

Mapping Cultural Heritage: Exploring Places

ATHENS

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www.efa.gr



Mapping Ancient Rome: from Data Collecting Towards Shared Knowledge

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Project Director Soprintendenza di Roma (Sitar Project)

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IT Team (Sitar Project)

Project Director



Mirella Serlorenzi
SSABAP

SITAR team



Giorgia Leoni
Scientific Technical
Assistant SSABAP



Claudio Borgognoni
Archaeologist



Federica Lamonaca
Archaeologist / Topographer



Stefania Picciola
Archaeologist

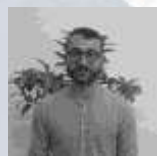


Stefania Valentini
Archaeologist



Alessandro Vecchione
Archaeologist / Topographer

IT team



Carlo Cifarelli
Senior Software
Engineer



Riccardo Montalbano
Archaeologist, GIS
Expert



Ascanio D'Andrea
Archaeologist, GIS
Expert



Andrea De Tommasi
GIS Expert



Daniele La Nave
Senior Java Developer

A 15-YEAR PROJECT

Project starting

Development, testing and first publication of data inside the intranet webGis of the Archaeological Superintendency of Rome

Implementation of SITAR database, expansion of the system's logical architecture

Archive data completion of the Rome Archaeological Constraints Map

2007

2008

2009

2010

New web interface, functional implementation of webGIS and integration of data editing tools in geo-web applications

new WEB-GIS application inside a comprehensive distributed platform

New official website, new web-interface, consultation and research tools. Sharing Open Data.

work in progress...

2011-2016

2017-2019

2020-2021

2022

Joined SITAR project

Laura Acampora, Funzionario Archeologo DG Musei
Alice Ancona, Assistente Tecnico SSABAP-RM
Irene Baroni, Assistente Tecnico SSABAP-RM
Claudia Berlendis Archeologa
Valeria Boi, Funzionario Archeologo ICA
Daniela Bruno, Archeologa
Alba Casaramona, Assistente Tecnico SSABAP-RM
Arjuna Cecchetti Archeologo
Barbara Ciarocchi, Assistente Tecnico SSABAP-RM
Sara Colantonio, Funzionario Archeologo MNR
Fulvio Coletti, Assistente Tecnico Parco Archeologico Colosseo
Cristiana Cordone, Topografa
Francesca Crescentini Archeologa
Luca De Angelis Archeologo
Emanuela D'Ignazio Archeologa
Valentina Di Stefano, Funzionario Archeologo SABAP-BO
Rachele Dubbini, Archeologa
Fabiola Fraioli, Archeologa
Petra Gringmuth, Topografa
Ilaria Jovine, Funzionario Archivista Polo Museale Umbria
Luisa Marulli, Archeologa
Mirco Modolo, Funzionario Archivista ACS
Marida Moretti Archeologa
Roberto Narducci, Funzionario Archeologo SSABAP-RM
Raffaella Palombella, Archeologa
Cecilia Parolini, Archeologa
Giorgia Pasquali, Archeologa
Alessandro Pintucci, Archeologo
Martina Revello Lami Archeologa
Anna Romano Archeologa
Simone Ruggeri, Archeologo
Francesca Chiara Sabbatini, Architetto
Milena Stacca, Archeologa
Lino Traini, Funzionario Archeologo SABAP-CS
Annalisa Treglia, Funzionario Archeologo DG Musei Puglia
Claudia Tempesta, Funzionario Archeologo Parco Archeologico Ostia Antica



Contribution to IT development

AESYS S.r.l. – Progettazione e sviluppo software e web design per l'implementazione dell'interfaccia grafica del portale web SITAR (miglioramento ergonomico); implementazione dell'applicativo web SITAR Knowledge Base
AreSoft S.r.l. – Studio di fattibilità per l'implementazione nella piattaforma SITAR di un modello di gestione dei dati archeologici 3D
Blue Bits S.r.l. – Seconda fase di sviluppo tecnologico del webgis
A. Caprioli – Consulente per la seconda fase di sviluppo del webgis
EiS S.r.l. – Sviluppo del Modulo Gestionale Documentale (SIGEDO)
Emeri Farinetti, Archeologa
R. Grassucci – Consulente per la seconda fase di sviluppo del webgis
SOFTLAB S.p.A. – Sviluppo WebAIS e sue implementazioni e prototipo della Digital Library Università degli Studi di Verona, Dipartimento di Informatica – Mappatura del modello dati SITAR sullo standard internazionale GeoUML
Andrea Varavallo, Sistemista – Seconda fase di sviluppo tecnologico del webgis e primo portale web archeositarproject.it

MAIN PROJECT GOALS

to **OVERCOME** years of delay in standardization processes for archaeological data management of the Superintendence

to **SIMPLIFY** management/administrative framework in order to enhance processes related to the protection and promotion of Cultural Heritage

to **BUILD** a flexible and dynamic tool that can be expanded and modified, according to new needs

to **TAKE ADVANTAGE** of previous experiences within the Superintendence and other institutions with already acquired and available data

to **PROVIDE** new tools in order to better inform and influence a responsible urban and landscape planning

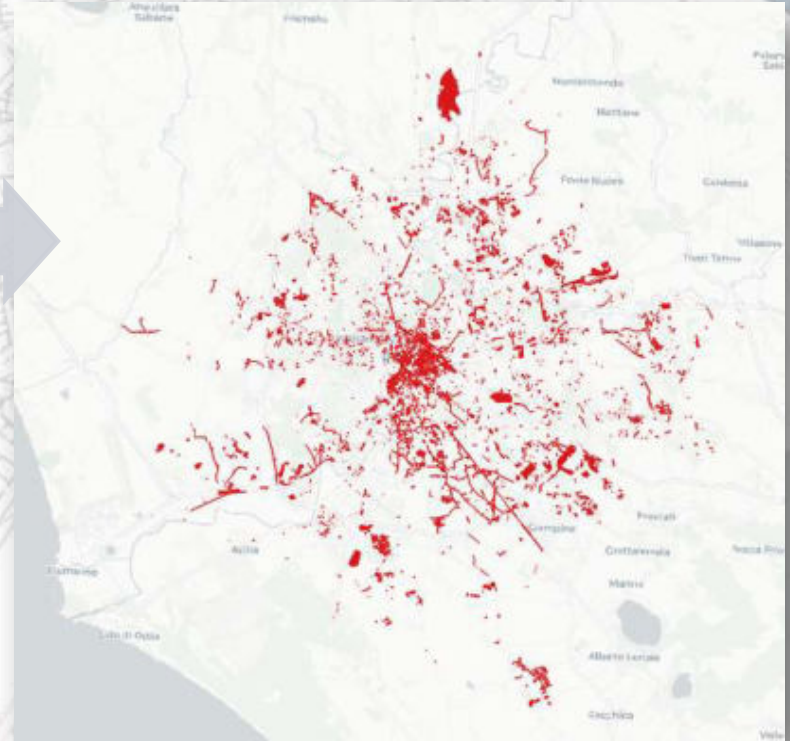
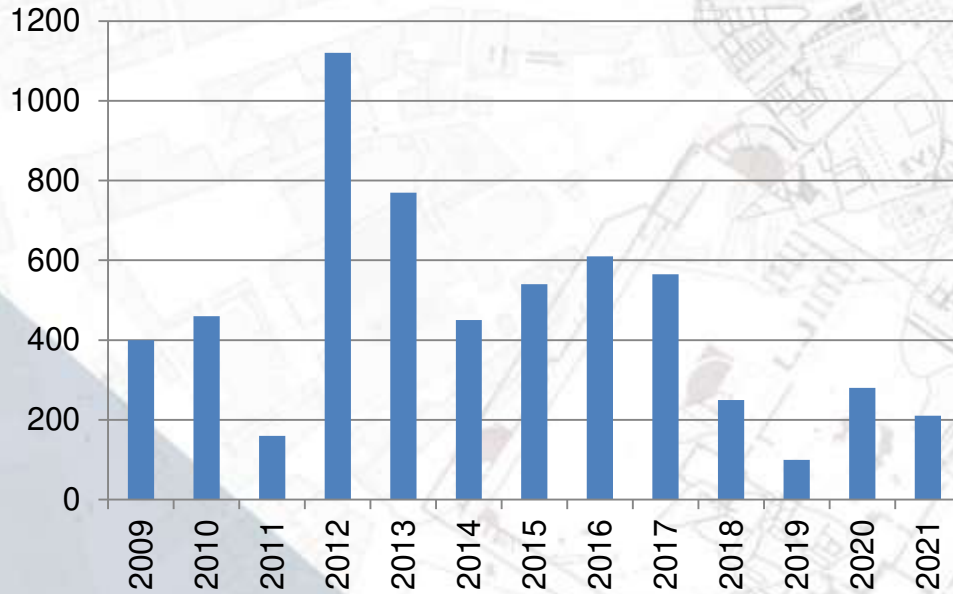
to **OFFER** an online open-data webgis tool for sharing knowledge

