

# Configuration and commissioning of Turnkey Production Systems

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ICSM 2018, Shanghai, 02-11-2018

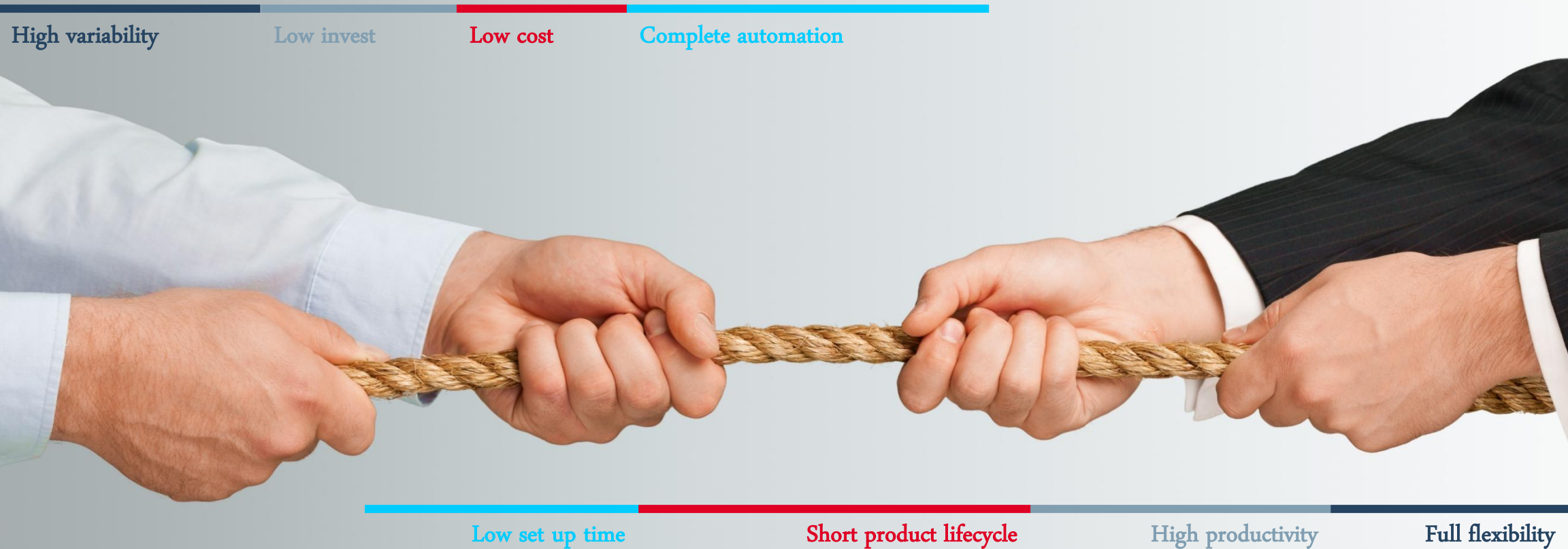


**Till Guener**

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Rexroth China,  
Engineering Assembly Technology

