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PRO EXTOUR

Black Sea CROSS BORDER COOPERATION

# *PROMOTING HERITAGE - AND CULTURE - BASED EXPERIENTIAL TOURISM IN THE BLACK SEA BASIN*

Project No. BSB 1145

**PROCEEDINGS**
**From the International Conference on Digital Technologies for Experiential Tourism**
**July 28th, 2022**

## Introduction

The International Conference "Digital Technologies for Experience-based Tourism" was aimed at highlighting the important role of digital technologies in tourism, and more specifically their importance in creating a high-quality experiential tourism product.



The Conference brought together researchers, practitioners, students and the general public interested to explore together and discuss the role of the digital technologies in all stages of creation and delivery of the tourist experience.

The key topics of the Conference covered

- Experiential Tourism globally and in the Black Sea Basin[1]
- Use of digital tools used for enhancing the tourist experience during culture events
- Digital Innovations and their role in research, investigation and presentation of historical artefacts
- Consumers expectations and attitudes towards the digital technologies used in tourism
- The need of digital skills in tourism.

Varna University of Management organised and hosted the International Conference the Conference Hall, of the campus, located at the address: Oborishte St., No. 13A, Floor 4 in Varna, Bulgaria.

PRO EXTOUR partners (Varna University of Management (Bulgaria), Aristotle University of Thessaloniki (Greece), Georgian Arts and Culture Centre (Georgia) and Culinary Arts and Hospitality Association (Bulgaria)) as well as guest organisations delivered presentations and shared their own experience and good practices.

These proceedings provide a synopsis of the presentations, delivered at the conference.

The working language of the conference was English.

More details are available at https://vum.bg/ and https://proextour.eu.

[1] The area of the Black Sea Basin is understood as to the European Neighbourhood Instrument's definition and includes Armenia, Bulgaria (Northeast and Southeast Planning Regions), Georgia, Greece (Central Macedonia, Eastern Macedonia and Thrace), Romania (Southeast Region), Republic of Moldova, Turkey (Regions İstanbul; Tekirdağ, Edirne, Kırklareli; Kocaeli, Sakarya, Düzce, Bolu, Yalova; Zonguldak, Karabük, Bartın; Kastamonu, Çankırı, Sinop; Samsun, Tokat, Çorum, Amasya; Trabzon, Ordu, Giresun, Rize, Artvin, Gümüşhane) and Ukraine (Odesa, Mykolaiv, Kherson, Zaporosh'ye and Donetsk Oblasts, Crimea Republic, Sevastopol).

## Agenda

| | |
|---|---|
| 9:30-10:00 | **Registration of the participants** |
| 10:00-10:10 | Opening and welcome<br>***Todor Radev**, PhD, Prof.*, *President Rector*<br>Varna University of Management |
| 10:10-10:20 | PRO EXTOUR Project – Concept, Objectives, Results, Hubs<br>***Tzvetalina Genova**, Senior Projects and Applied research manager*<br>Varna University of Management |
| 10:20-11:10 | Experiential Activities and the Use of Digital Tools in Culture Events in Northern Greece<br>***Athina Vitopoulou**, PhD, Assist. Prof, **Konstantina Salata**,*<br>***Apostolos Papagiannakis**, PhD, Assoc. Prof.*<br>City_Space_Flux Research Unit, Aristotle University of Thessaloniki<br><br>The Museums in the Digital Era: Designing New Experiences for the Visitors of the Archaeological Museum of Thessaloniki<br>***Angeliki Koukouvou**, **Evi Papadopoulou**, **Angeliki Moneda***<br>*Archaeological Museum of Thessaloniki* |
| 11:10-11:40 | Innovating through Experiential Tourism: The New Era of Sustainable Tourism<br>***Seyran Suvaryan**, PhD, Prof.*, ***Gor Aleksanyan**, PhD, Assoc.Prof.*<br>Yerevan State University |
| 11:40-12:10 | Tourism Service and Digital Technologies in Georgia<br>***Nana Kartvelishvili***, Tourism Manager<br>Georgian Arts and Culture Centre |
| 12:10-12:40 | Digital Approaches in the Underwater Archaeological Investigation in Bulgaria<br>***Preslav Peev**, PhD, Assoc. Prof.*, Institute of Oceanology at BAS/CAHA |
| | **Lunch-break/Reception** |
| 13:30-14:00 | Tourists' Preferences Toward the Humans-Robots Mix in the Service Delivery System<br>***Stanislav Ivanov**, PhD, Prof.*, *Vice Rector for Research*<br>Varna University of Management |
| 14:00-14:30 | Digital Skills in Tourism<br>***Maya Ivanova**, PhD, Assoc. Prof.*,<br>Varna University of Management |
| | **Coffee-break** |
| 15:00-16:30 | Round-Table Discussion and Stakeholder Presentations |

## Presentations

### *PRO EXTOUR Project – Concept, Objectives, Results, Hubs*



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**TRAVELLING AND EXPERIENCE**

Modern tourists become increasingly demanding not only in terms of quality of services, but also in terms of innovative ways of enjoying destinations and of spending their leisure time.

The new trend is known as ***"experiential tourism"*** and refers to those forms of travelling in which people focus on experiencing a country, city or particular place *by connecting to its history, people and culture and participate actively in the experience-creation process.*

*Technologies and innovations affect experiential travel by far.*

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**Why *PRO EXTOUR?***

PRO EXTOUR is a project that aims **to promote experiential tourism** as a **sustainable development pathway** for tourism business in the BSB by valorising the potential of the **indigenous heritage and culture, innovative solutions and cross-border cooperation.**

**RELEVANCE TO THE JOP BSB PROGRAM**

Specific O1 "Promote business and entrepreneurship within the Black Sea Basin"
Priority 1.1 "Jointly promote business and entrepreneurship in the tourism and cultural sectors"

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**PRO EXTOUR Partnership**

- Varna University of Management (BG)
- Aristotle University of Thessaloniki - Special Account for Research Funds (GR)
- Georgian Arts and Culture Centre, Tbilisi (GE)
- Yerevan State University (AR)
- Culinary Arts and Hospitality Association, Dobrich (BG)

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## PRO EXTOUR APPROACH

### Research and training

- A **Regional Needs Assessment Report** for the development of experiential tourism,
- A **Regional Action Plan** for encouraging the heritage and culture-based experiential tourism in the BSB,
- An **Inventory of Business Models** for experiential tourism,
- A cross-border network of **Black Sea Hubs on Experiential Tourism** - a space in every partner organization to research and train

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## PRO EXTOUR APPROACH

### Practice

- **Pilot Inventories of heritage and culture activities and events**
- An **On-line Repository** of resources and tools for experiential tourism

### Networking

- An **International business conference** on experiential tourism
- An International Conference on **Digital Technologies for Experiential Tourism**
- An International **Fair on Heritage and Culture-based Experiential Tourism** in the BSB

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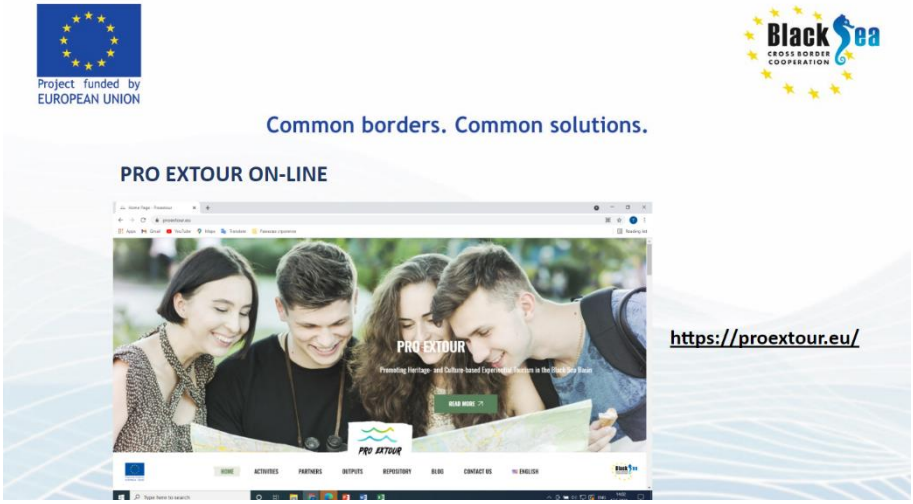
## ADDED VALUE

**Cross-border cooperation** has a high added value. It mobilizes the capacity of various regional organizations and leads to finding **tailor-made solutions = > economic and social sustainability of tourism and hospitality, region-specific innovations.**

WHEN: 1.06.2020 -30.11.2022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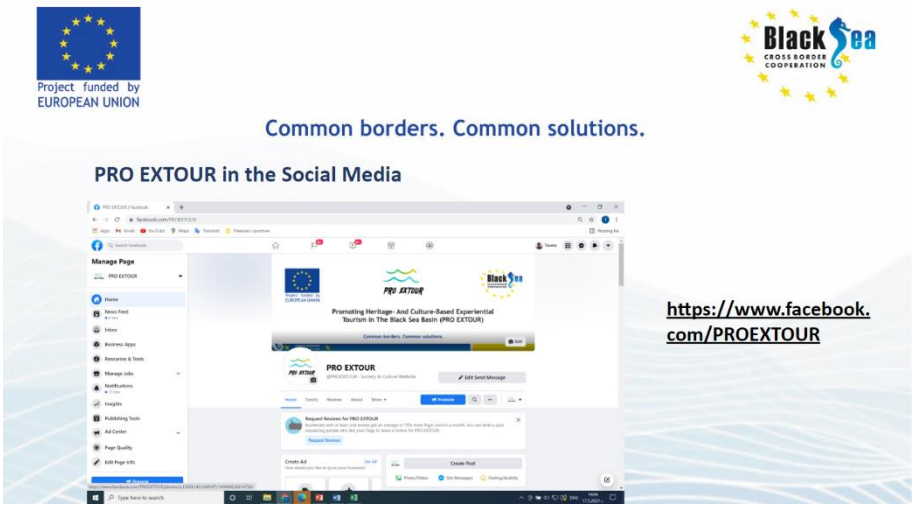
PRO EXTOUR ON-LINE
https://proextour.eu/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PRO EXTOUR in the Social Media
https://www.facebook.com/PROEXTOUR

*Experiential Activities and the Use of Digital Tools in Culture Events in Northern Greece*



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# Experiential Activities and the Use of Digital Tools in Culture Events in Northern Greece

**City_Space_Flux Research Unit, Aristotle University of Thessaloniki (AUTh)**

**Athina Vitopoulou**
Dr architect-urban designer, Assistant Professor, School of Architecture, Faculty of Engineering AUTh

**Konstantina Salata**
PhD Candidate, School of Spatial Planning and Development, Faculty of Engineering AUTh

**Apostolos Papagiannakis**
Dr Transport Planner, Associate Professor, School of Spatial Planning and Development, Faculty of Engineering AUTh

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As part of the "pilot inventories of heritage and culture activities and events in the BSB" developed within the PRO EXTOUR research program, 10 representative popular authentic cultural activities and events taking place in the two Greek Black Sea Basin Regions (BSB-GR), i.e. the Region of Central Macedonia and the Region of Eastern Macedonia and Thrace, were selected as case studies

| | Name | Region | Implementation period | Thematic area - event category |
|---|---|---|---|---|
| 1 | Anastenaria | Region of Central Macedonia | January 17, 18 & 20, July 27 and May 21, 22 and 23 | Traditions and celebrations |
| 2 | Silk Festivity | Region of Eastern Macedonia and Thrace | June, July or September | Traditions and celebrations |
| 3 | Custom of Janissaries and Boules | Region of Central Macedonia | February | Historic sites and re-enactments |
| 4 | Custom of the Camel and the Wedding of Manio | Region of Central Macedonia | January 5, 6 and 7 | Historic sites and re-enactments |
| 5 | Olympus Festival | Region of Central Macedonia | July - August | Festivals |
| 6 | Philippi Festival | Region of Eastern Macedonia and Thrace | July - August | Festivals |
| 7 | Xanthi's Old Town Festival | Region of Eastern Macedonia and Thrace | Late August - early September | Cultural events |
| 8 | Dramoinognosia (Drama's Wine Celebration) | Region of Eastern Macedonia and Thrace | May | Cultural events |
| 9 | EuroBirdwatch in Lake Kerkini | Region of Central Macedonia | First Sunday of October | Natural heritage |
| 10 | World Forestry Day in Dadia-Lefkimi-Soufli Forest National Park | Region of Eastern Macedonia and Thrace | March 21 | Natural heritage |

**Custom of Anastenaria**
Lagadas

**Silk Festivity**
Soufli

**Custom of Janissaries and Boules**
Naoussa

**Custom of the Camel and the Wedding of Manio**
Galatista

**Olympus Festival**
Pieria, Dion Ancient Theater and other archeological sites at the foot of Mont Olympus

**Philippi Festival**
Philippi Ancient Theater and Kavala

**Xanthi's Old Town Festival**
Old Town of Xanthi

**Dramoinognosia**
wider area of Drama

**EuroBirdwatch**
Eastern embankment of Lake Kerkini

**World Forestry Day**
Dadia-Lefkimi-Soufli Forest
National Park


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## Common borders. Common solutions.

Almost all the selected events/activities are either experiential themselves as the visitors participate with a physical presence and with all their senses or include some type of experiential activities:

_ interactive activities and educational workshops for children (e.g. art and crafts, storytelling, theatrical games, creative writing etc.)
_ interactive reenactment of traditional works
_ competitions
_ sport activities
_ wine tasting
_ traditional food and sweets preparation and tasting
_ photography seminars with practical application
_ lost treasure hunt

Many of the interviewees made some additional suggestions for the future

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## Common borders. Common solutions.

In most of the events the use of digital technology is limited in:
_ livestreaming in social media
_ digital methods of communication, especially via social media
_ online sale of services
_ digital broadcasting during the pandemic

In Olympus Festival, methods for measuring spectator impressions, profile and origin are used by the International University of Greece, School of Management and Economics

For the custom Janissaries and Boules an application has been created for mobile devices so that the user can locate in real time the location in which the herds move with the dancers in the city and also read useful information about the custom

In Silk Festivity reenactments of the traditional works related to the breeding of silkworms and silk and representation of the life cycle of the silkworm with the help of technological means have taken place with the use of modern electronic equipment of virtual reality as well as through interaction with image and sound

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## Common borders. Common solutions.

