SCHOOL OF ECONOMICS AND MANAGEMENT

Department of Informatics

Research strategy for the Department of Informatics, Lund University School of Economics and Management

Decided by the Board of the Department of Informatics on 5 December 2022. The strategy is valid three years from the date of the decision.

The research at the Department of Informatics focuses on the nexus between business, society, and digital technology. We are uniquely placed to understand the challenges of digitalisation as we teach the next generation how to build and design information systems (IS) as well as their organisational and societal impact. As such we make a valuable contribution to businesses and society because we study how digital transformation affects organisations and individuals in unique and sometimes unexpected ways. We can also help optimise information systems and their implementation for maximum positive good in businesses and society.

The research is interdisciplinary in its approach and has a strong international focus both in terms of research topics, and the range and diversity of research staff. Researchers and doctoral students make an important contribution to the research at the department and the intellectual life of the school. We participate in national and international research collaboration projects. We publish our research in highly ranked, peer-reviewed conferences and journals in information systems and adjacent fields. Researchers at the department also participate in the popular science debate and collaborate with practitioners in several areas.

Read more about our research in information systems: https://www.lusem.lu.se/research/research-areas/informatics.

This research strategy includes the following sections:

- Information systems as a research discipline
- Information systems as a research discipline at the Department of Informatics
- Mission, values, and aspirations
- How to achieve our aspirations and expectations for members of staff

Information systems as a research discipline

The staff members of the Department of Informatics carry out their research in the academic discipline of *information systems*. In an international context, the discipline of information systems is defined as *"the effective design, delivery, use and impact of information [and communication] technologies in organizations and society."* (Avison & Fitzgerald, 2003). Svenska Informationssystemakademin, which includes all Swedish universities with basic, advanced and third-cycle education in information systems, defines the information systems discipline as: *"... the scientific subject that develops knowledge about digitalization and its prerequisites, significance, values and consequences in individual, organizational and societal contexts. The discipline includes studies and development of digital practices, resources, artifacts and systems. Digital practices include management, design, implementation and use of digital resources, artifacts, and systems."* (Own translation) (Svenska Informationssystemakademin, n.d.).

This means that the study of information technology within the discipline of information systems is always performed in a human context, whether individual, group, organisation, or society.

Scrutinizing the definitions of the discipline further, *design* means all aspects of the creation of information systems, while *use* means the actual application of information systems in all kinds of human contexts, how it is perceived, and what impact it has on human activities. At the birth of the discipline, from the 1960s until the 1990s, the focus was to enhance business and business opportunities of traditional large, for-profit companies, by providing information systems for production, finances, HR, and other support for the firm. As information systems has become more widespread and ubiquitous, the discipline currently concerns virtually all aspects of private life and society, not the least in the public sector and in non-profit organisations.

The area where information systems is used is called application area or domain. A domain can be, for example, a certain industry or sectors of the society such as healthcare, government, or education. Information systems is cross-disciplinary with a socio-technical core that covers knowledge about technology, the application area or domain, research methods and theories, and models (see Figure 1). The main characteristic and strength of the discipline is the ability to create knowledge in the intersection of these knowledge areas (marked "information systems" in Figure 1), not in one of them separately.
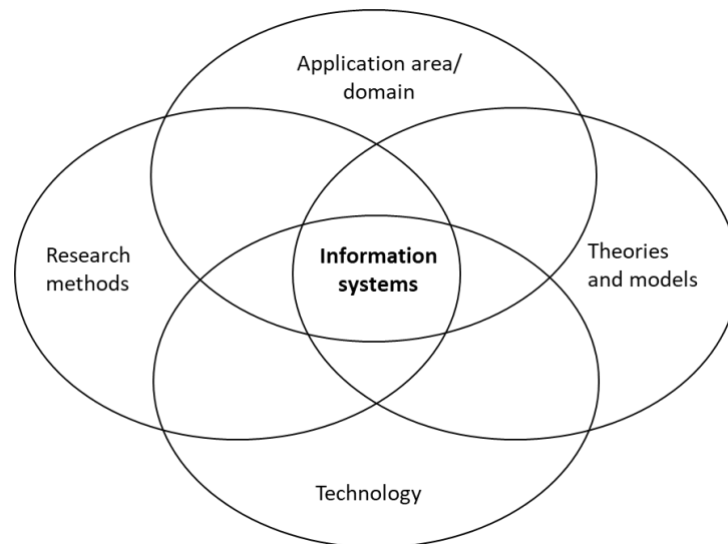
Figure 1. Linkages between knowledge areas included in the research discipline of informatics/information systems (inspired by Topi et al., 2010; de Vreede et al., n.d.).

The academic discipline of information systems is an interdisciplinary and pluralistic area of study that draws upon other reference disciplines' theoretical background (Avison & Elliot, 2006). As information systems are constantly evolving and spreading to new application areas, it is significant to have a flexible research organisation which can organise research around emergent themes.

