ERICSSON

IOT ACCELERATOR

October, 2017

CONNECTED DEVICES IN 2021

28 BILLION

7.1 BILLION IN 2015

8,7 BILLION
MOBILE PHONES

3.7 BILLION IN 2015

4,2 BILLION
PC/TABLET/LAPTOOP/FIXED PHONES

4.6 BILLION IN 2015

15,3 BILLION
M2M/IOT DEVICES

Source: Ericsson Mobility Report
November 2015

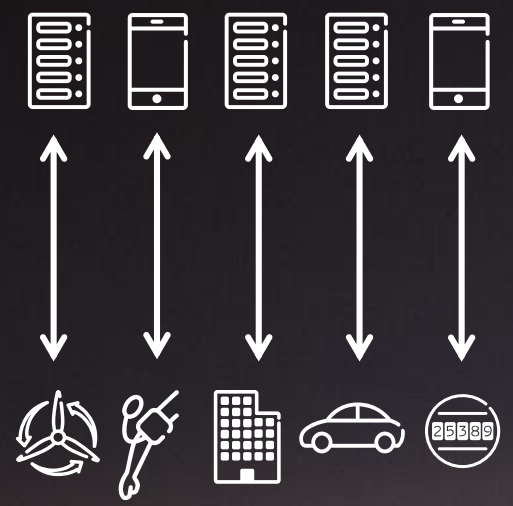
Machine to Machine

A ***device…***
that captures an ***event…***
transmits it over a ***network…***
to an ***application …***
that translate it into
meaningful information

Internet of Things

Bringing together the
people, process, data
& things to make networked
connections more relevant
turning information to actions

TRANSFORMATION WITHIN IOT



M2M

IoT

- Horizontal platform for vertical applications
- Open environments
- Data centricity
- Easy access as a Service
- Business focused innovation

IOT ACCELERATOR VALUE PROP

Low Risk

No upfront investments in software and hardware

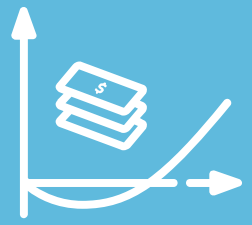
From CAPEX to OPEX.
Improved free cash flow

Always up to date

Lifecycle Management Included.
Remove costly and painfully long migration projects

Guaranteed

Functionality and capacity governed by a service level agreement (SLA)



Only pay for what you consume

IOT Accelerator is priced on individual functionality modules growing with your business

Scalable & Secure

Scalability allows to evolve from proof of concept to industrialization.
Data protection and privacy

Technology made easy

Removing the infrastructure hurdles, handled through Ericsson Network Operations Center

IOT ACCELERATOR USE CASES

EXAMPLES

Demo Zone / Internet of Things / Smart Home

SMART HOME

The Smart Home Solution represents one of the main Operators and Enterprises starting point to enable and develop the IoT business in their Subscriber's base. Ericsson Smart Home provides a complete E2E solution not limited to Smar home but also extended towards Healthcare, Security, Energy management…

Wanto to know more? Sign in or request a new account here

Demo Zone / Internet of Things / Smart Building - Facility Management

SMART BUILDING - FACILITY MANAGEMENT

The Smart Building /Facility Management Solution allow the full control of climate/energy consumption/room allocation/cleaning and others, through either new sensors installed or leveraging on existing sensors integrated on the AppIoT Platform.

Wanto to know more? Sign in or request a new account here

Demo Zone / Internet of Things / Smart Lighting

SMART LIGHTING

The Smart Lighting Solution allow municipalities to have the full control of city Lighting in terms of power consumption and optimal light distribution over the day/night, enabling at the same time a multipurpose local area network to also connect other devices and enable additional Business Models.

Wanto to know more? Sign in or request a new account here

Demo Zone / Internet of Things / Smart Waste Management

SMART WASTE MANAGEMENT

Smart Waste Management Solution optimizes waste collection and vehicle usage. By means of a set of sensors installed on the Trucks and on the bins, and a specific set of applications and analytics, it allows the municipalities to monitor and optimize the vehicle weight and route, fuel consumption and anomalies.

Wanto to know more? Sign in or request a new account here

Demo Zone / Internet of Things / Safety and Security

SAFETY AND SECURITY

Maintaining a safe and secure society requires our public safety agencies to be efficient , well organized, informed and able to communicate rapidly and effectively to carry out their mission. The changing ICT landscape of CLOUD, IoT, MBB and service oriented business models brings challenges to these customers.

Ericsson Safety and Security Solution enable real time management of situations such as Accident Trigger ,ER Dispatch ,Emergency Vehicle Movement and others, so to keep the public safety and under control.

Wanto to know more? Sign in or request a new account here

Demo Zone / Internet of Things / Internet of Towers

INTERNET OF TOWERS

Leveraging on massive presence of Operator's radio sites on the territory, this solution enables both a capillary environmental data collection (such as: Air Temperature, Air Humidity, Wind Speed, Wind Direction, Wind Temperature, Light, Solar Flares, Fog, Dust aerosol, Refractive effects, Electromagnetic emissions, Rain and Snow rate, Vibration (Hearthquake),CO2, Atmospheric Pressure, adioactivity, Pollution, Clouds Status,Noise….) and at the same time enable a capillary IoT local radio network to reach on-the-ground sensors (such as Parking,Videosurveillance, elderly devices, waste management, lighting).

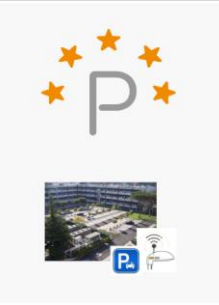
Wanto to know more? Sign in or request a new account here

Demo Zone / Internet of Things / Smart Parking

SMART PARKING

Smart Parking Solution help to optimize and monetize the Parking spaces, at the same time enabling a multipurpose local area network to also connect other devices and enable additional Business Models (Bus Ticketing & Monitoring, Environmental and Security Monitoring, Public Light Control, WasteBin Optimization….)

Wanto to know more? Sign in or request a new account here



Demo Zone / Internet of Things / Smart Car

SMART CAR

Ericsson Smart Car Solution enables complete and structured Vehicle Tracking System for Insurances, Fleet management, Car sharing and others, in order to optimize and monetize, according to the Customer business and sales model, all the information coming from the connected vehicles, thus enabling operational savings, new business models and new revenue streams.

Wanto to know more? Sign in or request a new account here

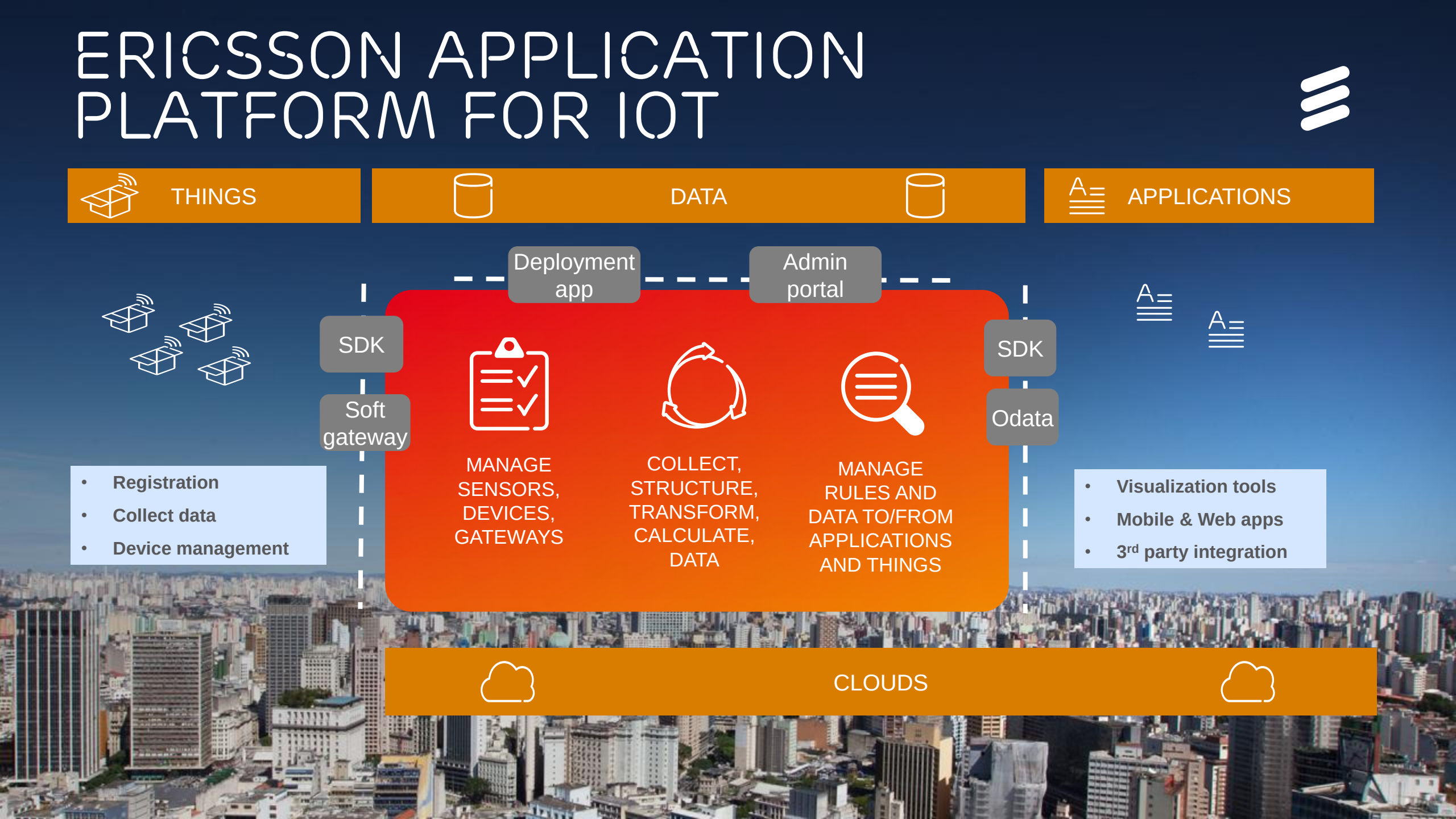
Demo Zone / Internet of Things / Smart Farming - Agriculture

