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Future Directions of IS Research in the Financial Institutions Domain

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RESEARCH PANEL

FUTURE DIRECTIONS OF INFORMATION SYSTEMS RESEARCH IN THE FINANCIAL INSTITUTIONS DOMAIN

Panellists:

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Robert Winter (Chair), Institute of Information Management, University of St. Gallen, Mueller-Friedberg-Str 8, CH-9000 St. Gallen, Switzerland, Robert.Winter@unisg.ch

Issues:

This panel is comprised of heads of large research units that specialize in information systems research in the financial institutions domain throughout Europe as well as of high ranking practitioners from the European Central Bank and Bank of America.

Researcher and practitioners will explain their positions on future directions of information systems research in the financial institutions domain. We expect to create value for ECIS participants by (1) providing insights from leading researchers as well as practitioners as well as by (2) discussing the future research agenda both from the academic and the practitioner perspective.

Presentations:

Rainer von Ammon will address emerging innovations in IT architecture and their potentials for financial institutions. The heterogeneous IT infrastructures are especially typical for financial institutions. Therefore the present main subjects are focused on new integration technologies for Enterprise Application Integration (EAI) like J2EE Connector Architecture and on leveraging the flexibility and promptness of implementing and adapting business processes. Some of the current most important topics concern Service Oriented Architectures (SOA), Business Process Management (BPM) and Business Activity Monitoring (BAM).

Mark M. Davydov utilizes an analysis of achievements and challenges of IT utilization in banks to address

- Wide-based development of systems focused on incorporating predictive technologies – e.g. predictive behaviour capturing, predictive analytics, customer data integration and integral business rule management.
- Business intelligence (BI) commodization and inter-enterprise BI integration.
- Strategic reuse of software assets within an enterprise and across the value chains.

- Reducing the volatility of software development expertise – wide-base adoption of generative programming practices, architecture frameworks, and intuitive learning/training tools and technologies.

From his analysis, he will identify three major immediate research goals:
- Software product line – oriented frameworks
- Service-oriented client-centred behaviour recording and the use of behaviour data for cooperative, process-integrated decision support
- Architectures for networked, client-centred inter-enterprise systems

Hans-Gert Penzel is especially interested in research fields that provide the CIO with tangible help for managing the information systems landscape with a mid (3 years) to long (up to 10 years) view in mind. For the coming years, he evaluates the following topics as being most important:
- Develop a better understanding of the impacts of IS architectures on the effectiveness and efficiency of IT, concentrating on quantitative (cost and benefit) impacts over time, including more empirical research.
- Elaborate on roll out plans for service oriented architectures - where to set priorities, where to strive for fast results, where to invest for longer term benefits.
- Get a better understanding of operational risk, which specifically should include quantification of risks, in order to find a balanced approach on where to invest and where not to invest in risk reduction or mitigation measures.
- Further developments of benchmarking approaches that allow for comparing performance between heterogeneous organisations (e.g. comparing performance in developing software - we have not proceeded too far beyond the function point approach).
- Further analyse outsourcing benefits and costs, where outsourcing is understood in a much more differentiated way (by situation of those institutions who want to source out, by type of company that provides services, by business criticality, by function within the business process, ...)
- Apply a more differentiated view towards IT governance, showing which approach (including policies, roles and responsibilities, processes) would be optimal in which situation.

Federico Rajola is convinced that the impact of innovation, integration and flexibility of IT on financial institutions will continuously increase. Some visible symptoms for that impact are organisational and managerial changes on IT governance and structure, competency shifts in IT management (from IT towards managerial competencies), project leadership by business units and process knowledge that is more and more owned by IT departments.
He thinks that the near future of IT in Finance will be driven by two main challenges: risk management and efficacy. The first one could be seen as an extension of the concept of IT security which relates more on infrastructures and architecture. The efficacy topic is going to be more and more studied due to the fact in the past most of projects have been carried out for reaching efficiency.

Robert Winter will introduce the panel and provide a framework for the contributions.
Regarding the panel theme, he will focus on architectural issues. Each organization is forced to permanently adapt its strategic positioning, organizational structures, business processes and information systems to changing market conditions. IT innovations enable business potentials that trigger additional transformation demands. But strategies, organizational structures / business processes and information systems

have different life cycles. Major organizational changes (and sometimes even strategy shifts) have to be implemented in two years or even less, but fundamental IS structures still date back to the 1970ies. In addition, 'buy before make' and 'best of breed' IT strategies increase the heterogeneity of architectures in financial institution. After a phase in that speed was considered more important than sustainability and consistency, architectural issues gained importance for financial institutions recently. The IS discipline is well suited

- to propose architecture visions on the organizational as well as the IS layer,
- to develop meta models and modelling techniques for enterprise architecture, and
- to develop methodologies for the management of architectures.

Since work systems are addressed and not only IT artefacts, communication and governance issues have to be addressed in addition to construction issues.

About the Panelists:

Rainer von Ammon is research director at ibi Research, a major research centre for finance and IT in Germany associated with the University of Regensburg.

Mark M. Davydov is an internationally known expert in advanced systems architecture and data management solutions. He has planned and implemented enterprise-wide systems architecture initiatives for over 30 Fortune 500 companies, for example, Royal Bank of Canada, Mastercard, and Southwestern Bell. Currently, Dr. Davydov is affiliated with several companies (e.g., Architected Futures, Inc.) working on domain architecture definitions, software architecture life cycle processes, and software reuse.

Hans-Gert Penzel is Deputy Director General DG IS of the European Central Bank in Frankfurt.

Federico Rajola is general director of CeTIF – research centre on IT finance – associated with the Catholic University of Milan. CeTIF is the largest research institution in Italy for the financial sector.

Robert Winter is director of IWI-HSG, the information management institute of the University of St. Gallen. IWI-HSG is the largest IS research unit in Switzerland and conducts several large research projects with financial institutions from Switzerland and Germany.