



We Bring Things to Life

ING. JACOPO CASSINA





Se il prodotto fosse intelligente...



E si ricordasse la sua storia...



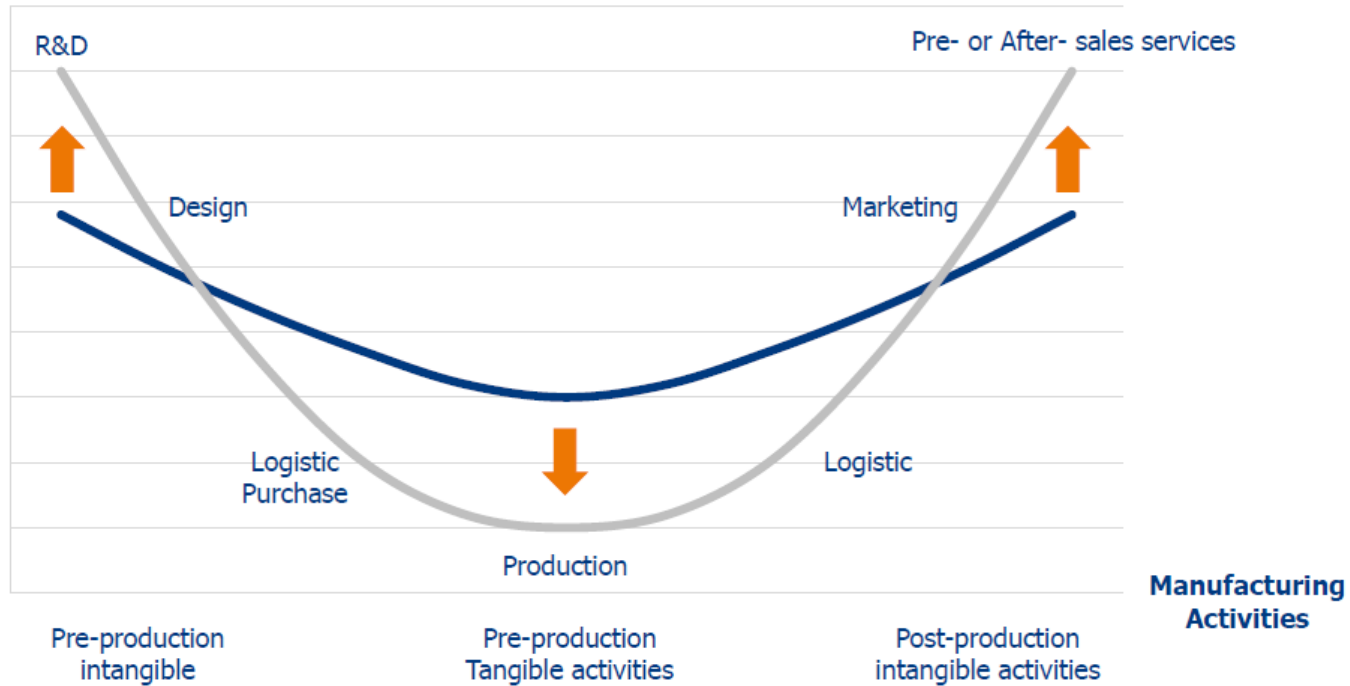
E sapesse interagire con i processi industriali...
(produzione, logistica, manutenzione, ...)



