



FALCON

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

The FALCON Project

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Horizon 2020
European Union Funding
for Research & Innovation

1. FALCON Overview

- Objectives
- Approach

2. FALCON Business Scenarios

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

FALCON

Funding: Horizon 2020
European Union

Call: FoF-05-2014
RIA

Start: 01.01.2015
36 months

Coordinator: BIBA – Bremer
Institut für Produktion und
Logistik GmbH

Team: 13 Partners
8 Countries



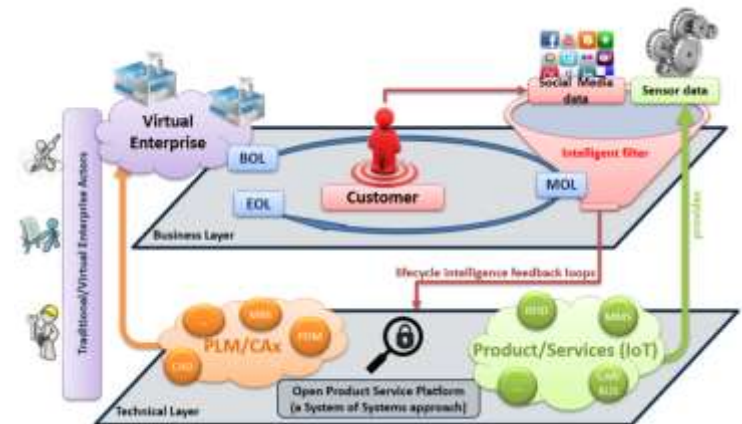
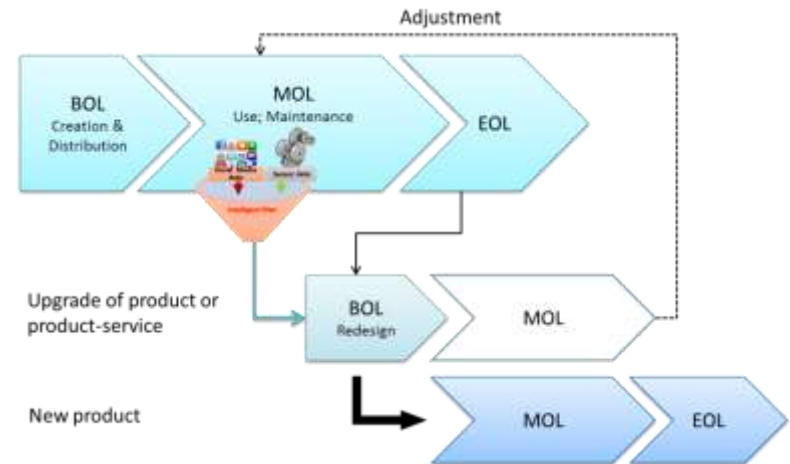
FALCON Approach



