MERKEZİ KAYIT KURULUŞU (MKK)

CENTRAL SECURITIES DEPOSITORY

& TRADE REPOSITORY OF TÜRKİYE

BUSINESS CONTINUITY MANAGEMENT

AECSD Annual Training Program ●

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CSSP, CISM, CRISC, CEH, CDPSE, PMP, CICP

Lead Auditor of Management Systems:
- ISO 27001 ISMS
- ISO 22301 BCMS
- ISO 27701 PIMS
- ISO 20000-1 ITSMS
- ISO 9001 QMS

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MKK BCMS OVERVIEW

Business Continuity Management System (BCMS) practices have started since the date MKK started operating.

Until 2013, the BCM activities were conducted based on the BS25999, BSI's standard in the field of BCM.

Since 2013, ISO 22301 BCMS standard has been taken as the basis and MKK BCMS structure has been reviewed in this context.

ISO 22301 BCMS was firstly certified in 2013, and the validity of the certificate is maintained successfully with the renewal and follow-up audits carried out from this date.

ESTABLISHMENT OF MKK BCMS SCOPE

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- Organization's Overall Objectives
- Amount & Type of Risk *that it may or may not take*
- MKK's Products & Services
- Mission & Vission
- Legal & Regulatory Requirements
- Needs & Expectations of Interested Parties

After understanding context of the organization, MKK BCMS scope has been established.

MKK BCMS SCOPE

MKK's all services provided in MKK's facility, Borsa İstanbul Data Center (PDC), Disaster Recovery Center (DRC), Disaster Recovery Operation Center (DROC) are within the scope of the Business Continuity Management System (BCMS).

- *Central Securities Depository System (MKS)*
- *Electronic Warehouse Receipt Center (e-ÜRÜN)*
- *Public Disclosure Platform (KAP)*
- *Electronic Trade Repository (e-VEDO)*
- *Electronic General Meeting (e-GENEL KURUL)*
- *Companies Information Portal (e-ŞİRKET)*
- *Electronic Board of Directors (e-YKS)*
- *Investor Information Center (e-YATIRIMCI)*
- *Investor Notification Service (YBS)*

- *Investor Risk Monitoring System (YRTS)*
- *Capital Markets Data Bank (e-VERİ)*
- *Data Analysis Platform (VAP)*
- *Crowdfunding Platform (KFS)*
- *Bearer Shares Registry System (HPKS)*
- *MKK Communication Center (MİM)*
- *Real Estate Based And Developing Financial Instruments Information System (GEFAS)*
- *Financial Registration System (FTS)*

MKK BCMS POLICY

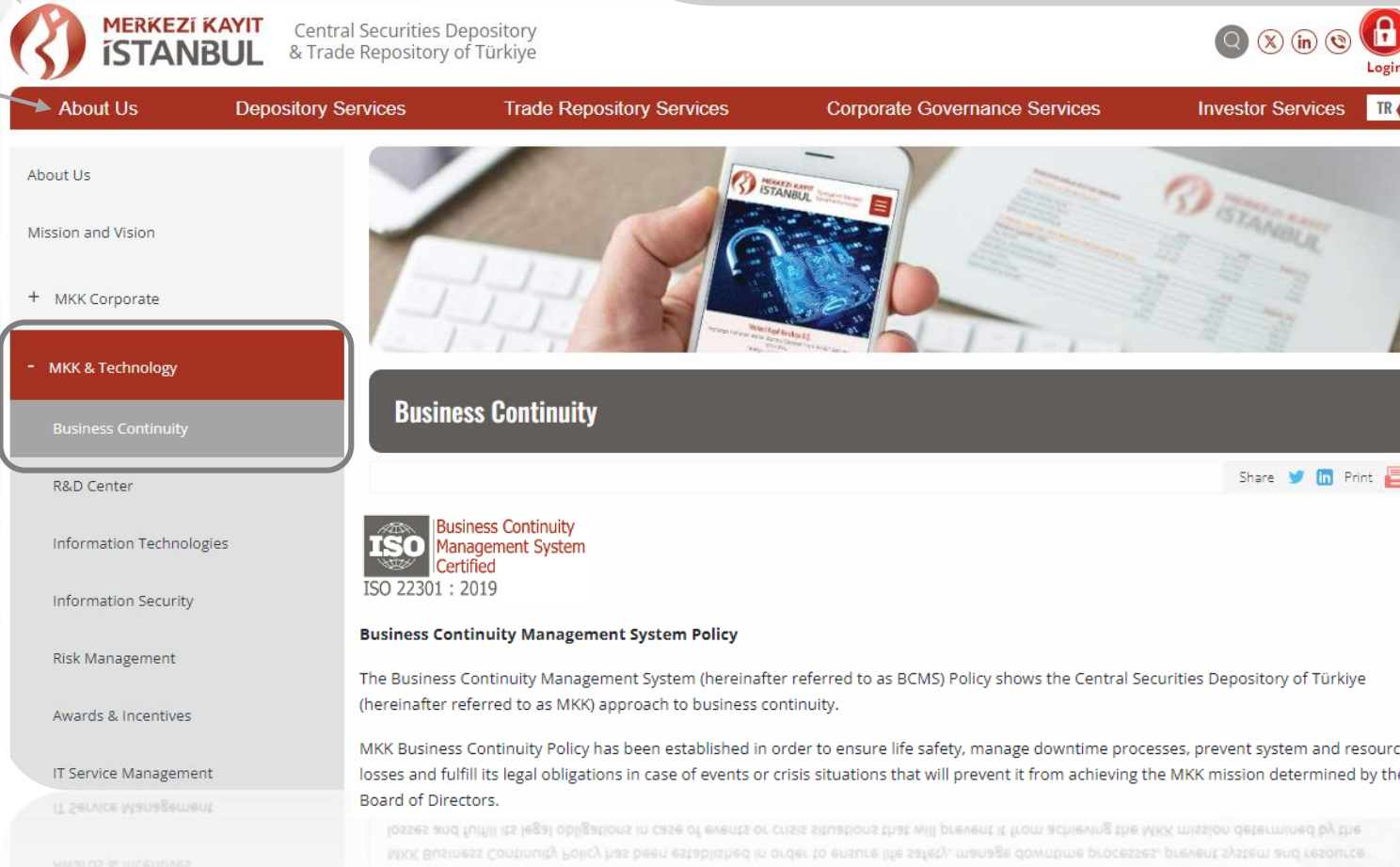## MKK Business Continuity Management System Policy

