



FALCON

**Feedback mechanisms Across the Lifecycle for
Customer-driven Optimization of iNnovative product-
service design**

The FALCON Project

Eva Coscia (Holonix)



Horizon 2020
European Union Funding
for Research & Innovation

1. FALCON Overview

- Objectives & Approach
- Achievements

2. FALCON Business Scenarios

- White/Brown Goods & Clothing Textiles
- Healthcare Products & High-tech Products

3. FALCON Exploitation

- Methodology
- How to market FALCON

FALCON

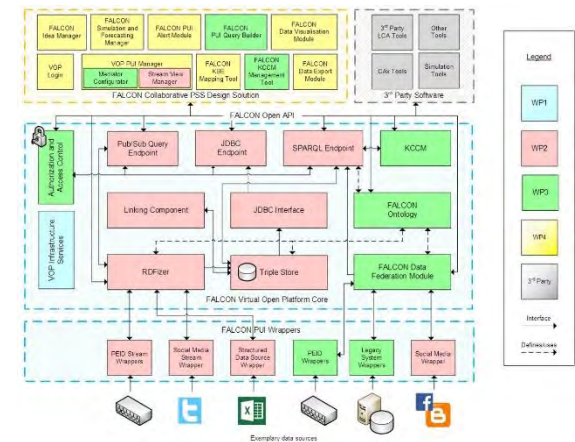
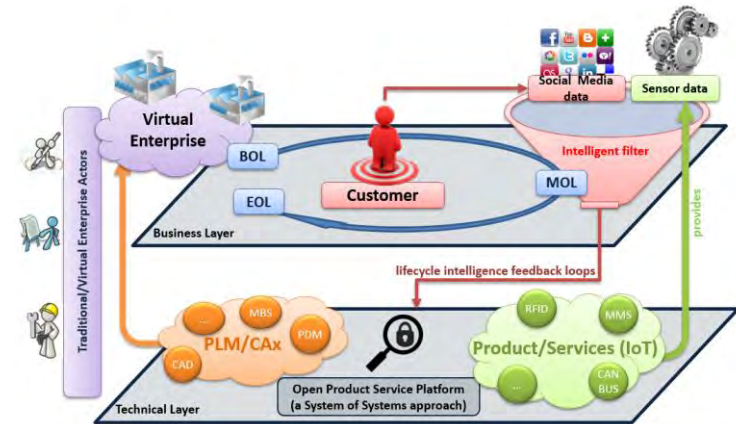
Funding	Horizon 2020 European Union
Call:	FoF-05-2014
Type:	RIA
Start:	01.01.2015
Duration:	36 months
Team:	13 Partners 8 Countries
Coordinator:	BIBA – Bremer Institut für Produktion und Logistik GmbH

FALCON Objectives & Approach



FALCON objective is to use product-service information collected from **Collaborative Intelligence and Product Embedded Information Devices** to support innovative product-services (re)design & improved assessment of lifecycle

FALCON has defined and deployed a **Virtual Open Platform** to enable a set of application and services for **social media analysis** and **open innovation**, **usage data gathering** and **visualisation**, **simulation** and benefit from a **semantic representation** of PLM information for cross-sectoral search

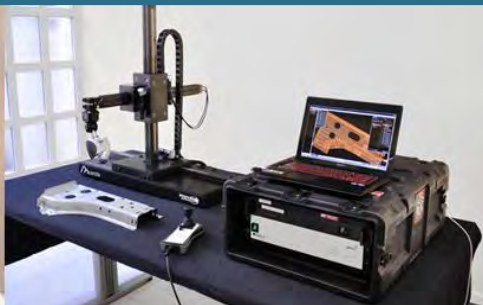




White & Brown Goods



Healthcare Products



High-tech Products



Clothing Textiles

BUSINESS SCENARIOS



Business Motivation:

- Integration of data sources and creating valuable information to improve the offer to the customers
- A better product-service quality through optimization of planning, development and testing processes.
- New innovative services for existing products.

