İnsan Doğramacı
Bilkent
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# İŞLETME BÖLÜMÜ
# BİTİRME PROJELERİ

# 2025-2026
# AKADEMİK YILI

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İşletme Bölümü

# BİLKENT ÜNİVERSİTESİ
# İŞLETME FAKÜLTESİ
# İŞLETME BÖLÜMÜ

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# BİTİRME PROJELERİ
# 2025-2026

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# Katkıda Bulunan Kuruluşlar:



























# Katkıda Bulunan Kuruluşlar:





















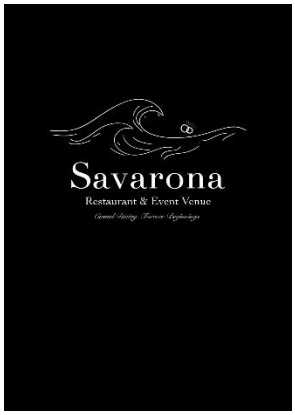






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*Murat Tufan Demircan*, SAYTEK

*Zeynep Demirtaş, Sena Açıkgöz*, Fetih Tekstil

# Önsöz

Bu kitap, İhsan Doğramacı Bilkent Üniversitesi İşletme Fakültesi İşletme Bölümü bünyesinde güz ve bahar dönemlerinde verilen MAN 495 Bitirme Projesi dersinin tüm şubelerinde yürütülen projelerin özetlerini bir araya getirmektedir. "İşletme Projeleri" e-kitabı, öğrencilerimizin farklı sektörlerde faaliyet gösteren kuruluşlarla birlikte gerçekleştirdiği çalışmaları paylaşmak ve bu süreçte ortaya çıkan bilgi ve deneyimi kalıcı bir kaynağa dönüştürmek amacıyla hazırlanmıştır.

Bitirme Projesi dersi, son sınıf öğrencilerimize lisans eğitimleri boyunca edindikleri bilgi ve becerileri gerçek işletme problemleri üzerinde kullanma fırsatı sunmaktadır. Öğrenci ekiplerimiz, akademik ve sektörel danışmanlarının desteğiyle, iş birliği yaptıkları kuruluşların karşılaştığı bir problemi ele almakta; problemin nedenlerini araştırmakta, ilgili bilgi ve verileri değerlendirmekte ve uygulanabilir çözüm önerileri geliştirmektedir. Bu çalışmalar, işletmenin farklı alanlarında edinilen bilgilerin bir arada kullanılmasını ve önerilerin şirketin faaliyet koşulları, kaynakları ve öncelikleri dikkate alınarak değerlendirilmesini gerektirmektedir.

Bu süreçte öğrencilerimizin bir çözüm önermeleri kadar, neden o çözümü tercih ettiklerini ve hangi koşullarda uygulanabileceğini açıklamalarını da önemsiyoruz. Gerçek bir işletme problemi üzerinde çalışmak; eksik bilgilerle ilerlemeyi, farklı beklentileri anlamayı, varsayımları sorgulamayı ve gerektiğinde ilk değerlendirmeleri gözden geçirmeyi gerektirir. Takım içinde sorumluluk paylaşmak, şirket temsilcileriyle iletişim kurmak ve önerileri gerekçeleriyle sunmak da bu öğrenme deneyiminin önemli parçalarıdır. Böylece öğrencilerimiz, analitik düşünme ve problem çözme becerilerinin yanında, mesleki yaşamlarında ihtiyaç duyacakları iş birliği ve iletişim becerilerini de geliştirme olanağı bulmaktadır.

Sürdürülebilirlik ve sorumlu işletmecilik anlayışı da dersimizin önemli bir boyutunu oluşturmaktadır. Öğrencilerimizden, çalıştıkları kuruluşların çevresel, sosyal ve yönetişim uygulamalarını incelemeleri ve geliştirdikleri önerilerin sürdürülebilirlik açısından sonuçlarını değerlendirmeleri beklenmektedir. Birleşmiş Milletler Sürdürülebilir Kalkınma Amaçları kapsamında özellikle insana yakışır iş ve ekonomik büyümeye odaklanılması, öğrencilerimizi önerilerinin ekonomik katkılarıyla birlikte çalışanlar ve diğer paydaşlar üzerindeki olası etkilerini de düşünmeye yönlendirmektedir.

Projelerin, öğrencilerimizin öğrenimine katkı sunarken iş birliği yaptığımız kuruluşlar için de yararlı değerlendirmeler ve yeni çözüm olanakları ortaya koymasını amaçlıyoruz. Kuruluşların paylaştığı bilgi ve deneyim, akademik çalışmaların uygulamadaki karşılığını anlamamıza yardımcı olurken, öğrenci ekiplerinin araştırmaları ve önerileri de ele alınan sorunlara farklı bir bakış açısı getirebilmektedir. Bu kitap, üniversite ile iş dünyası arasındaki bu karşılıklı öğrenme sürecinin ürünlerini daha geniş bir çevreyle paylaşmaktadır. Proje özetleri, ilgili kuruluşların bilgilerinin gizliliği gözetilerek okuyuculara sunulmaktadır.

Projeleri emek ve özveriyle hazırlayan tüm öğrencilerimize; bilgi, deneyim ve zamanlarını paylaşarak çalışmalara destek veren kuruluşlara ve temsilcilerine; akademik ve sektörel danışmanlarımıza teşekkür ederiz. Projelerin değerlendirilmesine, Proje Fuarı ve Yarışması'nın düzenlenmesine ve bu e-kitabın hazırlanmasına katkıda bulunan tüm çalışma arkadaşlarımıza da teşekkürlerimizi sunarız.

Kitapta yer alan çalışmaların okuyucularımıza yararlı olmasını, yeni projelere ve iş birliklerine ilham vermesini dileriz.

**Bilkent Üniversitesi İşletme Fakültesi**

**MAN 495 Bitirme Projesi Dersi Koordinatörleri**

**Dr. Ceren Aydoğmuş**

**Dr. Öğr. Üyesi Rasim Serdar Kurdoğlu**

**Prof. Dr. Ali Rıza Zafer Sayar**

# Dekanın Mesajı

Bilkent Üniversitesi İşletme Fakültesi olarak temel hedeflerimizden biri, öğrencilerimizi yalnızca güçlü bir akademik altyapıyla değil, aynı zamanda öğrendiklerini gerçek iş problemlerine uygulayabilen, takım içinde etkin biçimde çalışabilen, sorumluluk alan ve değişen iş dünyasına uyum sağlayabilen bireyler olarak yetiştirmektir.

Son sınıf öğrencilerimizin mezuniyet öncesinde aldıkları **MAN 495 – Business Capstone Project** dersi, bu hedefimizin önemli bir parçasını oluşturmaktadır. Öğrencilerimiz bu ders kapsamında dört yıllık İşletme eğitimleri boyunca edindikleri bilgi ve becerileri bir araya getirerek, ekipler halinde çeşitli işletmelerin karşı karşıya olduğu gerçek problemlere çözüm geliştirmektedir. Akademik danışmanların ve iş dünyasından proje paydaşlarının katkılarıyla yürütülen bu süreç, öğrencilerimize sınıfta öğrendiklerini uygulamaya dönüştürmenin yanı sıra problem çözme, analitik düşünme, takım çalışması, iletişim ve proje yönetimi becerilerini geliştirme fırsatı sunmaktadır.

MAN 495'i bizim için özellikle değerli kılan bir diğer unsur, öğrencilerimizin geliştirdikleri çözümlerin yalnızca işletmeler açısından sağlayacağı faydayı değil, toplumsal etkilerini de düşünmelerini teşvik etmesidir. Bu anlayış doğrultusunda, en başarılı projelerin yanı sıra toplumsal sorumluluk ve sosyal etki boyutuyla öne çıkan projeleri de ayrıca ödüllendiriyoruz.

Bu kitapçıkta yer alan projeler, öğrencilerimizin Bilkent Üniversitesi İşletme Fakültesi'nde geçirdikleri dört yıl boyunca kazandıkları bilgi, beceri ve bakış açılarının somut çıktılarıdır. Aynı zamanda üniversite ile iş dünyası arasında kurulan güçlü iş birliğinin ve karşılıklı öğrenmenin güzel örneklerini oluşturmaktadır.

Projelerinde büyük bir emek ve özveriyle çalışan tüm öğrencilerimizi kutluyor; gerçek iş problemlerini öğrencilerimizle paylaşarak onların gelişimine katkıda bulunan kurumlarımıza, firma temsilcilerine ve proje danışmanlarımıza içtenlikle teşekkür ediyorum. MAN 495'in başarıyla yürütülmesini sağlayan akademik ve idari koordinatörlerimize ve bu süreçte emeği geçen herkese de ayrıca teşekkürlerimi sunuyorum.

**Bilkent Üniversitesi İşletme Fakültesi Dekanı**

**Prof. Dr. Özgür Kıbrıs**

# Firmalardan Teşekkür Mektupları

## Türkiye İş Bankası

Türkiye İş Bankası olarak, çalışan deneyimini odağına alan uygulamalarımızı değişen çalışma hayatının ihtiyaçları doğrultusunda sürekli geliştirmeyi önemsiyoruz. Bu yaklaşımın bir parçası olan MaxiOfis ile çalışanlarımıza farklı lokasyonlarda esnek, erişilebilir ve verimli çalışma alanları sunmayı; aynı zamanda çalışanlarımızın bir araya gelmelerini ve kurumsal kültürümüzle bağlarını güçlendirmelerini amaçlıyoruz.

Bu kapsamda gerçekleştirilen proje çalışmasında MaxiOfislerimizin; çalışan deneyimi, operasyonel verimlilik ve fiziksel çalışma koşulları açısından çok boyutlu olarak ele alınmasını oldukça değerli buluyoruz. Öğrencilerimizin sektör araştırmaları, çalışan görüşmeleri, kullanım verileri ve lokasyon bazlı gözlemleri bir araya getirerek mevcut yapıyı analiz etmeleri; dijital rezervasyon süreçlerinden fiziksel çalışma alanlarının standardizasyonuna kadar farklı gelişim alanlarına yönelik çözüm önerileri geliştirmeleri, çalışmaya bütüncül bir bakış açısı kazandırmıştır.

Özellikle gerçek bir iş problemini farklı veri kaynaklarından yararlanarak değerlendirmeleri, çalışan ihtiyaçlarını anlamaya yönelik yaklaşımları ve uygulanabilir çözüm önerileri geliştirme yönünde gösterdikleri çaba bizler için kıymetlidir. Çalışma kapsamında ortaya konulan değerlendirme ve önerilerin, MaxiOfis deneyiminin gelecekteki gelişimine yönelik çalışmalarımız açısından da farklı bakış açıları sunduğunu düşünüyoruz.

Üniversite-sanayi iş birliğinin, öğrencilerin akademik bilgilerini gerçek iş hayatındaki ihtiyaçlarla buluşturması açısından önemli bir öğrenme alanı sunduğuna inanıyoruz. Bu süreçte gösterdikleri özen, merak ve emek için proje ekibinde yer alan tüm öğrencilerimize teşekkür ediyor; kendilerine eğitim ve kariyer yolculuklarında başarılar diliyoruz.

Projenin hayata geçirilmesine katkı sağlayan değerli akademisyenlere ve proje koordinasyon ekibine de destek ve yönlendirmeleri için teşekkürlerimizi sunuyoruz.

**Ceren Esen**
**İşveren Marka ve Çalışan Deneyimi Müdürü**

**Fetih Tekstil**

1996 yılında kurulan **Fetih Tekstil**, Taha Grup bünyesinde faaliyet gösteren, Türkiye ve Mısır'daki üretim tesisleriyle tekstil ve hazır giyim sektöründe global markalara hizmet sunan bir üretim şirketidir. Kaliteli ve esnek üretimin yanı sıra çalışan gelişimi, operasyonel verimlilik, sürdürülebilirlik ve güçlü iş birliği kültürünü odağına alan Fetih Tekstil, faaliyet gösterdiği tüm lokasyonlarda sürekli gelişim anlayışıyla çalışmalarını sürdürmektedir.

Bu anlayış doğrultusunda, üniversite-sanayi iş birliklerini yalnızca akademik bir çalışma olarak değil, gerçek iş problemlerine yenilikçi ve uygulanabilir çözümler geliştiren değerli bir gelişim alanı olarak görüyoruz.

Bu kapsamda, **İhsan Doğramacı Bilkent Üniversitesi MAN495 Capstone Projesi** çerçevesinde öğrencilerimiz tarafından Fetih Tekstil'in Mısır operasyonları üzerine gerçekleştirilen çalışma; farklı lokasyonlar arasındaki iletişim, yetki ve karar alma süreçleri, veri yönetimi ve operasyonel koordinasyon konularına odaklanmıştır. Proje kapsamında süreçlerin sadeleştirilmesi, merkezi veri yönetiminin güçlendirilmesi ve ekipler arasındaki teknik ve kültürel uyumun geliştirilmesine yönelik çözüm önerileri ortaya konulmuştur.

Gerçek bir iş probleminin üniversite öğrencilerinin bakış açısıyla ele alınması ve uygulanabilir çözüm önerilerine dönüştürülmesi bizim için son derece kıymetli bir deneyim olmuştur. Bu çalışmanın, süreçlerimize farklı bir perspektif kazandırdığına ve öğrencilerimizin gerçek iş hayatındaki problemlere çözüm üretme deneyimlerine katkı sağladığına inanıyoruz.

Proje süresince emek ve özveri gösteren öğrencilerimiz **Alp Arap, Bora Utku Aydın, Ceyda Yiğit, Onur Alp Çimen, Sıla Çetin, Şevval Yıldırım ve Yağmur Tuna'ya**; bilgi ve deneyimleriyle projeye yön veren **İhsan Doğramacı Bilkent Üniversitesi akademisyenlerine** ve üniversite-sanayi iş birliğinin gelişmesine katkı sağlayan tüm paydaşlarımıza teşekkür ederiz.

Fetih Tekstil olarak, gençlerin akademik birikimlerini gerçek iş dünyası problemleriyle buluşturan bu tür iş birliklerinin hem sektörümüz hem de geleceğin profesyonellerinin gelişimi açısından önemli bir değer yarattığına inanıyor, benzer çalışmaların artarak devam etmesini diliyoruz.

**Zeynep Demirbaş**
**İnsan Kaynakları Bölümü / Endüstri Mühendisi**

**Emeklilik Gözetim Merkezi AŞ (EGM)**

Emeklilik Gözetim Merkezi AŞ (EGM), 4632 sayılı Kanun uyarınca, Hazine ve Maliye Bakanlığının görevlendirme ve yetkilendirmesi çerçevesinde, merkezi İstanbul'da olmak üzere 10 Temmuz 2003 tarihinde kurulmuştur. EGM'nin kanunla belirlenen temel amaçları, özel emeklilik sisteminin güvenli ve etkin biçimde işlemesini sağlamak ve katılımcıların hak ve menfaatlerini korumaktır. Bu doğrultuda EGM; emeklilik şirketleri, emeklilik yatırım fonlarını yöneten portföy yönetim şirketleri ve bireysel emeklilik aracılarının faaliyetlerine yönelik risk esaslı dijital gözetim altyapısını sağlamakta ve bu altyapı üzerinden tespit edilen gözetim bulgularını ilgisine göre Sigortacılık ve Özel Emeklilik Düzenleme ve Denetleme Kurumuna (SEDDK) ve Sermaye Piyasası Kuruluna (SPK) raporlamaktadır. EGM ayrıca fon performans izleme ve değerlendirme sistemini yönetmekte, sektöre ilişkin istatistikler üretmekte, katılımcılara dijital hizmetler sunmakta ve ilgili otoritelere özel emeklilik sisteminin gelişimine yönelik politika ve strateji önerileri geliştirmektedir.

2025-2026 Akademik Yılı Güz ve Bahar dönemlerinde Bilkent Üniversitesi İşletme Fakültesinden 13 öğrencimizin katılımıyla, BES Mobil uygulamasının bilinirliğini ve kullanımını artırmaya yönelik etkileşim odaklı bir pazarlama stratejisi projesini tamamladık. Proje kapsamında öğrencilerimiz, uygulamanın hedef kitlesini ve mevcut kullanıcı davranışlarını analiz ederek BES Mobil'in daha geniş bir katılımcı kitlesine ulaşmasını, mevcut kullanıcıların uygulamayı daha etkin ve düzenli kullanmasını ve kullanıcı etkileşiminin güçlendirilmesini amaçlayan bütüncül bir pazarlama stratejisi geliştirdiler. Ortaya konulan analiz ve öneriler, kurumumuzun dijital hizmetlerini geliştirmeye yönelik çalışmalarında değerlendirilebilecek somut ve uygulanabilir bir yol haritası niteliği taşımaktadır.

Projemizin, bireylerin emeklilik tasarruflarına ilişkin farkındalıklarının artırılmasına sağlayabileceği katkı da dikkate alınarak Sosyal Etki (Social Impact) kategorisinde birincilik ödülüne layık görülmesi, bizler için ayrıca gurur ve memnuniyet verici olmuştur. Bu başarı, akademik bilgi birikiminin gerçek sektör ihtiyaçlarıyla buluşturulmasının, yalnızca kurumsal fayda sağlamakla kalmayıp toplumsal değer yaratma potansiyeli taşıyan sonuçlar da üretebildiğini göstermektedir.

Projenin bizim açımızdan bir diğer memnuniyet verici sonucu ise proje süresince sergilediği başarılı performansla öne çıkan bir öğrencimizi, projenin tamamlanmasının ardından EGM bünyesinde istihdam etmiş olmamızdır. Bu gelişme, üniversite-sektör iş birliğinin bilgi ve deneyim paylaşımının ötesine geçerek genç yeteneklerin keşfedilmesine, mesleki gelişimlerinin desteklenmesine ve iş hayatına kazandırılmasına da somut katkılar sağlayabildiğinin güzel bir örneğidir.

Bilkent Üniversitesi İşletme Fakültesiyle yürüttüğümüz bu çalışma, gerçek sektör ihtiyaçlarına yönelik uygulanabilir çözümler geliştirilmesinin yanı sıra, öğrencilerin akademik bilgi ve becerilerini gerçek iş ortamında değerlendirmelerine imkân sağlaması bakımından da son derece kıymetlidir. Proje boyunca öğrencilerimizin konuyu sahiplenmeleri, kurum içi paydaşlarımızla kurdukları etkili iletişim, gösterdikleri kararlılık ve geliştirdikleri önerilerin niteliği, akademisyenlerimizin değerli rehberliğiyle birleşerek başarılı sonuçların elde edilmesini sağlamıştır.

Bu vesileyle, başta projeye akademik rehberlikleriyle yön veren Bilkent Üniversitesi İşletme Fakültesi öğretim üyeleri olmak üzere, emeği geçen tüm akademik kadroya, projede görev alan öğrencilerimize ve katkı sağlayan

EGM çalışma arkadaşlarımıza içten teşekkürlerimi sunuyorum. Öğrencilerimizin merak ve öğrenme isteklerinin daima canlı kalmasını, başarılarının ise meslek hayatları boyunca artarak devam etmesini diliyorum.

Üniversite-sektör iş birliğini güçlendiren, gençlerin mesleki gelişimlerini destekleyen ve toplumsal fayda yaratma potansiyeli taşıyan bu tür çalışmaları önümüzdeki dönemlerde de sürdürmekten memnuniyet duyacağımızı özellikle belirtmek isterim.

Saygılarımla,

**Mustafa AKMAZ**
**Emeklilik Gözetim Merkezi AŞ**
**Genel Müdürü**

**Karmaş Endüstri**

1997 yılında kurulan Karmaş Endüstri, eğitim, inşaat, kumlama-boya ve gıda sektörlerinde faaliyet göstermektedir. Karadeniz Ereğli'de bulunan fabrikamızda sürdürdüğümüz çalışmalarımızla farklı sektörlerde değer yaratmayı ve sürekli gelişimi hedefliyoruz.

2021 yılında Bilkent Üniversitesi İşletme Fakültesi'nden mezun olmamın ardından, iş hayatında edindiğim deneyimleri akademik bilgiyle buluşturmayı ve genç yeteneklerin gelişimine katkı sağlamayı önemsiyorum.

Şirketimiz bünyesinde faaliyet gösteren Savarona Restaurant & Event Venue'de Bilkent Üniversitesi öğrencileri ve akademisyenleriyle gerçekleştirilen çalışmalar, işletmemizin gelişimine önemli katkılar sağlamıştır. Öğrencilerin bilgi birikimleri, yaratıcı fikirleri ve farklı bakış açıları Savarona'ya büyük değer katarken, akademik bilginin iş hayatında uygulanmasının önemini de ortaya koymuştur.

Üniversite öğrencilerinin mesleki gelişimlerini destekleyen, teorik bilgilerini gerçek iş ortamlarında deneyimlemelerine olanak tanıyan ve akademi ile iş dünyası arasında köprü kuran iş birliklerini değerli buluyoruz.

Savarona'nın gelişimine emekleri ve katkılarıyla değer katan Bilkent Üniversitesi öğrencilerine ve akademisyenlerine teşekkür ediyor, bu tür iş birliklerinin gelecekte de artarak devam etmesini diliyoruz.

**Saygılarımızla,**

**Karmaş Endüstri**

**Kurucu Temsilcisi**

**Damla Karahan Çelikkol**

# PROJELER

# Savarona Restaurant & Event Venue, Marketing Problems




**Proje Ekibi:** Accumulated Depreciation

**Proje Adı:** Savarona Restaurant için Erişilebilir Pazarlama

**Grup Üyeleri:** Berat Can Kalaycı, Feyza Sevgili, Fırat Sarıbuğa, Nazlı İpek Kazanç, Necip Can Kalı, Rabia Sıla Gürbüz

**Şirket Danışmanı:** Damla Karahan Çelikkol

**Akademik Danışman:** Onur Osmanoğlu

**Koordinatör Danışman:** Ceren Aydoğmuş

## ÖZET

Savarona Dining, Ereğli'de faaliyet gösteren bir restorandır. Fiyatları rekabetçi olmasına rağmen, bölgede "çok pahalı ve sadece özel günler için uygun" olarak algılanmaktadır. Yaptığımız yüz yüze ankete göre, yerel halkın %68,4'ü restoranı pahalı bulmakta, %71,7'si ise markayı bilmesine rağmen hiç ziyaret etmemiştir. Bu yanlış algı, pazar araştırması eksikliğinden, lüks imajdan ve yüksek personel devrinden kaynaklanmaktadır. Buna yönelik üç çözüm paketi geliştirilmiştir. Birincisi mevcut müşterilere odaklanmakta ancak uzun vadeli bir yaklaşım benimsemekte ve Savarona'nın ihtiyaç duyduğu hızlı, güçlü çözümü sunmamaktadır. İkincisi, ayrı bir self-servis kafe açılmasını önermekte ancak riskli bir yatırım gerektirmektedir. Önerilen en iyi çözüm ise erişilebilir pazarlamadır. Bu yaklaşım, yeni teklifler, daha iyi iletişim ve düzenli yönetim geri bildirimine odaklanmaktadır. Bu unsurlar bir arada bütünleşik bir etki yaratmaktadır. Strateji; sabit fiyatlı bir iş yemeği, hafta sonu aile paketi, görünür fiyatlar, daha sıcak bir marka tonu ve yapılandırılmış geri bildirim sistemini içermektedir. Bu yaklaşım, düşük ila orta düzeyde bir yatırımla algı sorununu doğrudan hedef almaktadır.

**Anahtar Kelimeler**: Restoran Pazarlaması, Lüks İmaj, Fiyat Algısı, Çok Pahalı, Ulaşılabilir Lüks, Müşteri Sadakati, Erişilebilir Pazarlama

## 1- Company Information

Savarona Dining is a full-service restaurant located on the seafront in Ereğli, Zonguldak. It was established in June 2025 under Karmaş Endüstri with an "accessible luxury" concept. The restaurant takes its name from Mustafa Kemal Atatürk's yacht, symbolizing prestige and heritage.

The venue has a large capacity. It holds 300 people inside and more than 1,000 outside for events. Staff numbers are around 22 in winter and 27-28 in summer. The menu has breakfast, lunch, and dinner. It offers both international dishes and traditional Turkish food. There is also a selection of familiar and different drinks. The restaurant also hosts weddings, engagements, and corporate events. Events bring good revenue, but they are not held frequently.

The main strengths of Savarona are the seaside location, the large parking lot, the open kitchen, and the nice interior design. The atmosphere is warm and pleasant. The service is also good; waiters greet guests at the door and walk them to their tables. Yet, many locals perceive the place as too expensive and only for special occasions. This perception is the main problem the restaurant faces.

## 2- Problem Definition

Savarona Dining's main problem is not price. It is the perception of price. Although the restaurant's prices are competitive, many locals see it as too expensive and only for special occasions.

We conducted a face-to-face survey in Ereğli. The results show that 68.4% of locals find the restaurant expensive or very expensive (Appendix 1). Also, 71.7% have never visited Savarona even though 62% of them know the brand (Appendix 2; Appendix 3). This is a big gap between awareness and actual visits.

The root causes of this problem are threefold. First, the restaurant opened without enough market research. The concept was built on the founders' vision, not on local customer needs. Second, the majority of customers are under 25 years old, with 39.3% below 25 and 18.8% students, which creates a mismatch with the restaurant's target audience (Appendix 4). Third, the strong luxury image and formal atmosphere create a psychological barrier. People feel intimidated. In addition to these, there are operational issues. High staff turnover leads to inconsistent food quality and service (Appendix 5). These interconnected root causes are further summarized through a Fishbone (Ishikawa) Root Cause Analysis, which highlights the effects of environmental conditions, operations, customer mismatch, strategy, perception, and marketing-related weaknesses on Savarona's overall performance (Appendix 6).

These problems have clear impacts. The restaurant struggles to attract customers during weekdays and daytime hours. Revenue is falling across all mealtimes. Negative word-of-mouth spreads quickly in a small city like Ereğli, making it even harder to change perceptions.

The stakeholders affected include the owner and investors, who face lower returns. Employees deal with high turnover and unresolved problems. Suppliers face unreliable ordering patterns. Because of that, customers experience inconsistent service and food quality, which reduces trust and repeat visits.

## 3- Recommended Solutions

Three solution packages are developed to deal with Savarona's perception problem. Each package is presented below with its strengths and weaknesses.

### 3.1 Solution Package 1: Internal Marketing for Existing Customers

This package focuses on keeping current customers. According to our survey, 40% of existing customers are hesitant or do not want to return (Appendix 7).

The package has three parts, and the first one makes the others possible. First, data collection through Menulux. Customers would enter their name and phone number when ordering. The system would also remember their

favorite dishes and how often they visit. Without this data, the rest of the package cannot work. Second, customer retention programs. Using the collected data, the restaurant would send birthday messages with a 25% discount, anniversary reminders with a free dessert, and short surveys after each meal. Third, a loyalty program. A free dessert awaits on the 5th visit, 30% off on the 10th, and a free meal for two on the 20th. The most loyal customers would even have a special menu created in their name.

The main goal of this package is to build an emotional connection between Savarona and its customers. In a small city like Ereğli, personalized attention makes people feel valued. A birthday message or a menu named after a customer changes the "expensive" association into “Savarona is where I feel valued.” This is the real strength of the package. However, it focuses on keeping existing customers, not bringing in new ones. It also takes 12-18 months to show real results.

### 3.2 Solution Package 2: Radical Marketing with a Self-Service Cafe

This package tries a different path. It does not focus on existing customers. Instead, it aims to break the expensive perception by changing the physical space.

A separate self-service cafe would open next to the restaurant. People who would never step into a formal restaurant can come here for affordable coffee. The cafe would be separated so that restaurant guests are not disturbed. It would run with just 2-3 baristas. Prices would be set at normal cafe levels. A small seafront tasting on weekends would offer free coffee in Savarona logo cups, turning everyday people into walking billboards.

The goal is to create a network effect. Cafe visitors get curious about the restaurant and come for dinner. Restaurant guests discover the event space. Event attendees find the cafe. Each channel feeds the others.

On the restaurant side, three marketing methods would support this. Weekend brunch would target families with small gifts for children. A seafood night would run every Saturday to meet the demand shown in our surveys (Appendix 8); a storytelling menu would add a short story next to each dish, giving the restaurant a more personal feel.

This solution is creative and directly targets the perception problem, but it comes with risks. Physical conversion costs would exceed 750,000 TL, and the restaurant already struggles with high staff turnover. Adding a whole new operation would multiply the management burden.

### 3.3 Solution Package 3: Accessible Marketing

This package goes after the real problem, too expensive perception of Savarona. Instead of only addresing to existing customers or building a whole new cafe, it uses simple, low-cost comprehensive actions that work together.

The package has three parts that support each other. First, new offers. A fixed-price business lunch with a 45-minute service guarantee for daytime professionals. A weekend family package for groups of four or more, promoted through street banners. These offers directly remove time and price uncertainty, two main barriers that keep first-time visitors away.

Second, communication and transparency. The brand voice would become warmer and simpler. The brand would split into two: Savarona Dining for daily visits and Savarona Düğün & Organizasyon for events. The website would show menus and prices clearly. A street banner would also be added for offline visibility. Right now, people avoid Savarona because they cannot see prices online and assume it is too expensive. Making prices visible directly removes this barrier.

Third, operational consistency. Kitchen checklists would be standardized. A Monday management meeting and a monthly KPI dashboard would track progress. A post-meal QR feedback form would collect at least 75 responses per month. No marketing works if the food and service change every time. Consistent experience turns

first-time visitors into regulars and generates positive word-of-mouth, which is the most powerful marketing tool in Ereğli (Appendix 9).

These three parts do not work alone. The new offers bring people in. The transparent communication makes them feel safe to try. The consistent operations make them want to come back. Each part feeds the others. This is the integrated impact. Without one, the others would not work as well. Together, they attack the expensive perception from three angles at once. The package uses what Savarona already has: the same staff, the same kitchen, the same space. No new construction, no extra staff. The costs are low to moderate, and the entire plan is built on data from over 350 participants.

**4- Assessment**

Package 1 builds loyalty but takes too long and directly brings no new customers. Package 2 is creative but expensive and risky. Package 3 attacks the expensive perception with new offers, clear communication, and consistent operations. Unlike Package 1, it works quickly and brings new customers. Unlike Package 2, it avoids high costs and risk. It also uses existing resources and fixes operational inconsistency. For these reasons, Package 3 is the best solution. A detailed analysis is presented in the following section.

**5- Best Solution: Accessible Marketing**

After evaluating the three packages, Accessible Marketing is the best solution. It attacks the expensive perception without the high costs of a new cafe or the slow results of a loyalty-only approach. It brings new customers in, fixes inconsistency, and uses what Savarona already has.

**5.1 Project Scope**

The main goal is to change the "too expensive" perception. The solution targets local workers, Erdemir employees, and families who currently avoid the restaurant. It also separates daily dining from events with two different brand identities so that the event side stays prestigious while the dining side becomes more approachable.

**5.2 SMART Goals**

Goal 1: Increase weekday lunch visitors by 40% in two months with a fixed-price lunch menu and corporate billing .

Goal 2: Grow weekend reservations by 15% in five weeks using a family package and street banners.

Goal 3: Create two separate brands (Savarona Dining and Savarona Düğün & Organizasyon) in eight weeks.

Goal 4: Build a website with clear prices and reach the top 5 on Google for "Ereğli restoran" in two months.

Goal 5: Get at least 75 customer feedback responses each month through QR forms.

Goal 6: Reach a service quality score of 4.5 out of 5 in six weeks with a Service Standards Manual.

Goal 7: Increase total monthly revenue by 10% in four months.

**5.3 Action Steps**

The plan has three main focus areas. Each area includes specific actions with clear owners and targets.

**Focus Area 1: New Offers and Demand Generation**

Savarona's afternoon revenue has declined for six consecutive months, and lunchtime demand remains weak. According to our surveys, time and price uncertainty are the main barriers for weekday customers. This focus area introduces two structured offers that lower both uncertainties.

**Weekday Business Lunch**
The business lunch relaunch offers a fixed-price, two-course menu with a 45-minute service guarantee. It targets Erdemir employees and local white-collar workers. A corporate billing option is also available. The lunch menu is promoted through a short brochure. The kitchen selects dishes that can be prepared quickly. The service flow is simple: order in 3 minutes, starter in 8, main course around 20, bill before 40 minutes. A five-minute pre-shift briefing is held each weekday.

**Weekend and Family Package**
Social gatherings and family meals are top reasons for choosing Savarona (Appendix 10). The weekend table package targets groups of four or more, available from Friday to Sunday lunch. It includes a shared starter and requires advance reservation. The package is promoted through four street billboards at key locations. A Friday WhatsApp reminder is sent to opted-in customers. Warm photos from a single shoot are used across banners, Instagram, and the website.

**Focus Area 2: Communication and Brand Transparency**
Our survey findings, supported by the owner's comments, point to two main perception problems. Savarona is seen as more formal and expensive than its actual price level, and many customers associate it more with special occasions than everyday dining. This focus area addresses both.

**Brand Voice and Content**
Only a small number of Savarona's Instagram posts feel casual, warm, or approachable. Older posts show Savarona as premium, which strengthens the expensive perception. The website text also feels too formal. To solve this, the brand voice becomes warmer and simpler. Content focuses on three themes: kitchen and team, ambience, and customer moments. Paid social media spending is redirected toward the business lunch and weekend table offers. A one-page tone guide with sample captions is created and shared with the social media team.

**Sub-Brand Separation**
Savarona separates its dining and events identities completely. The two Instagram accounts do not cross-post. Savarona Dining stays warm and everyday-focused. Savarona Düğün & Organizasyon remains elegant and wedding-focused. The events side also gets easier reservation access, a separate phone number, and its own Google Search and Maps visibility for "Savarona wedding." Monthly audits check for cross-posting incidents.

**Website and Price Transparency**
The current website has no visible prices. Google searches also show another restaurant with the same name first, creating wrong expectations. The redesigned website will include clear menus with prices, a separate reservation section for events, and updated photos. It will also link the QR menu and improve local SEO. A street banner across from the restaurant will target weekend family traffic and reduce the formal image barrier.

**Focus Area 3: Operational Consistency and Management Discipline**
Food and service inconsistency is a key weakness cited in the employee survey and owner interviews. Customer feedback is collected but not used systematically. Since word-of-mouth strongly affects restaurant choices in Ereğli; consistent food, service, and feedback follow-up are needed to turn new visits into positive recommendations.

**Kitchen and Service Standardization**
A short Service Standards Manual covers greeting, escort, order-taking, check-backs, table turnaround, complaints, and farewell. Best-selling items, especially the schnitzel, get clear rules for portioning, prep, plating, and quality. Recipe cards and kitchen checklists are kept and used as they are. Monthly spot checks aim for a 4.5 out of 5 score within six weeks.

**Management Cadence and Feedback**
A 30-minute Monday meeting reviews KPIs, operations, feedback, campaigns, and weekly actions, while a monthly dashboard tracks all seven goals. Any KPI that fails for two months is reviewed. A QR feedback form on every table asks about food, service, ambience, price-value, and recommendations, aiming for 75 responses per month so the restaurant relies less on Google reviews. A simple table also shows who decides on menu changes, prices, campaigns, suppliers, and service rules.

**Resources and Requirements**
No new staff or construction is needed. Existing roles are reassigned. The Operations Manager owns the lunch service flow, service standards, KPI dashboard, and compliance checks. The Sous Chef owns recipe cards, kitchen checklists, onboarding, and signature dish consistency. The Assistant Operations Manager handles corporate outreach, weekend table reservation notes, WhatsApp broadcasts, QR feedback tracking, and meeting minutes. Damla Karahan co-leads the agency rebriefing, tone-of-voice approval, and weekly management meeting. Oğuz Karahan joins the monthly review and signs off on supplier performance, signature dish quality, and major financial decisions.

The plan uses Savarona's existing resources. Fixed costs are between 45,500 and 91,000 TL, which is about 2-4% of monthly revenue. Monthly costs range from 30,000 to 50,000 TL, or 1-2% of monthly revenue. These figures do not include optional items or the photographer, which is already a sunk cost.

### 5.4 Timeline (6 Months)
Phase 1 (Week 1-2): Brand audit, tone guide, sub-brand separation planning, lunch menu testing, service standards manual draft.

Phase 2 (Week 3-6): Website redesign, QR menus, photographer shoot, service manual soft launch, social media tone rollout.

Phase 3 (Month 2): Launch business lunch and weekend table, install four street banners, send first Friday WhatsApp reminders, first QR feedback collection.

Phase 4 (Month 3): Corporate outreach to Erdemir and local SMEs, SEO review, 90-day performance review, second service spot check.

Phase 5 (Month 4-6): Optimize high-performing initiatives, scale what works, embed routines into daily operations, six-month final review.

### 5.5 Responsibilities and Accountability
Marketing & Communications: Brand direction, sub-brand separation, website approval, campaign design.

Social Media Team: Content creation, paid ads, engagement, sub-brand account separation.

Restaurant Management: Business lunch flow, weekend packages, service standards, monthly spot checks, corporate outreach.

Operations: KPI dashboard, QR feedback system, Menulux configuration, data accuracy.

A 30-minute Monday meeting tracks progress. Monthly reviews with Oğuz Karahan evaluate KPIs. Any KPI underperforming for two months triggers corrective action. The owner is accountable for major financial decisions and final approval.

## 6- Conclusion
Savarona's main problem is the perception of price, not price itself. People think it is too expensive and only for special occasions, even though its prices are competitive. The Accessible Marketing package offers a practical, low-cost solution. It brings new customers in through a fixed-price business lunch and a weekend family offer. It

removes price anxiety with visible menus and warmer communication. It fixes inconsistency with kitchen standards and regular feedback. Unlike internal marketing, it delivers results quickly. Unlike radical marketing, it avoids high costs and operational risks. It uses what Savarona already has: the same staff, the same kitchen, the same space. The plan is built on data from over 350 participants. With a six-month plan, Savarona can shift from a distant luxury venue to a warm, accessible neighborhood destination while keeping its premium identity for events. This is the most effective path forward.

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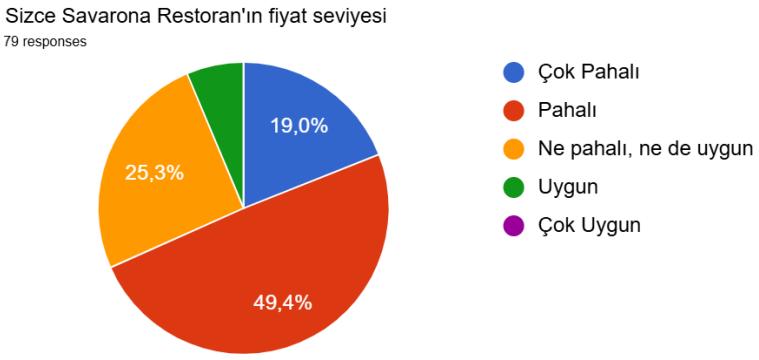
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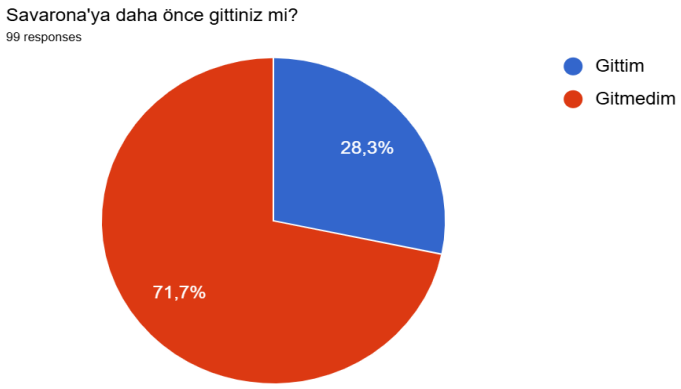
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# Appendices

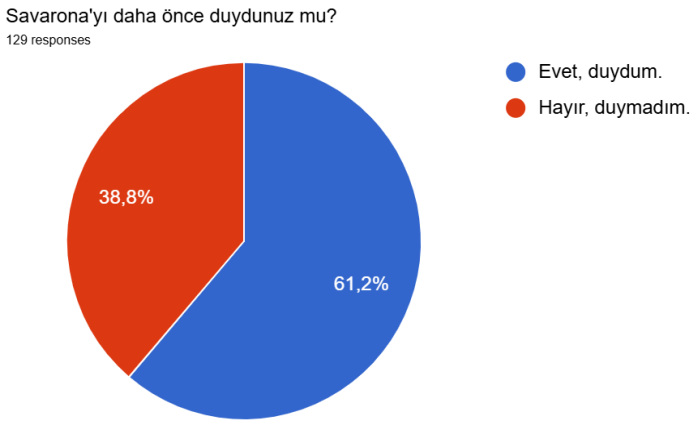
Appendix 1: Ereğli Market Price Perception Toward Savarona (N=79)




Appendix 2: Consideration Rate of Visiting Savarona (N=99)



## Appendix 3: Awareness Rate of Savarona (N=129)



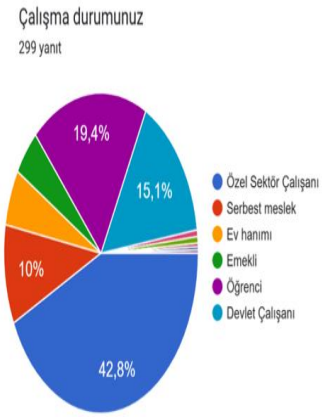

## Appendix 4: Savarona Current Customer Profile (N=299)[1]

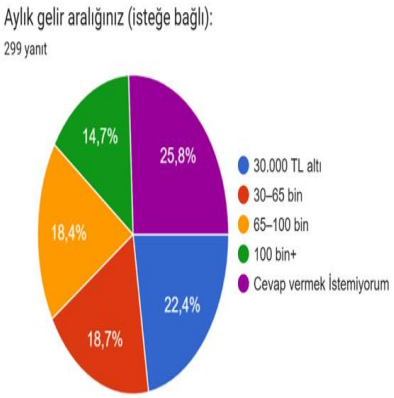
**Demografi Profili**

| Cinsiyet | Sayı | % |
|---|---|---|
| Kadın | 165 | 56,9% |
| Erkek | 106 | 36,6% |
| Belirtmek istemiyorum | 19 | 6,6% |

| Öğün Harcama | Sayı | % |
|---|---|---|
| 551 TL ve üzeri | 103 | 35,5% |
| 251–350 TL | 50 | 17,2% |
| 250 TL ve altı | 49 | 16,9% |
| 351–450 TL | 47 | 16,2% |
| 450–550 TL | 41 | 14,1% |

| Yaş | Sayı | % |
|---|---|---|
| 18–25 | 112 | 38,6% |
| 26–35 | 90 | 31,0% |
| 36–45 | 56 | 19,3% |
| 46–55 | 13 | 4,5% |
| 55+ | 19 | 6,6% |



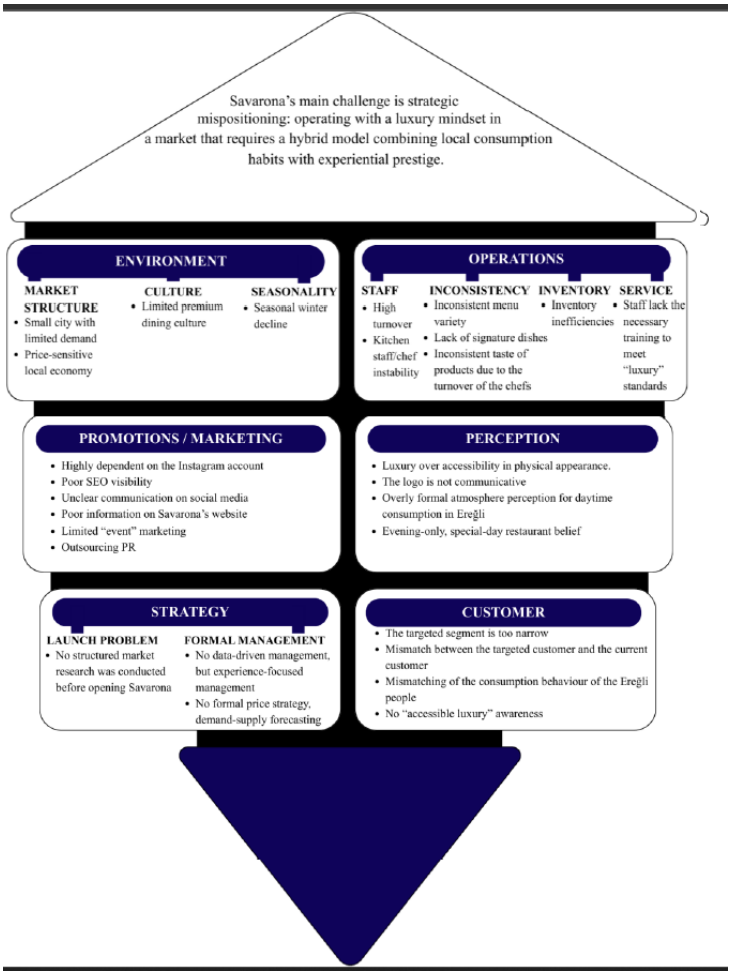

[1] Savarona's current customer profile is prepared by combining data from the Ereğli market survey, which includes previous visitors, and the Savarona in-place customer survey.

Appendix 5: Interview with D. Karahan: Q&A

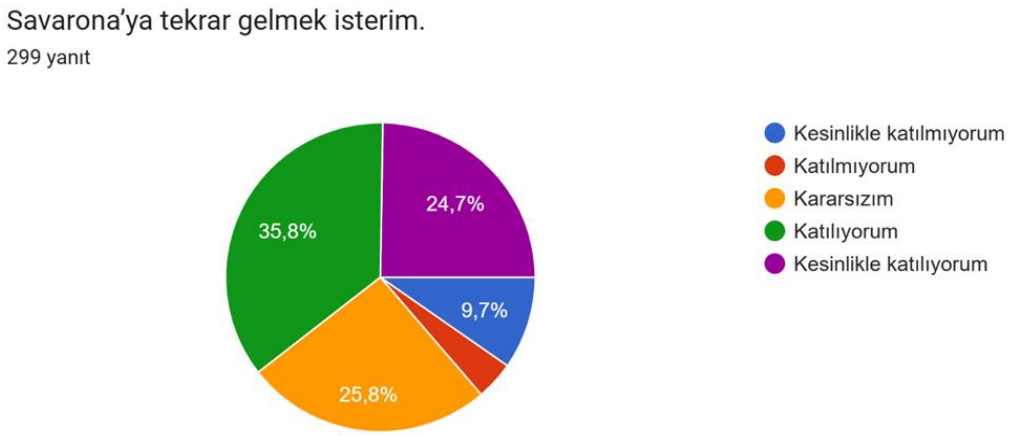
**Question 1.** Savarona Dining'i düşündüğünüzde, sizi rakiplerinizden ayıran güçlü yönleriniz nelerdir? Bunun yanında geliştirmek istediğiniz alanlar ve sektörde sizi etkileyebilecek fırsat ya da riskler hakkında neler söyleyebilirsiniz?

**Answer 1.** Denize sıfır konumda olması, Ereğli sahilinde ve şehrin tam merkezinde yer alması önemli bir avantaj. Ayrıca yaklaşık 100 aracın sığabileceği otoparkı var; Ereğli sahilinde otopark sorunu düşünüldüğünde bu ciddi bir artı. Açık mutfak konsepti de güçlü bir taraf. Hijyene önem verdiklerini gösteriyor ve misafire güven veriyor (eldiven kullanımı, saçların kapalı olması, tezgâhın temiz görünmesi gibi). Ambiyansı başarılı; mekân hem mimari olarak etkileyici hem de tarihi bir havası var. Zayıf taraflarına gelince: Yeni bir işletme olduğu için çalışan devri (turnover) yüksek olabiliyor. Bu da sürdürülebilirliği zorlaştırıp zaman zaman lezzet ve servis standardında farklılıklara yol açabiliyor. Ayrıca bazı insanlar mekânı sadece özel günlerde gidilecek bir yer gibi konumlandırdığı için gündüz saatlerinde yoğunluk daha düşük kalabiliyor. Buna rağmen Savarona'nın önemli bir güçlü yanı daha var: Denize sıfır bir lokasyonda düğün/nişan gibi organizasyonları gerçekten yapılabilir şekilde sunuyor; Ereğli'de hiçbir mekan denize sıfır bir organizasyon sunmuyor.

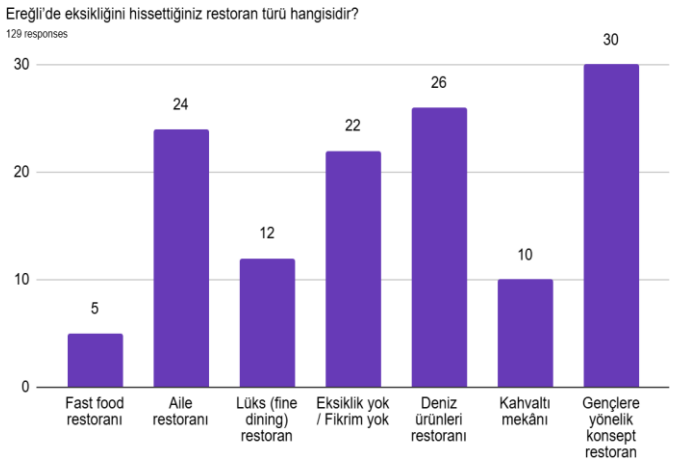
Appendix 6: Savarona's Root Cause Analysis-Fishbone Method



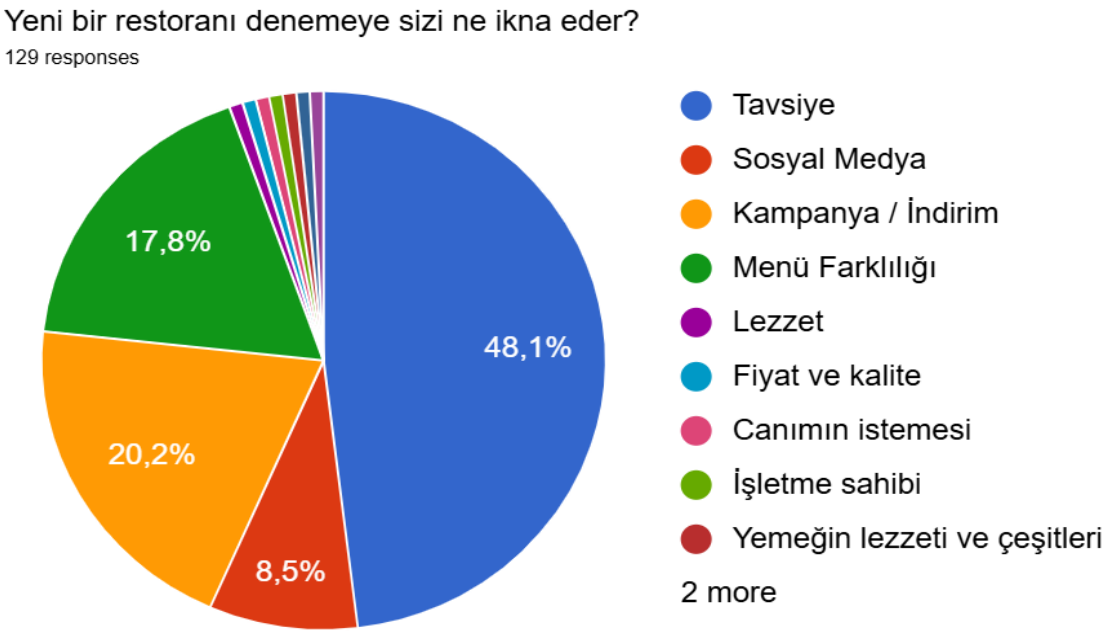
Appendix 7: Post-Consumption Retention Intent (N=299)



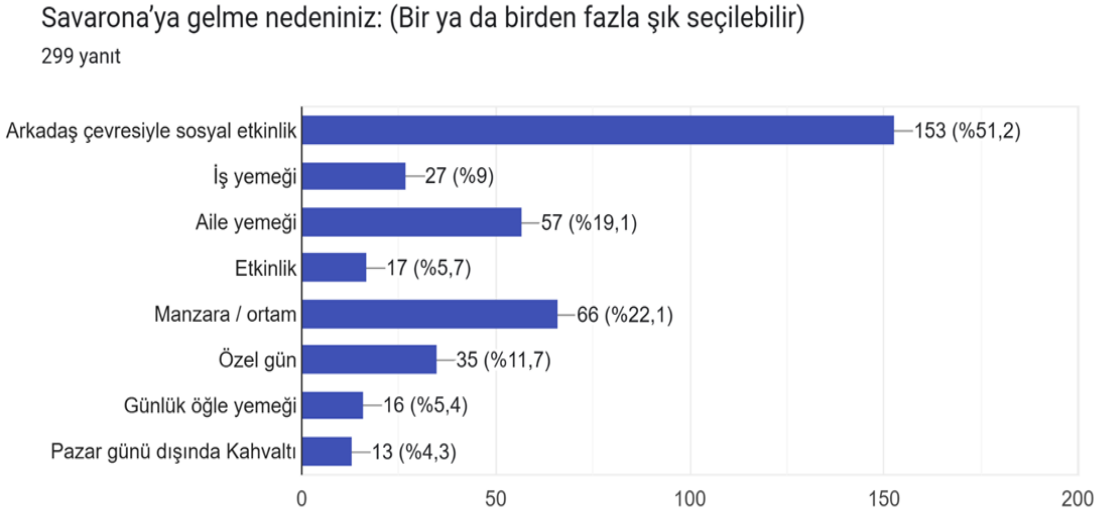

Appendix 8: Gaps in the Ereğli Restaurant Market (N=129)



Appendix 9: Key Drivers for Trying New Restaurants (N=129)




Appendix 10: Motivations for Choosing Savarona (N=299)



# Be-Advise, Business Development Problem




**Proje Ekibi: Pentara**

**Grup Üyeleri:** Eylül Demirözü, Gözde İtkü, Lara Su Ünlü, Selen Tirolar, Zeynep Saraç

**Şirket Danışmanı:** Ege Nasuhoğlu

**Akademik Danışman:** Zeynep Önder

**Koordinatör Danışman:** Ali Rıza Zafer Sayar

## ÖZET

Bu proje, BeAdvise'ın startup değerleme sürecinde karşılaştığı operasyonel verimsizlikleri ele almaktadır. BeAdvise, ve girişimcileri yatırımcılarla buluşturan butik bir finansal danışmanlık firmasıdır. Halihazırda kullanılan değerleme sürecinin temeli Excel tabanlı analizler, manuel şekilde toplanan dağınık veriler ve danışmanların subjektif değerlendirmelerinden oluşmaktadır. Bu durum sürecin yavaşlamasına, standardizasyon eksikliğine ve şirket değerlemesinin sınırlanmasına neden olmaktadır. Projede dışarıdan kaynak kullanımı ve API tabanlı veri entegrasyonu alternatif çözümler olarak değerlendirilmiş; ancak en uygun çözüm olarak VIPE isimli platform önerilmiştir. VIPE, kıyas analizi, gelir çarpanı hesaplaması, puan kartı oluşturma ve son adımda da startup-yatırımcı eşleştirme süreçlerini otomatikleştiren yapay zekâ destekli bir platformdur. Bu çözüm BeAdvise'ın daha hızlı, daha tutarlı ve ölçeklenebilir bir danışmanlık süreci oluşturmasını hedeflemektedir. Ayrıca VIPE, danışmanların tekrarlayan işlerden uzaklaşarak daha stratejik ve katma değerli görevlere odaklanmasını desteklemektedir.

**Anahtar Kelimeler:** Startup Değerleme, Yapay Zekâ Destekli Danışmanlık, VIPE, Yatırımcı Eşleştirme, Otomasyon, Ölçeklenebilirlik, Finansal Danışmanlık, SDG 8

## 1. Company Background

BeAdvise is a boutique financial advisory firm that focuses on connecting startups with multinational investors. The company operates mainly in areas such as fintech, gaming, e-commerce, and SaaS, where startup valuation, investor relations, and strategic advisory services and CFOaaS are highly important. As a small and specialized advisory firm, BeAdvise provides customized support to startups by helping them understand their financial position, prepare for investment processes, and communicate their potential more clearly to investors.

The company's business model depends heavily on reliable valuation practices and effective investor-startup matching. In this task, BeAdvise analyzes startup data, evaluates business potential, compares companies using relevant benchmarks, and supports investment decisions. The expertise of BeAdvise's advisors plays a central role in creating value for both startups and investors, because startup valuation is not only a financial calculation task, but also a strategic advisory process.

However, BeAdvise operates with a small team of four people, which creates limitations in terms of time, operational capacity, and scalability. The company's current valuation process still relies on manual data collection, Excel-based calculations, scattered information sources, and advisor judgment. While this approach allows BeAdvise to provide boutique and personalized services, it also makes the process slow and difficult to scale when the number of clients increases. Therefore, improving the valuation process is strategically important for BeAdvise's future growth and competitiveness.

## 2. Problem Description

The main problem identified in this project is the inefficiency, subjectivity, and lack of standardization in BeAdvise's startup valuation process. These products require an acceptable evaluation method with minimal effort and no guidance provided through subjective criteria, but currently, the evaluation process relies heavily on manual labour combined with subjective criteria since advisors are providing evaluations based solely upon their own perspective. Because the advisors are not connected/associated to each other, they tend to evaluate companies by sourcing and combining the same information in several different places and entering that information into a spreadsheet; thus, creating a fragmented, difficult to administer system.

One of the most central causes of the problem is the lack of a centralized data system. Startup information, financial data, sector benchmarks, and investor-related information are not managed through a single integrated platform but integrated in Excel by advisors manually. As a result, advisors need to spend a significant amount of time searching, collecting, and organizing data before they can begin the actual valuation process. This reduces the time available for higher-value advisory activities such as strategic analysis, investor communication, and client relationship management.

Another key issue is the dependence on Excel-based analysis. While Excel is useful for basic calculations, it becomes inefficient when the number of startups increases and when different valuation methods need to be applied consistently. This increases the risk of human error, double counting of work completed, and inconsistency with final results. Since the process of evaluating a startup company requires both quantitative and qualitative evaluations of the startup, the lack of using a uniform method for determining valuations can lead to different conclusions about a company's value from two different advisers, even though they are being compared to similar companies.

The problem also affects BeAdvise's scalability. Since the firm has a small team, the labor-intensive process of manually conducting an analysis to provide a startup with a valuation will hinder how many valuations can be

performed during each designated timeframe. This, in turn, may cause delays in providing timely valuation reports to startups that need them during fundraising efforts. Additionally, it will hinder the ability of investors to obtain similar analyses quickly, reliably and comparably from different advisers. Given this, the valuation issue is not just an internal process/operational issue for BeAdvise; it's also an issue for startups, investors, and the startup ecosystem.

## 3. Recommended Solutions

In this project, two alternative solutions were first evaluated: outsourcing and API-based data integration. Outsourcing involves transferring repetitive tasks such as data collection and data entry to interns, freelancers, or external service providers. This would provide immediate relief from the workload of data entry for BeAdvise's advisors and allow the advisors to focus more on the analysis from the data, working with investors, and giving strategic recommendations. However, outsourcing still has the same issues as keeping the data entry in-house; all that changed is who does the data entry. As such, the potential for human error, inconsistencies in data entry, delays attributable to the data entry, and security risks from the manual entry of data will continue regardless of whether the data entry is in-house or outsourced. Therefore, outsourcing was only thought of as a short-term solution to relieve some of the workload on advisors, but not a long-term viable solution that could be expanded on as BeAdvise grows.

The second option is to provide an API for data integration into the valuation workflow. With the API, BeAdvise's strategic valuation workflow can be connected directly to external data sources like Crunchbase and Startups.watch and internal data sources, or databases of companies, to create a more efficient program and reduce the need for repeated manual entry of information and help standardize the amount of time spent searching for and inputting data. By utilizing the API technology in this manner, BeAdvise would be able to integrate important startup and market data into the valuation process without the need to repeat entering the same information repeatedly. However, adding only the API for data integration alone will not solve the problem, as the API is not capable of interpreting the quality of the startup, determining the market potential, generating scorecards, or helping to identify and match investors that are a good fit for the startup with the startup.

The recommended solution is VIPE, which stands for Venture Intelligence Pre-Seed Evaluator. VIPE is an AI-supported valuation and investor - start-up matching platform including a dashboard and several filters which are customized, designed specifically for BeAdvise’s needs. Unlike outsourcing or API integration alone, VIPE directly targets the root causes of BeAdvise’s problem by reducing manual data entry, centralizing information, decreasing reliance on Excel, standardizing valuation methods, and supporting advisor decision-making.

VIPE uses AI technology to help you determine how much a startup company pays for its equity by helping you conduct benchmark analyses, calculating multiple revenue based on a startup's revenue history; generating scorecards for investors; and matching investors with startups. The platform also uses multiple valuation methods for evaluating early-stage companies, including those developed under the Berkus, revenue multiple – and balanced scorecard methodologies. Finally, VIPE aggregates your data to provide you with summary evaluation charts to better understand the results of your analysis. By bringing together these features, VIPE greatly decreases the amount of time required to conduct startup investment valuations and provides increased consistency and scalability for investing in early-stage companies.

The solution does not aim to replace BeAdvise’s advisors. However, this solution strengthens their role by allowing them to spend less time on repetitive operational tasks and more time on strategic advisory work. Since startup valuation still requires human expertise, especially in areas such as founder quality, industry potential, local market conditions, and investor fit, VIPE functions as a decision-support tool instead of a fully independent replacement. This makes it especially suitable for a boutique advisory firm like BeAdvise.

The implementation of VIPE is planned in five phases: discovery and scoping, engine development and integration, investor matching and marketing, AI integration and pilot application, and final launch. The full launch is expected after testing the system with real BeAdvise cases and making necessary improvements based on advisor and client feedback. After implementation, BeAdvise will be able to track success through KPIs such as valuation time, number of valuations per month, advisor hours saved, client satisfaction, and investor-startup matches generated.

**4. Conclusion**

Shortly, the current valuation process for BeAdvise has created operational inefficiencies through manual data collection, heavy reliance on Excel, disorganization of data sources, and the subjective judgment of the advisors. These problems limit the company's speed, consistency, and scalability. Although using outsourced or API-integrated data will help with parts of this problem, it will not completely solve the strategic part of the problem. VIPE is recommended as the most suitable solution because it provides an integrated, AI-powered platform for valuation and investor matching. By automating all benchmark analysis, revenue multiple calculations, scorecard generation, and matching processes, VIPE will enable BeAdvise to provide faster, more reliable, and more standardized advisory services while freeing up the advisor's time to focus on higher value tasks, such as strategic interpretation, communicating with clients, and managing the relationship between investors and start-ups.

Overall,VIPE will help BeAdvise achieve its growth potential while increasing its competitive advantage as a boutique advisory firm. VIPE will also contribute to SDG 8 by improving productivity, supporting the growth of startups, being more efficient with resources, and establishing a more effective link between startups and investors.

