



SearchCulture.gr

The Greek National Aggregator for Digital Cultural Content



NATIONAL DOCUMENTATION CENTRE

NATIONAL DOCUMENTATION CENTRE (EKT)

July 2023

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www.searchculture.gr

Suggested citation

EKT (2023), SearchCulture.gr- National Aggregator for Digital Cultural Content. Athens: National Documentation Centre

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The publication is available online at: www.searchculture.gr

Fostering Digital Transformation in Greece's Knowledge Ecosystem

The National Documentation Centre (EKT), supervised by the Ministry of Digital Governance, as per its institutional position in the knowledge ecosystem, plays a central role in supporting the digital transformation of science and culture organisations for the benefit of society and the economy. EKT's core mission includes the collection, aggregation, hosting, documentation, dissemination and long-term preservation of authoritative digital content produced by the Greek scientific, research and cultural communities.

For this purpose, EKT, in cooperation with reputable institutions, collects digital collections of scientific and cultural content, enriches them by adding value to their documentation and makes them available as open data through the digital portals SearchCulture.gr¹ and OpenArchives.gr². At the same time, in cooperation with the Operational Programmes and the Managing Authorities, it is a catalyst for the establishment of common standards of interoperability and quality of documentation of digital archives in digitisation projects implemented at national level. For decades, EKT has been developing a number of flagship infrastructures in the field of open scientific communication and digital curation of the country's cultural heritage, such as the National Archive of PhD Theses³, the Open Access infrastructure for scientific publications⁴, the Library Automation Infrastructure OpenABEKT⁵ and the repository infrastructure SaaS⁶. EKT dynamically contributes to the digital transformation of culture, research and education nationwide, through infrastructure, services, standards, policies and educational programs, supporting dozens of scientific and cultural institutions from all over Greece.

