

# Photography and archives: discovery, technology and innovation



**Half-day conference to explore the evolving  
landscape of photographic archives**

**29 May 2025**

**09:45am - 1:30pm CEST**

**hybrid format: in Florence and online**



Co-funded by  
the European Union



## Why 3D digitisation at Archives?

Archive is primarily a space for preservation and custody

- it is also a space for **discovery, knowledge, experimentation, and creation**
- 3D digitisation, allows the representation of volumetric elements to provide a faithful representation for **analysis, research, and entertainment**
- Archives as a resource of knowledge related to our heritage. The main resource to create **Memory Twins**.



# The technical framework

1 How do we digitize in 3D?

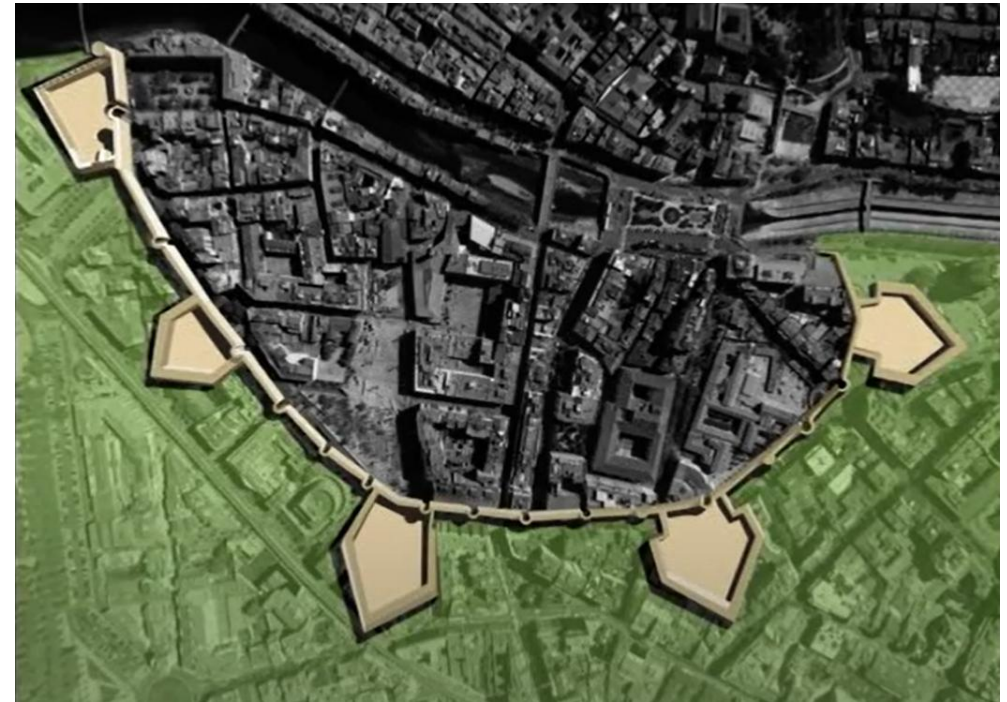
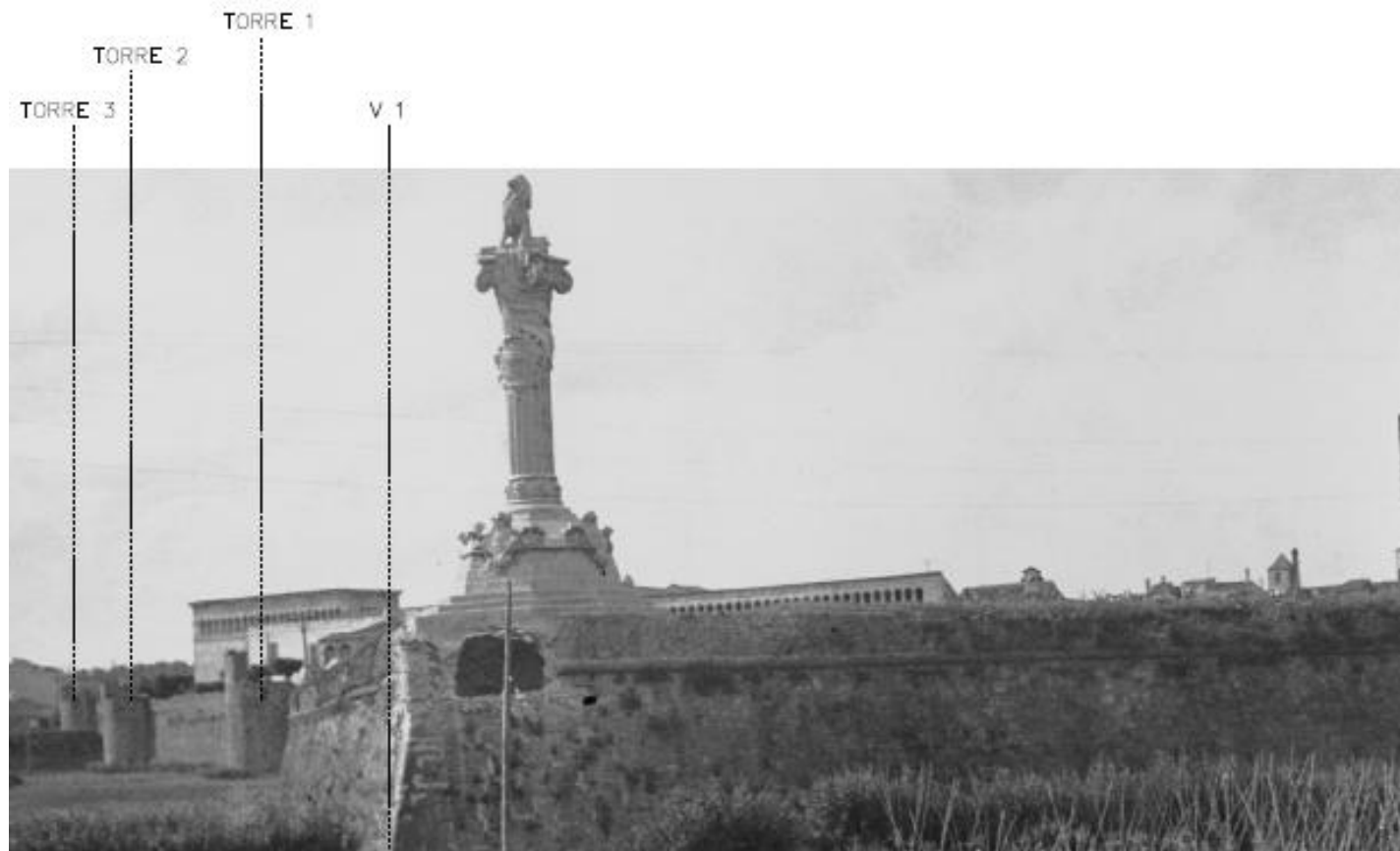
2 How do we manage the content?