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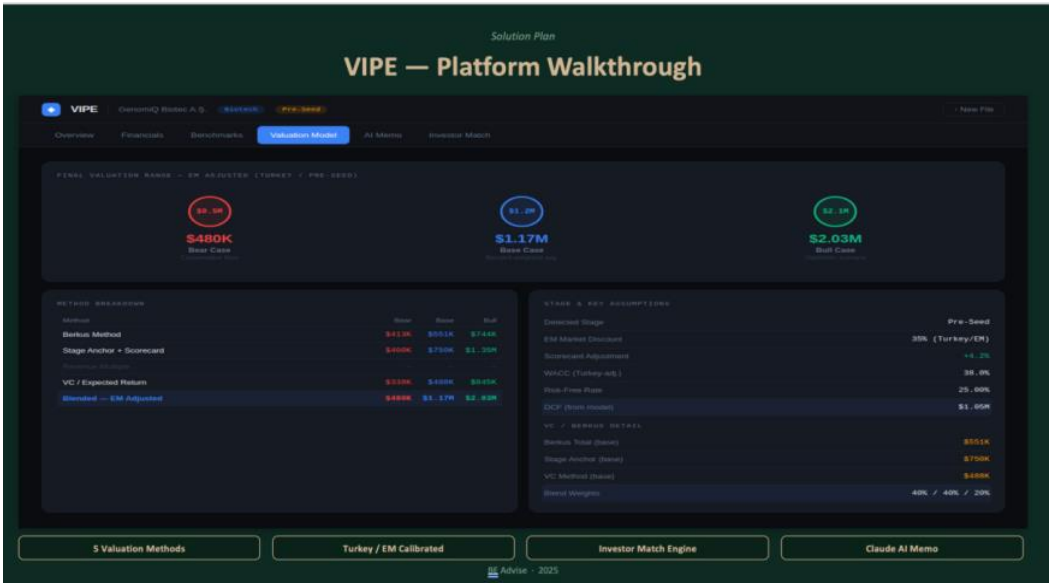
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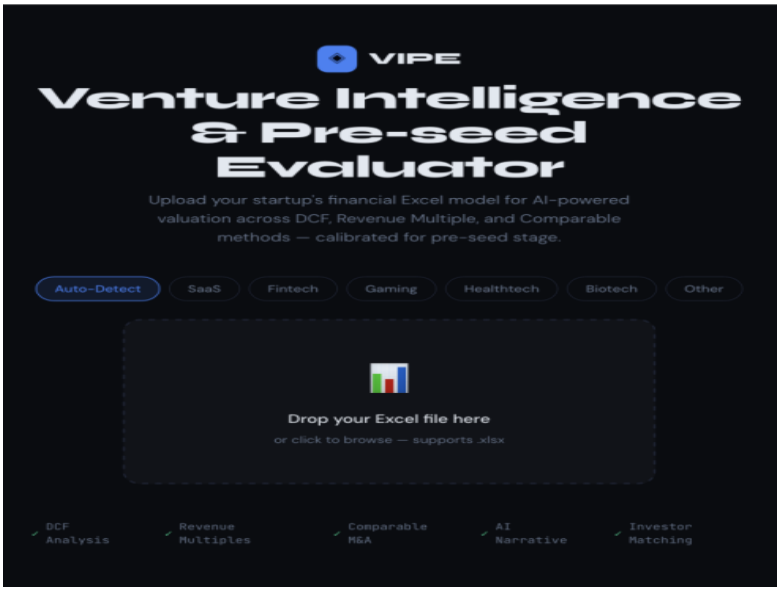
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# Appendices

## Appendix 1 - VIPE Platform Appearance




## Appendix 2 - VIPE Dashboard



## Appendix 3 - Critical Success Factors: BeAdvise Pre-VIPE vs. Post-VIPE

| Critical Success Factor | BeAdvise Pre-VIPE | BeAdvise Post-VIPE |
|---|---|---|
| **Speed of Delivery** | 2–4 weeks (manual) | Target: 24–72 hours (automated) |
| **Data Quality** | Relies on advisor-gathered data | Automated, defensible data |
| **Methodological Credibility** | Subjective factors involved | Stronger credibility; automation standardizes and reduces human error |
| **Scalability** | Limited by manual work | Mass valuations possible |
| **Relationship Capital** | Strong — key differentiator retained | Enhanced: defensible and repetable process increases trust |

## Appendix 4 - KPI Comparison Table

| Metric | Today (before VIPE) | After VIPE |
|---|---|---|
| **Valuations per month** | 3–5 | 50–100+ |
| **Time per valuation** | 2–4 weeks | 24–72 hours |
| **Advisor hours per valuation** | ~10–15 hours | ~1–2 hours |
| **Time spent on valuable advisory work** | ~30% of advisor time | ~80% of advisor time |
| **Revenue potential (valuation service)** | Low — limited by capacity | 3–5x growth within 12 months |
| **Client satisfaction with speed** | Below expectations | Significantly improved |
| **Quality and consistency of valuations** | Good, but varies by advisor | More consistent — automation reduces errors |
| **Startup-investor match quality** | Moderate | Better — more data means better matches |

# Türkiye İş Bankası, HR Problems




**Proje Ekibi: Big 5**

**Grup Üyeleri:** Hüseyin Güngör, Rabia Güven, Seda Yıldırım, Cenker Yıldız, Ahmet Fatih Zegerek

**Şirket Danışmanı:** Gülşah Bozdağ

**Akademik Danışman:** Lale Tomruk Gümüşlüoğlu

**Koordinatör Danışman:** Ceren Aydoğmuş

## ÖZET

Bu çalışma, Türkiye İş Bankası'nın hibrit çalışma modeli olan MaxiOfis'i çalışan deneyimi, operasyonel verimlilik ve fiziksel çalışma koşulları açısından incelemektedir. Araştırma kapsamında sektör ve şirket analizi, çalışan verileri, heatmap bulguları ve farklı MaxiOfis lokasyonlarından alınan görüşmeler birlikte değerlendirilmiştir. Bulgular, MaxiOfis'in çalışanlara esneklik, özerklik ve sosyalleşme imkânı sunduğunu; ancak birtakım teknik vefiziki koşullarda gelişime açık alanlar olması nedeniyle modelin performans potansiyelinin artırılabileceğini göstermektedir. Çalışma, bu alanlara yönelik olarak rezervasyon ve erişim süreçlerinin dijital olarak iyileştirilmesini, fiziksel çalışma alanlarının standartlaştırılmasını ve her lokasyonun kendi ihtiyaçlarına göre geliştirilmesini önermektedir. Böylece MaxiOfis'in daha verimli, sürdürülebilir ve çalışan odaklı bir hibrit çalışma modeline dönüşmesi hedeflenmektedir.

**Anahtar Kelimeler:** MaxiOfis, hibrit çalışma, çalışan deneyimi, verimlilik, rezervasyon sistemi, fiziksel standartlaştırma, sürdürülebilir çalışma, lokasyon bazlı iyileştirme

## 1 - Company Background

İşBank was founded in 1924 as the first national bank of the Republic of Türkiye (Türkiye İş Bankası, 2025). Its foundations were laid on the direct instructions of Mustafa Kemal Atatürk to ensure the economic development of the country emerging from war and to foster domestic capital growth. The institution, partly funded by Atatürk himself, stands today as Türkiye's largest private bank. Since its establishment, the bank has played a pioneering role in technological transformation and innovative banking practices, setting industry standards not only in financial services but also in its operating models. In line with this vision, İşBank has implemented the "MaxiOfis" hybrid work model, which combines traditional office structures with modern requirements. MaxiOfis is an ecosystem that offers bank employees alternative workspaces outside of Headquarters, closer to their residences, and equipped with high-tech facilities. The main goal of the model is to provide employees with flexibility and autonomy, improve work-life balance, and strengthen corporate culture by creating social interaction areas where employees from different departments come together. Today, the MaxiOfis network, spread across strategic locations in Turkey, represents one of the most concrete and dynamic components of the bank's "employee-centric" digital transformation strategy.

## 2 - Problem Description

Although the MaxiOfis hybrid working model at İşBank supports employee satisfaction and engagement, its positive effects on measurable work performance vary across different locations. While the flexibility, autonomy, and high level of employee engagement enabled by MaxiOfis are appreciated, some challenges may be arising from the current working structure (Gajendran & Harrison, 2007; Felstead & Henseke, 2017). As previous studies have shown, the physical environment plays a significant role in work performance (Vischer, 2007; Jensen et al., 2005). Moreover, some technical problems related to the reservation system may slow down the process.

The key concern in the current reservation system stems from the disconnect between reserving seats in the office and actually using them. Because of the ghost reservations, i.e., spaces that are technically occupied in the system bur remain physically unused, employees may occasionally experience difficulties finding available spots despite existing capacity. This situation is also supported by interviews conducted with employees across different MaxiOfis locations.

The analysis shows that employees are satisfied with the high levels of engagement and wellness. However, the results obtained through business output metrics did not reveal the same picture, as differences in working conditions across locations affected both the employee experience and productivity. Through interviews carried out in consideration of the diversity created by the MaxiOfis structure across different locations, the hybrid working model, and the differences arising from physical and operational structures, key areas for improvement and change were identified.

## 3 - Recommended Solutions

The recommended solution framework is built on two complementary pillars: digital reservation optimization and physical workspace standardization (see Appendix B). These solutions should not be treated as separate improvements, because the operational and physical issues in MaxiOfis locations are strongly connected. Therefore, software efficiency can only solve part of the problem unless it is supported by physical improvements. Furthermore, this integrated approach aims to guarantee the same high quality of service at every location.

The first general solution focuses on efficiency and capacity utilization since employees can reserve seats without having to attend which creates ghost reservations. To minimize such reservations, we propose converting reservations into attendance signals through a mandatory check-in system one day prior to the reservation, automatic cancellation of unconfirmed bookings, a shorter one-week reservation horizon, and a waitlist

mechanism for canceled or unused slots. Additionally, the reservation system could be integrated based on different workspace types and employees' needs for these areas.

Different from the current system, our proposal supports reliability through a system that calculates a dynamic score based on historical attendance behavior and no-show frequency. At the same time, a transition from QR-based entry to a card-based turnstile system may integrate physical access with digital reservation data. As a result, the reservation process becomes more measurable and useful for HR decision-making.

The second general solution focuses on MaxiOfis Workspace and Service Standardization. Establishing physical and operational standards at MaxiOfis locations is a strategic necessity that directly affects corporate efficiency and comfort in the workplace. The heatmap findings and interviews show that physical conditions vary among different locations. This solution aims to ensure the same productivity potential in every location by creating the "İşBank Corporate Workspace Standards" or MaxiOfis Standard Checklist. This checklist includes acoustic and quiet space standards, focus pods, compact meeting rooms, height-adjustable desks, ergonomic laptop risers, isolated dining areas, improved ventilation, social areas, coffee stations, and smart vending machines.

Location-based solutions could be evaluated through pilot implementations in selected office locations. For MaxiOfis A, improvements would mainly focus on functional separation. Small acoustic phone booths, a small meeting or socialization area, artificial lighting, adjustable LED panels, and IT checks for QR entry have the potential to improve the experience without requiring costly structural changes. For MaxiOfis B, the relocation to a new area with improved nearby facilities and dining options could help enhance the employee experience. The new location could also include quiet/focus areas, customer-call areas, team areas, meeting rooms, team-based reservation authority, cafeteria access when needed, and vending machines. For MaxiOfis C, the same physical improvements would be beneficial for employee experience; additionally, a faster access flow, seasonal climate control adjustments, and parking agreements could also be considered. For MaxiOfis D, improvements related to the QR entry process, reservation practices, workspace availability, and workplace facilities could be evaluated. These pilot improvements could allow the company to test feasibility, control costs, and collect performance data (see Appendix C). The proposed implementation process is structured as a 16-week phased plan covering planning, system rollout, physical improvements, and final evaluation (see Appendix A).

## 4 - Conclusion

This study revealed that while employee engagement is high within the İşBank MaxiOfis ecosystem, there are still some operational and physical areas with room for improvement. Interviews with MaxiOfis users and performance data show that physical conditions are highly related to the level of productivity. In our proposal, the digital reservation optimization and physical space standardization are designed as a complementary, indivisible package. This strategy, to be implemented in four pilot offices minimizes operational risks and offers a scalable model that can be extended to the entire system. This holistic approach is fully aligned with the United Nations' "Decent Work and Economic Growth" (SDG 8) goals (United Nations, 2015). Consequently, with the standardization package, starting with pilot branches, the company's hybrid work vision could further support the translation of employee satisfaction into more sustainable performance improvements in both the short and long term.

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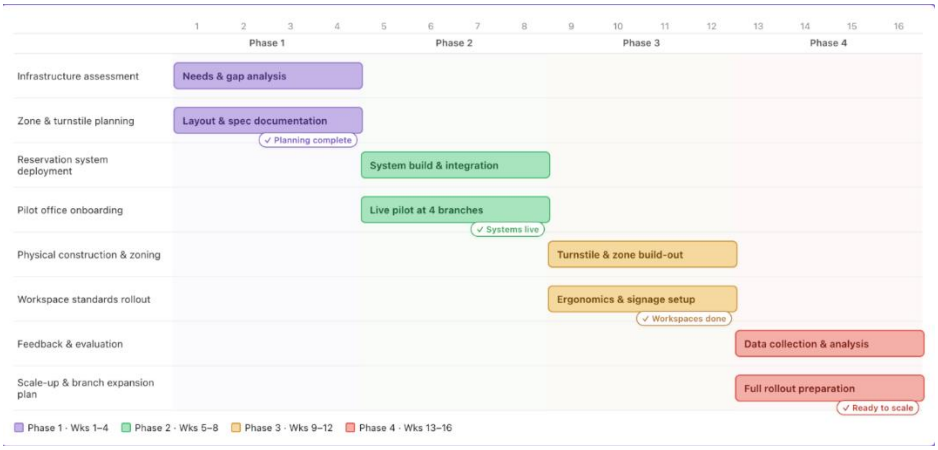
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# Appendices

## Appendix A




**Note:** This timeline summarizes the 16-week implementation plan, including planning, system rollout, physical improvements, and final evaluation.

## Appendix B

| Solution Pillar | Main Focus | Key Actions | Expected Contribution |
|---|---|---|---|
| Digital Reservation Optimization | Improving capacity utilization, fairness, and access control | Mandatory pre-check-in, automatic cancellation of unconfirmed bookings, shorter reservation horizon, waitlist mechanism, workspace classification, reliability-based prioritization, and card-based entry system | Reduces ghost reservations, improves actual seat availability, creates fairer access, and links reservations with real attendance |
| Physical Workspace Standardization | Creating consistent and productive working conditions across MaxiOfis locations | Acoustic phone booths, quiet zones, compact meeting areas, ergonomic desks, laptop risers, isolated dining areas, ventilation improvements, social areas, and vending/snack points | Reduces noise and distraction, improves employee comfort, supports concentration, and decreases location-based quality differences |
| Integrated Implementation | Applying both digital and physical solutions together | Testing improvements through selected pilot offices before wider rollout | Allows İşBank to test feasibility, control costs, collect feedback, and scale the model more safely |

**Note:** This table summarizes the proposed solution framework, including digital reservation optimization, physical workspace standardization, and integrated implementation.

**Appendix C**

| Pilot Office | Recommended Improvement Focus |
|---|---|
| MaxiOfis A | Small acoustic phone booths, compact meeting/social area, artificial lighting improvements, adjustable LED panels, and QR/access system checks |
| MaxiOfis B | Quiet/focus areas, customer-call areas, team zones, meet,ng rooms, team-based reservastion options, cafeteria access if needed, and vending machines |
| MaxiOfis C | Completion of silent areas and meeting cabins, simplifies internal access, summer capacitymonitoring, air-conditioning review, and possible parking agreements |
| MaxiOfis D | Simpler access flow, softer no-show awareness mechanisms, semi-closed booths, better-ventilated eating area, and Wi-Fi/VPN review by IT |

**Note:** This table summarizes the main improvement areas for the four pilot MaxiOfis locations.

# Mutfak Sanatları Akademisi (MSA), HR Problems




**Proje Ekibi: Mission Capstone**

**Grup Üyeleri:** Eren Acar, Elif Deniz Alaaddinoğlu, Elif Ebrar Arslan, Doğa Çelebi, Sunay Çağan Şimşek, Zehra Tümbaş

**Şirket Danışmanı:** Yasemin Alpagut

**Akademik Danışman:** Oğuz Gencay

**Koordinatör Danışman:** Ali Rıza Zafer Sayar

## ÖZET

Türkiye'nin en köklü özel aşçılık eğitimi kurumu olan Mutfak Sanatları Akademisi (MSA), 22 yıllık öncü geçmişine karşın kritik bir stratejik dönüm noktası ile karşı karşıyadır: 2030'a doğru genişleyen kariyer yelpazesi ve değişen sektör dinamikleri, mevcut müfredatın ötesine geçen yeni yetkinlik katmanları gerektirmektedir. Sektör analizi, çevresel değerlendirme, yönetim görüşmeleri ve 141 mezunla gerçekleştirilen anket çalışmasına dayanan bu rapor, MSA'nın bu fırsatı değerlendirmesine yönelik üç alternatif çözüm önermektedir: klinik beslenme bilimini mutfak pratiğiyle buluşturan Tıp Olarak Gıda programı, görsel hikaye anlatımı ve kişisel marka geliştirme becerilerini kapsamlı biçimde ele alan İletişimci Şef atölyesi ve yapay zekayı restoran yönetimine entegre eden YZ Destekli Restoran Operasyonları elektifi. En iyi çözüm olarak, teknik açıdan yetkin mezunları bütüncül deneyim tasarımcılarına dönüştüren sekiz haftalık Benzersiz Yemek Deneyimi Tasarımı Elektif Dersi önerilmektedir.

**Anahtar Kelimeler:** Aşçılık Eğitimi, Müfredat İnovasyonu, Deneyim Tasarımı, Gastronomi, 2030 Kariyer Yetkinlikleri

## 1. Company Background

Mutfak Sanatları Akademisi (MSA) was founded in 2004 by entrepreneur Mehmet Aksel, who had a decade of experience in the hospitality sector. When MSA was established, no comparable private culinary education institution existed in Türkiye, making MSA a pioneer. The firm initially operated with a Vestel/Zanussi sponsorship but decided to leave the sponsorship and have the standalone name "Mutfak Sanatları Akademisi". From its early years, the firm prioritized accreditation, by doing so it became the only institution in Türkiye that was accredited by City / Guilds, Scottish SQA, and Pearson/Ed Excel, all while operating under the regulatory oversight of the Türkish Ministry of National Education. In 2010, City & Guilds designated MSA as one of the world's top two culinary schools, and the following year it became the first culinary school in Türkiye to receive WACS accreditation. Most recently, MSA became an approved WSET provider, further expanding its international credential portfolio (Mutfak Sanatları Akademisi, n.d.).

Today, MSA employs approximately 140 people, equally distributed white, grey and blue-collar workers. The institution serves two primary customer groups: professional culinary program student, with over 1,200 students graduating every year, and workshop participants, whom exceed 27,000 per year across more than 400 events (Mutfak Sanatları Akademisi, n.d.). With over 30,000 alumni globally, MSA holds the largest market share among private culinary education institutions in Türkiye, and is also recognized by WACS as the highest quality professional culinary school in the world. The firm is wholly owned by its founder and operates as a sole proprietorship, having received funding through sponsorships and bank loans rather than external investment

## 2. Problem Definition

The main business problem indicated in this report is "What other abilities are needed to convert this foundation into multidisciplinary long-term professional roles, and how much practical culinary talents serve as a transferable foundation for various career paths?" Changing technology, the transformation of the food industry, evolving consumer expectations, and changing work models are creating a variety of career opportunities beyond traditional kitchen roles. Therefore, these changes and new opportunities push MSA to consider how it can develop its courses and curricula with clear, structurally viable education programs for MSA's graduates by 2030, through additional education, cross-disciplinary skills, or professional experience for new gastronomy-related career paths. The company gives its yacht education program as an example of the problem, because it was modernist and offered a new career path 20 years ago. However, today, this yacht program lost its innovative property because technological developments and changing customer preferences create new career paths (Baras S., Alpagut Y., personal communication, 2026).

## 3. Recommended Solutions

### 3.1. Alternative 1: Food as Medicine

The core idea of this alternative is to educate chefs on the Türkiye Beslenme Rehberi (TÜBER 2022) framework, enabling them to integrate clinical nutritional science into their professional culinary training. With this newly acquired information, MSA graduates will be able to prepare meals for patients who often suffer from malnutrition after surgery, and to make informed culinary choices for customers with special dietary needs who also suffer from mineral deficiencies.This education will enable them to operate within a three-way collaborative workflow between physicians, dietitians, and kitchen staff. The proposed curriculum and course schedule are available in the appendix as *Chart 1*.

**Strengths:**

1. The model is directly grounded in Türkiye's own TÜBER 2022, published by the Turkish Ministry of Health, and is calibrated specifically to public health data, food supply, and cultural eating patterns, allowing chefs to

adapt beloved national dishes to clinical needs while using geographically indicated agricultural products of Türkiye.

2. The model addresses documented nutritional deficiencies in the Turkish population, including below-EAR levels of vitamin D, calcium, vitamin B12, zinc, magnesium, and folate (T.C. Sağlık Bakanlığı Halk Sağlığı Genel Müdürlüğü, Sağlıklı Beslenme ve Hareketli Hayat Dairesi Başkanlığı, 2022).

3. With this education, MSA graduates could enter a largely unoccupied professional niche with clear employability options, creating a near-blue-ocean opportunity.

4. The model aligns with Turkish healthcare priorities for 2030, as identified by TÜBER 2022: the rise in obesity, Type 2 diabetes, and cardiovascular disease (T.C. Sağlık Bakanlığı Halk Sağlığı Genel Müdürlüğü, Sağlıklı Beslenme ve Hareketli Hayat Dairesi Başkanlığı, 2022). The model would equip chefs with the education needed to prevent and accelerate recovery from these diseases.

**Limitations**

1. Regulatory gray zone: A chef trained in TÜBER 2022 cannot act as a replacement for dietitians; the risk of crossing into the practice of registered dietitians, which is a legally protected area of profession under the Turkish health code, may pose a legal threat (T.C. Sağlık Bakanlığı, 2025). Therefore, the model likely requires input from institutions like Türkiye Diyetisyenler Derneği (Türkiye Dietitians Association).

2. The model creates a need for new institutional partnerships. Teaching TÜBER 2022 requires instructors with medical nutrition credentials.

3. The market is not yet aware of this need; the hospital kitchens are mainly operated by large catering contractors, which, like restaurants, are not especially aware of this problem, so an education initiative for employers could be considered

### 3.2. Alternative 2: Chef as a Communicator

This elective is designed to bridge the gap between MSA's core practical culinary training and the critical communication skills that empower chefs to become storytellers, educators, and brand builders. Rather than producing "food influencers," the program cultivates the chef as a multi-disciplinary communicator, someone who can articulate a culinary philosophy through photography, video, styling, and narrative design. It positions aspiring chefs by drawing inspiration and receiving support from MSA alumni who successfully combine disciplines (for example, food photographers Derya Turgut and İsmail İleru, or artist Deniz Aşık, whose work blends pastry with conceptual art). Students learn to transform their knowledge of flavor, technique, and ingredients into compelling visual narratives. The proposed curriculum and course schedule are available in the appendix as *Chart 2.*

**Strengths:**

1. This elective turns the digital skills our graduates are already seeking into a core part of their education. It ensures they graduate with the professional ability to present their work at the same high level as their culinary skills. According to the survey, 43% MSA graduates have said that they had to develop these skills on their own after graduation, implying a gap in the education.

2. It offers career opportunities beyond just working as a chef in the kitchen. The interdisciplinary richness offers a new perspective for students who want to work only as chefs, while also supporting those who want to pursue other fields.

3. By activating the school's unused studio, this course provides students with a dedicated space to develop their professional portfolios.

4. Having a ready-to-use digital portfolio at the end of the elective course helps them stand out from their competitors. It will be an effective tool in future job interviews.

**Limitations:**

1. Investment in photography/video equipment, as well as training in both culinary arts and visual media, is necessary.

2. Due to the constant changes in technology and social media, the content of this elective course must be continuously updated and remain dynamic.

3. If the content and purpose of the course are not properly explained and designed for both students and instructors, it could be perceived as an "influencer training camp, etc." This could actually cause MSA to lose its desired positioning as a "chef as a communicator."

### 3.3. Alternative 3: AI Supported Restaurant Operations & Management

Artificial Intelligence (AI) could offer restaurants greater opportunities to operate efficiently and access information to make business decisions. The key advantage of the alternative proposed is that it offers immediate solutions compared to the existing culinary business models. Use of AI technologies will continue to grow in the culinary industry, especially in digital tools, automation, and smart kitchen systems. Therefore, AI should be applied in two operational areas: Financial Management and Restaurant Operations Systems. The proposed curriculum and course schedule are available in the appendix as *Chart 3.*

**Strengths:**

1. Makes both cooking and the business side of gastronomy sector more efficient,

2. Efficient management systems,

3. Gives chefs the important management skills they need by combining them with the digitally available tools and platforms integrated with AI.

**Limitations:**

1. The effects of this project will be limited to a number of use cases, therefore its marginal benefit to MSA's innovation cycle will be limited in the long run,

2. Won't dramatically open up lots of new job opportunities by itself,

3. Will need to be regularly refreshed and closely monitored, as tech moves quickly and relies on programs and applications made by other companies to implement the necessary readaptation to those changes.

### 3.4. Best Solution: Unique Dining Experience Design Elective Course

As the best solution, we proposed the 'Unique Dining Experience Design Elective Course', an 8-week elective program that aims to help chefs gain design skills and transform them into dining experience designers. Students will be able to produce dining experiences that are consistent, purposeful, and unforgettable.

The preparation of food is the main focus of traditional culinary education (cooking techniques, recipes, and traditional plating), while the dining experience consists solely of the food itself, ignoring the larger system

through which food is perceived. Unique Dining Experience Design Elective Course fills this gap by providing a comprehensive framework that covers seven essential dimensions: plating, food preparation, ambiance, ordering, storytelling, service choreography, and sound design. This will help students to close the gap between culinary skills and real-world restaurant success. The proposed curriculum and course schedule are available in the appendix as *Chart 4.*

**Why is This the Best Solution?**

The reasons why this elective course is the best among the solutions produced for the problem given by MSA are: its adaptation of holistic experience design to the program's structure and the measurable outputs it produces; its development of technical and cognitive capabilities through the workshop, and its learning-by-doing training structure.

Firstly, considering the integration of holistic experience design into the program's structure, although the program focuses on a different element each week, all these topics are aligned under a single narrative: dining experience design. This program feature allows participants to create cohesive, powerful eating experiences and reflects best-in-class industry practices.

Secondly, the program's measurable outputs enable students to gain real-world experience based on the week's concept. This guarantees that the learning objectives are observable, measurable, and immediately applicable in practical contexts.

Thirdly, participants enhance their strategic thinking skills regarding customer experience, emotional impact, and multisensory design, in contrast to traditional culinary training, which focuses solely on culinary skills, by developing both technical and cognitive abilities throughout the program.

Fourth, in line with a learning-by-doing structure, students undergo training each week that blends conceptual analysis, hands-on culinary work, and individual creative outputs. Students iteratively develop concepts through a piece-to-whole development process, culminating in a fully integrated experience design.

In addition, aside from these reasons, focusing on the survey results, 39.7% of participants (MSA Alumni) combined their MSA education with business and entrepreneurship. This rate shows that it was the area where MSA graduates most frequently utilized their culinary training. This indicates that a large majority of MSA graduates start new businesses and apply their education there; therefore, graduates need skills to start their own businesses. This program provides exactly that, and graduates who want to start their own business after graduating from MSA will gain a skill that will assist them in their business/entrepreneurship journey by also taking this workshop (Personal survey, 2026).

## 4. Conclusion

This report aimed to answer how MSA will redesign its education portfolio for the future by introducing the multidisciplinary skills required for the changing environment of the 2030s, while maintaining its hands-on, practical education identity that has enabled the firm to become a market leader. To solve this problem, three alternatives and one best solution idea have been proposed. The first alternative, "Food as Medicine," offers a new career pathway for students in fields parallel to both culinary and clinical fields, opening an entirely new field of operations based on evidence-based nutritional gastronomy. The second alternative focuses on a need reported by MSA alumni: the "Chef as a Communicator" program equips students with the skills to be not only a content creator but also a visual storyteller. The last alternative, "AI-Supported Restaurant Operations & Management," aims to enable chefs and owners to leverage AI to increase productivity through digital analytical tools. The best solution the report presented is the "Unique Dining Experience Design Elective Course", which is an 8-week course that covers 8 dimensions of unique experience factors. In conclusion, all

offered solutions create new career pathways for MSA's students that will make them more competitive in the changing landscape of the 2030s.

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# Appendices

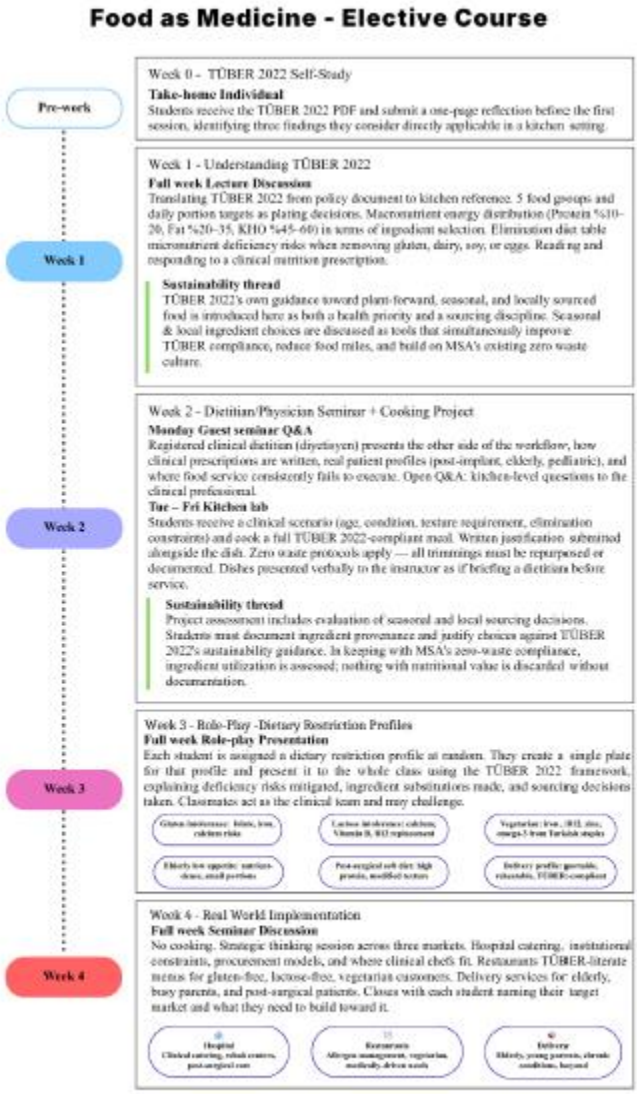



*Chart 1: Food as Medicine Elective Course Content and Weekly Plan*

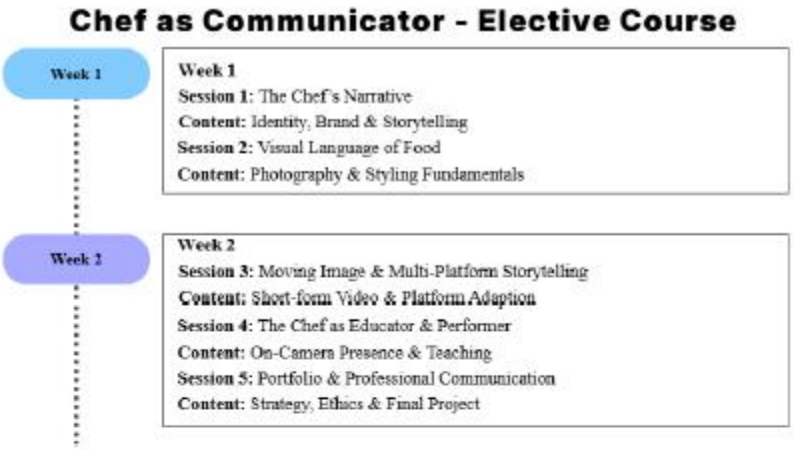



*Chart 2: Chef as Communicator Elective Course Content and Weekly Plan*

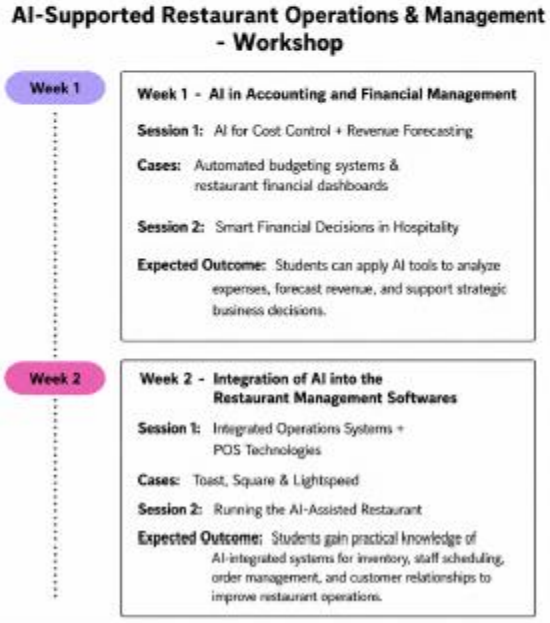



*Chart 3: AI-Supported Restaurant Operations & Management Workshop*

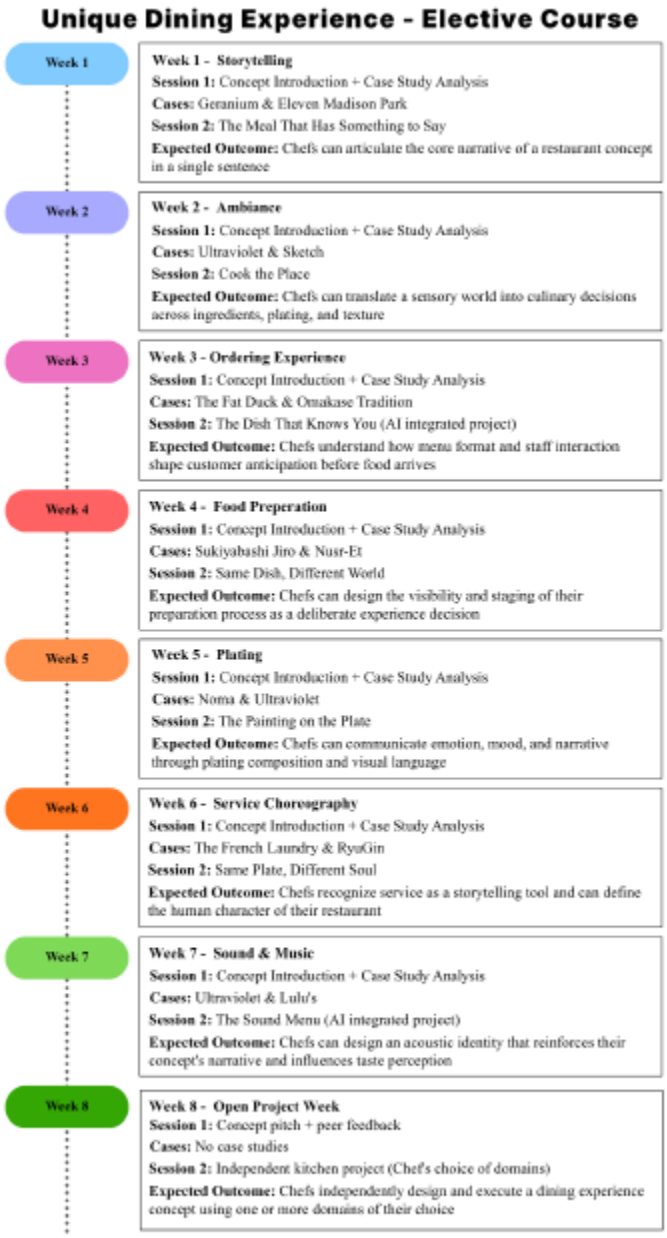



*Chart 4: Unique Dining Experience Elective Course Content and Weekly Plan*

# SolarVis Co., Business Development Problems




**Proje Ekibi**: Grup 5 (G5)

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**Koordinatör Danışman:** Fehmi Tanrısever

## ÖZET

SolarVis, güneş enerjisi projelerinde müşteri edinimi, fizibilite analizi ve teklif oluşturma süreçlerini dijitalleştiren bir B2B yazılım platformudur. 16'dan fazla ülkedeki 1.000'den fazla şirkete hizmet veren platform, 420.000'i aşkın fizibilite raporu ve 10.200'den fazla proje üretmiştir. Buna karşın sigorta süreci hâlâ platform dışında yürütülmekte; bu durum proje başına 3–4 günlük ek gecikmeye ve önemli gelir kayıplarına yol açmaktadır. Üç alternatif çözüm incelendikten sonra en uygun çözümün, dört sigorta paketi (Temel, Standart, Gelişmiş ve Kurumsal) ile otomatik öneri motorunu entegre eden çok-sigortacılı gömülü sigorta marketplace modeli olduğu sonucuna varılmıştır. Birinci yılda %40 daha hızlı poliçe süresi, %12 sigorta ekleme oranı ve sigortalı projeler üzerinde %5–7 net komisyon marjı hedeflenmektedir.

**Anahtar Kelimeler:** Gömülü Sigorta, Güneş Enerjisi, B2B Yazılım, Dijital Aracılık, Fintech, Yenilenebilir Enerji

## 1. Company Background

SolarVis is a B2B solar software platform that digitizes customer acquisition, feasibility analysis, and proposal generation for the renewable energy sector. Founded by METU graduates and headquartered in Türkiye, the platform serves more than 1,000 companies across 16+ countries. To date it has generated over 420,000 feasibility reports and supported 10,200+ solar projects.

The platform consolidates lead generation, 3D system design, proposal writing, CRM, and project management into a single environment. SolarVis's key commercial partners include Akbank, Garanti BBVA, Türkiye İş Bankası, and Yapı Kredi. Revenue is generated primarily through a SaaS model anchored by its Solar Proposal Software and Solar Lead Generator products.

The Turkish solar market provides a strong tailwind: by February 2026, solar energy accounted for 21% of total installed electrical capacity in Türkiye, with 39,426 of 41,505 registered power plants being solar installations (Republic of Türkiye Ministry of Energy and Natural Resources, 2026). Strategically, SolarVis aims to become an end-to-end ecosystem enabler for the solar industry, extending its value beyond front-end digitization into financial and insurance services.

## 2. Problem Description

Despite automating the early and mid-stages of the solar customer journey, the insurance procurement step remains entirely off-platform. Customers, EPC companies, and distributors must contact insurers through phone calls, e-mails, and face-to-face meetings, manually compile supporting documentation, and duplicate project data already available within SolarVis. This creates an average delay of three to four additional working days per project.

The root causes of this gap are multi-layered: (1) workflow disjunction—the digital funnel terminates at the proposal stage; (2) data translation failure—SolarVis holds rich project data that has not been mapped to insurers' underwriting requirements; (3) an unvalidated intermediary business model; (4) absence of stakeholder integration across customers, EPC contractors, insurers, brokers, and banks; and (5) unclear viability from a cost-benefit perspective.

For SolarVis, the strategic consequences include weaker platform stickiness, no commission income, and a competitive vulnerability should rivals integrate insurance first. Meanwhile, many residential and small commercial customers either forego insurance altogether or overpay by 10–20% above market averages due to lack of comparison tools. EPC companies absorb the coordination burden, reducing their own installation throughput.

## 3. Recommended Solutions

### *3.1 Alternative Solutions Considered*

Four solutions were evaluated across six criteria: customer experience, speed to market, revenue potential, scalability, and strategic fit.

| Alternative | Description | Key Strength | Key Weakness | Score /25 |
|---|---|---|---|---|
| **1. Embedded Marketplace (Recommended)** | Multi-insurer in-platform intermediary with automated quote engine | Full workflow integration; highest revenue & scalability | Longest time to market; higher initial complexity | **23** |
| 2. White-Label Single Insurer | Exclusive partnership with one insurer under SolarVis brand | Fast deployment (3–6 months); simple integration | Single-partner risk; limited product choice | 19 |
| 3. Broker-Led Referral | Leads forwarded to external brokers for follow-up | Very low start-up cost; no licensing required | User leaves platform; minimal margin; no data retention | 14 |
| 4. Passive Comparison Tool | Static module listing insurance providers and typical prices | Easiest to build; minimal legal risk | No revenue; does not resolve the core problem | 12 |

*Table 1. Alternative Solution Comparison (unweighted, scale 1–5 per criterion).*

### *3.2 Best Solution: In-Platform Embedded Insurance Marketplace*

Alternative 1—an embedded, multi-insurer insurance marketplace operated by SolarVis as a licensed digital intermediary—is the recommended solution for five reasons:

- End-to-end workflow integration: The only alternative that keeps the customer entirely within the platform, reducing insurance cycle time from 3–4 days to under 24 hours.
- Optimal use of existing data assets: SolarVis already holds system specifications, location data, equipment details, and projected energy yields—precisely the information insurers need to price solar PV policies.
- Superior revenue generation: Projected commission revenues are USD 35,000 in Year 1, USD 180,000 in Year 2, and USD 420,000 in Year 3, with breakeven in the latter stages of Year 2 (based on a 12% attachment rate, USD 1,500 average annual premium, 13% blended commission).
- Multi-insurer neutrality: A marketplace model ensures competitive pricing and eliminates single-partner dependency, enhancing trust with EPC partners and large enterprise clients.

- Strategic alignment: Adding insurance to a platform that already covers feasibility, design, proposals, CRM, and project management deepens user lock-in and creates a natural bridge to future embedded financing services.

### *3.3 Implementation Plan*

The implementation follows a 12-month, three-phase roadmap governed by five SMART goals:

| Goal | Target | KPI | Deadline | Dept. |
|---|---|---|---|---|
| G1 – Speed | Reduce cycle time from 3–4 days to <24 h | Median quote-to-bind duration | Month 12 | Product & Eng. |
| G2 – Adoption | ≥12% insurance attachment rate | Attachment rate (%) | Month 12 | Marketing |
| G3 – Partners | ≥2 live insurers, ≥2 product types | Live insurer integrations | Month 9 | Biz. Dev. |
| G4 – Revenue | ≈USD 35k Y1; ≈USD 420k Y3 | Net commission (USD/month) | Month 12 / Month 36 | Finance |
| G5 – Satisfaction | NPS ≥50; CSAT ≥85% | In-platform NPS / CSAT survey | From Month 4 | Mktg. & CS |

*Table 2. SMART Goals Summary.*

Phase 1 – Foundation & MVP (Months 1–4): Regulatory licensing (SEDDK), letters of intent with two insurers, API architecture (REST, OAuth, KVKK-compliant), MVP user interface with one-click insurance selection post-proposal, and an internal pilot with 25+ real proposals across 2–3 EPC partners.

Phase 2 – Expansion (Months 5–8): Launch machinery breakdown and third-party liability cover, build EPC partner dashboard, begin co-marketing campaigns with banking partners (Akbank, Garanti BBVA, Türkiye İş Bankası, Yapı Kredi), and target a third insurer by Month 8.

Phase 3 – Scale & Optimize (Months 9–12): Introduce business interruption insurance for commercial/industrial customers, localize for two additional countries, run A/B pricing tests, release the first Insurance Performance Dashboard, and finalize the Year-2 roadmap incorporating embedded financing.

Resource requirements include 2–3 incremental hires (backend engineer, Insurance Business Development Manager, part-time compliance officer), a KVKK-compliant data platform, e-signature integration, and an estimated first-year budget of USD 90,000–130,000. Five departments share accountability (Product & Engineering, Business Development & Partnerships, Marketing & Customer Success, Legal & Compliance, Finance), governed by a RACI matrix and quarterly Steering Committee reviews chaired by the CEO.

**4. Conclusion**

SolarVis has successfully digitized the front end of the solar customer journey but faces a critical gap: insurance procurement remains manual and off-platform, generating delays of 3–4 days per project and leaving commission revenue uncaptured. This report recommends the creation of an embedded, multi-insurer insurance marketplace within the SolarVis platform, operated as a licensed digital intermediary.

The recommended solution resolves the time-lag problem, transforms existing data assets into a revenue engine, enhances platform stickiness, and positions SolarVis as a true end-to-end solar ecosystem provider. Financial projections show a path from USD 35,000 in Year 1 commissions to USD 420,000 by Year 3, with an expected breakeven in the second half of Year 2, on an initial investment of approximately USD 110,000.

The initiative aligns strongly with UN Sustainable Development Goal 8 (Decent Work and Economic Growth), specifically targets 8.1 (sustainable growth), 8.2 (productivity through innovation), 8.5 (decent work), 8.6 (youth employment), 8.8 (safe work environments), and 8.10 (universal access to financial services). Secondary contributions include SDG 7 (Clean Energy), SDG 10 (Reduced Inequalities), and SDG 17 (Partnerships for the Goals).

Management is urged to endorse the programme and allocate an initial first-year budget of approximately USD 110,000—sufficient to fund a credible MVP launch and validate the commercial model before Year 2 scale-up.

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# Appendices

## *Appendix 1 – SMART Goals Table*

| Goal | Specific & Measurable | Achievable & Relevant | KPI | Time-Bound |
|---|---|---|---|---|
| G1 Speed | Reduce insurance cycle time from 3–4 days to <24 h | Achievable via API-based quoting; relevant to platform stickiness | Median quote-to-bind duration | 12 months from go-live |
| G2 Adoption | ≥12% attachment rate on finalized proposals | Benchmarked against embedded insurance leaders | Insurance attachment rate (%) | End of Month 12 |
| G3 Partners | ≥2 authorized insurers, ≥2 product types | Aligned with existing bank partner ecosystem | Number of live insurer integrations | End of Month 9 |
| G4 Revenue | ≈USD 35k Y1 / USD 420k Y3 | Conservative attachment & commission assumptions | Net commission USD/month | Y1 Month 12; Y3 Month 36 |
| G5 Satisfaction | NPS ≥50 and CSAT ≥85% | Achievable through clean UX & reliable partners | In-platform NPS / CSAT survey | Continuous; first measure end of Month 4 |

## *Appendix 2 – Three-Year Financial Projection*

| Year | Qualifying Proposals | Attachment Rate | Avg. Premium (USD) | Commission Rate | Est. Revenue (USD) |
|---|---|---|---|---|---|
| Year 1 | ~4,000 | 5% | $1,300 | 13% | **~$35,000** |
| Year 2 | ~6,500 | 12% | $1,700 | 13% | **~$180,000** |
| Year 3 | ~9,000 | 17% | $2,200 | 13% | **~$420,000** |

## *Appendix 3 – RACI Matrix*

| Activity | Product & Eng. | Biz. Dev. | Mktg. & CS | Legal | Finance |
|---|---|---|---|---|---|
| Regulatory licensing & contracts | C | C | I | **R/A** | C |
| Insurer onboarding & commercial terms | C | **R/A** | I | C | C |
| Platform / API development | **R/A** | C | C | C | I |
| UX, in-app messaging, attachment-rate growth | C | C | **R/A** | I | I |
| Pricing, commissions, ROI tracking | C | C | I | C | **R/A** |
| Data privacy / KVKK compliance | R | I | I | **A** | I |

*R = Responsible · A = Accountable · C = Consulted · I = Informed*

# JOTFORM Yazılım A.Ş., Strategy Problems




**Proje Ekibi:** Future Cash Flows

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**Akademik Danışman:** Betül Altunsu

**Koordinatör Danışman:** R. Serdar Kurdoğlu

## ÖZET

Jotform, abonelikler, ek hizmetler ve gelir paylaşımına dayalı entegrasyonlar gibi mevcut gelir yaratma kanallarının ötesine geçerek uzun vadeli büyümeyi güçlendirmeyi ve gelir elde etme verimliliğini artırmayı amaçlamaktadır. Ancak şirket; ölçeklenebilir gelir büyümesi fırsatları yaratma, mevcut gelir modellerini optimize etme ve yeni gelir kaynakları geliştirme süreçlerinde kullanıcı deneyimini koruma ve müşteri kaybını artırmama gibi önemli zorluklarla karşı karşıyadır. Yapılan analizler sonucunda düşük ücretsizden ücretliye dönüşüm oranı ve abonelik paketleri arasındaki dengesiz gelir dağılımı, şirketin büyümesini sınırlandıran temel problemler olarak belirlenmiştir. Bu doğrultuda raporda farklı alternatif çözümler değerlendirilmiş ve en uygun çözüm olarak Jotform'un fiyatlandırma mimarisinin yeniden yapılandırılması önerilmiştir. Önerilen çözüm kapsamında Gold ve Enterprise paketleri arasına yeni bir "Business" paketi eklenmesi ve Jotform ekosistem ürünlerinin abonelik planlarına daha stratejik şekilde entegre edilmesi planlanmıştır. Böylece kullanıcılar için daha net bir yükseltme yolu oluşturulması, kullanıcı başına ortalama gelirin artırılması, müşteri kaybı ve iade oranlarının azaltılması hedeflenmektedir.

**Anahtar Kelimeler:** Jotform, SaaS, fiyatlandırma stratejisi, gelir büyümesi, abonelik modeli, no-code platformlar, dijital dönüşüm, müşteri dönüşümü, churn oranı, sürdürülebilir büyüme.

## Company Background

Jotform is a globally operating no-code SaaS platform founded in 2006 by Turkish software developer Aytekin Tank. The company was created to simplify online form building and data collection processes without requiring coding knowledge. Starting as a small bootstrapped side project, Jotform gradually expanded into one of the leading platforms in the online form builder industry while remaining fully independent without external investment. Today, the company serves millions of users across more than 190 countries and offers a broad ecosystem including online forms, workflow automation, e-signature solutions, mobile apps, payment integrations, and AI-powered tools.

Jotform operates with a customer-centric and innovation-driven approach focused on accessibility, automation, and digital transformation. The company's vision is to empower users and businesses to build digital workflows without technical expertise while reducing the friction of paperwork and manual processes. Over the years, Jotform has expanded beyond traditional form building into a more comprehensive no-code business platform through products such as Jotform Sign, Jotform Apps, Jotform Tables, and AI Agents. Its strong freemium model, extensive template library, global infrastructure, and compliance standards such as GDPR and HIPAA have helped the company establish a significant competitive position within the SaaS market.

## Problem Definition

Jotform is currently facing a slowdown in revenue growth despite operating in a rapidly growing no-code SaaS market and maintaining a large global user base. The company aims to strengthen long-term growth and improve monetization efficiency while diversifying beyond existing monetization channels such as subscriptions, add-ons, and revenue-sharing integrations. However, the current pricing and monetization structure creates several challenges, including a low free-to-paid conversion rate, uneven revenue distribution across subscription tiers, and high dependence on Gold-tier users. In addition, many customers use higher-tier plans only for short-term or seasonal needs and later cancel their subscriptions. The low free-to-paid conversion rate and the revenue generation imbalance between tiers indicate inefficiencies within the company's monetization structure. These issues greatly reduce the company's ability to fully benefit its large user base as well as limiting its overall revenue growth potential.

1- **Possible Solutions**

## Alternative Solutions

### Alternative 1- Tightening Free Plan Limitations

One alternative solution is reducing the generosity of the free plan in order to encourage users to upgrade to paid subscriptions more quickly. Currently, many users are able to satisfy their needs through the free plan, which weakens upgrade motivation and lowers the free-to-paid conversion rate. By decreasing submission limits, storage capacity, or access to premium features, Jotform could create a clearer distinction between free and paid plans. This approach could improve monetization in the short term, but it also carries the risk of negatively affecting user satisfaction and reducing user acquisition if restrictions become too aggressive.

### Alternative 2- Offering Temporary Premium Trials

Another alternative is introducing limited-time premium trials that allow users to experience advanced features before purchasing a subscription. This strategy aims to increase users' awareness of the value offered by higher-tier plans through direct experience rather than simple feature descriptions. Users who become accustomed to

premium functionalities may feel more motivated to upgrade after the trial period ends. However, this solution also creates the possibility of abuse, as some users may repeatedly use temporary accounts or subscribe only for short-term needs without generating stable long-term revenue.

**Alternative 3- Creating Educational and Industry-Specific Plans**

A third alternative solution is developing customized plans for educational institutions and sector-specific customer groups. Schools, universities, NGOs, healthcare organizations, and SMEs could benefit from tailored pricing structures and specialized feature bundles. This strategy could help Jotform build stronger customer loyalty and generate long-term recurring revenue through institutional usage. Nevertheless, institutional sales processes are often slower and require additional onboarding, support, and operational resources, making this a more long-term growth opportunity rather than an immediate monetization solution.

**Best Solution- Pricing and Ecosystem Restructuring**

The most effective solution for Jotform is redesigning its pricing architecture and restructuring the platform's ecosystem integration in order to create a clearer, more scalable, and value-oriented customer journey. The current pricing structure relies heavily on usage limits and does not clearly communicate the additional value provided by higher-tier subscriptions. As a result, many users remain in lower-tier plans such as Bronze and Silver, while high-tier plans appear to contribute more significantly to revenue generation. This creates an unstable monetization structure and limits sustainable long-term growth.

The proposed solution introduces a new "Business" tier between Gold and Enterprise plans. This new tier would specifically target growing teams, agencies, SMEs, and mid-sized organizations that require more advanced collaboration, automation, and administrative tools but are not ready for a fully customized Enterprise contract. By filling the gap between Gold and Enterprise, Jotform would create a more logical and scalable upgrade path:

*Free - Bronze - Silver - Gold - Business - Enterprise*

In addition to the new pricing structure, the solution also focuses on integrating Jotform ecosystem products directly into subscription plans. Products such as Jotform Sign, Jotform Apps, Jotform Tables, AI Agents, workflow automation tools, and white-label capabilities would become key differentiators between pricing tiers instead of functioning as disconnected add-ons. This would strengthen the perceived value of higher-tier plans and reposition Jotform from being primarily a form-building tool into a complete no-code business operations platform.

Another major advantage of this solution is its ability to reduce customer churn and improve long-term retention. Many users currently purchase higher-tier subscriptions only for temporary or project-based usage and later cancel their plans. By increasing collaboration tools, automation capabilities, and ecosystem integration within higher-tier subscriptions, Jotform can encourage customers to use the platform continuously rather than temporarily. This would increase customer lifetime value and stabilize recurring revenue streams.

The solution also provides opportunities to improve free-to-paid conversion rate by improving the visibility of value differences between plans. Instead of simply increasing storage or submission limits, each subscription tier would represent a different stage of organizational growth and operational need. Bronze and Silver plans would focus on freelancers and professionals, Gold would target workflow automation and advanced operational usage, while Business and Enterprise would focus on collaboration, AI support, advanced analytics,

and administrative control. This clearer differentiation would strengthen upgrade incentives throughout the customer journey.

Finally, the implementation process would follow an agile and data-driven approach. The strategy would first begin with restructuring pricing tiers and redistributing features, followed by pilot testing, A/B testing, customer feedback analysis, and continuous optimization before the full-scale rollout. This phased implementation process would minimize operational risk while allowing Jotform to adapt the new system according to real customer behavior and market response.

**Conclusion**

Jotform operates in a highly competitive and rapidly evolving no-code SaaS market where sustainable growth depends not only on user acquisition but also on effective monetization and long-term customer retention. Although the company has built a strong global user base and a diversified product ecosystem, the current pricing and subscription structure creates important challenges such as low free-to-paid conversion rates, uneven revenue distribution across tiers, and increasing customer churn. These issues limit the company's ability to fully benefit from its market position and reduce the sustainability of long-term revenue growth.

Among the evaluated alternatives, the most effective solution is redesigning Jotform's pricing architecture and integrating ecosystem products more strategically into subscription plans. Introducing a new Business tier between Gold and Enterprise would create a clearer and more scalable upgrade journey while strengthening monetization across different customer segments. At the same time, embedding products such as Jotform Sign, Apps, Tables, AI Agents, and workflow automation tools directly into subscription packages would increase perceived customer value and reposition Jotform as a comprehensive no-code business platform rather than only a form-building tool.

Overall, the proposed solution would help Jotform improve conversion rates, reduce churn behavior, strengthen customer lifetime value, and establish a more balanced and sustainable revenue model. Through an agile and data-driven implementation process, the company would be able to optimize its pricing strategy while maintaining customer satisfaction and supporting long-term competitive advantage within the SaaS industry.

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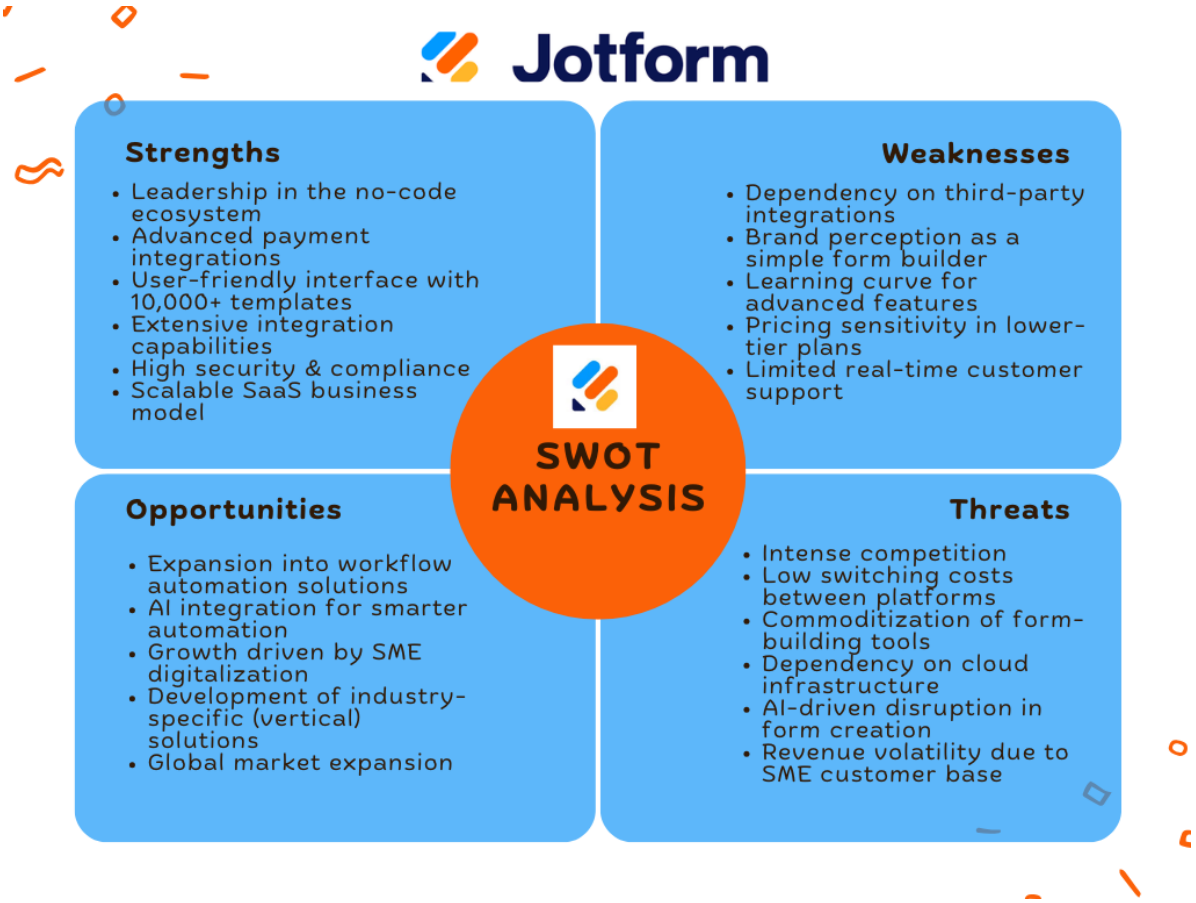
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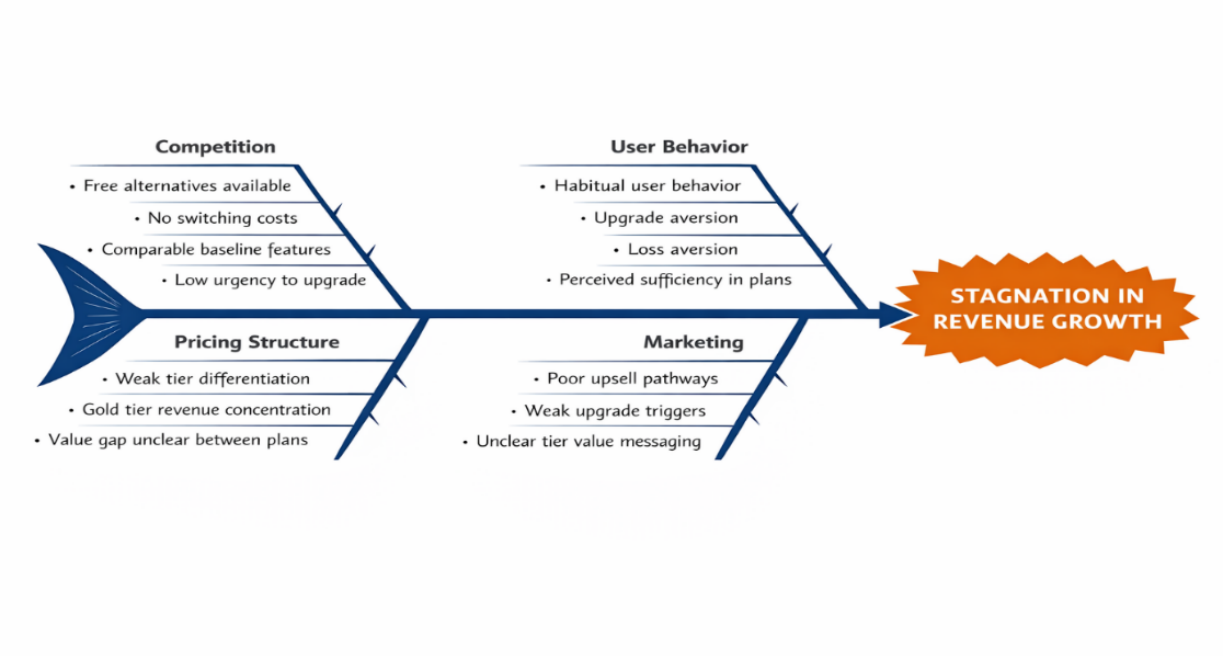
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# Appendices

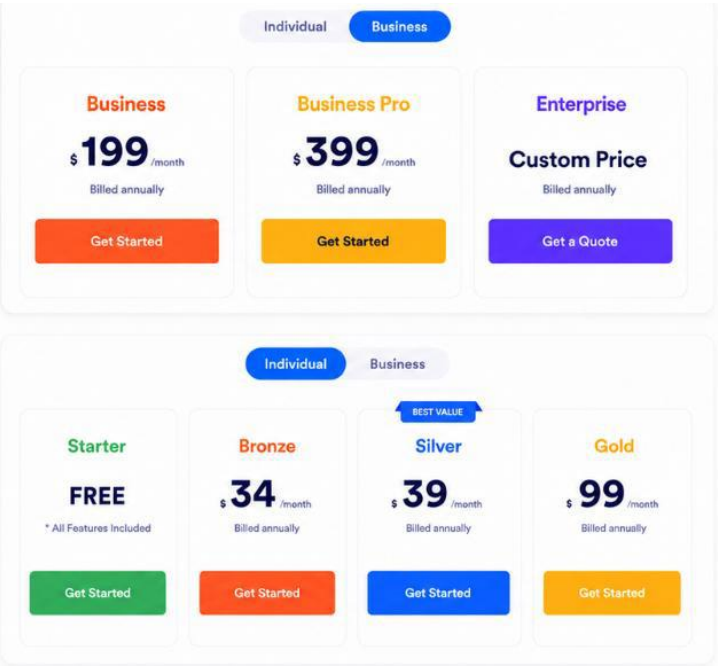
## Appendix 1- SWOT Analysis



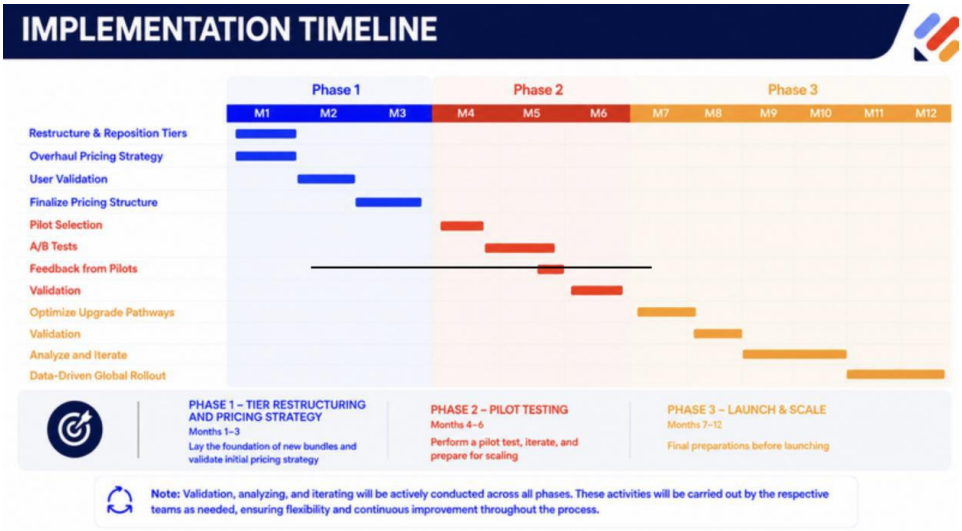
## Appendix 2- Fishbone Diagram



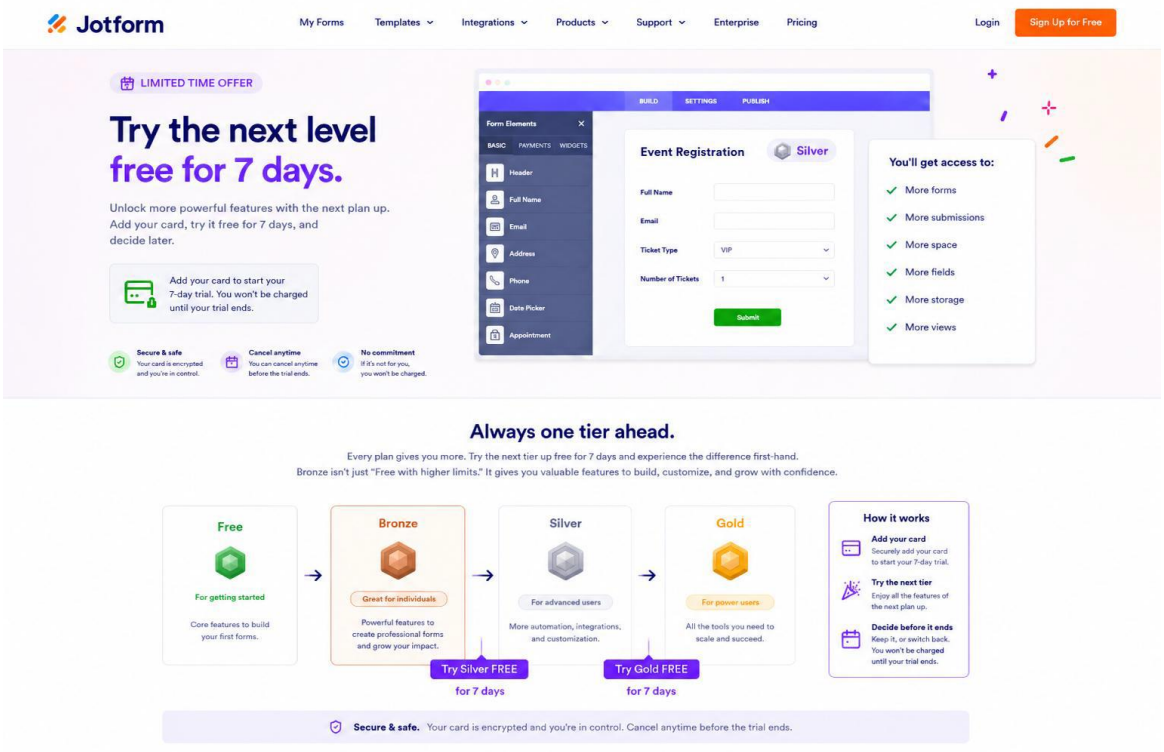

## Appendix 3- Best Solution Illustration for Pricing



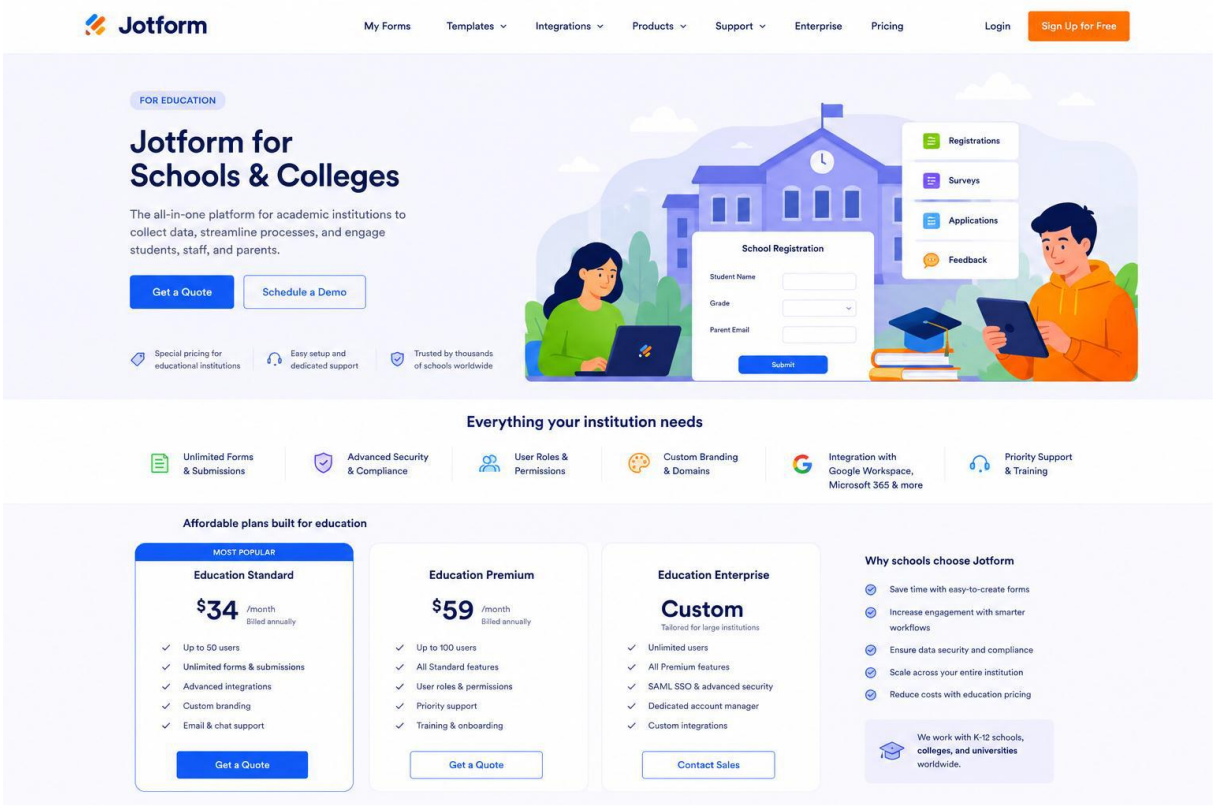
## Appendix 4- Implementation Timeline for Best Solution




## Appendix 5 – Alternative Solution 2 Illustration



# Appendix 6 – Alternative Solution 3 Illustration



# İkikardeş Otomotiv Paz. ve Tic. Ltd. Şti., Marketing Problems



**Proje Ekibi:** ANKA

**Grup Üyeleri:** Busegül Andiç, Deniz Demirci, Duru Karasu, Melek Zöhre İkikardeş, Serhat Zalaltuntaş, Zeynep Tanrıverdi

**Şirket Danışmanı:** Uğur İkikardeş

**Akademik Danışman:** Tolga Demir

**Koordinatör Danışman:** Rasim Serdar Kurdoğlu

## ÖZET

Bu proje, İkikardeş Otomotiv'in müşteri kazanım sürecini daha ölçeklenebilir, ölçülebilir ve dijital olarak görünür hale getirmeyi amaçlamaktadır. Şirket, ağır ticari araç satışı, treyler üretimi ve satış sonrası hizmetlerde güçlü bir yerel itibara sahip olsa da mevcut müşteri kazanım modeli büyük ölçüde yüz yüze satış, referanslar ve kişisel ağlara dayanmaktadır. Bu durum, şirketin mevcut hizmet kalitesini yeni potansiyel müşterilere yeterince ulaştıramamasına neden olmaktadır. Bu doğrultuda önerilen Digital-First Hybrid Customer Acquisition Model; CRM entegrasyonu, SEO, Google Ads, LinkedIn outreach, e-mail marketing, TCO Calculator, mikro etkinlikler ve PlusClouds destekli lead generation araçlarını bir araya getirmektedir. Model, geleneksel güvene dayalı satış yaklaşımını korurken dijital kanallarla desteklemeyi amaçlamaktadır.

