



Smart Textile Services

Designing and Selling 'Soft Product' - 'Valuable Service' systems

About

The goal of this research project is to integrate existing knowledge from the separate domains of textile (soft materials), technology and services. Such integration creates opportunities within the industry and end users of societal care, productivity, healthy lifestyles, work and leisure to design 'soft product' - 'valuable service' systems. As no single actor in the fields of textile, technology or service design can understand and realize the creation of Product Service Systems they need to team up with relevant partners.

Background

Smart textiles, which combine soft materials and electronics, may invigorate both the textile and high-tech industry. The European textiles and textiles-related industry is dealing with increasing competition from lower-cost regions. Smart textiles, which combine soft materials and electronics, give the industry an added value, enabling the European textiles industry to keep its competitive position in the world. The high-technology industry can humanize their hard and cold products through soft material properties and valuable services. End users will be given the opportunity to co-create 'soft product' - 'valuable service' systems and new business combinations will arise selling such Product Service Systems.

Questions

This project will address the following questions:

- What are the successful methods, platforms, guiding principles and business models to realize an eco-system

of partners that understands the multi-disciplinary opportunities and challenges of putting Smart Textile Product Service Systems into society?

- How can the application of user-centered design methods discover, exchange and combine the theoretical principles, strong traditions and best practices within the domains of textile, interactive product and service design?
- What are the methods and criteria for the different stakeholders to pass the transitions between the different phases of the Growth Plan (Incubation, Nursery and Adoption phase)?

Results

Accomplished results

- Prototypes designed and made by the PhD students at Eindhoven University of Technology.
- Collaboration of the partners in workshops to enable a bottom-up approach to innovation, and to exchange expertise, skills and expectations.

Expected results

- An 'inspirational test-bed' in an eco-system of partners where new Smart Textile-based PSS proposals are created and studied in a societal context of use and business.
- A growth plan for the development and evaluation of 'inspirational test-beds'.
- Start-up companies within the realm of Smart Textile Product Service Systems.

Facts

Duration: till april 2015.

Funding: CReative Industry Scientific Programme (CRISP).

Partners

- Eindhoven University of Technology, dept. Industrial Design
- Delft University of Technology, dept. Industrial Design Engineering
- Design Academy Eindhoven
- Saxion Universities for Applied Sciences
- Audax Textiel Museum Tilburg
- De Waag Society
- V2
- MODINT
- Contact Groep Textiel
- Unit040 Ontwerp BV
- Metatronics
- De Wever

People

Dr. O. Tomico Plasencia, Eindhoven University of Technology, dept. Industrial Design, project leader

Dr. Ir. M.S. Kleinsmann, Delft University of Technology, dept. Industrial Design Engineering, copromotor

Dr. Ir. G.R. Langereis, Eindhoven University of Technology, dept. Industrial Design, copromotor

M. ten Bhömer MSc, Eindhoven University of Technology, dept. Industrial Design, PhD candidate

K. Kuusk M.A., Eindhoven University of Technology, dept. Industrial Design, PhD candidate

Ir. Christine De Lille, Delft University of Technology, dept. Industrial Design Engineering, postdoc

Case

An important part of the project is the collaboration between different industries and knowledge partners. During two workshops the project partners focused on getting to know each other, exchanging skills and defining directions for concrete 'soft product' - 'valuable service' systems. The partners identified the following important areas of interest for the project:

- Outcomes and valorization
- Network, partnering and friends
- Societal impact
- Technology exploration
- Creative vs. constraints
- Entrepreneurship

The project can be described best as a research-through-design approach in which hands-on activities lead towards a bottom-up approach to innovation. An example is the workshop hosted by Saxion Hogeschool in October. The workshop was a full day of hands-on activities to unravel opportunities for new Smart Textile Product Service Systems combining the strengths and expectations of different partners.

