

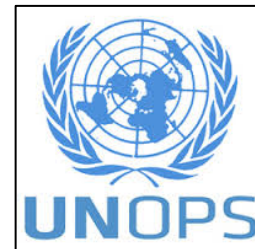
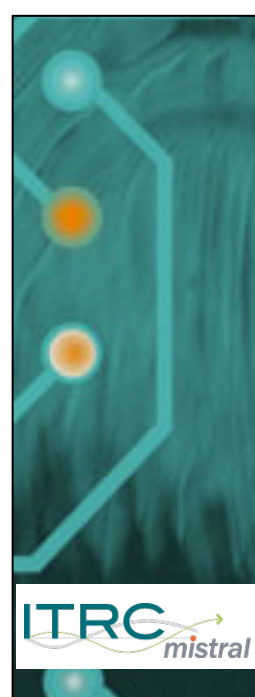
National Infrastructure Systems Modelling for International contexts (NISMOD-Int)

Scott Thacker, Tom Russell, Daniel Adshead, Lena Fuldauer and Jim Hall

November 14th, 2017

Website: <http://www.itrc.org.uk>

Contact: scottt@unops.org, tom.russell@ouce.ox.ac.uk, jim.hall@eci.ox.ac.uk

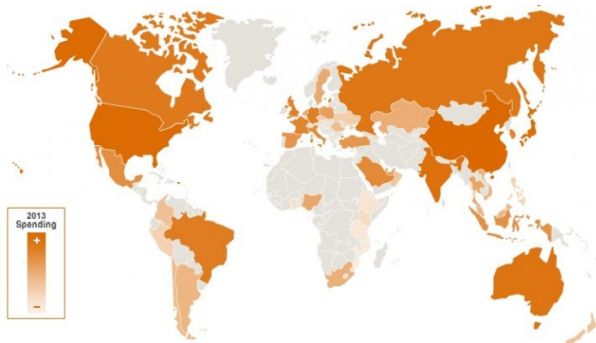
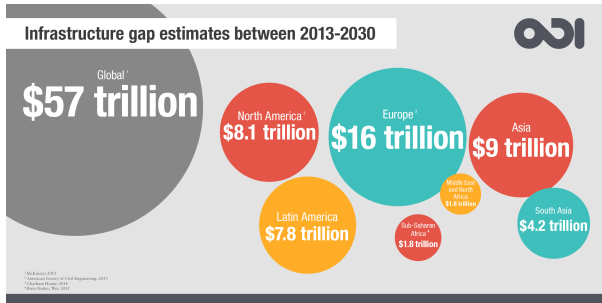


Infrastructure for Sustainable Development

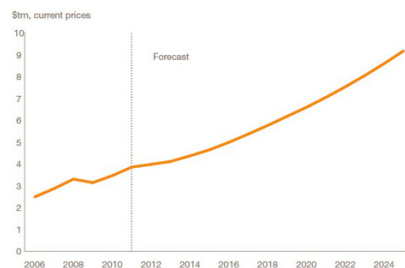


- Infrastructure interventions can influence
 - 104 of the 169 SDG targets (62%)
 - All 17 of the SDGs

