

JTG2 Architecture

Group Chair: Dr. Shi-Wan Lin,
Thingswise

shiwonlin@thingswise.com

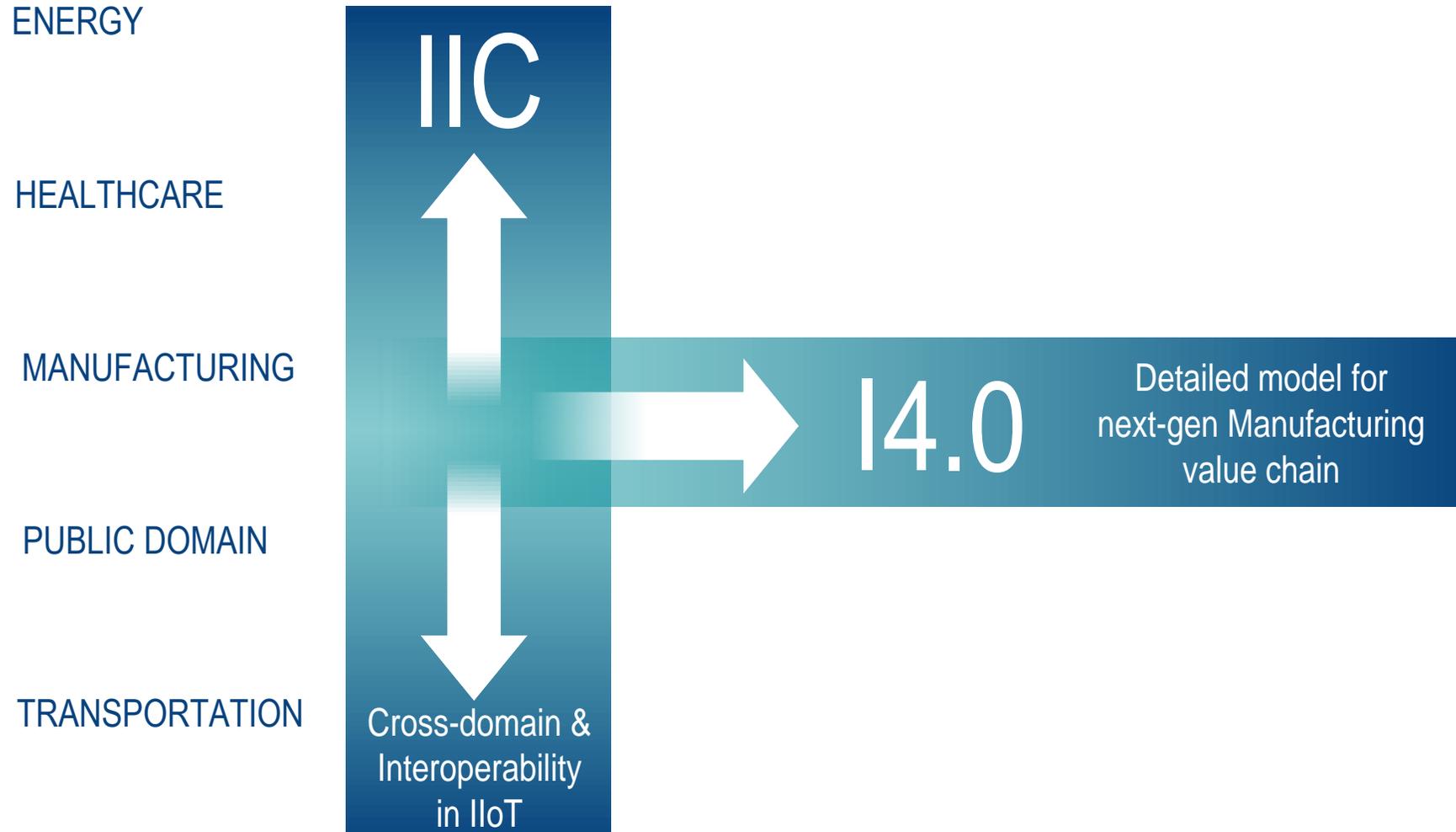
Group Chair: Martin Hankel, Bosch

martin.hankel@boschrexroth.de

June 19 2017



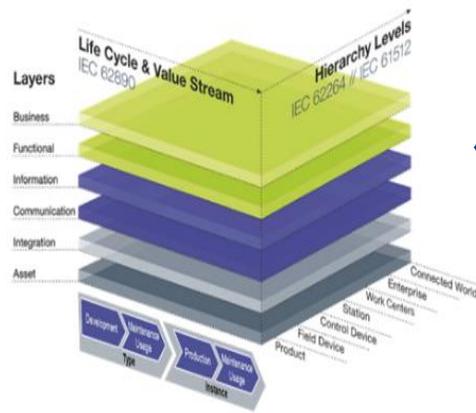
Intersection of the Leading IIoT Requirements Organizations



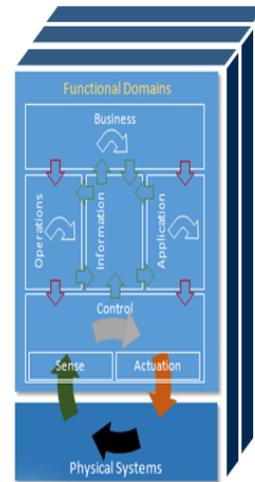
The Industrial Internet Consortium (IIC) addresses technical architectural across the domains of the IIoT. Industrie 4.0 focuses mainly on manufacturing, but goes much deeper

