

THE IMPACT OF IOT & 5G ON PORT & TERMINAL OPERATIONS

A large cargo ship is docked at a port at night. The ship is illuminated by warm, golden lights, and its reflection is visible in the water. In the background, a large crane structure is also illuminated, and the sky is a deep blue with some clouds. The overall scene is a busy port at night.

ASEAN Ports and Shipping 2016 Conference

Bangkok, Thailand

14th July 2016

ERICSSON INTRODUCTION



MOBILE IT INFRASTRUCTURE

OSS&BSS

SERVICES

MEDIA DELIVERY & IPTV

INDUSTRY & SOCEITY/MARITIME

37,000

Patents 2014

Top 5

Largest software company

1 billion

Subscribers managed by us

2.5 billion

Subscribers supported by us

118 000

Employees

180

Countries with presence

25,700

Employees in R&D 2014

BEURO 4

In R&D in 2014

50%

LTE Smartphone traffic through our networks in 2014

65,000

Services professionals

Result 2015

NS 27,2 BEURO,
OPI 2,42 BEUR (9%)

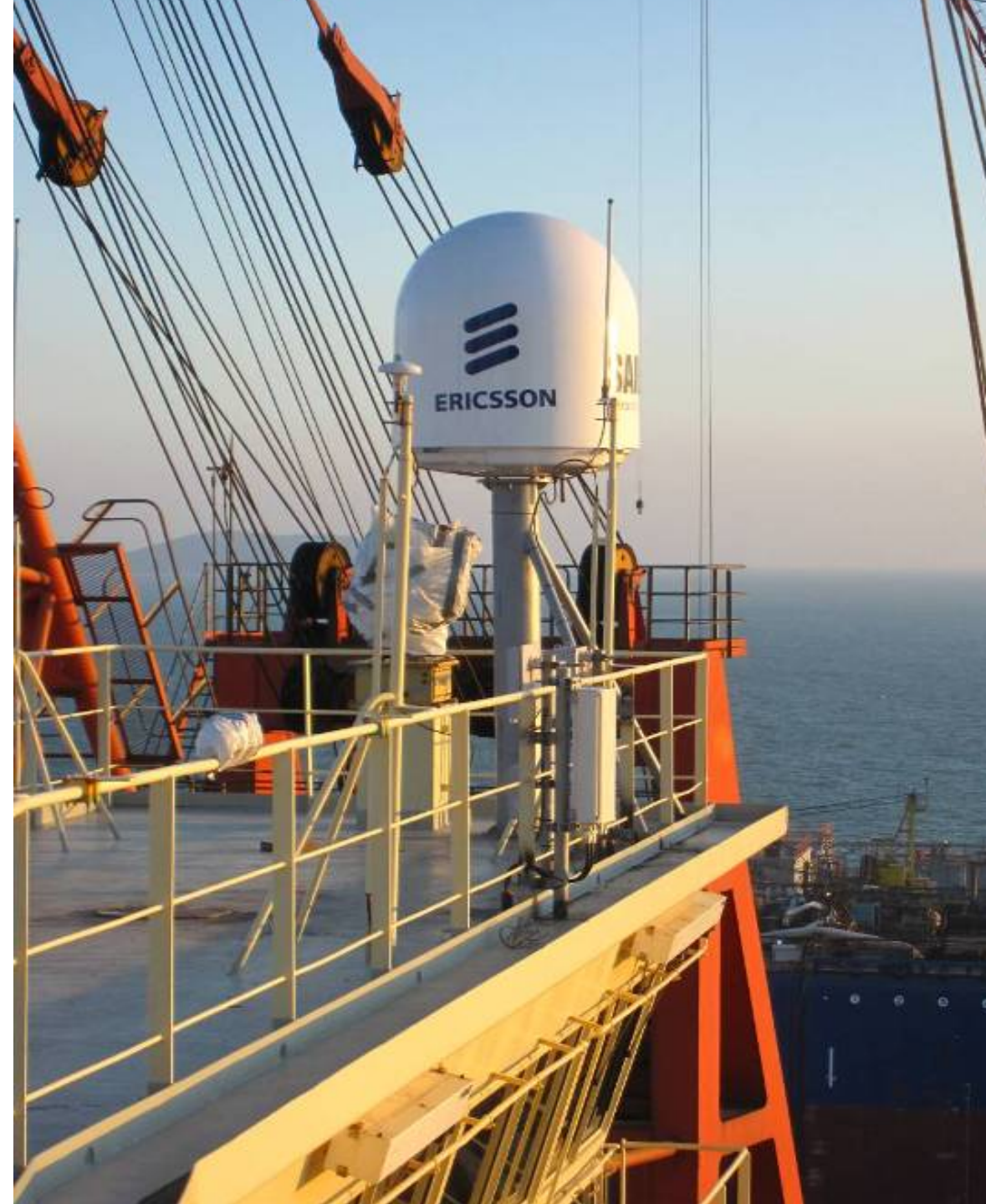
AGENDA

THE NETWORKED SOCIETY

INTERNET OF THINGS (IOT)

