



# Digital Transformation at HALKBANK

Enhancing Operational Efficiency & Customer Experience  
with Camunda

CamundaCon Amsterdam  
May 14, 2025



# SPEAKERS



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IT Manager  
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HALKBANK



**İBRAHİM KÜP**

Senior Software Developer  
Core Banking Software Development Department

HALKBANK



# ABOUT HALKBANK



Established in  
**1938**



**4th largest** bank in  
Türkiye in terms of assets



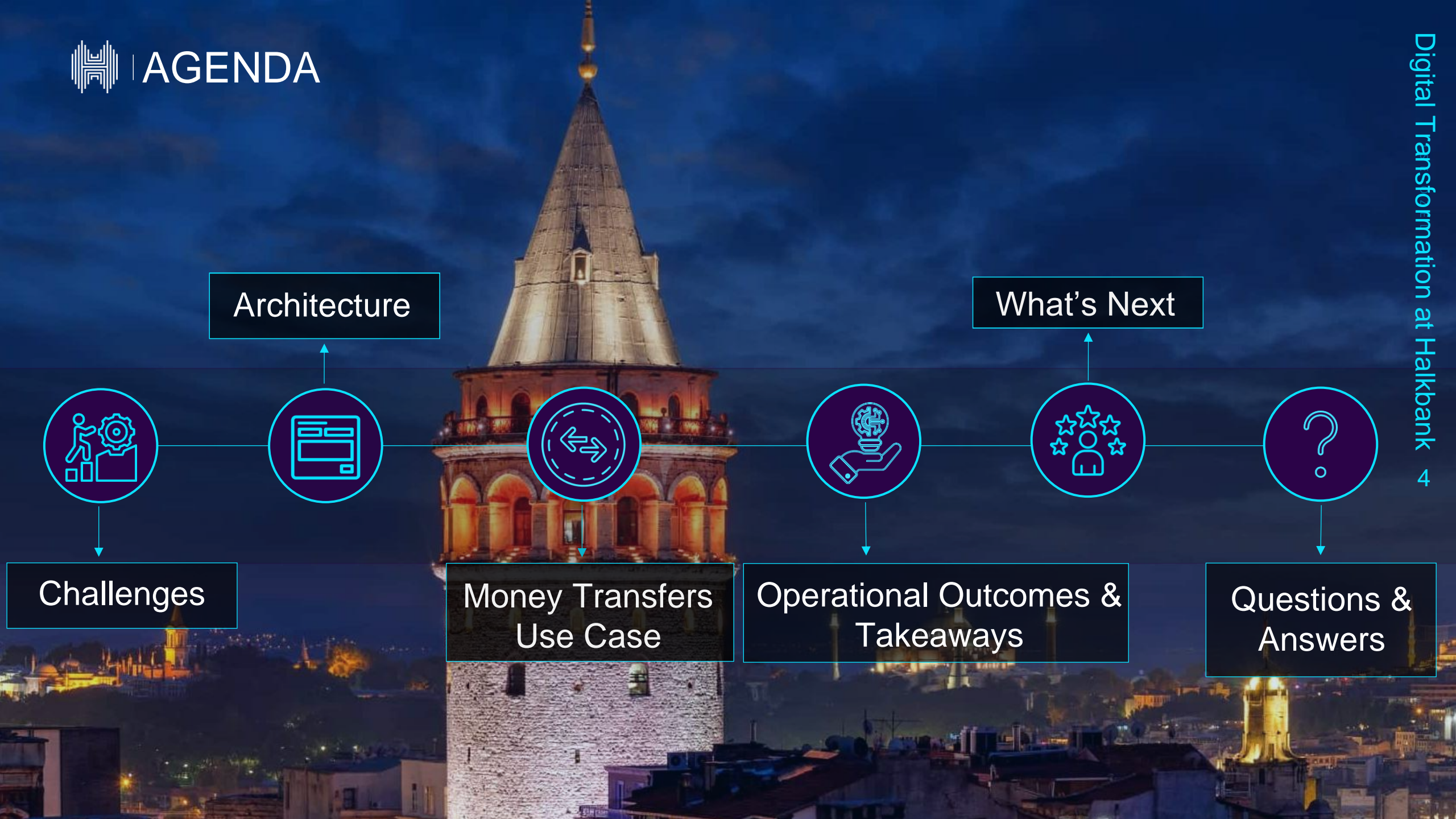
**18.000.000**  
Customers

**1.017**  
Branches

**23.000**  
Employees

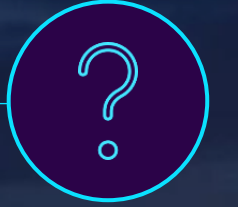


Retail Banking, Private Banking  
Investment Banking, Corporate Banking



Architecture

What's Next



Challenges

Money Transfers  
Use Case

Operational Outcomes &  
Takeaways

Questions &  
Answers

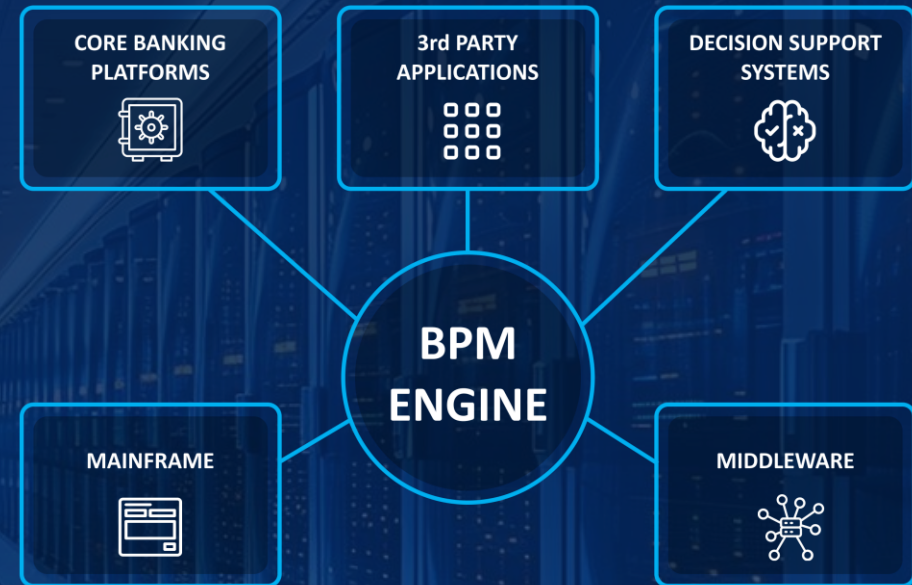
# CHALLENGES & OUR JOURNEY

Technology is advancing at a very rapid phase...

## Industry-Wide Challenges

- Rising Transaction Volumes
- Expansion of Banking Txns Across all Channels
- Evolving Customer Expectations
- Constantly Changing Regulations
- Need for Integrating Diverse Systems

Our Technology Ecosystem integrates diverse components





# ARCHITECTURE

From Legacy to Modern

Key Requirements

Taskpool Application

Implementation with Camunda

## From Legacy to Modern



### The Legacy System:

- Users had to jump between disconnected systems
- Navigating between platforms slowed down daily work



### Then, Our Digital Transformation:

- In-house developed Anka Framework
- Unify all banking modules under one infrastructure
- Our single platform strategy
- Compatible with modern technologies

## Key Requirements



### Follow global BPM standards

Improve IT and Business Users collaboration



### Be open-source and understandable in behavior

Transparency – Not a black-box



### Performance? Control the data and make the Engine lean and fast

Do not carry all the business data along with the execution



### Work in harmony with Anka Framework

- All other banking modules
- All APIs and integrations
- UI / UX standards
- Security layers / Role-based authorization structures
- DevOps lifecycles

## Taskpool Application



### Full control over the tasks

What the users see and how they interact



### Dynamic components in Taskpool app

Re-render the entire UI with new set of information



### Different business units – different needs

Some roles needed to see more while others less — We wanted to manage that flexibly



### Deep task execution integration with Core Banking UIs

Direct access to Core Banking applications from the Taskpool and provide the required runtime data



