

# **A Morphological Approach For Designing Product-Service Systems Concepts**

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## **Abstract**

Product-Service Systems (PSSs) have emerged as a means of substituting transactional product sales with more comprehensive solutions able to achieve and surpass the product's potential. Several studies regarding the design of these systems adopted functional approaches, yet limited to specific aspects and settings of a PSS. Morphological thinking is renowned in product design and development for breaking down functions and tasks into sub-functions where the fulfillment of each is a step towards the holistic solution. The article proposes using a morphological approach in terms of a PSS, incorporating not only the product, but also enclosing the service and the actors involved. The morphological matrix hence leads to a feasible and holistic definition of the functions, activities, actors and the means for fulfilling a requirement. Then, each sub-function is assessed according to economic and environmental criteria: the combination of the most promising sub-function establishes the sought PSS concept.

## **Keywords**

Morphological matrix, product-service systems, conceptual design, concept development, sustainable design.

## **Biography**

Nicolas Haber is a Ph.D. candidate in Industrial Engineering and Engineering Management at Università degli studi di Roma, La Sapienza. His research concentrates on product-service-system design as a means of improving environmental sustainability