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Outstanding Student & PhD candidate Presentation contest

A4alerts: Design and implementation of a mobile device app for a community-based Site-Specific Early Warning System (SS-EWS) in Catalonia, Spain

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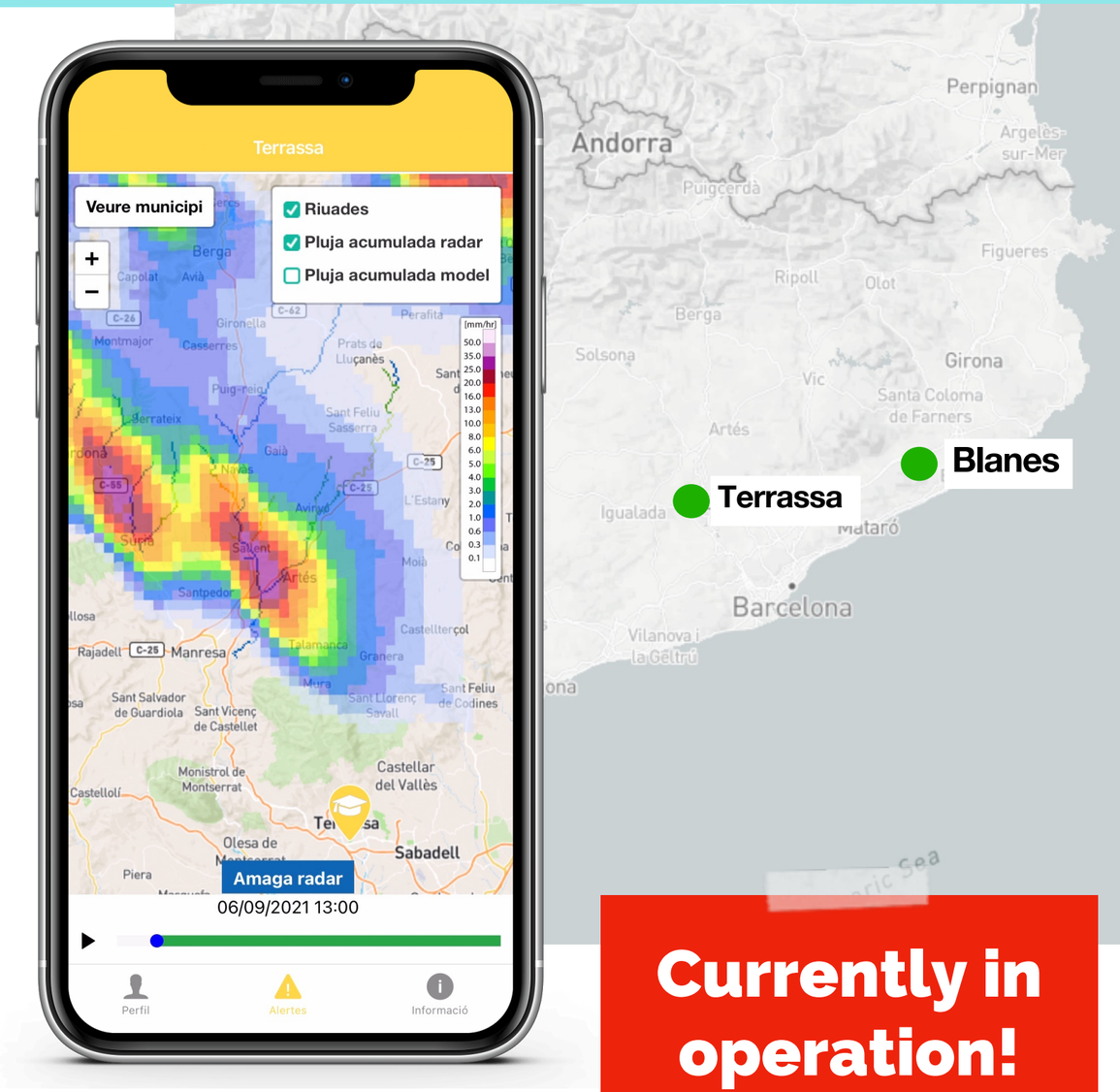
A4alerts: Crisis app for emergency communication

Implemented in Catalonia, Spain

- Tailor-based communication during emergencies for communities
- Official and site-specific warning levels based on local vulnerability and exposure information
- End-user's real-time impact validation
- Protection actions specific for each location context
- Rainfall forecasts up to 24 hours (radar nowcasting + NWP)
- Push notifications & warning timeline
- Connection with municipal platforms



Currently in operation!

