



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?

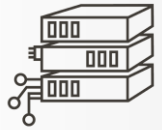


VISION

GREEN ENERGY FOR A BETTER WORLD



RAPID CHANGES – TOWARDS AN RE-BASED ENERGY SYSTEM



PLATFORM



SUPPLY SITUATION



DIGITALIZATION



SPEED

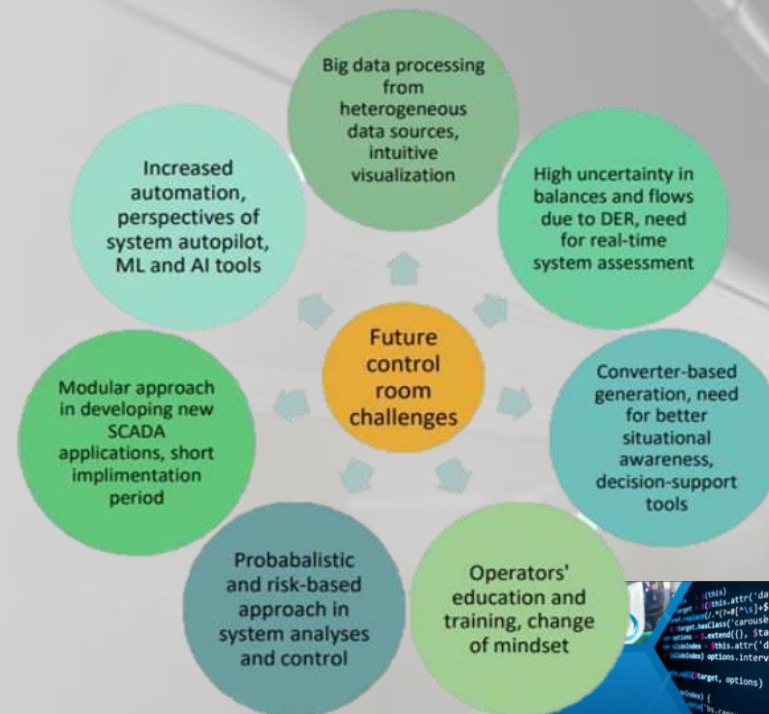
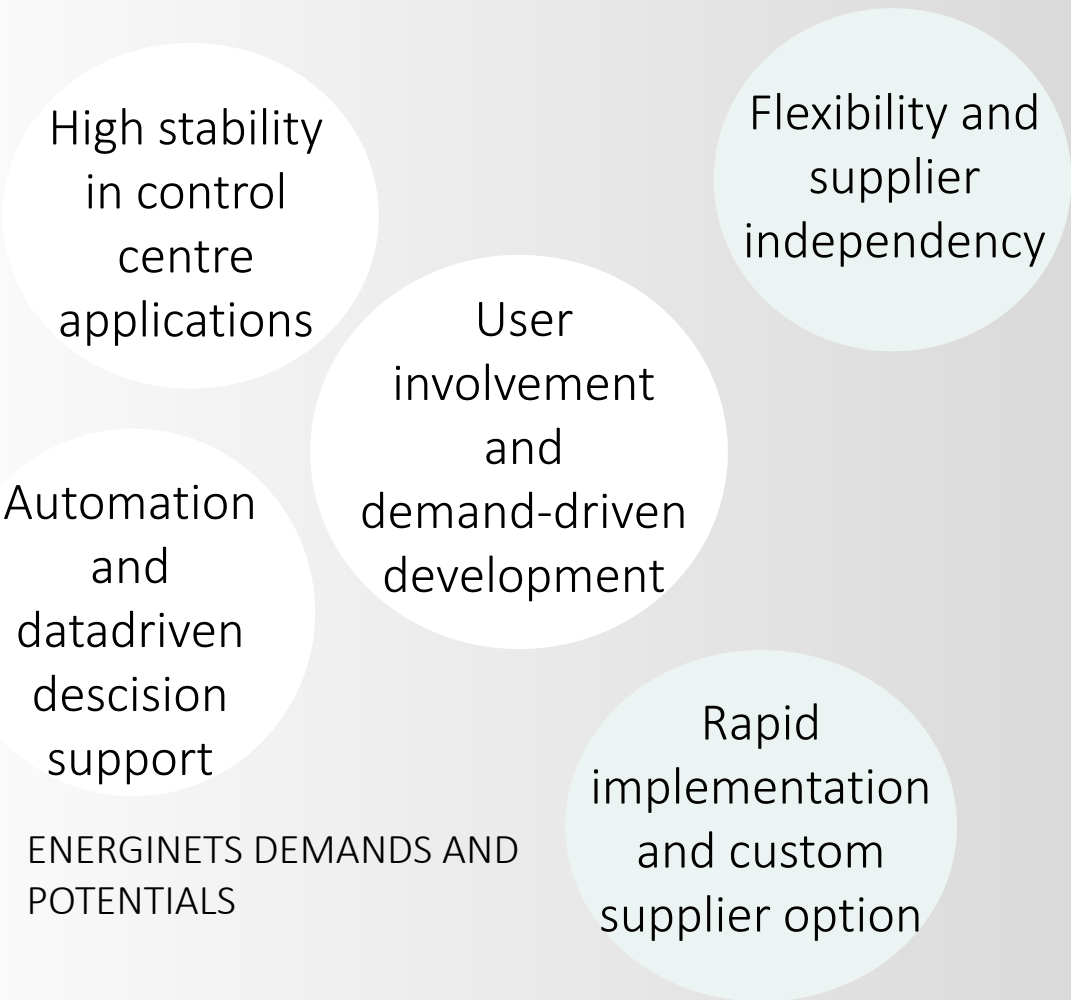