**Anahtar Kelimeler:** Customer Acquisition, Digital Visibility, CRM, B2B Marketing, Hybrid Sales Model, Heavy Commercial Vehicles

## 1. Company Background

İkikardeş Otomotiv is a family-owned heavy commercial vehicle company located in Adana. The company operates mainly in three business areas: being an authorized Renault Trucks dealer, manufacturing custom trailers in-house, and providing after-sales services. With its long-standing local experience, strong technical knowledge, and relationship-based customer trust, İkikardeş Otomotiv has built an important position in the regional heavy commercial vehicle market.

The company mainly serves customers operating in logistics, transportation, construction, agriculture, and related business sectors. In these sectors, purchasing a heavy commercial vehicle or trailer is not a simple transaction. It is a high-value, long-term investment decision. Therefore, customers usually care about trust, after-sales reliability, service availability, technical support, and long-term business relationships. For this reason, İkikardeş Otomotiv's traditional sales model mostly relies on face-to-face communication, referrals, showroom visits, and field sales activities.

However, customer behavior in the sector is changing. Potential customers increasingly search for information online, compare different suppliers digitally, and expect companies to provide accessible technical and financial information before direct contact. Larger competitors have stronger digital visibility, more developed websites, and more structured online communication channels. This creates a challenge for İkikardeş Otomotiv because the company has strong service capabilities, but these capabilities are not visible enough to potential customers outside its existing network.

The company needs a customer acquisition model that protects its relationship-based sales strength while adding a digital and data-driven structure. The main aim of this project is to help İkikardeş Otomotiv transform its local trust and service quality into a more scalable regional growth advantage.

## 2. Problem Description

İkikardeş Otomotiv's main problem is that its customer acquisition process is not sufficiently scalable, efficient, or digitally visible. The company currently depends heavily on traditional relationship-based sales methods such as referrals, field visits, showroom traffic, and personal networks. These methods are valuable in the heavy commercial vehicle sector because trust plays a central role in customer decisions. However, relying only on these methods limits the company's ability to reach new customers outside its current network.

The root cause of the problem is not poor-quality service. In fact, survey and perceptual map findings show that existing customers perceive İkikardeş Otomotiv as a strong company in terms of service integration, reliability and buyer satisfaction. The biggest weakness is digital visibility. Potential customers who search online, compare alternatives or evaluate suppliers digitally may not easily discover İkikardeş Otomotiv. As a result, the company's existing value proposition is not effectively communicated to the wider market.

Another important cause is the lack of a fully integrated CRM and structured lead management system. Without CRM, the company cannot systematically track leads, classify potential customers, measure conversion rates, or follow sales opportunities through a clear pipeline. This makes the sales process dependent on individual sales representatives' personal networks and informal follow-up habits. Valuable leads gathered from trade fairs, customer visits, or digital channels may be lost if they are not recorded and followed properly.

The impact of this problem is significant for both immediate-term performance and long-term growth. First, the company continues to be less visible to potential customers outside of its existing relationship network. Second, sales representatives spend too much time on manual outreach and physical visits, rather than focusing on qualified leads. Third, the company's long-term goal of increasing its regional market share from 4% to 10% by 2030 becomes harder to achieve if customer acquisition continues to depend only on traditional methods.

Therefore, the problem should be understood as a structural growth limitation. İkikardeş Otomotiv already has a strong service offering, but it needs a more systematic way to attract, inform, track, and convert potential customers.

## 3. Recommended Solutions

After analyzing the company's customer acquisition problem, two alternative solutions were evaluated and one best solution was proposed.

### Alternative 1: Hiring Additional Sales Representatives

One possible solution is to hire more sales representatives to increase the company's field presence. A larger sales team could help the company visit more potential customers, create more direct contact, and strengthen relationship-based sales activities. Since face-to-face communication is still important in the heavy commercial vehicle industry, this alternative could create short-term benefits.

This solution does not solve the core problem, because hiring more salespeople would increase fixed costs such as salaries, commissions, travel expenses, and management workload. It would only increase the number of people manually searching for customers. It would not improve digital visibility, CRM usage, lead tracking, or scalable customer acquisition. Thus, this alternative may increase activity but does not build a repeatable and measurable growth system.

### Alternative 2: Opening New branches

Another possible solution is to establish new branches in nearby cities, especially in the Mediterranean region. This could increase physical visibility, improve regional access and make the company more accessible to customers in similar markets. A new branch could also support after sales services and strengthen local trust.

However, opening new branches requires high investment in facilities, infrastructure, employees, logistics, and daily operations. More importantly, the company's current problem is not mainly geographic coverage. İkikardeş Otomotiv already needs to reach more customers within its existing operating region. If the digital visibility and lead generation problem is not solved first, opening a new branch would simply transfer the same customer acquisition problem to another location. For this reason, this alternative is not the most efficient solution at this stage.

### Best Solution: Digital-First Hybrid Customer Acquisition Model

The best solution is the Hybrid Customer Acquisition Model (Digital-First). This model intends to support İkikardeş Otomotiv's existing relationship-based sales structure with digital and analytics-based tools. The goal is not to replace face-to-face sales, but to make the current sales model visible, measurable and scalable.

The model includes several linked components. First, the company's digital visibility should be improved through SEO, Google Search Ads, Google Business Profile Optimization and active social media management. These tools allow İkikardeş Otomotiv to appear in front of potential customers who are already searching for heavy commercial vehicles, trailers, spare parts or after-sales services. This helps the company move beyond personal networks and become more discoverable.

Second, the website should be strengthened with technical and value-based content. Potential customers should be able to understand the company's products, services, after-sales capabilities, and operational advantages before contacting a sales representative. A TCO Calculator should also be added to the website. Since heavy commercial vehicle purchases are long-term financial decisions, customers care about fuel costs, maintenance expenses, service reliability, and total ownership cost. A TCO Calculator can help potential customers evaluate the financial benefits of working with İkikardeş Otomotiv.

Third, CRM integration should be implemented through a system such as HubSpot. CRM would allow the company to record leads, classify them as hot, warm, or cold, assign follow-up tasks, monitor sales stages, and

measure conversion rates. This is especially important after trade fairs, digital campaigns, LinkedIn outreach, and micro-events. Instead of losing leads in manual notes or informal conversations, the company can manage all potential customers through a structured pipeline.

Fourth, targeted outreach should be supported with Mailchimp, LinkedIn, and PlusClouds. PlusClouds can help identify potential customers based on criteria such as industry, fleet size, business profile, and purchasing potential. These leads can then be reached through segmented e-mail campaigns and personalized LinkedIn messages. This makes the outreach process more focused and cost-efficient.

Finally, the model protects the company's relationship-based sales culture through invitation-based micro-events such as Fleet Consultation Day. These events can bring pre-qualified leads together with the company, create trust, and allow deeper discussions about customer needs. In this way, digital tools create awareness and interest, while face-to-face interaction supports preference and purchase decisions.

The proposed model is planned as a 12-month implementation process. In the first two months, the focus is on digital infrastructure such as website improvement, CRM setup, Google Business Profile, social media activation, and e-mail marketing setup. Between months 2 and 4, the company launches Google Ads, LinkedIn outreach, SEO content, and the TCO Calculator. Between months 4 and 6, digital lead generation is connected with the sales process through CRM training, micro-events, trade fair follow-up systems, and PlusClouds integration. From month 6 onward, the company tracks key performance indicators such as qualified leads, conversion rate, cost per lead, digital visibility score, and campaign performance.

This solution is the most suitable option because it directly addresses the company's real problem. İkikardeş Otomotiv does not need to abandon its trust-based sales culture. Instead, it needs to support that culture with digital visibility, structured lead generation, and CRM-based follow-up. The Digital-First Hybrid Customer Acquisition Model helps the company transform its strong local reputation into a scalable regional growth system.

## 4. Conclusion

In conclusion, İkikardeş Otomotiv is a strong company with local reputation, sectoral experience, reliable after-sales services and trust-based customer relationships. However, its current customer acquisition model relies too heavily on conventional methods such as referrals, field visits, showroom traffic and personal networks. Although these methods remain important in the heavy commercial vehicle sector, they are not sufficient for scalable and measurable growth.

The evaluated alternatives, hiring additional sales representatives and opening new branches, may provide some short-term benefits. However, they do not solve the structural problem of limited digital visibility and lack of systematic lead management. Hiring more salespeople increases cost without improving the acquisition system, while opening new branches requires high investment without first solving the visibility problem.

Therefore, the Digital-First Hybrid Customer Acquisition Model is the most appropriate recommendation. By combining SEO, Google Ads, CRM, targeted e-mail campaigns, LinkedIn outreach, TCO Calculator, PlusClouds-supported lead generation, and micro-events, the company can attract more qualified leads and manage them more effectively. At the same time, the model preserves the face-to-face trust-building process that is essential in high-value B2B purchases.

Overall, this solution offers İkikardeş Otomotiv a realistic and sustainable path for growth. It makes the company more visible to potential customers, improves sales team productivity, creates a more measurable customer acquisition process, and supports the long-term goal of increasing regional market share from 4% to 10% by 2030.

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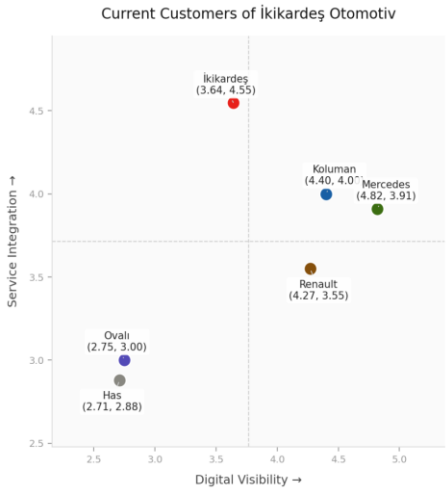
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# Appendices

## Appendix - 1: Perceptual Maps

Chart-1: Perceptual Map of Current Customers



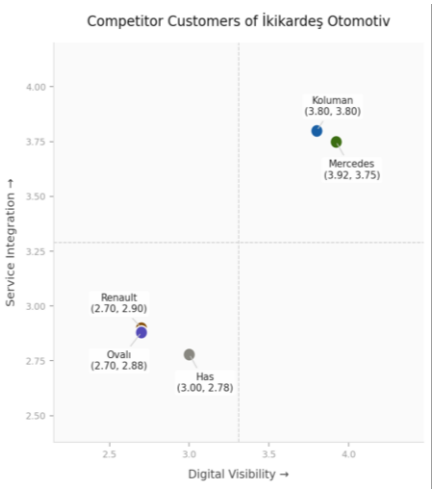




Chart-2: Perceptual Map of Competitor Customers

## Appendix 2 - Cost and ROI Calculations

### Appendix 2.1: Cost Calculations

**MARKETING & OPERATIONS COST BREAKDOWN**

*Exchange Rate: 1 USD = 45 TRY | May 2026 | All figures based on real published pricing*

| Category / Item | Cost USD/month | Cost TRY/month | Cost USD/year | Cost TRY/year | Type | Source & Notes |
|---|---|---|---|---|---|---|
| ▸ CRM | | | | | | |
| CRM Software — HubSpot Starter | $20,00 | ₺900 | $240,00 | ₺54.000 | monthly | HubSpot official: $20/seat/mo standard. Promo: new customers: $15/mo (monthly) or $9/mo (annual). Source: https://www.hubspot.com/products/crm/starter |
| CRM Implementation — Agency Onboarding (one-time) | One-time | One-time | $3.000,00 | ₺135.000 | one-time | HubSpot Starter has no mandatory fee but realistic SME agency-assisted implementation = $3,000–$6,000. Includes portal config, data migration, pipeline setup, team training (~4–6 weeks). Source: https://insagmkflat.com/insights/how-much-does-hubspot-agency-charges/ \| https://www.pixcell.io/blog/hubspot-implementation-cost |
| TOTAL | | | $3.240,00 | ₺189.000 | | |
| ▸ Google ADS | | | | | | |
| SME Monthly Ad Spend Budget | $500,00 | ₺22.500 | $6.000,00 | ₺270.000 | monthly | Small business avg: $100–$10,000/mo. Recommended minimum for meaningful results: $1,000/mo. Turkey CPC ~32% below US avg. Starting budget: $500/mo. Source: https://www.americanapps.com/insights/blog/post/how-much-does-it-cost-to-advertise-on-google-ads-in-2025 |
| CPC Data — Avg. CPC Turkey | N/A | N/A | N/A | N/A | per-click | US avg CPC $1–$2 on Search Network. Turkey is 32% less → ~$0.68–$1.36/click. Source: WordStream 2025 https://www.wordstream.com/blog/average-cost-per-click |
| Ads Management Fee (agency, optional) | Bundled | Bundled | Bundled | Bundled | monthly | Previously listed at 150 /mo. Bundled into SEO+Google Ads Management Retainer (850/mo) as most Turkish digital agencies offer combined SEO+Ads packages. Effective Ads management cost: $150–250/mo if included in retainer. |
| ▸ SEO Budget | | | | | | |
| SEO Monthly Retainer (basic SME) | $700,00 | ₺31.500 | $8.400,00 | ₺378.000 | monthly | SME SEO avg: $500–$2,000/mo. Freelancer avg $1,348/mo (Ahrefs survey). Basic local package from $700/mo. Source: https://ahrefs.com/blog/seo-pricing/ Average local seo cost : 1557 |
| SEO Initial Audit (one-time) | One-time | One-time | $500,00 | ₺22.500 | one-time | Basic SEO audit: $500–$1,500. (2500-3000) one-time. Enterprise: $3,000–$10,000. Source: https://www.scuterbosdesign.com/articles/seo/seo-pricing-costs/ |
| SEO Tools — SEMrush / Ahrefs (monthly) | $120,00 | ₺5.400 | $1.440,00 | ₺64.800 | monthly | SEMrush Pro: $139.95/mo. Ahrefs Lite: $129/mo. SME avg ~$120–$140/mo. Source: https://ahrefs.com/pricing \| https://semrush.com/pricing |
| TOTAL | | | $10.340,00 | ₺465.300 | | |
| ▸ E-Mail Marketing | | | | | | |
| E-mail Marketing Tool (Mailchimp) | $35,00 | ₺1.575 | $420,00 | ₺18.900 | monthly | Mailchimp Essentials 500–1,500 contacts: $13–$45/mo. Avg SME plan: ~$35/mo. Source: https://mailchimp.com/pricing/ |
| Fleet Consultation Day | | | | | | |
| Venue | | | $66,67 | ₺3.000 | one time | https://dugunbuketi.com/tavsiyeler/adana-en-iyi-konferans-toplanti-salonu-fiyatlari |
| Light Catering | | | $40,00 | ₺1.800 | one-time | https://ymkcatering.com/hizkasyonlar/adana |
| Staff Cost | | | $388,89 | ₺17.500 | one-time | provided by the company owner |
| Printed Material | | | $11,11 | ₺500 | one-time | https://adanabrosur.com/ |
| TOTAL | | | $506,67 | ₺22.800 | | |
| ▸ Trade Fair Marketing – After Fair | | | | | | |
| Follow-Ups (CRM + email automation) | $0 | ₺0 | $0 | ₺0 | included | Covered by HubSpot Starter + Mailchimp subscriptions. Time cost ~5 hrs/event for manual follow-up. |
| ▸ AI System — PlusClouds Suite | | | | | | |
| LeadOcean — B2B Lead Gen (Growth Plan, recommended) | $99,00 | ₺4.455 | $1.188,00 | ₺53.460 | monthly | OFFICIAL PRICE: LeadOcean Growth $99/mo (monthly) or $79/mo (annual). 200,000 credits/mo, unlimited searches, 5 ICP profiles, all filters, full buying signal preview, CRM export. Source: https://plusclouds.com/cs/pricing/leadocean |
| AutoQuill — AI Content Automation (Pro/Enterprise) | $7,99 | ₺360 | $95,88 | ₺4.332 | monthly | OFFICIAL PRICE: AutoQuill Pro Edition = $7.99/mo. Full custom link control, no PlusClouds branding, AI-written content, affiliate optional. Free edition: $0 (with PlusClouds branding). Source: https://plusclouds.com/cs/pricing/autoquill |
| TOTAL | | | $1.283,88 | ₺57.792 | | |
| ▸ ESTIMATED TOTALS | | | | | | |
| Total Monthly Recurring (recommended suite) | $1.698,99 | ₺76.455 | $21.790,55 | ₺1.023.792 | | |
| One-time Setup Costs (total, first year only) | – | – | $4.006,67 | ₺180.300 | | |

### Appendix 2.2 ROI Calculations

**Expected Return Analysis**

Exchange Rate: 1 USD = 45 TRY | May 2026 | All figures based on real published pricing

The figures in this table are industry average expected revenue. Each channel's 'return' estimate was calculated using that channel's conservative benchmark multiplier × annual expenditure formula from the literature.

| Solution Package Component | Annual Cost (USD) | Return Multiplier | Expected Return (USD) | Profit | Resources |
|---|---|---|---|---|---|
| ▸ CRM | $3.240 | 5 | $16.200,00 | $12.960 | HubSpot 2024 ROI Report (1,474 user survey, Aug 2024): average return in first year: 5x. hubspot.com/roi hubspot.com/case-studies/iex-group |
| ▸ Google Ads | $6.000,00 | 3 | $18.000,00 | $12.000,00 | Changan case → %43 ROI %43 ROI → multiplier: 1+0.43=1.43x<br>focus-digital → avg ROAS (genelde 2x–4x arası)<br>https://innova-ms.com/en/case-study/como-changan-logro-duplicar-los-leads-calificados-mensuales-mientras-bajo-sus-costos/<br>focus-digital.co/average-roas-google-ads |
| ▸ SEO | $10.340,00 | 1,80 | $18.612,00 | $8.272,00 | GM case → lead ↑ %60<br>Audi case → lead ↑ %89 assuming constant conversion<br>revenue ↑ ∞ lead ↑ CaseMultiplier<br>GM1.6x<br>Audi1.89x slightly optimistic average is taken<br>https://c-4analytics.com/insights/gm-dealership-digital-overhaul-case-study ve<br>https://www.clickheredigital.com/insights/seo-audi-case-study?utm |
| ▸ E-mail Marketing | $420,00 | 25 | $10.500,00 | $10.080,00 | Mailchimp itself claims up to 30x return. |
| Fleet Consultation Day | $507 | - | $1.000,00 | $493 | Since no suitable case study or data could be found regarding this component of our solution a break-even aalysis was conducted. Approximate price of a truck=1 million TL (given by the company), and taking 5% margin (which we have found out for türkiye during our research for report 1) profit per truck approximately $1000 Break-even:162 / 1000 = 0.16 sale. |
| AI System | $1.284 | 5,00 | $6.420,00 | $5.136 | The ROI multiplier for the AI system is estimated at 5x based on a synthesis of operational efficiency metrics reported by PlusClouds. These include up to 60% cost reduction, 40% time savings in repetitive tasks, and significant productivity improvements (like up to 12x efficiency gains). Since these metrics overlap and do not directly translate into revenue, a conservative approach was adopted. Cost reductions were combined with a realistic revenue uplift (1.5x–2x), resulting in an estimated return multiplier of approximately 4x–6x. A midpoint value of 5x was selected to ensure a balanced and defensible estimate. |
| Total | $21.791 | | $70.114,00 | | |
| Total ROI | 222% | | | | |
| Return multiplier | 3,217615613 | | | | |

# Appendix 2.3 Return Statistics of Other Case Studies with Solution Packages

**Return Statistics of Other Case Studies with Solution Packages**

| Case | Solution Content | ROI / Return | Resource |
|---|---|---|---|
| Concentrix | CRM + personalization + digital marketing (multi-channel automotive) | ~1.8x ROI (%87 improvement) | https://www.concentrix.com/insights/case-studies/hyper-personalized-automotive-marketing-strategies/ |
| Intellibright | SEO + paid ads + funnel optimization (automotive e-commerce) | ~3x revenue growth | https://www.intellibright.com/industries/ecommerce/automotive/ |
| Changan Automobile | Google Ads + lead generation optimization | ~1.4x ROI (%43) | https://innova-ms.com/en/case-study/como-changan-logro-duplicar-los-leads-calificados-mensuales-mientras-bajo-sus-costos/ |
| Digital Radish | ABM campaign (highly targeted B2B marketing) | ~25x ROI (%2567) (outlier, included as a high-performance example) | https://www.b2bmarketing.net/case-studies/read-about-digital-radishs-hyper-personalised-abm-campaign-with-an-roi-of-2567/ |

# ASRHUR, Marketing Problems




**Proje Ekibi:** The Next Step

**Grup Üyeleri :** Emre Zedelenmez, Muharrem Berat Demirtaş, Nilay Şahin, Oktar Berat Onar, Sevgi Utma

**Şirket Danışmanı:** Hakan Aras

**Akademik Danışman:** Rasim Serdar Kurdoğlu

**Koordinatör Danışman:** Ceren Aydoğmuş

## ÖZET

ASRHÜR, Türkiye merkezli bir temiz enerji girişimidir. Şirket, patent başvurusu aşamasında olan alüminyum-su reaksiyonu teknolojisiyle, harici altyapıya ihtiyaç duymadan kullanım noktasında hidrojen üretmektedir. Sistem, minimum 650+ Wh/kg enerji yoğunluğuyla lityum-iyon bataryalara kıyasla 3-4 kat üstünlük sağlamakta; düşük termal imzası ve sürdürülebilirlik yönünden fark yaratmaktadır. Şu anda TRL 4 seviyesinde olan şirket, Horizon Europe Mükemmellik Mührü'ne sahiptir. Temel ticari engel teknolojik hazırlık değil, fosil yakıt ataletinden kaynaklanan temin süreçleridir. Ticarileşme sürecinin ilk 18 aylık döneminde stratejik olarak 'Savunma Sanayisi ve Afet Yönetimi için Kesintisiz Enerji Güvenliği' odağına kilitlenmiştir. TRL 4 seviyesinden saha doğrulamasına (TRL 7+) geçiş sürecini halihazırda stratejik niyet mektubuna (LOI) sahip olduğu AFAD pilot projeleriyle yürütecektir. Veri merkezleri yedek güç sistemleri, yer altı madenciliği ve endüstriyel hidrojen sağlayıcılığı ($H_2$ Enabler) gibi diğer segmentler ise paralel hedefler değil; ilk 18 aydan sonra, teknolojinin olgunlaşmasına bağlı olarak değerlendirilecek 'Olası Stratejik Genişleme Alanları ve Pivot Senaryoları' olarak konumlandırılmıştır."

**Anahtar Kelimeler:** Hidrojen üretimi, temiz enerji, Zero-CapEx abonelik modeli, savunma sanayi, veri merkezi, fosil yakıt ataleti, TRL 4, alüminyum-su reaksiyonu, pazar giriş stratejisi

## 1. Company Background

ASRHÜR is a Turkey-based clean energy technology startup. Led by two founding partners, the company is developing aluminum-water (Al-$H_2O$) reaction technology, currently in the patent pending phase. This technology enables point-of-use hydrogen production without the need for external hydrogen storage infrastructure or pipelines.

One of the system's most important features is its energy density, reaching 650+ Wh/kg; this value is 3-4 times that of lithium-ion batteries. In addition, because the system operates at temperatures close to human body temperature, it is undetectable by thermal imaging systems; this feature offers a critical advantage for dual-use purposes.

ASRHÜR, which was awarded the Horizon Europe Seal of Excellence, is conducting its R&D project aimed at developing TRL (Technology Readiness Level). The company's recurring revenue model is based on subscriptions to aluminum cartridges that can be transported with standard cargo classification and are not subject to ADR Class 2 restrictions.

## 2. Problem Definition

ASRHÜR's fundamental strategic challenge is not a lack of technological readiness. The company's technology will reach commercial availability with standard product development processes. The real problem is why corporate buyers prefer familiar alternatives such as diesel generators and lithium-ion batteries instead of adopting this technically superior solution.

### 2.1 Fossil Fuel Inertia

Diesel generators and lithium-ion batteries are solutions deeply integrated into corporate procurement processes. The lifecycle costs of these products are well known, supplier relationships are established, and maintenance schedules are predictable. A new technology must break the inertia effect of this system-integrated procurement process.

### 2.2 Procurement Process Barriers

Corporate and enterprise contexts have multi-stakeholder approval requirements for capital expenditures. These processes are structurally risk-averse and slow; they disadvantage any new technology, even if technically promising, that has not yet been proven commercially.

### 2.3 Identity Ambiguity

ASRHÜR’s three distinct identities (hydrogen technology company, metal fuel system, and energy platform) make it difficult for corporate buyers to establish a direct point of comparison. The market is unsure which product to compare this technology to.

The strategic starting point is to identify and prioritize the segments of the existing fossil fuel solutions that are structurally the most costly, the most dangerous, or the most subject to regulatory sanctions. In these segments, premium pricing becomes a rational business decision rather than a deterrent.

## 3. Possible Solutions

Based on interviews and market research, two primary commercial entry segments and two secondary pivot segments have been identified. All segments are addressed within the framework of the Zero-CapEx subscription model.

### 3.1 Primary Segment A: Defense and Disaster Management Operations

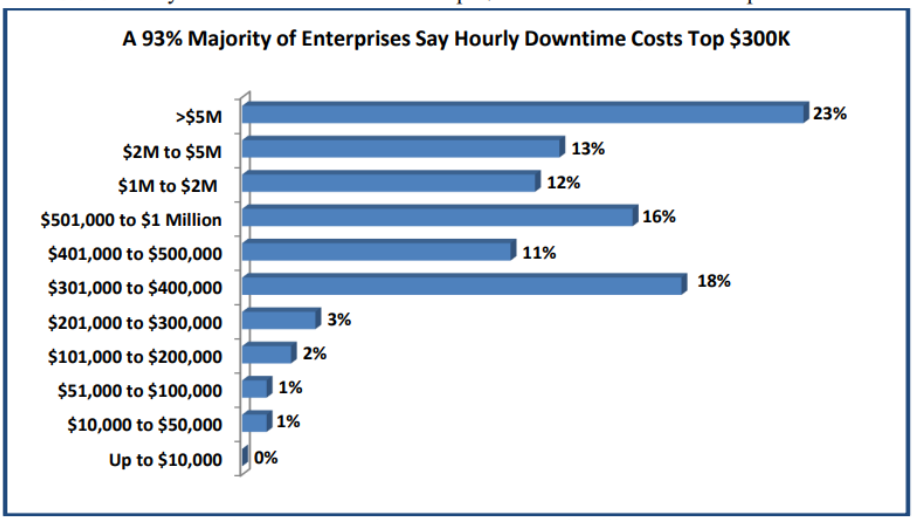
The defense industry and disaster response operations are the segments most reliant on uninterrupted energy supply, thus providing the strongest structural justification for premium pricing strategies. Potential power outages in these critical applications represent not only financial loss but also direct mission failure and life-threatening risk. In defense operations, the disclosure of thermal signatures can reveal personnel locations, disrupt encrypted communication infrastructure, and completely halt time-critical operations.

In disaster management and humanitarian aid operations, the success of search and rescue and coordination processes is directly dependent on logistical flexibility and operational environmental conditions in the field. ASRHÜR's technology provides complete stealth on the defense side with its low temperature profile undetectable by thermal imaging systems; and thanks to its silent operation principle, it does not interfere with sensitive acoustic listening and search and rescue operations in disaster areas. Furthermore, unlike traditional generators, its cartridge infrastructure, suitable for standard cargo transportation and exempt from hazardous materials restrictions (easy logistics), radically simplifies supply chain processes in the chaotic environment of a disaster.

The company's commercial and operational viability in this segment is supported by strategic partnerships. The existing distribution network (10 x 1 kW modular units, total 10 kW requirement) implemented with the Turkish Disaster Management Foundation constitutes a short-term, field-validated pilot anchor point. In addition to this validation, the Letter of Intent received from AFAD, Turkey's highest authority in disaster management, demonstrates the corporate-scale acceptance of the technology and provides strong commercial leverage for our medium-to-long-term market entry strategy.

**3.2 Primary Segment B: Data Centers and Flexible Financing Models (Zero-CapEx Subscription System)**
Over 90% of large-scale companies estimate the cost of a single hour of data center downtime to be over $300,000, while 48% predict this loss will range from $1 million to $5 million (ITIC, 2024). Any backup power solution that radically reduces downtime risk and thus these massive financial losses justifies a substantial premium pricing above market standards.

**Exhibit 7.** Hourly Cost of Server Downtime Tops $1 Million for 48% of Enterprises




**Source:** ITIC 2024 Global Server Hardware, Server OS Reliability Survey

ASRHÜR's "Zero-CapEx" Subscription Model enables reactors to be installed without any initial cost and links the entire revenue stream to cartridge subscriptions. This model shifts the decision-making process from cumbersome CapEx (Investment) approval processes to a flexible OpEx (Operational Expense) cycle. Thus,

instead of multi-stakeholder and months-long board CapEx approvals, an IT operations manager can approve the project within a single budget period.

Given the budget dynamics of data centers, this model is defended in scenarios where operational budgets (OpEx) are limited with two main arguments:

1. Cost Comparison and Risk Insurance: Compared to the massive CapEx budgets that data centers allocate for traditional generator and UPS systems, this cartridge-based OpEx model acts as an insurance premium protecting the company from millions of dollars in "downtime costs." While it may seem like a constant increase in operational expenses, even a single downtime it prevents amortizes many times the annual operational budget.

2. Financial Flexibility Based on Budget Structure: The model offers financial flexibility to accommodate companies' internal budget constraints. In addition to a fully OpEx-focused "Pay-as-you-go" model, a hybrid financing option is also offered for data centers with insufficient operational budgets but large investment budgets, where hardware can be purchased (CapEx) and only cartridges are periodically supplied.

**3.3 Pivot Segment 1: Hydrogen Activator ($H_3$ Activator)**
Positioned as a low-cost hydrogen testbed for organizations with hydrogen transition obligations, ESG commitments, or carbon reduction targets, but unable to make multi-million euro electrolyzer investments without operational data. Municipalities, industrial facilities, ports, and microgrid developers are key stakeholders in this segment.

**3.4 Pivot Segment 2: Underground Mining**
Diesel equipment used in underground mining operations produces diesel particulate matter (DPM), which directly threatens worker health. These emissions are subject to very strict standards and legal restrictions under MSHA (Mine Safety and Health Administration) and NIOSH regulations. The ventilation and air conditioning costs required to evacuate these toxic gases and maintain legal limits in underground mining operations constitute a very large portion, between 30% and 40%, of total mining operation costs (OpEx) (SME Mining Engineering Handbook). In large-scale deep mines, this figure, along with the electricity consumption and maintenance costs of fans, translates to a budget of millions of dollars annually.

ASRHÜR's reactant-limited design eliminates this cost pressure, offering a double advantage for underground operations.
ASRHÜR's reactant-limited design eliminates these costs, offering a double advantage for underground operations:

- Zero Storage Risk: Instead of storing hydrogen in tanks under high pressure, the system produces hydrogen instantly in the reactor on demand, eliminating the risk of explosions, leaks, or gas buildup in enclosed underground galleries.

- Exhaust-Free Operation and Zero Ventilation Costs: Unlike diesel engines, operating with zero emissions completely eliminates exhaust-related ventilation investments.

Furthermore, the byproduct remaining after the hydrogen production reaction is completely non-toxic and environmentally friendly. This safe byproduct profile, which does not pose any risk of chemical pollution or toxic waste, guarantees full compliance of ASRHÜR technology with occupational safety (OHS) standards in underground mining ecosystems where personnel work in confined spaces.

### 3.5 Zero-CapEx Subscription Model: Financial Rationale

The developed financial model is based not only on raw production costs but also on a holistic Total Cost of Ownership (TCO) optimization covering the entire operational cycle. In the traditional market, transporting, storing, and managing high-pressure logistics infrastructure for pure hydrogen is an extremely costly process. ASRHÜR, with its Zero-CapEx model, completely relieves its customers of this initial investment burden. Our model does not simply calculate a profit margin based on raw production costs (variable costs); our pricing strategy is structured as "Value-Based Pricing" to cover all additional operational cost items:

- Amortization of Capital Expenditures (CapEx): In the Zero-CapEx model, the initial financing of the reactors is covered by our company, and this investment cost is integrated into the financial model as an amortization share per cartridge unit over the subscription period.

- Sustainable Circular Logistics: Reverse logistics processes, including the collection of empty cartridges from the field, and corporate certification/safety OpEx expenses are included in the base cost of subscription pricing from the outset. The fact that the cartridges are exempt from hazardous materials classification (excluding ADR Class 2) radically reduces the cost burden of this reverse logistics operation compared to conventional hydrogen.

Accordingly, ASRHÜR's pricing structure does not aim to compete with generic hydrogen pump costs. Instead, a high price premium is achieved thanks to the infrastructure-free installation, zero storage risk, and reverse logistics convenience provided to the customer. This high-profit margin structure, which can absorb the financial burden of long sales cycles and all operational costs, provides a predictable and sustainable corporate revenue stream that is resilient to market fluctuations.

### 3.6 SMART Goals and Implementation Plan

The project's commercialization and market entry strategy is divided into three strategic phases to fully align with the technology's current TRL (Technology Readiness Level) development:

Short-Term Phase (0–6 Months): Transition from TRL 4 to TRL 5/6 and Pilot Verification:

- Expansion of the AFAD Pilot Project: Completion of field tests and acquisition of initial operational data for the 10 kW modular unit project conducted with the Turkish Earthquake Management Foundation under the existing AFAD Letter of Intent (LOI).

- Certification and Legal Infrastructure: Formal initiation of ATEX/IECEx industrial safety certification processes and completion of legal templates for the "Zero-CapEx" subscription agreement for the corporate B2B segment.

- Production and R&D: Verification of reactor and cartridge integration in operational environmental simulations, moving beyond the laboratory environment, through an R&D project conducted under a grant program.

Medium-Term Period (6–12 Months): TRL 6/7 - Market Preparation and Circular Operations

- Reverse Logistics Program: Operational establishment of a circular logistics (reverse logistics) network ensuring safe and cost-effective collection of empty cartridges.

- Market Expansion Triggers (Pivot Mechanism): Activation of Pivot 1 and Pivot 2 (Underground Mining, etc.) scenarios based on evaluation criteria at the end of month 6, if expected enterprise conversion rates are not achieved in primary segments.

- Pre-Marketing: Initiation of initial technical information (RFI) processes with defense industry suppliers and local data center operators as the TRL level increases.

Long-Term Period (12–24 Months): TRL 7+ - Corporate Commercialization and Scaling

- Entry into Highly Regulated Markets: Signing letters of intent (LOI) with at least 2 major defense industry buyers and engaging with 5 Tier 1/2 data center operators with a system that has completed field validations (TRL 7+).

- Commercial Subscriptions: Signing at least 5 long-term corporate "Zero-CapEx" subscription agreements and completing reactor installations.

- Global Expansion: Gaining 1 licensing partner in the European market and securing at least 1 strategic defense/public reference agreement in the Gulf Region.

**4. Conclusion**

ASRHÜR has achieved a unique position in the clean energy sector with its patented technology that produces hydrogen at the point of use without the need for external infrastructure. The central question examined in this report is not the effectiveness of the technology; rather, it is whether the company can translate this technical advantage into commercially defensible premium pricing within the limited commercial bandwidth available to its founders.

The analysis is fundamentally based on reframing: the barrier to ASRHÜR's market entry is not the TRL level, but rather cost habits stemming from fossil fuel inertia, established procurement processes, and identity ambiguity. Therefore, instead of competing on unit energy cost, the target should be segments where premium pricing becomes a rational business decision rather than a deterrent.

Defense & Disaster Response and Tier 1/2 Data Centers are the primary entry points that meet these conditions. The Zero-CapEx subscription model structurally overcomes the procurement barrier by converting the CapEx decision to an OpEx decision. Hydrogen Enabler and Underground Mining are kept ready as pre-validated pivot segments that will be activated if the conversion cannot be achieved within six months.

The sustainability dimension also reinforces the long-term validity of the strategy: thanks to zero emissions, a circular resource economy based on $Al(OH)_3$ recycling, and safer working environments, the strategy aligns with various targets under UN SDG 8.

This 18-month, experience-driven roadmap, to be executed with an annual lean business budget of $52,000, aims to systematically advance a scalable commercialization process in validated segments with measurable commercial evidence.

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# Appendices

## Appendix 1: Energy and Cost Reference Table

| Metric | Figure | Note | Source |
|---|---|---|---|
| **System Energy Density** | 650+ Wh/kg | Rises with utilisation rate | MDPI Materials Journal (2024) / Al-$H_2O$ Reaction Literature Standards |
| **Li-ion Comparator** | 150–200 Wh/kg | Where the headline density gap shows up | U.S. Department of Energy (DOE) / *IEA Global EV Outlook* |
| **Variable Cost per kg $H_2$** | ~USD 10/kg | Floor for cartridge pricing | S&P Global Platts Hydrogen Price Index / *U.S. DOE Hydrogen Shot Target Analysis* |
| **EU Pump Price ($H_2$)** | EUR 16–22/kg | Live reference price observed on h2.live | h2.live (2026) |
| **Cargo Classification** | Standard cargo | Not ADR Class 2; cuts cost and transit time | IATA / ADR (European Agreement Concerning the International Carriage of Dangerous Goods) |
| **Disaster-Response Load** | ~10 kW | Reachable via 10 × 1 kW units | Field Operational Load Requirements |

*Appendix Table 1: ASRHÜR Energy and Cost Reference Indicators*

## Appendix 2: 18-Month Implementation Phases

| Phase | M 1–3 | M 4–6 | M 7–12 | M 13–18 |
|---|---|---|---|---|
| **Phase 1: Experimental Launch** | ● | | | |
| **Phase 2: Pilot Conversations** | | ● | | |

| | | | | |
|---|---|---|---|---|
| **Phase 3: Pilot Execution or Pivot** | | | ● | |
| **Phase 4: Scale & Reference Case** | | | ● | ● |

*Appendix Table 2: ASRHÜR 18-Month Implementation Phases*

## Appendix 3: Comparative Segment Matrix

| Dimension | Defense (incl. disaster response) | Data centers (backup power) | Hydrogen enabler (Pivot 1) | Underground mining (Pivot 2) |
|---|---|---|---|---|
| **Willingness to pay a premium** | Defense buyers consistently show the highest willingness to pay, because mission failure carries consequences that dwarf any unit cost. | Data center operators are willing to pay well above commodity rates when downtime risk is reduced. | Hydrogen buyers will pay a medium-to-high premium, mainly to de-risk early supply. | Mining operators pay high premiums when safety and ventilation constraints are addressed. |
| **Defensibility of premium pricing** | The combination of off-grid operation, low thermal signature, and standard cargo classification gives ASRHÜR its strongest defensible position here. | Pricing holds up well because diesel and lithium-ion alternatives each carry obvious flaws that operators already feel. | Pricing is defensible on risk-reduction grounds rather than pure cost grounds. | Pricing is defensible because the alternatives create real safety and ventilation problems underground. |
| **Procurement cycle without Zero-CapEx** | Traditional defense procurement runs from twelve to twenty-four months and often longer, with multiple sign-off layers. | Capital-budget purchases at data centers typically run six to twelve months from first contact to deployment. | Cycle length is tied to the funding mandate rather than to a calendar, which makes it unpredictable. | Capital-budget purchases in mining typically run six to twelve months. |
| **Procurement cycle with Zero-CapEx** | Authorisation can be done from operating budget within months rather than years, which is the single biggest unlock. | Operations managers can authorise pilots within weeks to months under existing OpEx authority. | Pilots can be authorised within weeks to months when funded under a mandate budget. | The OpEx-friendly structure fits the way mining buyers already manage commodity-cycle spending. |
| **Customer concentration** | The buyer pool is narrow, so a single reference customer carries | Concentration is moderate; a handful of operators dominate, but the | Demand is distributed across many smaller buyers rather than | Demand is distributed across many operators across regions. |

| | | | | |
|---|---|---|---|---|
| | disproportionate weight. | second tier is reachable. | dominated by a few. | |
| **Substitutes available to the buyer** | There is no clean substitute that combines off-grid operation, thermal stealth, and standard-cargo logistics in one package. | Diesel and lithium-ion are the standing options, but each is flawed enough that buyers actively look for alternatives. | The realistic substitute is a twelve-to-twenty-four-month electrolyser deployment, which is what makes the enabler pitch work. | Diesel competes on cost and lithium-ion competes on convenience, but both run into safety limits underground. |
| **Founder priority** | Treated by the founders as the primary commercial entry point. | Treated as a primary segment specifically for the backup-power use case rather than full-facility supply. | Treated as the most credible funded pivot if primary segments do not validate. | Treated as a strong secondary pivot, gated by ATEX and IECEx certification timelines. |

*Appendix Table 3: Comparative Segment Matrix Across Primary and Pivot Segments*

## Appendix 4: Estimated Annual Operating Budget (Founder-Funded Minimum Mode)

| Budget Item | Amount (USD) | Description |
|---|---|---|
| **Market Exploration Experiments (E1–E4)** | 10,000 | Exploration meetings across defense, data centers, $H_3$ enablers, and mining |
| **ATEX/IECEx Pre-Certification & Gap Analysis** | 18,000 | Start on Day 1 due to the 12–18-month certification lead time |
| **Prototype Maintenance & Field Preparation** | 10,000 | Maintain TRL 4 units for reliable, controlled demonstrations |
| **Grant Management** | 5,000 | Milestone tracking for Horizon Europe and CET Partnership |

| | | |
|---|---|---|
| **Commercial Activities** | **4,000** | Contracts, pricing, and core market collateral |
| **Unexpected Expenses** | **5,000** | Contingency buffer |
| **TOTAL** | **52,000** | |

*Appendix Table 4: Estimated Annual Operating Budget*

## Appendix 4.1 : Future Funding Sources and Certification/OpEx Matching

| Period | Funding Source | Target Operation | Financial Security / Status |
|---|---|---|---|
| **0–6 Months (Short Term)** | Founder's Equity (52K USD) + TÜBİTAK R&D Support | • AFAD Field Testing Operation<br>• ATEX / IECEx Preliminary Application and Gap Analysis<br>• Legal Contract Templates | Active / Approved (Bootstrapping & TÜBİTAK Periodic Entitlement) |
| **6–12 Months (Medium Term)** | CETPartnership 2026 Consortium Fund | • ATEX / IECEx Laboratory Testing and Type Approval Fees<br>• Reverse Logistics Software and Infrastructure Setup | Application Phase (Consortium Formation Ongoing) |
| **12–24 Months (Long Term)** | Horizon Europe (Seal of Excellence Transition Funds) | • Global Demo Unit Shipment and Insurance<br>• EU and Gulf Region Licensing/Sales Cycle Management | Excellence Seal Holder (Priority Funding Status) |

## Appendix 5: Key Technology and Business Model Indicators

| Parameter | Value / Description |
|---|---|
| **Technology** | Patent application for on-site hydrogen production via aluminum-water reaction. |
| **Energy Density** | 650+ Wh/kg |

| | |
|---|---|
| **TRL Level** | TRL 4: Suitable for controlled demos and field tests. |
| **Income Model** | Cartridge subscription (Zero-CapEx) + reactor sale + regional licensing |
| **Logistics** | Standard cargo (no ADR Class 2 restrictions) |
| **Accreditation** | Horizon Europe Excellence Seal; Springer Nature Scientific Article, SoGreen WorldBank Project |
| **Current Pilot** | Turkish Disaster Management Foundation: 10 x 1 kW modular distribution (10 kW) |

*Appendix Table 5: ASRHÜR Key Technology and Business Model Indicators*

# Akakçe, Marketing Problem




**Proje Ekibi: SE7EN**

**Grup Üyeleri :** A. Çağrı Örel, A. Tuan Karataş, Bora Ataoğlu, Deniz Tınaz, Eren Doğan, Onur Sedat Sorkun, Zeynep Mola

**Şirket Danışmanı:** Merve Çakmak

**Akademik Danışman:** Hanife Armut

**Koordinatör Danışman:** Ceren Aydoğmuş

## ÖZET

Bu danışmanlık projesi Akakçe Bilgi ve Teknoloji Sistemleri A.Ş.'nin yüksek trafik hacmini sürdürülebilir kullanıcı bağlılığına dönüştürme problemini incelemektedir. Akakçe, Türkiye'nin önde gelen fiyat karşılaştırma platformlarından biri olarak yaklaşık 40 milyon aylık ziyaret, geniş satıcı ağı, tarafsız fiyat sıralaması ve güçlü organik arama görünürlüğüyle önemli bir konuma sahiptir (SE7EN, 2026a). Fakat buna rağmen kullanıcıların büyük bölümü platformu alışveriş yolculuğunun sonunda, yalnızca fiyat doğrulamak amacıyla kullanmakta ve işlem sonrasında düzenli bir geri dönüş davranışı göstermemektedir. Bu durum, tıklama bazlı gelir modelini, mobil uygulama büyümesini ve uzun vadeli rekabet gücünü sınırlandırmaktadır. Kaynak raporlarda belirlenen temel nedenler kişiselleştirme eksikliği, mobil uygulamanın zayıf kullanımı, proaktif bildirim mekanizmalarının yetersizliği ve büyük pazar yerlerinin karşılaştırma fonksiyonlarını kendi ekosistemlerine taşımasıdır (see Appendix 1; SE7EN, 2026a). Önerilen çözüm iki tamamlayıcı yaklaşıma dayanır: veri odaklı kişiselleştirme motoru ve uygulama merkezli alışkanlık motoru. İlk yaklaşım davranış verilerini anlamlı segmentlere dönüştürerek fiyat uyarıları, trend bildirimleri, öneriler ve haftalık kategori özetleri üretir. İkinci yaklaşım ise uygulamaya özel indirimler, kişiselleştirilmiş fırsat akışı, web'den uygulamaya geçiş yönlendirmeleri ve App Store optimizasyonu ile mobil bağlılığı artırır. Bu bileşik plan, Akakçe'yi tek seferlik fiyat kontrol aracından kişiselleştirilmiş ve mobil öncelikli bir alışveriş yardımcısına dönüştürmeyi hedefler (SE7EN, 2026b).

**Anahtar Kelimeler:** E-ticaret, Fiyat Karşılaştırma, Kullanıcı Bağlılığı, Kişiselleştirme, Mobil Uygulama, Sürdürülebilir Büyüme

## Company Background

Akakçe operates at the intersection of digital commerce, product discovery, and price comparison. Unlike large online marketplaces, it does not complete the transaction itself. Instead, it helps consumers compare prices, inspect sellers, review product information, and then move to the merchant that offers the most attractive option. This position makes Akakçe a traffic aggregator and decision-support platform rather than a retailer (SE7EN, 2026a).

The company was founded in 2000 and formally established in 2003. Its early direction changed from general internet search toward price comparison after global search engines became dominant. Akakçe's proprietary crawling and data systems became the foundation of the business, allowing the platform to gather product and price information from a large network of sellers and present it in a neutral format for consumers (SE7EN, 2026a).

Akakçe's current strength comes from three connected assets. First, it attracts more than 40 million unique monthly visits and is the traffic leader among Turkish comparison platforms, ahead of Cimri and Epey. Second, it works with over 1,500 vendors, including major marketplaces and smaller retailers. Third, it protects consumer trust by refusing to let sponsored relationships determine price rankings. The company is also very strictly selective with seller applications, which reinforces the reliability of the marketplace it presents to users (SE7EN, 2026a; see Appendix 2).

Its business model is mainly based on cost-per-click revenue from merchants. Consumers use Akakçe for free, while sellers pay when Akakçe directs qualified traffic to their websites. This model works well when traffic is high and users frequently compare products. However, it becomes fragile when visitors arrive only for one final price check and leave without becoming registered, repeat, or app-based users (SE7EN, 2026a).

Akakçe is also connected to wider sustainability and social impact goals. Through Banayeni, its affiliated second-hand and refurbished goods platform, the company supports reuse and circular consumption. Internally, Akakçe has a 53% female workforce, above Turkey's national female labor participation average. These features give the company a broader strategic identity than simple price matching: it can support consumer savings, SME visibility, digital employment, and resource efficiency at the same time (SE7EN, 2026a; see Appendix 3).

## Problem Definition

The central problem is that Akakçe attracts a very large audience but does not convert enough of that audience into habitual users. Many visitors come to the platform after they have already decided what to buy. They use Akakçe to validate the lowest price, click out to a seller, and do not return until the next separate purchase need appears. In the customer journey, Akakçe is therefore positioned too late and too narrowly (SE7EN, 2026a; see Appendix 1).

Customer research in the first report shows that 66.7% of Akakçe users visit only after deciding on a product. The same research indicates that price comparison is common among Turkish consumers, but this behavior does not automatically create loyalty to a dedicated comparison platform. Users may compare prices inside marketplaces, through search engines, or across competing comparison sites because switching costs are very low (SE7EN, 2026a; see Appendix 4).

The problem is intensified by Akakçe's channel mix. Around 70% of traffic comes through mobile web, while the dedicated app has only about 600,000 active devices despite the broader monthly visitor base. Since 80-90% of Turkish e-commerce activity is mobile-driven, this is a strategic mismatch. The app is the best channel for notifications, saved preferences, personalization, and repeat engagement, but it is not yet strong enough to become the default touchpoint (SE7EN, 2026a; TIRPORT Insights, n.d.; see Appendices 2 and 3).

The current product experience also lacks personalization. Akakçe has useful features such as price alerts, price history, wishlists, and machine-learning price predictions, but these features are not integrated into a personalized

engagement journey. A first-time visitor, a returning high-intent shopper, a user interested in electronics, and a dormant account are treated too similarly. Without segmentation, Akakçe cannot provide timely reasons to return (SE7EN, 2026a; see Appendices 1 and 2).

This creates financial and strategic risk. CPC revenue depends on repeated, high-quality interactions. If users remain episodic, Akakçe captures only a small portion of the value it helps create. At the same time, large marketplaces are adding their own price filtering, discovery tools, loyalty systems, and personalized recommendations. If consumers can compare, discover, and buy inside a single marketplace app, Akakçe's independent role becomes easier to bypass (SE7EN, 2026a; see Appendices 2 and 3).

## Possible Solutions

Two solution packages were proposed to address the engagement problem rather than isolated feature changes. Package A builds the behavioral intelligence Akakçe needs in order to understand users more accurately. Package B turns that intelligence into a stronger mobile habit by giving users clearer reasons to download, open, and return to the app. The first package therefore creates the data foundation, while the second package converts that foundation into visible user value (SE7EN, 2026b).

This structure is important because Akakçe's current challenge is not only a communication problem or only an app problem. Users visit the platform mainly when they already know what they want to buy, which keeps Akakçe in a late and transactional position in the shopping journey. A stronger recommendation system without an engaging app would have limited reach; a more active app without behavioral data would risk becoming generic. The two packages are designed to solve those weaknesses together (SE7EN, 2026b).

### Package A: Data-Driven Personalization Engine

Package A focuses on making Akakçe's existing user data more structured, actionable, and useful for re-engagement. The platform already has valuable signals through favorites, price alerts, recent product views, and large volumes of daily web activity. However, these signals are not yet organized into a complete behavioral profile that can guide personalized communication. The purpose of Package A is to move from scattered user actions to a systematic understanding of intent (SE7EN, 2026b).

#### Sub-phase 1: Data Collection Infrastructure

The first sub-phase defines which user behaviors should be tracked and connected across the website and the mobile app. Instead of treating "data collection" as a broad technical task, Akakçe should focus on the behavioral dimensions that directly explain why a user returns, pauses, compares, or leaves (SE7EN, 2026b).

- Products viewed across sessions, including items that were not favorited or added to alerts.
- Time spent on product pages, which can indicate purchase intent or hesitation.
- Category browsing patterns, so recommendations can reflect recurring interests rather than general popularity.
- Search history, which helps identify changing needs and product research behavior.
- Return visit frequency and timing, including the gap between sessions and the triggers that bring users back.
- Drop-off and continuation actions, such as whether users move from comparison to seller pages or abandon the journey.

Once these signals are captured consistently, Akakçe can create practical user segments such as first-time visitors, price-alert users, high-intent repeat users, casual browsers, and dormant users. These groups should not receive the same experience. A new visitor may need trust-building and registration value, while a dormant user may

need a timely product or category update. This segmentation is the bridge between raw data and useful personalization (SE7EN, 2026b).

**Sub-phase 2: Data Utilization**

The second sub-phase uses the data foundation to expand Akakçe's notification and recommendation system. At the moment, notifications are mainly tied to price drops on favorited products. This reaches users who have already shown strong purchase intent, but it misses many visitors who browse products, compare categories, or leave before creating a favorite. Package A broadens the system so that Akakçe can communicate earlier in the decision process (SE7EN, 2026b).

- Extended price-drop alerts for products a user viewed, not only products they favorited.
- Price trend alerts that warn users when prices are rising across sellers and create a timely reason to act.
- Predictive purchase-timing suggestions based on historical price movement and category behavior.
- Similar-product recommendations that help users continue discovery instead of ending the session after one comparison.
- Weekly category digests that summarize price changes, popular items, and relevant opportunities in the categories each user follows most often.

A notification preference center should be part of this package from the beginning. Users need control over frequency, categories, and notification types, while Akakçe needs a clear consent structure under KVKK. This turns personalization into a permission-based relationship rather than a one-way push system. It also reduces the risk of notification fatigue, which would weaken trust and make users disable alerts (SE7EN, 2026b; see Appendix 3).

**Pros and Cons of Package A**

Pros: Package A builds on assets Akakçe already has. Price alerts, product views, and interaction data are already part of the platform, so the package improves existing capabilities instead of requiring an entirely unfamiliar system. It also responds to proven user behavior: the final report notes that around 40% of new members already set price alerts, showing that users are open to re-engagement when the value is clear. The package is measurable through notification open rates, click-through rates, alert adoption, repeat visits, and segment-level engagement (SE7EN, 2026b).

Cons: The main risks are technical complexity, privacy compliance, and message overload. Predictive recommendations may require stronger machine-learning and CRM infrastructure than Akakçe currently uses in the customer journey. KVKK consent must be handled carefully, especially when behavioral data is used for personalization. Finally, excessive or poorly targeted notifications could create fatigue and damage the exact engagement relationship the package is meant to build (SE7EN, 2026b; see Appendix 3).

**Package B: App-First Habit Engine**

Package B focuses on making the mobile app the primary engagement channel for price-conscious shoppers. This is urgent because Turkish e-commerce behavior is heavily mobile, while Akakçe's app usage remains far below its website traffic. The final report highlights that 80-90% of e-commerce activity in Turkey happens on mobile, yet Akakçe's app has roughly 600,000 active devices against more than 40 million monthly visits. Package B addresses this gap by giving users a distinct reason to choose the app instead of treating it as a copy that is an alternative to the website (SE7EN, 2026b; TIRPORT Insights, n.d.; see Appendix 3).

The first mechanism is app-exclusive discount codes negotiated with strong retail partners or other sellers with relevant commercial relationships. These codes create an immediate and understandable benefit: users can save more by opening the Akakçe app. This makes the app download decision easier and gives marketing campaigns a simple message to communicate (SE7EN, 2026b).

The second mechanism is a personalized deal feed available through the app. A scrollable feed of refreshed offers can shift Akakçe from need-triggered usage to browsing-based engagement. Users would not need to wait until they have already chosen a product; they could open the app to discover relevant savings in categories they follow. When this feed is connected to Package A's behavioral data, it becomes more than a general promotions page. It becomes a personalized shopping surface (SE7EN, 2026b).

The third mechanism is web-to-app conversion. Because Akakçe has already laid groundwork for deferred deep linking, this is an extension of current infrastructure rather than a completely new build (SE7EN, 2026b; DeepLinkNow, 2025).

The final mechanism is App Store Optimization. Better keyword targeting, clearer screenshots, stronger review management, and more persuasive store messaging can increase organic install conversion. Since Akakçe already has a strong brand recognition, small improvements in app-store presentation may produce meaningful install gains without depending fully on paid acquisition (SE7EN, 2026b).

**Pros and Cons of Package B**

Pros: Package B creates a practical habit loop. ASO helps users discover the app, deep links reduce friction when moving from web to app, exclusive discounts give users a concrete reason to download, the deal feed creates a reason to return, and notifications bring users back after installation. The package is also measurable through install rates, deep-link conversion, deal-feed usage, notification engagement, and repeat app visits (SE7EN, 2026b).

Cons: The main limitation is dependency on partner negotiations. App-exclusive discounts require cooperation from retailers, including some large marketplaces that are also indirect competitors. There is also a risk that users become conditioned to wait for discounts instead of valuing the platform itself. The deal feed brings an operational burden because it must remain fresh, relevant, and commercially attractive. Finally, the app experience must be strong enough to carry this new role; otherwise, pushing users from web to app could create frustration rather than loyalty (SE7EN, 2026b).

**Combined Recommendation**

The best solution is to implement Package A and Package B together. Package A provides the intelligence: it identifies what users care about, when they are likely to return, and which alerts or categories are relevant to them. Package B provides the channel and habit structure: it gives users app-exclusive benefits, a personalized deal feed, and a smoother path from mobile web to app. One package explains the user; the other gives the user a reason to act (SE7EN, 2026b).

Together, the packages create a reinforcing cycle. Better behavioral data makes app notifications, deal feeds, and discount recommendations more relevant. Stronger app engagement then produces richer behavioral data, which improves personalization even further. This is why the final report treats the packages as complementary rather than competing alternatives. Used together, they can help Akakçe move from a final-stage price-checking tool toward a personalized, mobile-first shopping companion (SE7EN, 2026b).

## Conclusion

Akakçe does not suffer from a lack of awareness or market relevance, it has traffic leadership, a long-standing SEO advantage, a broad seller network, and a trusted dominant position in a market where consumers are highly price sensitive. The core issue is that these strengths are not yet converted into a recurring relationship with users (SE7EN, 2026a; see Appendix 2).

The reports show that the engagement problem is not a single feature gap but rather a result of episodic consumer behavior, weak personalization, limited app adoption, fragmented data use, and growing marketplace competition. Akakçe needs both the intelligence to understand users and the mobile channel to reach them at the right moment (SE7EN, 2026a; see Appendices 1 and 4).

The combined Data-Driven Personalization Engine and App-First Habit Engine offers an efficient solution. Personalized alerts, category digests, recommendations, app-exclusive discounts, deal feeds, deep links, and notification controls work best when they are treated as one engagement system. If implemented through the proposed 12-month roadmap, Akakçe can move from a final-stage price validation tool to a mobile-first shopping companion (SE7EN, 2026b; see Appendix 6).

This transformation is also commercially realistic. The final report estimates the full 12-month program at approximately ₺1.83 million, including technology upgrades, KVKK compliance, partnership incentives, and contingency (SE7EN, 2026b; see Appendix 5). Relative to Akakçe's traffic scale and the revenue risk of remaining a reactive price-check platform, the investment is considered to be modest. More importantly, it protects the platform's independent role before marketplaces make comparison a fully internal habit for consumers (SE7EN, 2026a; see Appendices 2 and 3).

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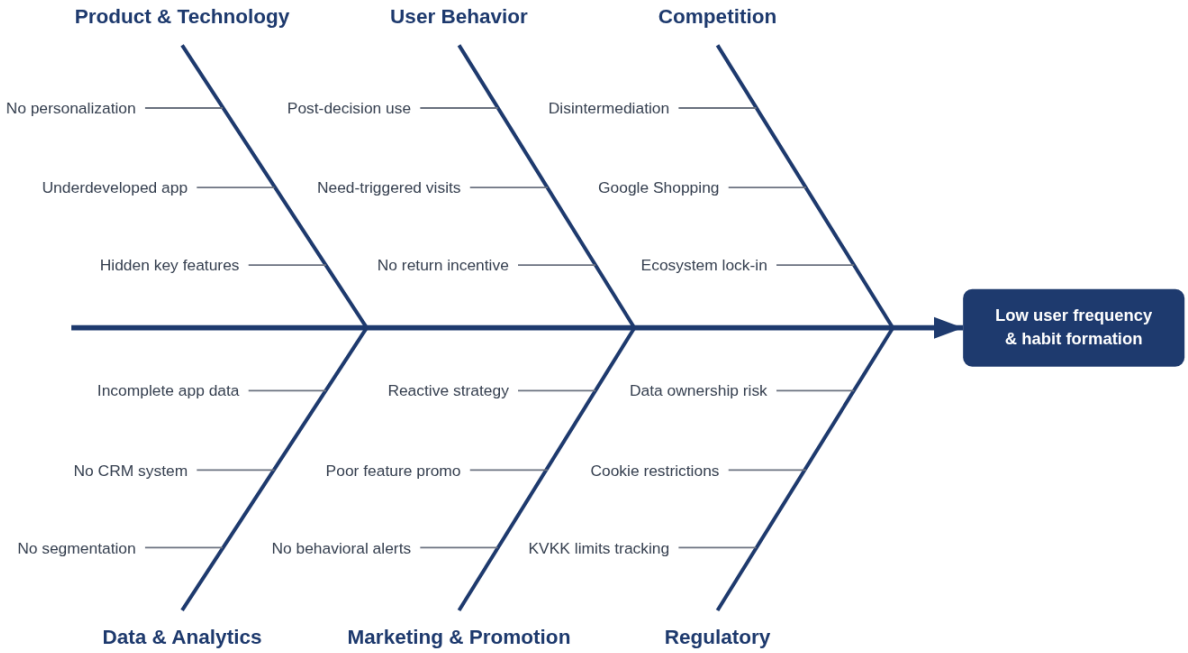
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# Appendices

**Appendix 1:** Fishbone diagram diagnosing Akakçe's core problem



## **Appendix 2:** SWOT Table

### Strengths

- **Market Leadership: 67-68% of Turkey's comparison traffic**
- **Cross-Platform Comparison: Compares across all Turkish marketplaces simultaneously**
- Trusted Neutrality: No sponsored rankings, 70% vendor rejection rate
- SEO Dominance: Near-zero customer acquisition cost through organic search; 25 years of link equity
- Lean Efficiency: 140 employees managing 40M monthly visits

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### Weaknesses

- **Zero Personalization: no user-specific product recommendations or behaviorally adapted UX**
- **Neglected Mobile App: Only 600K active app devices vs. 40M monthly visits; web-to-app strategy barely initiated**
- No User Segmentation: All users receive a similar experience
- Episodic Usage Pattern: Users arrive to solve a one-time need and leave; no habit loop or continuous engagement trigger

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### Opportunities

- **App Channel: 80-90% of Turkish e-commerce is mobile; a better app with exclusive features is a major unlock**
- **Inflation Tailwind: High consumer price sensitivity is a structural driver**
- **E-Commerce Boom: Turkish e-commerce reached 3.16T TRY in 2024 (+60% YoY)**
- Personalization Baseline is Zero: Investment in personalization can create improvement with high ROI

### Threats

- **Marketplace Disintermediation: Trendyol and Hepsiburada are internalizing product discovery**
- **Low Switching Costs: Users can move to Cimri or Epey instantly**
- App Ecosystem Lock-In: Users deeply embedded in Trendyol/Hepsiburada apps may never seek external comparison tools

## **Appendix 3:** PESTEL Table

### Political
REGULATORY ENVIRONMENT

**ETBIS e-commerce registry**
Neutral
Government-mandated registration formalizes the ecosystem, improving transparency that benefits comparison platforms.

