

RAVENNA 2023

Intensive Study
Programme

24st july – 1st august

OLA



FONDAZIONE
FLAMINIA
PER L'UNIVERSITÀ
IN ROMAGNA



cifla

Centro per l'innovazione
tecnologica e sociale



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA
DIPARTIMENTO DI ARCHITETTURA

AGAINST ALL ODDS: DEFYING FUTURE THROUGH PARTICIPATORY DESIGN



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Floods in Ravenna through history

History of flooding and water management

Roman era: centuriazione, a grid system of canals and reclaimed agricultural fields constructed on former wetland areas.

Gothic era: repair of Roman aqueducts of Ravenna, ~500 AD to provide clean water and also project power and stability during uncertain times.

Modern era:

1544-1651: 10 severe floods and many other localized floods due to embankments rupturing

1636: Ronco and Montone Rivers submerged Ravenna city over 6 meters

1739: San Marco Lock → Montone River rerouted to intersect Ronco River and flow into the sea as the Fiumi Uniti

20th century: wetland and woodland dredging/reclamation increases rapidly with surge in urban development.



Flood Types In Ravenna

- 1-River Flooding
- 2-Coastal Flooding
- 3-Flash Flooding
- 4-Urban Flooding
- 5-Groundwater Flooding
- 6-Sewer Flooding

What has happened recently?



The historic centre of Lugo, outside Ravenna was among the cities with the worst flooding



The Rocca Estense castle surrounded by flood water in Lugo, in Ravenna province, northern Italy, on Thursday, May 18, 2023.

(Michele Lapini/Bloomberg / Getty Images)

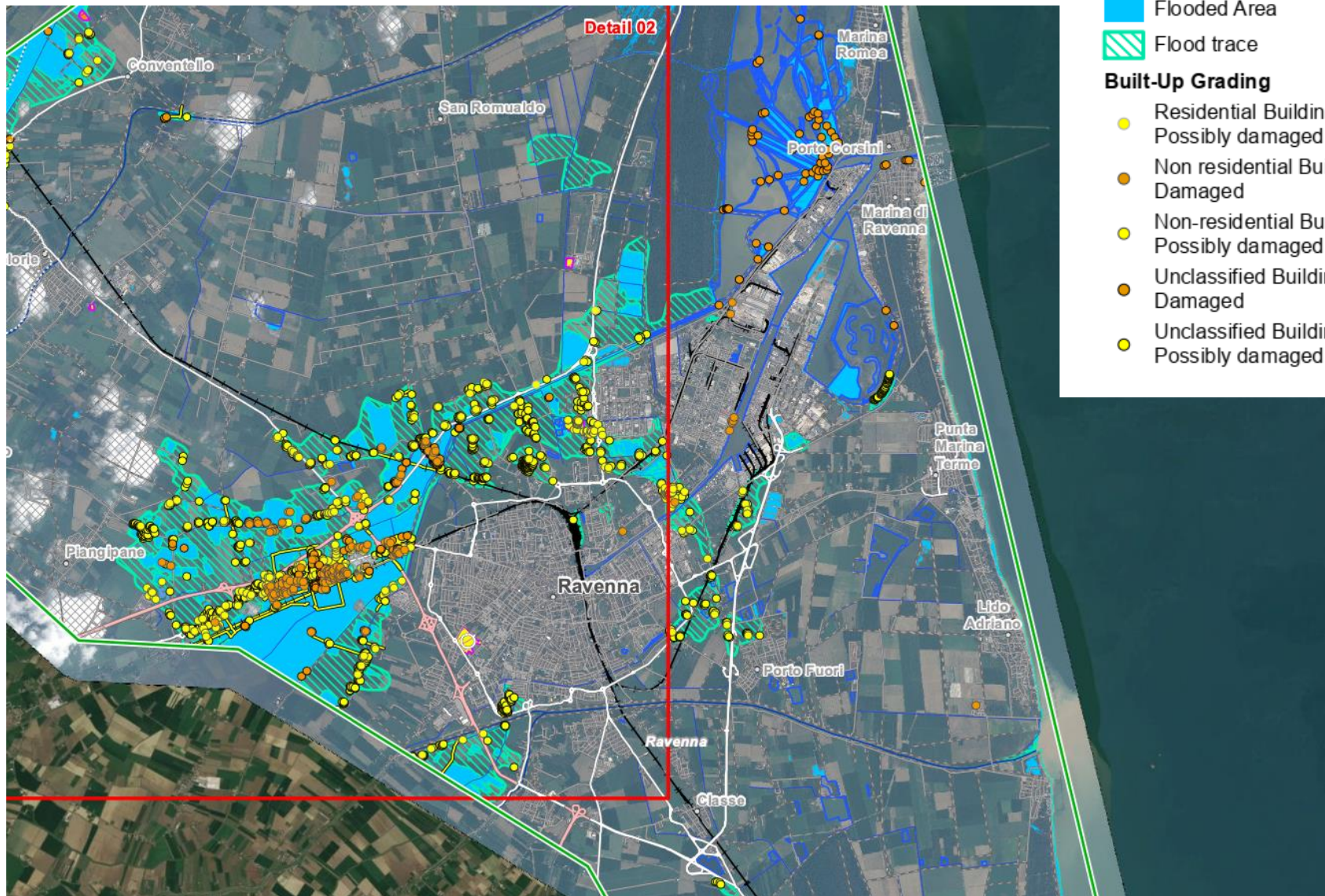
Within 6 days, 01 May to 17 May 2023: More than 20 rivers have burst their banks in Emilia Romagna,

