Towards More Resilient Cities

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UNIVERSITY OF TWENTE.

UN-GGIM ACADEMIC NETWORK

Simple Definition of RESILIENT

: able to become strong, healthy, or successful again after something bad happens

: able to return to an original shape after being pulled, stretched, pressed, bent, etc.

The definition implies temporal change/dynamics and capability to respond after shock in system

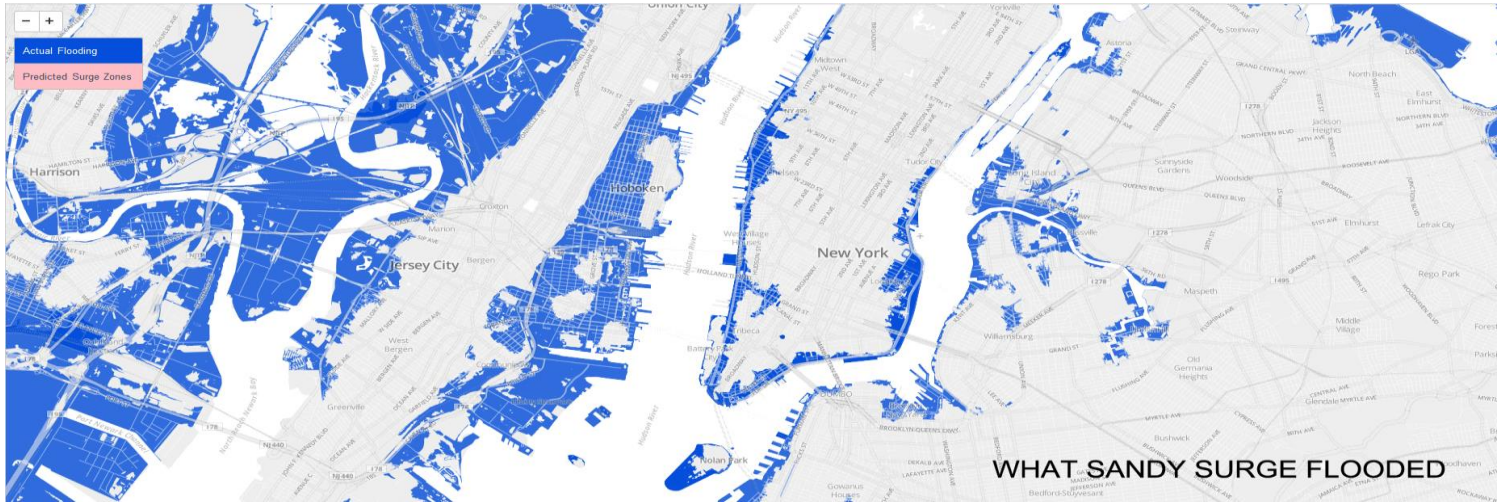
The used data is static and relative and lacks spatio-temporal dimensions and behavior and different perspectives
It gives technocratic info

The Organisation for Economic Co-operation and Development (OECD)

IDENTIFY CURRENT CHALLENGES OF URBAN COMMUNITIES AND SETTLEMENTS AND OPPORTUNITIES FOR INTEGRATING GEOSPATIAL AND STATISTICAL INFORMATION;

- From robust to resilient concepts.

Shift from static to dynamic concepts changes geospatial data needs. So apart from needing accurate (fit for purpose) x,y,z data we also need temporal data and forecasts.



EXAMINE HOW GEOSPATIAL INFORMATION WILL SUPPORT AND INFORM INCLUSIVE AND EVEN URBANISATION, RESILIENT DEVELOPMENT, AND THE SDG'S

- Spatial information will allow to identify where and when and if resilient engineering is required.
- This information should ideally be available for everyone from a reliable and acceptable source to prevent contested knowledge (fake facts) discussions.
- Allow all stakeholders to participate and share views

