

# Process Instrument Digitization

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# Industrial Automation and Control (4)

## Production control and safety instrumented systems

### CENTUM VP

Integrated production control system



### STARDOM

Network-based control system



### FAST/TOOLS

SCADA software



### FA-M3V

Range-free multi-controller

### e-RT3 plus

eMbedded M@chine controller



### ProSafe-RS

Safety instrumented system



## Field instruments, analytical instruments, and recorders

### DPharp EJX

Differential pressure / pressure transmitter



**ROTAMASS Total Insight (ROTAMASS prime model)**

Coriolis mass flowmeters

### YTA510

Wireless temperature transmitter



### TDLS8000

Tunable diode laser spectrometer



**SMARTDAC+ GX10/GX20**

Paperless recorders

### GC8000

Process gas chromatograph



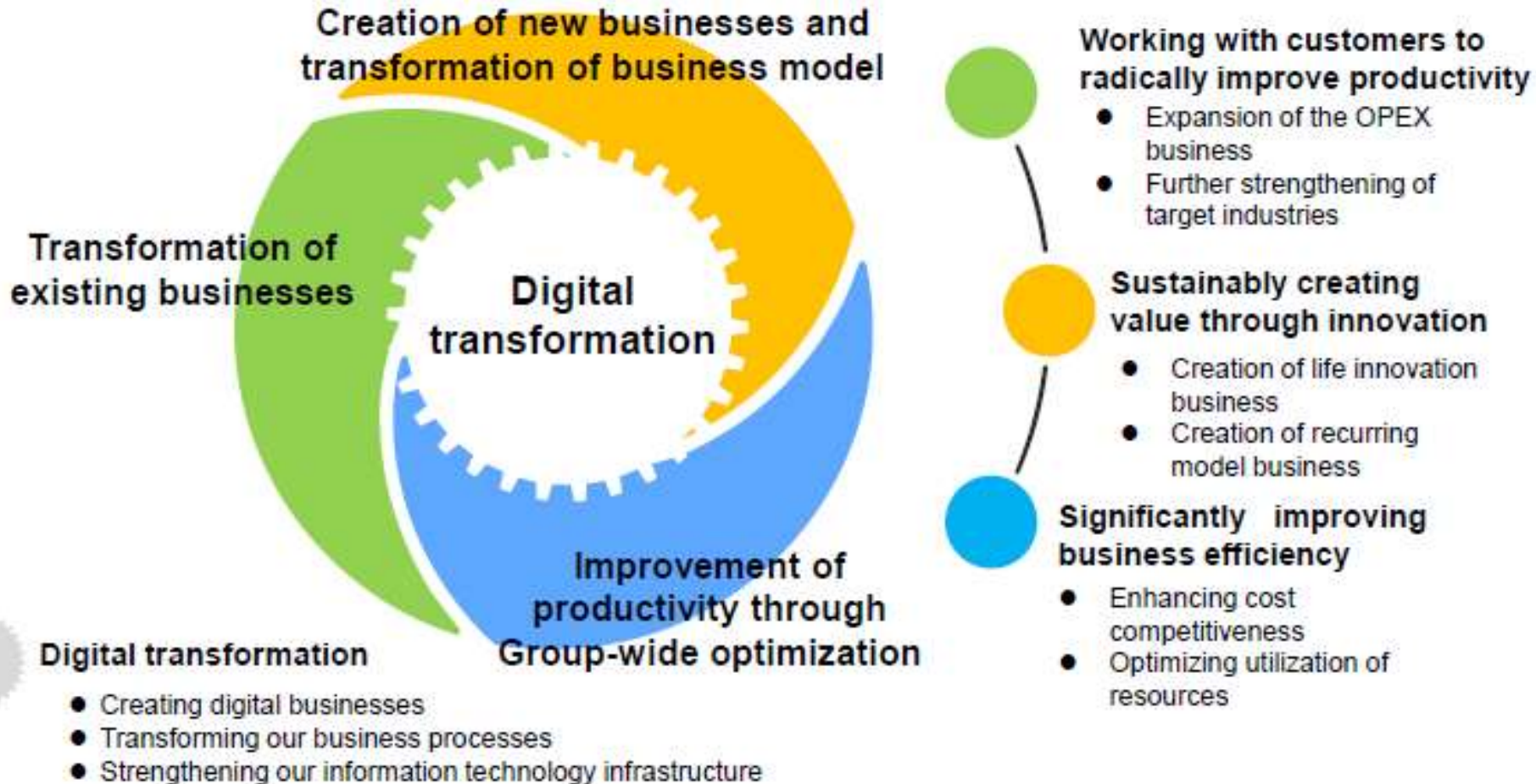
# Worldwide Business Operations

## Global network supporting business growth



# Yokogawa's Digital Transformation

Transform our businesses to achieve a sustainable society.



