

FROM “APPROPRIATE TECHNOLOGIES” TO “APPROPRIATE STAKEHOLDERS INTERACTIONS”: SYSTEM DESIGN FOR SUSTAINABILITY, A PROMISING APPROACH TO COUPLE ECO-EFFICIENCY WITH SOCIAL EQUITY AND COHESION

Abstract

When the socio-ethical dimension of sustainability is a concern, most of the attention has been given so far to product design that meets the basic needs with appropriate technologies in emerging and low-income contexts, i.e. so called Base of the Pyramid approach (BOP). This paper presents Product-Service System Design for Sustainability as a promising and complementary approach to the former one.

Firstly, reasons for applying eco-efficient Product-Service Systems (PSS) innovation in low-income and emerging contexts are highlighted and some cases are presented.

Secondly, the now familiar model of distributed economy is introduced as a promising characteristic of such Product-Service Systems innovation when targeting both eco-efficiency and social equity and cohesion in emerging and low-income contexts.

Consequently, the following working hypothesis is proposed: “A PSS approach may act as a business opportunity to facilitate the process of social-economical development in emerging or low-income contexts by jumping over or by-passing the stage of individual consumption/ownership of mass produced goods. Such an approach potentially works towards a “satisfaction-based” and low resource intensity advanced service-economy, characterized by locally-based and network-structured enterprises and initiatives. This fosters a sustainable re-globalisation process that aims to democratise access to resources, goods and services”.

Thirdly, a potential role to design the transition path to facilitate the experimentation (design the sociotechnical experiments), introduction, scaling-up and branching of the Sustainable PSS solution is introduced to increase the probability for the innovation to be implemented and survive autonomously.

Within this framework a new potential role of design is proposed: that of System Design for Sustainability (SDS), with its own definition, approaches, criteria and tools. This role emphasises among others that, in emerging and low income contexts, it is not only a matter of appropriate technologies, but also of designing “appropriate stakeholders roles” and their “appropriate interactions/partnerships”.

Finally, - as a testing ground for such a new design approach - an on-going sustainable solar powered mobility system project for the transportation of disabled peoples is presented. This is managed by a cooperative of marginalised persons in Cape Town South Africa.