HEIMDALL PROJECT
FINAL DEMO

21ST OF JANUARY 2021
GIRONA (SPAIN)

#HEIMDALLFINALDEMO HEIMDALL-H2020.EU /HEIMDALLPROJECT @HEIMDALLPROJECT TINYURL.COM/HEIMDALL-PROJECT

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CONTENT

HEIMDALL PROJECT

HEIMDALL PROJECT

The HEIMDALL project aims at improving preparedness of societies to cope with complex crisis situations by providing a flexible platform for multi-hazard emergency planning and management.

This overall purpose is achieved by addressing the following key aspects:

- Improved data and information access and sharing among the involved stakeholders, including the population and first responders on the field.

- Better understanding of the situation by using advanced multi-hazard methods to develop realistic multi-disciplinary scenarios, risk and vulnerability assessment, information sharing and emergency response.

- Recognising the value of information by advanced data fusion, situation assessment and decision support tools.

The combination of these aspects are integrated in a modular and highly flexible platform that makes use of innovative technologies for the definition of multi-disciplinary scenarios and response plans, providing integrated assets to support emergency management: i.e. scenario building and matching, situation and impact assessment, drones monitoring system, simulation tools, in-situ sensors for landslides, decisions support and communications and first responders app. During the project the focus is on three main hazards: **landslides**, **wildfires** and **floods**, but the platform is multi-hazard and can be extended for addressing other hazards as well.

THE HEIMDALL APPROACH:

The approach adopted for the development of the HEIMDALL platform follows a detailed system engineering process, based on an iterative version of the well-established Vee model for system engineering (Figure 1) and a close cooperation with the relevant stakeholders (first responders), both the consortium partners and the members of the Advisory Board.

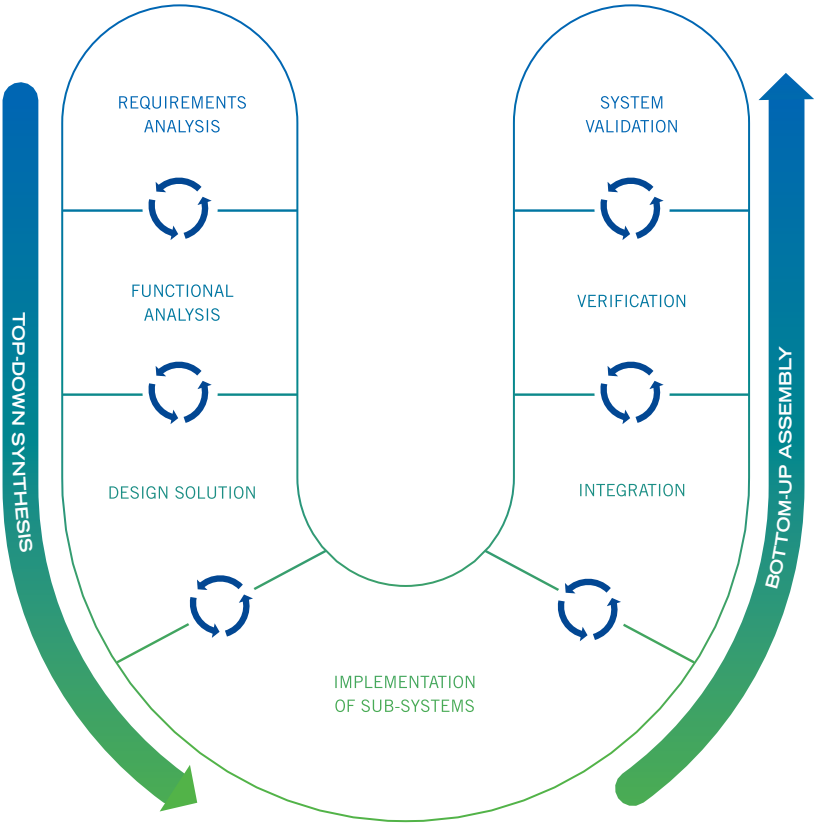


Figure 1: Vee model of system engineering.