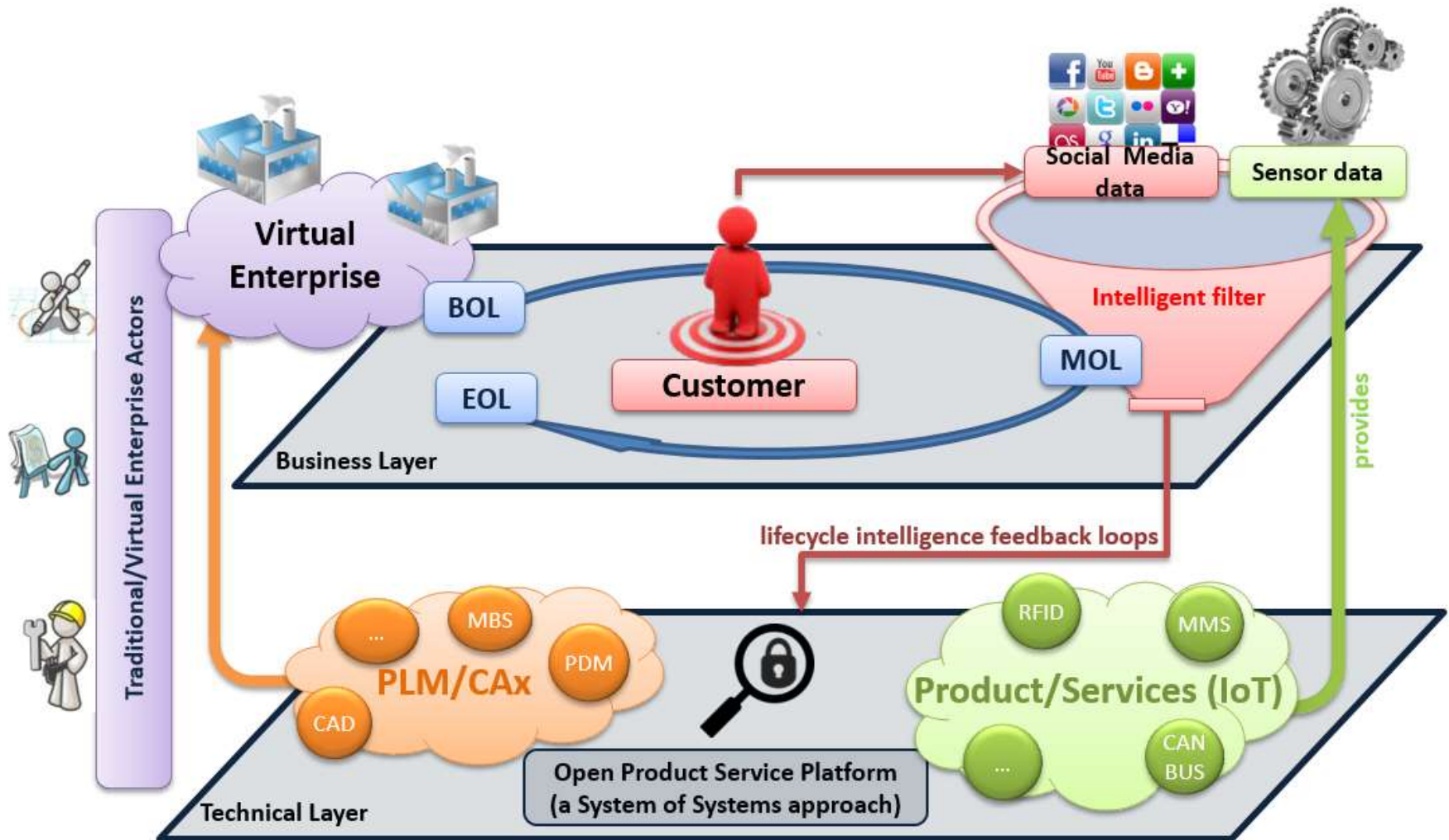
FALCON will investigate how user experiences and usage data collected via IoT and social media can be deployed for the improvement and design of product-services.

FALCON will define and deploy a Virtual Open Platform for Product/Service Design, Manufacturing and Lifecycle Management

The Virtual Open Platform platform will incorporate new simulation techniques and benefit from a semantic representation of PLM information for cross-sectoral search



Approach





White & Brown Goods



Healthcare Products



High-tech Products



Clothing Textiles

BUSINESS SCENARIOS



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:

- Identify potential demands for equipment before the bid is out (customising needs)
- 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



White & Brown Goods

Business Motivation:

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

Arçelik A.Ş.