SMART FARMING - AGRICULTURE

Farming, on the whole, remains a highly imprecise science. Despite widely varying local soil conditions, fluctuating water systems and an unstable climate, our approaches are often uniformly applied, resource-intensive and staggeringly wasteful. Not surprisingly, a number of IoT systems are quickly converging upon new ways to customize performance and eliminate inefficiencies. Ericsson Solution address all these with an E2E Solution.

Wanto to know more? Sign in or request a new account here

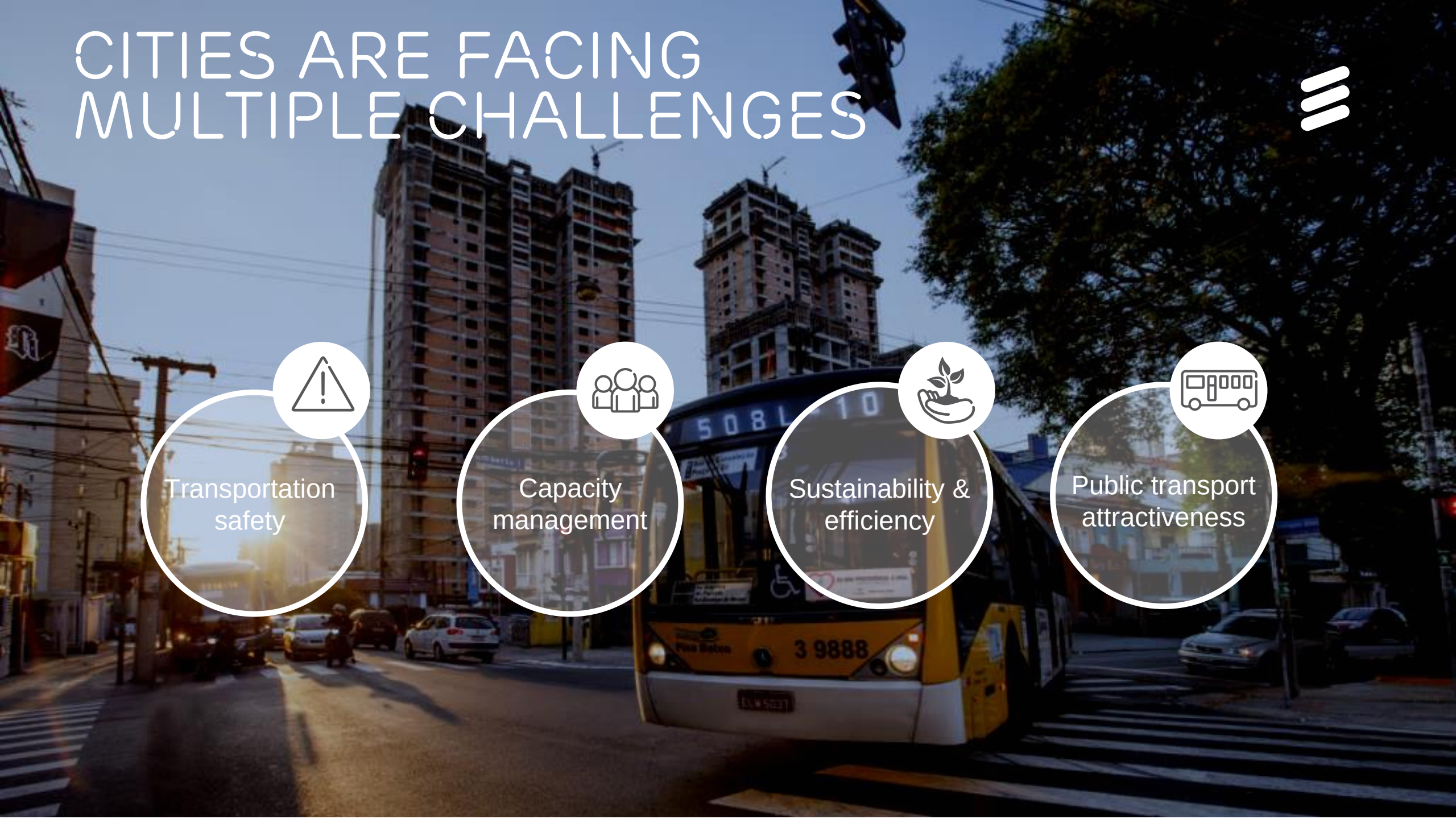
ERICSSON APPLICATION PLATFORM FOR IOT



ERICSSON

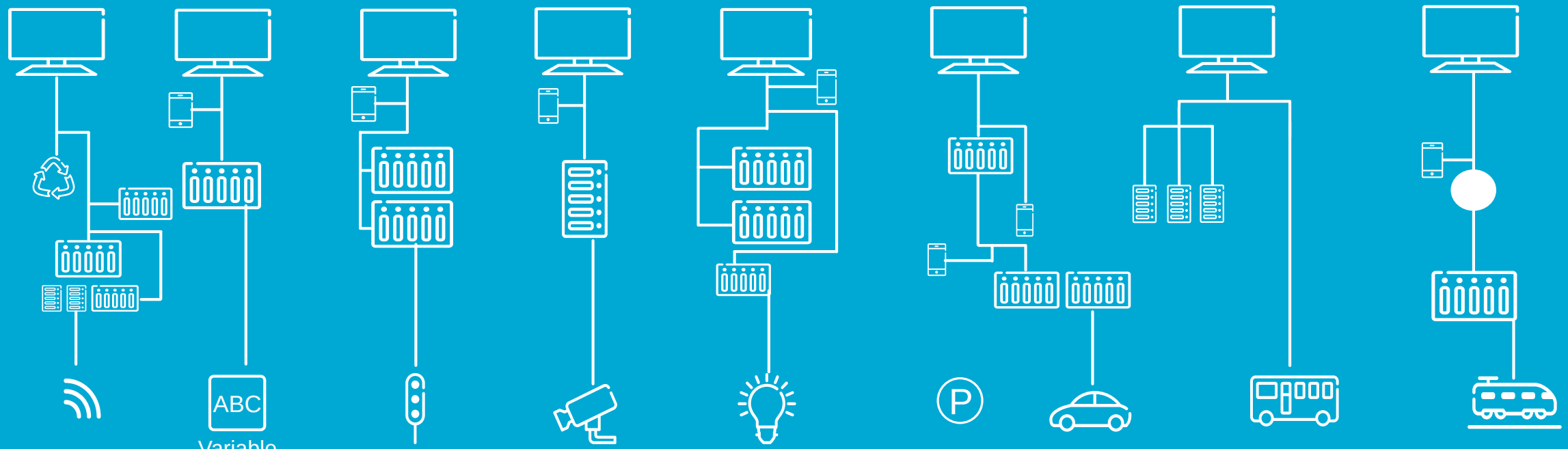
CONNECTED URBAN TRANSPORT

CITIES ARE FACING MULTIPLE CHALLENGES



MANY DIFFERENT SYSTEMS

Make it difficult to get an overview and manage



Sensors

Variable Message Signs

Traffic Signals

Cameras

Street Lights

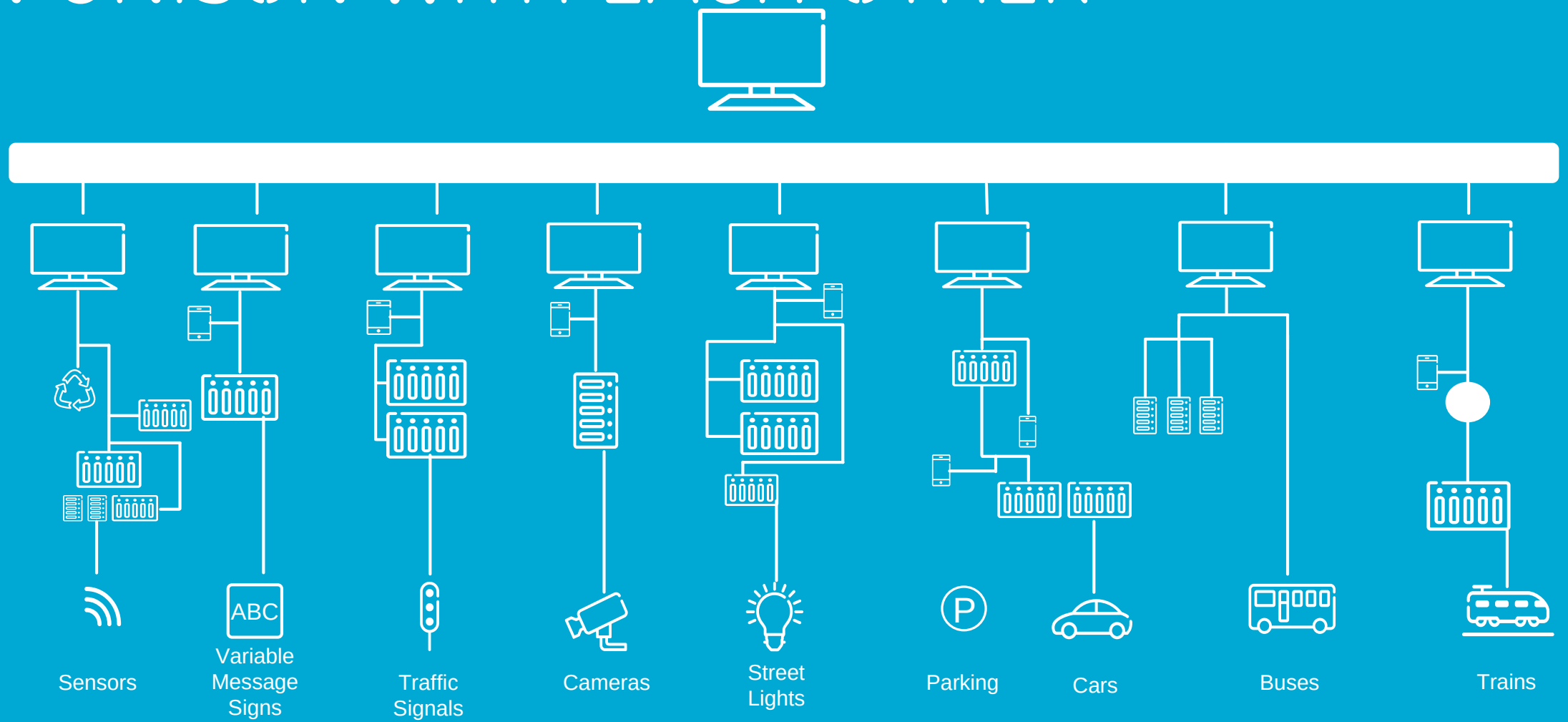
Parking

Cars

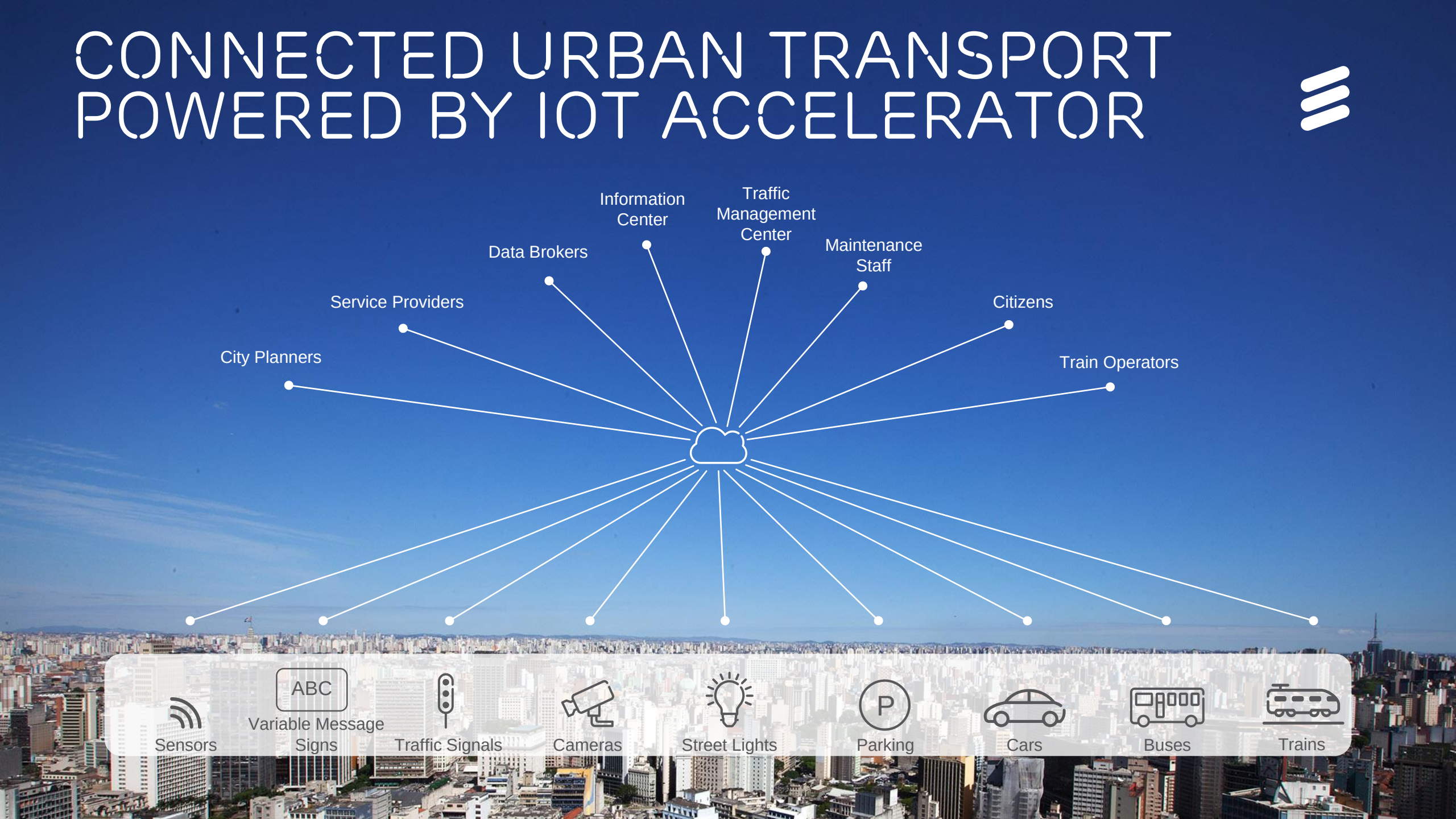
Buses

Trains

NEED FOR A SYSTEM OF SYSTEMS
MAKE SURE THAT ALL PARTS WORK IN UNISON WITH EACH OTHER

