



International Federation of Surveyors
Fédération Internationale des Géomètres
International Vereinigung der Vermessungsingenieure



How to develop rural areas in a SMART way?

Marije Louwsma, chair FIG commission 8



SMART cities – integrating ICT and sensors





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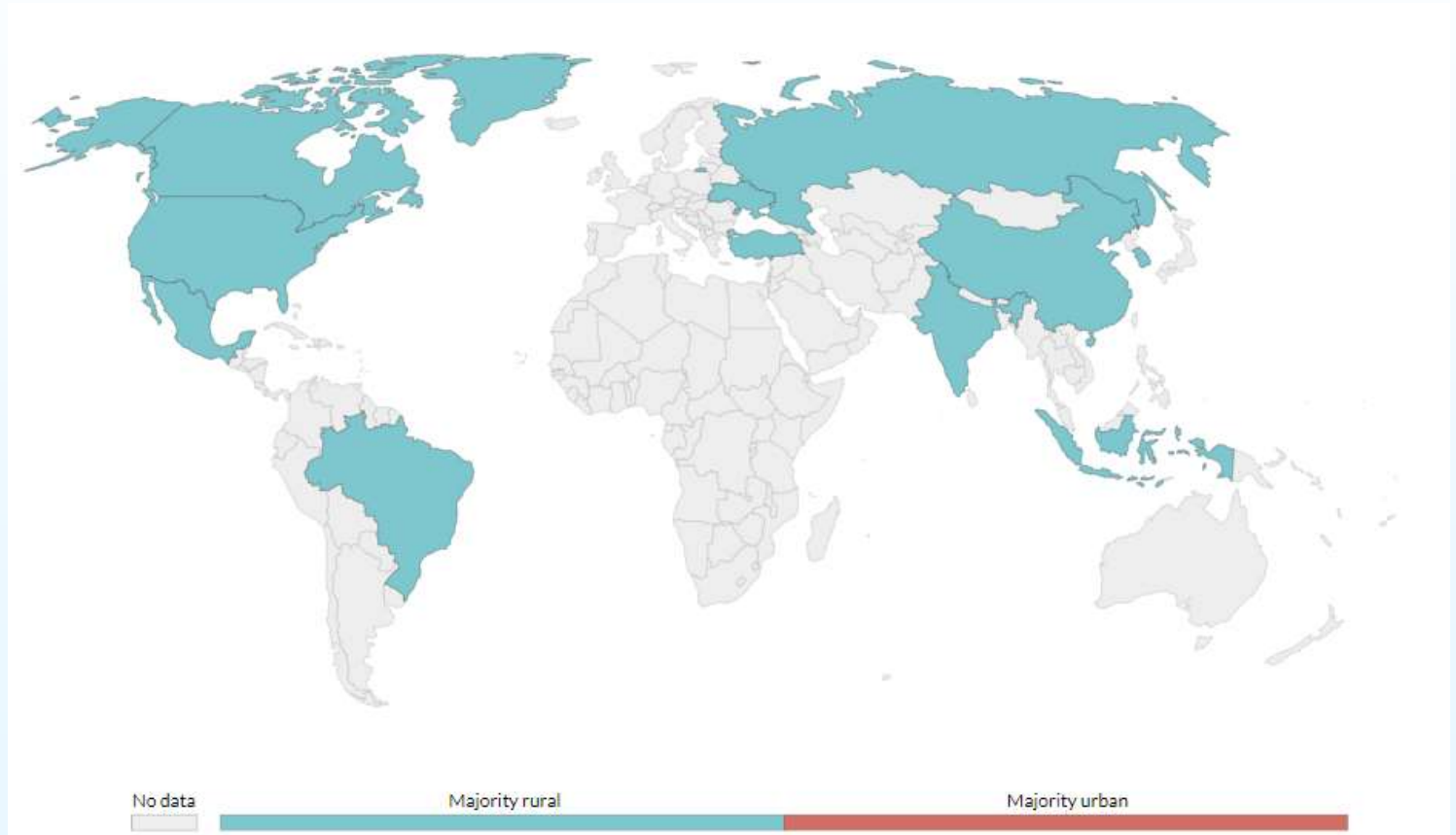
SMART cities..... and what about ‘the rest’