The Goal

RAMI4.0



IIRA

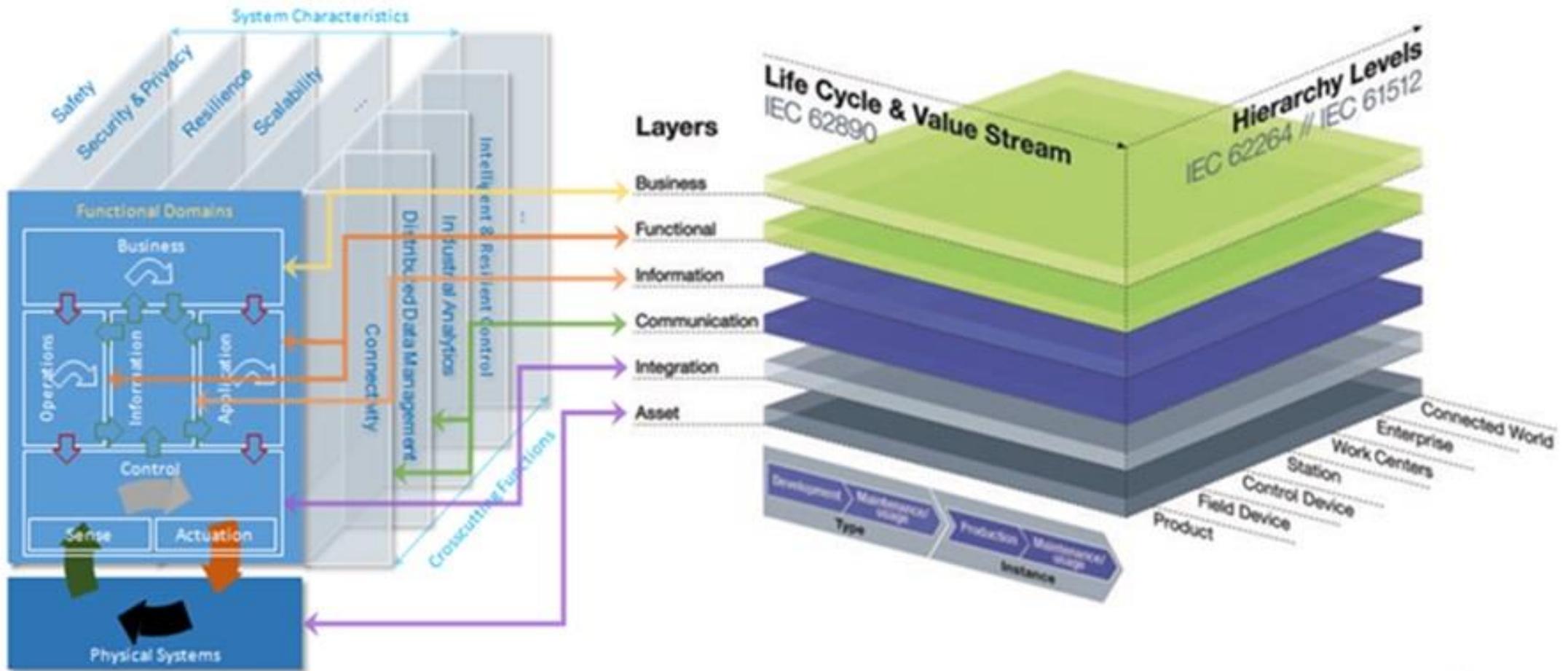


The IIC and Industrie 4.0 are working together to map architectures and provide eventual interoperability. A key part of that mapping is to understand and map the “connectivity” communications layer.

JTG2: Standardization: Harmonisation of Reference Architectures

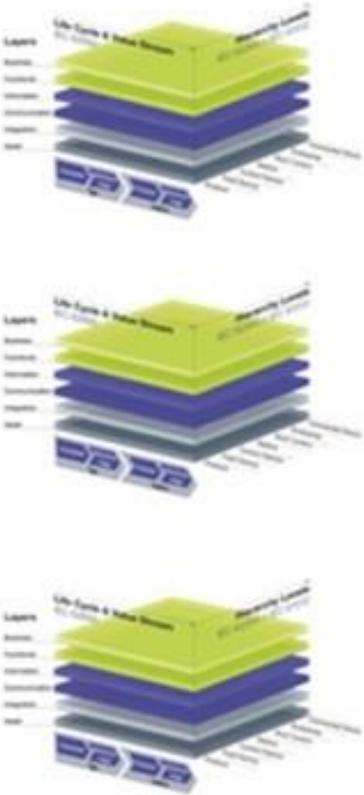
<p>Role and Responsibilities</p>	<p>The Joint Task Group 2 is part of the collaboration between the Industrial Internet Consortium and the Plattform Industrie 4.0. The Task Group is responsible for the development and mapping of the reference architectures IIRA and RAMI4.0. The purpose of this group is to further understand how IIRA and RAMI4.0 can fit together and develop the mappings between the RAMI4.0 dimensions and the IIRA viewpoints and key objectives.</p> <p>The result of the mapping will be used to improve the requirements for standards and to drive interoperability forward. With a joint understanding, gaps in standards can be easily identified, to be submitted to standards organizations. Creating joint testbeds in cooperation with the JTG 3 also helps to identify the gaps in existing standards.