Arçelik A.Ş.



Business Motivation:

- Improve collection of feedback from customers from usage phase and even from new collection proposals
- Improve exchange of information both from social networks, marketplaces and e-commerce site.
- Collecting better information about required fitting of the garments.

 *cashmere*
Dena 

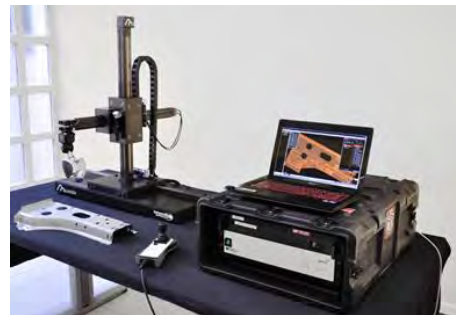


Healthcare Products

Business Motivation:

- Increase technical reliability of the devices,
- Enable comprehensive diagnostics, and
- Enable user-friendly devices and services

PHILIPS

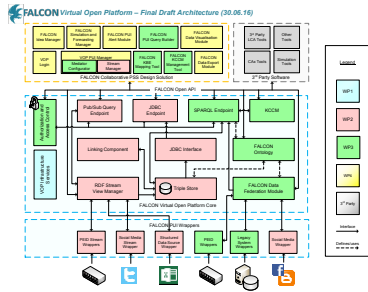


High-tech Products

Business Motivation:

- Increase the Competitiveness of Metrology Solutions improving their functionalities and ease to use.
- Reinforce Client “loyalty“ offering metrology services more effective.
- Improve the Calibration, Maintenance & Verification processes and Enhance Machine Programming & Report Content Definition.