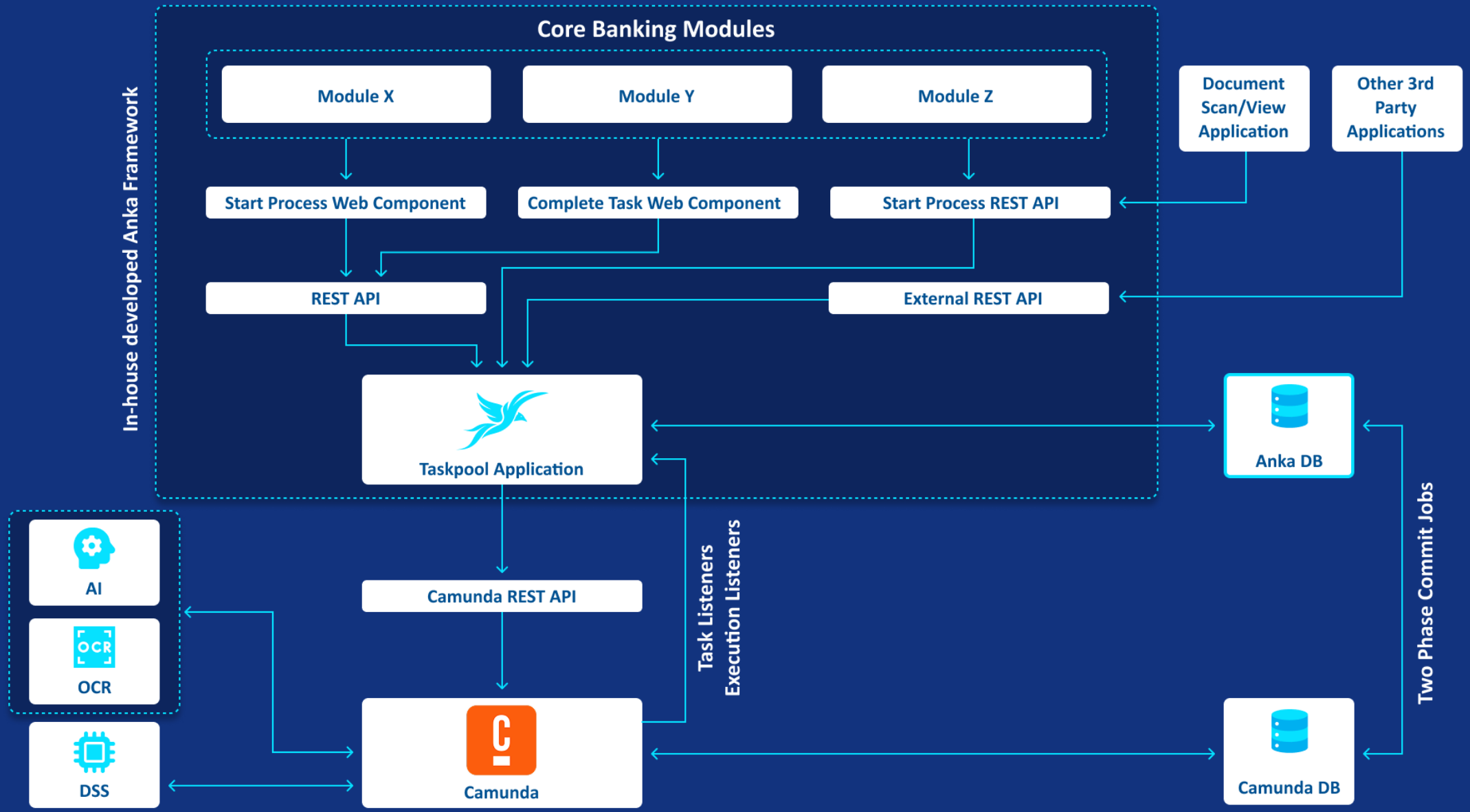
### Session handling, authentication and role-based authorization

Full access to Anka Framework's session, authentication and role-based authorization structures

İŞLEM REF	TALEP SAHİBİ	SORUMLU	MÜŞTERİ	GELİŞ TARİHİ	ÖNCELİK	SÜREC ADI	ATANMA ZAMANI	DURUM	Talep No	EFT	HAVALE	Toplam
0850-0016-10...	(TXXXXL01) 850 - GAYRİTETT...	ERCAN AK (TK... 928 - Operasy...	11 HASAN TOPAL	10/02/2025 15:34:48	6870	TRANSFER İŞLE... Karım Transfer...	10/02/2025 20:23:15	İşlemede	30785	12	12	24
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0101-0016-20...	(TXXXXL01) 101 - GALATASAR...	CHMAN YELKE... 928 - Operasy...	22385968 TURKAN ASL...	11/02/2025 09:38:58	876	TRANSFER İŞLE... KT Transfer Ko...	11/02/2025 11:50:48	Atandı	112601	36	36	72
0101-0016-20...	(TXXXXL01) 101 - GALATASAR...	ERCAN AK (TK... 928 - Operasy...	22385968 TURKAN ASL...	11/02/2025 09:39:47	250	TRANSFER İŞLE... KT Transfer Ko...	11/02/2025 11:49:57	Atandı	112602	24	24	48
0101-0016-20...	(TXXXXL01) 101 - GALATASAR...	ERCAN AK (TK... 928 - Operasy...	22385968 TURKAN ASL...	11/02/2025 10:14:53	50	TRANSFER İŞLE... KT Transfer Ko...	11/02/2025 10:36:00	İşlemede	112606	9	9	18