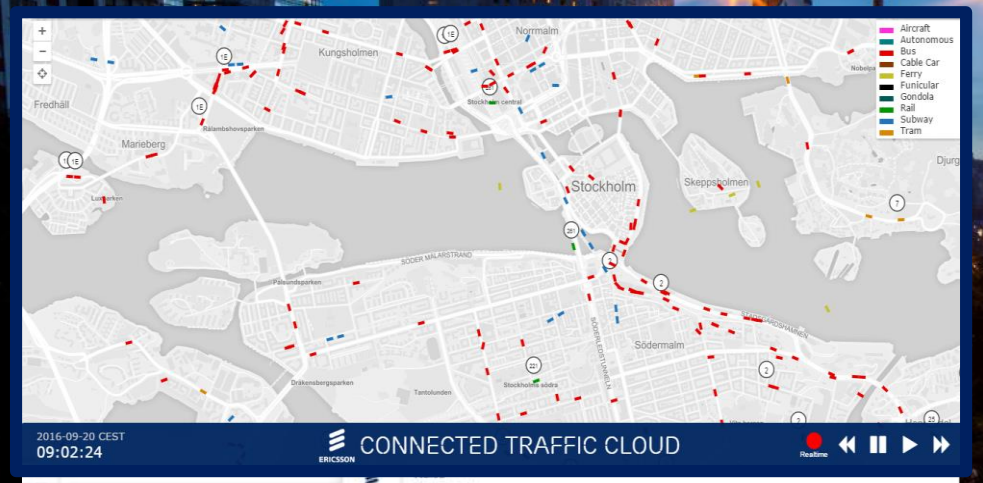


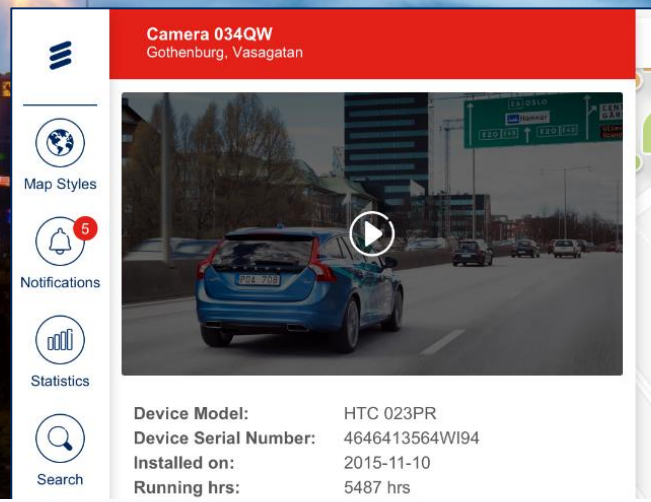
CONNECTED URBAN TRANSPORT POWERED BY IOT ACCELERATOR

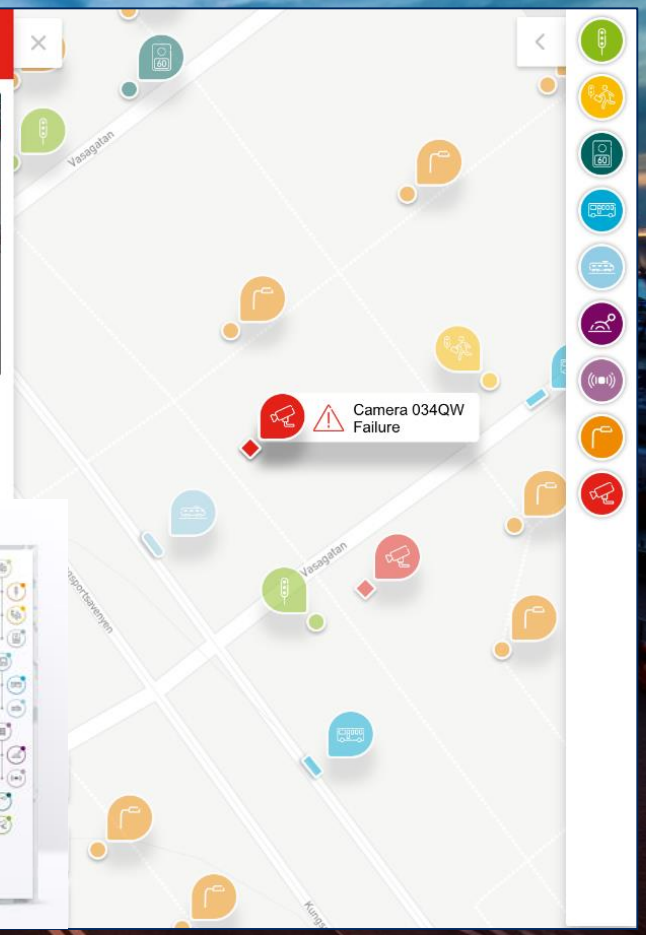


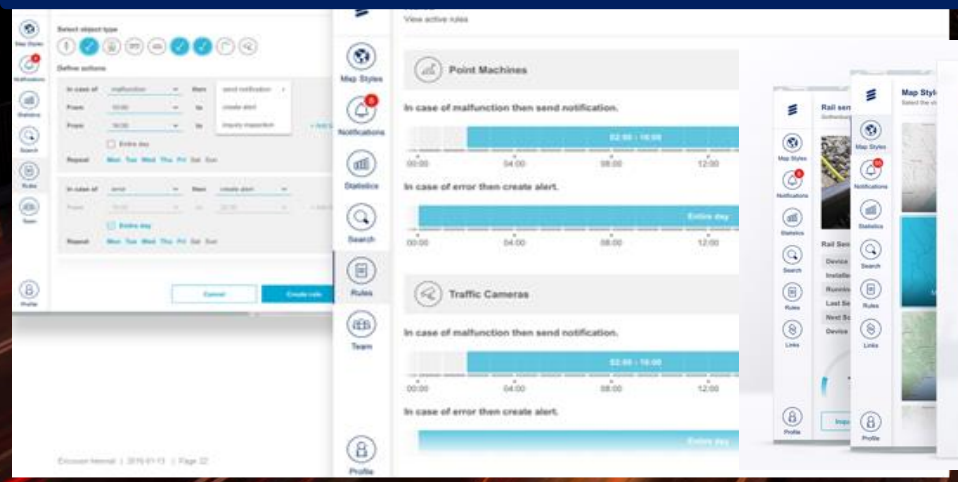
DASHBOARD OVERVIEW

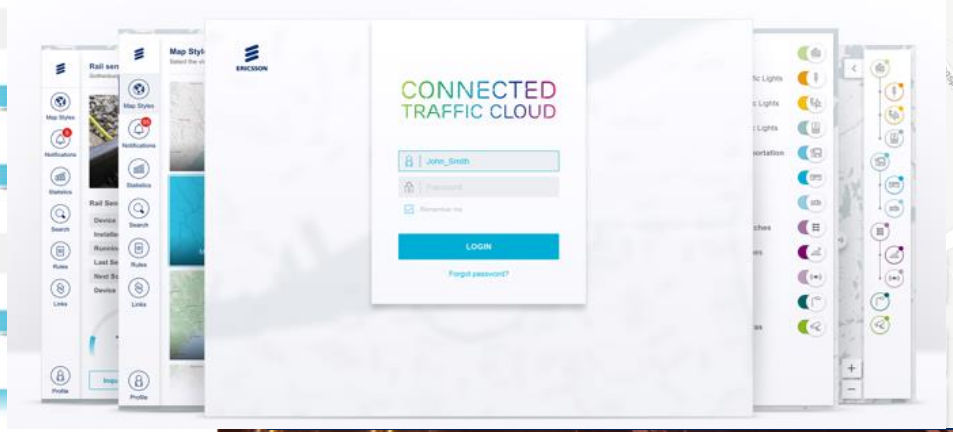
Connecting road infrastructure and traffic enabling connected, cooperative and automated transport





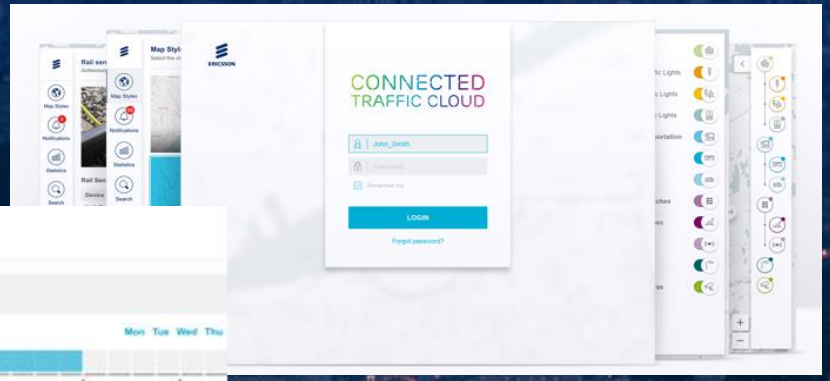




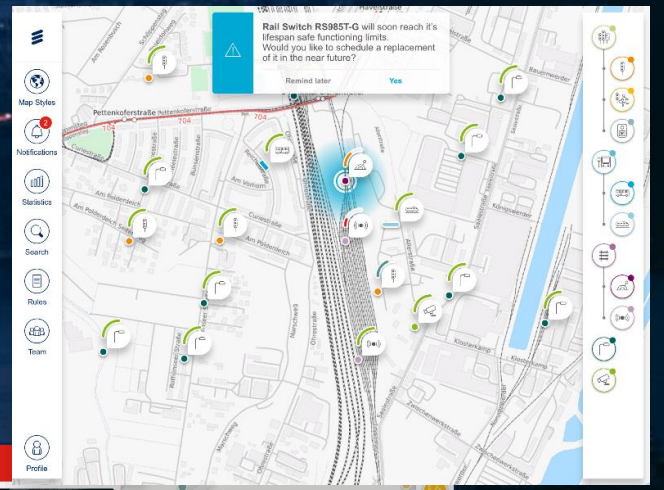


SCREENSHOTS (USER PERSPECTIVE)