¹ <https://www.searchculture.gr/>

² <https://www.openarchives.gr/>

³ <https://www.didaktorika.gr/>

⁴ <https://epublishing.ekt.gr/>

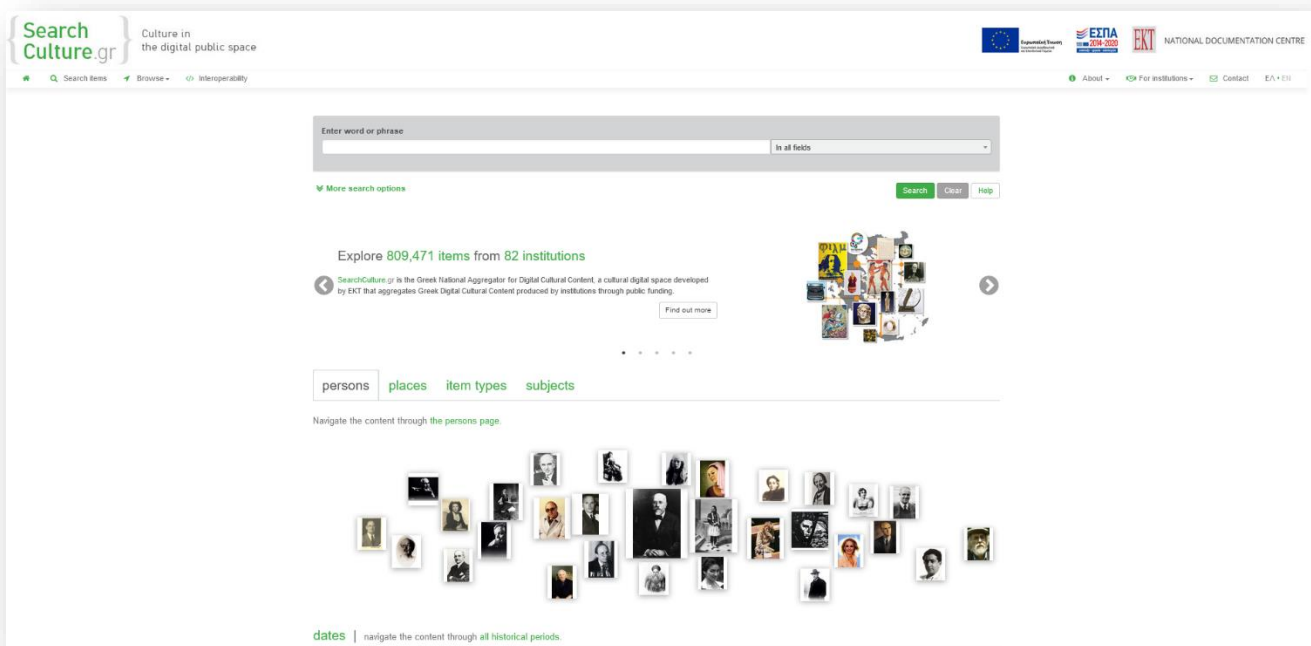
⁵ <https://www.openabekt.gr/>

⁶ <https://econtent.ekt.gr/el/pro/solutions/repositories>

Scope of SearchCulture.gr

SearchCulture.gr is the national aggregator portal of the country's digital cultural heritage and contemporary artistic production. Development of the infrastructure began in 2012 with in-house expertise from the National Documentation Centre (EKT).

The purpose of SearchCulture.gr is to provide a single point of access not only to all the country's digital cultural heritage but also contemporary cultural production, and to render it open, interoperable, reusable and available long-term for communities of interest, such as the educational and research communities as well citizens, for learning, creativity, inspiration and innovation, thus contributing to the creation of a Digital Public Space for Culture.



SearchCulture.gr home page

Collections and institutions

SearchCulture.gr currently offers access to over 810,000 digital records from 82 cultural institutions. The collections correspond to the whole range and variety of the different eras of the history of Hellenism and the different cultures that flourished within it, from prehistoric times to the present day. The content consists, among other things, of 2D and 3D depictions of archaeological monuments, historical documents and manuscripts, folklore items and relics, works of fine arts, works of religious art, cartographic material, audiovisual material of our intangible cultural heritage and books.



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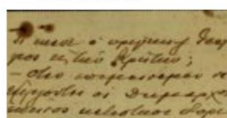
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Artifacts from the whole spectrum of Culture, History and Arts



Enhancing national presence on Europeana: EKT's Key Role in Achieving National Objectives

Since 2018, the National Documentation Centre is the accredited national aggregator ⁷ for the European platform Europeana, to which it has contributed more than 570,000 items, ensuring the availability of Greek content internationally.

The increase in Greek content available in Europeana is also one of the central national objectives in the field of Culture as part of the Digital Transformation Bible developed by the Ministry of Digital Governance, which supervises EKT (9.5.2. Works, 'Making cultural content available in Europeana's digital library').

The policies and specifications for inclusion of collections in SearchCulture.gr are fully compatible with those of the European Publishing Framework and Europeana Licensing Framework. This means that sending the institutions' collections to Europeana is fully streamlined, so institutions have no associated cost or work to do.

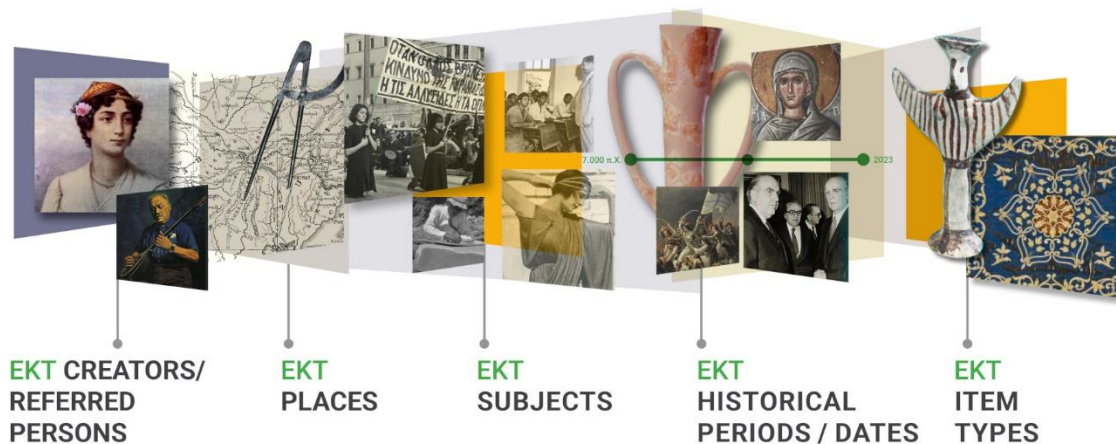
SearchCulture.gr members participate in the Europeana National and Thematic Aggregators Forum, exchanging know-how and actively contributing to European events related to Digital Culture, such as supporting the implementation of the European Recommendation for the Creation of a Data Space for Culture.

