



# PROJECT



The **S**ervicizing **P**olicy for **R**esource **E**fficient **E**conomy (**SPREE**) three-year research project was launched in July 2012 under the European Commission's Seventh Framework Programme. Its overarching goal is to bring the European community closer to achieving a truly sustainable and prosperous economy characterized by decoupling of economic growth and social prosperity from inefficient use of resources. Servicizing systems, which facilitate the transition from selling products to providing services, can potentially face this challenge and therefore comprise the core of SPREE research. Experts in environmental and social sciences, industrial ecology, complex system engineering, innovation, business management and public policy are working together at SPREE in order to identify specific servicizing opportunities that advance sustainable performances and to enhance the systems' evolution in practice.

## OUR GOAL

SPREE project's goal is to assist and enhance the creation of a resource-efficient Europe, characterized by an absolute decoupling of economic growth and social prosperity from unsustainable and inefficient use of resources.

## OUR APPROACH

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. Green growth policies, improving resource productivity through supply side measures such as supporting eco-innovation or facilitating sustainable use of raw materials, have achieved only relative decoupling since they have inevitably led to rebound effects through the increased scale of consumption. It is widely agreed that additional efforts beyond existing paradigms are required.

Servicizing is defined in SPREE project as a transaction where value is provided through combination of products and services and where satisfaction of customer needs is achieved by selling function of the product rather than product per se and/or by increasing the service component of the offer.

Servicizing relates to the concept of "functional economy" grounded on consuming functions rather than products as the end of economic activity, and enables a broader range of arrangements, including leasing, sharing and taking back. These enhance the supplier's responsibility on the products and provide an incentive to improve durability and design for end-of-life considerations by changing business models and redesigning products. At the same time, consumers are provided with the economic incentive to use products in a more efficient way. By influencing both production and consumption patterns, servicizing can bring us closer to achieving absolute decoupling.

## PROJECT OBJECTIVES

- (1) To investigate the key components of servicizing systems including, inter-alia, business models, consumers behavior and choices, types of contracts, infrastructure, ICT and innovation;
- (2) To further evaluate these aspects with a particular focus on servicizing opportunities in the Water, Mobility and Agri-food sectors;
- (3) To develop methods to explore the economic, environmental and social impact of moving towards servicizing solutions;
- (4) To evaluate specific servicizing systems, using three sector-specific Agent Based Models, based on empirical data collected in SPREE consortium's countries;
- (5) To integrate societal objectives into the environmental agenda based on a social comprehensive framework;
- (6) To test the influence of servicizing policy measures and the combination between them on the facilitation of servicizing systems together with their ability to achieve absolute decoupling and social advantages;
- (7) To provide a set of methods to evaluate decoupling policies;
- (8) To translate the knowledge gained throughout the project to tangible resources: 'Servicizing Policy Packages'.

## METHODOLOGY

SPREE methodologies were developed in order to evaluate the economic, environmental and social effects of servicizing as well as the impact of policies designed to facilitate these systems. SPREE methodology development phase included review and assessment of decoupling indicators and tools to measure economic and environmental effects of servicizing, such as Life Cycle Assessment, Input-Output Analysis and hybrid I/O-LCA; development of tools to assess social effects and policy impacts; and development of sector-specific "behavioral methodologies", i.e. consumers and businesses' decision making processes. In addition, Qualitative methodologies include 'Triple Task' participatory methodology bringing together key actors and policymakers, and Policy Packages methodology allowing ex-ante identification of possible contradictions among proposed policy measures and synergies between such measures, thereby producing packages where total contribution exceeds the sum of its parts.

In order to measure absolute decoupling and social impacts, the project uses novel Agent Based Modeling, on the basis of evidence-based data derived from a variety of case studies, simulating the impact of servicizing and evaluating the outcomes of proposed policies and their effect on achieving absolute decoupling and social desired outcomes.