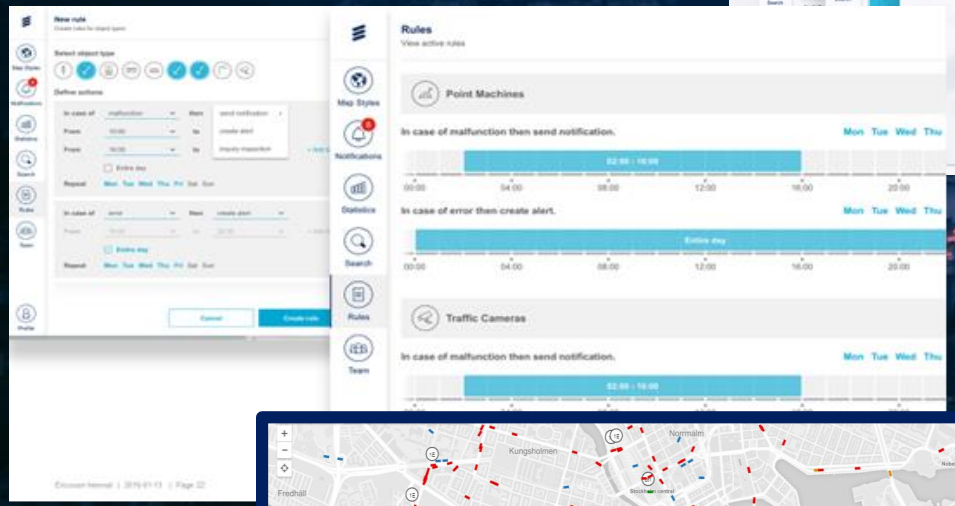
Single-sign on



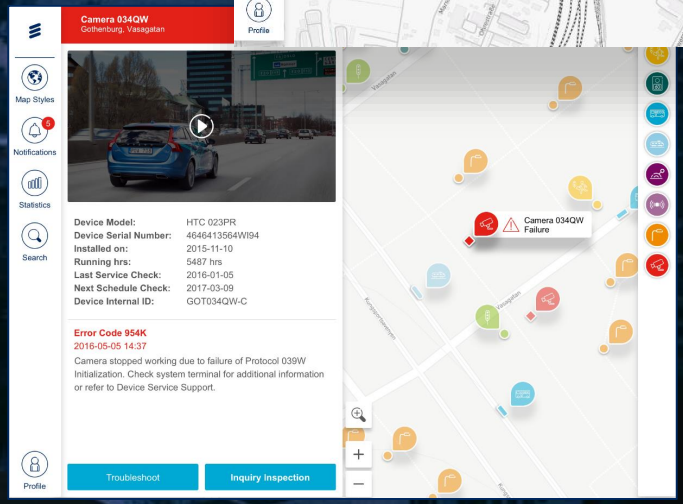
Dashboard overview

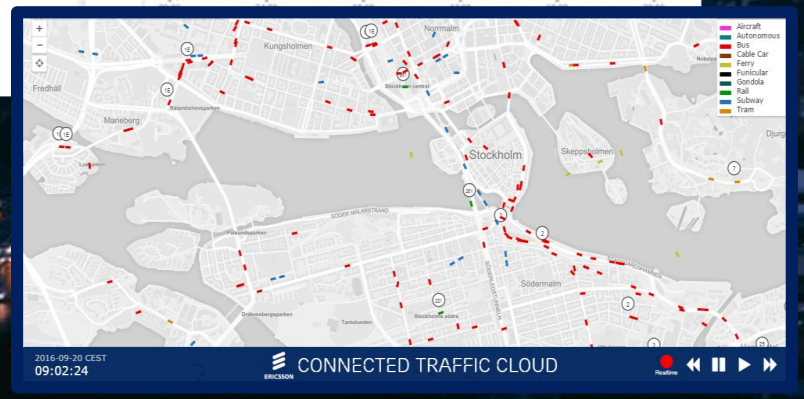


Rules to link systems



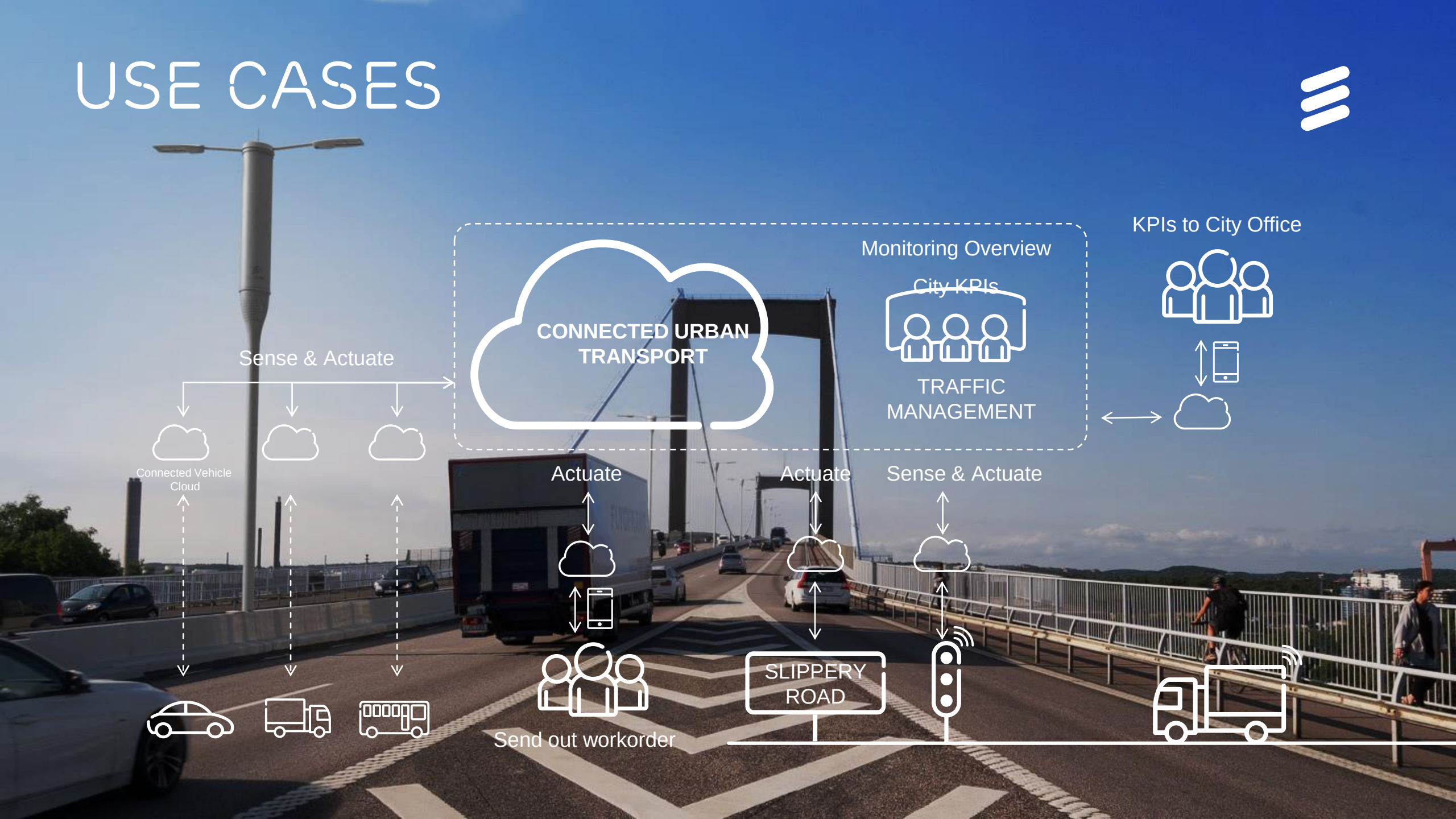
Notify and suggestions



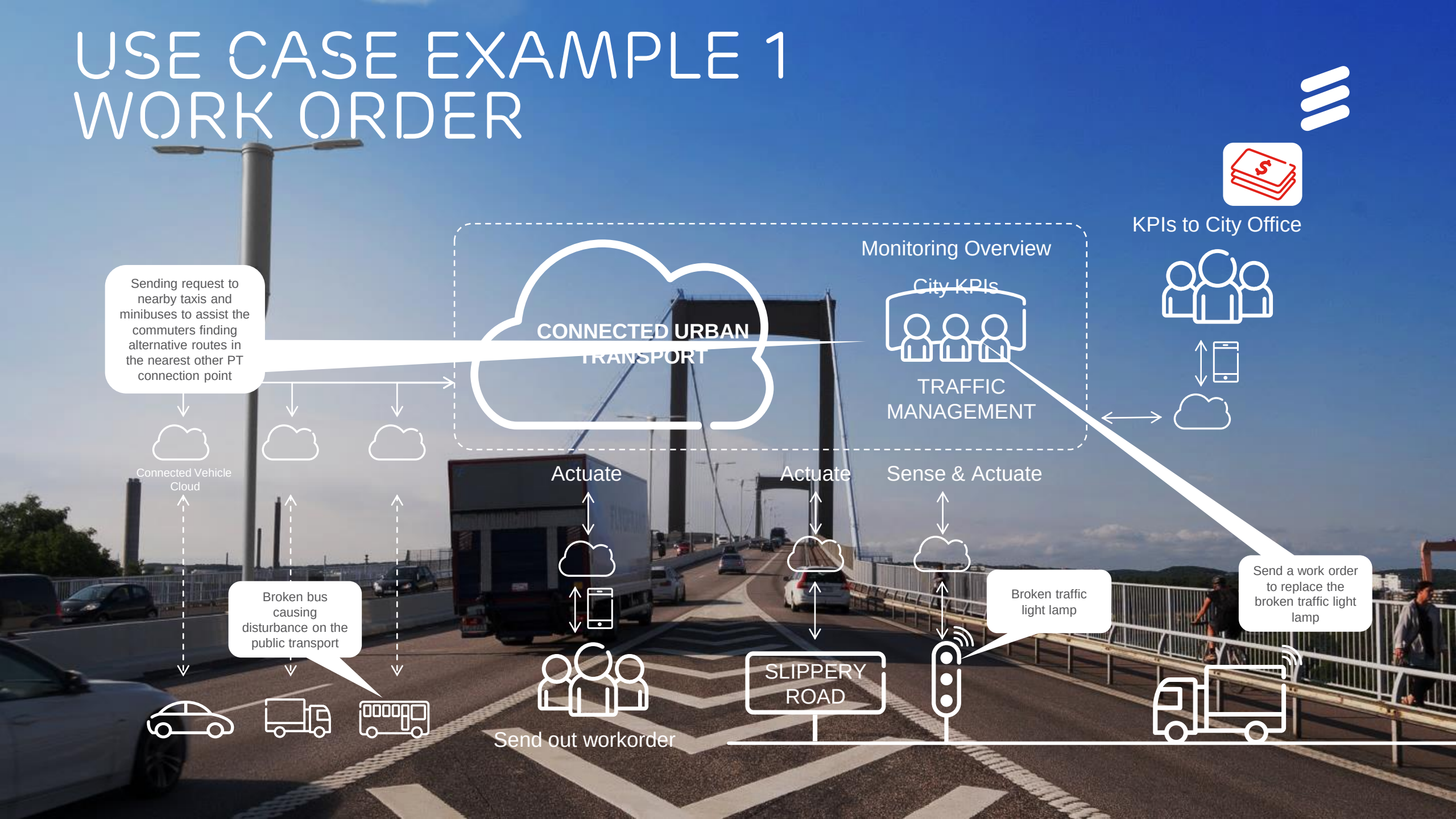


Link to 3rd party systems

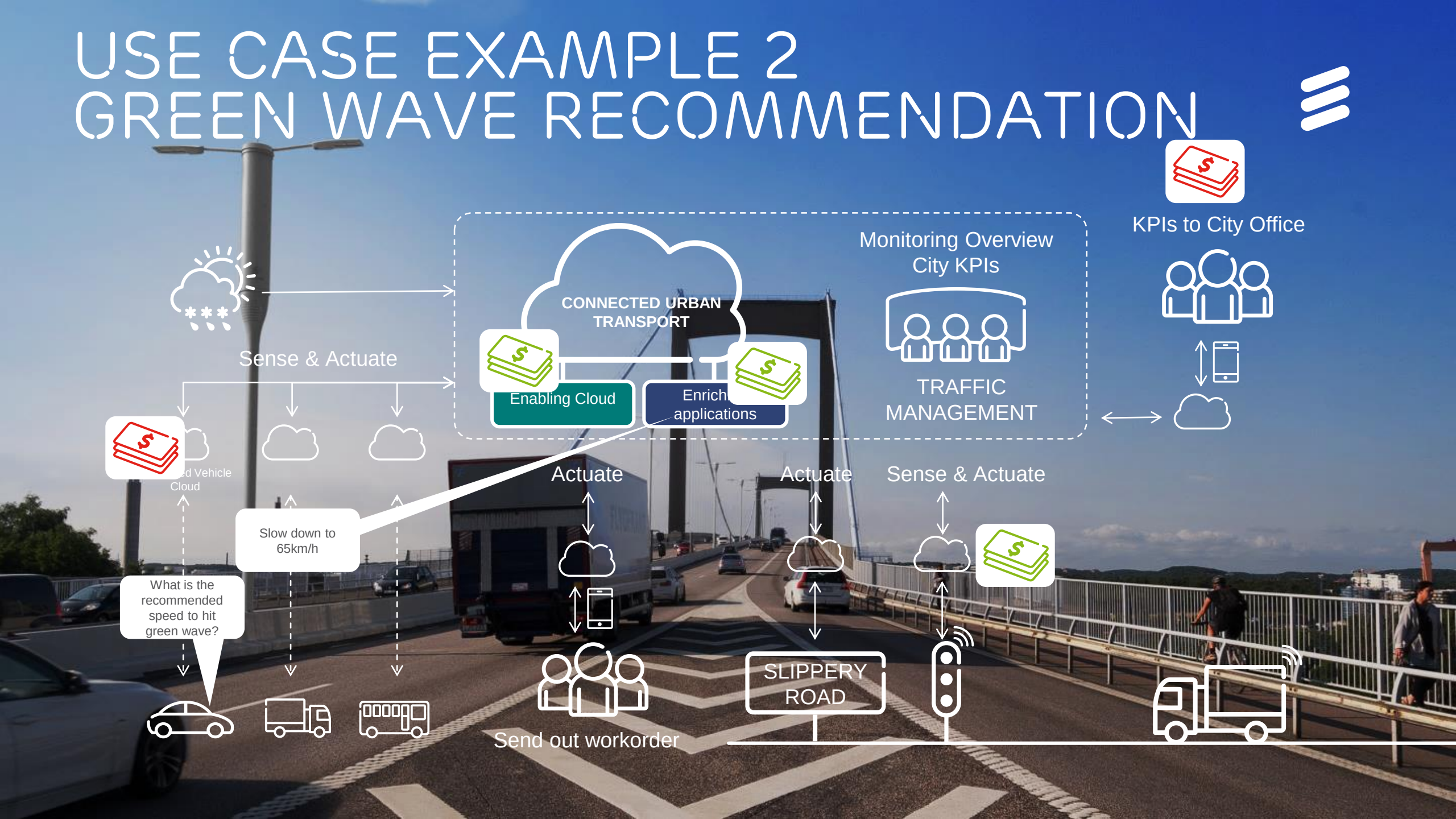
USE CASES


CONNECTED URBAN TRANSPORT
Monitoring Overview
City KPIs
TRAFFIC MANAGEMENT
KPIs to City Office
Sense & Actuate
Connected Vehicle Cloud
Actuate
Send out workorder
Actuate
SLIPPERY ROAD
Sense & Actuate