⁷ <https://pro.europeana.eu/organisation/greek-aggregator-searchculture-gr>

Advanced search and browse functions powered by semantic enrichments implemented by EKT

Most aggregators face problems regarding findability, multilingual searchability and presentation of the content they host because of the great heterogeneity of the metadata they collect. SearchCulture.gr is considered a model infrastructure for European standards, especially thanks to the systematic semantic enrichments⁸ of all collections by EKT's scientific staff, using state-of-the-art Semantic Web and Knowledge Representation technologies.

EKT has developed a series of bilingual Vocabularies and Authorities specifically for SearchCulture.gr with which metadata are enriched by adding specific 'EKT' fields containing terms from these vocabularies. This way it achieves homogenization and classification according to item types ('EKT type'), subjects ('EKT subject') and historical periods ('EKT historical period'), but also to distinguish creators ('EKT creator), referenced persons ('EKT related person') and places ('EKT place'). All EKT vocabularies are hosted on Semantics.gr⁹, a prototype Platform for publishing semantic resources as Linked Open Data developed by EKT and are openly available as Linked Data and via API for dynamic search and access by third-party applications.



Semantic metadata enrichment and the 'EKT field'

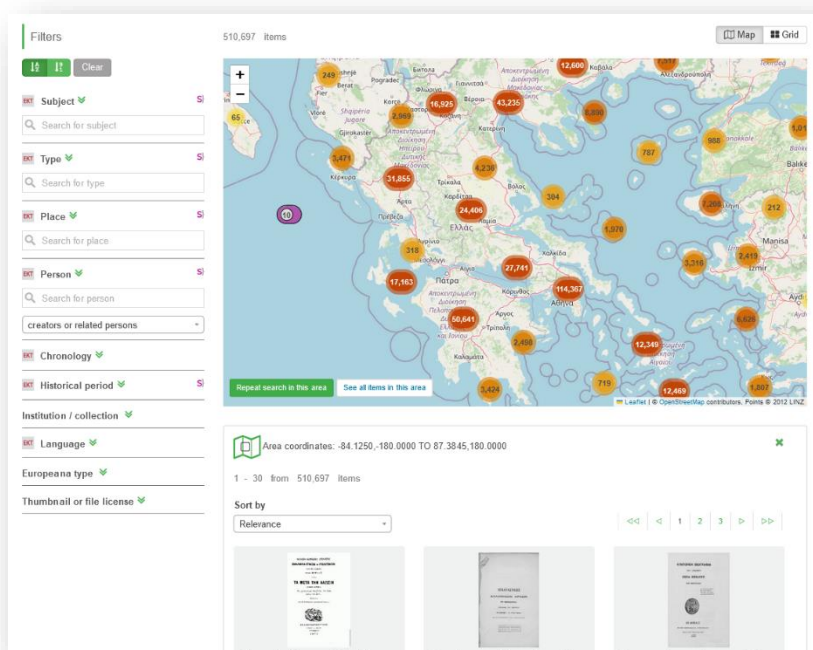
Semantic enrichment improves the quality and validity of data, adds a level of multilinguality, allows for the clarification of concepts, persons and places, supports the conceptual interconnection between items and is fully exploited in the search and navigation functions of the portal. By exploiting semantic

⁸ <https://www.searchculture.gr/aggregator/portal/enrichments>

⁹ <https://www.semantics.gr/>

enrichments, the SearchCulture.gr portal offers advanced and targeted search and browse capabilities¹⁰ across the hundreds of thousands of items found in the portal. Users can, for example, navigate or search by persons¹¹, subjects, types of documents, historical periods, and locations mentioned in the items.

Thanks to these multiple search criteria in the items aggregated in SearchCulture.gr, it is possible to develop and curate thematic exhibitions consisting of smaller or larger sets of records which, having a conceptual relevance, tell a story. EKT has so far created more than 40 thematic exhibitions¹² covering various themes. In addition to the multiple ways of accessing the documents, interactive visual data representation applications such as tag clouds, timeline and map-based discovery¹³. These are the most advanced search and navigation capabilities offered by a cultural content aggregator in Europe.