ACADEMIC INSTITUTIONS AND OTHER STAKEHOLDERS NETWORK

- Regione Lazio
- Università degli Studi della Basilicata
- Freie Universitaet Berlin
- University of Groningen – Groningen Institute for Archaeology
- Università Ruprecht Karl di Heidelberg
- Università degli Studi di Palermo
- Sapienza Università di Roma
- Università degli Studi di Roma Tor Vergata
- Università degli Studi Roma Tre
- Università degli Studi di Siena
- Università degli Studi di Trieste
- Università degli Studi di Verona
- Associazione Culturale DAT – Borsa di Studio “Silvia Mellace”



SOME NUMBERS: archeological surveys database

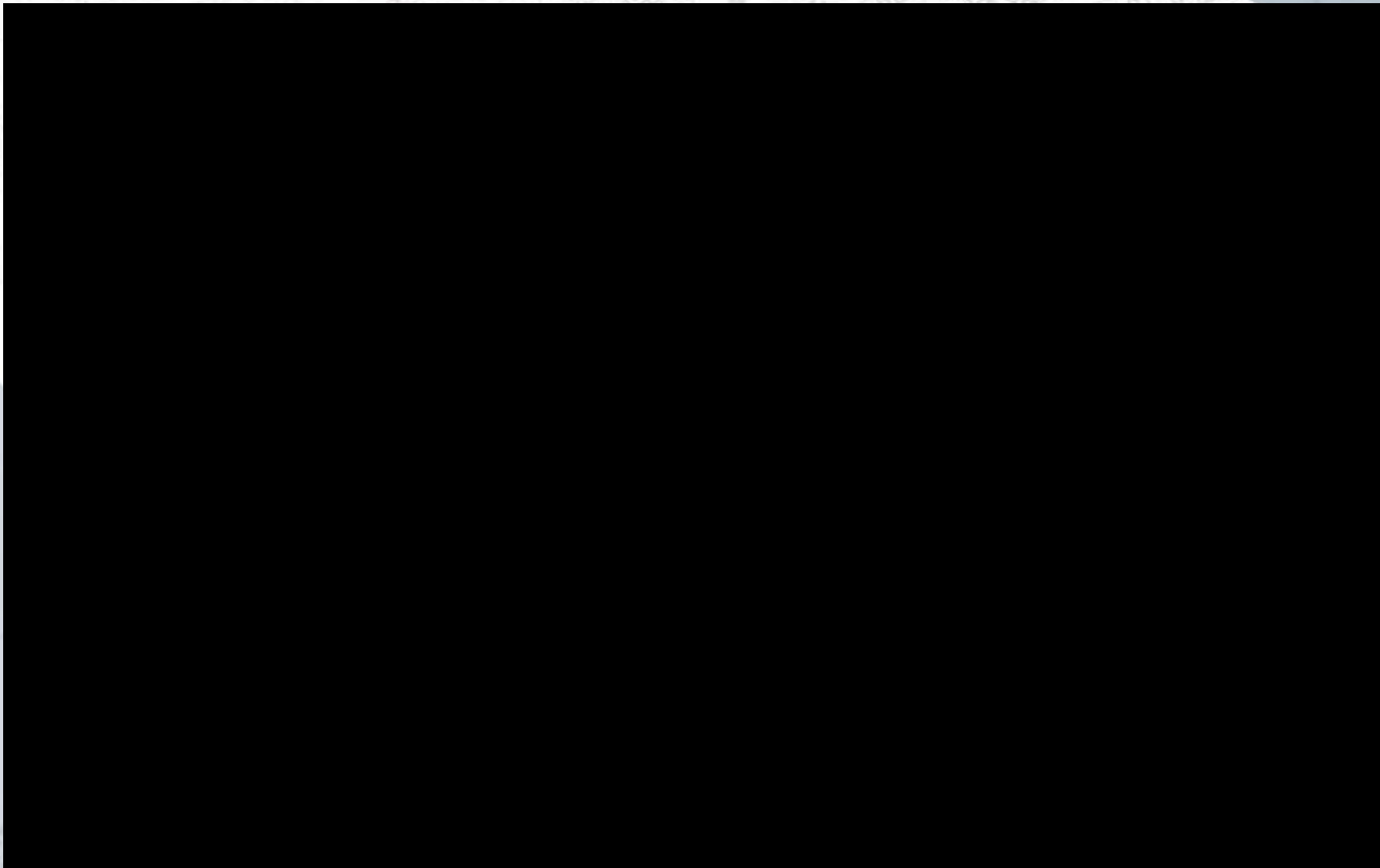


2009



2022

data geographic distribution



GUIDELINES FOR ARCHAEOLOGICAL INTERVENTIONS



DA – Documentazione Amministrativa

Nota di consegna della documentazione contenente l'elenco degli elaborati presentati

Formati File: pdf/A

[Modello DA](#) [Documentazione Amministrativa](#)

DS – Documentazione Scientifica

Schede con informazioni generali sullo scavo e su ciascuna evidenza (PA) individuata.

Formato File: pdf/A

[Scheda DS](#) [Modello Scheda DS](#) [Scheda PA](#)
[Modello Scheda PV](#)

DGA – Documentazione Grafica



Posizionamento topografico, planimetria generale e di dettaglio, sezioni stratigrafiche e prospetti.