SMART PORT SOLUTIONS

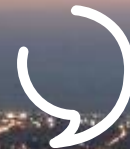
USE CASES



A NEW GOLDEN AGE



 A NETWORKED SOCIETY WHERE
EVERY PERSON AND EVERY
INDUSTRY IS EMPOWERED TO
REACH THEIR FULL POTENTIAL





Our Maritime Vision

WE TURN OVERSEAS INTO UNDER CONTROL



https://www.youtube.com/watch?v=qnzIJS_eDow

MARITIME ICT CLOUD



Customer Reference Cases

We have global maritime engagements ongoing in more than 15 countries with focus on Shipping Lines, Ports and Terminals.

The focus is on the key challenges within the Maritime Industry such as efficiency, optimization, change management, business value drivers, reduction of costs in the short & long term and be future ready.



SUPERIOR
EXPERIENCE



MASTERING
COMPLEXITY



SYNERGY
CIRCLE



LEVERAGING
SCALE

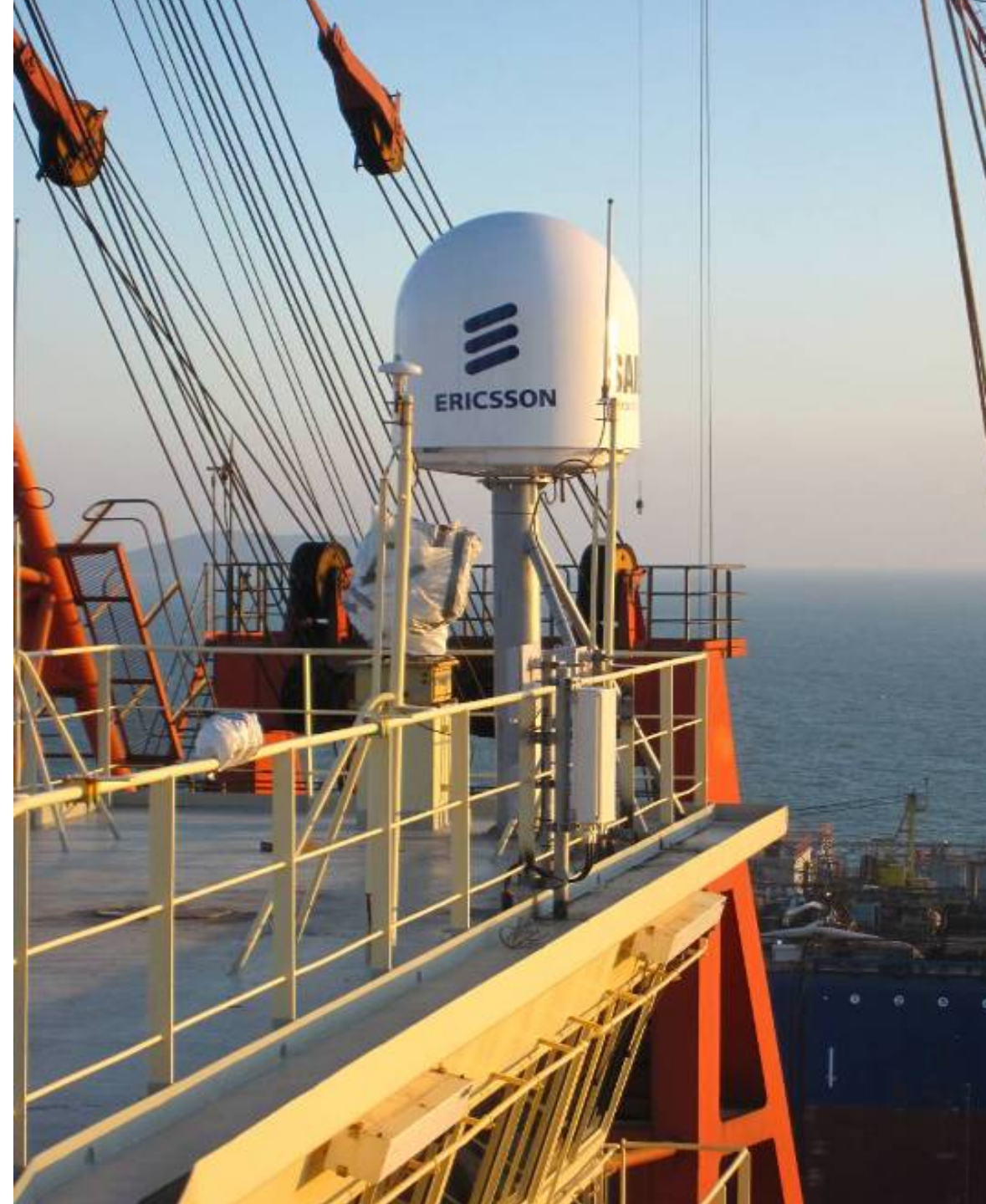
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USE CASES





