



Critical Interdependencies in Urban Systems (and urban health risk)

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Cities:

- constantly evolving and dynamic physical and socio-economic systems
- ever-changing functionality and spatial distribution
- no parts of a city, or a city system, exist in isolation - interdependencies and interconnections





Effective interventions - sector integration:

- Common sense and necessary in areas with limited resources for development.
- Potential to blend funds across capital programs.
- Valuable opportunity to strengthen outcomes
- Source of infra investment and metrics for success





How to identify/ quantify connectedness?

- Economic models
- Disaster risk management

- Data requirement – well known, fixed systems
- Physical/ geo-spatial/ political/ informational



Household Service Delivery

Services

Water
(drinking, hygiene
irrigation)

Environmental
(sanitation, solid
waste, drainage)

Energy
(heat, light
cooking)

Shelter
(space,
tenure)

Mobility
(access,
communication)

Security
(safety,
privacy)

Infrastructure

Pipes



Wires



Roads



Physical form



Pipes



Wires



Roads

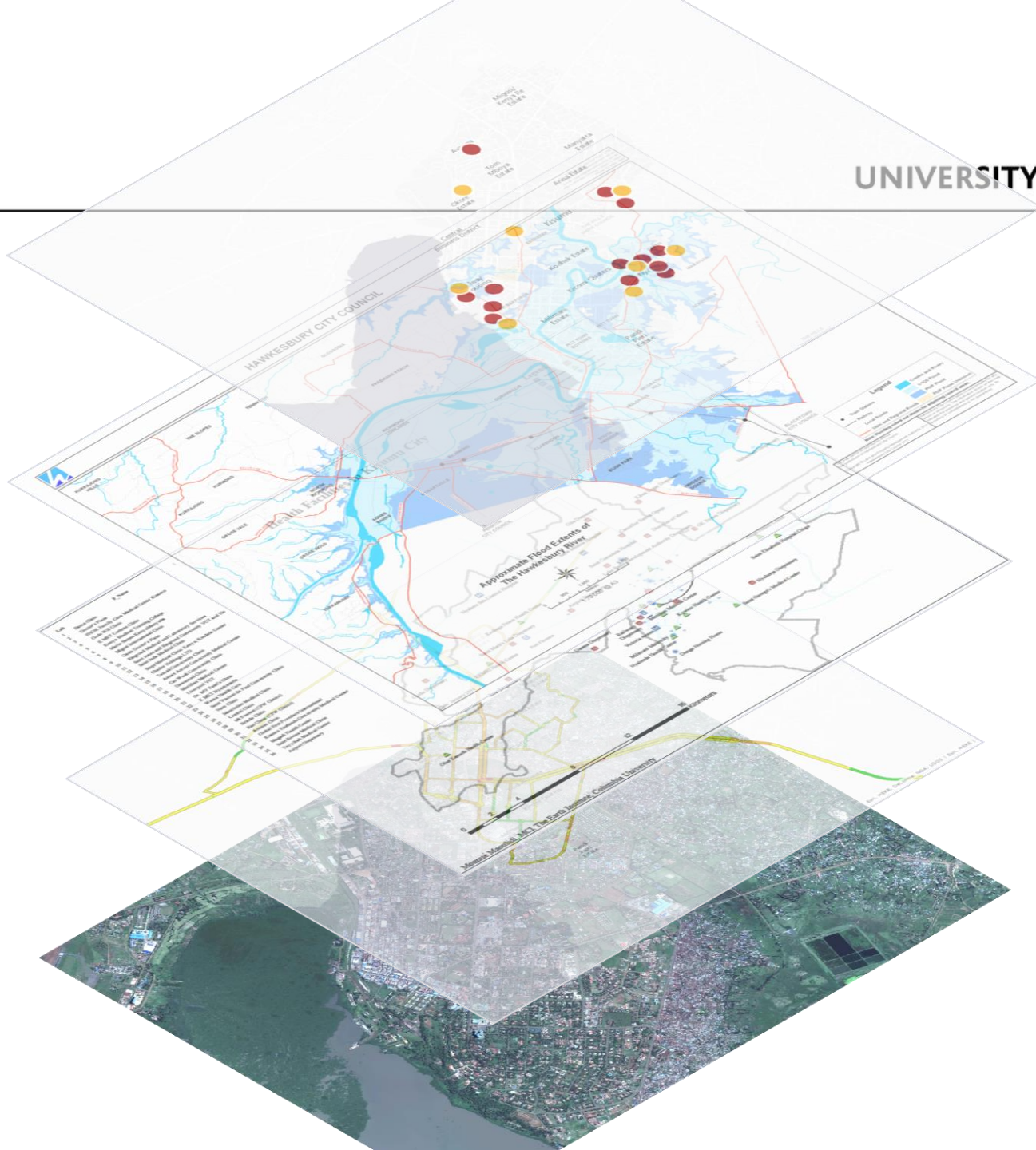


Physical form



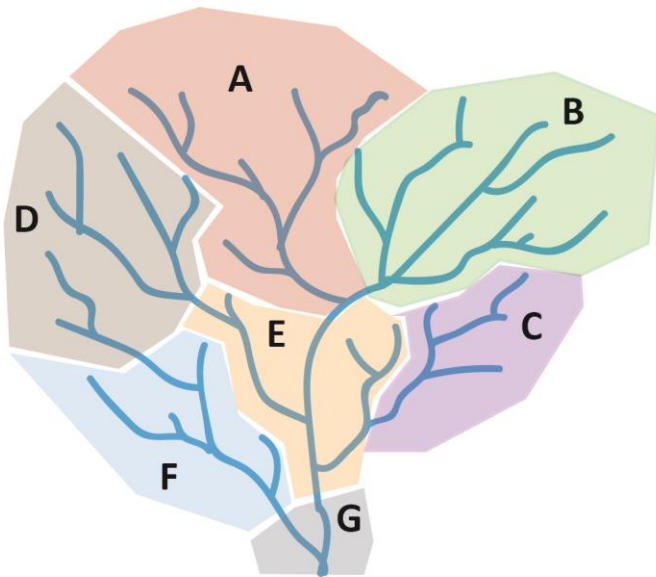
City Scale

Building Scale

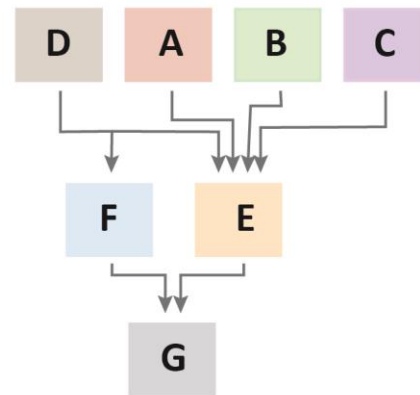




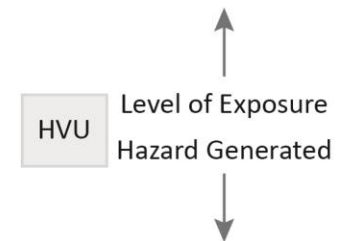
Propagation of Risk



Drainage basin map



Conceptual model



Exposure to, and Generation of, Hazards