Introduction to the Smart Service Systems: Analytics, Cognition and Innovation Minitrack

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Economic and societal well-being depend on innovations that help people use big data more intelligently. Human-centered, smart service systems for business and society can be characterized by: (1) the types of offerings to their customers and/or citizens, (2) the types of jobs or roles for people within them, and (3) the types of returns they offer investors interested in growth and development, through improved use of technology, talent, or organizational and governance forms, which create (dis) incentives that (re) shape behaviors. Innovators of smart service systems, including entrepreneurs, managers, and policymakers seek to improve quality-of-service for customers, quality-of-life for citizens, and/or quality-of-returns for investors.

Smart service systems are ones that continuously improve (e.g., productivity, quality, compliance, sustainability, etc.) and co-evolve with all sectors (e.g., government, healthcare, education, finance, retail and hospitality, communication, energy, utilities, transportation, etc.). Regional service systems include nations, states, cities, universities, and hospitals. Global service systems include multi-national businesses, professional associations, and NGOs. Natural or human-made disasters, technology failures, criminal activities, political collapse can disrupt or negatively impact quality-of-life for people living and working in service systems.

Using big data analytics and cognitive systems to improve decision-making service providers try to compete for the hearts, minds, and wallets of collaborators by (1) improving existing offerings, (2) innovating new types of offerings, (3) evolving their portfolio of offerings, and, (4) changing their relationships to others in the ecosystem in ways stakeholders perceive as more positive, sustainable, fair, or responsible.

The goal of this mini track is to explore the challenges, issues and opportunities related to innovation of smart service systems that enable value co-creation with analytics, cognitive and human systems. NSF and other funders see this research area as essential to build interdisciplinary innovation capacity (http://www.nsf.gov/pubs/2015/nsf15610/nsf15610.htm).

The six papers accepted for the minitrack investigate these issues in different ways.