



# CONTROL CENTRE OF THE FUTURE

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01

WHY

02

HOW

03

CASES AND  
CHALLENGES

01

WHY

*WHY DO WE NEED TO CHANGE  
THE CURRENT CONTROL CENTRE?*

01. WHY DO WE NEED TO CHANGE THE CURRENT CONTROL CENTRE?

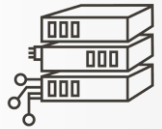


VISION

# GREEN ENERGY FOR A BETTER WORLD



# RAPID CHANGES – TOWARDS AN RE-BASED ENERGY SYSTEM



PLATFORM



SUPPLY SITUATION



DIGITALIZATION



SPEED

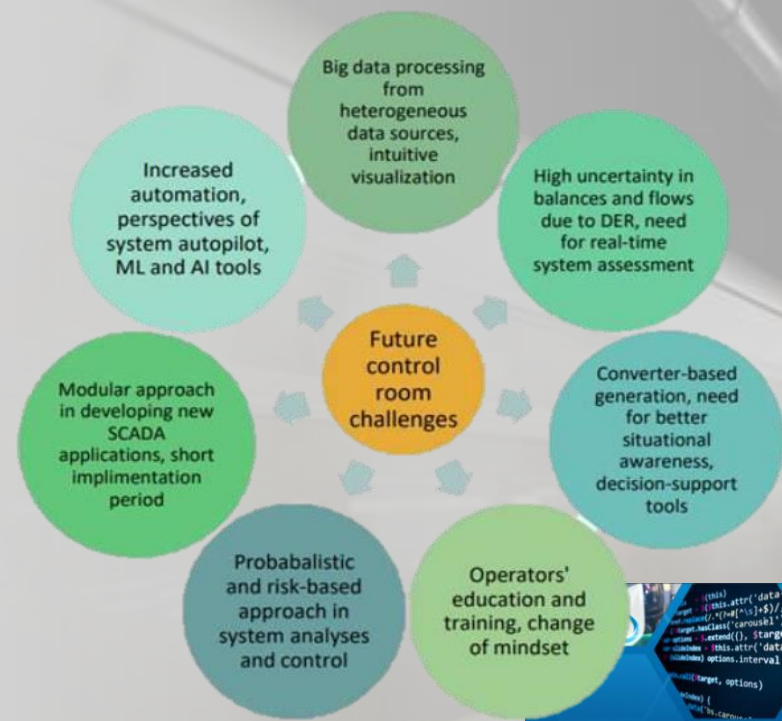
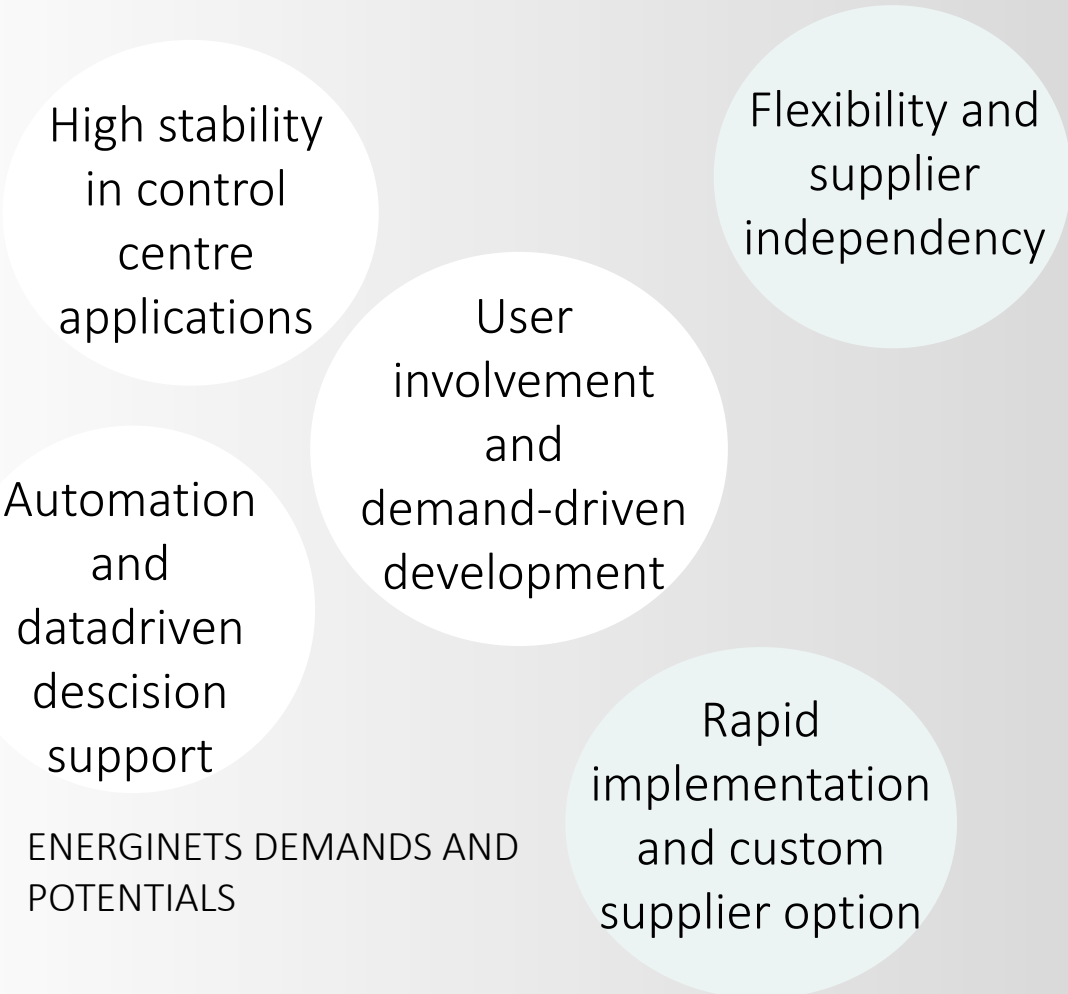