Clothing Textiles

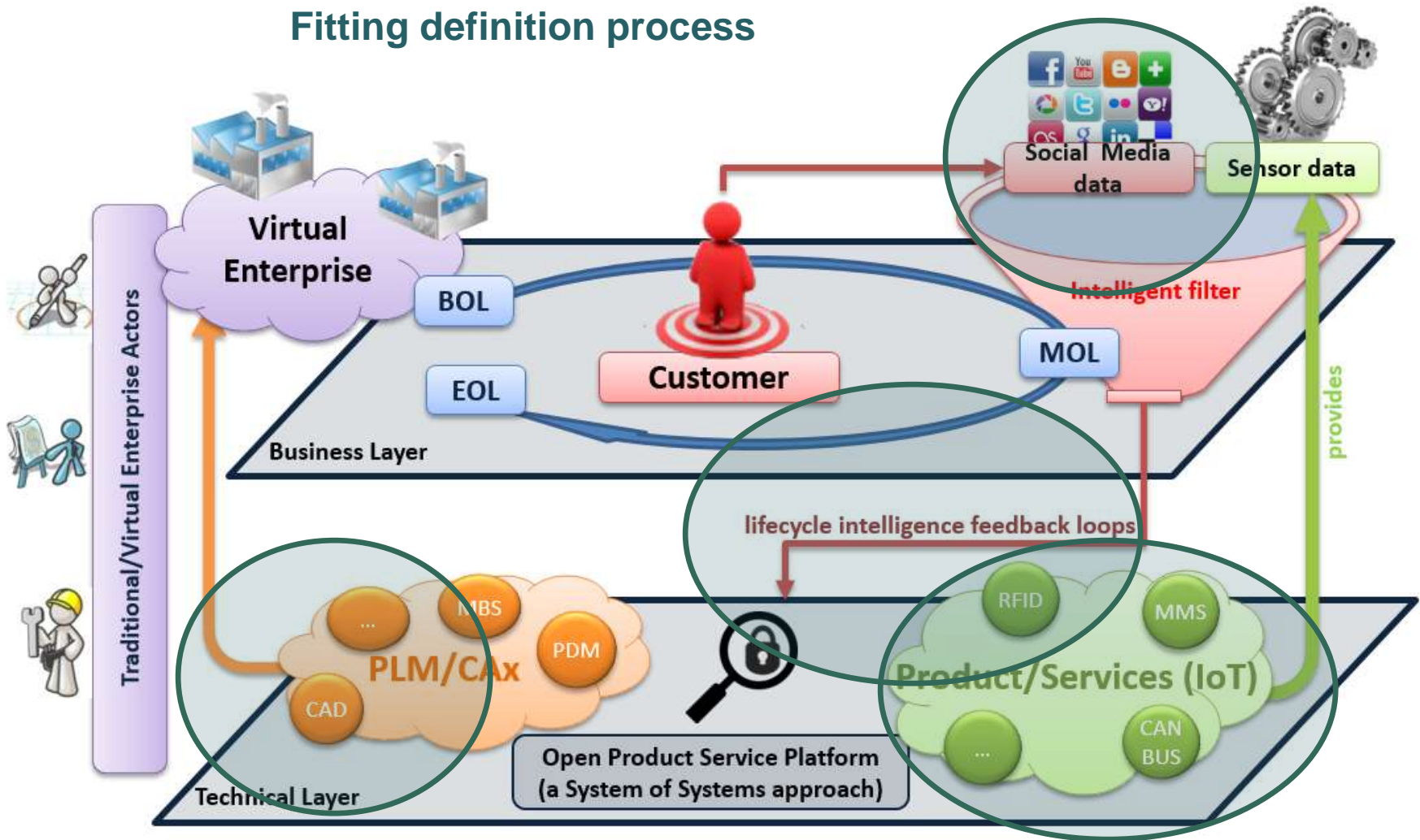
Business Motivation:

- 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 our e-commerce site.
- Collecting better information about required fitting of the garments.