3 How do we make it accessible?





# The scenario: the medieval walls of Girona



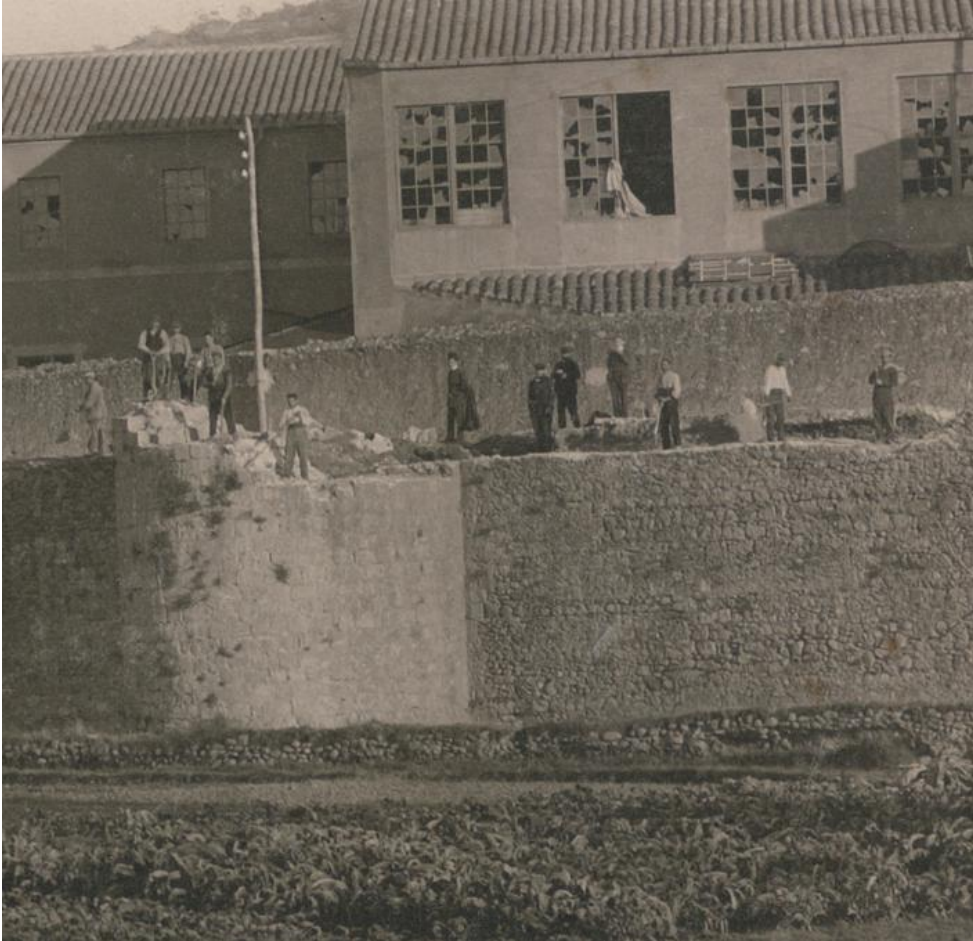
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## The scenario: historical context