Cambiarebbe le regole del business

The SMILE Challenge

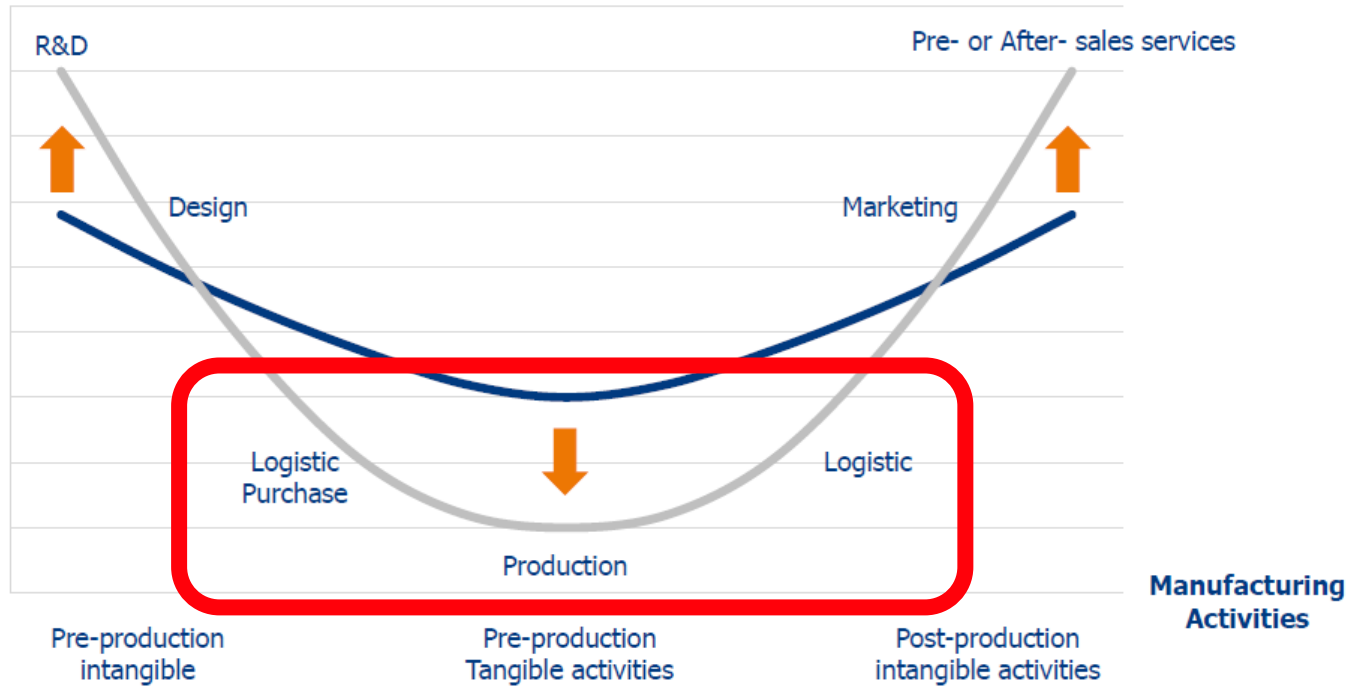
Value Added



Source: The European House - Ambrosetti re-elaboration on Bruegel data, 2014

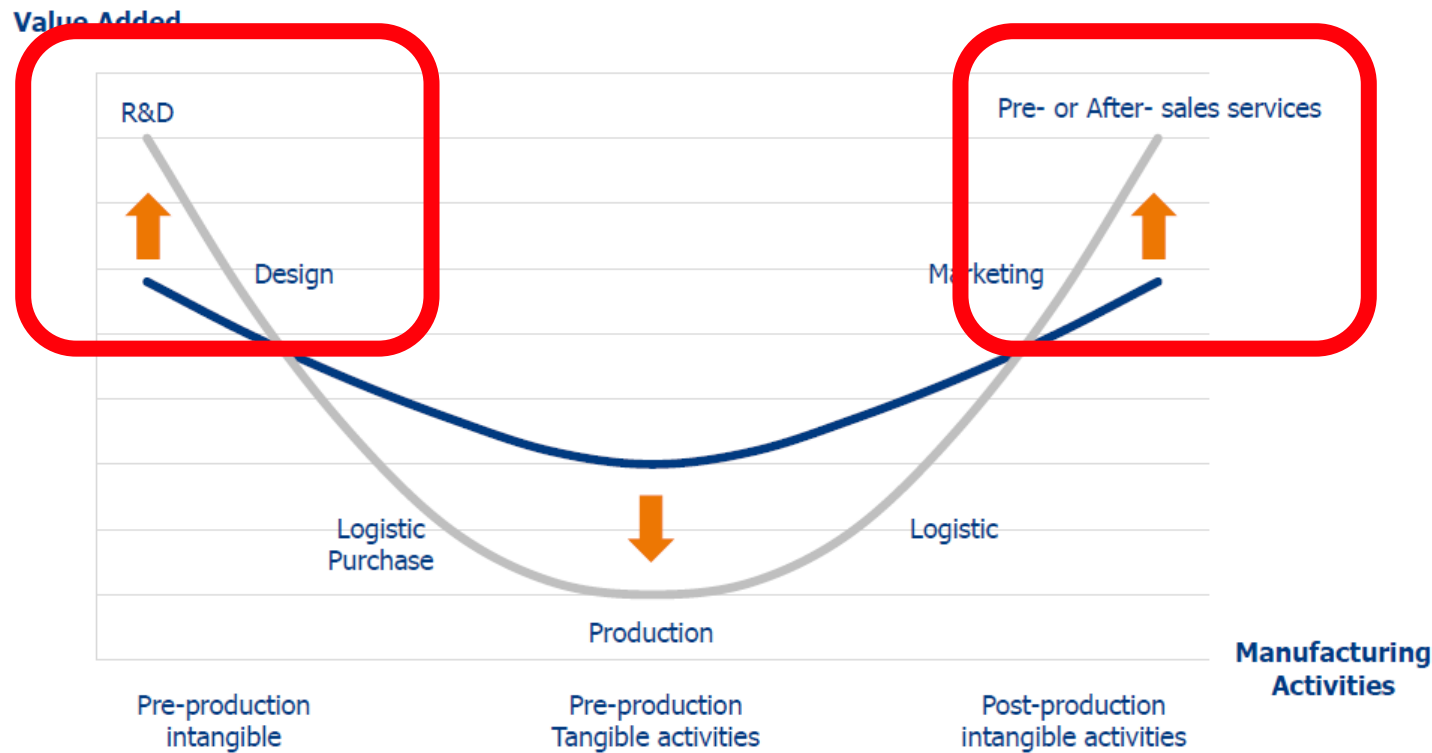
The SMILE Challenge

Value Added



- Ricercare l'efficienza nelle operations:
 - Produzione
 - Logistica

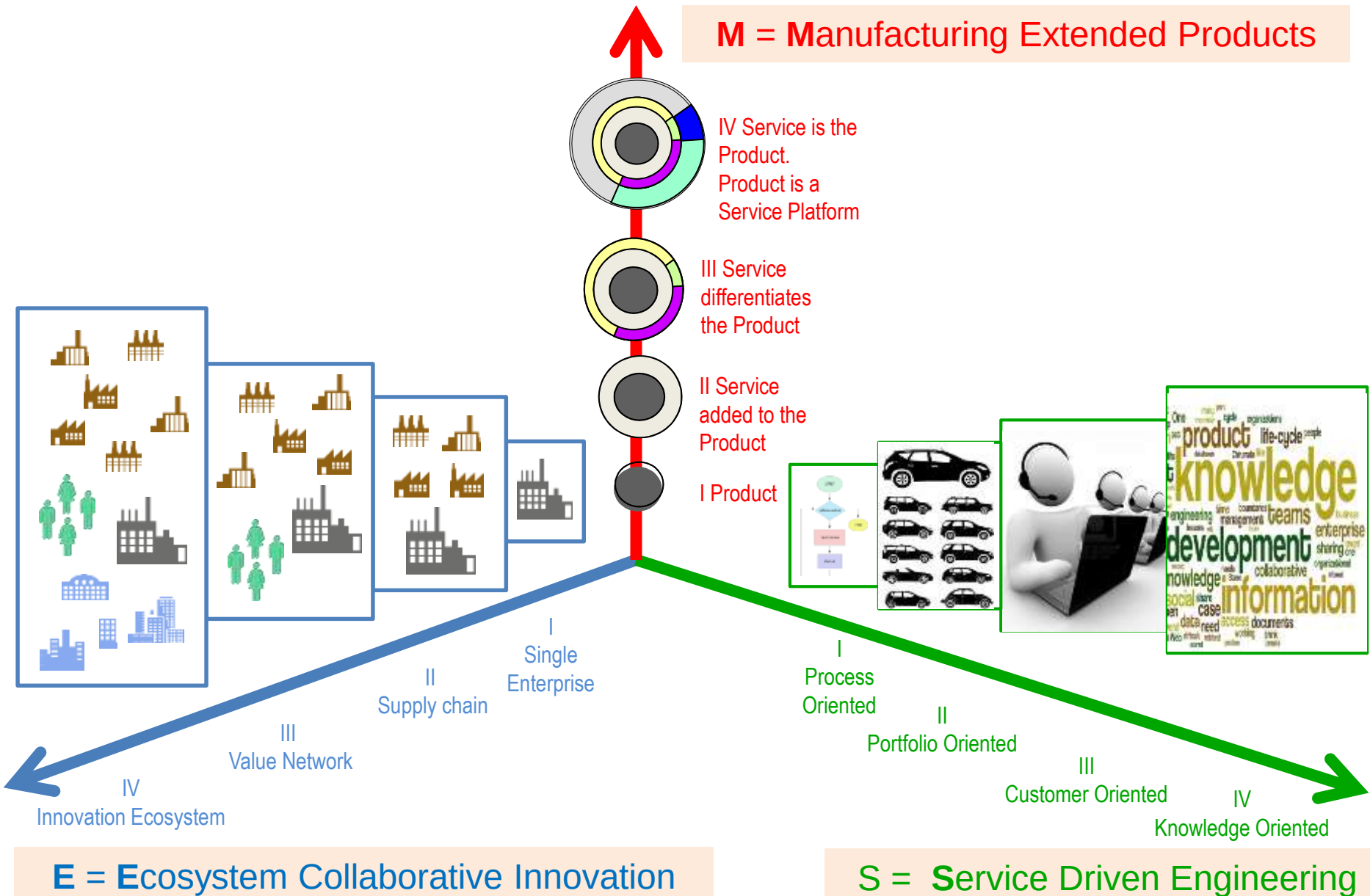
The SMILE Challenge



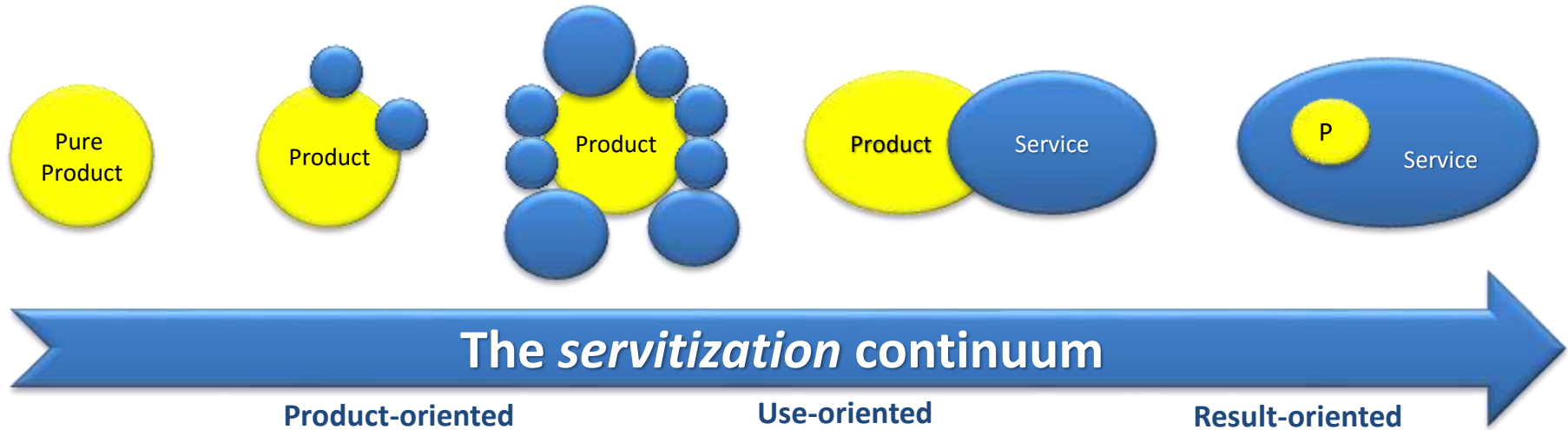
Source: The European House - Ambrosetti re-elaboration on Bruegel data, 2014

- Aumentare il valore aggiunto da:
 - R&D e Progettazione
