15) SWARM - Distributed Warehouse Management Experiment; **CEESA, S.A.,** Spain

EXPERIMENT DESCRIPTION

CEESA's SWARM experiment proposes to validate a service that enables manufacturers and retailers to efficiently manage distributed warehouses in the scenario of new added-value services for e-commerce business model.

The SWARM main challenges were 1) the optimization of the multiple warehouses management, some of them virtual since the products in transit are owned by the manufacturer or distributor till the moment the client accepts them, 2) the integration with enterprise management tools and 3) the efficient interoperability with management tools of different logistic agents within the supply chain, including logistic agents and carriers.
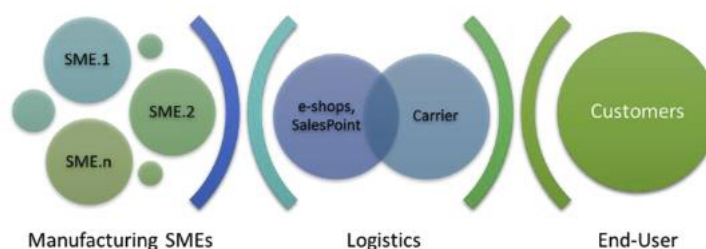
TECHNICAL IMAPCT

The SWARM experiment solution is mainly based in the use of one FIWARE component, the Orion Context Broker. It relies on the open source MongoDB technology and will receive the request using the NGSI communication protocol to manage the context information about the context entities of the experiment, as requested in the Open Standards for Context Information Management of FIWARE.

The SWARM experiment has been useful to demonstrate that MIDIH technology can be actually instrumental in delivering very significant business KPI improvements, and specifically:

- a better connection between resource management tools and the rest of the actors involved in the delivery have improved the data exchange and reduce the incidences, with a reduction of delivery incidences around 20%.
- real time access to physical and virtual stock level of an item, enables a correct management of the products availability for sales and deliveries, avoiding stock break by 25%
- Automation of labelling via courier's web services, and providing a return label to clients, reduce the labelling times and improve quality of service for clients' satisfaction, with a reduction of labelling time by 20%

ECONOMICAL/BUSINESS IMPACT

To bring the product to the market CEESA will have to differentiate from existing competitors. CEESA strategy is to enable the increased flexibility offered by MIDIH technology enablers and architecture, but also to address the need of small and medium enterprise marker; where the company already holds a strong position.

CONTACT
Christian Bolaños
christian@ceesa.com
CEESA,S.A.
Bajo, Tomas Olabarri Kaia, 2,
48930 Las Arenas - Areeta, BI, Spagna