

Next Generation Spatial Data Infrastructure (SDI)

Nick Land (United Kingdom)

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SUMMARY

The concept of “spatial data infrastructure” (SDI) is well established embracing technology, standards, policies and institutional arrangements to facilitate the availability of and access to spatial data. Since the concept was defined, back in the early 1990’s, SDIs have gone through several iterations with an emphasis on metadata to aid data discovery, through ‘clearing houses’ and legally binding agreements, such as INSPIRE in Europe, and more recent work by UNGGIM to formalise the concept of ‘Integrated Geospatial Infrastructure Frameworks’ (IGIF) and support its implementation.

In this presentation the author will review those trends, the evolving emphasis on the use and re-use of spatial data to support better data driven policy, and how technology, including the emerging use of AI and digital twins, is helping build collaborative platforms – a “system of systems” or "digital ecosystem" – to support bringing people together across different disciplines to help solve many of the economic, social and environmental challenges the world faces. This will be illustrated using case studies on the use of SDIs to support implementation of the SDGs, to address climate change and resiliency, and also to respond better to global threats such as pandemics.

The vision is that access to and use of spatial data within a Nation's SDI becomes frictionless, enabling it to be used productively across many disciplines and at all levels of governance from local to global.