Rapid Urbanization

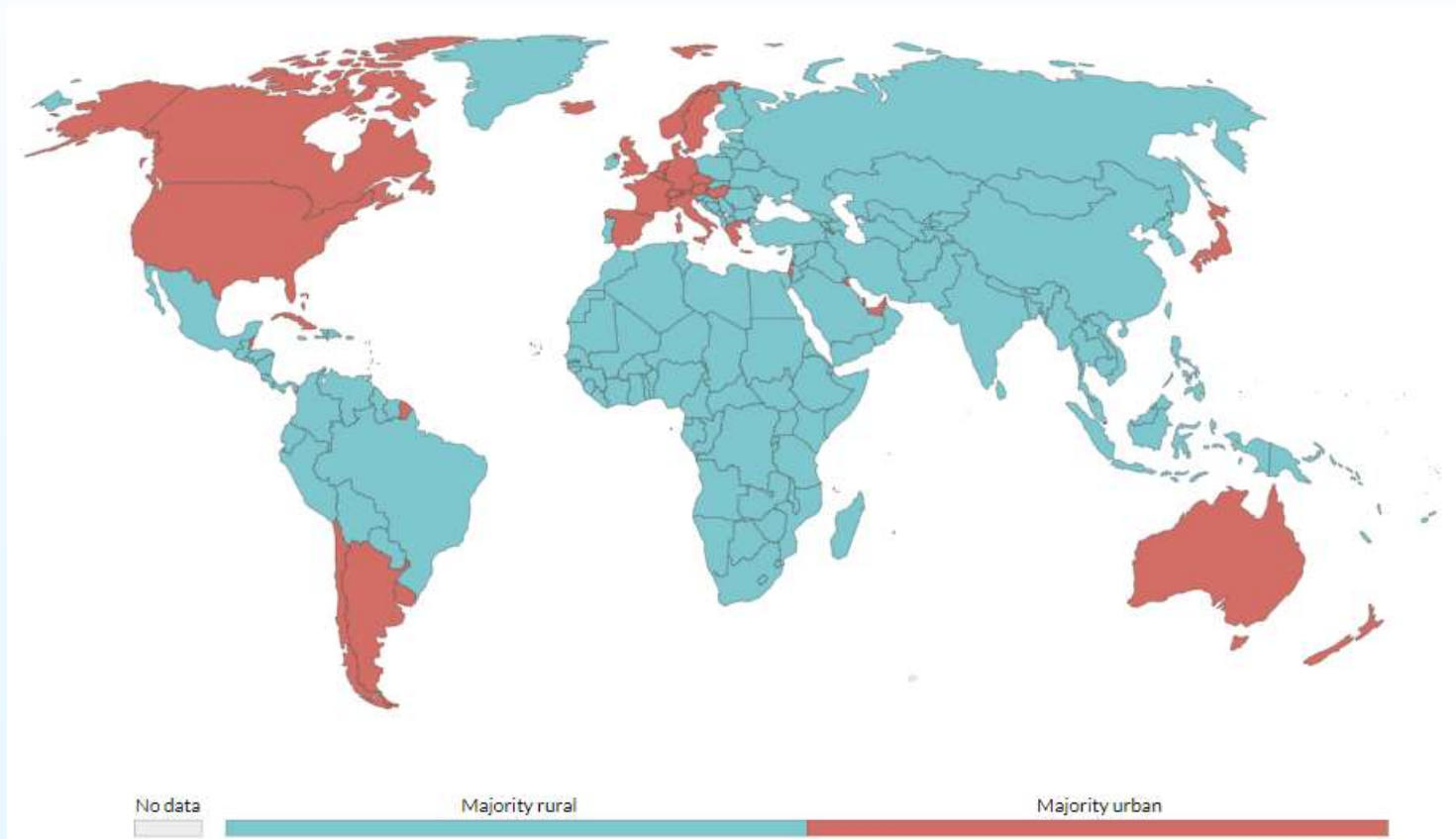
1900





Rapid Urbanization

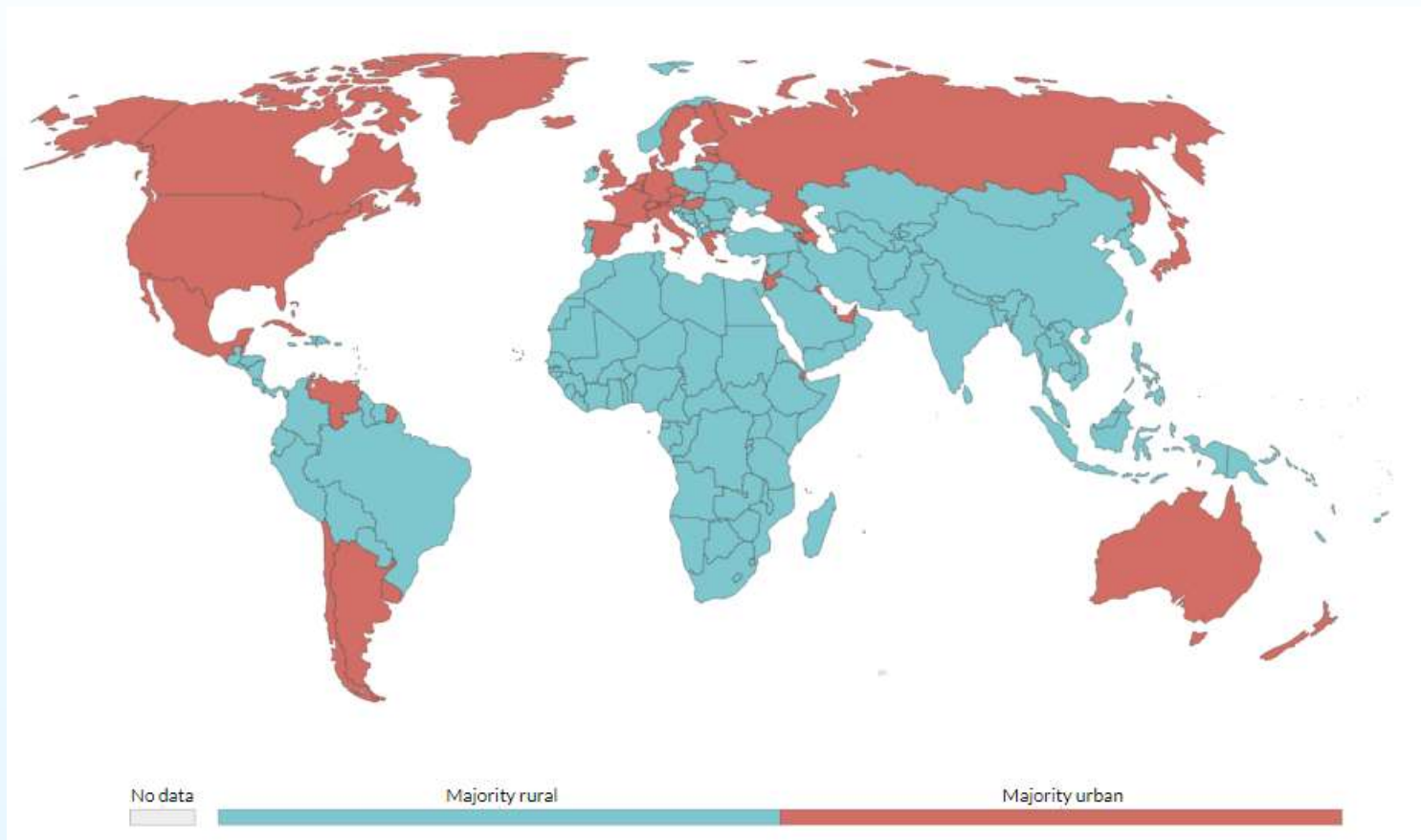
1950





Rapid Urbanization

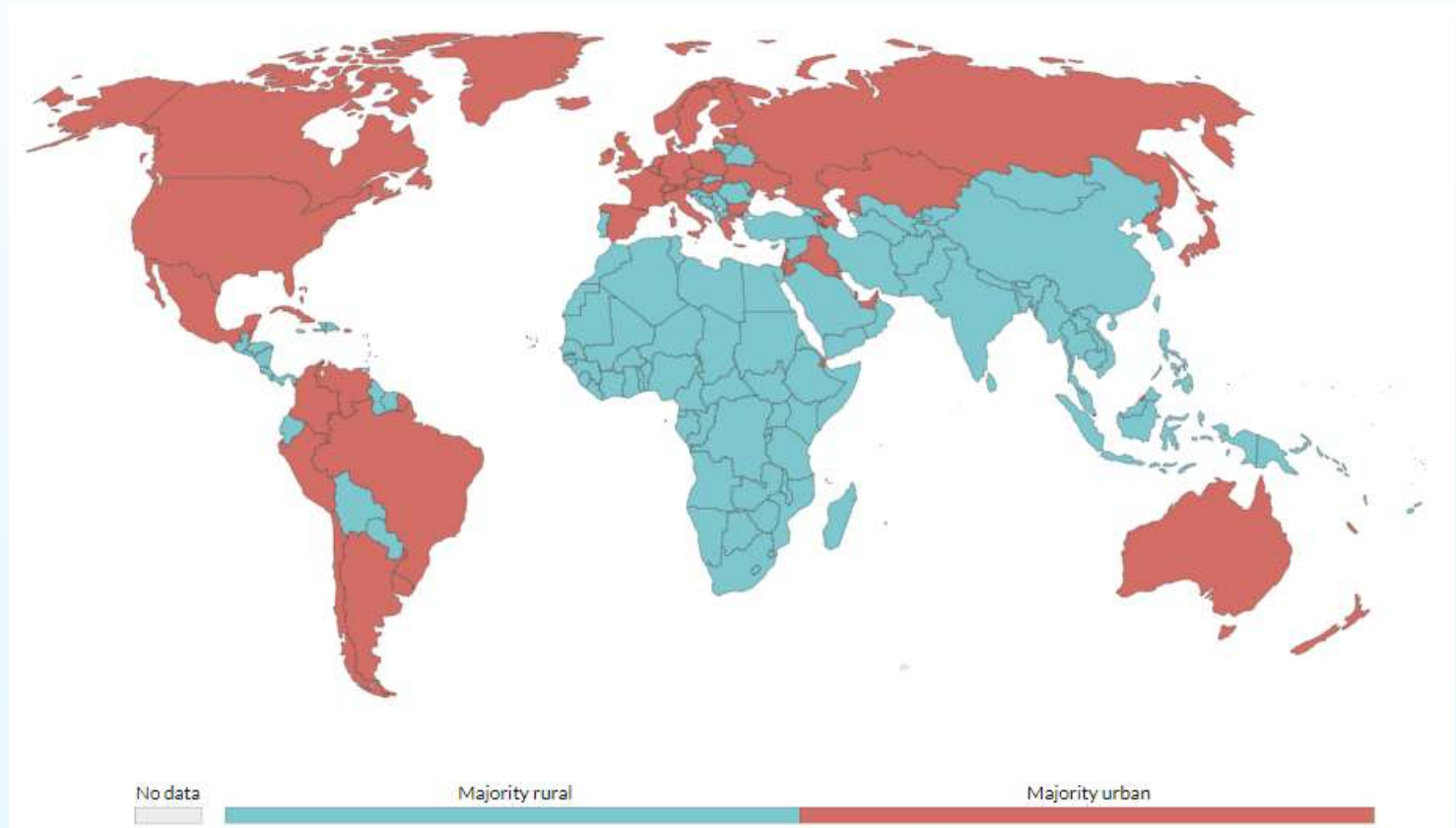
1960





Rapid Urbanization

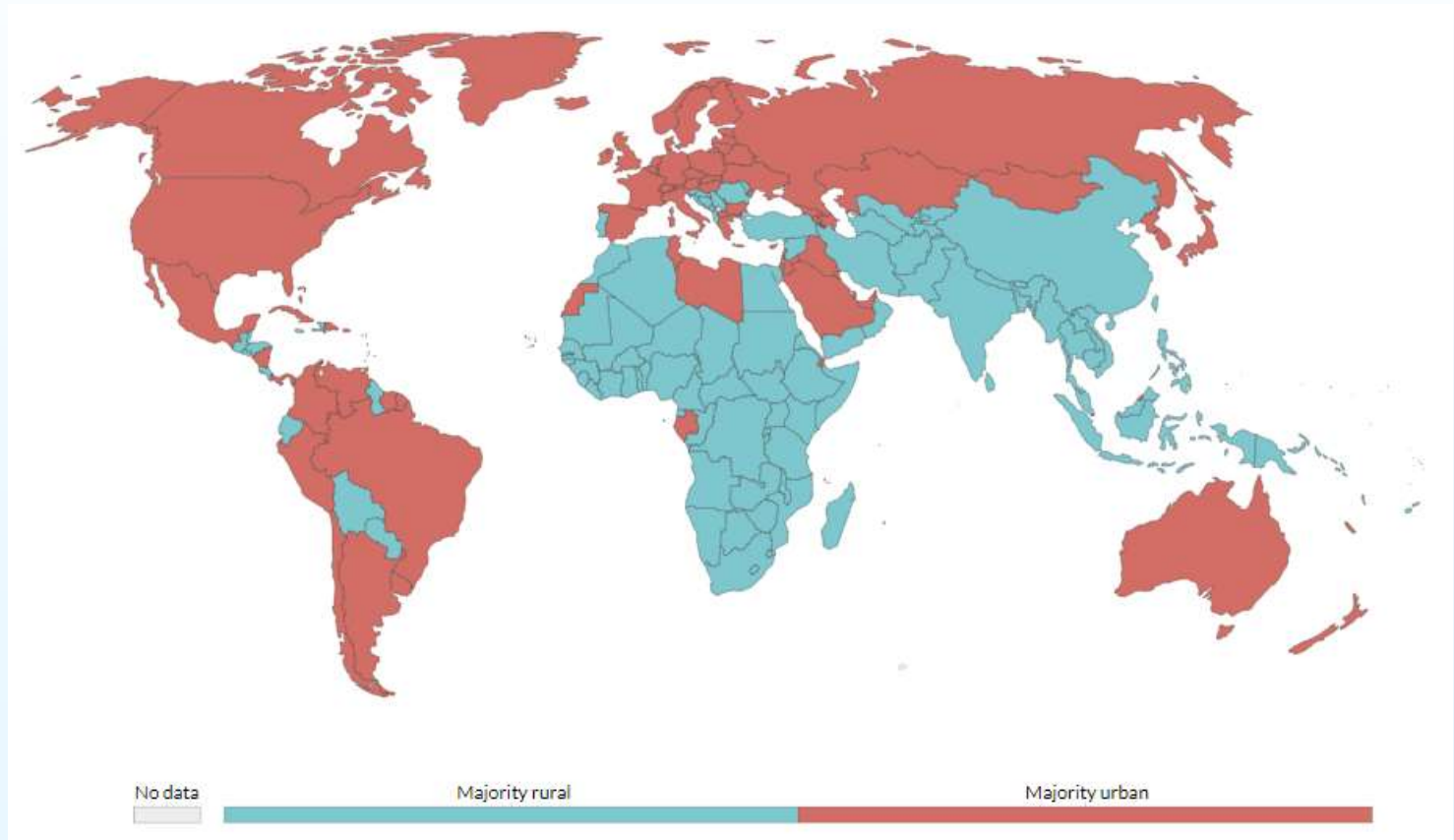
1970





Rapid Urbanization