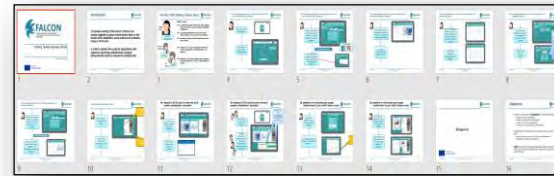
DATAPIXEL
QUALITY CONTROL ENGINEERING



Virtual Open Platform



Ontologies



Story Boards



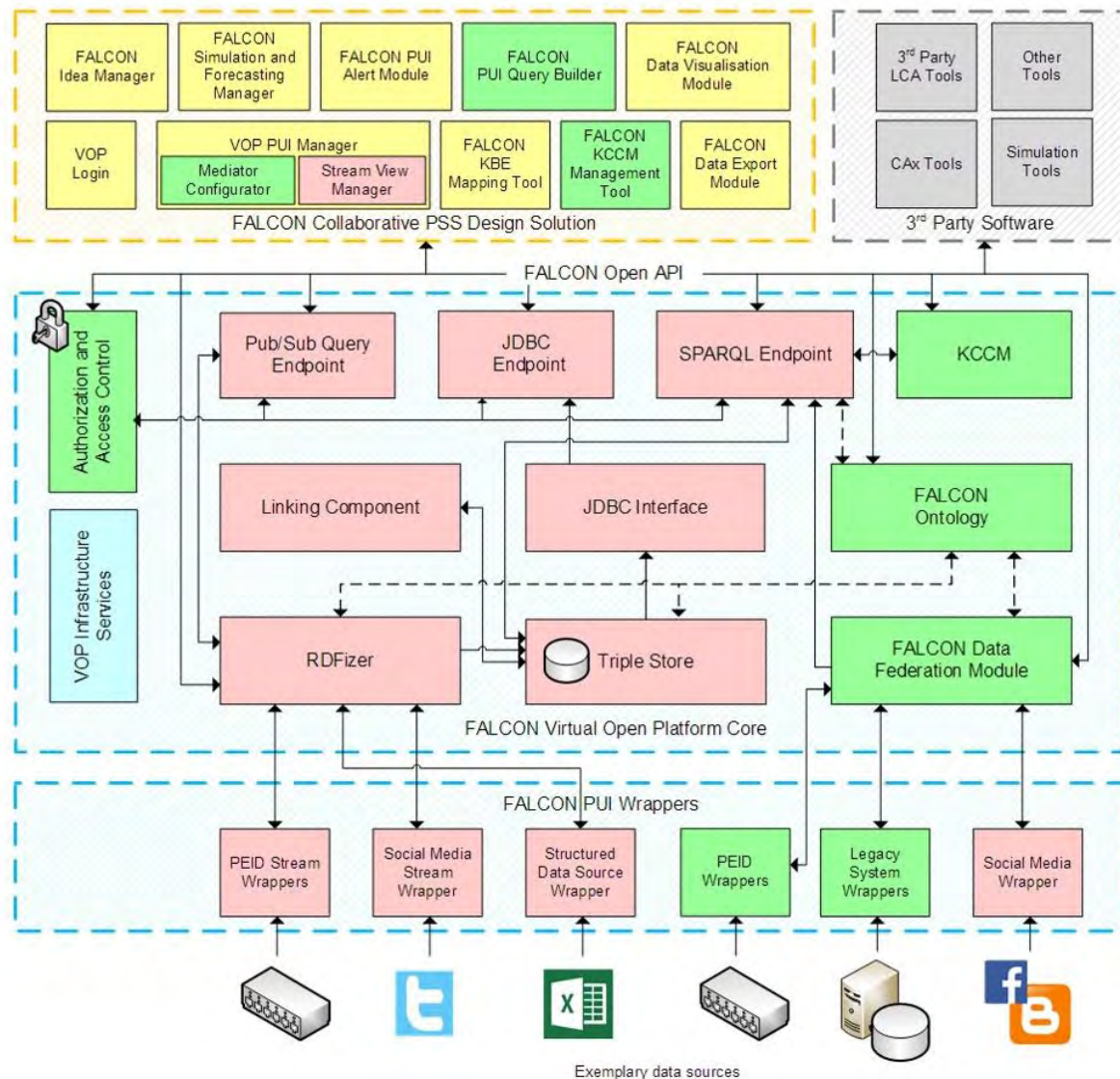
IT prototypes

FALCON ACHIEVEMENTS

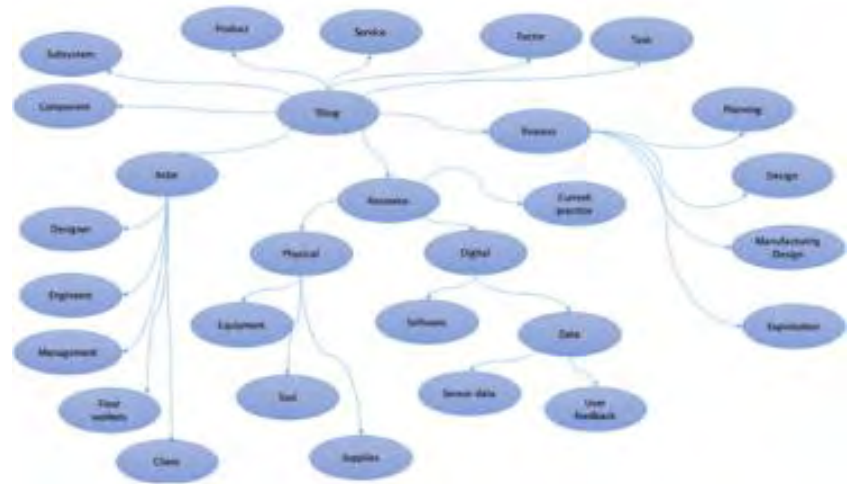
Virtual Open Platform



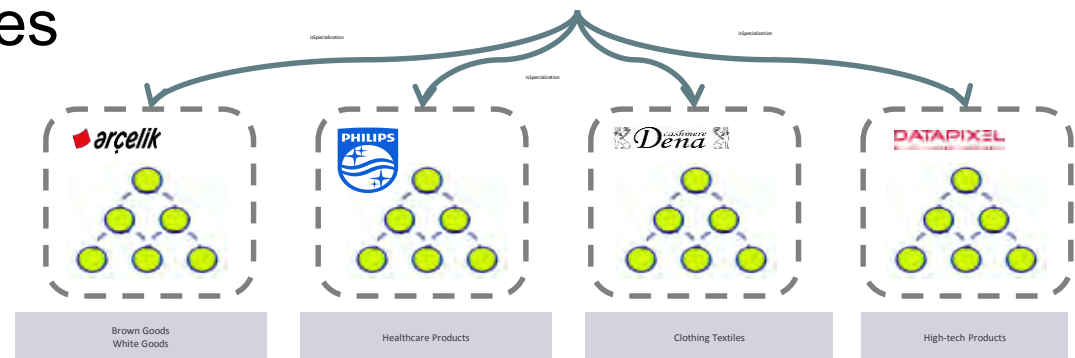
- Open system-architecture
- Systems of Systems Approach
- Based on semantic technologies