**"Hidden secrets on the tramway"**
**Pilot demonstration project**
Thessaloniki, 28.5.2022

The aim of the project was to:
_ highlight the tangible and intangible cultural heritage of the district in the east part of the city that flourished at the end of 19th c. and the beginning of the 20th c. along the tramway in the Vass. Olgas avenue
_ create a multisensory experience in relation to the villas and the historical, social and cultural context of the period

The experiential character of the project was attempted through:
_ theatrical and musical performances
_ interactive games and puzzle solving
_ food tasting of recipes coming from the then different ethnoreligious communities of the city



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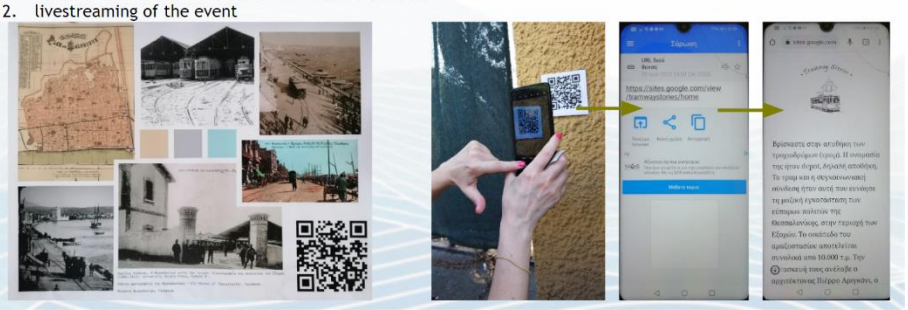
Two digital tools were used:

1. QR codes to learn about the history of the villas and the other monuments included in the experiential walking tour and draw clues for solving the puzzles
2. livestreaming of the event



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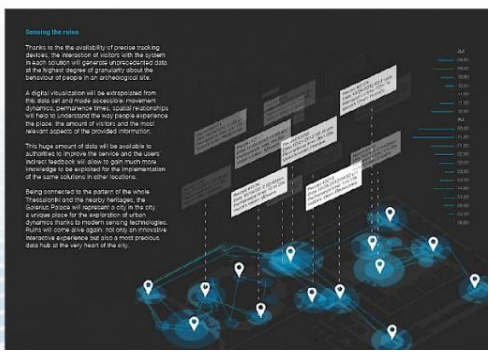
## Common borders. Common solutions.

In recent years, there is a growing interest in the use of digital tools and techniques mostly in the field of culture and cultural tourism with the aim of:

_ developing a more interactive relation between the visitor/tourist and the exhibit and/or product

_ making the exhibit and/or product more vivid and interesting especially for the new generations

_ highlighting aspects of exhibit and/or product that would be not so easily perceived by or accessible to the non-experts



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**Common borders. Common solutions.**

Some of these tools and techniques are:
_ applications allowing digital interaction with the exhibits through appropriate legend reading equipment
_ virtual tours inside the museums or in the city
_ personalized tours on mobile devices (mobile phone, tablet)
_ robots providing information to visitors or interacting with exhibits and visitors and playing games related to exhibits
_ interactive digital tools and techniques from the field of computer vision and machine learning for people with disabilities, especially deaf or blind
_ 3D recording and virtual reality techniques for the diagnosis, maintenance, documentation and highlighting of monuments and objects
_ projection mapping

The Covid-19 pandemic accelerated the digitalization process and multiplied the cultural events and activities in which digital tools and techniques are adopted

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**The Information Center for the Galerian Complex**
Thessaloniki, archaeological site of the Palace's Apsidal Hall
Ephorate of Antiquities of Thessaloniki City

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The Center offers exhibition of supporting material, videos, interactive applications and digital reconstructions of the Complex's most important buildings
In collaboration with the Thessaloniki chamber of commerce and industry and MIT an application was developed to increase visitor numbers through the use of new technologies, which is accessible from browsers on both fixed and mobile devices regardless of platform

http://galeriuspalace.culture.gr/en/education/psifiakes-efarmoges/information-centre/
http://galeriuspalace.culture.gr/en/education/psifiakes-efarmoges/mit/

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Virtual tour of the galerian complex in late Antiquity

https://www.youtube.com/watch?v=zQfgzExwC1Y&t=20s

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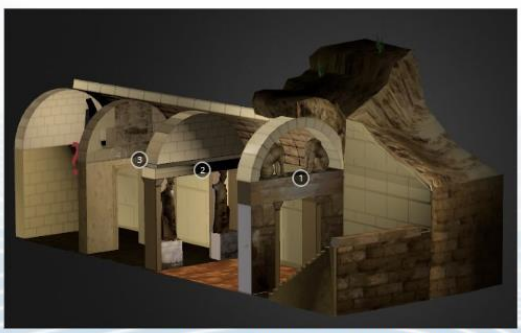
**3D model rendering of the Kasta Tomb,
the funerary monument of Amphipolis**

A virtual navigation in every detail of the apartments, so that the visitors can understand the actual size of the tomb by using the functions of zooming in, zooming out and rotating



https://www.amfipolis.gr/video/124-apeikonisi-3d-tafou-amfipolis

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**3D-ICONS data collection, Athena Research Centre - Xanthi's Division**


http://www.ipet.gr/~akoutsou/3dicons/showall.php?lang=EN

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3D-ICONS data collection, Athena Research Centre - Xanthi's Division

Rotunda, Thessaloniki

In addition to the 3D representation, other information are available, such as:

- history of the heritage asset
- location
- video and images
- method of digitisation


http://www.ipet.gr/~akoutsou/3dicons/showall.php?lang=EN

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**"Project RoGH: Digital Roots in Greek History's Paths"**

An under-development research project aiming to create a platform that will contain digital content of multiple type (2D,3D etc) and serve it to virtual and augmented reality enabled devices, regarding important historical periods of the Hellenic History.

The user, with the help of an interactive timeline, will be able to create personal routes through Hellenic History and learn about important events by virtually visiting the Hellenic cities in which they took place, including Byzantine Period and the cities: (a) "Counselor", Thessaloniki, (b) Mystras, (c) Ioannina, (d) Rhodes.

https://www.di.uoa.gr/en/research/2019-04_RoGH
http://cultech.di.uoa.gr/index.php/en/projects/38-rogh-digital-roots-in-greek-history-s-paths
Kargas, A., Loumos, G., Mamakou, I., & Varoutas, D. (2022). Digital Routes in Greek History's Paths. *Heritage*, *5*, 742-755. https://doi.org/10.3390/heritage5020041


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The 3D representations will include representations of buildings with full architectural detail and realistic photorealistic depictions
Example of the tower of Prosforion in Ouranoupolis
Kargas et al., (2022)
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"A tower narrates its story"
Projection mapping, 3D audio-visual journey to the history of the monument
N. Fokaia, Halkidiki, 8-9 & 15-16 August 2020
Ministry of Culture, Ephorate of Antiquities of Chalcidice and Mount Athos
ΕΝΑΣ ΠΥΡΓΟΣ ΑΦΗΓΕΙΤΑΙ ΤΗΝ ΙΣΤΟΡΙΑ ΤΟΥ
Νέα Φώκαια Χαλκιδικής
8-9 & 15-16 ΑΥΓΟΥΣΤΟΥ
21:00-00:00
Ένα τρισδιάστατο οπτικοακουστικό ταξίδι στο παρελθόν του μετοχιακού πύργου της αγιορείτικης μονής Αγίου Παύλου
Υπουργείο Πολιτισμού & Αθλητισμού
Εφορεία Αρχαιοτήτων Χαλκιδικής και Αγίου Όρους
η προβολή θα επαναλαμβάνεται κάθε 30 λεπτά
https://parallaximag.gr/kati-magiko-erchetai-ston-pyrgo-stis-fokies-86356
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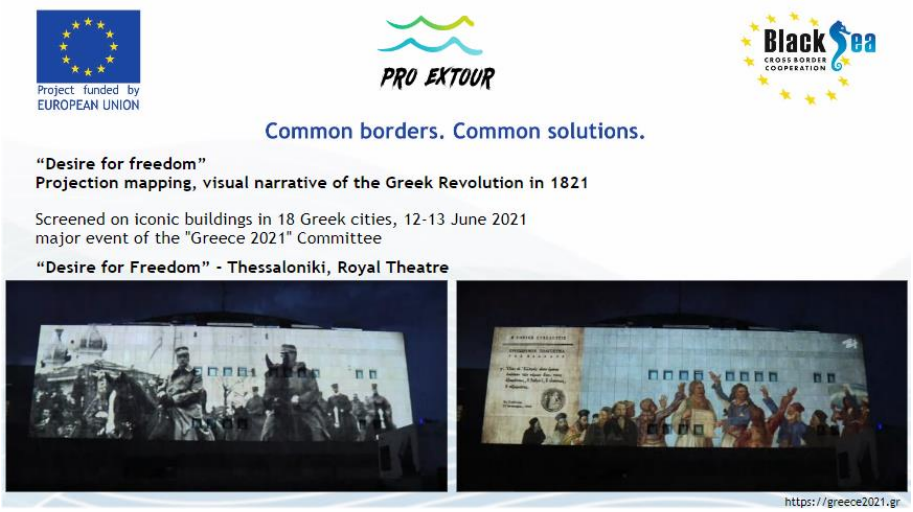
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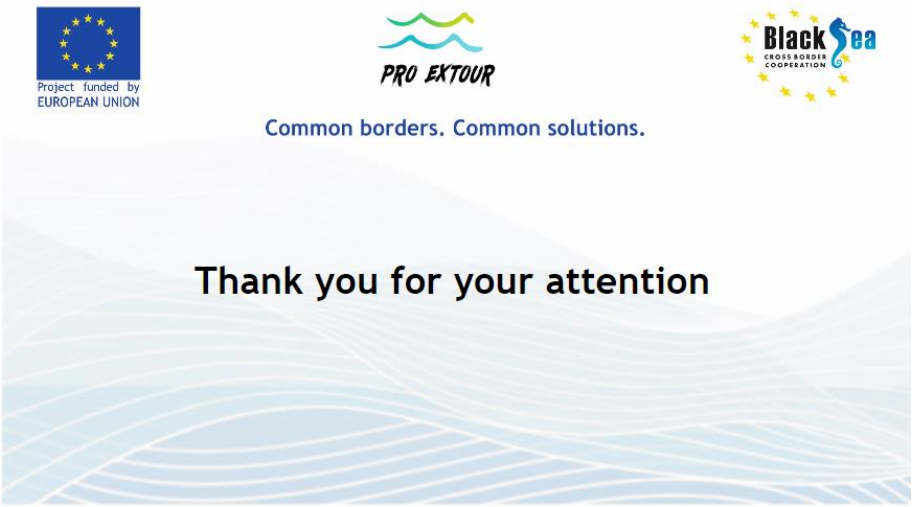
"Desire for freedom"
Projection mapping, visual narrative of the Greek Revolution in 1821
Screened on iconic buildings in 18 Greek cities, 12-13 June 2021
major event of the "Greece 2021" Committee
"Desire for Freedom" - Thessaloniki, Royal Theatre
https://greece2021.gr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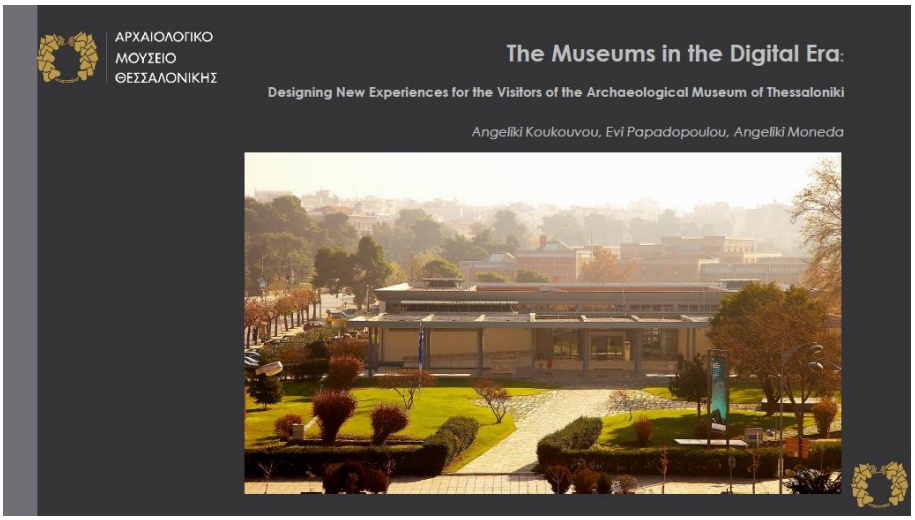
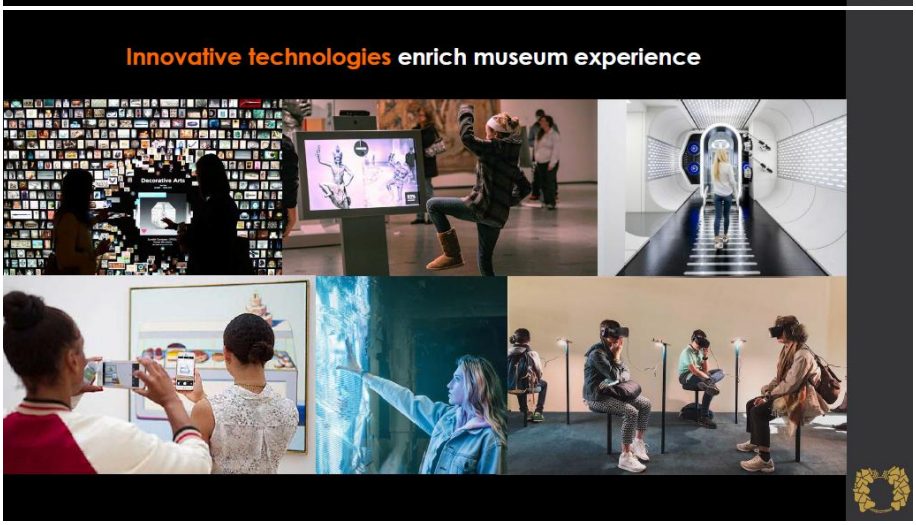
Thank you for your attention

***The Museums in the Digital Era: Designing New Experiences for the Visitors of the Archaeological Museum of Thessaloniki***