CYBERATTACKS



COMPLEXITY

INCREASED COMPLEXITY CALL FOR NEW DEMANDS AND POSSIBILITIES



Leading the energy transition through global open source collaboration

GPST-CHALLENGE OUTLINE

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

AND WE ARE NOT ALONE..



02

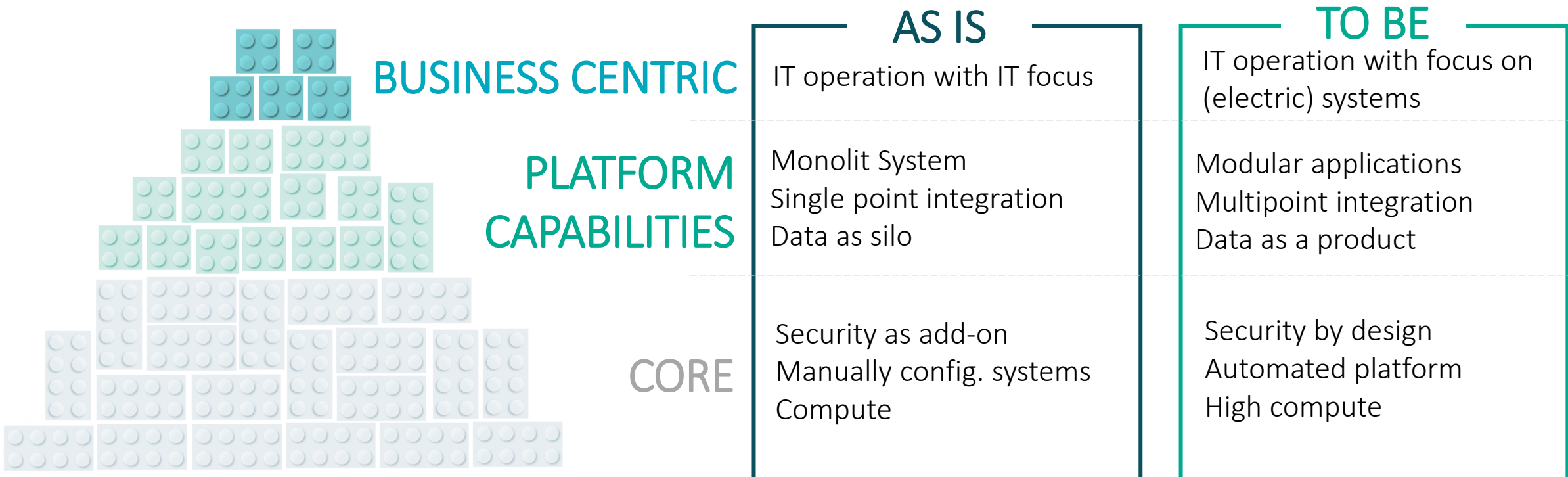
HOW

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

HOW ARE WE TRANSFORMING THE CONTROL CENTRE?



