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Meeting new design challenges to achieve societal sustainability**

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DOI

[10.1016/j.jclepro.2012.05.050](https://doi.org/10.1016/j.jclepro.2012.05.050)

Publication date

2012

Document Version

Final published version

Published in

Journal of Cleaner Production

Citation (APA)

Vezzoli, C., Ceschin, F., Diehl, J. C., & Kohtala, C. (2012). Why have 'Sustainable Product-Service Systems' not been widely implemented? Meeting new design challenges to achieve societal sustainability. *Journal of Cleaner Production*, 35, 288-290. <https://doi.org/10.1016/j.jclepro.2012.05.050>

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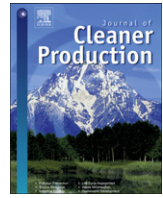
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Journal of Cleaner Production

journal homepage: www.elsevier.com/locate/jclepro

Call for papers

Why have ‘Sustainable Product-Service Systems’ not been widely implemented? Meeting new design challenges to achieve societal sustainability

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ARTICLE INFO

Article history:

Received 30 May 2012

Accepted 30 May 2012

Available online 7 July 2012

We recognise that the dominant socio-economic development models in industrialised contexts are unsustainable. The pressure of human beings on the environment has profoundly modified natural systems, and today the planet is reaching its limits in the capacity of assimilating environmental effects caused by anthropic activities. In the last few decades the reaction of humankind to sustainability problems has produced a series of approaches that has gone from relying upon end-of-pipe solutions to cleaner production and product eco-design strategies. However, although these types of interventions are fundamental and necessary, the improvements they can provide are usually more than offset by the pace and scale of population growth and increasing consumption levels. For these reasons it is clear that we must not only address products, production processes and provision of services but we must also address the patterns of consumption, lifestyles, and the institutions that underpin them and how all of these must be addressed simultaneously, if we intend to make the transformation to sustainable societal processes.

Moreover, we are currently in a series of structural economic and social crises in which we are facing rapidly rising prices, global food crises, inflation, recession, rising unemployment, credit crises, and over-arching crises of confidence in government, the financial system and in many other societal institutions.

Within this context, these dangers and challenges can and must be converted from crises to opportunities. But do we have the will, know-how and persistence to convert the crises into opportunities? Are there business and/or political models capable of creating equitable and sustainable economic and social values that are decoupled from material and energy consumption and which are ecologically sustainable?

A promising way to begin to address these challenges is the Product-Service System (PSS) approach. A PSS is a value proposition oriented to provide satisfaction to customers/users through the delivery of an integrated system of products and services. If properly conceived, a PSS can offer an economic and competitive incentive for stakeholders involved to continuously foster improvements in sustainable resource management, thus delinking creation of equitable economic value from intensive material and energy use within ecologically sustainable boundaries.

Because of its potential to deliver social well-being and economic prosperity while operating within the limits of our planet, a wide number of research projects in the field of PSS have been undertaken in the last decade. This has led the research community to collect and to analyse an extensive number of cases in diverse sectors, to increase our understanding of the potential benefits, drivers and barriers, and to develop and to test several design methods and tools to be able to enhance the array of PSS systems that are implemented globally.

This is urgently needed because, despite all the knowledge and experience that has been accumulated, the application of PSS approaches is still *very limited*. The basic reason is that sustainable PSSs are usually considered to be ‘*radical innovations*,’ because they challenge existing customer/user habits, company organisational structures and regulatory frameworks. In other

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words, their introduction and ‘scaling-up’ require fundamental changes in behaviour and practice that are implemented by individuals, groups, business communities, policy actors and society-at-large. Consequently, the introduction and scaling-up of PSS innovations is not under the control of a single actor (or a small network of actors). In fact any changes in the factors that form the boundary conditions (i.e. existing institutions, dominant practices, rules and interests) are resisted at multiple levels, and strategies for changes must be addressed holistically if they are to be brought about.

Therefore, a central challenge is to identify and test combinations of visions, policies, strategies, frameworks, indicators and development pathways to foster and hasten the introduction and scaling-up of such innovations.

In this Special Issue (SI), the editorial team has the aim to analyse and better understand the dynamics, mechanisms and factors impeding/driving the implementation of sustainable PSSs, and of the strategies, approaches and tools that can be adopted, at different levels, to design, manage, stimulate and monitor the widespread adoption of PSS concepts. At the same time we seek to increase our understanding of the way in which interwoven and convergent approaches, such as *social innovations*, *distributed economies*, *sufficiency*, *cradle-to-cradle*, etc., can be synergetic with the PSS concepts and approaches.

We thereby invite teams of authors to contribute papers that holistically tackle the multi-disciplinary dimensions of PSS (and interwoven approaches) as contributors to making societal progress toward more sustainable patterns.

This may include but is not limited to: the design of PSS concepts, the design of implementation strategies, the design of environmental policies, or the design of educational systems. In other words, the issue may be addressed from the perspective of various stakeholders, firms, public institutions, NGOs, and research centres. Moreover, contributions are invited to explore the potential synergies between/among the PSS concept and other inter-linked and promising approaches (*social innovations*, *distributed economies*, *sufficiency*, *cradle-to-cradle*, etc.). In addition, contributions are invited to focus on different contexts (i.e. industrialised, emerging, low-income).

