In June 2010, the Ministry launched a new portal, "Digital Collections of the Hellenic Ministry of Culture and Tourism" (collections.culture.gr), with the aim of making digitised artefacts from its public museums accessible online. The new portal was essential for publishing these digital items in Europeana, since the aim of Europeana is to guide the visitor back to the website where they can view each item in its full original context.

The new portal was initially developed to enable the publishing of existing digitised artefacts contained within the system of the National Archive of Monuments of the Ministry. The information in this system was
The new portal, produced by the Ministry on a very low budget with a great deal of in-house effort, was indeed a first step in “opening the gates” of the Hellenic public museums to the online visitor.

Originally created by the responsible regional archaeological units of the Ministry and was stored in 68 separate, geographically distributed, local databases, designed to be accessible only to the respective responsible unit. All local databases, however, were based on the same database schema, so homogeneity of the exported information made it easier to import and integrate the content in the common database of the portal. The imported files are processed and any necessary additional information - the URL of the digital image or the museum name among others - is included in the database, before the records can be displayed on the portal and exported from the portal database for updating Europeana.

A back-end management system was also developed, which provides edit and update functionality for the content. Moreover, it accelerates the process of integrating new content to the portal, as well as to Europeana. Through an easy to use web interface, personnel of the archaeological units can edit and make corrections to already imported content, add new content, by adding one or more photographs and related documentation directly on the portal, and control whether and when to publish it online. Different profiles for contributors, content coordinators and administrators are implemented for user management.

The portal currently provides access to about 4,500 high quality digitised archaeological objects, selected from 34 archaeological museums throughout Greece. These include the largest museums, i.e. the National Archaeological Museum, the Byzantine and Christian Museum, the Numismatic Museum, the Epigraphic Museum, the Archaeological Museum of Thessaloniki, the Museum of Byzantine Culture, the Archaeological Museum of Heraklion, and many other regional museums maintained by the regional archaeological units of the Ministry throughout Greece. The online visitor can explore content based on a faceted filtering interface, using the name of the museum, or the category, type and date of the artefact.

The new portal, produced by the Ministry on a very low budget with a great deal of in-house effort, was indeed a first step in "opening the gates" of the Hellenic public museums to the online visitor. Giving the public the opportunity to search and study scientific information about these objects was a major step forward. Thanks to the ATHENA project and the potential of publicity in Europeana, public museums for the first time published their collections online. There is still huge scope for enrichment though. The archaeological wealth managed by the Ministry reaches millions in number of items from all prehistoric, classical and byzantine collections. The tools are there, so a coordinated effort - and vision - could rapidly increase the number of the archaeological items accessible online, both on the national portal and on Europeana.
The portal can go further and offer opportunities of digital curation to the Ministry’s professionals, such as creating virtual exhibitions for the general public, elaborating on a specialised research topic, or producing educational material for young visitors, based on items from one specific museum or covering artefacts from across various museums’ content. Adding advanced search functionality using semantic enrichment and linked data is also being planned. Moreover, the content of the "Digital Collections of the Hellenic Ministry of Culture and Tourism" portal can expand from the current digital collections of archaeological objects to include digital collections of archaeological monuments and listed buildings, as well as digital representations of modern and intangible cultural heritage, thus presenting all aspects of cultural heritage under the responsibility of the Ministry.

Other museums and supervised cultural institutions

In the framework of the ATHENA project, a number of other museums and cultural institutions have collaborated with the Ministry in order to make their digitised collections available in Europeana. The Ministry has organised two national events to inform cultural institutions, encourage their participation in the ATHENA network, and support them in further "opening the gates" to their digital collections for the online public. Interested institutions were then invited to training seminars about the details of how they could make their digital content available in Europeana.

The Ministry eventually worked closely with 15 smaller or larger cultural institutions from various regions of Greece and from different sectors (museums, archives, a music library, a theatre etc), who gradually joined the project.

The Ministry has invested considerable effort and has effectively supported the cultural institutions throughout the ingestion process, including the use of the LIDO harvesting schema and the ingestion tool developed by the ATHENA project.