# ARCHITECTURE



AI: Artificial Intelligence    OCR: Optical Character Recognition    DSS : Decision Support System

## Implementation with Camunda



### Used Camunda as a backend process engine

- ❑ Loosely coupled engine



### Built our Taskpool Application

- ❑ Native part of the unified system



### Separated business data and workflow data

- ❑ Abstracted Business Data from the engine to make it lightweight



### Developed re-usable Web Components and REST APIs

- ❑ Pre-built functionality that minimizes integration efforts
- ❑ Can be embedded in any Anka UI

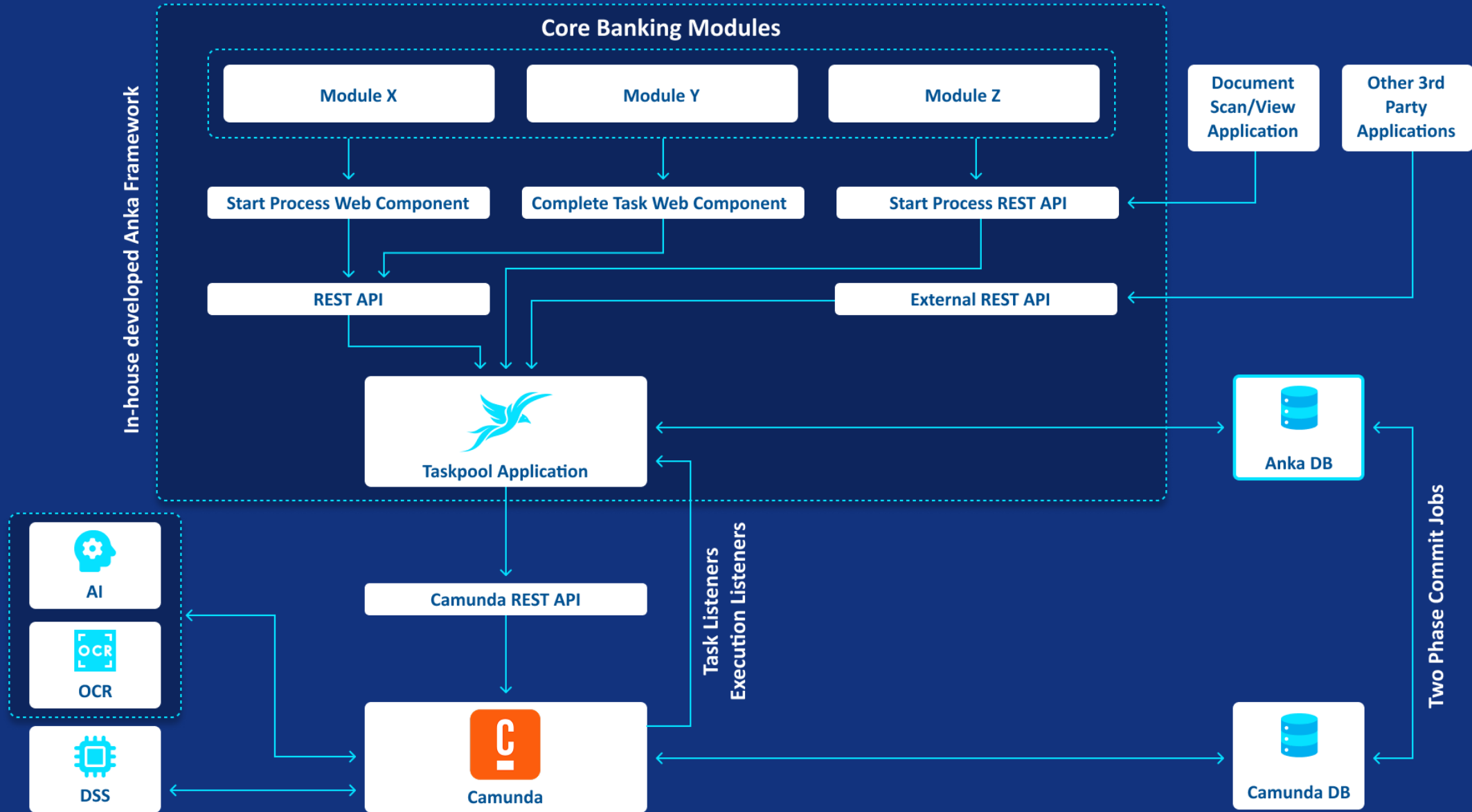


### Synchronized Core Banking and Camunda

- ❑ Task Listeners
- ❑ Execution Listeners
- ❑ Two-Phase Commit Jobs



# ARCHITECTURE





# MONEY TRANSFERS USE CASE

Challenges

Order & Transaction

Taskpool Application Showcase

BPMN Showcase

Metrics

Operational Outcomes & Impacts

Takeaways



# MONEY TRANSFERS CHALLENGES

MTs are fundamental to banking,  
but they come with multiple challenges:

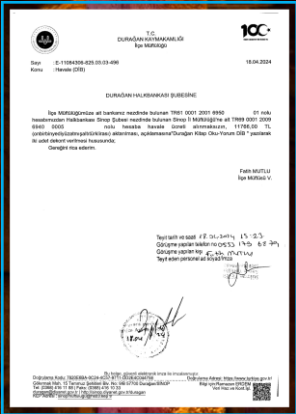
- Financial risks**
- Operational Complexity**
- High Txn Volume**
- Meeting Cut-off Time**
- High number of API calls**
- Second Approvals**
- Decision Points**

We process around 50.000 MT txns per day  
To handle this load we created:

- High-performance architecture**
- Advanced prioritization**
- Dynamic authorization**
- Strong Pool Management**
- Real Time Dashboards&APM**
- Effective Workforce Management**
- IT&Business Collaboration**



# MONEY TRANSFER ORDER & TXN



S.NO	FİRMA ADI /AÇIKLAMA	HESAP NO	TUTAR
1	PEPS	TR15 0003 2099	15.317,06
2	LUKYA HIR	TR92 0006 4000 0	13.570,52
3	AKSA	TR79 0006 400	6.320,88
4	YÖRÜKOĞLU	TR480021000	26.117,70
5	ÇAĞTEKS	TR24 0001 001	4.704,94
6	KILAVUZ Sİ.TUR.İN...	TR48 0006 4000	702,32
7	SEMA F	TR55 0001 0015	48.166,05
8	ORNEK	TR24 0006 7010	5.192,71
9	NOBEL ENEF	TR27 0004 6011	7.217,31
10	EMRE MA	TR13 0011 1000	44.721,00
11	EKİM ASAN		749,13
TOPLAM			172.030,49

İŞLEM REF	TALEP SAHİBİ	SORUMLU	MÜŞTERİ	GELİŞ TARİHİ	ÖNCELİK	SÜREÇ ADI	ATANMA ZAMANI	DURUM	Talep No	EFT	HAVALE	Toplam
0850-0016-10	ITXXX101 850 - GAYRETTE...	ERCAN AK İTK...	13 HASAN TOPAL	10/02/2025 15:34:48	6870	TRANSFER İŞLE. Karma Transfer...	10/02/2025 16:23:13	İşlemde	30785	12	12	24
0101-0016-20	ITXXX101 101 - GALATASAR...	CIHAN YELKE...	22385968 TURKAN ASL...	10/02/2025 15:45:04	5960	TRANSFER İŞLE. KT Transfer Ko...	11/02/2025 11:50:49	Atandı	112591	9	9	18
0101-0016-20	ITXXX101 101 - GALATASAR...	928 - Operasy...	22385968 TURKAN ASL...	10/02/2025 15:54:37	7087	TRANSFER İŞLE. KT Transfer Öny...	11/02/2025 11:51:23	Bekleyen	112596	1	1	2
0101-0016-20	ITXXX101 101 - GALATASAR...	928 - Operasy...	22385968 TURKAN ASL...	11/02/2025 09:38:28	876	TRANSFER İŞLE. KT Transfer Ko...	11/02/2025 11:50:48	Atandı	112601	36	36	72
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Talep Detayları / Notlar / Ekler

Transfer İşlemleri

IBANA HESABA KARTA

Gönderen ve Ödeme Bilgileri

Gönderen Şube \* 101 - GALATASARAY/IST. Hesap No 010100 Transfer Tutar 222,30 TL Ödeme Tarihi 12/02/2025

Ad Soyad / Unvan TÜRKAN Kullanılabilir Bakiye 5261.962.921,00 Bloke Bakiye 50,00 Kullanılabilir Kredili Ba. 5261.982.921,00

Alıcı Bilgileri

IBAN \* TR60 0006 4000 Alıcı Banka Kodu / Adı 64-TÜRKİYE İŞ BANKASI A.Ş. Alıcı Şube Kodu / Adı 90001-İBAN SUBE Ad Soyad / Unvan \* YAŞEMİN

