An assessment of New Zealand’s spatial data ecosystem

Needs, barriers and initiatives among the spatial planning community

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Spatial data for urban decisions

- Increased use of decision-support tools in urban planning
- Challenge: availability of fit-for-purpose spatial data for evidence-based decisions

Needs, barriers and initiatives among the spatial planning community?
Methodology

Stakeholder-based assessment of the urban planning spatial data ecosystem

- Stakeholder identification & mapping
- Interviews: challenges and needs among the community
- Multi-level perspective (Geels 2002): transition of the ecosystem
Stakeholder mapping along the spatial data life-cycle

adapted from Singh (2009)
Stakeholders’ spatial data needs

Aligning stakeholder needs

• urban infrastructure: advanced **attribute information**
• address data: high internal and **external quality**
• demographic attributes: **spatially varying**
• localized amenities: **(re)usable & consistent**
• building and property: attributes **in bulk**
• land information: **spatial relationships**
• Natural hazards: **small-scale & consistent**
Towards an optimized spatial data ecosystem

- **Frictionless** data life-cycle
- Fundamental principles following the EU INSPIRE Directive
- **Adaptive, scalable, sustainable** socio-technical system with potential for
  - self-organisation
  - **flexibility**
  - cooperation
  - transparency
  - recognition of user needs
  - feedback mechanisms

**Benefits to stakeholders**
- cost reductions
- value creation
- greater potential for innovation
- evidence-based decision-making
- tailored outcomes

The multi-level perspective of New Zealand's spatial data ecosystem

increasing structuring of activities in local practices

landscape

socio-technical regime

niche-level

current state

barriers / needs

optimized ecosystem

time

SCIRT  SGP  BRUCE
Multi-level perspective of New Zealand's spatial data ecosystem

Towards a transition

- System-wide perspective
- Awareness, capability, understanding, trust
- Catalyst technologies through **niche-level developments**
- Focus shift from technology to **cultural** and **governance** local practices:
  - **Joint coordinated mechanism** at the landscape and niche level
  - Well-networked community; stakeholder **communication**
Thank you for your attention!

We are thankful for the valuable support of our interview partners

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