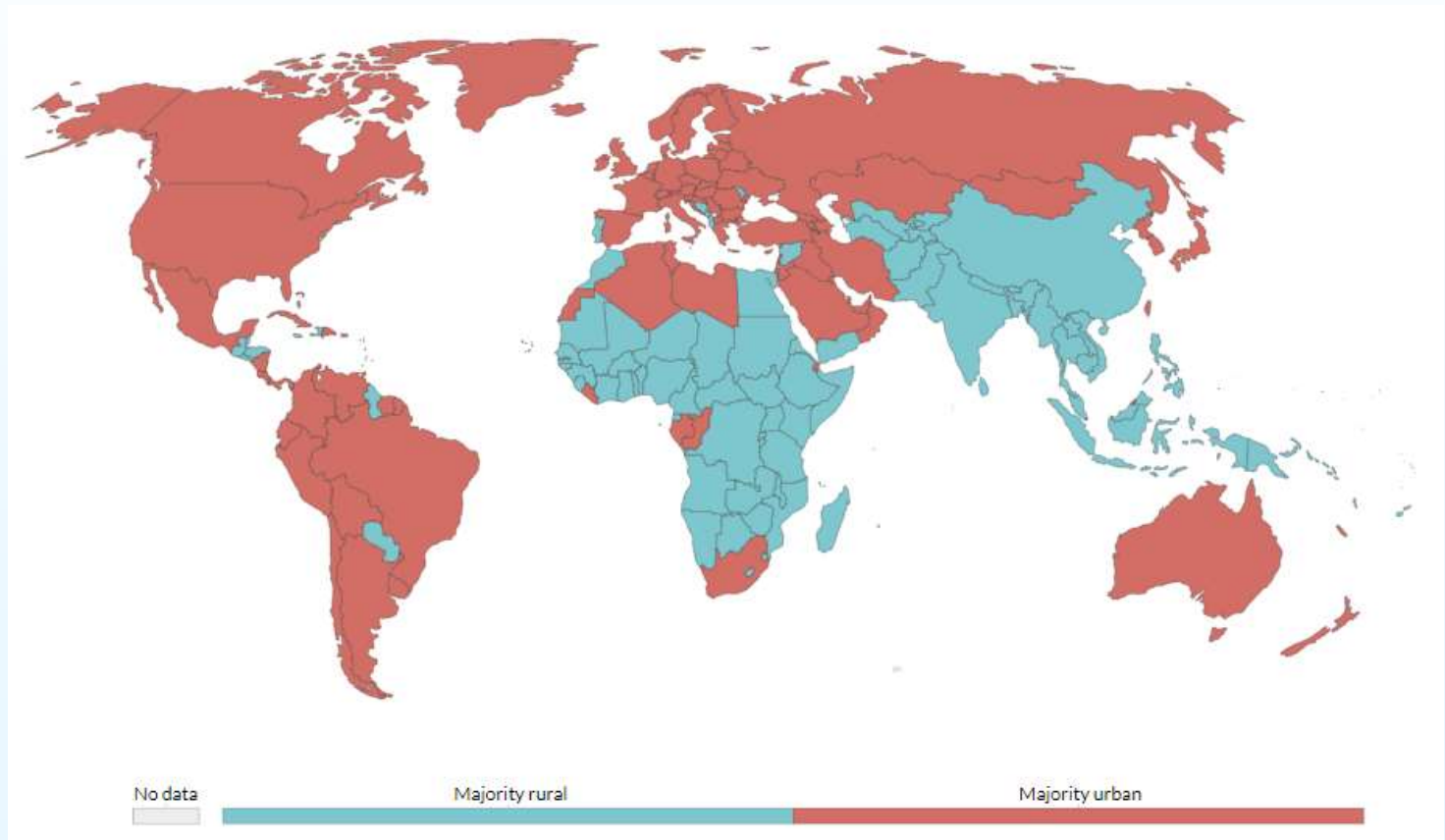
1980





Rapid Urbanization

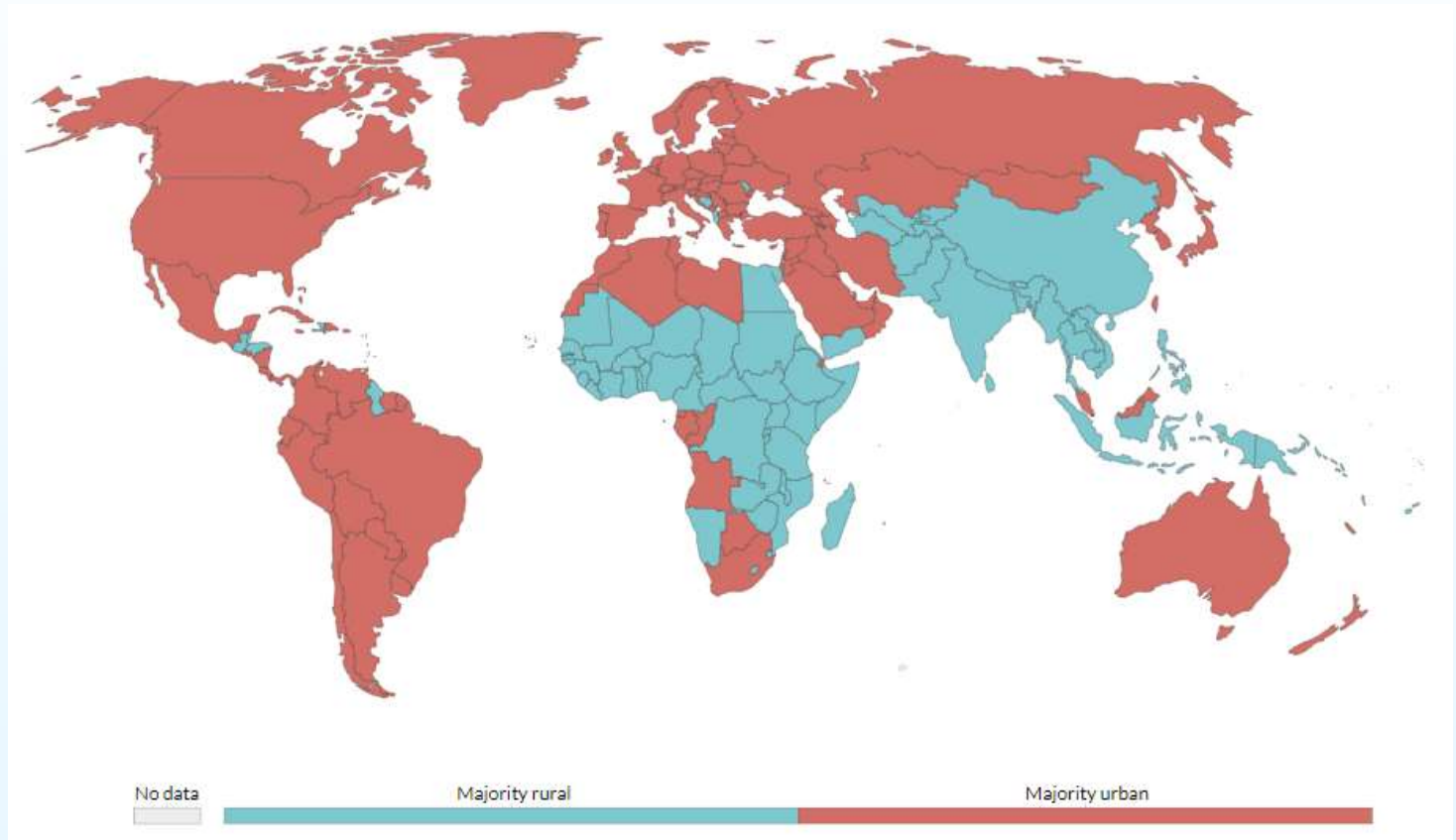
1990





Rapid Urbanization

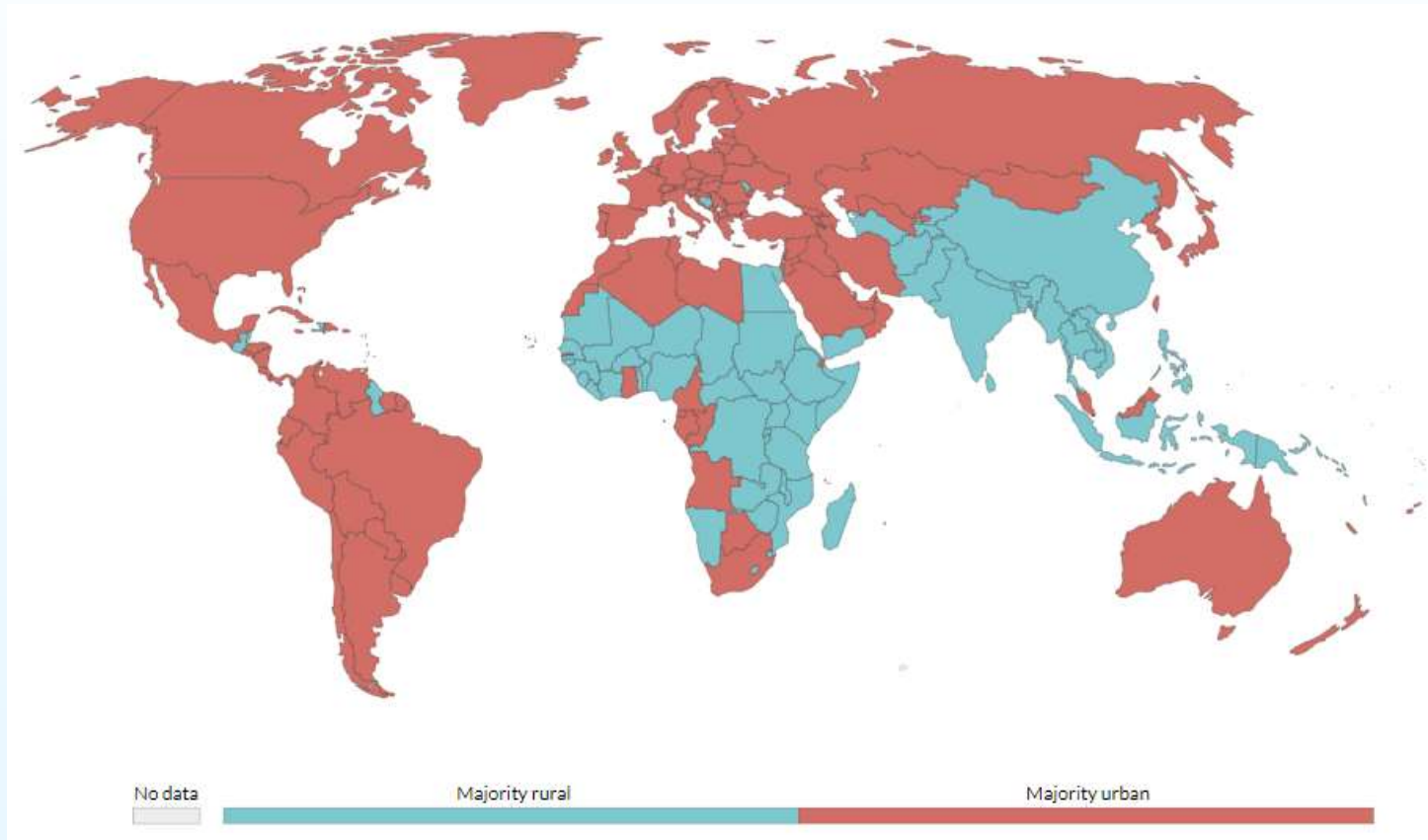
2000





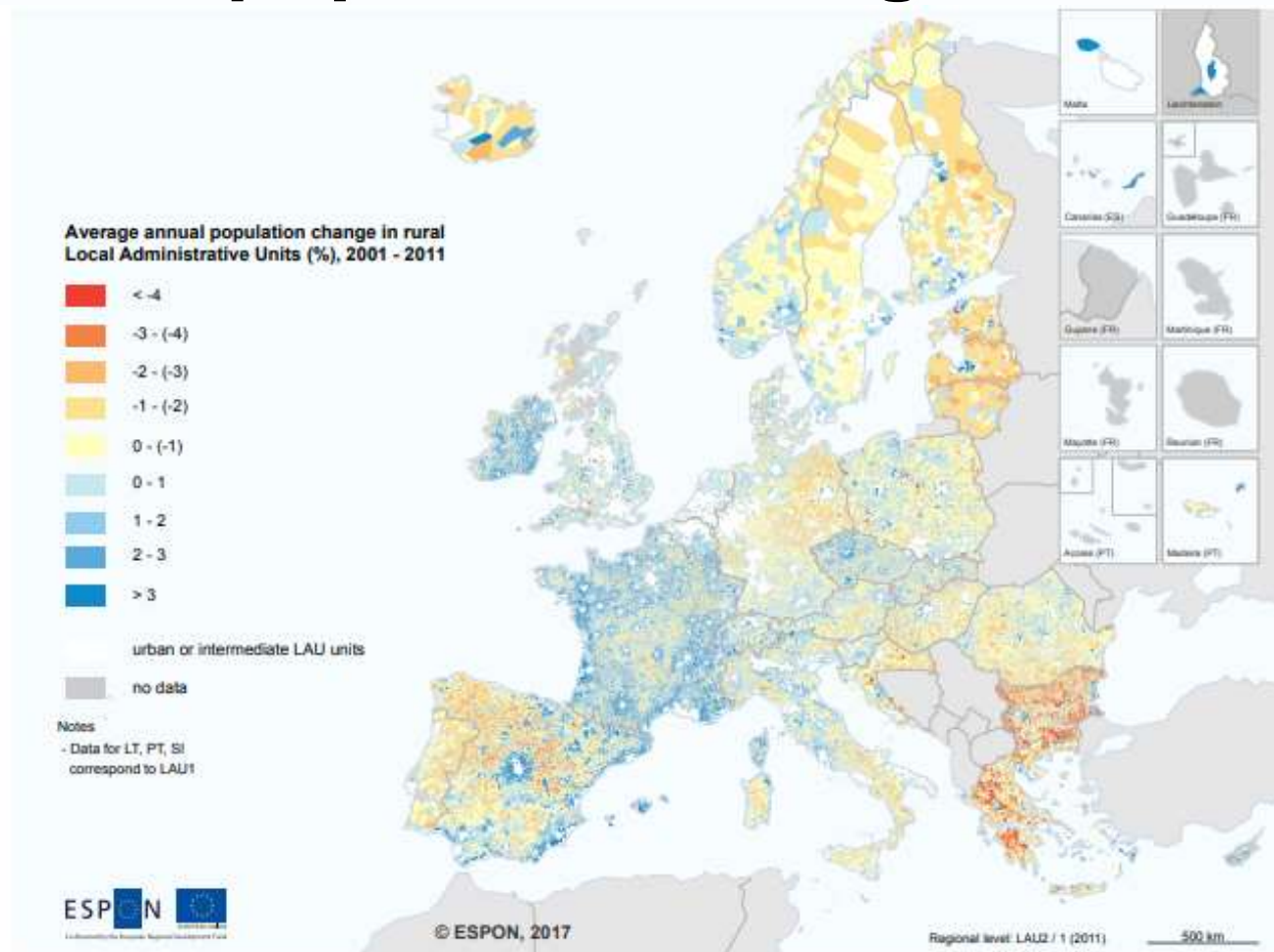
Rapid Urbanization

2010



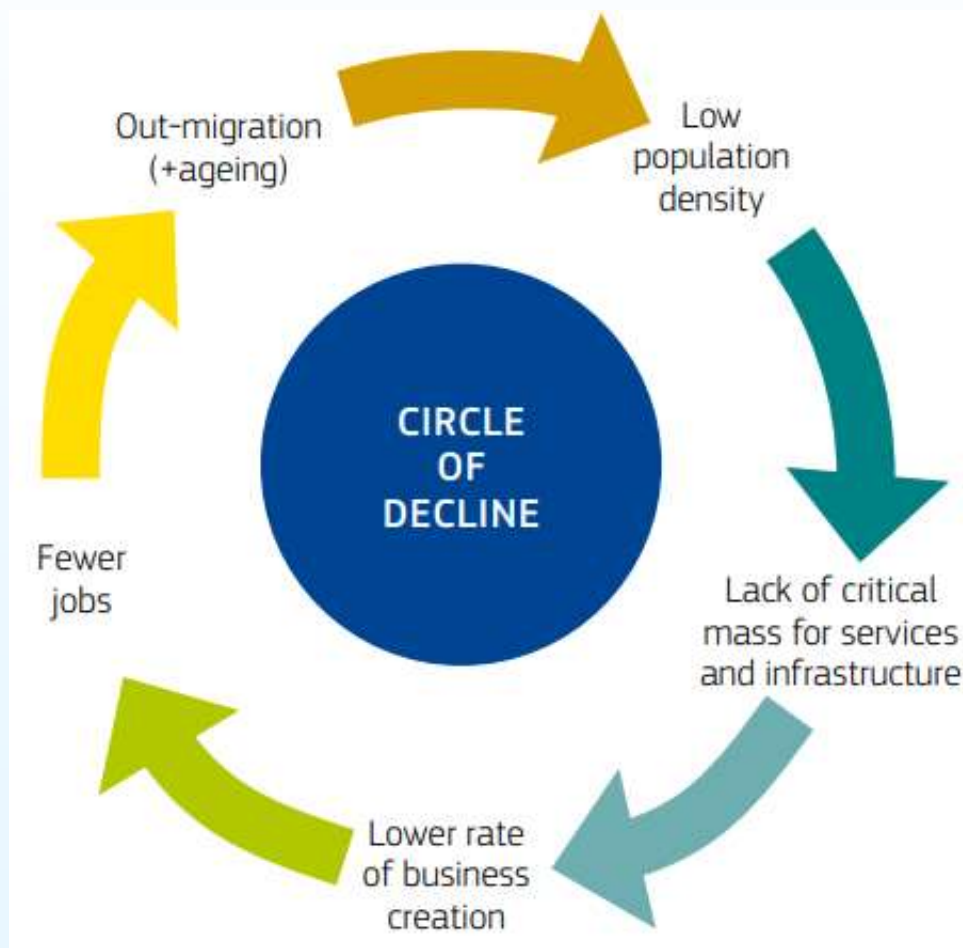


Rural population change in Europe