CYBERATTACKS



COMPLEXITY

# INCREASED COMPLEXITY CALL FOR NEW DEMANDS AND POSSIBILITIES



Leading the energy transition through global open source collaboration

CoMPAS, GRID EXCHANGE FABRIC, POWSYBL, Everest, OPERATORFABRIC, SHAPESHIFTER, OPENEEMETER, openLEADR, SEAPATH, Hyphae, SOGNO, FLEDGE POWER

GPST-CHALLENGE OUTLINE

## AND WE ARE NOT ALONE..



02

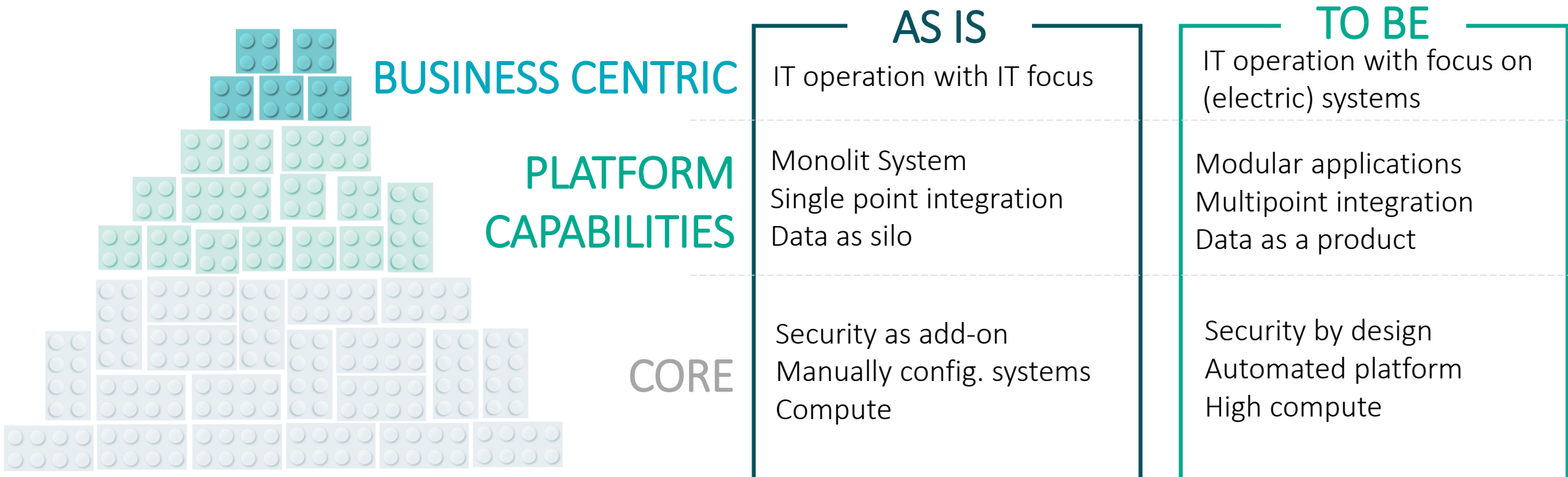
HOW

*HOW ARE WE BUILDING THE  
CONTROL CENTRE OF THE FUTURE?*

# HOW ARE WE TRANSFORMING THE CONTROL CENTRE?



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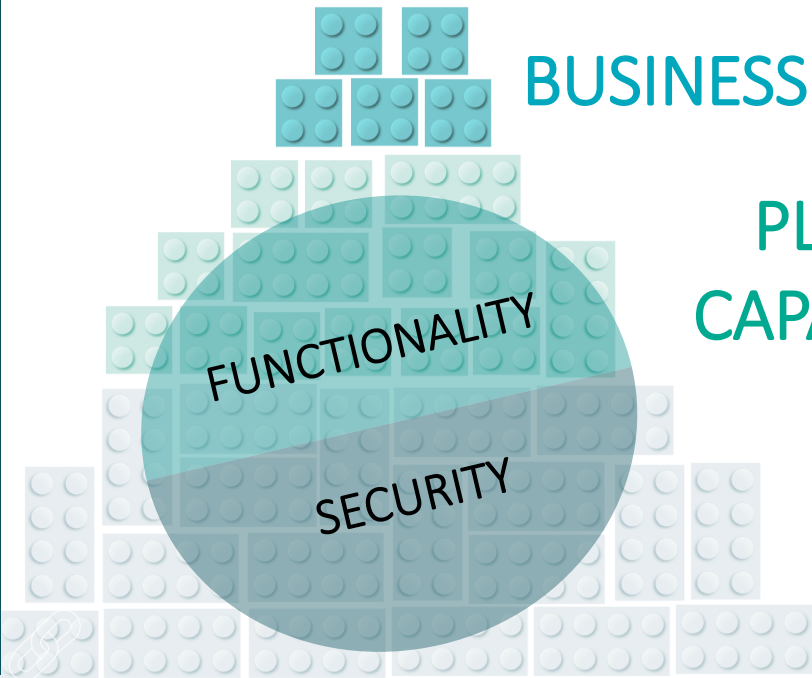
02. HOW ARE WE BUILDING THE CONTROL CENTRE OF THE FUTURE

# A FUTURE-PROOF OPERATIONAL FOUNDATION



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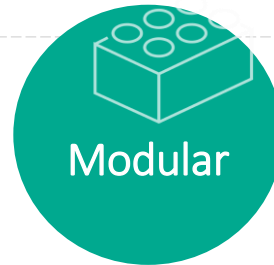
CO-CREATION OG PARTNERSHIPS