Formati File: dxf, dwg, shp, sdf, geodatabase

[Documentazione Grafica](#) [Modello dwg](#) [Modello dxf](#)
[Modello shp](#)

DI – Documentazione Fotografica



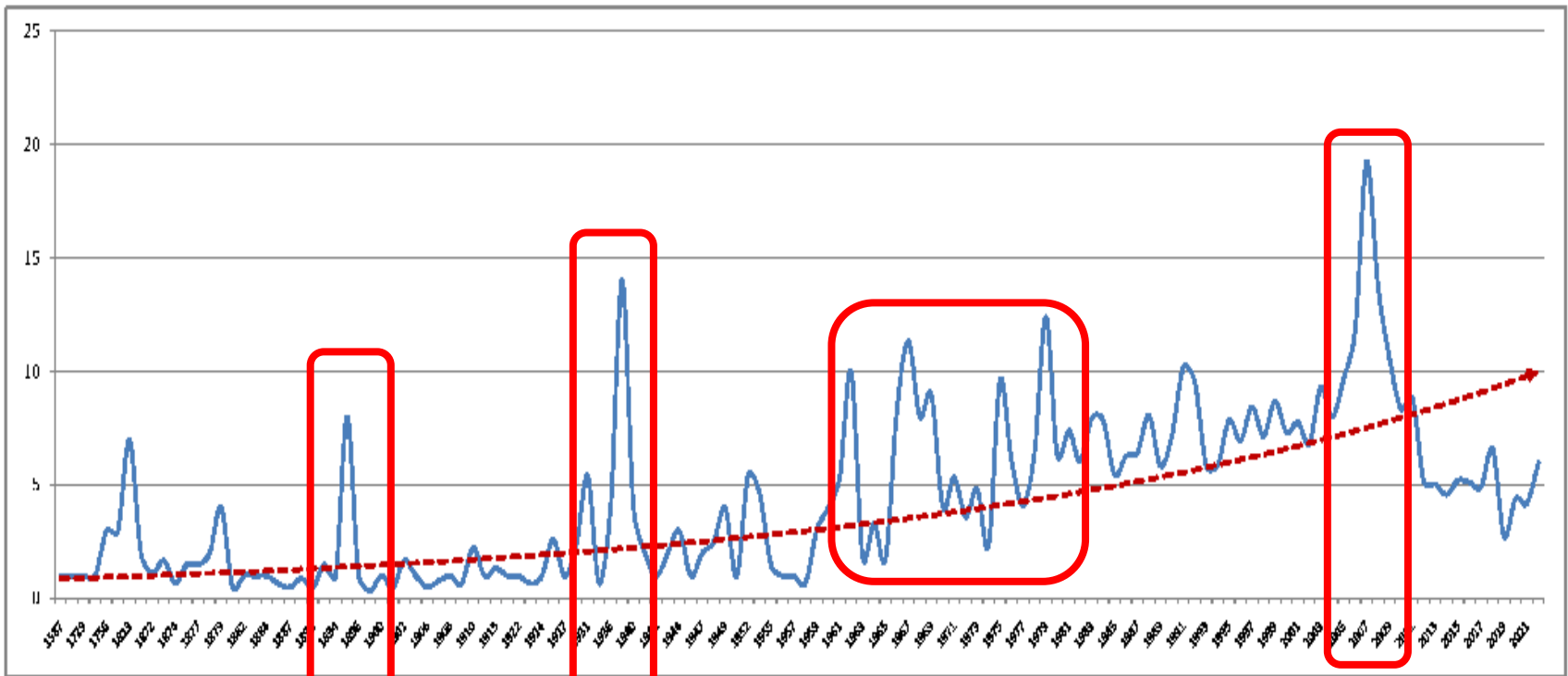
Immagini digitali generali dell'area d'indagine e particolari delle evidenze rinvenute.

Formato File: tiff, jpg

[Documentazione Fotografica](#) [Modello DF](#)

SITAR NUMBERS

following main urban development along centuries



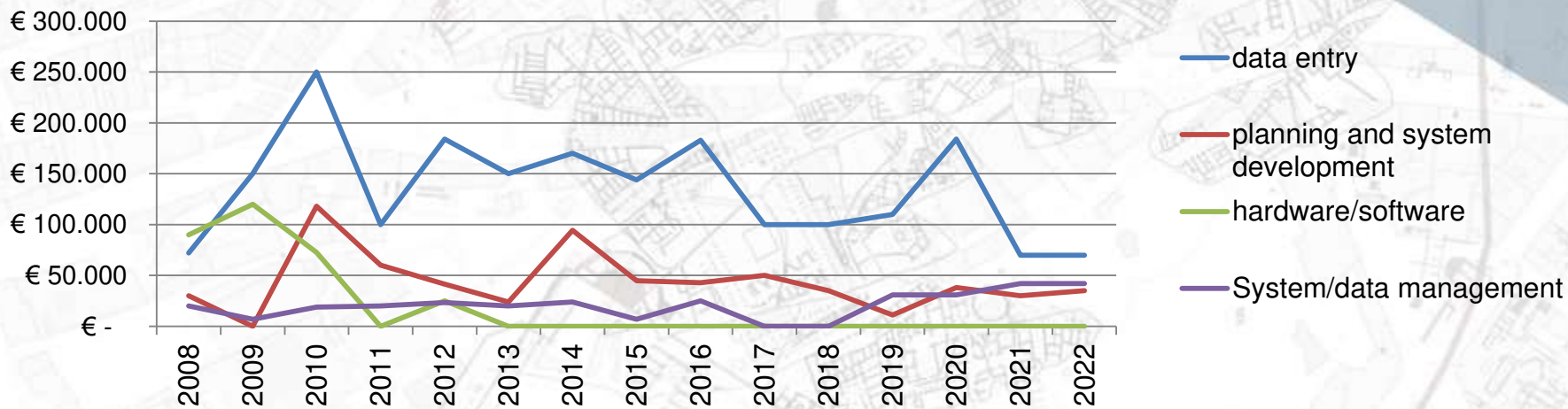
“Umbertina”
Rome

Fascist era
urban changes

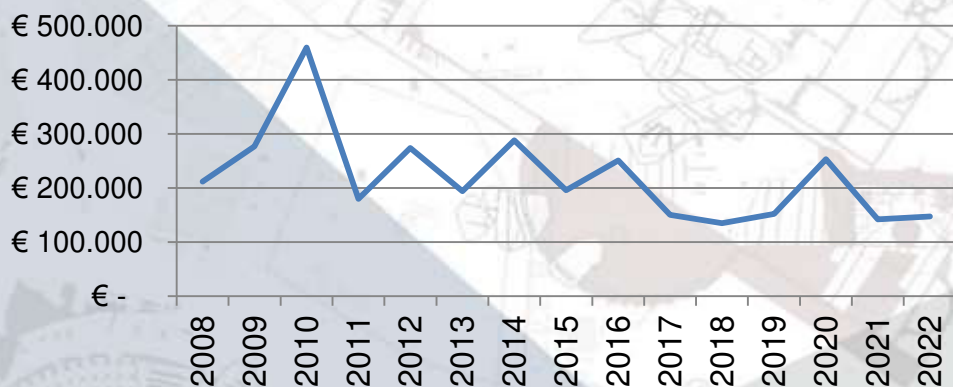
major interventions
of residential
buildings during
1970s

new underground
Metro C

SITAR COSTS by CATGEORIES (2008-2022)



SITAR COSTS per YEAR (2008-2022)

