

CALL FOR PAPERS Special Issue
Journal of the Association for Information Systems (JAIS)

**Accumulation and Evolution of Knowledge
in Design Science Research**

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Sir Isaac Newton once famously said that he has only seen further by “standing on the shoulders of giants.” Research is a collaborative endeavor – and this is no different with design science research (DSR), which develops and builds upon design knowledge. Design knowledge is about means-end-relations between problem and solution spaces (Venable et al. 2006) and can take different forms such as designed artifacts (Hevner et al. 2004), design principles (Chandra et al. 2015), or design theories (Gregor and Jones 2007). More recently, the potential of DSR to contribute to the solution of real-word problems has been pointed out more often, and that this is considered an opportunity to demonstrate relevance of IS as an academic field (Watson et al. 2010, vom Brocke et al. 2013, Lee 2015). In particular, the recent MISQ Editorial on the Diversity of DSR (Rai 2017) highlights many diverse opportunities to effectively apply DSR for the solution of important information systems research challenges.

Based on high-impact design practice over several decades, the methodological reflection of DSR in the information systems research community has made significant progress during recent years so that researchers now can start from a sound foundation (including, e.g., Hevner et al. 2004; Peffers et al. 2007; Gregor & Hevner 2015). It is the right time to foster knowledge creation from actual DSR studies, which significantly advance our understanding of information systems design, use and impact. For a research community, systematic knowledge generation across multiple DSR projects plays an important role. While in the past, most studies reported on single DSR projects, future work needs to pay attention to knowledge accumulation and evolution across multiple projects. We exemplify this focus by two challenges:

- First, it is often difficult to assess the re-use potential of design solutions to different yet related problems. Given today’s DSR methodology and practice, it is hard to tell to what extent a problem space of interest would relate to other problem spaces; and, similarly, how a solution would relate to other solutions. Achieving ‘projectability’ of designed artifacts (Baskerville & Pries-Heje 2014) is different from achieving generalizability of descriptive statements. In this call, we therefore seek contributions, which demonstrate that DSR can systematically support re-use and how ‘related’ design problems (and solutions) can be identified.
- Second, it is often difficult to scope and document DSR comprehensively because relevant real-life problems and solutions are highly complex. It is necessary that large problems or artefacts are jointly covered by different sub-projects and/or researchers, allowing knowledge accumulation across projects and between researchers. In this call, we therefore seek contributions, which demonstrate that knowledge accumulation can be achieved across projects, application areas, or levels of abstraction in order to systematically advance our understanding of the design of information systems as problem and solution spaces evolve over time and space.

We particularly invite studies that apply the DSR paradigm (also referred to as Design Research studies, see Winter 2008), and that serve as exemplars to demonstrate challenges and solutions for knowledge aggregation and evolution in DSR. These studies will shape the community's understanding of accumulative design knowledge and design knowledge re-use, enabling future methodology improvements towards a more collaborative endeavor, as expressed in the famous quote of Sir Isaac Newton.

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Important dates

- November 30, 2017 – Initial submissions of full papers
- March 31, 2018 – Reviews sent to authors
- May/June, 2018 – Paper Development Workshop
- September 30, 2018 – Revised papers from authors due
- December 31, 2018 – Reviews sent to authors
- February 28, 2019 – Revised papers from authors due
- April 30, 2019 – Final decision

Paper development workshop

Participation at the workshop is voluntary. However, participation will provide the opportunity to meet the editors and to personally discuss the papers, which have passed the first round of reviews. The location and dates for the workshop will be communicated to prospective authors.

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Submission guidelines

Submitted papers must make a significant and novel contribution to the existing literature. Interdisciplinary collaboration is strongly encouraged. JAIS does not have restrictions on length because as an electronic journal it does not have page limits. However, all manuscripts should be written concisely to avoid unnecessary length. Manuscripts that are more than 15,000 words may receive extra scrutiny from the editors, although additional latitude can be expected for some types of papers such as review articles. Full papers are to be submitted to JAIS online review system: <http://mc.manuscriptcentral.com/jais>. Please follow the JAIS manuscript preparation guidelines: <http://aisel.aisnet.org/jais/authorinfo.html>.

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