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VDMA Forum Industrie 4.0
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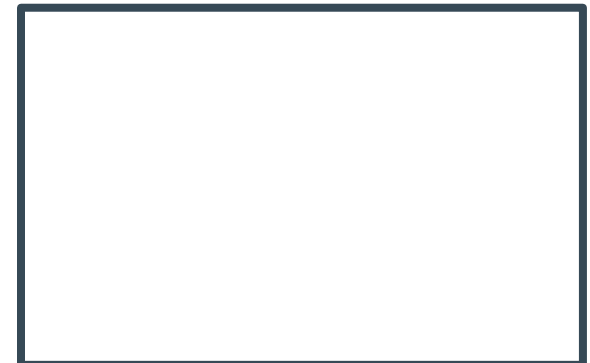


OPC UA for Machinery

Harmonization within the VDMA

OPC UA within the VDMA

- » Agricultural Machinery
- » Air Conditioning & Ventilation
- » Air Pollution Control
- » Automated Guided Vehicles
- » Battery Production
- » Building Control and Management
- » Building Materials
- » Ceramic Machinery
- » Cleaning Systems
- » Compressors, Compressed Air and Vacuum Technology
- » Construction Equipment
- » Continuous Conveyors
- » Cranes
- » Die & Mould
- » Drying Technology
- » Electrical Automation
- » Electronics, Micro & New Energy Production Technologies
- » Engines
- » Engines & Systems
- » Fire Fighting Equipment
- » Fluid Power
- » Food Processing and Packaging Machinery
- » Foundry Machinery
- » Glass Machinery
- » Hydro Power Plants
- » Industrial Trucks
- » Integrated Assembly Solutions
- » Intralogistic Systems
- » Lasers and Laser Systems for Material Processing
- » Length Measurement Technology
- » Lifts & Escalators
- » Machine Tools and Manufacturing Systems
- » Machine Vision
- » Metallurgical Plants and Rolling Mills
- » Micro Technologies
- » Mining
- » Photovoltaic Equipment
- » Plastics & Rubber Machinery
- » Power Transmission Engineering
- » Precision Tools
- » Printing & Paper Technology
- » Process Plant & Equipment
- » Productronic
- » Pumps & Systems
- » Refrigeration & Heat Pump Technology
- » Robotics
- » Security Systems
- » Software & Digitalization
- » Surface Technology
- » Testing Technology
- » Textile Care, Fabric and Leather Technology
- » Textile Machinery
- » Thermal Power Plants
- » Thermo Process Technology
- » Valves
- » Waste Treatment & Recycling
- » Weighing Technology
- » Welding & Pressure Gas Equipment
- » Wind Power Plants
- » Woodworking Machinery



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- » Welding & Pressure Gas Equipment
- » Wind Power Plants
- » Woodworking Machinery

OPC UA CS released

Release Candidate

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- » OPC UA CS released
 - » Release Candidate
 - » Joint Working Group with OPC Foundation
 - » OPC UA CS in work

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- » OPC UA CS released
- » Release Candidate
- » Joint Working Group with OPC Foundation
- » OPC UA CS in work
- » Aware of OPC UA

- The VDMA organizes the development of Companion Specifications for various sectors:



Plastics & Rubber Machinery



Robotics



Machine Tools



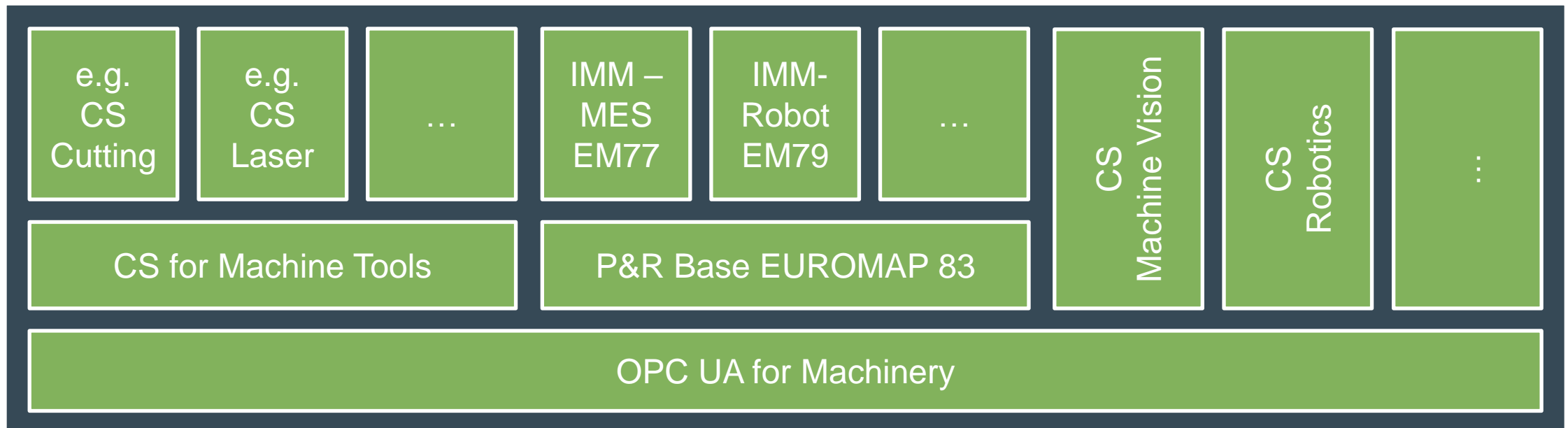
Many more

→ The usage of OPC UA in the context of the mechanical engineering industry needs to be harmonized.

→ OPC UA for Machinery

- OPC UA Companion Specification for Machines & Components of Machines in the discrete manufacturing.
- Addressing specific Use Cases

- **OPC UA for Machinery** defines building blocks for specific Use-Cases
 - Building Blocks can be used if seen fit
 - Companion Specs use required Building Blocks



- Part of the Project **II4IP** - Interoperable Interfaces for Intelligent Production
- Objective:
 - Harmonized Interoperability for OPC UA Companion Specifications
 - **OPC UA for Machinery**
 - Integration of other Sectors
 - Transfer of Knowledge
 - Internationalization

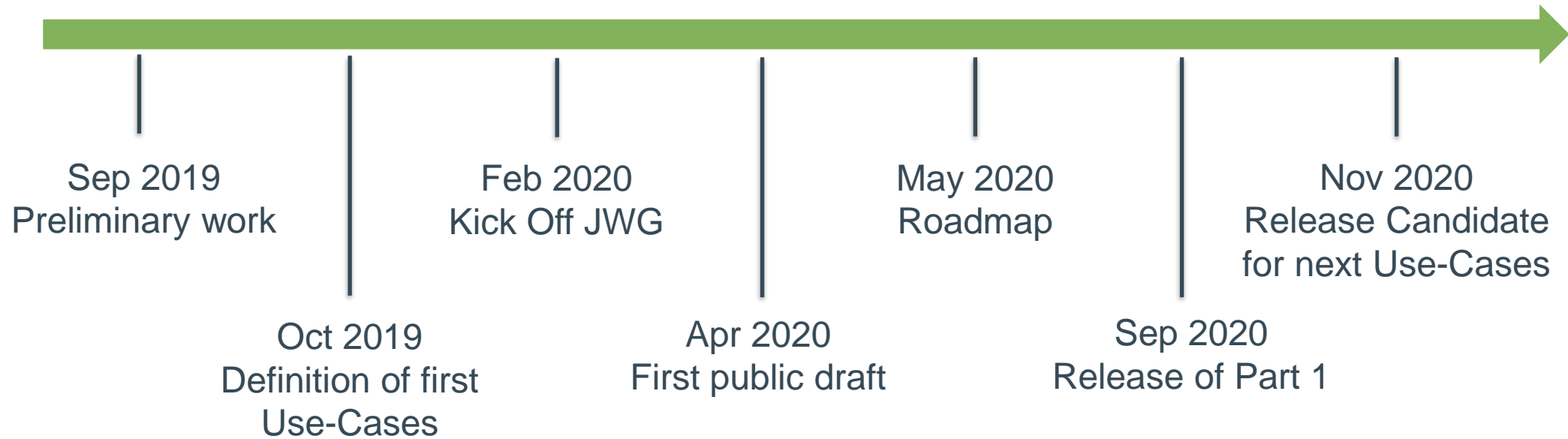
Supported by:



Federal Ministry
for Economic Affairs
and Energy

on the basis of a decision
by the German Bundestag

General Informations

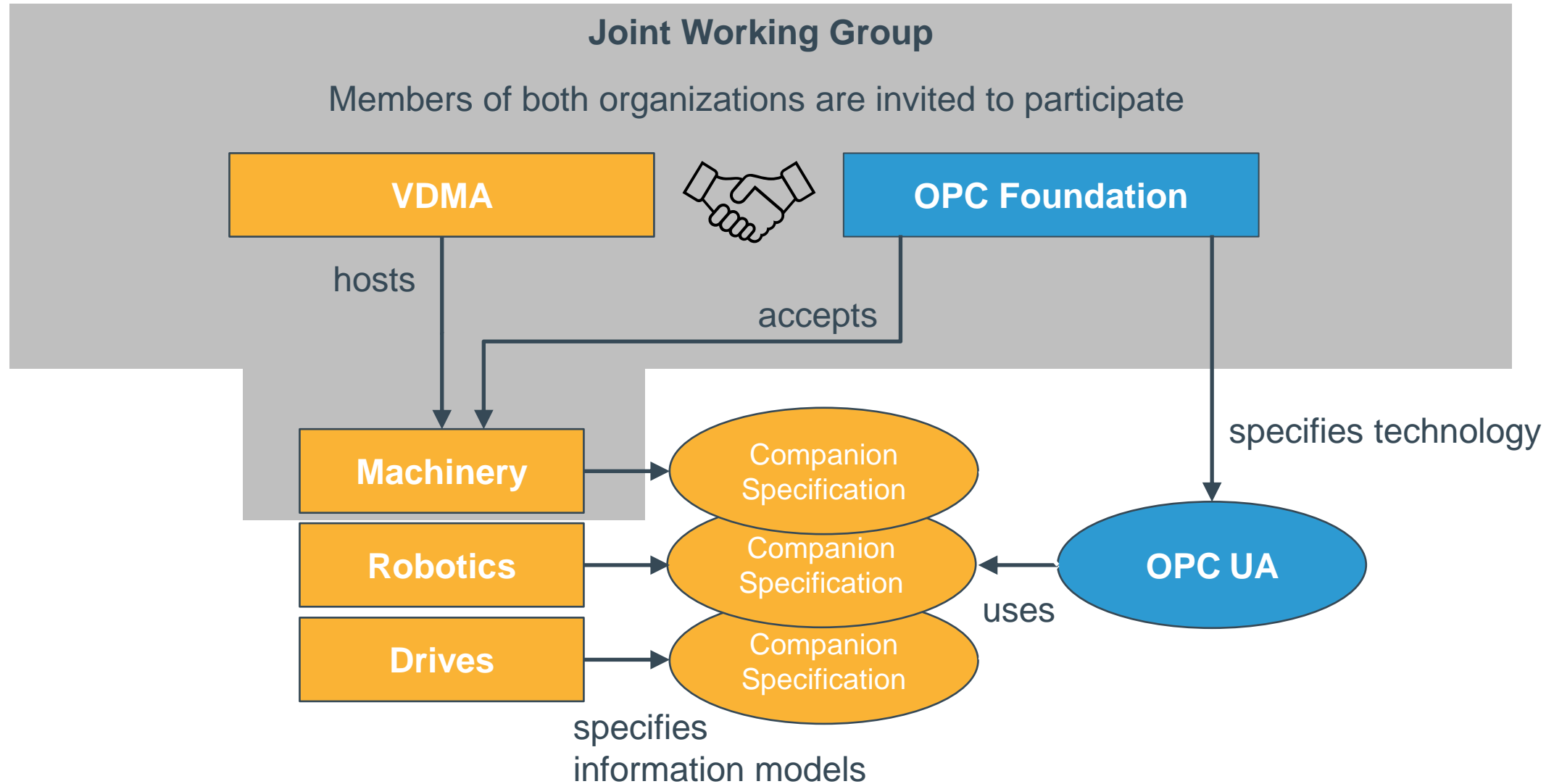


Modelling Expert: Dr. Wolfgang Mahnke

