

SDI-development and the Slowness of Organisational Change

A Modern Sociotechnical Systems Approach

Ezra Dessers and Geert Van Hootegem¹
¹K.U.Leuven, Centrum voor Sociologie (CeSO)

Abstract

At this moment most GI and SDI researchers widely agree that the organisational aspects are of fundamental importance to setup a successful SDI. On the one side, SDI-initiatives are often confronted with non-optimal and divergent GIS-implementations within the organisations that are considered to be a constituent part of the SDI. On the other side, the design and implementation of the SDI itself presents us with new and challenging organisational problems.

So far, mostly GI experts have explored the organisational field. They sometimes simply stress the fact that organisational change is needed to make the SDI work. Or they point at particular organisational aspects, like human resource management, or quality of leadership. From a sociologist point of view, these approaches tend to focus primarily on the organisational 'software'. They don't take into account the underlying and determining organisational 'hardware', and the related slowness of organisational change.

The organisational hardware is largely defined by the division of labour within and between organisations. Imagine you're having a party at your home, and a few guests volunteer to do the dishes. You'll see a division of labour emerge: one will probably wash, the other will dry, a third may put everything back in the kitchen cabinets. This is a functional division of labour: every person performed a separate task. This is probably the best solution here, because the tasks are simple and stable.

But it is quite conceivable that another division of labour could be more appropriate, for example when more flexibility is needed. Suppose that different types of kitchenware need to be handled in a specific way, let's say: delicate champagne flutes, dishes with leftovers, and greasy pots and pans. In that case it might be a better idea that each volunteer will wash, dry and put away one type of kitchenware. The functional division of labour is then replaced by a process-oriented one. In other words: there is no one best way of organizing, it all depends on the type of the processes and the environmental demands.

Let's leave the kitchen now, and come back to SDI. Based on earlier research (outside the SDI-domain), we expect that certain types of division of labour have a higher capacity for the adoption of SDI than others. More specific, we suppose that traditional, bureaucratic and functional divided organisational forms will have trouble handling SDI-related demands for flexibility and innovation. Modern, process-oriented, network-based organisational forms are expected to perform better.

In the context of SDI development, new organisational units and collaboration networks are being constructed. They could be designed and implemented immediately according to more innovative organisational principles. But successful SDI development requires also the participation and integration of many existing organisations and interorganisational structures. Sometimes this will not pose many problems, when the existing division of labour allows the innovation capacity and flexibility needed to adopt the SDI, and benefit from it. In reality, we notice that many organisations and cooperation forms do have problems with SDI adoption. We expect that in those cases structural changes on the level of the division of labour are needed, to make SDI adoption possible and fruitful.

However, research shows that organisations are relatively stable. Most organisations aren't involved in fundamental change processes. SDI initiators should be aware of this organisational slowness, and take this into account when developing their strategies.