Push and Pull factors





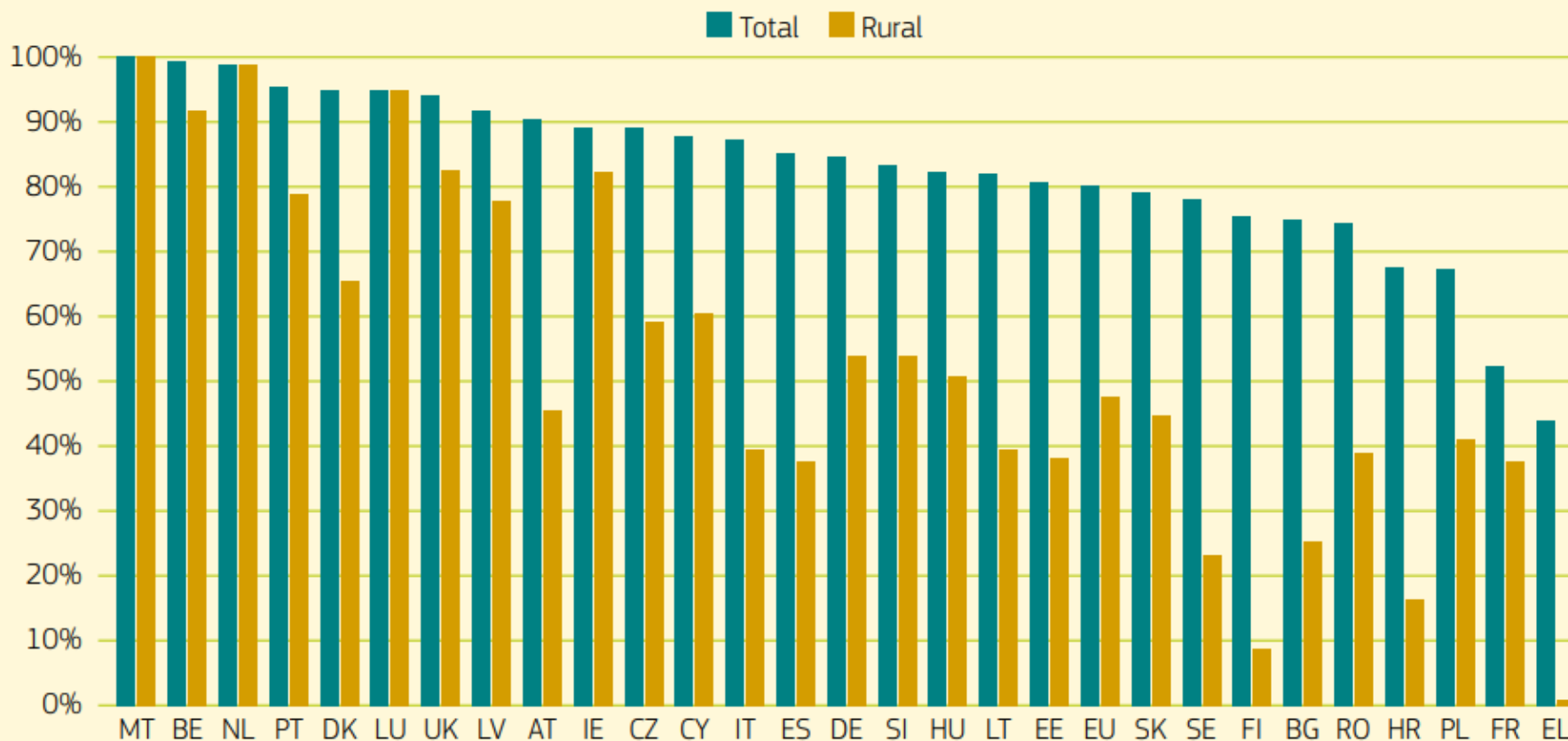
Need for SMART rural areas

- How to keep rural areas liveable?
- How to revitalize rural areas?
- What about development of population?
- What about abandoned land?
- Potential of digital services (ICT, sensors, communication) for rural areas