The diagram in Figure 2 depicts the interaction between the system engineering and the stakeholder management layers. The HEIMDALL system engineering process has defined a series of milestones for the system development, namely, the initial system specification, three intermediate releases and the final release. These milestones are aligned with interactions with the relevant stakeholders (partners with first responder profiles and Advisory Board members), by means of the planned Advisory Board and End-User workshops. Therefore, the outcome of the different workshops will be used to perform preliminary system demonstrations to evaluate the preliminary releases and gather end user feedback until the final operational demonstration.

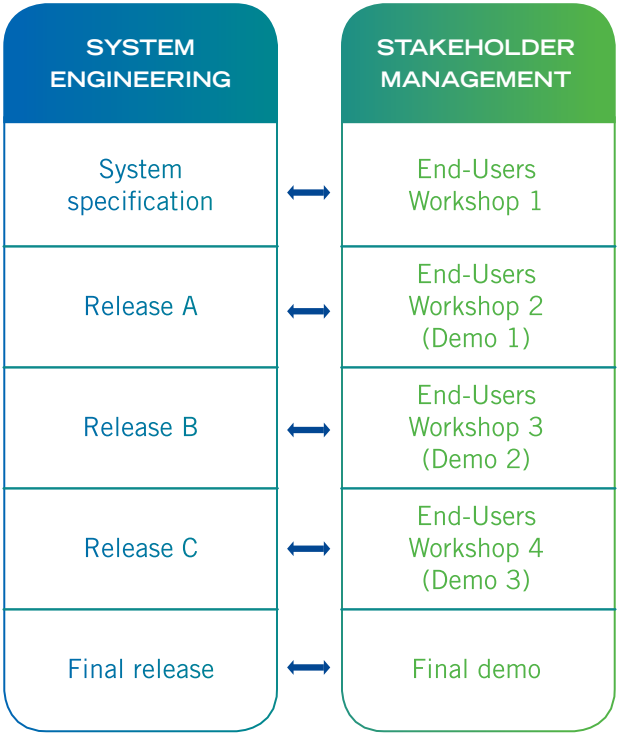


Figure 2: HEIMDALL methodology

WELCOME

Dear HEIMDALL final demo attendees,

Let me first of all warmly welcome you to the final demo of HEIMDALL!

In these uncertain times, the entire society has been importantly affected by the outbreak of COVID-19 and the HEIMDALL project itself has been also impacted in the workplan and in the way this final demonstration could have been run. As a result of the necessary hygiene and health restrictions therefore imposed, it has been decided to have an hybrid event, in order to allow in any case people not in the possibility to join physically the event to have the opportunity to have a glimpse of what the HEIMDALL platform is and which important support it can offer to end-users in the context of disaster management situations.

As such, I'm very proud that despite all the aforementioned complications imposed by COVID-19 outbreak we managed to organise such a final demonstration and more importantly to have the possibility to concretely show the power of the HEIMDALL platform developed in the course of the project. The design and development activity started nearly three years ago and has been subject to consecutive end-user workshops and iterations to better match the expectations from the end users. It has been a very intense but instructive implementation activity, which eventually allowed us to have a solid and powerful platform that in the long term could be extended for use in real operations.

Just to conclude, I'm pretty sure that you'll be able to enjoy a very interesting demonstration.

Thank you again for joining, and more importantly, stay safe, stay healthy!

