

CHIMS: The Cultural Heritage Inventory Management System for the Maltese Islands

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The Superintendence of Cultural Heritage has launched the national inventory of Malta's cultural heritage. The inventory is based on a custom-built software developed by local expertise from the Superintendence and Datatrak Solutions Ltd. The software, which is called CHIMS (Cultural Heritage Inventory Management System) combines the functionalities of heritage documentation with geographic information systems (GIS).

The Cultural Heritage Act 2002 requires the Superintendence of Cultural Heritage to develop and manage a national inventory of cultural property. The Act also provides a very broad definition of "cultural heritage", incorporating movable, immovable, as well as intangible cultural assets. As such, the national inventory required by law will store and manage data pertaining to all sectors of cultural heritage, including archaeological, palaeontological, geological sites and deposits, landscapes, historical buildings and monuments, scientific collections, collections of art objects, manuscripts, books, published material, archives, audio-visual material and reproductions, as well as intangible cultural assets which have a historical, artistic and ethnographic value. Moreover, the national inventory will include data about the cultural property belonging to the State, to the Catholic Church and to other religious denominations, and data relating to privately owned cultural assets which are made accessible to the public.

The inventory will cover all of Malta's territory, including territorial waters. This has led to a very specific and unique scenario. Data pertaining to a rich, vast and varied amount of cultural property belonging to an entire country is being managed in a single inventory framework. Although the amount and variety of data is remarkably extensive, the limited size of the Maltese Islands will facilitate this challenging initiative of the creation of an all-inclusive national inventory.

Following its establishment, the Superintendence of Cultural Heritage launched the CHIMS (Cultural Heritage Inventory Management System) Project. The Superintendence views CHIMS as an opportunity to create for the first time in Malta a national core for heritage data management.

CHIMS will create a new knowledge-based context for understanding, managing and disseminating data concerning Malta's cultural heritage

through the creation and maintenance of an electronic database. CHIMS is designed to encourage access to cultural heritage as a requirement for protection as well as a fundamental human right. CHIMS has a social vision. As a tool, it is primarily an object of public policy. CHIMS will bridge the gap between academic and technical necessities and public concerns. This development will also provide an effective platform for improved public heritage management as well as improved contact between government and society at large.

Cultural heritage is one of Malta's precious resources. Although ubiquitous, the cultural heritage of the Maltese Islands is a non-renewable resource. Its loss as a result of ill-informed development or measures will lead to the steady depletion and in many cases extinction through irreparable damage and loss. Such loss is nothing more than a latent undermining of our cultural identity.

Experience, locally and internationally, is showing that it is no longer sufficient to simply create lists of cultural heritage assets. It is simply not enough to develop ever more lengthy and fragmented lists, schedules or catalogues of heritage resources without concurrently addressing public needs and expectations.

Increasingly it is becoming clear that speed and accuracy in data capture and retrieval are critical to heritage management and protection. Public accessibility to data storage is similarly becoming an increasingly important requirement, both for the local public and for extra-national audiences. It is also generally acknowledged that these objectives should be achieved in a unified format, through the use of advanced IT technologies.

CHIMS is aiming at developing these values with a view to making heritage data management a pro-active tool for the use of contemporary society in Malta. This is one tangible way in which cultural heritage management can extend its contribution to the improvement of the quality of life enjoyed by today's society.

On a technical level, CHIMS aims at recording details of immovable and movable heritage as defined by the Cultural Heritage Act, as well as recording details of historical events, sources of information, and heritage consultation and management histories. CHIMS will provide real-time capture, validation, processing and recording of cultural property data. All the data will be stored in a relational database, which is also GIS and internet-based. The indexing of the records will be done according to international standards. The System will provide flexible, end-user oriented querying and

reporting facilities. Up-to-date cultural heritage information will be available for online query and reporting based on defined user security levels. Cultural heritage information will be maintained as close to the source as possible, and data integrity will be enhanced by the elimination of data entry redundancy and extensive data reconciliation. Accuracy of data input is acknowledged as of paramount importance and CHIMS will therefore incorporate a mechanism of data validation and edits throughout the software to ensure such accuracy.

