SETTING NATIONAL STANDARDS FOR THE NATIONAL MUSEUM INVENTORY SYSTEM OF TURKEY (MUES)

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ABSTRACT

The Ministry of Culture and Tourism (MoCT), General Directorate for Cultural Assets and Museums, is responsible for the documentation and management of almost two hundred national museums in addition to private museums and collections. There are about three and half million movable objects in Museums across the country that were inventoried through conventional methods. The era of information technology has brought further opportunities to develop new methods for systematic inventory, presentation, management, planning and monitoring of museums objects. This paper discusses process of setting national standards for MUES (*Müze Ulusal Envanter Sistemi*/National Museum Inventory System), an information system capable of querying and managing museum objects on a digital platform.

Keywords: museum inventory, information management of museums, museum objects, standards of museums, standardization

WHAT IS MUES?

MUES is designed as an information system enabling the querying, monitoring, and management of artefacts, and all related processes in line with the concept of museology, for authorized users, researchers, scientists and visitors[i]. MUES has been under development since 2011[ii], and today, MUES version 2.0 with the Inventory Module is fully functional for the museum people. The mainframe will continue to expand with the implementation of additional supportive modules such as Restoration/Conservation and the Excavation Information. Now it is only for the museum people, in the future step by step the system will be open for researchers, excavation directors, students and visitors.

The first museum in Turkey was built in the early 19th century; since then, different types of museums were

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built such as palace museums, archaeology museums, Atatürk Houses, ethnography museums were built gathering a variety of objects such as small artefacts, coins, daily life objects, national historical objects, which became their collections. But one of the major difficulties faced by museums of Turkey is the absence of a digitized inventory system. In Turkey, there are almost two hundred museums and nearly three and half million artefacts and all these objects, all of them catalogued using conventional methods.

The MUES system made it possible for the Ministry of Culture and Tourism (MoCT) to overcome problems deriving from the conventional documentation used in museums, notably in addressing the challenges posed, by the different types and methods applied, to a holistic and efficient management of museum inventories.

It was important to design an information system that is fast, secure, reliable and user-friendly; but it was also essential to set methods for common inventory standards that can adapt to some two hundred museums with different characteristics and collections into one centralized system. The innovations that information technologies bring to our lives and the dedicated involvement of the Project Management Team made it possible to achieve successful results.

SETTING NATIONAL STANDARDS

Setting national standards to create a common language was a crucial necessity to achieve such a centralized system as museums, universities and departments across the country have been using different terminologies and chronologies in their curricula.

But setting national standards required technical expertise more than bureaucratic decision-making. For this purpose, a "Movable Cultural Property Standardization Committee" under the supervision of MoCT was formed. While setting up the Committee, the Project Management Team tried to invite experts with different specializations and from various kinds of museums. The Committee assembled on many occasion to discuss and decide upon several items that arose during the preparation process and most of the proposals put forward were endorsed by consensus.

In this regard, and with the full cooperation and consensus of the standardization Committee, The Project Management Team started the long process of setting national standards such as Unique Cultural Asset ID, chronology (ages, periods, civilizations), and standardized naming of museum spaces, artefacts, materials, manufacturing techniques and ornamentation styles.

Cultural Asset ID:

Until today, most of the museums had been using common methods to register their artefacts. While some of them would be using a systematic approach, others would just increment the number from the previous page. However, the lack of a systematic approach could entail duplicated records. Consequently, when designing a nationwide inventory system, it was indispensable to follow a systematic approach to generate unique object IDs.

But, creating a unique ID for a national system like this was not an easy task. The Project Management Team received several suggestions each with both advantages and disadvantages. One of the first proposals was to use an identification number with the following codification: "1.06.01.03.004.99.2616.020.01" (1: Movable Object / 06: City, 01: District, 03: Excavation Area / 004: Trench Number of the Excavation / 99: Year / 2616: Inventory Number from the Excavation / 020: Museum Code / 01: Object Type).

Starting from this example, members of the Standardization Committee suggested many other options. For example, MUES could use a number like "TR.2011.07.23.312" with digits indicating the acquisition date, national traffic code, unique id of the museum and an incremental number. This number would be relatively easy to remember but since not all findings have a museum entry date, it was not possible to use this system.

Another suggestion was to use "TR.0011.312" where digits define the museum id and an incremental number. Again, this codification is an easy one to remember but does not show the total number of objects housed in the museum because the incremental number is not specific to that museum. Objects can move to another museum, and in such case that number would not mean anything.

Another idea was to use a mixed numeric and alphanumeric characters like "TR-74460ec6-c375-4657-8a8b-57b9328ff1d9" but this would not be easy to remember.

In the end, the Committee decided to use "TR.M.000.000.000" as the unique ID template for museum objects. When registering an object to the system, MUES automatically generates a unique ID, without any codes or abbreviations.

