

# MUES PROJECT

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National Museum Inventory  
System of Türkiye

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REPUBLIC OF TÜRKİYE  
MINISTRY OF CULTURE AND TOURISM  
Directorate-General Cultural Assets and Museums  
Project Coordination Office



# Presentation Content

## 01 What is MUES?

The contribution of the system to Cultural Heritage Management.  
Benefits of digital transformation via MUES.

## 02 Project Design and Implementation

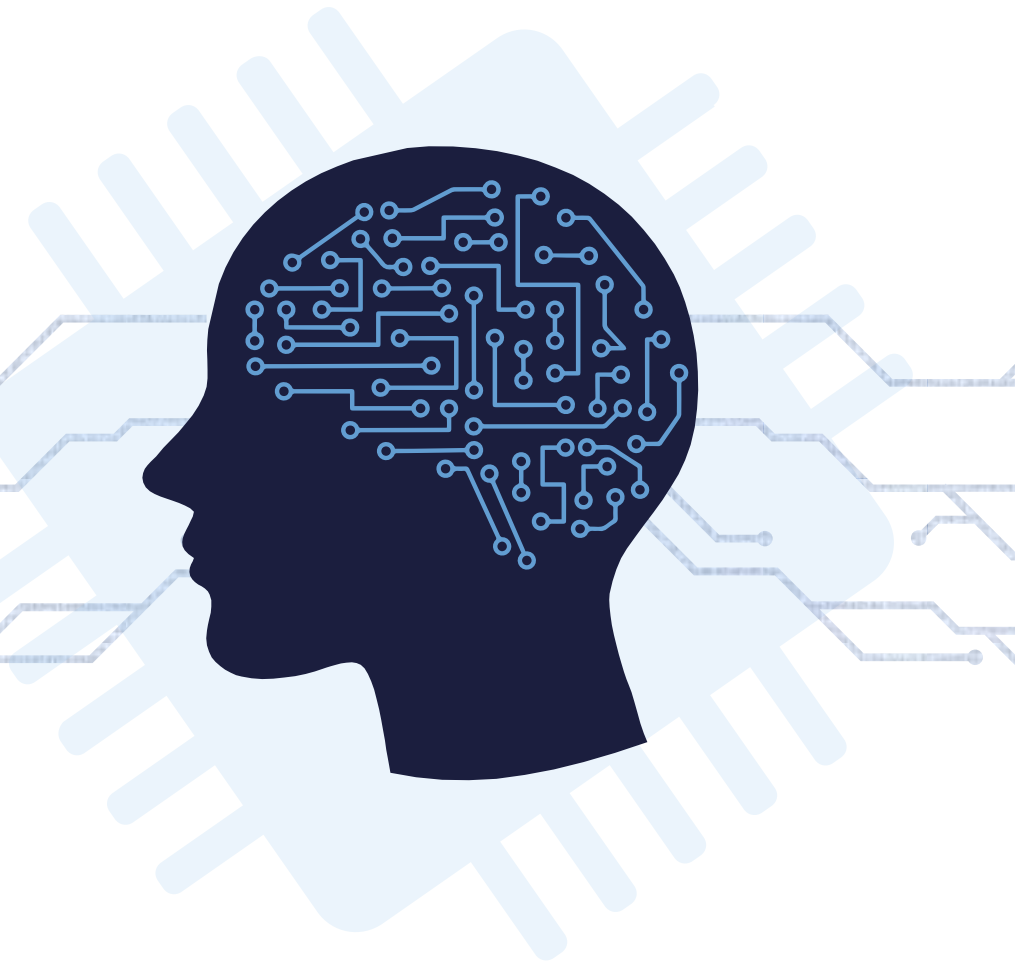
In-depth evaluation of needs and requirements at policy, decision-making, practice, and public levels.

## 03 Multidisciplinary Standardization

Inclusive and participative approach of Project MUES to establish a common terminology and strategy countrywide.

## 04 Dissemination and Follow-Up

Collaborative environments supporting peer-to-peer learning through training of trainers. Monitoring the digitalization process and new horizons to strengthen sustainability.



# MUES SYSTEM

## A Breakthrough digital innovation in Cultural Heritage Management

### Access

**In-depth** information for artifacts one click away from cultural heritage professionals

**Immediate** access to up-to-date information on archaeological sites, museums, and artifacts

**An advanced** communication network connecting museum and professionals

### Manage

Managing cultural heritage via a user-friendly e-government gateway application

Reinterpreting artifacts in line with recently developed data sets, standards in archaeology and museology

Powerful action against illicit-trafficking of artworks, effective measures preventing smuggling and fraud

### Support

A robust baseline suitable to build a management decision support system for cultural assets