 *cashmere*
Dena 

Approach – Clothing Business case

Fitting definition process



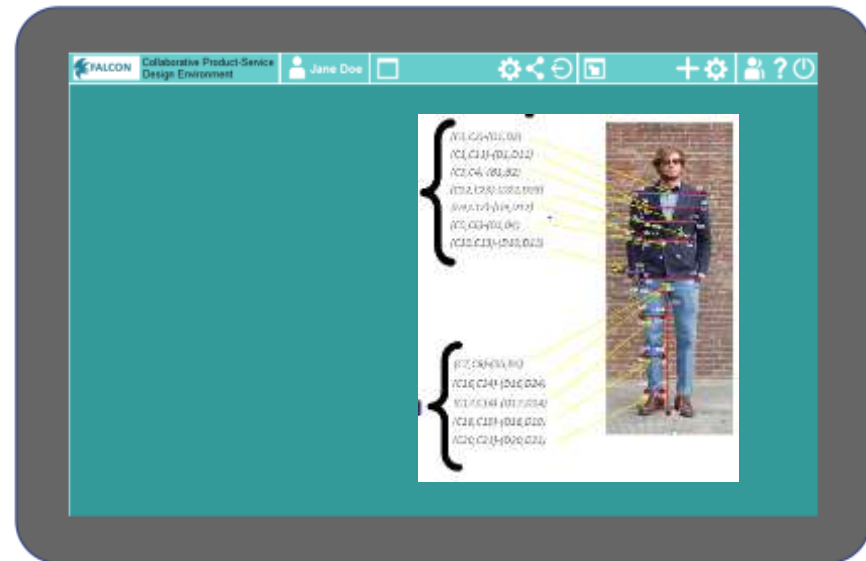
To identify fittings by simulation of current products from the market collected by i-Deal platform.



Collection
Responsible

On the FALCON
VOP, she opens
the Fitting
Forecast widget ...

Goes back to the
FALCON VOP to ...



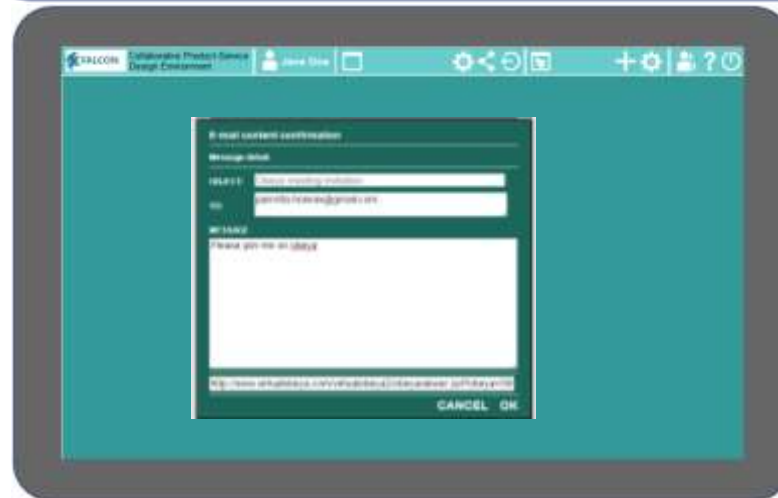
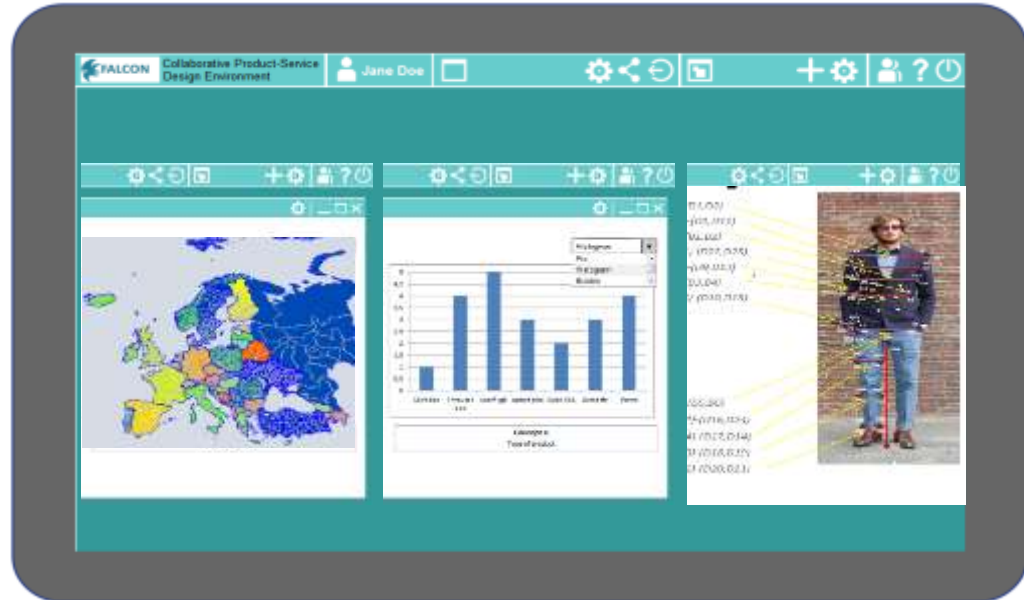
To generate predictions and share with stylists, suppliers and manufacturers.