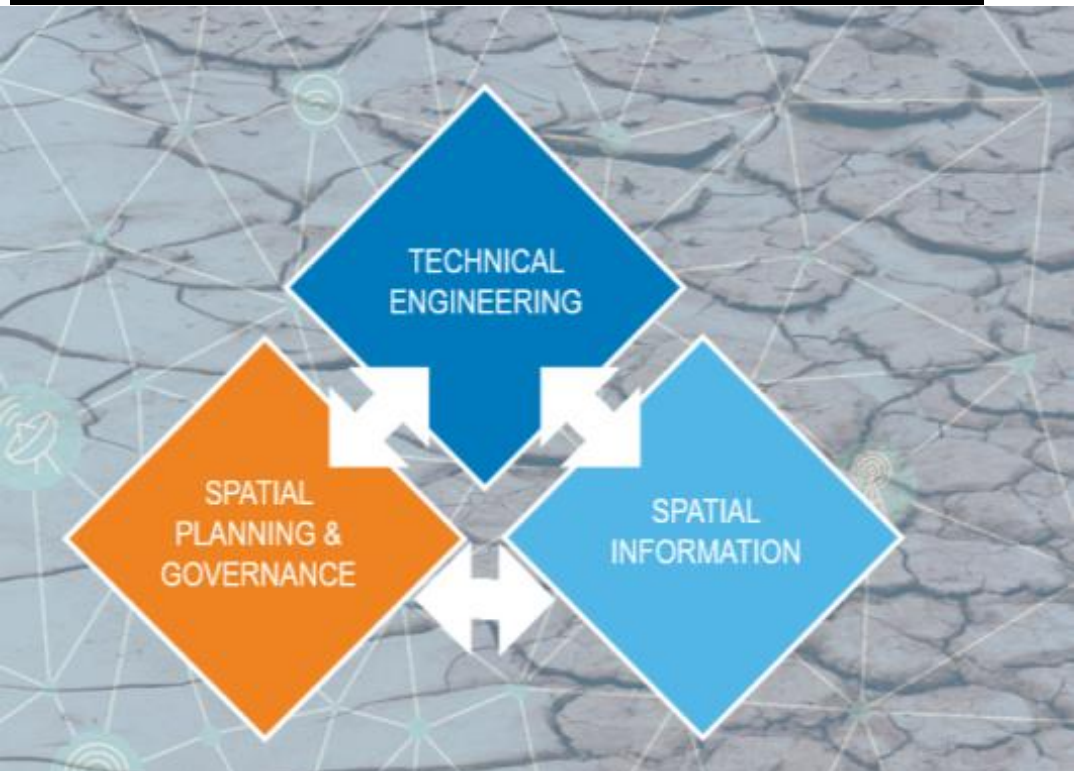
PRESENT AND DEVELOP ROADMAPS FOR A MORE SUSTAINABLE AND RESILIENT FUTURE FOR ALL, PARTICULARLY IN LIGHT OF GROWING DISASTER RISKS.

- Our urban planning and infrastructure need to change to allow more resilient solutions.
- These development should be fact based (reproducible reasoning and decision making)
- Not only the city has to become resilient also its citizens, including informal habitants (it is also social challenge not only a planning and engineering problem)
- Sustainable development of cities in the context of global change is a wicked problem

- ITC's **mission** is to develop global capacity, particularly in less developed countries, and to utilize geospatial solutions to deal with national and global problems
- The road map from ITC perspective is capacity development for sustainable resilient cities.
- New MSc programme: Spatial Engineering

