

Project start: 1 July 2012 Duration: 3 years

Funding Scheme:

Seventh Framework Programme
EU Contribution: 2 400 000 € Consortium: 10 partners from 7 different countries

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www.spreeproject.com





SPREE is a three-year EU (FP7) funded research project launched in July 2012. Its overarching goal is to bring the European community closer to achieving a truly sustainable and prosperous economy characterized by efficient use of resources. We are focusing on the concept of Servicizing which represents the shift from traditional purchasing to service acquisition. The current discourse on resource efficiency already acknowledges the fact that mere technological improvements and moderate changes in consumers' behaviors are insufficient in terms of living within safe planetary boundaries. It is widely agreed that additional efforts beyond existing paradigms are required. We, at SPREE project, are designing innovative servicizing systems in the water, mobility and agri-food sectors that will enable a more radical and at the same time practical change in the way resources are being used and consumed. The Agent-Based Modeling (ABM) of these systems together with simulations of their potential effects will be supplemented by the composition of Servicizing Policy for Resource Efficient Economy.

Research progress

SPREE

2012 2013 2014

PAST

- Servicizing definition and methodology development
- Mapping Servicizing opportunities in the three sectors and policy review
- Ontology development for the ABM

PRESENT

- Conceptualizing "Policy Packages" and their applicability to Servicizing
- Conceptualization of the sector-specific environmental, economic and social impacts
- Developing methods for data collection and sector-specific methodologies
- Evaluation process of cases
- Developing the generic ABM

FUTURE

- Simulation of ABM and sensitivity analysis
- Data collection
- Country feasibility studies

News

Watch our video explaining the concept of Servicizing



- **Learn about Servicizing** ontology in SPREE wiki
- Take a look at the Services for Sustainability **International Workshop held in** Delft, the Netherlands on 11th April 2013
- Follow us on Facebook

SPREE Sectors

The SPREE sectors: Water, Mobility and Agri-food were chosen as they have been long identified as sectors with significant environmental impacts. Within the three different case studies, a through and robust study of servicizing systems and policies will be conducted. Data within each sector will be collected for the purpose of designing a sectorspecific ABM. This data collection will also be extended to other countries in order to evaluate the systems' environmental, economic and social impacts in different country settings.



The University of Surrey team has been searching for servicizing opportunities within the water sector and is particulary interested in the links between water consumption and well-being. Servicizing opportunities in the water sector include, among others: watering management of farm lots or private lawns, grid water supply service rather than owning an own rainwater tank and communal water intense services.



The Oxford university team is exploring several servicizing opportunities within the mobility sector that consist of business-to-business cases, collaborative consumption schemes between consumers and business-to-consumer systems. Servicizing opportunities include, among others: freight services, car sharing, lift sharing and car renting.



The team from the University of Santiago de Compostela is looking into a variety of servicizing cases in the agri-food sector, including cross-sector examples with strong links to the water sector. Servicizing opportunities include, among others: pest and fertilizer management, cooperative management of heifer rearing, cooperative production and distribution of fodder and farm machinery services.

Research teams and their tasks



dr. ir. Reinier van der Veen (left) and dr. ir. Igor Nikolic (right)

The Delft University of Technology team consists of dr. ir. Igor Nikolic (leader, assistant professor) and dr. ir. Reinier van der Veen (post-doc researcher). We are responsible for building an agent-based model for the evaluation of servicizing policy. Agent-based simulation is an advanced computational research methodology with which one can simulate the distributed decision-making processes and behaviour of individual agents. The behaviour of the individuals (representing consumers and businesses), interacting with one another and with the surrounding markets and physical environment, gives rise to the overall patterns of system behaviour. Within SPREE we aim to explore the possible emerging development pathways of servicizing under different policies, which will support a holistic analysis of the impacts of servicizing policy on absolute decoupling. Case-specific models will be created for the water, mobility and agri-food sectors, and we will take up the challenge of balancing between the richness of the analysis and the feasibility of data collection and modelling.

The Lund University team leading the conceptualization work package consists of Prof. Oksana Mont and Dr. Andrius Plepys. We are responsible for establishing a common understanding of the notion of servicizing and reviewing the relevant EU Directives and initiatives addressing servicizing. Our main task is to contribute to a better understanding on the current role of supply and demand side policies in facilitating the shift towards servicizing and especially its role in addressing absolute decoupling between consumption and resource use. Rebound effects often take place when a more efficient technology enters the market allowing more products made with fewer resources but also at lower costs (and the end price). Consumption oriented policies, and in particular policies that stimulate new means of generating the value for businesses and consumers could potentially address such side effects. Besides this main task we are also contributing to the final ontology for the agent-based modeling and to the conceptualization of policy.



Prof. Oksana Mont (left) and Dr. Andrius Plepys (right)

SPREE Advisory Board

The project assembled a respectable Advisory Board. Its main role is to carry out an on-going quality assessment of the project's key deliverables and to exploit project outcomes. The members of the Advisory Board participated in the workshop 1 in Lund (December 2012) and will participate in selected SPREE events in the future.

Prof. Ernst Ulrich von Weizsäcker, Co-Chair, UNEP international resource panel, Wuppertal Institute's founder

Prof. Walter R. Stahel, Vice Secretary-General & Head of Risk Management Research, The Geneva Association, Visiting Professor, Faculty of Engineering and Physical Sciences, University of Surrey, Founder-Director of the Product-Life Institute Geneva

Ms. Jenny Jones, English politician and member of the Green Party of England and Wales, former Deputy Mayor of London Areas of interest: transport, housing, planning and policing

Prof. Ronald Clift, Executive Director of the International Society for Industrial Ecology, Emeritus Professor of Environmental Technology, University of Surrey

Dr. Christian Patermann, Former Programme Director for "Biotechnology, Agriculture & Food" Research at the Research Directorate-General of the European Commission

Dr. Jola Welfens, Project coordinator of the research group for sustainable production and consumption in Wuppertal Institute. Research Areas include: Sustainable Consumption, Green Growth, Education for Sustainable development

Project partners



The Jerusalem Institute for Israel Studies



School for Geography and Environment, Transport Studies Unit, Oxford University



The Finnish Environment Institute



The International Institute for Industrial Environmental Economics, Lund University



ICEDE Research Group, University of Santiago de Compostela



The Research Council of Lithuania



Centre for Environmental Strategy, Surrey University



Faculty of Technology, Policy and Management, Delft University of Technology



The Faculty of Management, Tel Aviv University



The department of Business Management, Ben Gurion University of the Negev