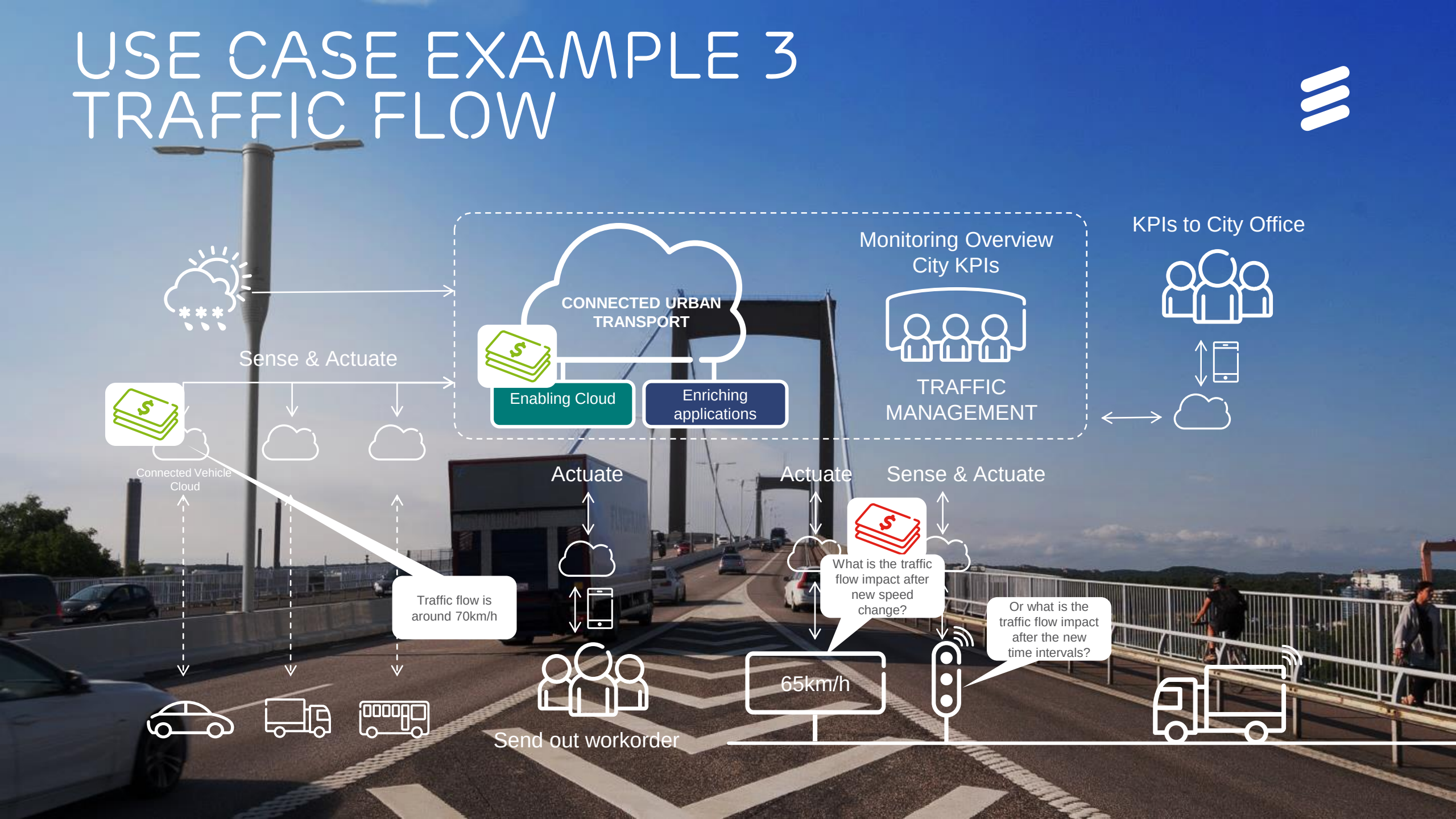
USE CASE EXAMPLE 1
WORK ORDER



USE CASE EXAMPLE 2
GREEN WAVE RECOMMENDATION



USE CASE EXAMPLE 3
TRAFFIC FLOW



EXAMPLE CUSTOMER CASES

Marketing material available

Dutch Ministry of Infrastructure

› Expose data from roadside systems to service providers (apps, in-vehicle)

EXPOSING TRAFFIC DATA IN REALTIME

Nationwide Cloud Solution for Ministerial Program “Talking Traffic”, Netherlands

The Netherlands has rolled-out a national program called “Talking Traffic”. The goal is to significantly reduce congestion on the roads by optimizing their usage.