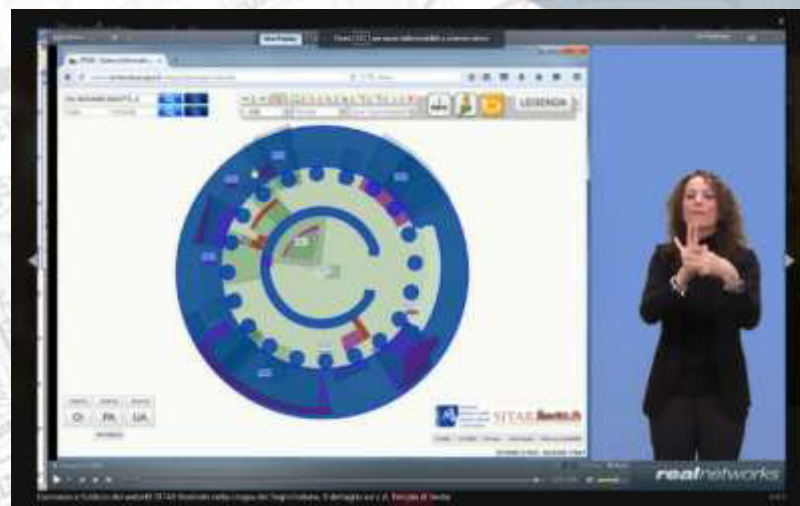


Costi totali 2008-2022

- Data entry: € 2.037.000 **62%**
- System planning and development: € 54.900 **9%**
- Hardware /software: € 307.700 **9%**
- System management: € 311.300

total costs 2008-2022:
3.310.900 €

2016: first institutional website



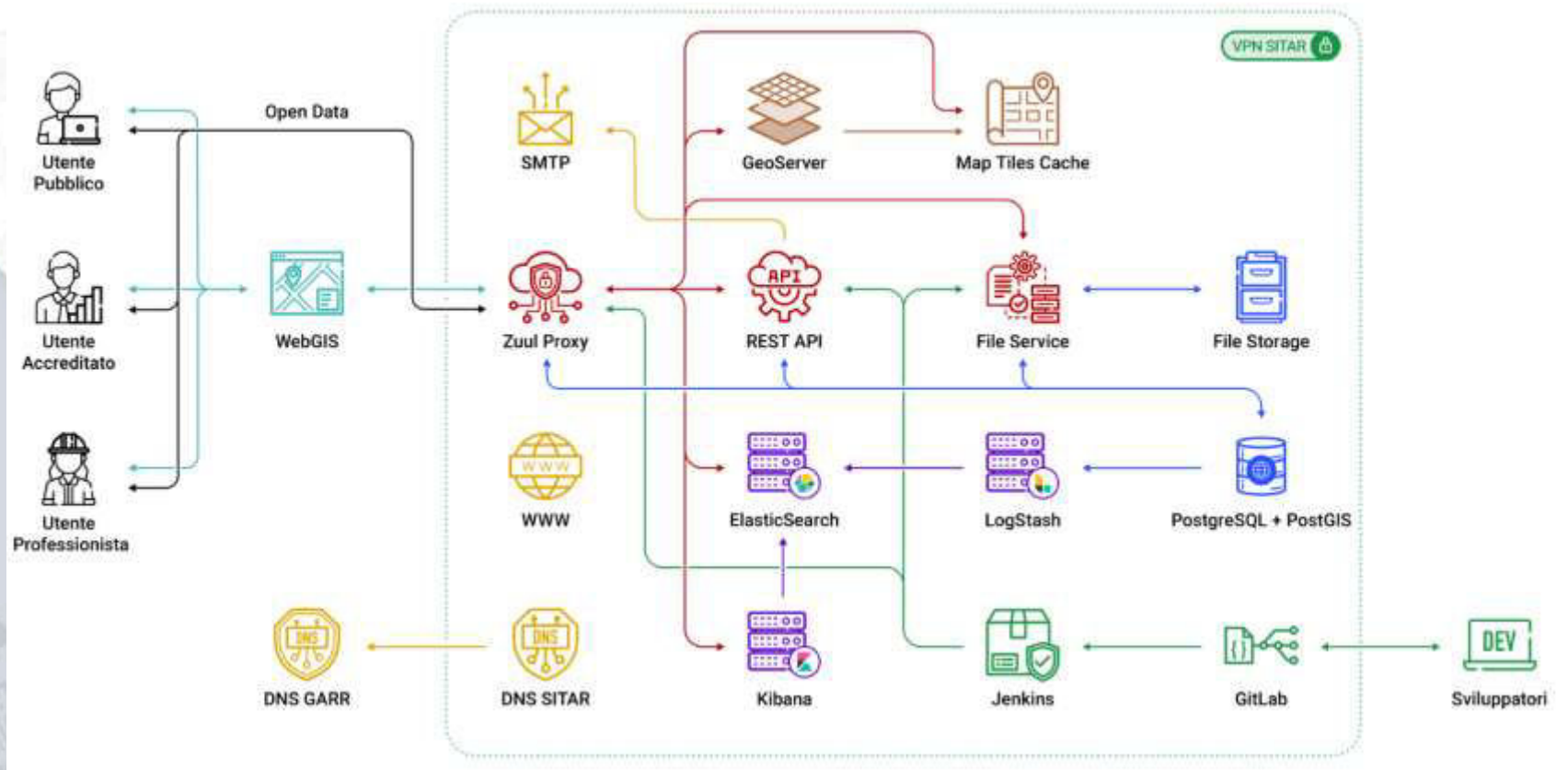
FROM 2020: NEW SITAR WEBSITE ONLINE



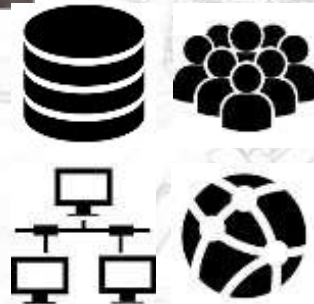
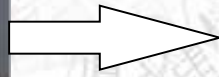
- opendata services
- guidelines for archaeological interventions
- tutorials (how to use)
- API descriptions
- WEBGIS services (WMS and WFS)

NEW PLATFORM

- OPEN DATA services
- Collaborative services (request for change & download)
- Scalable and module based system (possible integration of other management tools)