 - Marketing e Pre/After sales services

MSEE Reference Framework



Product / Service



[Tukker, 2006]



Cos'è l'IoT

L'IoT: Basi

- Leggere dati da Sensori;
- Rendere le macchine Comunicanti (M2M);

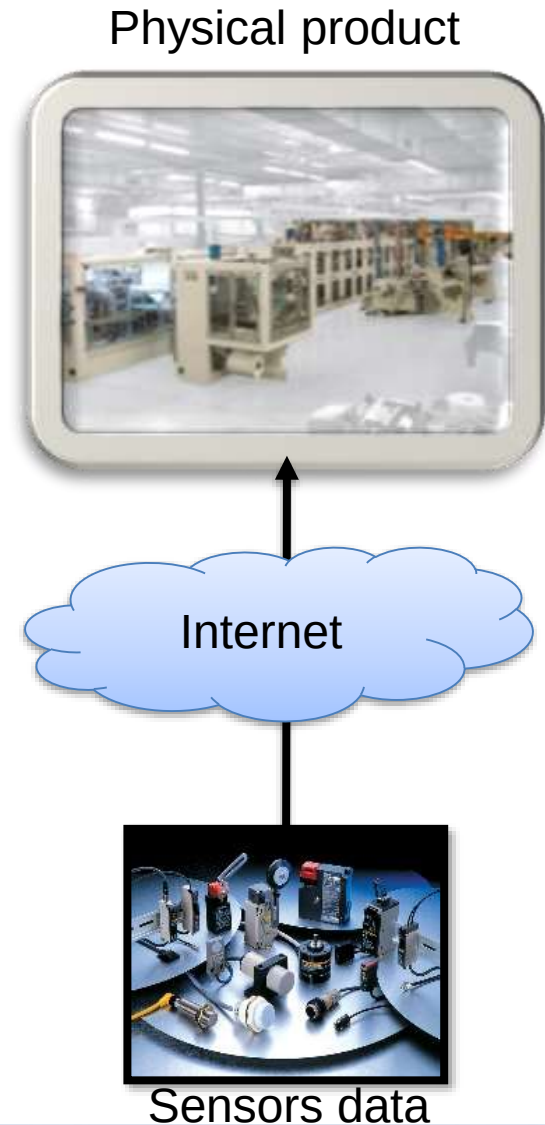
Physical product



Sensors data

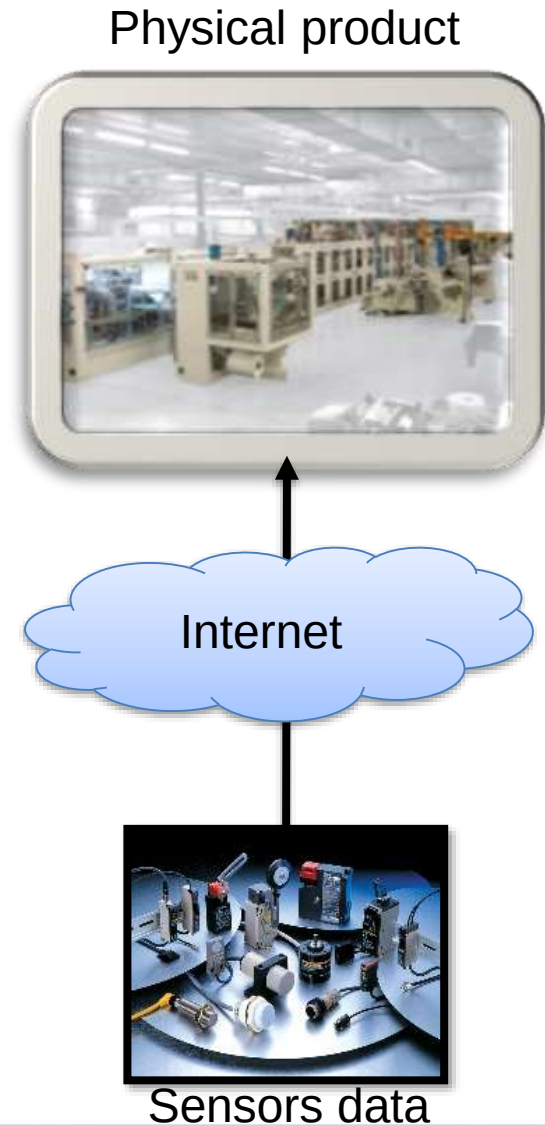
L'IoT: Basi

- Leggere dati da Sensori;
- Rendere le macchine Comunicanti (M2M);
- Su Rete Geografica Aperta (Internet);



L'IoT: Basi

- Leggere dati da Sensori;
- Rendere le macchine Comunicanti (M2M);
- Su Rete Geografica Aperta (Internet);
- Con un protocollo aperto e comune (?)



