

A time of dramatic change requires learning by doing

What is the role of IT in modern financial services?

Prof. King: IT is a part of our knowledge infrastructure, and plays a vital role in human enterprise. The knowledge infrastructure in schools, universities, libraries and so on is “epistemic infrastructure.” It carries explicit knowledge stored as text, algorithms, and data, and has been important to financial services since record-keeping practices first evolved more than 5,000 years ago. It remains important today in sophisticated credit analysis and risk management models. Another kind of infrastructure is less visible, embedded in social conventions of practice. This “practice infrastructure” contains “tacit” knowledge that is hard to see or describe. Financial services are very dependent on practice infrastructure, and much of our knowledge of how to provide those services is hidden in routine practice. To understand the role of IT in the future of financial services, we must examine both the role of IT in established practice infrastructure, and the essential functions of financial services that will remain stable over time.

Can you give an example of what you mean?

Prof. King: Security is a basic function of financial institutions. Physical security for valuable physical assets is the reason banks have vaults. The world has been shifting away from physical assets toward representational assets. This started with fiat money, and has expanded into securities and other instruments that started on



*Prof. John Leslie King, Ph.D.
University of Michigan, Ann Arbor*

paper but have now moved into electronic records systems. The need for security remains an essential function of financial services, but the focus of security has changed from the physical to the virtual. Financial institutions also serve as intermediaries in payments, account maintenance and reconciliation, liquidity, risk management, and so on. These functions used to take place on paper, but today they take place as digital representations in online transactions and computer-based records systems. The functions are largely the same, but the ways in which those functions are accomplished are changing. Designing the future of financial services poses a dilemma. On one hand, we must separate the essential functions that do not change over time from the current practice infrastructure, in order to see where existing practice falls short.

At the same time, the existing practice infrastructure contains much of our tacit knowledge about the functions themselves. This is the heart of the problem facing financial service industries at this time.

What do you recommend for financial institutions in dealing with this problem?

Prof. King: If I had exact answers I would be very wealthy! My job as a researcher is to try to understand the relationship between the essential functions of financial services and the “art of the possible” created by new information technology. I get some insight from studying financial services directly, but I also learn a lot from studying other fields of work to get around the tacit knowledge problem. For example, I have learned a lot about financial service functions from studying the freight transportation sector. The insights from this research will be of use to the financial services sector, but they are not the “magic bullet” that everyone needs. This is a time of dramatic change at many levels, from the IT infrastructure to the national and international frameworks for managing financial services. To

use a famous quote, “all that is solid melts into air.” In situations like this, our best strategy is our oldest strategy: learning by doing. It is difficult and expensive, but it is proven.

Biography

John Leslie King stays at the J.W. Goethe University as visiting Fulbright distinguished Chair in American Studies for the summer term of 2005. He is a professor at and the dean of the School of Information at the University of Michigan in Ann Arbor. Previously, he was professor of information and computer science and management and a research scientist in the Center for Research on Information Technology and Organizations at the University of California, Irvine. King held a number of administrative and committee appointments at Irvine, including chair of the Department of Information and Computer Science. He conducted research on the development of high-level requirements for information systems design and implementation. Drawing on engineering and the social sciences, he studies the organizational and institutional forces that shape how information technology is developed.