# Digital Handover

The transfer of data about an asset in a computer-actionable format



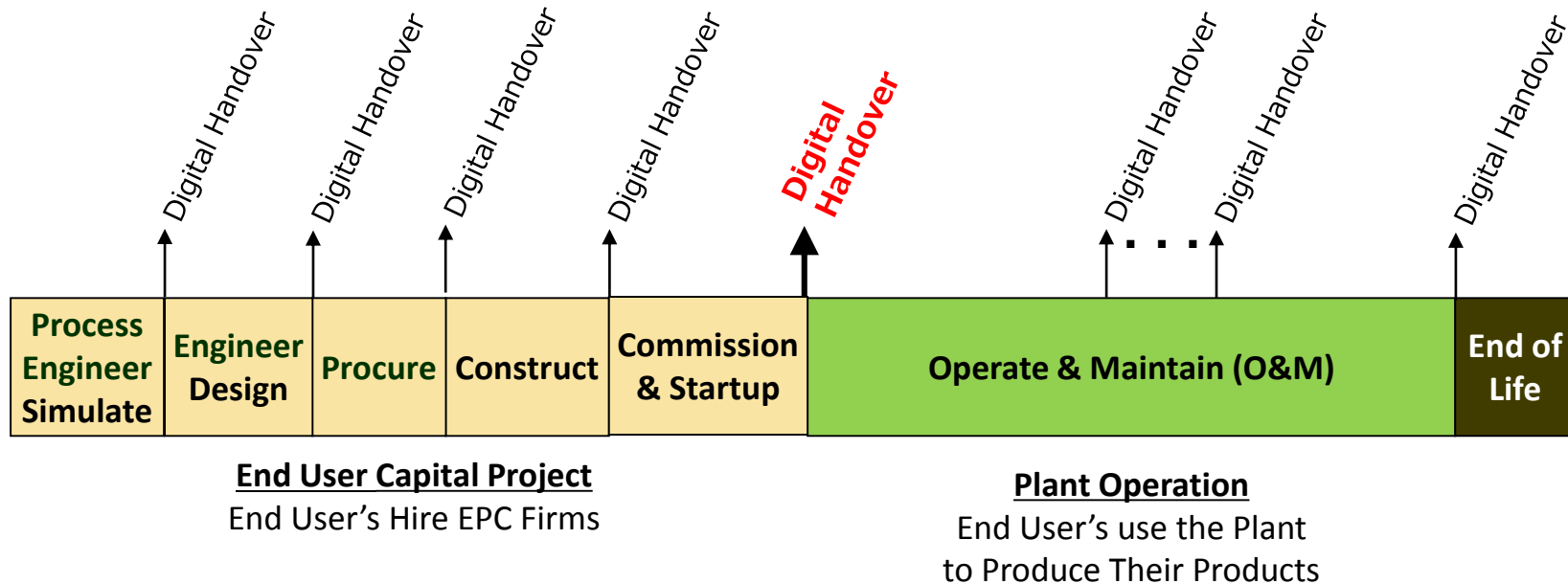
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</body>
</html>
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```