Museum Spaces:

One of the most important phases of this process was standardizing the names of museum spaces, because until today, museums did not have a standard system to name their facilities. Each museum defined its spaces as "Ayşe's Storage", "Storage for Clay Tablets", "Old Exhibition Salon" or "Garden with

Sculptures". The Project Management Team examined the spaces of the pilot museums (the Topkapı Palace Museum, Çorum Museum, Eskişehir Museum and Ankara Ethnography Museum) and the Committee decided on the use of the code "Bina(BN)" to define the main building as a top space, while all the other sub-level spaces would be defined under this BN-X code.

The primary sublevel of museum spaces are termed "Exhibition Spaces (TS)" and "Storage Spaces (DP)" while subordinate areas are defined under them. For example, the primary level "Storage Spaces (DP)" covers sub-level entities like "Cabinet (D)" "Shelf (R)" "Safe (K)" and "Open Storage (AT)." Whole spaces in these museums have been labelled according to MUES standards and all of the entries were verified by the Project Management Team.

During this standardization process, The Committee encountered many difficulties and brought up a number of questions. For instance, the following issue was debated in an official meeting: *"There are some registered artefacts in XYZ Museum's entrance salon, and we do not know how to define this space?"*

Some members of the Committee suggested that *"They should be defined as stand-alone spaces and have their own code"*, while the others thought that, *"These spaces should not have a separate code but be related to the nearest exhibition space."* In the end, the Committee decided that *"When a museum space with at least one artefact has no relation to other halls, it should have a private name and code."* As a result, new definitions like "Hall (H)" "Foyer (F)" and "Courtyard (A)" were created into the system.

The systematization of museum spaces was difficult because each museum had its own specificities; while most of them are set in historical buildings, some museums are located in newly built structures. But each museum did its best to classify their spaces and now, all the museums and their buildings, storages, halls, salons, showcases and cabinets have standardized codes in MUES, which will help MoCT for future planning.

Image 1. Defining the location of an artefact in the Test Museum

Chronology:

It is a common problem in chronology studies, especially for the BC periods, to have different approaches regarding historical events. Since museums, universities and departments often use different chronologies and terminologies, it was challenging to find consensus on the subject. When thinking about the birth, ascension and death dates of a king from prehistorical times, one may come across different dates. This led the Project Management Team to set a standard to settle this issue.

For example, according to the Museum-1, King Test was enthroned in B.C.(x), and died in B.C.(y). According to the Museum-2 he was enthroned in B.C.(x+1) and died in B.C.(y-2). As a solution, the Project Management Team defined the dates in MUES with minimum and maximum intervals like “King Test, enthroned B.C.(x+1), died B.C.(y)” So, the users can enter their own chronology freely, limited by these preset intervals.

As shown in Image 2, the chronology area was divided into five layers: "chronology type", "era", "period", "civilization" and "ruler", which prevented the data entry operators to get lost in a stack of data consisting of thousands of lines. Each of these layers was divided into sections, allowing the operator to make a choice from a subordinate level. In this respect, the chronology area became a simple and user-friendly section, which does not allow any spelling mistake.

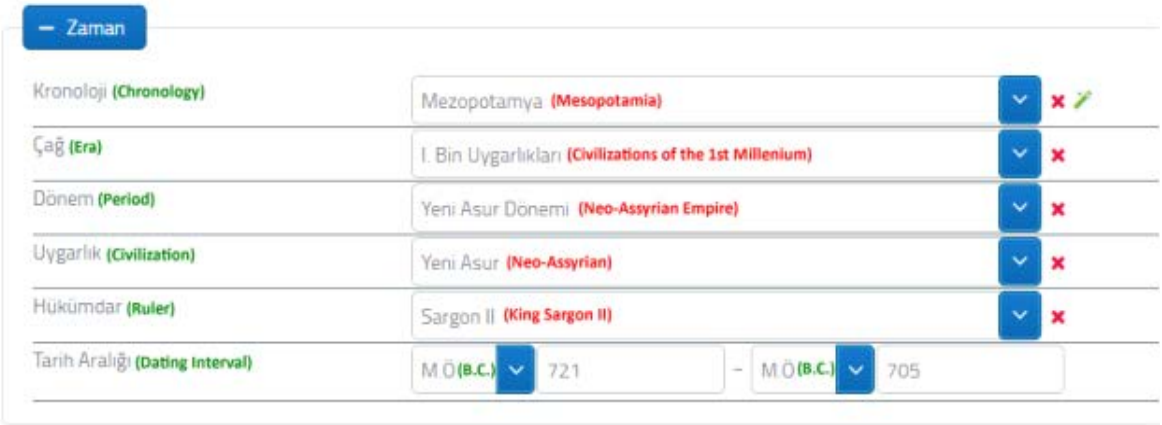

Image 2. Defining the chronology entry of an artefact in the Test Museum

Object Types and Subtypes:

While working on the Inventory module, The Project Management Team requested thirty different museums to send their registered object types and all the collected information was classified into a database. Many objects were assorted by their material, manufacturing style, era, ornamentation style, but also by physical attributes like short, wide, narrow etc. Thus, The Committee ended up with a very long list consisting of 8.500 object types, such as wooden plate, silver plate, ritual axe/mace or Atatürk's coffee set. However, since one of the main reasons for creating a streamlined inventory system was to achieve consistent query results, the Committee had to eliminate and compile the repetitive and similar object types.

