

**Ministero dei Beni e delle Attività Culturali e del Turismo
Soprintendenza Speciale per i Beni Archeologici di Roma**

*Italian Ministry for Cultural Heritage and Tourism
Special Superintendence for the Archaeological Heritage of Rome*

SITAR Project - The first Digital Archaeological Cadastre of Rome

ABSTRACT

At the end of 2007, MiBACT-SSBAR designed the first action plan of SITAR Project, in order to design, realize and maintain the first *Digital Archaeological Cadastre of Rome*. This project was planned also in direct comparison with others experiences promoted and carried out by the same Italian Ministry in behalf of Cultural Heritage.

The primary focus of the implementation strategy was put on the following pressing needs:

- archaeological archives digitalization and rationalising;
- via-web data and applications accessibility;
- new forms of collaborative multi-domain knowledge creation, sharing and recombination;
- public engagement and active participation.

In these activity areas, the MiBACT-SSBAR has carried out some appropriate initiatives, achieving the following objectives:

- a digital lab for acquiring, processing, indexing and archiving data and documents, both scientific and administrative;
- definition and codification of current daily workflows and procedures;
- description of Institute cultural business and data models;
- a central spatialized database for the metadata archiving, both of geographical and descriptive items;
- a dedicated infrastructure for database, apps, back-up and data preservation systems, workstations, acquiring and output devices, etc.;
- a network for internal and external users & machines connections, based on public optical fibre circuits, supplied by the Consortium GARR as Italian managing body of National Education and Research Network (GARR-X) and supported by its wide community;
- identification and qualification of necessary human resources & professional profiles involved in a dedicated core-workgroup, to design and develop the SITAR system and web platform; specifically, this wide workgroup is a compound of senior archaeologists, analysts, professionals and technicians, in charge of the implementation of the SITAR cultural business and data models, and fine tuning of new competences, procedures and tools; moreover, a dedicated data-entry workgroup has been structured thanks to a selection of young archaeologists with early experiences in fields of ancient topography, classical archaeology, archaeological census activities, GIS skills, etc.; with its total 80% of female percentage, this workgroup represents a clear expression of actual trend of the Italian archaeological sector, highly populated of women and young researchers, requesting for new qualification and job opportunities within the complex Cultural Heritage field;
- new web applications both for back-end activities and publication/dissemination of structured data and metadata, digital objects and interactive territorial and archaeological web maps, in particular referring to the open science paradigm and open source solutions;

- continuous comparison with others workgroups operating both within the same Ministry projects and academic and research sectors, also by means of participation to inter-ministry committees, european networking projects (as ARIADNE, <http://www.ariadne-infrastructure.eu/>, and DCH-RP, <http://www.dch-rp.eu/>), conferences and workshops, publications, etc.;
- a continuous flow of informations in behalf of internal and external personnel, professionals and other users about theoretical and practical items, tools and application functionalities, availability of new dataset and metadata, etc., also with the aim to aggregate and engage an alive users community;
- a more and more efficient public informative services delivering, through more solid and easy-to-use web apps, web services, project portal, etc.;
- a necessary guarantee and allocation of MiBACT-SSBAR own annual financial funds to the SITAR Project, in order to implement a unique, not fragmented project framework with a progressive release of functional components and re-organization of new collaborative activity areas;
- finally, the activation and ongoing enrichment of new SITAR web platform dedicated to the Public Archaeology of Rome.

A web platform to make the digital archaeological cadastre of Rome really accessible and shareable

Among these topics, the latter achievement represents the real access door both to informative and cultural heritages that MiBACT-SSBAR preserves and exploits for the benefit of many different user groups and various uses, from scientific, professional and technical public requests for affordable open data banks, up to citizens' needs of cultural information and more awareness about their native or immigration territories and daily "personalized landscapes".

Indeed, the goal of the SITAR project is the creation of the Archaeological Territorial Informative System of Rome, with a particular attention to the engagement and participation of the different *publics* interested and involved in the archaeological knowledge creation, sharing, exploitation and dissemination processes, through and across the web, the research networks and the social media.

The core of this innovating programm is the SITAR system that can manage many different types of data sets, ranging from large monumental contexts to single archaeological features found in rescue excavations, deriving from the entirety of salvage or planned investigations carried out in the territory of the Cities of Rome and Fiumicino.