## Contradictory Demands

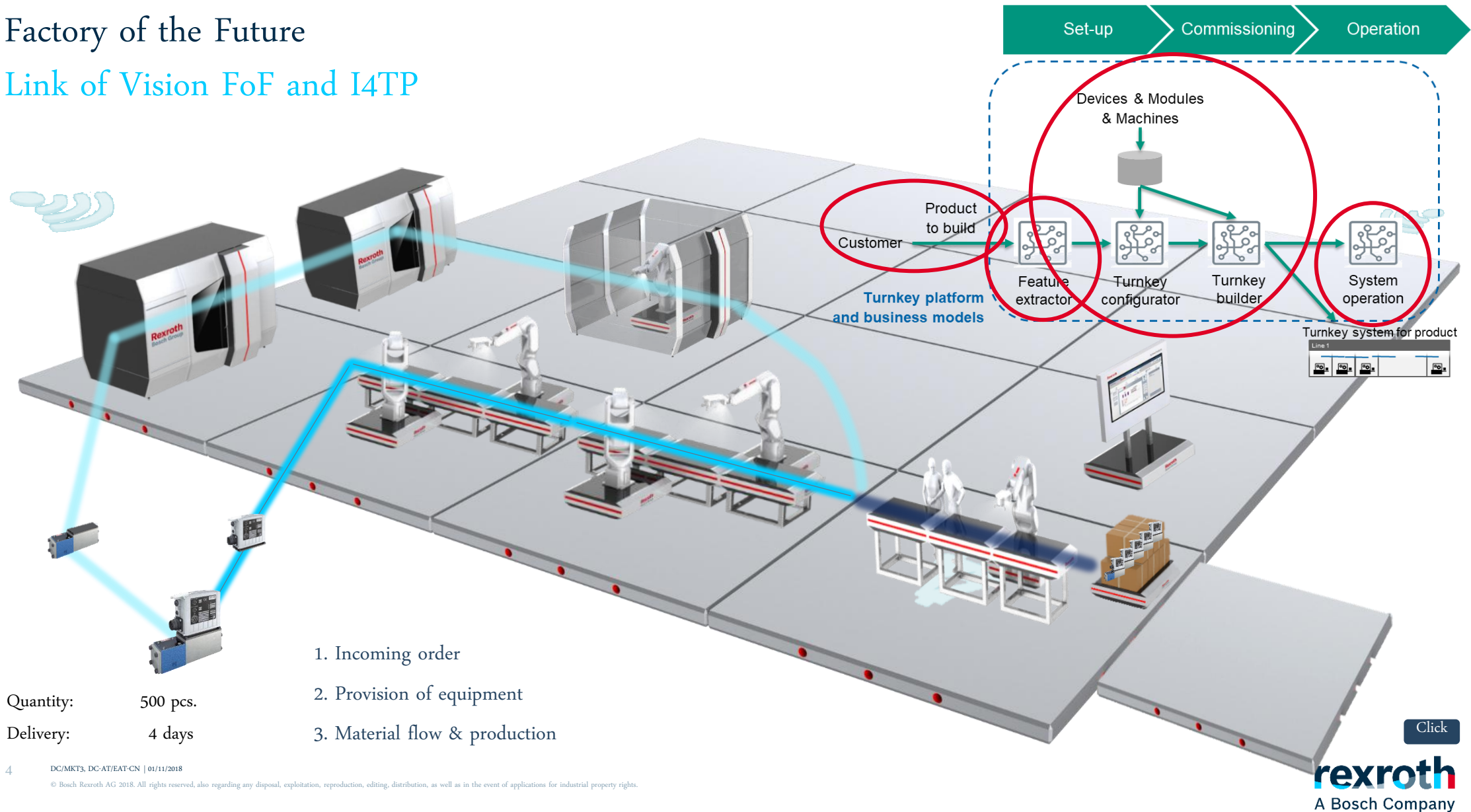


## Vision of the Factory