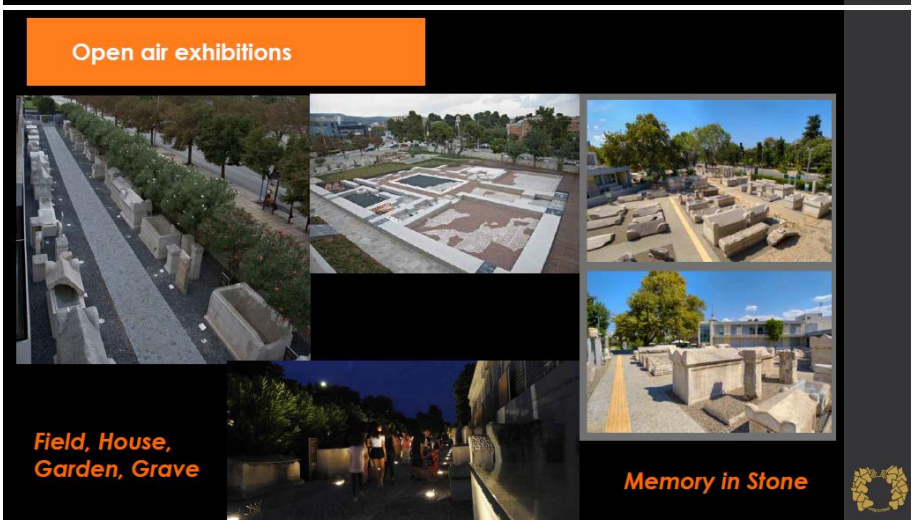


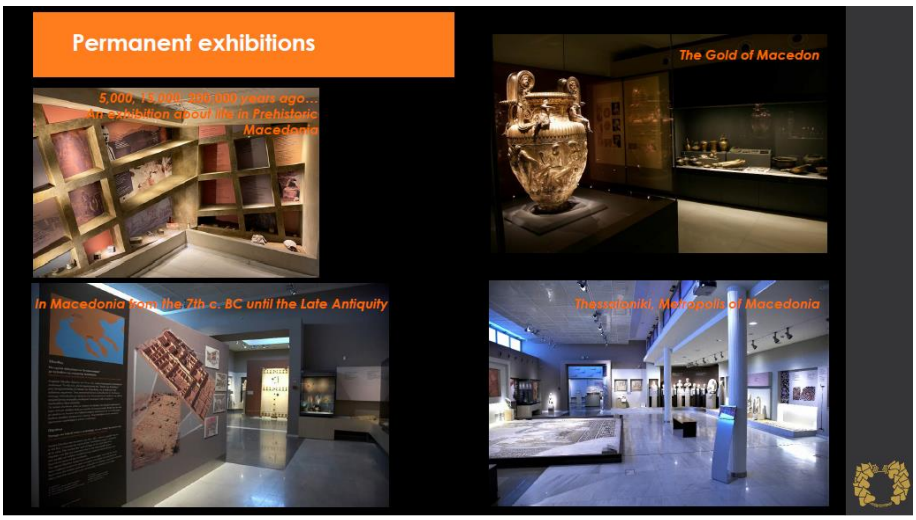


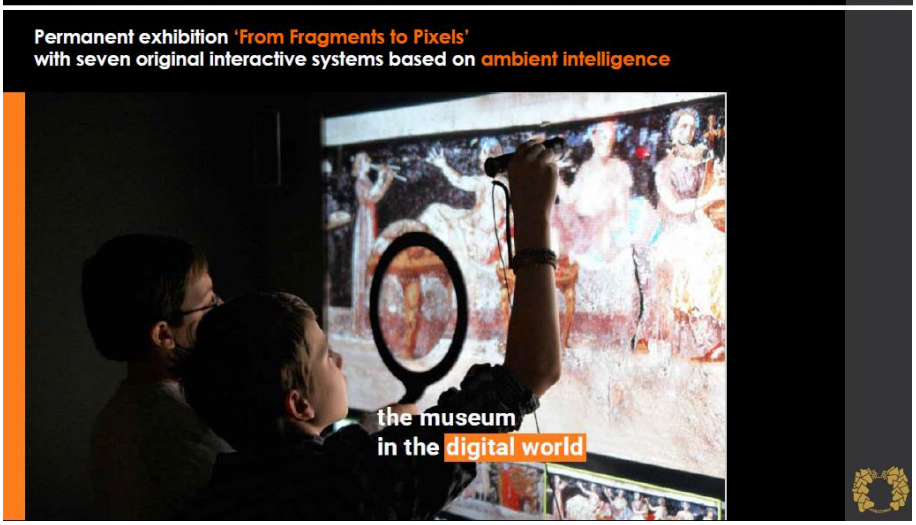


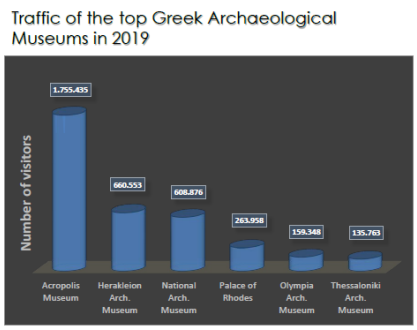

A CONTEMPORARY
PUBLIC MUSEUM
with many roles

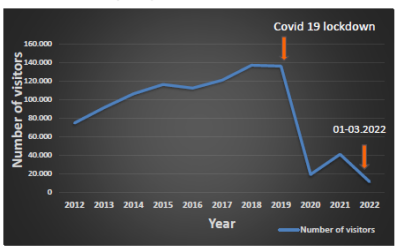

The museum highlights
Gold wreaths from ivy and myrtle, 350-325 BC
Derveni papyrus, late 4th c. BC. The oldest book in Europe.
The first Greek entry in the UNESCO "Memory of the World" register.
Derveni copper krater,
late 4th c. BC


Open air exhibitions
Field, House,
Garden, Grave
Memory in Stone



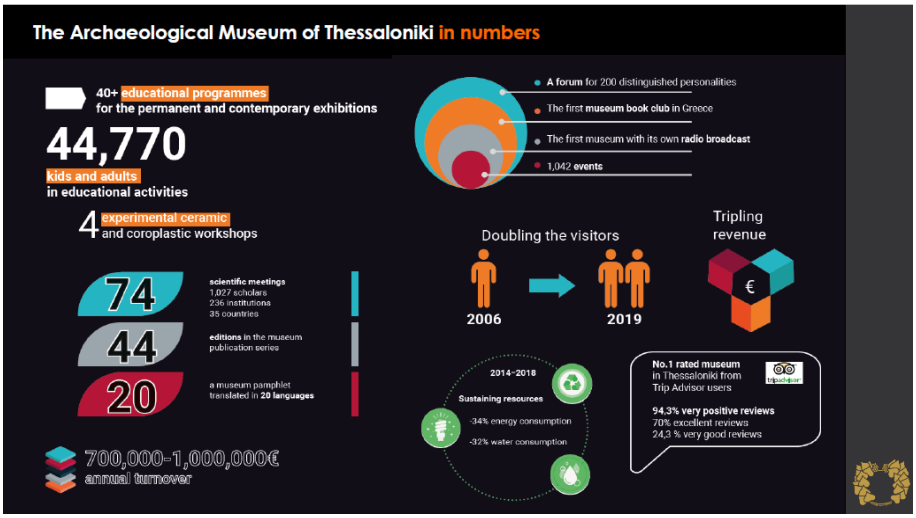



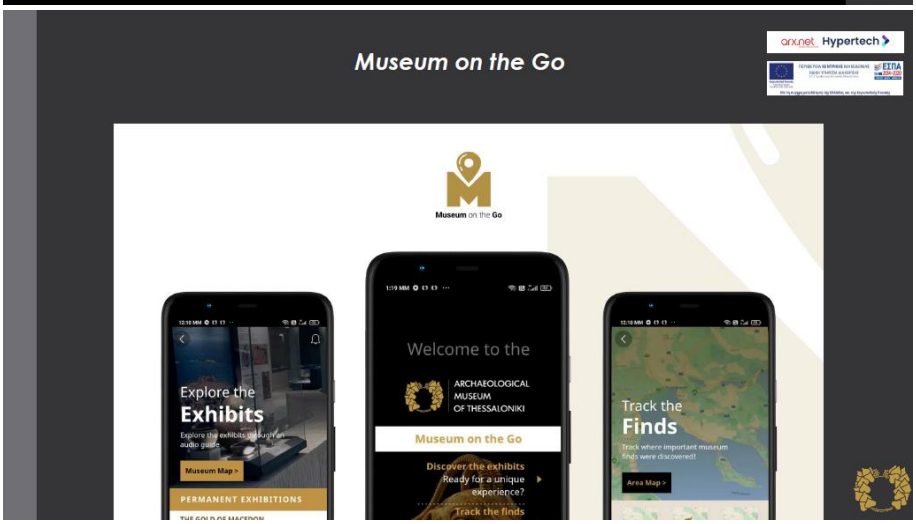




From 01.11.2020 to 13.05.2021 suspension of operation due to the Covid 19 pandemic.

Data retrieved from the Greek Statistical Service


The Archaeological Museum of Thessaloniki in numbers
40+ educational programmes for the permanent and contemporary exhibitions
44,770
kids and adults
in educational activities
4 experimental ceramic and coroplastic workshops
74
scientific meetings
1,027 scholars
236 institutions
35 countries
44
editions in the museum publication series
20
a museum pamphlet translated in 20 languages
700,000-1,000,000€
annual turnover
A forum for 200 distinguished personalities
The first museum book club in Greece
The first museum with its own radio broadcast
1,042 events
Doubling the visitors
2006
2019
Tripling revenue
2014-2018
Sustaining resources
-34% energy consumption
-32% water consumption
No.1 rated museum in Thessaloniki from Trip Advisor users
94.3% very positive reviews
70% excellent reviews
24,3 % very good reviews


Regional Operational Programme Central Macedonia 2014-2020
ΕΥΡΩΠΑΪΚΟ ΤΑΜΕΙΟ ΠΕΡΙΦΕΡΕΙΑΚΗΣ ΑΝΑΠΤΥΞΗΣ
ΤΟ ΜΟΥΣΕΙΟ ΕΙΝΑΙ ΠΑΝΤΟΥ
Operational Programme Competitiveness, Entrepreneurship and Innovation 2014-2020
e-skapani.gr
ΕΠΑνΕΚ 2014-2020
ΕΣΠΑ 2014-2020
ΕΥΡΩΠΑΪΚΟ ΤΑΜΕΙΟ ΠΕΡΙΦΕΡΕΙΑΚΗΣ ΑΝΑΠΤΥΞΗΣ
SignGuide
Αυτόματη Σενόγηση σε Μουσεία με Χρήση Νοηματικής Γλώσσας
ΕΥΡΩΠΑΪΚΟ ΤΑΜΕΙΟ ΠΕΡΙΦΕΡΕΙΑΚΗΣ ΑΝΑΠΤΥΞΗΣ
CULTUREID
Τα Διαδίκτυα του Πολιτισμού: Ενσωματώνοντας Τεχνολογία RFID στο Μουσείο.


Museum on the Go
arx.net Hypertech
Museum on the Go
Explore the Exhibits
Museum Map >
PERMANENT EXHIBITIONS
Welcome to the
ARCHAEOLOGICAL MUSEUM OF THESSALONIKI
Museum on the Go
Discover the exhibits
Ready for a unique experience?
Track the finds
Track the Finds
Area Map >

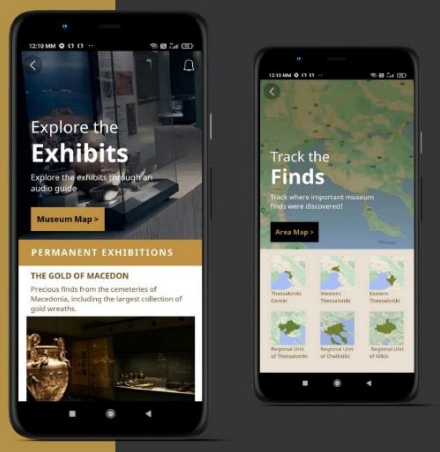

## Discover the **app**

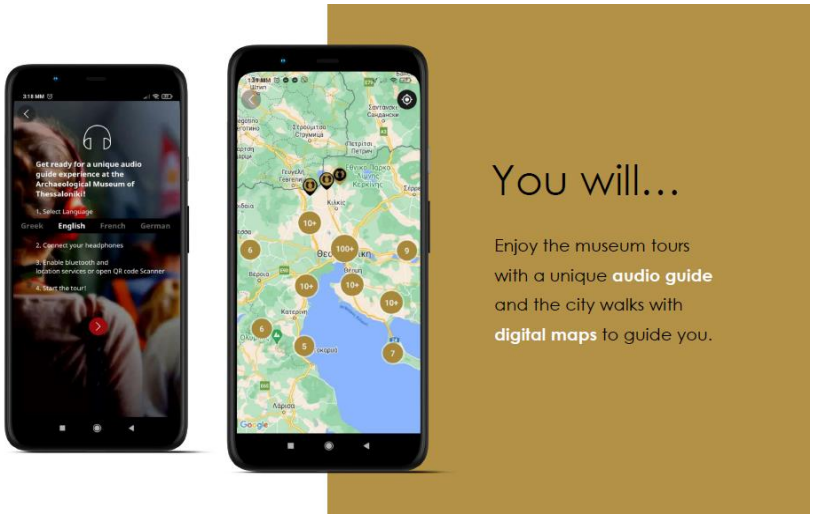
of the Archaeological Museum of Thessaloniki which travels us back in time and brings us closer to **the culture and history** of the city of **Thessaloniki** and **Central Macedonia.**

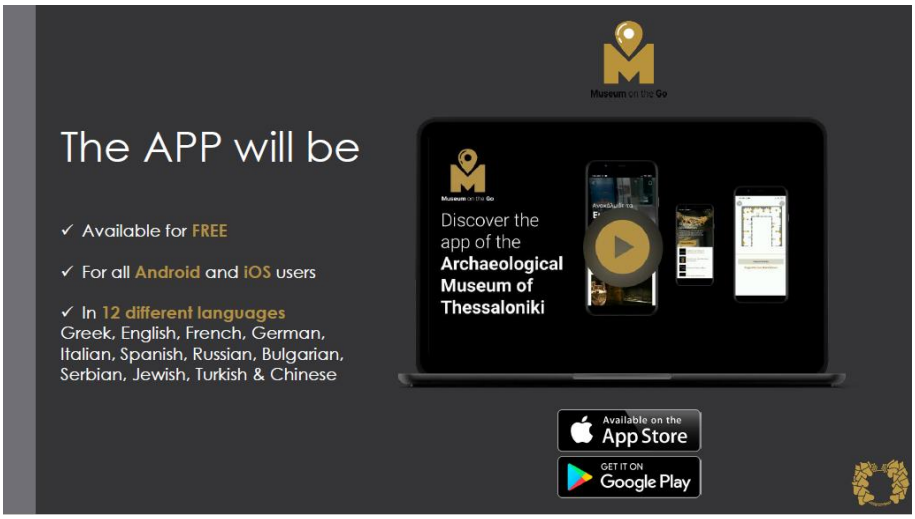
## What to **expect**!