The underlying logic architecture of SITAR web platform is based on 4 primary information layers and a fifth "class" still in development (pay attention to the fact we don't give the translation of italian definitions of our geospatial features classes, but we try just to explain them briefly):

- the s.c. ORIGINI DELL'INFORMAZIONE (in acronim OI): the administrative and scientific information of every single archaeological digging, geophysical\geological survey, topographical study, etc. (in others words the sources of information);
- the s.c. PARTIZIONI ARCHEOLOGICHE (PA): the scientific description of the archaeological findings even if fragmentary, identified by the chronological or functional criteria;
- the s.c. UNITÀ ARCHEOLOGICHE (UA): each archaeological complex or monument, conventionally identified by the logical union of many PA which analyzed together makes an unambiguous archaeological monumental contest (for example a specific ancient building);
- the s.c. DISPOSITIVI DI VINCOLO (DT): the law-constraints which punctually preserv each complex and/or monument;

- finally, the s.c. POTENZIALE ARCHEOLOGICO still in development (we try to translate it with “archaeological potential”): it is generated by the logic union and super-interpretation of the base layers. Local authorities and institutional bodies must bear the ‘potenziale archeologico’ map in mind when working on the urban development of a territory.

Open approach, open data, Open Science

The early SITAR Project proposal to safeguard data and related digital objects, and at the same time to foster new forms of knowledge sharing and exploitation, is the following:

- *Rights holders:*

- MiBACT - SSBAR for all SITAR GeoDB dataset/records and archive documents directly owned by SSBAR;
- for the external Archives documents possibly stored in the SITAR web file system (e.g. public cartographic bases, historical document, etc.), a full compliance with owner (institution / natural person) copyright specifications will be guaranteed.

- *Content copyrights/copylefts:*

- Different copyrights/copylefts are expected to be applied, such as:

a) for the SITAR GeoDB datasets (OI, PA, UA, DT, digital objects, etc. owned by SSBAR in its archives), also in according to different publication modes (web apps, web service OGC compliant, file downloads, open data & linked open data, etc.), there are the following orientations:

1) CC-0 license or another one suitable for purposes of public domain data and information dissemination, sharing and use/re-use, for the all the SITAR *primary source data* (with “primary source” meaning the consolidated internal data different from the “external sources” of other datasets not directly managed by SITAR and SSBAR); these SITAR primary data could be available also for open data and Linked Open Data applications, e.g. in Europeana projects;

2) CC-BY-SA[+/- NC] license or another one suitable for purposes of scientific data and information dissemination, sharing and use/re-use, for the all the SITAR GeoDB dataset, single record and/or digital object available on line/off line in different access modes for scientific and territorial studies;

b) for the digital copies/versions of external Archives documents, possibly stored in SITAR web file system, a full compliance with owner (institution / natural person) copyright specifications will be guaranteed.

Towards a Public Archaeology Knowledge System of Rome

Therefore, the primary aim is to foster the opportunities of cooperation between MiBACT-SSBAR and other public administrations, local government bodies and their services, professionals, researchers and academics, technicians, cultural creatives and up to the citizens, both native and immigrant ones, educational sector stakeholders, students and, not least, tourists.

All that in rapidly evolving scenario in which the exponential increase of public infrastructural and private insediative transformations has claimed, on one hand, the preventive archaeology as a necessary daily practice, involving quite two or three generations of archaeologists and cultural heritage specialists, above all women and young researchers, in registering, collecting, processing

and archiving lots of field heterogeneous data. On the other hand, this urban process has stimulated a new and stronger interest among citizens, educators, students, tourists, etc., for a wider knowledge and ‘awareness’ of Rome’ subsoil, not only for the well known monumental evidences, and indirectly it has promoted new users’ needs in terms of data and information availability, accessibility, understanding, sharing and personalized recombination.

For all those reasons and in light of quite four decades of institutional activities and action plans, the MiBACT-SSBAR has started an innovation program, both organizational and technological, in order to correctly address, above all by means of the SITAR Project, the lacks and issues still affecting a full archaeological knowledge sharing and exploitation, and to meet its *publics* needs and requirements across the whole cultural sector, with a particular attention also for socio-economic and territorial development items.

SITAR Project Web Resource

SITAR Project web site: <http://sitar.archeoroma.beniculturali.it/>

SITAR web pages on Academia.edu platform: <https://beniculturali.academia.edu/ProgettoSITAR/>

SITAR Knowledge Base: <http://sitarmoodle.archeoroma.beniculturali.it/>

SITAR Knowledge Base on Academia.edu:

<https://beniculturali.academia.edu/SITARProjectKnowledgeExperienceBase/>