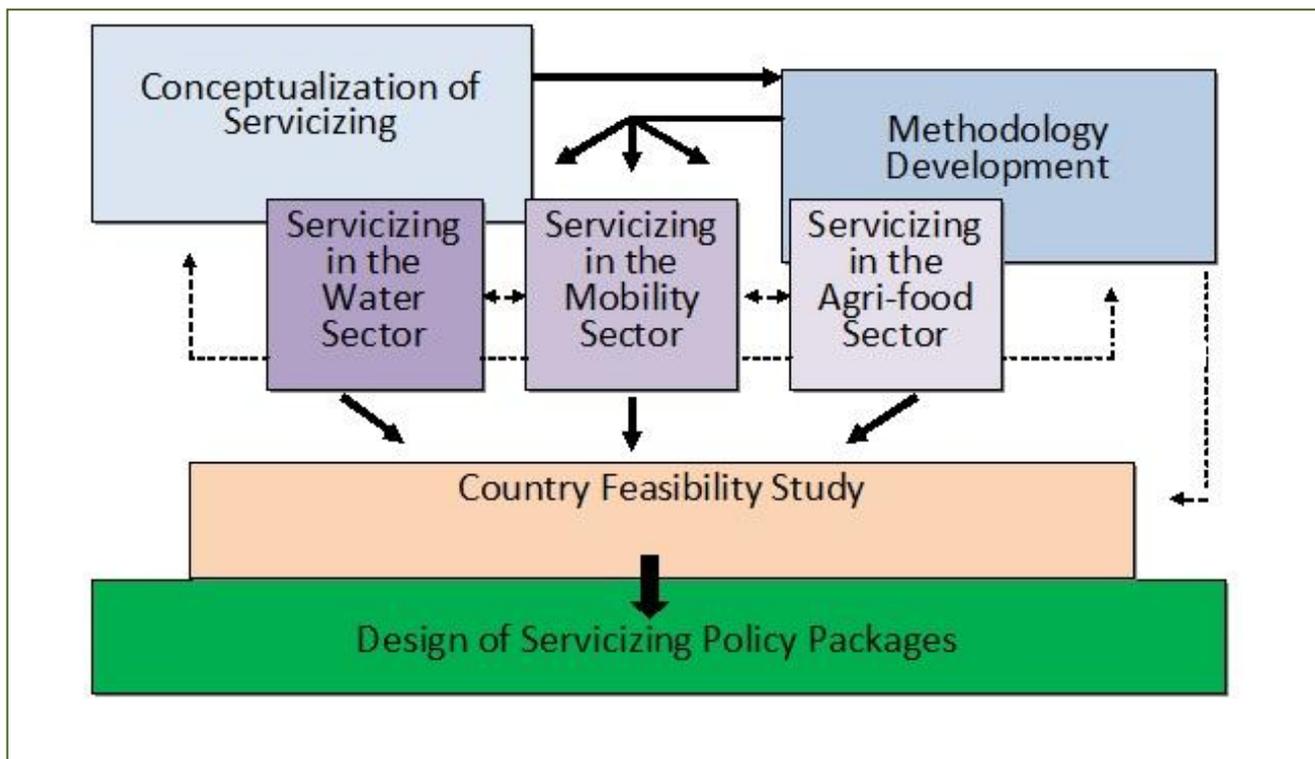
## SPREE SECTORS: WATER, MOBILITY AND AGRI-FOOD

The study of servicizing in SPREE three sectors includes review of existing servicizing cases and potential opportunities based on literature and desk review; evaluation of the key features of servicizing in the sectors; development of sector-specific methodologies based on and complementary to the generic ones; creation of a conceptual framework to evaluate social aspects of servicizing and analysis of sector-specific policies targeting sustainability in general and decoupling in particular.

Following the review of servicizing cases in each of the sectors, a long evaluation process was carried out towards the selection of one servicizing system in each of the sectors. The cases were evaluated against a set of criteria, including data availability, potential impact, feasibility and innovation together with a macro analysis of the inter-connections of the three systems and their unique role in the research. The three chosen systems are entitled 'Household Water Management', 'From Owning to Sharing in Car and Bike Use' and 'Crop Protection Management Solutions'. The modeling of these systems together with simulations of their potential economic, environmental and social effects will be supplemented by the composition of **Servicizing Policy for Resource Efficient Economy**, in the form of 'Servicizing Policy Packages', the key outcome of SPREE project.

## SPREE PHASES

**SPREE project** is constructed upon four key-elements: Conceptualization and detailed definition of Servicizing; Methodology that includes an advanced Agent Based Modeling (ABM) approach to structure and test options for servicizing systems and policies; Case studies in the partners' countries and; Policy design.



## EXPECTED RESULTS

The key outcome of SPREE project is the 'Servicizing Policy Packages' in the Water, Mobility and Agri-food sectors to achieve a sustainable EU economy and assess the contribution of policies to absolute decoupling and social desired outcomes. In addition, SPREE project will provide:

- (1) A thorough understanding of the transition dynamics towards servicizing systems;
- (2) A quantitative tool (ABM) for testing policies directed at promoting the transition to servicizing systems in the Water, Mobility and Agri-food sectors;
- (3) Development and use of new ways to measuring and visualizing decoupling success through the modelling simulation outcomes;
- (4) A comprehensive framework for understanding and assessing the social implications of servicizing systems, including well-being, quality of life, gender aspects, access to resources and social equity;
- (5) A better understanding of the existing differences within the European Union and the extended region countries with regard to customer approach, production standards, overall advancement on environmental issues and available infrastructure;
- (6) Contribution to methodology and research development coupled with support to actual policymaking.



Photo by Sierra Michels Slettvet

## STAY IN TOUCH

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## SPREE CONSORTIUM

	Partner	Country
	<b>Research Council of Lithuania</b>	Lithuania
	<b>Oxford University</b> – School of Geography and Environment, Transport Studies Unit	The UK
	<b>Surrey University</b> – Centre for Environmental Strategy	The UK
	<b>Lund University</b> – The International Institute for Industrial Environment Economics	Sweden
	<b>University of Santiago de Compostela</b> – ICEDE Research Group	Spain
	<b>The Finish Environment Institute</b>	Finland
	<b>Delft University of Technology</b> – Faculty of Technology, Policy and Management	Netherlands
	<b>The Jerusalem Institute for Israel Studies</b>	Israel
	<b>Tel Aviv University</b> – Faculty of Management	Israel
	<b>Ben Gurion University</b> – Department of Business Management	Israel

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