TOMASO DE COLA
HEIMDALL PROJECT COORDINATOR

AGENDA HEIMDALL

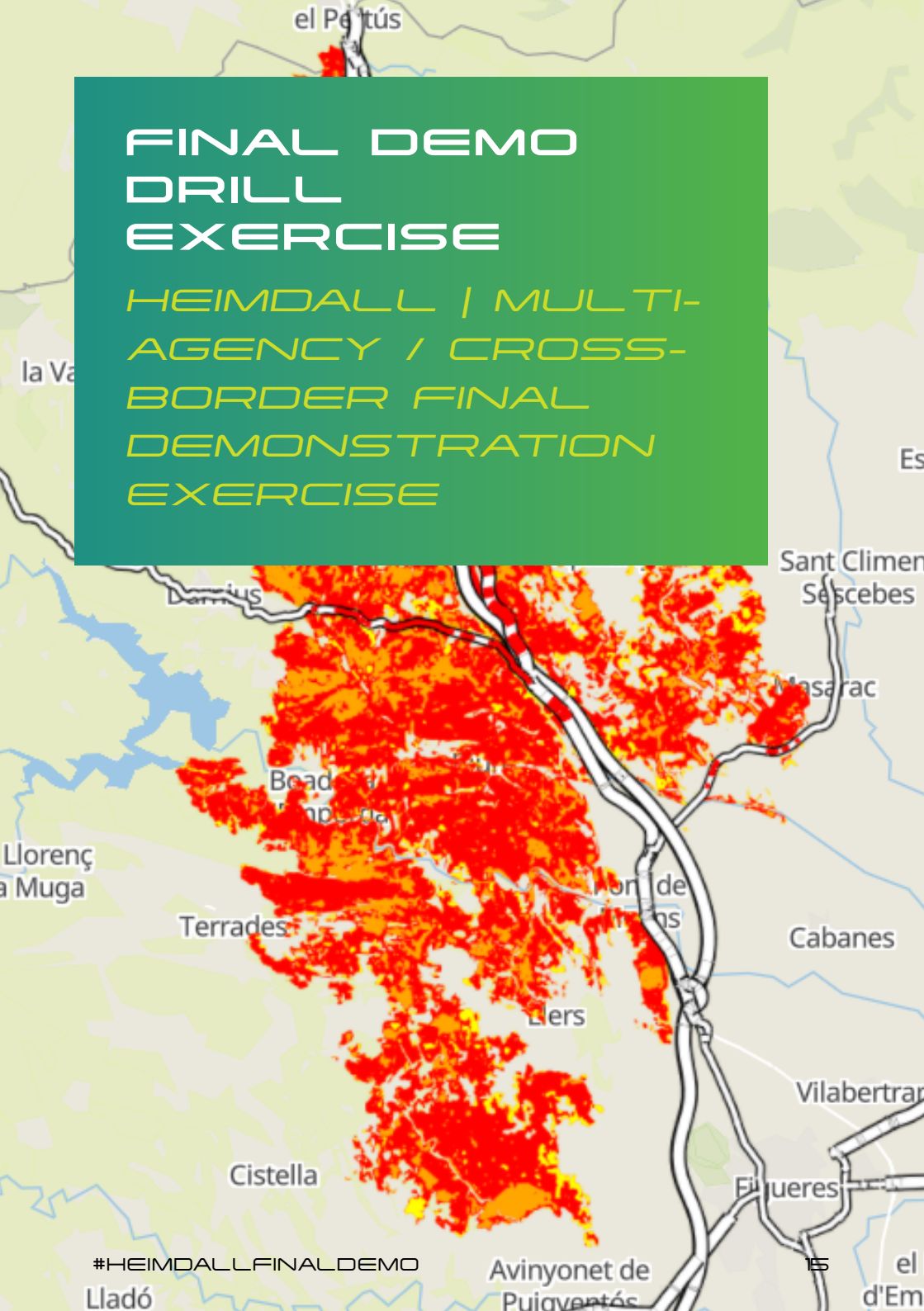
21ST OF JANUARY 2021

8:15-9:00	(In-person) Registration
9:00-9:15	Welcome and introduction
9:15-9:25	HEIMDALL System: intro and modules usage
9:25-9:35	Presentation of the drill exercise
9:35-9:45	Workstations: participants' roles and positions
9:45-13:30	Final Demo drill exercise* La Jonquera Fire / Ter river flood
13:30-15:00	LUNCH BREAK
15:00-17:00	Final Demo drill exercise* La Jonquera Fire / Ter river flood
17:00-17:30	Final discussions and conclusions

*Non-stop coffee delivery for in-person attendees during the Final Demo drill exercise

