Industrial Internet In Flanders (3IF)

industrial
internet
In flanders

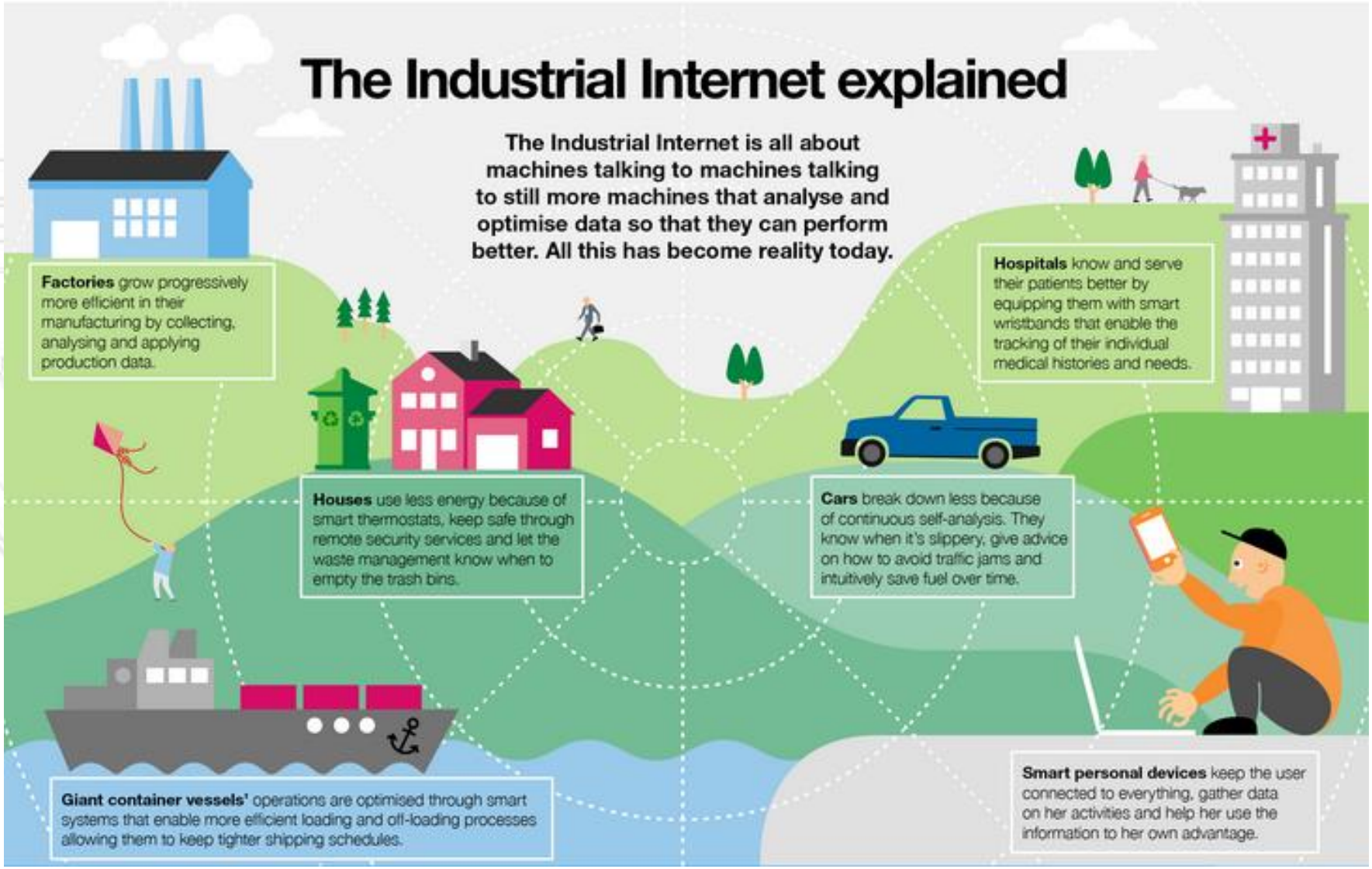
Industrie 4.0
Industrial IoT

IIC MEMBER
industrial internet
CONSORTIUM

agentschap voor Innovatie
door Wetenschap en Technologie

LOSEC
LEADERS IN SECURITY

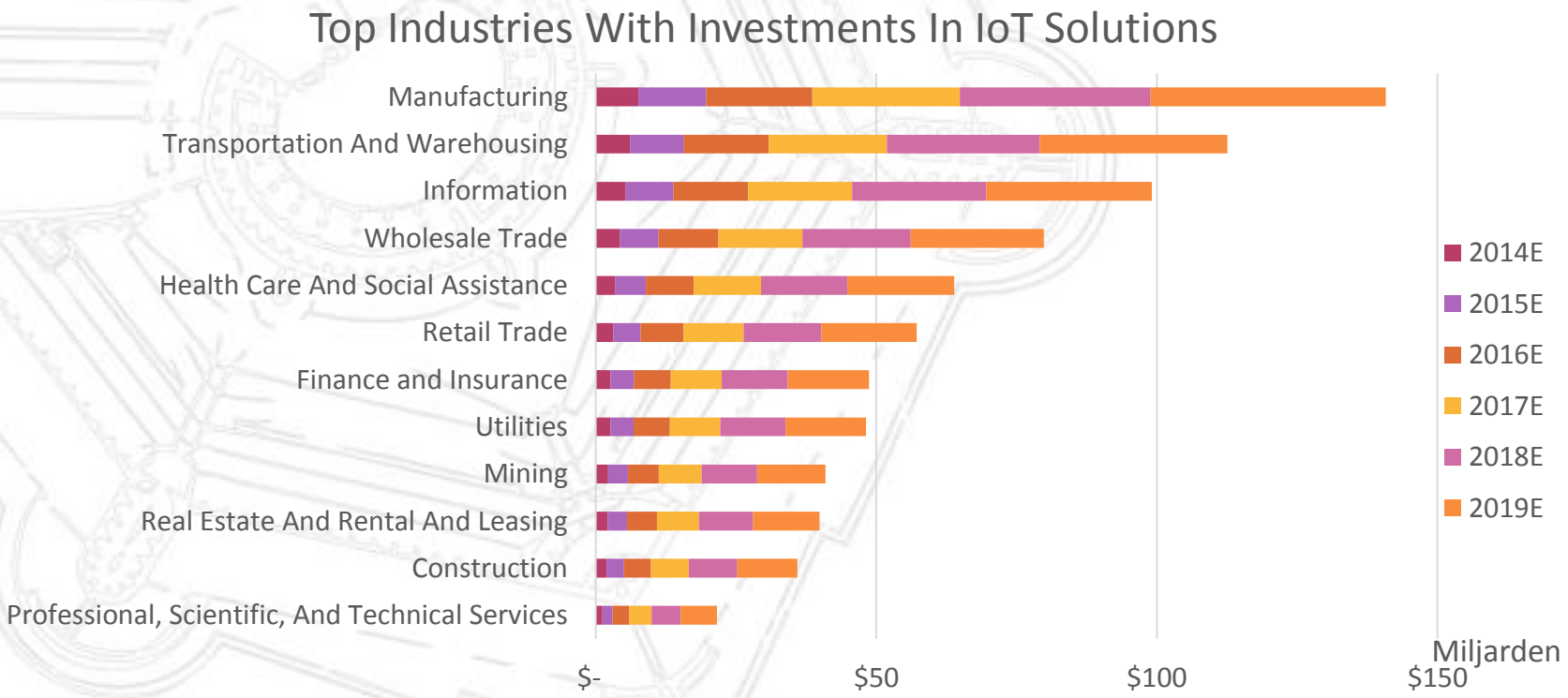
sirris
driving industry by technology



Source : Tieto, 2015

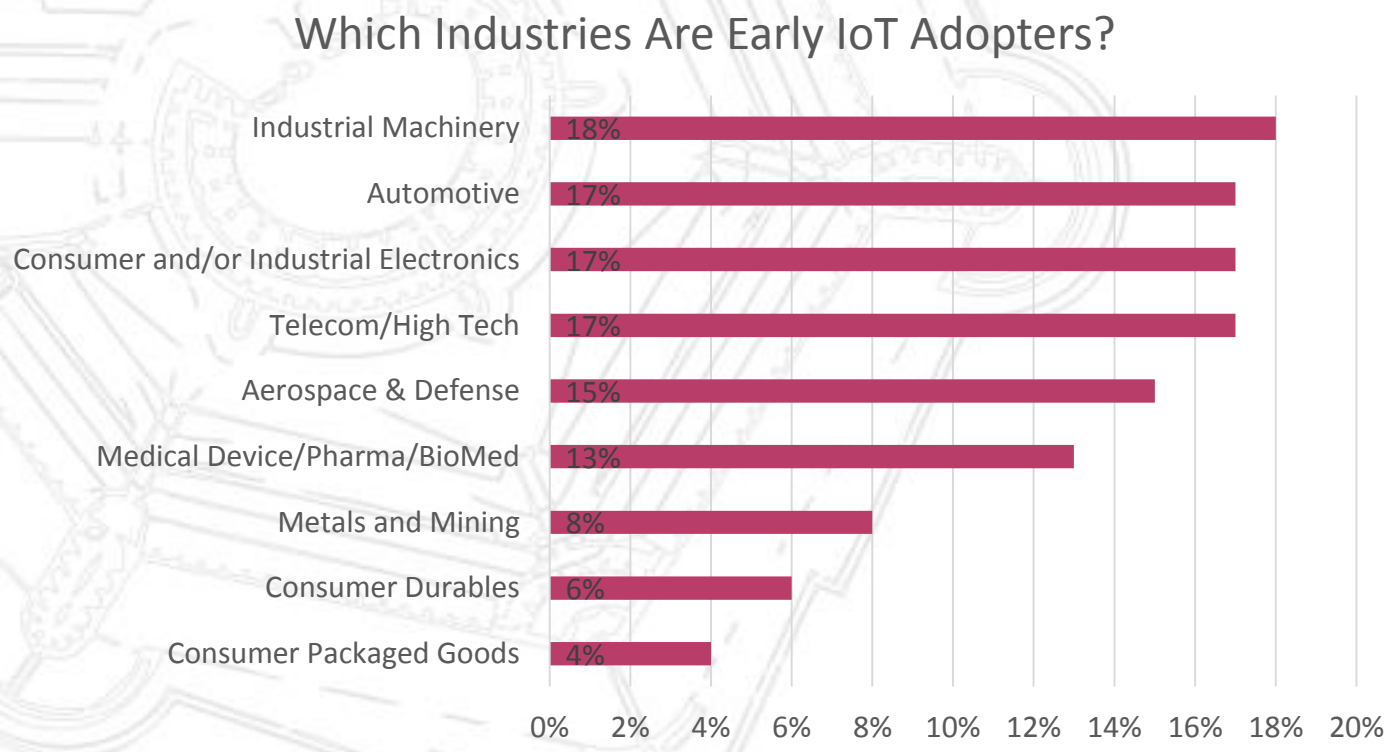

The next big thing
will be a lot of small things.
UITGEZONDERD
BUS EN TAXI'S
UITGEZONDERD

… manufacturing to lead, logistics early adopter



Source: BI Intelligence, 2015

… and in manufacturing …

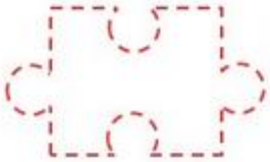


Source: BI Intelligence, 2015

3IF Activities Focus

73% OF COMPANIES HAVE NOT MADE CONCRETE PLANS FOR THE INDUSTRIAL INTERNET

MANY COUNTRIES HAVE INSUFFICIENT CONDITIONS TO SUPPORT WIDESPREAD ADOPTION



DATA STANDARDS ARE LARGELY PROPRIETARY, WORKS-IN-PROGRESS, OR NON-EXISTENT

36% OF EXECUTIVES SAY SYSTEM BARRIERS BETWEEN DEPARTMENTS PREVENT COLLECTION & CORRELATION OF DATA

59% OF IT PROS SAY THEY HAVEN'T STARTED PREPARING FOR THE EXPECTED DATA INCREASE

URGENT NEED TO REFOCUS EDUCATION TO PREPARE FOR THE UPCOMING DIGITAL WORKPLACE

RESEARCH INTO THE INDUSTRIAL INTERNET HAS ONLY EXISTED IN THE PAST 3 YEARS

Source : IIConsortium, April 2015

3IF Main Themes & Audiences

Explore, Evaluate, Transform:

1. Explore the concept of Industrial Internet, Industrie 4.0 and Industrial Internet of Things
2. Evaluate the opportunity, relevance and impact at company level
3. Transformation & Innovation Support

Beneficiaries:

1. Manufacturers
2. Suppliers: Industrial Automation Service & Technology Providers, System Integrators, Cyber Security Companies….etc.

