ÀreesDigitals

Immersive experiences in the province of Girona:
MAC - Ullastret

Miquel Lleixà – i2CAT
Laura Romero – MAC Ullastret

Girona, 29th of january 2026
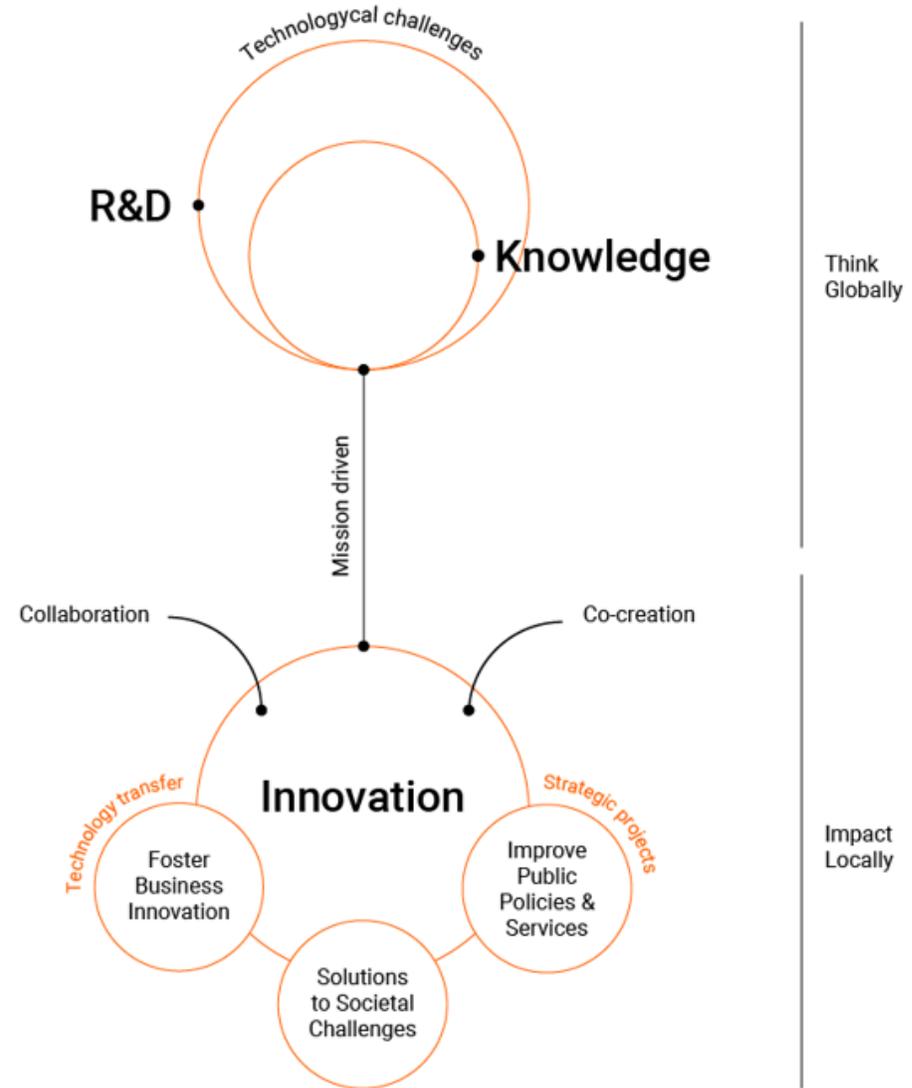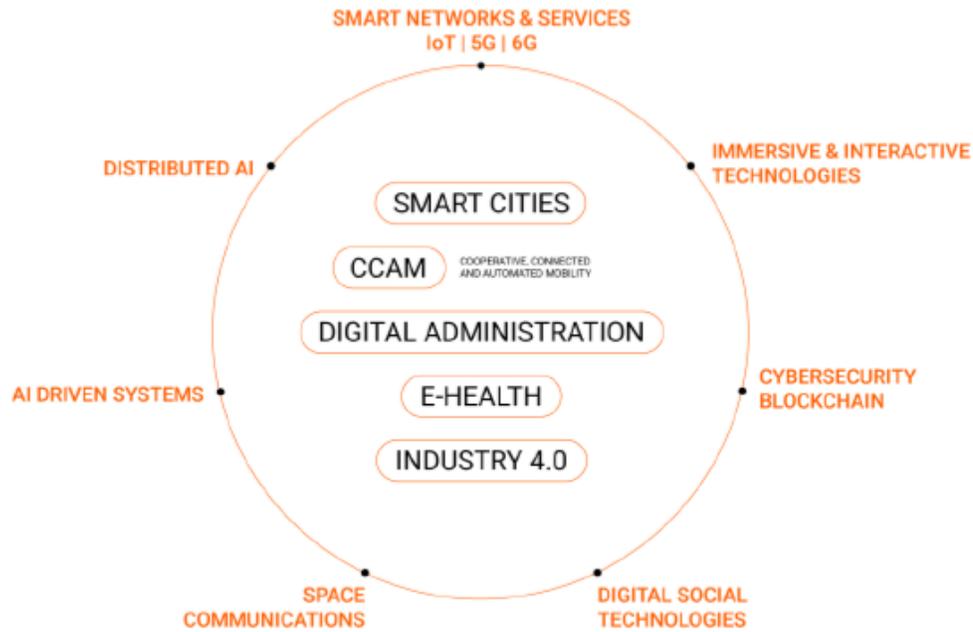
Generalitat de Catalunya