FINAL DEMO DRILL EXERCISE

HEIMDALL | MULTI-AGENCY / CROSS-BORDER FINAL DEMONSTRATION EXERCISE

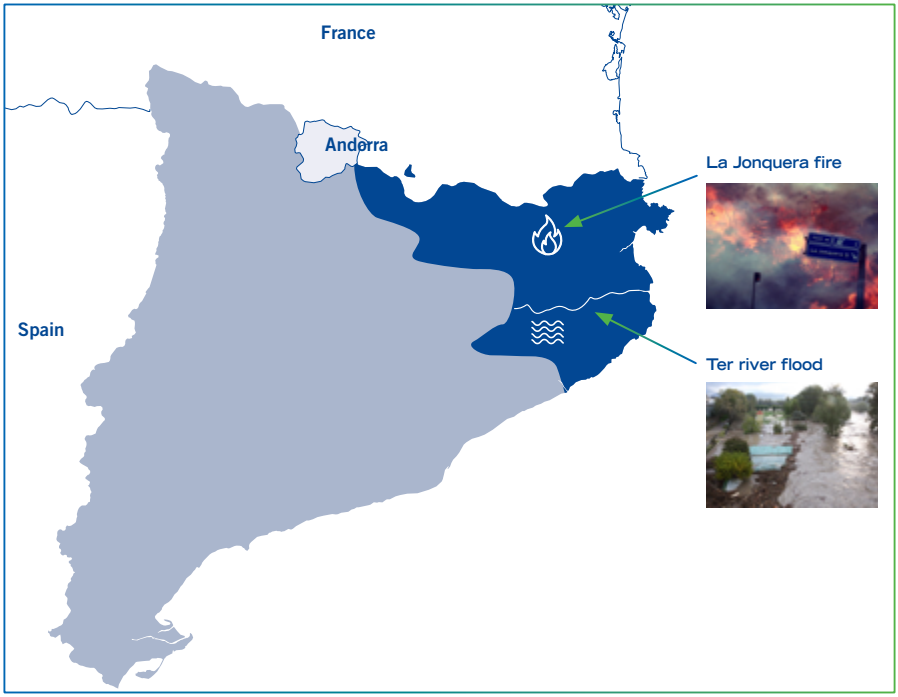


OBJECTIVE

The purpose of the Final Demo event is to demonstrate the practical use of the HEIMDALL system to underpin decision-making processes in an operational environment. To achieve this, an exercise has been prepared that implies the use of integrated tools, services and products developed over the project lifetime.

USE CASES

The Final Demo exercise consists of a multi-hazard, cross-border scenario involving interagency participation and cooperation. This scenario revolves around two incidents coinciding in time in two separate areas within the Girona province of north-east Spain:



Wildfire:
Wind-driven fire in La Jonquera

(historical cross-border incident)

This use case is based on the historical wildfire that started in the locality of Le Perthus (Southern France), on the 22nd of July 2012, quickly crossed the border with Catalonia through the locality of La Jonquera, and resulted in nearly 14,000 ha affected and two fatalities. The incident management required cross border cooperation between French and Spanish emergency organisations.

Flood:
Flash flooding along the Ter River basin

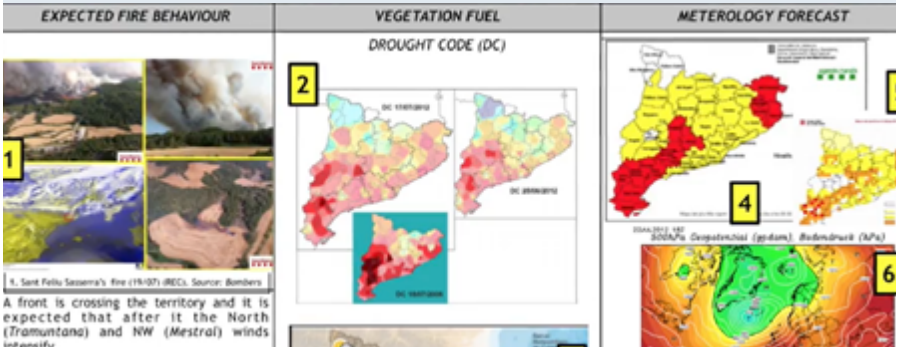
(fictional incident)

This use case is based on a fictional flooding event that occurs as a result of an urgent release of water at Susqueda dam, leading to numerous impacts along the Ter River basin from Susqueda as far as the river mouth.