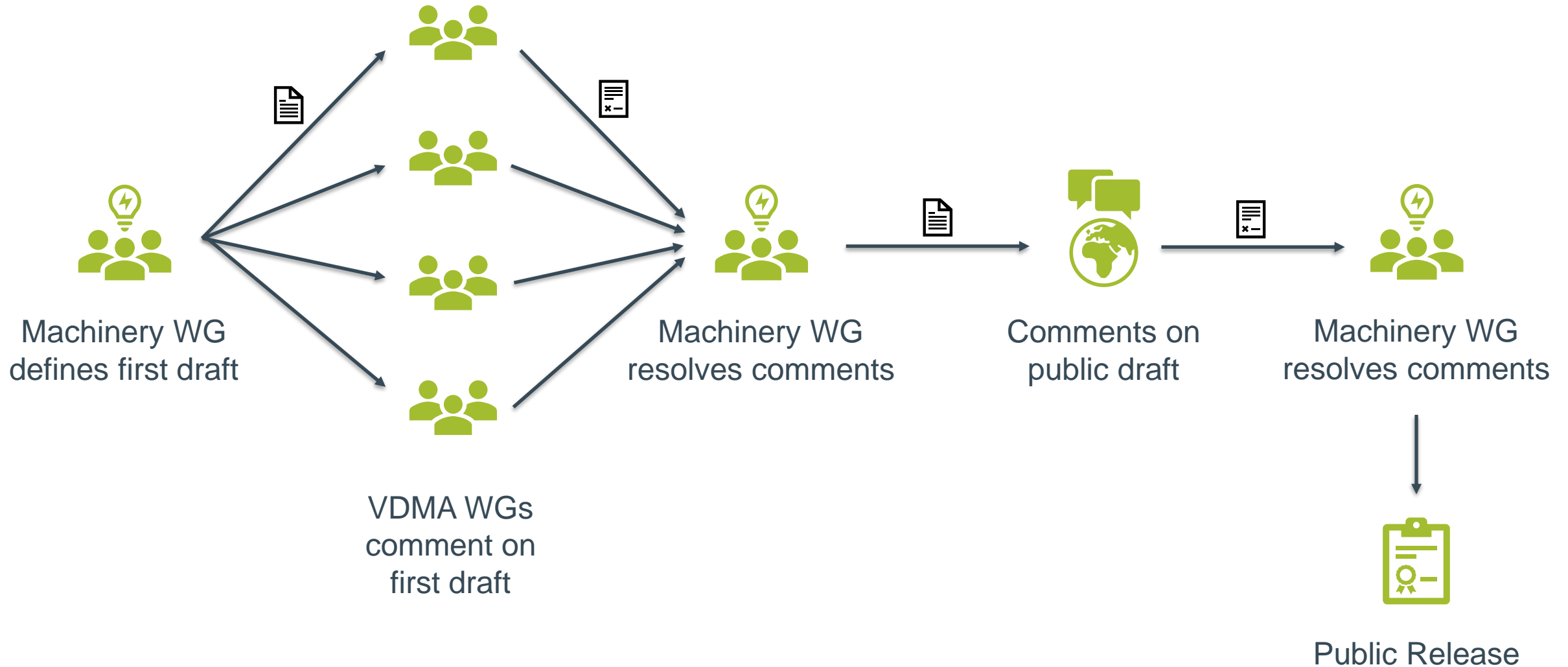
Representatives from: Robotics, Machine Tools, Metallurgy, Drives, Plastics & Rubber Machinery



Recently added: Machine Vision, Woodworking Machinery, Weighing, Food & Packaging