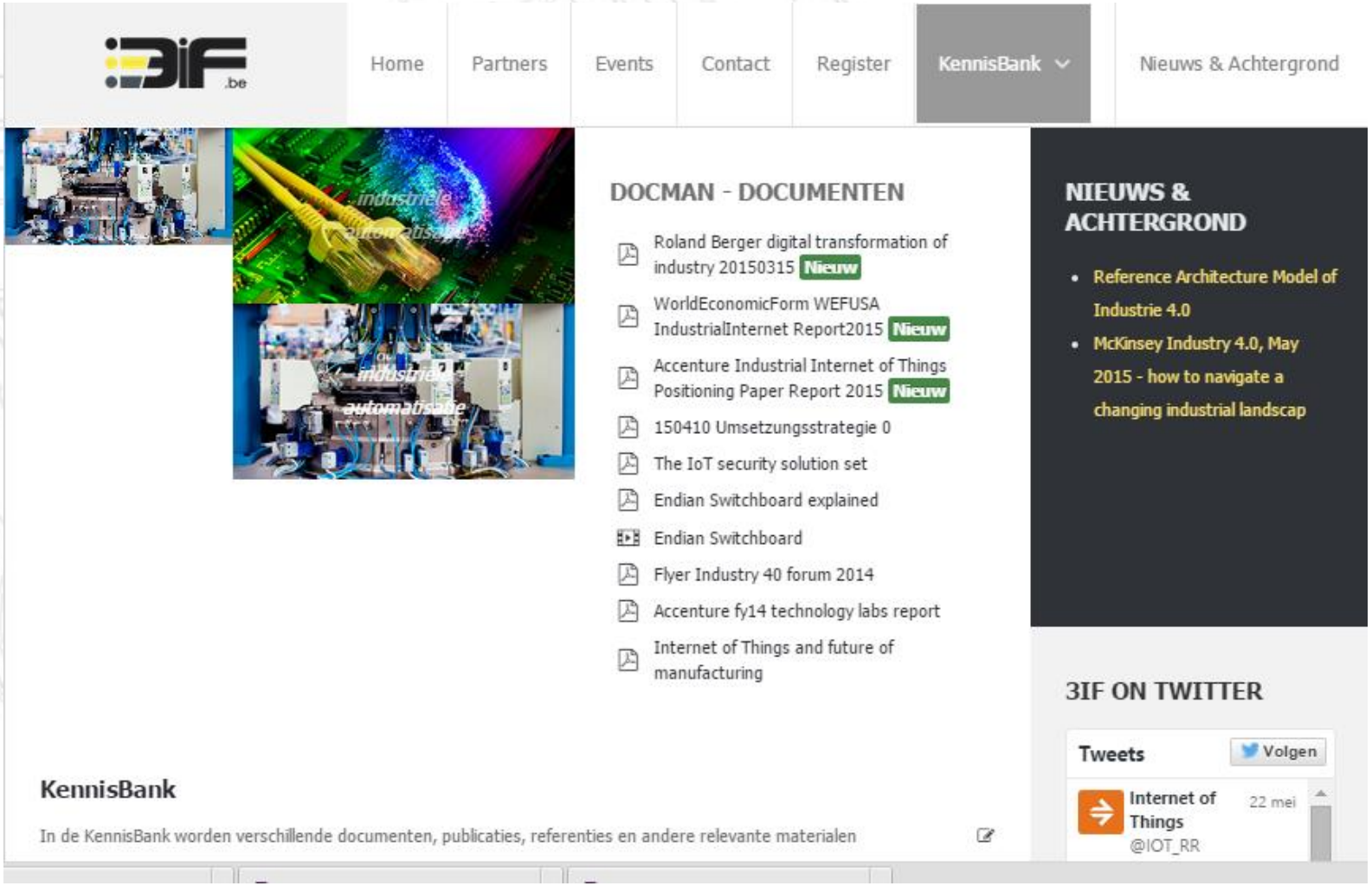
Main Objectives

1. **Stimulate** (economic) developments of industrial internet, industrie 4.0 and IIoT in Flanders, and support the viability of the Industry
2. **Support** manufacturers and their suppliers to fully benefit of the technological opportunities ahead
3. **Connect** suppliers with users of technology
4. **Create** a Flanders powerhouse, with export opportunities to other countries
5. **Support** other initiatives/ Factory of the Future – Madedifferent