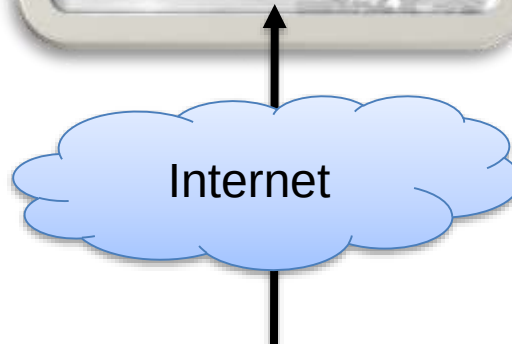
An aerial photograph of a wide river with a large, forested island in the center. The river flows from the top left towards the bottom right. On the left bank, there is a small cluster of buildings. The text "Product Lifecycle Management" is written diagonally across the left side of the river.

Product Lifecycle Management

Internet of Things

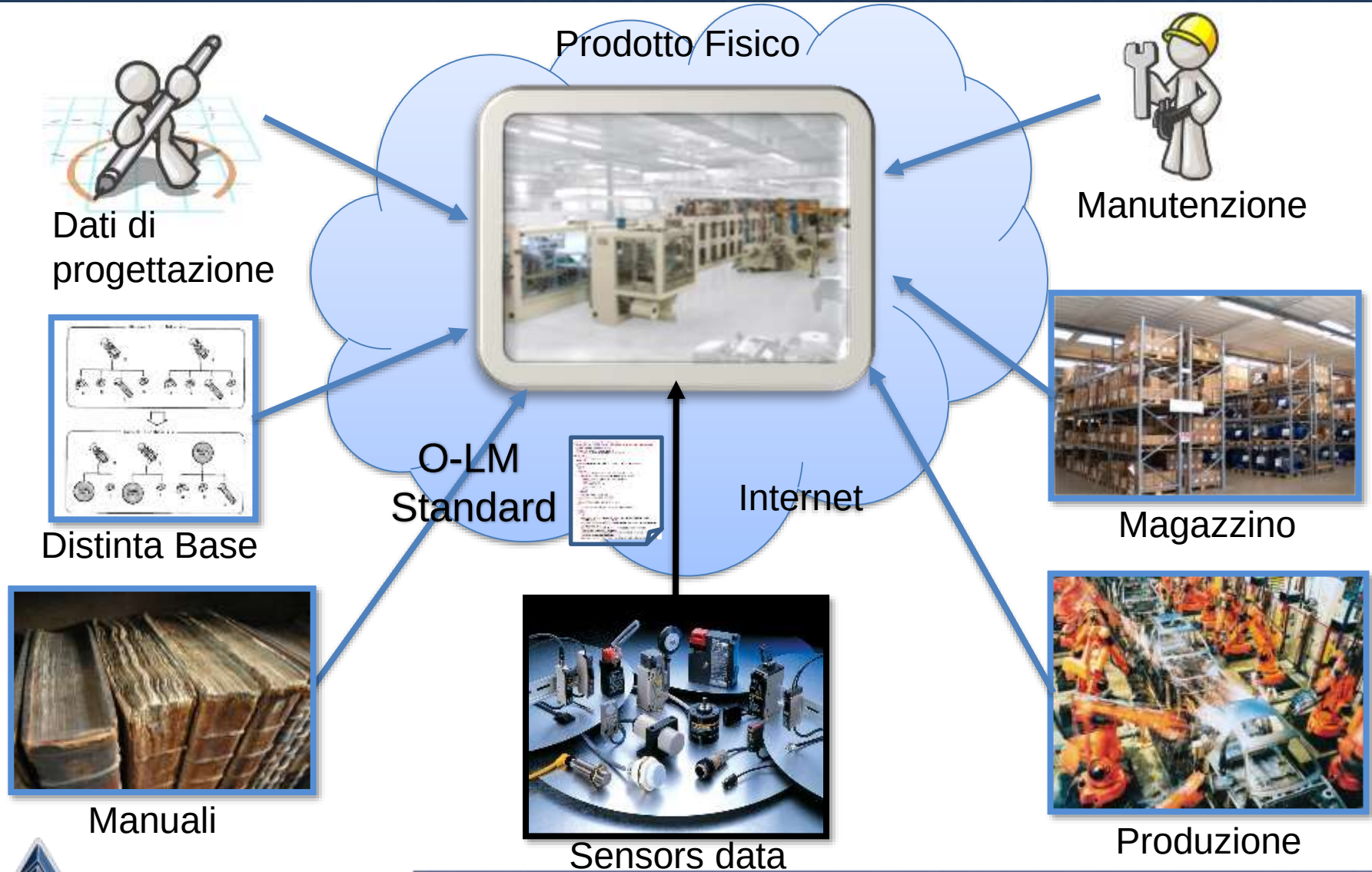
Things Lifecycle Management