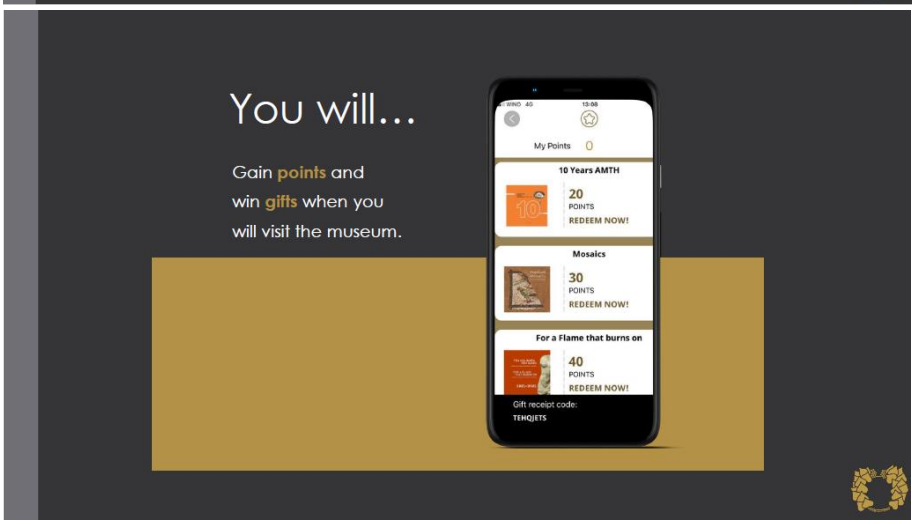
## You will…

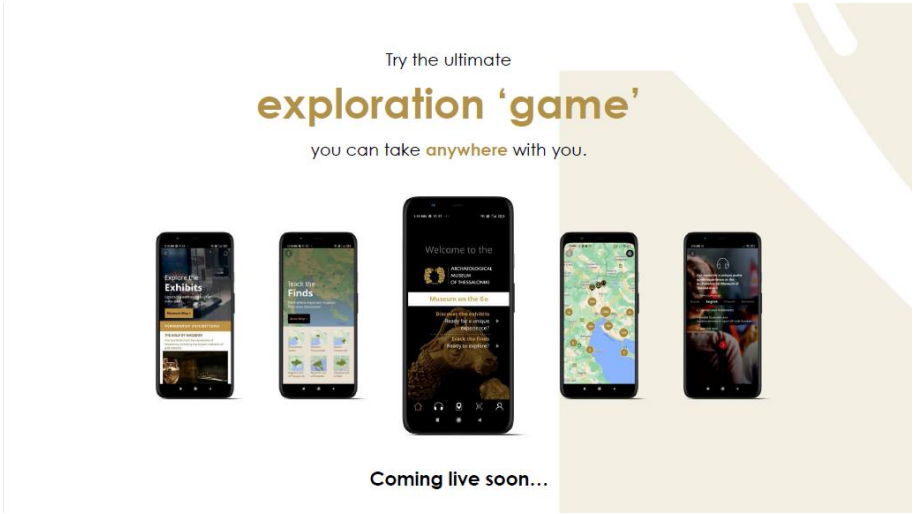
Explore the museum **exhibits** and track the archaeological **finds** at their excavation sites.



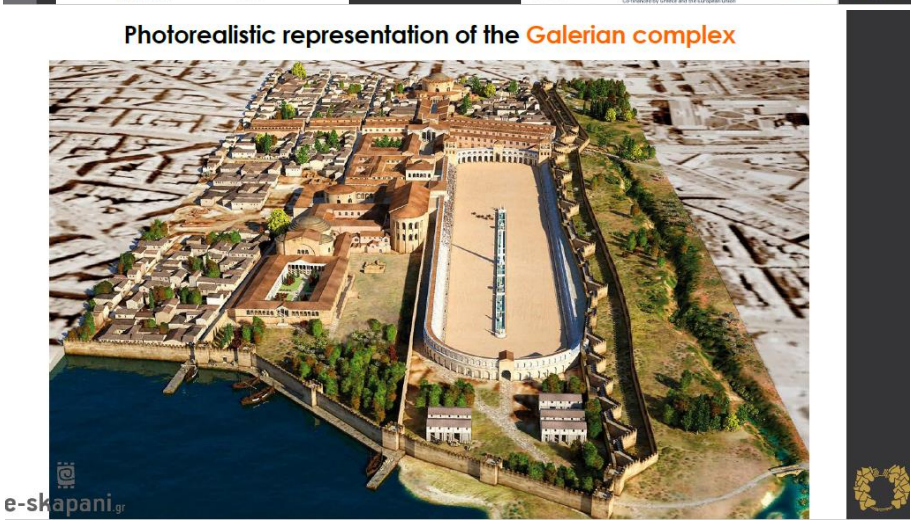

You will...
Enjoy the museum tours with a unique audio guide and the city walks with digital maps to guide you.

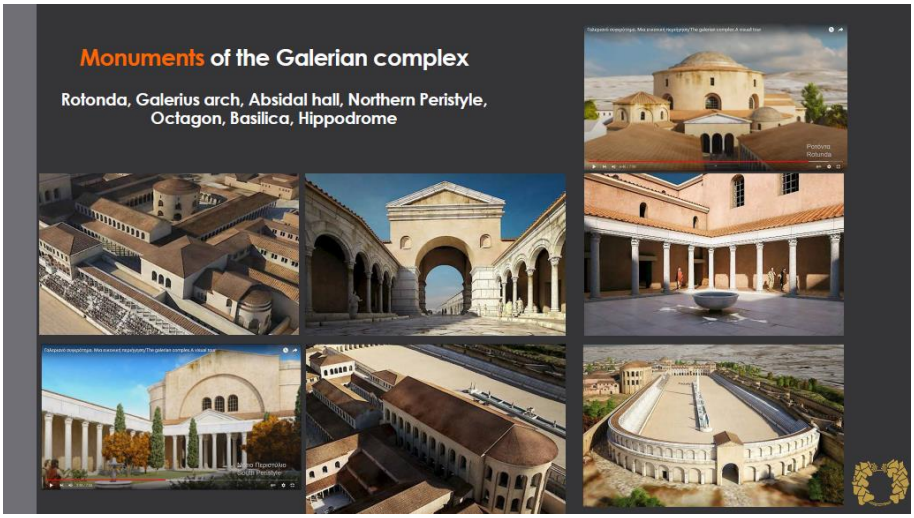

The APP will be
✓ Available for FREE
✓ For all Android and iOS users
✓ In 12 different languages
Greek, English, French, German, Italian, Spanish, Russian, Bulgarian, Serbian, Jewish, Turkish & Chinese
Museum on the Go
Discover the app of the Archaeological Museum of Thessaloniki
Available on the App Store
GET IT ON Google Play

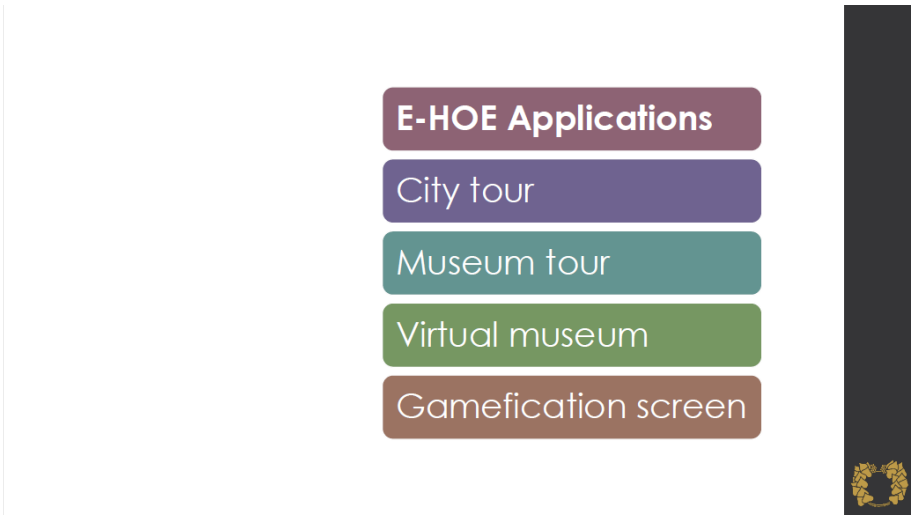

You will...
Gain points and win gifts when you will visit the museum.
My Points 0
10 Years AMTH
20 POINTS
REDEEM NOW!
Mosaics
30 POINTS
REDEEM NOW!
For a Flame that burns on
40 POINTS
REDEEM NOW!
Gift receipt code:
TEHQJETS

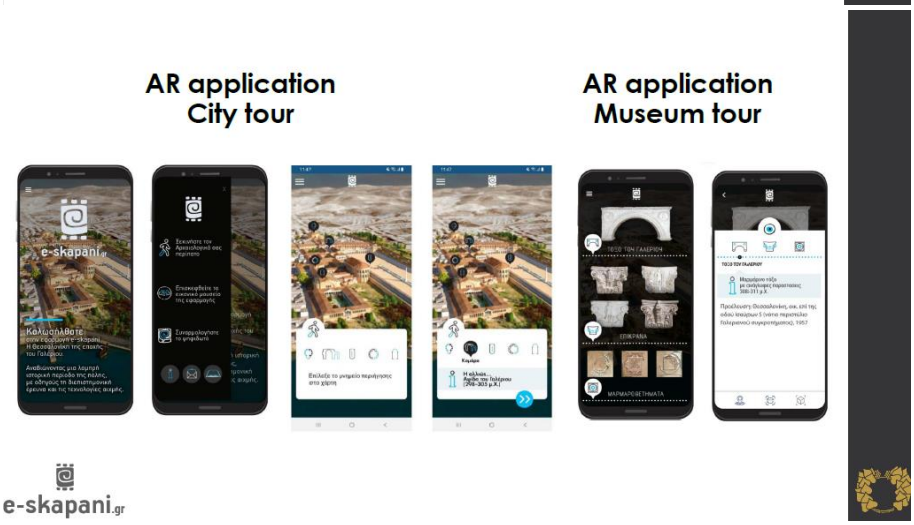

Try the ultimate
exploration 'game'
you can take anywhere with you.
Coming live soon...


e-skapani.gr
Η Θεσσαλονίκη της εποχής του Γαλέριου:
Αναβιώνοντας μια λαμπρή ιστορική περίοδο της πόλης,
με οδηγούς τη διεπιστημονική έρευνα και τις τεχνολογίες
αιχμής

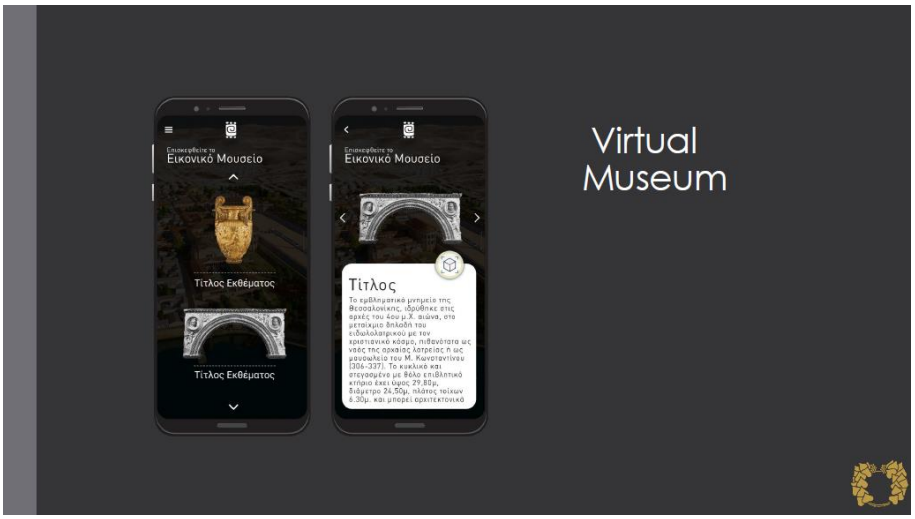

Photorealistic representation of the Galerian complex
e-skapani.gr

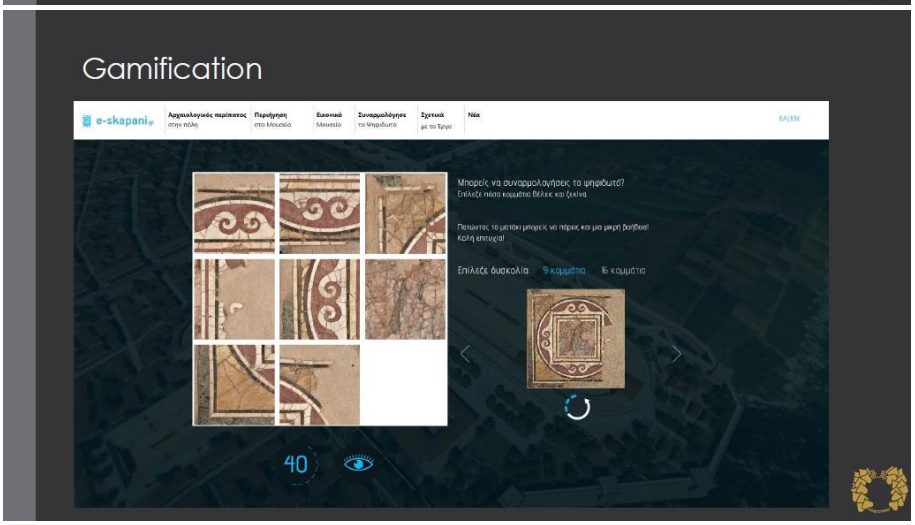

Monuments of the Galerian complex
Rotonda, Galerius arch, Absidal hall, Northern Peristyle, Octagon, Basilica, Hippodrome