Infrastructure for Sustainable Development



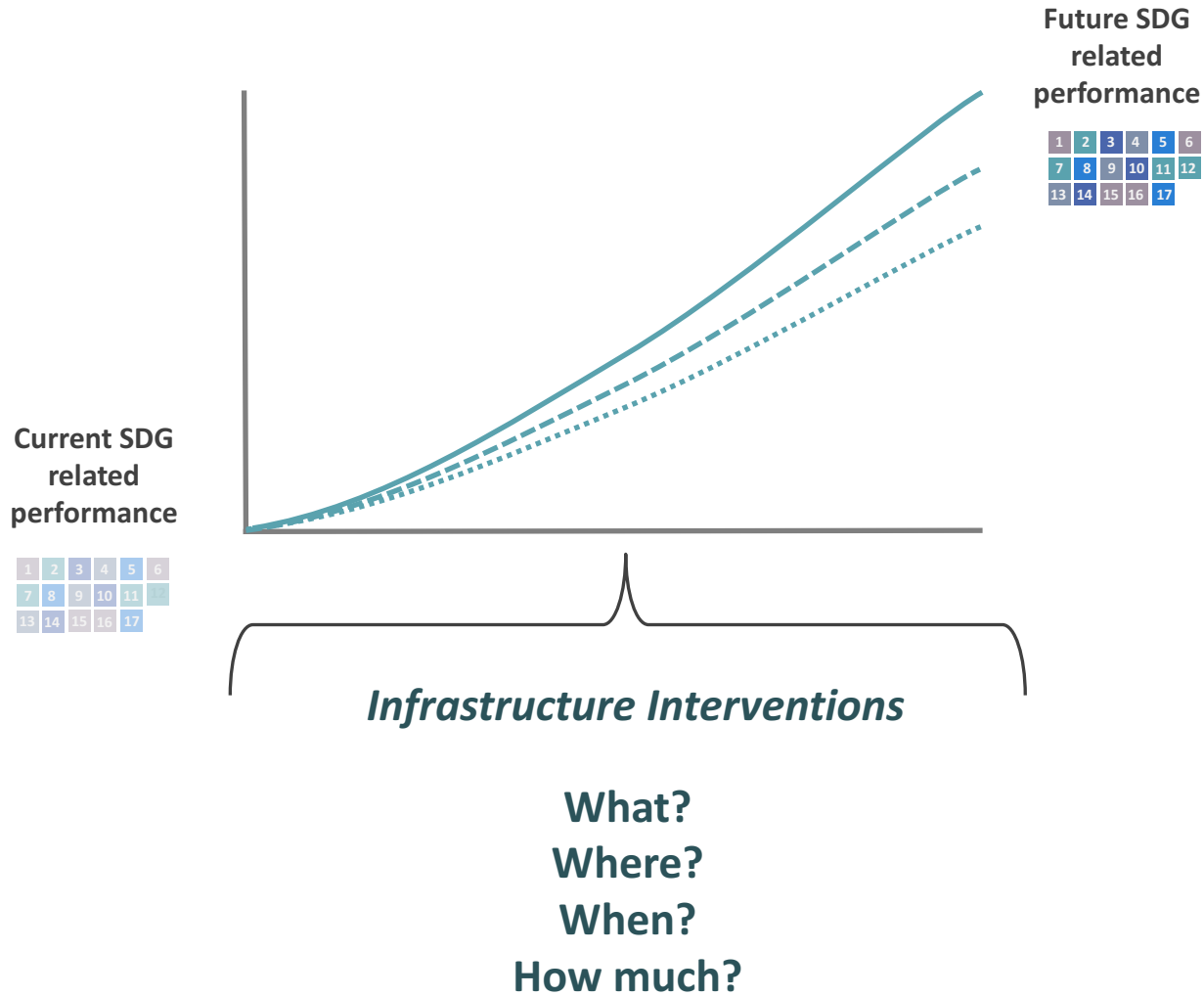
Global infrastructure spending to exceed \$9 trillion by 2025