Collection Responsible

Results appear in parallel and can be compared and merged

Sends mail to other subjects involved into design with link to platform



Fitting definition

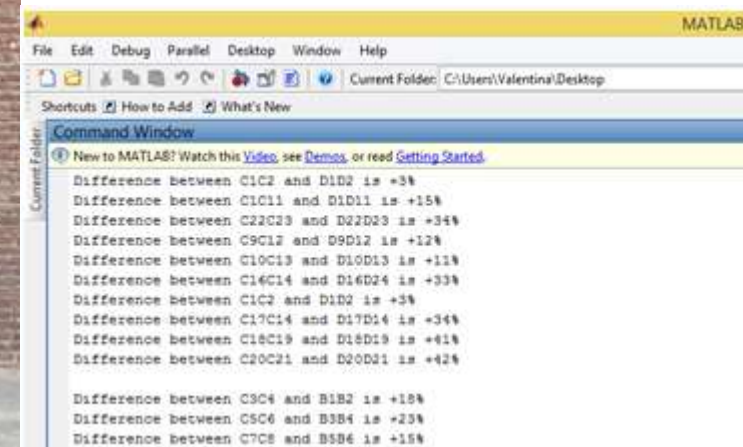
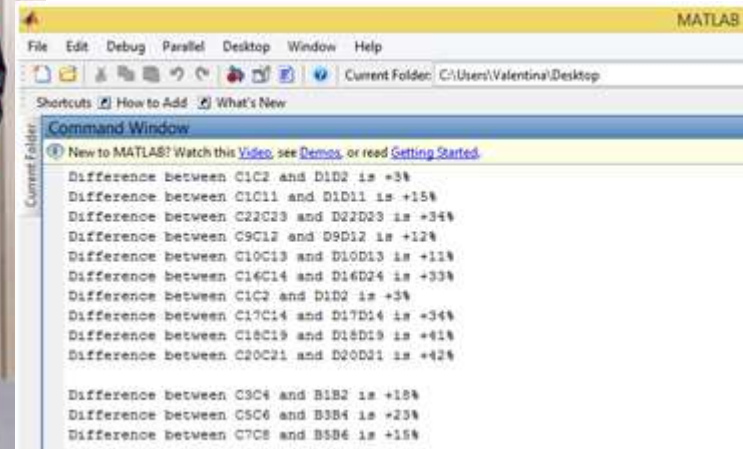
Fitting is the physical relationship between the body of the consumer and the piece of clothing.

Example of fitting categories are “slim fit”, very tight to the body on one side, and “over fit”, very slight to the body on the other.

