# 5G & AI Based Video Analytics for Teleco's

*"Unlock new oppourtunity with us"*

**Webinar by DeepSight AI Labs**

DEEPSIGHT AI LABS Pvt Ltd

# OverView

**01**

5G & AI Video Analytics  - Power of "TWO"

DeepSight AILabs

# UNDERSTANDING THE PROBLEM

## AI Deployments

Solution deployments are lengthy & need technical assistance

## AI Accuracy
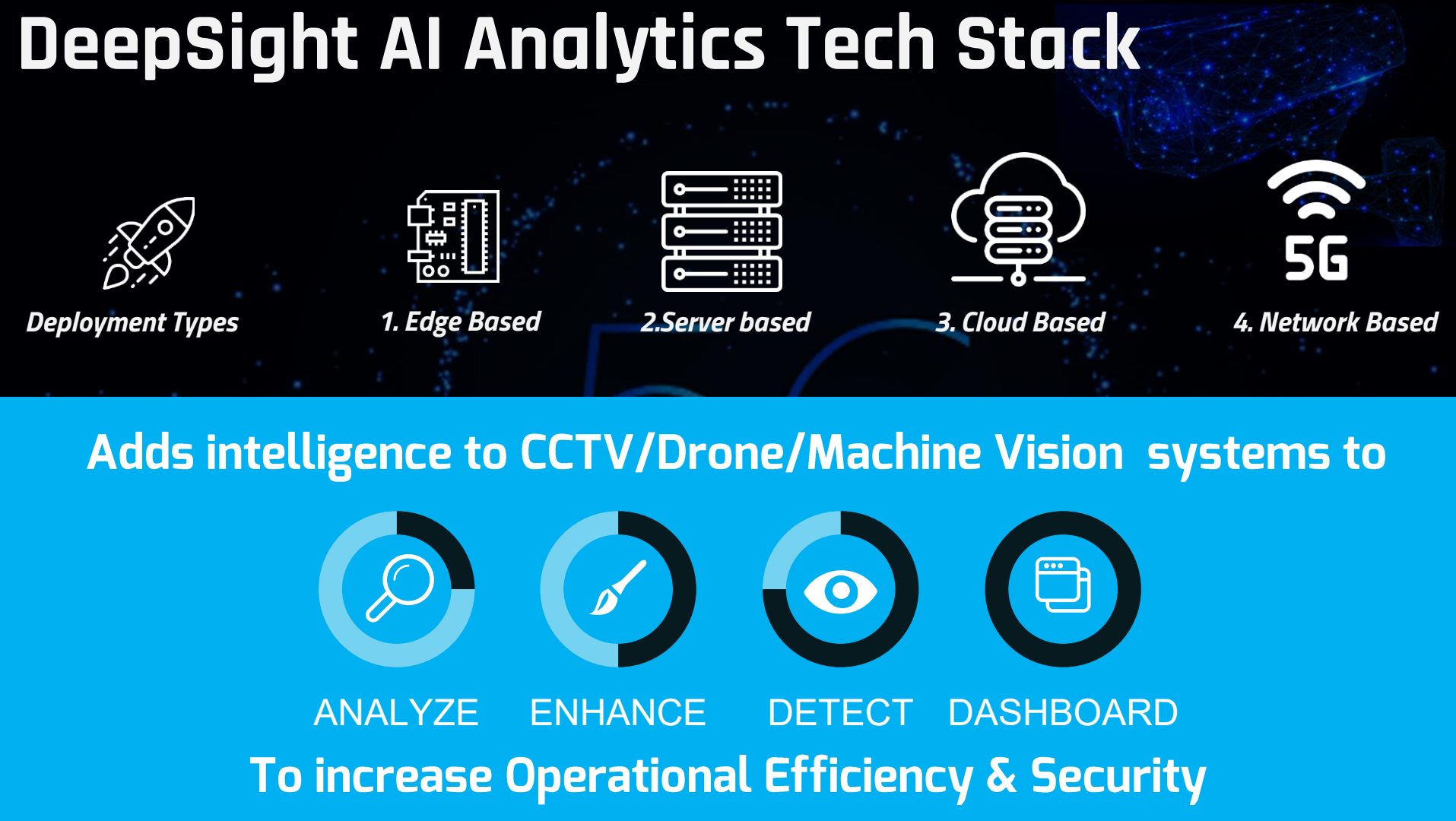
Generating accurate & timely alerts is complex

## AI Fine Tuning

High intense projects need fine tuning on-field post deployment

**AI companies are currently *experiencing continuous request* from clients with various types of deployment**

**DeepSight AI Labs**

DeepSight's AI platform is Scalable & Stable that can be deployed on Edge, Server, Cloud and 5G ready retrofit CCTV/Drone/Machine Vision real-time Computer Vision platform to deploy new object detection/action/incidents/QA etc. Recognition in faster ways with High accuracy.

# ABOUT US

# DeepSight AI Analytics Tech Stack

Deployment Types

1. Edge Based

2. Server based

3. Cloud Based

4. Network Based

**Adds intelligence to CCTV/Drone/Machine Vision systems to**

ANALYZE    ENHANCE    DETECT    DASHBOARD

**To increase Operational Efficiency & Security**

# OUR USP

**1** Feature Customization

Computer Vision Features

Scalable System 10's of Feature Support

Retrofit Solution (Any CCTV)

Dashboard with Analytics

**2** Quick Deployment

Automated 15 Imaging Augmentation

IoT / HID Ready Integration

Behavior & Object Analytics Models

"1 Click" Deployment & Integration

**3** Hyper Scaling

Handle 10 to 1000's of CCTV Cameras

Supports Cloud, Server and On-Premises

Platform on Low Config CPU/GPU/FPGA to High

Multi-Access Edge Computing

**4** On-Field Tuning

Proprietary "Neural Network"

High Accuracy