# Digital Handover Goal



# Asset Lifecycle

During the Life of an Asset there are many Digital Handovers



During the O&M Phase there are multiple Digital Handovers as Plants are Upgraded

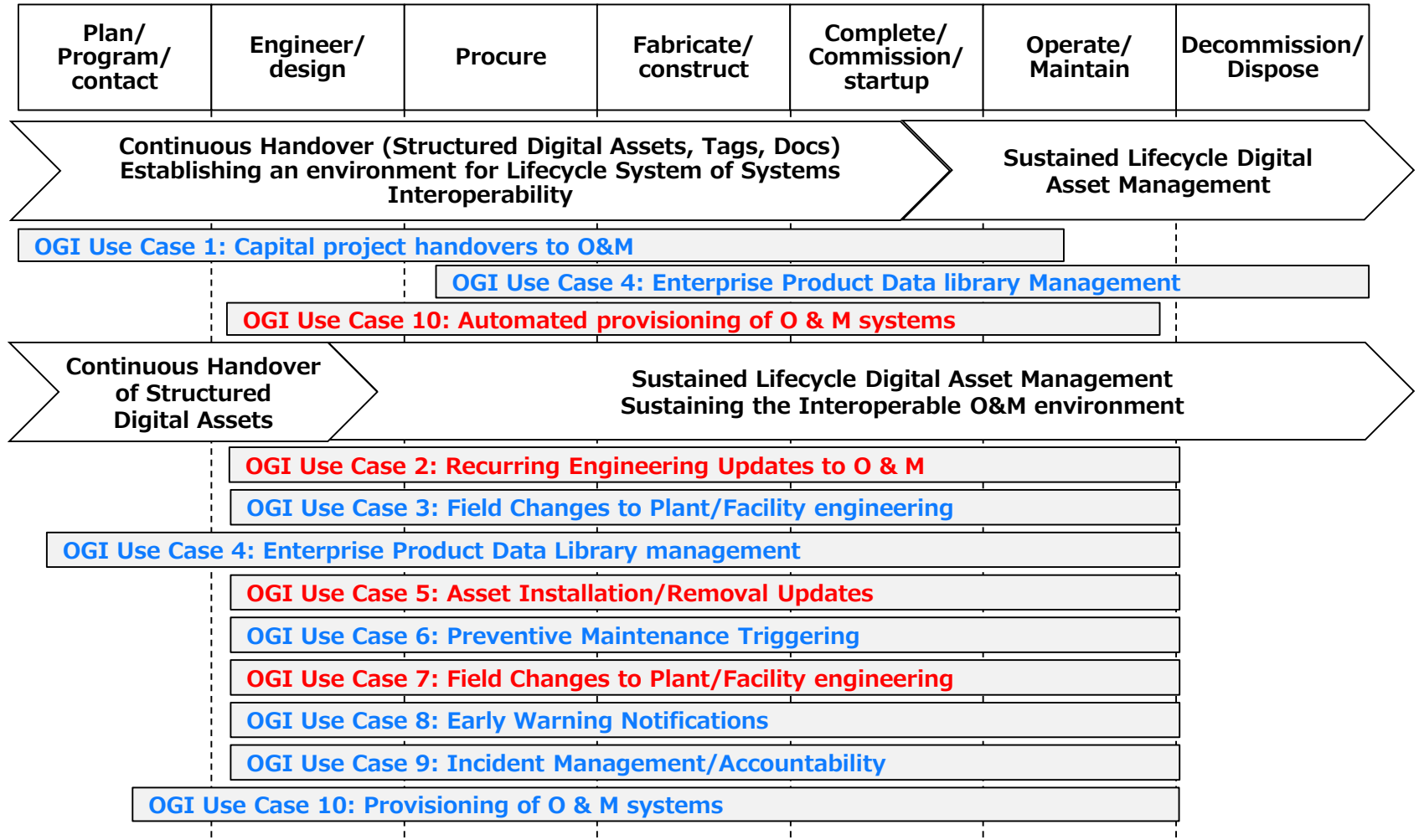
Digital Handover



**Yokogawa**

Product Design  
&  
Manufacturing