The first priority of our organization is to ensure the life safety of employees and guests in case of crisis or events that will prevent the MKK from achieving its corporate objectives.

Once the life safety of the employees and guests is guaranteed, the critical services of MKK are aimed to continue as planned, recovered and returned to normal condition.

MKK BCMS POLICY DISSEMINATION

After establishing the MKK Business Continuity Policy;

The policy is documented and communicated internally and externally.

MANAGEMENT INVOLVEMENT & LEADERSHIP

Impact Analysis

Recovery Strategies

Business Continuity

Plan Development

Testing & Maintenance
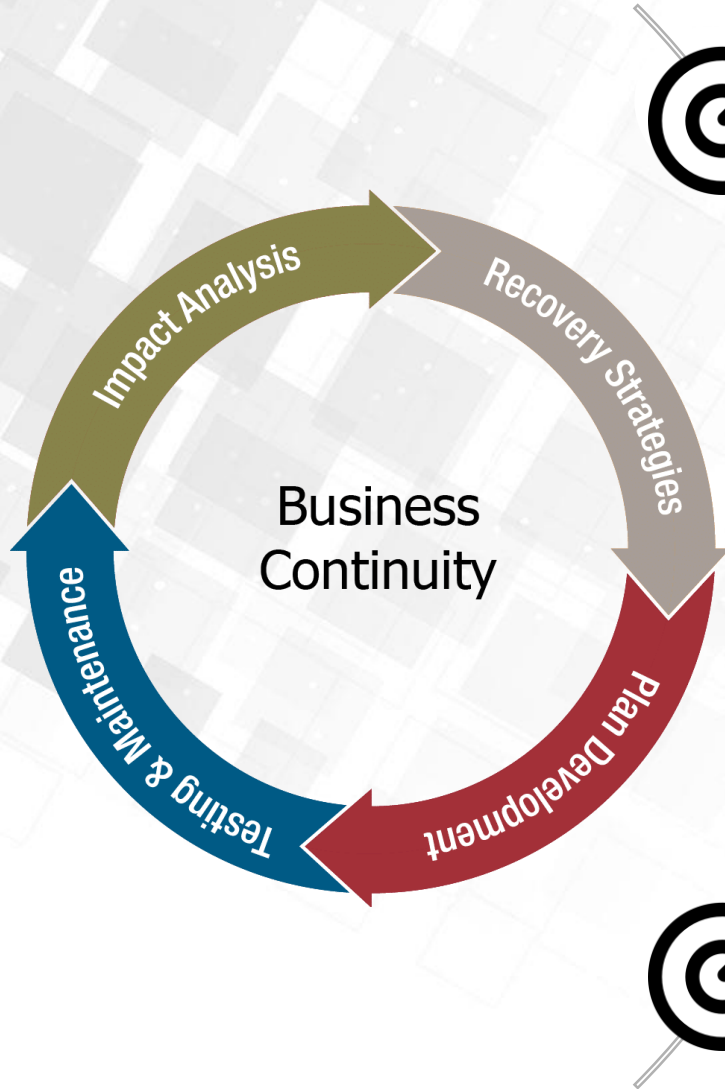
MKK BCMS strategies and goals are determined in line with our organization's strategies and goals.