Information systems as a research discipline at the Department of Informatics

The overriding research focus of the department is to examine and understand the "profound changes taking place in society and [organizations] through the use of digital technologies" (Vial, 2021, p. 118). Specifically, we are interested in the use of existing and new digital technologies to both enable major business improvements and bring forth individual and societal good.

As information systems research takes place at the intersection of technology and people, there is always an application area or domain where the research is performed. This application area or domain is studied through one or more theoretical lenses. When performing research, researchers are free to apply their expert area and/or theoretical lenses to an application area or domain. With time, these combinations of theoretical lenses and application areas/domains will evolve and shift as information technology develops, and information systems spread to new areas.

The research conducted at the department is rooted in a Scandinavian tradition which embraces the involvement of humans throughout the design, development, and application of information systems. In terms of methodologies for research, our department has expertise in both

qualitative and quantitative methods. At the same time, the department encourages the use of diverse methods including design research in addition to qualitative and quantitative research. This is inspired by Landry and Banville's (1992) concept of "methodological pluralism," and the call by Robey (1996) to use a diversity of theories and methods in their investigations of IS-related phenomena. Therefore, the department supports such "disciplined pluralism" and the use of any method or theory that is suitable for understanding the phenomena of interest as long as they all adhere to the accepted standards of the community.

In addition, the department believes in diversity in research. Robey (1996, p. 404) alerted the information systems discipline to the many "promises" of diversity, including (but not limited to) the fact that "diversity fosters creativity" and helps advance "the valued principle of academic freedom." Inspired by Landry and Banville's (1992) concept of "methodological pluralism," Robey (1996) called out to IS researchers to use a diversity of theories and methods in their enquiry of IS-related phenomenon. Consequently, the department supports such "disciplined pluralism" and thus the use of any method or theory that is suitable for understanding the phenomenon of interest as long as they all adhere to the accepted standards of the community.

Mission, values, and aspirations

Our mission, values, and aspirations for information systems research at the department are presented below.

Mission

To create relevant, rigorous, and timely knowledge on digitalisation by influencing individuals, organisations, and society.

Values

- A free choice for researchers of theoretical lens or lenses, application area(s) and methods within information systems
- A work environment founded on mutual trust and respect
- An inclusive and collaborative research culture
- A research environment presenting equal opportunities for all, regardless of sex, sexual orientation, transgender identity or expression, ethnicity, religion or other belief, disability, and age
- An "engaged scholarship" with active interactions between researchers and practitioners
- A focus on research that is sustainable from a human, social, economic, and environmental perspective

Aspirations

- Achieving external funding for research projects
- Publications in leading journals and conferences

- A PhD education programme that is embedded into the research of the department
- High-quality research seminars
- Knowledge dissemination of research findings outside of academia

How to achieve our aspirations and expectations for members of staff

We strive to reach our aspirations through a number of activities that are presented below. Each activity is presented in more detail in the text that follows and expectations for staff members are specified.

- Benchmarking on a regular basis
- An aspiration for "engaged scholarship"
- Collaboration with research partners outside LUSEM
- Continuous quality assessment of our research
- Compiling, maintaining, and updating a relevant list of publication outlets
- Applying for external funding for research projects
- Setting expectations for members of staff regarding research output
- Continuously develop the PhD education to be in accordance with the research at the department
- Recruitment of excellent researchers and promotion of junior scholars
- Collaboration with research partners within LUSEM
- Regularly disseminate knowledge of research findings outside of academia

Benchmarking on a regular basis

Research and education standards evolve over time. Thus, we work relentlessly to learn from benchmarking, by understanding, in particular, how to balance research and education activities. Striving to balance such activities allows the staff to conduct excellent research and to offer excellent education. It is very important, therefore, for us to benchmark against both aspirational schools and peer schools on a regular basis. Examples of our peer schools could be Uppsala University, Umeå University, and Gothenburg University.

Examples of our aspirational schools could be Copenhagen Business School (CBS), Aalto Business School, and Warwick Business School.

We have close links with CBS, and they are a model of how to achieve high quality research over a period of time. Their starting point 15 years ago was similar to ours, and we aim to replicate that journey.

Full benchmarking regarding research publications and grants will be performed every third year. Comparisons will be made annually.

An aspiration for "engaged scholarship"

In conducting research, the department subscribes to Van de Ven's (2007) principle of "engaged scholarship." This particular view asserts that research should not be conducted in "ivory towers" and only in controlled environments which often struggles to have practical contributions, but instead should emerge from the active interactions between researchers and practitioners. Consequently, departmental researchers are encouraged to work closely with industry and professional partners in developing research problems, and jointly solving them through empirical enquiry and using methods such as case studies, action design research, field experiments, and surveys, among others. We also believe that such an endeavour will help the department to achieve the balance between rigor and relevance, which has been long touted as a key mission of the information systems discipline.

