Support for the Early Stages of Designing Effective and Resource-Efficient Offerings

Sergio Brambila is one of the PhD students involved in Mistra REES. His research interests lie in innovation, entrepreneurship, and the environment – and he is largely involved in the work in Mistra REES on design support for REES.

In December 2020, Sergio is set to defend his PhD thesis with the title "Support for the Early Stages of Designing Effective and Resource-Efficient Offerings: A cross-disciplinary approach". His research involves looking into engineering design methods from a systems perspective and especially into how to evaluate and analyse such methods. It combines knowledge in engineering design, environmental and systems engineering as well as project management. In contributing to the research in Mistra REES, Sergio studies how manufacturing companies can develop product design to become more resource efficient. This means that from a system perspective, he studies methods for manufacturing design and evaluates how these work in practice.

He believes that the key to achieve the shift towards a circular economy lies in lifecycle thinking and to retain the value of resources as opposed to thinking in silos and discarding valuable resources. The aim of his research is to provide useful and usable support to design practitioners for them to successfully design effective and resource efficient offerings. The research conducted by Sergio provides practitioners with different types of support covering tools, methods and even knowledge and skills important for designing effective and resource-efficient offerings.

Sergio sees great potential in focusing more on knowledge and skills that can benefit design practitioners and society at large. His licentiate thesis, "*Early stages of designing resource-efficient offerings: An initial view of their analysis and evaluation*", covered the early stages of designing resource-efficient offerings, underlining the need for academia and industry's interdisciplinary knowledge and common understanding for design. In the future, he hopes that universities can put an emphasis on knowledge and skills and not only methods and tools.