MKK BCMS requirements are fullfilled in an integrated manner with organizational processes.

MKK Top Management provides necessary resources for BCMS like human, budget, technology, information, equipment, training.

Continuous improvement is one of the fundamental milestone of MKK BCMS and it becomes an organizational culture.

Employee participation to the BCMS practices is promoted to ensure BCMS effectiveness and continuous improvement.

MKK BCMS STRATEGIES

Main principle in creating BCMS strategies is the reactivation of critical services after the incident.

Critical employees are identified and backed up.

The Disaster Recovery Center, configured as a hot site, is located around 400 km away from the primary site.

Data redundancy is provided instantly from the disaster recovery center.

Critical services and products' suppliers are backed up.

MKK BCMS OBJECTIVES

Business continuity objectives that are compatible with BCMS policy.

Resource requirements, responsibilities and target completion dates are determined to achive the BCMS objectives.

The business continuity objectives are reviewed periodically and their current status is monitored.

MKK BCMS's OBJECTIVES

- ❑ 2 hours recovery time objective (RTO) for critical services

- ❑ Conduct a table-top BCP exercise with the participation of Top Management

- ❑ Identify, measure, monitor and report BCMS related key performance indicators

- ❑ Test and exercise of BCP related part of MKK Communication Plan

MKK BCMS ORGANIZATION
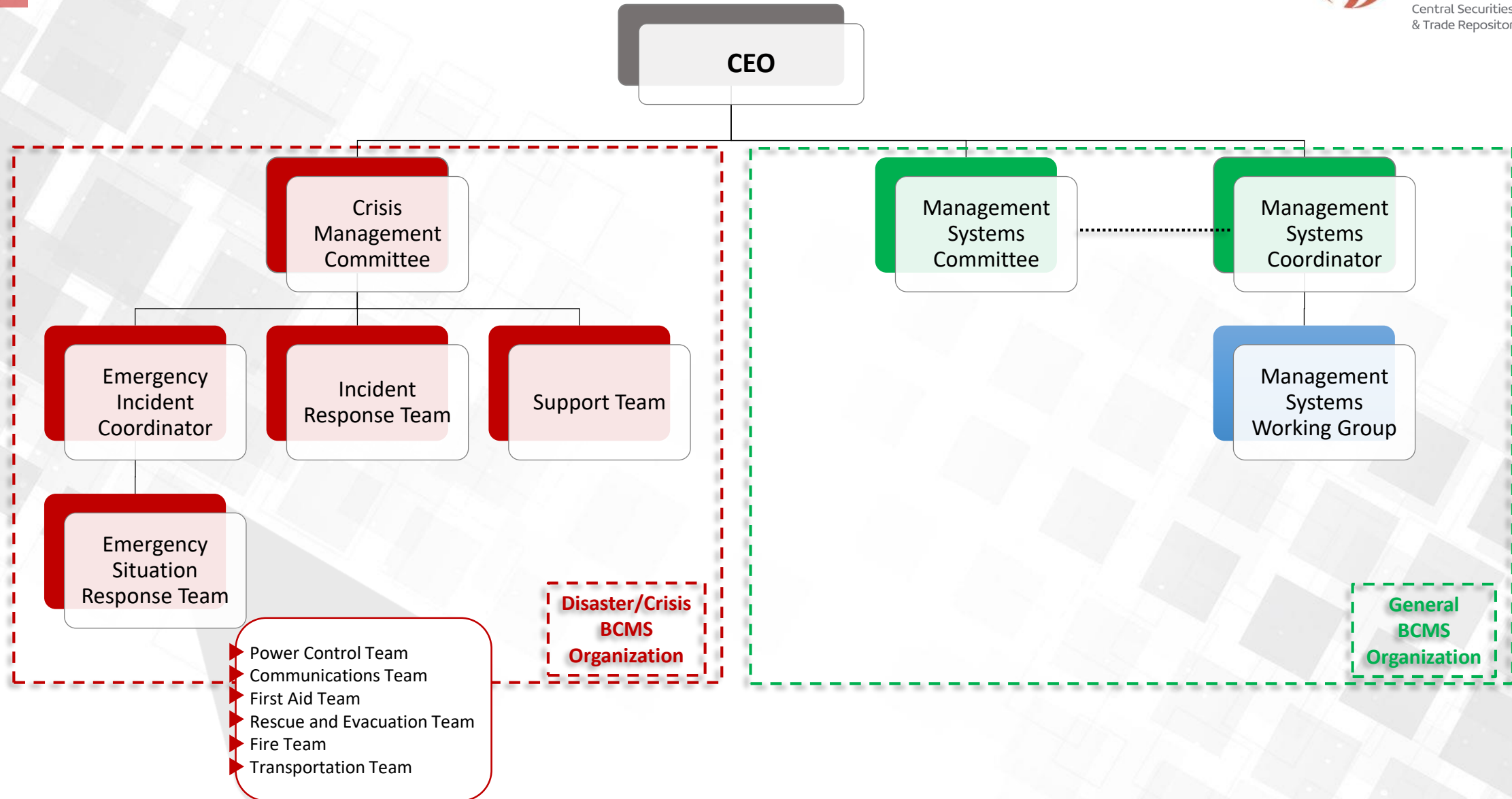
INCIDENT RESPONSE MANAGEMENT

Management Systems Committee	✓ The committee consists of the CEO, Deputies of CEO, Information Security and Risk Management Director (Lead Responsible for BCMS) , Directors of Legal Services and Internal Audit. ✓ Ensures the implementation and continuous improvement of the business continuity management system in line with MKK's objectives.
Management Systems Working Group	✓ Consists of key persons from all departments of the company. ✓ Discuss and evaluate BCMS related issues in the periodic group meetings.
A Crisis Management Committee	✓ Consists of the CEO, Deputies of CEO, Information Security and Risk Management Director (Lead Responsible for BCMS) , Directors of Legal Services and Human Resources. ✓ The committee where crisis-related issues are discussed and decided. ✓ Internal and external communication plan execution during the crisis situation.
Incident Response Team	✓ Consists of critical persons from all incident-related departments. ✓ Responsible for incident response and follow-up. ✓ Ensuring that the normal situation can be restored after the incident.
Emergency Response Teams	✓ Consists of persons responsible for emergency response.

THE HUMAN FACTOR IN BCMS

External / Internal Training

Awareness Quiz

BC Exercises and Tests

Awareness Presentations

Information Posters

Job Rotation

MKK BUSINESS IMPACT ANALYSIS (BIA)

➢ Business impact analysis processes are carried out to determine business continuity priorities and requirements.

➢ The impact levels of all CFS and BFS in terms of confidentiality, integrity and availability and are analyzed and evaluated.