Physical product

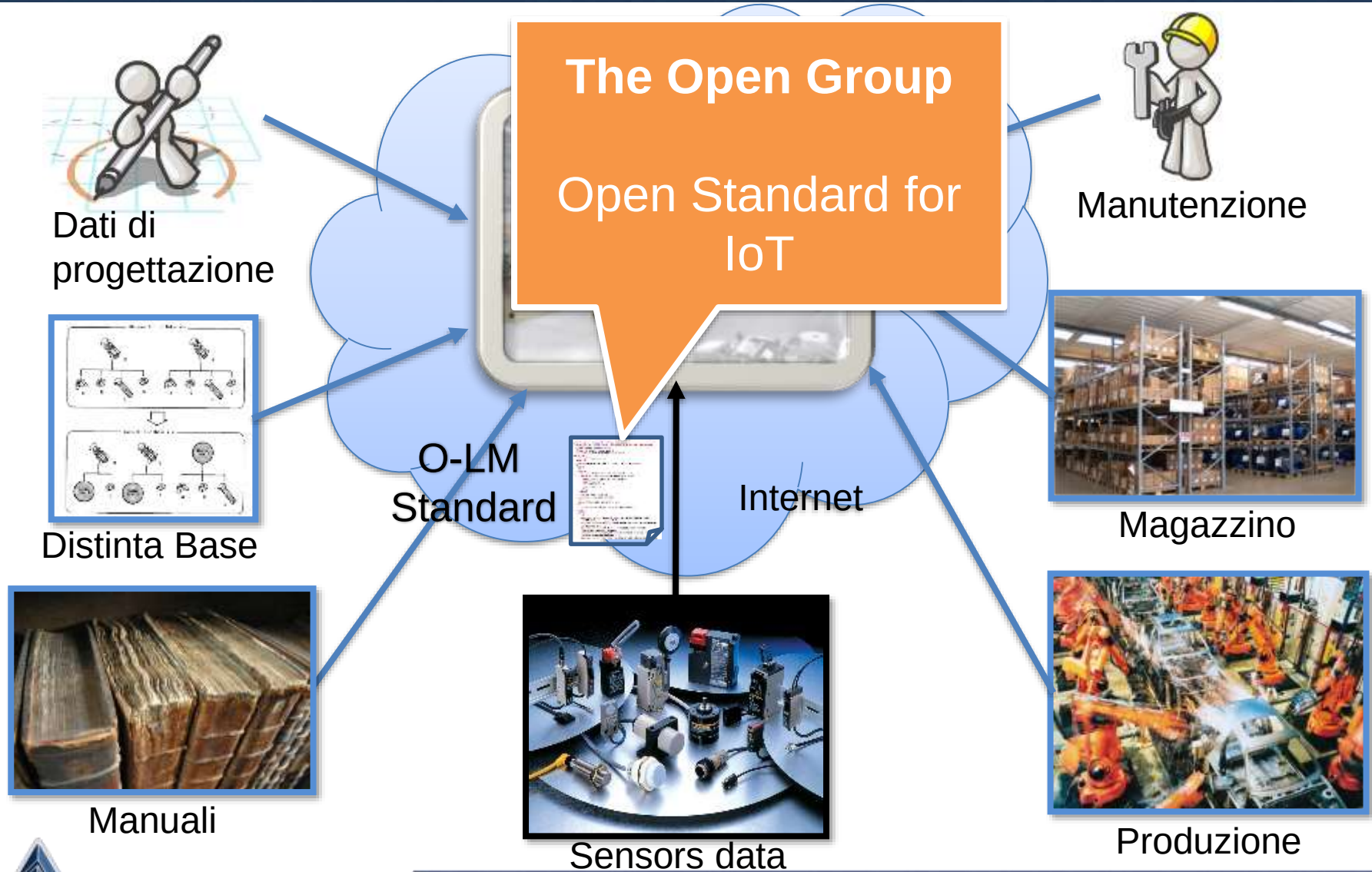


Sensors data

Holonix IoT – Things Lifecycle Management



Holonix IoT – Things Lifecycle Management



The INDUSTRIAL Internet of Things

Holonix utilizza:

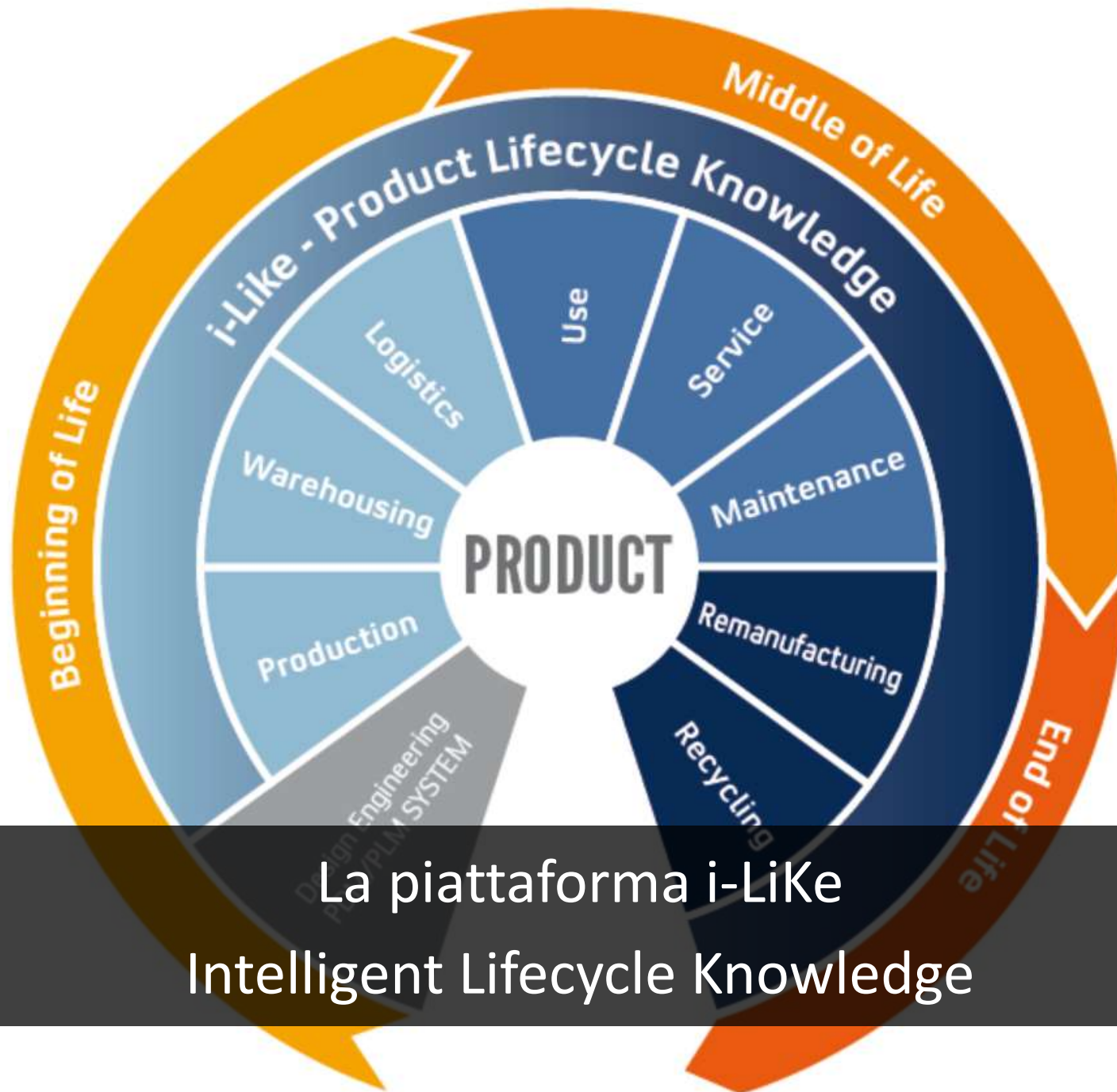
- Telematics: T-BOX
- Uso in Mobilità: PDA industriali (Motorola) and Tablets
- Macchine industriali: PLC e computer industriali
- Tracciabilità: RfIDs, QR codes, barcodes

SISTEMI AD ALTA AFFIDABILITA'