Haciz İşlemi Fraud İşlemi Banka K. Geçikme Ödeme Amacı Bireysel Ödeme Gönderen Alıcı Aynı Kişi

Masraf Bilgileri

ÜCRET TİPİ	STANDART ÜCRET	TANIMLI MUAFİYETE GÖRE ÜCRET	VERGİ ÜCRETİ	TOPLAM ÜCRET
Şubeden EFT (0-6.300 TL)	30,46 TL	30,46 TL	1,52 TL	31,98 TL

Masraf Tutarı içindeki al Ödenecek Tutar 222,30 TL

Açıklama Giden EFT - TÜRKAN TARAFINDAN YAŞEMİN KAYANA GÖNDERİLEN

Listeden Çıkar Kontrol Edildi Transfer Yap

Talimat Listesi

Listeden Çıkar

Filtreleme için yazın.

İşlem	Sayfa No	İşlem Tarihi	IBAN No/Kredi Kartı	Şube Kodu	Hesap No	Transfer Tutar	Masraf Tutar	Alıcı A
<input checked="" type="checkbox"/>	1	12/02/2025	TR240001000	90001		91.237,40 ₺	63,99 ₺	GÜLAY F
<input type="checkbox"/>	2	12/02/2025	TR920006400	90001		61.332,90 ₺	0,00 ₺	SAMI SE
<input type="checkbox"/>	3	12/02/2025	TR480021000	90001		1.502,30 ₺	31,98 ₺	Bolu Bek
<input type="checkbox"/>	4	12/02/2025	TR530001000	90001		23,40 ₺	31,98 ₺	KARAYO
<input type="checkbox"/>	5	12/02/2025	TR660001000	90001		46.101,30 ₺	63,99 ₺	ERMAN J
<input type="checkbox"/>	6	12/02/2025	TR470001200	101	10	34,30 ₺	15,99 ₺	ÖZYLİN
<input type="checkbox"/>	7	12/02/2025	TR240001000	90001		91.237,40 ₺	63,99 ₺	GÜLAY F
<input type="checkbox"/>	8	12/02/2025	TR920006400	90001		61.332,90 ₺	0,00 ₺	SAMI SE
<input type="checkbox"/>	9	12/02/2025	TR380001200	101	010	237,40 ₺	0,00 ₺	MISANUR
<input type="checkbox"/>	10	12/02/2025	TR020006400	90001		345,20 ₺	31,98 ₺	YIGITMA

Toplam Talimat: 16 EFT: 8 Havale: 2 Fast: 0 Toplam Tutar: 353.384,50 TL Masraf Tutar: 303,90 TL