E-HOE Applications
City tour
Museum tour
Virtual museum
Gamefication screen

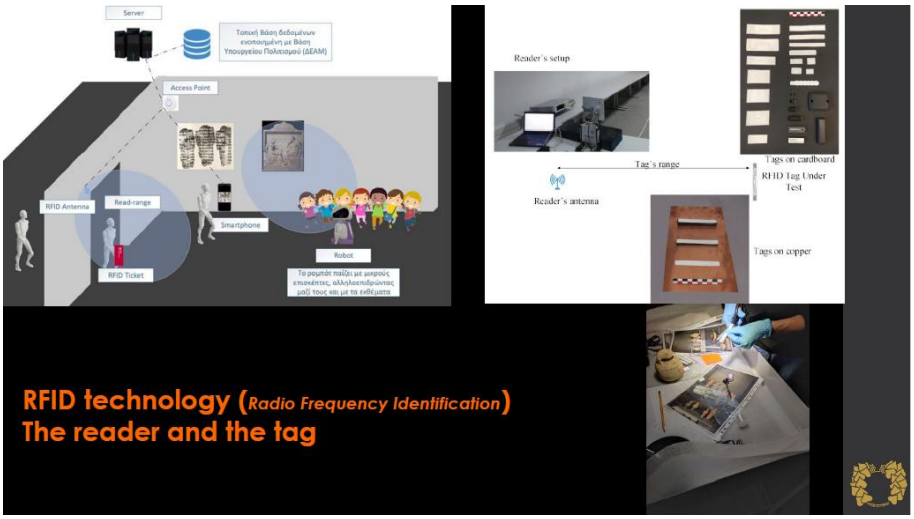

AR application
City tour
AR application
Museum tour
e-skapani.gr

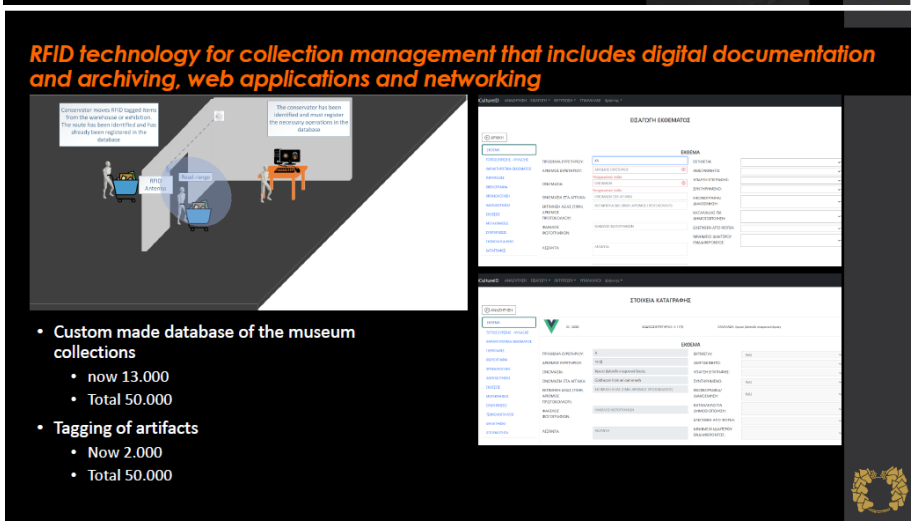

Η εφαρμογή AR στο Αρχαιολογικό Μουσείο Θεσσαλονίκης
e-skapani.gr

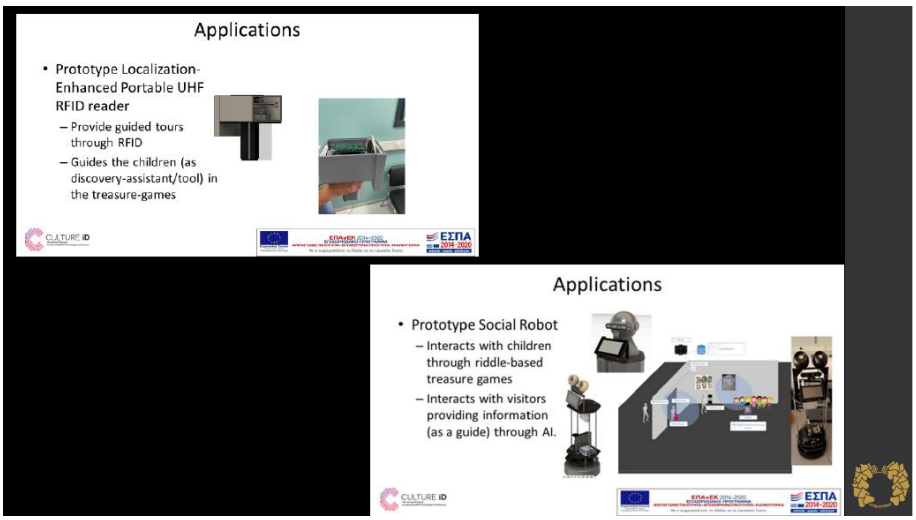

Επισκεφθείτε το Εικονικό Μουσείο
Τίτλος Εκθέματος
Τίτλος Εκθέματος
Επισκεφθείτε το Εικονικό Μουσείο
Τίτλος
Virtual Museum


Gamification
e-skapani
Μπορείς να συναρμολογήσεις το ψηφιδωτό?
Επιλέξε πόσα κομμάτια θέλεις και ξεκίνα
Επιλέξε δυσκολία 9 κομμάτια 16 κομμάτια
40


CULTURE iD
The Internet of Culture
Incorporating RFID Technology in the Museum
CultureID
Internet of Things, Robotics, Big Data Analysis, Artificial Intelligence in Culture
START EXPLORING
RFID
SOCIAL ROBOTS
TrinitySystems
KENOTOM
ΠΑΝΕΠΙΣΤΗΜΙΟ ΜΑΚΕΔΟΝΙΑΣ
ΕΣΠΑ 2014-2020


Server
Access Point
RFID Antenna
Read-range
Smartphone
Robot
RFID Ticket
Reader's setup
Tag's range
Reader's antenna
Tags on cardboard
RFID Tag Under Test
Tags on copper
RFID technology (Radio Frequency Identification)
The reader and the tag


RFID technology for collection management that includes digital documentation and archiving, web applications and networking
• Custom made database of the museum collections
• now 13.000
• Total 50.000
• Tagging of artifacts
• Now 2.000
• Total 50.000


Applications
• Prototype Localization-Enhanced Portable UHF RFID reader
– Provide guided tours through RFID
– Guides the children (as discovery-assistant/tool) in the treasure-games
Applications
• Prototype Social Robot
– Interacts with children through riddle-based treasure games
– Interacts with visitors providing information (as a guide) through AI.


SIGNGUIDE
Automatic Guided Tour of a Museum Using Sign Language
About the project

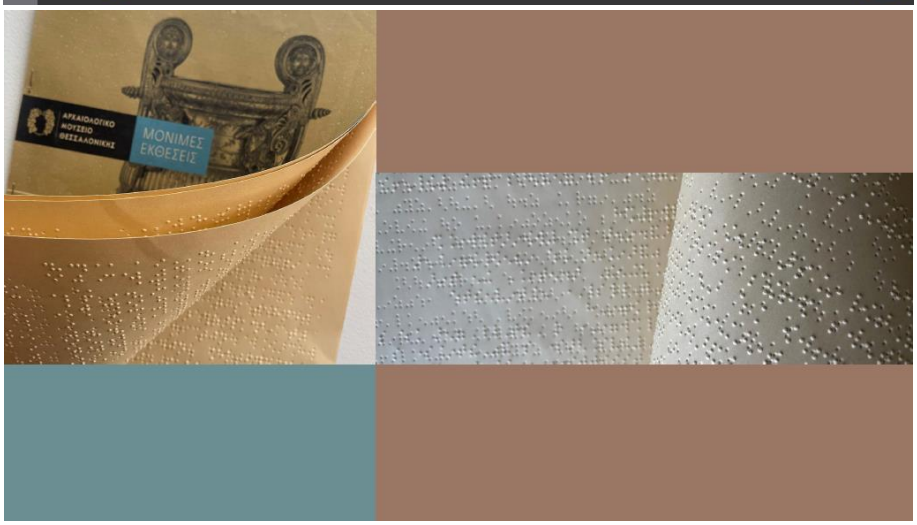

ΜΟΝΙΜΕΣ ΕΚΘΕΣΕΙΣ


exhibit
ID & title
name
image
presentation
ID & title
section
ID & title
description
image
gloss
question
ID & title
description
gloss
answer
ID & title
description
gloss

*Innovating through Experiential Tourism: The New Era of Sustainable Tourism*



PRO EXTOUR.

*Promoting heritage- and Culture-Based Experiential Tourism in the Black Sea Basin*

*INTERNATIONAL CONFERENCE ON DIGITAL TECHNOLOGIES FOR EXPERIENTIAL TOURISM*

*Innovating Through Experiential Tourism: the New Era of Sustainable Tourism*

*PhD in Geography, Associate Professor, Seyran Suvaryan*
*PhD in Geography, Associate Professor, Gor Aleksanyan*
*Yerevan State University*

Bulgaria, Varna

July 27-29, 2022

Why the Experiential Tourism is considered as an Innovation in the Scope of Sustainable Tourism?

Do we really need digitalization in Experiential Tourism?

Innovation

Creativeness + Environment = Novation

Novation x Commercialization = Innovation

# Experiential Tourism

Heritage- and Culture-based Experiential tourism (HCBET) promotes an understanding of history, people and culture among travellers, but also generates appreciation among the local people for their cultural values.

HCBET is a concept of co-creation and coorganization of tourism activities

## Principles of Sustainable Tourism

1. Minimises negative economic, environmental and social impacts
2. Generates greater economic benefits for local people
3. Involves local people in decisions that affect their lives
4. Makes positive contributions to the conservation of natural and cultural heritage
5. Creates more enjoyable experiences for tourists through more meaningful connections with local people
6. Provides access for people with disabilities and disadvantaged people
7. Engenders respect between tourists and hosts through culturally sensitive travel

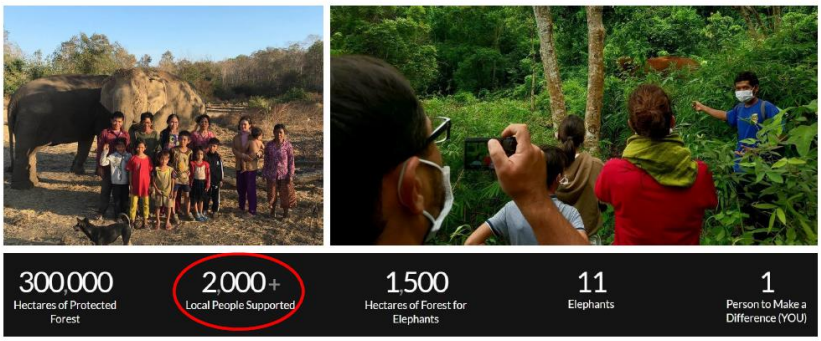
## … creates more enjoyable experiences for tourists through more meaningful connections with local people

5

## Positive example

Elephant Valley Project Mondulkiri, Cambodia

https://elephantvalleyproject.org/




PRO EXTOUR engenders respect between tourists and through culturally sensitive travel

Black Sea CROSS BORDER COOPERATION

UNSEEN TOURS


**Discover the Unseen**

Walking Tours & Virtual Quizzes

Providing a voice & income for the formerly homeless

We believe in giving our guides a platform and a voice, and empowering them to tell their own story. In this way, we provide them with paid work, confidence, opportunities to up-skill, and social inclusion.

https://unseentours.org.uk/

PRO EXTOUR

Black Sea CROSS BORDER COOPERATION

# Where is the Digitalization?

PRO EXTOUR

Black Sea CROSS BORDER COOPERATION

# i → IT → ITC → ITGS

PRO EXTOUR

Black Sea CROSS BORDER COOPERATION

# Before-During-After


PRO EXTOUR

Black Sea CROSS BORDER COOPERATION

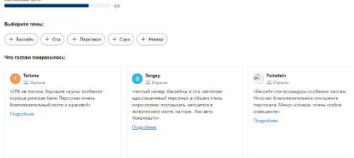
# Before-During-After

Tripadvisor

Booking.com


https://www.youtube.com/watch?v=6QIAFALRYIY

facebook



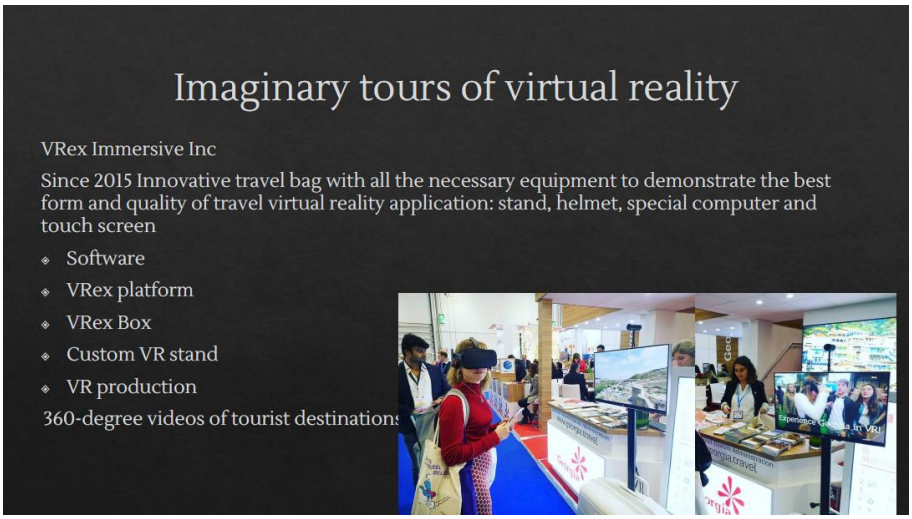
Connect with People to Feel the Places

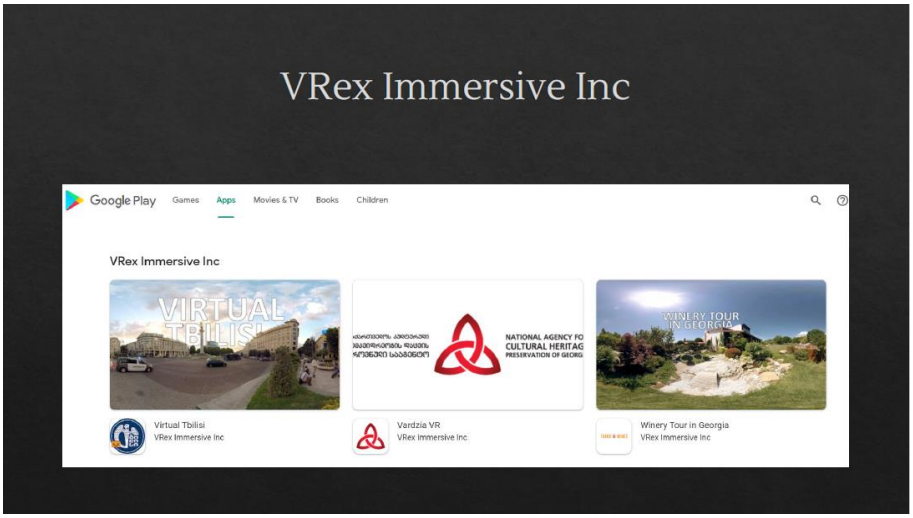
In general:

Technology is the answer,
but what was the question?