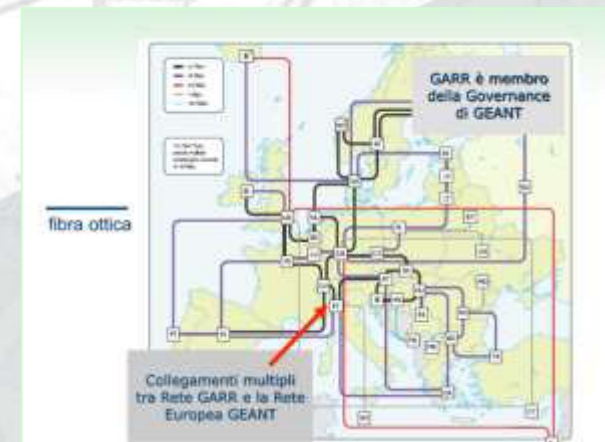


Italian network for scientific research: GARR



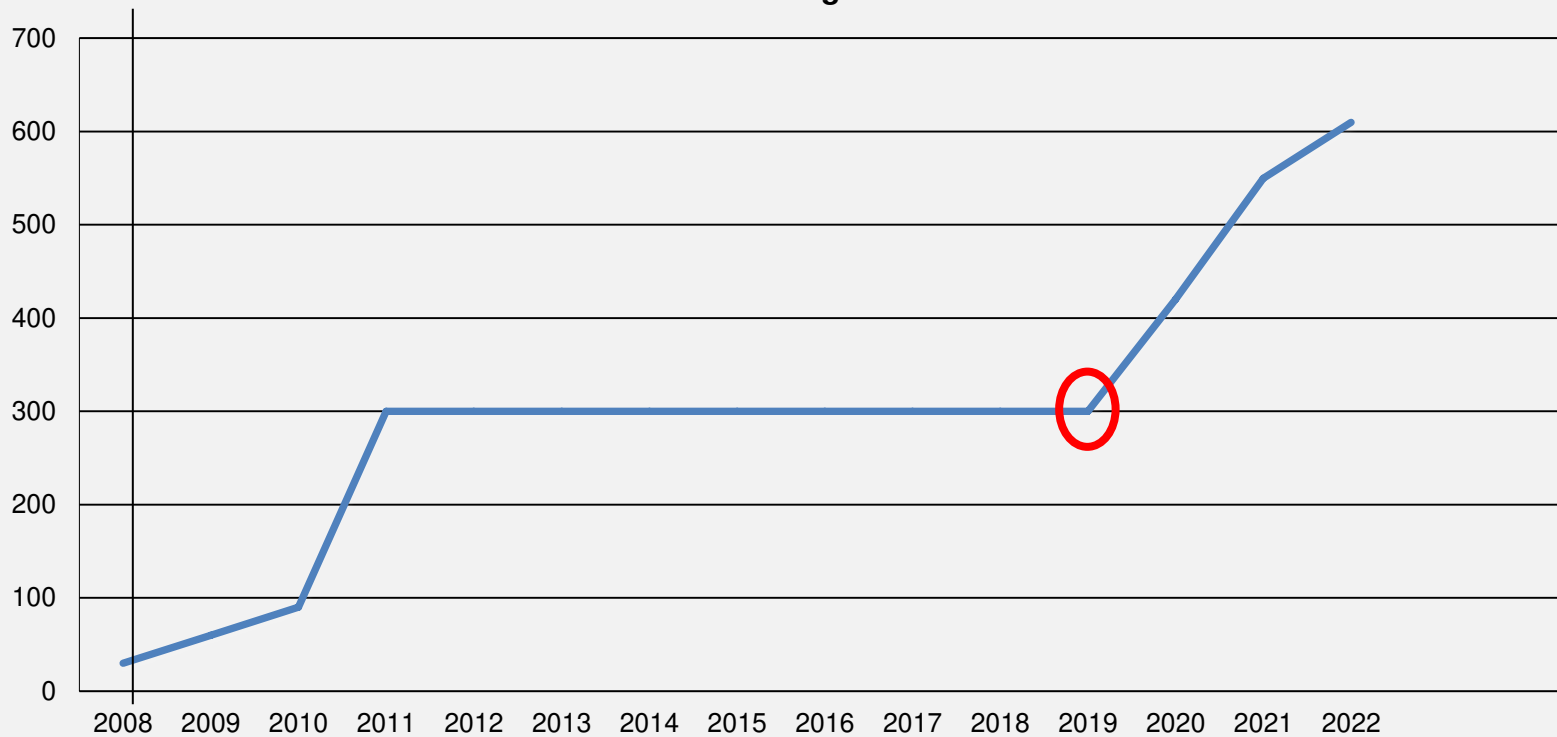
- 2013: connection of SITAR to the GARR Italian Research Network
- 2015: from SITAR physical servers to virtualizations residing on physical machines managed by the GARR Consortium
- 2018: preparation of a new entirely cloud-based infrastructure, hosted on the GARR network servers and managed through OpenStack open-source cloud technology

The choice of the GARR cloud allows for a containment of server management and maintenance costs and from a systemic point of view, a guarantee in terms of long-last preservation of the acquired and processed archeological documentation.