Search and explore items on the map using multiple filters

¹⁰ <https://www.searchculture.gr/aggregator/portal/help>

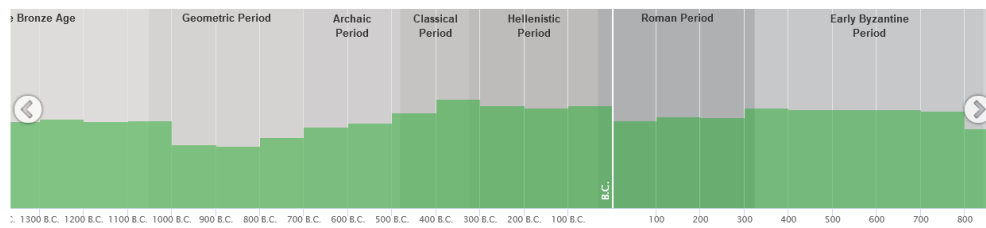
¹¹ <https://www.searchculture.gr/aggregator/persons/search>

¹² <https://www.searchculture.gr/aggregator/portal/thematicCollections>

¹³ <https://www.searchculture.gr/aggregator/portal/advancedSearch/search?moreOptions=true&resultsMode=MAP>

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dates | navigate the content through all historical periods.



persons places item types subjects

Navigate the content through the persons page.



Navigation by interactive timeline and tag clouds

A screenshot of the SearchCulture.gr website. The page title is "# Distinguished Persons in Greek History and Art". Below the title, there is a search bar with the text "Name" and "Probabilities or occupations". The search results are displayed in a list format, showing the name, birth year, and a list of probabilities or occupations. The results are sorted by the number of related items. The first result is "Vasileios Exilirentis" (1824-1904) with 11,147 related items. Other results include "Konstantinos Kavafis" (1896-1933) with 2,224 related items, "Vasilios Solomos" (1800-1856) with 2,193 related items, and "Anastasiadis Georgios" (1850-1900) with 2,193 related items. The page also features a navigation menu at the top and a footer with logos for EKT and the National Documentation Centre.

Search and explore items through the persons page

Common standards for interoperability and quality of documentation and digital files in digitisation projects

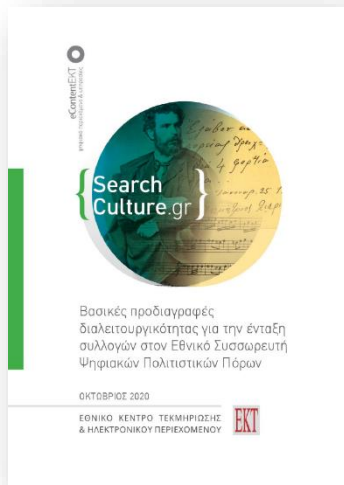
EKT is a catalyst for the establishment of common standards for interoperability, openness and quality of documentation and digital archives in digitisation projects implemented at national level. To make their collections available on SearchCulture.gr, all participating institutions must adopt the *Basic Interoperability Specifications*.¹⁴ It is recommended that these specifications be used in conjunction with the detailed *Interoperability and content quality specifications for publishing online digital cultural content* for the online availability of digital cultural content¹⁵.

The specifications published and updated by EKT encapsulate international experience, standards and good practices that content delivery systems of institutions, metadata and digital archives should adopt in order to be made available in a standardised way and in a manner compatible and interoperable with the national aggregator and Europeana. They cover issues such as interoperability protocols, use of open licences, the required analysis and acceptable formats of digital files.

¹⁴ <http://www.ekt.gr/el/publications/25039>

¹⁵ <http://www.ekt.gr/el/publications/25040>

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Basic interoperability specifications for the inclusion of collections in SearchCulture.gr

<https://www.ekt.gr/el/publications/25039>



Interoperability and content quality specifications for publishing online digital content