# MIMOSA Digital Handover Use Cases

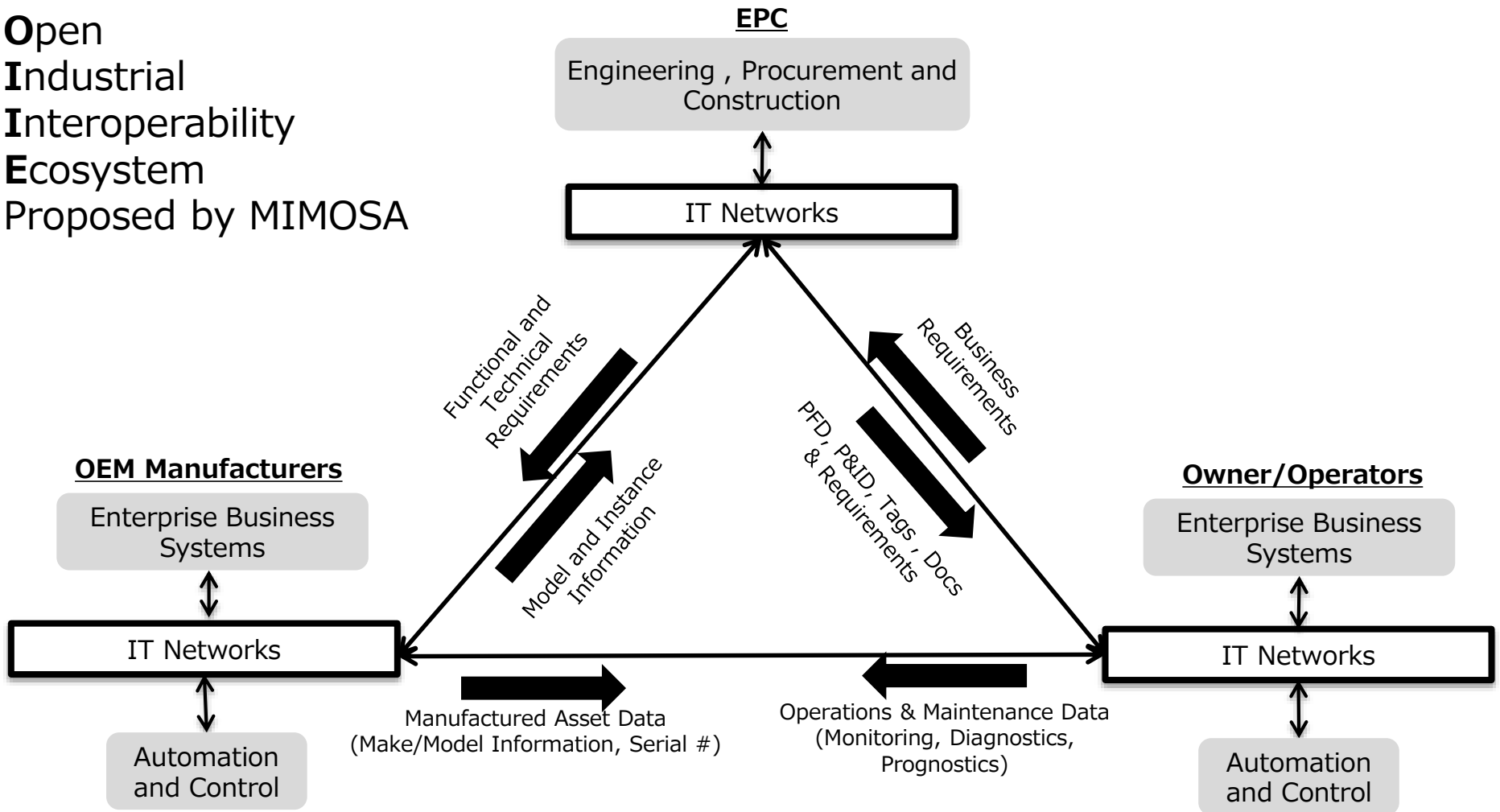




# ISO 18101-1 Draft Standard



**OIIIE**  
**Open**  
**Industrial**  
**Interoperability**  
**Ecosystem**  
 Proposed by MIMOSA



Source: ISO\_WD\_ISO 18101-1

# Challenges to Standardizing



Complexity

