

MKK'S Software Infrastructure Transformation Program & Next Generation of E-GMS

AECSD FORUM

Presentation Session

Mustafa Akgün

Merkezi Kayıt Kuruluşu A.Ş.

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**MERKEZİ KAYIT
İSTANBUL**
Central Securities Depository
& Trade Repository of Türkiye

- ❑ MKK'S Software Infrastructure Transformation Program & Next Generation of E-GMS
 - MKK's R&D Center
 - Aims of transformation
 - Milestones
 - Next generation of E-GMS



ISO 27001:2013



ISO 20000-1:2018



ISO 22301:2019



ISO 27701:2019



ISO 9001:2015



Central Securities
Depository
Platform



R&D
Center



Trade
Repository
Platform

Depository Services



Capital
Markets



e-WR
ELECTRONIC REGISTRY CENTER
Electronic
Registry
Center



CFS
CROWDFUNDING SYSTEM
Crowdfunding
Platform



OMNIBUS
GLOBAL ACCOUNTS
Global
Accounts



BSRS
BEARER SHARES REGISTRY SYSTEM
Bearer Shares
Registry System



CACRS
CRYPTO ASSETS CENTRAL REGISTRY SYSTEM
Crypto Assets
Central
Registry System

Corporate Governance Services



PDP
PUBLIC DISCLOSURE PLATFORM
Public
Disclosure
Platform



e-GEM
ELECTRONIC GENERAL MEETING
Electronic
General
Meeting



e-BDS+
ELECTRONIC BOARD OF DIRECTORS SYSTEM
Electronic Board
Of Directors
System



e-COMPANY
COMPANIES INFORMATION PORTAL
Companies
Information
Portal



DAP
DATA ANALYSIS PLATFORM
Data
Analysis
Platform



REFIS
REAL ESTATE BASED AND DEVELOPING FINANCIAL INSTRUMENTS INFORMATION SYSTEM
Real Estate Based
And Developing
Financial Instruments
Information System



IRMS
INVESTOR RISK MONITORING SYSTEM
Investor Risk
Monitoring
System



COMPASS
INTERMEDIARY INSTITUTIONS HIGH DATA ANALYSIS PLATFORM
Intermediary
Institutions MKK
Data Analysis
Platform



e-INVESTOR
INVESTOR INFORMATION CENTER
Investor
Information
Portal



MCC360+
MARKET COMMUNICATION CENTER
MKK
Communication
Center

What are the aims of transformation?

- Limitation of update and support opportunities
- Modular and modern architecture
- Minimize technology dependency
- Facilitating access to applications from different devices and channels
- Enable the dissemination of project information and the increase of personel redundancy
- System's Efficiency and Scalability
- User Experience and Future-Proofing
- Cross-platform compatibility
- Security and compliance

Milestones



(01.06.2020)



(29.03.2024)

(22.03.2025)



(31.12.2026)



(31.12.2028)



(31.03.2023)

(19.02.2025)

(31.03.2026)
(API Transformation)

(31.12.2027)



Next generation of e-GMS

Scalable and Reinforced Infrastructure

A robust infrastructure designed to seamlessly scale with increasing traffic and user load, while maintaining system stability and security.

Lean coding

Improved code to reduce complexity, improve performance and facilitate future development updates more easily.

Mobile Compatible

Compatible with mobile devices, providing a smooth experience across various screen sizes and platforms.



Performance Optimizations

Enhancements to system speed, responsiveness, and overall performance, ensuring a smooth user experience even during peak usage periods.

Browser and OS Independent

Compatible with multiple browsers and operating systems, ensuring a consistent experience for all users.

Database Independent (RDBMS)

Supports multiple database platforms (e.g., MySQL, PostgreSQL, Oracle, etc.), offering flexibility and avoiding dependence on a single database solution.

Next generation of e-GMS

Embedded authorization, menu and role management
Integrated systems for managing user roles, access permissions, and sections within the application, ensuring secure and customizable access control.

1

2

Modular and parametric

A flexible parametric design complies with different regulations

Hibernate Envers - Easy Entity Auditing

Integration of Hibernate Envers for simplified entity auditing to track and store the history of data changes to ensure transparency and accountability.

3

4

Centralized Logging at the DB Level

A centralized logging system that stores logs in the database, enhancing monitoring, traceability, and troubleshooting across the entire application.

Improved Cache Management

Refined cache management strategies that improve system performance by reducing redundant data retrieval and reducing response times.

5

Next Generation of e-GMS

Working Hours

7x24

Max. User Count for
messaging

80000

Max. Concurrent User

5000

Max. Response Time for
critical API

4 seconds

Max. Response Time
for non- critical API

8 seconds

Sending votes
(80.000 ea.)

2 minutes

Next Generation of e-GMS

New General Meeting Types

- Sports Clubs
- Chambers and Exchanges
- Associations
- Foundations
- Cooperatives etc.
- Bond Holders can now hold their general meetings on the new system

New Parametric Login Types

- e-Government integration (in Türkiye)
- User / Password and 2 Factor Authentication (2FA)

Secret Ballot (Voting)

- A secure anonymous voting method utilizing end-to-end encryption technology in general meetings or elections

Poll Voting

- Customizable polls that allows users to choose from multiple voting options,
- Ideal for surveys, feedback gathering and simple decision-making process.

Next Generation of e-GMS

Signing Documents (in Türkiye)

- Digitally signed meeting minutes
- Digitally signed decision document for bond holders meetings

New Reports

- Available for admin users

Board Member New Role Implementation

- Enables board members to attend meetings virtually, ensuring active engagement in the decision-making process.

Additional Support Including RTL (Right-to- Left Languages)

- Multiple language support such as Arabic and Hebrew expanding accessibility for a global audience.

Next Generation of e-GMS

UPCOMING FEATURES

- ☐ Mobile Application
- ☐ Collecting Physical Votes Electronically
- ☐ Integration with Ministry of Trade
- ☐ Invoice Module

Please visit our web site for further information!



www.mkk.com.tr



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internationalrelations@mkk.com.tr

THANK YOU



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