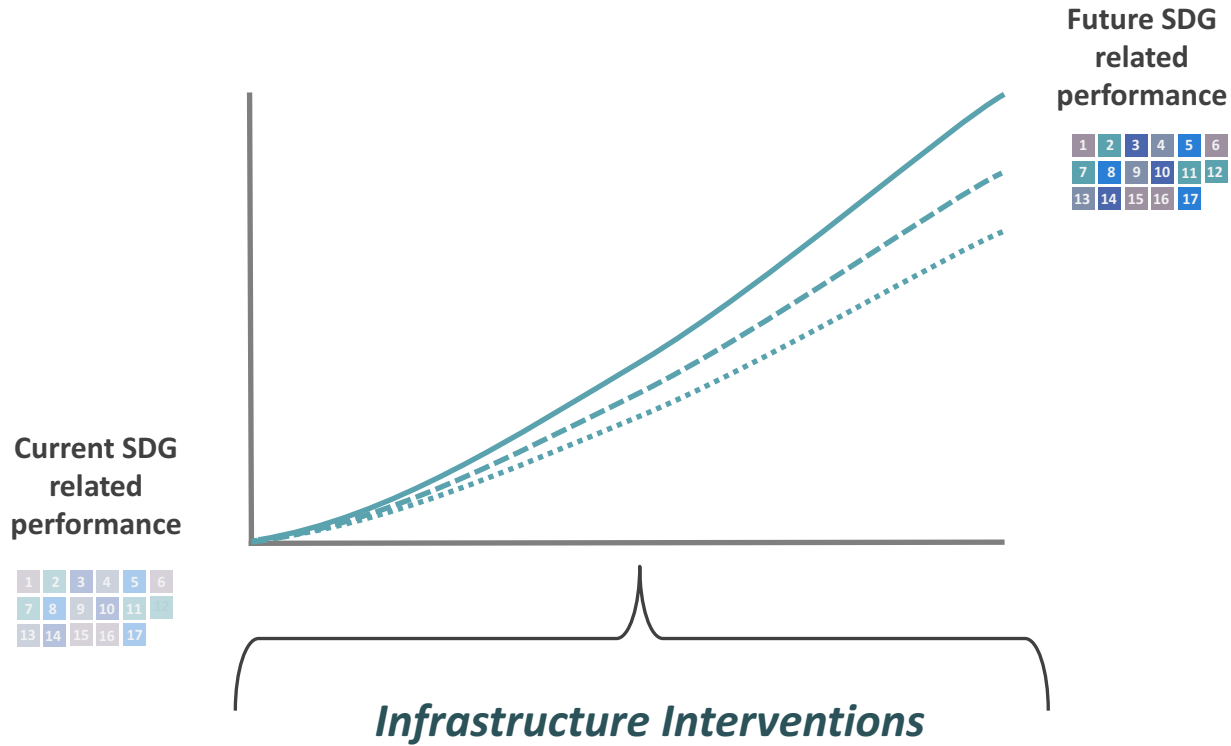
Source: Oxford Economics

- Large quantities of infrastructure to be developed globally in the coming decades
- Risk:
 - Poor decisions will lock countries into unsustainable practices for years to come
- Opportunity:
 - Good decisions can unlock sustainable development

Problem: What, Where, When and How much?



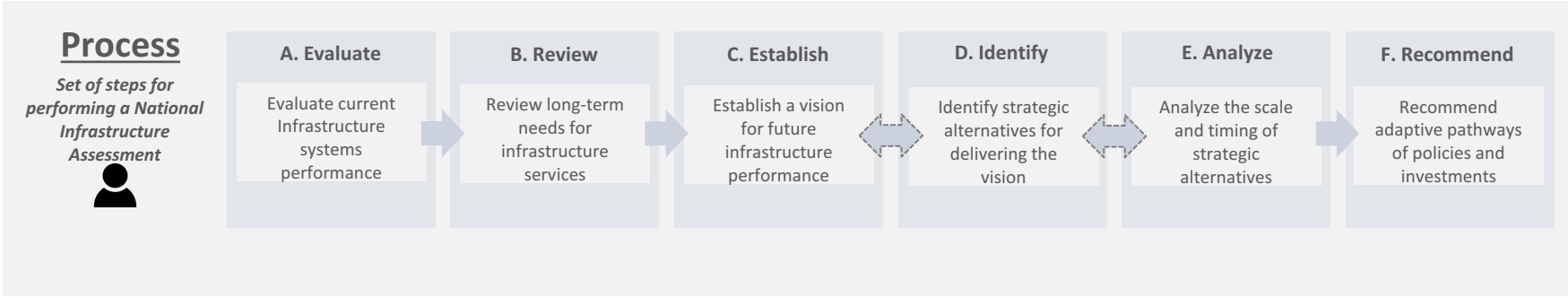
Problem: What, Where, When and How much?