of the Future



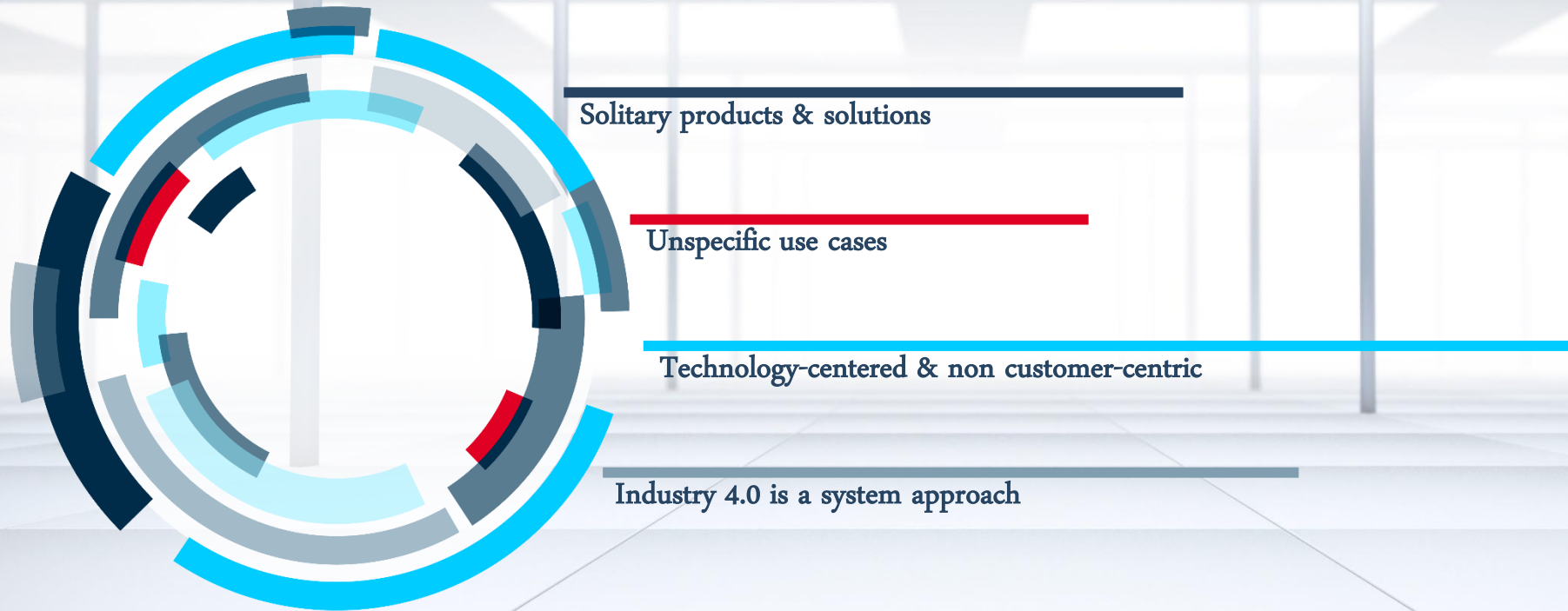
# Factory of the Future

## Link