BUSINESS CENTRIC

PLATFORM  
CAPABILITIES

CORE

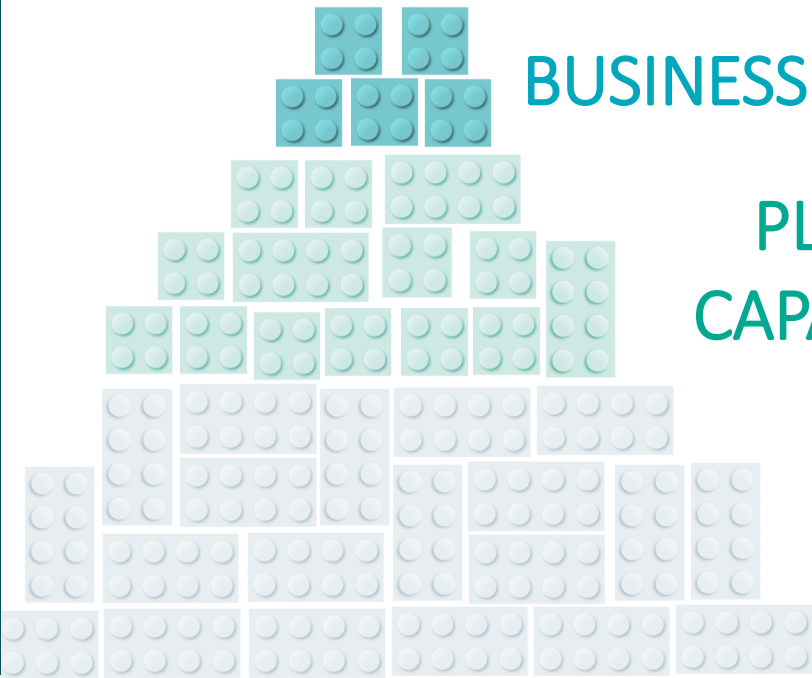


# GRID OPERATION – CODING ARCHITECTURE



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BETTER WORLD

CO-CREATION OG PARTNERSHIPS



**BUSINESS CENTRIC**

Supervisory & control

Outage Planning

Realtime security analysis

Early warning, early prevention

AVR/AVC

Dynamic Line Rating

**PLATFORM  
CAPABILITIES**

Edge computing

Datamanagement

High cyber resilience & IT  
robustness

High performance compute  
& data streaming

Domain specific protocols

**CORE**

Secure communication &  
compute platform





03

HOW

*CASES AND CHALLENGES*

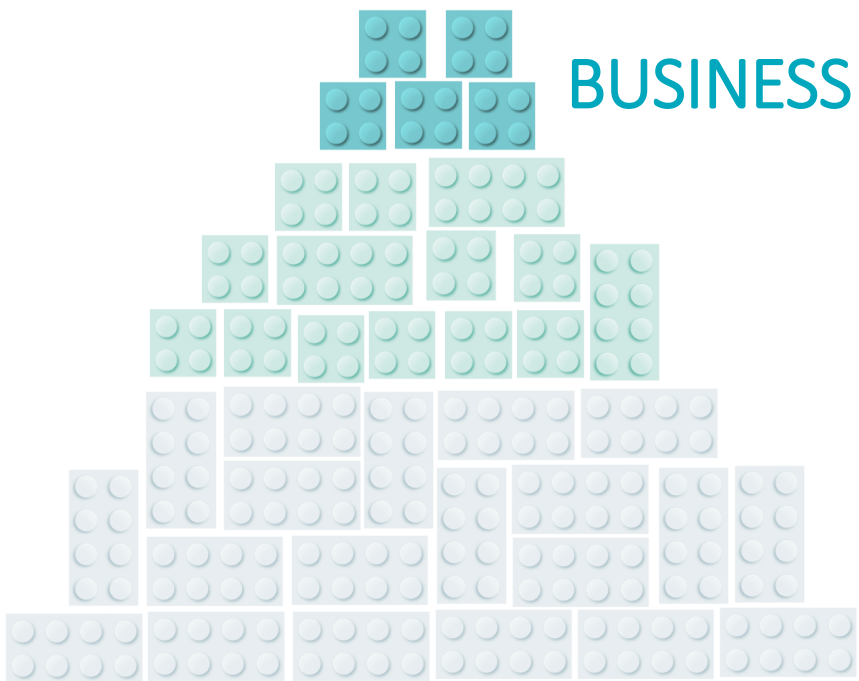
# CASES (1/2)