No Action will mean considerable impact for food security and other rural services



Figure 4. Next Generation Access coverage (percentage of households), 2017

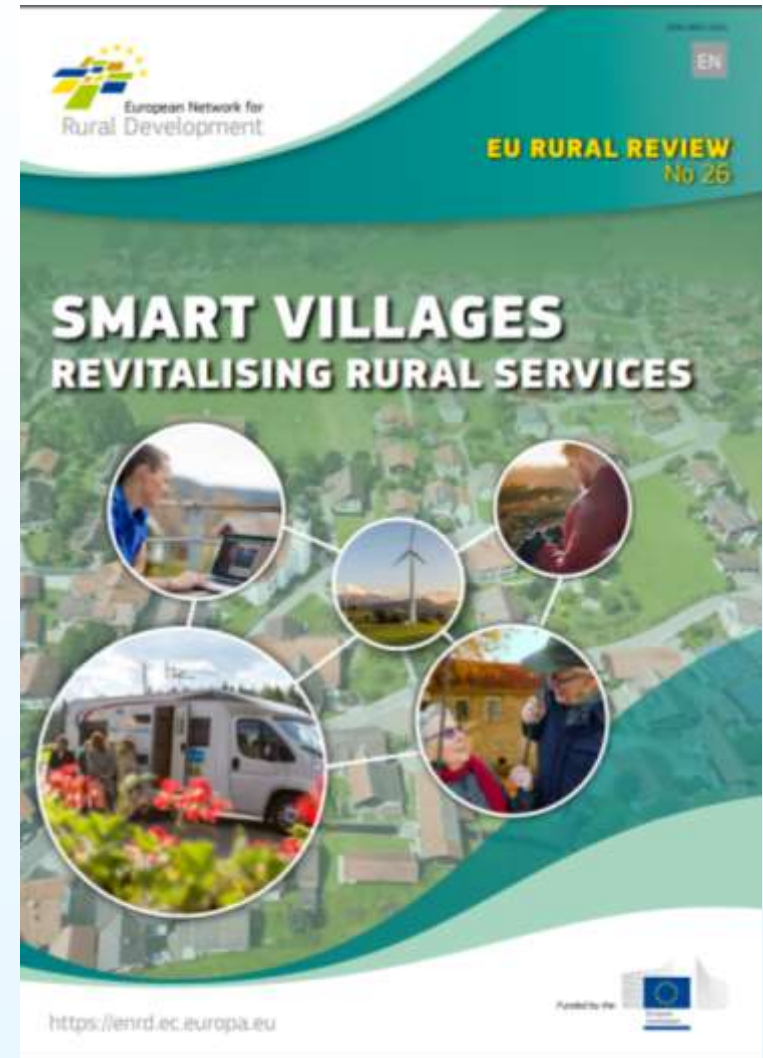


Source: IHS and Point Topic



EU Action

Smart villages are rural areas and communities which build on their existing