- Currently, 320 processes have been analyzed and 85 processes are determined as critical.

➢ In determining RTO, MTPOD, RPO and MBCO values for the processes, the following criterias are taken into consideration:

- Legal requirements of the process

- Criticality of the service

- Critical points of the service availability period

BCMS RISKS AND OPPORTUNITIES

MKK ENTERPRISE RISK MANAGEMENT

BCMS risks and opportunities are adressed and managed under MKK Enterprise Risk Management Structure.

Risks are identified, analyzed and evaluated in terms of impact and the probability:

- Financial, reputation, compliance and operational impact criteria for business risks
- Confidentiality, availability and integrity impact criteria for IT risks

MKK Risk Appetite has been determined and approved by BoDs.
For the residual risks that are above the MKK risk appetite, action plans are determined.

Risk assessments are yearly reported to the BoDs, Early Detection of Risks Committee (EDRC) and Top Management. Risk reviews are quarterly reported to EDRC and Top Management.

INCIDENT RESPONSE MANAGEMENT STRUCTURE

Life-Threatening Incident

- ✓ Life-threatening situation such as fire, illness, earthquake, etc., an emergency call is made to the emergency phone number.

Critical/Major Incidents

- ✓ Critical situation that will cause disruption of company processes, it is considered as a Major Incident and the relevant communication plan steps are implemented.

- ✓ Actions are followed by the incident response person by informing the relevant teams and senior management.
- ✓ Root cause analyzes are carried out to prevent the recurrence of the incident and actions are taken towards a permanent solution.

Non-critical Incidents

- ✓ Non critical incidents are followed and solved by the relevant departments.
- ✓ The incident related outputs are registered under lessons learned database.

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MKK BCP TESTS AND EXERCISES

MKK BCP TESTS AND EXERCİSES

Business Continuity Plans (BCP) are created by taking into account the targets, risks and opportunities identified within the scope of management systems.

In order to ensure the effectiveness of BCMS, BCP exercises are annually conducted in line with the specified scenarios by the participation of Borsa İstanbul Group and MKK members.

Test and exercises are planned and executed periodically to verify the effectiveness of our business continuity strategies and solutions.

MANAGEMENT REVIEW AND REPORTING

Management Systems Committee meetings are conducted quarterly, on the content of ISO 22301 BCMS, ISO 27001 ISMS, ISO 20000-1 ITSMS, ISO 9001 QMS and ISO 27701 PIMS.

Management Systems Commitee are held on the following topics:

➢ General Information on Management Systems

➢ Scope of the Management Systems

➢ Management Systems Policies

➢ Management Systems Organization

➢ Management Systems Activities

➢ Risks and Opportunities

➢ Management Systems Objectives

➢ Lessons learned and actions arising from near-misses and disruptions

➢ Opportunities for Continual Improvements

THANK YOU