Immense contribution to grow cultural and archaeological tourism



### Follow Up

**Accurate due diligence** for museums and more meticulous condition surveying for artifacts

**Simpler and smarter** follow-up artifacts after conservation treatment

**Practical follow-up** of the exhibition process in museums

### Research

**Improved research** infrastructure and investigation capacity in the field of cultural heritage

**Remedial** to the problem of implicit knowledge in archaeology-related social sciences

**A scientific bridge** linking museum artifacts to published articles



# COMPONENTS

- MUES Servers
- Disaster Recovery Center
- Interface

# RELEVANT ACTORS

- Cultural Heritage Institutions
- Public Museums
- Private Museums
- Restoration and Conservation Laboratories
- Archaeological Excavation Management
- Law Enforcement
- Online Catalogue
- Cultural Heritage Professionals
- Collectors
- Researchers
- Students
- Museum Visitors and Enthusiasts



# WHAT KIND OF INFORMATION?

## TECHNICAL INFORMATION

Scanned Inventory Form\*

Former Inventory No\*

Artifact Category >  
Classification\*

Specific Name

Movable Property Regulation  
Group\*

Movable Transaction Form  
Registry No

Acquisition Method

Responsible Museum Staff

## SAFEKEEPING INFORMATION

Affiliated Museum Directorate \*

Museum\*

Building ID\*

Positioned Area\*

Location in the Area\*

Placement in the Location\*

Details (free-text)

Physical Condition\*

Valuation (free text)\*

Weaving/Craft Status

Manuscript/Lithography

Islamic/Non-islamic

Uniqueness

Ceremonial-Ritual Status

## CHRONOLOGY INFORMATION

Era

Period

Civilization

Emperor

Dating Range

Artist(s)/Artisan(s)  
(Who produced)

Gift giver  
(who ordered the production )

Gift Receiver

Owner  
(who used the artifact)

Donator  
(Donation to the Museum)

## PRODUCTION INFORMATION

Geographical Location

Production Area

The Mint

Year of Minting

Direction of Minting

Production Technique

Decoration Technique(s)

Stylistic Properties

Atelier/Workshop

## PHOTOGRAPHY AND DRAWINGS

## MEASUREMENT

## TRANSCRIPTION

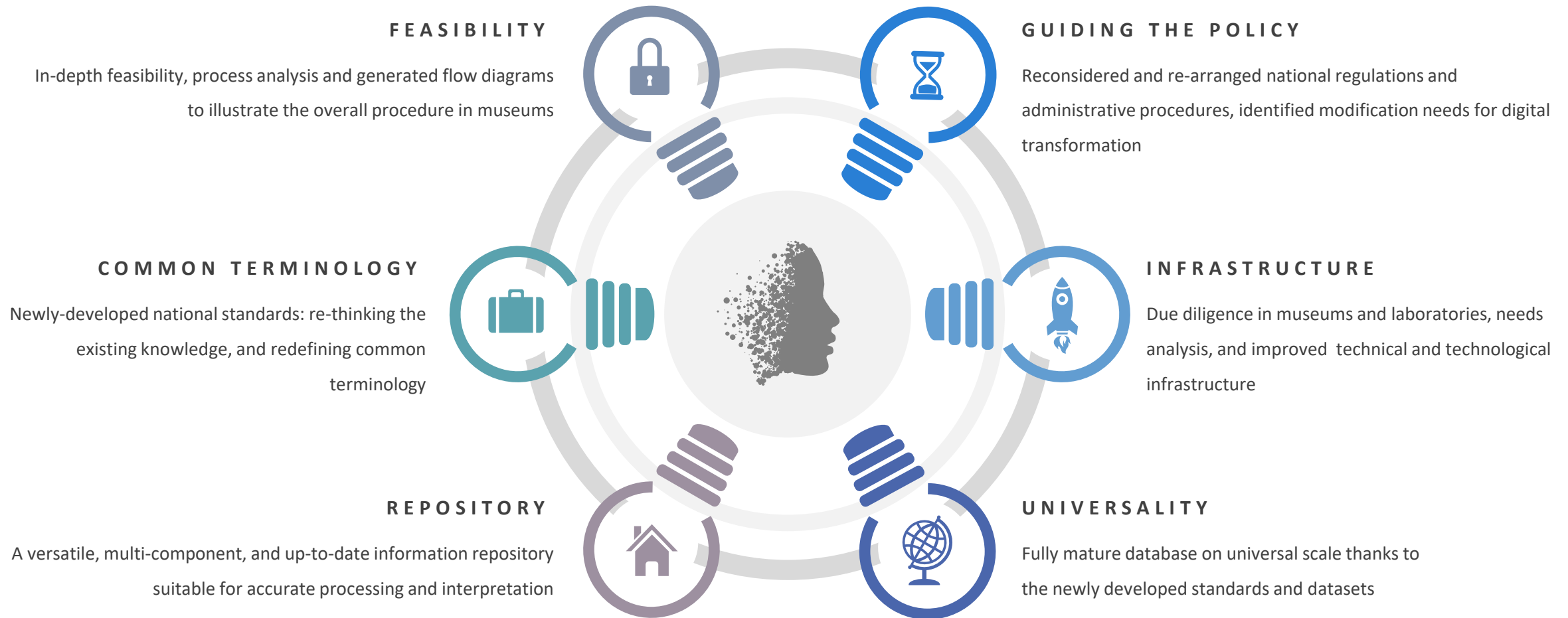
## DEFINITION

## BIBLIOGRAPHY

The screenshot displays the MUES National Museum Inventory System interface. It features several sections for data entry, including 'Eran', 'Rakam', 'Kendin', 'Zaman', 'Özellikler', and 'Notlar'. Each section contains multiple input fields for text, numbers, and dates, as well as dropdown menus and checkboxes. The interface is designed for detailed record-keeping of museum artifacts.