<http://www.ekt.gr/el/publications/25040>

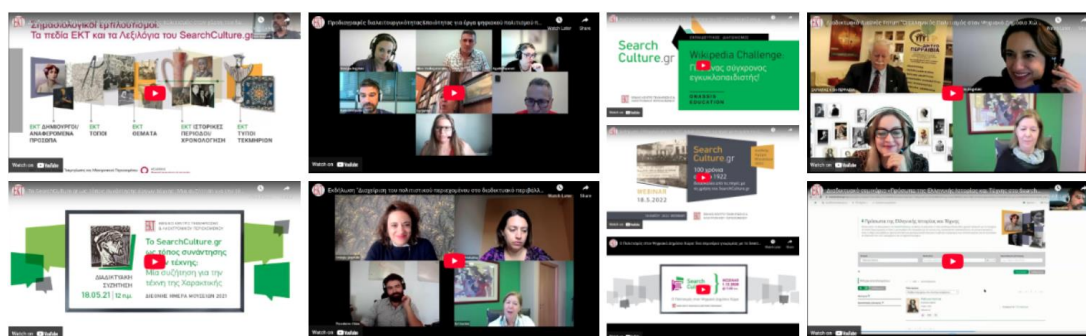
The Basic Specifications for Interoperability are now included as a compliance requirement in the new calls for proposals for the digitisation of the country's cultural heritage.

By the end of 2023, more than 100 new digitisation projects of the country's cultural heritage are expected to comply with the *Basic Specifications*, while the resulting collections - estimated at more than 500,000 items – are gradually expected to be available for inclusion in SearchCulture.gr, and through it in Europeana, from the end of 2023.

Through the adoption of common standards at national level, the aim is to adopt a common strategy on quality, promotion and re-use of the country's digital cultural heritage in terms of long-term sustainability of public investments in digitisation; to ensure the wide dissemination of the country's cultural heritage on the internet, within Greece and internationally, and the creation of a single public digital cultural space that is particularly beneficial for research, education and creative re-use.

Community outreach and skill-sharing

In addition to checking compliance with the specifications and carrying out all the necessary procedures for the inclusion of content in the national repository and Europeana, as part of its role as national aggregator, EKT provides consultancy and support services for the adoption of the specifications by institutions through webinars and the publication of information material¹⁶ and remote support, thus making a substantial contribution to the digital transformation of the cultural sector.



Webinars for organizations and communities of users

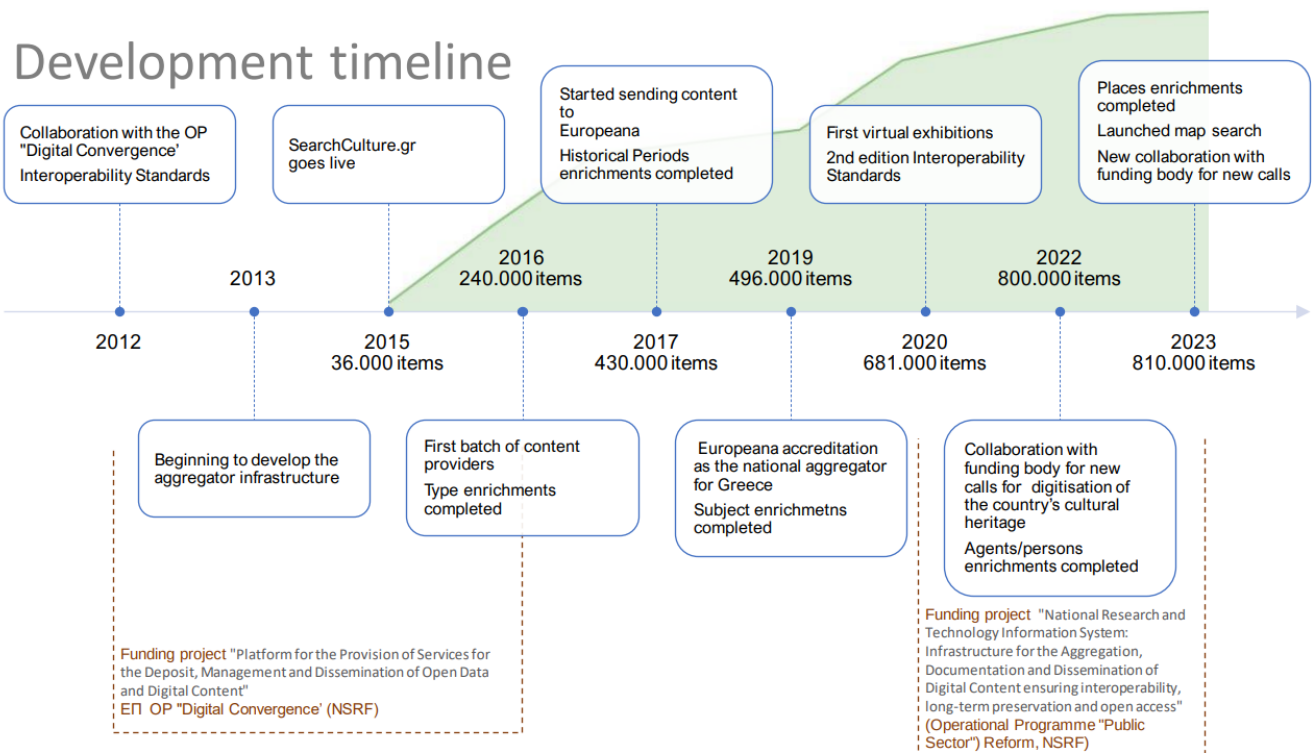
More than 10 webinars¹⁷ have been conducted covering topics such as EKT's *Interoperability Specifications*, copyright clearance and licensing procedures and the use of SearchCulture collections as an educational and research tool. These have been attended by more than 2,500 participants, including cultural employees, representatives of local government and public organisations, university professors and researchers. Both the rapid growth in traffic and the high attendance of the webinars, as well as the enthusiastic comments of the participants in the webinars and in an extensive audience survey we conducted, demonstrate the significant public interest in SearchCulture.gr.

