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Foreword IRIS46: Reflecting on the Nordic Approach to IS Research

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SELECTED PAPERS OF THE INFORMATION SYSTEMS RESEARCH SEMINAR IN SCANDINAVIA (IRIS)

IRIS46: Reflecting on the Nordic Approach to IS Research

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1 About issue 14 (2023)

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2 Foreword

The 46th Information Systems Research Seminar in Scandinavia was held in Haikko Manor, Porvoo, Finland between August 13th and 16th hosted by the Aalto University School of Business. This year's theme was *Reflecting on the Nordic Approach to IS Research.*

Seminar participants worked on the papers in seven groups chaired by experienced researchers: 1) *Education* chaired by Tuure Tuunanen, 2) *Emerging tech & innovation* chaired by Aleksandre Asatiani, 3) *Healthcare* chaired by Miria Grisot, 4) *Organizations* chaired by Louise Harder Fischer, 5) *AI & analytics* chaired by Jan Pries-Heje, 6) *Smart society* chaired by Tero Vartiainen and 7) *Sustainability* chaired by Elena Parmiggiani. All the papers underwent a double-blind peer-review process to be accepted to the seminar and were subject to one-hour group discussion each in the seminar. Out of the 45 seminar papers, six were nominated as best papers by the group chairs. This means a 13 % acceptance rate for this issue. The authors of the nominated papers were asked to submit a revised version of their paper for the issue.

We are thankful to all the participants and chairs of the IRIS46 for the very engaging days of discussion and feedback in the companionable atmosphere the Nordic IS community and IRIS are known for.

3 Selected papers

In the first paper, *Digitalisation of Crisis Management Tabletop Exercises – Lessons Learned from a Scandinavian R&D Project*, Monika Magnusson and Malin Wik examine the requirements of a collaborative virtual training environment for crisis management. While vital, crisis management exercises are laborious to implement and often in on-site tabletop form limiting smaller organisations' access to crisis training. However, many organisations, such as municipalities, have similar scenarios they need to prepare for. Thus, a repository of ready-made generic virtual tabletop exercises could vastly decrease the planning burden of crisis training while improving training standards. However, while generic exercises are easy to share, overly generic exercises are not useful or engaging. Similar tensions exist between the benefits of distributed and co-located as well as synchronous and asynchronous exercises, for example. Drawing on two Swedish-Norwegian R&D projects, the authors present an exercise template for producing virtual tabletop exercises for crisis training.

In the second paper, *Portfolio Management of Digital Innovation Initiatives – A Systematic Literature Review,* Jukka Salonen applies the bibliometric method to map the current situation with portfolio management research. The results highlight a disconnect between extant portfolio management research and digital innovation. Innovation portfolios increasingly consist of digital innovation initiatives rather than product innovation, but this is not reflected in current research. This is troublesome because traditional innovation portfolio management is not effective for measuring digital innovations which require more flexibility and agility, new metrics for value creation and less protracted processes. At worst, traditional portfolio management might guide managers to invest in the wrong initiatives. At best, they could hinder value realization from digital innovation initiatives. To remedy the situation, Salonen outlines potential research streams on digitalization-specific innovation portfolio management, value realization from digital innovation portfolios, organizational requirements' and executives' role in digital innovation initiative portfolio management.

The third paper, *Addressing Uncertainty in AI Tool Development: End-User Collaboration in Healthcare* by Ursula Sokolaj, Casandra Grundstrom and Aleisha Martul studies how AI developers cope with and navigate feasibility, data, decision-making and adoption related uncertainties. Though human-AI collaboration shows great promise for the healthcare sector, medical practitioners are accountable for proper diagnosis and treatment. The healthcare setting and the final responsibility remaining with humans accentuate the need for trustworthy AI, but uncertainty is intrinsic to AI. Data used to train AI might be biased, its algorithm might be imperfect and how AI achieves its conclusions might be opaque. Furthermore, AI development differs from established software development practices and AI developers' practices remain relatively unknown and understudied. For human-AI collab-

oration to progress in the healthcare setting, uncertainties must be reduced where possible and managed where necessary. Involving end-users in all development stages could help to mitigate uncertainties to ensure that the AI is fit for purpose and that the end-users are comfortable with using it.

Since technologies in the agricultural domain play an essential role in reducing poverty in developing countries, the fourth study *Factors Influencing Extension Workers' Behavioural Intentions Towards Digital Farm Technologies in Malawi*, seeks to define factors that impact the behavioural intention towards adoption of digital technologies for farming purposes. Eddons Munthali with his colleagues use National Agriculture Management Information Systems (NAMIS) as a case. In this study, the authors investigate the intentions of extension workers who are usually experienced farmers appointed by the government for training and mentoring tasks. A lens of the theory of planned behaviour aids the authors in their analysis of behavioural factors and showing which of those factors can influence agricultural workers' intentions to use digital farm technologies to achieve food production and sustainability. The respondents for a questionnaire in this study were selected agricultural extension workers in the Extension Planning Areas where NAMIS was implemented. The study is based on a linear regression of behaviour intention on attitude, subjective norms and behavioural control, the latter influenced by age and experience. As a result of the examination case, the paper poses that perceived behaviour control and subjective norms influence behaviour intention while attitude is not a significant determinant of such an intention. Therefore, it is recommended to involve users in the system development process as well as to upscale the study to further districts.

The fifth paper, *Implications of Including the Developer in the IS Delegation Framework*, by Akhona Khumalo and Amirhossain Gharaie inspires us to look beyond the traditional description of a dyadic relationship between an agentic IS artefact and a human agent towards a more inclusive framework in which a developer's role clearly stated. In this study, a developer is conceptualized as another actor involved in the human-AI hybrid. The authors see the need for such an extension of actors as the developer's influence on the delegation mechanism is obvious and can be crucial. For instance, Khumalo and Gharaie note that "if the human agent perceives that the agentic IS artefact prioritizes the interests of the manufacturer over the interests of the human user, then trust in the program may falter." Reaching out to adaptive structuration theory (AST) the authors not only achieve a better understanding of the impact of agentic knowledge, skills, and preferences on the delegation mechanisms but also shed light on the influence of these mechanisms on agents' roles. AST also enables accounting for multiple factors – technological, organizational, and individual – to explain the novel triadic delegation process. The method applied to the secondary data is titled a best-fit framework synthesis method and Khumalo and Gharaie focus on searching across extant literature sources addressing the human-AI hybrid in organizations. Deriving eight propositions from their analysis, the authors show how the developer shapes several aspects of the delegation framework and what are the implications of this process on the agency of the IS artefact.

Lastly, in *Delegating Agency in the Public Sector: A Case Study on Current Human-Technology Practices and Visions for AI* the authors address the shifting work practices in the sick leave department of a public organization, the latter being a welfare agency in Scandinavia. In this case, study based on both semi-structured interviews and observations, Charlotte Grøder and Elena Parmiggiani look at emerging configurations of humans and technology at work and the advantages which AI implementation could bring about. Encouraged by actor-network-approach and a concept of delegation, their study underscores the salience of a twofold argument. First, describing the stage preceding AI implementation enables picturing the pre-conditions of the current work practices. Consequently, the path can be determined that leads organizations to envision AI as a solution to a certain problem. The results of their study contribute to our understanding of welfare work practices, presenting those as unfolding along a network of human and technological agents. Also, Grøder& Parmiggiani highlight the active role of AI in streamlining and automating processes in line with Latour's logic.