CONNECTED DEVICES IN 2020

26 BILLION

9 BILLION
MOBILE PHONES

10 BILLION
CONSUMER ELECTRONICS

7 BILLION
INDUSTRIAL DEVICES



Source: Ericsson Mobility Report

WHAT IS DRIVING INDUSTRIES TO TRANSFORM?



Sustainability Policy

Innovation

Global Scale

Efficiency

Customer Intimacy

Collaboration



BUSINESS DRIVERS





INDUSTRIES IN TRANSFORMATION



Utilities



Transport



Public Safety



Other Industries

WHAT DOES IOT BRING?



BUSINESS PROCESSES
IMPROVEMENT

NEW CUSTOMERS, NEW REVENUE
STREAMS, NEW BUSINESS
MODELS

IOT – A BIG PART OF 5G



BROADBAND EXPERIENCE
EVERYWHERE, ANYTIME



MEDIA
EVERYWHERE



SMART VEHICLES,
TRANSPORT & INFRASTRUCTURE



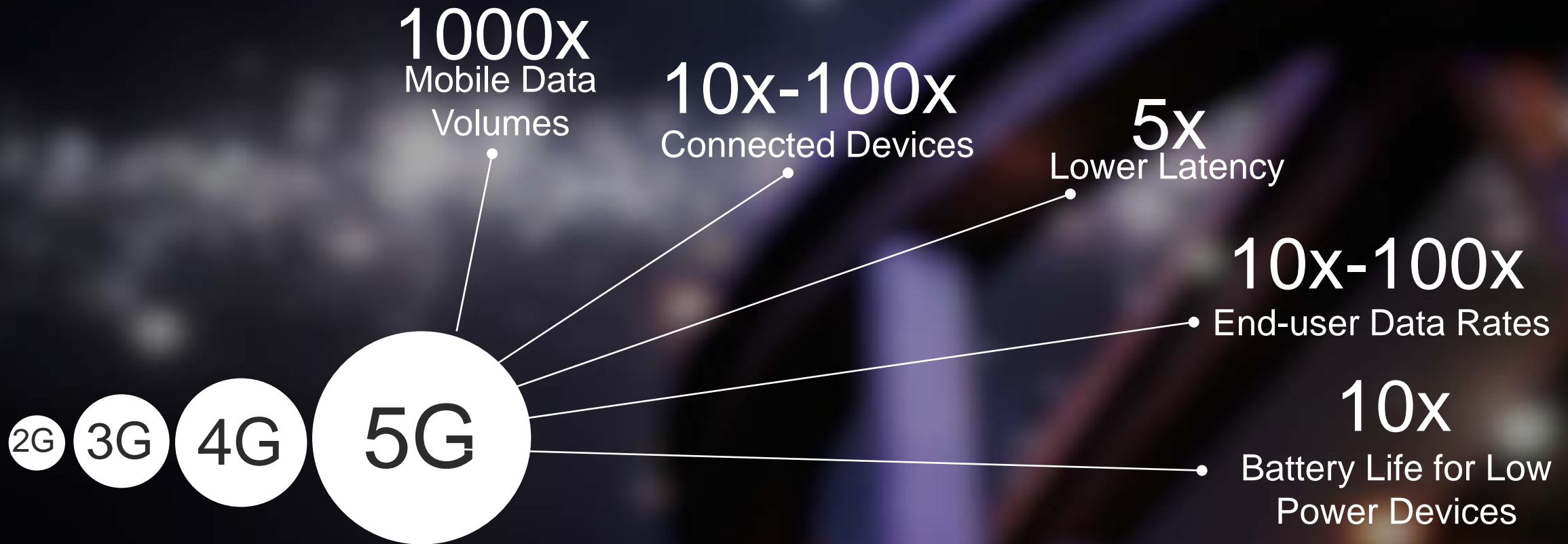
CRITICAL CONTROL
OF REMOTE DEVICES