International Electrotechnical Commission



**IEC 61987**  
Common Data Dictionary



ISO 18001



Slow

PLATTFORM  
**INDUSTRIE 4.0**



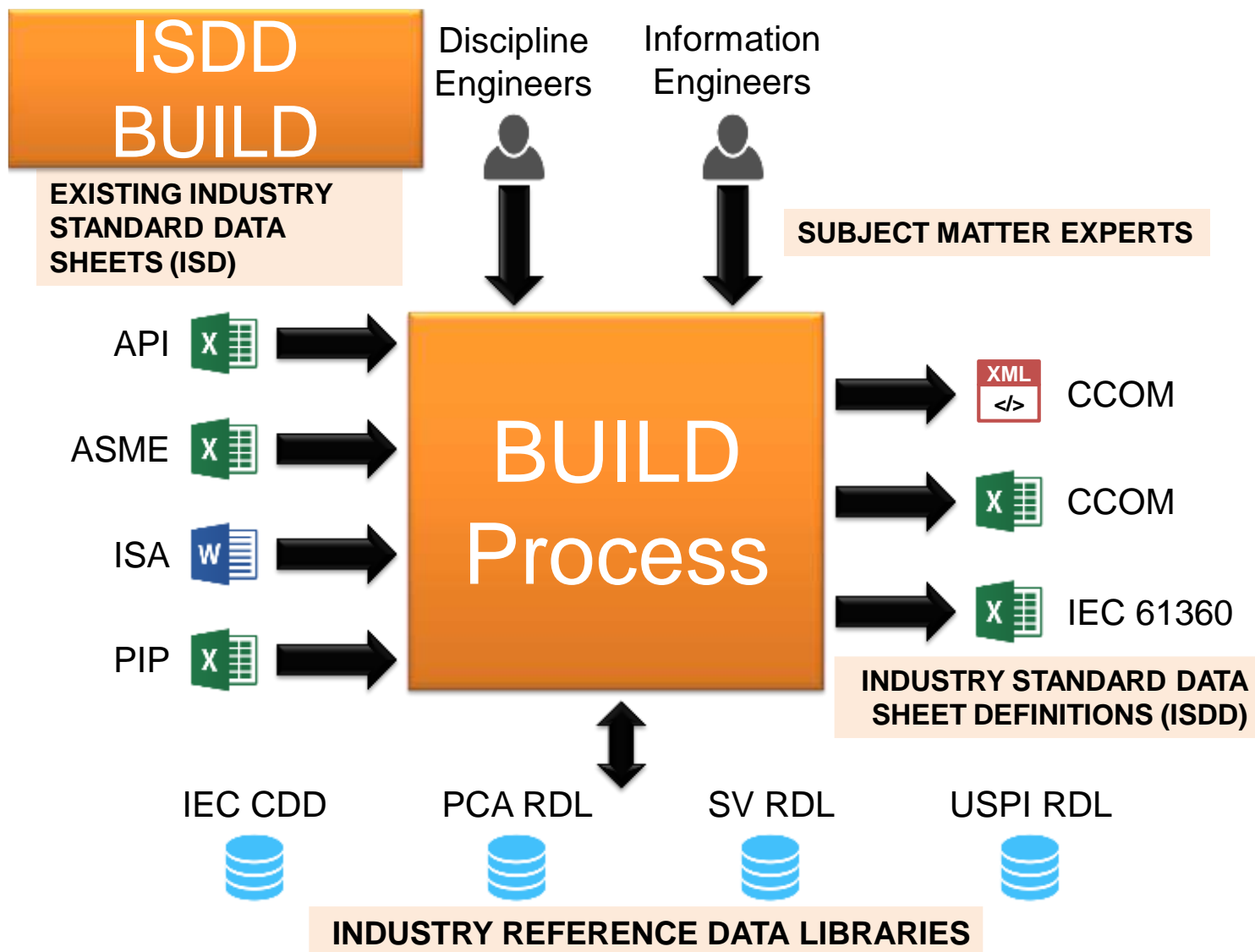
Compromise



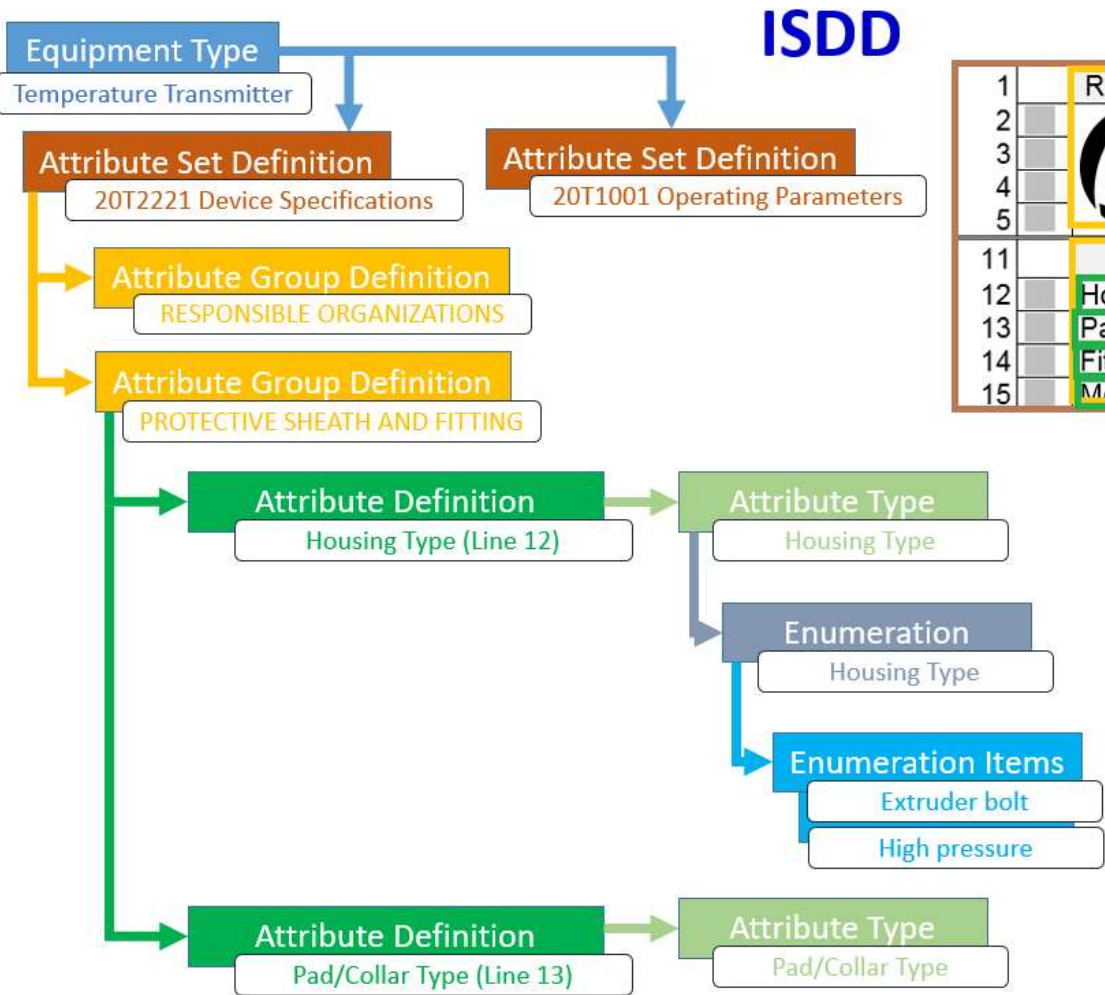
ISA-20  
Data Sheets