**SME digital export support**
Positive
Government programs incentivizing SME digital participation expand Akakçe's potential vendor pool beyond 1,500.

**Japanese investor exposure**
Neutral
20% Netprice stake since 2013 introduces FX sensitivity, though the relationship has remained stable.

**Platform economy regulation**
Risk
Emerging EU-style accountability laws may impose obligations on intermediaries around seller fairness and pricing.

### Economic
MARKET CONDITIONS

**E-commerce boom**
Positive
Turkish e-commerce reached 3.16T TRY in 2024 (+60% YoY), directly expanding the addressable market.

**High inflation drives price sensitivity**
Positive
Persistently high inflation makes price-consciousness a behavioral norm — a structural tailwind for comparison tools.

**TRY depreciation**
Risk
Currency weakness compresses real ad budgets for merchants, so real revenue lags nominal e-commerce growth.

**SME affordability pressure**
Positive
Rising marketplace commissions push SMEs toward low-cost traffic channels, growing Akakçe's commercial opportunity.

### Social
CONSUMER BEHAVIOR

**Price-conscious culture**
Positive
Price is the #1 factor in Turkish online purchase decisions — the core demand driver for Akakçe.

**Mobile-first lifestyle**
Challenge
80-90% of Turkish e-commerce is mobile, yet Akakçe's strength is on web — a structural engagement gap.

**Low cognitive effort preference**
Challenge
Consumers prefer fewer clicks and faster decisions, which conflicts with deliberate multi-step comparison behavior.

**Circular economy awareness**
Opportunity
Growing interest in second-hand goods aligns with Banayeni and creates a sustainability-led engagement loop.

### Technological
DIGITAL INFRASTRUCTURE

**AI/ML personalization**
Opportunity
Akakçe has zero personalization today — any ML investment in recommendations or targeting yields immediate differentiation.

**Real-time data crawling**
Strength
1,000+ shops crawled every few hours gives Akakçe a data freshness advantage that grows harder to replicate.

**Quick commerce infrastructure**
Risk
98% quick commerce growth in 2024 shortens the comparison consideration window before purchase.

**App store optimization**
Gap
600K active devices vs. 40M monthly visitors — ASO, push notifications, and deep-linking are underdeveloped.

**Price prediction (ML)**
Differentiator
Akakçe's 15-day ML price prediction is a unique capability competitors lack and a habit-forming hook if better surfaced.

### Environmental
SUSTAINABILITY CONTEXT

**Low direct footprint**
Positive
Digital-only platform with minimal impact — limited to two offices and server infrastructure; no logistics or inventory.

**Banayeni and circular economy**
Positive
Second-hand marketplace extends electronics lifecycles, reducing e-waste through resale, repair, and buy-back programs.

**No formal sustainability measurement**
Gap
No carbon tracking or ESG KPIs in place, creating reputational risk as investor and regulatory expectations rise.

**Growing ESG expectations**
Watch
Turkish and Japanese investor partners are increasing ESG disclosure requirements; early adoption would be favorable.

### Legal
COMPLIANCE LANDSCAPE

**KVKK (Turkish GDPR)**
Risk
Stricter enforcement and cookie regulations limit behavioral tracking, directly constraining the personalization roadmap.

**E-commerce platform law**
Neutral
Turkish law mandates transparency from platforms — Akakçe's no-sponsored-ranking policy already exceeds requirements.

**Data scraping legality**
Risk
Core infrastructure relies on scraping; evolving data ownership norms could allow large marketplaces to legally challenge this.

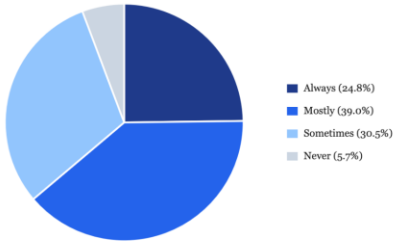
**Consumer protection expansion**
Positive
Stricter consumer laws increase demand for verified pricing transparency, reinforcing Akakçe's value proposition.

## **Appendix 4:** Customer Research Survey Results

FIGURE 1

**Price Comparison Frequency Before Online Purchases**

*All respondents (N = 108)*

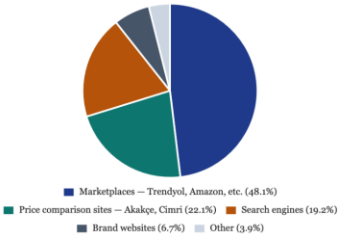



*Source: SE7EN Consumer Survey, March 2026.*

FIGURE 2

**Primary Platform Used for Price Comparison**

*All respondents (N = 108)*

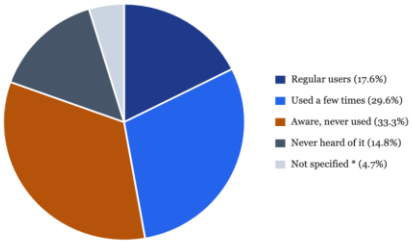



*Source: SE7EN Consumer Survey, March 2026.*

FIGURE 3

**Akakçe Awareness and Usage Status Among Respondents**

*All respondents (N = 108) — illustrates the gap between awareness and habitual use*



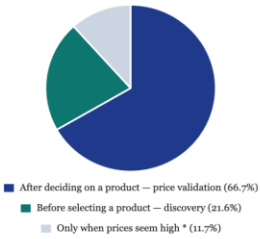

** "Not specified" (4.7%) derived as remainder to 100%.*

*Source: SE7EN Consumer Survey, March 2026.*

FIGURE 4

**Stage at Which Akakçe is Consulted in the Purchase Journey**

Akakçe users only *Respondents who have used Akakçe at least once*




** "Only when prices seem high" (11.7%) derived as remainder to 100%.*

*Source: SE7EN Consumer Survey, March 2026.*

FIGURE 5

**Primary Motivation for Using Akakçe**

Akakçe users only *Respondents who have used Akakçe at least once*



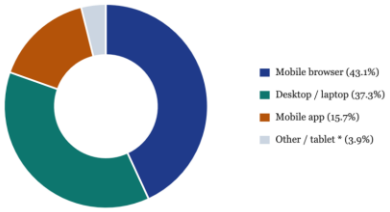

** "Other" (7.8%) derived as remainder to 100%.*

*Source: SE7EN Consumer Survey, March 2026.*

FIGURE 6

**Device Used to Access Akakçe**

Akakçe users only *Respondents who have used Akakçe at least once*



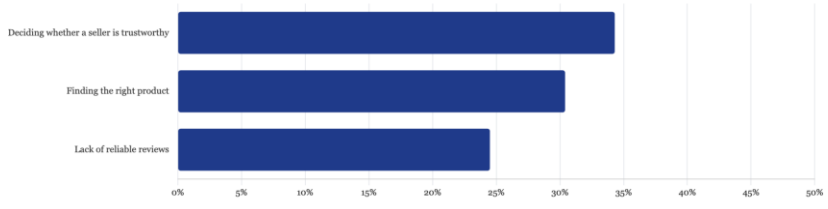

** "Other / tablet" (3.9%) derived as remainder to 100%.*

*Source: SE7EN Consumer Survey, March 2026.*

FIGURE 7

**Most Difficult Aspect of Online Price Comparison**

*All respondents (N = 108) -- single response; % of respondents selecting each option*

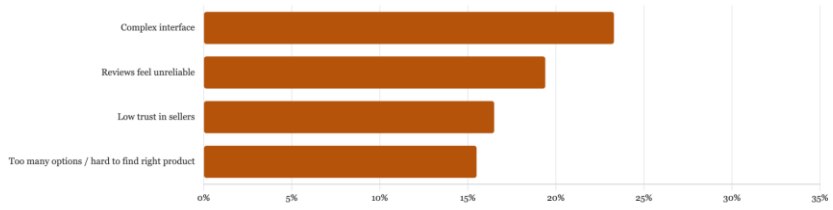



*Source: SE7EN Consumer Survey, March 2026.*

FIGURE 8

**Top Reasons for Abandoning a Purchase**

*All respondents (N = 108) -- single response; % of respondents citing each reason*




*Source: SE7EN Consumer Survey, March 2026.*

## **Appendix 5:** Budget Breakdown Table

| Item | ₺ (TRY) | $ (USD) |
|---|---|---|
| **Technology & software** | | |
| CRM & push notification upgrade Segmentation & automation layer | 470,000 | 10,000 |
| Deferred deep-link improvement Web-to-app conversion via third-party platform | 282,000 | 6,000 |
| App Store Optimisation tooling Keyword-intelligence licence only | 56,400 | 1,200 |
| Incremental cloud ML compute Marginal uplift on existing pipeline | 235,000 | 5,000 |
| **Technology subtotal** | **1,043,400** | **22,200** |
| **KVKK compliance** | | |
| Data protection impact assessment, legal retainer & consent tooling | 222,000 | 4,724 |
| **Strategic partnerships** | | |
| Retailer promotional discount pool Released in tranches against phase-gate data | 400,000 | 8,511 |
| **Human resources** | | |
| Internal job rotation (base case) No incremental headcount cost | — | — |
| **Reserve** | | |
| 10% contingency | 166,540 | 3,543 |
| **Total (12-month programme)** | **₺1,831,940** | **~$38,977** |

*Source: Adapted from SE7EN (2026b). Converted at ₺47 per USD. Human resources fulfilled via internal job rotation at zero incremental cost.*

**Appendix 6:** KPI Targets Summary

| KPI | Baseline | | Target (12 mo.) | Direction |
|---|---|---|---|---|
| **Registered active users**<br>Prerequisite for both packages | – | → | +25% | ↗ Increase |
| **Repeat visit rate (30-day)**<br>Currently est. below 20% | <20% | → | 30% | ↗ Increase |
| **Monthly active app users**<br>Currently ~600K devices | ~600K | → | +40% | ↗ Increase |
| **Web-to-app conversion rate**<br>Currently ~2% | ~2% | → | 5% | ↗ Increase |
| **Bounce rate**<br>Sector avg. 45%; Akakçe at 30% | ~30% | → | ~30% | – Maintain |
| **Session duration**<br>Industry benchmark ~4.4 min | 2.08 min | → | 4 min | ↗ Increase |

# Woppy Teknoloji A.Ş., Strategy Problems



**Proje Ekibi: NOVA**

**Grup Üyeleri :** Yankı Arslan, Zehra Eryılmaz, Mahmut Nedim Göğebakan, Burcu Ilgın Pala, Begüm Yazıcı

**Şirket Danışmanı:** Rasim Cin

**Akademik Danışman:** Tolga Baycan
**Koordinatör Danışman:** Ceren Aydoğmuş

## ÖZET

Bu proje, Türk üretim sektöründe faaliyet gösteren firmaların sahip oldukları büyük veri hacmini etkili karar mekanizmalarına dönüştürememesi problemine odaklanarak Üretim.ai için sürdürülebilir ve ölçeklenebilir bir karar mimarisi çözümü sunar. Proje kapsamında, özellikle TOGG örneği üzerinden sektördeki veri parçalanması, düşük dijital olgunluk, zayıf yönetişim yapıları ve karar alma süreçlerindeki verimsizlikler analiz edilir. Çözüm modeli; Sector Intelligence Report, Decision Diagnostic ve Woppy Decision OS olmak üzere üç aşamalı bir yapı üzerine kurulur. İlk aşama sektörel analiz ve rekabet haritalaması sağlarken, ikinci aşama firma içindeki karar boşluklarını ve değer kayıplarını ortaya çıkarır. Son aşamada ise API entegrasyonları, yapay zekâ destekli Decision Agent'lar ve gerçek zamanlı yönetim altyapısı ile karar süreçlerinin hızlandırılması hedeflenir. Proje aynı zamanda CBAM ve Avrupa Yeşil Mutabakatı uyumluluğu, veri yönetişimi ve sürdürülebilir dijital dönüşüm konularına odaklanarak Üretim.ai'nin Türk otomotiv sektöründe öncü bir decision intelligence sağlayıcısı olarak konumlanmasını amaçlar.

**Anahtar Kelimeler:** Karar Mimarisi, Yapay Zekâ, Dijital Dönüşüm, TOGG, Decision Intelligence, Veri Yönetişimi, Woppy Decision OS, CBAM, Avrupa Yeşil Mutabakatı

## Company Background

Üretim.ai is a decision-intelligence and AI consultancy initiative operating under Woppy Teknoloji A.Ş., focusing on improving decision-making systems within Turkish manufacturing industries. Rather than acting as a traditional technology provider, the company positions itself as a "decision architecture partner" that helps firms transform fragmented operational data into measurable, accountable, and real-time strategic decisions.

The company operates in an environment where Turkish manufacturers are rapidly increasing their digital investments but still struggle to achieve sustainable productivity gains due to weak governance structures, disconnected systems, and limited analytical integration. Üretim.ai addresses this gap by combining artificial intelligence, decision governance, market intelligence, and system integration into a unified framework.

As part of this project, TOGG was selected as the primary implementation case because it represents both the opportunities and challenges of Turkey's evolving automotive ecosystem. Although TOGG possesses advanced production infrastructure and strong digital assets such as Trumore and Trugo, many strategic decisions remain disconnected from these data sources, see *Appendix 1*. This makes TOGG an appropriate example for demonstrating how decision intelligence systems can create measurable operational and strategic value.

Üretim.ai's methodology consists of three stages: the Sector Intelligence Report, the Decision Diagnostic, and the Woppy Decision OS. Together, these stages aim to help Turkish manufacturers transition from traditional management models toward data-driven, agile, and accountable decision ecosystems that can compete in increasingly digital and value-based global markets.

## Problem Definition

The main problem addressed in this project is that Turkish manufacturing firms generate large amounts of operational and behavioral data but fail to transform this data into fast, coordinated, and accountable decisions. Although companies continue investing in digital technologies, artificial intelligence, and automation systems, these investments often remain fragmented and disconnected from executive decision-making processes. As a result, firms experience slow response times, inconsistent decisions, and weak accountability structures.

This issue is mainly caused by fragmented data infrastructure, low digital maturity, weak governance systems, and limited analytical integration. ERP systems, production monitoring tools, and customer data platforms frequently operate independently without integration, preventing firms from converting raw data into actionable insights *(Appendix 1)*. In addition, many AI initiatives remain isolated pilot projects without measurable outcomes, limiting long-term digital transformation.

These challenges are especially visible in the Turkish automotive sector, where competition is increasingly driven by electric vehicles, sustainability regulations, and digital customer experience. TOGG reflects these sector-wide problems at the firm level. Despite its advanced technological infrastructure and digital assets such as Trumore and Trugo, operational and customer data remain insufficiently connected to strategic decisions. Therefore, the absence of an integrated decision architecture is identified as the core issue limiting sustainable competitiveness in a data-driven industrial environment.

Üretim.ai's solution framework addresses the structural decision-making gap in Turkish manufacturing through three cumulative tiers. The three alternatives are not mutually exclusive substitutes but sequential phases of a single phased engagement, with each tier building upon the previous one.

## Solution A: Sector Intelligence Report

Solution A is the first tier of Üretim.ai's engagement model, functioning as a low-commitment, insight-driven entry point. Delivered by Week 4 at a client cost of USD 2,500 (actual cost USD 8,000) *(Appendix 2)*, it produces a standalone 36-month strategic intelligence report *(Appendix 1)* covering sector profit and loss dynamics, competitive analysis of BYD, Chery, and Tesla, EU market data gaps, and a "Decision Era" narrative for executive decision-making. The report requires no system integration or organizational change, making it the lowest-risk option. Its primary advantage is providing an independent sector map and analytical foundation for later stages. However, it produces strategic insight without measurable operational impact: TOGG's fragmented data infrastructure, governance deficit, and EUR 1.5 million value leakage remain unresolved.

**Solution B: Decision Diagnostic**

Solution B is the second tier and incorporates all components of Solution A, followed by a firm-specific Decision Diagnostic delivered by Week 8 at a combined client cost of USD 7,500, see *Appendix 2* (actual cost USD 25,000). It audits TOGG's internal data infrastructure, reconstructs the German market entry decision to identify available but unused data, maps the disconnections between Trumore, Gemlik MES, and financial systems, and delivers a decision architecture roadmap with defined decision rights and accountability structures *(Appendix 1)*. Its key advantage is making the EUR 1.5 million value leakage visible by linking it to concrete decision failures. However, it remains diagnostic rather than operational: systems remain siloed, EU Green Deal compliance is designed but not automated, and the identified value leakage is diagnosed but not recovered.

**Solution C: Woppy Decision OS (Recommended)**

Solution C is the full three-tier implementation and the recommended option. Phase 1 delivers the Sector Intelligence Report (USD 2,500), Phase 2 provides the Decision Diagnostic and validated EUR 1.5 million value recovery case (USD 5,000), and Phase 3 deploys the Woppy Decision OS at USD 1,500 per month, with total investment reaching USD 200,000 *(Appendix 2)*. The system connects Trumore and Gemlik MES through an integrated API layer, deploys AI-powered Decision Agents for commercial and operational decision support *(Appendix 1)*, and embeds a real-time governance framework. By Week 12, EU Green Deal and CBAM compliance are fully automated. Structured around staged decision points, TOGG receives a standalone deliverable at each milestone before committing to the next phase, keeping financial risk proportional to demonstrated impact *(Appendix 3)*.

Solution C is identified as the best solution because it is the only option that fully resolves the core problem while integrating and extending the value generated in Solutions A and B. It addresses all four root causes in sequence: fragmented data structures are resolved through the Trumore and Gemlik MES API integration layer; the decision-system capability gap is reduced through embedded Decision Agents; governance absence is addressed by operationalizing the governance architecture designed in Phase 2; and investment inertia is overcome by converting the EUR 1.5 million value recovery case into a tracked, milestone-verified outcome. The measurable targets include a 30% reduction in signal-to-action response time within 14 weeks, a 20–30% improvement in demand forecasting accuracy, and a 10–15% reduction in inventory inefficiencies (McKinsey & Company, 2021; Deloitte, 2022).

**Conclusion**

This project demonstrates that the fundamental challenge facing Turkish manufacturing firms is not a scarcity of data, but the absence of the architecture required to convert that data into fast, coordinated, and accountable decisions. Through sector-level analysis and firm-level evaluation using TOGG as the primary case, four interrelated root causes are identified: fragmented data infrastructure, limited decision-system capability, weak governance, and investment inertia. These structural failures result in slow decision cycles, inconsistent outcomes, and a widening competitiveness gap in increasingly value-driven global markets.

The Woppy Decision OS is recommended as the optimal solution because it is the only option that operationalizes all prior analytical and diagnostic value into a functional decision system. By integrating Trumore and Gemlik MES through an API layer, deploying AI-powered Decision Agents, and embedding a real-time governance framework, it directly addresses each root cause and enables measurable short-term performance improvements alongside long-term strategic repositioning. Its phased milestone structure ensures that TOGG's financial commitment scales with verified impact rather than speculative returns *(Appendix 3)*, making it both financially viable within the approved 10 million TL budget *(Appendix 2)* and strategically sound as a foundation for TOGG's transition toward becoming a Mobility Intelligence Provider *(Appendix 1)* in the European EV market.

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# Appendices

### Appendix 1: Decision Gap Analysis — TOGG

This appendix documents the structured meeting notes from the strategic consultation session held on April 3, 2026 with Rasim Cin, covering the core problem diagnosis, solution methodology, sector selection rationale, budget framework, and decision architecture approach. The notes confirm that digital tool adoption alone is insufficient for productivity gains, that the real competitive differentiator is governance structure and decision-making architecture, and that TOGG's current orientation remains cost- and engineering-focused rather than data-driven and experience-oriented. These findings directly inform the three-tier solution framework proposed in this report.

### Appendix 2: Budget Breakdown by Phase

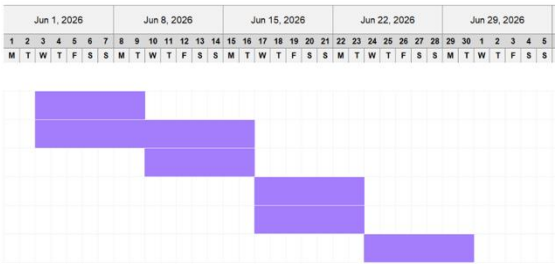
This appendix provides a full itemized cost breakdown across all four phases of the engagement. Phase 1 (Sector Intelligence Report): actual cost USD 8,000, client entry price USD 2,500. Phase 2 (Decision Diagnostic): actual cost USD 17,000, client entry price USD 5,000. Phase 3–4 (Woppy Decision OS): USD 175,000 covering SaaS and platform licensing (USD 42,000), technical integration (USD 66,500), Decision Agent development (USD 28,000), and consulting and delivery (USD 38,500). Change management (USD 17,000) and contingency reserve (USD 25,000) are included within Phase 3–4 budget lines. Total investment: USD 200,000.

### Appendix 3: 14-Week Engagement Gantt Chart

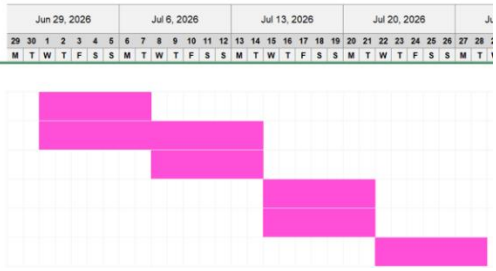
This appendix presents the full project timeline from June 3, 2026 to September 9, 2026. Phase 1 (Weeks 1–4): Sector Intelligence Report, Milestone 1 delivered June 30. Phase 2 (Weeks 5–8): Decision Diagnostic, Milestone 2 (Decision Friction Map) delivered July 14, Milestone 3 (Architecture Report and ROI Forecast) delivered July 28. Phase 3 (Weeks 9–11): Woppy Decision OS Integration, Milestone 4 (first Decision Agent operational, compliance module validated, Brand Narrative Playbook delivered) August 22. Phase 4 (Weeks 12–14): Scaling and Board-Level Handoff, Milestone 5 (CEO Control Center active, full CBAM compliance confirmed, CEO Trust Test validated, board defense delivered) September 9. Each milestone serves as the entry condition for the following phase; no phase begins until the prior deliverable is accepted by TOGG.

## Appendix 4: Gantt Chart

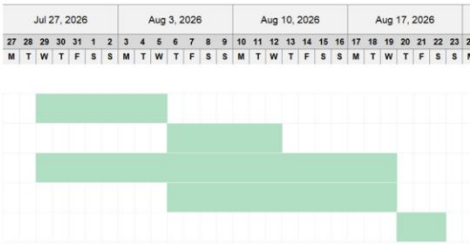
| TASK | ASSIGNED TO | START | END |
|---|---|---|---|
| **Phase 1: Sector Intelligence Report** | | 6/3/26 | 6/30/26 |
| Sector P&L mapping | Finance and Value | 6/3/26 | 6/9/26 |
| Chinese OEM competitive analysis | Growth and Market Intelligence | 6/3/26 | 6/16/26 |
| EU Green Deal compliance gap quantification | Growth and Market Intelligence, Strategy and Governance | 6/10/26 | 6/16/26 |
| Decision Era narrative development | Strategy and Governance, Content and Thought Leadership | 6/17/26 | 6/23/26 |
| OEM decision architecture benchmarking | Strategy and Governance | 6/17/26 | 6/23/26 |
| Sector Intelligence Report compilation and delivery | All departments | 6/24/26 | 6/30/26 |



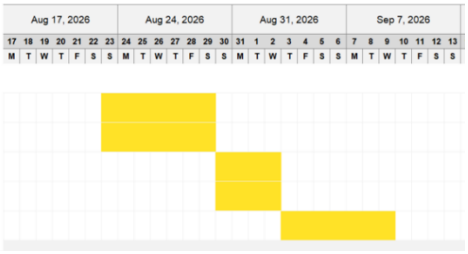

| TASK | ASSIGNED TO | START | END |
|---|---|---|---|
| **Phase 2: Decision Diagnostic** | | 7/1/26 | 7/28/26 |
| Internal data infrastructure audit | Growth and Market Intelligence, Finance and Value | 7/1/26 | 7/7/26 |
| German market entry decision reconstruction | Growth and Market Intelligence | 7/1/26 | 7/14/26 |
| Commercial decision gap quantification | Finance and Value, Strategy and Governance | 7/8/26 | 7/14/26 |
| Decision Friction Point mapping and ranking | Growth and Market Intelligence, Brand and Positioning | 7/15/26 | 7/21/26 |
| Governance framework design | Strategy and Governance, Finance and Value | 7/15/26 | 7/21/26 |
| Architecture Report compilation and delivery | Strategy and Governance, Finance and Value | 7/22/26 | 7/28/26 |




| TASK | ASSIGNED TO | START | END |
|---|---|---|---|
| **Phase 3: Woppy Decision OS Integration Start** | | 7/29/26 | 8/22/26 |
| API integration layer construction | Growth and Market Intelligence, Finance and Value | 7/29/26 | 8/5/26 |
| First Decision Agent configuration and deployment | Growth and Market Intelligence, Finance and Value | 8/6/26 | 8/12/26 |
| EU Green Deal compliance automation module | Strategy and Governance, Growth and Market Intelligence | 7/29/26 | 8/19/26 |
| Brand Narrative Playbook development | Brand and Positioning, Content and Thought Leadership | 8/6/26 | 8/19/26 |
| Phase 3 delivery and structured feedback round | All departments | 8/20/26 | 8/22/26 |




| TASK | ASSIGNED TO | START | END |
|---|---|---|---|
| **Phase 4: Scaling and Board-Level Handoff Start** | | 8/23/26 | 9/9/26 |
| CEO Control Center Finalization | Strategy and Governance, Finance and Value | 8/23/26 | 8/29/26 |
| CBAM and EU compliance confirmation | Growth and Market Intelligence, Strategy and Governance | 8/23/26 | 8/29/26 |
| CEO Trust Test | Brand and Positioning, Strategy and Governance | 8/30/26 | 9/2/26 |
| Scaling roadmap documentation | Content and Thought Leadership | 8/30/26 | 9/2/26 |
| Board Defense preparation and delivery | All departments | 9/3/26 | 9/9/26 |

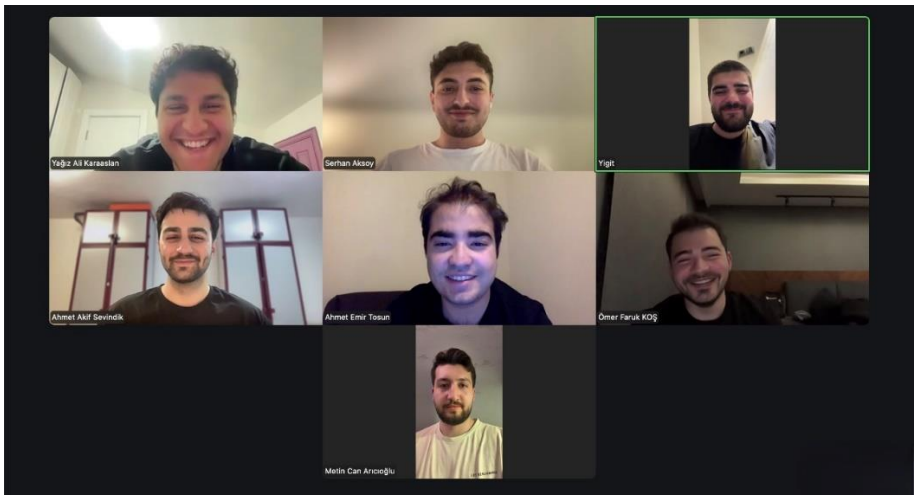



## Appendix 5: Summary Budget Table

| Category | Amount (USD) |
|---|---|
| **Phase 1 – Sector Intelligence Report** | **$8,000** |
| **Phase 2 – Decision Diagnostic** | **$17,000** |
| **Phase 3 – SaaS / Platform (3 Months)** | **$42,000** |
| **Phase 3 – Implementation** | **$66,500** |

| | |
|---|---|
| **Phase 3 – Agent Development** | **$28,000** |
| **Phase 3 – Consulting & Delivery** | **$38,500** |
| **GRAND TOTAL** | **$200,000©** |

# Vezin Yeminli Mali Müşavirlik A.Ş., Marketing Problems




**Proje Ekibi: Stone Cap**

**Grup Üyeleri:** Ahmet Akif Sevindik, Serhan Aksoy, Ömer Faruk Koş, Metin Can Arıcıoğlu, Ahmet Emir Tosun, Yağız Ali Karaaslan, Yiğit Emin Şekerci

**Şirket Danışmanı:** Ahmet Oruç

**Akademik Danışman:** Ali Rıza Zafer Sayar

**Koordinatör Danışman:** Başak Tanyeri Günsur

## ÖZET

Bu kapsamlı iş analizi, küresel HLB International ağının bağımsız bir üyesi olarak faaliyet gösteren Vezin YMM & Bağımsız Denetim A.Ş.'nin Türkiye bağımsız denetim pazarındaki kritik değer algılama uçurumu sorununa odaklanmaktadır. Şirket, elit 1:3 Ortak Personel oranı ve Big 4 düzeyinde teknik kapasiteye sahip olmasına rağmen, 2026 KGK düzeninin yarattığı şok ve sıkı TÜRMOB reklam yasakları nedeniyle prim fiyatlandırma yapamamaktadır. Zorunlu denetim pazarı 25.000 şirketten 17.000'e daralmış, bu da sektörde fiyat savaşlarını yoğunlaştırmıştır. Önerilen çözüm üç aşamalı bir B2B Marka Konumlandırma Çerçevesidir. Şirketin Öğretici Firma kültürünün resmi bir mezun ağına dönüştürülmesi, üst düzey yöneticilere yönelik Kurumsal Bülten yayını ve yüksek kar marjlı Sürdürülebilirlik (ESG) Danışmanlığı biriminin kurulması bu üç aşamalı stratejinin adımları olarak ele alınmıştır. Bu strateji, Vezin'i ticaret tuzağından kurtararak değer odaklı fiyatlandırmaya geçiş yapmasını, genç profesyonellere sürdürülebilir istihdam sağlamasını ve orta ölçekli müşterilere yüksek kaliteli mali denetim sunarak ulusal ekonomik büyümeye katkıda bulunmasını sağlayacaktır.

**Anahtar Kelimeler:** Bağımsız Denetim, Marka Konumlandırma, Değer Odaklı Fiyatlandırma, ESG Danışmanlığı, B2B Pazarlama

## Company Background

Vezin YMM & Bağımsız Denetim Anonim Şirketi was established in 2015 and operates as an independent member of the globally recognized HLB International network, which is currently ranked as the 8th largest accounting network worldwide. The firm was founded by Mr. İsmail Koş, whose professional experience in tax advisory and auditing dates back to the year 2000. Vezin is structured as an integrated professional services group consisting of four interconnected entities, including Vezin SMMM, Vezin YMM, and Vezin Independent Audit, enabling the firm to deliver a comprehensive range of services under a unified operating philosophy.

The company's mission is to assist Turkish commercial law enterprises in achieving their strategic goals through superior quality tax, audit, and advisory services. Operating with a workforce of approximately 55 professionals, of which 20 are dedicated specialized auditors, Vezin maintains an elite 1:3 Partner to Staff ratio that significantly exceeds standard industry benchmarks. This concentrated structure ensures that engagements are managed and executed directly by seasoned senior experts, rather than being delegated entirely to junior staff.

Vezin's service portfolio is diversified across four main pillars. Tax Advisory and Compliance, Independent Audit Services and Corporate Finance and Outsourcing Services. Its primary clients consist of mid to large scale Turkish enterprises, including publicly listed firms such as KAYİK, large scale private corporations requiring statutory audits, and entities with international reporting needs. Through its HLB International membership, Vezin offers global cross border capabilities while maintaining the agility and personalized attention of a local boutique firm. The company's vision is to remain a premium, highly specialized firm operating within the boutique premium segment of the Turkish audit market, focused on sustainable, value-based growth rather than aggressive volume expansion.

## Problem Description

Vezin YMM & Bağımsız Denetim A.Ş. faces a critical value perception gap in the Turkish mid cap market, where the firm struggles to command premium pricing for its high touch, Tier 1 quality services. This challenge arises from the fact that mid cap corporate clients frequently view independent audits as commoditized legal obligations rather than strategic, value adding risk management tools. Despite Vezin possessing technical capabilities comparable to the Big 4 networks and operating with an elite 1:3 Partner to Staff ratio, the firm finds itself trapped in a structural pricing dilemma where its exceptional service quality is not adequately reflected in its market valuation.

This pricing trap has been severely exacerbated by the 2026 regulatory shock initiated by the Public Oversight Authority called as KGK. The mandatory audit thresholds were dramatically raised, with revenue requirements increasing from 600 million TL to 1 billion TL, and asset requirements rising from 300 million TL to 500 million TL. Consequently, the total addressable market of eligible companies suddenly shrank from approximately 25,000 to roughly 17,000 enterprises, intensifying competitive rivalry within the sector. The Turkish independent audit market is highly stratified, comprising three distinct tiers. First, the dominant Big 4 such as PwC, EY, Deloitte, KPMG which operate on factory scale volume models with leveraged ratios reaching 1:28; mid-tier global networks such as Grant Thornton, BDO, and Mazars which compete with Tier 1 pricing but deliver mediocre quality, and over 450 local independent boutiques that engage in aggressive price undercutting wars.

Another structural challenge arises from strict TÜRMOB and KGK regulations that explicitly prohibit direct commercial advertising for audit firms. This regulatory framework effectively prevents Vezin from utilizing traditional mass marketing channels to build brand equity and educate the market about its premium service offering. As a result, the firm's strong global backing through HLB International and its elite human capital remain insufficiently recognized in the domestic market. A root cause analysis conducted through the Ishikawa Diagram identifies several interconnected factors driving this challenge. The 2026 regulatory contraction, legal advertising bans, the statutory obligation mindset of clients, flawed price anchoring against Tier 3 boutiques, informal feedback loops, and high operational costs required to sustain elite human capital. These factors collectively create a severe margin squeeze that threatens the long-term sustainability of Vezin's premium service delivery model.

The primary stakeholders affected by this problem include Vezin's management facing compressed profit margins, the firm's staff and corporate alumni whose career growth depends on the firm's profitability, mid cap CFOs who unknowingly miss out on Vezin's optimal high touch value, industry competitors driving prices toward commoditization, and regulatory bodies such as KGK and TÜRMOB whose policies directly shape the competitive landscape.

**Recommended Solutions**

After evaluating several alternative strategies, including aggressive digital marketing which is legally infeasible due to TÜRMOB advertising bans, cost leadership with volume expansion which is incompatible with Vezin's boutique identity, and aggressive mergers and acquisitions that have high risk during market contraction, the optimal remedy identified is a comprehensive B2B Brand Positioning Framework. These three branched solutions address the value perception gap at its core without violating regulatory requirements which can also be seen from the positioning map in the appendix section. The strategy is operationalized through three mutually reinforcing initiatives that, when implemented together, allow Vezin to transition from the Undervalued Partner quadrant into the Elite Boutique position.

**Initiative 1: The Alumni Referral Network**

Leveraging Vezin's existing teaching firm culture, this initiative formalizes the firm's organic alumni connections into a structured, high trust B2B referral engine. Many former Vezin auditors currently hold senior corporate positions such as CFO or Finance Director within mid cap enterprises. By establishing an exclusive HLB and Vezin Executive Alumni Network with curated networking events, peer to peer knowledge sharing sessions, and a dedicated CRM tracking system, the firm can systematically convert this latent goodwill into measurable business outcomes. The SMART goal for this initiative is to generate a minimum of 5 new Moderate Risk corporate audit contracts through alumni referrals by Q2 2027. This approach completely bypasses the legal advertising ban by relying on peer trust and professional credibility, fundamentally consistent with the firm's premium brand positioning.

**Initiative 2: The Corporate Thought Leadership Newsletter**

This initiative entails launching a monthly corporate newsletter strictly targeting decision makers such as CFOs, board members, and partners of mid cap enterprises. Rather than functioning as a promotional tool, the newsletter will deliver high level thought leadership on market conditions, KGK regulatory updates, mandatory audit threshold changes, and emerging audit risks. By demonstrating Vezin's intellectual capital and technical expertise directly to executive decision makers, this initiative serves as compliant physical evidence of the firm's Tier 1 quality. The targeted goal is to build a subscriber base of 200+ mid cap executives and maintain a consistent open rate of at least 25%, with the opening issue scheduled for distribution by September 2026.

**Initiative 3: Sustainability (ESG) Consulting Department**

As the third pillar, Vezin will establish a specialized consulting unit dedicated to the newly mandated Turkish Sustainability Reporting Standards which is also called as TSRS and the broader ISSB based ESG framework. With Turkish corporations being legally required to adopt these new sustainability standards, this initiative captures a substantial, unique revenue stream that directly offsets the contraction of the statutory audit market. By bundling traditional financial audits with new ESG compliance reports into an Integrated Audit Package, Vezin can apply premium value-based pricing that accurately reflects this specialized expertise. The target is to cross sell ESG consulting services to 15% of Vezin's existing mandatory audit client base by Q4 2027, with the new service unit officially launching in January 2027 after the completion of intensive technical cross training and certification. The detailed implementation timeline across the three phases is presented also in Appendix 6.

**Conclusion**

In conclusion, Vezin YMM & Bağımsız Denetim A.Ş., as an elite boutique firm operating within the highly regulated Turkish audit and advisory sector, faces a critical value perception gap that has been intensified by the 2026 KGK regulatory shock and strict TÜRMOB advertising restrictions. Despite delivering Big 4 level technical quality through its concentrated 1:3 Partner to Staff ratio and global HLB International backing, the firm is currently trapped in destructive price wars with Tier 3 local boutiques that view independent audits as commoditized legal obligations rather than strategic risk management tools. After carefully evaluating alternative strategies such as aggressive digital marketing, cost leadership, and mergers and acquisitions, all of which were determined to be either legally infeasible or fundamentally incompatible with Vezin's boutique identity, the proposed three branched B2B Brand Positioning Framework emerges as the optimal solution. This framework, comprising the formalization of the Alumni Referral Network as a high trust referral engine, the launch of a Corporate Thought Leadership Newsletter as compliant physical evidence of Tier 1 quality, and the establishment of a Sustainability (ESG) Consulting Department as a premium new revenue stream, provides a comprehensive, legally compliant solution that bypasses the advertising ban while diversifying revenue through high margin, non commoditized services. Supported by a detailed SMART goal structure, a phased implementation timeline running from July 2026 to March 2027, and a clearly defined RACI accountability matrix, the strategy ensures disciplined execution across all departments. By implementing these mutually reinforcing initiatives alongside a strategic pivot from cost plus to Value Based Pricing, Vezin will successfully transition from the Undervalued Partner quadrant into its rightful position as an Elite Boutique, commanding premium pricing while sustaining decent work conditions for its young professionals, advancing the United Nations Sustainable Development Goals, and contributing to long term economic growth in Türkiye. Ultimately, the 2026 regulatory contraction should be reframed not as a market threat but as a strategic catalyst for Vezin to permanently secure the financial valuation its exceptional service quality has always deserved.

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# Appendices

| Firm (Tier) | Total Revenue | Audit Staff | Lead Auditors | Partner:Staff | Strategy |
|---|---|---|---|---|---|
| Tier 1: PwC | ~3.45 Billion TL | 1,350 | 45 | 1:30 (Low) | Factory |
| Tier 1: Deloitte | ~3.10 Billion TL | 1,160 | 40 | 1:29 (Low) | Factory |
| Tier 1: EY | ~2.85 Billion TL | 1,050 | 36 | 1:29 (Low) | Factory |
| Tier 1: KPMG | ~2.21 Billion TL | 863 | 30 | 1:28 (Low) | Factory |
| Tier 2: Grant Thornton | ~653 Million TL | 254 | 20 | 1:12 (Med) | Mid-Market |
| Tier 2: Mazars | ~480 Million TL | 210 | 15 | 1:14 (Med) | Mid-Market |
| Tier 2: Crowe | ~310 Million TL | 135 | 9 | 1:15 (Med) | Mid-Market |
| Tier 2: BDO | ~225 Million TL | 148 | 8 | 1:18 (Med) | Mid-Market |
| Tier 2: RSM | ~180 Million TL | 80 | 5 | 1:16 (Med) | Mid-Market |
| **Vezin (HLB)** | **~100 Million TL** | **20** | **6** | **1:3 (High)** | **Boutique** |

*Table 1: Comparison of Vezin with Tier 1 and Tier 2 Competitors*

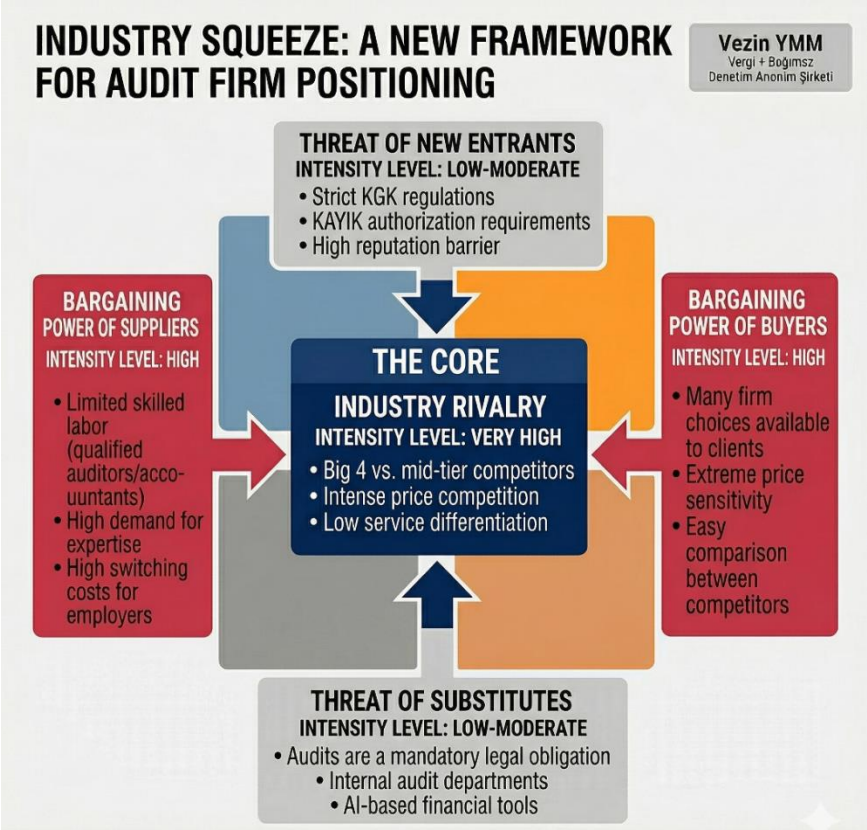



*Figure 1: Porter's Five Forces Analysis – Industry Squeeze Framework*

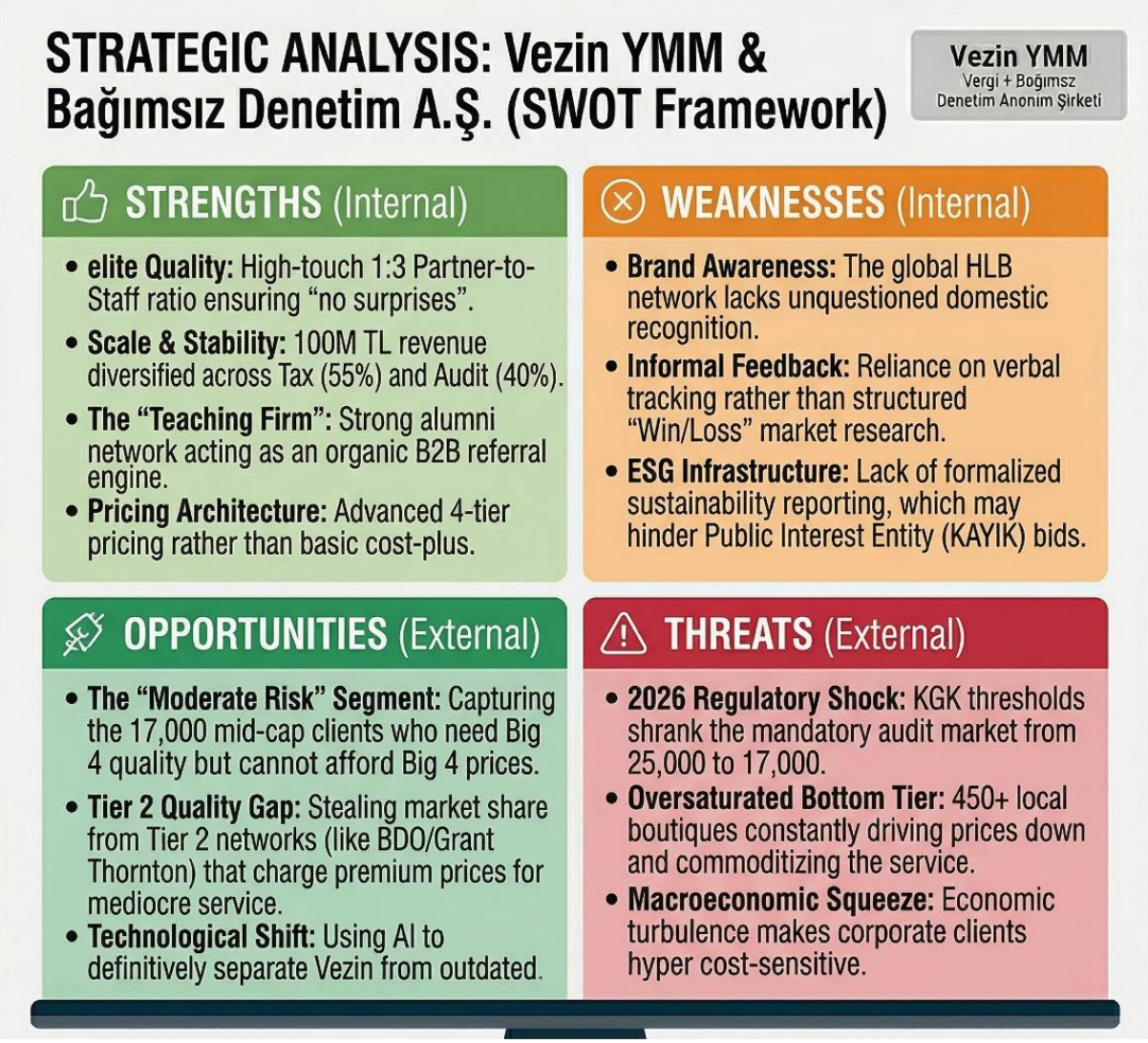



*Figure 2: SWOT Analysis Diagram for Vezin YMM*

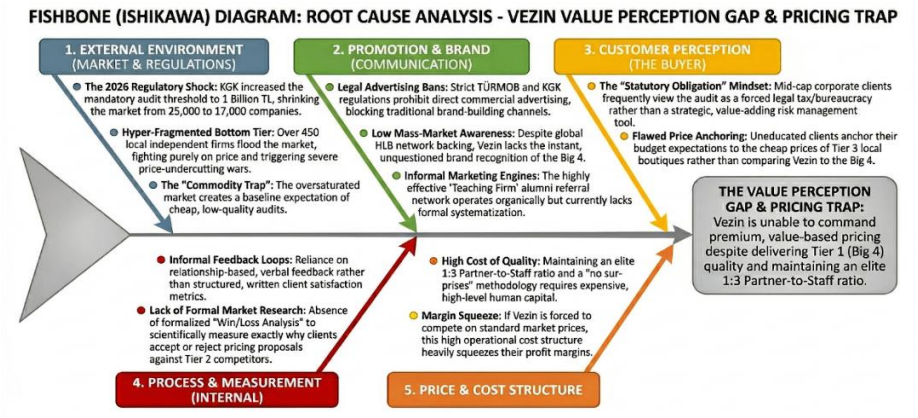



*Figure 3: Fishbone (Ishikawa) Diagram – Value Perception Gap Root Causes*

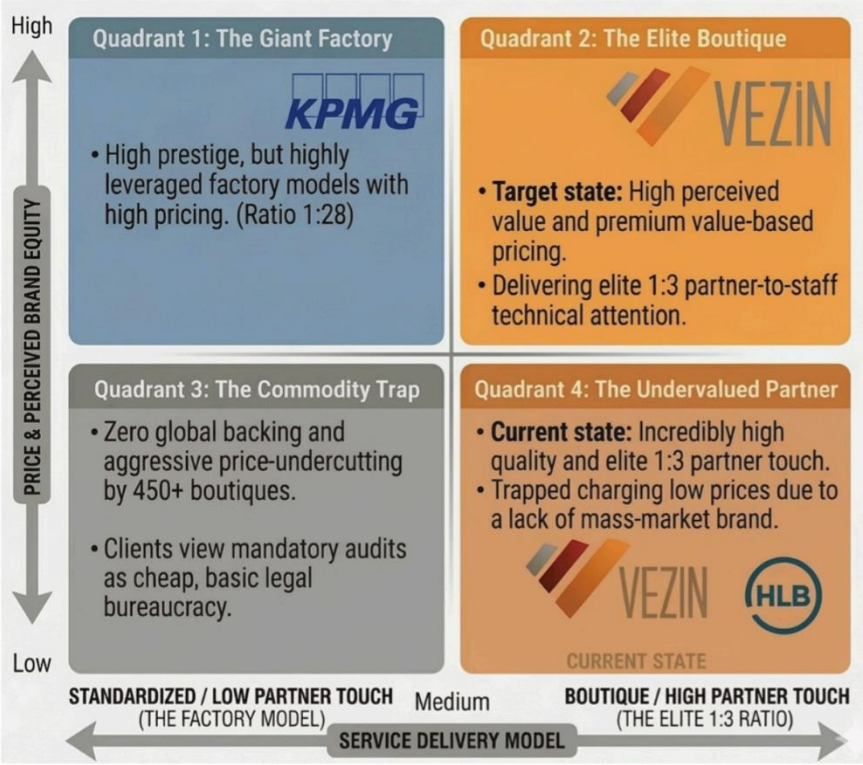



*Figure 4: Vezin's Strategic Positioning Map – From Undervalued Partner to Elite Boutique*

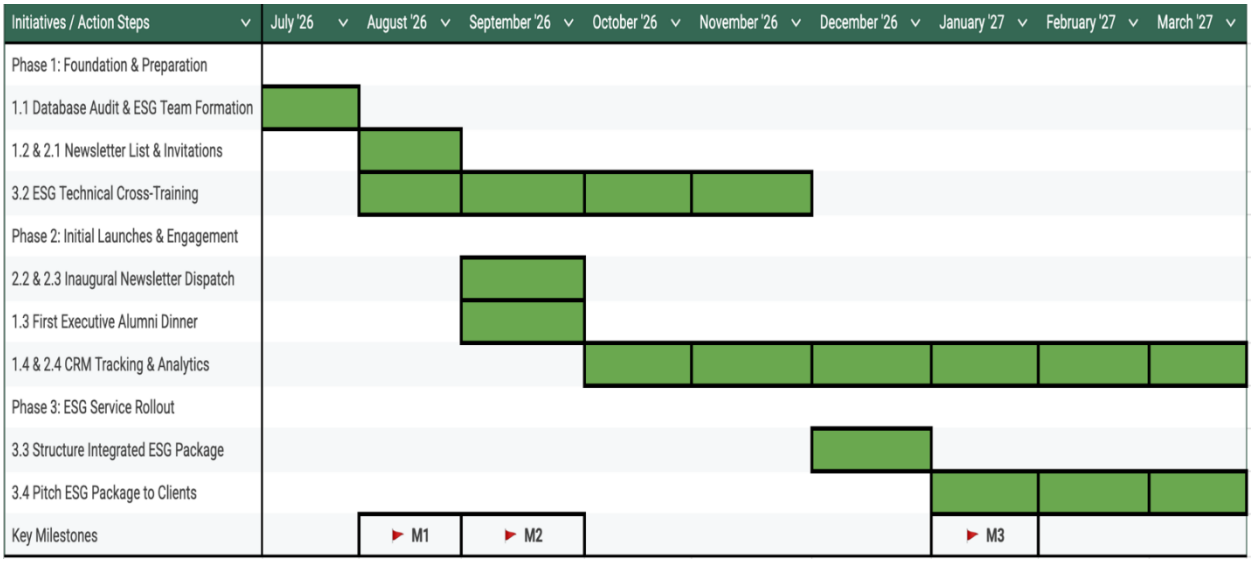



*Figure 5: Gantt Chart of the Three Phase Implementation Timeline (July 2026 – March 2027)*

# Bilkent Holding A.Ş., HR Problem




**Proje Ekibi: The Go-Getters**

**Grup Üyeleri :** Baran İbrahim Dinçman, Duru Kürkçüoğlu, Gökçe Erguvan, Mehmet Emin Demirci, Mete Canbolat, Mustafa Hulusi Tanık

**Akademik Danışman:** Duygu Öztürk

**Akademik Danışman:** Örsan Örge
**Koordinatör Danışman:** Rasim Serdar Kurdoğlu

## ÖZET

Bilkent Holding A.Ş.'nin mevcut çalışan çıkış süreci, manuel iş akışları, kağıt tabanlı belgeler ve alt şirketler arasında parçalı koordinasyon nedeniyle operasyonel verimsizliklere yol açmaktadır. Bu durum; bordro hatalarına, uyum risklerine, güvenlik açıklarına ve marka itibarında olumsuzluklara sebep olmaktadır. Mevcut ERP sistemi "Paperwork" üzerine entegre edilecek tam dijital bir çıkış süreci tasarlanmıştır. Karma tam sayılı doğrusal programlama (MILP) ile optimize edilen bu süreç; iş yükünü, hata riskini ve idari maliyeti en aza indirirken yasal uyumu ve şeffaflığı artırmaktadır. Önerilen çözüm, 20 haftalık uygulama planı, net sorumluluk matrisi (RACI) ve SDG 8 hedefleriyle uyumlu sürdürülebilirlik katkıları içermektedir. Bunun yanında projede alternatif çözümler olarak simülasyon ve kritik yol yöntemi bulunmaktadır. Bu dönüşüm, stratejik bir yetkinlik olarak holdingin rekabet avantajını güçlendirmektedir.

**Anahtar Kelimeler:** Dijital çalışan çıkış süreci, karma tam sayılı doğrusal programlama, simülasyon, kritik yol yöntemi, SDG 8, Bilkent Holding, Paperwork entegrasyonu

## 1- Company Background

Bilkent Holding A.Ş. is a diversified holding company operating across multiple sectors, including construction, defense, and facility management. The holding manages over 40 subsidiaries and employs approximately 35,000 people. Its primary strategic objective is to generate financial contributions to Bilkent University, which is the ultimate owner of the holding.

The company utilizes an ERP-based platform called "Paperwork" for core human resources processes. However, despite this existing digital infrastructure, certain HR workflows, particularly employee offboarding, remain largely manual, fragmented, and decentralized across subsidiaries. The holding's centralized HR function oversees policy design, while subsidiary HR departments execute daily operations. A shared services center, OHM, handles payroll, accounting, and personnel administration. IT, legal, and administrative affairs departments also play critical roles in employee exits.

The current offboarding problem was initially not recognized as a strategic priority by the holding, but internal friction and rising compliance risks have prompted a pivot toward full digitalization.

## 2- Problem Definition

The employee offboarding process at Bilkent Holding is characterized by significant operational inefficiencies that stem from its largely manual and fragmented nature. Despite the company's use of the ERP-based Paperwork platform for other HR functions, the offboarding process remains paper-based, involving physical document handovers, wet signatures, and extensive email coordination between subsidiary HR departments and the central holding HR. This manual approach leads to several interconnected issues. First, it causes time loss due to sequential document transfers and approval delays. Second, manual data entry increases the risk of payroll calculation errors, particularly in severance pay, notice period compensation, and unused annual leave. Third, the lack of standardized procedures across more than 40 subsidiaries results in fragmented workflows and inconsistent execution, creating compliance risks under Turkish labor law and data protection regulations (KVKK). Fourth, the absence of a real-time status dashboard prevents stakeholders from tracking progress, while unclear ownership of offboarding tasks leads to accountability gaps where critical steps such as IT access revocation and asset return are sometimes overlooked. Root cause analysis reveals that the problem is driven by underutilization of the Paperwork system, coordination difficulties between subsidiary and holding HR, limited digital training among staff, and missing standardized policies. Departing employees face uncertainty and potential financial inaccuracies, while remaining employees may lose trust in management. Legal teams face compliance exposure, and IT teams struggle with security vulnerabilities from mistracked system access revocations. Thus, the current offboarding process is not only inefficient but also poses financial, legal, and reputational risks to Bilkent Holding.

## 3- Possible Solutions

For the business problem, we presented three alternative solution methods for redesigning Bilkent Holding's employee offboarding process: the Critical Path Method (CPM), Simulation, and Mixed-Integer Linear Programming (MILP).

### 3.1. Critical Path Method (CPM):

For Bilkent Holding's offboarding process, CPM could be used to map operational dependencies between activities such as approval pending, payroll calculations, IT clearance, and departmental confirmations. Through critical path analysis, the organization would identify which activities within the workflow create delays.

Additionally, slack analysis would help managers recognize non-critical tasks that may be delayed without changing the total process duration. However, CPM is limited to sequencing and scheduling analysis. It does not optimize operational variables such as administrative cost, labor workload, or expected error risk, all of which are fundamental dimensions of the offboarding problem. Furthermore, CPM is effective for relatively fixed process durations and cannot reliably handle the dynamic and naturally simultaneous processes of a digital workflow. Most importantly, CPM lacks the ability to mathematically distinguish the most efficient task stage mechanism when multiple options exist under various operational constraints. Therefore, while CPM is an effective technique for visualization and bottleneck identification, it is insufficient as a comprehensive optimization framework for Bilkent Holding's large-scale, multi-subsidiary offboarding structure.

### 3.2. Simulation:

Simulation analysis is a tool used to test operational parameters under uncertainty by generating various process scenarios with different assumptions regarding task duration, delays, workload intensity, and process variability. For Bilkent Holding's offboarding problem, simulation could model different offboarding conditions and estimate how changes in parameters, such as approval timing in hierarchical order, payroll calculation duration, and departmental coordination, affect total process performance. However, simulation analysis functions only as an evaluative and observational technique rather than a direct tool for optimizing the entire workflow. While simulation can compare alternative schedules and highlight low-cost and low-delay scenarios, it cannot mathematically determine a single optimal workflow; it only produces a range of possible outcomes based on predefined assumptions. For Bilkent Holding, the primary objective is not merely to evaluate process variability but to determine the most efficient allocation of tasks across various departments and subsidiaries to minimize operational burden. Unlike simulation, the selected method (MILP) can directly optimize labor hours, administrative costs, and expected error risk while considering all constraints such as capacity and sequence. Consequently, while simulation yields useful results for scenario testing and process validation, it is not sufficient as the main decision-making framework for the proposed digital offboarding workflow.

### 3.3. Mixed-Integer Linear Programming (MILP):

The Mixed-Integer Linear Programming model is selected as the best solution for Bilkent Holding. MILP functions as the core operational optimization process for the offboarding workflow, with the objective of minimizing organizational burden across the dimensions of time, labor cost, and error risk. The model uses binary assignment variables to resolve the optimal scheduling of ten key offboarding tasks, including notice period definition, compensation calculations, IT access closure, and departmental clearances, across different stages of the workflow. MILP incorporates several variables such as active labor hours, administrative cost, and error-risk scores, allowing Bilkent Holding to quantify the burden of each assigned task. Capacity controls prevent overload of departments, while sequence constraints ensure realistic task progression. The model is structured around clearly defined task IDs, with each task constrained by earliest, ideal, and latest acceptable stages based on legal requirements and operational feasibility. Additionally, priority labels differentiate tasks based on organizational importance: critical tasks such as compensation calculations and final legal obligations receive higher priority coefficients, ensuring efficient resource allocation. The MILP model transforms the inefficient offboarding workflow, characterized by manual intervention, bottlenecks, and payroll delays, into an analytically optimized process. From a managerial perspective, MILP achieves the goal of minimizing process inefficiencies and reducing monetary loss. The objective function minimizes total cost through binary task-stage assignments, labor-hour weighting, error-cost coefficients, capacity constraints, and sequential dependencies. This formalization ensures that the proposed solution is not merely a procedural approach but the outcome of a sophisticated quantitative method grounded in operations research principles.

## 4- Conclusion

The current manual and fragmented offboarding process at Bilkent Holding creates operational, financial, and reputational risks. The proposed MILP-optimized digital workflow, fully integrated into the Paperwork platform, transforms offboarding from an administrative burden into a strategic capability. It reduces cycle time, eliminates payroll errors, ensures legal compliance, and enhances employee trust. With a 20-week implementation plan, clear RACI accountability, positive financial metrics (NPV, IRR, rapid payback), and alignment with SDG 8, the solution is operationally feasible, financially sound, and strategically valuable. The Go-Getters recommend immediate approval and deployment.