¹⁶ <https://www.searchculture.gr/aggregator/portal/documentation>

¹⁷ <https://www.searchculture.gr/aggregator/portal/documentation#webinars>

Development timeline of SearchCulture.gr

SearchCulture.gr was launched in 2012 by the National Documentation Centre (EKT) in cooperation with the Operational Programme ‘Digital Convergence’, with the aim of collecting and consolidating the entire Greek Digital Cultural Heritage produced by publicly funded organisations under Calls 31 ‘Culture’ and 31.2 ‘Digital Services for the Promotion of the Greek Cultural Digital Heritage’. The first phase of SearchCulture.gr development was funded by the project ‘Platform for the Deposit, Management and Delivery of Open Metadata and Digital Content’¹⁸ implemented by EKT within the framework of the OP ‘Digital Convergence’ (NSRF) and completed in early 2015.



Development timeline

¹⁸ <http://saas.ekt.gr/>

In this first phase, EKT established the Interoperability Specifications for all 31 and 31.2 Actions. It also developed a Content Quality Control Service (Validator) to check the compliance of the Actions with the Specifications and a Digital Content Preservation Service (Preservator) in which copies of digital documents were deposited to ensure their long-term availability. Finally, it developed the *Unified Catalogue of Cultural Digital Assets*, in which it included the collections, which it also made available to Europeana. Branded “SearchCulture.gr”, the unified catalogue first launched in 2015, bringing together the collections of the above projects, 42 Acts in total, while in 2016 it started to contribute material into Europeana, taking on the role of Greek National Aggregator in 2018.

Since 2020, the upgrading and expansion of SearchCulture.gr has been ongoing within the framework of the project ‘National Information System for Research and Technology: Infrastructure for the Aggregation, Documentation and Dissemination of Digital Content, ensuring interoperability, long-term preservation and open access (Operational Programme ‘Public Sector Reform’ (NSRF¹⁹).