- Core services for data and knowledge management
- Wrappers for data gathering from IoT and Social Media
- High level applications for end users



Upper ontology covering
PSS knowledge domain



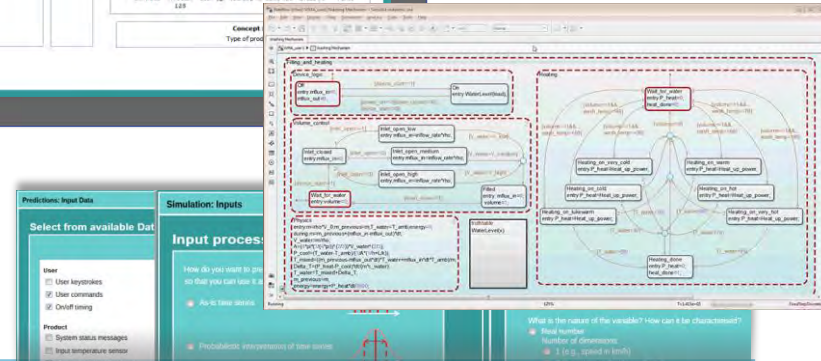
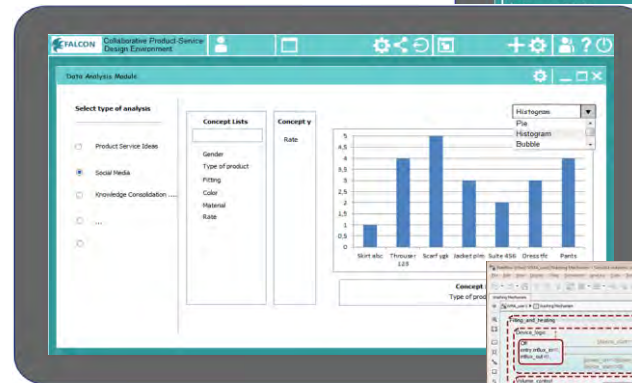
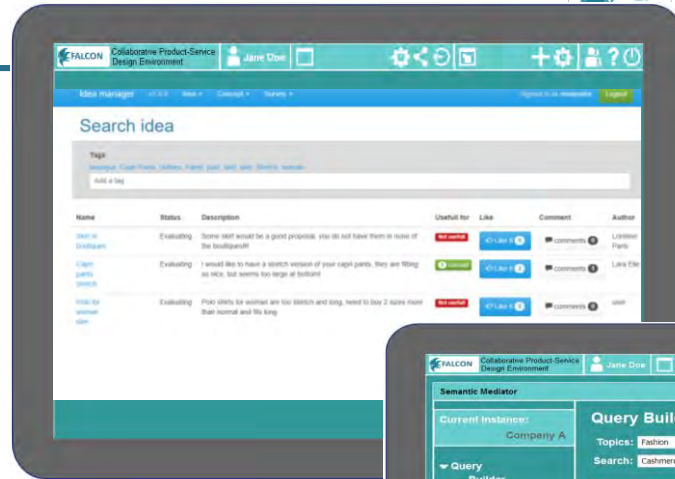
Initial definitions of
domain-specific ontologies
for FALCON business
scenarios