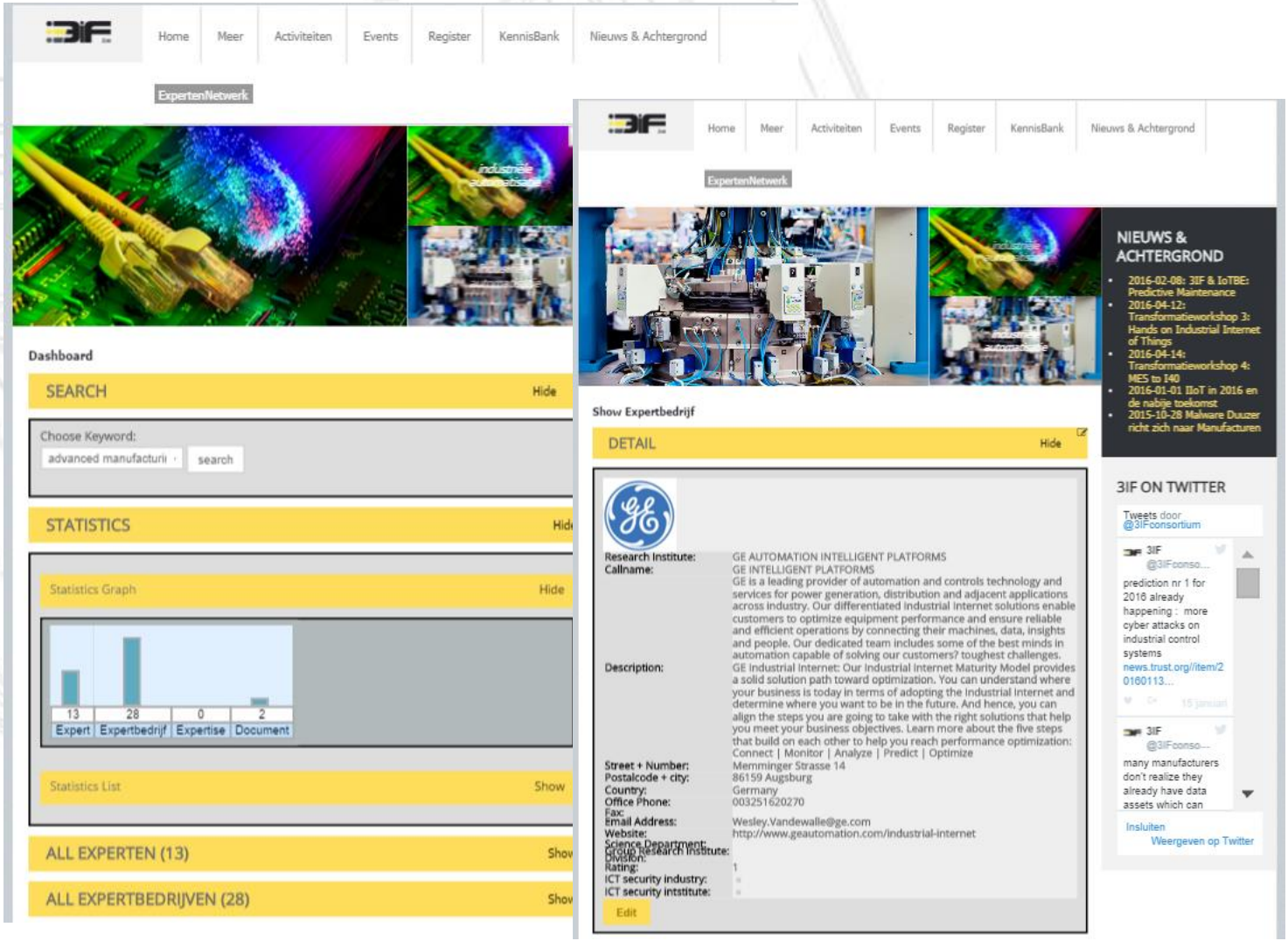
3IF activities

1. Support development of **industrial internet in Flanders**
2. **Promote** expertise and use cases in International Fora
3. Developing a **knowledge platform** on industrial internet in Flanders
4. Identification of the eco system and **organising knowledge exchange**
5. Development of industrial internet **transformation models** : roadmaps, evolution plans for manufacturing in various sectors, aimed at different departments
6. Development of **self-assessment tools**
7. **Detecting requirements and challenges** of partner- and target group companies
8. **Assistancen Advisory and Support services** for companies indicating interest in transformation
9. **Support** in **intellectual property protection** in manufacturing against abuse and data theft.
10. Analyzing and clarifying **sector specfic needs** versus collective requirements
11. **Support** to the development of the **Factory of the Future – Madedifferent** with the 3IF industial internet specialization.

1. Knowledge Platform



2. Promoting Expert Network



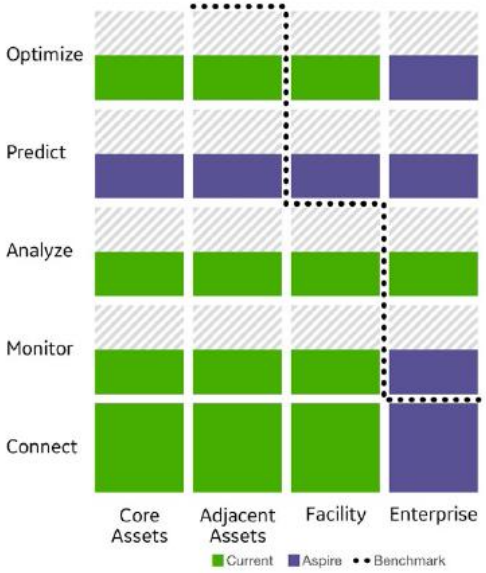
3. (Self)-Assessments

1. Surveys
    1. Online enquête
    2. PDF enquête

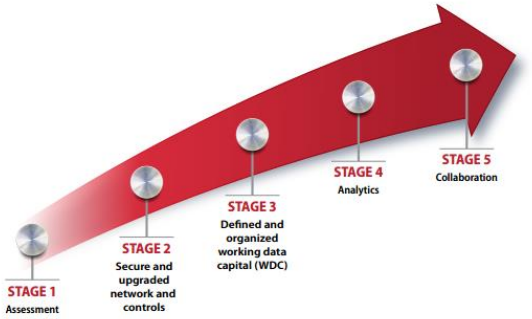
2. Online introductie assessment
    1. Industrial Internet Maturity Model (GE)
    2. Connected Enterprise Maturity Model (Rockwell)

1. Diepte – interviews
    1. On Site Interview op afspraak
    2. Peer Group interview
    3. Use case interview

Where do you rank in the Industrial Internet journey



Source : GE Automation, 2015



Source : Rockwell, 2013

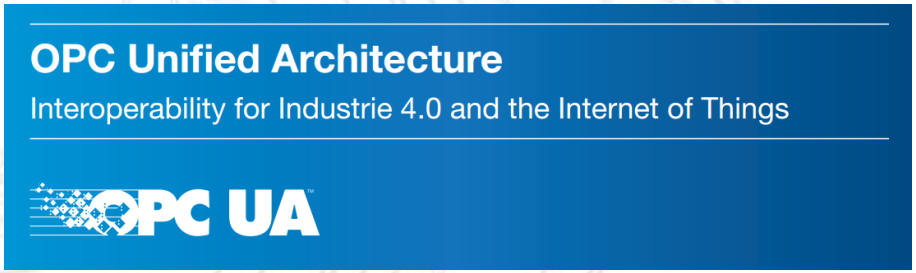
4. Transformatie (Workshops)