Thank you
Շնորհակալություն
Благодаря ти
გმადლობთ
ευχαριστώ

## *Tourism Service and Digital Technologies in Georgia*


VRex Immersive Inc


Uplistsikhe Museum Reserve - Imaginary Virtual Reality Stand
NATIONAL AGENCY FOR CULTURAL HERITAGE PRESERVATION OF GEORGIA


VRex Immersive Inc

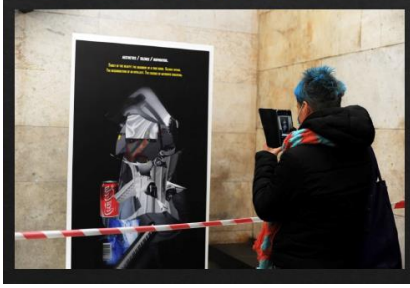

In-flight VR entertainment
In-flight VR entertainment:
Our VR is used by a major airline, letting passengers experience destinations
VRex Immersive partnered up with Georgian Airways on the mission to bring VR into the in-flight entertainment. Our technology enabled Georgian Airways to become one of the first airlines in the world to offer its passengers to experience travel destinations in VR during the flights.
Georgian Airways continues to further expand the number of flights this service is offered at, bringing more excitement to the passengers and capturing their engagement.
As the network of VR devices expands, more ways to monetize emerge. At this stage VRex and Georgian Airways is bringing ads and sponsored content to the in-flight experiences, enabling third party advertisers to reach and engage passengers as well.
Georgian Airways VR experience is also based on our VRex GO solution, which means it is easy to adopt and maintain by the flight crew.


MUSEUM
Tbilisi Digital Space
DAL
Tbilisi Digital Space

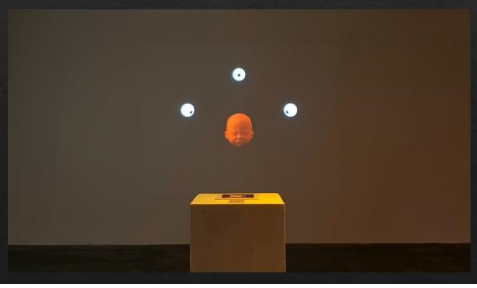

Holoseum - AudioVisual Museum

## Art | Up

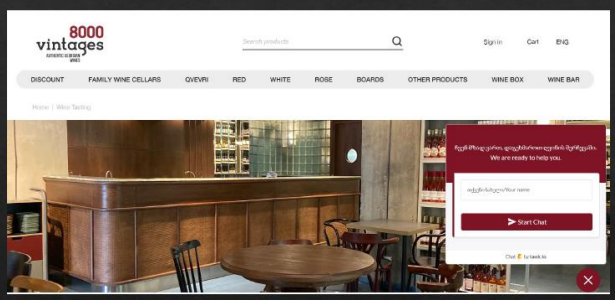
Tbilisi Metrofest



All Eyes on ME – Video Installation



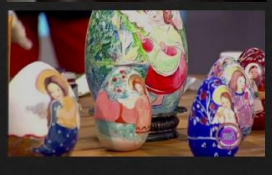
## Online wine sommelier

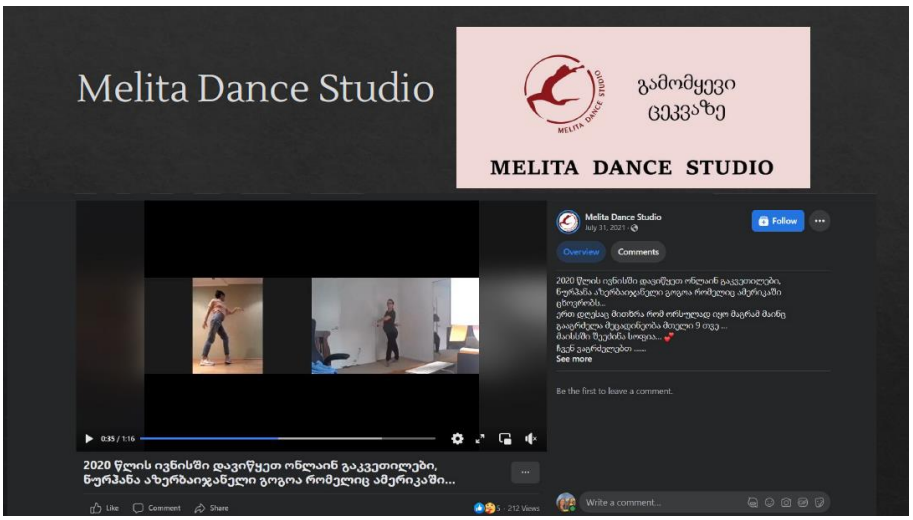


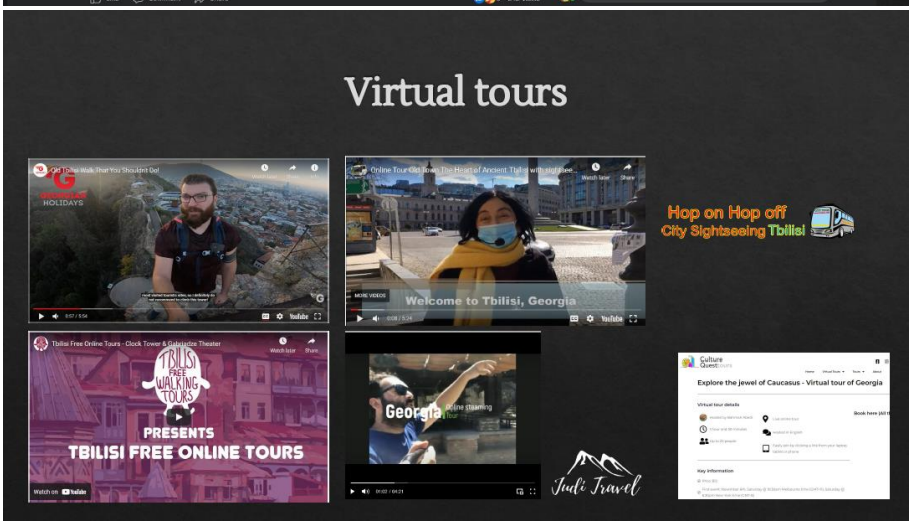

www.8000vintages.ge/

## Variety of on-line masterclasses

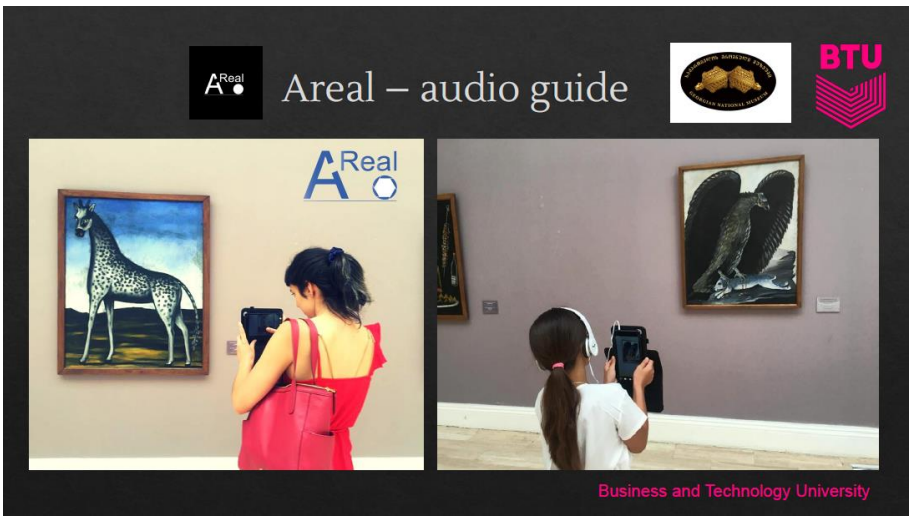
- Masterclass of vintage Christmas toys
- Masterclass of Georgian enamel
- 1 June Children's Day online master class from the little friend of the museum
- Masterclass to paint Easter eggs
- Master class of Khinkali preparation
- Master class of chess player
- Georgian, ballroom and exotic Dances master classes
- Yoga instructor master classes
- Winemakers online master classes
- Oleg Timchenko's master class of painting
- Etc..

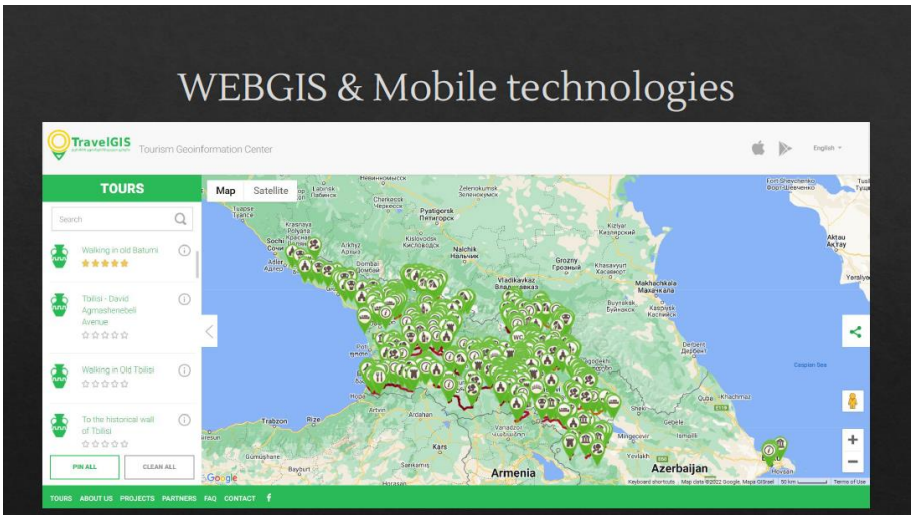


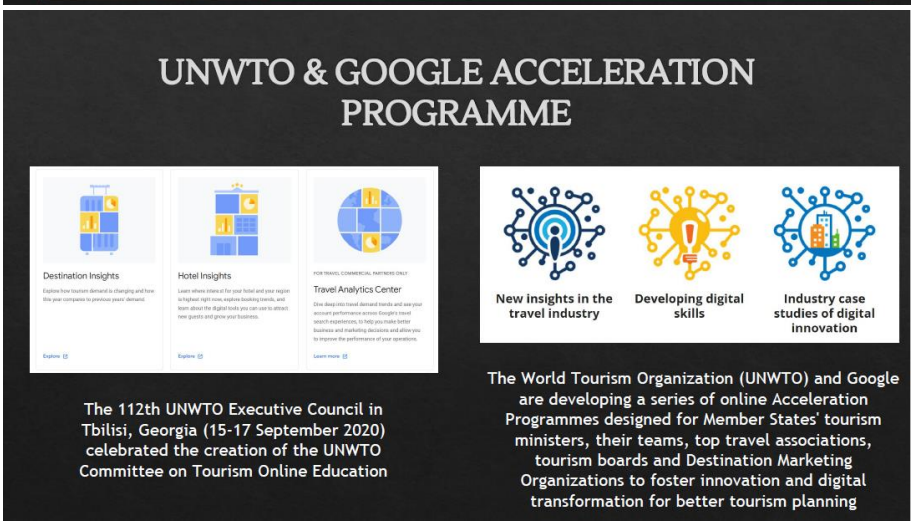

Melita Dance Studio
გამომყევი ცეკვაზე
MELITA DANCE STUDIO
Melita Dance Studio
Follow
Overview
Comments
2020 წლის ივნისში დავიწყეთ ონლაინ გაკვეთილები, ნურჯანა აზერბაიჯანელი გოგოა რომელიც ამერიკაში ცხოვრობს...
See more
Be the first to leave a comment.
2020 წლის ივნისში დავიწყეთ ონლაინ გაკვეთილები, ნურჯანა აზერბაიჯანელი გოგოა რომელიც ამერიკაში...
Like
Comment
Share
Write a comment...