INTERACTION
HUMAN-IOT



EVOLUTION TOWARDS 2020



CHALLENGES



COST



Entry cost kills the business case

COMPLEXITY



Silos, development, management of the platform, security

AGILITY



Slow traditional solution design, deployment, testing and launching

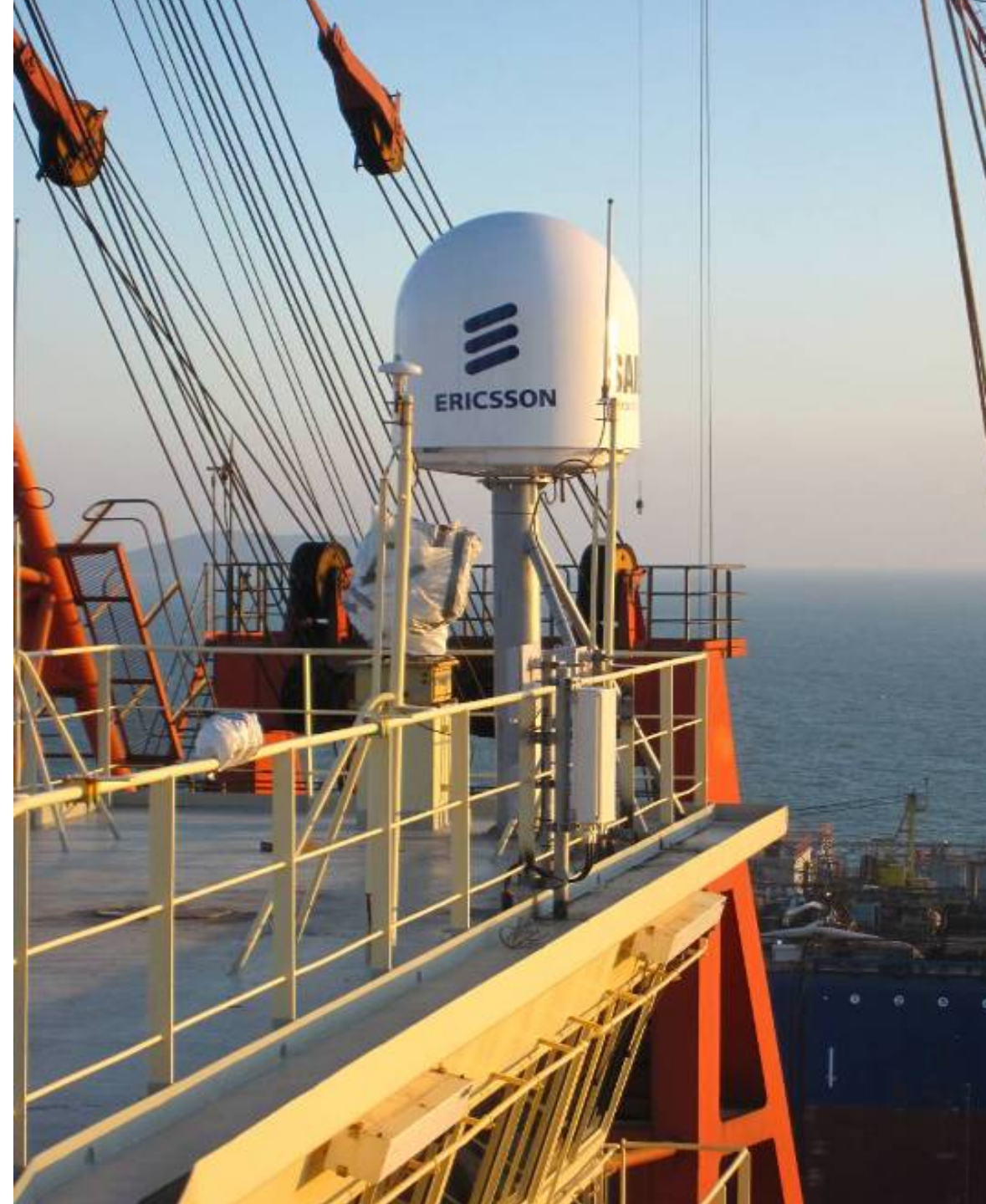
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THE NETWORKED SOCIETY

INTERNET OF THINGS (IOT)

SMART PORT SOLUTIONS

USE CASES



A SMART PORT IS ...

AUTOMATED

Fully automated operation from STS Cranes to AGV



EFFICIENT

Optimise Port Of Call process coordinated with inland transport

LEARNING

Capture of data for analytics and predictive modelling

SUSTAINABLE

Use of renewable energy
Network of sensors to monitor environmental health.

