

System Innovation for Sustainability: Perspectives on Radical Changes to Sustainable Consumption and Production

The role of public policy in stimulating radical environmental impact reduction in the automotive sector: the need to focus on Product-Service System innovation

Fabrizio Ceschin* and Carlo Vezzoli

Politecnico di Milano, INDACO Department, Unit of Research Design and System Innovation for Sustainability (DIS), via Durando 38/A, 20158 Milan, Italy. E-mail: fabrizio.ceschin@polimi.it; carlo.vezzoli@polimi.it.

*Corresponding author

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Abstract: Product-Service System (PSS) innovation is a promising approach to address sustainability challenges in the automotive industry. Starting from this assumption, this paper presents and discusses the potential contribution that policy measures can have in fostering the automotive sector in innovating on a PSS level. A set of policy instruments (general instruments and specific PSS-targeted ones) are presented and classified, underlining the effects they could produce at the company and environmental levels. In order to effectively support sustainable PSS diffusion in the automotive industry, the paper suggests the integration of general policy measures (such as internalisation of external costs, Extended Producer Responsibility programmes, and informative policies), with the PSS-targeted ones (such as Green Public Procurement focused on sustainable PSS, support of companies in acquiring information related to PSS, support of demonstrative pilot projects). In addition the paper suggests the necessity to involve actively universities and research centres.

Keywords: Public Policies; Automotive Industry; Product-Service System (PSS); Sustainability; Environmental Impact Reduction; Functional Economy; Policy Instruments; Design.

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Biographical notes: The authors work as researchers in the Design and system Innovation for Sustainability (DIS) research unit, inside the Design department (INDACO) of Politecnico di Milano University, dealing with innovation, design and development of products, services and systems, targeting sustainable results.

Fabrizio Ceschin works as researcher at the DIS research unit since 2006, and he is currently a PhD candidate in Design at Politecnico di Milano University, dealing with the issue of 'design & radical changes for sustainability'. He took part in several research projects commissioned by companies and researches funded by EU (among which 'SCORE': Sustainable Consumption Research

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innovation level: here the focus is beyond individual the impact due to ever increasing consumption, has a technical perspective with a Design for sustainable behaviour (DfSB), Making people to adopt a desired. Human social systems and well-being Human well-being does not necessarily Innovation business processes for the development of new and improved products, Sustainable production and consumption involves business, .. for Sustainability 1: Perspectives on Radical Changes to Sustainable Consumption and.Fostering change to sustainable consumption and production: an evidence based System innovation for sustainability 1: Perspectives on radical changes to.a predominance of perspectives in sustainable consumption governance that focus almost exclusively on questions of time, a reliance on growth, innovation and technological solutions important information on need and strategies for radical changes to .. of the dominant consumption-production systems (Lebel et al.

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