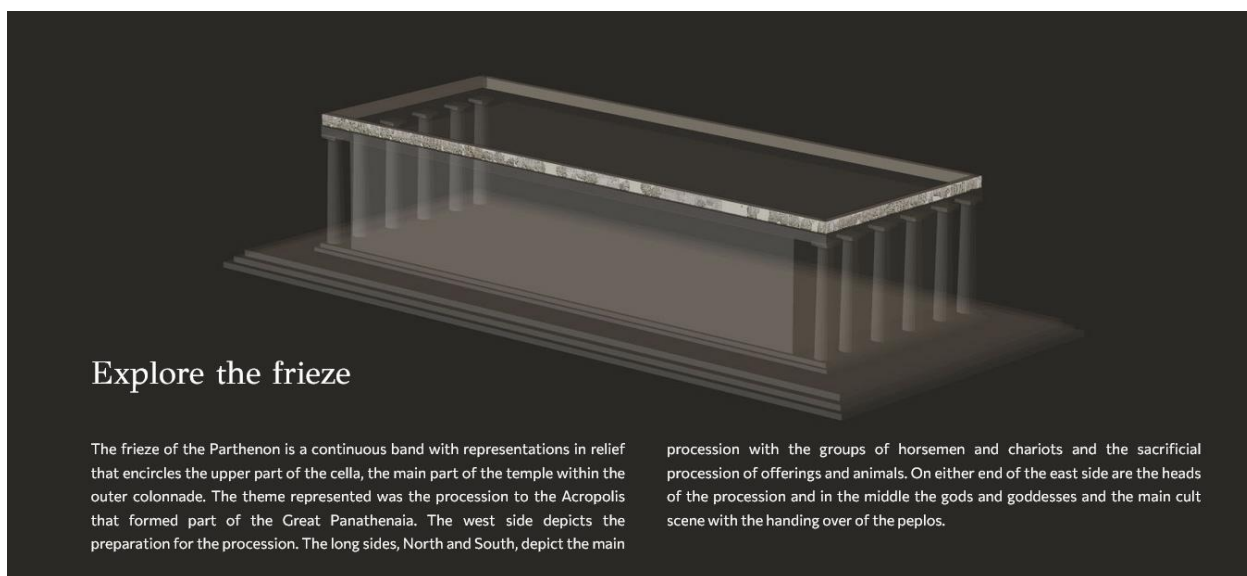
SearchCulture.gr is now going through a phase of maturity. Having developed infrastructures and processes that allow the aggregation and semantic enrichment of the country’s cultural heritage in line with European standards, it is now facing the challenges of the next phase of development. This mainly involves the scaling up of aggregation, which in turn not only requires the cultivation of the digital skills of stakeholders and communities of interest in the context of their digital transformation, but also the redesign of the infrastructure and engagement processes to allow for increased participation, collaboration, transparency and control for the success of a Digital Public Space for Culture.

¹⁹ <http://www.ekt.gr/el/projects/24958>

Other projects related to Digital Culture

EKT plays an important role in the wider ecosystem of digital culture through a range of actions, partnerships and networks aimed at expanding the dissemination of Greek culture and widening the expertise of institutions.

Long-term partnerships with important cultural institutions in the country, such as the Acropolis Restoration Service, have resulted in major infrastructures and platforms for the dissemination of their work. EKT, in cooperation with the Acropolis Museum, has developed an application for the Parthenon Frieze,²⁰ recently redesigned according to modern standards. Through it, the public and experts alike can immerse themselves in this unique work of art. The application brings together photographs and descriptions of all the surviving blocks of the frieze that are in the Acropolis Museum and abroad. In addition, as part of this long-standing cooperation, EKT has developed a repository of educational content on the Acropolis²¹, an interactive application²² for children, a repository for the archive of the restoration works on the Acropolis²³ and, with the openABEKT service, the digital catalogue of the YSMA library.²⁴



The Parthenon Frieze, an interactive application

²⁰ <https://parthenonfrieze.gr>

²¹ http://repository.acropolis-education.gr/acr_edu/

²² <http://www.acropolis-athena.gr/>

²³ <http://repository-ysma.ekt.gr/ysma/>

²⁴ <https://ysma.openabekt.gr/>

For the Museum of Cycladic Art, EKT created a repository of educational content²⁵, and through collaboration with the School of Fine Arts of the Aristotle University of Thessaloniki, the first repository of a School of Fine Arts²⁶ in Europe, with works by students and professors, where the contemporary artistic production of the Department is published on open access principles.

For the National Research Foundation, EKT created the PANDEKTIS²⁷, in 2007. The repository hosts the Foundation's important digital collections of Greek history and culture. Many scientific fields related to culture and the humanities in general are covered by EKT's electronic publications through its ePublishing service.²⁸.

Recently, EKT, in cooperation with the 'Book Lovers' Garden', developed the 'About Libraries'²⁹ website, a unique digital encyclopaedia on the history and content of libraries around the world from antiquity to the present day.