INTEGRATED

Collaborative Decision Making based on single source of information

SECURE

Coastal/border security
Cyber security

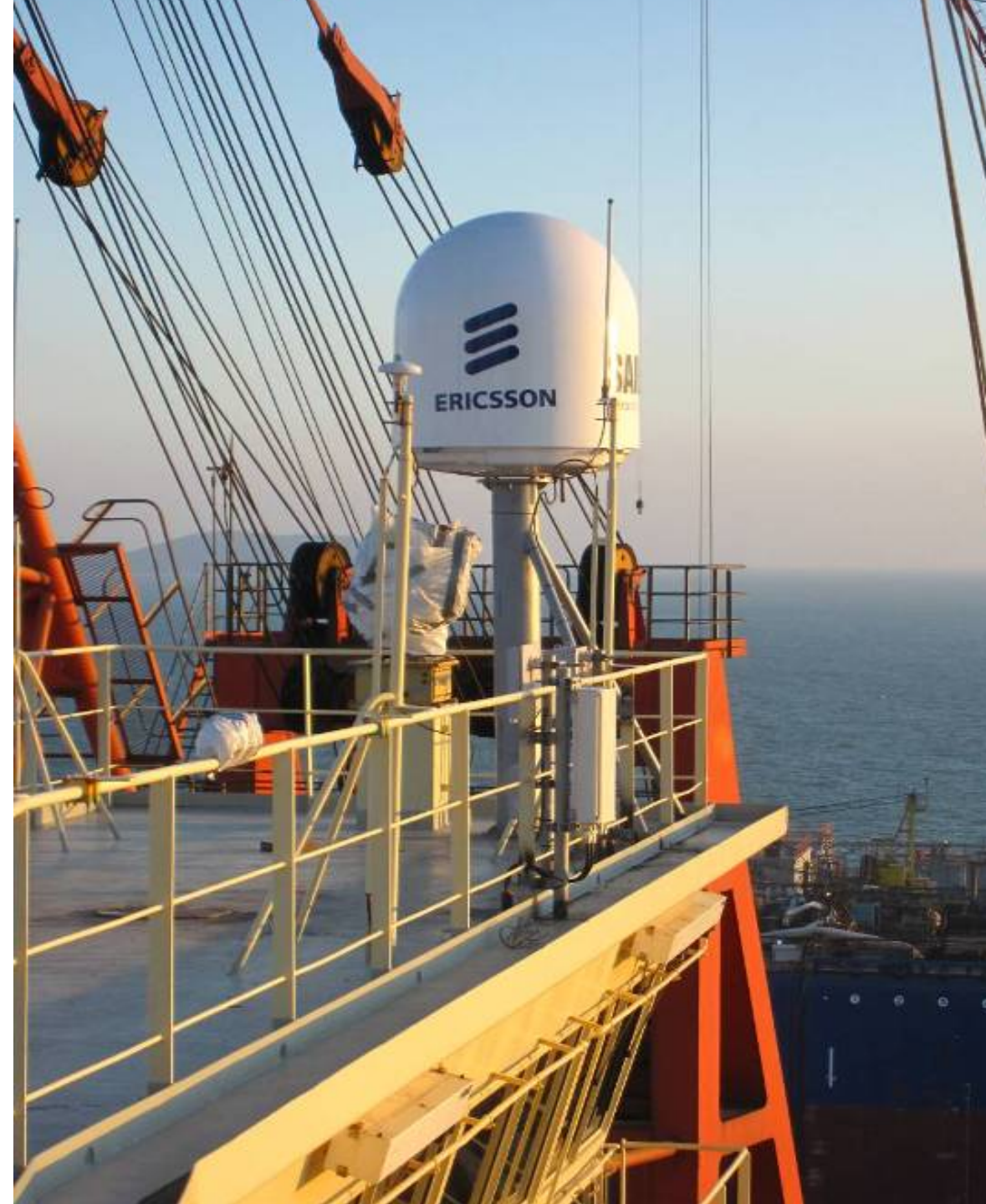
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THE NETWORKED SOCIETY

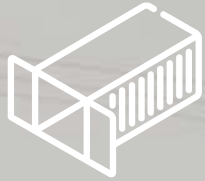
INTERNET OF THINGS (IOT)