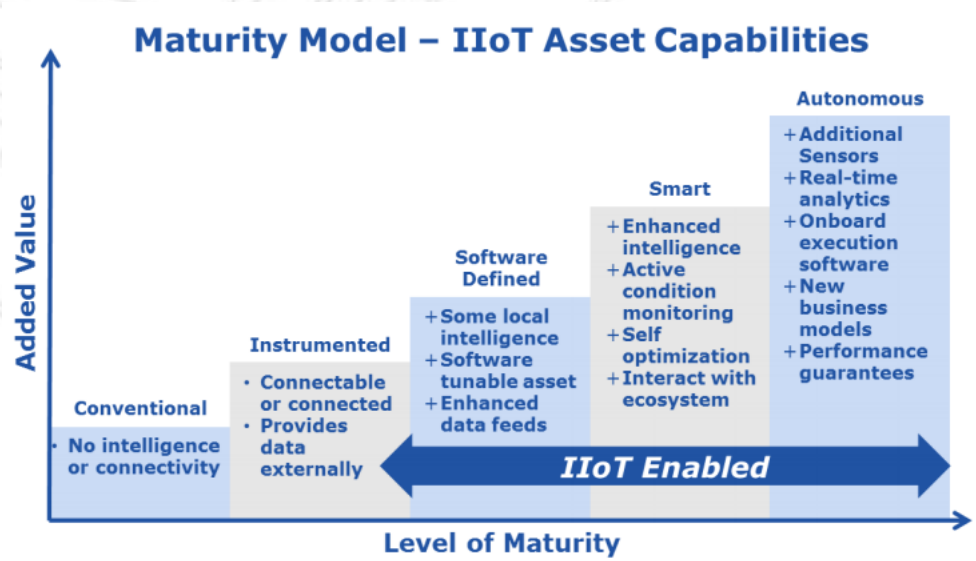
1. **Inspiratieseminar** industrial internet, industry 4.0, industrial IoT en aanverwanten,
2. **Inspiratieseminar i**ndustrial internet, industry 4.0, industrial IoT en aanverwanten,
3. Inspriratie Workshop 2 : **manufacturing – use cases**,
4. Inspriratie Workshop 3 : **Data Science, MES, Mobile, Application domain specific,**
5. Workshop 4 : **Transformation methodology**
6. Workshop 5 : **Best practices** (Subnets of things, Cloud, Connected Asset Lifecycle Management, Overall Equipment Effectiveness, Servitization, …)

7. Bi-annual event

Transformatie Workshops - planning

1. Inspiratie Workshop 2 : Manufacturing technology transformation, OPC UA vs Industrial Internet





Transformatie Workshops

2. Workshop 3 :
   - Scripting the Internet of Things (RPi, BBB, Arduino, ...)
     - Bouwen van sensoren en things op basis van betaalbare pakketten
     - Welke pakketten
     - Eerste stappen
     - Op weg met Github en andere Open Source tools
     - Installeren en leren
     - Proof of concept model uitwerken en business case support
   - GPIO programming in Linux
   - Reactive programming.
   - Node.js and Cloud 9
   - Frameworks: NodeRed, Johnny5, MH, ...

Transformatie Workshops

3. 14.04.2016 : Inspiratie Workshop 4

- Manufacturing Execution System towards Industrie 4.0 – Industrial Internet
  - Mark Van Pee, Sirris : overzicht
  - Ulrich : Industrie 4 interact / cloud MES
  - BrightEye
  - Objective (De Clercq Solutions)
  - Robex & Proficy Suite (GE)
  - Wonderware (Schneider)
  - Simatic
  - Scheider Invensys – Microsoft Azur

- Wat zijn de huidige mogelijkheden (en moeilijkheden) van MES Systemen
- Op welke manier bieden ze een oplossing naar uitdagingen voor Industrie 4.0, kunnen ze een tussenoplossing bieden, een meerwaarde
- Kunnen organisaties sneller van start gaan met Industrie 4.0 op basis van MES?

May 25, 2016: 3IF & Agoria International Conference

Home | Meer | Activiteiten | Events | Register | KennisBank | Nieuws & Achtergrond | BD

NIEUWS & ACHTERGROND

- 2016-02-08: 3IF & IoTBE: Predictive Maintenance
- 2016-04-12: Transformatieworkshop 3: Hands on Industrial Internet of Things
- 2016-04-14: Transformatieworkshop 4: MES to I40
- 2016-01-01 IIoT in 2016 en de nabije toekomst
- 2015-10-28 Malware Duuzer richt zich naar Manufacturen

2016-05-25 : 3IF & AGORIA CONFERENCE: INTERNET OF THINGS & DIGITAL TRANSFORMATION FOR INDUSTRY

3IF.be sirris driving industry by technology LSEC LEADERS IN SECURITY — 10 YEARS —

AGORIA No future without technology

3IF & AGORIA CONFERENCE: Industrial Internet, Internet of Things and Digital Transformation for Industry:

Program is still under development. Seats are limited, make sure that you pre-register using the eventbrite link here

Over the last 200 years, the world has experienced several waves of innovation. The Industrial Revolution saw innovations in technology applied to manufacturing. The Internet Revolution allowed machines to connect and exchange information. The two combined have set the stage for the next wave, that we are calling the "Industrial Internet", or Industrial Internet of Things" (IIoT). This last wave pushes the boundaries of machines and will drastically increase

3IF ON TWITTER

Tweets — Volgen

3IF @3IFconsortium 15 januari
prediction nr 1 for 2016 already happening : more cyber attacks on industrial control systems news.trust.org//item/20160113...

3IF @3IFconsortium 11 december
many manufacturers don't realize they already have data assets which can serve first steps to a digital factory twitter.com/Industry40/sta...

3IF @3IFconsortium 21 september
#IoTClan @Airbus jean bernard hentz demonstrating the live riveting of the future airbus planes on @Raspberry_Pi pic.twitter.com/2al4QWdKc1