*Gestiamo le
informazioni
del*
PRODOTTO FISICO
in
TUTTO
il suo
CICLO DI VITA





La piattaforma i-Like
Intelligent Lifecycle Knowledge



BoL: la nascita del prodotto



NearChimica

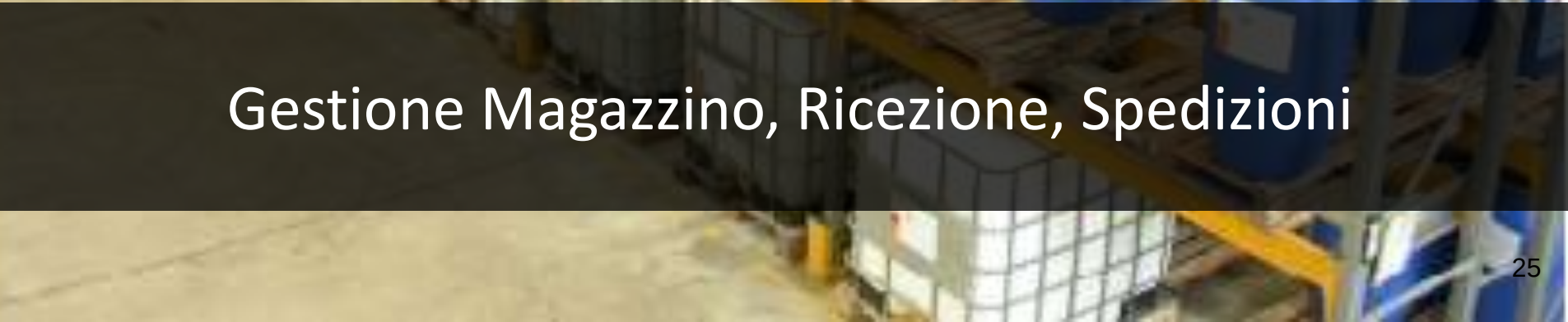




Gestione della Produzione



Gestione Magazzino, Ricezione, Spedizioni





Gestione dei risultati del Laboratorio

PASSPORT



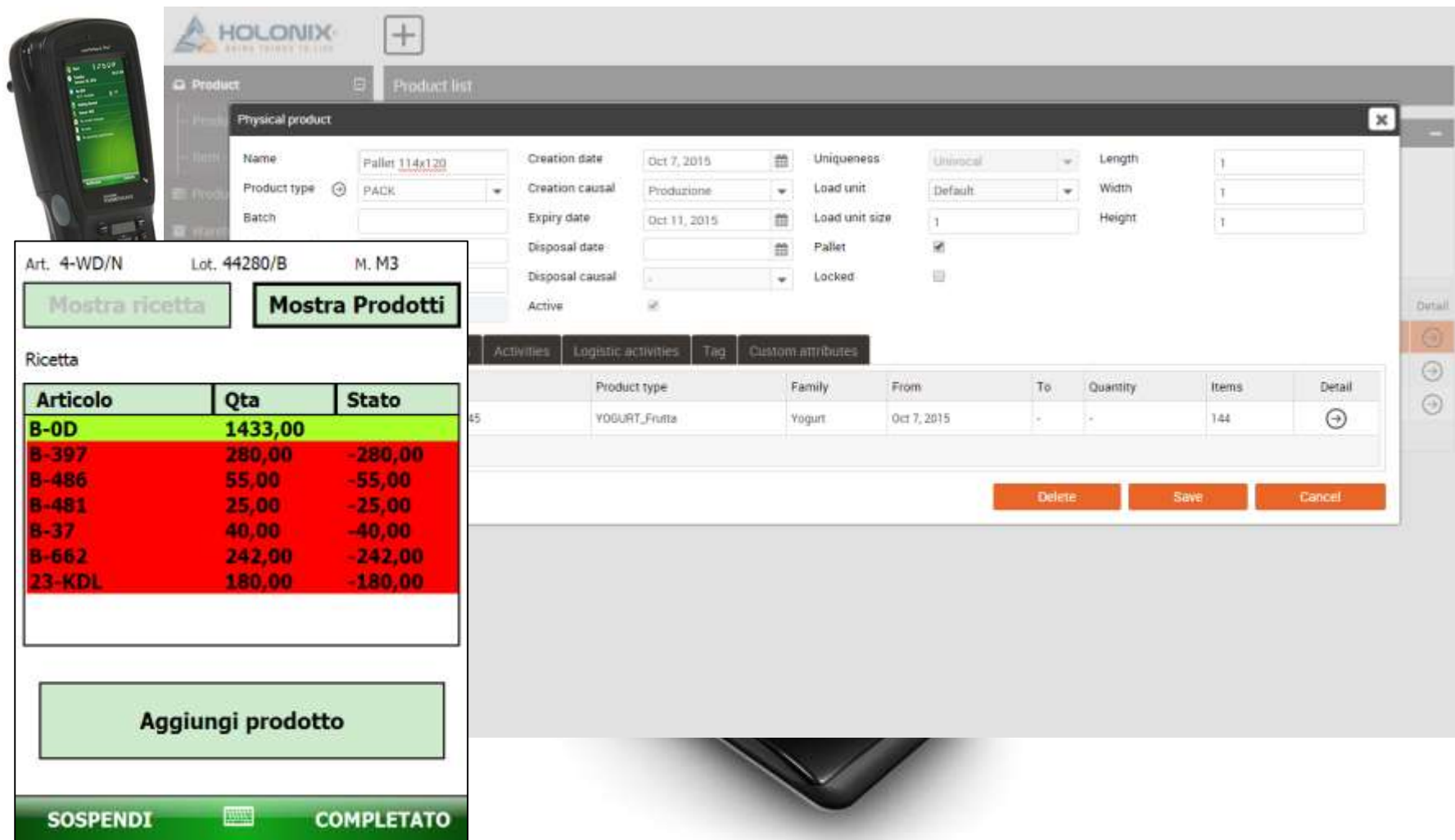
United States
of America

Un passaporto per ogni prodotto...
con tutta la sua storia

Tecnologie



Tecnologie e USABILITA'



HOLONIX
BRING THINGS TO LIFE

Product list

Physical product

Name: Pallet 114x120
 Product type: PACK
 Batch:
 Creation date: Oct 7, 2015
 Creation causal: Produzione
 Expiry date: Oct 11, 2015
 Disposal date:
 Disposal causal:
 Active: ☒
 Uniqueness: Univocal
 Load unit: Default
 Load unit size: 1
 Pallet: ☒
 Locked: ☐
 Length: 1
 Width: 1
 Height: 1

Art. 4-WD/N Lot. 44280/B M. M3

Mostra ricetta **Mostra Prodotti**

Ricetta

Articolo	Qta	Stato
B-0D	1433,00	
B-397	280,00	-280,00
B-486	55,00	-55,00
B-481	25,00	-25,00
B-37	40,00	-40,00
B-662	242,00	-242,00
23-KDL	180,00	-180,00

Aggiungi prodotto

SOSPENDI  COMPLETATO

Activities Logistic activities Tag Custom attributes

	Product type	Family	From	To	Quantity	Items	Detail
45	YOGURT_Frutta	Yogurt	Oct 7, 2015	-	-	144	

Delete Save Cancel



Efficienza e velocità!