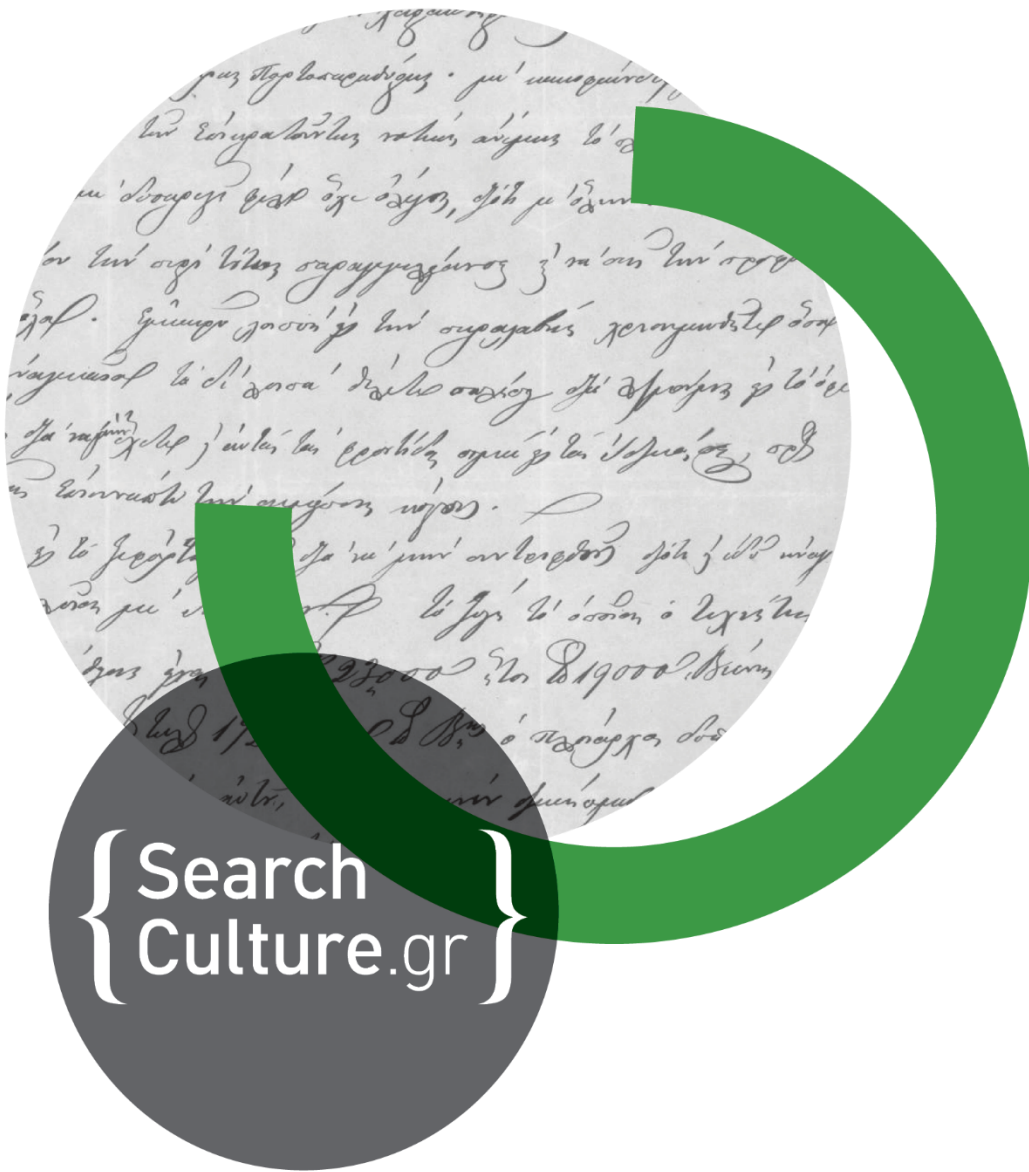
²⁵ <http://repository-mca.ekt.gr/mca/>

²⁶ <http://repository-artschool.ekt.gr/artschool/>

²⁷ <http://pandektis.ekt.gr/pandektis/>

²⁸ <https://epublishing.ekt.gr/el/subjects?id=6>

²⁹ <https://www.aboutlibraries.gr/libraries/>



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Ανάπτυξης

Ε.Π. "Μεταρρύθμιση Δημόσιου Τομέα 2014-2020"
ΕΥΔ Προγράμματος "Ψηφιακός Μετασχηματισμός"
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