i2cat®

Mobile WorldCapital Barcelona

i2CAT, The Internet Research Centre

SMART NETWORKS & SERVICES
IoT | 5G | 6G

DISTRIBUTED AI

IMMERSIVE & INTERACTIVE
TECHNOLOGIES

SMART CITIES

CCAM — COOPERATIVE, CONNECTED AND AUTOMATED MOBILITY

DIGITAL ADMINISTRATION

E-HEALTH

CYBERSECURITY
BLOCKCHAIN

AI DRIVEN SYSTEMS

INDUSTRY 4.0

SPACE
COMMUNICATIONS

DIGITAL SOCIAL
TECHNOLOGIES

Technologycal challenges

R&D

Knowledge

Mission driven

Think Globally

Collaboration

Co-creation

Innovation

Technology transfer

Strategic projects

Foster Business Innovation

Improve Public Policies & Services

Solutions to Societal Challenges

Impact Locally

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ÀREES DIGITALS
Territorial Social and Digital Innovation Strategy

The Territorial Social and Digital Innovation Strategy aims at **connecting the different active agents** of the territory to **accelerate the transformation towards the digital society throughout Catalonia**, making the entities of the territory leaders and participants in this transformation, and making it fairer and more equitable, seeking to reduce gaps.
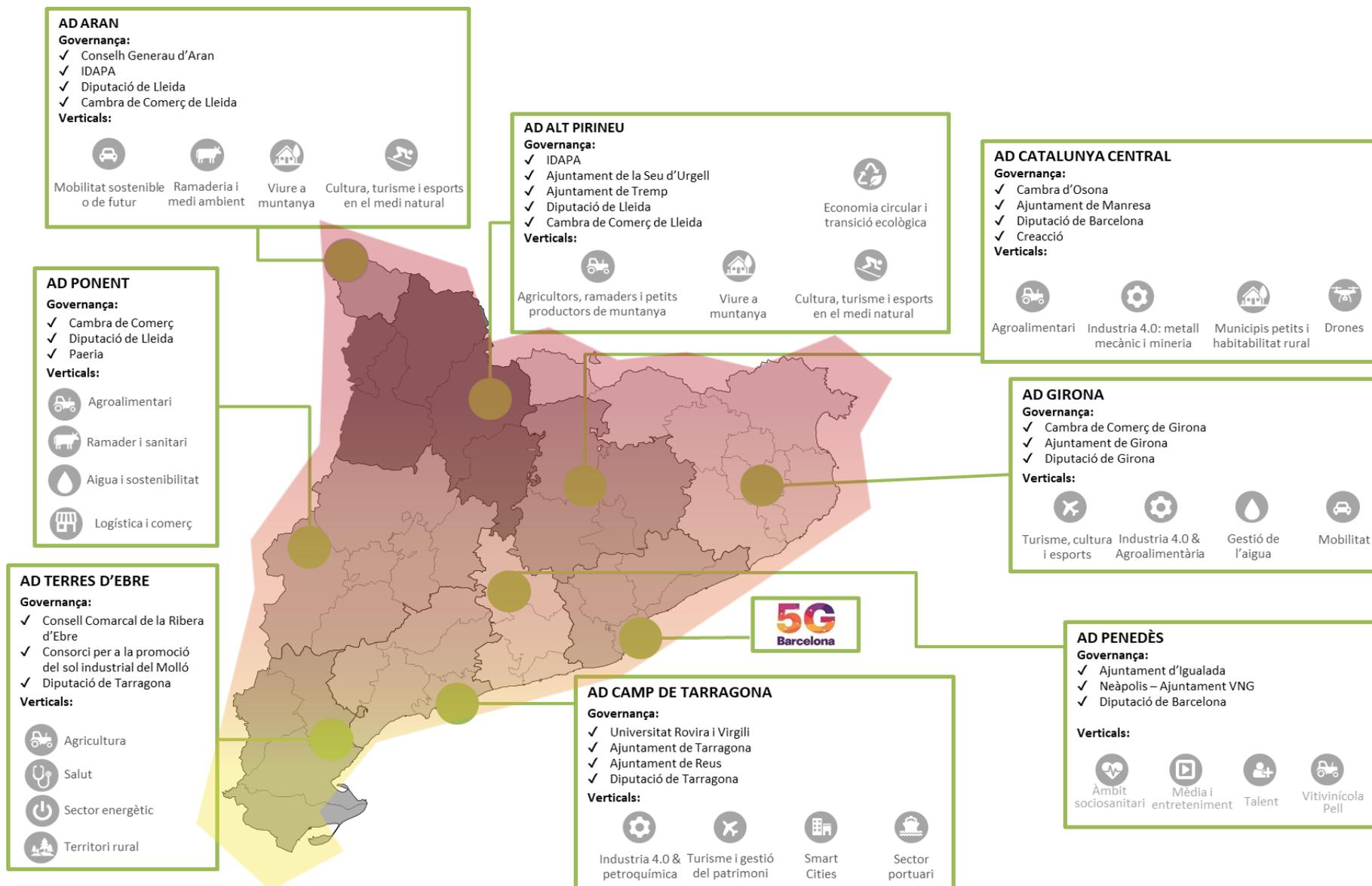
Specific objectives:

Connect all actors in the territory to the innovation ecosystem.

Promote **competitiveness and the economic dynamism** of the territory.

Reduce **digital divides**.

ÀreesDigitals

AD ARAN
Governança:
✓ Conselh Generau d'Aran
✓ IDAPA
✓ Diputació de Lleida
✓ Cambra de Comerç de Lleida
Verticals:

Mobilitat sostenible o de futur | Ramaderia i medi ambient | Viure a muntanya | Cultura, turisme i esports en el medi natural

AD ALT PIRINEU
Governança:
✓ IDAPA
✓ Ajuntament de la Seu d'Urgell
✓ Ajuntament de Tremp
✓ Diputació de Lleida
✓ Cambra de Comerç de Lleida
Verticals:

Economia circular i transició ecològica

Agricultors, ramaders i petits productors de muntanya | Viure a muntanya | Cultura, turisme i esports en el medi natural

AD CATALUNYA CENTRAL
Governança:
✓ Cambra d'Osona
✓ Ajuntament de Manresa
✓ Diputació de Barcelona
✓ Creacció
Verticals:

Agroalimentari | Industria 4.0: metall mecànic i mineria | Municipis petits i habitabilitat rural | Drones

AD PONENT
Governança:
✓ Cambra de Comerç
✓ Diputació de Lleida
✓ Paeria
Verticals:

Agroalimentari

Ramader i sanitari

Aigua i sostenibilitat

Logística i comerç

AD GIRONA
Governança:
✓ Cambra de Comerç de Girona
✓ Ajuntament de Girona
✓ Diputació de Girona
Verticals:

Turisme, cultura i esports | Industria 4.0 & Agroalimentària | Gestió de l'aigua | Mobilitat

AD TERRES D'EBRE
Governança:
✓ Consell Comarcal de la Ribera d'Ebre
✓ Consorci per a la promoció del sol industrial del Molló
✓ Diputació de Tarragona
Verticals:

Agricultura

Salut

Sector energètic

Territori rural

5G Barcelona

AD CAMP DE TARRAGONA
Governança:
✓ Universitat Rovira i Virgili
✓ Ajuntament de Tarragona
✓ Ajuntament de Reus
✓ Diputació de Tarragona
Verticals:

Industria 4.0 & petroquímica | Turisme i gestió del patrimoni | Smart Cities | Sector portuari

AD PENEDÈS
Governança:
✓ Ajuntament d'Igualada
✓ Neàpolis – Ajuntament VNG
✓ Diputació de Barcelona

Verticals:

Àmbit sociosanitari | Mèdia i entreteniment | Talent | Vitivinícola Pell

Immersive technologies in health

Pilot project: universal access to culture with an immersive concert

This pilot project uses Media Technologies together with connectivity, to offer users of healthcare centers the possibility of enjoying a cultural activity in an immersive way.

Offering an immersive experience of a live concert with 360° vision to a patient with severely reduced mobility

Main impacts of the project:

• Allowing people with reduced mobility to enjoy cultural activities in an immersive way.

• Testing of technological assets for camera synchronization (Sync X software)

• Change of perspective without contact

• Replicability in other environments

Technological partner: **Into Reality**

Other Partners: Generalitat de Catalunya, i2CAT Foundation, Mobile World Capital Barcelona, Girona Provincial Council, Casa de la Música Foundation, Salut Empordà Foundation.

Immersive technologies in cultural heritage

Pilot project: discovering the historical heritage of the Torre Gironella site with immersive experiences

This pilot project proposes to create a mixed reality experience in the ruins of Torre Gironella through the use of advanced technologies such as augmented reality (AR)

Offering an immersive and educational experience allowing the visitor to interactively explore an emblematic monument

- The project combines WebXR technology with the dissemination of historical heritage.
- Users can explore the 14th century Gironella Tower interactively, thanks to a high-quality 3D model precisely integrated into the physical environment through LIDAR scanning and optimized tracking points.
- Improvements in textures, light and placement have provided an attractive and coherent visual representation.

Technological partner: **CIFOG** (training center focused on audiovisual technologies)
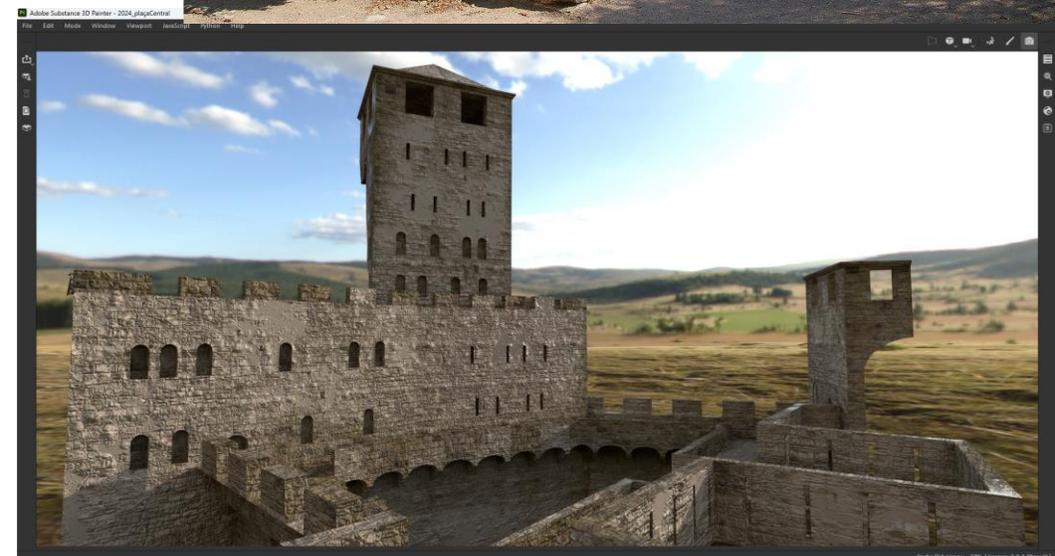
Pilot project: archaeological heritage with augmented reality experiences at the MAC museum - Ullastret