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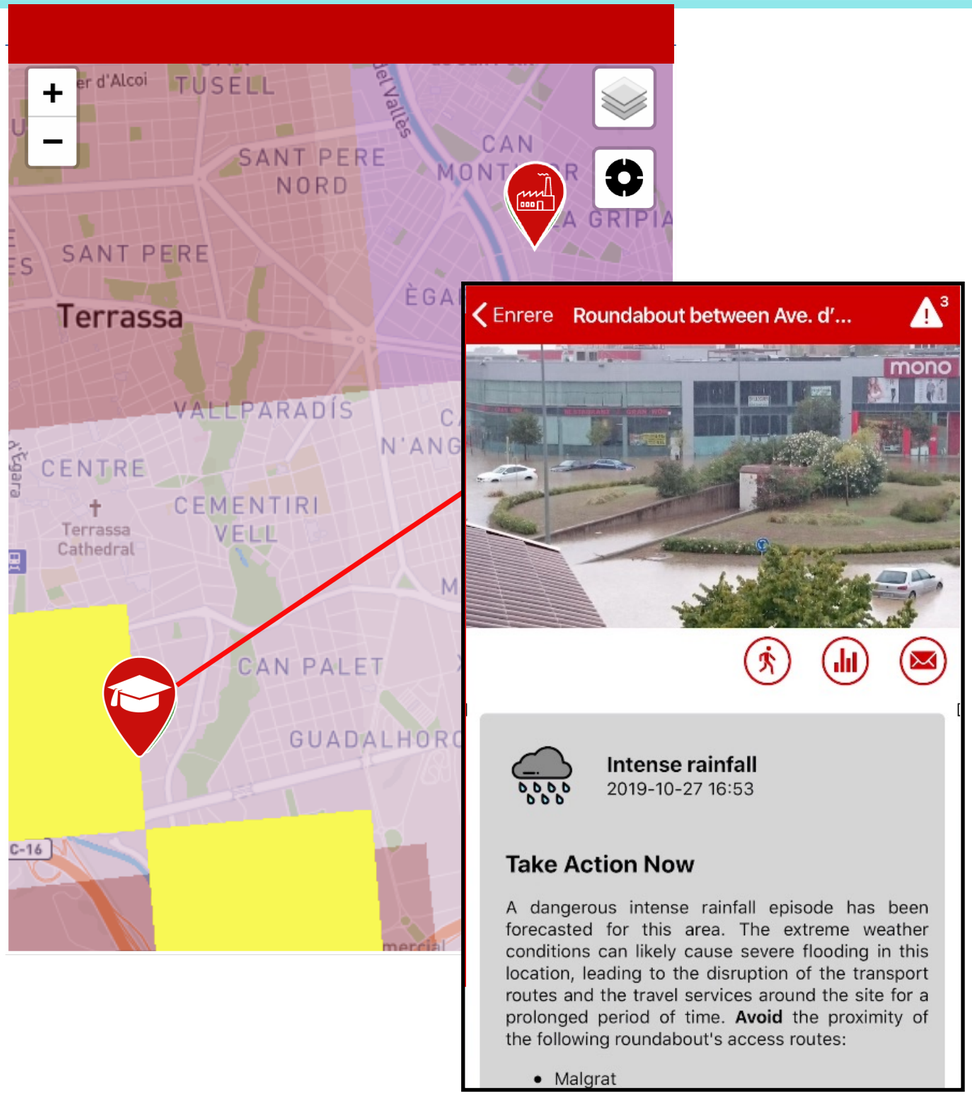
The A4alerts: Design and evaluation

- **Workshops and interviews with community representatives (e.g civil protection)**
  - To co-design and gather qualitative feedback of mobile app requirements
  - Usability guidelines and good practices for mobile apps

- **Online experimental survey (n=76) in Terrassa**
  - Make protective decisions using the a4alerts app during a real-based flood scenario (1)
  - **Participants:** First and second responders in Terrassa and public/private sectors
  - **Evaluate functionalities and system:**
    - Based on 5-point interval Likert scale statements (2)
    - Ranking from the most to the least useful during emergencies (3)



Site-specific warning in Terrassa

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A4alerts: Online experimental survey stages