The Superintendence envisions a dynamic system that will grow, change, and remain current with available technology, changing philosophy of data management, changing regulations, and reporting requirements. All information will be accessible to all authorised users and the information shall be as current as possible. CHIMS will also enable the Superintendence to be more customer focused and to provide employees with the required tools to make informed, competent decisions and appropriate responses to customer requirements. CHIMS will not simply be an electronic inventory, but a number of functions of the Superintendence are also being automated through the use of the System. The System shall also provide increased flexibility for all users to have their needs met, especially since CHIMS will be internet-based.

Upon its establishment in 2003, the Superintendence of Cultural Heritage conducted a Systems Analysis and Needs Assessment of the current situation in Malta with respect to heritage data management. This analysis took a holistic and integrated approach to cultural heritage data management, addressing such diverse resources as museum collections, archives, archaeological and geological deposits, architectural resources, rural and urban landscapes and marine resources. During this process, the Superintendence identified a large number of stakeholders, who will have a direct role in the establishment and updating of CHIMS. Stakeholders include both regulators and operators within the heritage sector. The latter include public entities, ecclesiastical entities, NGO's, bodies within the public sector, as well as universities and organisations related to heritage, which are operating in Malta. Partners include e-Government, Government agencies and departments, schools, international and regional partners, as well as international organisations, institutions and universities. The CHIMS Project is intended to dovetail with broader nation-wide e-Government initiatives. Such a link will allow the data management system to be easily accessed by all interested audiences, locally and internationally.

Following the Systems Analysis phase, work continued on the drafting and publication of a Request for Proposal for the development or purchase of the

CHIMS software. This process entailed the analysis of the eventual System's content in terms of metadata, images, descriptive metadata, etc. Analysis was also carried out in respect to the means for the management of the System content, such as databases, user interface, GIS, and other technical specifications. The means of long-term data storage and conservation, both in electronic and in archival formats, were also investigated.

Following the publication of a Request for Proposals by the Superintendence, through the Department of Contracts, for the purchase or the development of a software system for the operation of CHIMS in 2003, and subsequent to the adjudication of submissions made to the RFP, Datatrak Solutions Ltd was identified as the company providing the best solution, and was subsequently awarded a contract for the development, maintenance and support of CHIMS in September 2005.

According to this contract, the Project was divided into three phases, namely an initial phase for conducting an analysis of the CHIMS requirements and to design the System, a second phase for data migration of already existing heritage data in electronic format, and a third phase during which the System was developed.

Phase 1, which included the creation of a new data model and all the relevant tables and data fields, as well as analysis of the Superintendence' business processes, was completed in May 2006. Work on Phase 2 commenced in April 2006, with the migration of data pertaining to the fine arts inventory and with the GIS mapping of the items within the same inventory.

The CHIMS Project was concluded in January 2007, including the full development and implementation of the System, and the System was officially launched on the 9th of February 2007 by the Superintendence of Cultural Heritage and inaugurated by the Hon. Dr. Francis Zammit Dimech, Minister for Tourism and Culture.

The national inventory Project will inevitably be an ongoing process. Following the development and installation of CHIMS, the Superintendence will be conducting various exercises of data capture and data input. Since existing inventories are of a highly sporadic nature, and since data capture for most categories of cultural heritage assets still has to be initiated, the next phase of the inventory Project following the implementation of the System, will certainly be an extensive undertaking. However, in order for the System to start functioning, the Superintendence has identified and prioritised sets of core data which require capturing, digitising, and/or inputting into the System. These include the national collections (pertaining to archaeology, fine

arts, history, natural history, and ethnography), known archaeological sites and threatened archaeological sites, built heritage, cultural assets which are in transit, and threatened intangible cultural heritage.