Collaboration with research partners outside of LUSEM

Research collaboration with research partners outside of LUSEM is encouraged. These partners could be other universities, enterprises, and public organisations. Industry needs to achieve more attention in information systems research as it has an important influence on information systems activities and the IT artefact (Chiasson & Davidson, 2005).

Researchers at the department should strive to have durable collaboration with at least two research partners outside of LUSEM. In addition, the department should strive to find ways to work with more than 50 companies engaged in our bachelor's programme in research projects.

Continuous quality assessment of our research

Our strategy requires us to continuously monitor the quality of our research. Regular and supportive research reviews will be conducted with all members of staff who have a research time allocation. The list of publication outlets (see next section) will give a guide to quality of outlets.

Compiling, maintaining, and updating a relevant list of publication outlets

We have compiled and will maintain a list of quality publication outlets for both journals and conferences. We are guided by the Norwegian Register for Scientific Journals, Series and Publishers, the CABS ranking list (see the Academic Journal Guide (AJG) https://charteredabs.org/academic-journal-guide-2021/) and the Association for Information Systems (AIS) Senior Scholars Journal List (see https://aisnet.org/page/SeniorScholarBasket). This list will help newer scholars in particular to target their work carefully and get good quality feedback in the peer review process. The current list of journals is presented in appendix 1.

Conferences are very important to our discipline and department. Younger scholars have a chance to meet senior colleagues, network and build up collaborations, and have the chance to be involved in journals by virtue of who they meet at conferences. Conference papers can be an excellent precursor to good journal publications. The major conferences ICIS and ECIS take full length papers, have a quality review process, and acceptance rates ranging from 10% to 30%. There are also regional IS conferences such as AMCIS, HICSS and PACIS which have higher acceptance rates but are also very valuable for networking. The current list of conferences is presented in appendix 2.

Applying for external funding for research projects

The department strives for external funding for research projects. External funding for research projects increases the possibilities of researchers spending more time on research, collaborating with other researchers, and deepening the research on specific topics within the discipline. The department encourages both internal and external collaboration in order to bring in these opportunities and to benefit as many staff members as possible.

Researchers at the department should strive to participate in at least two applications for external funding per year. It is expected that colleagues will collaborate with each other and external contacts to meet this expectation. This is a group target.

Setting expectations for members of staff regarding research output

A way to reach our aspirations is for the department to have clear and transparent expectations for staff members.

When it comes to publication, staff members with a research allowance are asked to submit one manuscript per year to at least one high-ranked scientific journal or one high-ranked conference. The overall expectations of staff at the department on research output is presented in Table 1 below. For teachers having 10% of research in their position, submissions of teaching cases and articles aiming at educational journals and conferences should be encouraged.

Table 1. Expectations of research output of staff at the department.

10% research	20% research or more	PhD students
Participation in departmental research seminars	Participation in departmental research seminars	Participation in departmental research seminars
At least one tier 3 conference or journal publication in five years	At least one tier 2 journal submission or one tier 1 conference publication per year. There is an overarching expectation of one or more tier 2 journal publications every three years.	Progress according to the individual study plan

The department is committed to helping and supporting staff to meet the departmental research targets in the research strategy. Any assessment of achievement of the departmental targets will take into account research allowance, overall workload, and personal circumstances. The peer review process for some journals is long and sometimes papers do not get published there but have to be resubmitted to other journals. The same is true for funding applications that are refined for another opportunity. For this reason, the activity – submitting the paper to the conference or journal or submitting the funding application – is the key metric that the department will recognise.

The publications from the department are categorised in three levels:

1. High-ranked journal publications, defined as journals having a ranking of 2 on the Norwegian Register for Scientific journals, Series and Publishers and at a rank of at least 3 on the AJG list.
2. High-ranked conferences with conference proceedings (for example ICIS, ECIS, and HICSS) and journals having a minimum rank of 1 on the Norwegian Register for Scientific journals, Series and Publishers and on the AJG list. Normally, the department would expect a conference paper to be the first step towards a journal publication.
3. Books, book chapters, middle- or low-ranked conferences, and journals having a rank of 0 on the Norwegian Register for Scientific journals, Series and Publishers.

Researchers should strive for a higher share of publications within category 1, that is high-ranked journal publications. Publications within category 3 can be valuable, but more so in order to collaborate with other researchers and participate in the information systems community nationally and internationally. Journals without impact factors should be avoided.