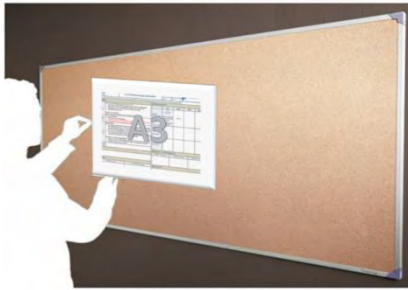


Software prototypes of functional modules

Applications and services for

- Open Innovation
- Data Federation module for data acquisition from Product Usage Information sources
- Data visualisation
- Alarms triggering
- Simulation and forecasting

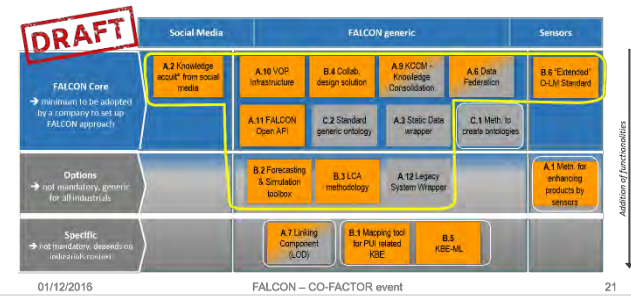




Methodology

- A.1 Methodology for enhancing products by sensors to establish PUI feedback loops
- A.2 Methodology for knowledge acquisition from social media
- A.3 Static Data Wrapper
- A.6 Data Federation Semantic Mediation
- A.7 Linking Component
- A.9 Knowledge Consolidation & Cross sectoral Management
- A.10 FALCON Open Platform Infrastructure
- A.11 FALCON Open API
- A.12 Legacy Systems Wrappers

Innovative Exploitable Assets

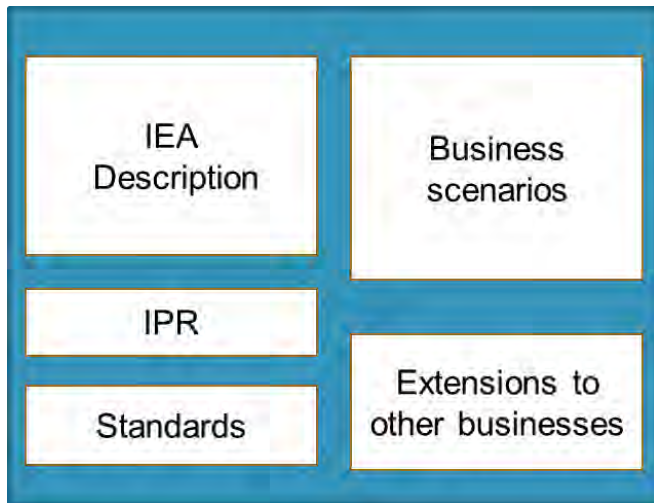


Individual vs Joint Exploitation

EXPLOITATION PLANS & ASSETS

Knowledge Brief to capture knowledge on Innovative Exploitable Assets

- **A3 K-Brief is a powerful tool to share efficiently key information, facilitate discussions and support decisions**
- **K-brief is not only a template, it is a process**