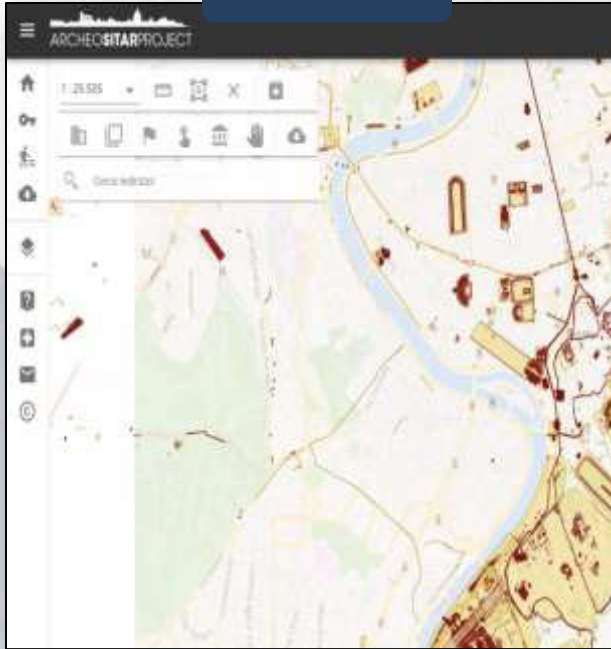
SITAR NUMBERS – REGISTERED USERS

Annual increase of registered users



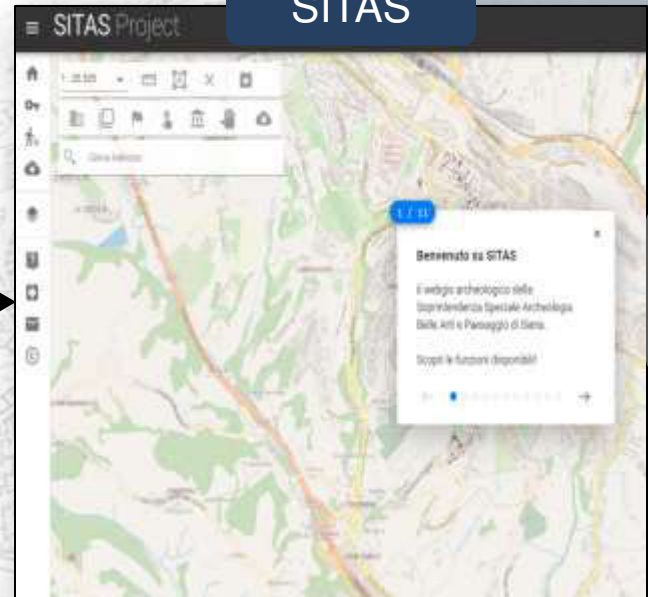
SITAR FAMILY

SITAR



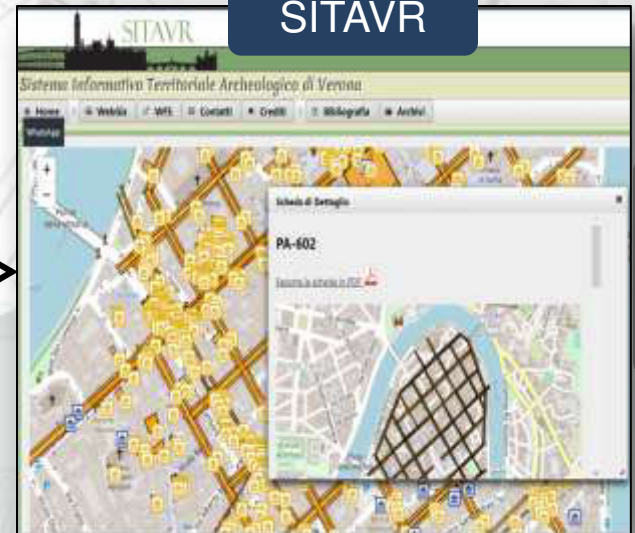
ROME

SITAS



SIENA

SITAVR



VERONA



WEB SITE
<https://www.archeositarproject.it>

NEW AND RETURNING VISITORS

Google Analytics Audience Overview

Continent

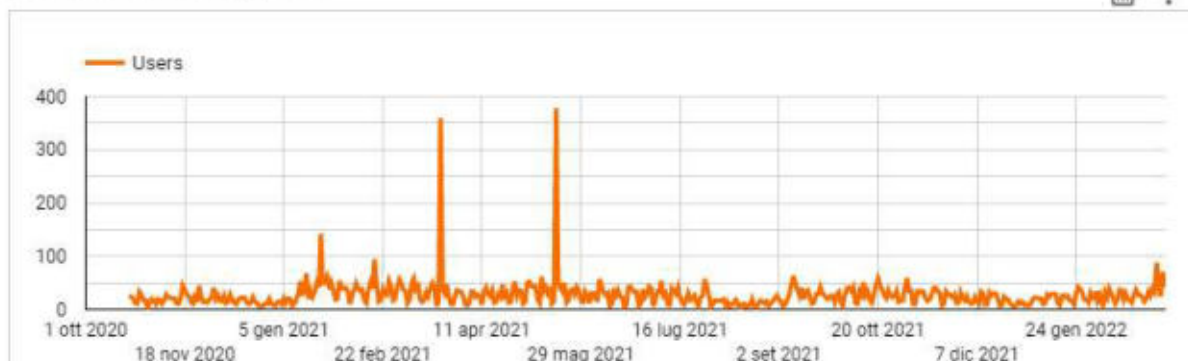
Region

Channel

Device

1 ott 2020 - 8 mar 2022

Your audience at a glance



Users

9.192



New Users

9.220



Number of Sessions per User

1,66



Sessions

15.303



Pageviews

34.119



Pages / Session

2,23



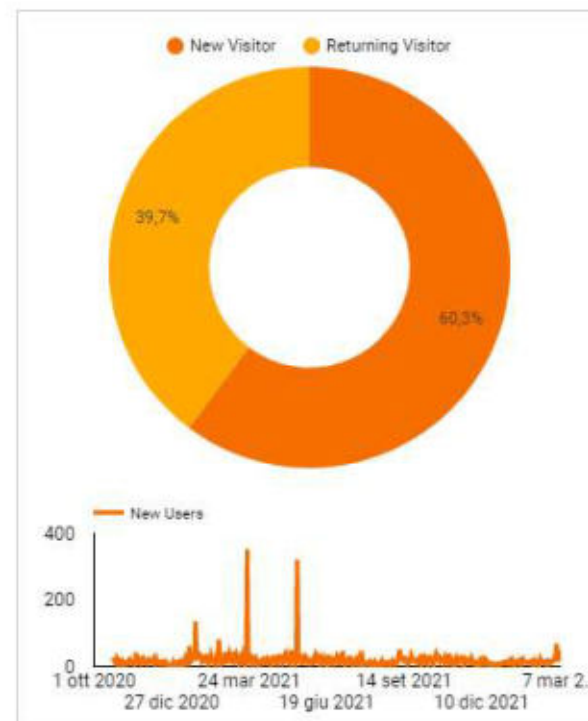
Avg. Session Duration

00:01:43



Bounce Rate

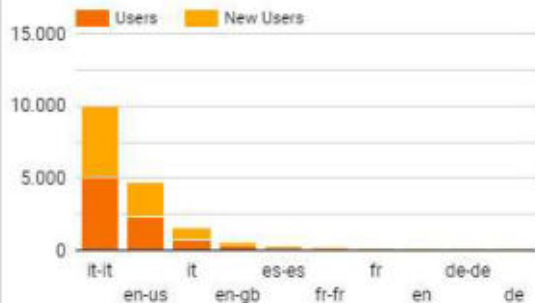
58,00%



NATIONAL AND INTERNATIONAL VISITORS

Let's learn a bit more about your users!

Language breakdown



Language	Users	New Users
1. it-it	5.002	5.009
2. en-us	2.351	2.354
3. it	774	757
4. en-gb	281	282
5. es-es	140	140
6. fr-fr	101	102
7. fr	50	50
8. en	45	45
9. de-de	41	41
10. de	41	41

1 - 10 / 87 < >

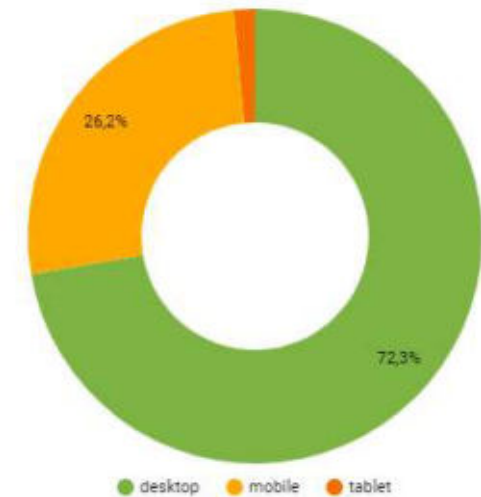
Country breakdown



Continent	Users	New Users
1. Europe	8.183	8.198
2. Americas	588	588
3. Asia	321	320
4. Africa	74	74
5. (not set)	29	29
6. Oceania	15	15

1 - 6 / 6 < >

What device are people using?



Device	Users	New Users
1. desktop	6.599	6.687
2. mobile	2.388	2.394
3. tablet	139	143

1 - 3 / 3 < >

HOW DO VISITORS REACH THE WEBSITE?