Virtual tours
Hop on Hop off
City Sightseeing Tbilisi
Welcome to Tbilisi, Georgia
TBILISI FREE WALKING TOURS
PRESENTS
TBILISI FREE ONLINE TOURS
Georgia
Explore the jewel of Caucasus - Virtual tour of Georgia
Judi Travel


Ilia University
SCHOOL OF BUSINESS, TECHNOLOGY AND EDUCATION
Geoinformation and Tourism Technologies Centre(GTTC) and laboratory
HERITAG (Higher Education interdisciplinary Reform In Tourism management and Applied Geoinformation curricula) project within the framework of Erasmus + program was held at Ilia State University.
SCIENCE CAFÉ
FabLab and GameLab


Areal – audio guide
BTU
Areal
Business and Technology University

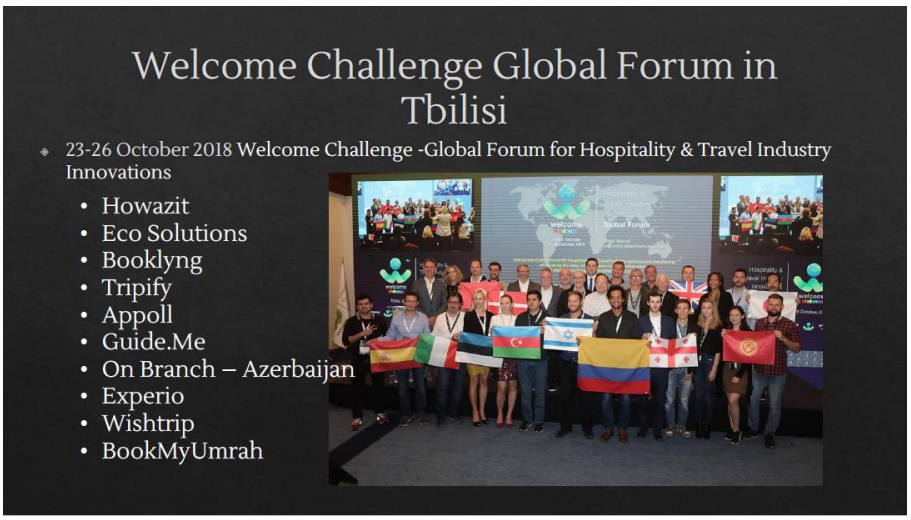

WEBGIS & Mobile technologies
TravelGIS
Tourism Geoinformation Center
TOURS
Map
Satellite
Armenia
Azerbaijan

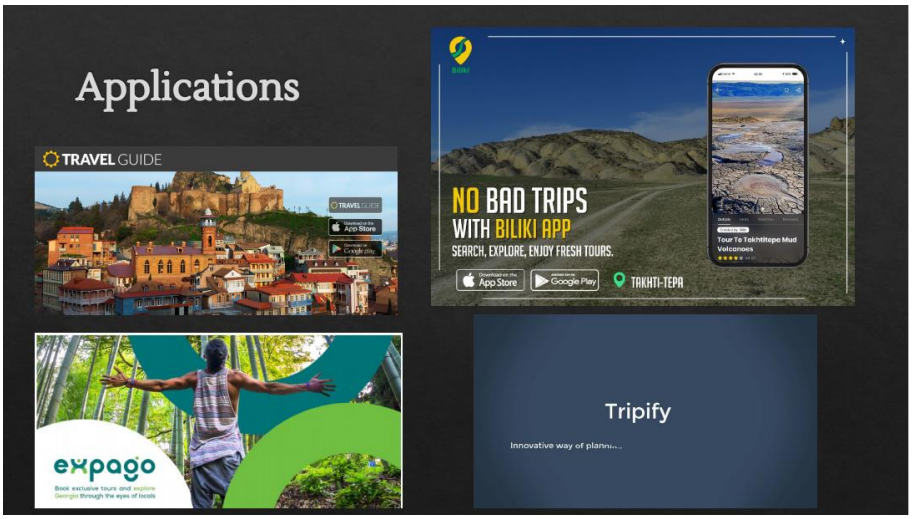

UNWTO & GOOGLE ACCELERATION PROGRAMME
Destination Insights
Hotel Insights
Travel Analytics Center
The 112th UNWTO Executive Council in Tbilisi, Georgia (15-17 September 2020) celebrated the creation of the UNWTO Committee on Tourism Online Education
New insights in the travel industry
Developing digital skills
Industry case studies of digital innovation
The World Tourism Organization (UNWTO) and Google are developing a series of online Acceleration Programmes designed for Member States' tourism ministers, their teams, top travel associations, tourism boards and Destination Marketing Organizations to foster innovation and digital transformation for better tourism planning


Google
Digital tourism ecosystem
April 14, 2020
12:00 - 14:00
Georgia's Innovation and Technology Agency (GITA) and Georgian National Tourism Administration (GNTA) jointly with Google are happy to invite you to the Digital Tools for Tourism online workshop for public officials, NGOs and tourism enthusiasts under the Google for Tourism Georgia campaign. Do not miss a chance to learn more about Google digital tools and boost your digital skills in editing of Google Maps, adding places, working with visualization and analysis of situations related to tourism.
The workshop will be conducted by a team of Google Certified Photographers and Trainers, who will provide advice, assistance, and support to each participant and practical application of their digital competencies in creating content-rich learning environments and new success stories!
Google
GEORGIA'S INNOVATION AND TECHNOLOGY AGENCY
Georgia


Google Arts & Culture
Home
Explore
Play
Nearby
Favorites
Those were the years of Art Nouveau, Expressionism, Fauvism, Cubism, Abstractionism, Constructivism, Neo-primitivism and even more "-isms". In those Modernist times, the artist's self-expression meant everything. Otskheli's artistic ideals coincided with those of the epoch he lived in.
Google Arts and Culture
Art Palace of Georgia - Museum of Cultural History
Petre Otskheli - Eternally Modern


MasterCard for tourism planning
Georgia
mastercard
BM.GE


Welcome Challenge Global Forum in Tbilisi
23-26 October 2018 Welcome Challenge -Global Forum for Hospitality & Travel Industry Innovations
Howazit
Eco Solutions
Booklyng
Tripify
Appoll
Guide.Me
On Branch – Azerbaijan
Experio
Wishtrip
BookMyUmrah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0108 -Tbilisi, Georgia
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Tbilisi Experiential Tourism Hub TETH
15, Giorgi Akhvlediani Str.
0108 -Tbilisi, Georgia
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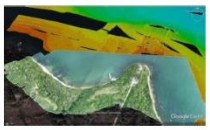
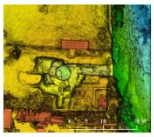
THANK YOU!
Q&A

## *Digital Approaches in the Underwater Archaeological Investigation in Bulgaria*



**Digital approaches in the underwater archaeological investigation in Bulgaria**





ФОНД НАУЧНИ ИЗСЛЕДВАНИЯ

Preslav Peev

INTERNATIONAL CONFERENCE ON DIGITAL TECHNOLOGIES FOR EXPERIENTIAL TOURISM
Varna, 13a Oborishte Street, Varna University of Management, Conference Hall

## What is *underwater archaeology*?

Some archaeological features lie under water, either because they were deposited there by accident (e.g., shipwrecks) or design (e.g., votive offerings), or because the ground in which they were originally preserved subsequently became inundated by rising water levels, subsidence, coastal erosion, seismic events, or human agency.

## Maritime archaeology

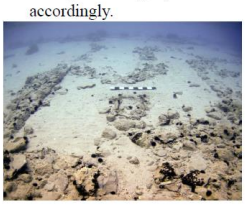
Maritime archaeology is the interpretation through surviving physical evidence of any activity associated with humankind's past relationship with the sea. Most obviously, it includes the investigation of seagoing ships, boats, and other floating craft, whether as surviving vessels, boat-burials, abandoned hulls, ship components and fittings, or sunken wrecks. More broadly, maritime archaeology is concerned with the wider infrastructures of human activities associated with the maritime environment, many of which may be situated wholly or partially on land. Such aspects might include harbors; shipbuilding and related resource extraction; shore structures associated with seagoing activities; navigational aids; exploration; cargoes and trade; predation (fishing and piracy); the projection of power and status; warfare; ritual; and recreation.

## Nautical archaeology

Nautical archaeology is the specialized study of ships, boats, and other past floating craft by examining their surviving remains. It includes freshwater as well as seagoing vessels. Documentary research, iconography, ethnology, and experimental techniques are often combined with archaeology in pursuing such studies.

## Submerged-site archaeology

Submerged-site archaeology is the investigation of any archaeological feature or structure once on land but now wholly or partly covered by water. It may include the study of submerged former landscapes and sunken habitation sites such as inundated cities or lake dwellings. Riverine or lacustrine sites such as the foundations of bridges and other structures built underwater may also be included in this category, as may lost items, rubbish, or votive objects deposited in lakes, rivers, wells. Wetland sites may be waterlogged but not wholly submerged, and techniques for investigating them are adapted accordingly.



## What is *digital archaeology*?

Digital archaeology is the application of information technology and digital media to archaeology. It includes the use of digital photography, 3D reconstruction, virtual reality, and geographical information system, among other techniques. Computational archaeology, which covers computer-based analytical methods, can be considered a subfield of digital archaeology, as can virtual archaeology.

## Specific features of digital archaeology

**Methods**

- Aerial photography
- GIS
- 3D
- Total Station Theodolite



## Aerial photography

Aerial Photography is a tool used within the field of archaeological research to discover, place and document archaeological sites. The application of this technology developed from its previous use as a method of military surveillance throughout the First World War, and offers a non-destruction means of archaeological research.

The documentation of archaeological sites through Aerial Photography techniques involve the use of digital cameras, GIS and rectification software to collect numerous black and white photographs of the site for archaeological study. These photographs can be used by archaeologists to enhance the details of the site and plot the composite features. These results are often analysed to create a geographical framework, allowing archaeologists to create a map inclusive of the sites landscape features.

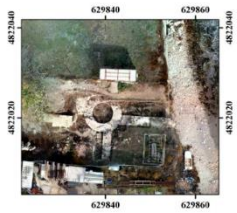
## GIS

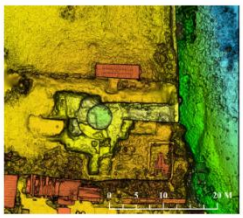
A Geographical Information System (GIS) is used within digital archaeology to document, survey and analyse the spatial data of archaeological sites. The use of a GIS within the study of archaeology involves in-field analysis and collection of archaeological and environmental data, predominantly through aerial photography, spatial cognition, digital maps and satellite imaging. The application of GIS in the analysis of archaeological data allows archaeologists to process the data collected efficiently, recreate landscapes of archaeological sites through spatial analysis, and supply the archaeological findings to public archives. The use of this digital method has enhanced the ability of archaeologists to analyse the geography and spatial relationships of ancient archaeological sites.

## 3D modeling

3D modeling is a digital technique used within archaeological research to interpret, analyse, and visualise data. The technique utilises methods of satellite imaging and aerial photography, amongst other digital imaging techniques to construct 3D models of the geography, architecture and archaeological findings of historical sites.

The application of computer technology allows large amounts of image sequencing to be collected and processed by archaeologists, enhancing the photorealistic texture mapping within the construction of these 3D models.



## Total Station Theodolite

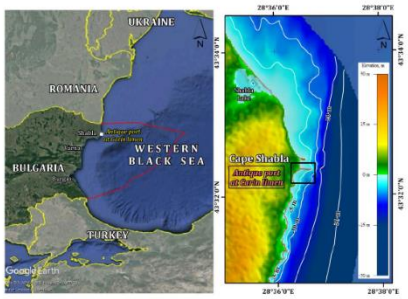
A Total Station Theodolite (TST) is a surveying instrument that utilises electronic distance measurement technology to analyse archaeological sites. TST technology allows the distance of an archaeological site to be documented and maps to be established. This is conducted through the measurement of distance between the TST instrument and the site selected. The use of reflectorless TST technology as a method of archaeological research utilises an infrared beam to record measurements of archaeological sites, this allows archaeologists to study the spatial landscape of sites despite possible inconsistencies in elevation.

oTST technology is considered a direct surveying technique as it utilises the manual acquisition of points of reference by the operator. TST techniques allow data to be downloaded and analysed after the archaeological survey is complete, limiting the awareness of an archaeologist when conducting in-field analysis.

## Data collection

The use of Information Communication Technology and digital techniques in archaeological studies has furthered the development of documenting archaeological data. This incorporation of modern technology throughout the process of conducting archaeological research has allowed commercial, academic and heritage management fields to become increasingly unified. The recording of archaeological data is distinguished through methods of acquisition, analysis, and representation throughout the process of data handling.

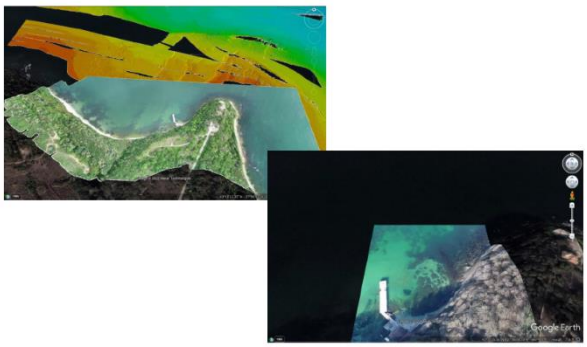
## Cape Shabla




## Aerial survey, Cape Shabla, Bulgaria

## Underwater survey, Cape Shabla

## Galata



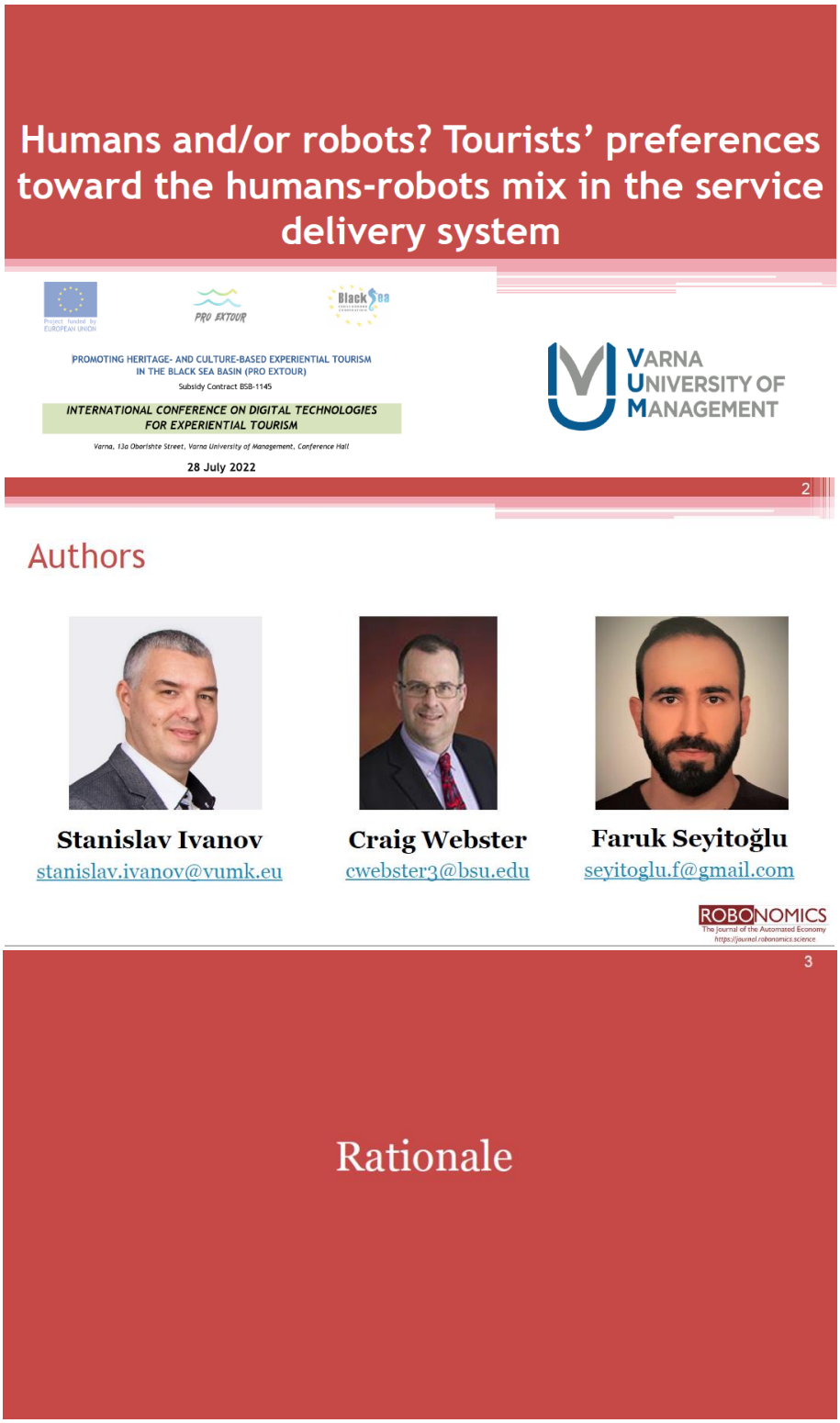


## Acknowledgments

The present study was supported by the project „Inventory of Late Antique and Medieval ports along the Western Black Sea“, funded by the National Science Fund of the Ministry of Education and Sciences of the Republic of Bulgaria and the Centre for International Cooperation & Mobility (ICM) of the Austrian Agency for International Cooperation in Education and Research (OeAD-GmbH) through the Scientific & Technological Cooperation Programme Award (Grant Agreement no КП-06-Austria/11).