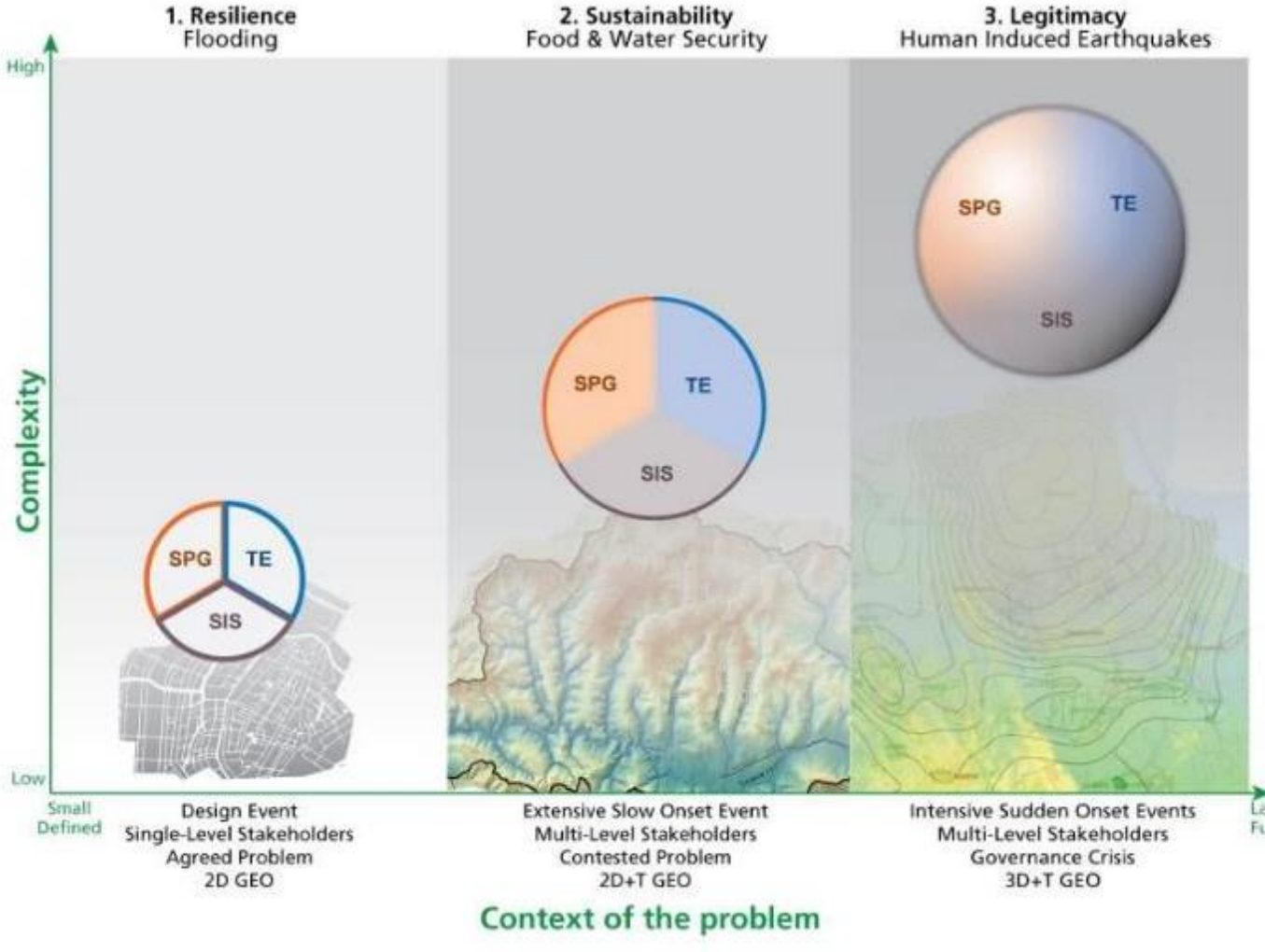
MASTER SPATIAL ENGINEERING

- 2-year Master's programme
- Research-based educational programme
- Entry level: BSc
- Combining technical and socio-economic knowledge with a strong basis of spatial data analysis and modelling



Taming wicked problems

nvao
accredited programme



Disaster risks are increasing because of urban encroachment into risk areas

Informal settlements are almost always in disaster prone locations. Typically in area of flooding, land sliding

Commitment to sustainable solutions are closed linked to ownership of location and related problems

School for
Land Administration Studies

Capacity Building in Land Administration

- Scientific
  - concepts
  - models
  - methodology

ITC

- Operational
  - operations
  - management
  - governance

kadaster

Thank you

Let us move towards engineering more Resilient Cities