LSEC LEADERS IN SECURITY

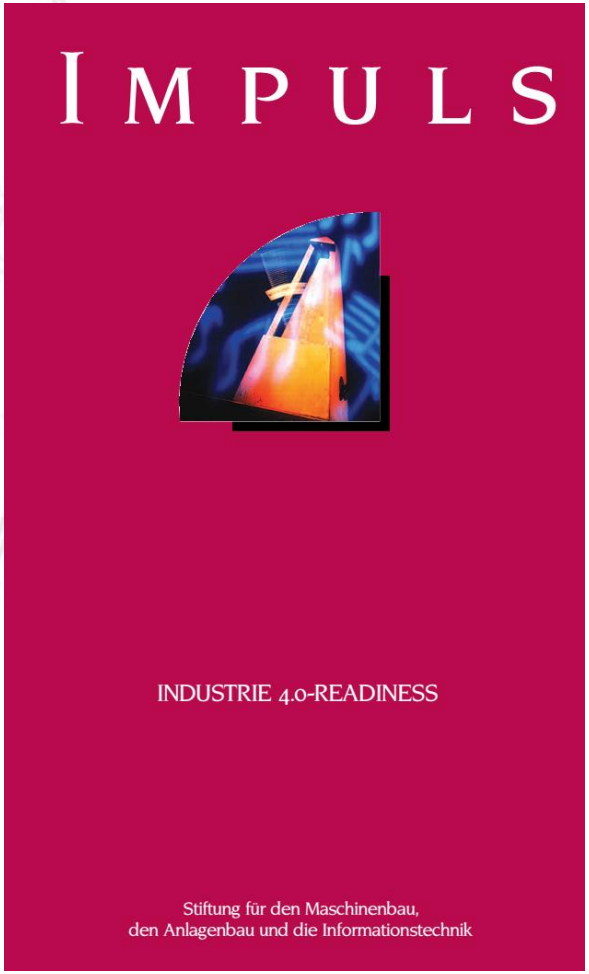
4. Monitoring Major Developments

bitkom VDMA ZVEI: Die Elektroindustrie

Implementation Strategy Industrie 4.0

Report on the results of the Industrie 4.0 Platform

January 2016

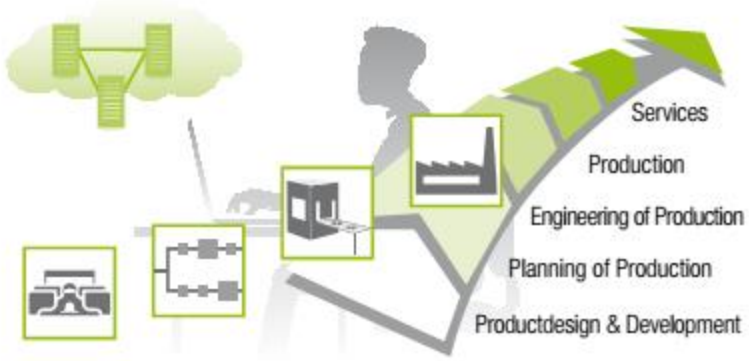


4. Monitoring Major Developments

Horizontal integration via value-added networks

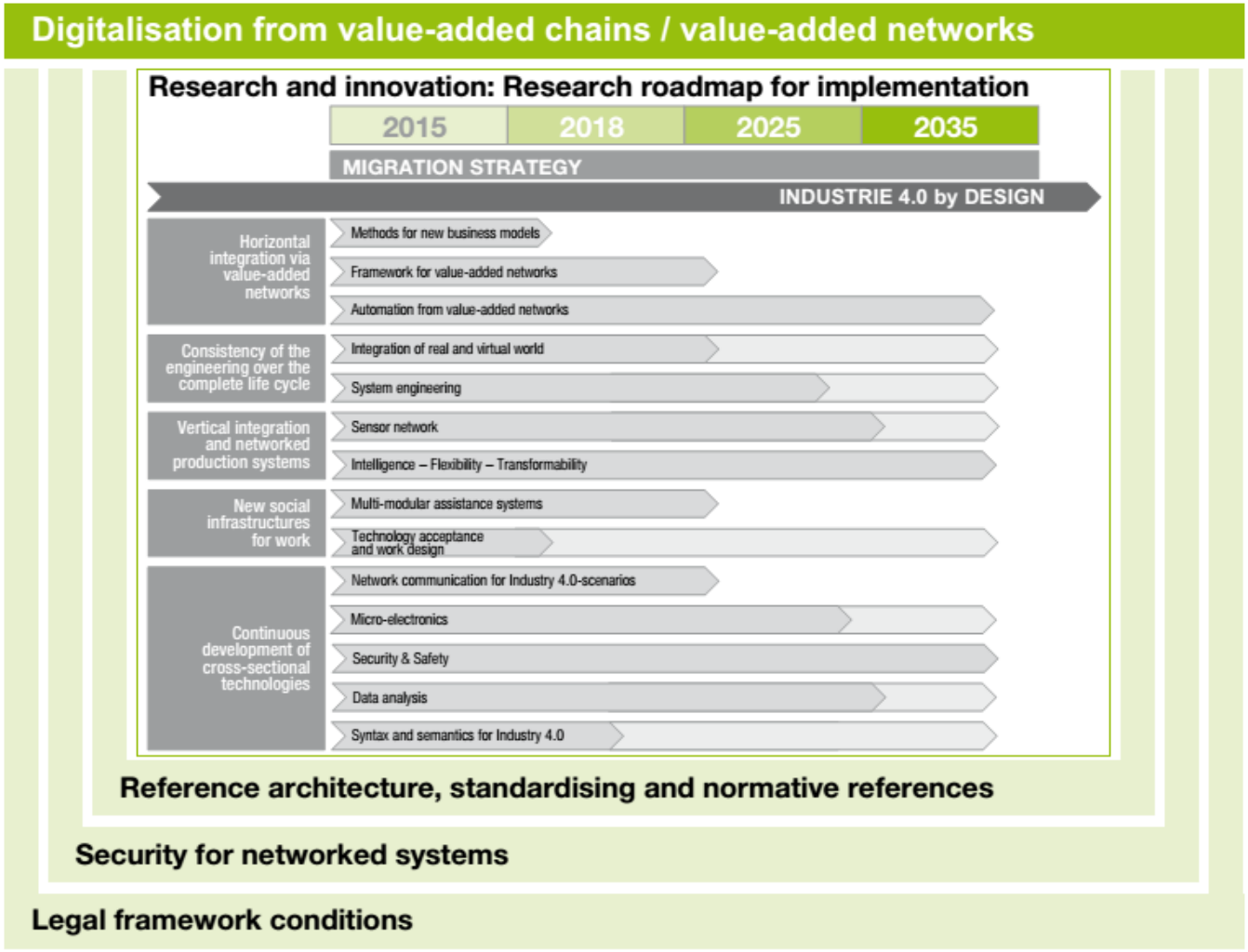
Vertical (integration and networked production systems)