2 App & functionalities evaluation criteria

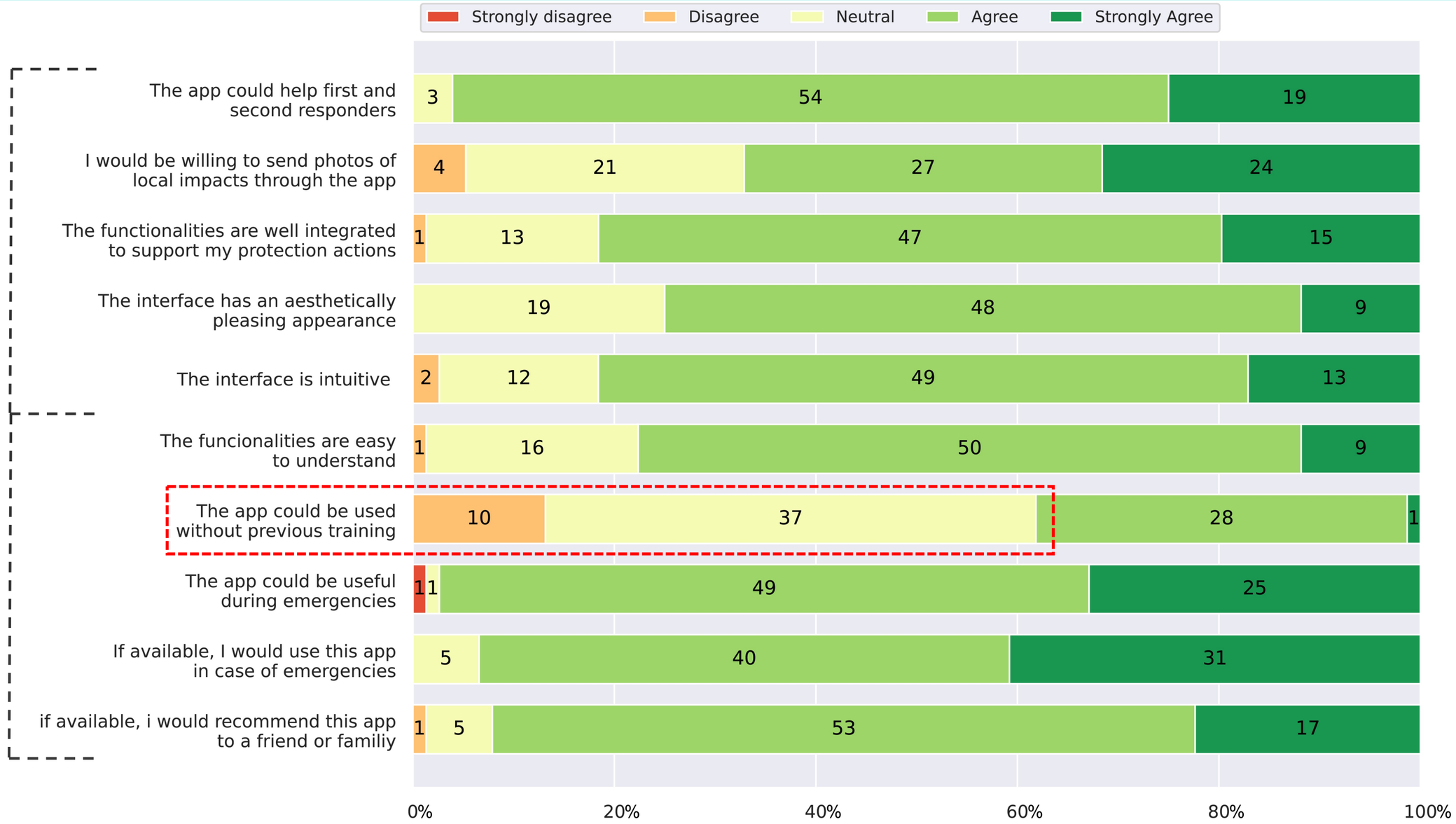
Impact area	Criteria	Sub-criteria	Statement
Social impact	Effects on emergency decisions, working routines and daiy decisions	Usefulness	• The app can be useful during emergencies • The app can be usefull for first and second responders
		User's satisfaction	• I would use and/or recommend this app
	Effects on knowledge sharing	Knowledge sharing	• I would be willing to send photos of local impacts through the app
Technological impact	Understandability	Functional appropriatness	• The functionalities are well integrated to support my protection actions
	Learnability	Self-explanatory interface	• The functionalities are easy to understand • The app could be used without previous training • The interfase is intuitive
	Attractivenes	Interfase aestethics	• The interfase has an aesthetically pleasing apperance