of Vision FoF and I4TP

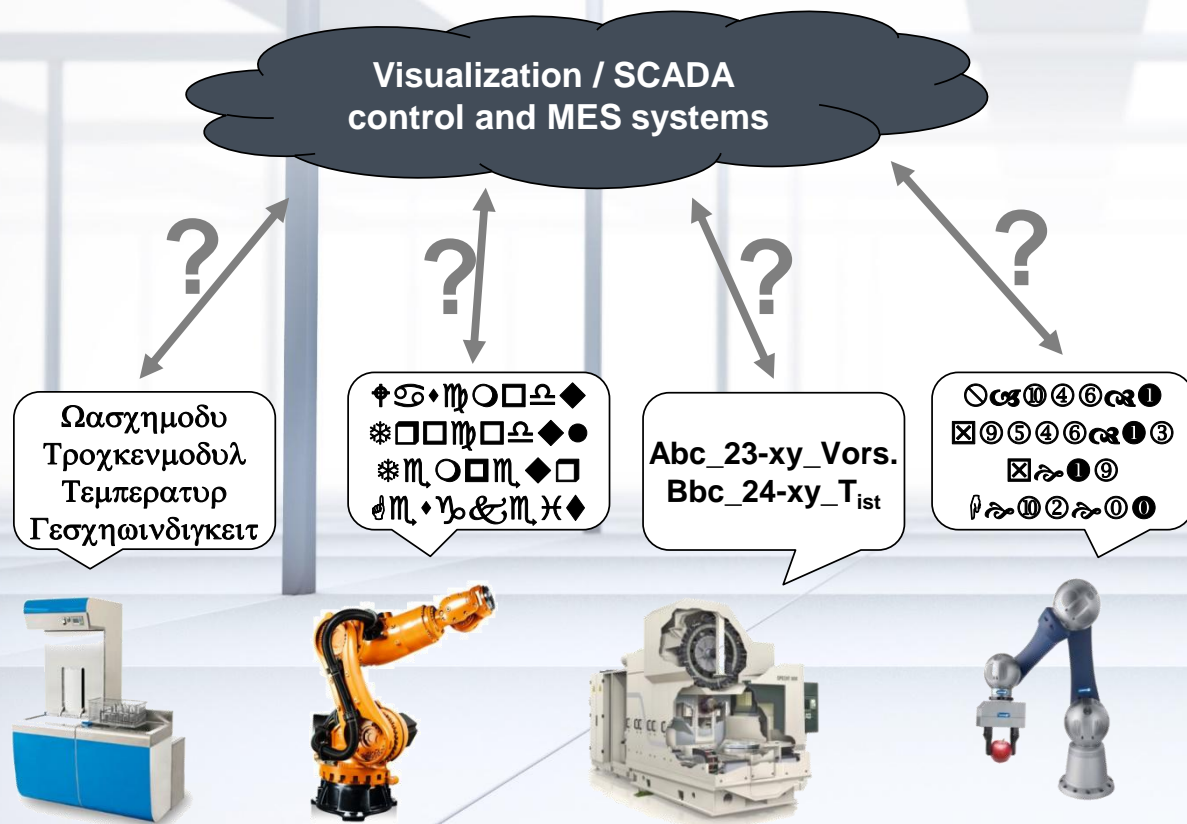




## Maturity Level of