Author teams are invited to develop their contributions so that they holistically address the multi-stakeholder empowerment dimensions needed to transform short-term projects from tiny baby steps of a single PSS short-term project into changes that truly impact society: making the essential quantum improvements that are urgently needed for transformation from unsustainable to truly sustainable societal patterns.

Topical areas

Within this framework we invite contributions (including comprehensive reviews, theoretical frameworks, empirical studies, case studies and applied studies) that focus on (but are not limited to) one or more of the following issues:

- **How do sustainable PSS innovations take place?** What are the dynamics and factors that facilitate and hinder the process of introduction and scaling-up? What conceptual and analytical frameworks can describe these transition processes? How can firms organise and manage the shift towards a PSS-oriented business approach? What role(s) can be played by different stakeholders (governments, public institutions, NGOs, citizens, research centres, etc.) in stimulating these processes? What can be learned from failure and success cases?
- **What strategies, approaches and tools can be adopted to trigger the scaling up of sustainable PSSs?** How can transition

processes be designed and managed and to what extent? How can concepts such as socio-technical experiments, transition experiments, living labs, etc., trigger, guide and sustain these processes? What knowledge and capabilities are required to design, monitor and manage transition processes and their impacts? What kinds of design approaches, methods and tools can be used to improve the quality, breadth, depth and spread of the needed changes?

- **What are specific characteristics of transition processes in different contexts (industrialised, emerging and low-income)?** What are the similarities & differences and the specific challenges & opportunities? What specific design strategies and approaches can be applied to support transition processes in the different contexts?
- **What synergies can be built with other promising models?** The PSS concept seems to be a valuable and promising concept to tackle sustainability issues, but it does not represent a silver bullet. Synergies have to be built with other promising and interwoven concepts, for example the *social innovation*, *distributed economies*, *sufficiency* and *cradle-to-cradle* concepts. How can these concepts be combined to favour and to speed up radical changes for sustainability? Are there cases that document the synergistic benefits of using different combinations of approaches, concepts and tools? What can we learn from them that can help us to speed up the up-scaling processes?
- **How do/can final users influence the introduction and scaling up processes?** Sustainable PSSs usually require fundamental changes in user behaviour, practices, and mental frameworks. What strategies and approaches can be adopted to stimulate people to accept new consumption models? What role(s) can the aesthetic of PSSs play in this? How can/should sustainable PSSs be designed to stimulate behavioural changes and to foster user acceptance and satisfaction? How can/do different socio-cultural conditions foster or hinder the acceptance of sustainable PSSs? What can we learn from them that can help us to speed up the up-scaling processes?
- **How can changes in economic and legal frameworks foster and accelerate the implementation of sustainable PSS innovations?** What governmental, regional and local policies can be adopted to specifically favour the introduction and scaling up of sustainable PSSs?
- **What are the challenges/opportunities for Higher Education Institutions (HEIs) to help to facilitate the necessary transitions?** What knowledge and know-how should be provided to challenge students to become active within the transformation of our consumption and production patterns to truly sustainable patterns? What educational strategies and approaches should be put into practice?

Tentative schedule

Contributors with proposals for papers are encouraged to communicate with the co-editors by e-mail. The following schedule will be applied:

- Call for papers: **Why have ‘Sustainable Product-Service Systems’ not been Widely Implemented?**
- Submission of extended abstracts of max 1000 words to the SI Editorial team at e-mails: carlo.vezzoli@polimi.it and fabrizio.ceschin@polimi.it, by September 15, 2012.
- Invitations from the SI Editorial Team will be sent to all prospective authors of full papers by October 15, 2012.
- Authors will submit their ‘peer-review ready’ documents to Elsevier via the EES system by February 15, 2013.

- The first round of the peer review/paper revision process will be done from February to April 30, 2013.
- When needed, the second and third rounds of the peer review/paper revision process will be done from May 1 to July 15, 2013.
- Submission of the final/nearly final versions of all revised papers will be done by September 15, 2013
- Authors will be informed of acceptance and/or about additional minor changes they are to make on their documents by October 15, 2013
- Deadline for revisions for the SI by November 1, 2013.
- Submission of all documents for conversion to uncorrected proofs by November 15, 2013.
- Authors return uncorrected proofs along with suggested corrections by December 1, 2013.
- Publication of the SI January 2014

Authors may also confer with the 'Editor-in-Chief' of the Journal of Cleaner Production: Professor Dr. Donald Huisingh, University of Tennessee, Knoxville, TN, USA. E-mail: dhuising@utk.edu. Tel (+1) 865 692 4066. SKYPE name: huisinghdon.

Submission guidelines

After submission of the abstracts and provision of feedback from the SI editorial team, the selected authors will be invited to prepare and to submit full papers for potential publication in the SI.

Paper submissions should be between 9000 and 10,000 words for comprehensive reviews, between 7000 and 8000 words for theoretical papers with broad empirical studies and between 4000 and 5500 words for case studies.

All papers should be developed based upon the editorial guidelines provided in the instructions for authors for "Journal of Cleaner Production," which can be accessed from the website: http://www.elsevier.com/wps/find/journaldescription.cws_home/30440/authorinstructions.

Upon receipt of the completed documents, a **minimum** of three independent reviewers will be selected to provide peer reviews for each document. Upon receipt and acceptance of the author's revised documents, all will be published in this SI of the JCP.