



PRESS RELEASE

MODULUSHCA project to change vision of logistics

- The objective of this project is to apply the innovative “Physical Internet” concept in a real case in FMCG sector and contribute to the development of interconnected logistics at the European level.
- This project receives funding from the 7th Framework Programme of the European Commission.

Logistics sustains our lifestyle and businesses activities. Physical objects are moved in containers, stored, realized, supplied and used throughout the world, allowing the globalization of world trade. But this is still a harsh fact to be solved due to the inefficiency and unsustainability of the processes from an economic, environmental and social perspective.

For example, despite all efforts already undertaken to improve transport technologies, CO₂ emissions are still growing. Trucks and containers are often half empty at departure, with an 42,6% of average utilization. And vehicle & containers often return empty, or travel extra routes to find return shipments (25% of travel). Besides this, multimodal routes are most often time-and-cost inefficient and risky due to a scanty synchronization and badly designed interfaces.

To overcome this Global Logistics Sustainability Grand Challenge, the ‘Physical Internet’ is an international initiative which proposes a new efficient and sustainable logistics system. It is defined as an open global logistics system founded on physical, digital and operational interconnectivity through encapsulation, interfaces and protocols.

This initiative is based on applying the Digital Internet metaphor to enable such an open network of networks for physical objects like the one employed in the World Wide Web. This new concept drives to high-performance logistics centers, movers and systems, making it seamless, easy, fast, reliable and cheap to interconnect physical objects through modes and routes, with an overarching aim towards universal interconnectivity.

Interconnected Logistics

MODULUSHCA project is the first real experience of this innovative vision. The objective is to achieve the first genuine contribution to the development of interconnected logistics at the European level, in close coordination with North American partners and the international Physical Internet Initiative.

In this new logistics context, the Physical Internet does not deal directly with physical goods, but rather with interlocking modular containers encapsulating objects. So, it proposes the use of modular, eco-friendly, smart and standardized worldwide packets.



So, the goal of the MODULUSHCA project is to enable operating with developed iso-modular logistics units of sizes adequate for real modal and co-modal flows of fast-moving consumer goods (FMCG). This sector has been selected because it faces several challenges where logistics are involved and the high logistics requirements of the product as its frequent purchase, non-durability, high volumes, etc.

MODULUSHCA will establish a robust and replicable methodology to develop and evaluate solutions for interconnected logistics looking at other elements of the supply chain.

In detail, this project integrates interrelated working fields: the development of a vision addressing the user needs for interconnected logistics in the FMCG domain; the development of a set of exchangeable (ISO) modular logistics units providing a building block of smaller units; the establishment of digital interconnectivity of the units; and finally the development of an interconnected logistics operations platform leading to a significant reduction in costs and CO₂ emissions that will be demonstrated in two implementation pilots for interconnected solutions.

MODULUSHCA efforts will lead to the development of a road map towards a fully interconnected logistics system in 2030. The road map will address the changes and necessary steps to evolve the logistics system gradually, exploiting progresses in digital, physical and operational interconnectivity, building on current players, assets and infrastructures.

An international consortium coordinated by **PTV Group** leads the project, with relevant partners as the companies **Procter&Gamble, Chep, Jan de Rijk Logistics and Poste Italiane**; the **Universities of Graz, TU Berlin, Laval and Lausanne**; the research centers **ILIM, ITENE and MINES PARISTECH**; and the consultancies **Inception Consulting, Kirsen Global Security and Meware SRL**.

More information: www.modulushca.eu