It has been **2,100 years** since the foundation of Girona by the Romans (**Gnaeus Pompey the Great, in 76 BC**)

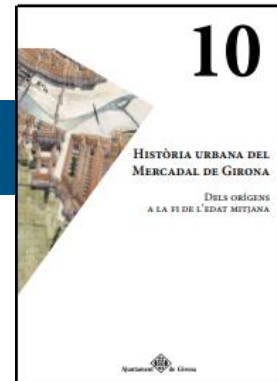
- The medieval walls of Girona were built in the **15th century**.
- The building of towers and bastions (**16th- 17th century**)
- The walls and all these elements were partly demolished at the beginning of the **20th Century**.
- The walls of the **eastern side** were kept, even if they were abandoned for many years.
- It was during the decade of the **1980's** that the works carried out in different phases aimed to reuse a space for walking and enjoyment, more than carrying out an archaeological restoration.

**Now, it's time for virtual reconstruction!**



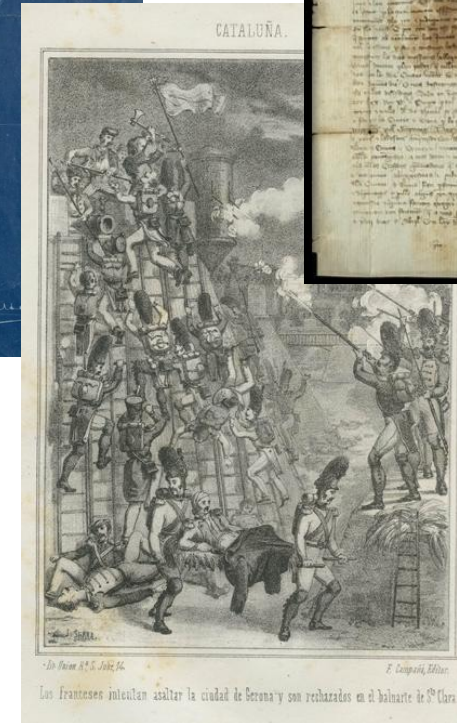
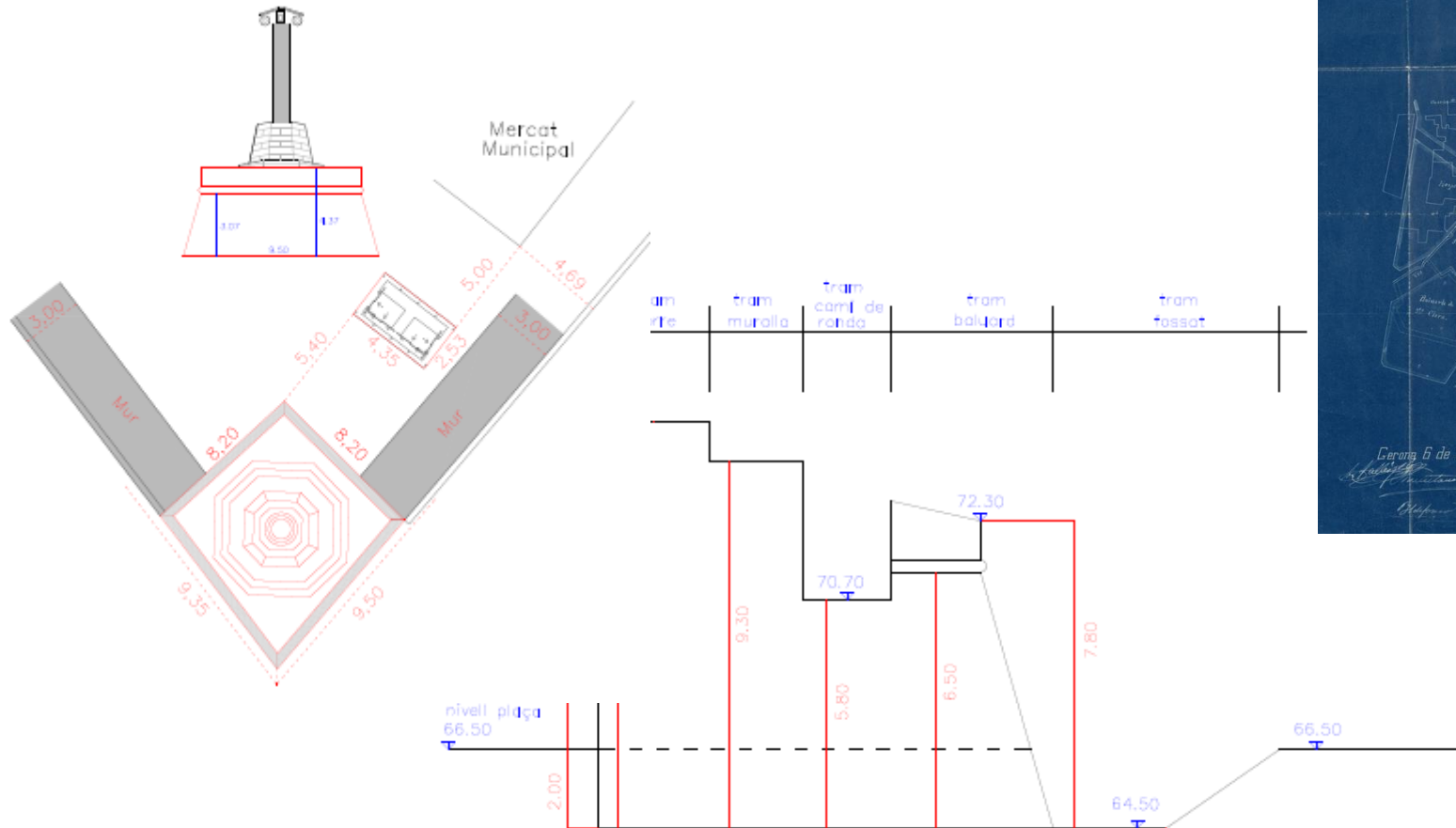
## Challenge 1: scientific research