The A4alerts: Evaluation results (n=76)

2

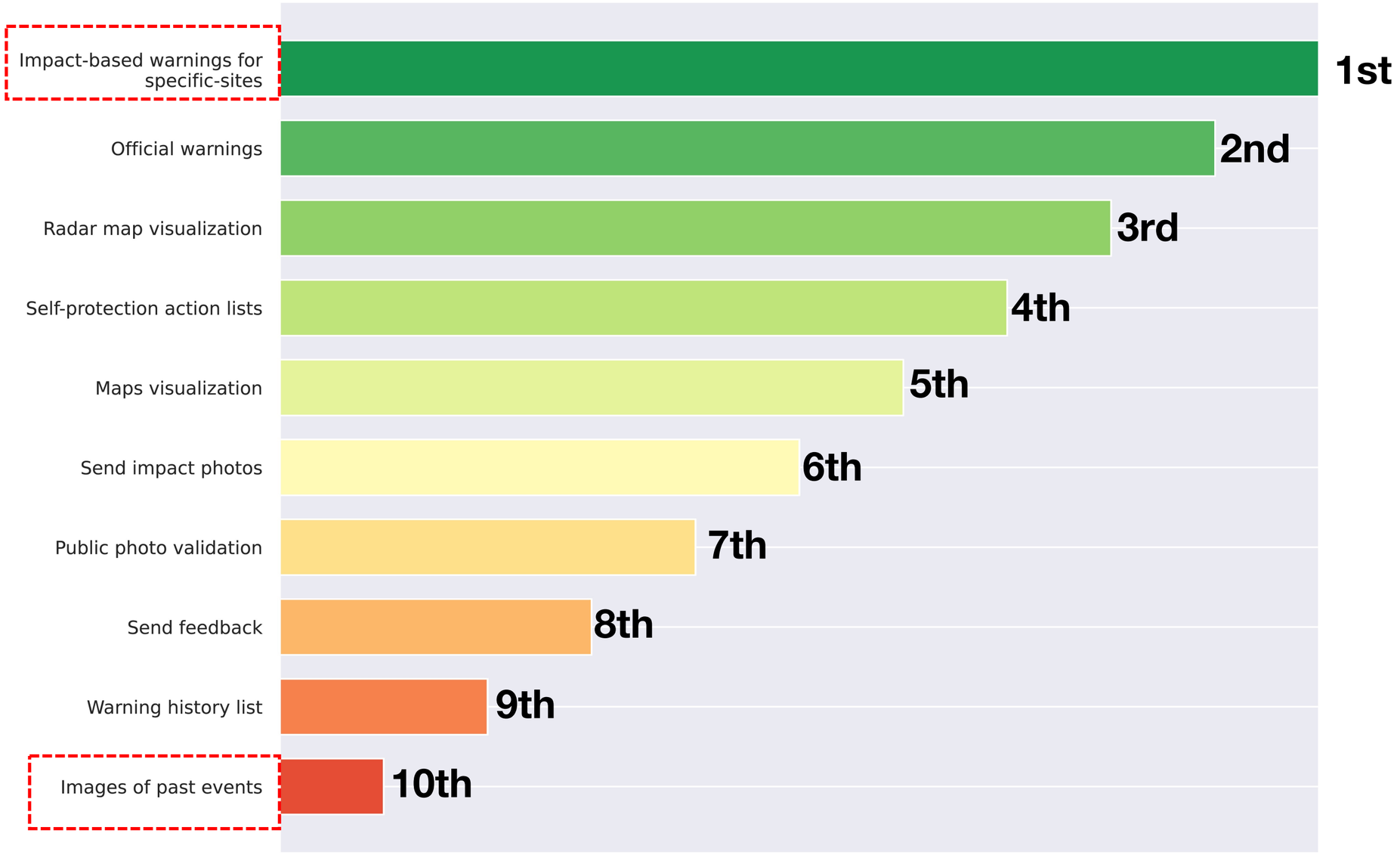
Technological Impact

Social Impact



The A4alerts: Ranking of functionalities

3



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Thank you!

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