# Introduction to the Practitioner Research Insights: Applications of Science and Technology in Work Minitrack
# LEARNING FROM THE FIELD

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The world of work as a service system[1] - a system in which people and/or machines perform work using information, technology, and other resources to produce products and services for internal or external customers - evolves and then undergoes occasional revolutions. Organizations are at the heart of these changes both in terms of the technologies they design and in the technologies they deploy. The most recent information and communication technology changes to work and organizations radically affect both work and personal life. But not all of the changes are positive, and the relationships are complex.

Some call the current wave of transformation "digital transformation." We call it "service transformation enabled by digital technologies." Our advanced technical capabilities are revolutionizing business activities, processes, and business models. When we review some of the most successful digital transformations, we see that "service" - the ability to co-create value - is at the core of the transformation. The overall goal of any transformation, including service transformation, is to increase the productivity and creativity (decision making, connectivity, innovation, and augmentation) of individuals and organizations.

Scholarly work on the science of information technologies (e.g., mobile, IoT, cloud computing, big data, analytics, cognitive computing, artificial intelligence, intelligence augmentation, disruptive technologies, social media) supports organizations as they find new ways to increase efficiency and effectiveness of their offerings while avoiding possible societal downsides.

In many cases, however, these practitioners' innovations are ahead of academic research contributions. Practitioner research serves to offer more directly applicable results and to focus academic attention where it is needed most. By bringing together practitioner and academic researchers, there are opportunities to create on-ramps to increase the pace of discovery and application overall.

Practitioner research serves as a two-way bridge between academic research and the organizations on the front lines. For example, with the advent of cloud computing, how organizations design, execute, store, transmit, and reuse information creates opportunities to configure IT into service relationships. These actions create new value by reducing costs, increasing efficiency, and improving outcomes. Digital solutions provide the means to improve the innovativeness through: 1) industrialization that improves existing service offerings often by separating traditional production (backstage) from customer contact (front stage) of a service, thus enhancing storability, transportability, and access to knowledge-based service offerings (e.g., online classes, patents); 2) facilitations of new types of coordination of service systems through new and improved value propositions and governance mechanisms (e.g., Apple apps, iTunes, online broker systems, open innovation platforms, auction technology); 3)reduction of the costs of backstage and front stage service activities (e.g., semi-automated and fully-automated call centers); 4) improvement in customer-perceived service quality (e.g., ability to standardize elements of service as well as mass-customization or personalization, mass production to configure-to-order supply chains that achieve productivity and customer responsiveness); and 5) integration of customers into service creation and delivery (e.g., self-service education, healthcare information systems, IT outsourcing).

There is a need to apply robust research findings in the appropriate management, organizational contexts, architecture and design related to applications of science and modern technologies (Data Analytics, AI, Cybersecurity, IoT, Blockchain, Service Oriented Technology and Management, AR/VR, etc.).

We hope you enjoy the papers and their presentation at the conference. We thank the authors for submitting their work to make this an engaging minitrack. We also thank the reviewers for their valuable feedback.

[1] Alter, S. Service System Fundamentals: Work System, Value Chain, and Life Cycle," IBM Systems Journal, 47(1), 2008

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