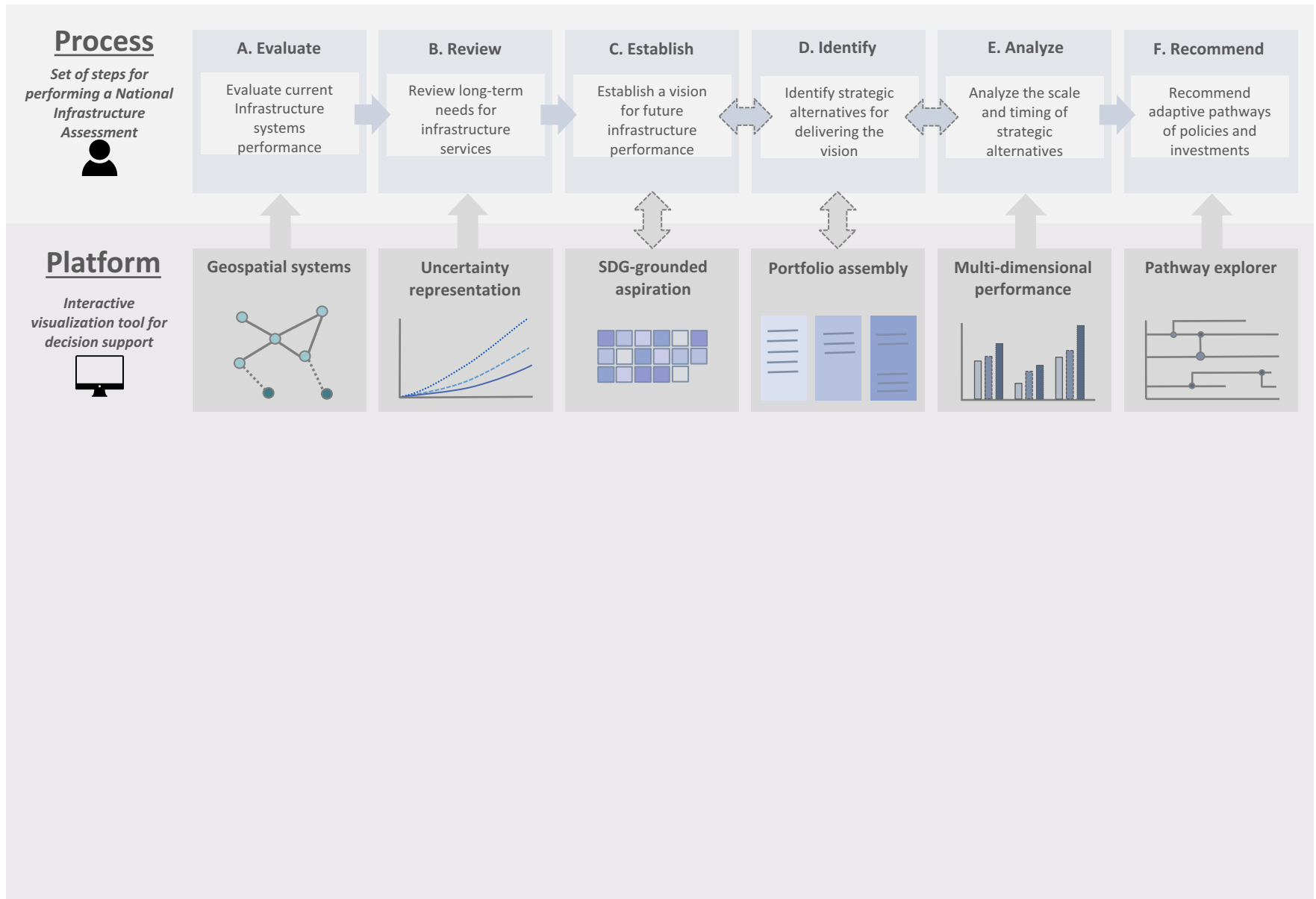
What?
Where?
When?
How much?