# MUES PROJECT

Integrative approach from Research to Practice (R2P) in Cultural Heritage Management



# MUES PROJECT

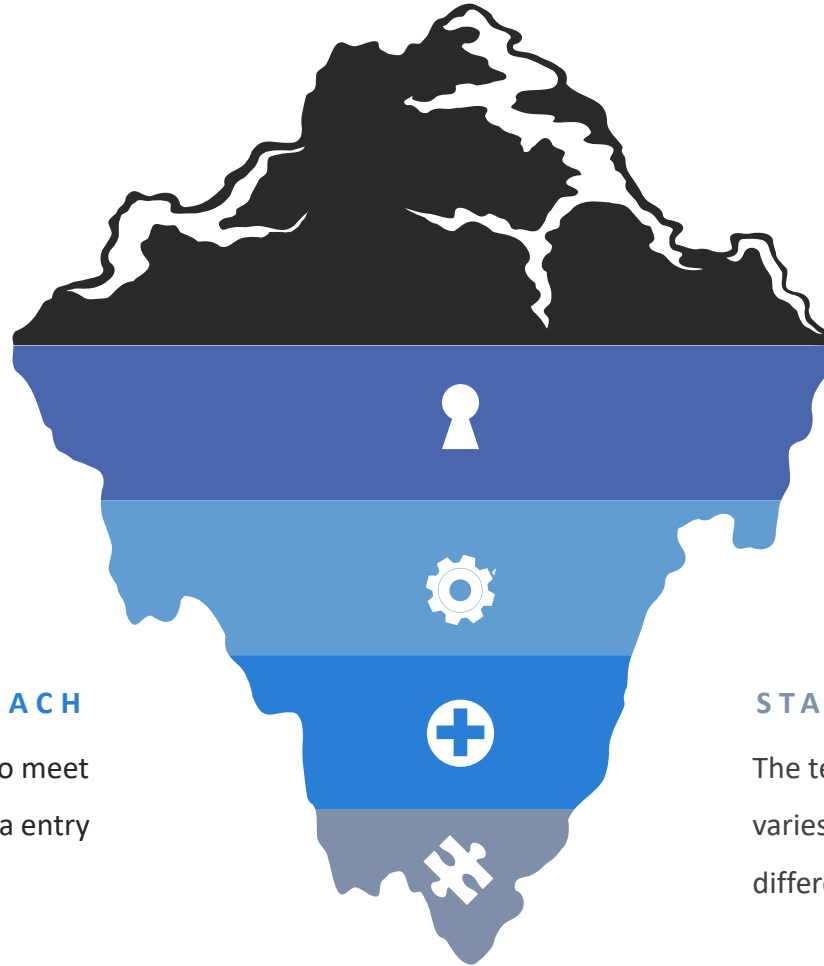
Integrative approach from Research to Practice (R2P) in Cultural Heritage Management

## ALIGNMENT WITH REGULATIONS

System is designed in accordance with the existing laws and regulations to promote sustainability in transformative change towards the digital era

## PARTICIPATIVE APPROACH

Involvement of practitioners from Museums is crucial to meet demands, reach greater user-friendliness, and data entry