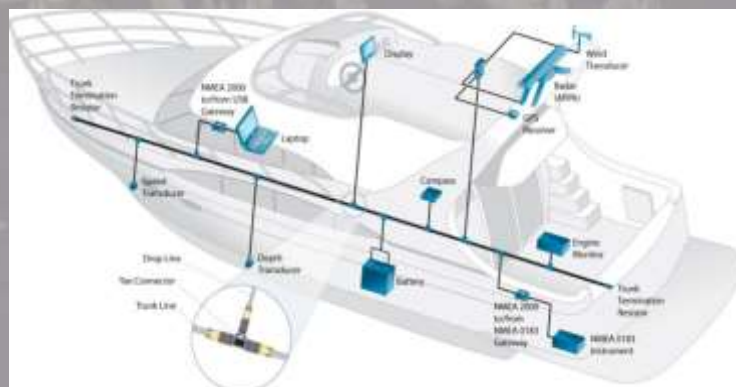


MoL: La VITA del prodotto

The Internet of Boats



The SMART BOAT



Sensors

- Accelerometer
- GPS
- 2 digital inputs
- Analog input

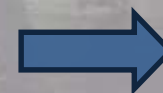


Data

- Position
- Pitch and Roll
- Engine on time
- Bilge pumps
- ---

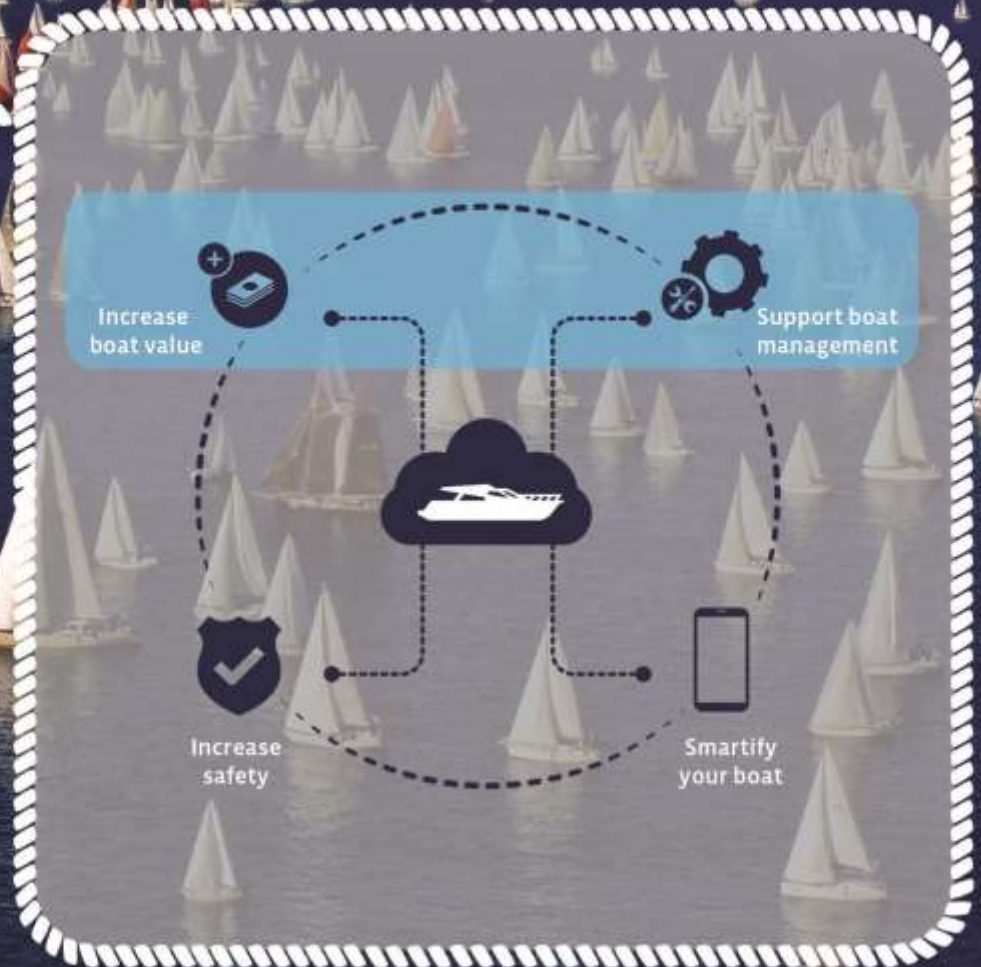
Connectivity

- GSM – 3G – LTE



The Internet of Boats

i-Captain



Internet of Boats



Cantieri, Marine e Rimessatori

Boat Producers



Product	Boat	Boat type	Boat name	Boat date	Boat status	Boat owner	Boat photo	Boat color
Product 1	Boat 1	Boat type 1	Boat name 1	Boat date 1	Boat status 1	Boat owner 1	Boat photo 1	Boat color 1
Product 2	Boat 2	Boat type 2	Boat name 2	Boat date 2	Boat status 2	Boat owner 2	Boat photo 2	Boat color 2
Product 3	Boat 3	Boat type 3	Boat name 3	Boat date 3	Boat status 3	Boat owner 3	Boat photo 3	Boat color 3

Boat	Boat type	Boat name	Boat date	Boat status
Boat 1	Boat type 1	Boat name 1	Boat date 1	Boat status 1
Boat 2	Boat type 2	Boat name 2	Boat date 2	Boat status 2
Boat 3	Boat type 3	Boat name 3	Boat date 3	Boat status 3

i-Like Boats

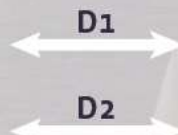
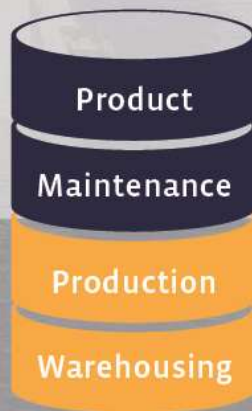
Product and Maintenance
modules on the Cloud

Customized Server
on the cloud or premises

Boaters/Captains



Cloud Based
System



SMART
BOATS
(Marine Gateways)