Joint Working Group



Feedback on Draft



VDMA Specification		November 2020
	VDMA 40001-1	
ICS 25.020; 35.240.50		
OPC UA for Machinery – Part 1: Basic Building Blocks		
VDMA 40001-1:2020-11 is identical with OPC 40001-1 (Release 1.0.0)		
VDMA		Document comprises 36 pages
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First Building Blocks already released:



Machine Identification & Nameplate



Finding all machines in a server

Next Building Blocks published as draft:

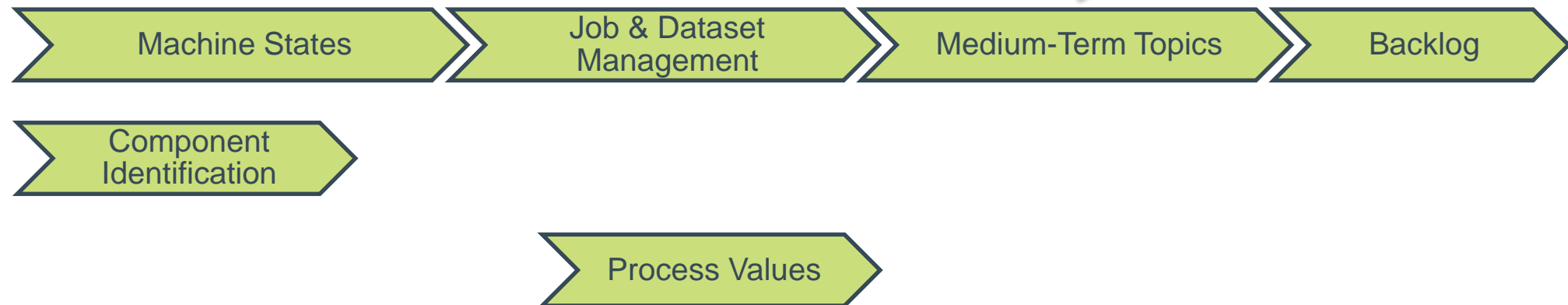
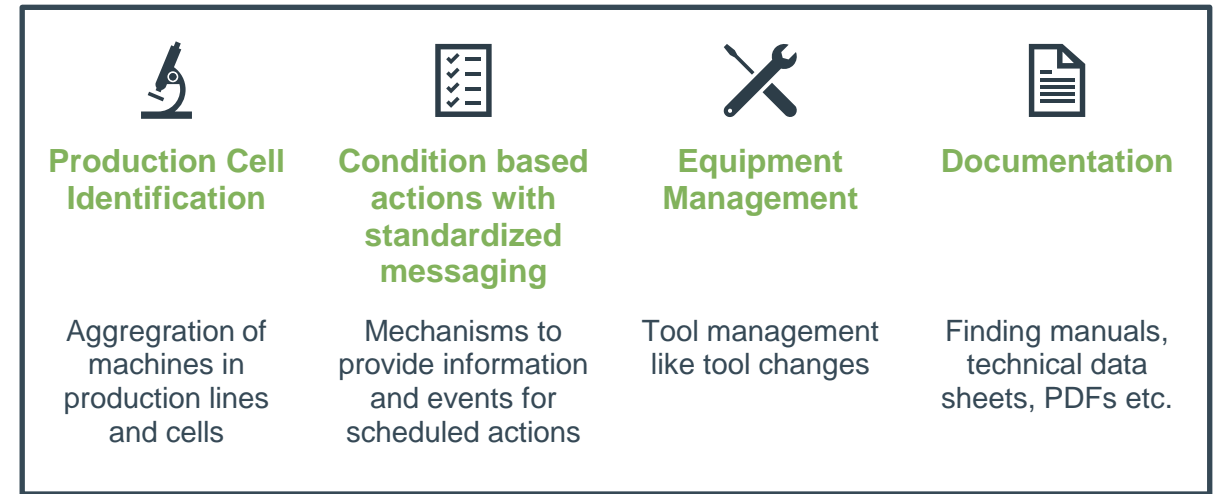


