Lianne Bodenstaff, Roberto Santana Tapia

Information systems, in an ideal situation, support the business goals of an organization in the best possible way. But how 'mature' are the relevant processes, and how does an organization perform in a larger network? Lianne Bodenstaff, Roberto Santana Tapia and Novica Zarvic look at the matter from the different perspectives of IT and economics.

Overcoming the growing pains of information systems

An insurance company wants to introduce new products. They calculate all the risks and benefits involved, prepare their marketers and their call center staff, and everybody is ready. And then, suddenly, the current IT landscape appears incapable of handling the flexibility needed. Or, a company's development team is working on a new version of support software that only runs on a system now being phased out by the organization. These examples demonstrate that business-IT alignment can be hard enough even for one single company. For a networked organization it will be a completely different matter. In two projects, the VITAL project and the COOP project, the three roommates in the Information Systems group are working on ways of aligning these networks of e-businesses. VITAL stands for Value-based IT Alignment, COOP is 'Coordination Process Correctness and Trust Assumptions'.

"In this respect our research is different from existing approaches that examine single companies", Novica Zarvic explains. "What's also different is that we focus on the value exchanges between the participating companies. If someone is downloading an MP3 file from the internet, he or she will probably pay for it by credit card. The MP3 provider, in turn, acquires the rights from the artist, and pays for them. Is this chain, as a whole, economically profitable for every participant: that's the question. Once you know all the value objects that are exchanged between the companies in the network, what can you say about the functional and qualitative requirements to be placed on the supporting information systems. The business perspective is dominant in my work, although I also look at the technology."

Roberto Santana Tapia's task is to scrutinize the relevant processes involved in the network organization. "For quite a few years, special models have been available for describing the level of sophistication of activities. These 'maturity models' help organizations to assess a specific area or process against a norm. A typical existing model may describe five levels of software process management sophistication. But looking at alignment, all the models lack a networked business viewpoint. In a networked business, different decisions are often taken at different times and by different individuals and groups. Achieving business-IT alignment in a single business may be complex enough, but alignment in a networked business acquires another level of confusion by being driven by economic processes as opposed to neat and tidy centralized decision making. My goal is to develop new maturity models for these settings, and I'm currently using focus groups to help decide which processes are crucial in this. We have already narrowed this down to four major processes."

"I would like to know if the collaborative processes in the networked business give rise to problems or inconsistencies", Lianne Bodenstaff adds. "At present, I'm working on a tool that rapidly provides insight at runtime into performance. Colored indicators allow you to see at a glance which exchanges were less than satisfactory and which parts performed better. From the event logs I abstract the data I need to check my value model and my coordination model. Suppose organization A wants to receive payment before delivering goods, while organization B is happy to deliver before being paid: will the order of events be handled correctly when both organizations are part of the same network?

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The inconsistencies can relate to technical problems and bad design, but could also result from organizational problems, and even from unpredictable consumer behavior. When a business partner never delivers on time, there may well be repercussions on the chain as a whole. Using my methods, you will be able to gain an insight into all the dependencies: where did an exchange go wrong?"

"Managers don't want to know all the technical details when something doesn't work as it should", Novica explains the business point of view. "The same holds for investments in new IT infrastructure: they don't want to know all the pros and cons, just whether the investment meets the organization's needs, which might be a high level of flexibility. That's why we opt for the value-based approach."