



SMART SUITCASES

Suitcases with integrated sensors that can self-weigh, self-locate and self-identify



With the rise of the Internet of Things, consumers increasingly expect to be connected to their devices and personal items over the internet. There is plenty of opportunity for the luggage industry to capitalize on this trend. Smart suitcases – connected to the internet and equipped with sensors – can enhance the travel experience and streamline the processes of stakeholders along the travel industry value chain. That’s exactly what the SMART SUITCASE project intends to develop.

Happier travelers and smoother processes

One of the most common luggage handling pain points cited by travelers is lost luggage with no information about its location. Long check-in and security lines, oversized luggage and unidentifiable suitcases are also high on the list. These pain points can lead to higher costs and unsatisfactory travel experiences. By gaining greater insight into luggage weight and location through internet-based services, travelers would have more information about their luggage, and travel industry players could improve the travel experience, reduce luggage handling errors and simplify operational processes for airports, railways, ground handlers, and more.

Combining cutting-edge electronics with plastics

The SMART SUITCASE consortium is comprised of experts in luggage design, printed electronics, geolocalization, antenna design and moldable electronics. Together, they will develop a smart suitcase with the sensors, hardware and services necessary to address traveler pain points. The project will innovate in the areas of integrating electronics in plastics, electrical interconnections that bridge suitcase parts, low-cost printed electronics, antenna design and geolocalization for the aviation industry.

Low-cost, lightweight and safe

The success of this project hinges on the following quantifiable goals for a smart suitcase, which are not yet met by currently available products. As such, the suitcase should:

- increase less than 5% in weight;
- have an average lifetime of at least 7 years;
- limit the loss of packing space to maximum of 0.1%;
- keep the rise in purchase price below 10%;
- meet all airline and safety regulations.

A suitcase that looks after itself

The SMART SUITCASE project will produce an energy-efficient technology platform that integrates printed and classic electronics into injection-molded or press-formed suitcase elements. The cloud- or smartphone-connected suitcase will be equipped with self-weighing, smart-lock and geolocalization functionalities. The project will result knowledge growth and competitive advantages for consortium partners as well as new applications of the technology in other market areas.

“The SMART SUITCASE project will develop a lightweight, durable, cost-effective and regulations-compliant smart luggage solution to improve operational processes of the travel industry and improve the travel experience.”

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Project information

Industry

- Quad Industries
- Samsonite Europe
- Sensolus

Research

- imec – IDLab IBCN – Ugent
- imec - CMST

Contact

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