Call for Papers
Information Systems Journal Special Issue on:
Information Systems addressing the Challenges of Environmental Sustainability

Special Issue Guest Editors

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Call: Empirical research on Information Systems addressing the challenges of environmental sustainability

Submission deadlines: December 15, 2012 (initial). **August 15, 2013** (final) see details p.4.

Motivation: Scientific evidence accepted by the leading experts in the environmental domain attributes observable degradation of the natural environment on a global scale to human behaviour. Acknowledging the deteriorating state of the environment as one of the most critical challenges confronting the world, the governments of 192 countries have accepted the scientific evidence of this degradation and, by ratifying the United Nations Framework Convention on Climate Change, have committed to take action. Consequently, business, government and society need to make fundamental changes in their current behaviours and prevailing practices in order to address the challenges of environmental sustainability (IPCC 2007, NIC 2008, Porter and Reinhardt 2007, Stern 2007, UNFCCC 2007).

Applications of technology, particularly Information and Communications technologies and systems, have been acknowledged as a key source of solutions to address the necessity for fundamental change to behaviours and practices (IPCC 2007, MEA 2005, NIC 2008, Stern 2007). As a discipline, Information Systems (IS) is well placed to make significant contributions to this domain as it "examines more than just the technological system, or just the social system, or even the two side by side; in addition it investigates the phenomena that emerge when the two interact" (Lee 2001, p iii). Therefore, interaction between technological and social systems to address one of the world's most critical challenges lies at the core of the IS discipline.

Researchers in a wide range of disciplines, including accounting, economics, engineering, government, management, sociology, and psychology, as well as ecology and environmental studies, have made meaningful contributions over many years. Despite the potential for IS solutions to address environmental issues, IS researchers have been slow to accept this challenge (Watson et al. 2012).

Since 2007, a small number of publications has demonstrated the potential for IS solutions to address environmental challenges (e.g., Elliot 2011, Melville 2010, Watson et. al., 2012), if only IS researchers can be motivated to do so. The challenge for IS researchers and practitioners has been presented by scientific evidence, endorsed by governments globally and highlighted by acclaimed business thought leaders like Michael Porter:

> "Periodically, major new forces dramatically reshape the business world – as globalization and the information technology revolution have been doing for the past several decades. Climate change, in its complexity and potential impact, may rival them both" (Porter and Reinhardt 2007).

Opportunities for IS researchers and practitioners to respond with significant contributions to meet this challenge are based on IS-enabled innovation to support: changes to business practice, changes to practice in government and society; development of theory based on and informing practice; and, contributions with positive impacts on business, government and society to improve the environment. Critical questions for IS research and practice shown in Table 1 represent key opportunities for IS researchers and practitioners. These questions require answers based on evidence of empirical activities and experiences.

Table 1. Opportunities for IS in practice and research for positive impacts on the environment

Areas	Critical questions
1. Practice	a. Globalization, IT and the environment are major drivers of transformation but do they have the same effect and do they operate in the same ways? If not, then why, how and where?
	b. Are IS-enabled solutions applicable in all situations for all drivers? Why, how and where?
	c. Do different drivers of IS-enabled change require different policies, strategies and solutions?
	d. What is the impact of value chains on the environment and of the environment on value chains? Do these impacts differ, e.g., by sector, country, culture, size or local environments?
	e. How can multi-national organizations manage global responses to local sustainability issues?
	f. Can multi and trans-disciplinary teams produce improved outcomes? Why, how and how to evaluate?
	g. Can alliances of organizations produce improved outcomes? Why, how and how to evaluate?
	h. Does IS have new roles in mixed disciplinary teams and alliances? Why, how and where?
	i. Do IS innovations for sustainability require different approaches to evaluation? Why? How?
	j. Do organizations require particular capabilities to address environmentally-driven, IS-enabled change? What capabilities, why, and how can they be acquired, developed and maintained?
	k. How can organizations utilize IS to encourage more environmentally-responsible behaviours by their employees?
2. Theory	a. To what extent is current IS theory able to support IS-solutions for sustainable practices?
	b. What current IS theory, in what circumstances and what evidence supports their application?
	c. What gaps exist between current IS theory and IS-solutions for sustainable practices?
	d. To what extent might these gaps be addressed by testing and development of current IS theory, application of theory from reference disciplines or by development of theory-in-use?
	e. To what extent is current IS theory generalizable to IS-enabled solutions for sustainable practices across, e.g., sector, country, culture, size, and local environments?
	f. How can current and emerging IS theory maintain generalizability in multi-faceted, dynamic environments?
	g. To what extent are methods applied in current IS research applicable to IS-solutions for sustainable practices? Will different research approaches be required? What? Why?
	h. What roles do IS researchers have to support IS-solutions for sustainable practices? Are these roles different? Why, how and where?
	i. Do IS researchers require new capabilities to address environmentally-driven, IS-enabled change? What capabilities, why, and how can they be acquired, developed and maintained?
3. IS impact	a. What is the impact of IS on current practices in business, government and society?
	b. What is the impact of IS research on current practices in business, government and society?
	c. What is the impact of IS research and scholarship on current practices in universities?
	d. Could the impact of IS on current practices be improved by IS-solutions for sustainable practices? Why? How?
	e. Could the impact of IS research on current practices be improved by IS-solutions for sustainable practices? Why? How?
	f. Could the impact of IS research and scholarship on current practices in universities be improved by IS-solutions for sustainable practices? Why? How?
	g. Does IS research need to increase its impact on current practices in all organizations?
	h. How could the impact of IS, IS research and IS scholarship be determined, evaluated and reported coherently and consistently in each situation?
	i. How can action research or other methods be utilized to encourage more environmentally responsible behaviours within organizations?