## PROJECT MANAGEMENT

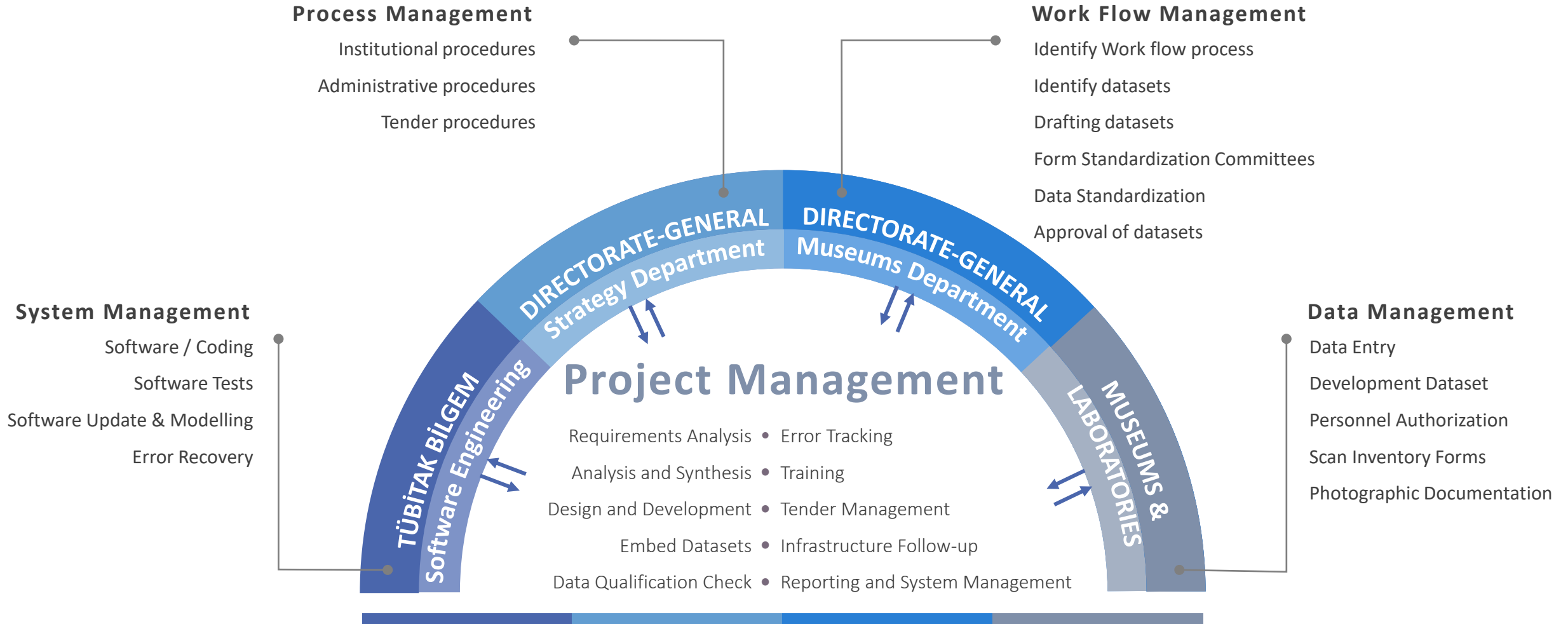
Inter-institutional management approach to integrate traditional museology skills into new and emerging digital perspectives

## STANDARDIZATION

The terminology and work procedures that often varies in museums and laboratories depending on different doctrines are standardized

# INTER-INSTITUTIONAL TEAMWORK

## Roles and Responsibilities





# PROJECT MANAGEMENT

**Research and Innovation (R&I)**  
System analysis and proposed solutions

## Up-to-date Software

Software development in line with legislation and processes

## Qualified Human Resources

Upskilling of existing staff through training

## Infrastructure

Installation of necessary hardware

## Project MUES

Implementation Phases

## Measurable Data

Digital transformation of the national inventory in line with the determined standards

## Added-value

Contribution to transferring cultural assets to future generations, and promotion of Turkish museums and Türkiye

## Unity

Standardization of procedures and terminology in archaeology and museology

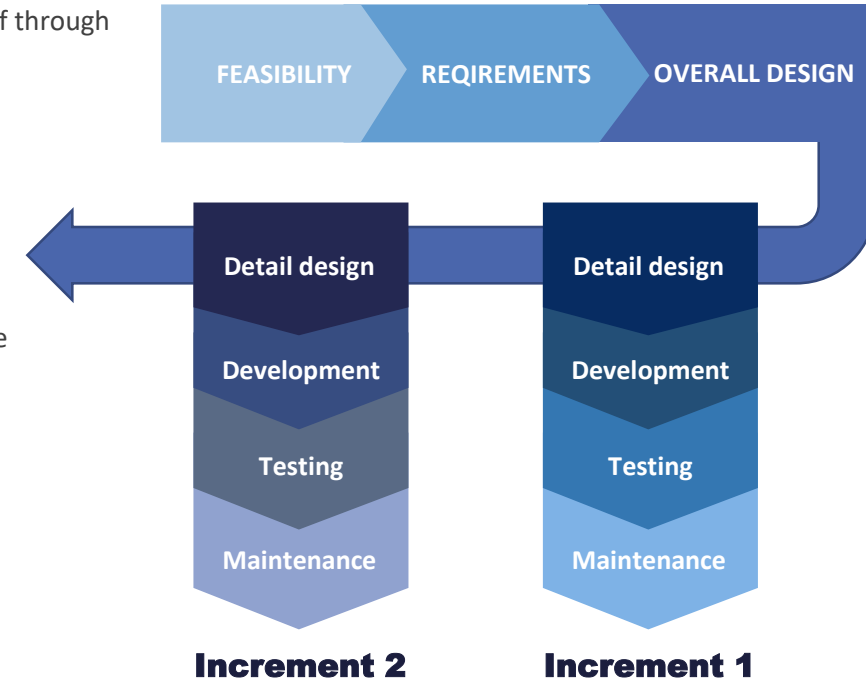
## Knowledge Assessment

Increased awareness of ICT and improved academic efficiency

- **Software Engineering Institute:** Capability Maturity Model Integration (SEI-CMMI)
- **Project Management Institute:** Project Management Body of Knowledge (PMI-PMBOK)