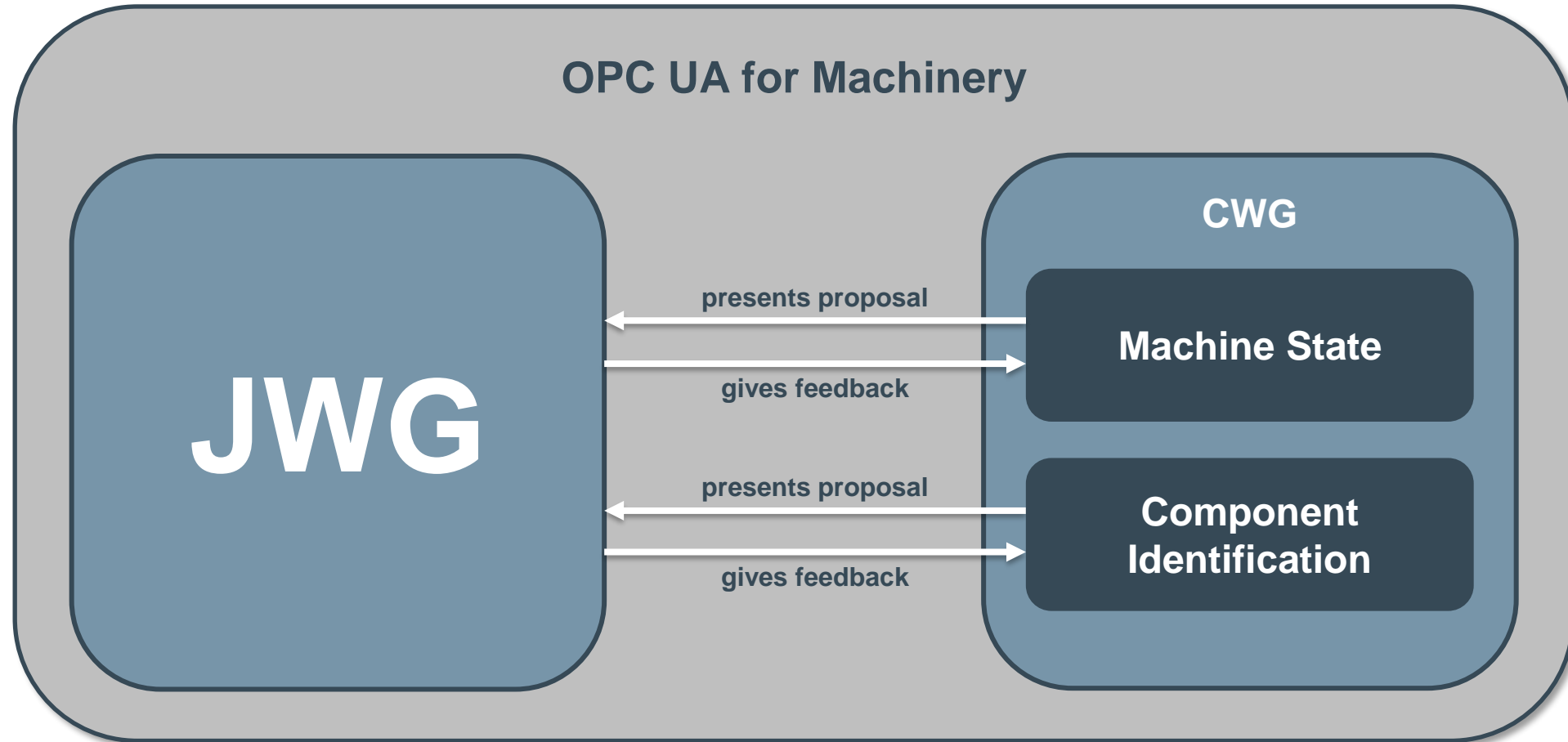
Component Identification



Finding all components of a machine

1. **Component Identification**
2. **Machine States**
3. **Job & Dataset Management**
4. **Process Values**
5. **Medium-Term Topics**
6. **Backlog-Topics**







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Thank you for your attention!
and stay safe! 😊