GREEN ENERGY FOR A BETTER WORLD

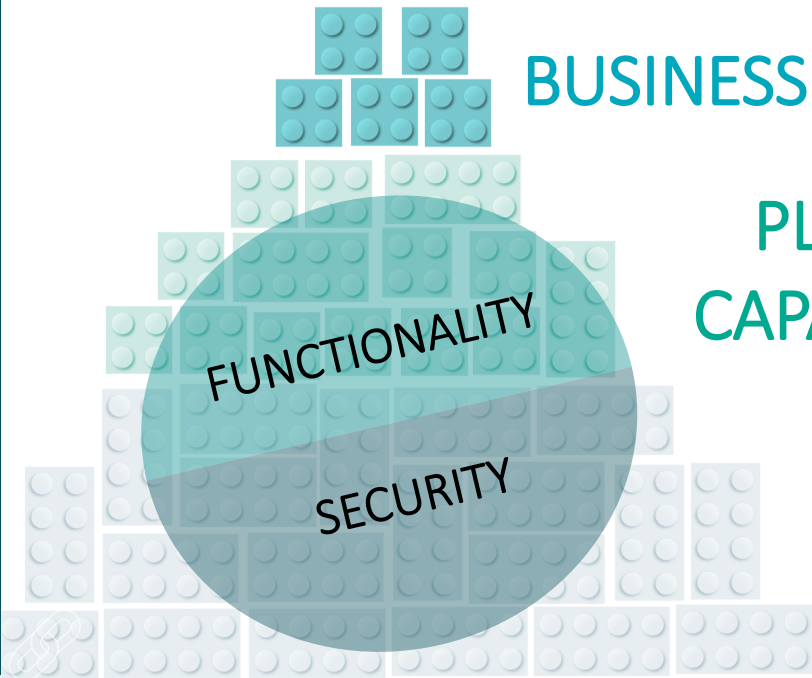


A FUTURE-PROOF OPERATIONAL FOUNDATION



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BETTER WORLD

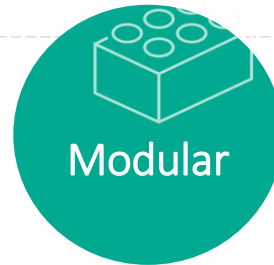
CO-CREATION OG PARTNERSHIPS



BUSINESS CENTRIC

PLATFORM
CAPABILITIES

CORE

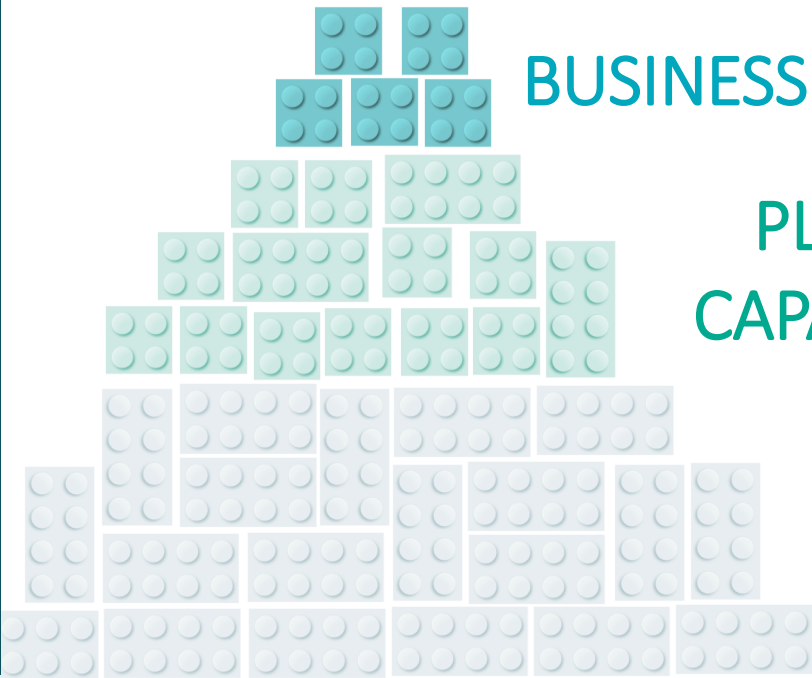


GRID OPERATION – CODING ARCHITECTURE



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BETTER WORLD

CO-CREATION OG PARTNERSHIPS



BUSINESS CENTRIC

**PLATFORM
CAPABILITIES**

CORE

Supervisory & control

Outage Planning

Realtime security analysis

Early warning, early prevention

AVR/AVC

Dynamic Line Rating