This Special Issue of the *Information Systems Journal* seeks to attract outstanding research papers on exemplary practices in the application of IS solutions for the challenges of environmental sustainability. Submissions should address critical questions shown on Table 1 to inform, engage, motivate and guide

practitioners to pursue improved practices and IS researchers to pursue improved levels of contribution to theory and practice in this domain.

The Special Issue aims to contribute significantly to the development of relevant and rigorous research in this domain that: demonstrates the applicability of IS as a source of empirical solutions to a range of environmental challenges; promotes the development of a diversity of environmentally sustainable practices; promotes the application, testing and development of relevant theory; and promotes the development of generalizable theory-in-use (Lee 2010) informed by fundamentally changed behaviours and practices by pioneering organizations in a variety of contexts. The unit of analysis may be employees or organizational teams, sub-organizational units, organizations, or an alliance of organizations with shared aims. We encourage a variety of empirical approaches (e.g., experiments, surveys, interviews, action research, design science, etc.).

Consistent with the Special Issue's aims, the Editors have identified a list of desirable requirements for submissions that clarify how authors might broaden the scope of empirical IS research in this domain and guide future research efforts:

- Diversity in research perspectives by appropriate inclusion of co-authors from a variety of disciplines/genders/nationalities/etc;
- Academic and industry co-authorship of papers on the experiences of real organizations leading to testing and developing extant theory and proposal of "theory-in-use";
- Analysis of pioneering experiences and achievements by organizations from a range of contexts across AIS regions;
- Analysis of pioneering experiences and achievements by organizations from a range of industries and sectors including government, professional and non-profit / societal organizations across AIS regions;
- Analysis of pioneering experiences and achievements by alliances of organizations from a range of contexts across AIS regions;
- Support for future efforts in research and practice through review of the opportunities available and capabilities required for IS researchers and practitioners to further develop the contributions presented in each submission.

Submissions should:
- Explain how the submission meets the aims and critical questions (Table 1) of the Special Issue and describes how the desirable requirements have been addressed;
- Present complete and coherent exemplars with major contributions based on empirical evidence within a specific context;
- Illustrate how IS research can make significant contributions to theory and practice in efforts to address the challenges of environmental sustainability that inform and engage diverse interests; and
- Promote further efforts by IS researchers and practitioners in this domain.

Submissions should not:
- Lack research rigor at the standard required for *ISJ*;
- Ignore the Special Issue's aims, critical questions and desirable requirements;
- Lack significant innovation in its contribution to IS and environmental sustainability solutions for development of practice and theory;
- Lack empirical evidence and analysis (e.g., not be a speculative paper, an opinion article or based on algorithmic analysis of secondary data);
- Lack completeness, i.e., reporting research in progress;
- Lack generalizability to a broad range of organizations and contexts.

The Review and Publishing Process
The Special Issue Editors' objective is to address the emerging domain of contributions by IS solutions for environmental sustainability in an expedient, rigorous manner. Recognising that the Special Issue seeks innovative submissions that expand the scope of IS research in the domain through diversity in:

disciplines, occupations, gender, theory, context, organization type and researcher capabilities, the Editors will provide initial feedback to assist authors to focus their efforts before the final submission.

Submissions for initial review must be received by December 15 2012.
Submissions for initial review are to be emailed directly to all three SI Guest Editors (see page 1).
These will be reviewed by the Guest Editors for compliance with the Special Issue's aims, critical questions and desirable requirements. Initial submissions will be up to 5-pages in total including: 1-page with title, keywords, authors and key references; a 1-page extended abstract; a 1-page description and justification of the research approach; a 1-page description of the expected major contributions, limitations and generalizability; and a 1-page analysis of how it may address the aims, critical questions and desirable requirements of the Special Issue. Formatting for this 5-page initial submission is to the standard for *ISJ* submissions. Submission for an initial review is strongly recommended but is not mandatory.
Reviews of the initial submission will be returned to authors by January 15 2012.

The final deadline for submissions is August 15, 2013. All submissions will be peer-reviewed according to the standards of the *ISJ*. **The deadlines are fixed and no extensions will be possible.** Submissions for the full papers must be made to the ISJ's Manuscript Central Account: http://mc.manuscriptcentral.com/isj, where you should select the Special Issue on Environmental Sustainability as the submission type.

Sources

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