## Project Life Cycle

Incremental Development Model



# ANALYSIS AND SYNTHESIS

## Different Approaches in Museums

- Inventory Forms
- Photographic Documentation Methods
- Storage and Display Methods
- Types of Storage and Exhibition Areas
- Internal Management Processes and Work-Flow
- Artifact Definition and Chronology



# STANDARDIZATION PROCESS



## Institutional Standardization

- Process flow aligned with legislations and regulations

## Standardization of Artifact Definition

- Description of Artifacts
- Category and Classification of artifacts
- Chronology
- Materials
- Production Techniques
- Decoration Techniques
- Artifact Acquisition Method
- Cultural Asset ID
- Types and Units of Measurements
- Color Standards

## Standardization of Inventorial Methods

- Visual Digitalization Methods and Standards
- Photographic Documentation Standards
- Scanning Standards

## Spatial Standards

- Types and ID codes of Museums and Laboratories
- Storage, Exhibition and Treatment Area ID Codes





# STANDARDIZATION WITH METRICS

## 3 Different Bodies

Museums, Archaeological Sites, Mouseloums (Turbe)

## 30 Subtypes of Bodies

Archaeological Museums, Art Galleries, Ethnography Museums, History Museums, City Museums, Science Museums, Palaces, Monuments, Monastery, Castle, Underground Cities, Caves, etc.

## 11 Types of Area in Museums

Open-air/Garden Exhibition, Open-air Storage, Courtyard, Storage Room, Storage Exhibition, Foyer, Hall, Ancient Site, Private Exhibition, Showroom Storage, Exhibition Hall

## 9 Types of Placement in Museum Areas

Exposed, Open display, Outdoor, Sliding case, Storage cabinet, Safe, Panel, Shelf, Showcase





# STANDARDIZATION WITH METRICS

## 54 Artifact Category

Archival documents, Horologe, Weapons, Cuneiforms, Agricultural Tools, Toys, Relics, Kitchen Tools, Maritime tools, Dresses, Communication tools, Musical instruments etc.

## 1155 Artifact Classes

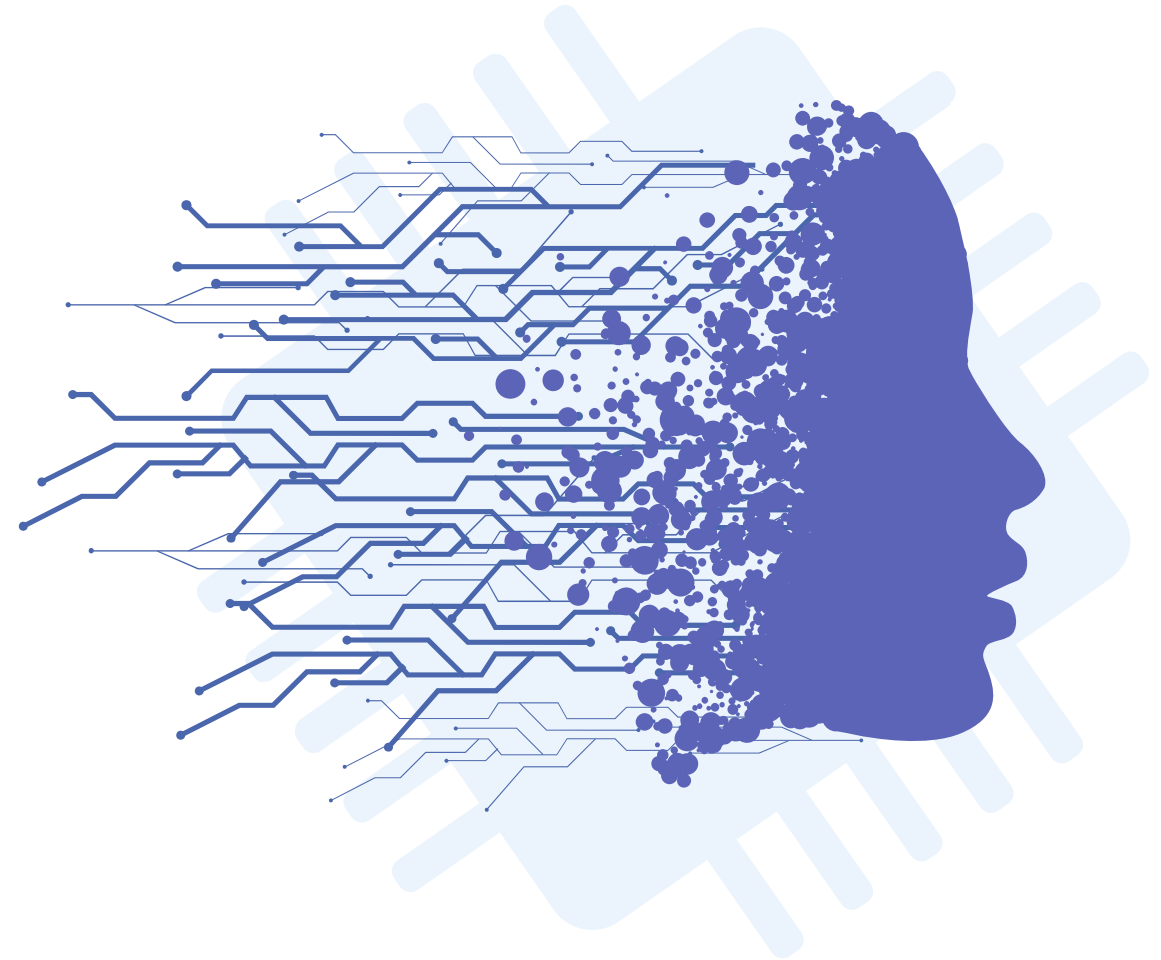
For archival documents **30** classes, For horologes **7** classes, for Weapons **72** classes, etc.

