Beyond SDI networks are SDI chains

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Many governments have launched Spatial Data Infrastructure (SDI) initiatives at local, national and international levels (Crompvoets et al., 2004; Rajabifard et al., 2006). The development of SDIs was triggered by the growing need for a more integrated approach to tackle the major economic, social and environmental issues of our times (Rajabifard et al., 2003). The performance of an SDI typically depends on the level to which the various SDI components and initiatives are successfully adopted by many different organisations, and implemented in their daily activities. It should however be noted that SDI development as such is not part of the core business of most of these organisations.

Organisations are traditionally aimed at the realisation of their core objectives. Many societal issues however call for an integrated approach. Such an integrated approach can only be reached by in-depth cooperation between multiple organisations (Goedee and Entken, 2008). This paper argues that the underlying challenge of adopting inter-organisationally proposed objectives in the context of processes that encompass many different organisations, is not unique to the SDI domain. This challenge can be noticed in various other situations in which (parts of) organisations together engage in an endeavour, which may not be directly supportive for their own core objectives. The paper provides following examples: environmental policy, integral water policy, health care, food safety, and the combatting of tax fraud.

De Vries (2009) reported that INSPIRE is adopted with varying success in processes within and between organisations. Based on recent literature on inter-organisational relations and chain management (Goedee and Entken, 2008; Cropper et al., 2010), the paper introduces the concept of an SDI chain to refer to an inter-organisational process in which SDI adoption is wanted. Based on case study data (Dessers et al., 2012), the paper argues that it may be advisable that further SDI initiatives should go beyond the development of SDI networks, and focus more on specific chains within this network, in order to implement the SDI in accordance with the needs and objectives of the various stakeholders involved. The paper suggests that it has yet become unavoidable to manage and (re)design inter-organisational chains in order to further advance the role of SDI as an enabling platform.

The main conclusion of the research (Dessers, 2012) is that, in order to reach a successful adoption of SDI objectives in the context of inter-organisational SDI chains, the focus must best be placed on the architecture of the inter-organisational chain and its intra-organisational links. Efforts to shorten inter-organisational SDI chains, and to base the task division between the organisations involved on the definition of coherent and loosely coupled work packages, supplemented with a suitable form of chain management, might offer opportunities for improved SDI adoption. The most striking result however is that the functioning of inter-organisational SDI chains may benefit from less fragmentation of the intra-organisational processes. In other words, the functioning of the inter-organisational SDI chain, and more specifically the coordination
and mutual alignment between the organisations involved, might be hindered by intra-organisational fragmentation. SDI adoption in inter-organisational chains seems to require organisations in which the units that are involved in the inter-organisational chain dispose of substantial control of their link in the chain, which is needed to successfully participate in the chain. This remark might be especially relevant for longer, sequentially organised SDI chains, where the strength of the chain might literally be in the weakest link.

Furthermore, the findings seem to suggest that in order to reach SDI adoption within an inter-organisational chain, some form of organisational hub (such as a spatial data coordinator) might be required in order to guarantee SDI-related inter-organisational coordination and alignment, and to provide basic SDI-related support to the intra-organisational processes.

The results of the study could be particularly relevant for the further implementation of INSPIRE, since the eventual success of this implementation may largely depend on the uptake of the INSPIRE-related regulations and initiatives in the daily work and cooperation of many individual organisations.

Reference List