Digital consistency for the engineering throughout the whole value-added chain



The human being as a conductor for added value

4. Monitoring Major Developments



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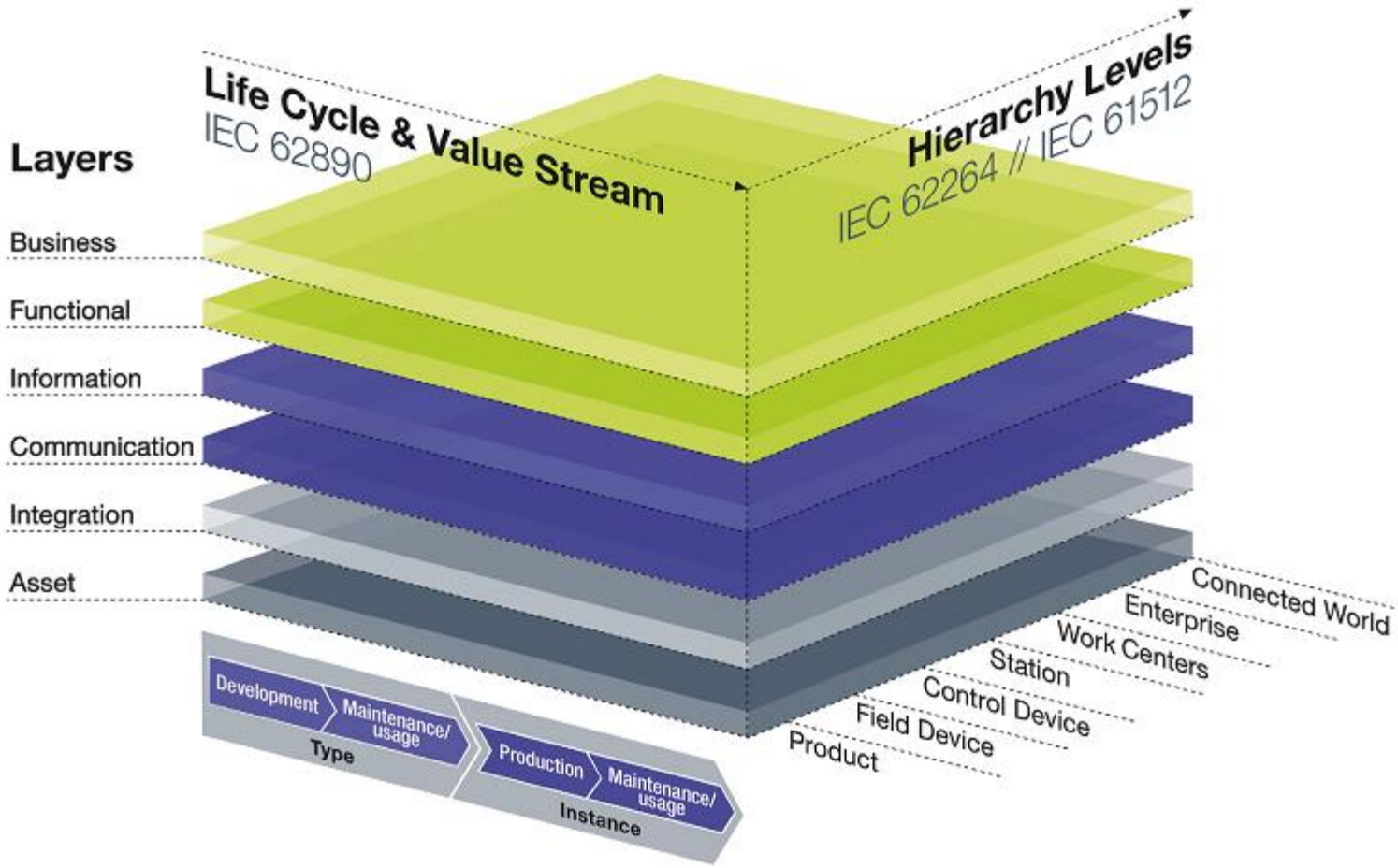

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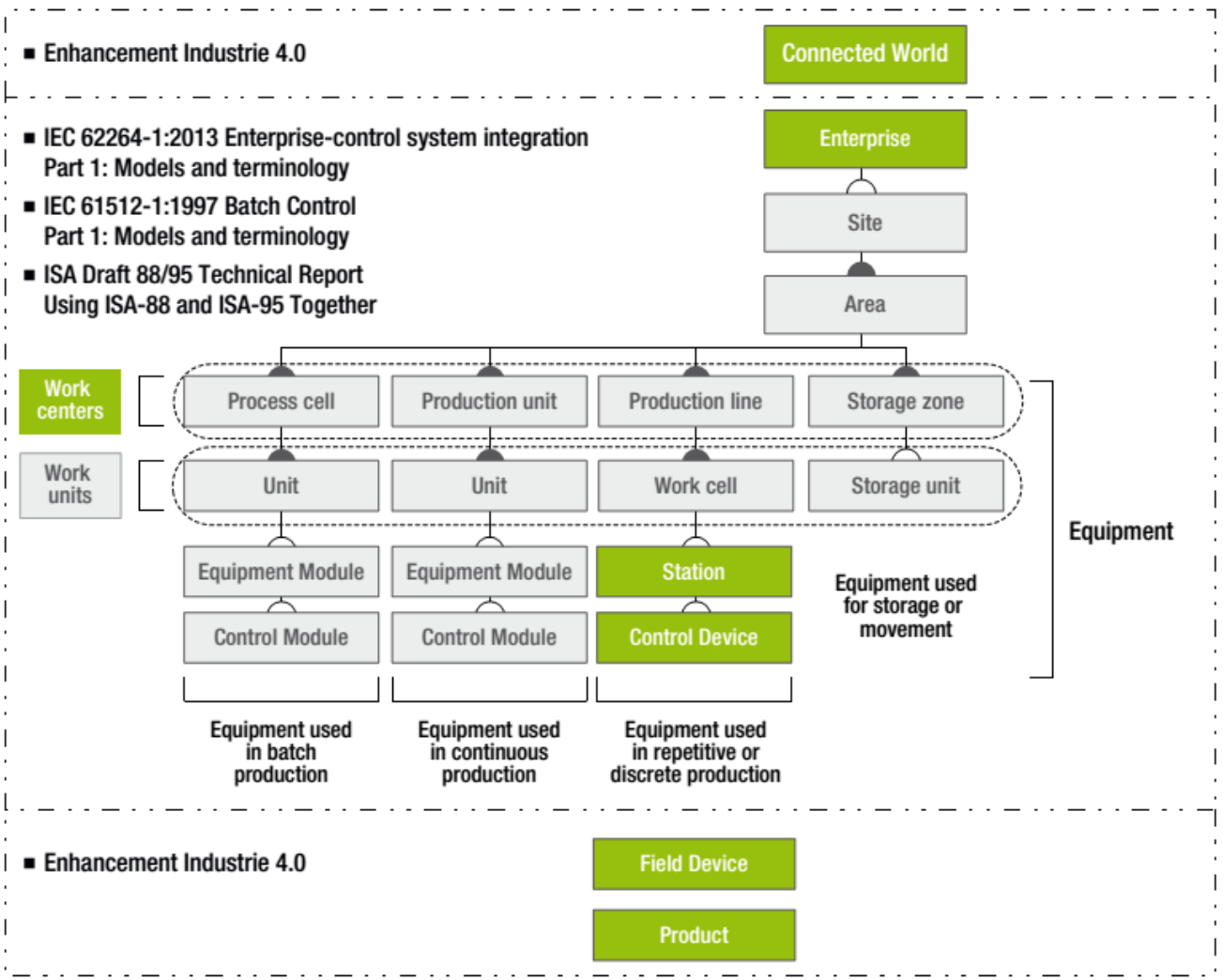