EXERCISE APPROACH

The execution of the exercise follows a **drill-based approach** that immerses the participants in a decision-making environment requiring appropriate intervention response by the emergency organisations involved. During the ongoing drill, the HEIMDALL platform will be used across the **preparedness** and **response** phases of the wildfire emergency cycle.

- The **preparedness** phase involves risk prediction, assessment and planning in anticipation of the potential incidents.



- The **response** phase begins when the two incidents start, and involves live management situations where conditions change quickly, and new decisions must be continually made to ensure a safe outcome.

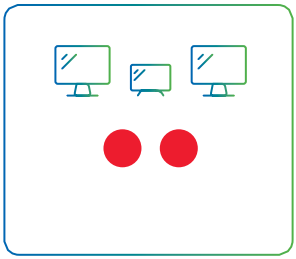
ROLES AND POSITIONS

The participants of the drill exercise will play a role that is aligned with the profile of their organisation (firefighters, police, medical services, civil protection, forestry service). They will be distributed in workstations, each representing fictional positions, namely command and control centres and the field. Thus, participants will be operating the system while interacting with other participants responding from other workstations.

Their distribution across the fictional workstations is set up as follows:

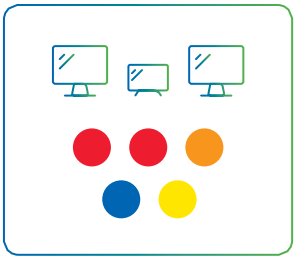
Workstation 1

Firefighters Command and Control National Room



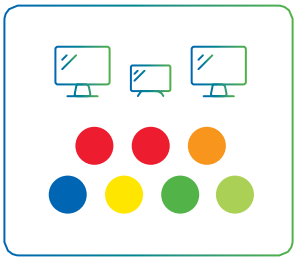
Workstation 2

Girona Firefighters Command and Control Regional Room

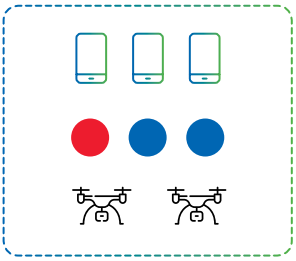


Workstation 3

Forward Command Post



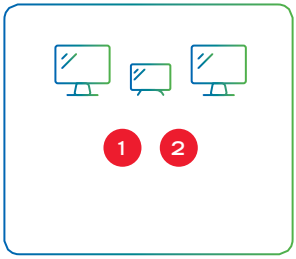
Other positions*



- Firefighter
- Civil protection
- Police
- Medical service
- Forest service
- Volunteer responders

**These are participants using the HEIMDALL app, whose fictional location differs from any of the other three positions.*

WORKSTATIONS



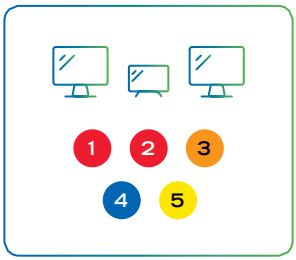
Workstation 1:

Firefighters Command and Control National Room

This is the supervisory and coordination office that centralizes all the information about incidents occurring across Catalonia in real-time. The main room chief and the fire analyst who will be based in this room will have a global vision of the emergencies and keep track of the dispatch of resources.

Station positions

1. Main Room Chief
2. Fire Analyst 01



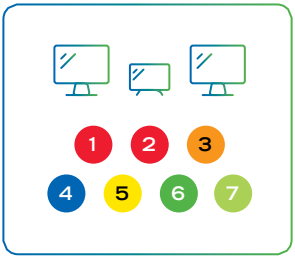
Workstation 2:

Girona Firefighters Command and Control Regional Room

This is the supervisory and coordination office for all incidents occurring within the province of Girona. The main room chief will coordinate the overall information, whereas representatives of local emergency services will gather in this position to conduct interagency briefings and coordinate the operations of the first responders in the field.

Station positions

1. Regional Room Chief
2. Flood Analyst
3. Local Civil Protection
4. Police Mossos d'Esquadra
5. Medical Service

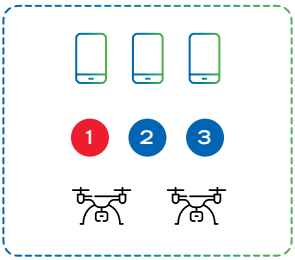


Workstation 3:
Forward Command Post

This is the on-site position, which is temporarily set up in a location close to the incident, where the primary command functions are carried out during the response phase of the emergency. Representatives of all the emergency services involved in the incident will gather in this position.