Edge computing

Datamanagement

High cyber resilience & IT
robustness

High performance compute
& data streaming

Domain specific protocols

Secure communication &
compute platform





03

HOW

CASES AND CHALLENGES

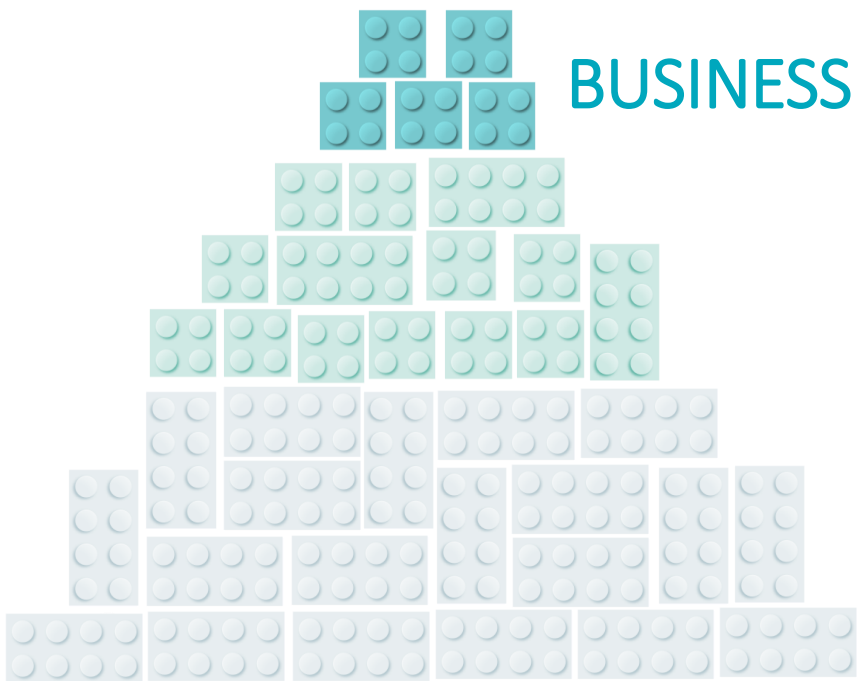
CASES (1/2)

BUSINESS LAYER



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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"

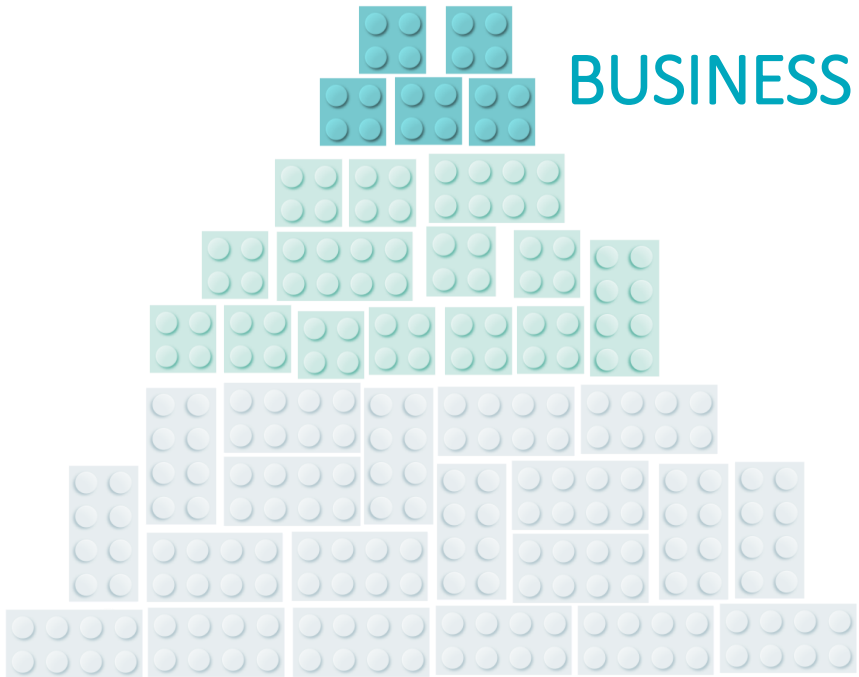
CASES (1/2)

BUSINESS LAYER



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BUSINESS CENTRIC



PARTNERSHIP-CASE:

Forecasting
potential power
line overload

TRIAL AND ERROR
"FAIL FASTER"
GROWTH MINDSET

LEARNING:

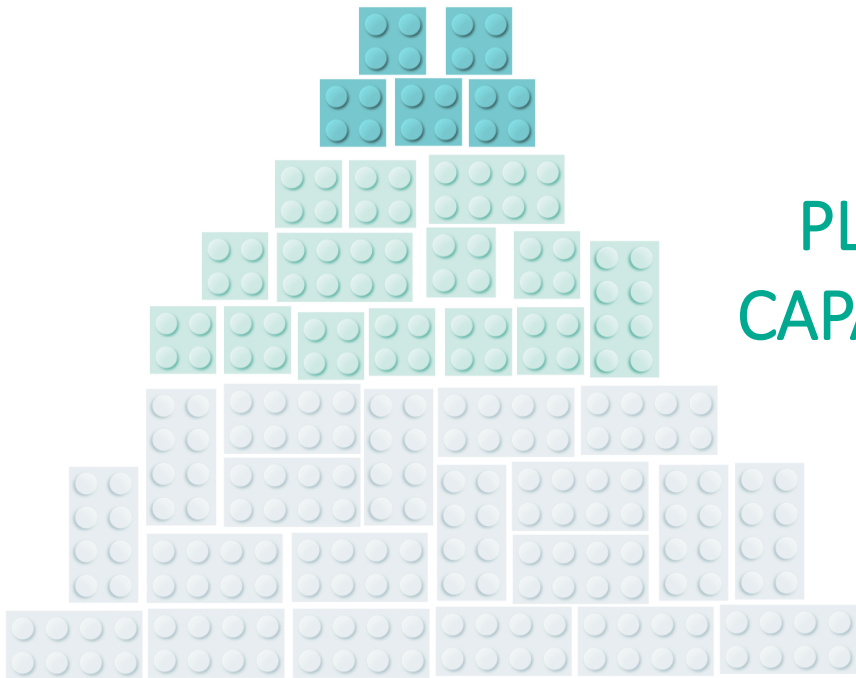
Larger amount of data needed to
train sufficient good models.

CASES (1/2)

PLATFORM LAYER



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**PLATFORM
CAPABILITIES**

CASE:

Digital operational
service bus for 3rd
party integration

TRIAL AND ERROR
"FAIL FASTER"
GROWTH MINDSET

LEARNING:

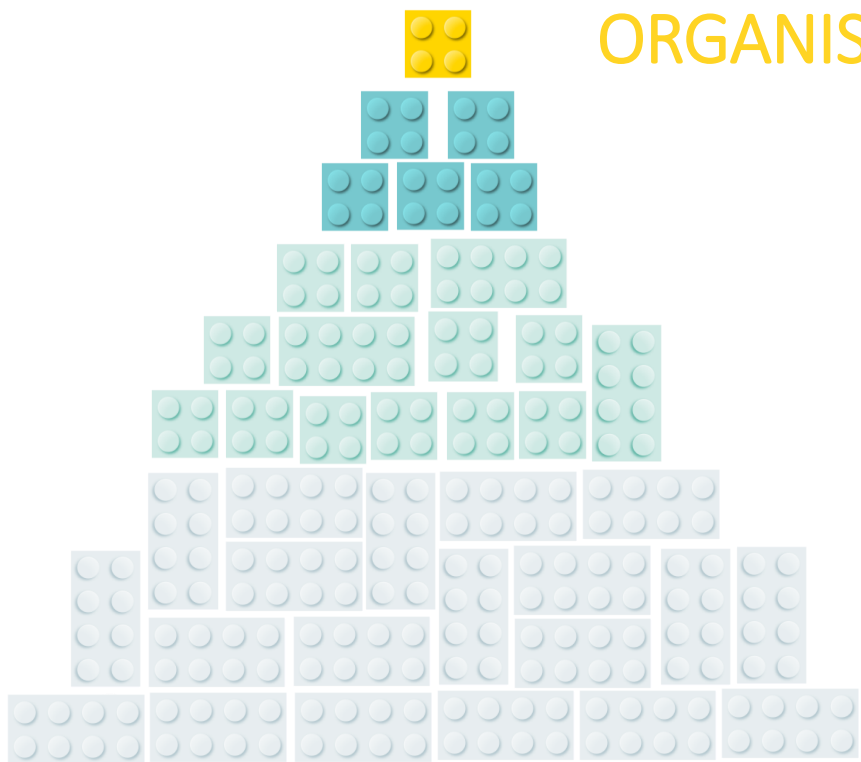
Enabling Modularity/Scalability
Integration to existing SCADA/EMS
Enabler for datadriven decision



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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