NISMOD-Int

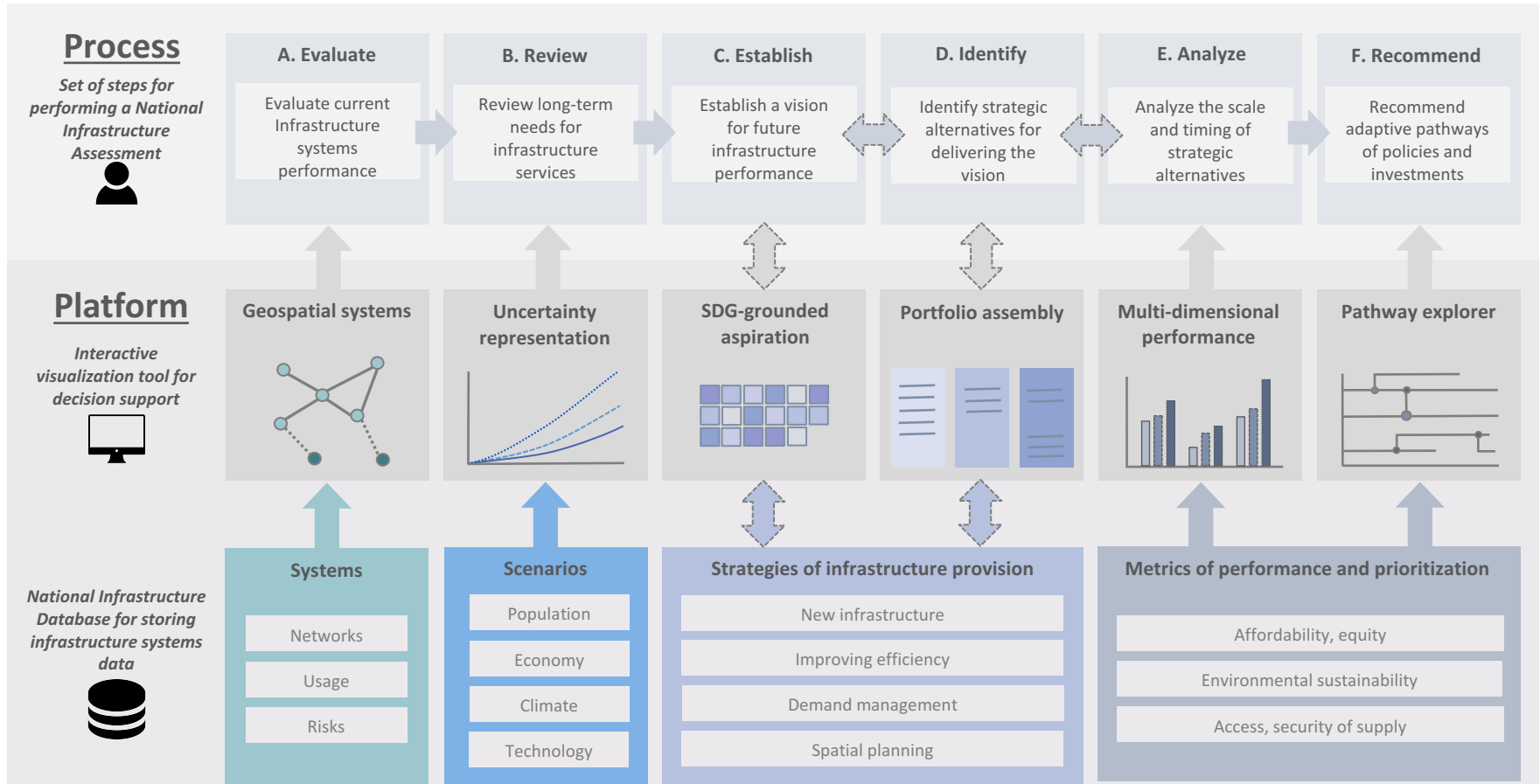
NISMOD-Int: Overview



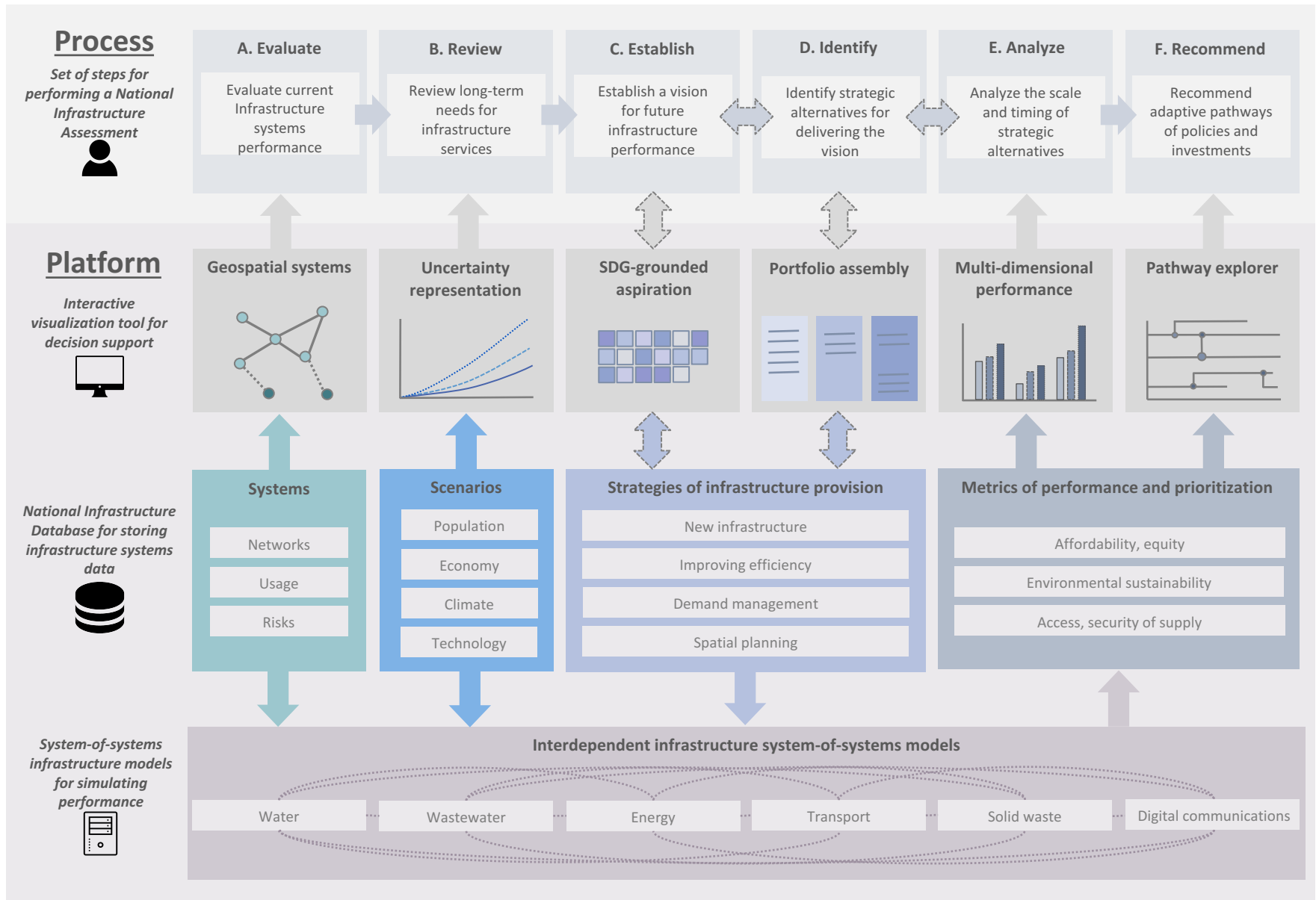