resulting in 13 death,

forcing thousands to leave their homes

after six months worth rainfall fell in a day and a half.

The flooding and its impact May, 2023



Community vs. Flood

More than 10,000 people have been evacuated as rivers of mud tore through towns. People who stayed behind were left without gas, electricity, and food.

"People are struggling to find food and places to stay,"

"The reaction by people here was exceptional. When you see 2,000 young volunteers arriving with shovels, ready to remove mud, you know you need to do your part too."

"Our community is broken, we felt completely cut out, isolated, some of us were truly terrified."
Ines, who runs the local cafe in the central square in Lugo a city near Ravenna

Our vision: Community based flood / drought resilient and adaptive Ravenna region

- Green belt around Ravenna as suburb protection
- Multipurpose micro parks to contain water in the dense city centres



Basin Park/
Playground





How did the Romagnolo react to May 2023?

“Boosted by the typical Romagnolo spirit, spontaneous neighbourhood efforts have mushroomed to clean mud from houses, roads and farms. Beaches have already been cleaned for the upcoming tourist season. But that resolve to recover quickly should not allow us to forget what happened. We know what the future holds. Extreme weather events will happen, not only in well-known high-risk flooding areas, such as the Indian Subcontinent, Southeast Asia, and Pacific and Caribbean Islands, but also in traditionally safer regions of the world”

Max Claps, a researcher from Ravenna – Climate Change Resilience: A Cry for Help from My Hometown

Crucial question of the project:
in need of social/soft infrastructure



People forced to flee their homes due to northeastern Italy's deadly floods

CULTURE NEWS

Victims of the Italian floods find shelter among paintings and sculptures

Updated: 19/05/2023 - 16:36

Ravenna's Classis museum is offering camp beds and food among lost their homes in the natural disaster.

FLOODS

MUSEUM

FLOODS IN ITALY

ITALY

DIS

<https://www.euronews.com/video/2023/05/19/victims-of-the-italian-floods-find-shelter-among-paintings-and-sculptures>

How could this be overcome with landscape democracy?
How are the marginalized communities are getting involved in the decision making and are helped to adapt to future – more drastic – floods and droughts?