strengths and assets as well as new opportunities to develop added value and where traditional and new networks are enhanced by means of digital communications technologies, innovations and the better use of knowledge for the benefit of inhabitants.



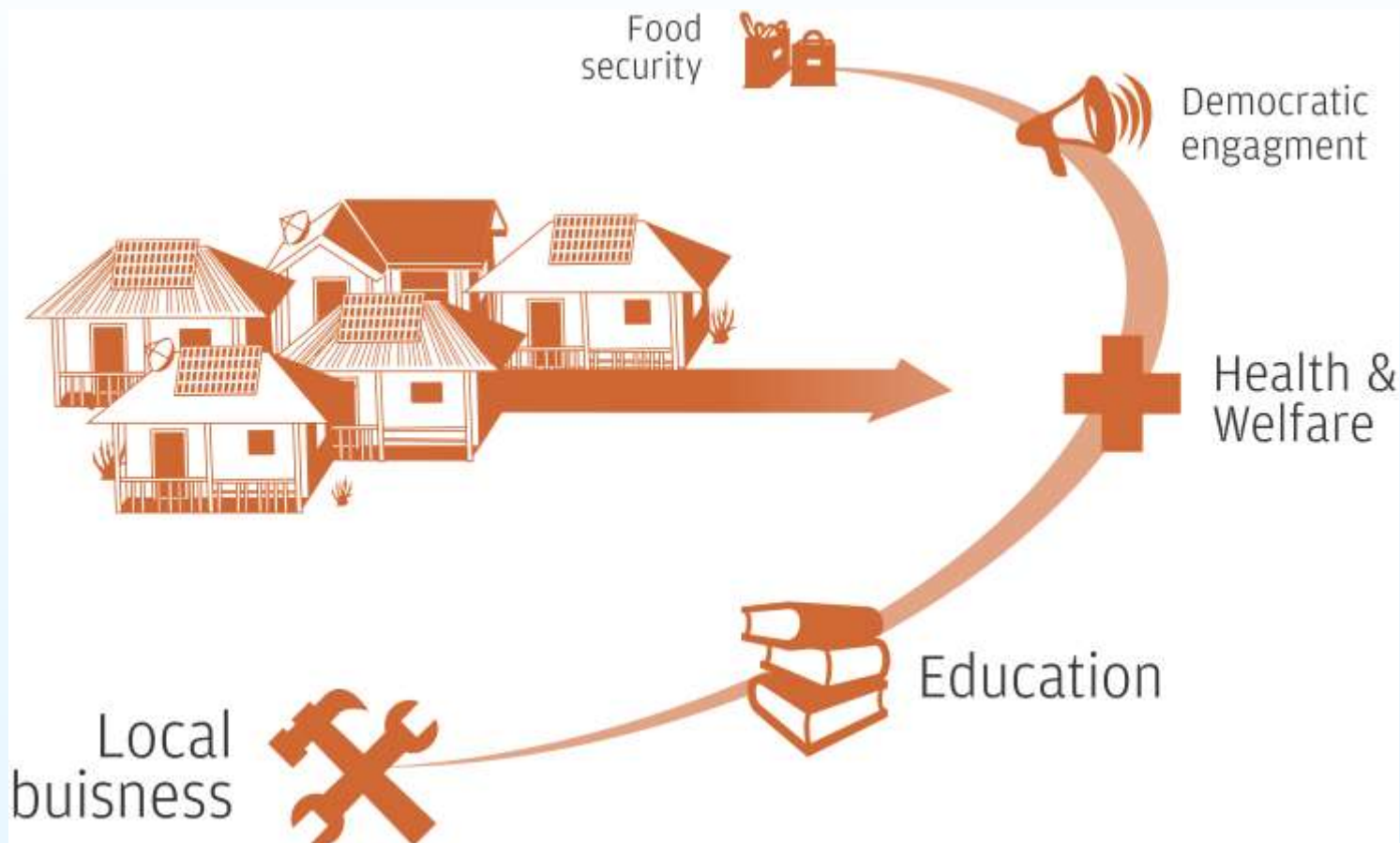


What does SMART mean?