This is done by sharing data between roadside equipment and vehicles and by connecting 25% of all traffic lights.

A nation-wide Cloud platform handles the data collection and sharing and the private sector is challenged by the Ministry to introduce new business models with local governments and travel service providers.

More asphalt is not always the solution for our traffic problems. Our infrastructure can be optimized by providing personalized information to individual travelers.

Melanie Schultz van Haegen
Dutch Minister of Infrastructure and the Environment

www.beterbenutten.nl

Networks IT Media Industries

Not yet disclosed (contract negotiations)

US Cities

› Convergence of existing traffic systems in 1 central overview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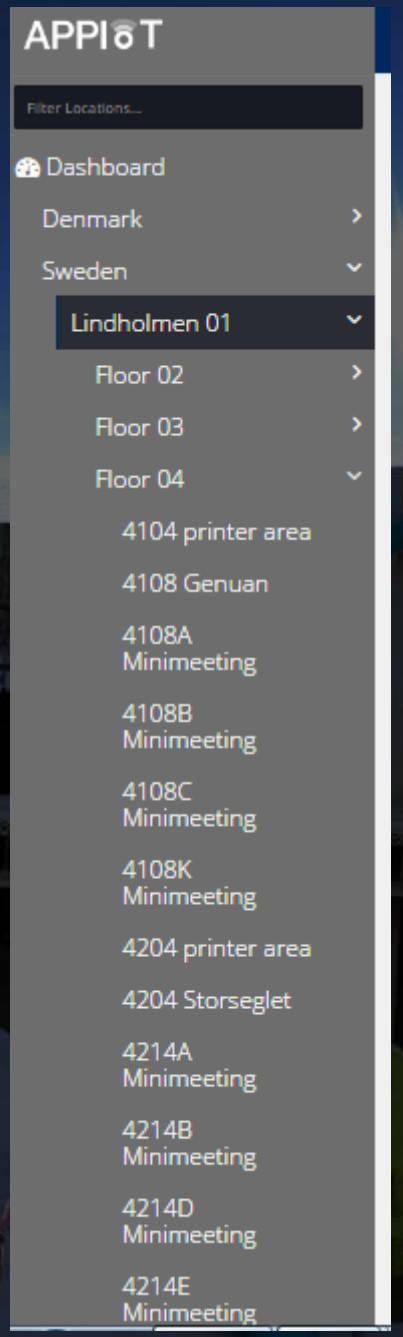
ERICSSON LINDHOLMEN
FACILITY
CONNECTED TO APPIOT

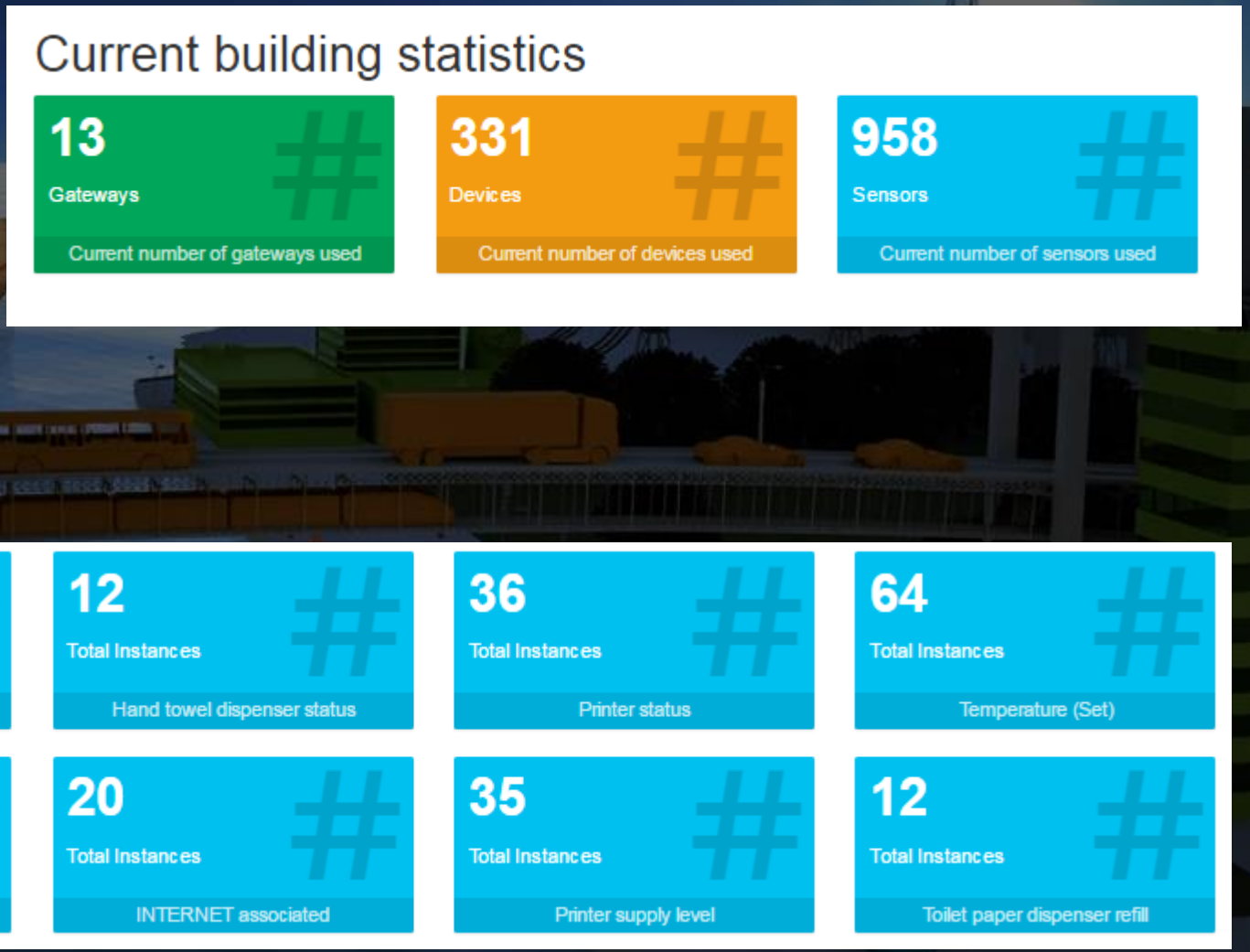
BACKGROUND

- Ericsson Lindholmen is the first Ericsson facility that is being connected to the AppIoT platform.
- The goal is to connect all existing sensors as well as to retro fit with new sensors and visualize how the facility is being used when it comes to
  - Utilization of resources
  - How to optimize processes
  - Predictive maintenance
  - etc



WHAT HAS BEEN DONE?

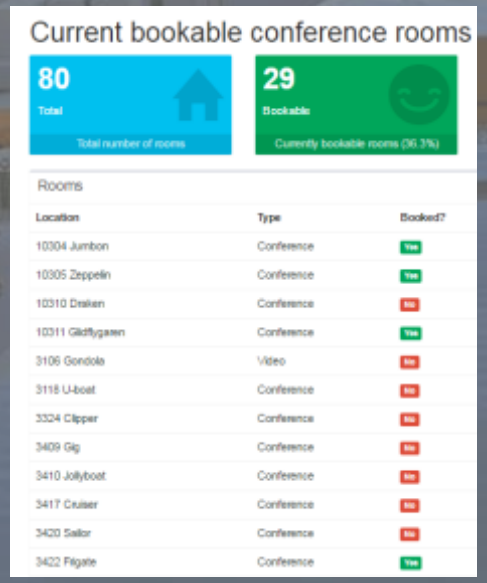
- Appr. 1000 sensors has been connected to the platform via different technologies and protocols such as Lora, Bluetooth, WIFI, Cellular.
- Front end user interfaces and analytics reports has been connected to the AppIoT platform to visualize the data.



USE CASES

UTILIZE AVAILABLE SPACE OPTIMALLY

- Are there enough meeting rooms, desks, telephone boots etc?
- What is the true utilization of the space?



