

# Sustainable Product-Service Solutions Offer Design

Course developed by Pr Daniel Brissaud, Tomohiko Sakao, Andreas Riel and John Erkoyuncu

The course is based on the article titled Designing Value-Driven Solutions: The Evolution of Industrial Product-Service Systems, CIRP Annals - Manufacturing Technology, 71-2, 2022, 553-575

## Venue

Grenoble INP - UGA, 46 avenue Félix Viallet, 38000 Grenoble, France

## Contact and registration

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## Prerequisites

A basic knowledge in engineering or management is needed.









## Objectives

Product-Service Systems were popularized in the 2010's for their huge potential in profitability, affordability and sustainability. In 2022, some industries are very successful in their business but in general, unfortunately, the industrial and scientific situations are far from what was expected. Even though the technology to deliver solutions to customers has come a long way, we still don't know how to design such complex systems at the expected level of performance and sustainability.

The course is open to PhD candidates, Master students willing go on with research, and Industry engineers and managers.

	Monday 28 November	Tuesday 29 November	Wednesday 30 November	Thursday 1 December	Friday 2 December
9.00		PSS Design Overview of Value-Driven Solutions Design Pr Daniel Brissaud, Grenoble INP	PSS Design Invent business transformations towards PSS (Group project) Pr Andreas Riel, Dr Valérie Rocchi, Pr Daniel Brissaud Université Grenoble Alpes	PSS Design Value-Driven Solutions Design Pr Daniel Brissaud, Grenoble INP	PSS Design Will the future be sustainable with product-service systems? (Group project presentations, lectures, discussions) Pr Peggy Zwolinski, Dr Valérie Rocchi, Pr Daniel Brissaud Université Grenoble Alpes
10.00	Registration	Resource-based design (Circular Economy serious game) Lucas Riondet, Pr Peggy Zwolinski Université Grenoble Alpes		Sustainable Big Equipments Cyril Micheau, Business Development Manager, Caterpillar France	
12.00	PSS Design Introduction Pr Daniel Brissaud, Grenoble INP Sustainable Device-AS-A-Service Patrice René, Director of Personal Systems, HP France	Entrepreneur's talk BeFC Jean-François Bloch, Pierre-Yves Bloch Lunch Networking with entrepreneur and industrialist	Entrepreneur's talk Rosi Solar Guy Chchignoud, Joris Moenne Lunch Networking with entrepreneur and industrialist	Entrepreneur's talk Peer coaching Philippe Martinelli Lunch Networking with entrepreneur and industrialist	Farewell lunch
14.00	PSS Design Sustainable Product-Service Systems Design Dr Estephania Delgadillo Jaime Université de Technologie de Troyes, France	PSS Design Big Assets Management Design Pr John Erkoyuncu Cranfield University, UK	PSS Design Product-Service Systems Innovation Pr Andreas Riel Université Grenoble Alpes, France	PSS Design Design of Sustainable Offers Pr Tomohiko Sakao Linköping University, Sweden	
17.00					
19.00					Gala Dinner

## Sustainable Product-Service Solutions Offer Design

	<p>Daniel Brissaud has been a professor of engineering design at Grenoble INP since 1998. He is director of the School of Industrial Engineering. He led the French survey on sustainable production systems for the future. He is a member of the board of the institute of artificial intelligence (MIAI), in charge of deploying AI research on manufacturing, supply chain and material. His research interest is eco-design, humans in industry 4.0, product-service transition design.</p>
	<p>Prof. Tomohiko Sakao develops theories applicable into practice and disseminates cutting-edge insights into industry. He is internationally recognised expert in Ecodesign and Product-Service System. As environmental problems and resource scarcities are growing issues, innovative ways of providing products and services are needed in order to enhance the global competitiveness of industry in developed countries.</p>
	<p>Andreas Riel received a MSc (Dipl.-Ing.) in Telematics from Graz University of Technology, Austria, and a PhD in Mechatronics from Vienna University of Technology, Austria. He is an independent coach, consultant and trainer in Systems Engineering, Quality Engineering, Innovation Management, as well as Digitalization and Industry 4.0 to major European industry, especially automotive. He is also a part-time Associate Professor at the Institute of Engineering of Grenoble Alps University.</p>
	<p>Prof. Erkoyuncu is Head of the Centre for Digital Engineering and Manufacturing. The Centre focuses on: 1) digitalisation of manufacturing processes, 2) complex systems and optimisation, 3) digital twins and AI, and 4) virtual and augmented reality. John is a Professor of Digital Engineering. John is active with Innovate UK and EPSRC funded projects.</p>
	<p>Dr Estephania Delgadillo Jaime got her PhD at the University of Technology Troyes. Her interest is in the integration of territorial resources (tangible and intangible) in sustainable Product-service systems (PSS) design for the circular economy. She examined the different collaborative relationships between territorial stakeholders designing and developing a PSS and its value creation processes. Her method aids companies to develop strategies that integrate territorial resources in the design of sustainable PSS.</p>
	<p>Peggy Zwolinski has been a professor fo eco-design at Grenoble INP since 2012. She is the director of the G-SCOP research laboratory, dedicated to production systems design and management. She is also a member of the University scientific board of directors, in charge of managing the research orientations in both environment and production systems. Sle leads the multi-disciplinary project on circular industrial systems.</p>
	<p>Lucas Riondet is currently a PhD candidate at Université Grenoble Alpes, France. His research project deals with ecodesign and lifecycle analysis methods from both prospective and industrialization perspectives. He also trains students at master level in mechanics, engineering design and LCA methods. He has developed a serious game on circular economy to make students understand the management of limited resources.</p>
	<p>Dr Valérie ROCCHI has been a research engineer in charge of the development of the sustainable industry of the future topics at Grenoble INP. Her interest is on the key factors and barriers that hinder industrial companies, especially SMEs, to uptake their digital transformation. She also addressed the role of humans in industry 4.0, work organisation and skills and competencies. For 15 years, she has been contributing to strengthening the links between industry and academia in R&amp;D&amp;I activities.</p>