## BUSINESS LAYER



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BETTER WORLD

### BUSINESS CENTRIC



Dynamic stability  
Assessment

Dynamic Line  
rating

Wind and  
Solar forecast

Imbalance  
forecast

TRIAL AND ERROR  
"FAIL FASTER"  
GROWTH MINDSET

*"No one knows how to run the powersystem in 10 years"*

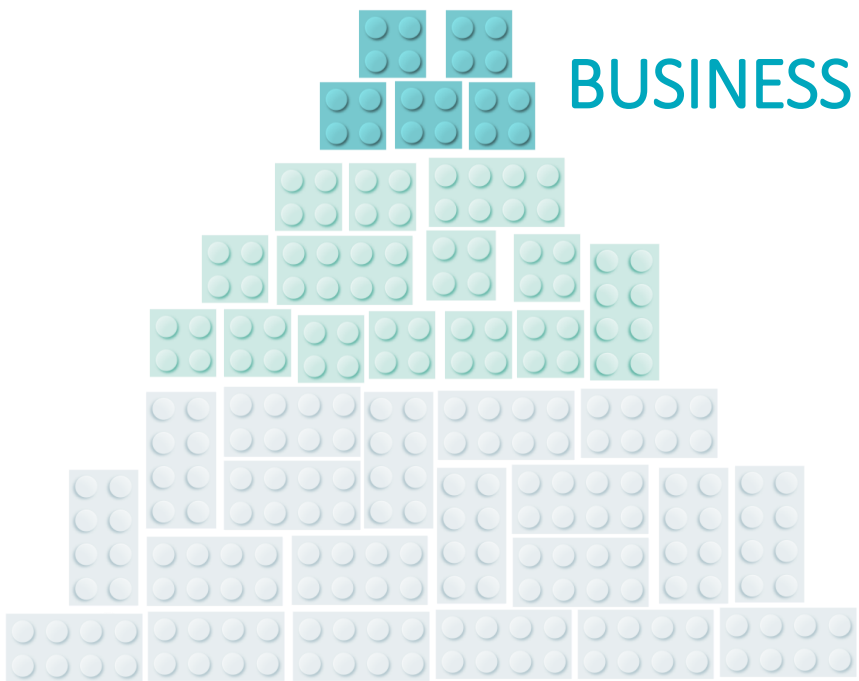
# CASES (1/2)

## BUSINESS LAYER



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### BUSINESS CENTRIC



PARTNERSHIP-CASE:

Forecasting  
potential power  
line overload

TRIAL AND ERROR  
"FAIL FASTER"  
GROWTH MINDSET

LEARNING:

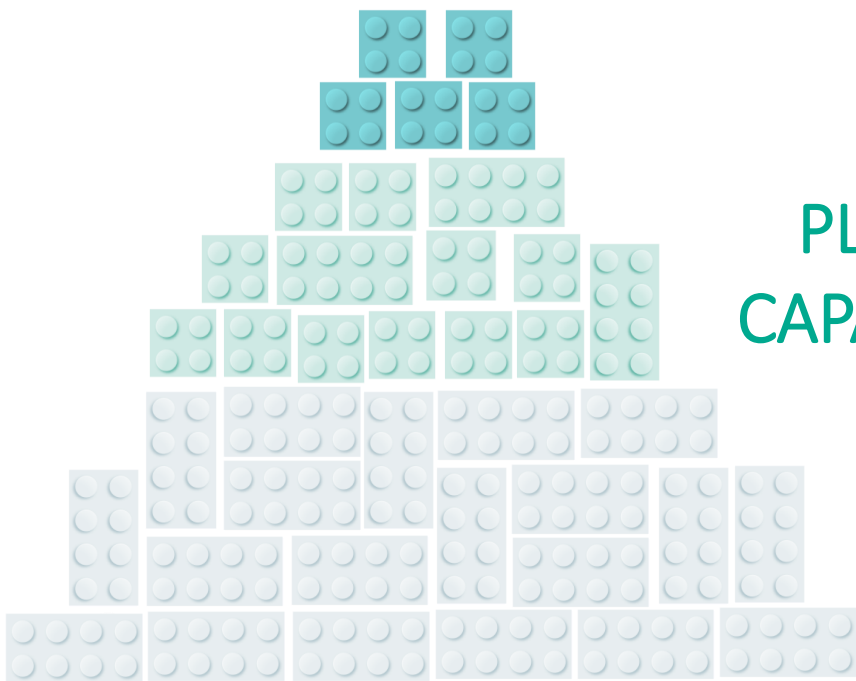
Larger amount of data needed to  
train sufficient good models.

# CASES (1/2)

## PLATFORM LAYER



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**PLATFORM  
CAPABILITIES**

CASE:

Digital operational  
service bus for 3<sup>rd</sup>  
party integration

TRIAL AND ERROR  
"FAIL FASTER"  
GROWTH MINDSET

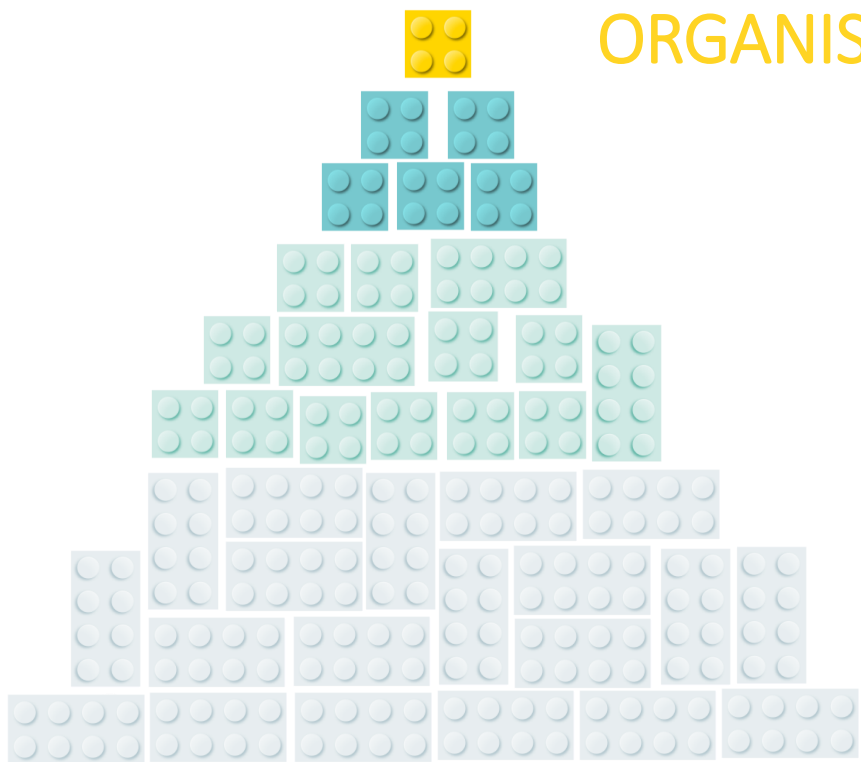
LEARNING:

Enabling Modularity/Scalability  
Integration to existing SCADA/EMS  
Enabler for datadriven decision

# OTHER CHALLENGES



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BETTER WORLD



## ORGANISATIONAL

Teams of  
teams

Co-creation  
mindset

Attracting  
talent

Capabilities  
and training

*“Unchartered territory  
that challenges culture  
and mindset”*

*THANK YOU FOR YOUR ATTENTION*

**QUESTIONS?**

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