Google Analytics Acquisition Overview

Continent -

Region -

Channel -

Device -

1 ott 2020 - 7 mar 2022 -

Users

9.167

Sessions

15.259

Bounce Rate

57,96%

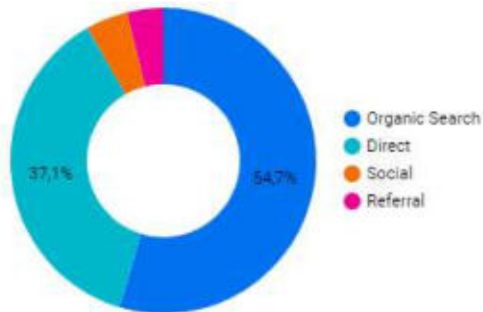
Goal Completions

Nessun dato

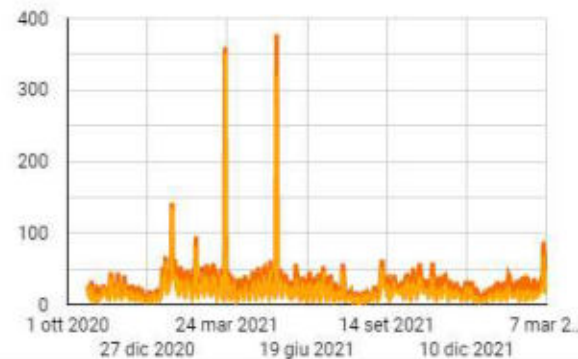
Avg. Time on Page

00:01:24

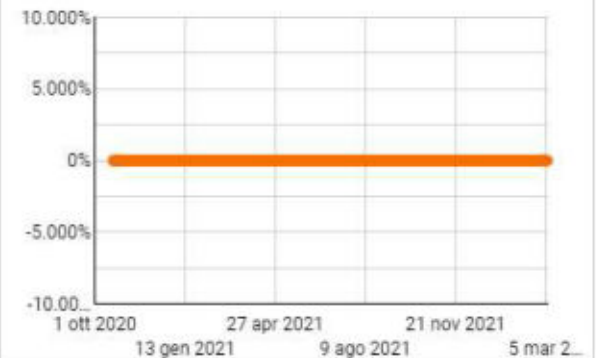
Top Acquisition Channels



Users (vs. New Users)



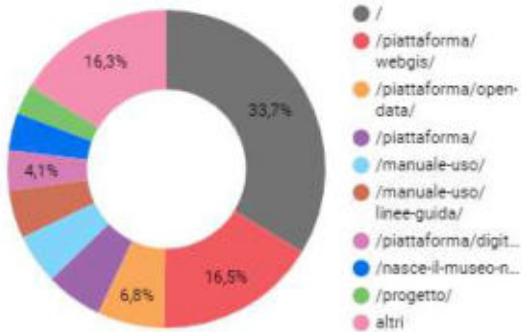
Conversions



WHICH ARE MAIN VISITED SECTIONS?

What do users see when they are in your website?

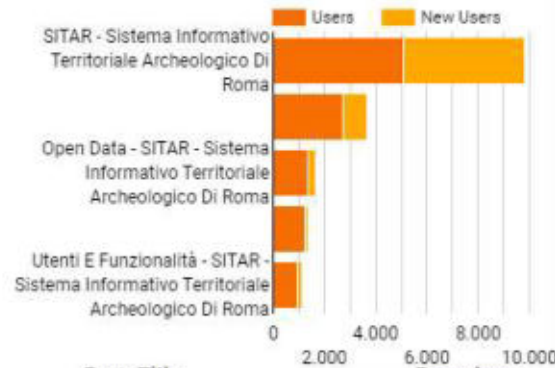
Which page is the most popular?



Page	Pageviews
1. /	11.486
2. /piattaforma/webgis/	5.619
3. /piattaforma/open-data/	2.314
4. /piattaforma/	1.977
5. /manuale-uso/	1.729
6. /manuale-uso/linee-gui...	1.665
7. /piattaforma/digital-libr...	1.399
8. /nasce-il-museo-ninfeo...	1.281
9. /progetto/	1.027
10. /equipe/	669

1 - 10 / 374 < >

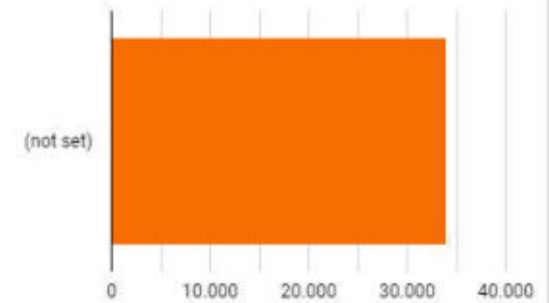
Most popular pages with title breakdown



Page Title	Pageviews
1. SITAR - Sistema Inform...	10.654
2. WebGIS - SITAR - Siste...	5.913
3. Open Data - SITAR - Sist...	2.458
4. Piattaforma Digitale - SI...	1.991
5. Utenti E Funzionalità - S...	1.759
6. Linee Guida - SITAR - SI...	1.683
7. (not set)	1.564
8. Digital Library - SITAR - ...	1.488
9. Nasce Il Museo-Ninfeo ...	1.345
10. Progetto - SITAR - Siste...	1.036

1 - 10 / 89 < >

Which content group is the most popular?



Brands (Content Gr...)	Pageviews
1. (not set)	34.049

1 - 1 / 1 < >



WEB-GIS
<https://repositor.archeositarproject.it/ui/map>

NEW AND RETURNING VISITORS

Google Analytics Audience Overview

Continent

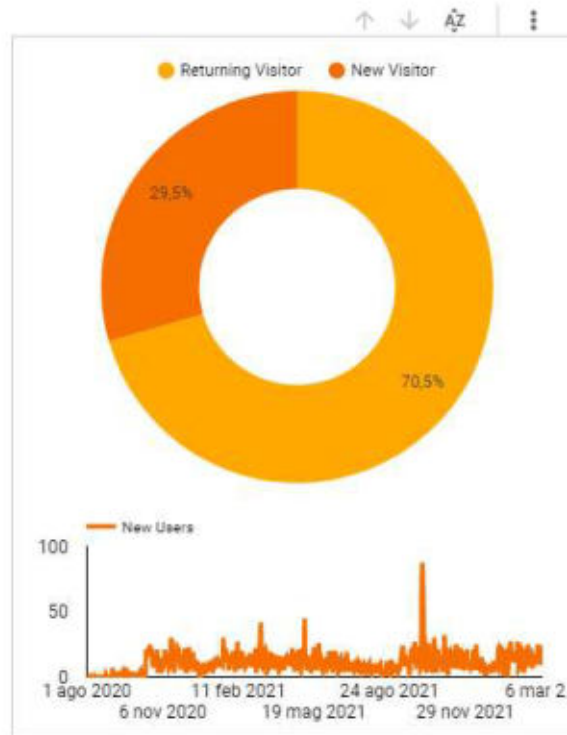
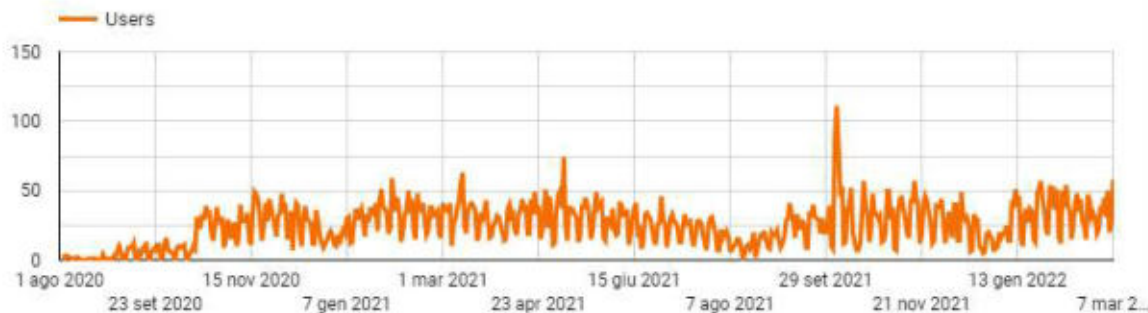
Region