## 10 Territorial Chronologies

America, Anatolia and the Near East, Arabian Peninsula, Europe, Iran, Roche, Mesopotamia, Egypt, Central Asia, Far East

## 49 Eras

With **124** Periods, **382** Civilization, **499** Period-Civilization Cross-Mappings, and **3671** Emperors



# STANDARDIZATION WITH METRICS

## 15 Ancient Material Groups

Paints, Natural Stones, Fossils, Bone/Ivory, Horn/Antler, Gemstones, Paper/Parchment, Resinous, Plastics, Earthenware, Metals, Glass, Wood, Textile, Illumination materials

## 236 Ancient Materials

With descriptions and exemplary images

## 101 Ancient Production Techniques

With 888 Materials-Production Technique Cross-Mappings

## 133 Decoration Techniques

With 1077 Materials-Decoration Techniques Cross-Mappings



# STANDARDIZATION WITH METRICS

## 81 Provinces in Türkiye

And 985 Districts, 110 Museum Directorates, and 476 Affiliated Museums, Archaeological sites, and Turbes

## 36 Cultural Heritage Professions

With 41 Titles, 8 Employment Classes, 71 Fields of Expertise

## 1025 Museum Staffs

With 3141 Role authorization, i.e. Museum Manager, Museum Expert, Museum System Supervisor, etc.

## 59688 Publications

Linked to digitalized inventory records, artifact by artifact





# TRAINING AND SUPERVISION

Dissemination process was involved training of trainers.  
Hands-on training at Pilot Museums carried out at 21  
intersection provinces.



User Handbook and MUES Guidelines



Book: Photographic Documentation for  
Museum Professionals



# HD PHOTOGRAPHY

## STANDARDIZATION OF DOCUMENTATION PROCESS AND RE-DOCUMENTATION BY HD CAMERAS

National Museums are re-documenting the complete inventory of artifacts, in line with the newly-established photographic documentation standards: i.e., compositional, visual, digital, and scale.