Existing Flood Prevention Facilities



Our Co-operative

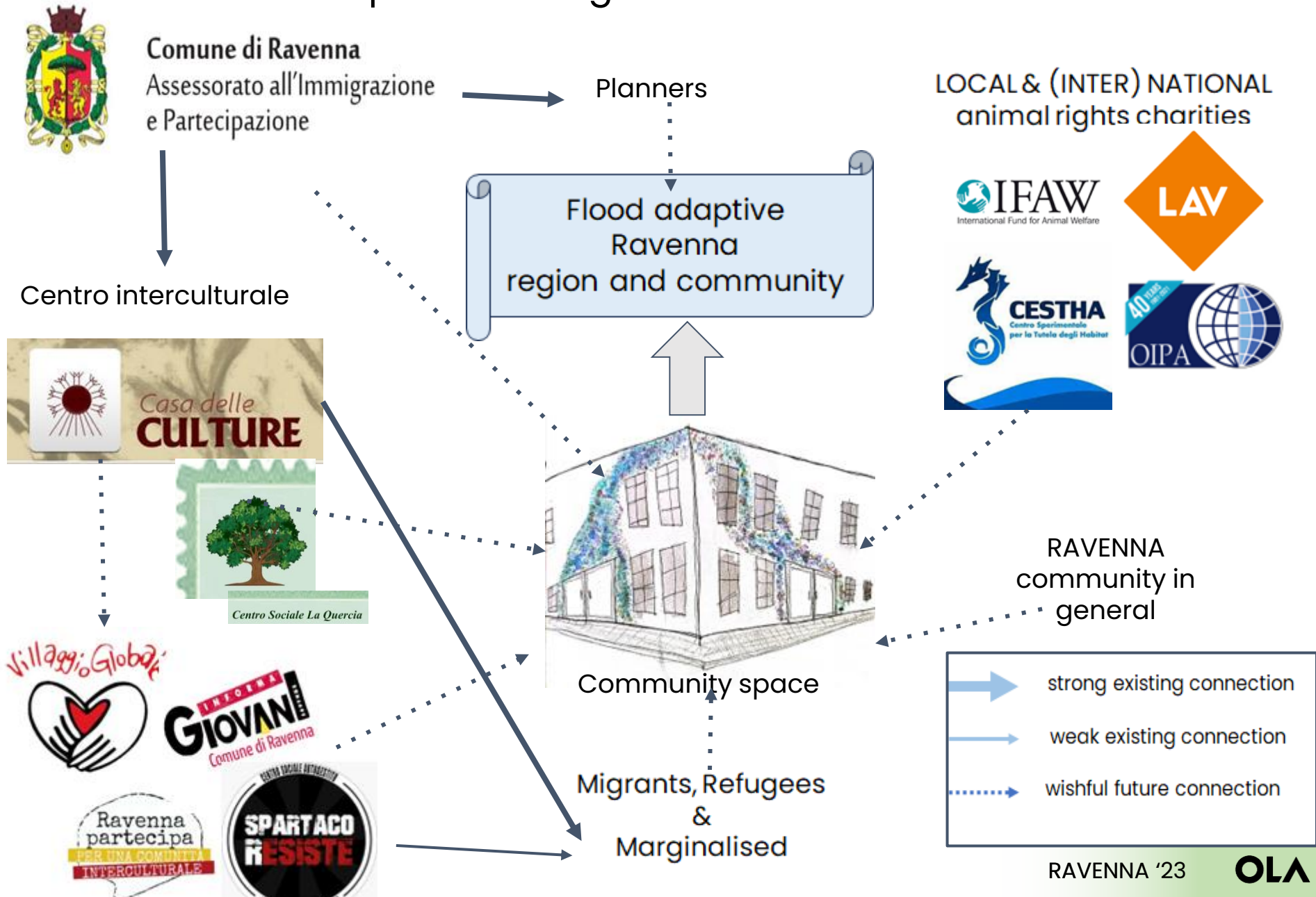
Traditional Flood Prevention Facilities

- Canals and Ditches
- Levies and Embankments
- Historic Building and Architecture

Contemporary Flood Prevention Facilities

- Flood Barriers and Gates
- Flood Retention Basins
- Improved Drainage Systems
- Flood Warning Systems
- Green Infrastructure
- Floodplain Mapping and Zoning
- Educational Initiatives

Power Map – Co-design Network



Process

Regular Town Hall Meetings
Feedback mechanism
Recognition and Appreciation

Monitor & Evaluate

Continuously monitor the impact and effectiveness of the community center's initiatives. Gather feedback from the community

Outreach plan

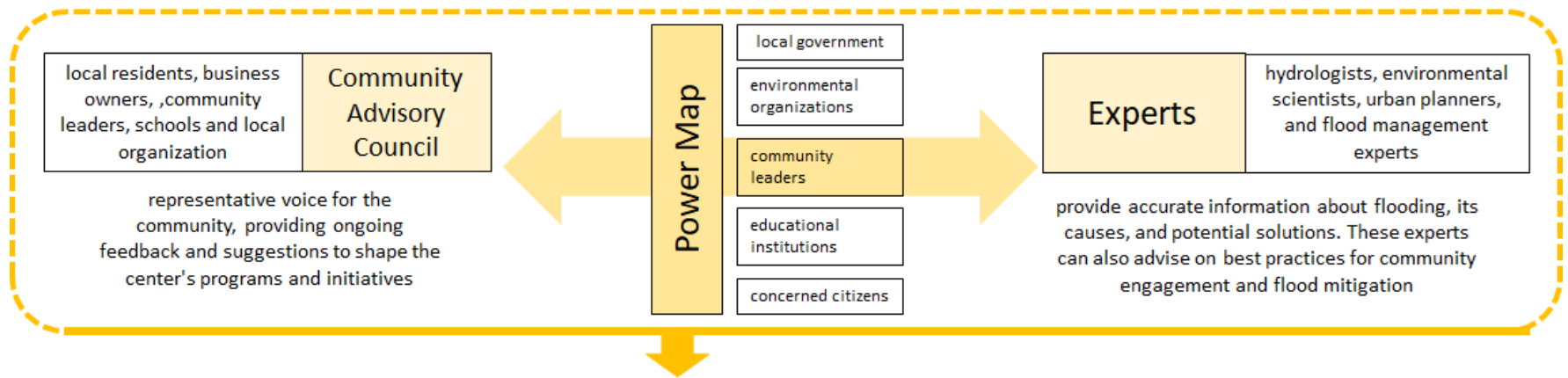
inform the community/ potential partners about the new flood awareness center and its objectives