The visitor is offered an immersion in antiquity through augmented reality technology. A guided tour of the Iberian city visiting the most outstanding spaces of the archaeological itinerary.

Improving the experience of visiting the Iberian city of Ullastret thanks to mixed reality and the 5G network. The pilot virtually reconstructs the Iberian settlement

These spaces have been reconstructed with virtual reality and allow a surprising journey into the past.

Technological partner: the project has been developed by the audiovisual and multimedia production company **Tururut Art Infogràfic**

Promoted by the Secretariat of Digital Policies of the Generalitat de Catalunya, the Mobile World Capital Barcelona and i2cat, and with the support of the Museum of Archaeology of Catalonia.

Pilot project: archaeological heritage with augmented reality experiences at the MAC museum - Ullastret

Starting point:
. Workshop with cultural agents
. 3D content produced by an audiovisual company

Selection of the 5 viewing points:

- External Wall
- Main entrance
- Aristocratic houses
- Illa d'en Reixac
- Temple

QR codes in the existing information posts

The use of technologies such as WebXR has allowed the creation of a functional web application, accessible from mobile devices, which stands out for its simplicity and effectiveness.

Pilot project: archaeological heritage with augmented reality experiences at the MAC museum - Ullastret

Next steps:

- Enrich the current visit itinerary by incorporating new points of interest linked to additional spaces of the site.

- Add new digital content (three-dimensional elements, architectural details, objects and settings)

- Integrate all the content into a single augmented reality web experience, accessible from the browser of mobile devices, without the need to install applications.

- Improve the consistency and continuity of the visit experience, adjusting the narrative, the order of the points, and the usability of the interface.

- It will optimize the experience in the real environment at the site (loading time, AR stability, QR code reading, 5G performance) through on-site tests and adjustments.

In addition, the Project will include: a) The capture of new materials and the generation of content. b) The 3D production and refinement in Unreal Engine. c) Multimedia programming and integration with the web platform.