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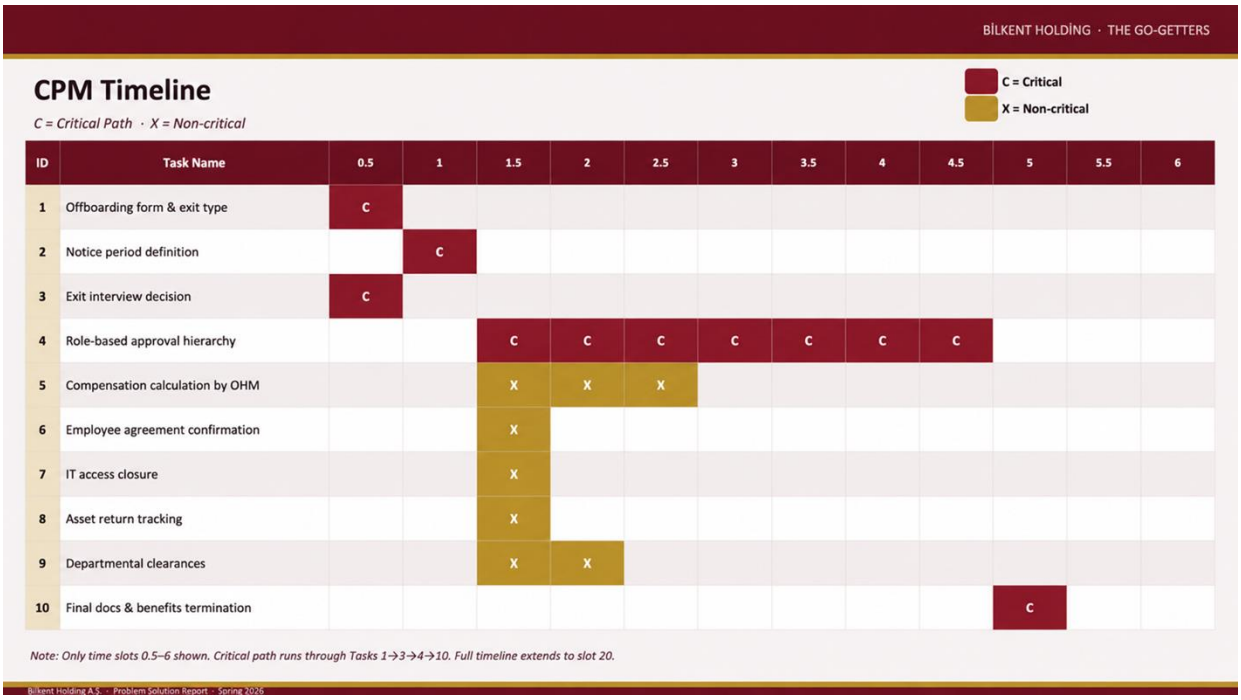
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# Appendices

Figure 1: Offboarding Process using Critical Path Method




| ID | Task Name | 0.5 | 1 | 1.5 | 2 | 2.5 | 3 | 3.5 | 4 | 4.5 | 5 | 5.5 | 6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Offboarding form & exit type | C | | | | | | | | | | | |
| 2 | Notice period definition | | C | | | | | | | | | | |
| 3 | Exit interview decision | C | | | | | | | | | | | |
| 4 | Role-based approval hierarchy | | | C | C | C | C | C | C | C | | | |
| 5 | Compensation calculation by OHM | | | X | X | X | | | | | | | |
| 6 | Employee agreement confirmation | | | X | | | | | | | | | |
| 7 | IT access closure | | | X | | | | | | | | | |
| 8 | Asset return tracking | | | X | | | | | | | | | |
| 9 | Departmental clearances | | | X | X | | | | | | | | |
| 10 | Final docs & benefits termination | | | | | | | | | | C | | |

Figure 2: Simulation Scatter plot with 10th percentile

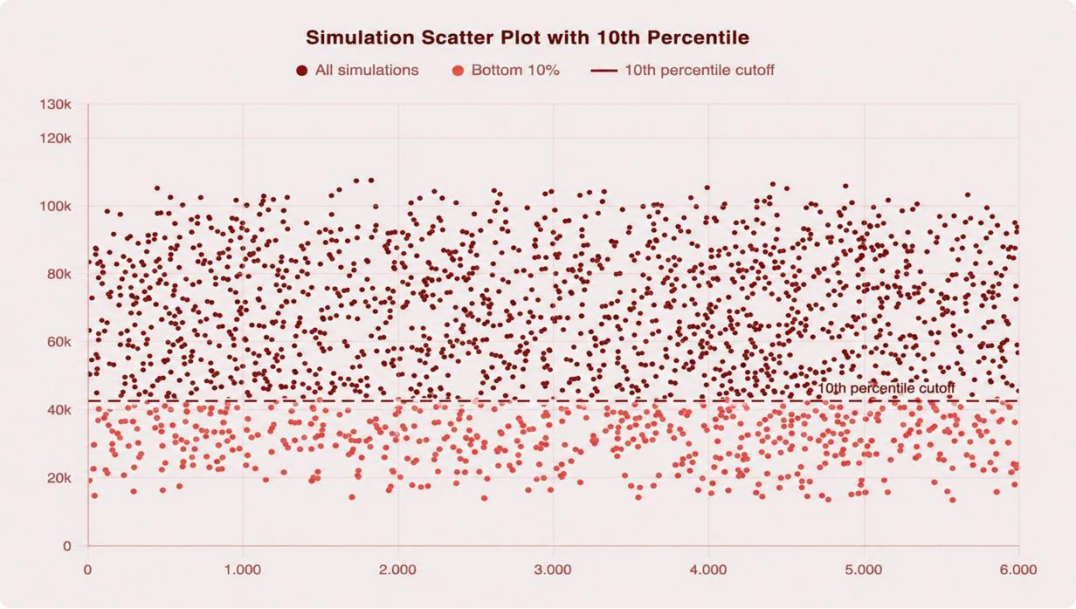
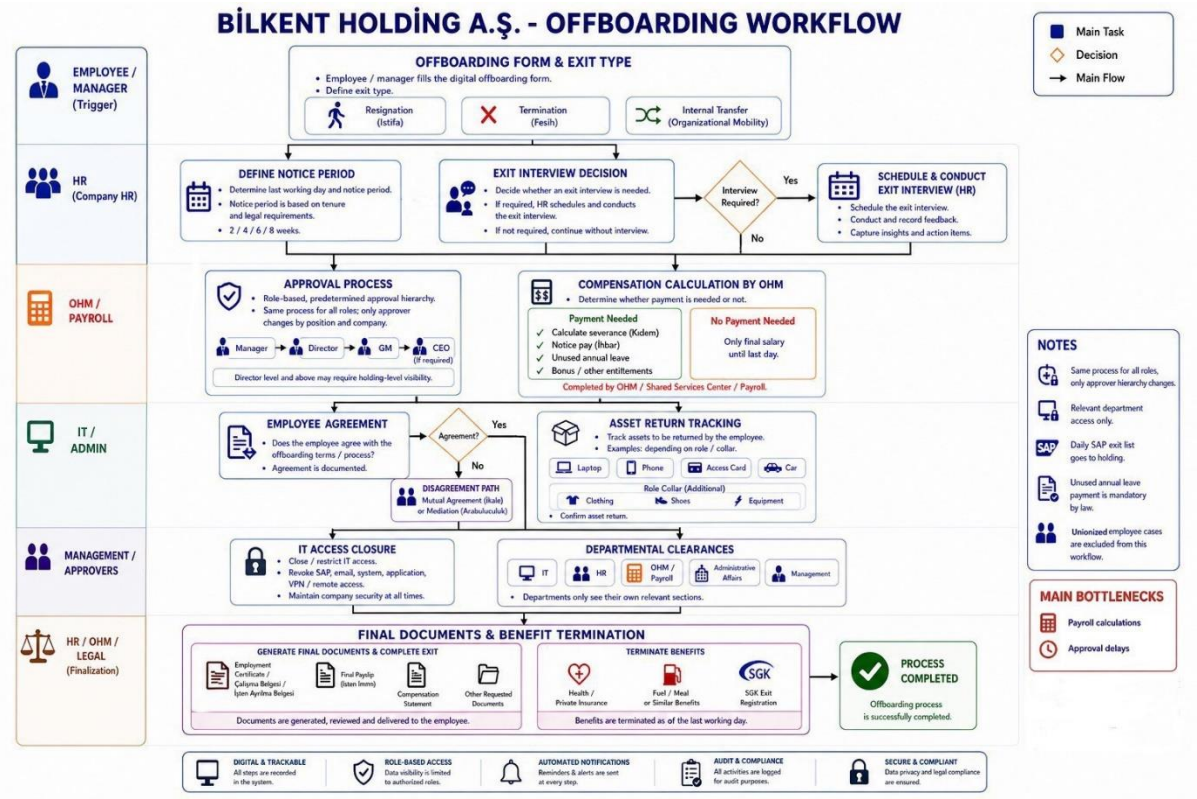


Figure 3: Offboarding Process offered by the MILP solution



# Baklavacı Hacıbaba, Business Development Problem




**Proje Ekibi:** The Synergists

**Grup Üyeleri:** Alishba Pitafi , Amal Rzazade, Daniş Yar, Mehmet Emir Altın, Nazihah Jokoo, Umaima Mahmood Awan

**Şirket Danışmanı:** Zeynep Tekin

**Akademik Danışman:** Gözde Esen

**Koordinatör Danışman:** Rasim Serdar Kurdoğlu

## ÖZET

Bu çalışma, köklü bir Türk tatlı markası olan Baklavacı Hacıbaba'nın uluslararası genişleme stratejisini ele almaktadır. Azalan net gelir ve yurt içi pazarın doygunluğu göz önüne alındığında, şirketin yeni pazarlara açılması stratejik bir zorunluluk haline gelmiştir. Potansiyel lokasyon olarak Londra ve Dubai değerlendirilmiş; PESTEL, CAGE Çerçevesi ve OLI Paradigması gibi analizler uygulanmıştır. Dubai; kültürel uyum, coğrafi yakınlık, düşük işletme maliyetleri ve güçlü hediyeleşme kültürü nedeniyle tercih edilen lokasyon olarak belirlenmiştir. Giriş modu olarak ortak girişim (Joint Venture) seçilmiş; yerel uzmanlığı ve ağ erişimi sayesinde Azadea en uygun partner olarak değerlendirilmiştir. Baklava kalitesini korumak amacıyla Türkiye'den ihracat yapılmasına karar verilmiştir. Senaryo planlaması ile en iyi, orta ve en kötü durumlar analiz edilerek projenin kapsamlı bir finansal ve operasyonel çerçevesi oluşturulmuştur.

**Anahtar Kelimeler:** Uluslararası Genişleme, Ortak Girişim, Dubai, CAGE Çerçevesi, OLI Paradigması, Baklava, Giriş Modu, Soğuk Zincir Lojistiği

## Company Background

Baklavacı Hacıbaba is a family-owned Turkish business established in 1949 in Ankara, Türkiye (Baklavacı Hacıbaba, n.d.). The company is operated by the third generation of the founding family. Furthermore, the company has built a strong heritage brand with authentic production of traditional Turkish *baklava*. Its product range includes pistachio *baklava*, walnut *baklava*, *şöbiyet*, carrot slice baklava, and various *kadayıf* varieties, all baked using high-quality ingredients such as Antep pistachios and premium butter. Along with desserts, some branches in Ankara also offer a dining experience with a traditional Gaziantep menu offering local dishes.

The company operates eight branches across Ankara, including locations in Balgat, Çayyolu, Necatibey, Keçiören, Söğütözü, Oran, Vega Cadde şaşmaz, and Dekocity ümitköy, and offers nationwide online delivery across Türkiye (Baklavacı Hacıbaba, n.d.). The workforce is structured around a shift system, with employees working either a 7:00–16:00 or 11:00–20:00 shift, totalling nine hours including a 1.5-hour rest break. Baklavacı Hacıbaba is known as one of the top *baklava* producers in Ankara, with a loyal customer base that trusts the company's product quality and craftsmanship. The brand also has a strong word-of-mouth reputation and doesn't rely heavily on other promotional strategies.

Despite Baklavacı Hacıbaba's strong domestic presence, the company has been experiencing declining net income in recent years, due to the saturation of the local market and rising raw material costs driven by Türkiye's high inflationary environment. These challenges have created the need for strategic growth beyond the Turkish market. With a well-established brand identity, proven production capabilities, and a product that carries strong cultural appeal in Middle Eastern markets, international expansion is a natural and timely next step for Baklavacı Hacıbaba.

## Problem Description

The problem case for Baklavacı Hacıbaba required coming up with an International Business strategy to expand the business internationally, with Dubai and London being the potential locations. A thorough analysis was carried out, using frameworks including PESTEL, CAGE, and OLI Paradigm, to evaluate the location selection and entry mode. Suggestions were also made for supply chain feasibility and marketing launch, and an extensive cost analysis was carried out to ensure accurate budgeting. The main reasons for Baklavacı Hacıbaba to consider international expansion are diversification and achieving economies of scale: the company can, through expansion, target a new customer base and enable foreign currency inflow while increasing production in Türkiye to export to the international market and achieving economies of scale. The following section explains the solutions proposed for Baklavacı Hacıbaba's international expansion.

## Recommended Solutions

### *1. Location Selection: Dubai vs London*

An evaluation of Baklavacı Hacıbaba's current operations and carrying out SWOT and Porter's 5 forces (see Appendices A and B) analyses highlighted the need for an international expansion. The company chose London and Dubai as the potential locations and an in-depth analysis was carried out to decide on an optimal location: various frameworks such as PESTEL and CAGE, amongst others, were used to compare both markets based on cultural fit, operational feasibility, logistics, and long-term growth potential. The findings indicated that Dubai offered stronger alignment with Baklavacı Hacıbaba's heritage-based brand positioning, consumer demand patterns, and the decision of keeping production only in Türkiye for now, making it the preferred location for expansion.

### *2. Entry Mode: Wholly Owned Subsidiary, Joint Venture, Franchising and Licensing*

After the location selection was finalized to Dubai, a critical consideration that had to be evaluated was the entry mode. There were four possible entry modes the company could opt for in its international expansion: Wholly

Owned Subsidiary (WOS), Joint Venture (JV), Franchising and Licensing. To ease this decision, John Dunning's OLI Paradigm was used, and since the analysis showed that all three factors, ownership, location and internalisation advantages were present, it justified foreign direct investment (FDI) in the form of a WOS or JV. Since Baklavacı Hacıbaba has not had any prior experience with international expansions, a JV was preferred over the WOS to leverage the local partner's expertise and familiarity with the location.

### *3. JV Selection: Azadea (Dubai) vs Restaurant Group (London)*

For each location, a credible JV partner was sought, Azadea for Dubai and Restaurant Group for London. One significant consideration behind the selection of both these potential JV partners was the lack of any Turkish brands or *baklava*-related SKUs in their current portfolios for the location considered. Hence, the inexistence of any indirect competition would allow Baklavacı Hacıbaba to settle more strongly in each of these locations. Based on the company interview, business licenses, logistical expertise in terms of the set-up ability, and access to real estate were among some of the other factors considered. Apart from this, presence of a local customer base, access to delivery and distribution networks, and an alignment of brand positioning were evaluated as well. After all of the considerations and analyses, Azadea was selected as the final JV partner for the preferred location, Dubai.

### *4. Exporting vs Producing*

To finalise the cold-chain supply, the decision to export or produce *baklava* was pivotal for the expansion project. In regards to producing *baklava* in London or Dubai, the quality of ingredients, expenses and their availability served as determining factors. Dubai has better supply chain management (The Synergists, 2026a). London does not possess certain ingredients which are essentials for producing *baklava*. Exporting ingredients means storage investments for finished products and ingredients which is costly. Here, maintaining the *baklava* quality is the priority. Based on Baklavacı Hacıbaba's preference, exporting *baklava* addressed key concerns about the freshness issue. Export of finished *baklava* to the selected location was confirmed with the company. In this respect, exporting the finished *baklava*, Dubai is more efficient and cost effective (The Synergists, 2026b).

### *Best Solution*

Compared to London, Dubai is a stronger strategic fit for Baklavacı Hacıbaba since it is culturally more familiar with Turkish and Middle Eastern desserts such as *baklava* and *kadayıf*, with strong gifting culture and seasonal demand spikes during Ramadan and Eid. Dubai is also geographically closer to Türkiye than London, offering lower logistics costs and more efficient cold-chain transportation, helping preserve product freshness and quality. Dubai also economically benefits from lower labour and rental costs and potential tax advantages, making it a more feasible and sustainable option for Baklavacı Hacıbaba's international expansion. Using scenario planning, the team identified three main events (worst, medium and best case) which showed how Baklavacı Hacıbaba would operate in Dubai, alongside Azadea for the expansion. A JV enables the company to preserve a semblance of its family business ownership structure as opposed to franchising or licensing. Moreover, with the JV as the entry mode the company faces less financial and operational pressure as it can leverage the partner's expertise and support. On that mention of the local partner, Azadea is the best choice as the firm is known for setting up premium businesses in the GCC region. As Azadea does not present any indirect competition by way of its portfolio composition, Baklavacı Hacıbaba can enter the Dubai market with a strong, prioritized focus from Azadea, as its JV partner. To implement the best solution, a timeline has been created for Baklavacı Hacıbaba to follow and effectively expand internationally (see Appendix C).

## Conclusion

With Baklavacı Hacıbaba experiencing declining net income, further analysis via SWOT and Porter's 5 Forces recommended the ideal solution is to expand its operations in Dubai. The team suggested adequate solutions broken down into four main categories to capture the complexity of the expansion concerns. With frameworks (see Appendices A and B) such as CAGE, Porter's 5 Forces, Scenario Planning,

amongst others applied, the proposed solutions established Dubai as the most appropriate location based on cultural alignment, ease of cold-chain supply, geographic positioning, adaptation of *baklava*, costs and market conditions. Using Azadea as the JV partner was deemed most suitable due to their high brand image, network access and location convenience. Coordinating with the company, the problem definition was clearly defined with sufficient evidence. By gaining company approval, the expansion project-maintained transparency and credibility.

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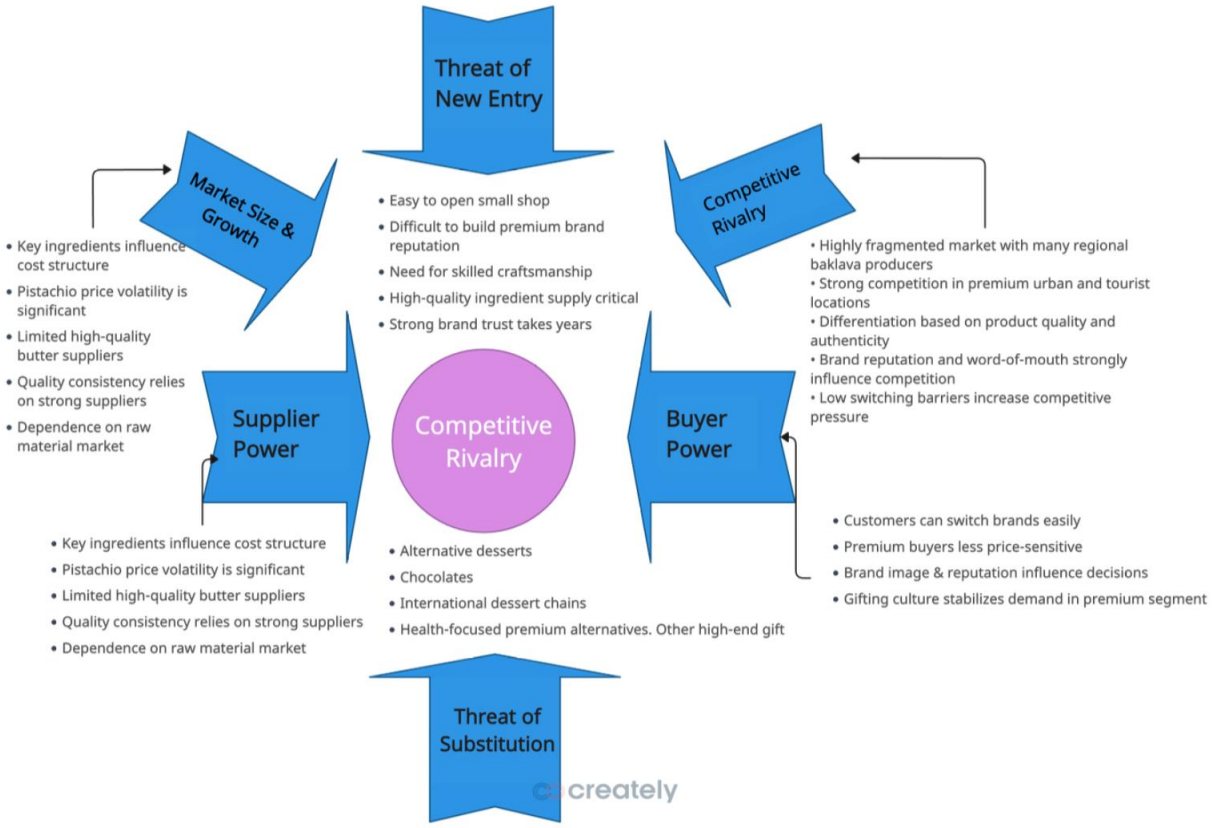
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# Appendices

## Appendix A

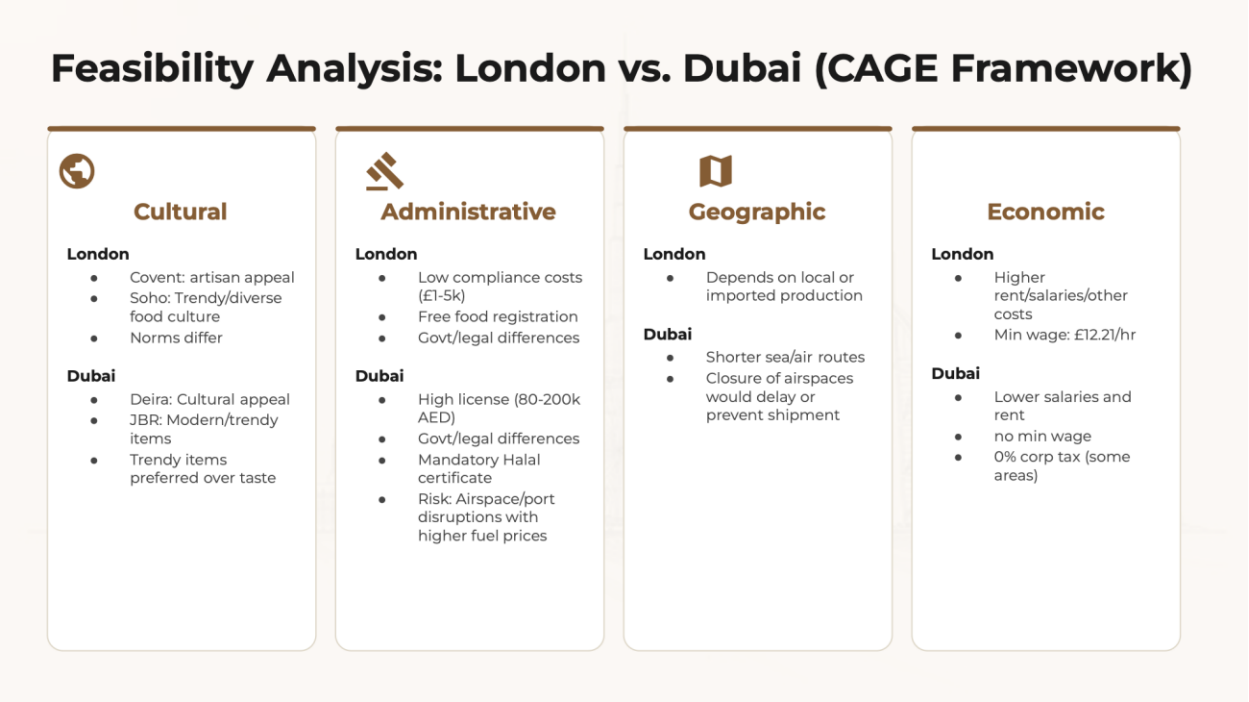
### Porter's Five Forces




Source: Creately

## Appendix B

## CAGE Framework




## Appendix C

## Timeline and Milestones



# TaleWorlds Entertainment, Marketing Problem




**Proje Ekibi: Consultio/Consultius**

**Grup Üyeleri:** Eylül Yaman, Öykü Zeynep Kambay, Mehmet Cem Arslanoğlu, Hüseyin Barış Kaya, Ömer Özyalçın, Selman Malik Özgenç

**Şirket Danışmanı:** Yelda Şekercioğlu

**Akademik Danışman:** Barış İnce

**Koordinatör Danışmanı:** Ceren Aydoğmuş

## ÖZET

Bu rapor, TaleWorlds Entertainment'ın "Mount & Blade" serisi ile yakaladığı niş pazar liderliğinin sürdürülebilirlik ve büyüme stratejisinin birleştirilmesiyle, Z ve Alfa kuşaklarına yönelik görünürlüğünü artırma stratejilerini ele almaktadır. Çalışma, şirketin marka bilinirliğinin yüksek olmasına rağmen hedeflenen genç demografideki aktif oyuncu sayısının düşük olmasını tanımlamakta ve uygun çözüm önerileri sunmaktadır. Önerilen temel çözüm TikTok, Instagram Reels ve YouTube Shorts gibi kısa formatlı video içerikleri ile farkındalık yaratarak Twitch, Kick gibi canlı yayın platformları üzerinden topluluk katılımını artırmayı hedefleyen bir "Entegre Çok Modlu Influencer ve Canlı Yayın Stratejisi"dir. Bu strateji oyunun karmaşıklık algısını kırıp oyun içi "modlama" ekosistemini ve kullanıcı kaynaklı içerikleri birer pazarlama stratejisi olarak kullanmayı amaçlamaktadır. Proje, geleneksel pazarlama yöntemlerinin ötesine geçerek dijital yerli kitlelerin tüketim alışkanlıklarına uygun bir modele geçişin yol haritasını sunmaktadır.

**Anahtar Kelimeler:** Video Oyun Endüstrisi, Sandbox RPG, Dijital Pazarlama, Z kuşağı, Marka Dönüşümü.

## 1. Company Background

Founded in Türkiye, Ankara in 2005, TaleWorlds Entertainment is an independent and niche video developing company. As part of its core, Mount and Blade series reached millions of gamers globally and helped the company become one of the most successful companies in terms of technological exports. Differing from traditional video game developers, TaleWorlds uses their own game engine. In comparison with many mid-sized game studios that rely on standardized external engines such as Unreal Engine or Unity, TaleWorlds possesses the capability of full technological independence over its development infrastructure. This allows the company to optimize large-scale medieval battles involving hundreds of simultaneous AI agents which creates a gameplay experience that is difficult for competitors to replicate.

The operational success of the company evolved from being small-scope and family-founded to a professional organization with 155 employees with the company philosophy highlighting a community driven production model. The biggest strategic existence of TaleWorlds is not just the software but also user-generated content (UGC) which allows the game to preserve its place in the industry for decades by including gamers as co-creators. This infrastructure provides a decentralized innovation environment where community-created modifications increase replayability, strengthen loyalty of customers, and reduce the pressure of content production on internal development teams. In order to protect its market share, the studio actively uses global channels such as Steam and Epic Games. With the publishing of Bannerlord in 2020, TaleWorlds broke gamer records on platforms like Steam and reached huge success in Europe and USA sales charts. Furthermore, by implementing local pricing strategies, pirating is prevented, overall maximizing accessibility. Today, TaleWorlds is not just a game developer but is a part of the ecosystem as a leading part of the Sandbox RPG sector. Currently, the existing corporate structure is in the process of combining the technical success of creative teams with modern marketing strategies.

## 2. Problem Description

Aligning with technological developments and the changing consumption habits throughout the last decade since the game's first establishment, the gaming industry has also experienced a significant transformation in consumer behavior as a natural result. Traditional long-form gaming experiences are increasingly competing against algorithm-driven entertainment ecosystems. In comparison with traditional advertising campaigns, younger consumers now discover games primarily through creators, viral clips, and social recommendation systems. As a result, visibility within digital communities has become equally as important as the quality of the game itself.

The core business problem for TaleWorlds Entertainment is brand awareness and the conversion gap between active users. Based on conducted market research and surveys, TaleWorlds and Mount and Blade is known by more than 90% of the participants as a household name among 17-25 demographic yet the ownership of the game is lower than the expected with a 23.5% rate. This situation is seen as a critical strategic bottleneck, limiting the potential growth of the company with the risk of turning into a game everyone knows but is not being purchased by younger generations.
The reasons behind the analyzed problem lie under various categories. The generational perception differs between the traditional hardcore players and the younger generations. Based on the survey, Gen Z and Gen Alpha see the games as too complex and time consuming, reported by 76.5% of the participants who do not own the game. Currently, younger generations prefer fast consumed games with immediate feedback such as League of Legends, Valorant and Minecraft.

Furthermore, it is acknowledged that the marketing language of the company is also targeted at the already existing hardcore gamers. The digital consumption habits of the targeted young generations include short form

and digestible content such as TikTok, Instagram Reels and YouTube Shorts, however the studio falls short on visibility on these platforms. Potential new gamers perceive the game as too complex and as an old legacy. This perception creates a barrier for exploring the deep sandbox mechanics which the game provides. Additionally, the lack of Environmental, Social and Governance (ESG) reporting weakens the potential bond with consumers who value these practices. Modern younger consumers increasingly value brands not only according to product quality but also according to ethical transparency, inclusivity, and sustainability practices. TaleWorlds' lack of formal ESG reporting represents not only a governance weakness but also a missed opportunity for emotional connection with socially conscious younger generations.

Overall, the core issue is not related to the quality of the game. The accessibility of presentation and how the game is communicated through the younger generations create the bottleneck.

**3. Recommended Solutions**

With respect to the analyzed data, TaleWorlds needs to implement an "Integrated Multimodal Influencer Visibility and Live Stream Strategy" in order to target younger demographics as the most sustainable solution.

**Steps of the Strategy:**

- **Visibility Funnel (Short-Form Content):** Through aggressive campaigns shared through TikTok, Instagram Reels and YouTube Shorts, the perceived complexity of the game is transformed into short and digestible digital content that is optimized for algorithmic reach and organic engagement. This step encapsulates the visibility issue of the game and aims to appear on potential user's "For You" pages where they already spend a fair amount of time in their daily digital consumption.

- **Conversion and Participation Funnel (Live Streams):** The survey results show that 61.1% of the target audience is directly influenced by streamers. Through platforms like Twitch and Kick, collaborations with local influencers focusing on strategy and RPG, the depth of the game will be portrayed in real time in live streams. Interactive incentives such as Twitch Drops and Community Battle nights will transform the passive viewers into active players.

- **Social Education Effect:** Live streams are aimed to function as Frequently Asked Questions (FAQ) sessions and eliminate the perceived view of complexity without the in-company costs that would incur to create additional tutorials.

This strategy with the mentioned steps provides much lower customer acquisition cost (CAC) compared to traditional media without threatening the premium branding of the company as a natural part of the digital communities.

In terms of the application of the strategy, it is proposed that the creative departments of the company should actively play a role in the process with a 10-15% budget allocation in order to protect the unique language of the brand. Laid out through a single year timeframe, the first 3 months include content creation followed by influencer partnerships and community events, the aim is to uplift sales charts of Mount & Blade. The effectiveness of the strategy should be monitored through KPIs including engagement growth through short-form platforms, click-through rates toward Steam pages, conversion rates from influencer links, livestream watch duration, and changes in purchase intention among non-owners.

## 4. Conclusion

When TaleWorlds Entertainment combines their technical perfection with modern and adaptive marketing strategies, it has the potential to evolve from a niche competitor in the sector into one of the most recognizable and searched for brands in the entertainment sector. The company already possesses the technological capacity, hardcore & loyal gamers and a differentiated product through its sandbox RPG ecosystem and modding culture. However, to sustain long-term growth in the changing market, improving visibility, accessibility and engagement with younger audiences is critical to combine with already existing product quality. Specifically designed with respect to the consumption habits of Gen Z and Gen Alpha, this strategic map protects the historical identity and legacy of the brand while integrating it into the digital world of the future. The proposed solution highlighting influencer collaboration and ESG integration is the key to permanent improvement of growth charts. Together, influencer collaborations, community integrations, and sustainability-oriented positioning provide TaleWorlds with a realistic opportunity to increase visibility, strengthen customer loyalty, target younger demographics, improve conversion rates, and establish sustainable long-term growth both in Türkiye and in international markets.

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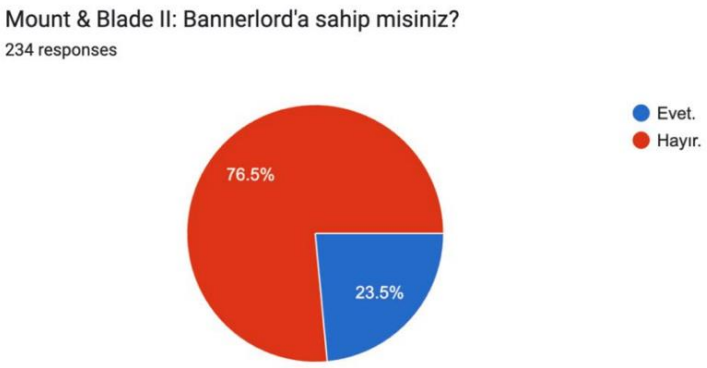
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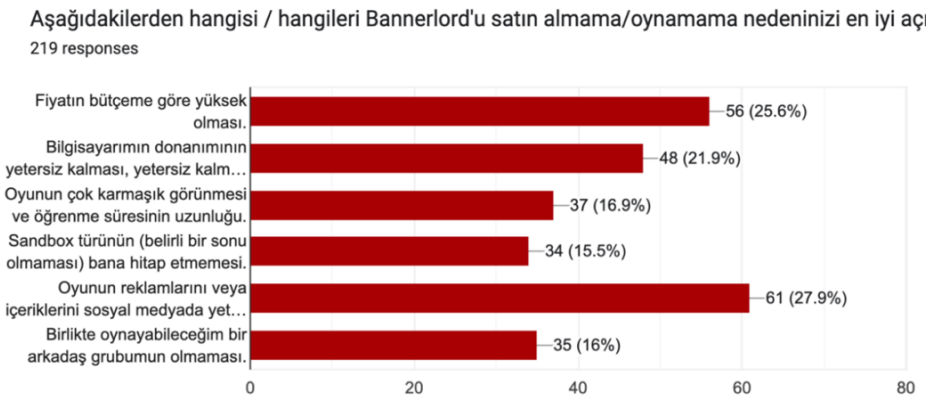
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# Appendices

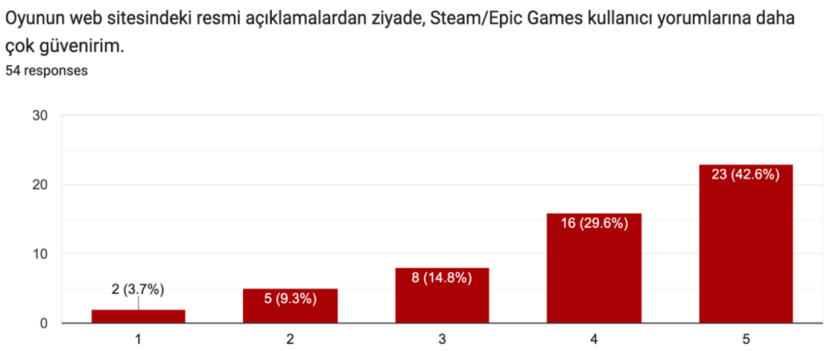
## Appendix A




## Appendix B




## Appendix C



## Appendix D


Aşağıdakilerden hangisi sizi bu oyunu denemeye en çok ikna ederdi?
223 responses
22%
15.7%
27.8%
29.6%
48 saatlik "Ücretsiz Deneme" süreci.
Arkadaşlarımla beraber oynayabileceğim daha basit bir çok oyunculu mod.
Sosyal medyada (TikTok/Reels/Shorts) karşıma çıkan açıklayıcı oynanış vide…
Oyunun popüler bir içerik üreticisi tarafından düzenlenen özel bir etkinliğ…
Takip ettiğim bir yayıncının oyunu canlı yayında oynaması ve ürünü tanıtması.

# ERL Solar Montaj Sistemleri, Operational Management Problem




**Proje Ekibi:** Four Twenty

**Grup Üyeleri:** Levent Şaşmaz, Kaan Dağlıoğlu, Tan Ergün, Yiğit Berke Ataseven, Yağız Taylan Güngör, Ramazan Evirgen

**Şirket Danışmanı:** Serdar Mesutgil

**Akademik Danışman:** Oğuzhan Özbaş

**Koordinatör Danışman:** Ali Rıza Zafer Sayar

## ÖZET

Bu iş analizi, ERL Solar Montaj Sistemleri'nin proje bazlı teklif ve revizyon süreçlerinde karşılaştığı koordinasyon, izlenebilirlik ve versiyon kontrolü sorunlarını değerlendirmektedir. Şirket, EPC müşterilerine galvanizli çelik güneş paneli montaj sistemleri ve proje bazlı mühendislik çözümleri sunmaktadır. Ancak Satış, Mühendislik ve Finans birimleri arasında standartlaştırılmış bir dijital iş akışı bulunmaması, teklif döngü süresinin uzamasına, eski teknik verilerle fiyatlama yapılması riskine ve gereksiz mühendislik döngülerinin artmasına neden olmaktadır. Bu nedenle önerilen ana çözüm, "Yapılandır, Fiyatlandır, Teklif Ver" mantığına benzer özel bir teklif ve revizyon yönetim yazılımıdır. Sistem; teklif numarası, revizyon kaydı, görev sahipliği, onay akışı, gösterge paneli ve temel performans göstergesi takibiyle süreci daha hızlı, şeffaf, kontrollü ve sürdürülebilir hale getirmeyi amaçlamaktadır.

**Anahtar Kelimeler:** Güneş enerjisi montaj sistemleri, proje bazlı teklif süreci, revizyon yönetimi, dijital iş akışı, versiyon kontrolü, operasyonel verimlilik, temel performans göstergeleri.

## 1. Company Background

ERL Solar Montaj Sistemleri operates in the solar energy infrastructure industry. The company produces galvanized steel mounting systems that carry solar panels in solar power plants and supports customers with project-based engineering, design optimization, technical support, proposal preparation, and installation-related services. Its customers are mostly EPC contractors that expect cost-efficient but technically reliable solutions, fast proposal responses, timely delivery, and strong engineering support during the quotation stage.

The company's competitive advantage is not based only on being the cheapest supplier. ERL Solar differentiates itself through engineering quality, in-house production and galvanizing capability, project-specific design, installation convenience, and after-sales customer support. This makes the quotation process strategically important because the proposal is not simply a price document; it is a technical and commercial reflection of the company's engineering strength.

ERL Solar has significant production and operational capacity. According to the project interview notes, the company has production facilities in Ankara and Dilovası, owns galvanizing capability, and processes large quantities of steel monthly. Its workforce includes both blue-collar production employees and a qualified white-collar engineering team. These resources allow ERL Solar to design customized steel structures according to project-specific variables such as site conditions, topography, wind and snow loads, coating decisions, steel tonnage, and customer preferences.

Because of this customized structure, each quotation behaves like a small engineering project. Unlike standardized products where pricing can be prepared quickly from a catalog, ERL Solar's proposals require Sales, Engineering, Finance, and sometimes Production Planning to work together. Sales collects customer requirements, Engineering converts them into a technical baseline and quantity output, Finance prices the approved baseline, and Sales submits the final proposal to the EPC customer. This cross-functional dependency is the main reason why the quotation process needs a more standardized and digitally traceable workflow.

## 3. Problem Description

The main problem is the inefficiency in ERL Solar's quotation and revision process due to the lack of a fully standardized workflow and the inability to track quotation changes through a dedicated digital system. The company already has production capability and an ERP system for production, inventory, and stock management. However, the quotation and revision process before production does not have a separate analysis system, change tracker, or version-controlled digital environment. Therefore, the issue is not the manufacturing process itself, but the coordination-intensive quoting-to-order stage.

The current process can be summarized as follows: Sales receives the customer request and forwards it to Engineering; Engineering prepares the design and quantity justification; Finance uses the technical information to prepare the price; Sales submits the offer to the customer. When the customer asks for a revision, alternative design, discount, or clarification, the same cycle starts again. The first quotation may be manageable, but confusion increases after the second or third revision because the latest technical baseline, pricing version, and customer request may not always be visible to every department.

Four root causes create this problem. First, there is no fully written and standardized rule about how a quote moves from Sales to Engineering, then to Finance, and finally back to the customer. Second, there is no strong version control system for design changes, customer alternatives, and pricing updates. Third, management does not consistently track operational metrics such as average quote cycle time, number of revisions per quote, engineering rework hours, and finance approval waiting time. Fourth, Sales often acts as an informal coordinator for complex quotes, although revisions require structured cross-functional ownership rather than verbal follow-up.

This creates several business risks. Engineering may spend time on avoidable rework when Sales forwards incomplete site or customer information. Finance may price an outdated technical quantity sheet if the latest engineering version is not clearly identified. Production Planning may not have early visibility into likely projects and material implications. Management may not see where delays accumulate, why quotes are blocked, or which customers repeatedly request unnecessary alternatives. As a result, the company can become slower in responding, less predictable in its internal workload, and more exposed to pricing mistakes during periods of steel and zinc price volatility.

The problem is especially important because EPC customers evaluate suppliers through both price and response speed. ERL Solar's goal is to deliver technically reliable proposals without losing agility. If the company sends a proposal quickly but with poor technical accuracy, its engineering-based reputation may be damaged. If the company sends a technically strong proposal too slowly, it may lose commercial opportunities. Therefore, the central challenge is to make the quotation process faster, more traceable, and more controlled while preserving the company's engineering quality.

**Current-State Problem Logic**

| Root Cause | Observation | Effect |
|---|---|---|
| **Methods** | No fully standardized written workflow for moving quotes among departments. | Teams rely on verbal communication and ad hoc follow-up. |
| **Technology** | ERP exists for production and stock, but quote revision tracking is not digitally controlled. | Old and new versions may be confused. |
| **Measurement** | Cycle time, revision frequency, and engineering rework are not consistently tracked. | Management cannot easily identify where delays accumulate. |
| **Manpower** | Sales often acts as informal coordinator in complex quote projects. | Coordination workload grows when revisions and alternatives increase. |
| **Market Pressure** | EPC customers expect fast, accurate, efficient proposals. | Delays weaken responsiveness and can affect competitiveness. |

## 3. Possible Solutions

Three alternative solutions were evaluated for ERL Solar. The first and strongest alternative is a custom CPQ-style quote and revision management software. CPQ refers to Configure, Price, Quote logic, which helps companies manage complex quotation processes by connecting product configuration, pricing logic, approvals, and proposal generation. ERL Solar does not need to purchase a full enterprise CPQ product immediately. Instead, it can develop or configure a focused internal software module specifically for project-based quote intake, engineering version control, finance approval, and revision tracking.

The proposed software would give every quotation a unique Quote ID. All related customer requests, technical drawings, quantity sheets, pricing assumptions, approval statuses, and revision reasons would be connected to that same ID. Sales would enter customer and project information through a standard intake form. Engineering would accept, reject, or request missing information and then release an approved technical baseline. Finance

would price only the latest approved engineering version. Management would see blocked quotes, urgent bids, revision counts, approval waiting times, and delay reasons through a dashboard.

The second alternative is to create a Proposal Coordination Office or assign a proposal coordinator for complex quotes. This person would not replace Sales, Engineering, or Finance. Instead, the coordinator would ensure that deadlines, document versions, missing information, and escalation points are followed consistently. This solution can reduce ambiguity quickly and with lower cost, but it still depends heavily on human discipline. Without a supporting digital system, the company may continue to face version-control problems when quote volume increases.

The third alternative is a customer-facing intake and revision policy. Under this solution, Sales would use a standard customer checklist before Engineering starts design work. The checklist would include required technical inputs, project location, site assumptions, capacity, loading information, deadline, delivery needs, and whether the customer is asking for a firm quote or preliminary budget. ERL Solar could also define "design freeze" points, where major changes after a certain stage require a new revision deadline. This option protects engineering capacity and makes customer communication clearer, but it cannot solve internal version confusion by itself.

The best solution is the custom quote and revision management software, supported by selected elements of the proposal coordination and customer intake policy. This combined approach directly addresses the actual gap: the absence of a centralized, traceable, version-controlled quotation environment. It also fits ERL Solar's strategy because it improves speed and control without forcing the company to abandon its customized engineering approach.

**Future-State Software Process**

| Step | Owner | Control Point |
|---|---|---|
| **Customer request received** | Sales | Classify request type and deadline. |
| **Quote intake completed** | Sales | Mandatory fields completed before Engineering starts. |
| **Technical review** | Engineering | Accept, reject, or request missing information. |
| **Design baseline** | Engineering | Assign version number and approved quantity output. |
| **Pricing** | Finance | Price only latest approved technical version. |
| **Risk approval** | Finance / Management | Escalate high-value or high-risk proposals. |
| **Customer submission** | Sales | Submit approved proposal and log customer response. |
| **Revision request** | Sales + Engineering | Log as controlled revision with reason and due date. |
| **Post-quote review** | Process owner committee | Record win/loss, cycle time, revision count, and lessons learned. |

**Key Dashboard Fields**

- Quote ID and project/customer name.
- Request type: new quote, revision, alternative, urgent bid, or post-award clarification.
- Current process stage and responsible owner.
- Current technical version and latest approved pricing version.
- Customer deadline and internal due date.
- Revision count and standardized reason codes.
- Engineering hours spent and Finance approval waiting time.
- Status: on track, at risk, blocked, submitted, won, or lost.
- Reason for delay and required management action.

**Implementation Plan**

The implementation should be gradual rather than disruptive. In the first month, ERL Solar should map the current process and measure baseline quotation cycle time. In the second month, the future-state process should be designed with Sales, Engineering, Finance, Production Planning, IT, and HR. In the third and fourth months, quote intake templates, revision-control rules, role definitions, approval thresholds, and a dashboard prototype should be prepared. In months five and six, the system should be piloted with selected domestic and export quotes. In month seven, pilot KPIs should be compared with baseline performance. In months eight to ten, the software should be rolled out company-wide. In months eleven and twelve, the dashboard, training materials, and improvement roadmap should be stabilized.

A successful implementation also requires change management. Employees should understand that the software is not intended to blame departments for delays. Its purpose is to make the real source of delay visible, reduce unnecessary rework, and prevent old-version pricing. Management sponsorship is critical because informal communication channels may continue unless Quote IDs and revision logs become mandatory. The pilot should begin with minimum required data fields so the system does not become too bureaucratic. User feedback should be collected during the pilot to remove unnecessary steps while keeping the essential control mechanisms.

**Key Performance Indicators**

| KPI | Definition | Target Direction |
|---|---|---|
| **Average quotation cycle time** | Time from complete intake to customer proposal submission. | Decrease |
| **Revision count per quote** | Number of logged customer or internal revisions per quote. | Decrease avoidable revisions; monitor true alternatives |
| **Engineering rework hours** | Hours spent correcting missing information or previous version errors. | Decrease |
| **Finance approval waiting time** | Time between approved engineering baseline and finance pricing approval. | Decrease |
| **On-time quote submission rate** | Share of quotes submitted by promised customer deadline. | Increase |

| | | |
|---|---|---|
| **Quote win/loss rate by revision count** | Win/loss patterns linked to quote complexity and revision intensity. | Use for learning |
| **Employee satisfaction with process clarity** | Survey score on role clarity and workload predictability. | Increase |

**4. Conclusion**

ERL Solar's core operational challenge is not a lack of engineering capability or manufacturing capacity. The company's challenge is the absence of a digitally traceable quote and revision management system across the quotation procedure. Because ERL Solar prepares customized, project-specific proposals for EPC customers, the quotation process requires close coordination among Sales, Engineering, Finance, Production Planning, and Management. When this coordination is handled through informal follow-up and uncontrolled document versions, the company faces longer cycle times, engineering rework, outdated pricing risk, and weaker customer responsiveness.

The recommended solution is a custom CPQ-style quote and revision management software supported by a disciplined intake policy and clear coordination ownership. This solution would create a single source of truth for each quotation by connecting Quote IDs, revision logs, engineering baselines, pricing versions, responsible owners, approval gates, and performance dashboards. It would not replace ERL Solar's engineering judgment; instead, it would protect that judgment by ensuring that the right technical information reaches the right department at the right time.

The expected benefits include shorter and more predictable quote cycle times, fewer avoidable revisions, improved pricing accuracy, better management visibility, and a clearer work environment for employees. The solution also supports SDG 8 by improving productivity, promoting sustainable business growth, and reducing unnecessary work pressure created by unclear responsibilities. Overall, the software-based workflow solution would help ERL Solar become faster and more reliable without weakening its engineering-based competitive advantage.

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# Appendices

## Appendix A - Interview Evidence Summary

| Interview Evidence | How It Supports the Project |
|---|---|
| ERL Solar produces galvanized steel mounting systems and provides project-based engineering support. | Shows that the quotation process is technical and project-specific, not a simple standard pricing task. |
| Customers are mainly EPC contractors expecting reliable, fast, and cost-efficient proposals. | Explains why quote speed and accuracy affect competitiveness. |
| The target quote time is around three days, but complex cases may take up to about a week. | Shows the performance gap and need for cycle-time control. |
| Quotation effort is roughly 80% Engineering, 10% Finance, and 10% Sales. | Shows why engineering rework is costly and why incomplete intake creates operational waste. |
| The main bottleneck is revision tracking when customers request multiple alternatives. | Directly supports the recommended version-control and revision-log solution. |
| ERP exists for production and inventory, but quotation revisions are not digitally tracked. | Shows why a focused quote/revision module is needed instead of a full ERP replacement. |

## Appendix B - 12-Month Implementation Timeline

| Period | Milestone | Output |
|---|---|---|
| **Month 1** | Project launch and baseline measurement | Current-state map, cycle-time baseline, stakeholder list, KPI definitions. |
| **Month 2** | Future-state design | Approved process map, intake template, revision-control rules, RACI draft. |
| **Month 3** | System configuration | Dashboard prototype, quote ID structure, document/version storage rules. |

| | | |
|---|---|---|
| **Month 4** | Training and pilot preparation | Training sessions, pilot quote selection, approval thresholds, user guides. |
| **Months 5-6** | Pilot implementation | Live use in selected quote categories, weekly issue log, KPI tracking. |
| **Month 7** | Pilot evaluation | Baseline vs. pilot comparison, revised templates, rollout decision. |
| **Months 8-10** | Full rollout | Software used across quotation process; approval routing active. |
| **Months 11-12** | Stabilization and continuous improvement | Monthly dashboard, lessons learned, yearly improvement roadmap. |

# Cengiz Holding, HR Problems




**Proje Ekibi: 7UP**

**Grup Üyeleri:** Arda Bora Numanoğlu, Başak Ceren Dinçer, Mert Ali Fidancı, Begüm Erden, Hazal Çalık, Berin Kahya, Zeynep Ayan

**Şirket Danışmanı:** Nurseda Birtane

**Akademik Danışman:** Zahide Karakitapoğlu Aygün
**Koordinatör Danışman:** Ceren Aydoğmuş

## ÖZET

“Bu proje, Cengiz Holding'ın ‘tercih edilen işyeri’ (preferred workplace) vizyonunu desteklemek amacıyla insan kaynakları süreçlerindeki entegrasyon fırsatlarına ve genç yetenekler nezdinde güçlü bir işveren markası algısının geliştirilmesine odaklanmaktadır. Yapılan analizler sonucunda üç temel bulgu öne çıkmıştır. Bu temel bulgular: Gençler, şirketin Ar-Ge kapasitesinden ve Ar-Ge uzmanlığına ilişkin farkındalıklarının artırılmasına ihtiyaç duyulduğu, iç iletişim sürecinde deneyimli çalışanlarla gençler arasındaki bilgi ve deneyim paylaşımının daha görünür hale getirilebileceği, çalışan gelişimi tarafında ise Ar-Ge gücünü yansıtan uygulamaların daha etkin şekilde konumlandırılabileceği tespit edilmiştir. Anadaki tespitler dayanağı üzerine geliştirilen “Stratejik Genç Yetenek, Alumni Bilgi Transferi ve Çalışan Deneyimi Programı” işveren markasını güçlendirirken; üniversite işbirlikleri, Talent Bridge etkinlikleri, mühendis hikâyeleri, mentorluk sistemleri ve alumni ağı ana hedeflenmiştir. Bu projede, genç yetenek havuzunun yaygınlaştırılması, deneyimli çalışanların iyileştirilmesi, kurumsal bilginin korunması ve sürdürülebilir bir yetenek ekosistemi geliştirilmesi hedeflenmiştir.

**Anahtar Kelimeler:** İşveren Markası, Genç Yetenek Yönetimi, Çalışan Deneyimi, Bilgi Transferi, İnsan Kaynakları Stratejisi, Kurumsal İletişim, Sürdürülebilir Yetenek Ekosistemi, Kurumsal Kültür.

## 1. Company Background

Cengiz Holding, in a sense, is one of the most important industrial and infrastructural groups in Türkiye, founded in 1980, and operating in various sectors such as energy, mining, metallurgy, construction and large-scale infrastructure projects. It's a completely integrated industrial sort of ecosystem where production takes place, energy is produced, and the actual project implementation goes on, you can see that in the main companies that are subsidiaries such as Cengiz İnşaat, Cengiz Enerji, Eti Bakır, Eti Alüminyum. The group also keeps a special standing in the Turkish metals arena, especially via Eti Alüminyum, which is Türkiye's only primary aluminum producer, and via Eti Bakır's integrated copper production facilities. More recently, they have given a little greater emphasis to technological progress, investing in research and development, sustainability measures and long-term strategic development to enhance their operational efficiency, and to increase the competitiveness of the company. (Cengiz Holding, n.d.)

## 2. Problem Definition

While Cengiz Holding possesses strong industrial capabilities, significant R&D investments, and a well-established human resources approach, the company aims to further strengthen its perception as a "preferred workplace," particularly among young talent and early-career professionals. Evaluations conducted throughout the project indicated that the primary development areas were not directly related to employee turnover, but rather centered on enhancing integration across HR practices, utilizing communication channels more effectively, and strengthening the visibility of the employer brand externally. It was also observed that existing practices in training, performance management, motivation, and employee development could be further supported through a more holistic employee experience approach. Opportunities for improvement were identified in the areas of awareness, participation, and engagement. In the long term, ensuring the systematic transfer of institutional knowledge from experienced employees to future generations is considered strategically important. In this context, Cengiz Holding positions attracting, developing, and sustaining high-potential talent through a strong employee experience as one of its strategic priorities within a competitive industrial environment. (See Appendix 1, answers 10, 11, 12 and 14).

## 3. Possible Solutions

The proposed solution is based on the concept of creating a Strategic Young Talent, Alumni Knowledge Transfer and Employee Experience Program, encompassing Employer Branding, University Partnership, Employee Engagement and Knowledge Transfer in one single integrated HR program. The goal of the solution is to make Cengiz Holding an even more attractive employer to university students and young professionals, by building deeper relationships by means of Talent Bridge Events, authentic employee storytelling, mentorship, and academic partnerships. In parallel, the program sets up an Alumni and Knowledge Transfer Model to ensure that the institutional knowledge is shared and will benefit from intergenerational learning between experienced staff and the younger generation. Through internal communication campaigns, recognition systems, and employee engagement initiatives, awareness, motivation and engagement are further strengthened. In summary, the solution creates a sustainable talent ecosystem that enhances the attractiveness of an employer, the experience of employees and the growth of the organization in the long term. Contrary to stand-alone HR projects, the suggested concept integrates employer branding, knowledge sharing, internal communication and collaboration with the University in a single HR ecosystem. This makes the solution more sustainable and strategically effective as it tackles employee experience from within and perception from the outside at the same time (See Appendix 1, Answers 1, 2, 3, 5 & 6).

**Short-term Solutions:**

**Partnerships with Universities**

As a first step to bolstering its employer brand and attracting young talent, Cengiz Holding can start building strategic relationships with universities and vocational schools. The company can provide awareness of career opportunities in the organization and introduce the students to the engineering, energy and R&D capabilities through Talent Bridge events, technical case studies, seminars and field visits. This is particularly important for enhancing the reputation of employers with Generation Z and early career professionals (see Appendix 1, answers 2 & 3).

**Launching "Cengiz Engineering Stories"**

The company can start its "Cengiz Engineering Stories" campaign on LinkedIn, explaining the real experiences of staff members and its engineering projects related to innovation in works like the R&D Center in Samsun and its works in Seydişehir, Konya. Through this storytelling communication strategy, the gap between the company's technological image in the outside world and its technical skills in the company may be narrowed, and the visibility of potential applicants to the company may be raised. In this process, the employees and alumni are placed not only as mentors and knowledge carriers, but also as true ambassadors that reflect the true experience of the employees of Cengiz Holding (See Appendix 1, Answers 1, 11 & 12).

**Establishing Mentorship and Alumni Systems**

Cengiz Holding can establish an alumni and mentorship program to support experienced workers and retired professionals to mentor young engineers and interns. This can enable the transfer of institutional knowledge, enhance employee interaction and aid in the maintenance of knowledge within the institution. Furthermore, mentoring can enhance staff engagement and help to develop a more positive organizational culture. (Answers 5, 6 and 14 in Appendix 1).

**Enhancing Internal Communication and Employee Awareness**

The company can enhance internal communication on training, development program, and a recognition system to boost employee experience. By raising awareness, internal platforms and feedback mechanisms can boost employee engagement and maximize the use of current HR practices in all departments. (See Appendix 1, Answer 8 & 10).

**Employee Recognition and Engagement Activities**

The organization can have visible processes to recognize and appreciate staff doing mentorship, university linkage and storytelling activities. Motivation, engagement and participation can be enhanced through recognition systems, certificates or participation-based rewards, which can help the company achieve the overall objective of being a preferred place to work. (See Appendix 1, Answer 7).

## Long-term Solutions:

The long-term solutions being proposed aim to make Cengiz Holding a sustainable talent ecosystem through the development of employer branding, institutional knowledge transfer, employee engagement and the strategic development of talent. The solutions will help the company to achieve its long term goal of becoming a 'preferred workplace' and will enhance the sustainability and competitiveness of the organisation. The proposed system is also quite feasible and cost-effective as it will primarily rely on existing HR systems and experienced personnel,

existing operational facilities, and existing university relations as opposed to high compensation strategies (Answers 1, 5, 6, 7 & 9 in Appendix 1).

**Sustainable Employer Branding and Talent Attraction**

Cengiz Holding needs to carry on the “Cengiz Engineering Stories” project and Talent Bridge Events in a wider academic circle to reinforce the perception of the company among the employers and make it stronger in the long-term. With regular storytelling, teamups with universities and authentic employee stories, the company can create greater empathy with aspiring engineers and young professionals. This approach can help to enhance the quality of long-term recruitment, raise employer visibility and boost the company's position in the industrial competitive market.

**Institutional Knowledge Transfer and Alumni Ecosystem**

The company needs to have a permanent Alumni and Knowledge Transfer System to retain important technical knowledge and foster intergenerational learning. Retired senior engineers and experienced professionals can still contribute to the project in mentorship, technical workshop and advisory roles. It can help mitigate risks of the loss of knowledge, enhance organizational continuity, and facilitate sustainable workforce development.

**Strategic Employee Experience and Internal Culture Development**

Cengiz Holding should keep creating whole employee experience systems integrating performance management, reward systems, career development and internal communication systems. An open and collaborative organizational culture will positively contribute to greater employee engagement, and improved employee motivation.

**Long-Term Academic and Industry Collaboration**

The organization should forge long term collaboration with universities, vocational schools, NGOs and professional organisations for building a long-term succession of talent. Together with technical competitions, field visits, mentorship, and collaborative case camps, the relationship between education and industry can be enhanced and innovation and workforce development can be promoted.

**Digital Infrastructure and Continuous Improvement**

Emphasis on Digital Infrastructure and Continuous Improvement.

It is important that the company improves their digital structures, analytics and KPI monitoring tools continuously to support sustainable implementation. By tracking the engagement rates, recruitment outcomes, shifts in perception, and employee retention rates, the company can continuously adjust its HR practices to achieve greater success and enhance organizational improvement over time.

The objectives of these long-term solutions are to establish the complete integration and strategic alignment of Cengiz Holding's human resource ecosystem with the organization, to enhance the engagement of employees, to improve the ability to attract talent in the organization, and to raise the competitiveness of the organization in the long run. (See Appendix 2, Table 1).

**Expected Organizational Outcomes**

- Improved employer perception among Gen Z
- Stronger internship and recruitment pipeline
- Higher employee engagement and participation
- Better onboarding and mentorship effectiveness
- Reduced institutional knowledge loss
- Increased long-term retention of early-career employees

**4 - Conclusion**

It was shown that the primary obstacle of Cengiz Holding is not the lack of human resources practices but their poor integration, communication and visibility both within and outside the company. The company has an excellent industrial capacity, high level of R&D investments and skilled human resources, but these are not translated into employee experience or the perception of the employer by young people. This means that the organization is at risk for lack of engagement, awareness, inside continuity of knowledge, and long-term talent attraction.

The solution proposed in the project was the strategic integration of the following three elements: Strategic Young Talent, Alumni Knowledge Transfer, and Employee Experience Program, as a whole and sustainable solution to these issues. The proposed system is based on the principle of university partnerships, Talent Bridge Events, mentorship activities, alumni networks, employee storytelling, and internal engagement mechanisms in a single HR system. The project will do so in order to enhance employee involvement, boost the employer branding, keep the institutional knowledge and build a better link between the company and the next generation of employees.

The proposed solutions do not only help enhance organizational sustainability, they also help promote long-term economic productivity, opportunities for decent work, talent development and building genuine ties between industry and academia. Cengiz Holding's HR practices can be integrated into a strategy for the creation of a talent ecosystem, enhancing the organization's attractiveness as an employer and its ability to grow sustainably and remain competitive in the long term. In this way, the program directly supports Cengiz Holding’s long-term strategic objective of becoming a preferred workplace for both current employees and future generations of talent (World Bank, 2020; ILO, 2020).

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# Appendices

## Appendix 1

Question 1: İşveren algısı nasıl iyileştirilecektir?

Answer 1: İşveren algısı, öğrenciler ve genç profesyonellerle kurulan doğrudan temaslar sayesinde geliştirilecektir. Üniversite etkinlikleri, mezunlarla kurulan bağlar ve Talent Bridge programları aracılığıyla şirketin sunduğu fırsatlar, çalışma ortamı ve gerçek çalışan deneyimleri paylaşılacaktır. Bu sayede hedef kitle şirketi daha yakından tanıma fırsatı bulacak ve olumlu farkındalık oluşturulacaktır.

Question 2: Akademik işbirlikleri nasıl kurulacak ve sürdürülecektir?

Answer 2: Üniversiteler ve meslek liseleri ile resmi anlaşmalar yaparak güçlü bir işbirliği ağı

oluşturulacaktır. Bu iş birliklerinin sürdürülebilir olması için düzenli olarak Talent Bridge programları gerçekleştirilecek ve kurumlarla sürekli iletişim halinde olunacaktır. Böylece uzun vadeli ve erişilebilir bir yetenek havuzu oluşturulacaktır.

Question 3: Yetenek etkileşimi ve görünürlük nasıl artırılacaktır?

Answer 3: Yıl içerisinde düzenlenecek Talent Bridge etkinlikleri sayesinde öğrencilerle doğrudan temas kurulacak ve şirketin faaliyetleri daha görünür hale getirilecektir. Bu etkinliklerde yöneticilerle birebir iletişim, proje paylaşımları ve kariyer fırsatları sunularak öğrencilerin şirkete olan ilgisi artırılacaktır.

Question 4: Staj başvuruları nasıl artırılacaktır?

Answer 4: Staj başvurularını artırmak için mentorluk programları, vaka çalışmaları ve üniversitelerle yürütülen iş birlikleri aktif şekilde kullanılacaktır. Adayların şirketle erken aşamada etkileşime geçmesi sağlanarak hem farkındalık artırılacak hem de başvuru süreci daha cazip hale getirilecektir.

Question 5: Bilgi transferi nasıl sağlanacaktır?

Answer 5: Bilgi transferi, kıdemli çalışanların aktif olarak mentorluk yapması, deneyimlerini paylaşması ve vaka çalışmaları yürütmesi ile sağlanacaktır. Bu süreç sayesinde hem teknik bilgi hem de saha deneyimi yeni çalışanlara aktarılacak ve kurumsal bilgi sürdürülebilir hale gelecektir.

Question 6: Mezun ağı nasıl oluşturulacak ve aktif tutulacaktır?

Answer 6: Mezun ağı, geçmiş çalışanların sisteme dahil edilmesiyle oluşturulacak ve bu kişiler mentor, konuşmacı ve bilgi paylaşımcısı olarak sürece dahil edilecektir. Düzenli iletişim ve etkinliklerle bu ağ aktif tutulacak ve hem mevcut çalışanlara hem de genç yeteneklere katkı sağlaması sağlanacaktır.

Question 7: Çalışan bağlılığı ve ödüllendirme nasıl artırılacaktır?

Answer 7: Çalışan bağlılığını artırmak için mentorluk, bilgi paylaşımı ve üniversite etkileşimlerine katkı sağlayan çalışanlar için bir ödül ve tanıma programı oluşturulacaktır. Bu sayede çalışanların bu süreçlere katılımı teşvik edilecek ve organizasyon genelinde daha yüksek bir bağlılık sağlanacaktır.

Question 8: İç farkındalık nasıl artırılacaktır?

Answer 8: İç farkındalık, etkili iç iletişim kanalları kullanılarak artırılacaktır. Programların amacı,

faydaları ve çalışanlara sağlayacağı katkılar açık bir şekilde anlatılacaktır ve düzenli bilgilendirmeler yapılacaktır. Böylece çalışanların programlara katılımı ve sahiplenmesi artırılacaktır.

Question 9: Erken kariyer çalışanlarının elde tutulması nasıl sağlanacaktır?

Answer 9: Yeni çalışanların şirkette kalıcılığını artırmak için onboarding süreçleri geliştirilecek, kariyer yolları daha görünür hale getirilecek ve mentorluk programları güçlendirilecek. Ayrıca çalışanların şirkete olan bağlılığını artıracak etkileşim ve gelişim fırsatları sunularak uzun vadeli istihdam desteklenecektir.

Question 10: Çalışanlar neden mevcut HR sistemlerinden yeterince faydalanamamaktadır?

Answer 10: Şirket notlarına göre çalışanların bir kısmı eğitim programlarını ve gelişim fırsatlarını aktif olarak takip etmemekte ve değerlendirme süreçlerine katılım düşük kalmaktadır. Bu durum, mevcut HR sistemlerinin değerinin çalışanlar tarafından tam olarak anlaşılmadığını göstermektedir.

Question 11: Gen Z'nin şirketi tercih etmemesinin temel nedenleri nelerdir?

Answer 11: Gen Z, ağır sanayi ve maden sektörünü zor ve riskli çalışma koşullarıyla ilişkilendirmekte, ayrıca şirket hakkında dışarıda oluşan olumsuz algılar nedeniyle başvuru konusunda çekimser davranmaktadır. Bunun yanında, gençler şirketin sunduğu gerçek kariyer fırsatlarını yeterince bilmemektedir.

Question 12: Şirketin dış employer image problemi nedir?

Answer 12: Cengiz Holding dışarıda çevresel eleştirilerle ilişkilendirilen ve kamu projeleri üzerinden değerlendirilen bir şirket olarak algılanmaktadır. Bu algı, şirketin gerçek faaliyetleri ve sunduğu fırsatlarla örtüşmemektedir ve düzeltilmesi gereken bir imaj farkı oluşturmaktadır.

Question 13: Turnover neden bir problem olarak görülmemektedir?

Answer 13: Şirket notlarına göre Cengiz Holding'de turnover oranı düşüktür ve uzun süreli çalışan sayısı fazladır. Bu nedenle turnover bir problem olarak değil, aksine belirli ölçüde artırılması gereken bir durum olarak değerlendirilmektedir.

Question 14: Bilgi kaybı riski neden önemlidir?

Answer 14: Uzun yıllardır çalışan deneyimli personelin ayrılması durumunda teknik bilgi, saha deneyimi ve kurumsal hafıza kaybolma riski bulunmaktadır. Bu nedenle bilgi transferi stratejik bir ihtiyaçtır.