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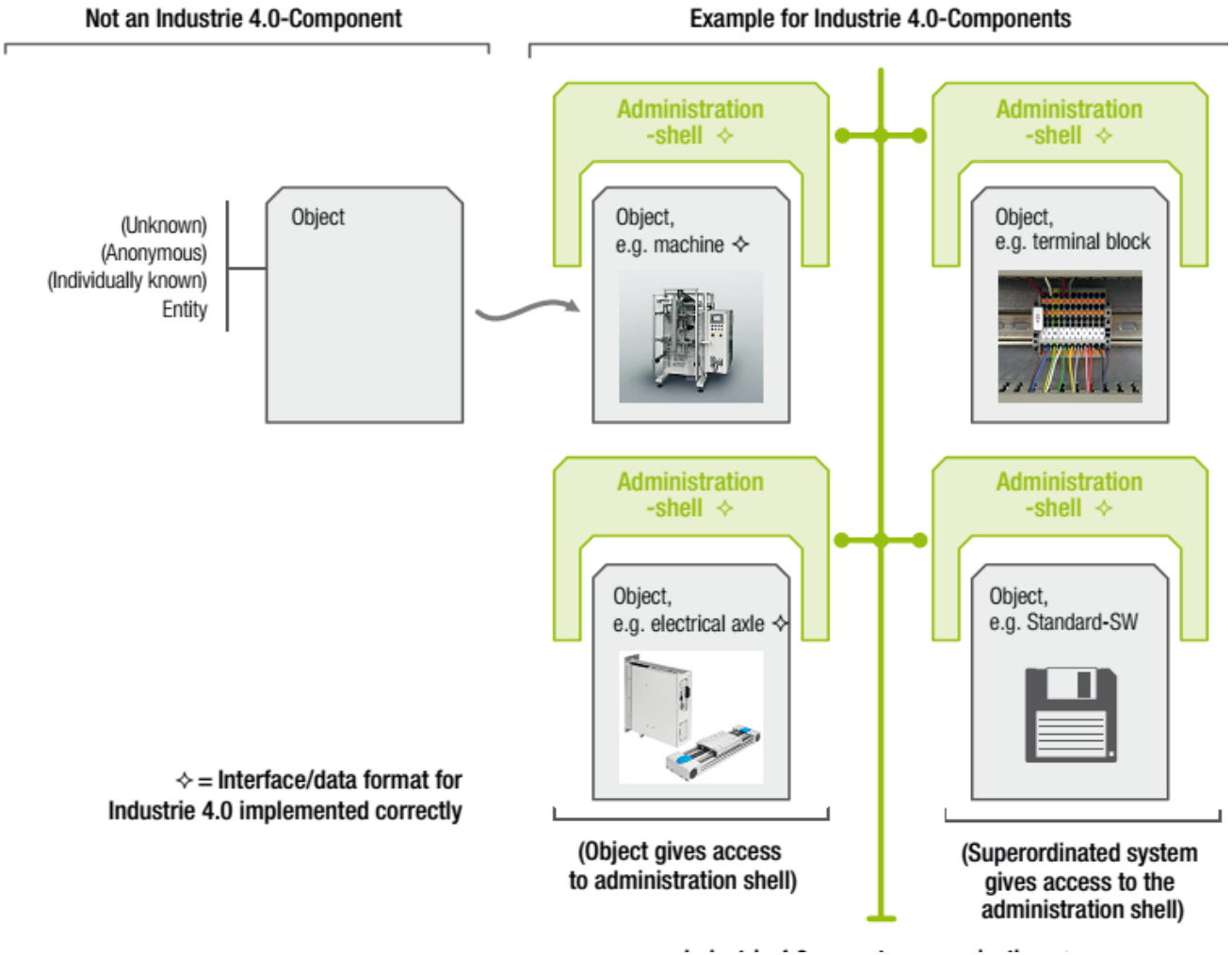
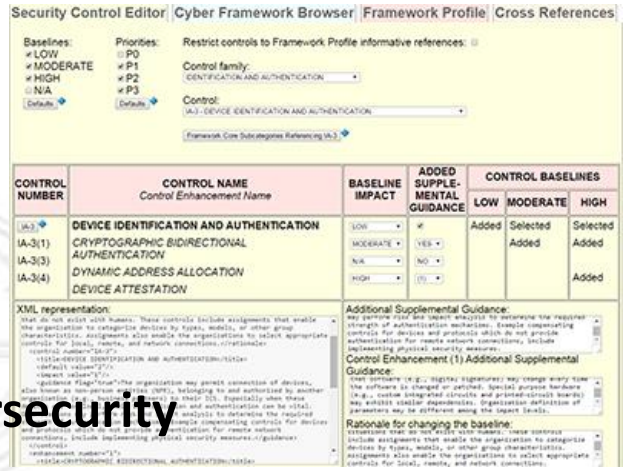


Industrie/y 4.0 & Security

1. **Significant developments**
   1. **Industrie 4.0**
   2. **Industrial Internet**
   3. **IoT**
   4. **(NIST CPS) Cyber Physical Systems Cybersecurity**



NOT THE END

More information, slides and follow-up

www.lsec.eu

www.3if.be - .eu

Club R2GS

cloud security alliance

European Commission

SEVENTH FRAMEWORK PROGRAMME

iwt

agentschap voor Innovatie door Wetenschap en Technologie

Flanders Investment & Trade

Government of Flanders - Belgium

Q or C

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