SMART PORT SOLUTIONS

USE CASES



INNOVATIVE USE CASES



CONNECTED CONTAINER
SMART LABEL



CONNECTED WAREHOUSE
PRODUCTION FLOOR



ELECTRIC VEHICLE
CHARGING



TELEMATICS
INSURANCE

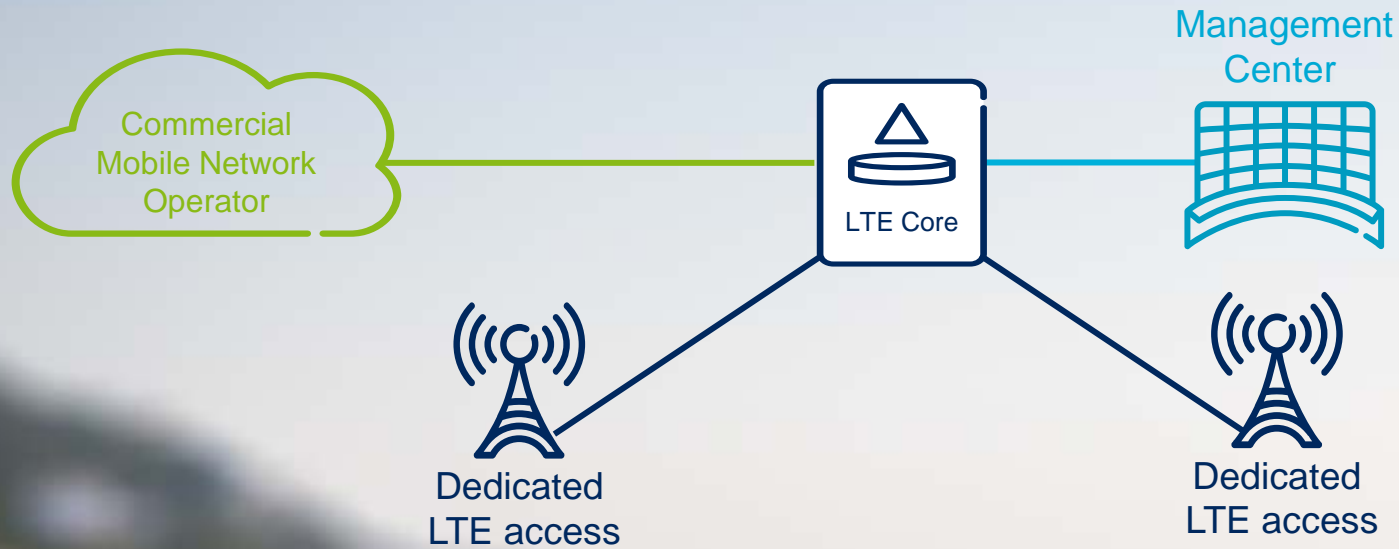


BIG BELLY
WASTE MANAGEMENT




SCANIA
SMART WATCH

LTE SOLUTION FOR PORT COMMUNICATIONS NETWORK



One integrated network for all communications requirements.
Use Case: AGV

 **Voice**
Collaboration in Operations
Emergency Management

 **Data**
Terminal Operations
Automation/remote control

 **Video**
Monitoring of equipment
Security surveillance

Network availability

PS Interoperability

Capacity
Speed & Latency

Data security

Priority control

Extended coverage

SLA monitoring

Carrier class LTE network

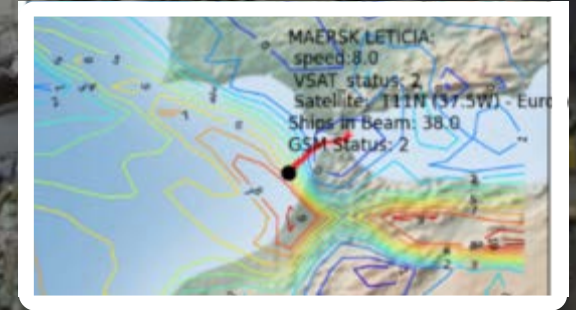
GEO-SPATIAL ANALYTICS

› WHAT

- Ability to unify complex IOT data where the data is sampled at different points in space and time.