## Appendix 2

| Resource Category | Estimated Cost (USD) | Description |
|---|---|---|
| Logistics & Travel | $12,000 | Covers the organization of **4 Talent Bridge Events** and partnership activities (seminars/workshops) across **15 institutions** (SMART Goals 2 & 3). |
| Case Camp & Technical Training | $7,000 | Resources for the multi-day **Cengiz Case Camp**, including technical materials and prep guidance for students and mentors (Phase 5). |
| Digital Infrastructure | $6,000 | Development of the **Alumni Database** and tracking systems for recruitment integration and monitoring (Phase 2 & 8). |
| Recognition & Rewards | $5,000 | Formal appreciation awards, certificates, and visibility materials for **mentors, speakers, and case judges** (Phase 6). |
| Total Annual Investment | $30,000 | Budget efficiency is achieved by utilizing. |

Table 1: Budgeting

Table 2: Responsibility Matrix Summary

## RESPONSIBILITY AND ACCOUNTABILITY MATRIX (RACI FRAMEWORK)

| FUNCTION / DEPARTMENT | R RESPONSIBLE (Do the Work) | A ACCOUNTABLE (Owns the Outcome) | C CONSULTED (Provides Input) | I INFORMED (Kept Updated) |
|---|---|---|---|---|
| **1. HUMAN RESOURCES DEPARTMENT** (Responsible & Accountable) | • Leads project execution<br>• Manages talent programs, mentoring & alumni systems<br>• Coordinates university partnerships & initiatives<br>• Tracks KPIs and program performance | **HR Director / Talent Management Lead** | • Corporate Communications<br>• Information Technology<br>• Operations / Technical Units<br>• External Relations / University Coordination | • Top Management |
| **2. CORPORATE COMMUNICATIONS** (Responsible) | • Develops content & storytelling<br>• Manages LinkedIn campaigns & employer branding<br>• Promotes university events and talent programs<br>• Ensures consistent messaging | – | • Human Resources<br>• Operations / Technical Units<br>• External Relations / University Coordination | • Top Management |
| **3. INFORMATION TECHNOLOGY DEPARTMENT** (Responsible) | • Provides technical infrastructure<br>• Provides analytics & reporting tools<br>• Ensures system integration (e.g., Cloudofix, platforms)<br>• Supports data tracking | – | • Human Resources<br>• Corporate Communications | • Top Management |
| **4. OPERATIONS / TECHNICAL UNITS** (Consulted & Responsible for Input) | • Provide technical content & engineering stories<br>• Participate in events & workshops<br>• Support mentorship & knowledge transfer activities<br>• Validate technical accuracy | – | • Human Resources<br>• Corporate Communications<br>• External Relations / University Coordination | • Top Management |
| **5. EXTERNAL RELATIONS / UNIVERSITY COORDINATION** (Responsible & Consulted) | • Manages university & vocational school partnerships<br>• Organizes talent bridge events, seminars, field visits<br>• Coordinates external engagement & early talent programs | – | • Human Resources<br>• Corporate Communications<br>• Operations / Technical Units | • Top Management |
| **6. TOP MANAGEMENT** (Accountable & Informed) | – | • **Provides strategic direction**<br>• **Approves resources & major decisions**<br>• **Oversees overall program impact** | • Human Resources | • All Departments |

**R** – Responsible *(Do the Work)* | **A** – Accountable *(Owns the Outcome)* | **C** – Consulted *(Provides Input)* | **I** – Informed *(Kept Updated)*

*This matrix clarifies who is responsible for what, ensuring accountability, collaboration and effective implementation of the program.*

Table 3: Timeline and Milestones

| **Phase** | **Months** | **Key Setup Activities** | **Execution & Results** | **Milestones** |
|---|---|---|---|---|
| **1. Foundation** | **1–3** | Establish an HR project team and define cross-departmental KPIs. | Launch an internal awareness campaign and audit existing systems. | **Milestone 1:** Infrastructure finalized and targets approved. |
| **2. Network** | **4–9** | Identify 15 partner institutions and develop an alumni database. | Sign formal MoUs and activate the faculty referral system. | **Milestone 2:** 15 Partnerships established and alumni active. |
| **3. Engagement** | **10–12** | Design storytelling sessions and Case Camp technical topics. | Execute **4 Talent Bridge Events** and collect student feedback. | **Milestone 3:** 4 major events completed; perception measured. |
| **4. Scaling** | **13–18** | Match mentors/mentees and set up the recruitment pipeline. | Launch **Case Camp** and integrate high-potentials into internships. | **Milestone 4:** Recruitment pipeline strengthened. |

| | | | | |
|---|---|---|---|---|
| **5. Impact** | **19–24** | Implementation of career maps and internal mobility pathways. | Evaluate **0–3 year retention rates** and refine the program. | **Milestone 5:** Stabilization of early-career retention achieved. |

# Nestlé, Marketing Problems




**Proje Ekibi:** Suits

**Grup Üyeleri :** Maham Fatima, Khadijah Tuz Zahra, Aiman Batool, Rahem Awan, Abdullah Ahmad Rajwana, Muhammad Bilal Akhtar Soomro

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**Akademik Danışman:** Feray Tunçalp

**Koordinatör Danışman:** Rasim Serdar Kurdoğlu

## ÖZET

Bu rapor, Nestlé Türkiye'nin saha satış çalışanları arasında dijital ve yapay zeka araçlarının düşük benimsenmesi sorununu ele almaktadır. Sorunun kök nedenleri; çalışanların yapay zekaya yönelik düşük motivasyonu, genel nitelikli eğitim programları, merkez ile saha ekipleri arasındaki iletişim kopukluğu ve yoğun çalışma temposu olarak belirlenmiştir. Bu doğrultuda önerilen Satış Odaklı Yapay Zeka Entegrasyon Çerçevesi; mobil uyumlu mikro öğrenme modülleri, satışa özgü kullanım senaryoları, Satış Yapay Zeka Elçisi ağı ve performans değerlendirmelerine entegre KPI'lar aracılığıyla davranışsal, yapısal ve organizasyonel engelleri bütüncül bir yaklaşımla çözmeyi hedeflemektedir. Dört aylık pilot uygulama ve ardından gerçekleştirilecek tam ölçekli yaygınlaştırma aşamalarından oluşan plan, net hesap verebilirlik yapıları ve sürekli geri bildirim döngüleriyle desteklenmektedir. Çerçevenin hayata geçirilmesiyle satış verimliliğinin artması, müşteri içgörü kapasitesinin güçlenmesi ve Nestlé Türkiye'nin dijital rekabet gücünün yükselmesi öngörülmektedir.

**Anahtar Kelimeler:** Dijital Dönüşüm, Yapay Zeka Benimsemesi, FMCG, Saha Satış Yönetimi, Mikro Öğrenme, Değişim Yönetimi

## 1. Company Background

Nestlé began in 1866 as the Anglo-Swiss Condensed Milk Company in Switzerland. In 1867, Henri Nestlé developed a baby formula, which marked a breakthrough, and by 1905, the two companies merged to form the Nestlé group (Nestlé, n.d.). By this time, Nestlé sold products across four continents. Today, Nestlé is the world's leading nutrition, health, and wellness company, with the mission of "Good Food, Good Life" (Nestlé, n.d.). The company aims to provide consumers with the best tasting, most nutritious choices in a wide range of food and beverage categories and eating occasions. Nestlé operates in Türkiye through Nestlé Türkiye Gıda Sanayi Anonim Şirketi, fully controlled by Nestlé S.A. (Nestlé S.A., 2025). Nestlé Türkiye operates across nine main product categories: coffee, waters, Nestlé Professional, confectionery, infant nutrition, petcare, medical nutrition, cereals, and beverages. Its products reach 9 out of every 10 households in Türkiye (Nestlé Economic Value Report Türkiye, 2025).

## 2. Problem Description

Nestlé Türkiye is focused on an organizational push towards digital transformation and has significantly invested in AI tools, such as Microsoft Copilot and NesGPT. The data for the marketing and sales department of Nestlé Türkiye shows that although AI adoption has improved among the field sales employees, the intensity (total volume of prompts sent by users) is well below the year-end benchmark set by Nestlé. Additionally, internal observations show that marketing and sales remain behind as the number of prompts generated do not meet the targeted volume (Exhibit 1).

The core problem is: *"Nestlé is facing friction in integrating digital transformation and AI tools to build a more efficient sales workforce."* The problem can be analyzed across three pillars:

### i. Sales Operational Management

The main challenge Nestlé faces arises from the mindset and motivation of the field sales employees. They often view digital learning as an added workload rather than a professional benefit. They think that AI learning is not for them and will not help them improve sales. Additionally, because of the nature of their responsibilities, field employees are on the road and traveling constantly, so they do not have time to keep track of the announcements about the AI webinars and training posted on the company platforms.

Moreover, sales management involvement in digital transformation efforts appears limited at this stage. Without visible leadership motivation, participation in these initiatives may be perceived as a lower priority by field sales employees. This gap limits the company's efforts to create a technology-skilled workforce.

### ii. Organization Management

Nestlé's organizational strategy emphasizes that true digital transformation requires a cultural change that maximizes employee potential and builds a digital mindset. Currently, there are challenges in reaching field employees consistently and in tracking engagement across internal platforms. Participation in digital fairs and broader training initiatives is lower than desired, partly because the relevance of AI tools is not yet sufficiently clear to all sales employees. Due to the underutilization of digital tools and platforms, the organization as a whole is making slower progress towards its goal of leveraging technology to create a more efficient, agile, and effective organization.

Moreover, AI is not translated well into the field work, and the field-to-HQ loop could be strengthened. As a result, management may have limited visibility into the real-time needs and constraints of field sales teams. A more tailored communication approach may be needed for field environments, where sales teams operate under distinct time constraints and operational pressures.

### iii. Customer Experience and Marketing

Beyond productivity, AI serves as a bridge to deeper customer insights. AI can help sales field employees achieve the end goal of satisfying the customers by achieving a superior understanding of the customer. Furthermore, AI can empower the marketing team to unlock personalized engagement opportunities. This demonstrates that digital transformation delivers a dual impact: driving internal operational excellence while enhancing external consumer relationships.

There are four main root causes behind the low adoption of AI among the sales field employees (Exhibit 2). Firstly, some field sales employees may not yet perceive a clear day-to-day value in AI usage, and training may be seen as an additional workload unless supported by clear incentives or relevance. Secondly, the training programs will become more beneficial if they are made field-friendly with specific sales-related use cases to demonstrate the benefits of AI tools. In addition, stronger visible support from sales management could further encourage the use of AI tools. Thirdly, because webinars are not always tailored to sales-specific needs, some field employees may find it difficult to relate AI usage directly to their roles. Lastly, sales field employees work in a high-pressure environment with limited time for learning, which can make immediate commercial priorities take precedence over long-term skill development. As a result, participation in AI webinars and day-to-day use of AI tools may remain limited.

Overall, this challenge may reduce the value captured from digital investments, slow decision processes, limit the conversion of raw data into actionable insights, and weaken competitive responsiveness.

## 3. Recommended Solutions

To address the barriers to AI adoption of Nestlé Türkiye's field sales employees, two alternative solutions were developed. These solutions were evaluated based on their feasibility, scalability, and organizational impact. The analysis shows that while both alternatives offer value, they differ significantly in depth of transformation and long-term effectiveness.

Following this evaluation, Solution 1: Sales-Oriented AI Integration Framework is identified as the best solution due to its ability to address AI adoption at the behavioral, structural, and organizational levels. Solution 2: The Field-Embedded AI Adoption Framework is considered a supporting alternative with more limited long-term impact.

**Best Solution: Sales-Oriented AI Integration Framework**
The framework is designed as a comprehensive organizational transformation model. It focuses on embedding AI into field sales employees' daily workflows while also strengthening managerial accountability and cross-functional coordination. The framework is built on three interconnected pillars: Sales Operational Management, Organization Management, and Customer Experience and Marketing.

**Pillar 1: Sales Operational Management**
The first pillar of the problem focuses on the mindset, motivation, and constraints of field sales employees. Due to the nature of their work, AI learning is sometimes perceived as additional workload and secondary to core responsibilities. Frequent travel can also make it difficult to engage consistently with announcements posted on internal platforms. Additionally, stronger involvement from sales management is required to help signal that digital adoption is a strategic priority.

To address this, the solution introduces mobile friendly modules (5-10 minutes) that are built around sales use cases (Exhibit 3), such as using Microsoft Copilot to prepare for a customer visit or summarizing retail feedback on the go. The solution removes the time and accessibility barriers that currently reduce participation. Communication about these trainings will also be altered by using simplified messages targeted specifically at

sales field employees, for example, slogans such as "AI in 5 minutes: Work Faster, Sell Better" and "Empower your team with AI" (Exhibit 4).

A critical component of this pillar is the introduction of Sales AI Ambassadors from the sales department. While digital AI ambassador roles exist in other departments, a comparable structure does not yet appear to be in place for sales (Exhibit 5). The solution formally increases the role of sales management in supporting AI adoption. Digital AI ambassador(s) would help strengthen engagement among sales field employees and reinforce digital transformation as a shared operational priority. This shift is an important factor because when direct sales ambassador(s) will monitor and encourage tool usage, the employee behavior will change more reliably than when the push comes from centrally led communication alone.

**Pillar 2: Organization Management**

The second pillar addresses the structural disconnect between field sales teams and the Digital Transformational Office (DTO). At present, there is limited two-way communication, making it difficult for headquarters sometimes to understand field-level challenges or adjust digital initiatives accordingly. Additionally, the one-size-fits-all communication approach may not take into account the distinct pressures and working nature of sales field employees, which may slow down the organization's progress toward its goals.

Digital AI ambassador(s) will not only help in encouraging sales field employees to use the digital tools, they will also act as a permanent bridge between the Digital Transformation Office and field sales teams. With their help, an upward feedback loop will be established, consistently reporting the friction points, tool adoption barriers, and employee concerns back to the DTO. This will help develop a more efficient, two-way communication channel. This is already present for other departments as AI Ambassadors stay in close contact with the DTO, however the sales department may face communication gap due to the absence of these ambassadors.

**Pillar 3: Customer Experience and Marketing**

The third pillar ensures that AI adoption is directly linked to customer outcomes and business performance. One of the main reasons for low engagement with AI is the lack of a visible connection between AI usage and real sales results. To address this, the framework shows sales field employees how AI adoption directly leads to customer-related outcomes. The solution shows AI-driven customer insight generation as a core use case, demonstrating to field sales employees that tools like NesGPT and Copilot can help them understand customer preferences, tailor their approach, and make faster, better informed decisions and recommendations. When field employees can see a direct link between using AI and achieving better sales results with their customers, the perceived value of adoption becomes concrete and personally meaningful, which is the most powerful motivator available in a rigorous sales environment.

Furthermore, by enabling the marketing team to unlock personalized engagement opportunities through customer data analyzed by AI, the solution creates a reinforcing cycle: the more field employees use AI tools in their customer interactions, the richer the data available to Nestlé, and the more targeted and effective the resulting marketing strategies become. This dual impact of both operational efficiency internally and enhanced customer relationships externally is what makes solution 1 not just an employee training initiative, but a genuine business growth strategy.

**Alternative Solution: Field-Embedded AI Adoption Framework**

The solution is built on a decentralized innovation, shifting the driver of digital transformation from the head office to the field employees. It will treat AI as a professional tool, financially rewarded, and integrated into a field sales employee's mobile workflow. It will shift the focus of AI usage from a mandate from the office to an efficient tool in the pocket. A strong, self-sustaining efficiency ecosystem will be created by empowering the field employees with a premium AI tool.

Instead of sitting through webinars and training programs on the benefits of AI use, field sales employees will be given the licensed version of Microsoft Copilot as their primary work tool. Providing them with the premium version of Copilot will address the current lack of engagement with free tools by offering more advanced, integrated features, thereby increasing the perceived value of AI. It will turn the long hours of manual work into productive, efficient work, while learning and integration occur between store visits or in the car. Field employees can use the licensed version of Microsoft Copilot to leverage its advanced AI features. For example, while drafting a report in Excel, sales field employees can use the licensed Copilot chat feature that allows them to complete a task within seconds, without creating a separate file as in the free Copilot version. This will allow the users to be more efficient with their work, with higher usage limits, and save time simultaneously.

Moreover, to further motivate employees to integrate AI into their daily routine, a financial incentive will be provided to the field employees. If a field employee demonstrates that they have successfully automated a manual task with Copilot, they can get a monthly cash bonus as a financial reward for AI adoption.

To make this solution measurable and effective, the primary KPI shifts from attendance to "minutes saved per visit" using the time recovery index. Other KPI measures include average report completion time, license utilization rate, document retrieval rate, and compliance adherence rate, to ensure the use of the license aligns with corporate standards and ensures employee productivity. As sales field employees become more comfortable with AI, they can use it for their daily tasks, improving efficiency and customer experience.

**Final Recommendation and Justification**

Based on the comprehensive evaluation, the Sales-Oriented AI Integration Framework is identified as the best solution for Nestlé Türkiye. While the alternative solution, Field-Embedded AI Adoption Framework, offers faster initial adoption through direct tool access and financial incentives, it primarily addresses surface-level engagement. It does not resolve the underlying structural and behavioral barriers that limit AI integration.

On the other hand, the best solution: Sales-Oriented AI Integration Framework provides a long-term transformation approach by embedding AI into daily workflows, strengthening managerial accountability, establishing Sales AI Ambassadors, and creating a continuous feedback loop between field teams and the DTO. It links AI adoption directly to both sales performance and customer value creation. The implementation of the solution is projected to start in July 2026, with the pilot phase to establish sales-specific use cases and base metrics, followed by the second phase starting in November 2026 and ending in June 2027, covering national recruitment of AI Ambassadors and formal integration into the performance system (Exhibit 6).

Overall, the Sales-Oriented AI Integration Framework is recommended as the best solution as it effectively resolves the structural and behavioral barriers to AI adoption and establishes the foundation for sustained digital transformation in the field sales teams.

## 4. Conclusion

To conclude, Nestlé Türkiye is currently addressing a significant challenge of low AI adoption among field sales employees. Although Nestlé has invested in tools such as Microsoft Copilot and NesGPT, further work is needed to embed these technologies consistently into the daily routines of sales teams. This adoption gap may also be influenced by the generic design of current training programs and by communication challenges between the Digital Transformation Office and sales employees. As a result, it may limit sales team efficiency and reduce the organization’s ability to translate raw data into actionable insights and capture deeper customer understanding.

Our proposed solution, the Sales-Oriented AI Integration Framework, offers a complete path forward to tackle this challenge, addressing all the behavioral, structural, and organizational factors that lead to low AI adoption among field sales employees. The framework suggests short, mobile-first, sales-specific training modules,

removing the barriers of time and accessibility that field employees face, showing them the benefits of AI tools through real-life use cases. Moreover, the solution emphasizes active involvement of sales management and assigns Sales AI Ambassadors to facilitate two-way communication between headquarters and field sales employees. Furthermore, it also connects AI usage to customer outcomes and business results, turning AI from an underused tool to a driver of productivity, customer engagement, competitive advantage, and growth.

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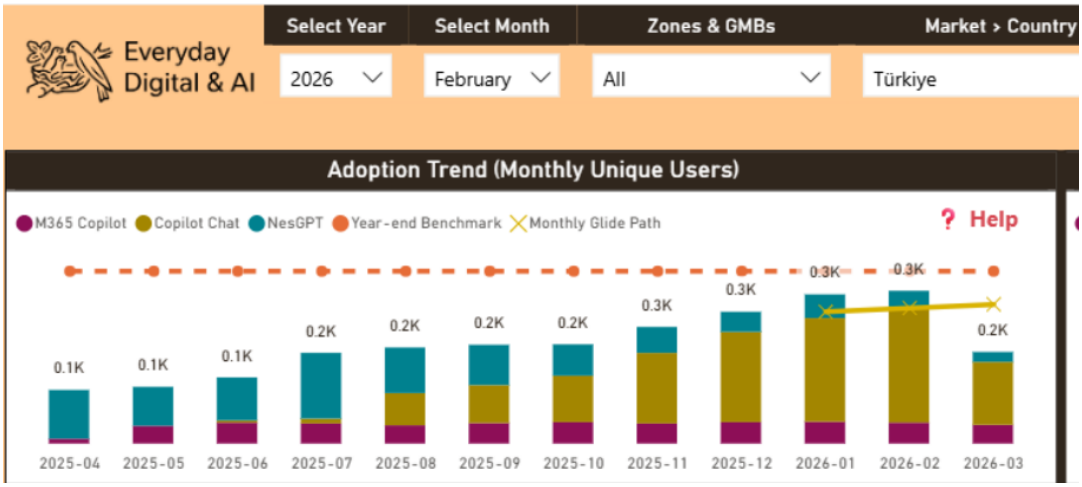
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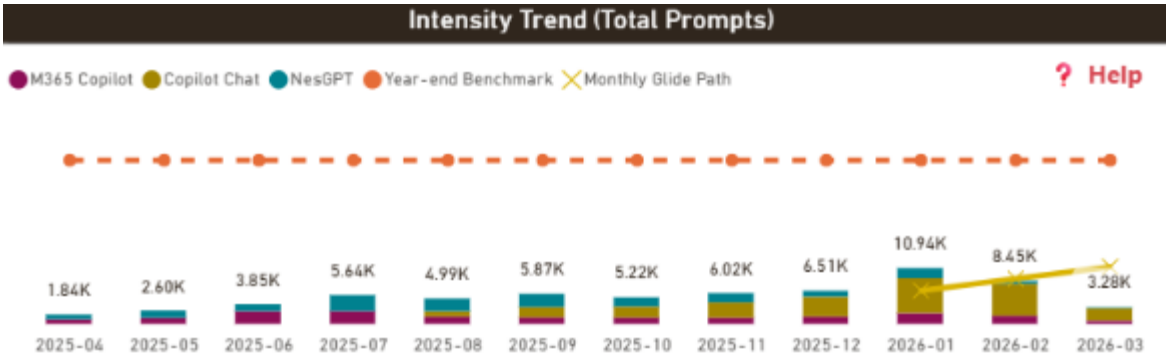
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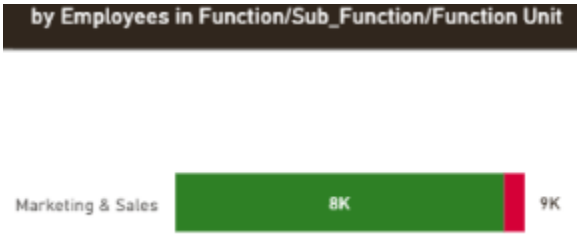
# Appendices

**Exhibit 1:**

Sales and Marketing




Sales

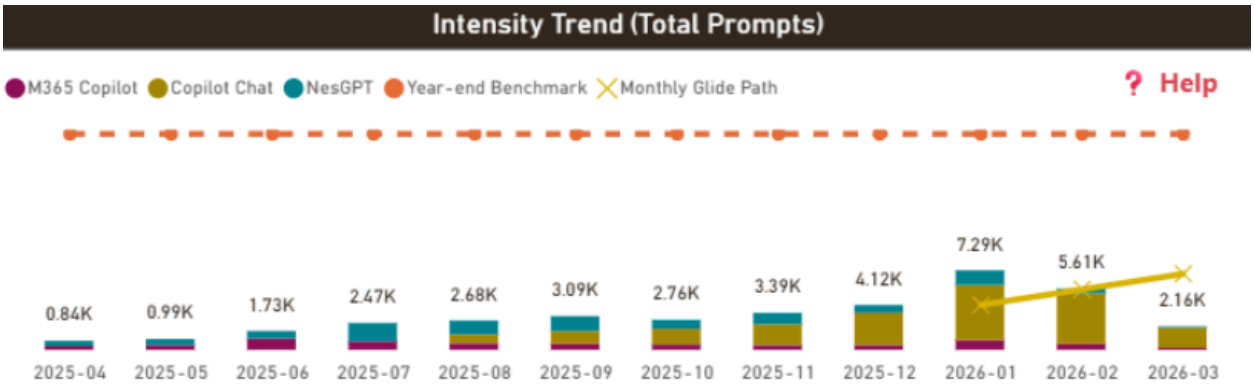

Intensity Trend (Total Prompts)
M365 Copilot
Copilot Chat
NesGPT
Year-end Benchmark
Monthly Glide Path
Help
0.84K
0.99K
1.73K
2.47K
2.68K
3.09K
2.76K
3.39K
4.12K
7.29K
5.61K
2.16K
2025-04
2025-05
2025-06
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**Exhibit 2:**

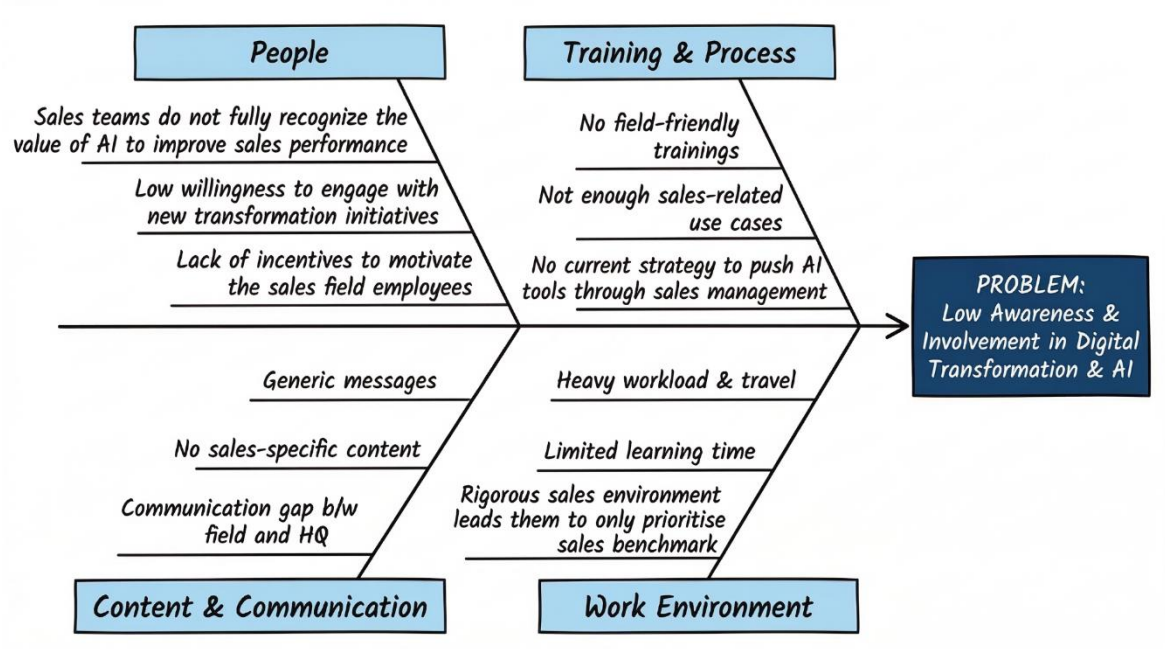

People
Training & Process
Sales teams do not fully recognize the value of AI to improve sales performance
Low willingness to engage with new transformation initiatives
Lack of incentives to motivate the sales field employees
No field-friendly trainings
Not enough sales-related use cases
No current strategy to push AI tools through sales management
PROBLEM: Low Awareness & Involvement in Digital Transformation & AI
Generic messages
No sales-specific content
Communication gap b/w field and HQ
Heavy workload & travel
Limited learning time
Rigorous sales environment leads them to only prioritise sales benchmark
Content & Communication
Work Environment

**Exhibit 3:**

# Outlook'ta Microsoft Copilot — Saha Satisi Kullanim Senaryosu

*Temsilci: Mehmet Y., Saha Satis Temsilcisi, Ankara Bolgesi · Gunde 6 musteri ziyareti · Copilot erisimi: mevcut ancak kullanilmiyor*

| Gorev | Sorun — Copilot olmadan | Sure karsilastirmasi | Cozum — Copilot komutu ve ciktisi | Gunluk etki |
|---|---|---|---|---|
| **Gorev 1**<br>Ziyaret oncesi hazirlik | Mehmet, her musteri ziyaretinden once eski e-postalari manuel olarak arayarak 20 dakika harciyor ve cogu zaman hazirliksiz gidiyor. | **20 dk**<br>manuel e-posta arama<br>↓<br>**3 dk**<br>Copilot ozeti | **Komut:**<br>*"Bu musteriye son 3 aydaki yazismalarimi ozetle. Acik sikayetleri, siparis gecmisini ve bir sonraki adimlari listele."*<br>**Cikti:**<br>Saniyelerde musteri brifing hazir: son iletisim, acik konular, son siparis ve onerilecek urunler. | **17 dk tasarruf**<br>her ziyaret hazirliginda<br>**6 kat daha hazirlikli** |
| **Gorev 2**<br>Ziyaret sonrasi rapor | Mehmet her ziyaretten sonra raporu sifirdan yaziyor — sonraki musteri onunde park halinde 18 dakika harcaniyor. | **18 dk**<br>sifirdan yaziliyor<br>↓<br>**2 dk**<br>ses notu -> Copilot | **Komut:**<br>*"Bu ziyaret notlarini yapilandirilmis rapora donustur: musteri adi, gorustulen konular, kararlastirilan aksiyonlar, takip tarihi."*<br>**Cikti:**<br>Musteri adi, konular, aksiyon maddeleri ve takip tarihi iceren yapilandirilmis rapor — gondermeye hazir. | **16 dk tasarruf**<br>her raporda<br>**Gunde 6 rapor otomatik** |
| **Gorev 3**<br>Musteriye takip e-postasi | Mehmet gunde 4 takip e-postasini manuel yaziyor — her biri 12 dakika, toplam 48 dakika gun sonu admin suresi. | **12 dk**<br>manuel yaziliyor<br>↓<br>**90 sn**<br>Copilot taslagi | **Komut:**<br>*"Bugunki gorusmede kararlastirdiklarimizi ozetleyen ve planogrami 3 gun icinde gonderecegimi belirten nazik bir takip e-postasi yaz."*<br>**Cikti:**<br>Profesyonel takip e-postasi 2 dakikadan kisa surede hazirlanip gonderiliyor. | **42 dk tasarruf**<br>gunde 4 e-postada<br>**Ayni gun yanit** |
| **Gunluk toplam** | 3 gorevdeki 90 dakikalik gunluk admin suresi 15 dakikanin altina iniyor. | **75 dk**<br>temsilci basina gunluk tasarruf | **Gunde +2 ekstra musteri ziyareti mumkun.**<br>Yeni uygulama veya egitim suresi gerekmiyor — Copilot zaten Outlook'ta mevcut. | **75 dk/gun**<br>= ayda ~25 saat<br>temsilci basina kazanilan sure |

*Not: Sure tahminleri, FMCG saha satisi admin gorevlerine iliskin sektör kiyaslama verilerine dayanmaktadir.*

Use Case Example - Turkish

# Microsoft Copilot in Outlook — Field Sales Use Case

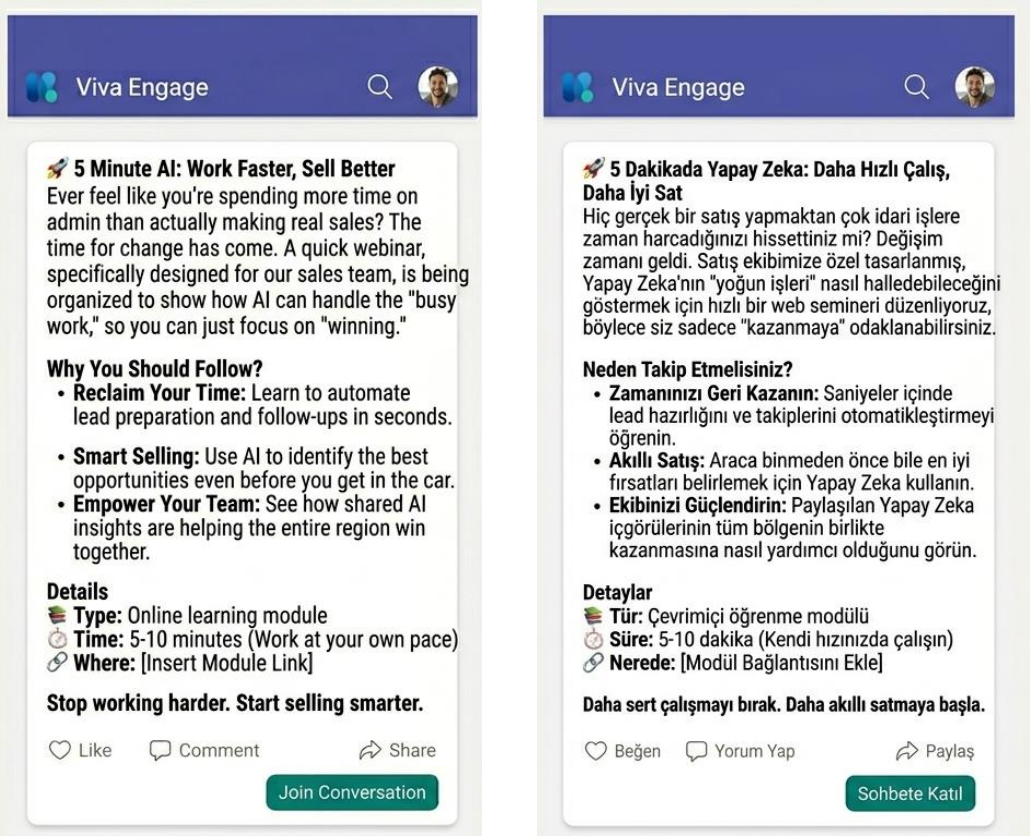
*Representative: Mehmet Y., Field Sales Rep, Ankara Region · 6 customer visits/day · Copilot access: available but unused*

| Task | Problem — without Copilot | Time comparison | Solution — Copilot prompt & output | Daily impact |
|---|---|---|---|---|
| **Task 1**<br>Pre-visit briefing | Mehmet spends 20 min manually searching old emails before each customer visit, often arriving unprepared. | **20 min**<br>manual search<br>↓<br>**3 min**<br>Copilot summary | **Prompt:**<br>*"Summarise my last 3 months of emails with this customer. List open complaints, order history, and next steps."*<br>**Output:**<br>Customer brief ready in seconds: last contact, open issues, last order, suggested talking points. | **17 min saved**<br>per visit prep<br>**6x better informed** |
| **Task 2**<br>Post-visit report | After each visit Mehmet writes a full report from scratch — 18 min parked in a car park before the next call. | **18 min**<br>written from scratch<br>↓<br>**2 min**<br>voice note → Copilot | **Prompt:**<br>*"Turn these visit notes into a structured report: customer name, topics discussed, agreed actions, follow-up date."*<br>**Output:**<br>Structured report with customer name, topics, action items, and follow-up date — ready to send. | **16 min saved**<br>per report<br>**6 reports/day auto-drafted** |
| **Task 3**<br>Follow-up email | Mehmet writes 4 follow-up emails per day manually — 12 min each, totalling 48 min of end-of-day admin. | **12 min**<br>written manually<br>↓<br>**90 sec**<br>Copilot draft | **Prompt:**<br>*"Draft a follow-up email to the customer confirming what we agreed today and that I will send the planogram within 3 days."*<br>**Output:**<br>Professional follow-up email drafted, reviewed and sent in under 2 minutes. | **42 min saved**<br>on 4 emails/day<br>**Same-day response** |
| **Daily total** | 90 min of daily admin reduced to under 15 min across all 3 tasks. | **75 min**<br>saved per rep per day | **+2 extra customer visits possible per day.**<br>0 new apps or training hours required — Copilot is already in Outlook. | **75 min/day**<br>= ~25 hrs/month<br>recovered per rep |

*Note: Time estimates are based on industry benchmarks for FMCG field sales administrative tasks. Prompts shown in English for clarity; Turkish versions are used in practice.*

Use Case Example - English

**Exhibit 4:**




Example communication campaigns targeted towards sales field employees

**Exhibit 5:**



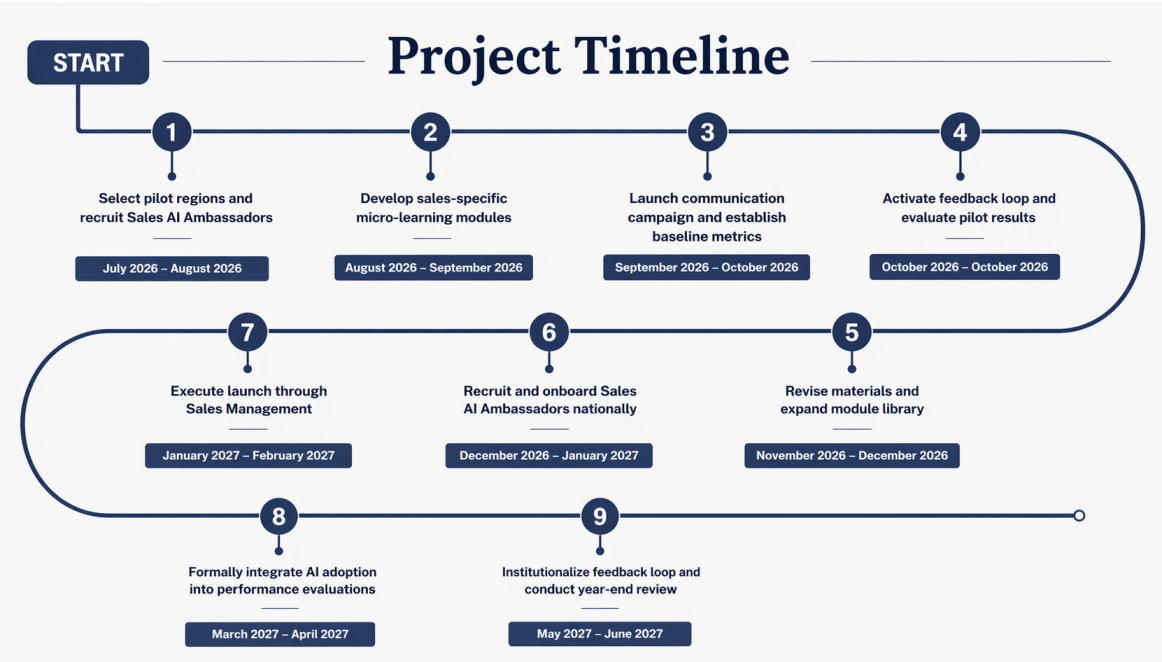
Nestlé Türkiye Everyday AI Ambassadors

| Department | Ambassador Count | Department | Ambassador Count | Department | Ambassador Count |
|---|---|---|---|---|---|
| DTO | 1 | Beverages | 1 | Nestlé Professional | 1 |
| Operations | 2 | Nespresso | 2 | Legal & Compliance | 1 |
| Finance | 2 | Marketing | 1 | Grand Total | 15 |
| Nestlé Waters | 1 | Nestlé Nutrition | 1 | | |
| HR | 1 | Nestlé Health Science | 1 | | |

Nestlé Europe

Data on sales regions and AI ambassadors taken from Nestlé Türkiye's Presentation

**Exhibit 6:**



# Pension Monitoring Center (Emeklilik Gözetim Merkezi), Marketing Problem




**Proje Ekibi:** RetireSmart

**Grup Üyeleri:** Zeynep Su Arıkan, Bilgehan Aydoğmuş, Emir Batak, Nil Duru Çil, Aslı Kocadağistan, Yasmin Damanehkouh Sorkhabi

**Şirket Danışmanları:** Hicran Aktaş Coşar, Samet Özben, Mukaddes Gizem Korur, Yasemin Yüksel Çuhadar Kütle, Ege Kaçar

**Akademik Danışman**: Saurabh Shinde

**Koordinatör Danışman:** Ceren Aydoğmuş

## ÖZET

Bu proje, Emeklilik Gözetim Merkezi tarafından geliştirilen BES Mobil uygulamasının sınırlı kullanıcı penetrasyonu sorununa odaklanmakta; kullanıcı kazanımını ve uygulama içi etkileşimi artırmaya yönelik pazarlama odaklı stratejiler geliştirmeyi amaçlamaktadır. BES Mobil geniş bir kullanıcı tabanına ulaşma potansiyeline sahip olmasına rağmen, pazarlama stratejisinin yeterince olgunlaşmamış olması ve kullanıcıların büyük çoğunluğunun pasifliği bu potansiyelin tam olarak değerlendirilememesine neden olmaktadır. Bu durum, uygulamada sunulan fonksiyonların kullanımını, kullanıcı motivasyonunu ve uzun vadeli platform değerini sınırlandırmaktadır. Proje kapsamında farkındalık stratejisi, etkileşim odaklı pazarlama ve gelir modeli stratejisi değerlendirilmiştir.

**Anahtar Kelimeler:** BES Mobil, Kullanıcı Etkileşimi, Finansal Okuryazarlık, Pazarlama Stratejisi,

## 1. Company Background

Türkiye's Individual Pension System, established in 2003, is a long-term individual savings and investment system designed to help individuals build retirement savings and maintain their living standards after leaving the workforce. The system encourages regular contributions during an individual's working life, supported by government incentives, and aims to convert these savings into long-term pension income. It consists of two main components: the Voluntary Individual Pension System and the Automatic Enrollment System, which automatically includes eligible employees in pension schemes. Over time, the system has expanded significantly in terms of both participant numbers and total fund size, becoming an important pillar of Türkiye's retirement and savings ecosystem.

The Pension Monitoring Center (PMC), known in Turkish as Emeklilik Gözetim Merkezi (EGM), operates within Türkiye's individual pension ecosystem as a central and neutral infrastructure actor. Unlike individual pension companies, PMC does not compete for customers through proprietary financial products. Instead, it supports the secure, transparent, and efficient functioning of the pension system by consolidating information, monitoring system operations, and improving participant access to pension-related data. Within this institutional structure, unlike proprietary pension company applications BES Mobil functions as a neutral consolidated digital interface through which users can monitor pension contracts, contribution histories, government contribution benefits, fund information, and retirement-related indicators.

The broader industry context makes BES Mobil strategically important. Türkiye's individual pension system has grown through government contribution incentives, automatic enrollment, increasing digitalization, and rising interest in long-term savings. The system includes Individual Pension System participants, Automatic Enrollment System participants, pension companies, portfolio management companies, regulators, and public institutions. BES Mobil's distinctive position comes from its neutrality: while pension companies' applications generally show only their own customers' accounts and may include commercial cross-selling, BES Mobil can provide a company-independent overview across providers. This gives the platform the potential to become a trusted central dashboard for pension awareness and long-term savings behavior.

However, despite its institutional importance, BES Mobil has not yet achieved sufficient user reach. Within this context, the project focuses on a marketing and communication challenge aimed at expanding the application's visibility, increasing adoption among target user groups, and improving sustained user interaction. The main objective is to design innovative, user-centered marketing strategies, digital communication plans, and campaign approaches that can enhance awareness of the application, support the growth of the individual pension system, and strengthen participant loyalty. In addition, leveraging application usage data to develop data-driven decision-making mechanisms is considered essential for enabling sustainable growth.

## 2. Problem Description

The core problem is the absence of a data-driven communication and growth strategy that addresses diverse participant segments, enhances user loyalty, and ensures sustainable development of the application.

The project therefore focuses on analyzing user behavior, creating meaningful segmentation, benchmarking against similar applications, and designing innovative marketing and digital communication strategies to increase awareness, adoption, and long-term engagement with BES Mobil.

The first root cause is an insufficient marketing and value communication strategy. Users may be aware of BES Mobil as an account-checking tool, but they are less likely to understand the practical value of features such as

government contribution tracking, fund performance visibility, savings history, and retirement projections. When these functions are not clearly communicated, the application is reduced in users' minds to a passive balance-checking interface. As a result, registered user numbers may overstate the platform's true market impact because reach does not automatically create depth of usage.

The second root cause is limited user engagement, which directly constrains BES Mobil's marketing and organic growth potential. In the context of pension systems, low engagement is not unexpected, as retirement is a distant goal, contributions are largely automated, and users have limited need for frequent interaction. However, from a marketing perspective, this creates a critical limitation: without regular touchpoints, the application cannot generate strong word-of-mouth effects, reinforce brand recall, or increase organic visibility in users' daily lives. The lack of repeated interaction reduces the likelihood that users will recommend the application to others or mention it in everyday financial discussions, which weakens BES Mobil's ability to scale through behavioral-driven marketing channels. In this sense, engagement is not only a product metric, but also a core driver of awareness, acquisition, and overall market penetration.

The third root cause is the lack of a structured revenue-generating system. BES Mobil currently functions primarily as an informational and transactional pension tracking platform, without a clearly defined mechanism to generate additional value from its user base. This limits the development of complementary services, monetizable features, and ecosystem-based growth opportunities. From a marketing and growth perspective, this also restricts the platform's ability to scale its positioning, as sustainable revenue models are often linked to stronger brand expansion, higher investment capacity in user acquisition, and broader market visibility. Therefore, the absence of a revenue-generating system is not only a financial limitation, but also a constraint on BES Mobil's long-term growth and market expansion potential.

The issue has implications for multiple stakeholders. Users are affected as limited visibility reduces access to information that could support better long-term financial decisions and retirement awareness. The organization faces constraints in marketing effectiveness, user acquisition, and brand growth due to weak organic reach. Pension institutions and public stakeholders are also impacted, as reduced platform visibility limits the effectiveness of financial awareness efforts and weakens the overall impact of the pension system. As a result, the challenge should be seen not only as a platform issue, but as a broader limitation on marketing reach and the effectiveness of a key public-facing financial service.

## 3. Recommended Solutions

Three strategic alternatives were evaluated: an Awareness Strategy, Engagement-Driven Marketing, and a Revenue Stream Strategy. While all three alternatives contribute to BES Mobil's long-term growth, the recommended solution is Engagement-Driven Marketing, supported by selected awareness activities and later-stage revenue opportunities.

### 3.1. Awareness Strategy

The Awareness Strategy addresses BES Mobil's limited market penetration by increasing visibility across both institutional (B2B) and consumer (B2C) channels, with the primary objective of driving downloads and improving overall market awareness.

On the B2B side, BES Mobil can be embedded into the existing pension ecosystem through e-BEAS training programs, onboarding materials, and certified representative education processes. By integrating the application into these existing communication and training structures, certified pension representatives become a natural and trusted distribution channel, introducing BES Mobil directly during user interactions and consultations.

A press and launch strategy further supports institutional credibility by positioning BES Mobil in business, finance, and technology media as a reliable pension visibility and tracking platform. This helps build trust and strengthens perceived legitimacy, which is critical in financial services adoption.

On the B2C side, awareness is driven through segmented social media strategies, where each platform serves a different purpose and audience. Short-form content focuses on making pension topics more understandable for younger users, while more professional platforms emphasize credibility and financial clarity. Educational content can also be used to explain basic pension concepts and the value of tracking contributions and funds.

To expand reach further, a university ambassador program can be implemented by selecting and certifying student ambassadors who promote BES Mobil within campuses. This targets younger users and early-stage IPS candidates, increasing awareness before pension relevance becomes immediate and building early familiarity with the platform.

Finally, App Store Optimization (ASO) strengthens organic discovery by targeting high-intent search terms such as “Individual Pension System,” “fund tracking,” and “retirement calculator”, capturing users who are already actively searching for pension-related solutions.

Overall, the strategy combines institutional integration, segmented digital communication, campus-based peer influence, and search optimization to increase downloads and visibility in a cost-efficient way.

### 3.2 Engagement-Driven Marketing

The primary objective of this approach is not product redesign, but market expansion. The focus is to increase BES Mobil’s awareness, daily relevance, and ultimately its download rate by strengthening word-of-mouth effects and encouraging organic user sharing in everyday life.

A key lever of this strategy is gamification, designed not as entertainment, but as a habit-forming engagement mechanism that increases repeat usage and social visibility of the application. Within this framework, a badge system can be used to reinforce both behavioral consistency and long-term financial progress. Two main types of badges can be implemented. Habit-based badges reward simple engagement behaviors such as first login, weekly check-ins, regular app usage, or reviewing pension updates. These are designed to create routine interaction and increase the frequency of app visits. In parallel, financial achievement badges recognize meaningful progress such as consistent contribution behavior, savings milestones, or long-term participation continuity. This structure helps users perceive progress in a simple and motivating way without turning the platform into a competitive or judgmental environment.

Another core component is behavioral nudges and personalized notifications, which act as continuous re-engagement triggers. These nudges can include updates like contribution confirmations, monthly savings progress summaries, or reminders encouraging users to revisit their pension overview. The goal is to create timely and relevant touchpoints that bring users back into the application naturally, without overloading them or creating notification fatigue.

Together, gamification elements and behavioral nudges increase daily relevance, strengthen habitual usage, and enhance perceived value. As users interact more frequently with BES Mobil and share their progress or experiences informally, the application becomes more visible in everyday conversations. This dynamic supports

word-of-mouth-driven growth, which ultimately contributes to higher awareness, stronger organic acquisition, and increased download rates.

### 3.3 Revenue Stream Strategy

The Revenue Stream Strategy includes options such as a premium subscription model and advanced financial courses. Revenue generation is proposed for long-term operational sustainability and institutional resilience — not profit maximization. Even the commercial dimension of this strategy is impact-driven: every course completed produces a more capable, financially literate participant and reduces dependence on public funding. Premium services and educational content will only become valuable if users already perceive strong value in the platform and interact with it actively. For this reason, monetization depends on solving the engagement problem first.

### 3.4 Implementation Plan

The recommended implementation strategy is structured around a phased marketing and growth roadmap designed to increase awareness, strengthen user engagement, and support the long-term sustainability of BES Mobil. In the first phase, the focus should be on awareness generation through both B2B and B2C marketing strategies. On the B2B side, BES Mobil can be integrated into pension system–related educational and institutional environments, such as sector committees, training programs in e-BEAS system, and professional development initiatives, in order to create organic visibility within the broader pension ecosystem. On the B2C side, the strategy should emphasize a comprehensive digital and social media presence supported by platform-specific content planning, awareness campaigns, and university-focused initiatives such as campus engagement activities.

The second phase should focus on increasing user interaction primarily to strengthen word-of-mouth marketing and organic user acquisition. Gamification systems, achievement-based badges, and behavioral analysis tools can be implemented to encourage more frequent application usage, social sharing, and participant-driven promotion of the platform. UX testing in Phase 2 may begin before Phase 1 is fully complete, allowing for parallel workflow optimization. Rather than focusing solely on engagement metrics, this phase aims to transform active users into voluntary advocates who contribute to the organic expansion and visibility of BES Mobil within their social and professional circles.

In the final phase, BES Mobil can expand its long-term value proposition by introducing additional revenue-generating services within the application ecosystem. Subscription-based premium features and advanced financial literacy or investment-related educational content may provide new revenue streams while simultaneously supporting users' financial awareness and long-term retirement planning behaviors.

## 4. Conclusion

BES Mobil's growth challenge is not solely related to application functionality, but rather to limited market visibility, insufficient user awareness, and the absence of a strong communication strategy. Although the application possesses a unique institutional advantage through its neutral, centralized, and ecosystem-wide structure, this potential cannot be fully utilized without a comprehensive marketing approach that strengthens visibility, trust, and user recognition across different target segments.

The recommended marketing-focused strategy provides the most effective solution because it addresses the platform's primary growth barriers directly. Through a combination of B2B partnerships, B2C communication campaigns, university collaborations, social media content strategies, and word-of-mouth marketing mechanisms,

BES Mobil can significantly expand its reach and strengthen its market presence. Supporting these efforts with gamification elements and behavioral tools can further encourage users to share the platform organically within their social and professional networks, contributing to sustainable user acquisition and stronger brand awareness.

By aligning marketing strategy, digital communication, behavioral insights, and financial literacy initiatives, BES Mobil has the potential to evolve from a relatively low-visibility pension application into a widely recognized and trusted financial platform. Such a transformation would not only support the growth of the application itself, but also contribute to broader public objectives including financial awareness, long-term savings culture, and increased participation in Türkiye's individual pension ecosystem.

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# Appendices

**Appendix 1. KPI Targets**

| Goal | Metric | Timeline |
|---|---|---|
| Increase DAU/WAU | +35% | 12 months |
| Reduce uninstall rate | -25% | 12 months |
| Increase monthly sessions per user | +50% | 9 months |

**Appendix 2. Implementation Timeline**

| Phase | Duration | Main Milestone |
|---|---|---|
| Foundation | Month 1–3 | Press Launch |
| Gamification | Month 4–6 | Two-tier badge system and UX testing |
| Market Integration & Triggers | Month 7–9 | Real-time dashboard, rating system, and behavioral nudges |
| Optimization | Month 10–12 | A/B testing, threshold balancing, and performance review |

**Appendix 3. Solution Comparison**

| Alternative | Main Value | Limitation |
|---|---|---|
| Awareness Strategy | Increases visibility, downloads, and trust | Does not directly sustain engagement |
| Engagement-Driven Marketing Strategy | Solves the core problem through habits, personalization, and nudges | Requires product, data, and UX coordination |
| Revenue Stream Strategy | Supports future monetization and scalability | Depends on an already active user base |

# SAYTEK, Operations Management Problem




**Proje Ekibi: NEXUS**

**Grup Üyeleri :** Damlasu Ateş, Eylül Çelebioğlu, Eyüp Eroltekin, Alara Hasaltuntaş, Begüm Onat, İpeksu Özdemir, Selin Tumay

**Şirket Danışmanı:** Murat Tufan Demircan

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**Koordinatör Danışman:** Rasim Serdar Kurdoğlu

## ÖZET

Bu proje, geri dönüşüm sektöründe faaliyet gösteren Saytek firmasının yüksek üretim kapasitesi ile manuel yönetim süreçleri arasındaki ölçeklenebilirlik sorunlarını analiz etmek amacıyla hazırlanmıştır. Yapılan incelemeler sonucunda, şirketin Excel tabanlı takibinin %3-5 oranında stok sapmalarına ve raporlama gecikmelerine yol açtığı tespit edilmiştir. Çözüm olarak, operasyonel hızı dijital altyapıyla eşitleyecek Logo Netsis 3 Standard ERP geçişi ve standart SKU kodlama sistemi önerilmiştir. 14 aylık kademeli bir yol haritası ile stok doğruluğunun %95'in üzerine çıkarılması ve acil satın almaların %30 oranında azaltılması hedeflenmektedir. Bu dönüşüm, Saytek'in küresel sürdürülebilirlik regülasyonlarına uyum sağlamasını ve operasyonel verimliliğini artırarak sürdürülebilir rekabet avantajı elde etmesini hedeflemektedir.

**Anahtar Kelimeler:** ERP (Logo Netsis 3), SKU Standardizasyonu, Stok Yönetimi, Dijital Dönüşüm, Operasyonel Verimlilik, Sürdürülebilirlik.

## 1. Company Background

Saytek Medikal ve Plastik Sanayi A.Ş. was founded in 2001, in Ankara by Özer Yıldırım. Originally established as a medical equipment distributor, Saytek has evolved into a diversified industrial group with strategic operations in the healthcare, energy and recycling sectors (Saytek, n.d.). A key milestone for the company was the establishment of the SAYTEKPET recycling plant in Düzce in 2022, which significantly expanded its industrial footprint. Currently, Saytek has 105 employees working in its large-scale manufacturing plants (Saytek, 2025).

The company specializes in converting recycled PET plastic into premium raw materials (rPET, rPE, and rPP) by leveraging cutting-edge sorting techniques. Saytek currently has a monthly production capacity of 2,100 tons, which accounts for about 15% of the entire recycled plastics market in Turkey (see Appendix A; Saytek, 2026).

As a supplier to regulated industries such as food-contact materials and textile fibers, Saytek holds global certifications including ISO 9001, ISO 13485, ISO 14001, RECYCLASS and VERRA Carbon Standard (Saytek, 2025). These certifications not only ensure compliance with international quality and environmental standards but also reflect the company's commitment to circular economy principles and reducing its carbon footprint compared to virgin plastic production.

## 2. Problem Definition

Despite its rapid revenue growth and a monthly manufacturing capacity exceeding 2 million kilograms (see Appendix D), Saytek faces significant scalability challenges, primarily arising from the absence of a comprehensive digital framework for its operations. In other words, the core scalability gap is caused by the misalignment between machine-paced production and the slower pace of human-paced administration.

The fundamental operational challenge lies in the reactive nature of the procurement process. In the absence of a structured forecasting system, material requirements are identified only at the point of shortage. This leads to frequent emergency purchases, which increase procurement costs and disrupt daily operational workflows (Saytek, 2026). Another critical challenge involves inventory coding inconsistencies resulting from non-standardized item naming. As identical materials are often identified by different names across the organization, maintaining cross-departmental data consistency becomes difficult, thereby increasing the risk of procurement errors (Saytek, 2026).

Moreover, the firm faces a critical lack of inventory visibility. Currently, inventory management relies on Excel-based tracking with weekly updates, which precludes real-time monitoring and control. This visibility gap creates significant operational risks, as evidenced by instances where inadequate storage conditions led to the loss of temperature-sensitive chemical raw materials. These inefficiencies are further worsened by a lack of coordination between departments; specifically, the reliance on manual, paper-based procurement requests slows down communication, complicates decision-making and disrupts production planning.

## 3. Possible Solutions

To address the scalability and operational inefficiencies identified in the analysis (Saytek, 2026), a structured digital transformation strategy is proposed. The core solution involves the phased implementation of the Logo Netsis 3 Standard ERP system, supported by a standardized SKU coding structure to eliminate data fragmentation and stock inconsistencies. This transition will centralize inventory management, procurement, production tracking and financial reporting within a single integrated platform. In the short term, the transformation will begin with SKU classification, infrastructure upgrades (including barcode scanners) and employee training to ensure seamless system readiness and data migration. In the medium to long term, the ERP system will facilitate real-time reporting, automated purchasing triggers (EOQ) and performance-based dashboards thereby minimizing manual intervention and eliminating reporting delays. The proposed 14-month roadmap ensures risk-controlled implementation while maintaining production continuity (see Appendix C). Collectively, these measures will

align administrative processes with production speed (see Appendix D), increase inventory accuracy to above 95% (Saytek, 2026), reduce emergency procurement and establish a scalable operational infrastructure that supports Saytek's long-term growth and sustainability objectives.

**Short-Term Solutions (Months 1-3):**

The proposed strategic transformation for Saytek is designed as a phased transition to align administrative speed with high-volume production, based on the operational gaps identified during stakeholder interviews (see Appendix A).

**Establishment of SKU Material Taxonomy**

To address current operational inconsistencies, a standardized terminology and material classification system will be integrated to ensure seamless data synchronization across departments.

**Upgrade of Physical Infrastructure**

The installation of industrial barcode scanners and label printers will replace manual data entry, enabling real-time and accurate recording of inventory movements.

**Formation of "Nexus" Project Task Force**

A cross-functional team led by the Production Planning Manager, including members from Procurement, IT and Finance, will be formed to oversee the digital transformation and resolve interdepartmental naming conflicts (Saytek, 2026).

**Digital Procurement Request Mechanisms**

Transitioning from physical forms to digital request and approval flows to make the procurement process more transparent, traceable and controllable.

**Medium & Long-Term Solutions (Months 4-14):**

The long-term strategy for Saytek focuses on establishing a resilient digital core through the integration of the Logo Netsis 3 ERP system, aiming to align administrative workflows with the company's high-volume manufacturing capacity. By focusing on data-driven inventory control, predictive procurement models and real-time management visibility, these solutions are designed to foster sustainable economic growth and operational excellence.

**Full-Scale Logo Netsis 3 ERP Integration**

The central pillar of the long-term strategy involves the full implementation of the Logo Netsis 3 Standard ERP system. This will integrate procurement, production, finance and warehouse management into a unified digital ecosystem, ensuring administrative synchronization with high-volume production output (Davenport, 1998).

**Automated Demand Forecasting & EOQ**

Leveraging the ERP's data analytics capabilities to transition from reactive to proactive procurement. By activating Economic Order Quantity (EOQ) models and automated safety stock alerts, the company will minimize emergency purchase costs and prevent production downtime (Panorama Consulting Group, 2024; Saytek, 2026).

**Real-Time Management Dashboards**

Developing executive dashboards that provide real-time visibility into Key Performance Indicators (KPIs). This will reduce the current three-day reporting delay to under 4 hours, allowing for faster and data-driven decision-making (Saytek, 2026).

**Sustainable Supply Chain Traceability**

Utilizing the ERP infrastructure to enhance the traceability of recycled materials (rPET, rPE, rPP). This digital audit trail will strengthen Saytek's compliance with global sustainability standards like RECYCLASS and VERRA (Saytek, 2025).

**Continuous Process Optimization**

Establishing a feedback loop where system-generated performance data is used to continuously refine warehouse layouts and production workflows, ensuring long-term scalability as capacity increases.

Each long-term solution is critical for eliminating manual bottlenecks, increasing inventory accuracy to above 95% and achieving significant cost savings in procurement operations. Despite the inherent challenges of digital transformation, such as user adaptation and system configuration, the overall objective is to build a scalable operational infrastructure. The combination of these strategies ensures that Saytek remains a competitive and future-ready leader in the rapidly evolving recycling industry.

## 4. Conclusion

In conclusion, Saytek operates as a high-capacity engineering firm; however, its reliance on manual, Excel-based management processes creates significant scalability constraints. The analyses conducted within this project indicate that sustainable growth cannot be achieved without aligning administrative systems with production speed. Accordingly, the implementation of the Logo Netsis 3 Standard ERP system emerges as a strategic necessity rather than a mere technological upgrade.

In the short term, the standardization of SKU coding and improvements in physical infrastructure are designed to eliminate immediate operational risks and enhance data consistency. In the long term, the proposed digital transformation roadmap positions Saytek at the intersection of operational excellence, innovation and sustainability. By transitioning from human-speed manual tracking to an integrated, data-driven ERP system, the company is expected to achieve inventory accuracy levels above 95% and reduce reporting time from several days to a matter of hours.

While the proposed ERP transformation presents significant strategic advantages, potential implementation risks such as resistance to change, data migration errors and temporary productivity loss during system adaptation must be carefully managed. Furthermore, although ERP implementation requires initial capital investment, long-term reductions in emergency procurement costs and inventory losses are expected to generate sustainable financial benefits for the company.

Overall, the proposed model provides a holistic and scalable transformation framework that strengthens Saytek's competitive advantage, reinforces its corporate governance structure, and ensures sustainable economic growth within the rapidly evolving recycling industry.

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# Appendices

***Appendix A - Interview Questions***

*This appendix presents the interview questions and answers collected from the company.*

1) **Q: Can you explain your material requirement and procurement process?**

**A:** In our recycling plant, we have material needs in both production and other departments. Each unit identifies its needs in advance and submits a "purchase request form" to the purchasing department. The purchasing department collects prices from approved suppliers and submits them for management approval. Once approved, the procurement process begins.

2) **Q: What happens when the procurement process is delayed?**

**A:** If a request is made late, if purchasing is slow to collect quotes, if management is late to approve, or if a supplier misses their deadline, our stock runs out, leading to various problems. To prevent this, each unit performs regular stock counts and follows "critical stock levels". When these levels are reached, we start the purchasing process.

3) **Q: Can you provide an example of an unexpected supply issue you've faced?**

**A:** Last year, we had a chemical used in production that must be stored within a specific temperature range. Temperatures dropped to unexpected lows, causing the chemical to freeze. Even when the temperature rose again, the chemical's structure was ruined and unusable, leading to an urgent supply problem and production loss.

4) **Q: You mentioned issues with product naming and coding. Can you elaborate on that?**

**A:** We don't currently have a coding system for products. For example, a simple item like a "plastic folder" might be called different names by different people (e.g., transparent folder, shirt folder). When a request is made using inconsistent naming, the purchasing department may struggle to identify the correct item, leading to incorrect procurement. This is especially difficult for detailed technical materials like various sizes of washers, bolts, and nuts used by the maintenance team.

5) **Q: What is the main competitive advantage that sets your company apart from rivals?**

**A:** Our most distinguishing feature is our ability to find raw materials. While standard production has stable inputs, our input is waste, which is never stable as it depends on citizen consumption habits and waste collection systems. We have the capability to reach the right and high-quality raw materials more easily than our competitors. We are particularly successful in maintaining our quality stability in the food packing segment, which has high standards.

6) **Q: Does the instability of your raw material input pose a risk?**

**A:** It is a challenge because we must constantly change our production recipes and planning based on the cleanliness or contamination levels of the incoming waste. However, because we can access this material effectively, it creates a net advantage over competitors.

7) **Q: Do you have plans for growth or entering new market segments?**

**A:** We are currently selling 100% of what we produce. Because of this, we are making investments to increase our capacity within the same customer segment rather than moving into new ones.

8) **Q: How does technology provide an advantage in your process?**

**A:** We use high-tech optical sorting systems. These machines can distinguish between types of plastics (like PET) and colors at high tonnages per hour. For instance, we target transparent and light blue PET bottles but want to exclude colored bottles (like green Sprite bottles). This technology ensures a higher quality final product compared to competitors.

9) **Q: Regarding social sustainability, do you track metrics like employee turnover or work accidents?**

**A:** Yes, we constantly track our turnover rate and maintain statistics on work accidents. We also regularly track our consumption of electricity and water.

10) **Q: Where do you position yourself in the recycling market, and who are your main competitors?**

**A:** The market has different segments: the highest is food-contact packaging (the most sensitive due to migration risks), followed by sheet manufacturers, and then fiber/yarn producers (the lowest segment). 80% of our customers are in the food-contact packaging segment. Very few firms in Turkey can successfully sell raw materials to international food-contact packaging producers. Our biggest competitor is a company called "Futurapet" located in the same organized industrial zone.

11) **Q: What difficulties do you face using physical forms for procurement, and have you considered digital solutions?**

**A:** We currently use physical forms, which carry the risk of being lost. We are planning to transition to an ERP system to make processes faster and more controlled. The challenge is the "user habit" aspect; we have many

different units (maintenance, production, lab, administrative, kitchen), and training everyone on a digital system can be difficult.

12) **Q: Do you use a digital system for stock tracking?**

**A:** We use an Excel-based system. Stocks are counted at the start of every week and recorded in Excel, where critical stock levels are defined for easy identification of needs.