Station positions

1. Fire Analyst 02
2. Incident Commander
3. Local Civil Protection
4. Local Police
5. Medical Service
6. Forest Service
7. Volunteer responders



Other positions

These are participants using the HEIMDALL app, whose fictional location differs from any of the other three positions. This basically includes the location for the first responders in the field in permanent communication with the operators in the command and control room.

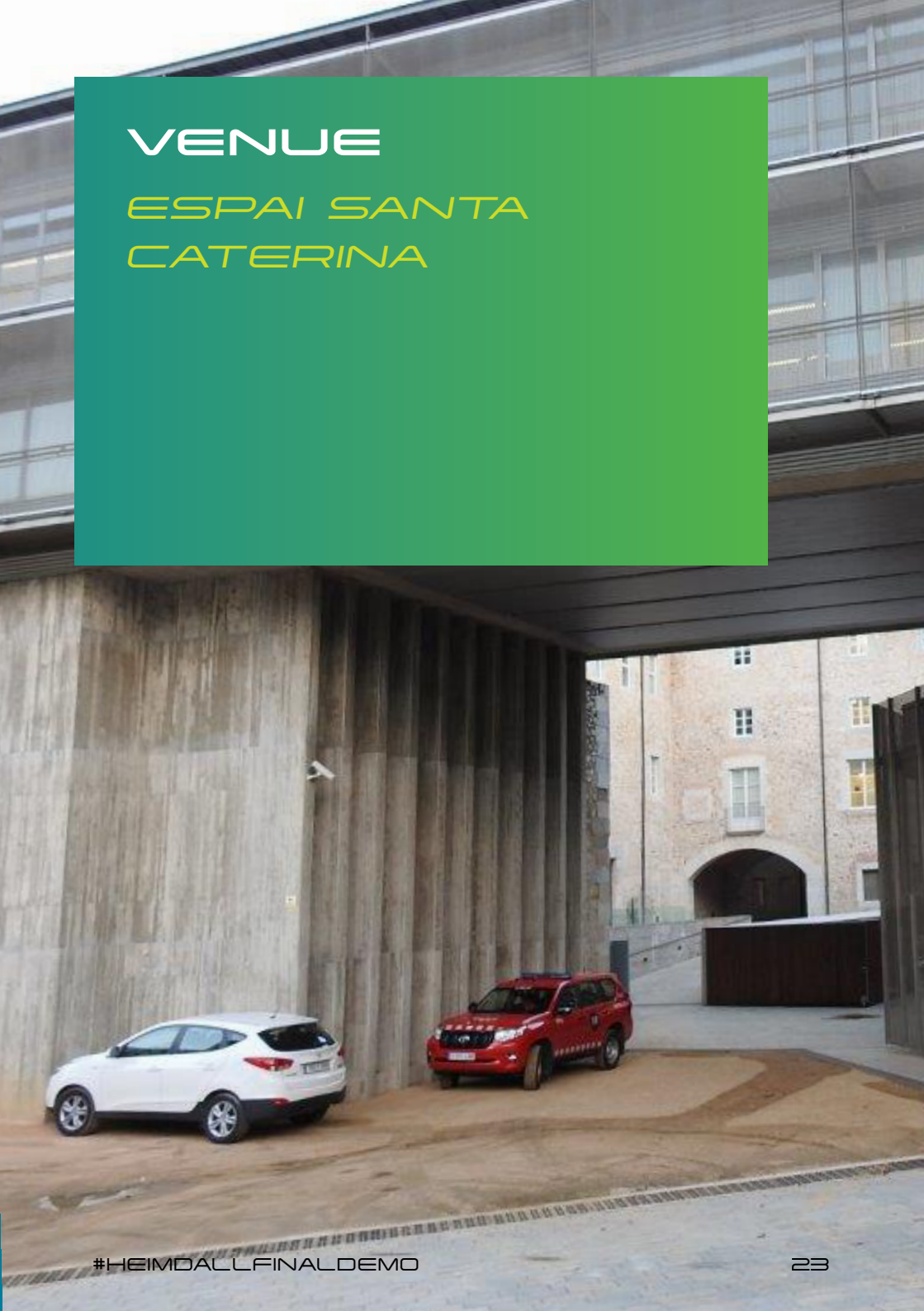
These are participants using the HEIMDALL app, whose fictional location differs from any of the other three positions.