NISMOD-Int: Overview



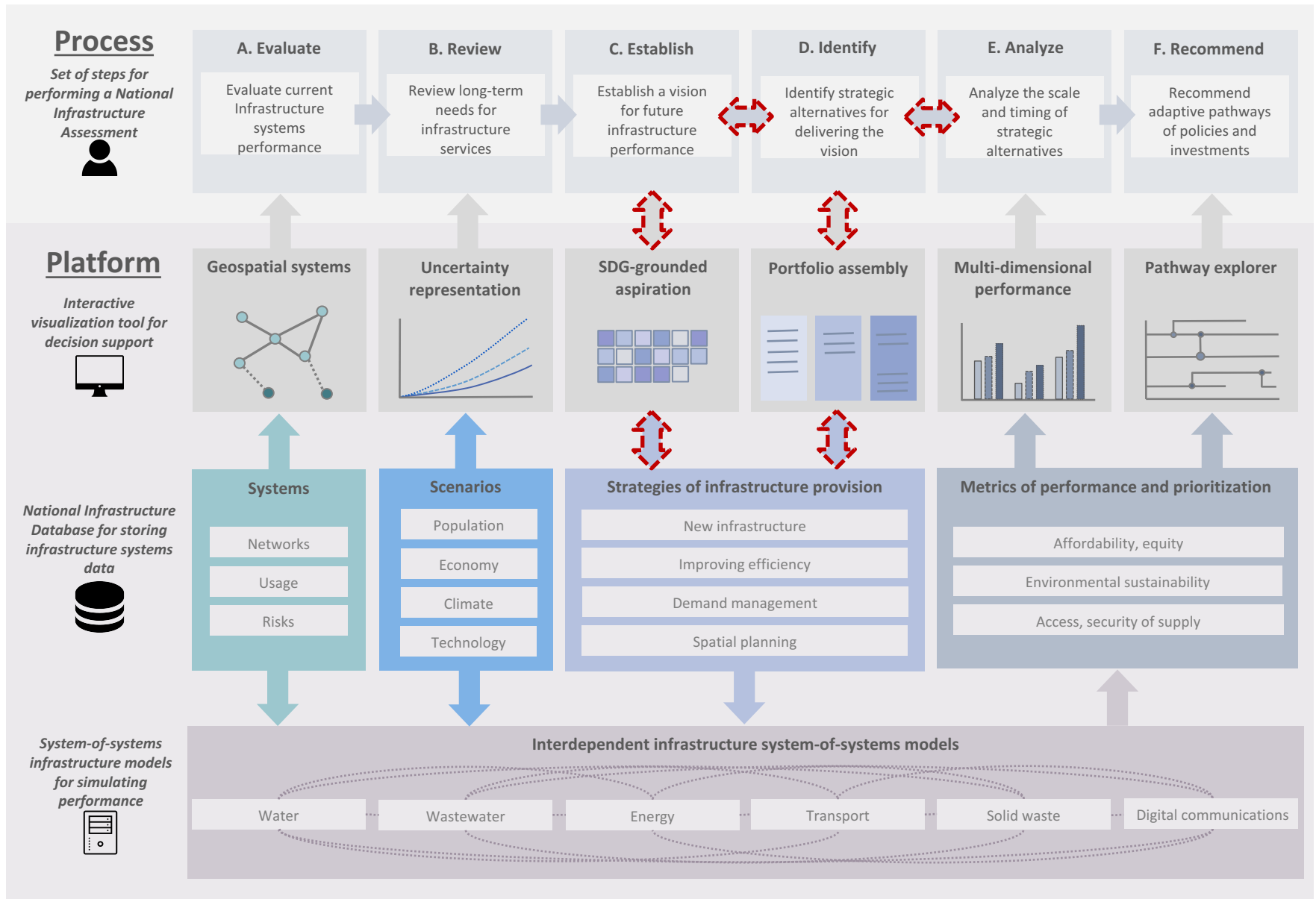
NISMOD-Int: Overview

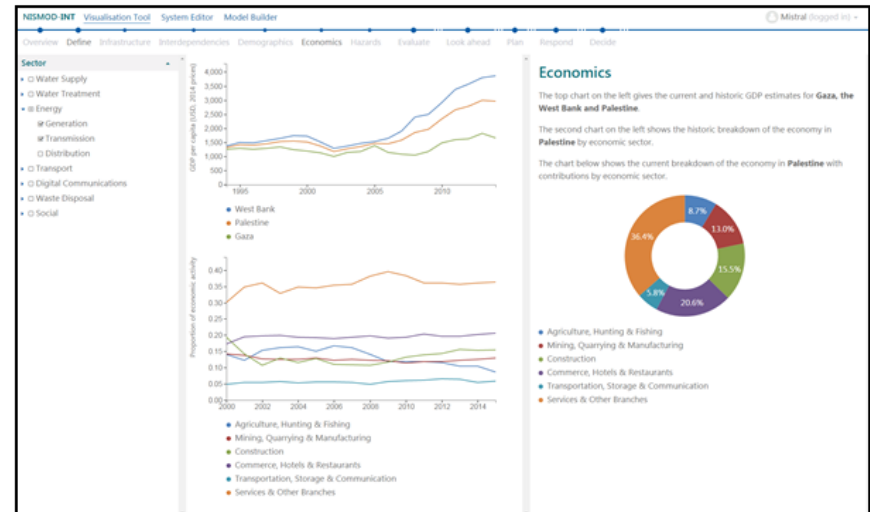