In the early 1990s, the **Urban History Research Group of Girona** was formed, with the aim of investigating the city's medieval past, especially its urban aspects, and of publishing these studies in a collection, edited by Girona City Council.





# Challenge 2: records & data (engravings, photographs, audiovisuals, maps, text, ...)



# Challenge 3: new images for textures



## REQ #10. Title: EXPOSURE VALUE

The photos should have a proper exposure value. Overexposed images lead to misinterpretation in 3D reconstruction by the AI tool. It is recommended to use an ISO value between 100 and 400.

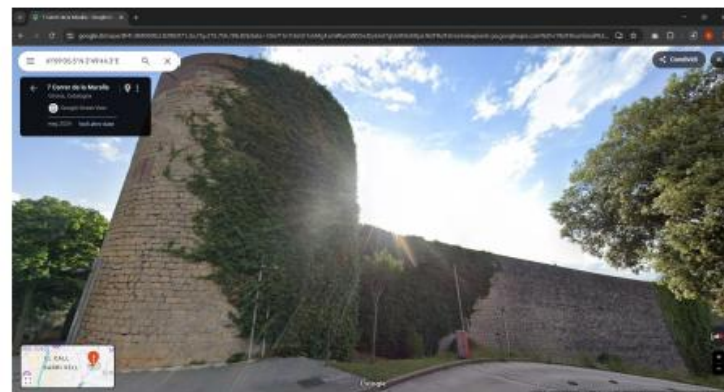
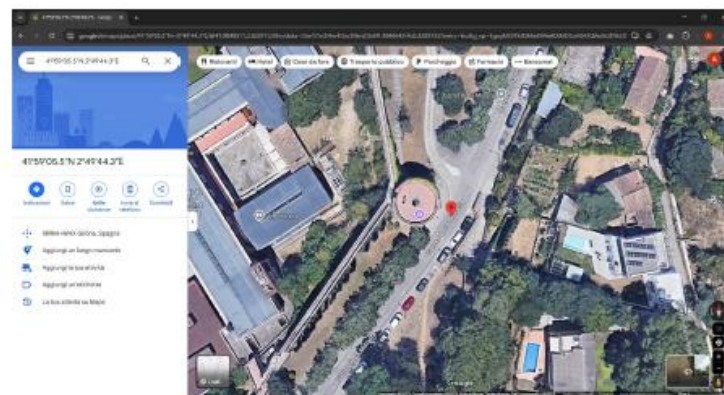
### Compliant image:



### Non Compliant image:



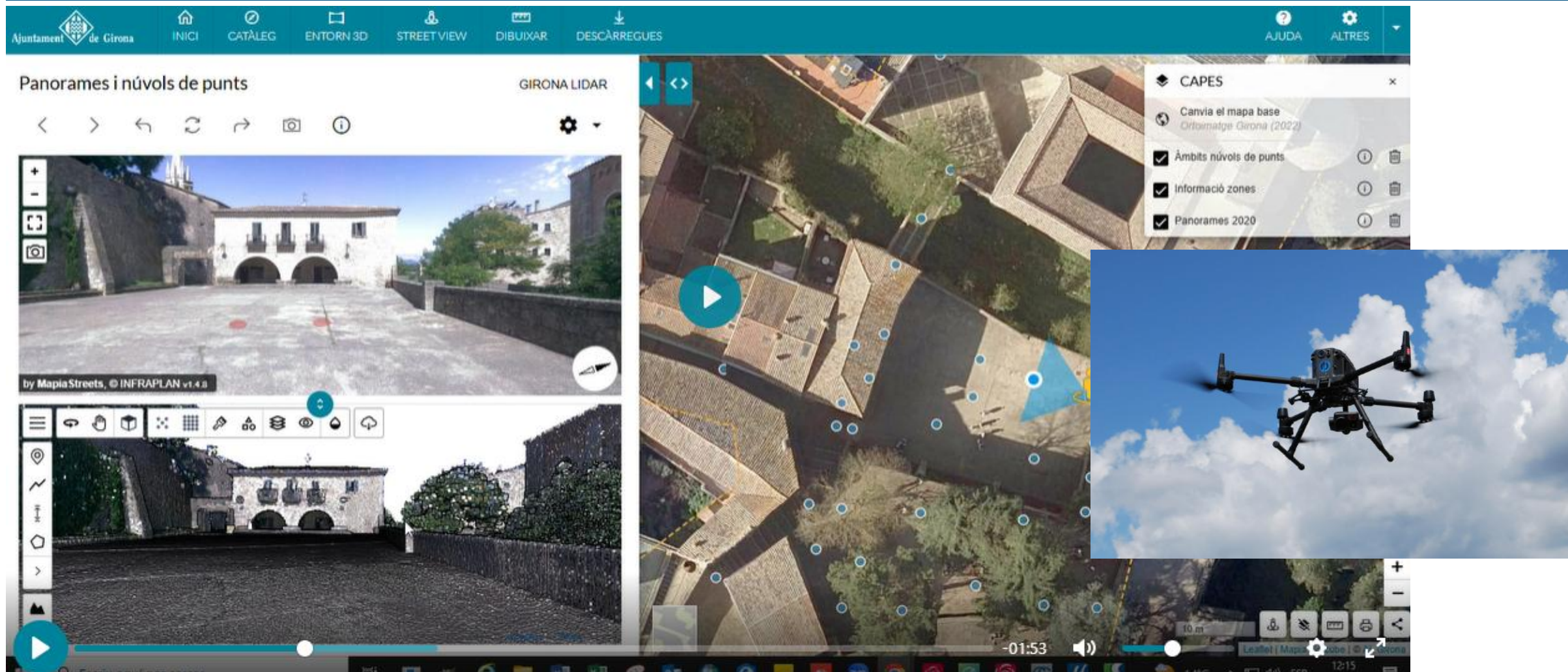
- Point #3. Name: Carrer de la Muralla  
LatLong Coordinates: 41°59'05.5"N 2°49'44.3"E