Continuously develop the PhD education to be in accordance with the research at the department

The general syllabus for third-cycle studies in informatics for the PhD degree at Lund University School of Economics and Management defines the third-cycle subject area as: *"… a social science and interdisciplinary subject that, through the use of theoretical and empirical tools, analyses and studies the design, implementation and effects of information systems. Informatics focuses on the digital transformation of society and human activities."*

The department strives for educating PhD students to be independent researchers prepared to take on future roles on different levels in the information systems research community. The PhD education is given in collaboration with the national Swedish Research School of Management and IT[1], which provides the PhD students with a community of fellow PhD students and senior researchers. Research performed in collaboration between PhD students and senior researchers at the department is encouraged.

The department should offer at least one PhD course within information systems, which is developed by the department, on a permanent basis every year.

Recruitment of excellent researchers and promotion of junior scholars

The department strives toward recruiting excellent researchers. The process as such is quality-ensured by the research committee, the department board, and the head of the department. The purpose is to continue to grow our intellectual footprint, stay competitive, and be in the forefront of conducting research and producing knowledge within the information systems discipline.

Junior scholars should be encouraged to seek promotion within the department, for example from lecturer to senior lecturer.

Collaboration with research partners within LUSEM

As information systems is an interdisciplinary academic discipline, collaborative opportunities in research with other disciplines within LUSEM are encouraged.

Researchers at the department should strive for establishing at least one research contact within another discipline at LUSEM in order to ascertain durable collaboration over time.

Regularly disseminate knowledge of research findings outside of academia

Besides education and research, collaboration with society outside of academia is the third task for Swedish universities. This collaboration can take place as participation in joint research projects, but also as knowledge dissemination of research findings outside of academia. The knowledge dissemination can be performed in many ways, for example

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[1] The Swedish Research School of Management and IT is a national research school including PhD students and senior researchers in information systems and business administration from twelve Swedish universities.

as invited talks or conference participation to a practitioner audience, articles in daily press and magazines, debates, blogs, and being active on social media.

Researchers at the department should engage in at least one activity of knowledge dissemination outside of academia every year.

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Van de Ven, A. H. (2007). *Engaged scholarship: A guide for organizational and social research.* Oxford University Press, Oxford.

Vial, G. (2021). Understanding digital transformation: A review and a research agenda. *Managing Digital Transformation*, 13-66.

Appendix 1 – Journal List for the Department of Informatics

Tier 1

Premier Journals

- MIS Quarterly
- Journal of the Association for Information Systems (JAIS)
- Information Systems Research (ISR)
- Journal of Management Information Systems (JMIS)

Senior Scholar Journals

- Journal of Information Technology (JIT)
- European Journal of Information Systems (EJIS)
- Journal of Strategic Information Systems (JSIS)
- Information Systems Journal (ISJ)

Tier 2 Journals

- All 3* journals and above in the Academic Journal Guide (AJG)[2]
- Journals on the Norwegian Register for Scientific journals, Series and Publishers on level 2

Tier 3 Journals

- Journals from the Academic Journal Guide (AJG) all 2* journals
- Journals from the Norwegian Register for Scientific journals, Series and Publishers on level 1

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[2] The former ABS-list.

Appendix 2: List of Relevant Conferences

The following conferences have been selected and divided into tiers based on quality levels. In general, the higher the level of the conference, the more likely it is that it accepts full papers post peer reviews (this is typically the case for many AIS conferences). The very top conferences, such as ICIS, have acceptance rates of ~25% and full papers accepted at ICIS are often viewed as similar to a 3* journal acceptance.

Note, that we do not consider ICIS TREO (Technology, Research, Education, and Opinion) talks or Paper-a-thon acceptances as Tier 1.

Niche conferences are automatically in Tier 3 unless strong evidence is provided for it to have a high-quality peer-review process. Attendance of selected niche conferences will be supported by the department in acknowledgement of its diverse research focus.

Tier 1

- International Conference on Information Systems (ICIS) – Full Research or Research-in-Progress Paper
- European Conference on Information Systems (ECIS) – Full or Research-in-Progress Paper
- Academy of Management – Best Paper Proceedings

Tier 2

- Hawaii International Conference on Systems Sciences (HICSS)
- INFORMS – Full Papers
- Annual Conference of Decision Sciences
- Association for Information Systems SIG HCI

Tier 3

- Americas Conference on Information Systems (AMCIS) – Full Research Paper
- Pacific Asia Conference on Information Systems (PACIS) – Full Research Paper
- Scandinavian Conference on Information Systems/Information Systems Research Seminar in Scandinavia (SCIS/IRIS)
- Other AIS SIG Pre-ICIS Workshops
- Annual Workshop on Information Technologies and Systems (WITS)
- Web Information Systems Engineering (WISE)
- International Conference on Design Science Research in Information Systems and Technology (DESRIST)
- Bled eConference
- International Conference on Information Systems Development (ISD)
- International Federation for Information Processing (IFIP) Group Conferences
- European Group for Organizational Studies (EGOS)