I 4.0

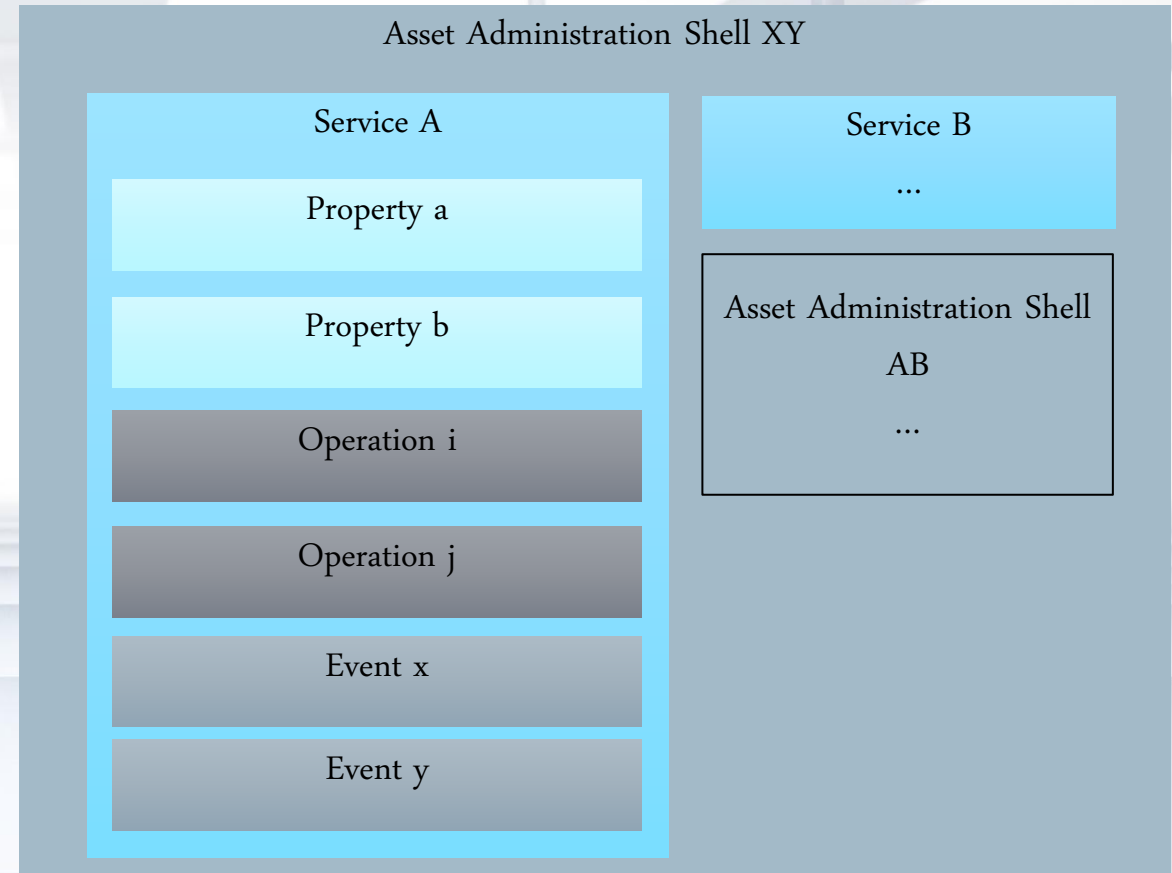
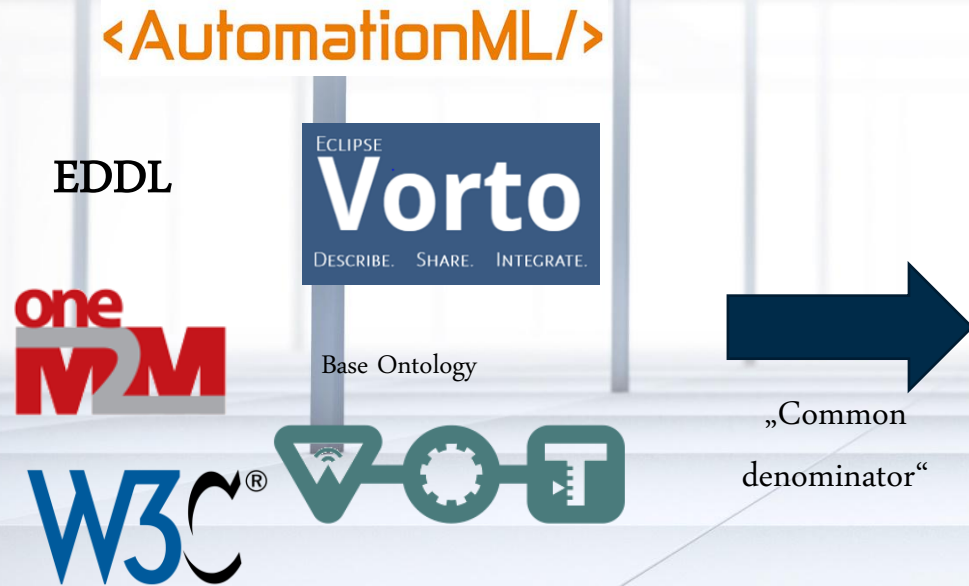