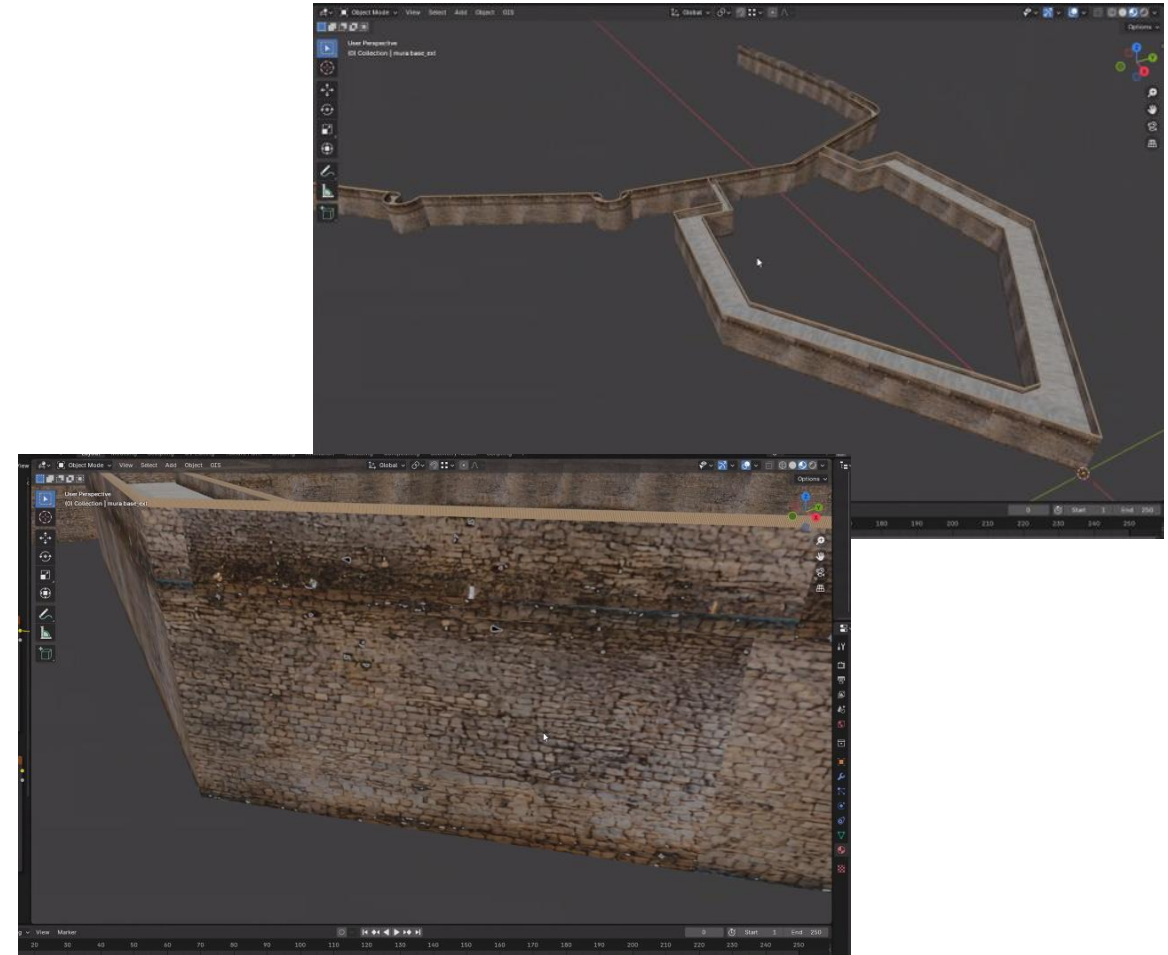
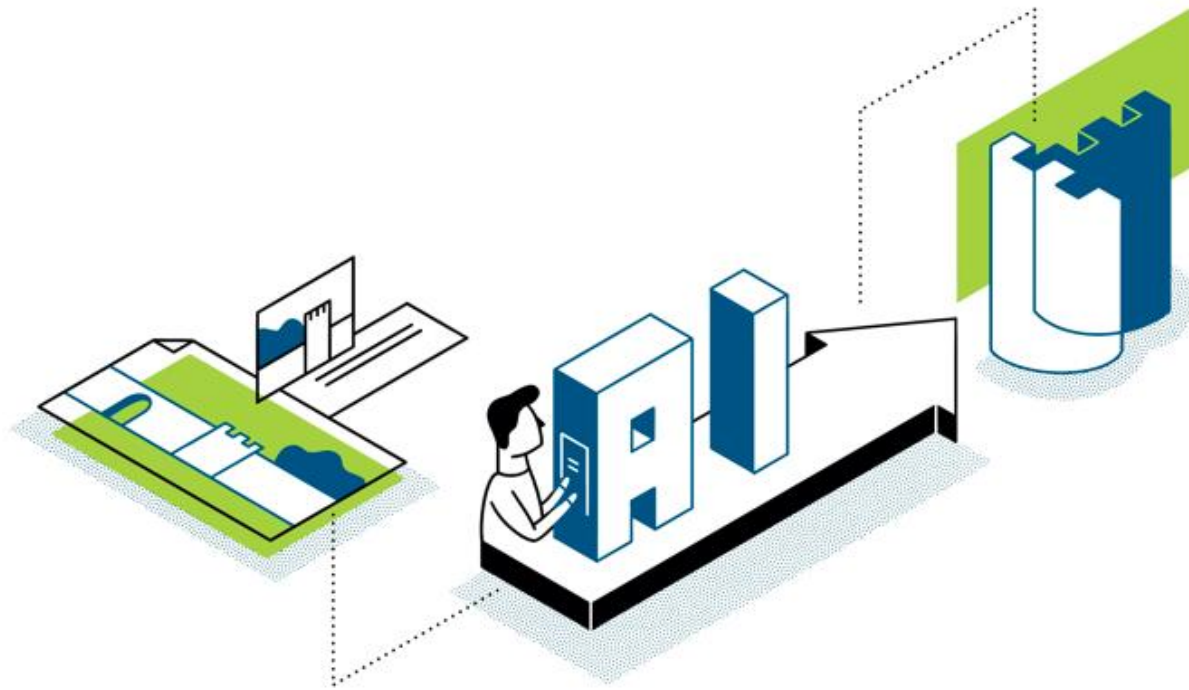
Name	FAJ6717.4.jpg
Resolution (px)	1417 x 914
Is blurry	Yes
Is coloured	No
Perspective	Top
Perspective efficacy	1/5
Level of detail	1/5
Level of usability in AI	1/5
Reason for scoring AI	The image, although presumably representing a small portion of the wall, does not provide sufficient details for the reconstruction of the 3D model. Furthermore, the low resolution of the photo does not allow the details to be distinguished correctly.
Usability in design	1/5
Usability in validation	1/5



