Smart public health emergency management and ICT implementations

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U4SSC Thematic Group on Enabling People-Centred Cities through Digital Transformation



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About the deliverable

Smart City Platforms Thematic Group

Working Group 2: Smart Public Health Emergency Management

- **The question:** why smart cities did not predict or utilized to respond to the COVID-19 pandemic? How can they prevent mass surveillance?
- Smart public health emergency management and ICT implementations
 - Analysis of the terms
 - A gap analysis of existing relevant standards for smart public health,
 - literature analysis about pandemic management frameworks.
 - How cities responded to COVID-19.
 - Define a framework for smart public health management in smart city

Findings & Experiences from pre-Covid-19 pandemics

CDC response to H1N1 Influenza (Swine flu)



General structure of a public health system

Examined cases

- 1. 'Flattening the curve': S. Korea's 24-hour emergency citizen prevention system & Korona App
- 2. TraceTogether from Singapore
- 3. GH Covid-19 Tracker App from Ghana
- 4. CovidWatch from Stanford University
- 5. HaMagen from Israel Ministry of Health
- 6. Corona DatenSpende from German Watch co.
- 7. Covid Symptom Tracker from King's College, London and others
- 8. NHS Smart Phone App from NHS, UK
- 9. Let's Beat Covid-19 from MedShr , London
- 10. PeduliLindungi from Indonesia
- 11. Kwarantana Dommowa from Poland
- 12. Arogya Setu from Government of India (GOI)

A Smart Public Health Emergency Framework: the role of SSCs



Integration with smart city platforms

1. City IoT infrastructure: collects information from the urban space (process step 1.2.4 and process step 2.2.2) and feeds into the public health threat analysis system (process step 1.4 e.g., the SIR functions) and the crisis curves (process step 2.2.1).

2. City Apps: These collect information from the community (process steps 1.2.5, 1.2.6 and 2.2.5).

3. City dashboard and public website: (process steps 2.1.1 and 2.2.3).

4. Smart services: ICT-based services that generate alerts when needed (process steps 2.2.6 and 2.3.1).



requirements for ICT implementations



Thank you. Any questions?

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