</p> <p>The JTG 1 and JTG 2 are working close to gather regarding the life cycle and value stream dimensions of the reference architectures.</p>
<p>Roadmap and Deliverables</p>	<p>Within the next three years the following goals should be achieved and the deliverables published:</p> <ol style="list-style-type: none"> 1) Mapping of IIRA and RAMI4.0 2) Requirements for standards 3) A set of best practices, methodologies and tools 4) Identifying ideas for joint testbeds for JTG3 for testing architecture ideas

First Steps in Alignment: Layers – Functional Domain



Interoperability between IIRA & RAMI 4.0

Manufacturers



Maintenance Services

Preventive Maintenance

Asset Usage Data For Engineering Processes

...

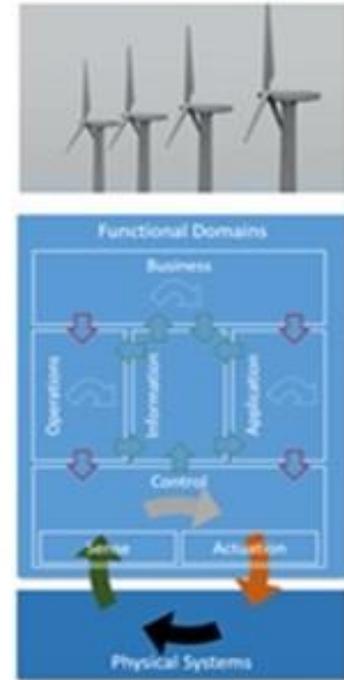
Standardized Functions

Standardized Semantics

Unique Identifier for Properties

Unique Identifier for Assets

Operations



Next Steps

Finalize Initial Whitepaper

Continue on mapping at the functional level

Continue on developing common understanding of cross-cutting functions

Develop shared requirements for standardisation