Listelenen 1 - 10 | Toplam 16 kayıt | 1 kayıt seçildi

Talimat Listesi

Statü \* Onaylandı

Askıya Al Görevi Ata Görevi Bitir

# MONEY TRANSFER ORDER & TXN



**Branch Officers  
Collect & Scan order**

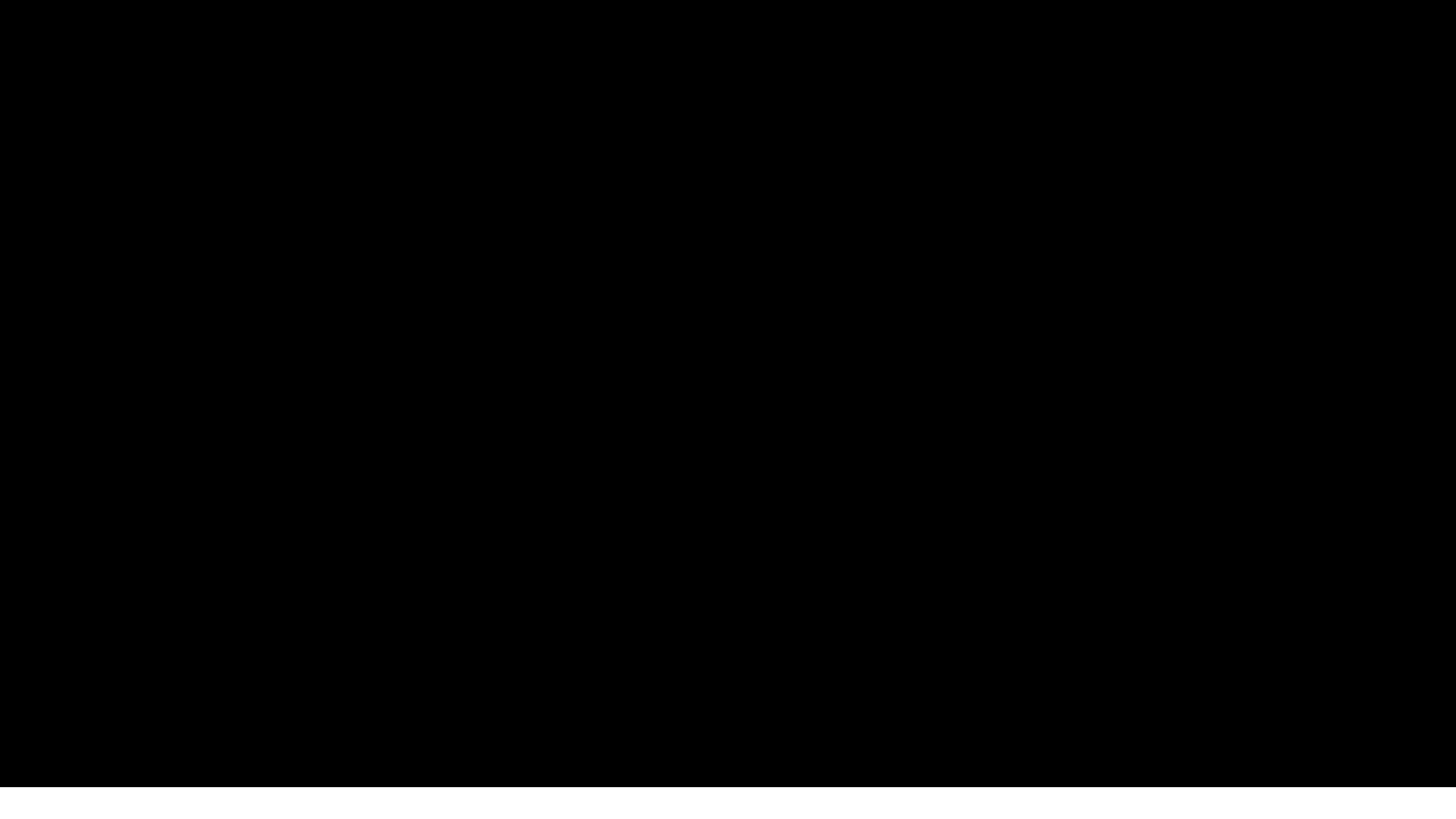
**Scanning App saves  
the Order into DMS &  
Calls Camunda's  
StartProcess API**