# ISDD Build Process



# Data Definitions



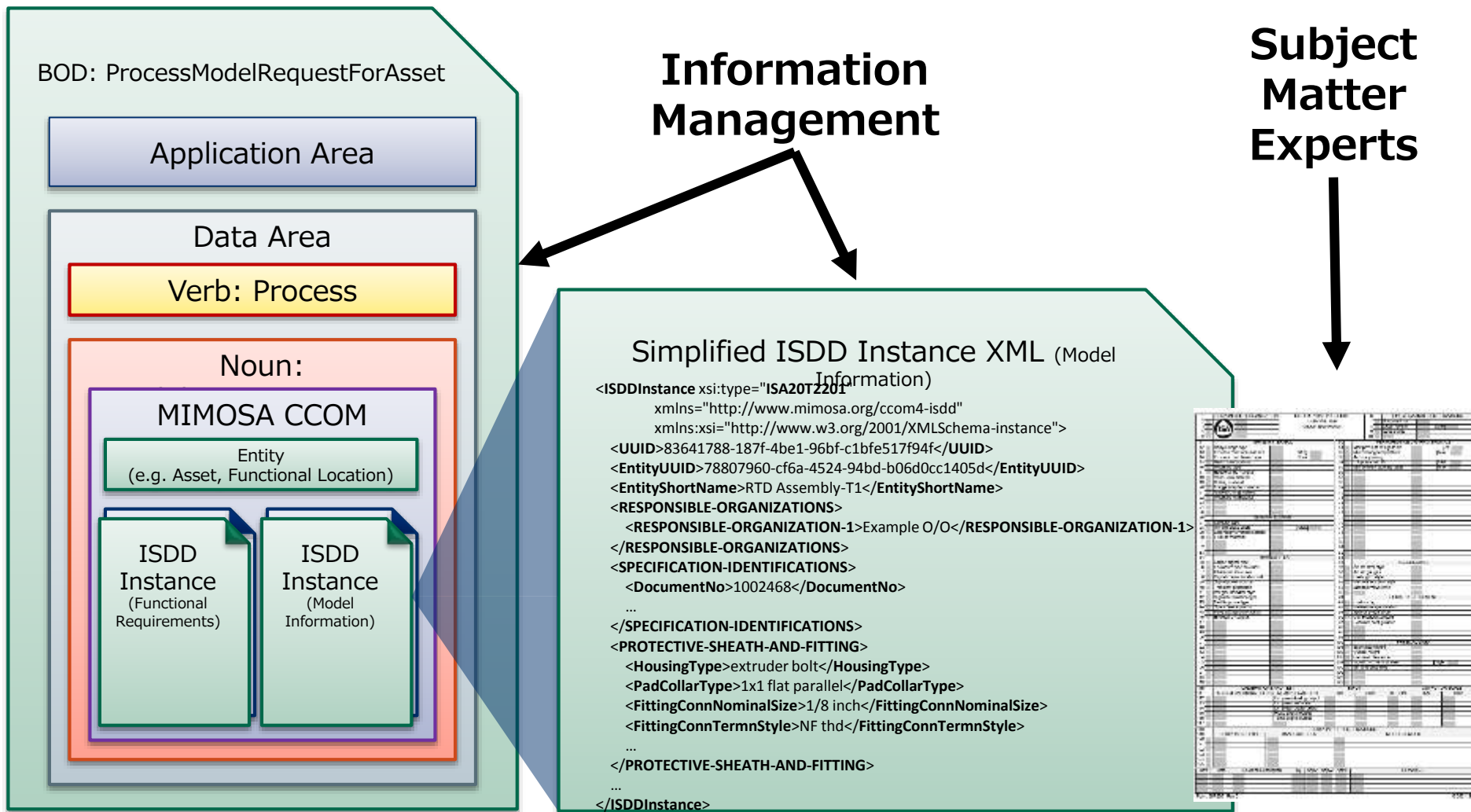
**ISA 20T2221 Datasheet**

1	RESPONSIBLE ORGANIZATION	RTD ASSEMBLY
2		w/wo THERMOWELL
3		Device Specification
4		
5		
5		
11	PROTECTIVE SHEATH AND FITTING	
12	Housing type	
13	Pad/Collar type	
14	Fitting conn nominal size	Style
15	Mounting fitting type	