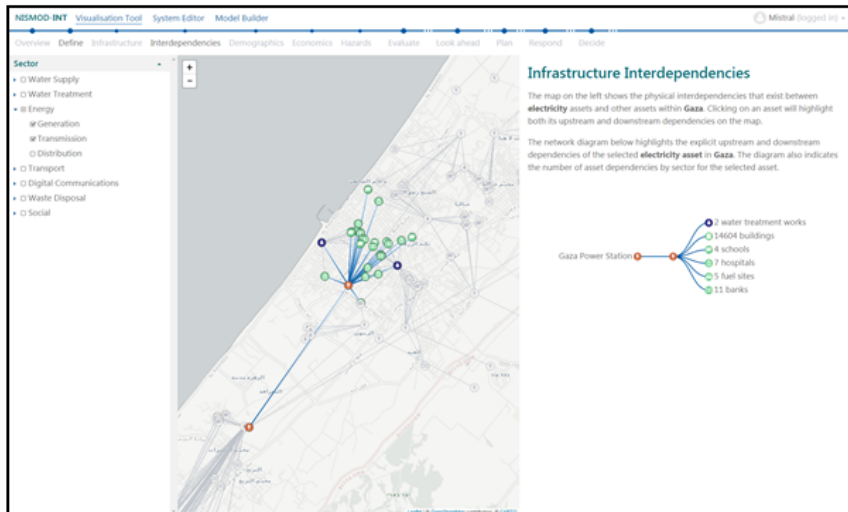
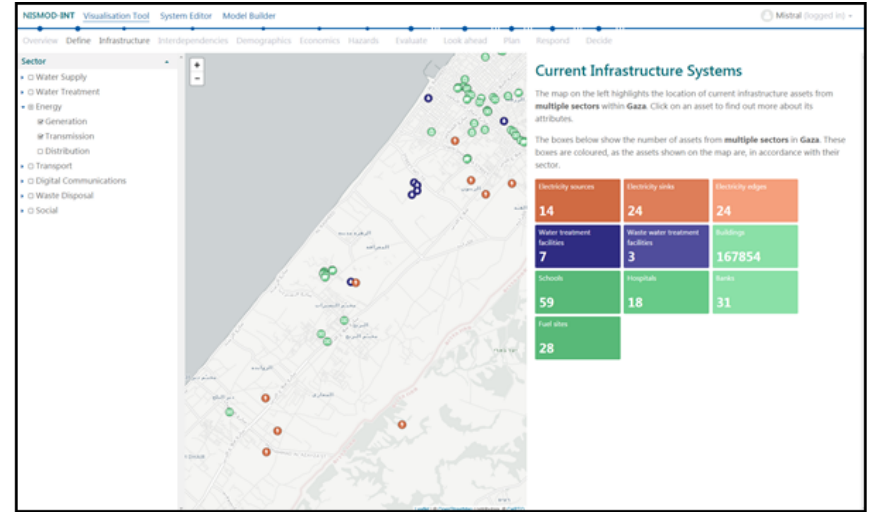
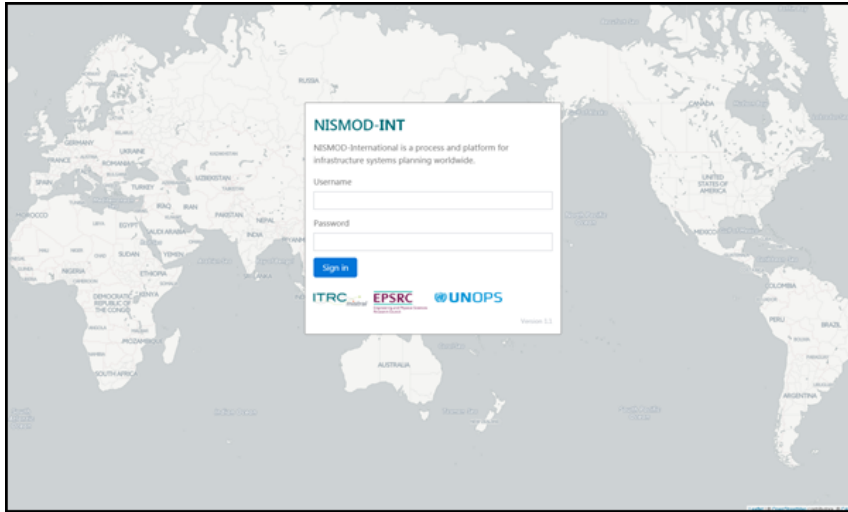