## Challenge 4: LIDAR data

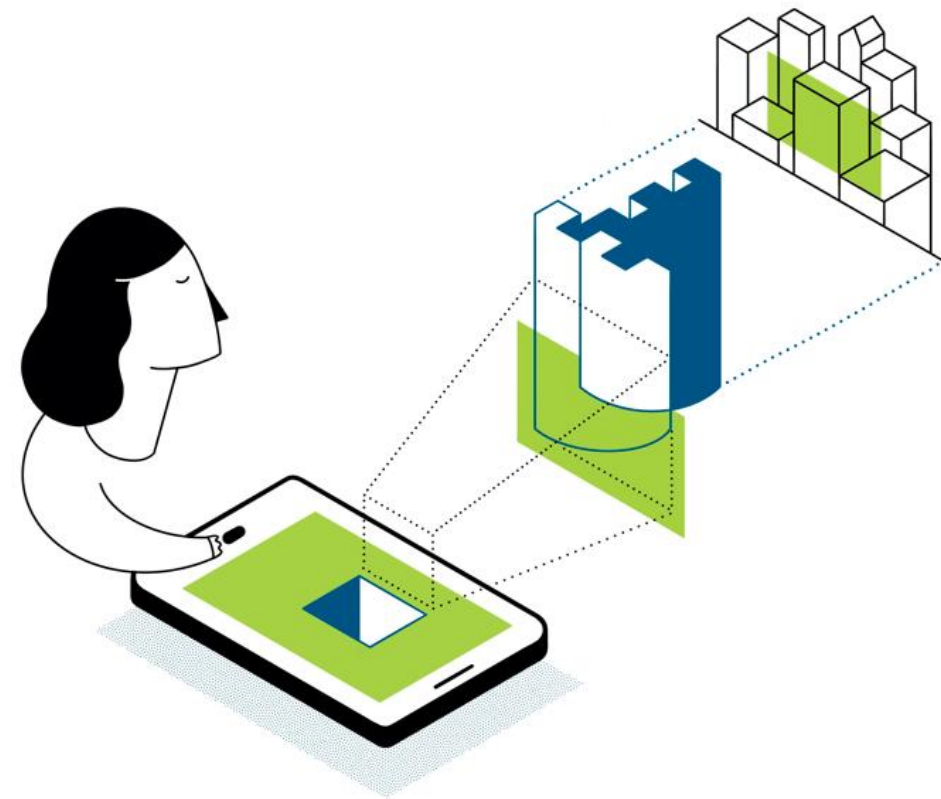


# The 3D modelling



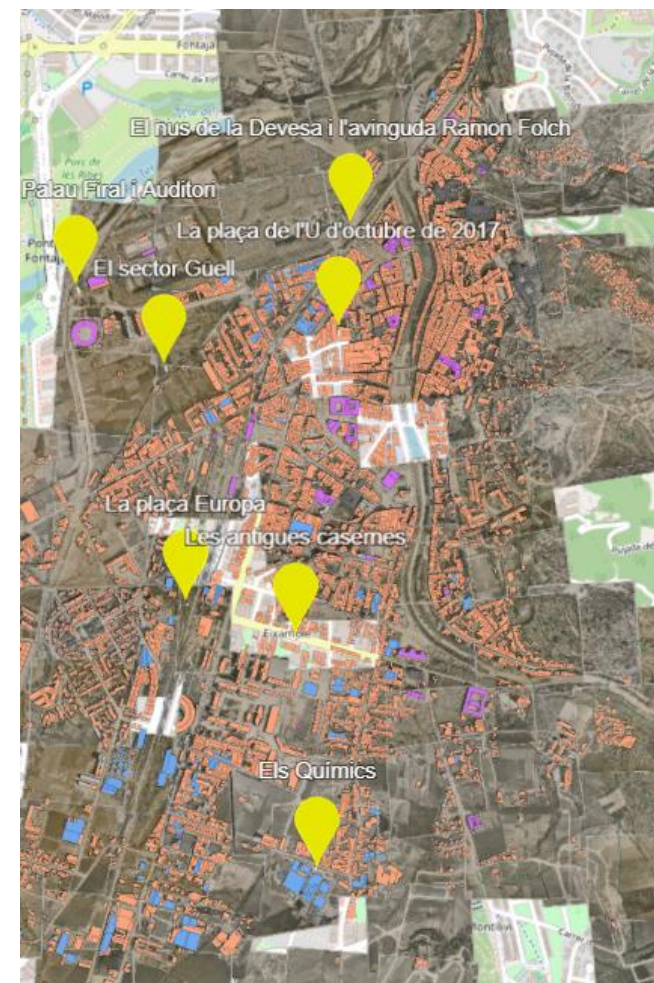
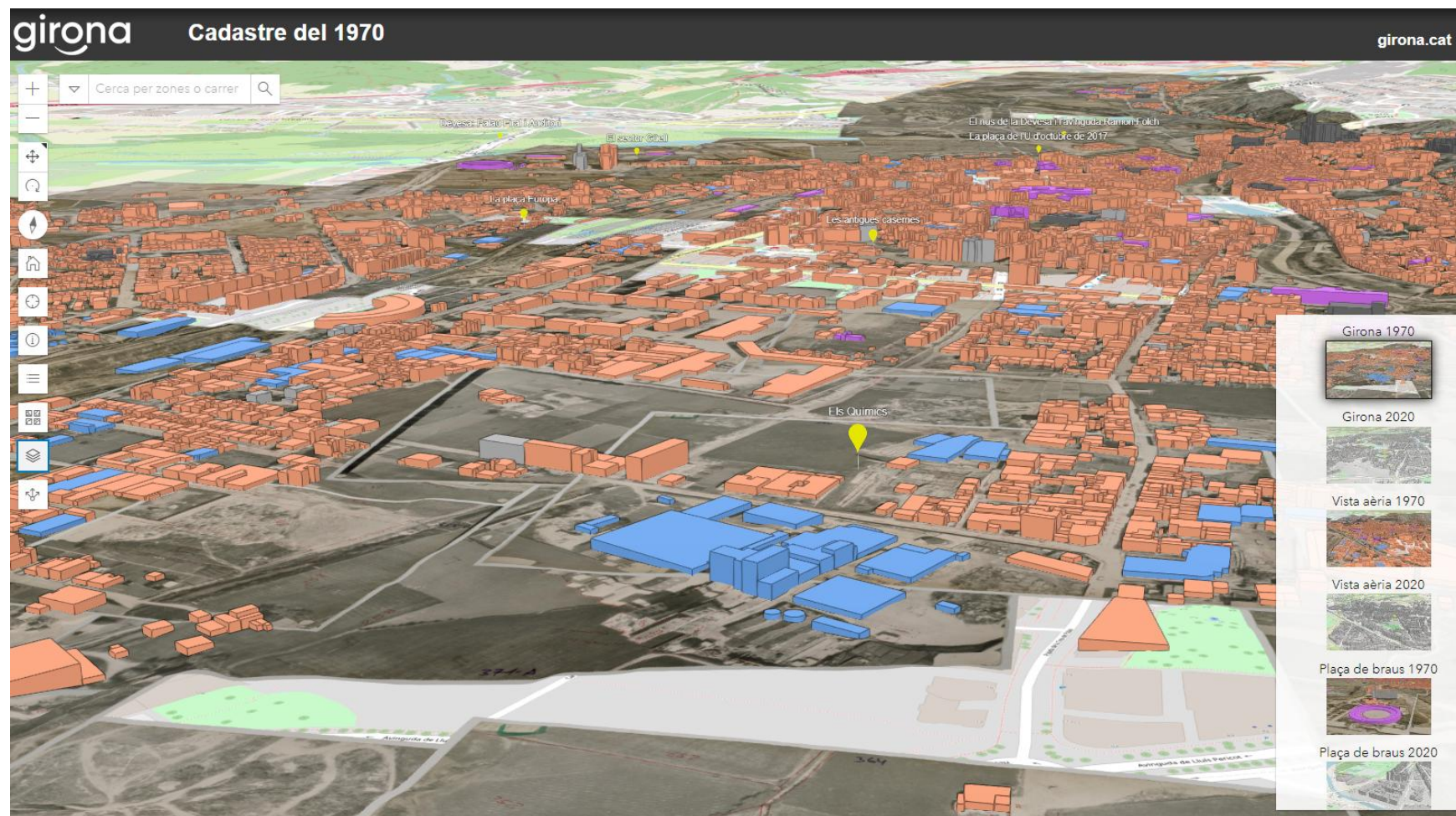


# The XR experience





# Girona City council plan for 3D visualisation







**EUreka3D – European Union’s REKonstruted  
content in 3D to produce XR experiences**

**Many thanks  
for your attention!**



[www.eureka3d-xr.eu](http://www.eureka3d-xr.eu)



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