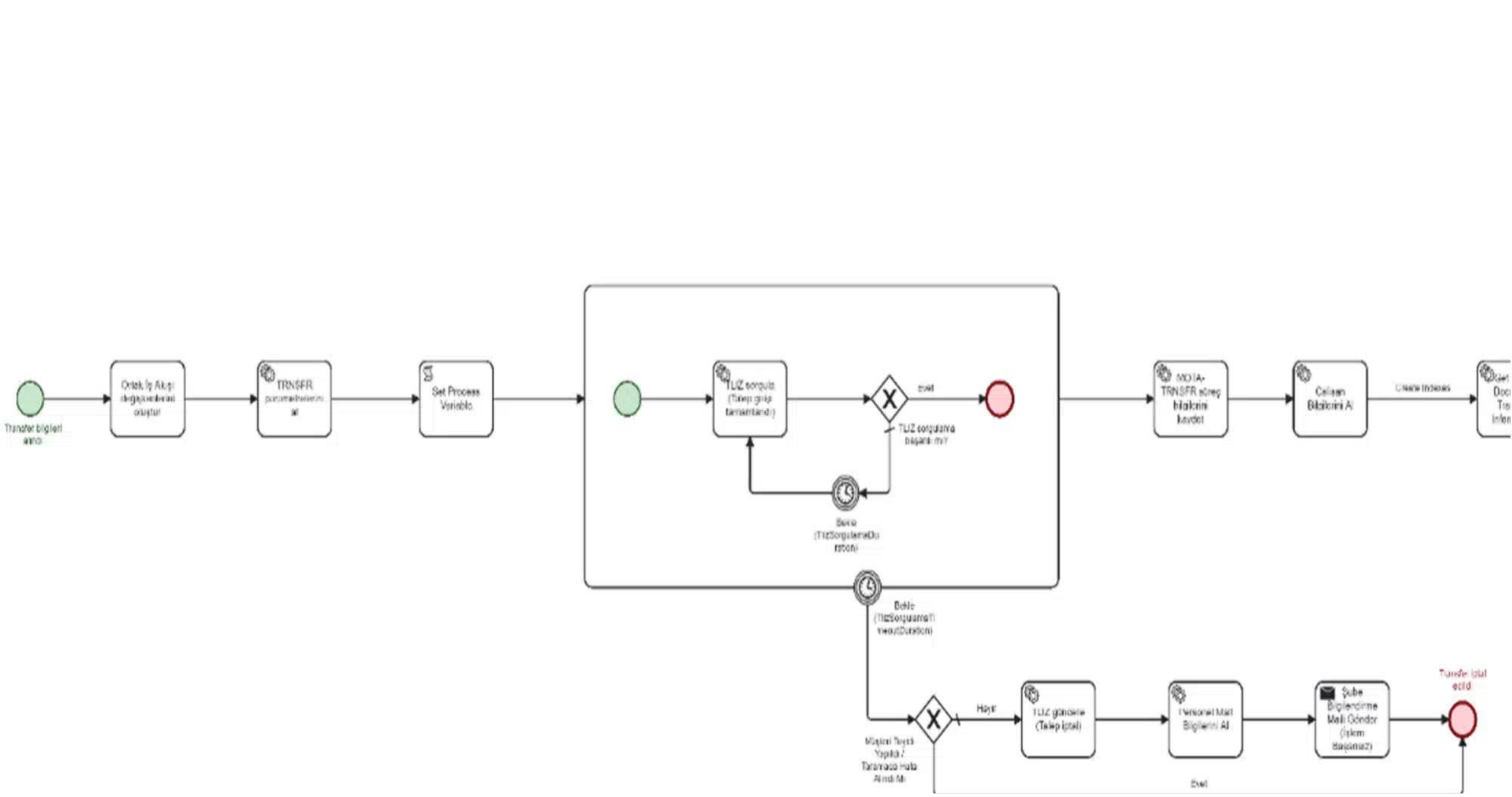
**Money Transfer  
Process Initiation**

**OCR Converts  
the Order into Text**

**AI Extracts  
Required Information**







# MONEY TRANSFERS METRICS

**83%**  
Process Efficiency

Current	Legacy
<b>9 sec</b>	<b>54 sec</b>

Time elapsed from claiming to complete  
Per order contains 2,55 transfer txn

**16%**  
Workforce Optimization

Current	Legacy
<b>163</b>	<b>195</b>

Daily resource saving, 32 headcount

Error Reduction

↓ **50%**

AI powered data extraction, validation

Automation

↑ **60%**

Txns completed with no human correction

**25%**  
Operational Improvements

Current	Legacy
<b>4:30 PM</b>	<b>6:30PM</b>

Number of Process  
(Peak Day)

**12.578**



Number of Txns  
(Peak Day)

**53.481**



Number of Processes  
(From Jan to May 2025)

**535.425**



Number of Txns  
(From Jan to May 2025)

**1.842.177**



Number of API Calls

**23**





# OPERATIONAL OUTCOMES & IMPACTS

Operational Efficiency



Reduced Errors



Faster Response & Resolution Times



Minimized Unexpected Downtime



Workforce Optimization



Cost Reduction



Intelligent Decision Making



Enhanced Customer Experience



“Best AI-Powered Efficiency” Award

# TAKEAWAYS

Digital Transformation is Essential for Modern Banking

BPM is not a one-time implementation but a continuous journey of improvement.

Significant Gains in Efficiency and Accuracy Achieved

Open-source Helps us Develop Accurate & Efficient Solutions

Architecture Decisions Played a Critical Role

Camunda's active community supports problem-solving

Critical Processes have been Facilitated by Automation & AI.

Camunda allows developing custom code and implement the tool of our choice.

Business & IT Collaboration has Improved

End-to-end process monitoring, workforce management and optimisation were ensured.

Libraries, Documentation, Consultants, Enterprise Support Ensured Smooth Implementation

With reusable components, developments are completed faster

Camunda Orchestrates Diverse Components Seamlessly and Ensures they Work in Harmony.

All teams want their processes to be transferred to Camunda ASAP



# CAMUNDA 8 MIGRATION

## Camunda 8 Migration

- ❑ Elevate our BPM platform to a central unit in the Bank
- ❑ Handle higher volumes with faster response times without hitting the limits of a relational database
- ❑ Horizontal scalability and resiliency under pressure
- ❑ Camunda 8 is the key



Orient Yourself

Migrate Solution

Roll out

Set up  
Camunda 8



# Digital Transformation at HALKBANK

Enhancing Operational Efficiency & Customer Experience  
with Camunda

# THANK YOU

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