IEA K-Brief

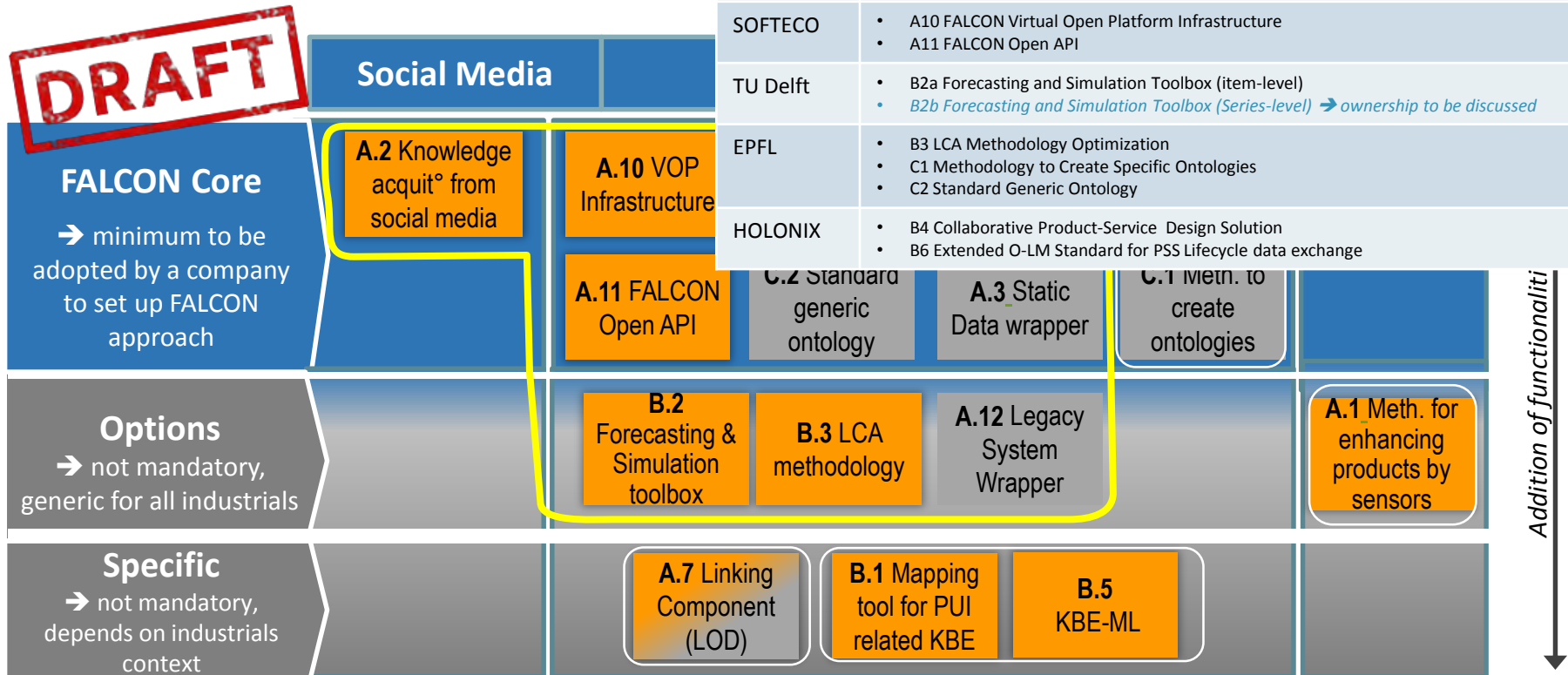


How to market FALCON VOP?



FALCON Exploitation :

- **Individual Exploitation plan**
→ the way the different results can be exploited
- **Group Exploitation plan**
→ the way we can sell FALCON results as a



- Domain-specific Ontologies



Thank You!

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BIBA

DATAPIXEL
QUALITY CONTROL ENGINEERING

cashmere
Dena

EPFL
ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

HOLONIX
BRING THINGS TO LIFE

ISADEUS

iDeal

mews
PARTNERS

PHILIPS

softeco
sismat
information technology

TU Delft

UBITECH
ubiquitous solutions



Horizon 2020
European Union Funding
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- Objective: Innovative product-service design using manufacturing intelligence
- Theme: FoF-05-2014
- Call: Factories of the Future
- Lead: BIBA – Bremer Institut für Produktion und Logistik GmbH
- Duration: 36 Months
- Start: 2015/01

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