› PROTOTYPE

- Container shipping example combines sensor (location, speed), communications (GSM, Satellite) and weather (GRIB) data

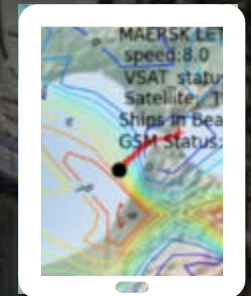


Port Call Process
Terminal Operations

Port Operations Passing
Limitations

Dangerous Goods
Management

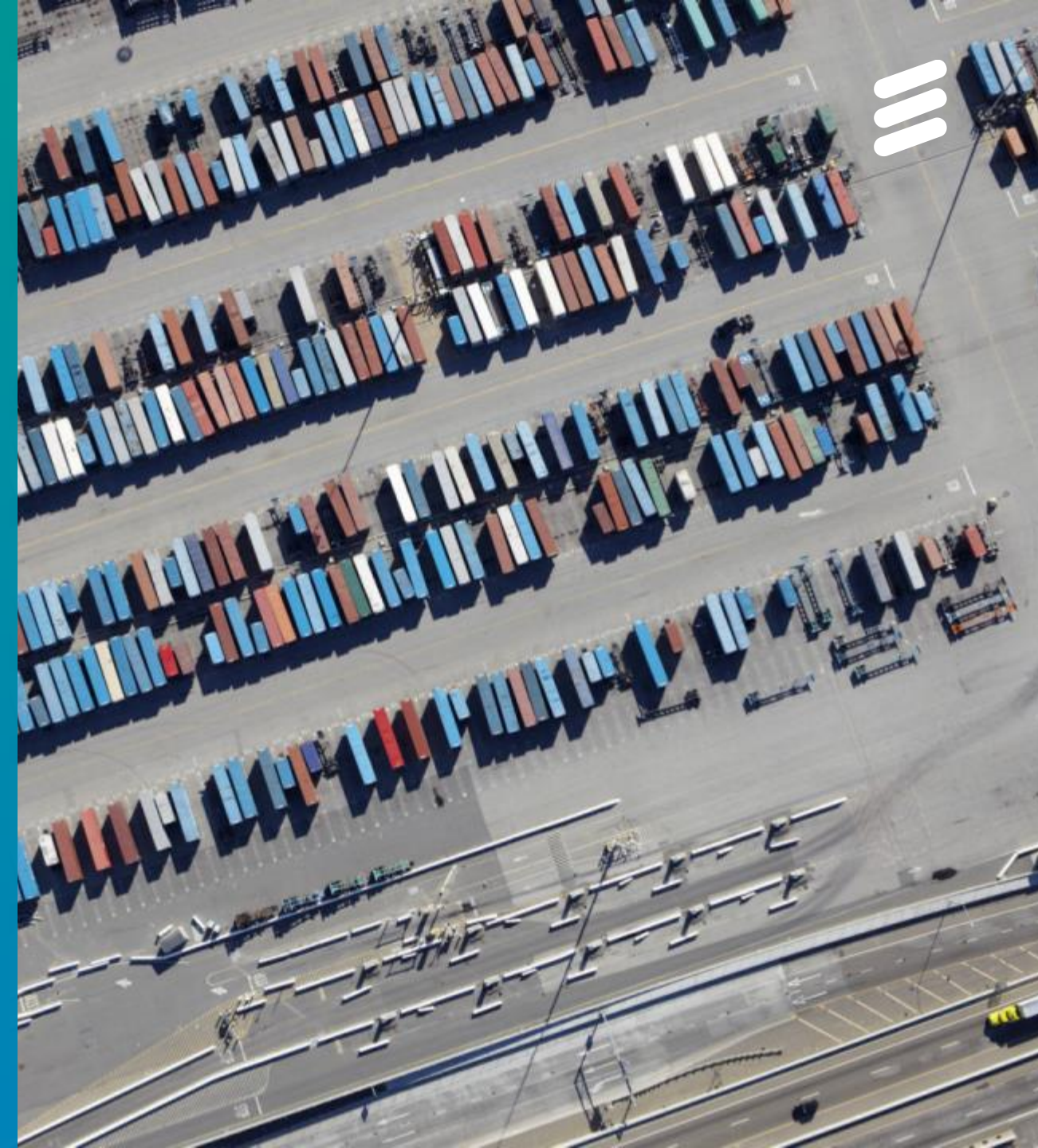
Virtual Container Tracking



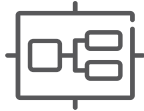
MONETIZE NEW SERVICES

- › Single view of customer enabling flexible tariffs
 - › Discounts and/or Incentives
- › Port Charges
- › Cargo Handling
- › Inland Transport