- Digital transformation
- Think beyond the village – include surrounding countryside and links to cities
- Building new forms of cooperation
- No standard model or solution – think for yourself



The SMART Villages initiative





Directions for future rural development

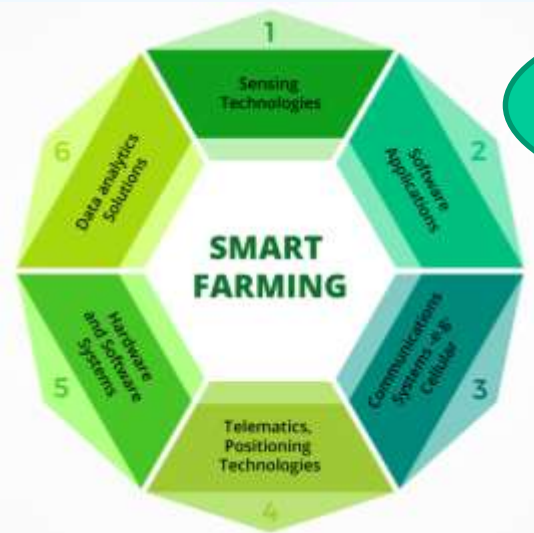
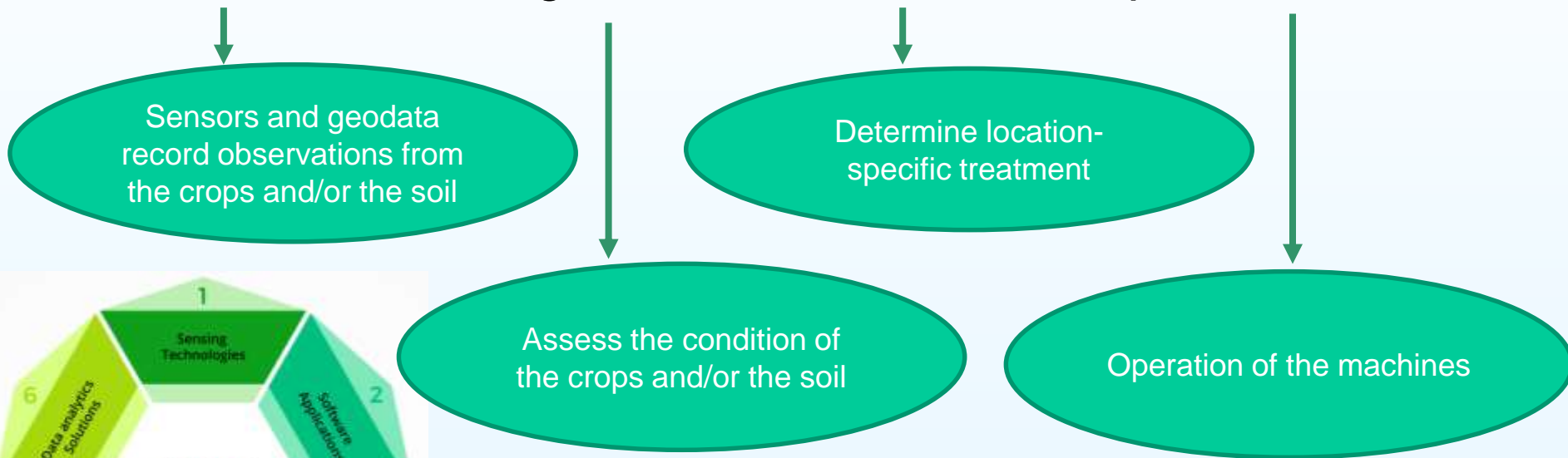
- Agriculture:
 - precision farming
 - utilize sensor data
 - local produce / markets
 - diversification
 - organic / circular
- Social:
 - engagement
 - public participation
- Digital:
 - distant working / tele-jobs
 - e-health services
 - online education





SMART farming

Observation - Diagnostics - Decisions – Implementation





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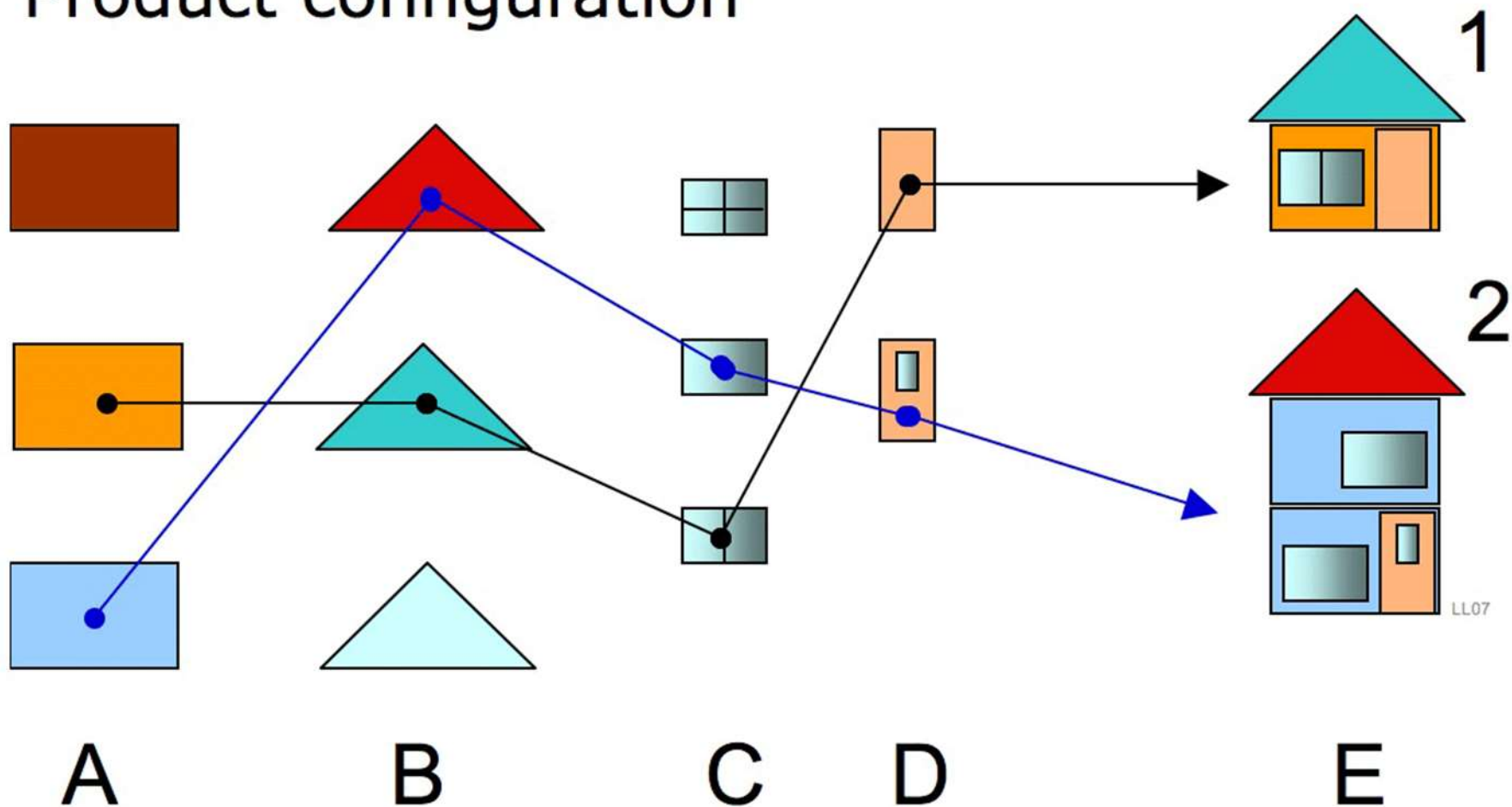