NISMOD-Int: Overview



NISMOD-Int: Overview



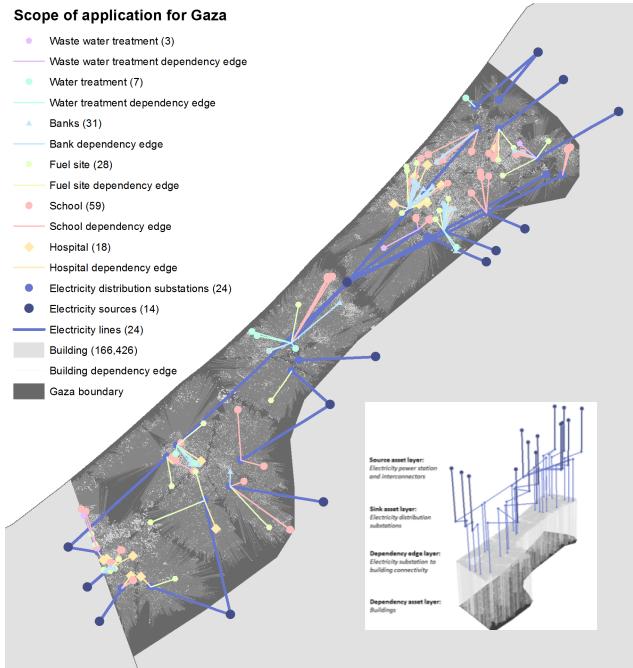


NISMOD-Int: Ongoing applications

Palestine: 2016-2017

Scope of application for Gaza

- Waste water treatment (3)
- Waste water treatment dependency edge
- Water treatment (7)
- Water treatment dependency edge
- ▲ Banks (31)
- Bank dependency edge
- Fuel site (28)
- Fuel site dependency edge
- School (59)
- School dependency edge
- ◆ Hospital (18)
- Hospital dependency edge
- Electricity distribution substations (24)
- Electricity sources (14)
- Electricity lines (24)
- Building (166,426)
- Building dependency edge
- Gaza boundary

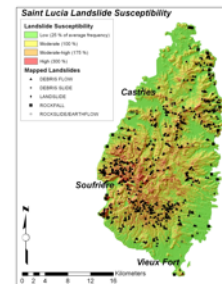


Curaçao: 2017-2018

- ### Infrastructure in Curaçao
- electricity generation plant
 - ▲ electricity sub-station
 - electricity transmission line
 - landfill site
 - ▲ recycling plant
 - wastewater treatment plant
 - wastewater dependency edge
 - desalination plant
 - water reservoir
 - water dependency edge
 - airport
 - airport dependency edge
 - port
 - port dependency edge
 - road



ST LUCIA 2018



SYRIA 2018



Conclusions



- **NISMOD-Int: to realise the opportunity of infrastructure for sustainable development**
 - **Development through diverse international applications**
 - **Open source development**
- **Further details in the DMDU booklet (p. 28-29)**