flyers, local newspapers
social media, local events
media partnerships

Open House Event

Youth Engagement Programs

Co-design activities/ prototype solutions



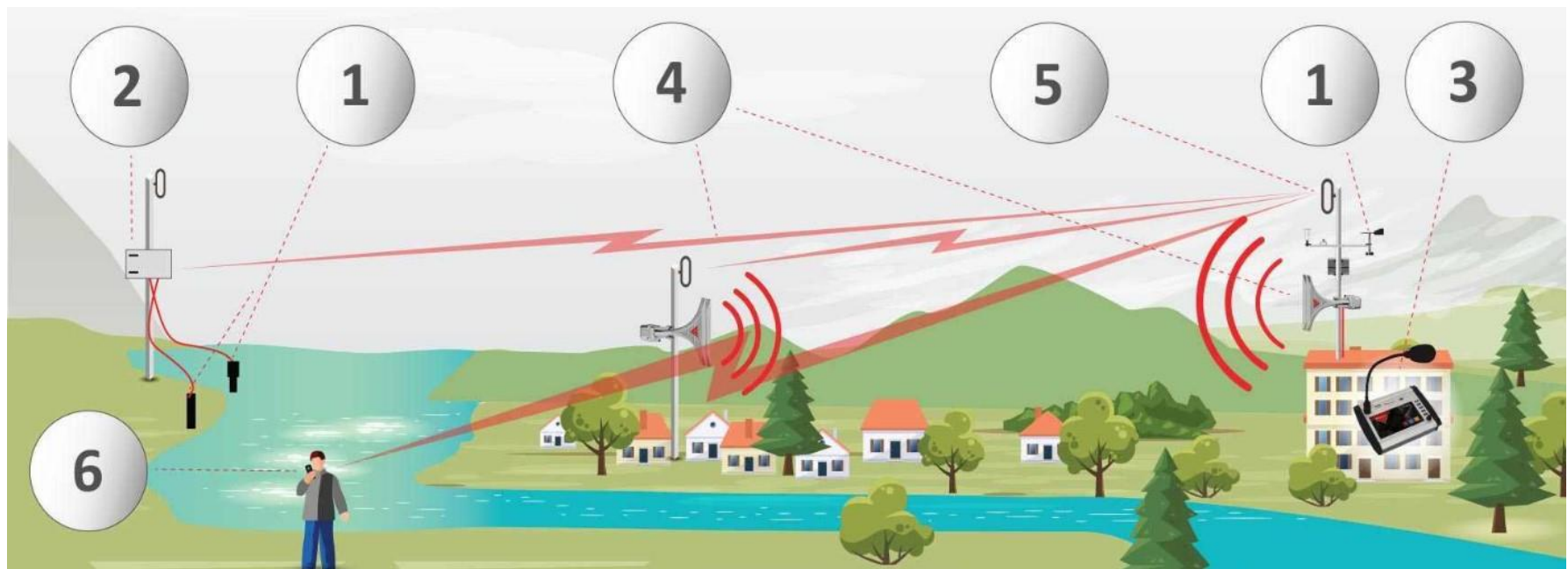
Community Flood Adaptation plan

Based on the inputs from community members and expert advice

Long term strategies	Short term strategies
Nature based solutions	Raising Awareness
Infrastructure improvements	Early warning systems
Long term educational program	Emergency response plan

Early Warning Systems

Creating innovation center with collected datas



The Early Warning System (EWS) in Ravenna, along with collected data, has the potential to become an innovative field. Engage the community in planning, utilize local knowledge, and establish accessible communication channels. Provide education, conduct drills, and consider the needs of vulnerable groups. Adapt the system based on data and community input for better disaster preparedness.