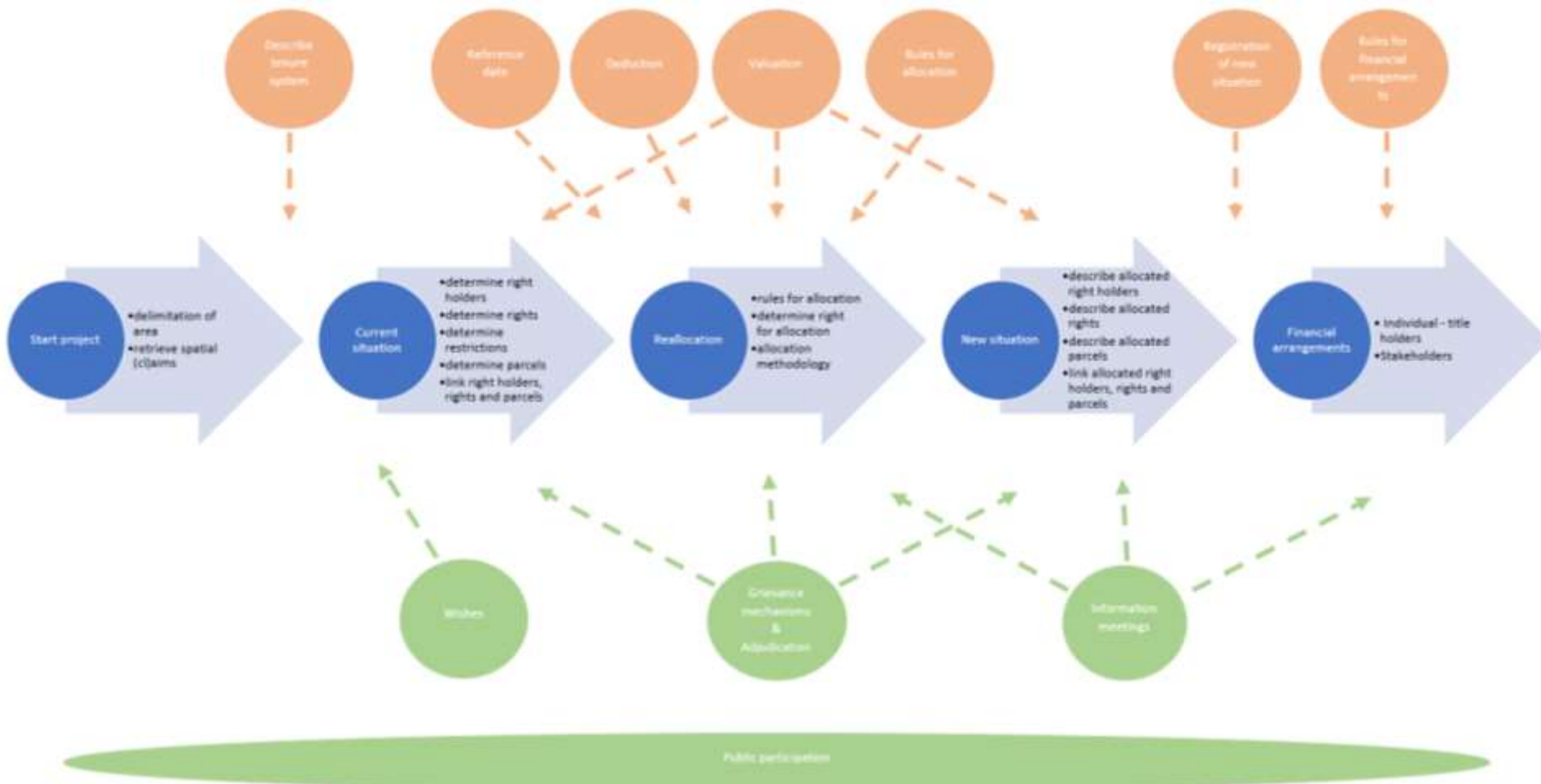
Our contribution to SMART rural development

- Generic tooling for land consolidation
- Tooling should be configurable to adjust to context (countries, regions etc.):
 - Tenure system
 - Land information system
 - SDI
 - Valuation method (mass appraisal or taxation)
 - Financial arrangements
- Support engagement and participatory planning



Product configuration

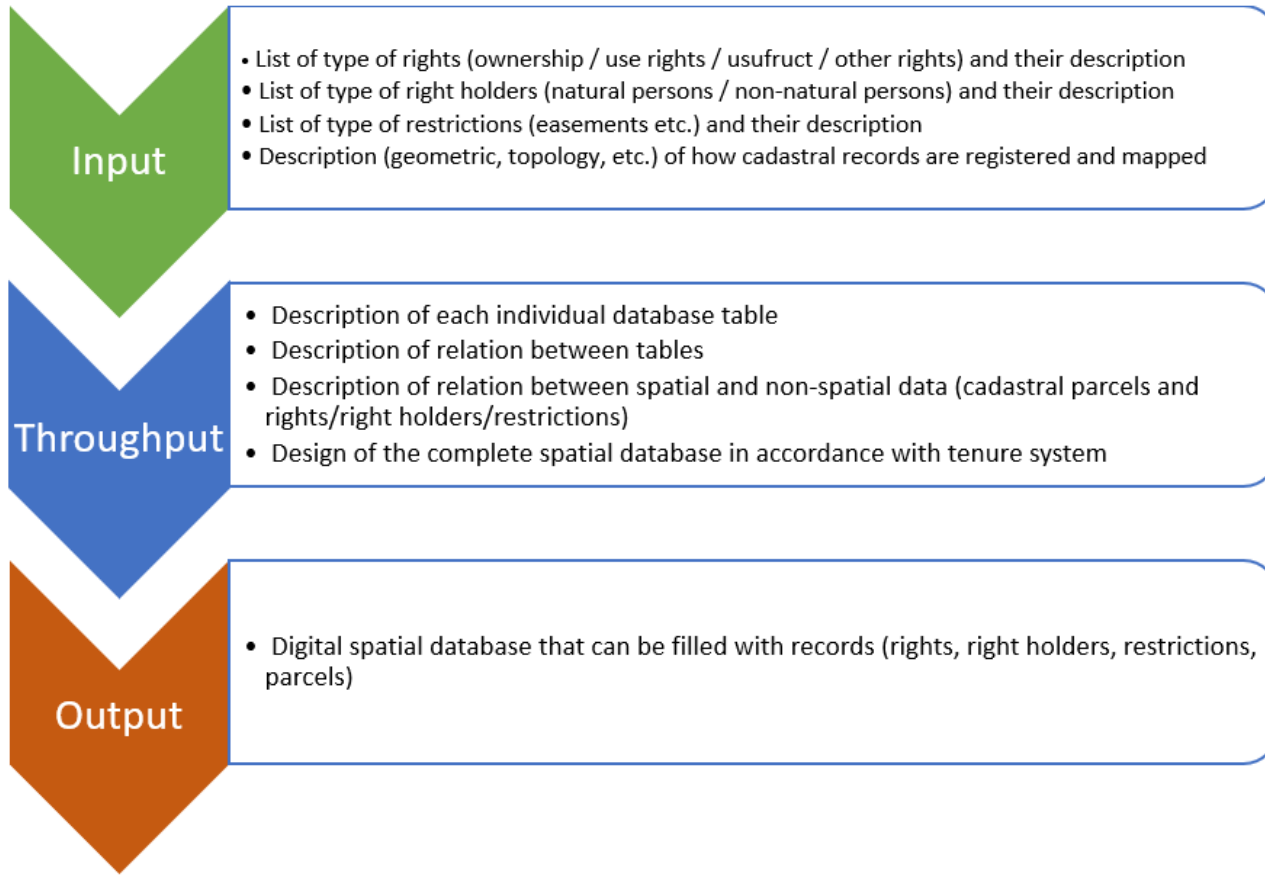






Input – throughput – output per module

Describe Tenure System





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