Of course, it was a very long process to deal with that raised many questions like *"How should we register coins found in an earthenware jar?"* or *"How should we define the doorknob, door lock and the door? Should we relate them with each other or should we register them as different/separate objects?"*. For the first question, the Committee let the museum experts to decide whether they relate objects like coins and earthenware jar, grave offerings, toolkits, dinnerware and jewellery sets.

The second issue raised even more questions. But the Committee decided that *"If the doorknob or the lock was detached from the integral part, they may be registered as separated objects. If they are still attached to the door, there is no need to register them as separate objects since they are elements of an integral part: the door"*.

In the end, the Committee decided to use nearly 1.000 different object types in MUES. It also approved the use of attributes like "material", "manufacturing style", "ornamentation style", "era" and "colour" as stand-alone entries.

Eser Alt Türü

No	Ad (Object Subtype)	Eser Türü (Object Type)
1	Adak Heykelciği (Votive Figurine)	Dinsel (İnançsal) Obje (Religious Objects)
2	Halı (Carpet)	Tekstil Ürünleri (Textile)
3	Agramdizör (Agrandisseur/Enlarger)	Fotoğraf Malzemesi (Photography)
4	Ferman (Edict)	Arşiv Belgesi (Archival Documents)
5	Ağırşak (Spindle Whorl)	Dikiş, Nakış, Dokuma Malzemeleri (Sewing/Weaving Objects)
6	Ahidname (Treaty)	Arşiv Belgesi (Archival Documents)
7	Akropodium (Acropodium)	Sanatsal Eser (Artistic Objects)
8	Alabastron (Alabastron)	Kap (Pot)
9	Mezar Taşı (Grave Stone)	Taşınmaz Eserler (Immovable Objects)
...		
927	Zarflı Tablet (Cuneiform)	Tablet (Cuneiform)

Image 3. Examples of object types and subtypes in MUES

MUES DISSEMINATION PROCESS

In order to disseminate the project, nationwide staff trainings and on-site inspection workshops were organized, a handbook was produced and circulated, and the computers and cameras of the museums were upgraded.

MUES Dissemination Handbook[iii]:

The "MUES Dissemination Handbook" was prepared as a guide about the works to be done by the museums before the data entry and was distributed to all museums. This handbook includes detailed information on the tasks and operations to be performed by the Museum Directorates; especially on how to create the spatial descriptions (museum spaces and their definitions), how to scan the existing inventory books and how the object photographs should be.

System Unit Manager:

In each museum, two staff members were designated "System Unit Managers" and officially appointed to ensure the sustainability of the work carried out by the Museum Directorates for the project, to be monitored by the Project Management Team. Beyond just being the contact points, the System Unit Managers are key elements in facilitating the exchange of up-to-date information on the project between their institutions and the Project Management Team.

Auditing Compliance with Standards:

Within the scope of MUES, two different working methods were developed for the achievement of the works and transactions carried out by the System Unit Managers. For about a year, all the System Unit Managers were trained under a programme called "MUES Dissemination Studies." The second method was the hands-on supervision of the works carried out in the museums by the MUES Project Management Team. In this exercise, 90% of the museum's supervision works were deemed as completed; and by the end of 2017, the audit works in all the museums should be fully completed.

CONCLUSION

It is clear that MUES Standards, which are expected to be the basis of national standards from a museological perspective, will also contribute to the security of basic tasks such as acquiring new objects, preventing forgery and the illicit trafficking of cultural heritage. In addition to this, the chronology, subtypes of objects, the artists and their workshops, the inscriptions and their translations, the manufacturing materials and detailed information on the condition of the objects will be easily accessible in MUES.

It is expected that the standardized language developed for the Inventory Module within the scope of the MUES Project will provide significant contributions to sustainable professional museum services, scientific researches, and the visitor experience in the field of museology in the Republic of Turkey. Furthermore, this project will ensure that all the objects registered in the national inventory are handled more effectively and more professionally in accordance with the scientific criteria.

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[i] N. A. Çayırezmez, H. M. Aygün and L. Boz. (2013). "Suggestion of RFID Technology for Tracking Museum Objects in Turkey," *2013 Digital Heritage International Congress (DigitalHeritage)*, Marseille, 2013, p. 316.

[ii] http://www.kulturvarliklari.gov.tr/TR,98489/muzeler-ulusal-envanter-sistemi-mues.html

[iii] N. A. Çayırezmez, H. M. Aygün. (2013). *Müzeler Ulusal Envanter Sistemi MUES Envanter Modülü Yaygınlaştırma Çalışmaları*, Ankara