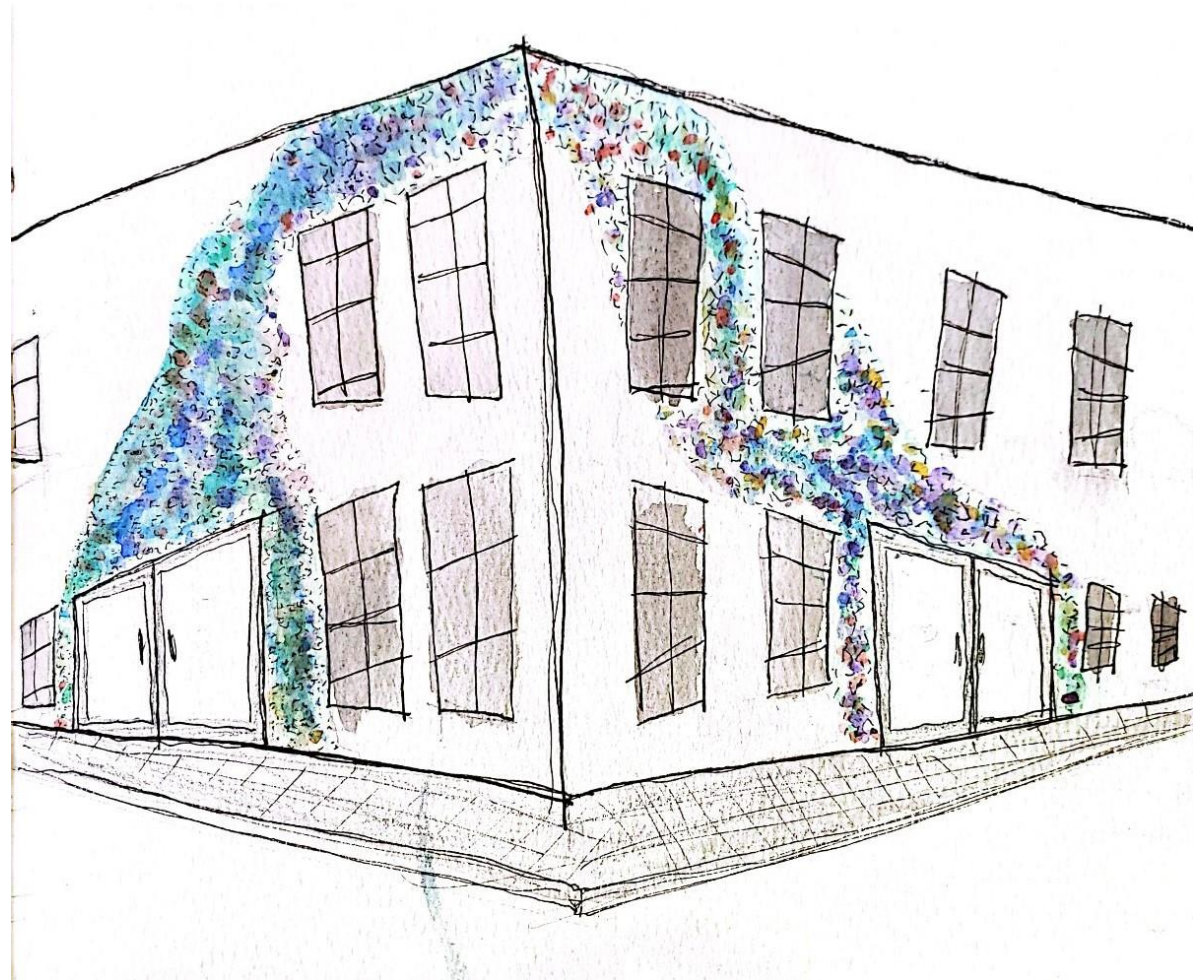
Prototype:

Community Center designed with colorful mosaic

These community center serves as:

Host **workshops and seminars** on various flood-related topics

Conduct **participatory design sessions** where community members can contribute ideas and solutions to address flooding issues



Prototype:

Community Center designed with colorful mosaic

Develop **youth-centric programs** that involve local schools and youth organizations in flood awareness activities.

Organize **community events and contests** that focus on flooding and flood preparedness.



throughout the years



during the flood

provide refuge to those who are affected