13) **Q: Is your supplier base broad or do you work with fixed suppliers?**

**A:** For raw materials (waste), we work with suppliers across Turkey, though we prefer those nearby due to shipping costs. For other materials, we use a list of approved suppliers based on price-performance. We never rely on a single supplier for any material to avoid risks if one stops operations.

14) **Q: Does the management approval step slow down the purchasing process?**

**A:** For routine materials, it only takes about 10 minutes and does not slow things down. However, for non-routine or large R&D projects, the process takes longer as production, maintenance, and management teams must evaluate the costs and benefits together.

15) **Q: Why do customers choose you over others?**

**A:** Because our input is inconsistent, the quality of the output can vary in this industry. Customers prioritize quality, stabilization, and washing standards. We have provided a stable quality value to our customers over time, which is the primary reason they prefer us.

16) **Q: How do economic fluctuations and exchange rates affect you?**

**A:** They do. When the exchange rate is lower than it should be, it hurts our competitiveness in the export market because our margins shrink. Generally, however, the market balances itself; as our sales prices change, our raw material purchase prices tend to follow.

17) **Q: Are there any upcoming developments that might challenge or help the sector?**

**A:** European Union legislation is a major positive. Manufacturers in the EU are now required to use a certain amount of recycled raw material, a requirement that will increase by 5% every year. This ensures that the demand for our product will continue to grow.

18) **Q: How do you handle capacity planning?**

**A:** We currently work at full capacity based on orders. We can increase this slightly with overtime, but because of the high demand, we have decided to invest in increasing the plant's overall capacity. In about 6 months, we expect to be able to handle significantly more orders.

19) **Q: What is your estimated market share in Türkiye’s recycled plastics (rPET/rPE/rPP) market?**

**A:** Our market share is 15%. In addition, Saytek increases its share in the food-contact packaging sector by 10% each year.

## *Appendix B– Production Planning Schedule (January 2026)*

*This appendix presents the weekly production planning schedule of the company for January 2026.*

ÜRETİM PLANLAMA- OCAK 2026

**1. HAFTA**

| VARDİYA TOPLAM ÇALIŞMA SÜRESİ ( 45 saat ) | | | | | |
|---|---|---|---|---|---|
| Genel Bilgi | | Ürün | Renk | Planlanan Miktar | Üretilen Kg |
| Vardiya Başlangıç | 08:00 | PET FLAKE | MAVİ& ŞEFFAF | 510.000 | 522.000 |
| Vardiya Bitiş | 18:00 | | | | |
| Yemek Süresi (dk) | 30 | | | | |
| Mola Süresi (dk) | 30 | | | | |

**2. HAFTA**

| VARDİYA TOPLAM ÇALIŞMA SÜRESİ ( 45 saat ) | | | | | |
|---|---|---|---|---|---|
| Genel Bilgi | | Ürün | Renk | Planlanan Miktar | Üretilen Kg |
| Vardiya Başlangıç | 08:00 | PET FLAKE | MAVİ& ŞEFFAF | 510.000 | 492.000 |
| Vardiya Bitiş | 18:00 | | | | |
| Yemek Süresi (dk) | 30 | | | | |
| Mola Süresi (dk) | 30 | | | | |

**3. HAFTA**

| VARDİYA TOPLAM ÇALIŞMA SÜRESİ ( 45 saat ) | | | | | |
|---|---|---|---|---|---|
| Genel Bilgi | | Ürün | Renk | Planlanan Miktar | Üretilen Kg |
| Vardiya Başlangıç | 08:00 | PET FLAKE | MAVİ& ŞEFFAF | 510.000 | 539.000 |
| Vardiya Bitiş | 18:00 | | | | |
| Yemek Süresi (dk) | 30 | | | | |
| Mola Süresi (dk) | 30 | | | | |

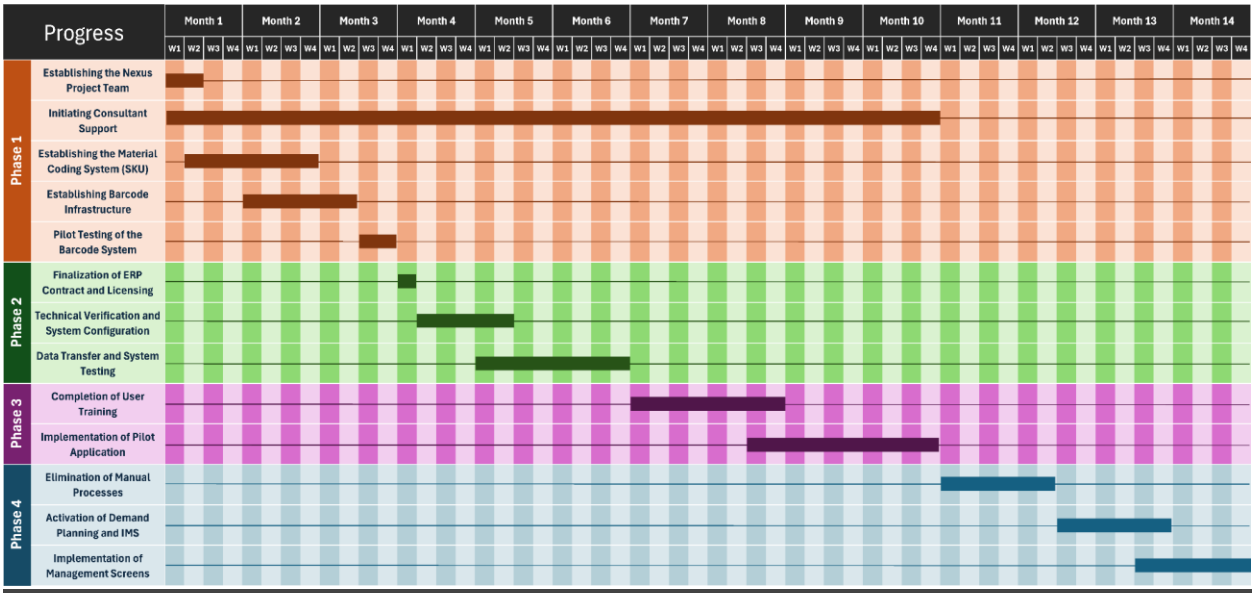
**4. HAFTA**

| VARDİYA TOPLAM ÇALIŞMA SÜRESİ ( 45 saat ) | | | | | |
|---|---|---|---|---|---|
| Genel Bilgi | | Ürün | Renk | Planlanan Miktar | Üretilen Kg |
| Vardiya Başlangıç | 08:00 | PET FLAKE | MAVİ& ŞEFFAF | 510.000 | 541.000 |
| Vardiya Bitiş | 18:00 | | | | |
| Yemek Süresi (dk) | 30 | | | | |
| Mola Süresi (dk) | 30 | | | | |

| | |
|---|---|
| PLANLANAN MİKTAR | 2.040.000 |
| ÜRETİLEN MİKTAR | 2.094.000 |

## Appendix C - Gantt Chart

*This appendix provides a detailed visualization of the project timeline, task sequencing, and key dependencies.*



## Appendix D - Annual Production Capacity Report

*This appendix includes the official document indicating the company's annual production capacity.*

DÜZCE TİCARET VE SANAYİ ODASI **MERSİS No:** 0757098695700002 **Vergi Dairesi/No:** Hitit V.D.Bşk. / 7570986957

SAYTEK MEDİKAL VE PLASTİK SANAYİ TİCARET ANONİM ŞİRKETİ DÜZCE ŞUBESİ

# TABLO : II YILLIK ÜRETİM KAPASİTESİ

| Üretim Kodu | Üretim Açıklaması | Miktar | Birim |
|---|---|---|---|
| 38.32.00.00.00 | Tasnif edilmiş materyallerin geri kazanımı (TEHLİKESİZ PLASTİK ATIK VE PLASTİK AMBALAJ ATIĞINDAN ÇAPAK) | 24.480.000 | kilogram |

TOBB tarafından 04-04-2025 tarih ve 158033 no ile onaylanmıştır. En son 14-03-2027 tarihine kadar geçerlidir.

Tablo 2 : 1 / 1

# Fetih Tekstil, HR Problem




**Proje Ekibi: Group 21**

**Grup Üyeleri:** Alp Arap, Bora Utku Aydın, Ceyda Yiğit, Onur Alp Çimen, Sıla Çetin, Şevval Yıldırım, Yağmur Tuna

**Şirket Danışmanı:** Zeynep Demirbaş, Sena Açıkgöz

**Akademik Danışman:** A. R. Zafer Sayar

**Koordinatör Danışman:** Yasemin Limon

## ÖZET

Bu proje, Fetih Tekstil'in giyim sektöründe karşılaştığı lokasyonlar arası iletişim ve kültürel uyuşmazlık sorununu ele almaktadır. Sunulan çözümler üretim gecikmelerini ve personel devir hızını azaltmayı hedeflemektedir. Proje kapsamında bu sorunların çözülmesini amaçlayan, üç aşamadan oluşan kapsamlı bir çözüm önerisi ve buna ek üç alternatif sunulmuştur. Çözüm olarak departmanlar ve lokasyonlar arası iletişimde çalışanlara verilen otonominin arttırılması ve iş süreçlerinin standardize edilmesi tavsiye edilmektedir. Bunun yanı sıra şirketin ana merkezinde kullanılan ERP yazılımının, QDMS ile de zenginleştirilerek tüm lokasyonlara entegre edilmesi önerilmektedir. Değişim programı ile kültürel farklılıklardan kaynaklanan problemlerin azaltılması hedeflenmektedir. Fetih Tekstil'in bu proje kapsamında ekolojik, sosyal ve ekonomik sürdürülebilir büyümesine ivme kazandırması beklenmektedir.

**Anahtar Kelimeler:** Fetih Tekstil, İletişim, Dijitalleşme, Otonomi, Verim, ERP, QDMS, Sürdürülebilirlik

## 1. Company Background

Fetih Tekstil operates within the Taha Group, one of the international ready-to-wear manufacturing groups. The company was established in Istanbul, in 1996. Since its establishment, Fetih Tekstil has gone through important changes.The company is mass producing garments for multiple international Clothing Brands across all segments in a total of 4 production facilities, two of them located in Turkey and two of them in Egypt, as of 2008. Right now they are reaching up to a million garments in quantity produced and the company already has the systems in place to expand production facilities and increase this volume if the need presents itself.
The company employs approximately 3,000 people. Overall, workforce distribution of Fetih Tekstil demonstrates that their organizational structure is suitable for the textile industry, where production activities are intensive.
Fetih Tekstil' mission is to provide high quality, flexible, and timely production with maximizing customer, supplier, and employee satisfaction while maintaining continuous growth, development and innovation of the production facilities and their employees to maintain their quality.
Fetih Tekstil's competitive advantage is based on its integrated production structure. The company's ability to manage design, product development, and production processes under the same structure enables Fetih Tekstil to provide faster and flexible solutions to its customers. These make Fetih Tekstil a production partner, rather than just producer.

## 2. Problem Definition

Fetih Tekstil operates as a multinational production company. Although having production facilities in different locations provides operational advantages, this situation brings communication, coordination and organizational alignment difficulties between locations. An asymmetric coordination problem is observed in the business processes carried out between the company's headquarters in İstanbul (HQ) and its production facilities in Malatya and Egypt. While the projects initiated by the headquarters and standard delivery times are subject to serious delays due to operational reasons such as local workload density and capacity bottlenecks in the Malatya facility, they are interrupted due to conflicts in local ways of work, working cultures and communication practices in the Egyptian facility. This disconnection between central, regional and international locations not only causes disruptions and operational inefficiencies in project lead time, but also negatively affects employee morale by damaging internal communication. This problem, which tends to grow due to the lack of cross-cultural and operational dialogue between facilities, directly threatens the company's value proposition in the form of building a "Unified and High-Retention Workforce". The main problem of this project is structural communication disconnections and alignment deficiencies in multi-location and multinational operation networks due to local business dynamics and cultural differences.

## 3. Recommended Solutions

**1. Roadmaps for Faster Processes:** This involves developing a visual roadmap for the Egyptian branch that clearly defines specific technical and operational boundaries where regional managers are pre-authorized to make final decisions without seeking Istanbul office's confirmation. Since the company already operates through recurring coordination between regional branches and headquarters, formalising these procedures into a standardised roadmap would make the existing workflow more efficient and transparent rather than introducing a completely unfamiliar system.
**Advantages:** Directly targets the time wasted in confirmation loops, empowers local leadership, and provides a clear visual guide to accelerate daily operations.
**Disadvantages:** Requires a significant initial effort from HQ to standardize and visualize every technical scenario and decision point.

**2. Unified Digital Standardization:** Complete mandatory migration of all regional data operations from Microsoft Excel to the centralized ERP and QDMS systems currently used in Istanbul to ensure single source of truth visibility. Since HQ already actively uses ERP systems in their operations, the proposed solution is rather practical than theoretical. Because it broadens the scope of an existing software in HQ into a company-wide standardised system instead of requiring the company to invest in an entirely new technological framework.
**Advantages:** Manual updates will no longer be necessary since HQ can track progress in real time, which will minimize mismanagement related to scheduling at the plant.
**Disadvantages:** It requires considerable technical training for the regional employees and may face opposition from individuals who are used to traditional manual updating and believe it as a conventional way.

**3. Reciprocal Technical Exchange Program:** Creating a structured program whereby technical and management personnel from Egypt and Malatya travel to Istanbul and also vice versa to harmonize technical language, expectations, and operational culture. The company occasionally sends Istanbul-based employees to the Egyptian branches for operational coordination. Thus, extending this practice into a more complementary and structured exchange program would be both viable and beneficial for strengthening communication between different offices.

**Advantages:** It cultivates better empathy between the regions, enabling employees from different cultural backgrounds to comprehend the precise technical demands of HQ, and reduces communication errors caused by the language and workflow differences.

**Disadvantages:** It is expensive logistically and temporarily creates staffing problems for their local factories while on exchange visits. The recommended best solution is an integrated strategy in which all the proposed solutions are implemented simultaneously to create a more unified and operationally autonomous organizational structure. Essentially, these recommendations are not solely new systems proposed to impose on the company, rather they build upon practices already partially utilised within Fetih Tekstil. By expanding existing ERP usage and adding QDMS, formalising operational communication through visual roadmaps, and structuring ongoing interregional visits into a reciprocal exchange program, the company can transform its fragmented production network in a pragmatic way into a more coordinated system within significantly reduced production delays.

## 4. Conclusion

In conclusion, Fetih Tekstil, a giant textiles producer that is representing our company internationally is facing some challenges with the inter-location and inter-department communication and coordination of their multilingual and multicultural workforce. The recommended solution package is designed to solve these problems while maintaining the production volume.

The pre-established roadmaps provided by the headquarter (HQ) would help ease the minor conflicts and increase the level of coordination and reduce delays that is caused by communication difficulties and multiple approval requirements.

The digital standardization would enhance the communication between administrative departments and would help ease the operational delays that arise from the non-updated software and manual documentation that is prone to human errors.

The exchange program would enable the employees to exchange their perspectives and experiences as well as their own culture and would increase cohesion within departments and would lead to the diminish of communication problems that arise from the HQ not understanding local situation or cultural perspective differences.

In the end, these interconnected issues that cause chain reactions and the proceeding of operational excellence would be solved by constructive solutions that operate on the same logic and would eventually create a feedback cycle for the company to aid its operational excellence.

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# Appendices

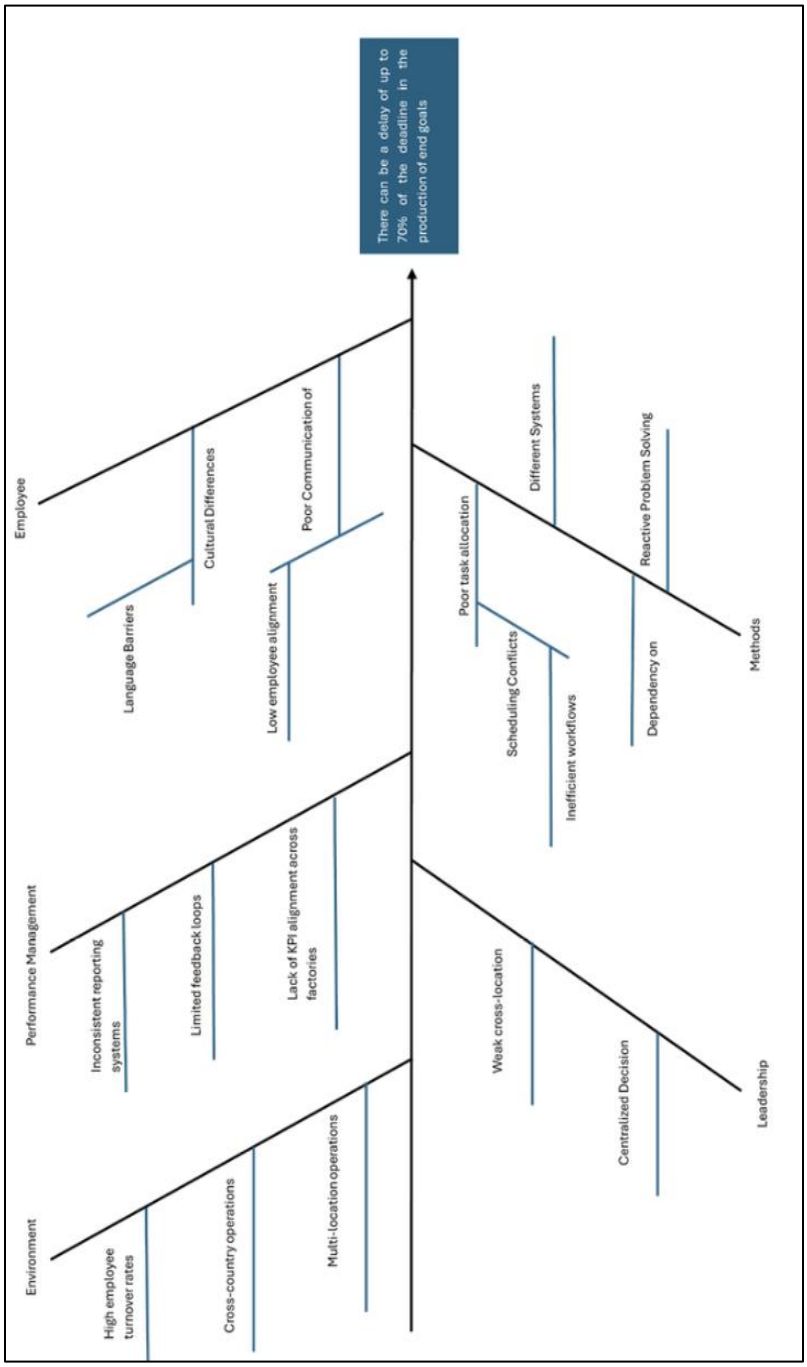



*Figure 1, the Fishbone Diagram*




*Figure 2: Image of a roadmap for Egypt Branch*

# Emeklilik Gözetim Merkezi, Marketing Problem




**Proje Ekibi:** Forever Young

**Grup Üyeleri**: Mert Dönertaş, Aslı Gülce Uyar, Yusuf Kutay Hayta, Neva Çelik, Gökhan Gültekin, Ömer Burak Erşekerci, Alp Türkalp

**Şirket Danışmanı:** Ege Kacar

**Akademik Danışman:** Saurabh Shinde

**Koordinatör Danışman:** Ceren Aydoğmuş

## ÖZET

BES Mobil; Emeklilik Gözetim Merkezi (EGM) tarafından 4632 sayılı Kanun kapsamında Sigortacılık ve Özel Emeklilik Düzenleme ve Denetleme Kurumu'nun (SEDDK) yetkilendirmesi çerçevesinde hazırlanmıştır. Bu uygulama, 17,7 milyon katılımcının bireysel emeklilik sistemine ilişkin veri setini analiz eden, geniş kullanıcı kitlesine hizmet verme potansiyeli bulunmaktadır. Ancak, birçok kullanıcının Bireysel Emeklilik Sistemi'ni pasif bir "kumbara" gibi görmesi ve uygulamanın farklı kullanıcı ihtiyaçlarına ve finansal okuryazarlık seviyelerine yeterince uyum sağlayamaması nedeniyle katılım ve kullanıcı sürekliliği zayıf kalmaktadır. Yapılan analizler, kullanıcıların altı farklı ihtiyaç temelli segmente (İzleme Odaklı, Kolaylık Arayan, Danışmanlık Odaklı, Yatırım Analizi Odaklı ve Güvenlik/Garanti Odaklı, ve İstekli) ayrıldığını göstermekte; bu durum tek tip bir kullanıcı deneyiminin bazı kullanıcı gruplarında etkileşimi azaltan engeller oluşturduğunu, diğer kullanıcı gruplarının ihtiyaçlarını yeterince destekleyemediğini ortaya koymaktadır. Bu sorunu ele almak amacıyla rapor, BES Mobil'i "kullanıcı başlatımlı" kullanımdan "sistem başlatımlı" etkileşime dönüştüren, zamanında ve kişiselleştirilmiş yönlendirmeler ile düşük çaba gerektiren aksiyonlar sunan, kullanıcıların finansal durumlarını anlamalarına, güvenle karar vermelerine ve "Aile Yuvaları" gibi hedef odaklı yapılar aracılığıyla bağlılıklarını uzun vadede korumalarına yardımcı olan GPT tabanlı bir yapay zekâ asistanı ve yenilikçi bildirim sistemi olan BESİM'i önermektedir.

**Anahtar Kelimeler:** Bireysel Emeklilik Sistemi, Kullanıcı Deneyimi, Yapay Zekâ, Davranışsal Ekonomi, Finansal Okuryazarlık, Kullanıcı Etkileşimi, Mobil

## 1. Company Background

The Pension Monitoring Center (PMC) was founded on July 10, 2003, in Istanbul under Law No. 4632, on the Individual Pension Savings and Investment System. Its initial mandate was to provide oversight, monitoring, and data infrastructure for Türkiye's private pension system. Over time, PMC's responsibilities expanded to include maintaining the central registry of pension contracts, operating fund performance evaluation systems, publishing sector-wide statistics, and supporting the Automatic Enrollment System (AES). As Türkiye's retirement savings market grew significantly in scale, PMC strengthened its data, IT, and supervisory capabilities accordingly, becoming the backbone institution of the private pension ecosystem despite not being a traditional commercial corporation.

PMC's vision is to serve as one of the globally acknowledged leading supervisory authorities, while its mission is to ensure the secure and effective operability of the private pension system to safeguard the rights and interests of the participants. The organization operates in accordance with the principles of independence, impartiality, objectivity, honesty, transparency, accountability, scientific reasoning, competence, innovation, continuous learning and improvement, a participatory approach, a stakeholder-focused mindset, and quality-oriented in service delivery.

PMC is organized as a joint-stock company under Turkish commercial law and operates under the supervision of the Ministry of Treasury and Finance. Governance is provided by a Board of Directors responsible for strategic direction and regulatory compliance, while daily operations are managed by a general manager coordinating core functional departments. These units support PMC's public-interest mandate through a centralized organizational structure that ensures consistent data management and regulatory coordination.

The Center is privately owned and not publicly traded, with shareholders primarily consisting of institutions active in the private pension and insurance sectors. Despite this structure, PMC's governance closely resembles that of a regulatory body, emphasizing neutrality and accountability. The organization employs approximately 115 professionals with expertise in finance, data management, information technologies, legal compliance, and administration. Through its regulatory and digital services, including platforms such as the BES Mobil application, the BEFAS Information Platform, the Digital Transfers Platform (DAP), the Fund Performance Evaluation System, the Digital Platform for the Monitoring of State Matching Contribution (SMC) and operations, and the PMC, it supports transparency, system integrity, and effective monitoring within Türkiye's private pension system.

## 2. Problem Definition

BES Mobil struggles to engage its 17.7 million participants due to a common perception of the pension system as a basic savings tool, akin to a "piggy bank," and a critical lack of customization in the app's user experience, effectively preventing the PMC from leveraging its central data advantage to drive sustainable growth.

## 3. Problem Solution

We adopted a consumer-driven needs-based approach to develop solutions for BES Mobil's engagement challenges. The analysis indicated that users interact with the Individual Pension System (IPS) in fundamentally different ways, forming distinct segments with varying levels of financial literacy, confidence, and engagement. Accordingly, BES Mobil users can be grouped into six need-based segments: Monitoring, Convenience, Consulting, Investment Analysis, Safety/Guarantee, and Enthusiasts. These segments reflect distinct user profiles shaped by differences in demographics, financial behavior, and levels of digital engagement.

To operationalize this segmentation, representative personas were developed for each user group: "Status-Check Serkan" for Monitoring-Oriented users, "Quick-Click Zeynep" for Convenience-Seeking users, "Guided Ayça" for Consulting-Oriented users, "Analyst Emre" for Investment Analysis-Driven users, "Secure Selma" for

Safety/Guarantee-Oriented users, and “Curious Newcomer Deniz” for Enthusiasts *(Appendix 1-6)*. These personas translate abstract segments into concrete user profiles and support the design of targeted, need-specific engagement strategies.

This finding highlighted the limitations of a one-size-fits-all experience and emphasized the need for solutions grounded in actual user behavior. By focusing on how users monitor accounts, seek guidance, evaluate investments, or prioritize security, the study identified key friction points such as passiveness, inertia, and lack of confidence. Beyond addressing current challenges, this needs-based perspective supports scalable and sustainable engagement by aligning system design with real consumer needs.

### 3.1 Short-Term Solutions:

#### 3.1.1 Financial Literacy Platform Integration

This solution will explicitly target the Safety/Guarantee-Motivated User (“Secure Selma”) and the Outsider (“Curious Deniz”) that were identified in the segmentation analysis. These two groups are often reluctant to use the service because they are skeptical of the private pension fund systems. With the government's established regulatory credibility, the barrier to entry will be eased. In the short term, BES Mobil can address engagement and trust-related challenges by integrating financial literacy content into institutionally credible platforms. This approach helps reduce skepticism among users who prioritize safety, regulatory assurance, and transparency. While it supports awareness and trust, the solution remains largely passive and relies on users’ voluntary engagement, limiting its ability to generate sustained interaction.

#### 3.1.2 BES Campus (University Engagement Program)

This is the solution for Convenience-Seeking Users, also known as "Quick-Click Zeynep", and young Consulting-Oriented users before “financial apalthy” sets in. Introducing IPS as a standard part of adulting will make pension participation the norm for Gen Z, locking in long-term customer lifetime value from the moment they get a job or a credit card. Another short-term solution involves university-focused engagement programs aimed at introducing the IPS at an early stage of users’ financial lives. By leveraging peer influence and direct interaction, these initiatives increase familiarity and reduce entry barriers. However, given the size and dispersion of the user base, high operational effort and scalability limitations constrain their effectiveness.

### 3.2 Long-Term Solutions:

#### 3.2.1 The "BESİM" AI-Smart Ecosystem

As a long-term solution, the project proposes the BESİM AI-Smart Ecosystem as a comprehensive response to BES Mobil’s engagement challenges (Appendix 7). This remedy is designed as a holistic solution that affects all categories of users and transforms the platform from a user-initiated monitoring tool into a system-initiated engagement model. The system directly addresses the dominant “piggy bank perception” by encouraging active management of pension funds rather than passive balance checking.

Through a GPT-based AI concierge and a smart notification engine, BESİM provides personalized guidance aligned with users’ financial literacy levels and behavioral profiles, reducing decision-making friction and uncertainty. Consulting-oriented users receive conversational “handholding” through chat-based interaction, investment analysis–driven users gain access to in-depth data and comparison charts, and monitoring-oriented users are supported through status confirmation mechanisms. In this way, the ecosystem adapts its level of complexity and guidance to different user needs while maintaining a consistent engagement framework.

By leveraging the PMC’s centralized, industry-wide data advantage, BESİM enables scalable engagement across diverse user categories. Rather than relying on users to initiate interaction, the system proactively supports

decision-making at relevant moments, thereby strengthening continuous participation and increasing the overall effectiveness of the platform.

### 3.2.2 Behavioral Nudging and Goal-Based Structures

The long-term solution further incorporates behavioral economics principles to counteract inertia and passiveness, which are key barriers to active participation in the IPS. Smart notifications are designed to prompt timely actions by identifying psychological trigger moments and delivering low-effort engagement opportunities. These notifications capitalize on external signals such as timing and account activity to encourage users to reassess their financial behavior.

In addition, the system applies social norm–based prompts and loss aversion framing to address lack of confidence and inaction. By showing users how similar cohorts manage their portfolios or highlighting the potential erosion of purchasing power, BESİM reframes inactivity as a risk rather than a neutral choice. This approach lowers psychological barriers to fund management and encourages more frequent interaction with the platform.

Beyond nudging, goal-oriented and family-based saving structures strengthen emotional commitment and long-term participation. By allowing users to link their pension savings to meaningful family goals and future-oriented objectives, the system shifts engagement from short-term monitoring to long-term planning. Leveraging the PMC's centralized, industry-wide data advantage, these mechanisms support sustained engagement, reduce churn, and contribute to the long-term sustainability of the IPS.

## 4. Conclusion

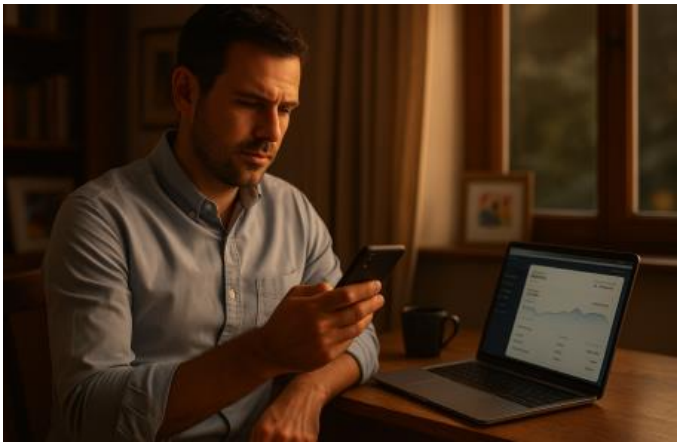
The analysis demonstrates that BES Mobil's core challenge does not stem from a lack of data or institutional capacity but from its limited ability to translate these strengths into sustained user engagement. The widespread perception of the IPS as a passive "piggy bank," combined with a user-initiated and uniform interface, results in inertia, low interaction frequency, and underutilization of pension-related opportunities across different user segments.

By adopting a consumer-driven, needs-based perspective, the project highlights the importance of aligning system design with diverse user expectations, financial literacy levels, and behavioral tendencies. In this context, short-term solutions help people become more aware and trust each other, while the BESİM AI-Smart Ecosystem makes long-term change possible. By shifting engagement responsibility from the user to the system, BESİM introduces personalized guidance, behavioral nudging, and goal-oriented structures that reduce decision-making friction and encourage active participation.

Overall, the proposed approach transforms BES Mobil from a passive monitoring platform into an active financial partner. Through the integration of artificial intelligence, behavioral economics, and centralized data capabilities, the solution supports long-term user engagement, strengthens institutional trust, and contributes to the sustainable development of Türkiye's private pension system.

# Appendices

**Appendix 1: Monitoring-Oriented Persona - “Status-Check Serkan”**



**Appendix 2: Convenience-Seeker Persona - “Quick-Click Zeynep”**



**Appendix 3: Consulting-Oriented Persona - “Guided Ayça”**



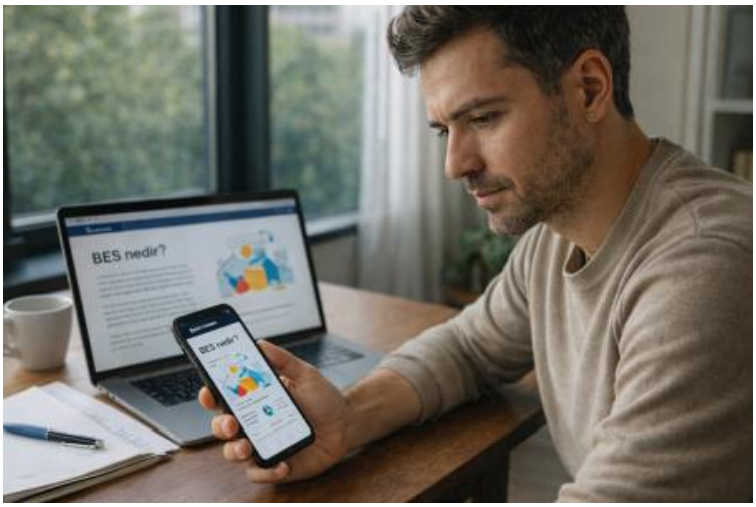
**Appendix 4: Investment Analysis Persona - “Analyst Emre”**



**Appendix 5: Safety / Guarantee-Oriented Persona - “Secure Selma”**



**Appendix 6: Enthusiast Persona - “Curious Newcomer Deniz”**



## Appendix 7: BESİM




## Appendix 8: Glossary

| Glossary | | | |
|---|---|---|---|
| **EN** | | **TR** | |
| Individual Pension System | IPS | Bireysel Emeklilik Sistemi | BES |
| Auto Enrollment System | AES | Otomatik Katılım Sistemi | OKS |
| Pension Monitoring Center Inc. | PMC | Emeklilik Gözetim Merkezi A.Ş. | EGM |
| Private Pension Fund Trading Platform | N/A | Bireysel Emeklilik Fon Alım Satım Platformu | BEFAS |
| Complementary Pension System | CPS | Tamamlayıcı Emeklilik Sistemi | TES |
| Insurance and Private Pension Regulation and Supervision Authority Strategic Plan | IPRSA | Sigortacılık ve Özel Emeklilik Düzenleme ve Denetleme Kurumu | SEDDK |
| TR Ministry of Treasury and Finance | MoTF | T.C. Hazine ve Maliye Bakanlığı | N/A |
| Istanbul Settlement and Custody Bank Inc. | N/A | İstanbul Takas ve Saklama Bankası A.Ş. | Takasbank |
| Central Securities Depository and Trade Repository of the Turkish Capital Markets | N/A | Merkezi Kayıt Kuruluşu A.Ş., Türkiye Sermaye Piyasalarının Merkezi Saklama ve Veri Depolama Kuruluşu | MKK |
| Fund Performance Assessment System | N/A | Fon Performans Değerlendirme Sistemi | N/A |
| Turkish Personal Data Protection Law No. 6698 | N/A | 6698 sayılı Kişisel Verilerin Korunması Kanunu | KVKK |
| Capital Markets Board of Türkiye | CMB | Sermaye Piyasası Kurulu | SPK |
| e-government portal (e-Devlet) | N/A | e-Devlet | N/A |

**Appendix 9: Forever Young's Pension Monitoring Center Field Trip**




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# Türkiye İş Bankası A.Ş.,




**Proje Ekibi: The Peak Point**

**Ekip Üyeleri:** Halit Oğlakçı, Badar Khalid Shaikh, Pınar Erman, Eda Özübek, Egemen Demir, Meriç Utku Sokat

**Şirket Danışmanı:** Aytaç Bayrak

**Akademik Danışman:** Oğuz Gençay

**Koordinatör Danışman:** Ceren Aydoğmuş

## ÖZET

Bu detaylı rapor, Türkiye İş Bankası'nın çevik dönüşüm süreci ile birlikte yapısal, kültürel ve teknolojik değişimlerin iş sonuçları üzerindeki etkisinin ölçümünde yaşanan sorunları ele almaktadır. Geliştirdiğimiz çözüm önerisi, halihazırda kullanılan ağırlıklı olarak nitel ve algı temelli verilerle birlikte nicel ve ölçülebilir metriklerin de kullanılmasıyla beraber daha veri odaklı bir model sunmaktadır. Çalışma kapsamında çevik dönüşümün yapısal, kültürel ve teknolojik boyutlarını ele alan üç boyutlu bir ölçüm yaklaşımı analiz edilmiştir. Yapılan değerlendirme sonucunda Geliştirilmiş SCT (Yapısal, Kültürel, Teknolojik) Etki Endeksi önerilmiştir. Bu üç boyutlu model, çevik uygulardan elde edilen çıktıları sayısal göstergelere dönüştürerek iş sonuçlarını değerlendirme imkanı tanıyan, bütüncül bir bakış açısı sunmaktadır. Endeks; karar alma süreleri, iş akışı verimliliği, ekip iş birliği, bağımlılık yükü ve teknoloji kullanım düzeyi gibi göstergeleri ağırlıklandırılmış tek bir skor altında toplayarak karşılaştırma ve zaman içindeki gelişimi izleme imkanı sağlamaktadır. Bu çözüm önerisi, çevik dönüşümün stratejik hedeflerle ilişkilendirilmesine ve katkısının ölçülmesini amaçlamaktadır.

**Anahtar Kelimeler:** Çevik Dönüşüm, Verimlilik, İnsan Kaynakları, Performans Ölçümü, Organizasyonel Dönüşüm, Yapı ve Kültürü

## 1. Company Background

Türkiye İş Bankası A.Ş. holds a distinctive and foundational position in the banking sector as the first private and national bank of the Republic of Turkey. Founded in 1924 by Mustafa Kemal Atatürk, the institution was created to play a central role in economic modernization, mobilizing domestic capital and supporting the industrial development of the young republic. As the largest private-sector bank in Turkey, İşbank is ranked first among its private-bank peers by market share in loans, deposits and total assets, according to its 2024 annual report. The bank serves approximately 25 million customers, employs around 20,560 staff, operates 6,496 ATMs, and runs 1,012 branches across the country (Türkiye İşbankası, 2024).

Today, İşbank offers a comprehensive range of financial products and services, including retail and commercial banking, as well as corporate and SME financing. Moreover, they have subsidiaries that offer insurance, leasing, factoring, and investment services. Its strong subsidiary structure allows İşbank to operate an integrated financial ecosystem. Nowadays, most of İşbank's services are provided through its mobile application "İşCep". İşCep allows customers to perform more than 750 different functions online. As a result, 78% of all banking transactions and 22% of investment transactions are executed through İşCep.

Facing increasing competition, regulatory pressure, macroeconomic volatility, and rapid technological change, İşbank has started an agile transformation to enhance flexibility, innovation, and customer orientation. This transformation aimed to shift from İşbank's traditional hierarchical structure toward cross-functional, autonomous teams with the use of digital technologies and modern management practices. The bank has implemented 25 agile domains, created 225 agile teams with the help of 14 agile coaches throughout this transformation. As a result, they obtained an agile satisfaction level of 4.36 and decreased time-to-market by up to 70%. (See Appendix 1)

## 2. Problem Definition

İşbank is undergoing agile transformation for its employees and is facing challenges in measuring and evaluating the impact of its structural, cultural, and technological changes on business outcomes on agile teams. İşbank currently has measurement systems that focus mainly on qualitative factors as well as cultural indicators, such as agile maturity and employee satisfaction. However, these measurements are not quantitative, which makes it hard for İşbank to work. The currently used system is called Harmony, which has structural constraints embedded in existing governance models, decision-right allocations, and cross-unit dependencies which have been preventing agile teams from operating with end-to-end ownership. The Harmony system lacked structural, cultural and technological components, which has been creating cavities of misalignment within the implementation. Examples of this are the cultural-technical gap, limited autonomy, role ambiguity, and weak feedback loops Limited autonomy causes agile teams to rely on management approval, which slows down the decision-making process. Role ambiguity further weakens accountability, as unclear roles and responsibilities hinder effective coordination and performance evaluation. Lastly, weak feedback loops extend the time period to fix problems and increase the quality of work. Therefore, the problem affects mainly employees, customers, and managers due to extended decision-making process and decreased process efficiency.

## 3. Possible Solutions

### 3.1. The Harmony Agile Ecosystem Optimizer (HAEO)

The HAEO framework is an integrated ecosystem framework that provides a holistic view across an organization in the areas of business metrics, organizational structure, technology stack, and core values. It establishes a framework for creating a self-sustaining, agile ecosystem of interconnected components that maximize the capabilities of autonomous units and reduce barriers to productivity. HAEO achieves this integration by providing insight into how an organization uses execution and collaboration tools such as Jira, Azure DevOps, HRIS, and Miro, and how teams generate and utilize data from multiple sources in planning, coordinating, and delivering

business values. The comprehensive structure of the HAEO framework facilitates detailed analysis of dependencies and workload priorities across other areas of the organization to ensure seamless workflow.

Using the HAEO framework to assess the overall health of an organization requires analyzing three distinct aspects of organizational performance using a specific combination of indicators. Various tools are available to measure cultural dynamics and energy at the team level, including Officevibe, TinyPulse, and Slack/Teams data. Each platform measures cultural alignment with Agile Values and the degree to which an organization's cultural mission is fulfilled. Team dynamics and energy are assessed through the aforementioned platforms, while technological performance is measured through SonarQube, New Relic, and Jenkins to ensure high stability and effectiveness of engineering and automation efforts. This information is correlated with business impact by monitoring strategic alignment and customer satisfaction through tools such as NPS systems, Mixpanel, and Power BI, which effectively bridge the gap between micro-level tasks and macro-level business outcomes.

However, the benefits of HAEO's holistic nature are balanced by the trade-offs that naturally exist within a larger framework. One of HAEO's main benefits is that it allows you to see how daily operational and tactical changes are directly related to high-level KPIs through a self-regulating mechanism. However, the broad scope of the HAEO framework makes it increasingly difficult to separate improvements stemming from Agile methodologies from other organizational changes made concurrently with these changes. Additionally, because HAEO solutions attempt to address all areas of an organization, there is significant complexity in the implementation process, and they are considerably more expensive than other, more narrowly focused solutions.

### 3.2. Integrated Agile Performance Engine (IAPE)

We formally propose the implementation of the Integrated Agile Performance Engine (IAPE) framework. This solution is designed to guarantee unified synchronization throughout the financial institution. The IAPE framework establishes a direct nexus between high-level organizational strategy and practical operational execution. This model significantly enhances decision-making by supplanting intuition with data-driven precision, a feat accomplished through the rigorous alignment of Objectives and Key Results (OKRs) with Value Stream Management. Consequently, the output generated by every team (squad) is ensured to contribute unequivocally to the bank's core strategic pillars.

A principal benefit of IAPE resides in its function as a "single source of truth." This critical feature enables İşbank to establish a direct correlation between internal metrics, such as team velocity and employee satisfaction, and measurable financial outcomes. Consequently, this heightened transparency affords leadership a precise understanding of the concrete effect of cultural health upon the institution's financial performance. The implementation of the IAPE system is confronted by two central difficulties: technical integration and cultural resistance.

The first challenge, Technical Integration, focuses on the "Engine," which constitutes the technical core of the IAPE system. Integrating this novel core with İşbank's existing legacy infrastructure represents a substantial undertaking. This effort necessitates considerable technical investment and carries the potential for protracted implementation timelines, thereby demanding meticulous project management and resource allocation.

The second challenge is Cultural Resistance, epitomized by the "Purse," the cultural component of IAPE. This component introduces radical transparency, a concept likely to encounter significant internal opposition within a highly regulated and traditionally conservative banking environment. Overcoming this resistance is critical and is entirely dependent upon a robust organizational change management initiative. This initiative must be strategically designed to effectively communicate the benefits and operational mechanics of the new framework, ensuring its eventual acceptance across all organizational strata. Successful navigation of these dual challenges will determine the ultimate viability of the IAPE system's deployment.

The IAPE framework represents a pivotal investment for İşbank, offering a transformative pathway to harmonize strategic objectives with operational execution. Notwithstanding significant technical and cultural hurdles, its capacity for achieving data-driven precision and unified synchronization is substantial. Through the adoption of this synchronized, transparent performance paradigm and the transition beyond reliance on subjective intuition, İşbank is positioned to fortify its status as an agile pioneer within the Turkish financial industry.

### 3.3. The Enhanced SCT Impact Index

The Enhanced SCT Impact Index is a comprehensive and structured measurement framework designed to evaluate the structural, cultural, and technological effects of agile transformation in a holistic and objective manner. One of İşBank's most significant challenges is its inability to clearly connect improvements in employee satisfaction and agile maturity with tangible operational and financial outcomes. Current assessment practices rely heavily on cultural surveys, while critical structural and technological dimensions such as decision-making flexibility, workflow efficiency, automation levels, and technology adoption remain insufficiently measured. The Enhanced SCT Impact Index directly addresses this gap by introducing a three-dimensional impact model consisting of a Structural Agility Index, a Cultural Agility Index, and a Technological Agility Index.

Each dimension of the model is supported by measurable and data-driven KPIs, including decision cycle times, psychological safety, cross-functional collaboration, deployment frequency, and automation ratios. By integrating these indicators into a single weighted SCT Score, İşBank gains the ability to compare agile units, monitor performance trends over time, and systematically identify underperforming dimensions. Most importantly, the SCT Index translates traditionally qualitative concepts such as adaptability, collaboration, and organizational culture into concrete numeric metrics, enabling the bank to demonstrate how agile transformation initiatives directly contribute to accelerated delivery, improved customer satisfaction, and profit growth. To ensure effective implementation, the model requires standardized data pipelines, the use of analytical tools, and the development of agile coaches' capabilities so that SCT results can be translated into actionable managerial decisions. Regular quarterly evaluations further support continuous learning, accountability, and performance transparency.

Among the alternative solutions considered, the Enhanced SCT Impact Index stands out as the most rational and suitable choice for İşBank. While the Harmony Agile Ecosystem Optimizer offers an advanced ecosystem-level approach, its high complexity, reliance on multiple tools, and significant cost make it difficult to implement effectively. Similarly, the Integrated Agile Performance Ecosystem, although strategically sound, is overly comprehensive and challenging to apply within a large and highly regulated banking environment. In contrast, the Enhanced SCT Impact Index provides a practical, focused, and scalable solution that leverages existing systems and balances qualitative insights with objective measurement. By moving beyond perception-based assessments and enabling data-driven evaluation, the SCT Index allows İşBank to reliably link agile transformation efforts to business outcomes while supporting strategic refinement, efficient resource allocation, and long-term planning.

## Conclusion

İşBank, founded in 1924 as the first private and national bank of the Republic of Turkey, is currently the country's largest private-sector bank, recruiting over 20,500 employees and serving about 25 million customers through more than 1,000 branches (Türkiye İşbankası, 2024). Flexibility and operational effectiveness are strategically prominent for the bank. The significant problem of İşBank's agile transformation is measuring the real business impact of structural, cultural, and technological changes. The current Harmony system mainly measures qualitative and cultural indicators, while end-to-end ownership and slow decision-making are constrained by legacy governance structures, limited team autonomy, role ambiguity, and insufficient feedback loops. Customers, managers, and staff are all affected by this decreased process efficiency and delayed value delivery. The Enhanced SCT Impact Index offers the best solution among the other two alternatives that were assessed. The SCT Index provides a targeted, scalable, and data-driven method that unites structural, cultural, and

technological KPIs with a single quantifiable score, unlike alternative solutions, HAEO and IAPE, which are more complex and expensive. In order to promote informed decision-making and long-term strategic alignment, this solution enables İşbank to directly connect agile transformation activities with operational performance and business objectives by converting qualitative agile outcomes into quantifiable measures.

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# Appendices

## Appendix 1




*Note: Key quantitative indicators of Türkiye İş Bankası's organizational agile transformation*

# Karel Elektronik Sanayi ve Ticaret A.Ş., Strategy Problem




**Proje Ekibi: The Five Forces**

**Grup Üyeleri:** Emine Gözde Artar, Koray Karadağ, Mohammad Saad Khan, Nasheet Ul Islam Ahmed, Suay Durdu

**Şirket Danışmanı:** İsa Aksu, Arda Baş

**Akademik Danışman:** Süheyla Özyıldırım

**Koordinatör Danışman:** Ceren Aydoğmuş

## ÖZET

Karel Elektronik, 30 yılı aşkın tecrübesiyle savunma sanayii dâhil birçok sektörde ileri teknoloji çözümleri geliştiren köklü bir teknoloji şirketidir. Bu birikimin bir sonucu olarak, 2025 yılında lansmanı yapılan yeni nesil geniş bant haberleşme çözümleri; dinamik askerî operasyonların ihtiyaçlarına özel olarak tasarlanmış Askerî Taktik Özel 5G altyapısını hayata geçirmiştir. Askerî Taktik Özel 5G gibi yıkıcı teknolojiler, yalnızca haberleşme altyapılarını değil; bu teknolojilerin nasıl konumlandırıldığı, fiyatlandırıldığı ve pazara sunulduğu yaklaşımları da dönüştürmektedir. Savunma sanayiinde birçok firma için ortak olan bu dönüşüm süreci, yeni ve esnek ticari modellere duyulan ihtiyacı artırmaktadır. Bu proje, Karel'in güçlü teknik yetkinliklerini; modüler, şeffaf ve ölçeklenebilir bir pazar giriş ve fiyatlandırma yaklaşımıyla desteklemeyi amaçlamakta ve Askerî Taktik Özel 5G çözümünün uzun vadeli, sürdürülebilir bir ihracat ürünü olarak konumlandırılmasına odaklanmaktadır.

**Anahtar Kelimeler:** Özel 5G Teknolojisi, Askerî Taktik Haberleşme Sistemleri, Uluslararası Savunma Pazarları, Pazar Giriş Stratejisi, Modüler Fiyatlandırma Modeli, Savunma Teknolojileri, Stratejik Fiyatlandırma, İhracat Odaklı Büyüme, Rekabetçi Konumlandırma

## 1. Company Background

Founded in 1986, Karel Elektronik Sanayi ve Ticaret A.Ş. is one of Türkiye's leading technology and electronics companies, operating across telecommunications, defense electronics, automotive systems, and enterprise communication solutions. Since its establishment, Karel has steadily expanded its technological capabilities and market presence, evolving from a domestic electronics manufacturer into a strategically important provider of high-value, locally developed technology solutions. Through continuous investment in innovation and production capacity, the company has become a key player in sectors that require high reliability, security, and regulatory compliance.

Karel offers a broad portfolio of products and services, including enterprise communication systems (PBX and cloud-based solutions), defense and military communication technologies, automotive electronics, and advanced network infrastructure such as private 5G systems. The company places strong emphasis on research and development, supported by certified R&D centers and in-house testing laboratories. This R&D-driven structure enables Karel to design and manufacture complex electronic systems tailored to the needs of institutional, industrial, and defense customers, while meeting international quality and safety standards.

Karel plays an important role in supporting Türkiye's technological independence and industrial development. It collaborates closely with government institutions, defense contractors, telecommunications operators, and major OEMs, contributing to national technology programs and strategic projects. At the same time, the company maintains a growing international footprint, exporting its products and solutions to markets in Europe, the Middle East, and Asia, particularly to countries with strong demand for secure communication and defense technologies.

As of 2024, Karel employs 3,913 people, reflecting its large-scale operational capacity and diversified organizational structure across engineering, manufacturing, project management, and corporate functions. The company's workforce is predominantly engineering-driven, enabling it to sustain high levels of productivity and innovation in technology-intensive fields. Karel's long-standing relationships with institutional clients and its reputation for reliability support its competitive position in both domestic and international markets.

Publicly listed on Borsa İstanbul (BIST), Karel operates with a strong governance framework and a long-term strategic orientation. The company prioritizes digital transformation, automation, and advanced communication technologies as core elements of its growth strategy, particularly in response to rising demand for secure, high-performance, and resilient network systems. In recent years, Karel has also increased its focus on sustainability, integrating environmental and social considerations into its operations through energy efficiency initiatives, responsible supply chain practices, and employee development programs.

## 2. Problem Description

Despite its strong engineering capabilities and long-standing presence in defense and telecommunications, Karel operates in a market environment where the commercialization of disruptive technologies such as Military Tactical Private 5G requires strategic frameworks that go beyond traditional defense procurement models. While Private 5G represents a high-value and transformative capability, its introduction into international defense markets naturally challenges established approaches to market entry, positioning, and pricing that have historically been project- and tender-centric across the industry.

In highly regulated and heterogeneous defense markets, Private 5G deployments vary significantly in terms of security requirements, coverage scale, certification processes, and system complexity. In the absence of modular and transparent pricing and feasibility structures that systematically reflect these variations, even advanced technological solutions across the sector may encounter challenges related to pricing consistency, scalability, and long-term commercial sustainability. This dynamic is not specific to Karel, but rather reflects a broader structural transition driven by disruptive communication technologies.

Early deployment experiences, including Karel's initial Private 5G implementation in international markets, underline the importance of systematically assessing market demand, competitive benchmarks, and long-term

revenue potential prior to broader market entry. In defense ecosystems characterized by limited buyers and high regulatory barriers, the lack of a formalized market introduction roadmap and scalable pricing architecture may increase financial, operational, and strategic complexity. Addressing this need is therefore essential to enabling Private 5G to evolve from a high-performance technical capability into a repeatable, competitive, and sustainable export offering in global defense markets.

## 3. Recommended Solutions

The most effective solution to Karel's market entry and pricing challenges is the development of a Private 5G Market Introduction Roadmap supported by a Modular Pricing Model. This approach directly addresses the structural gaps identified in the problem analysis by transforming Karel's Military Tactical Private 5G offering from a highly customized, project-based solution into a scalable, export-ready product with consistent pricing logic and strategic market positioning.

The proposed roadmap provides a structured framework for entering new international defense markets. It introduces a standardized feasibility assessment that evaluates regulatory requirements, defense procurement processes, competitive dynamics, demand potential, geopolitical risk, and long-term scalability before market entry decisions are made. By applying this framework consistently across target countries, Karel can reduce uncertainty, prioritize high-potential markets, and allocate resources more efficiently. This disciplined approach ensures that market entry decisions are driven by strategic fit and financial sustainability rather than solely by short-term tender opportunities.

Complementing the market roadmap, the modular pricing model restructures Private 5G pricing around clearly defined system components. Core elements, including network infrastructure, coverage area tiers, security and encryption layers, system integration, and after-sales services, are priced as separate modules (see Appendix 1). This structure enables transparent cost allocation, simplifies pricing decisions, and allows configurations to be tailored to customer needs without excessive customization. As a result, Karel can protect margins, reduce the risk of underbidding complex deployments, and improve consistency across international bids.

The modular pricing framework is strengthened by a hybrid logic applied within modules, using cost-based pricing as a baseline and value-based pricing for mission-critical capabilities such as secure communications, operational resilience, and sovereignty benefits. Additionally, long-term maintenance, software upgrades, and system expansion options support recurring revenues and foster long-term customer relationships. Together, these elements position Private 5G as a competitive, flexible, and commercially sustainable solution in international defense markets.

Overall, the Private 5G Market Introduction Roadmap with a Modular Pricing Model enables Karel to improve pricing discipline, enhance internal coordination across departments, and establish Military Tactical Private 5G as a repeatable and scalable export offering. By aligning strategic market entry decisions with a transparent and flexible pricing architecture, Karel can strengthen its competitiveness, ensure sustainable profitability, and support long-term growth in global defense communications markets.

## Conclusion

In summary, this project identified Karel's need for a more structured market-entry framework and a scalable pricing architecture as the key obstacles to the successful international commercialization of its Military Tactical Private 5G solution. Despite strong technological capabilities and growing global demand for secure defense communication systems, inconsistent pricing decisions, high levels of customization, and tender-driven market entry may constrain Karel's competitiveness and long-term profitability in international defense markets. Based on stakeholder analysis and insights from the initial international market deployment, the need for a more disciplined, repeatable, and export-oriented strategy was clearly established. Among the strategic alternatives evaluated, Cost-Based Pricing, Value-Based Pricing, Partnership Pricing, Competitive Pricing, and the Private

5G Market Introduction Roadmap with a Modular Pricing Model, the latter emerged as the most comprehensive and sustainable solution, as it directly addresses scalability, pricing transparency, and strategic market selection. While other approaches offer partial benefits in cost control or competitive positioning, they fall short of enabling long-term, repeatable growth. The recommended solution combines a structured market-feasibility roadmap with modular logic, translating technical complexity into clearly defined commercial components and enabling flexible yet disciplined pricing across diverse defense markets. By implementing this approach, Karel can transform Military Tactical Private 5G from a project-based offering into a scalable, export-ready product, strengthen internal coordination, justify value-based premiums, and position itself as a reliable and strategically disciplined technology partner, thereby establishing a solid foundation for long-term growth, profitability, and competitiveness in the global defense communications ecosystem.

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# Appendices

**Appendix 1:** This visual depicts Karel's Private 5G Mobile Network, a ruggedized and rapidly deployable solution that enables secure, high-throughput real-time communication while integrating with both legacy and modern systems and supporting a wide range of 5G-compatible mission-critical devices.



# LİV HOSPITAL, Operation Management Problem




**Proje Ekibi:** BETTER WAY

**Grup Üyeleri:** Mert Ceyhan, Banu Leblebicioğlu, Yasemin Akca, Burcu Çelik, Selin Ayşe Kılıç

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## ÖZET

Bu proje, Liv Hospital Ankara Kadın Hastalıkları ve Doğum (OB/GYN) Polikliniğinde randevu planlama süreçlerini desteklemek ve hizmet sürekliliğini güçlendirmek amacıyla yürütülen bir operasyon yönetimi çalışmasını sunmaktadır. OB/GYN hizmetlerinin doğası gereği gün içinde ortaya çıkabilen klinik öncelikler ve hastaların bakım sürecini korumaya yönelik "kendi hekimiyle devam etme" tercihi, randevu planlamasında planlı esneklik ihtiyacını artırabilmektedir. Çalışmanın odağı, hasta odaklı yaklaşımı koruyarak randevu akışının daha dengeli ve yönetilebilir biçimde olmasını sağlayacak bir planlama geliştirmektir.

Bu doğrultuda, Newsvendor Modeli temel alınarak hekim bazlı optimum buffer slotlar içeren bir randevu planı tasarlanmıştır. Önerilen yaklaşım, operasyonel kararları nicel bir zemine taşıyarak atıl kapasite ile fazla mesai maliyetleri arasında denge kurmayı ve gün içi planlama sapmalarını sistematik biçimde yönetmeyi amaçlamaktadır. Çalışma kapsamında simülasyon temelli değerlendirmeler gerçekleştirilmiş ve farklı alternatifler karşılaştırılmıştır. Veri temelli yapısı, ölçeklenebilirliği ve uygulanabilirliği sayesinde buffer slot yaklaşımının uygun bir planlama seçeneği olduğu görülmüştür. Bu yaklaşımın, Liv Hospital Ankara'nın hizmet kalitesini ve hasta deneyimini destekleyerek operasyonel sürdürülebilirliğe katkı sağlaması hedeflenmektedir.

**Anahtar Kelimeler:** Sağlık Operasyonları, Randevu Planlama, Kapasite Yönetimi, Newsvendor Modeli, Planlı Esneklik (Buffer), Hasta Bekleme Süresi

## 1. Company Background

Liv Hospital Ankara is part of **MLP Care Group**, one of the leading private healthcare groups in Türkiye. It is the premium hospital brand of the group. The Liv Hospital name is linked to high-quality care, advanced medical technology, and a strong focus on patients. Liv Hospital Ankara serves both local and international patients and provides many medical services in one place.

The hospital offers care in many areas such as obstetrics and gynecology, surgery, oncology, internal medicine, pediatrics, and emergency care. The **Obstetrics and Gynecology (OB/GYN)** department is especially important because it has steady demand and needs close follow-up. Pregnancy check-ups, ultrasound exams, childbirth services, and gynecological procedures require well-planned daily work and a reliable appointment system.

As part of MLP Care Group, Liv Hospital Ankara follows group quality standards and ethical healthcare principles. The hospital also supports sustainability in daily operations, in line with national rules and group policies. Liv Hospital Ankara continues to invest in medical technology, digital hospital systems and staff development to protect service quality and operational performance in a competitive healthcare environment.

## 2. Problem Definition

Liv Hospital Ankara's Obstetrics and Gynecology (OB/GYN) outpatient clinic operates within a high-quality, patient-centered care environment and delivers specialized services under demanding conditions. Due to the nature of obstetric care, however, emergency and unplanned cases occasionally disrupt the scheduled appointment flow. Field observations, appointment-flow analyses, and stakeholder interviews indicate that while the existing scheduling system functions effectively under routine conditions, it has limited built-in flexibility to absorb the variability inherent in OB/GYN services. As a result, patient waiting times may fluctuate during peak periods, and daily schedules can become less predictable.

A key contributing factor to this challenge is patient behavior that is typical and understandable within obstetric care. Many OB/GYN patients, particularly pregnant women, strongly prefer continuity of care and therefore wish to be examined by their own physician. This preference enhances trust and perceived care quality but also limits the clinic's ability to dynamically redistribute appointments when temporary congestion occurs. At the same time, OB/GYN physicians may be required to leave the outpatient clinic for unplanned cesarean sections or urgent medical interventions. These emergency procedures, which average around 70 minutes in duration and show considerable variability, create short-term interruptions in outpatient services.

For the reason patient reassignment across physicians is limited, such interruptions can lead to localized delays within individual appointment queues. These delays may gradually accumulate throughout the day, increasing variability in waiting times. This effect is further influenced by structural characteristics of the current scheduling system, including limited buffer capacity, natural variation in visit durations, and restricted real-time visibility of physician availability during daily operations. Additionally, differences between scheduled demand and actual patient arrivals particularly during morning hours can reduce the system's ability to absorb temporary disruptions.

If not proactively managed, these dynamics may place additional pressure on outpatient operations. Increased variability in waiting times can affect patient perceptions of service consistency, while accumulated delays may contribute to higher physician workload and overtime. Addressing this challenge therefore does not reflect a deficiency in service quality, but rather an opportunity for operational refinement. A capacity-planning approach that introduces planned flexibility into the scheduling system can enhance resilience to emergency-related interruptions and further strengthen the stability and predictability of outpatient service delivery at Liv Hospital Ankara.

## 3. Recommended Solutions

Following a comprehensive evaluation of the operational challenges, one best and two alternative solutions were considered to address the waiting time problem in the OB/GYN outpatient clinic.

### Alternative 1: Extending Appointment Slot Duration

This alternative proposes increasing the standard appointment duration from 20 minutes to 25–30 minutes in order to absorb small delays caused by longer consultations.

**Strengths**

- May reduce minor scheduling overruns on routine days
- Simple to implement within the existing scheduling framework

**Limitations**

- Reduces daily patient capacity and may create appointment backlogs
- Fails to address long interruptions caused by emergency surgeries
- Does not resolve the core issue of emergency-driven variability

### Alternative 2: Assigning a Daily Floater Physician

Under this approach, a dedicated backup physician would be assigned daily to cover outpatient visits when another physician is called into an emergency.

**Strengths**

- Provides short-term operational flexibility
- Can partially mitigate waiting time spikes during emergencies

**Limitations**

- High opportunity cost due to reduced productive capacity
- Limited effectiveness because many patients refuse reassignment
- Difficult to scale and sustain over time
-

## 4. Alternative 3: Designing an Optimized Appointment Plan Using the Newsvendor Model (Best Solution)

This alternative proposes a structured redesign of the daily appointment schedule in Liv Hospital Ankara's Obstetrics and Gynecology (OB/GYN) outpatient clinic by introducing planned buffer capacity and determining the optimal number and placement of buffer slots through the Newsvendor model. The approach addresses the system's limited ability to absorb emergency-related disruptions, particularly unplanned cesarean sections and urgent obstetric interventions that temporarily remove physicians from outpatient services for extended periods.

Given OB/GYN patients' strong preference for continuity of care with their own physician, demand cannot be flexibly redistributed when such disruptions occur. Consequently, even a single emergency may trigger cascading delays within individual appointment queues, increasing waiting times and physician overtime. Rather than attempting to eliminate this variability, the proposed solution acknowledges emergency interventions as an inherent feature of obstetric care and focuses on managing their impact in a systematic manner.The buffer slot strategy treats emergency-related interruptions as a form of demand uncertainty. By intentionally reserving empty appointment slots within the daily schedule, the system introduces controlled flexibility that limits the propagation of delays across subsequent appointments. When disruptions occur, part of their impact is absorbed by these planned buffer periods, stabilizing overall patient flow.

To determine the optimal buffer level, the Newsvendor model balances two opposing cost components: underage cost, associated with insufficient buffer capacity and reflected in overtime and patient dissatisfaction; and overage cost, associated with excessive buffer capacity and reflected in idle physician time and lost appointment revenue. Using the critical fractile approach and empirical data on emergency durations and arrival frequencies, the model identifies physician-specific buffer allocations aligned with actual operational risk.

The effectiveness of this strategy is validated through discrete-event simulation, which demonstrates meaningful reductions in patient waiting times, overtime hours, and overall system instability. Importantly, implementation requires only minor adjustments to the existing appointment template, making the solution operationally feasible without structural or staffing changes.

In conclusion, while all evaluated alternatives contribute to improving patient flow, the Newsvendor-based buffer slot strategy emerges as the most well-aligned solution for Liv Hospital Ankara's OB/GYN outpatient clinic. By combining analytical rigor with practical feasibility, this approach strengthens operational resilience and supports consistent, high-quality patient-centered care.

**5. Conclusion**

In this capstone project, we developed an operations management approach to support smoother patient flow and a more balanced physician workload in the Obstetrics and Gynecology (OB/GYN) outpatient services at Liv Hospital Ankara. Due to the nature of OB/GYN care, emergency medical priorities and occasional schedule changes may require adjustments during the day. In addition, patients' strong preference to continue care with their own physicians' limits appointment flexibility and increases the need for well-planned scheduling. Under these conditions, small time shifts can accumulate and place additional pressure on daily operations.

Three planning approaches were evaluated in this study. Extending appointment durations can absorb minor delays, but it reduces daily appointment capacity and is not effective for longer disruptions. Assigning a temporary backup physician provides short-term flexibility; however, it involves high opportunity costs, is limited by patient preferences and does not scale well when multiple disruptions occur. For this reason, a scheduling approach with planned buffer capacity was designed, and the size of this buffer was determined using the Newsvendor Model. Quantitative analysis and discrete-event simulation results show that the buffer-based schedule reduces waiting time and physician overtime while supporting daily net profit. The redesigned appointment template, together with system integration and regular performance monitoring, indicates that the solution is operationally feasible.