IF YOU CAN MEASURE IT,
YOU CAN MONETIZE IT



KEY TAKE-AWAYS



Data is Critical



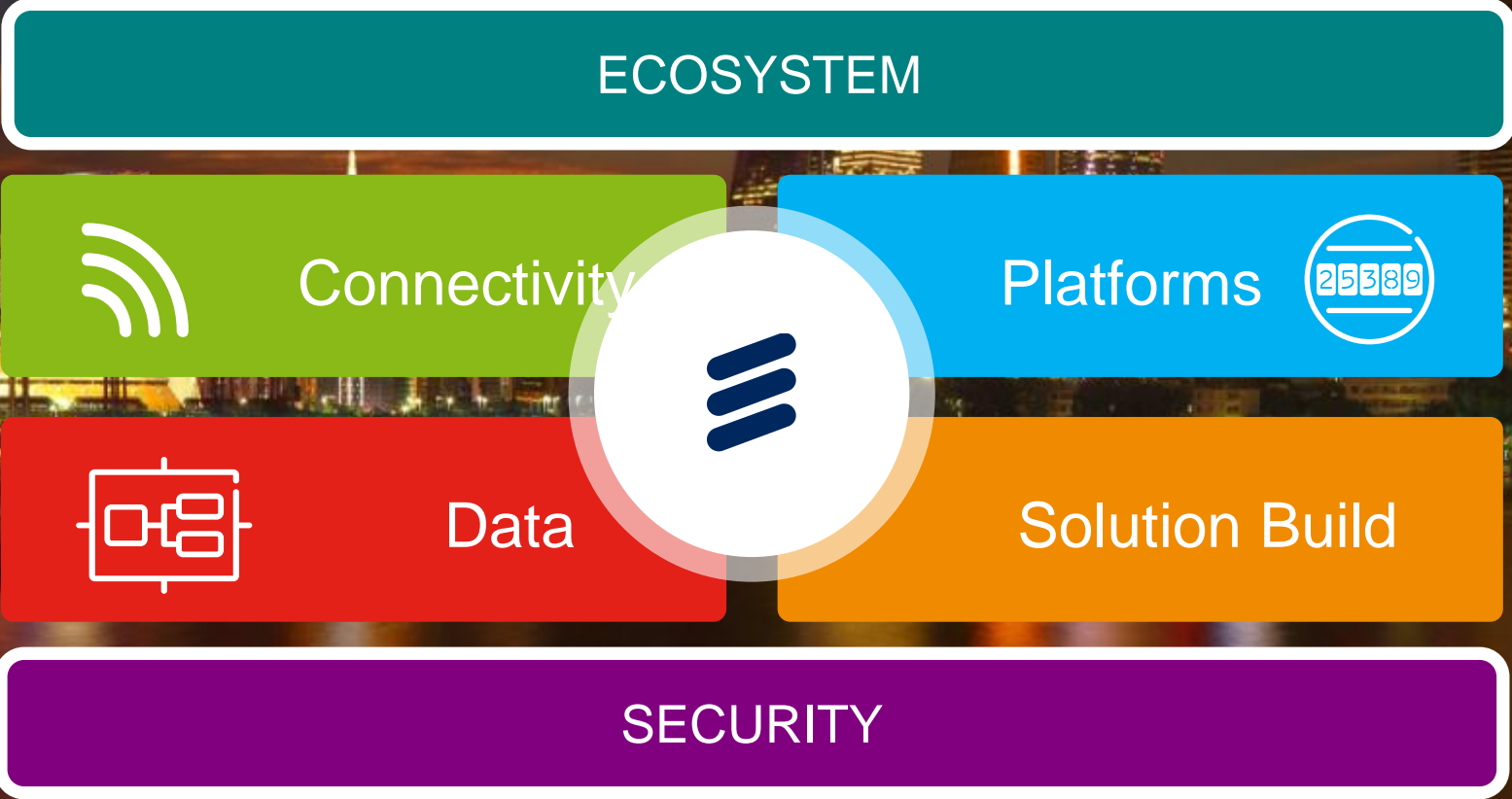
Transform
Processes

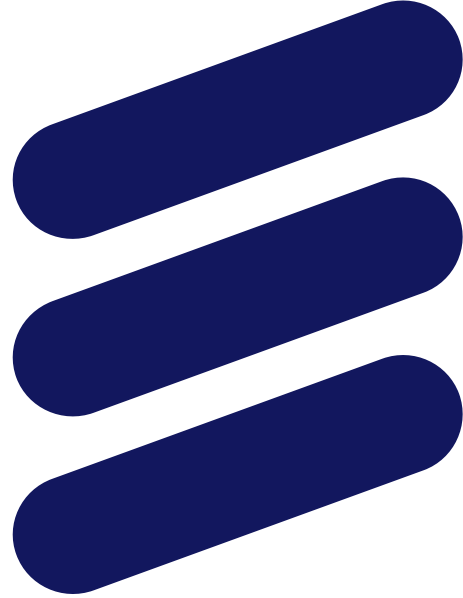


As A Service



E2E IOT TRANSFORMATION PARTNER





ERICSSON