Telling an Innovation Story

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In this conference, we come together to examine the diffusion of software innovations. We consider both software products and processes. For many years, I have had a particular interest in business application software and its design, implementation, use, and maintenance. Most recently, my research has focused on this software in an innovation context. Specifically, I have become interested in software associated with certain grand ideas for innovation, termed "organizing visions," defined as focal community ideas for the application of IT in organizations (Swanson and Ramiller, 1997). Examples of organizing visions would include data warehousing and mining, enterprise resource planning (ERP), and customer relationship management (CRM). I have become curious about the "innovation stories" associated with these visions, and, in particular, about how the innovation arises and takes a certain "career path" in which it achieves ascendancy for a time, but then eventually fades away, often displaced in the community's attention by still another vision. I believe that if we are to understand these innovations, we must tell the stories of their often inter-twined careers.

While the career of an organizing vision, and the diffusion of the software associated with it, thus takes place at the level of the inter-organizational field, the innovation story can also be told for the individual organization. These individual stories can then be assembled within the broader picture. In the following brief remarks, I suggest how such an individual story might be told.

As I shall describe it, in the context of organizing visions, an organization's own innovation story has four parts. It begins with the organization's *comprehension* of the innovation. It continues in the next part with the innovation's *adoption*. In the third part, it tells of its

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implementation. It concludes by speaking to the innovation's *assimilation.* As the story unfolds, it focuses on several questions: What? Why? When? How? Who? I will explain briefly. Table 1 summarizes.

Table 1. Innovation Story Summary

	What?	Why?	When?	How?	Who?
Comprehension	X	X			
Adoption		X	X		
Implementation			X	X	
Assimilation				X	X

An organization innovates when it adopts and implements an idea, practice, or object that is perceived as new to it (Rogers, 1983. p. 11). What is interesting here is that only a small fraction of organizations are the "true innovators" in the sense that they are among the first to undertake an innovation. The rest follow in their footsteps. Once an innovation thus comes to the early attention of a community, each subsequent prospective adopter faces first and foremost its comprehension. *What* is ERP all about, for instance, and *why* should firms undertake it? Here the organizing vision for the innovation is engaged as it is being constructed and propagated in the wider inter-organizational community (Swanson and Ramiller, 1997). Indeed, the original vision for ERP was put forth by the Gartner Group in 1990 (Wylie, 1990). It was subsequently stretched and refined and elaborated upon by many interested parties over a decade.

From its comprehension of the innovation, the organization may consider whether and when to adopt it. Once again, it asks why, but now the question is made specific to the firm's own situation and opportunity for action. *Why* or not should our firm undertake ERP, for instance, and if it should, *when* is the right time to do it? Here the risks and possible rewards of undertaking the innovation are assessed. The business case for adoption is assembled. Organizational readiness is further determined. If the firm moves early, might it obtain a competitive advantage? If it moves later, with the majority, might it be more likely to be successful? If it holds out past this period, might the firm fall too far behind and face competitive failure? The stakes may be high. Where the firm thus commits to ERP, for instance, it may budget tens of millions of dollars toward acquiring the software and needed expertise.

Should the organization decide in favor of the innovation and commit monetary and human resources to it, its next task is implementation. Again, it asks the "when" question, but now typically focuses on a project schedule. It also addresses how implementation is to be accomplished. *When* shall we have our ERP up and running, for instance, and *how* shall we make it happen? For instance, shall we take a "big bang" approach and implement

the full ERP system at all locations, or shall we take some phased approach (Brown and Vessey, 2000)? Do we have the right "know-how" in our project team to make our ERP implementation successful (Swanson, 2000)? Again, the stakes may be very high. A significant number of ERP implementation projects have run aground, and a few firms may have failed altogether as a consequence (Davenport, 1998).

Finally, once the organization has implemented its innovation, in the sense of making it operational, it is by no means done with it. Now, the innovation must be taken up and absorbed over time by those people intended to work with and benefit from it. Its users must take true ownership of it. Again, the organization may ask how this is to be accomplished. It may further ask "who" the organization might then be in the sense of being transformed by the innovation. *How* can we improve the use of our ERP such that we benefit best from it, for instance, and *who* will we then be, among our industry's global leaders? With ERP, we note that assimilation may not come easily at first, as organizational performance may dip upon installation, as users struggle with the new system (Ross, 1998). Even when users become acclimated to ERP, they may be slow to see its potential and use it to best advantage. Achieving expected ERP benefits can thus be problematic (Davenport, 1998; Willcocks and Sykes, 2000). Some benefits may be much more likely to be achieved than may be others (Swanson, 2000).

In summary, in telling an innovation story such as that for ERP, we must be cognizant of its multiple parts, both at the firm level and at the broader institutional level. Historically, diffusion-oriented researchers have focused primarily on the story's adoption chapter. Information systems researchers have also over many years also examined aspects of the implementation chapter. Relatively little research in any depth has been done on the concluding assimilation chapter. Here, studies of user satisfaction with systems, for instance, may touch upon assimilation, but they do little to reveal its important elements. Zuboff's (1984) classic study of the transformation of production work may provide a better example of the type of research needed here. Finally, almost no research has been conducted on the problem of comprehension, which forms the essential first chapter of the innovation story. Our own research on this subject barely scratches the surface (see, e.g., Ramiller and Swanson, 2000). Where organizing visions are concerned, much thus remains to be illuminated.

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