11 500 items from 11 institutions have so far been contributed for publication in Europeana.

Participating collections include:

- Benaki Museum - [www.benaki.gr](http://www.benaki.gr) : 3 440 art and historical objects from Greece and other parts of the world
- National Documentation Center - [www.parthenonfrieze.gr](http://www.parthenonfrieze.gr) : 119 blocks from the Parthenon Frieze and [www.pandektis.ekt.gr](http://www.pandektis.ekt.gr) : 1 500 bronze coins of the ancient Macedonian Kingdom
- Historical Archive of the Aegean "Ergani" - [www.ergani.org.gr](http://www.ergani.org.gr) : 1 500 items from the Kourtzis Archives - National Gallery - Alexandros Soutzos Museum - [www.nationalgallery.gr](http://www.nationalgallery.gr) : 1 270 artworks
- National Research Foundation "Eleftherios K. Venizelos" - [www.venizelosarchives.gr](http://www.venizelosarchives.gr)
Collection of 1050 postcards & photographs from 19th - 20th century
- Music Library of Greece "Lilian Voudouri"- www.digma.mmb.org.gr : 970 musical manuscripts and texts from the archive of Greek composer Mikis Theodorakis
- Museum of Cycladic Art - www.cycladic.gr : 350 objects of Ancient Greek Art, Cycladic Culture and Ancient Cypriot Art
- Museum of Greek Folk Art - www.melt.gr : 320 objects
- Research Centre for the Study of Modern Greek History of the Academy of Athens www.psifiakaarxeia.academyofathens.gr : 160 papers of the Greek poet Dionysios Solomos
- Hellenic Maritime Museum www.hmm.gr : 50 objects from the museum's collection

One could ask what the most difficult part was in the whole process. It turned out that it was not the use of the ATHENA ingestion tool or the mapping of the different metadata to the LIDO harvesting schema; rather, it was the...
extra work that the institutions had to do to prepare their metadata and export them from their own databases. In fact, the only requirement from institutions by ATHENA was to provide metadata in an XML format and to include, for each digital item, a unique pointer to the webpage where the item is originally shown together with the location of the digital image of the item. However, even for that simple task, the majority of institutions had to do extra development work, either to be able to just extract XML files, or to include the necessary URLs. One institution had to launch a new version of its website before they could obtain a unique pointer to each digital item. Another had to manually split up information stored in only one XML element to create proper descriptive metadata for each object. Quality checks of the content also required extra work. Opening the information to the public was an incentive for many to review and make corrections and improvements to their metadata and digital images, resulting sometimes in selecting only a small number of items from their collections.

**Problems and perspectives**

Overall, the initiative has been successful and has motivated public museums and other cultural institutions to bring their content online and become part of Europeana. Important, high quality content coming from a range of sectors has been contributed. However the total number of digital items remains relatively small and the number of institutions, although significant within the ATHENA project, is also small, compared to the national investment in digitisation that happened in the years 2004 - 2008, and the wealth of cultural content in Greece.

Various problems that prevented institutions from participating have been identified. The
content from many institutions, although digitised, is not accessible online and therefore cannot be displayed on Europeana. After the digitisation projects were finished, the majority of institutions no longer had technical support and there was no one in the institution who could export their metadata. Software companies were not willing to put in the extra effort required, especially when the corresponding contracts were over. The institutions' decision makers often could not appreciate the importance of these initiatives and did not consider participation - and the required effort for reviewing, correcting and enhancing the metadata that publication to Europeana would entail - as a priority. Some institutions were even reluctant to publish their content on Europeana at all.

Also, some more Greek institutions will contribute content to Europeana through other projects in the Europeana cluster, such as APENET, CARARE, EFG, ECLAP, DCA, Judaica Europeana etc. and the forthcoming Linked Heritage project that follows ATHENA.

However, the path has been opened. More content can follow, with encouragement and motivation from higher up, and financing at national level, for making it available online, in a way that can be used by other applications. This will help to make our country’s enormous cultural wealth a major part of Europeana.