Before Standardization

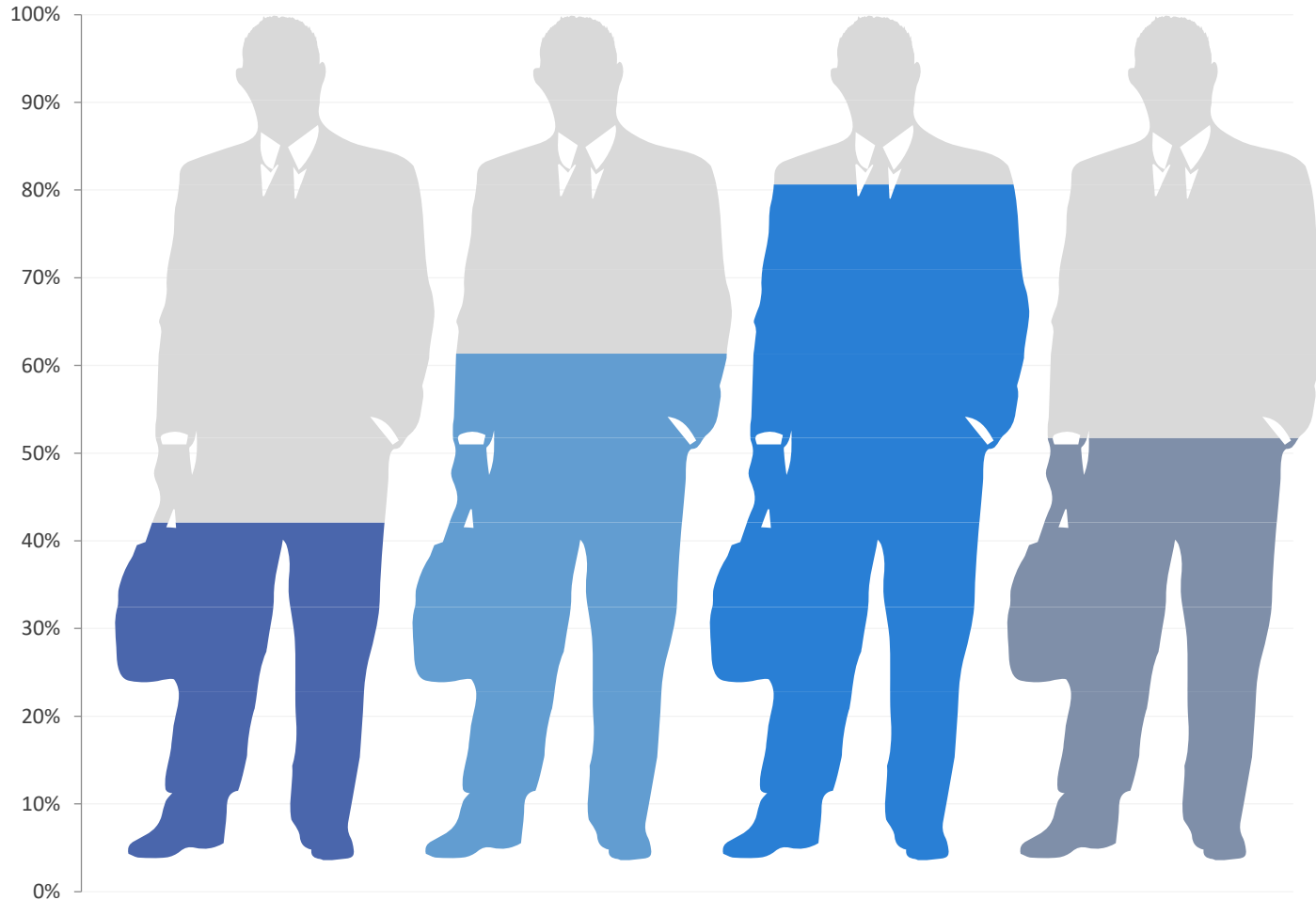


After Standardization



# PARTICIPANT SURVEYS

Rates of training participants whose voted 90 points and above



92%

**What is your professional opinion on MUES?**

Please rate 0 to 100 in accordance with your user-experience throughout the training

98%

**What is your opinion on the efficiency of MUES System Officer Training?**

Please rate 0 to 100 in accordance with your experience as a training participant

98%

**What is your opinion on overall performance of Trainers throughout the training?**

Please rate 0 to 100 in accordance with your experience as a training participant

# USER AUTHORIZATION

16 roles with 598 authorization areas

[illegible]

Classified information such as the location, museum expert responsible of the artifact, valuation, etc. are restricted areas for non-staff MUES users.



# MONITORING

## The progress in Digital Transformation

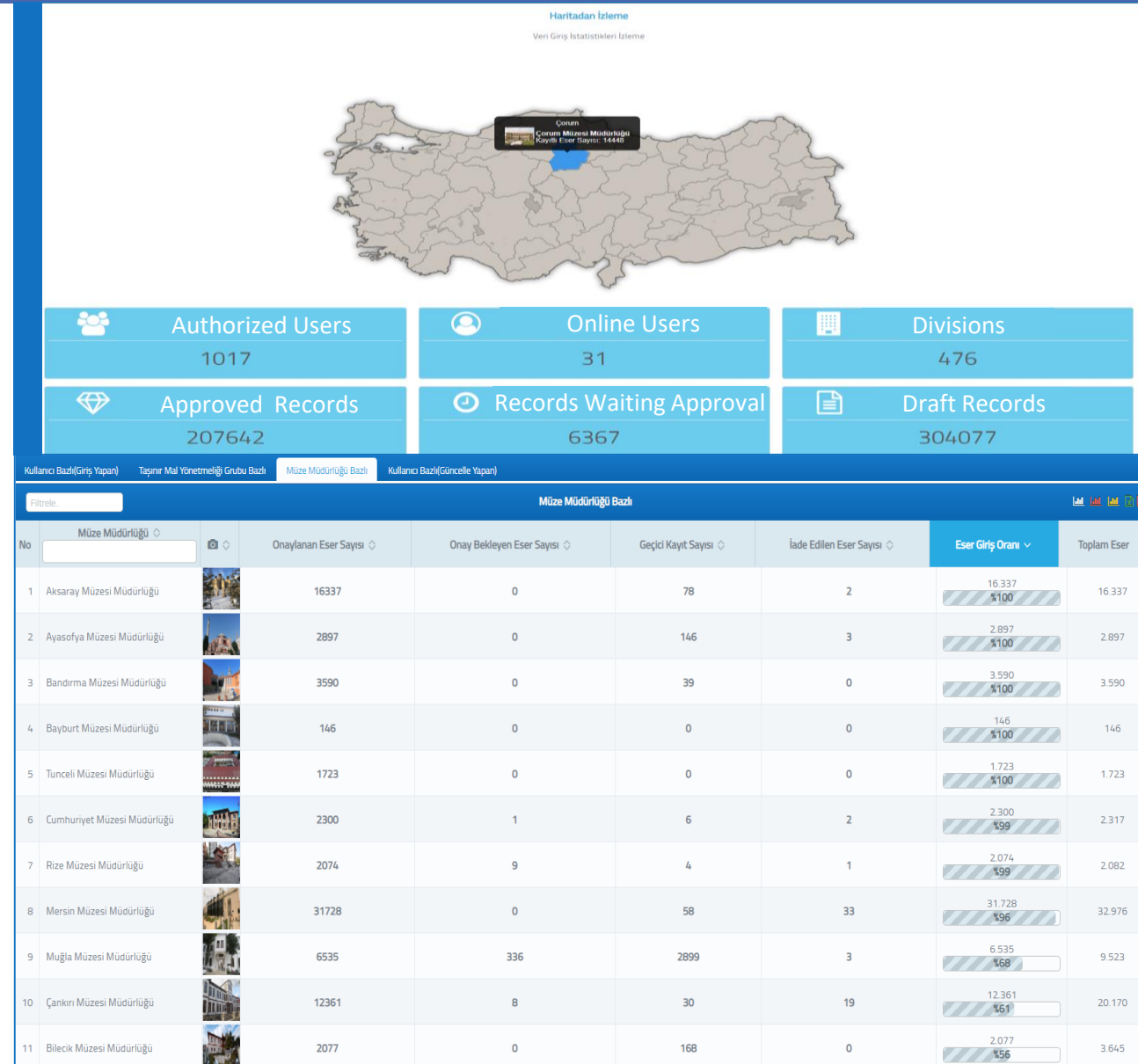
MUES allows administrators to effectively track the rate of digitalized inventory from the headquarters of Directorate-General Cultural Assets and Museums