**ISA 20T2221 Picklist**

Line No	Field Prompt	Pick List Data
011	PROTECTIVE SHEATH AND FITTING	SECTION TITLE
012	Housing type	extruder bolt
012	Housing type	high pressure
012	Housing type	overbraided
012	Housing type	pad design
012	Housing type	tubular
012	Housing type	tubular.reduced tio
013	Pad/Collar type	1 3/4x1 3/4 flat parallel
013	Pad/Collar type	1/4 in x 1 1/4 in
013	Pad/Collar type	1x1 flat parallel
013	Pad/Collar type	1x1 flat perpendicular
013	Pad/Collar type	1x1 formed parallel
013	Pad/Collar type	1x1 pad w/cover
013	Pad/Collar type	3/4x3/4 flat parallel
013	Pad/Collar type	3/8 in x 1 in
013	Pad/Collar type	NA

# Digital Data Exchange

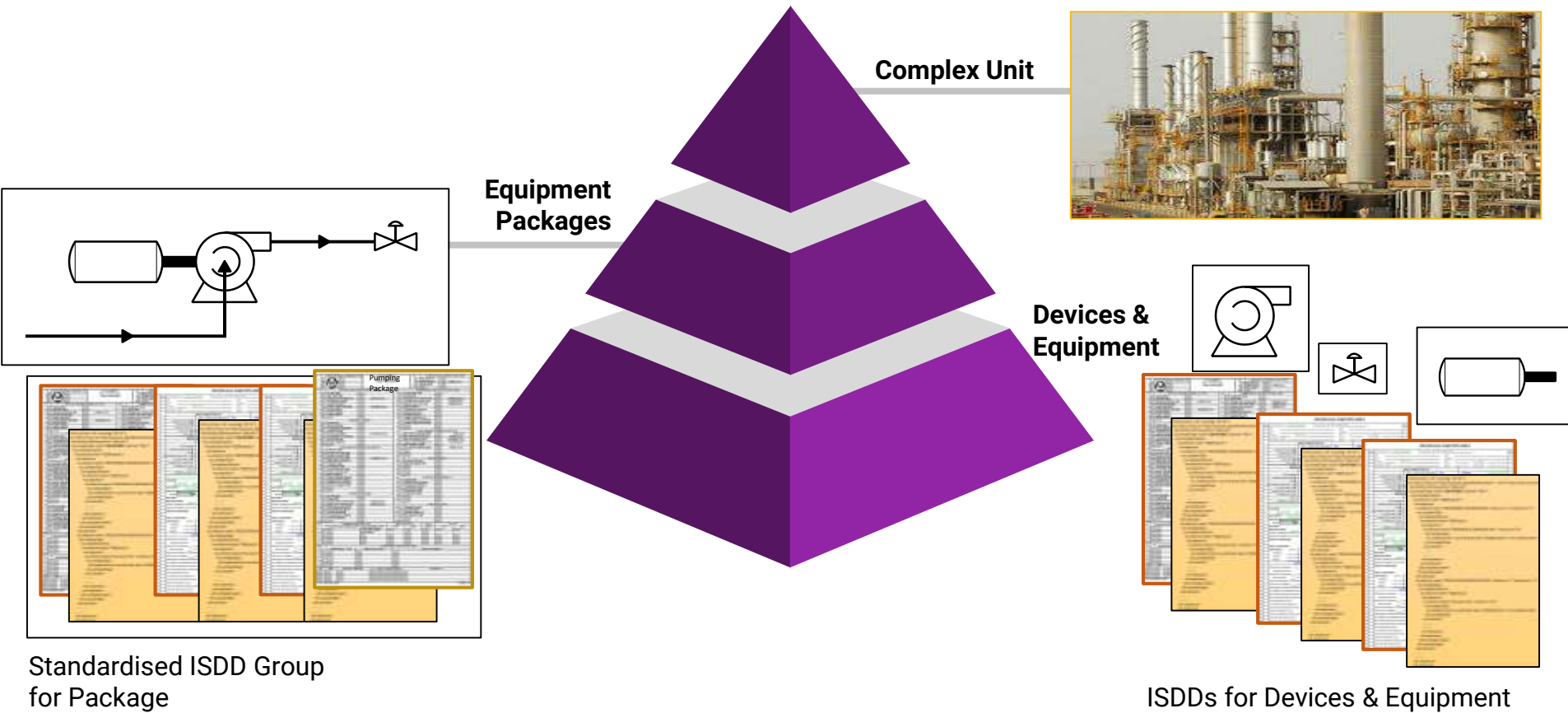


# Yokogawa to ISA-20 Mapping

## MCode to ISDD mapper for EJX110A

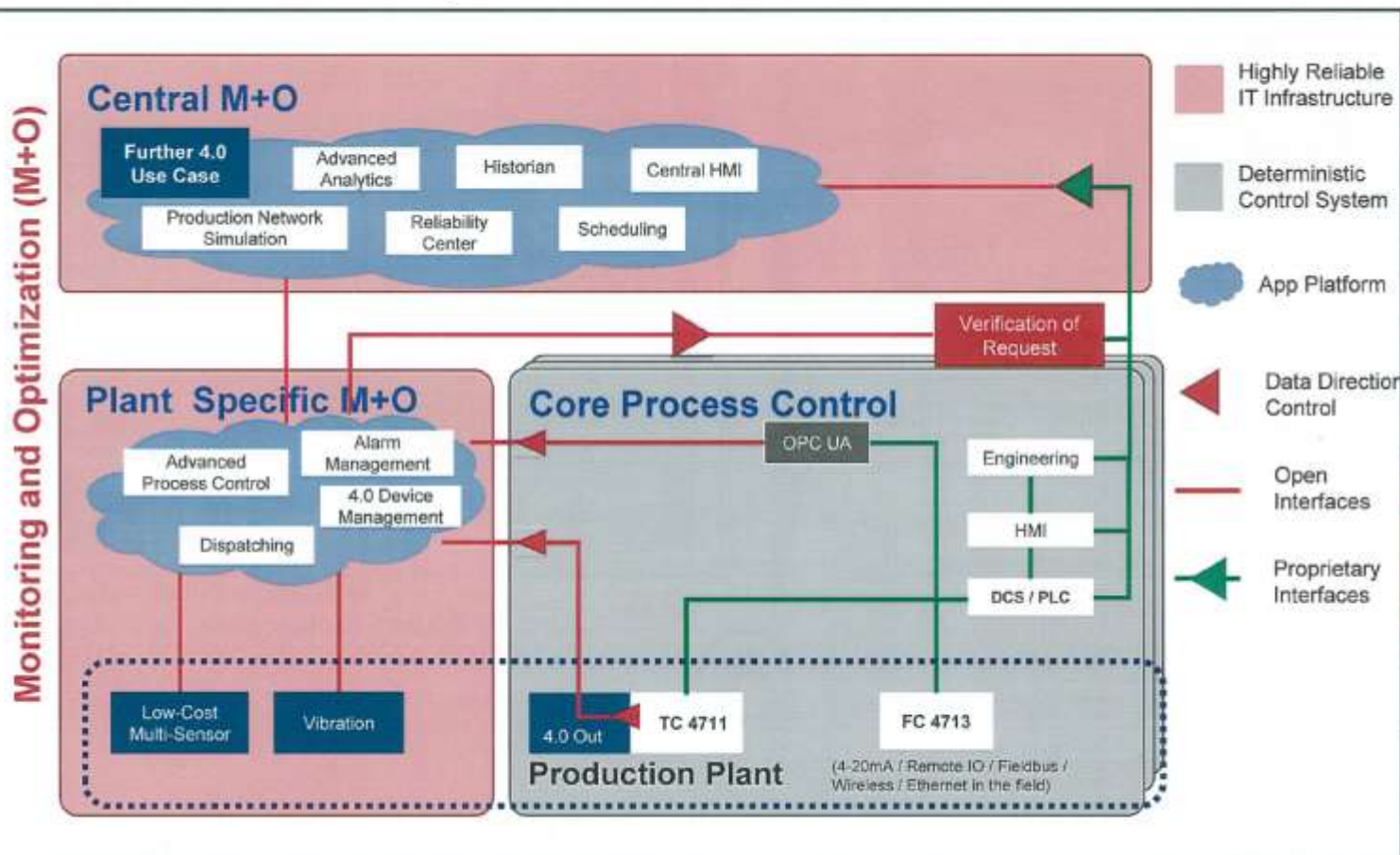
Yokogawa Property		ISA-20 Property																																													
<p>MODEL AND SUFFIX CODE <b>EJX110A-JMS5J-912NB</b></p>		<p>ISDD 20P2301 DIFFERENTIAL PRESSURE TRANSMITTER Device Specification</p>																																													
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<p>Output</p> <p><a href="#">Generate CCOM (ISA-20 format)</a></p>																																															

# Part of a Bigger Picture



# NAMUR Open Architecture

## NOA – NAMUR Open Architecture







# Call To Action

- Digital Transformation requires digitization of asset data
- Digital Ecosystems
- Interoperability between Digital Ecosystems
- Pragmatic & immediate steps are required