## Major hurdle for Industry 4.0 - Communication

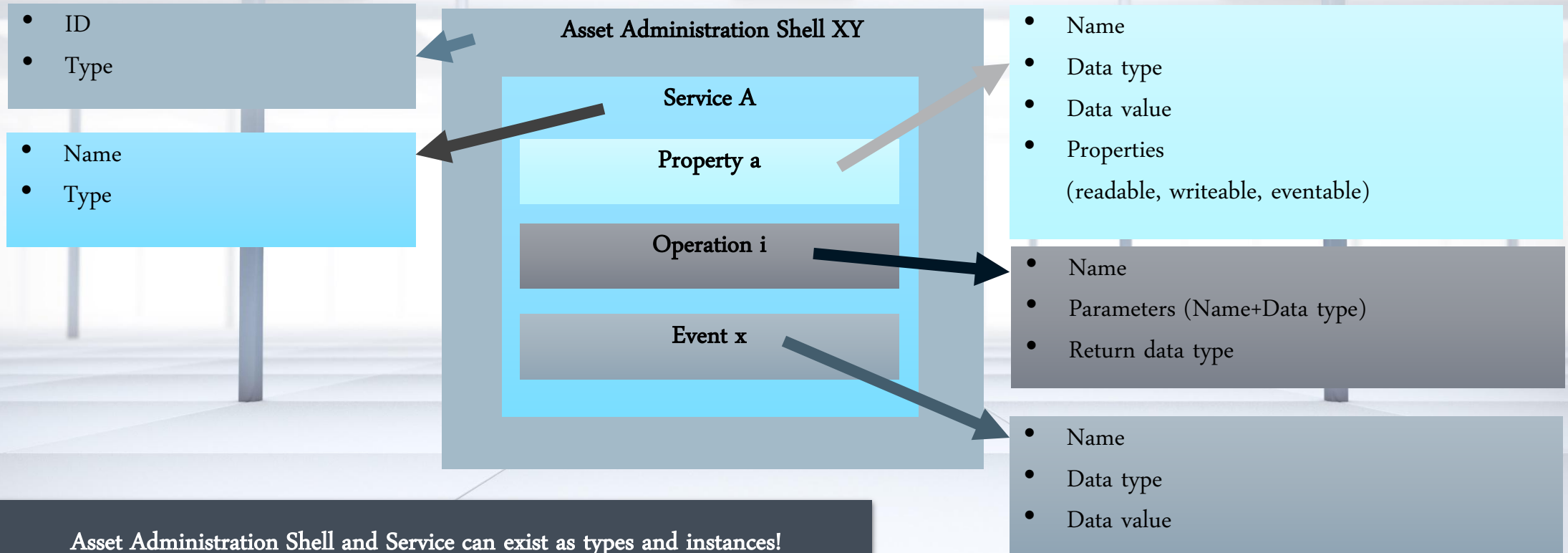


Standardization required

## Idea – IoT Gateway



## Idea – IoT Gateway





## Idea – IoT Gateway

### Asset Administration Shell

ID = „Actuator001“,

Type = „http://example.org/intelligentActuator/v1.0“

#### Service

Name: „Header“

Type: „DF-Header-v1“

#### Property

Name: „serialnumber“

Data type: string  
readable

#### Property

Name: „manufacturer“

Data type: string  
readable

#### Service

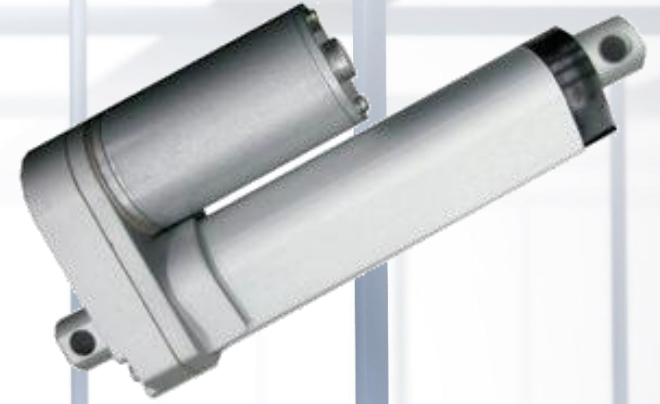
Name: „Submodel Actuator“

Type: „XYZ/actuator“

#### Operation

Name: „moveOut“

Parameter: none  
Return data type: void



Despite the use of only a few descriptive elements, many applications can be implemented!