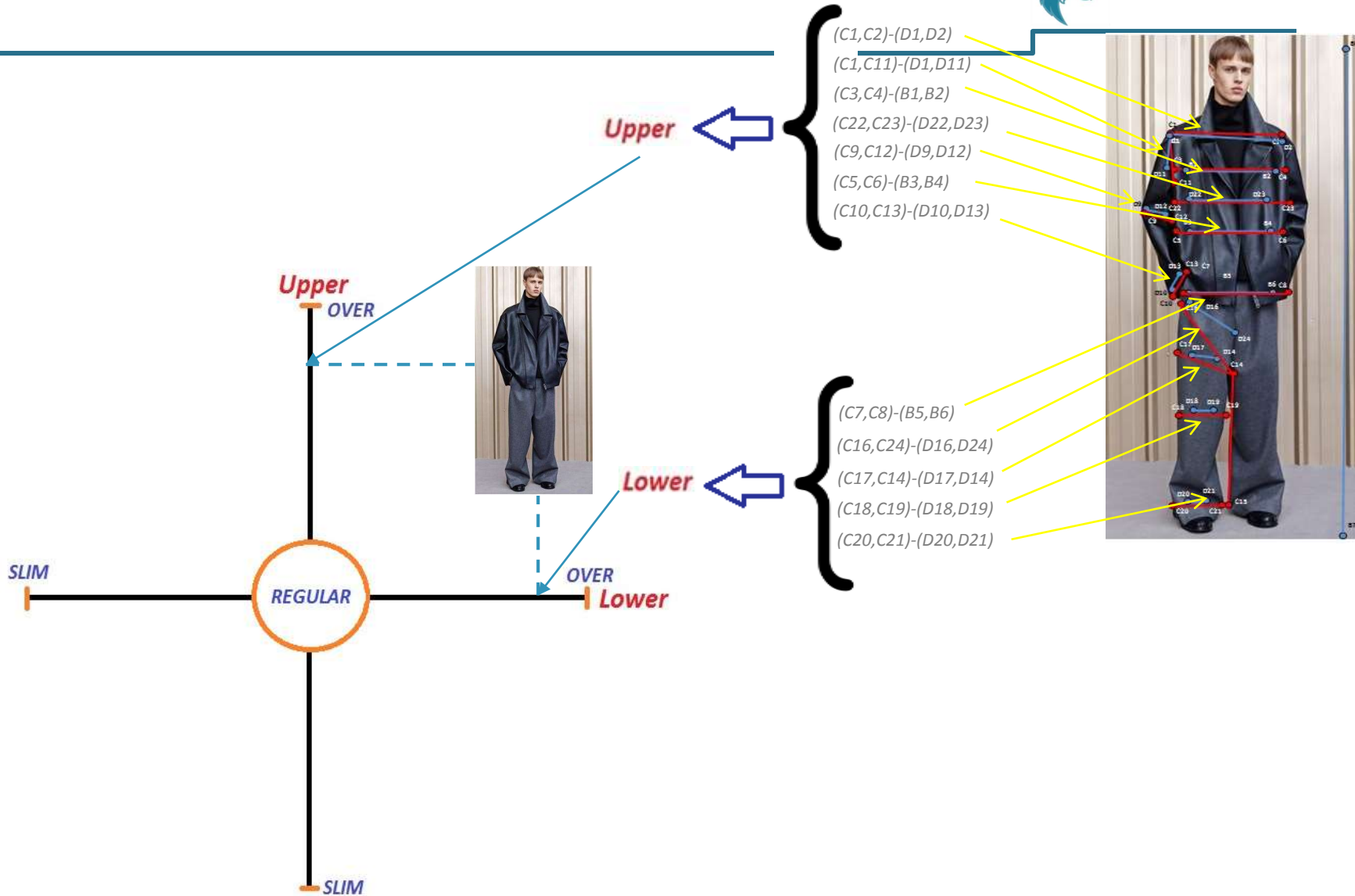


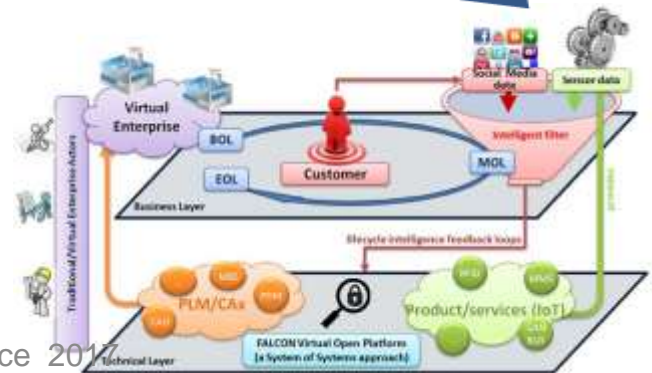
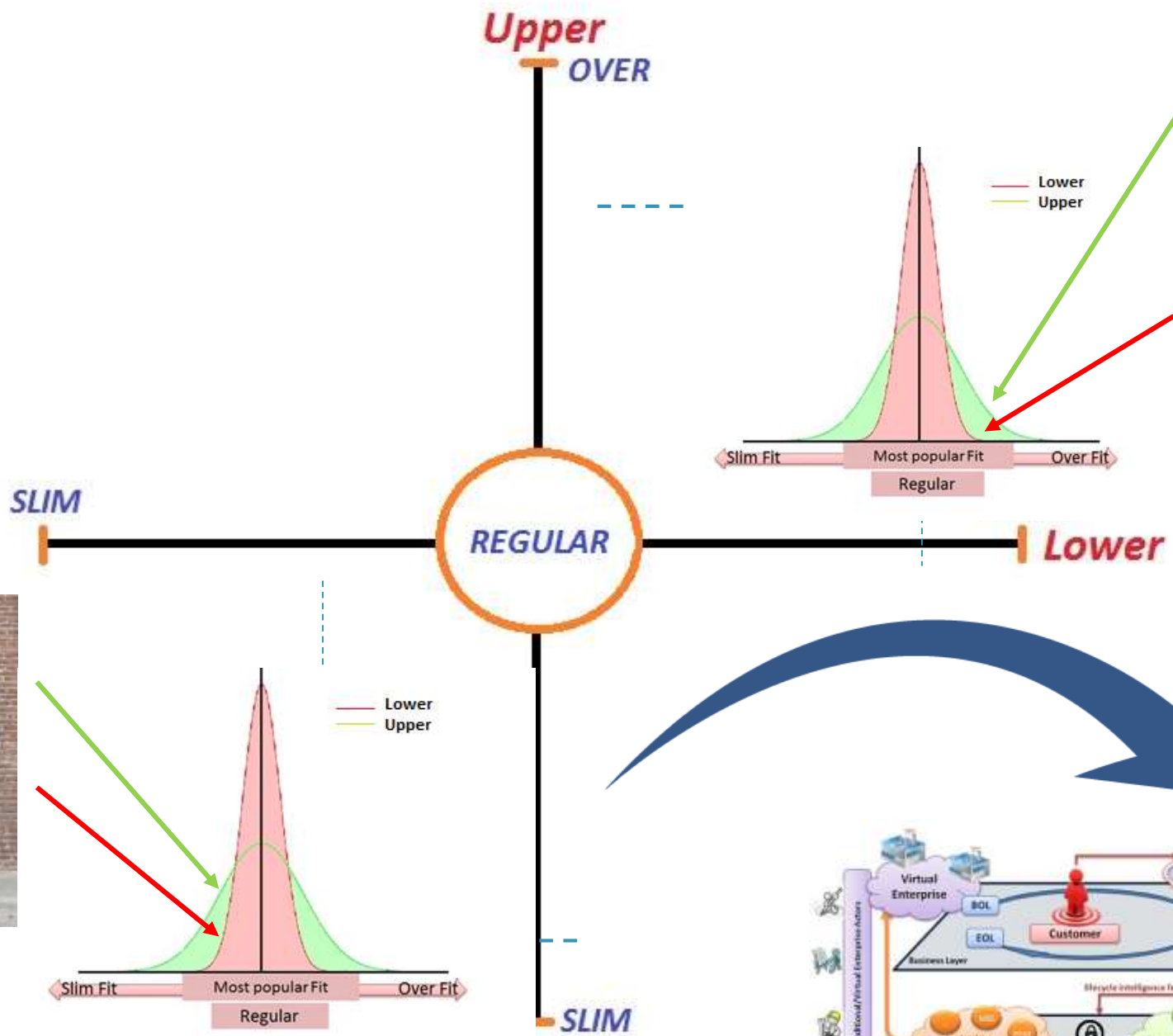
The definition of the fitting is based on the comparison between the measures of the piece of clothing and the ones of the person wearing that piece of clothing.