We thank the funding bodies and the Bulgarian and Austrian Academy of Sciences for their support.

***Tourists' Preferences Toward the Humans-Robots Mix in the Service Delivery System***



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## Rationale

http://www.h-n-h.jp/assets/images/facility_img_01.jpg

Photo credit: Stanislav Ivanov

Photo credit: Stanislav Ivanov

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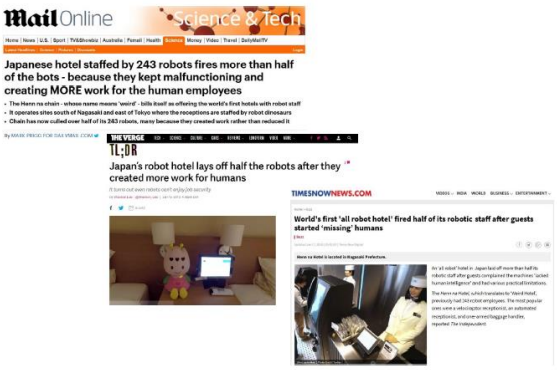
## Rationale





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## Rationale

- Demographic changes, biosecurity threats, low pay, long and inconvenient shifts decrease the labour supply in tourism and hospitality => companies are forced to automate processes, including to use service robots.
- The limited technological capabilities and relatively high costs of robots for the tasks they can perform hinder their quick adoption by companies.
- Hence, tourism and hospitality companies will rely on human employees only or on a mix of humans and robots in their service delivery systems rather implement complete robotisation of front-of-house operations.
- This raises the question: *What is the optimal mix of humans and robots in the service delivery system according to tourists?*

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# Research model

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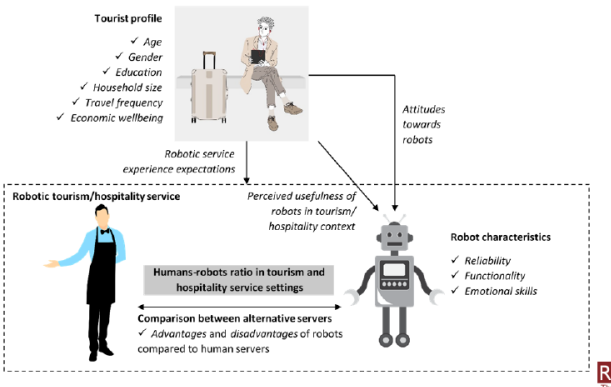
## Research model

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# Methodology

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## Methodology

- A global online survey on tourists' perceptions towards robots in travel, tourism and hospitality
- Data collected between Mach 2018 and October 2019
- Ethics clearance provided by Ball State University, USA
- 1537 respondents included in the sample
- Analytical methods include parametric tests, cluster analysis, factor analysis and regression analysis

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## Methodology

- Preferred humans-robots ratio measured on a 7-point scale (1= "I prefer to be served only by robots", 4="I prefer to be served by approximately an equal number of human employees and robots.", 7="I prefer to be served only by human employees.") for 17 different travel / tourism/ hospitality settings (Hotel, Room service, Restaurant, Bar, Travel agency, Tourist information centre, Rent-a-car, Airplane, Bus, Train, Ship, Airport, Bus station, Train station, Port, During an event such as a concert, congress, exhibition, and Museum/gallery)
- 7-point level of agreement scale used for other questions

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## Key results

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## Key results

- Respondents preferred to be served by slightly more human servers than robotic servers: all means were above the midpoint 4
- The mean humans-robots ratio was lowest (i.e. the share of robots is highest) for services with the shortest interaction between the service providers and the tourists, such as at train stations (m=4.25), bus stations (m=4.26), and room service (m=4.34), or for services related to the provision of information which is mainly repetitive such as at tourist information centres (m=4.33).
- For services with a strong social element, such as restaurants (m=5.06) and bars (m=5.12), respondents preferred a much higher share of humans than robots.

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## Key results

- 3 clusters identified:
  - Cluster 1 (n=260) included respondents that overwhelmingly preferred to be served by more robots than humans – means ranged from m=2.14 (train stations) and m=3.51 (bars). They also had very positive attitudes towards robots (m=6.10).
  - Cluster 2 respondents (n=494) preferred mostly humans to robots in the service delivery – the mean responses ranged from m=5.84 (tourist information centre) to m=6.38 (restaurant). They had neutral attitudes towards robots (m=4.56).
  - Cluster 3 was the largest one (n=753), and respondents in it preferred an approximately equal number of humans and robots in the service delivery: min m=3.93 (bus/train stations), max m=4.93 (bar).

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## Key results

- The t-test and ANOVA revealed that respondents' preferences towards the humans-robots ratio were largely shaped by respondents' gender, attitude towards robots and cluster belongingness. Males and people with more positive attitudes towards robots accepted more robots in the service delivery systems than females and people with negative attitudes towards robots.

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## Key results

| Hypotheses (robot's characteristics) | Outcome |
|---|---|
| H1: Perceived service robot *reliability* is positively related to tourists' preferences towards the share of robots in the service delivery systems of tourism and hospitality companies. | Not supported |
| H2: Perceived service robot *functionality* is positively related to tourists' preferences towards the share of robots in the service delivery systems of tourism and hospitality companies. | Not supported |
| H3: Perceived *emotional skills* of service robots are positively related to tourists' preferences towards the share of robots in the service delivery systems of tourism and hospitality companies. | Supported |





## Key results

| Hypotheses (comparison between alternative servers) | Outcome |
|---|---|
| H4: Perceived service robot *advantages* compared to human employees are positively related to tourists' preferences towards the share of robots in the service delivery systems of tourism and hospitality companies. | Not supported |
| H5: Perceived service robot *disadvantages* compared to human employees are negatively related to tourists' preferences towards the share of robots in the service delivery systems of tourism and hospitality companies. | Supported |





## Key results

| Hypotheses (expectations, usefulness, attitudes) | Outcome |
|---|---|
| H6: Tourists' robotic service experience *expectations* are positively related to their preferences towards the share of robots in the service delivery systems of tourism and hospitality companies. | Supported |
| H7: Perceived service *robot usefulness* in the tourism/hospitality context is positively related to tourists' preferences towards the share of robots in the service delivery systems of tourism and hospitality companies. | Supported |
| H8: Tourists' *attitude* towards robots is positively related to their preferences towards the share of robots in the service delivery systems of tourism and hospitality companies. | Supported |

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## Key results

| Hypotheses (tourist profile) | Outcome |
|---|---|
| H9.1: *Gender* shapes tourists' preferences towards the share of robots in the service delivery systems of tourism and hospitality companies. | Supported |
| H9.2: *Age* shapes tourists' preferences towards the share of robots in the service delivery systems of tourism and hospitality companies. | Not supported |
| H9.3: *Household size* shapes tourists' preferences towards the share of robots in the service delivery systems of tourism and hospitality companies. | Mixed results |
| H9.4: *Education* shapes tourists' preferences towards the share of robots in the service delivery systems of tourism and hospitality companies. | Not supported |
| H9.5: *Economic wellbeing* shapes tourists' preferences towards the share of robots in the service delivery systems of tourism and hospitality companies. | Not supported |
| H9.6: *Travel frequency* shapes tourists' preferences towards the share of robots in the service delivery systems of tourism and hospitality companies. | Not supported |

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## Key results

These results mean that people accept a high share of robots in the service delivery if they:

- perceive robots as having high *emotional skills* and as *useful* in the tourism/hospitality context,
- expect that robots will be beneficial to their *travel experience,*
- generally have *positive attitudes* toward robots,
- consider that robots have *fewer disadvantages* compared to human servers,
- have *smaller households* and
- identify with the *male* gender.

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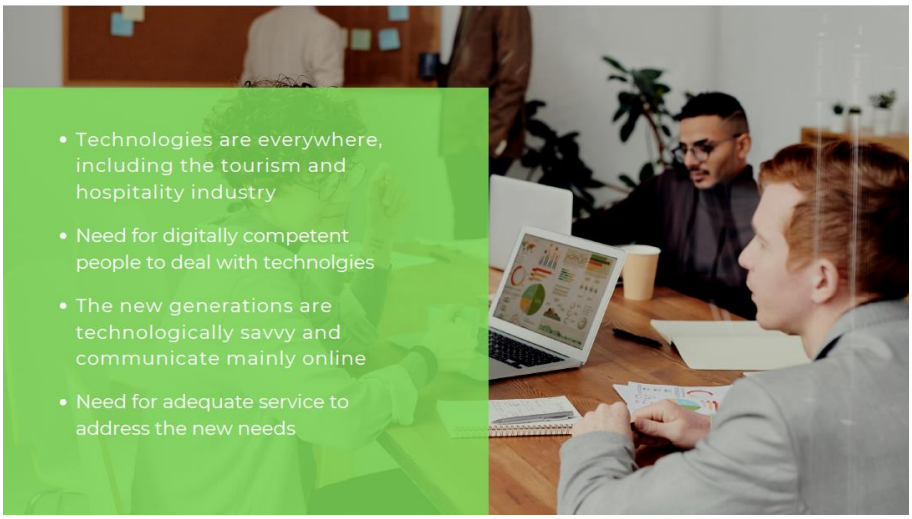
## THANK YOU FOR THE ATTENTION!

## QUESTIONS?

## *Digital Skills in Tourism*


### DIGITAL SKILLS IN THE EU

According to the Digital Economy and Society Index (DESI)2021 Bulgaria is rated with very low share of people with basic digital skills – only 29% of the total Bulgarian population aged 16-74, against the EU average of 56% (European Commission, 2021).

The demographic crisis and post-COVID revival additionally foster the need for further automation and technologies introduction

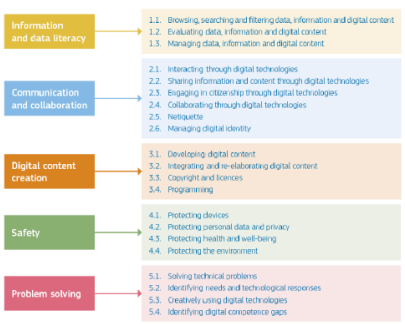
## DIGITAL COMPETENCES 2.2.

5 GROUPS OF DIGITAL SKILLS

1. Information and data literacy
2. Communication and collaboration
3. Digital content creation
4. Safety in digital environment
5. Problem solving



## DIGITAL COMPETENCES 2.2.




## DIGITAL SKILLS IN TOURISM

TOURISM AND HOSPITALITY ADOPT A LOT OF TECHNOLOGIES

- hospitality management software,
- high technological solutions for TA and TO,
- internal management systems,
- self-service technologies,
- robots,
- kiosks,
- experience-based technollgies
- and many others

## ROLE OF DIGITAL SKILLS FOR THE EXPERIENTIAL TOURISM


## METHODOLOGY

**GENERAL** 01
Period: March 2019
Part of a major EU project - NTG
Mixed methods research

**TARGET POPULATION** 02
8 countries from EU
5 tourism sectors
accommodation, F&B, TOTA, Attractions and DMO

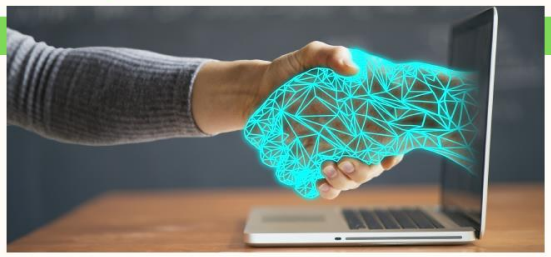
**SAMPLE** 03
representatives of the 5 tourism sectors
135 respondents to the online questionnaire
16 interviewees

## STUDY GOALS


Comparison between current and future needs (in 10 years) of digital skills in the tourism industry

Digital skills training and education - is it available and who is implementing it

## FINDINGS: ONLINE QUESTIONNAIRE RESPONDENTS



Strong focus on the social media skills, online reviews, digital marketing skills and communication skills

The least developed skills are Dealing with robots and AI skills; AR & VR, and Programming

Much appreciated skills both for the current moment and for the future are: Dealing with PMS, MS Office and other operational systems, as well as Working with digital equipment

## FINDINGS: INTERVIEWS

Focus on the general digital literacy and working with digital equipment and applications

Need for a better connectivity among the employees, improved communication and safety and security systems

Robots skills, although they are not quite popular in Bulgaria for now

## DIGITAL SKILLS TRAINING AND EDUCATION


44% of the respondents have never been trained for digital skills

80% of the trainings happen on the job place, but there is a significant share of online education as well (40%)

The common perception is that employees should acquire digital skills BEFORE they start working in the industry

## MAIN IMPLICATIONS

- Tourism employees in Bulgaria definitely need to develop their digital skillls
- Lack of digital skills would affect negatively the whole process of providing proper service
- Bulgarian respondents are aware of the importance of digital skills, but do not have a clear strategy yet how to develop them
- For now respondents still rely mostly on the general education, rather than on specially organizad training of digital skills

## THANK YOU!

## ANY QUESTIONS?

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PRO EXTOUR Partnership
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