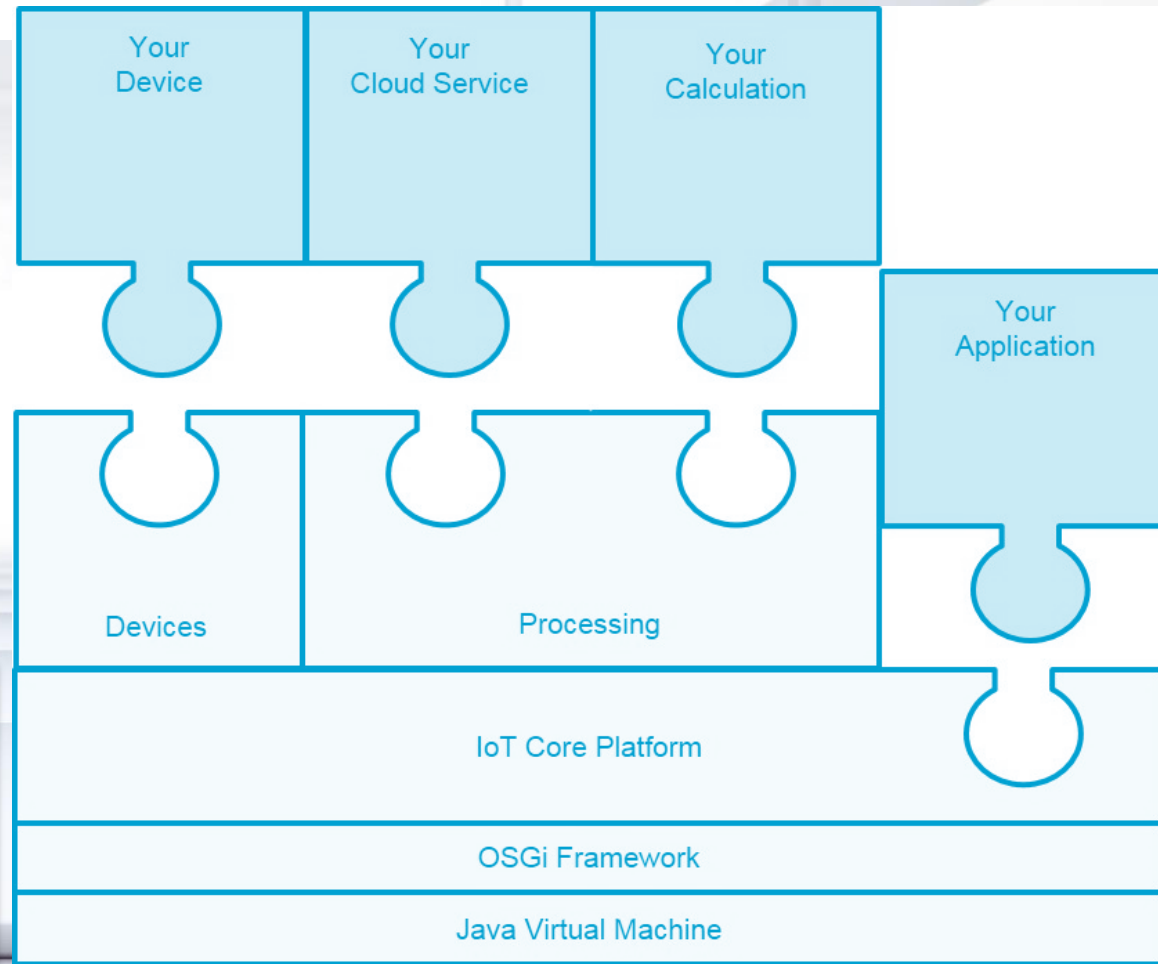
## Idea – IoT Gateway

- Based on Java and OSGi-Framework
- With OSGi dynamic adding of modules at runtime possible
- Usually sold with a device
- Responsible as interface between machine and cloud (reads data and sends it to cloud)



### I4TP

The objective of the joint project I4TP is to fully integrate the IoT Gateway with a reconfigurable role



## Summary – IoT Gateway