Overall, the Newsvendor-based buffer slot approach offers Liv Hospital Ankara a data-driven, flexible and sustainable planning method that supports patient experience, strengthens operational stability and contributes to long-term efficiency in OB/GYN outpatient services.

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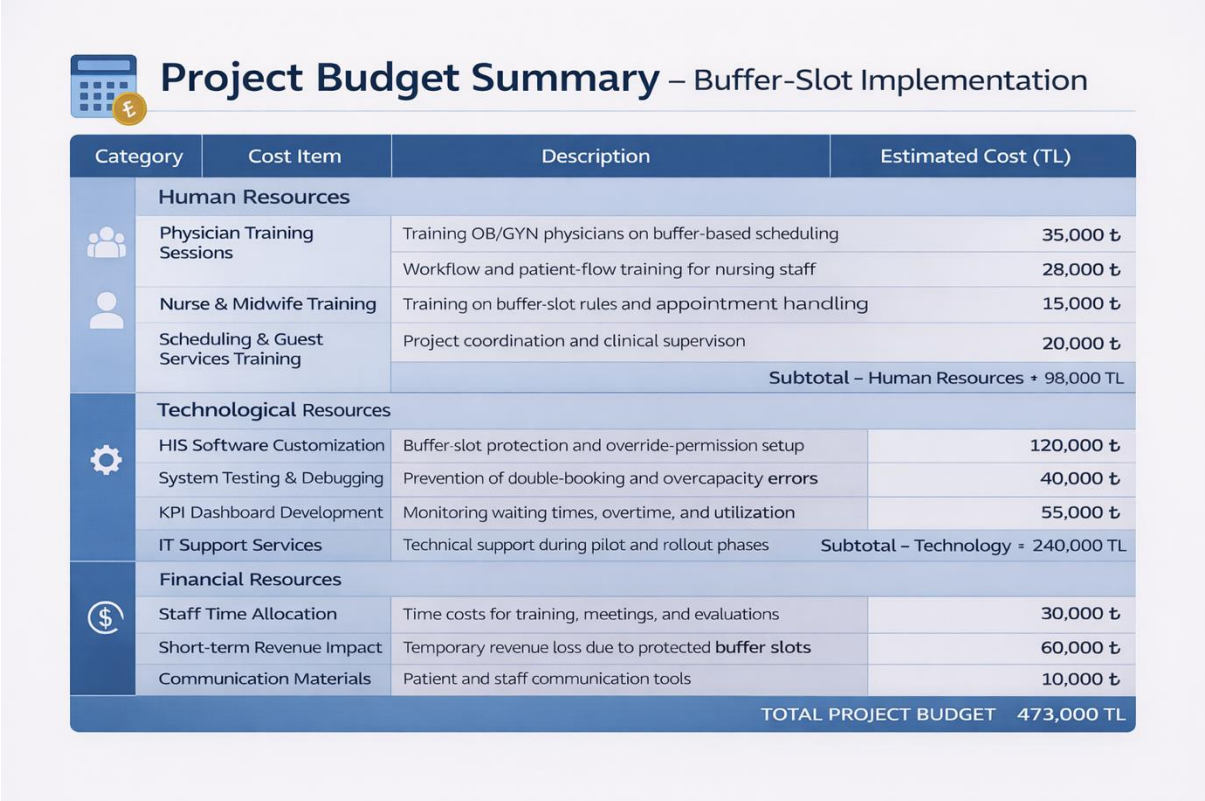
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# Appendices

**Figure1**



**Project Budget Summary** – Buffer-Slot Implementation

| Category | Cost Item | Description | Estimated Cost (TL) |
|---|---|---|---|
| Human Resources | | | |
| | Physician Training Sessions | Training OB/GYN physicians on buffer-based scheduling | 35,000 ₺ |
| | | Workflow and patient-flow training for nursing staff | 28,000 ₺ |
| | Nurse & Midwife Training | Training on buffer-slot rules and appointment handling | 15,000 ₺ |
| | Scheduling & Guest Services Training | Project coordination and clinical supervison | 20,000 ₺ |
| | | Subtotal – Human Resources | 98,000 TL |
| Technological Resources | | | |
| | HIS Software Customization | Buffer-slot protection and override-permission setup | 120,000 ₺ |
| | System Testing & Debugging | Prevention of double-booking and overcapacity errors | 40,000 ₺ |
| | KPI Dashboard Development | Monitoring waiting times, overtime, and utilization | 55,000 ₺ |
| | IT Support Services | Technical support during pilot and rollout phases | Subtotal – Technology = 240,000 TL |
| Financial Resources | | | |
| | Staff Time Allocation | Time costs for training, meetings, and evaluations | 30,000 ₺ |
| | Short-term Revenue Impact | Temporary revenue loss due to protected buffer slots | 60,000 ₺ |
| | Communication Materials | Patient and staff communication tools | 10,000 ₺ |
| | | TOTAL PROJECT BUDGET | 473,000 TL |

**Figure2**


Timeline & Milestones
Simulation-Based Operational Improvement – Liv Hospital
liv HOSPITAL
Project Duration: 12 Months
Month 1
Month 2
Month 3–4
Month 5
Month 6–8
Month 9–12
Design & Preparation
Technical Application
Pilot Phase
Analysis & Revision
Hospital-wide Generalization
Feedback & Improvement

# PASSO Digital Services Inc., Marketing Problem




**Proje Ekibi: nextstep**

**Grup Üyeleri :** Zeynep Melisa Turgut, Sema İlayda Doğru, Gaye Güre, Serra Niğdeli, Doğa Kandemir, Doğukan Saçkan

**Şirket Danışmanı:** Özge Kabaş

**Akademik Danışman:** Dr. Gozde Esen

**Koordinatör Danışman:** Ceren Aydoğmuş

## ÖZET

Bu proje, **PASSO Digital Hizmetler A. Ş.**'in dijital görünürlük ve marka konumlandırma problemini analiz etmeyi ve bu probleme yönelik bütüncül pazarlama çözümleri geliştirmeyi amaçlamaktadır. PASSO, Türkiye'de futbol biletlemesinde yüksek bilinirliğe sahip olmasına rağmen, eğlence ve kültür etkinlikleri alanında düşük etkileşim ve sınırlı algı sorunlarıyla karşı karşıyadır. Yapılan tüketici anketleri, platformun belirli farkındalığa rağmen düşük sosyal medya etkileşimi ve zayıf marka bağlılığına sahip olduğunu göstermektedir. Bu çalışmada, PASSO'nun mevcut durumu sektörel analizler, tüketici davranışı verileri ve dijital pazarlama çerçeveleriyle değerlendirilmiştir. Ardından, kullanıcı deneyiminin iyileştirilmesi, marka kimliğinin yeniden konumlandırılması ve genç hedef kitleyle etkileşimi artırmaya yönelik stratejik çözüm önerileri sunulmuştur. Önerilen stratejiler, PASSO'nun futbol odaklı algısını aşarak çok yönlü bir eğlence ve kültür platformu olarak konumlanmasını hedeflemektedir.

**Anahtar Kelimeler:** Dijital Biletleme, Marka Konumlandırma, Dijital Pazarlama, Kullanıcı Deneyimi, Eğlence Endüstrisi

## Company Background

Digital ticketing and event management platform, PASSO Digital Services Inc. is headquartered in Istanbul, Turkey, since 2014. The company started its operations by offering an electronic ticketing system to watch football matches and subsequently extended its operation in 2019 to cover theatres, concerts, festivals, museums and other cultural events. PASSO has registered a growth in the sale of football tickets, which has been catalyzed by the fact that the company has been in a long-term partnership with the Turkish Football Federation. PASSO's main competitors are Biletix(Ticketmaster), Biletinial, Bubilet, Biletino; these firms operate in cultural and entertainment events mainly.(Wikipedia Türkiye, n.d.)

Passo provides its 100 percent locally developed software that provides the opportunity to sell tickets via its online platform and mobile application, including innovative characteristics as QR code scanning, seat reservation, and transfers. In 2025, PASSO has also presented the new campaign called "PASSO ile Hayat Rutinden Cikti", which adds new features that enhance and make the in-app experience of users more rewarding and easier. (PASSO Turkey, n.d.)

## Problem Description

The main issue that PASSO had was the need to create higher brand awareness on social media. Brand awareness, after the "Consumer Analysis and Social Media Awareness Survey" (see Appendix 1) is predominantly concentrated around the sport of football, and considering that awareness, there is a low digital interaction on social media and brand loyalty. Primary reasons that led to this state of affairs may be summarized as follows: First of all, PASSO is viewed as a football ticketing platform to a large extent; it restricts the exposure of its entertainment and cultural events. Some of the problems of the user experience, such as the option of choosing a city or filters and discovery processes of events, can also complicate navigation and result in a higher exit rate. Lastly, although young adults and college students depend on social media and short video products to discover events mostly, PASSO is not yet at its optimal capacity.

## Recommended Solutions

The proposed solutions to the problems faced at PASSO are elements of a wide plan that takes into consideration both the short-term and medium-term projects. These objectives are geared towards the realization of high platform performance and strong brand positioning, and generate more user engagement and allegiance in social media, according to Fishbone (see Appendix 2) and PASSO Content Consumption and Digital Behavior Survey (refer to the details in Appendix 3.).

## Enhancing User Experience and Platform Performance

One of the best priorities of PASSO is to enhance the experience of user. User friction can be minimized by simplifying the search and filtering functions and offering better differentiation of cities, categories, and event types as well as enhancing the stability of the mobile application. Such enhancements will help to reduce the rate of bounces and contribute to the increased conversion rates. To maximize UI/UX and platform stability, PASSO will need to run a diagnostic audit to find out technical and usability problems, redesign category pages and filtering systems, introduce A/B testing and roll out a stable and enhanced version of the platform.

## Campus Engagement Program

Activations in Istanbul and Ankara will be done on campus, in order to transform high brand awareness among students in these countries into active use. By using physical booths, advertising, and QR discounts and student ambassadors, PASSO will be able to access a high-potential group within a short period of time. Nonetheless,

the efforts need rigorous coordination and the impacts are likely to be short-lived unless there are powerful product experience and retention strategies. To involve the campuses, the main universities will be chosen and assisted by on-campus activations, promotions and cooperation with student ambassadors, and awareness and conversion performance will be observed at the same time.

**Sports Culture Two-Identity Content Structure.**

This is a solution to the football-centric perception of PASSO by bringing in a twin-tracked framework of integrating sport and culture events. Cultural discoveries can be made apparent in the path of purchasing the ticket through in-app banners and location recommendations. Although this method directly helps in the process of repositioning, it relies on the production of content that is consistent, and a good working relationship with the partners. The dual-identity approach of Sports x Culture integrity should be adopted with the incorporation of the sports and cultural content by the use of in-app banners, geographic recommendations, and frequent cross-promotional content loops.

**Mood-Based Recommendations Emotional Engine.**

Emotional Engine is supposed to be a personalized events discovery that enables users to choose moods like With Friends or Me-Time. This solution will boost emotional sales and ticket purchasing by transforming the generic browsing to intent-driven recommendation. Its success however, is pegged on proper tagging, quality of the data and constant monitoring of performance. A recommendation engine with an emotional aspect can be implemented by means of providing events with mood categories, introducing a visible Select Your Mood option, and creating mood-based discovery by digital means and monitoring the results of conversion.

**Creator Program and Reverse Marketing: Unseen Stories.**

It is a project that uses the use of micro-creators and user-generated content to update the PASSO with the current culture. Branded templates and short-form videos promote genuine storytelling and sharing on the social front. Although this strategy is oriented to the preferences of the audience content, its results can be different based on the performance of the content and should be moderated and controlled by the creators. The reverse marketing team should be oriented at onboarding micro-creators, creating short-form content of the Unseen Stories and motivating users to post using branded templates and track engagement rates.

**Gamified Loyalty: Culture-Entertainment Passport.**

The loyalty scheme will be structured to persuade a client to use it again with badges, points, challenges, and partner rewards. It makes long-term engagement strong by transforming the one-time buyers into habitual users. The program should however provide substantial rewards and easy user experience so that the program does not appear hollow superficially. The gamified loyalty program is to be released to promote repetitive use with the help of points, badges, challenges, and rewards with partners in form of interactive quizzes and leaderboards.

**City Takeover Nights Every Month.**

City Takeover Nights are designed to enhance the cultural identity of the local population by enhancing different types of events with the same theme based on the city. This solution with the help of local influencers and in-app maps increases visibility not only to separate events but also regions grow. It faces the greatest difficulty in coordination at the venue and partners level. City Takeover Nights will be organized on monthly city-themed event packages with the use of local partners and influencers, and in-app maps and recommendations will improve the user experience.

**B2B Partner Network Growth**

Growing the B2B partner base is in the area of giving more variety to events by enrolling new venues, performers, and producers. Exclusive pre-selling can be useful to increase the value proposition of PASSO, as well as to assist the repositioning with physical inventory. This solution is however associated with lengthy sales cycles and it takes good relationship management to ensure quality. Lastly, the expansion of B2B partner networks ought to be carried out in terms of selective outreach to venues and producers, along with the creation of exclusive presales, co-marketing facilitation, and monitoring of the performance.

**Combined Implementation of every Solution.**

The best way is the combined application of all eight solutions. The difficulties faced by PASSO are multi-dimensional, and they include experiences, brand perceptions, and engagement habits. The solution to these problems will involve a unified approach where the short, medium, and long-term plans will support each other as opposed to using them independently.

**Conclusion**

PASSO is a company in the expanding digital ticketing industry and enjoys good brand recognition, well-developed infrastructure, and long-term partnerships. However, the company is experiencing difficulties connected to the low level of digital interaction, football-centered brand recognition, and insufficient emotional attachment to the users as well as younger audiences.

This paper demonstrates that the primary causes of these difficulties are user experience frictions and immature digital communication, instead of the absence of demand. The solutions proposed are aimed at enhancing the usability of the platform, rebranding PASSO as a culture and entertainment platform, and enhancing the digital and campus-based engagement. Combined with the strategies, they can contribute to sustainable growth, user loyalty, and the sustainability of the brand value of PASSO in the long-term entertainment ecosystem.

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# Appendices

Appendix 1

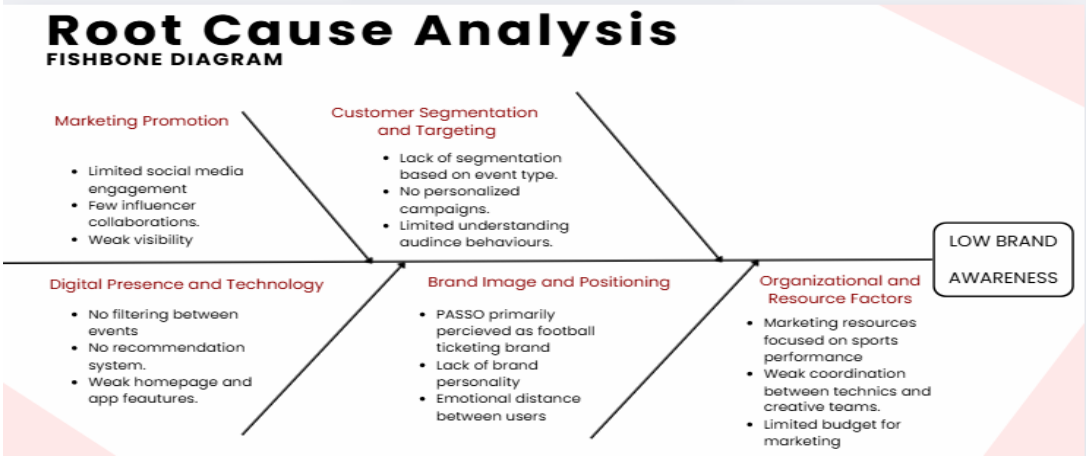
**Survey 1 Questions**

1. What is your age?
2. What is your gender?
3. What is your education level?
4. From which region are you filling out this survey?
5. What is your average monthly spending on ticketed events such as concerts and theatre?
6. Which social media platform(s) do you use the most?
7. On average, how many hours per day do you spend on social media?
8. When choosing an event (concert, theatre, match, festival, etc.), what do you pay the most attention to?
9. Do you share posts on social media during and/or after an event?
10. On average, how many ticketed events (concerts, theatre, etc.) do you attend per year?
11. Have you heard of the PASSO brand?
12. Where did you first see or hear about PASSO?
13. Which types of events do you associate PASSO with?
14. Through which device do you use PASSO?
15. What is the first word that comes to your mind when you think of PASSO?
16. Which of the following ticketing platforms do you know?
17. Which of the following ticketing platforms do you use the most?
18. Compared to other ticket platforms, how would you rate PASSO overall on a scale of 1–5?
19. Compared to other ticket platforms, how would you rate PASSO's app interface (ease of use) on a scale of 1–5?
20. Compared to other ticket platforms, how would you rate PASSO's pricing policy on a scale of 1–5?
21. Compared to other ticket platforms, how would you rate PASSO's campaigns and discounts on a scale of 1–5?
22. Compared to other ticket platforms, how would you rate PASSO's social media visibility on a scale of 1–5?
23. Compared to other ticket platforms, how would you rate PASSO's customer service on a scale of 1–5?
24. Compared to other ticket platforms, how would you rate PASSO's reliability on a scale of 1–5?
25. When buying an event ticket, which method do you use the most?
26. If you have an account on a ticket website, how often do you log in?
27. If you have a PASSO account, how often do you log in?
28. When buying an event ticket, which of the following behaviors do you show?
29. When sharing after an event, which platform do you use?
30. Do you follow PASSO's social media accounts?
31. How often do you see PASSO's social media posts?
32. How do you find PASSO's social media posts? (1–5: 1 = Not interesting, 5 = Creative and interesting)
33. What type of content would you like PASSO to share on social media?
34. How likely are you to recommend PASSO to your friends? (0–10: 0 = I would never recommend, 10 = I would definitely recommend)
35. Compared to other ticket platforms, how innovative do you find PASSO? (5 = Very innovative)
36. Do you use TikTok?
37. On which platforms do you follow event pages?

38. Which types of content do you see more often on social media? (Matches, concerts, campaigns, etc.)
39. What type of content would you like PASSO to share more on TikTok?
40. Do you have a PASSO account?

Appendix 2

**Fishbone Diagram**




Appendix 3

**Survey 2 Questions**

1. Yaşınız

2. Cinsiyetiniz

3. Eğitim durumunuz?

4. Ankete nereden katılıyorsunuz?

5. Konser, tiyatro gibi biletli etkinliklere ortalama aylık harcama düzeyiniz?

6. Sosyal medyada günde ortalama kaç saat geçiriyorsunuz?

7. Sosyal medyada en çok kullandığınız platform(lar):

8. Sosyal medya platformlarında en çok tükettiğiniz içerik türleri nelerdir? (Çoklu seçim)

9. Sosyal medyada en çok hangi içerik formatlarını tüketirsiniz? (Çoklu seçim)

10. Sosyal medyada hangi içerik türlerini daha sık görüyorsunuz?

11. Etkinlik (konser, maç, tiyatro, festival) duyurularını genelde nereden görüyorsunuz/öğreniyorsunuz?

12. Bir etkinlikten önce, etkinlik sırasında veya sonrasında sosyal medyada paylaşım yapar mısınız?

13. Aşağıdaki biletleme platformalarından hangilerini takip ediyorsunuz? (Çoklu seçim)

14.PASSO biletleme platformunu daha önce duydunuz mu?

15. PASSO biletleme platformunu sosyal medyadan takip ediyor musunuz?

15A. PASSO' ya ait kullandığınız sosyal medya hesabına 1–10 arasında puanlayacak olsanız, kaç verirdiniz?

15B. PASSO'nun geliştirilmesini istediğiniz en önemli özellik nedir? (Çoklu seçim)

16. PASSO'nun sosyal medya hesaplarında hangi içerik türlerini daha fazla görmek istersiniz?(Çoklu seçim)

17. Bir içerik için, sizi PASSO gönderisine tıklamaya yönelten en önemli faktör nedir?

18. PASSO gönderilerinde görmekten en çok hoşlandığınız tasarım stili nedir? (Çoklu seçim)

19. PASSO sosyal medya içerikleri sizce hangisine odaklanmalı?

20. Influencer'ların PASSO etkinliklerini paylaşması bilet satın alma davranışınızı etkiler mi?

21. PASSO'nun Reels/TikTok içerikleri sizce nasıl olmalı? (Çoklu seçim)

22. Bir PASSO postunun altına yorum bırakmanızı sağlayacak şey nedir? (Çoklu seçim)

23. PASSO size özel içerik önerse (Spotify gibi), kullanır mısınız?

24. PASSO'nun size özel içerikler sunmasını, sosyal medya dışında, alışveriş ve etkinlik tercihlerinize göre hazırlanmış kişiselleştirilmiş e-posta veya SMS bildirimleri alarak ilgilenebileceğiniz etkinliklerden haberdar olmak ister misiniz?

25. Etkinlik bileti satın aldıktan sonra PASSO'nun size kısa bir "ilgi alanı anketi" göndererek gelecekteki etkinlik önerilerini kişiselleştirmesine nasıl bakarsınız?

Hayır ise sorulacak ek sorular:

14A. Diğer biletleme platformlarının sosyal medya hesaplarını takip ediyor musunuz?

14B. Bu platformlarda en çok hangi içerik türlerini görüyorsunuz? (Çoklu seçim)

14C. Etkinlik duyurularını sosyal medyada nasıl görmekten hoşlanıyorsunuz?

14D. Biletlendirme platformunun postunun altına yorum bırakmanızı sağlayacak şey nedir? (Çoklu seçim)

# TEMSA, HR Problem



**Proje Ekibi: TeamSA**

**Grup Üyeleri :** Ali Mert Aslan, Funda Dilara Bolat, Gamze Doğan, Lara Taşkan, Melis Damla Arslan, Utku Durak, Yusuf Emir Yüksel

**Şirket Danışmanı:** Lena Yanç

**Akademik Danışman:** Betül Altunsu

**Koordinatör Danışman:** Ceren Aydoğmuş

## ÖZET

Bu rapor, TEMSA'nın erken kariyer beyaz yaka çalışanları arasında yaşanan 0-5 yıl arasında gönüllü devir oranı sorununa odaklanarak, çalışan bağlılığını ve yetenek sürekliliğini artırmaya yönelik bütüncül bir çözüm çerçevesi sunmaktadır. Çalışma kapsamında, çalışan anketleri ve birebir görüşmeler analiz edilerek mevcut durum değerlendirilmiştir. Bu bulgular doğrultusunda, kariyer görünürlüğünün artırılması, iş deneyiminin zenginleştirilmesi, rol yapısının netleştirilmesi ve çalışan refahını güçlendirilmesi hedeflenmiştir. Önerilen çözümler; kilometre taşı bazlı kariyer ilerleme sistemi, görev çeşitliliğini destekleyen rotasyon ve proje çalışmaları, ara unvanların oluşturulması ve çalışma ortamına yönelik iyileştirmeleri kapsamaktadır. Sürdürülebilirlik odaklı önerilerle desteklenen bu yaklaşım, TEMSA'nın çalışan memnuniyetini artırmayı, kurumsal bağlılığı güçlendirmeyi ve uzun vadeli organizasyonel gelişimi desteklemeyi amaçlamaktadır.

**Anahtar Kelimeler:** İK, Erken Kariyer Çalışanlar, Çalışan Devir Oranı, Kariyer Gelişimi, Çalışan Bağlılığı, Çalışan Refahı, Kurumsal Sürdürülebilirlik

## 1- Company Background

TEMSA is one of the leading companies in the global bus sector, concentrating on the development, production, and export of buses and coaches. Established in 1968 in the city of Adana, in the country of Türkiye, TEMSA began as a domestic producer and developed into a globally recognized brand in Europe, North America, and the other corners of the globe (TEMSA, n.d.-a). Currently, TEMSA is one of the well-known automobile exporters in the country of Türkiye.

The products manufactured by this company encompass city buses, intercity coaches, and electric mobility solutions. The company's focus on innovation and sustainability can be understood from this diversified product portfolio. In order to meet the demands of a sustainable means of transportation, TEMSA's focus has been on electric and low-emission vehicle technology to promote environmentally friendly transportation solutions for urban mobility (TEM Saunders, n.d.-b).

TEMSA has a business model that is very export-oriented with a large percentage of what they produce being shipped abroad. To survive in a competitive environment like Europe and America requires very strict regulatory and engineering practices and innovative capabilities (TEMSA, n.d.-a). Such a competitive global environment puts a great premium on the presence of competent white-collar workers in areas like engineering and strategic roles in the organization, making human resources a vital resource for TEMSA.

In terms of organization, TEMSA is headquartered and has most of its manufacturing operations in Adana, Türkiye, while it has operations in several other international markets. This particular structure enables it to have manufacturing, engineering, design, and service in an integrated way, which necessitates coordination between local and worldwide business units. In this way, this centralized manufacturing and engineering system of TEMSA supports effectiveness and expertise in technology in addition to ensuring compliance with diverse market demands and acceptable international standards (TEMSA, n.d.-a). This particular structure of TEMSA clearly indicates that it is a globally operating manufacturing company with centralized manufacturing and engineering capabilities.

## 2- Problem Definition

TEMSA's problem is about the voluntary turnover rate of white-collar employees that have less than five years of experience in their job, and this impacts on the stability of the workforce, retention of the knowledge and the long-term organizational development. Both organizational and contextual elements are generating the root causes of this problem. Potential repeated employee exits therefore may cause operational disruptions, raise the expense of hiring and training new employees, and limit the development of institutional knowledge, all of which create a strategic risk to TEMSA's employer brand and long-term competitiveness.

## 3- Possible Solutions for the Problem

### *Solution 1: Milestone Progression System*

By implementing a well-defined milestone progression system, young employees gain access to attainable goals, understandable expectations, and encouraging signs of career growth. Upon reaching these consistent milestones and being granted significant incentives, such as temporary rotational assignments, staff members observe enhanced career pathways, increased enthusiasm, and an improved perception of future prospects at TEMSA (See Appendix 1 & 2).

### *Solution 2:*

Early-career workers might experience less monotony and a greater sense of purpose by increasing job diversification through opportunities including short-term skill rotations, participation in high-impact projects,

and social impact efforts. Providing a variety of experiences that are development-focused enhances learning, boosts engagement, and promotes sustained dedication to TEMSA (See Appendix 3 & 4).

***Solution 3: Adding Intermediate Job Titles***

For early-career workers, the creation of extra intermediate job titles can offer a more transparent and achievable career path. This structure lowers voluntary turnover among young white-collar employees, boosts motivation, and promotes perceived advancement opportunities (See Appendix 5 & 6).

***Solution 4: Enhancing Workplace Experience and Employee Well-Being***

Employee satisfaction can be greatly increased by making the workplace lively, encouraging, and supporting through enhancements to the physical office space and increased well-being incentives. Early-career employees feel more motivated, appreciated, and connected to TEMSA when areas that promote relaxation and social contact are provided, along with optional wellness services or limited travel funding (See Appendix 7 & 8).

## 4- Conclusion

The voluntary turnover rates observed among early career white collar employees at TEMSA highlight the importance of addressing employee experience and talent retention through a structured and sustainable approach. As complimentary components of an all-encompassing strategy, the suggested solutions address greater career transparency, enhanced work experience, defined job structures, and better working circumstances. These efforts have the ability to boost employee happiness and corporate engagement when they are supported by thorough recommendations like a more defined strategic direction and greater uniformity in internal procedures across departments. TEMSA can continue its competitiveness in a dynamic global competitive environment while promoting sustainable human resource development by coordinating employee expectations with organizational structures and long-term objectives.

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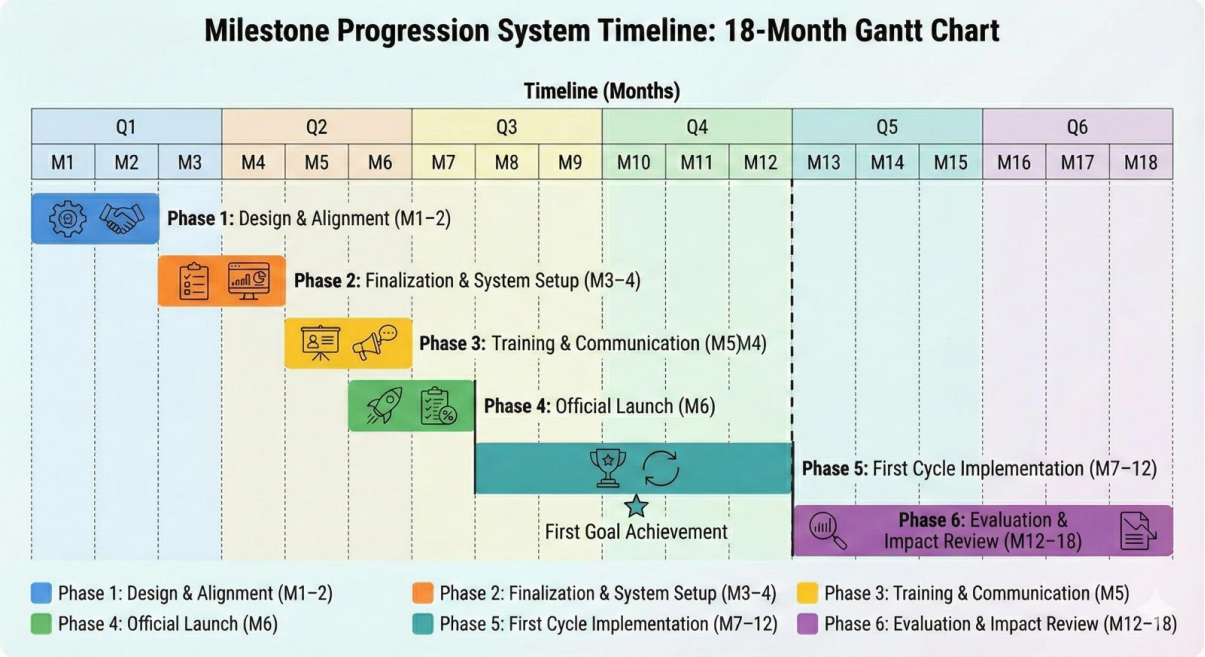
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# Appendices

## Appendix 1: Financial Breakdown for Solution 1

| Cost Item | Estimated Annual Cost | Description |
|---|---|---|
| Milestone Tracking System | 40,000 - 80,000 TL | HR portal or simple dashboard |
| Manager Training & Calibration | 30,000 - 60,000 TL | Short internal training sessions |
| Communication & Launch Materials | 20,000 - 40,000 TL | Guides, visuals, Q&A sessions |
| Development-Based Rewards | 60,000 -120,000 TL | Temporary international assignments or<br>short-term rotations |
| **Total Estimated Cost**<br>**150,000 - 290,000 TL** | | |

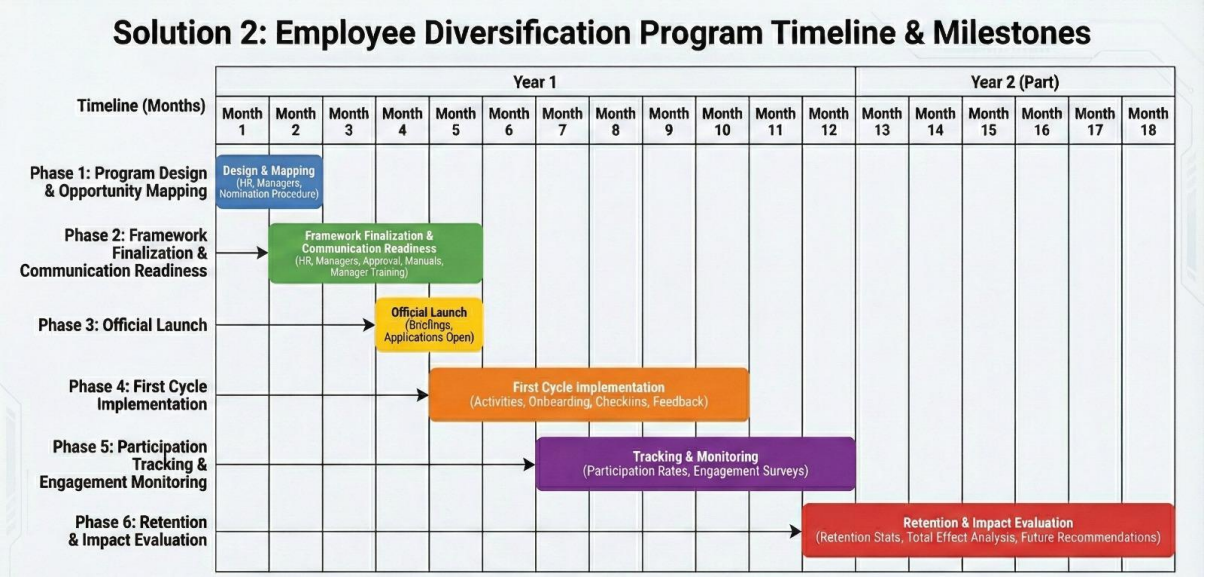
## Appendix 2: Gantt Chart for Solution 1




## Appendix 3: Financial Breakdown for Solution 2

| Cost Item | Estimated Annual Cost | Description |
|---|---|---|
| Short-Term Rotation & Project Assignment Costs | 150,000 - 300,000 TL | Productivity loss and backfill costs arising from rotating early-career employees across functions or projects |
| High-Impact Project Participation Costs | 100,000 - 200,000 TL | Incremental project costs associated with involving junior employees in strategic or cross-functional initiatives |
| External Social Impact Program Participation | 50,000 - 100,000 TL | Fees or partnership costs for participation in structured social impact or community engagement initiatives |
| **Total Estimated Cost** **300,000 - 600,000 TL** | | |

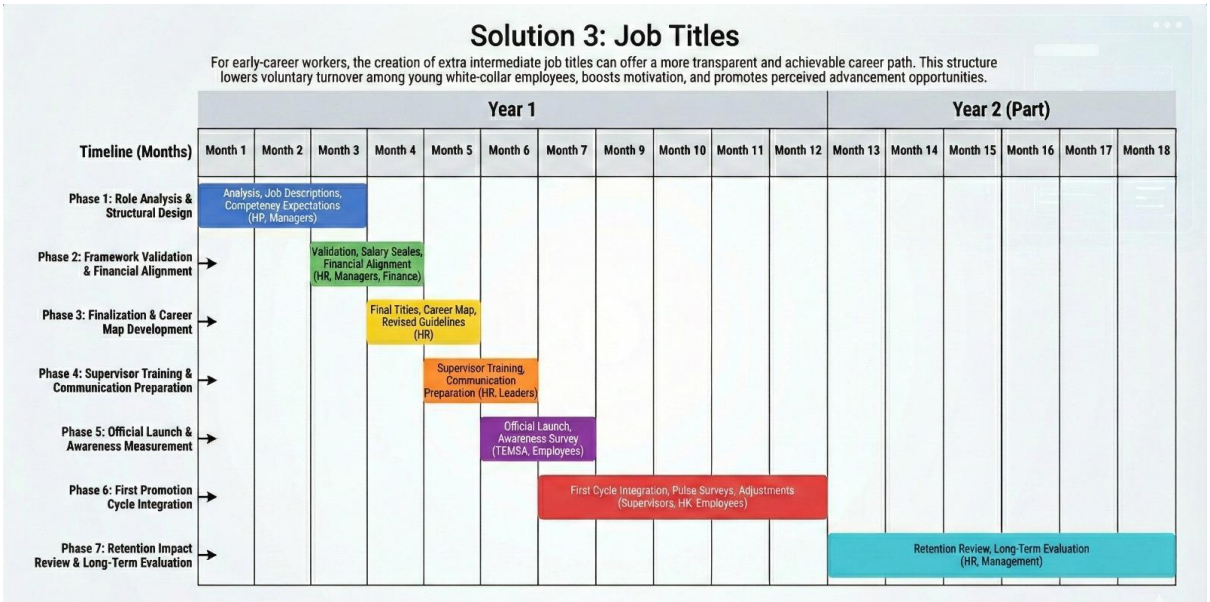
## Appendix 4: Gantt Chart for Solution 2



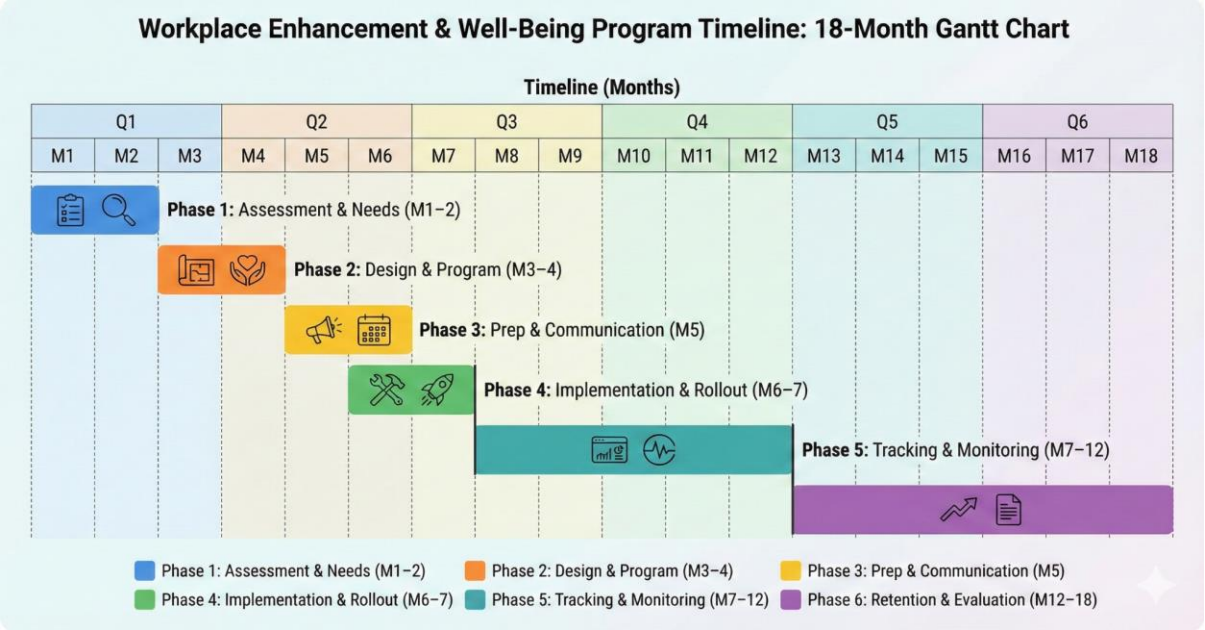

## Appendix 5: Financial Breakdown for Solution 3

| Cost Item | Estimated Annual Cost | Description |
|---|---|---|
| Salary Adjustments for Intermediate Titles | 180,000 - 350,000 TL | Mandatory base salary increases to differentiate intermediate job titles from existing roles |
| Market Alignment / Compensation Benchmark | 40,000 - 80,000 TL | External salary benchmarking to ensure alignment between new job titles and market pay levels |
| One-Time Title Transition Costs | 20,000 - 40,000 TL | Administrative and contractual costs related to updating employee titles and employment records |
| **Total Estimated Cost** **240,000 - 470,000 TL** | | |

## Appendix 6: Gantt Chart for Solution 3




## Appendix 7: Financial Breakdown for Solution 4



## Appendix 8: Gantt Chart for Solution 4

| Cost Item | Estimated Annual Cost | Description |
|---|---|---|
| Physical Office Environment Improvements | 200,000 - 400,000 TL | Basic refurbishment including workspace layout, lighting, and common areas |
| Employee Well-Being Benefits (Direct Cost Items) | 120,000 - 250,000 TL | Well-being benefits such as mental health support services or fitness partnerships |
| Common Area & Social Space Upgrades | 80,000 - 150,000 TL | Improvements to shared spaces supporting collaboration and informal interaction |
| **Total Estimated Cost** **400,000 - 800,000 TL** | | |

# TEPE HOME




**Proje Ekibi: Seven Minds**

**Grup üyeleri:** Ayça Korkmaz, Buse Ulusoy, Derin İlbaş, Ece Alp, Gökçe Ebrar Murathan, Selen Karaca, Umut Sayılıkan

**Şirket Danışmanı:** Ceren Evcimen

**Akademik Danışman:** Hanife Armut

**Koordinatör Danışman:** Ceren Aydoğmuş

## ÖZET

Bu proje, Tepe Home'un Türkiye mobilya pazarında yoğun rekabet ortamı içerisinde, özellikle 25-35 yaş aralığındaki tüketiciler nezdindeki marka algısını ve dijital temas noktalarındaki konumunu incelemektedir. Tepe Home, güçlü fiyat/performans dengesi ve geniş ürün gamına sahip olmasına rağmen, pazardaki büyük ölçekli rakiplere kıyasla daha sınırlı kalan pazarlama bütçesi nedeniyle genç tüketiciler arasında yeterli düzeyde marka hatırlanırlığına ulaşmakta zorlanmaktadır.

İkincil araştırmalar ve 100 katılımcı ile gerçekleştirilen anket çalışması, hedef kitlenin mobilya markalarını ağırlıklı olarak dijital iletişim kanalları, arama motorları ve yapay zekâ destekli arama araçları üzerinden keşfettiğini göstermektedir. Bulgular, Tepe Home'un dijital kanallar aracılığıyla geniş kitlelere erişim sağladığını, ancak bu erişimin marka bilinirliği ve rakiplere kıyasla ilk akla gelen marka olma açısından daha sınırlı kaldığını ortaya koymaktadır.

Bu doğrultuda çalışmada; SEO ve yapay zekâ uyumlu içerik stratejileri, hedefli ve maliyet etkin kampanyalar, seçici pazar yeri kullanımı ve mikro-influencer iş birliklerine dayalı sosyal medya faaliyetleri önerilmektedir. Önerilen çözümler, yüksek bütçeli reklamlar yerine, odaklı ve sürdürülebilir dijital stratejilerle Tepe Home'un marka görünürlüğünü artırmayı amaçlamaktadır.

## 1. Company Background

Tepe Home is a well-established Turkish furniture brand offering a wide range of home products, including living room, bedroom, dining room, and decorative items. The company positions itself as a brand that combines modern design, acceptable quality, and affordable pricing. Tepe Home primarily operates through physical retail stores and its official website, targeting middle-income consumers seeking functional and aesthetic furniture solutions.

The Turkish furniture industry is characterized by intense competition, with both domestic and international brands investing heavily in advertising, influencer marketing, and omnichannel retail strategies. Consumer preferences in this market have increasingly shifted toward digital research, online inspiration, and social media driven discovery. While Tepe Home maintains a strong product offering and significant digital reach, it faces challenges in standing out against competitors that benefit from larger marketing budgets and stronger brand storytelling capabilities.

Tepe Home's main competitive advantage lies in its price/performance balance. However, this advantage is not always clearly communicated to younger consumers, who tend to prioritize digital visibility, brand image, and online discoverability during the early stages of their purchase journey.

## 2. Problem Description

The core issue addressed in this project is Tepe Home's relatively low brand salience among the 25-35 age group (see Appendix 1, Q1-Q2), despite the company's competitive product offerings. In a market where brand visibility is strongly influenced by digital marketing intensity, influencer collaborations, and search engine presence, Tepe Home faces a disadvantage compared to large-scale competitors with higher marketing expenditures.

Primary research supports this problem definition. In the survey conducted with 100 respondents aged 25-35, only 15 participants mentioned Tepe Home as a brand they recognized, while 62 respondents stated that they had not encountered the brand before (see Appendix 1, Q1). In addition, most respondents indicated that they rely on platforms such as Instagram, Google, and AI-supported search tools when researching furniture brands (see Appendix 1, Q3). These findings suggest that although Tepe Home actively uses digital channels, its presence is less dominant within consumers 'awareness and consideration stages relative to key competitors.

The problem is therefore not related to product quality or value, but to the effectiveness and competitive strength of Tepe Home's digital visibility and brand communication within a crowded marketplace.

## 3. Recommended Solutions

Rather than proposing a single intervention, this project presents an integrated solution package consisting of four complementary strategies. This approach is adopted because Tepe Home's challenge spans multiple stages of the consumer journey. The brand experiences relatively lower visibility at the awareness stage, limited prominence during online information search, and constrained engagement opportunities due to competitive budget conditions. Addressing these issues simultaneously allows for a more realistic and impactful improvement in brand visibility among 25–35-year-old consumers.

### 3.1 SEO and AI-Driven Visibility

The first solution focuses on strengthening Tepe Home's discoverability on search engines and AI-supported platforms. Survey results indicate that consumers actively use Google and AI-based tools when researching furniture brands (see Appendix 1, Q3). By optimizing website content, product descriptions, and keywords, and by producing informative content such as buying guides and decoration tips, Tepe Home can enhance its visibility during the information search stage. This strategy enables more efficient use of existing digital investments without relying on large-scale advertising expenditures.

### 3.2 Strategic Partnerships

The second solution involves establishing strategic partnerships with universities, corporate employee networks, and alumni communities. These partnerships allow access to clearly defined and trust-based consumer groups through targeted and cost-efficient channels. Survey findings show that discounts and promotional campaigns are strong purchase motivators for the target group (see Appendix 1, Q5). Exclusive offers and co-branded initiatives can therefore increase trial and awareness while maintaining budget efficiency.

### 3.3 Hybrid E-Commerce Strategy

The third solution proposes a hybrid e-commerce model that combines online marketplaces with Tepe Home's own digital platforms. Smaller and standardized products can be offered on popular marketplaces to benefit from their high traffic and visibility, while larger or more customized items remain exclusive to Tepe Home's own channels. This approach balances reach with brand control and support gradual brand familiarization among new consumers.

### 3.4 Social Media and Micro-Influencer Strategy

The final solution emphasizes strengthening social media engagement through collaborations with micro-influencers. Survey results indicate that social media, particularly Instagram, plays a significant role in furniture discovery among younger consumers (see Appendix 1, Q3). By working with niche lifestyle and home decoration influencers, Tepe Home can create authentic and relatable content that fosters emotional connection while remaining cost-efficient.

## 4. Conclusion

In conclusion, Tepe Home's primary challenge lies in translating its product value and digital reach into stronger brand salience within a highly competitive, digitally driven market. Younger consumers increasingly rely on online discovery, social proof, and search accessibility when selecting furniture brands. The proposed solutions address this challenge by focusing on targeted visibility enhancement, strategic partnerships, and efficient digital marketing practices. Through these initiatives, Tepe Home can strengthen brand awareness and engagement among younger consumers while remaining aligned with its competitive positioning and budgetary constraints.

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# Appendices

## 1. SURVEY QUESTIONS

### Q1:

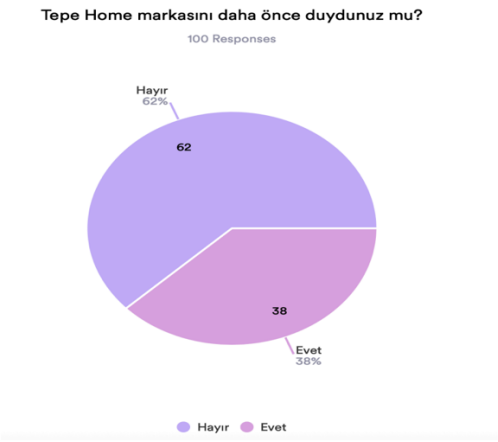
Mobilya denince aklınıza gelen ilk üç marka hangisidir?

100 Responses

| Data | Responses |
|---|---|
| Ikea | 2 |
| ikea tepe home enza | 1 |
| doğtaş, kelebek, ikea | 1 |
| lazzoni, tepe home, istikbal | 1 |
| ikea, enza, lazzoni | 1 |
| TepeHome, Bauhaus, EnzaHome | 1 |
| Tepe home, Bellona, Merinos | 1 |
| vivensa, ikea, istikbal | 1 |
| Other entries | 91 |

*Note: 15 respondents mentioned Tepe Home in their answer.*

### Q2:




### Q3:


Mobilya veya ev dekorasyonu alışverişi yapmadan önce ürünleri araştırmak için hangi dijital kaynakları kullanırsınız? (Birden fazla seçenek işaretleyebilirsiniz.)
239 Responses
ChatGPT veya diğer yapay zekâ araçları
22%
53
Google arama sonuçları
26%
62
Instagram / TikTok içerikleri
15%
36
Other entries
13%
32
30
26
YouTube inceleme videoları
13%
Pinterest
11%

**Q4:**


Mobilyayı genellikle nereden satın alırsınız?
100 Responses
Fiziksel mağaza
40%
40
9
İkna olana kadar mağazada bakıp online sipariş veriyorum
9%
Hem online hem mağaza
34%
34
17
Online mağaza
17%
Fiziksel mağaza
Hem online hem mağaza
Online mağaza
İkna olana kadar mağazada bakıp online sipariş veriyorum

**Q5:**


Mobilya satın alma ihtimalinizi en çok artıracak faktör hangisi olurdu?
100 Responses
İndirim / kampanya
38%
38
Daha kaliteli malzeme
19%
19
3
Other entries
3%
7
Daha uygun fiyatlı ürün grupları
7%
18
15
Daha modern tasarımlar
18%
Influencer / sosyal medya içerikleri
15%

# VIVEKA, Innovation Problem




**Proje Ekibi: IdeaBridge**
**Grup Üyeleri:** İlhan Melih Özbey, Ege Güleç, Baran Saldan, Ceren Topçuoğlu

**Şirket Danışmanı:** Emin Okutan, Aysha Hasanova

**Akademik Danışman:** Tolga Demir
**Koordinatör Danışman:** Ceren Aydoğmuş

**ÖZET**

Bu bitirme projesi, ağırlıklı olarak enerji sektöründe faaliyet gösteren butik bir inovasyon danışmanlık şirketi olan Viveka ve büyük enerji şirketlerinde inovasyonun nasıl etkili bir şekilde organize edilebileceği hakkındadır. Çalışma, inovasyon desteğinin iki kavramını karşılaştırarak, iç ve dış inovasyon desteğinin güçlü ve zayıf yönlerini ortaya koymaktadır. Bu analiz sonucunda proje, en iyi çözüm olarak Ortak Geliştirme Hibrit İnovasyon Modelini ortaya koymaktadır. Bu modelde, Viveka tarafından sağlanan koordineli ortaklık yoluyla, şirket içi uzmanlık, dış girişimcilik çevikliği ile birleştirilir. Önerilen strateji, ölçülebilir iş sonuçları elde etmeyi, kurumsal öğrenmeyi güçlendirmeyi ve uzun vadeli yenilikçiliği sağlamayı mümkün kılar; bu da enerji şirketlerinin hızla değişen ve yüksek düzeyde düzenlemeye tabi bir ortamda rekabetçi kalabilmelerini sağlar.

**Anahtar Kelimeler:** Hybrid Innovation Model, Energy Sector, Corporate Innovation, Co-Development,Innovation Management, Open Innovation, Organizational Learning, Sustainability, Innovation Consultancy

## 1. Company Background

Viveka is a Turkish-based innovation consultancy firm that was established in 2009 in the city of Ankara, Turkiye. Ever since its inception, the company has aimed at assisting organizations in transforming the innovation into a tangible and working ability, as opposed to an abstract strategic concept. In contrast to the conventional consulting management firms that focus primarily on providing analytical information and strategic advice, Viveka focuses on action, trial and error, and outcome-based solution.

In the course of its operation, which is over fifteen years, Viveka has developed and executed more than 250 innovation-oriented programs in Turkiye, Caucasus, Middle East, and Eastern Europe. Such programs can be innovation needs analyses, intrapreneurship, open innovation challenges, accelerator programs and proof-of-concept implementations. The vast experience of projects that the company has worked with, has enabled it to have a broad knowledge on how the innovation processes work in large organizations.

One of the notable features in the portfolio of the projects of Viveka is that the portfolio is highly concentrated in the energy sector. The clients of the firm are mainly energy companies, then comes the projects of the materials technology, automobiles, and foods and beverages sectors. The sectoral focus has helped Viveka to gain in-depth contextual understanding of sectors that are highly capital intensive, have rigorous regulatory regimes and have long investment cycles.

Viveka has a lean and lean organization. The company consists of a small cabin of full-time consultants that coordinate with and design projects as well as the strategy. This support core team is complemented by a large external network of mentors, industry professionals, startup founders and academics. That way of structure enables Viveka to achieve expertise scaling project-by-project and retain agility and cost efficiency.

As another important point of the business model, one can identify the methodological rigor of Viveka. The innovation projects are designed in terms of well-articulated stages, management approaches, and performance metrics. Viveka uses innovation maturity checks, stakeholder mapping and proof-of-concept frameworks to keep in line with corporate strategy and operational limitations. In this way, innovation is a process that is controlled and can be replicated as opposed to an experiment.

The energy industry is undergoing fast and extensive transformation due to environmental, technological and regulation forces. The decarbonization policies would force companies to cut their emissions and invest in renewable sources of energy. The use of smart grids, predictive maintenance, and data analytics are changing the nature of energy generation, distribution, and consumption using digital technologies. Decentralization contests the conventional energy systems that use centralized energy systems where generation is centrally controlled and customers are passive consumers.

Energy companies have opportunities and threats due to these trends. On one side, innovation may result into new sources of revenue, efficiency and sustainability performance. Conversely, lack of innovations puts firms at risk of regulatory fines, competitive limitations, and reputational risks. This has seen innovation cease to be a periphery activity but a strategy.

Nonetheless, the nature of the energy industry is such that innovation work is complicated. The energy companies have critical infrastructure that should be reliable and safe at all times. There is no bargain on regulatory compliance and even failure can lead to extreme outcomes in society. These limitations form organizational cultures that are more stability-oriented and risk-averse at the cost of experimentation and learning.

### 1.2 Industry Background:

The environmental, technological, and regulatory forces influencing the energy industry are changing the industry rapidly and in many ways. During the decarbonization process, the companies will be asked to minimize the emissions and implement renewable energy sources. Smart grids, predictive maintenance and data analytics are changing how energy is produced, distributed, and used using digital technologies. Decentralization is an issue that confronts traditional centralized energy systems, allowing the distributed generation as well as active consumer involvement.

Energy companies have a chance as well as threats of these trends. The innovation may bring new sources of income, efficiency, and sustainability performance on the one hand. Conversely, lack of innovations puts firms at risk of regulatory fines, competition, and reputational risks. This has led to the shift of innovation as an activity in the periphery to a strategic issue.

The nature of the energy sector however makes innovation efforts complicated in form of its structure. The energy companies have essential infrastructure whose reliability and safety should be maintained at any given time. Non compliance with regulations is not negotiable and breaches may have dire ramifications to society. Such restrictions determine superior organizational cultures, which focus on stability and avoidance of risks, usually to the detriment of experimentation and learning.

## 2. Problem Definition

The key issue that is the focus of this project is that large energy corporations have a challenge when it comes to producing sustainable and scalable innovation. Organizational barriers and obstacles in the way of innovation Internal innovation is limited by strict organizational structures, decision-making processes, cultural aversion to risk, etc. The innovation units usually do not have power, resources and are not integrated with the major business processes.

Meanwhile, external innovation methods, like collaborating with startups, pose problems of integration, governance and long-term capability development. Although external solutions are created faster, they are not always connected with internal systems and are not scalable.

This presents a strategic quandary: the innovation inside the organization is slow and limited, whereas the innovation outside is rapid and could be unsustainable. To overcome this dilemma, models of innovation are needed that are well balanced, control, speed, learning, and long-term competitiveness.

### 2.1 Stakeholder Analysis

The energy industry is a field of innovation that entails a variety of stakeholders whose interests differ. At the top, the direction is managed by senior executives, as well as allocation of resources. The innovation managers are interested in encouraging experimentation but might not be in a position to give orders. The operative teams are concerned with reliability and compliance and tend to be recalcitrant to disruptive change.

On the outside, startups want to have access to infrastructure and markets, regulators want to ensure that the system is stable, and the public institutions facilitate sustainability. Intermediaries of innovation like Viveka are very important in ensuring these interests are aligned and that they can work together.

## 3- Possible Solutions

The innovation dilemmas outlined in the Turkish energy industry need to be structured and designed in a manner that balances both the internal nature of large energy companies and external forces of innovation environments. In this section, three alternative innovation strategies that are widely used in large organizations are assessed namely, internal innovation, external innovation support, and a co-development hybrid innovation model. Each of the approaches is discussed in the context of its logic, benefits, and constraints, and its applicability to the companies of the energy sector. Among this comparative analysis, the co-development hybrid innovation model is defined as the most efficient and sustainable solution to Viveka and its client companies.

### Alternative 1: The Internal Innovation Approach

The internal innovation strategy is made on the assumption that innovation must be developed and be managed within the firm boundaries. Under this model, energy firms invest in the internal research and development division, innovation divisions and employee-led ideation programs. The aim is to generate innovation competencies that the organization has full control over to enable firms to maintain ownership rights over intellectual property, data, and strategy decision-making processes.

Internal innovation has a significant fit with the organizational strategy and operational realities which is one of its strengths. In-house units are well versed with the structure of the firm, legal requirement, safety standards as well as the current procedures. It is this contextual understanding that can be used to develop solutions that are technically possible and compatible with the current systems. This correspondence is especially essential in the energy sector, where regulatory conditions are strictly followed and one can incur severe financial and reputational losses, in case of slight contravention with the regulatory rules.

Long-term capability building is also facilitated by internal innovation. The firms can learn to think innovatively by instilling innovation skills in the organization, and make it a part of the organizational culture. Intrapreneurship programs, employee-led innovations programs and internal idea platforms are usually created to motivate participation at all levels of the hierarchy and functional department. In the long run, the implementation of such initiatives can help to build a common innovation culture and mitigate the opposition to change.

In spite of such benefits, internal innovation has high constraints within the realm of large energy companies. Organizational rigidity is one of the most important challenges. Hierarchy in governance, complicated approval process, and high risk minimisation are typical features of energy companies. The nature of innovation projects, of uncertainty and experimentation, tends to find it difficult to compete with activities that are part of the core. Consequently, internal innovation projects are likely to advance gradually and can fizzle with time.

The other significant weakness of internal innovation is the incrementalism tendency. Internal teams are also likely to be guided by routines, prevailing technological paradigms and agreed-upon performance measures. This path dependency restricts the freedom of the organization to experiment with radically new technologies or business models. The energy industry is one sector where vulnerabilities to internal innovation are more often applied to capitalizing on the inherent value of current assets than to considering disruptive options.

Finally, financial limitations decrease internal innovation performance. Creating and sustaining the high-level of R&D demands the heavy investment in the specialized talent, computer infrastructure, testing facilities and training courses. Some energy companies that are subjected to price controls by regulators or are under pressure to stop using most of their profits on risky innovation projects find it hard to invest in them. Consequently, there might be a lack of investment or the necessary mandate in internal innovation units to initiate a significant change.

Moreover, internal innovation processes are usually culturally resisted. Failure is a stigmatized concept that may cause employees to be unwilling to embark on innovation activities, as well as when the consequences of innovation are not explicitly connected to career progression and performance appraisals. Devoid of robust leadership augmentation and incentive harmonization, internal innovation programs may be seen as mere figurative than radical. These constraints imply that internal innovation is essential in the establishment of long term capability but it does not stand on its own to meet the complex innovation energy sector challenges.

**Alternative 2: External Innovation Support**

External innovation support represents an alternative approach in which firms source innovative ideas, technologies, and solutions from outside their organizational boundaries. This approach typically involves collaboration with startups, technology providers, research institutions, and innovation intermediaries. The underlying logic is that external actors, particularly startups, operate with greater agility, lower bureaucratic constraints, and a higher tolerance for risk, enabling faster experimentation and access to cutting-edge technologies.

One of the primary advantages of external innovation support is speed. Startups and technology providers are often able to develop and test solutions much more rapidly than large corporations. For energy companies facing urgent challenges related to digitalization, sustainability, and operational efficiency, external innovation offers a way to respond quickly to changing market and regulatory conditions. External partnerships also allow firms to access specialized expertise that may not exist internally, reducing the need for costly capability development.

External innovation support can also reduce financial risk. Rather than investing heavily in internal R&D infrastructure, firms can engage external partners on a project-by-project basis. This flexibility enables energy companies to experiment with multiple solutions simultaneously and terminate unsuccessful initiatives without incurring substantial sunk costs. From a managerial perspective, this approach increases optionality and reduces commitment under uncertainty.

However, despite these advantages, external innovation support presents significant challenges, particularly when pursued in isolation. One of the most critical limitations is the lack of internal learning. When innovation is primarily sourced externally, knowledge creation and problem-solving capabilities remain outside the organization. Over time, this can lead to dependency on external partners and weaken the firm's ability to innovate independently. In the long run, such dependency undermines strategic autonomy and competitive advantage.

Integration challenges further limit the effectiveness of external innovation. Solutions developed by external actors may not align with the firm's existing infrastructure, data systems, or regulatory obligations. In the energy sector, where safety and compliance are paramount, integrating externally developed technologies can be complex and time-consuming. Without close collaboration between internal teams and external partners, promising innovations may fail during implementation.

External innovation initiatives may also encounter resistance from internal stakeholders. Employees may perceive externally sourced solutions as threats to their expertise or job security, leading to low adoption rates. Without deliberate change management and internal engagement, externally developed innovations often remain isolated pilot projects that fail to scale across the organization. These challenges indicate that while external innovation support offers valuable speed and flexibility, it is insufficient as a standalone approach for sustainable innovation in the energy sector.

### Alternative 3: Co-Development Hybrid Innovation Model

The co-development hybrid innovation model integrates internal and external innovation approaches into a single, structured framework. Rather than treating internal and external innovation as mutually exclusive alternatives, this model combines the strengths of both while mitigating their respective weaknesses. Under the co-development approach, internal corporate teams and external innovation actors collaborate throughout the innovation process, from problem definition to solution development, testing, and scaling.

A central feature of the hybrid model is shared ownership of the innovation process. Internal teams contribute deep sector knowledge, operational expertise, and strategic priorities, while external partners such as startups provide technological innovation, agility, and entrepreneurial mindset. This collaboration enables solutions that are both novel and feasible within the constraints of the energy sector. By involving internal stakeholders from the outset, the model increases alignment and reduces resistance during implementation.

The co-development model is typically operationalized through structured programs that include innovation needs analysis, partner selection, proof-of-concept development, and pilot testing. Viveka plays a critical role in designing and managing these programs. As an innovation intermediary, Viveka translates corporate challenges into clearly defined problem statements, identifies suitable external partners, and establishes governance mechanisms that balance experimentation with control. This structured facilitation reduces coordination costs and increases the likelihood of successful outcomes.

One of the most significant advantages of the hybrid model is its contribution to organizational learning. By engaging internal teams directly in collaborative innovation projects, firms develop absorptive capacity—the ability to recognize, assimilate, and apply external knowledge. This learning-by-doing process strengthens internal innovation capabilities and reduces dependency on external actors over time. As organizations participate in multiple co-development cycles, innovation becomes increasingly embedded in their routines and culture.

The hybrid model also supports risk management. Rather than committing large resources upfront, energy companies can test innovative solutions through proof-of-concept and pilot projects. These controlled experiments generate data on technical feasibility, regulatory compliance, and business impact. Successful pilots can then be scaled, while unsuccessful ones provide valuable learning at relatively low cost. This approach aligns well with the risk-sensitive nature of the energy sector.

From Viveka's perspective, the co-development hybrid innovation model reinforces its strategic positioning as a long-term innovation partner rather than a short-term service provider. By embedding itself within the client's innovation processes, Viveka contributes not only to immediate project outcomes but also to long-term capability development. This deep integration increases switching costs and strengthens client relationships, creating sustained value for both parties.

In summary, the co-development hybrid innovation model offers a balanced and sustainable solution to the innovation challenges faced by large energy corporations. By integrating internal capabilities with external innovation sources through structured collaboration, the model addresses the limitations of purely internal or external approaches. For Viveka and its clients, this approach provides a scalable pathway to generate innovation while maintaining operational stability, regulatory compliance, and strategic autonomy.

## 4. Conclusion

The transformation pressures confronting the energy sector increasingly require innovation models that can reconcile operational stability with experimentation, learning, and long-term strategic renewal. As demonstrated throughout this capstone project, neither purely internal innovation approaches nor fully external innovation

strategies are sufficient to address the structural, cultural, and regulatory constraints faced by large energy corporations. Internal innovation efforts tend to be slowed by rigid governance structures, risk-averse organizational cultures, and high resource requirements, while external innovation initiatives often remain fragmented and fail to contribute to sustainable capability development when pursued in isolation.

This project has shown that the Co-Development Hybrid Innovation Model offers a more robust and balanced solution to these challenges. By integrating internal corporate expertise with external entrepreneurial agility, the hybrid model enables energy companies to engage in controlled experimentation while preserving strategic alignment and regulatory compliance. Through structured collaboration mechanisms such as proof-of-concept development and pilot testing, firms can reduce uncertainty, generate measurable outcomes, and gradually embed innovation practices within their organizational routines.

From Viveka's perspective, the proposed model reinforces the firm's positioning as a long-term strategic partner rather than a short-term service provider. By facilitating collaboration across corporate, entrepreneurial, and institutional boundaries, Viveka contributes not only to immediate project success but also to the development of enduring innovation capabilities within client organizations. This intermediary role is particularly valuable in the energy sector, where coordination complexity and institutional constraints often hinder innovation performance.

For energy companies, the findings of this study highlight the importance of viewing innovation as a systemic capability rather than a series of isolated initiatives. Investing in hybrid innovation models allows firms to balance short-term performance demands with long-term competitiveness and sustainability objectives. Ultimately, the Co-Development Hybrid Innovation Model provides a scalable and adaptable framework for managing innovation under uncertainty, positioning both Viveka and its client organizations to navigate the ongoing transformation of the energy sector effectively.

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