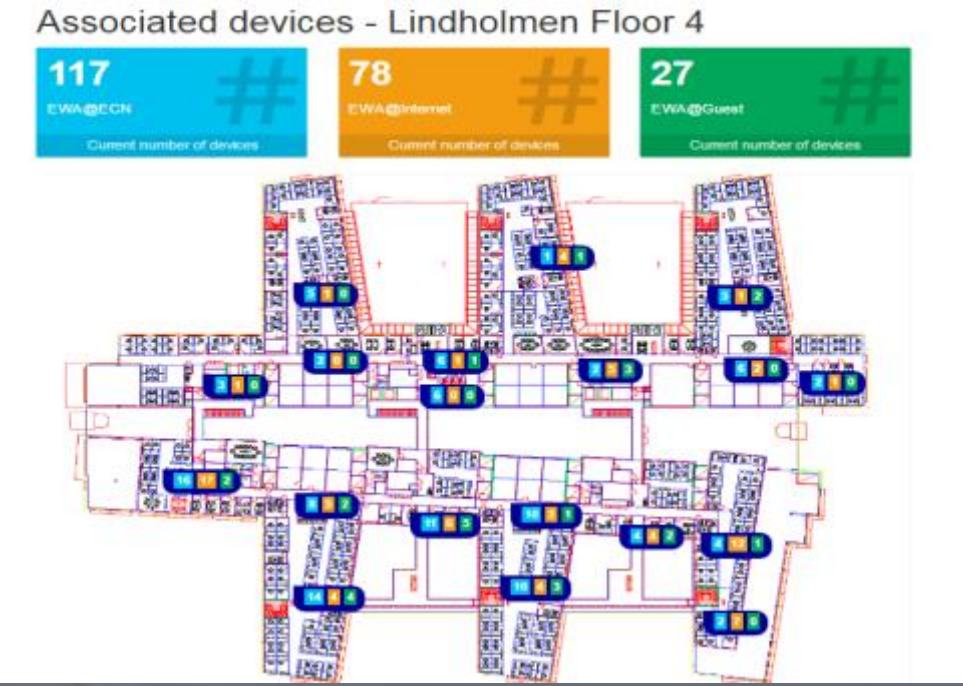
SIMPLIFY FINDING AN AVAILBLE ROOM

- Smart Phone app showing the presence and booking status of rooms

USE CASES

HEATMAPS

- What does the people flow look like over time in the building



Generate Heatmaps of connected WIFI devices

CLEANING ROUTE OPTIMIZATION

- Can cleaning be based on statistics in stead of fixed routes?

Toilet Utilization

USE CASES

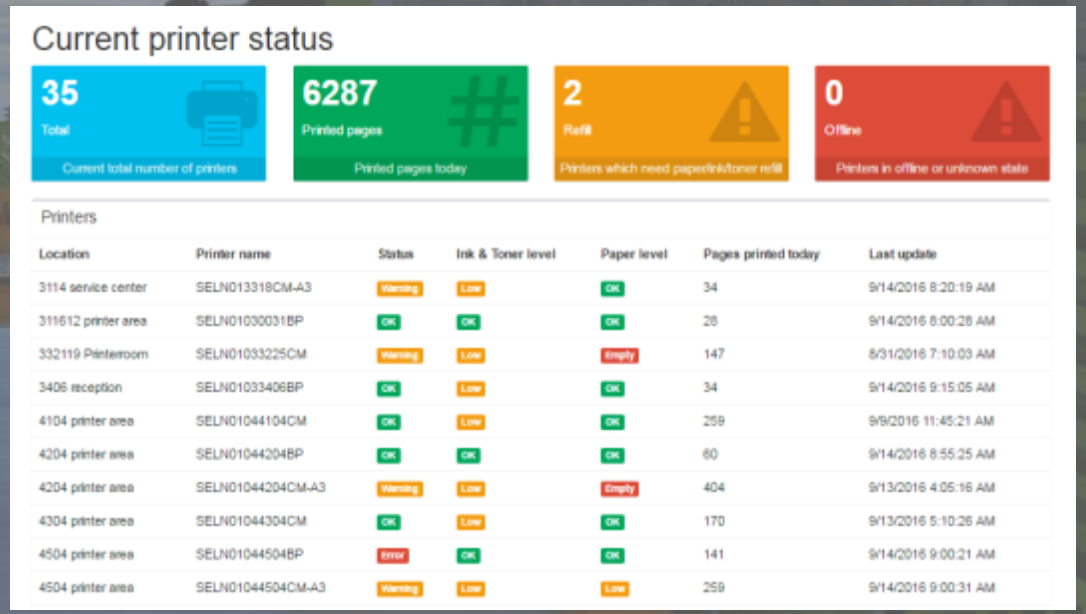
TEMPERATURE SETTINGS & ACTUALS

- How is the temperature in the building?
- To warm, to cold?

Temperature measurements

PREDECTIVE MAINTEANCE

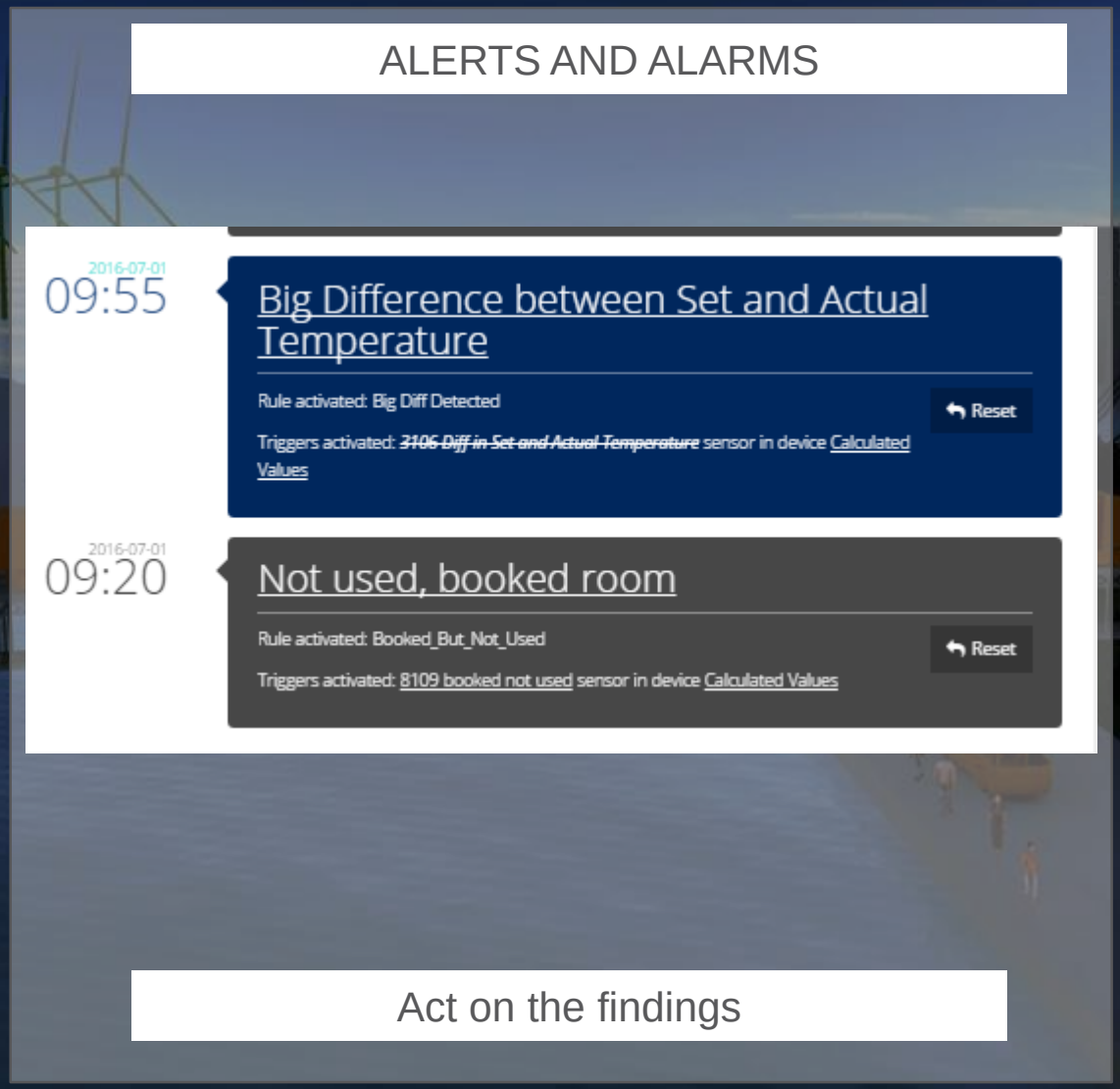
- Find and reports problems before someone is affected



Connected Printers

USE CASES

ALERTS AND ALARMS



Act on the findings

CONCLUSION AND RECOMMENDATIONS

Understand the complexity of IoT

(processes, people, partners).

Trustworthy partnership with IoT E2E systems

IoT is a journey, not a one-off project.

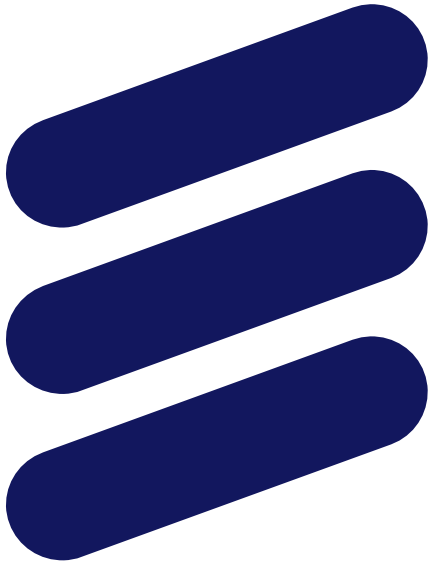
(start small and scale, expand)

Secure world class mobile connectivity management

Industries are already being transformed

(doing nothing is no longer possible).

Bringing rapid IoT deployment & monetization



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