Heritage digitization projects as a resource for visitors

EUreka3D-XR Workshop
Girona, 29th January 2026
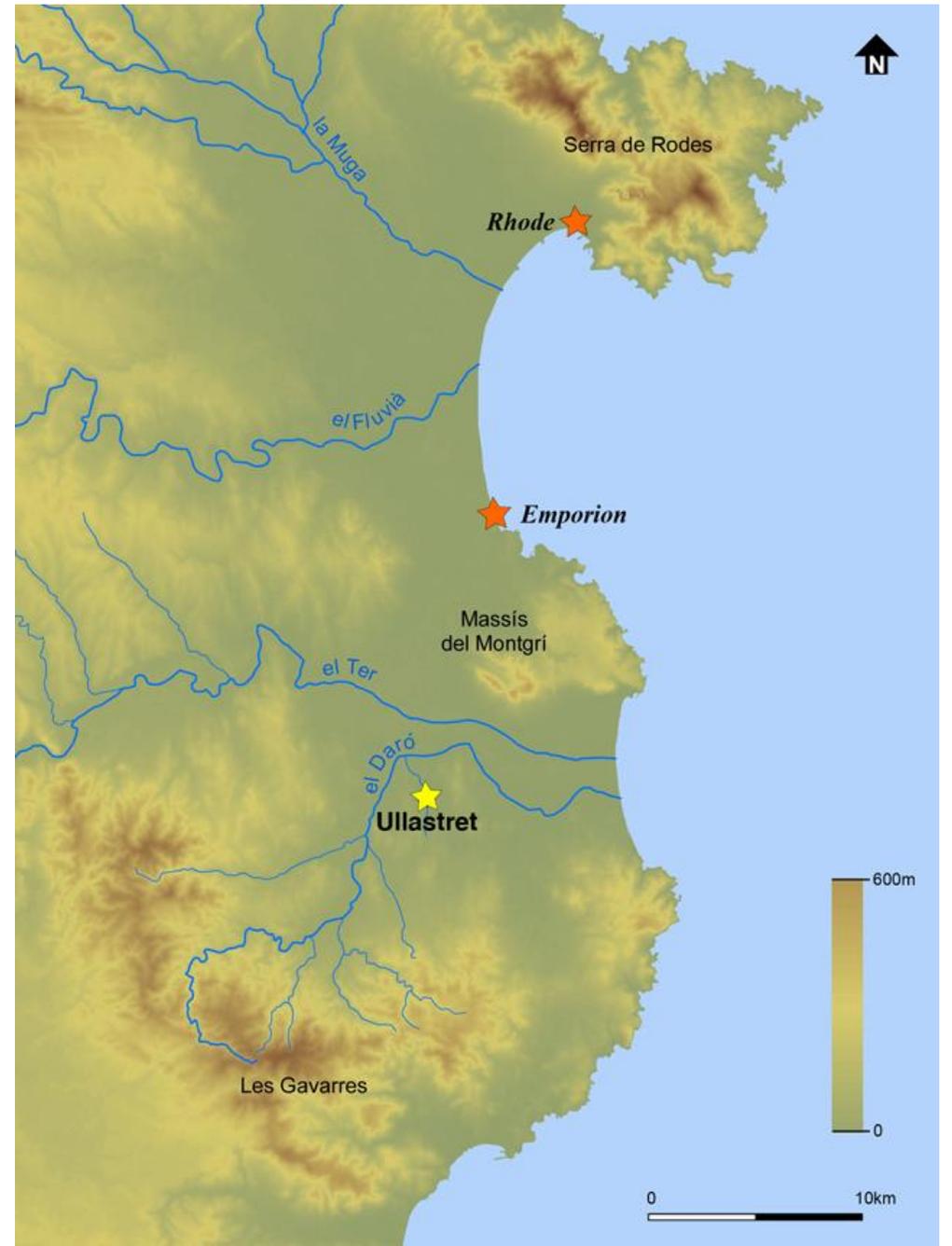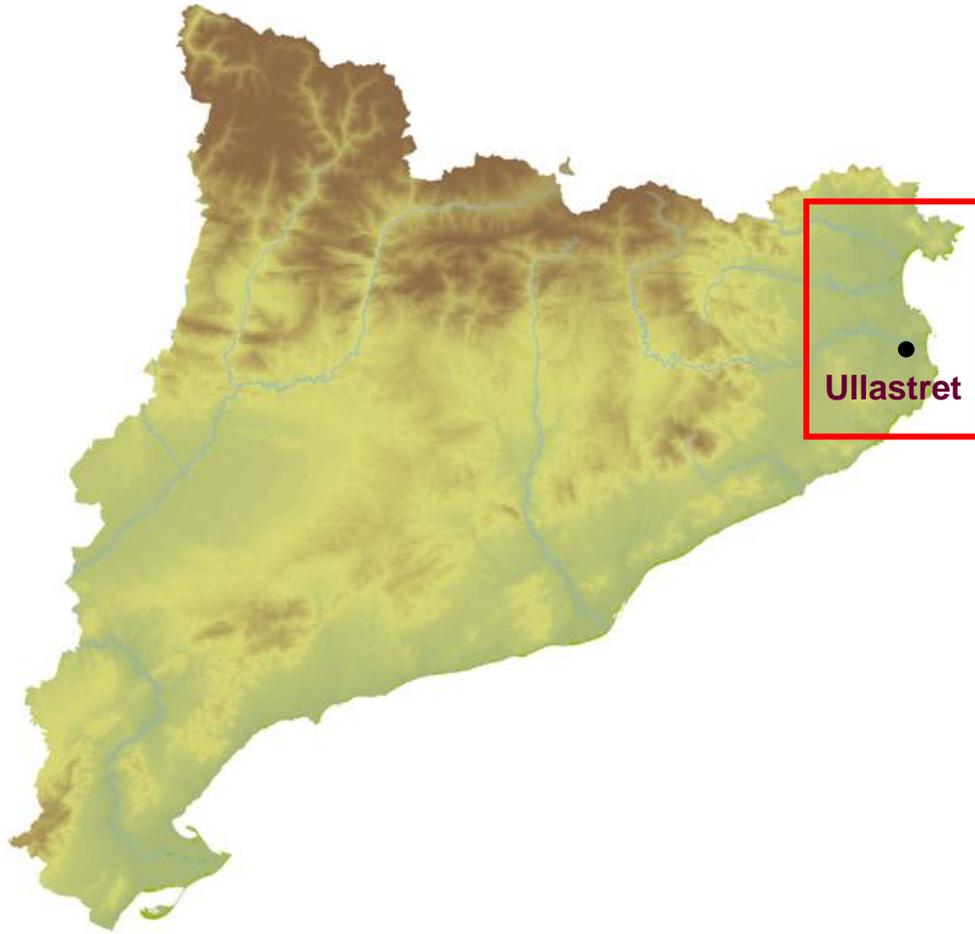
Laura Romero
MAC Ullastret Technician

