

CITIZEN-DRIVEN DISASTER MANAGEMENT IN SMART CITIES: THE PATH TO RESILIENCE

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PROJECT MOTIVATION



Source: R&D Magazine (2017)

Source: CNN (2017)

RESEARCH QUESTIONS

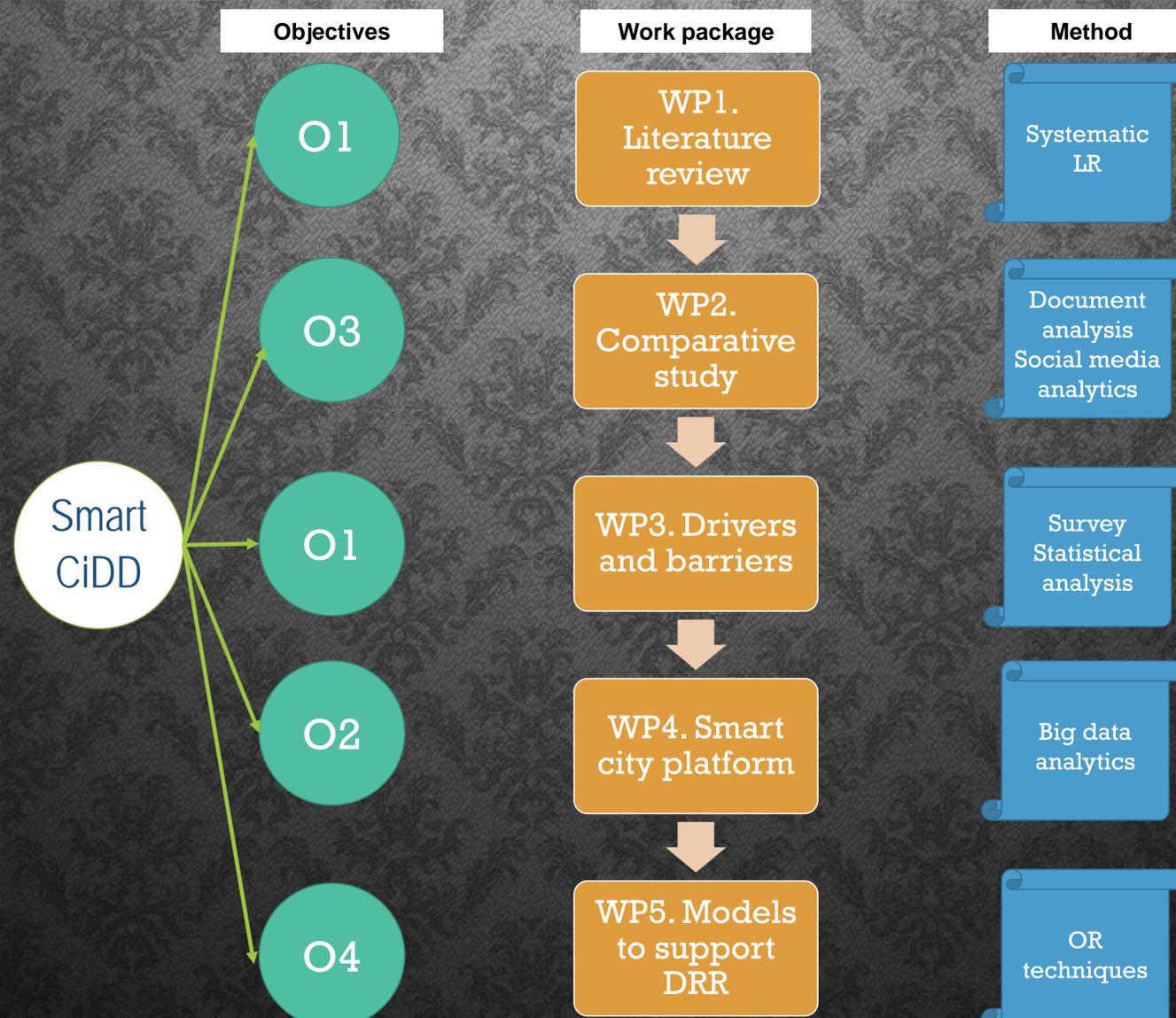
- RQ1 • How can smart cities and big data analytics support citizen-driven disaster management in smart cities in Mexico and the UK?
- RQ2 • What are the relevant capabilities of Smart Cities to enhance collaboration and coordination and foster community-based disaster management in Mexico and in the UK?
- RQ3 • What are the roles (if any) that the government, first responders and/or other NGOs and stakeholders may play in the coordination of these grassroots movements?
- RQ4 • How can we define and implement a system that integrates Smart cities, ICT infrastructure, social media and citizens to manage disasters effectively?

CASES FOR ANALYSIS



Source: Google Earth (2018)

METHODOLOGY



OBJECTIVES

O1. To identify the barriers and drivers to adopt citizen-driven disaster management in Mexico.

O2. To understand the use of social media in disaster management in Mexico and the UK

O3. To compare and contrast the disaster management systems in Mexico and UK

O4. To develop models and techniques to support coordination in disaster management exploiting the potential of smart cities.

DELIVERABLES

- Framework for disaster resilience in smart cities
- Architecture and pilot of system to allow exploitation of Smart Cities' capabilities
- Report of big data analytic solutions using smart cities' capabilities
- Models and decisions-support systems to enhance coordination and collaboration
- Taxonomy of disaster management models in Mexico and UK
- Good practice guidelines
- Repository of social media responses in disasters

DISSEMINATION

- Website
- Press media
- Social media
- Online repository
- Workshops
- Masterclasses
- Conference presentations
- ESRC festival of Science
- Academic articles

CONCLUSIONS

Citizen-driven response in disaster management in smart cities

Big data analytics to support collaboration and coordination

Analysis of disaster management systems in two countries

Decision models using real-time information and dissemination