Fitting analysis



Fitting analysis





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
MANAGEMENT

PHILIPS

softeco
sismat
information technology

TU Delft

UBITECH
ubiquitous solutions



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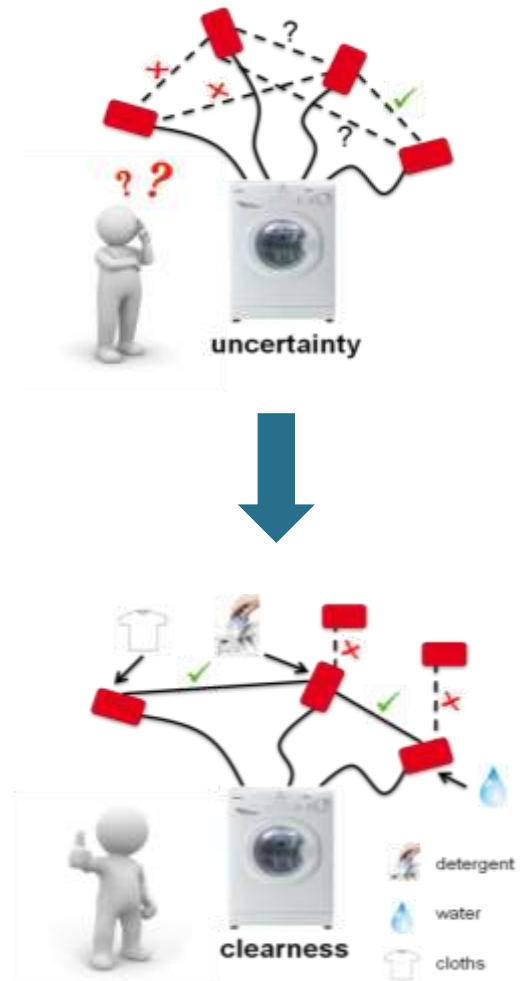
OBJ1: To address product-service information collection through Collaborative Intelligence and Product Embedded Information Devices.

OBJ2: To enable product-service knowledge representation, exploitation, openness and diffusion.

OBJ3: To strengthen collaboration and new product-service development through new feedback and feed forward mechanisms.

OBJ4: To support innovative product-services design using manufacturing intelligence.

OBJ5: To improve product-service lifecycle assessment approaches.



■ FALCON Virtual Open Platform

- Open system-architecture defined
- Systems of Systems Approach
- Based on semantic technologies

■ Initial FALCON Ontology

- Initial definition of upper ontology covering PSS knowledge domain
- Initial definitions of domain-specific ontologies for FALCON business scenarios

■ GUI Mockups & Business Stories

- Development of detailed Business Stories
- GUI Mockups facilitate understanding of functionality

■ Software prototypes of Functional Modules

- E.g. data federation module for knowledge acquisition from static PUI sources (PEIDs, social media, etc.)