Introduction and contextualization of the Iberian city of Ullastret

museu
d'arqueologia
de catalunya

Ullastret

Serra de Rodes

la Muga

el Fluvià

Rhode

Emporion

Massís
del Montgrí

el Ter

el Daró

Ullastret

Les Gavarres

600m

0

0   10km

Puig de Sant Andreu

mac
museu
d'arqueologia
de catalunya

mac Ullastret
Museu d'Arqueologia
de Catalunya

ITINERARI DE LA VISITA
ITINERARIO DE LA VISITA
ITINÉRAIRE DE VISITE
TOUR ROUTE

3D reconstruction project of the Iberian city of Ullastret

museu
d'arqueologia
de catalunya

Necròpolis del
Puig de Serra

Illa d'en Reixac

Puig de Sant Andreu

2021

Necròpolis del
Puig de Serra

Illa d'en Reixac

Puig de Sant Andreu

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5G project in the Iberian city of Ullastret
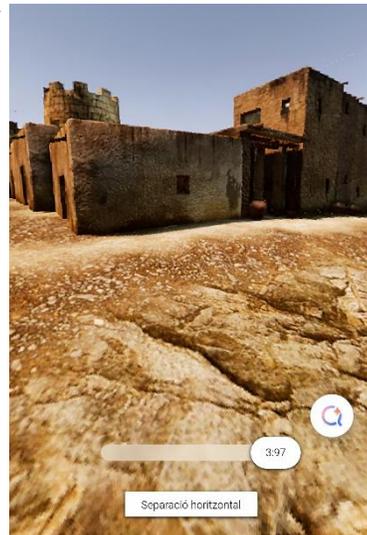
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de catalunya

Selecciona mode comparativa...

Sobreposició

Separació
horitzontal

Other digitization projects: Giravolt Project

https://sketchfab.com/tags/ullastret

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Terracota del déu Bes | MAC-Ullastret

Thank you for your attention!