MoL: La VITA del prodotto



i-LiKe Machines - HAAS

PRODUCER USER

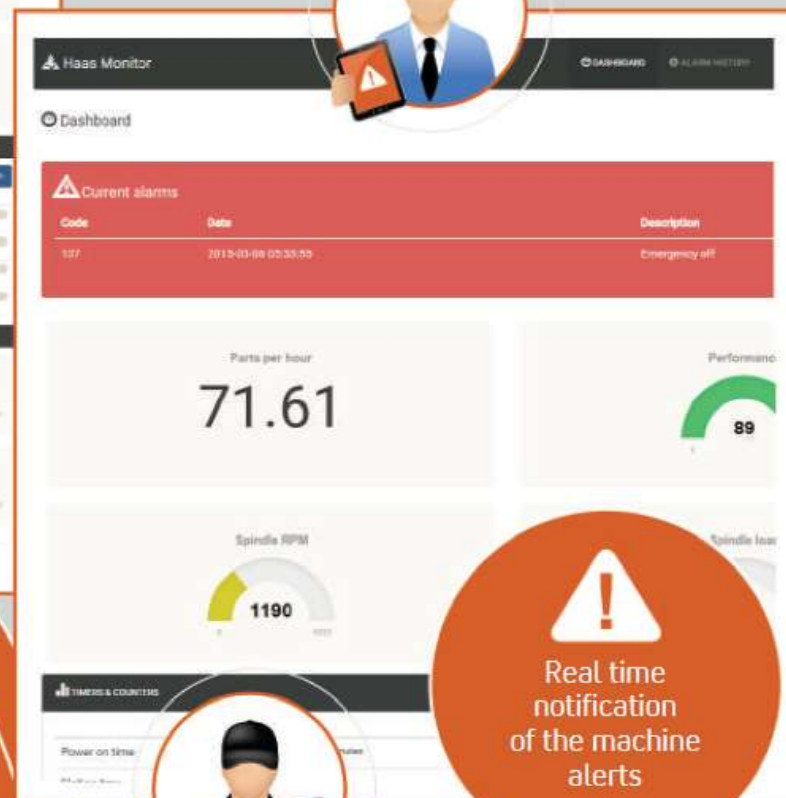
i-Like Machines USERS

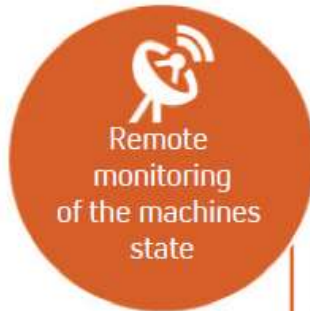
- Storico delle macchine
- Gestione real time
- Allarmi real time
- Gestione manutenzione
- Gestione parti di ricambio



HOLONIX® custom dashboard

Supervisor





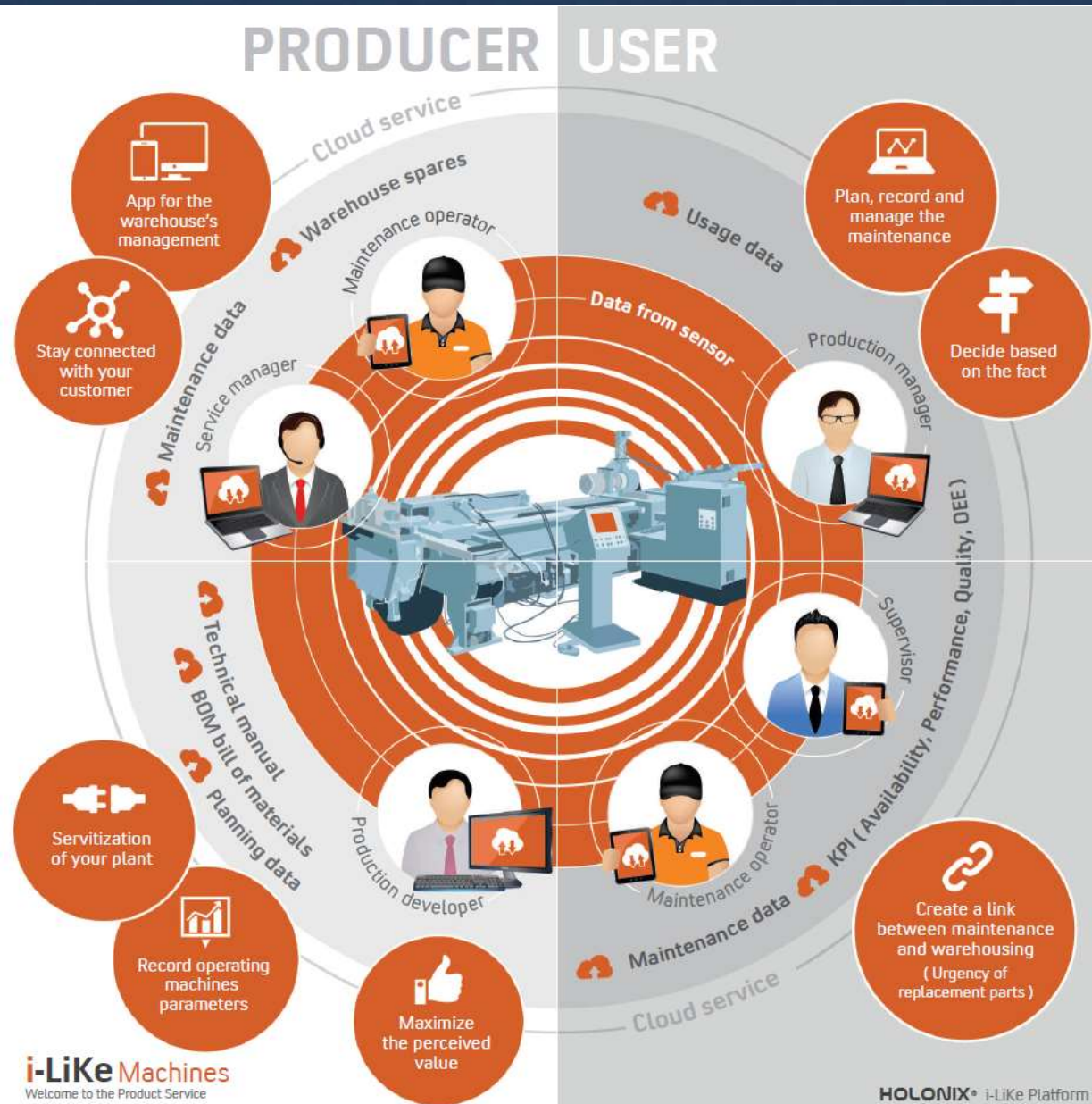
HOLONIX® i-Like platform



i-Like Machines For machine PRODUCER

- Storico «statistico» delle performances, dei guasti e dei fermi
- Gestione del supporto e della manutenzione
- Gestione delle parti di ricambio

All Together... better value for EveryBody





Non si vende più come una volta...



Passare da prodotto a Prodotto/Servizio



Eccellenza di «product/service experience»



Aumentare il valore percepito dal cliente



Gestendo la complessità... in modo efficiente



Decidere basandosi su FATTI



Migliorando il design e la progettazione basandosi sul
comportamento dei clienti



IoT e PLM : Efficacia ed Efficienza

Holonix: I TRE lati della medaglia

INNOVAZIONE

=

Vendi di più

EFFICIENZA

=

Riduci i costi



IT/Digital SOLUTIONS

=

Con una soluzione integrate PLM+IoT

Contatti



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