Station positions

1. SDIS66 French Firefigthers (at their C&C Regional Control Room in south France)
2. Local Police from La Jonquera (in the field)
3. Local Police from Torroella de Montgrí (in the field)

VENUE

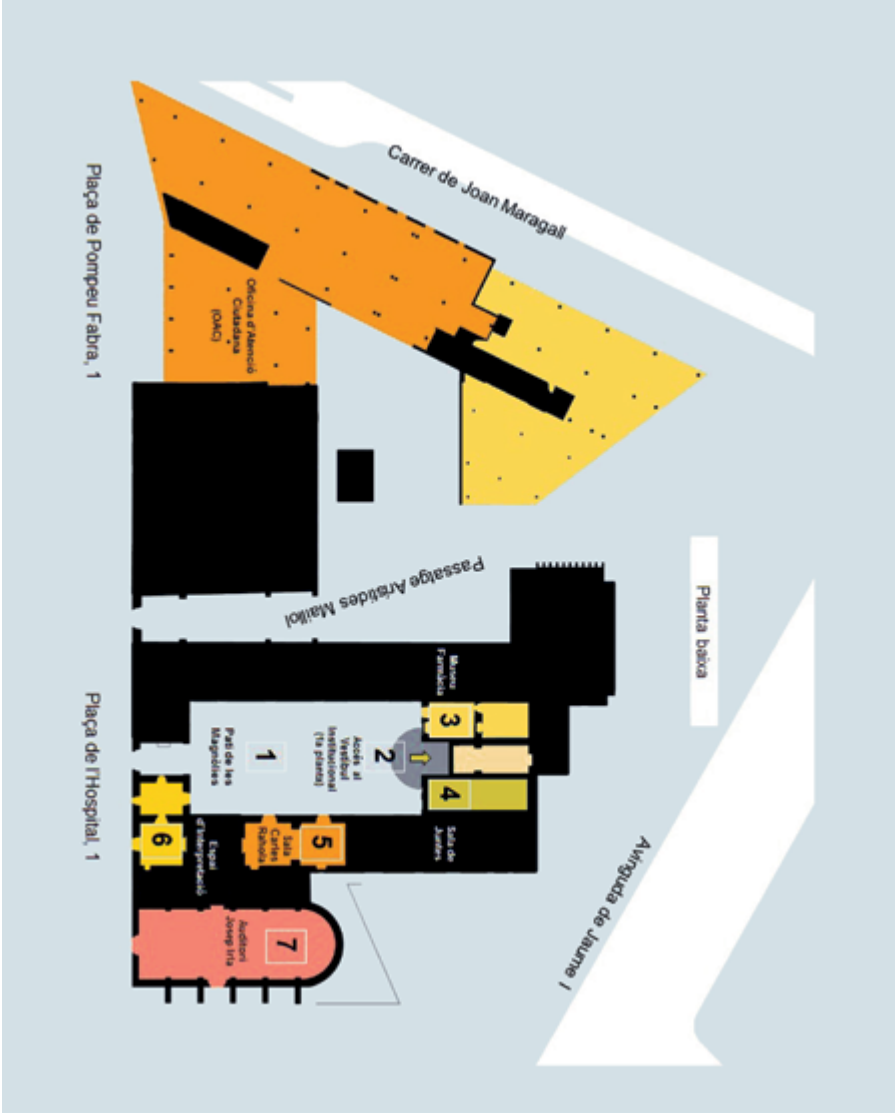
ESPAI SANTA CATERINA



VENUE

ESPAI SANTA CATERINA

PASSATGE D'ARISTIDES MAILLOL, S/N, 17002 GIRONA



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