Channel

Device

1 ago 2020 - 7 mar 2022

Your audience at a glance



Users

6.205



New Users

6.287



Number of Sessions per User

3,44



Sessions

21.357



Pageviews

1.047.620



Pages / Session

49,05



Avg. Session Duration

00:13:46

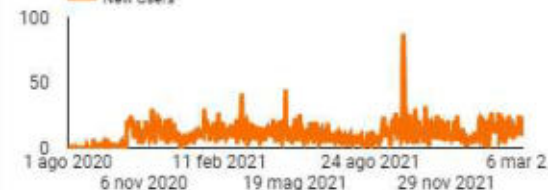


Bounce Rate

10,64%



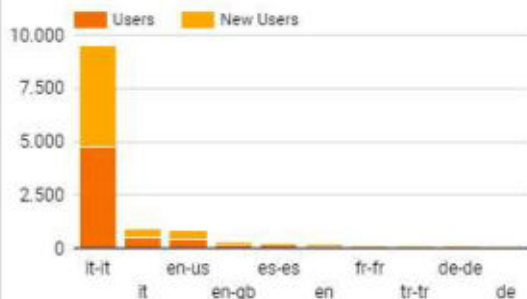
New Users



NATIONAL AND INTERNATIONAL VISITORS

Let's learn a bit more about your users!

Language breakdown



Language	Users	New Users
1. it-it	4,730	4,756
2. it	464	448
3. en-us	433	434
4. en-gb	144	145
5. es-es	107	107
6. en	87	87
7. fr-fr	49	49
8. tr-tr	41	41
9. de-de	41	43
1. de	28	28

1 - 10 / 58 < >

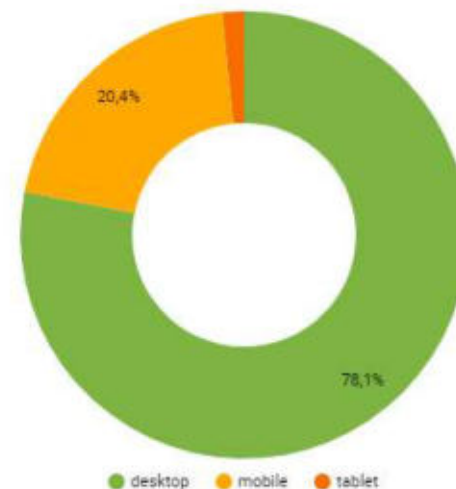
Country breakdown



Continent	Users	New Users
1. Europe	6,040	6,131
2. Americas	138	137
3. Asia	22	19
4. Oceania	9	9
5. Africa	4	4
6. (not set)	2	2

1 - 6 / 6 < >

What device are people using?



Device	Users	New Users
1. desktop	4,899	4,914
2. mobile	1,277	1,285
3. tablet	98	103

1 - 3 / 3 < >

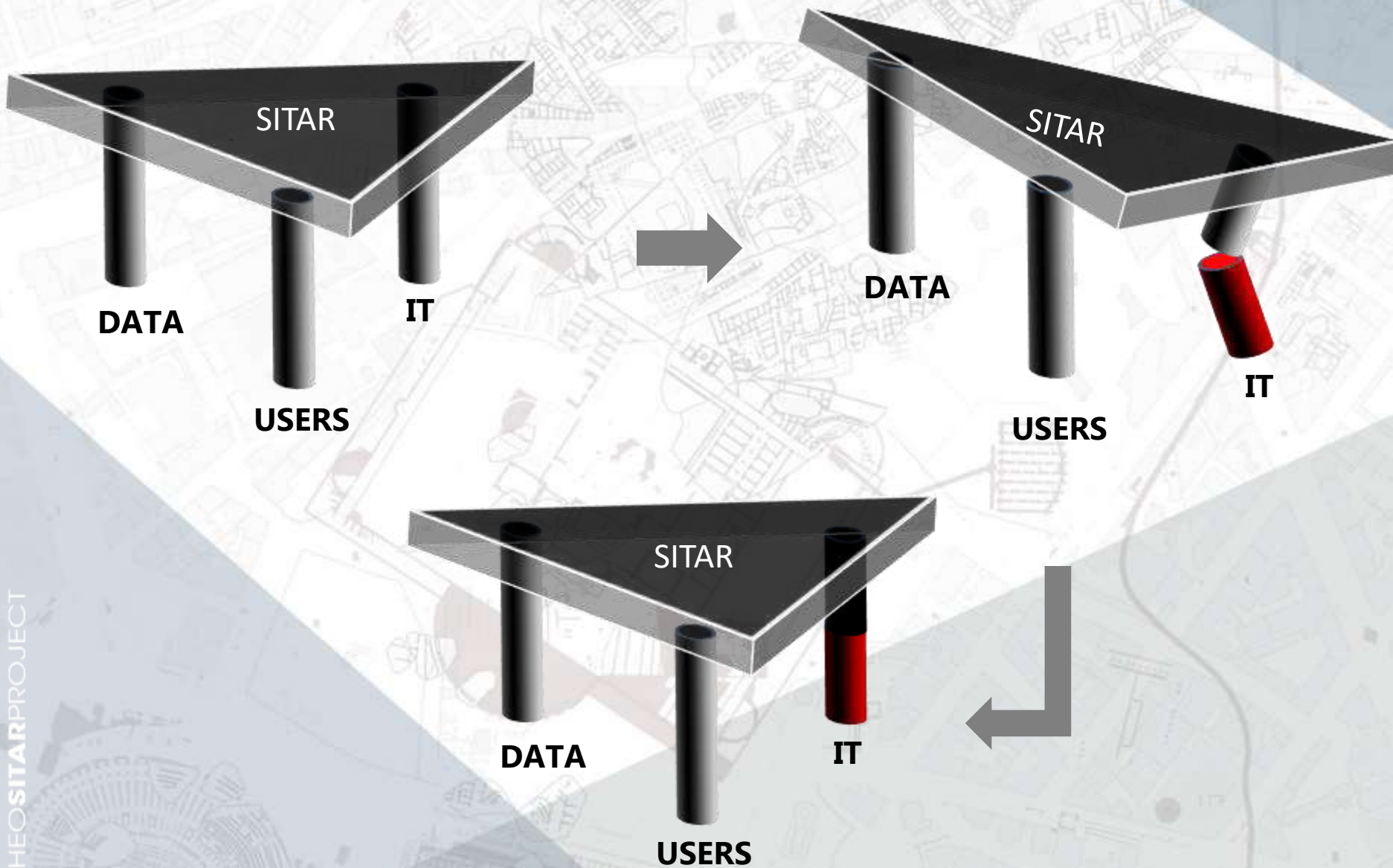
HOW AND FOR HOW LONG DO VISITORS INTERACT WITH THE SYSTEM?



30 minutes

31-60 secondi	1.491	
61-180 secondi	3.348	
181-600 secondi	4.451	
601-1800 secondi	4.021	
1801+ secondi	2.963	

LONG TERM SUSTAINABILITY



NEXT STEPS...

SHORT
TERM

- methods and tools for archaeological impact assessment in support of rescue archaeology

SHORT-
MIDDLE
TERM

- SITAR in support of PNNR activities (European Recovery Plan)

LONG
TERM

- 3D visualization of archaeological features