Ranking by Approved Records

Ranking by User-based Data Entry

Ranking by Museums Entry

Ranking by Total Number of Artifacts





## What We Do Now?

26%

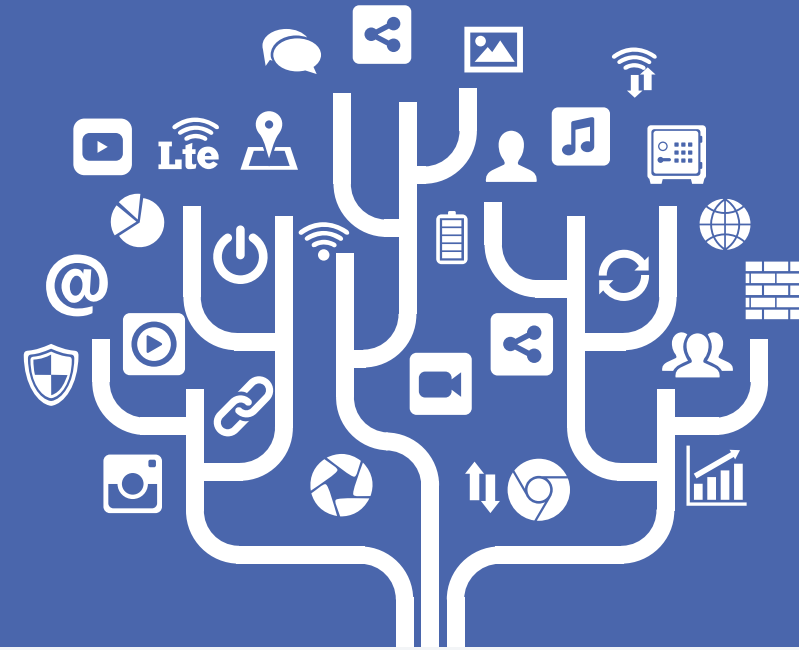
### Digitalized Inventory

The rate is calculated over 2M historical artifacts, while the estimated number of inventory in Türkiye is above 3.5M.

75%

### Systems Completion

Completion rate of Project MUES constituting of 7 Exclusive integrated systems



MUES INVENTORY SYSTEM REAL TIME DATA ENTRY MONITORING SCREEN 14/09/2022 15:33



# INTEGRATION

Education

Security

Transportation

Tourism

Financial  
Resources

EaPEEC 2022

5th Eastern Partnership  
E-Infrastructures Conference

MUES - NATIONAL MUSEUM INVENTORY SYSTEM



DIRECTORATE-GENERAL  
CULTURAL ASSETS  
AND MUSEUMS



REPUBLIC OF TÜRKİYE  
MINISTRY OF CULTURE  
AND TOURISM





# THANK YOU

**MUES Project Team:** Hakan Melih Aygün-Uğur Haşlak, Irmak Güneş Yüceil, Zeynep Kaya, Levent Boz, Sibel Bozdağcı, Halis Yılboğa, Ufuk Tül, Tolga Gül, Arif Akkaş, Ali Badem

TÜBİTAK The Scientific and  
Technological Research  
Council of Türkiye

BİLGEM Informatics and  
Information Security  
Research Center

Ministry of Culture and  
Tourism of Türkiye

Directorate-General Cultural  
Assets and Museums

TURKISH MUSEUMS