Platform reduces Ai Training from 6 weeks to 2 weeks

Live Fine Tune on Deployments

# 5G & AI Video Analytics – Benefits Telcos

**New & Disruptive Business Model**

1. 5G with AI Video Surveillance for Increased ARPU

2. Video Analytics offerings with Subscription option

3. Cross sell more services through AI to large customers

4. Surveillance to Indoor Coverage with 5G Private Network

5. Customized Video Analytics solution to Business Segments

6. Video Streaming at 5G Devices

# Teleco's - Time to Reinvent the Business Models

*5G with Video Analytics provides enormous business opportunity for telecom's*

## Industries



## Sample Use Cases

1. Customer Analytics for the Business
2. Video Surveillance for Business
3. Crowd Analysis across the Branches
4. Productivity Solutions
5. Employees Workplace Safety
6. Many More .....

## Business Model

# SaaS

(Subscription Model is very suited model which is already in place for telcos)

# Exponential power of the 4 Techs for Telco's Business Growth

## 5G x AI x Video Analytics x MEC
## =
## New Revenue Stream
## (For Telcos)

# Deepsight 5G AI Video Analytics Platform

## 03

Our platform enables Teleco's to do faster AI deployment

DeepSight AILabs

# 5G- DeepSight AI Labs Role

## Validation of 5G hardware for AI

- AI Video Accelerators Card
- Servers and Processors
- 5G Chip
- 5G Mobile
- 5G Routers
- 5G SIM based CCTV
- 5G Access & Core Network
- MEC Platform
- 5G Automation Devices
- Cloud Infrastructure

## Pre- Deployment

intel

NVIDIA

## Video Analytic requirement

- QoS
- Latency
- Reliability
- Speed of detection

# 5G- DeepSight AI Labs Role

## Indoor Coverage VA based Offerings on 5G

- Banks
- Ports
- Hospitals
- Warehouses
- Airports
- Transportation
- Smart City
- Constructions
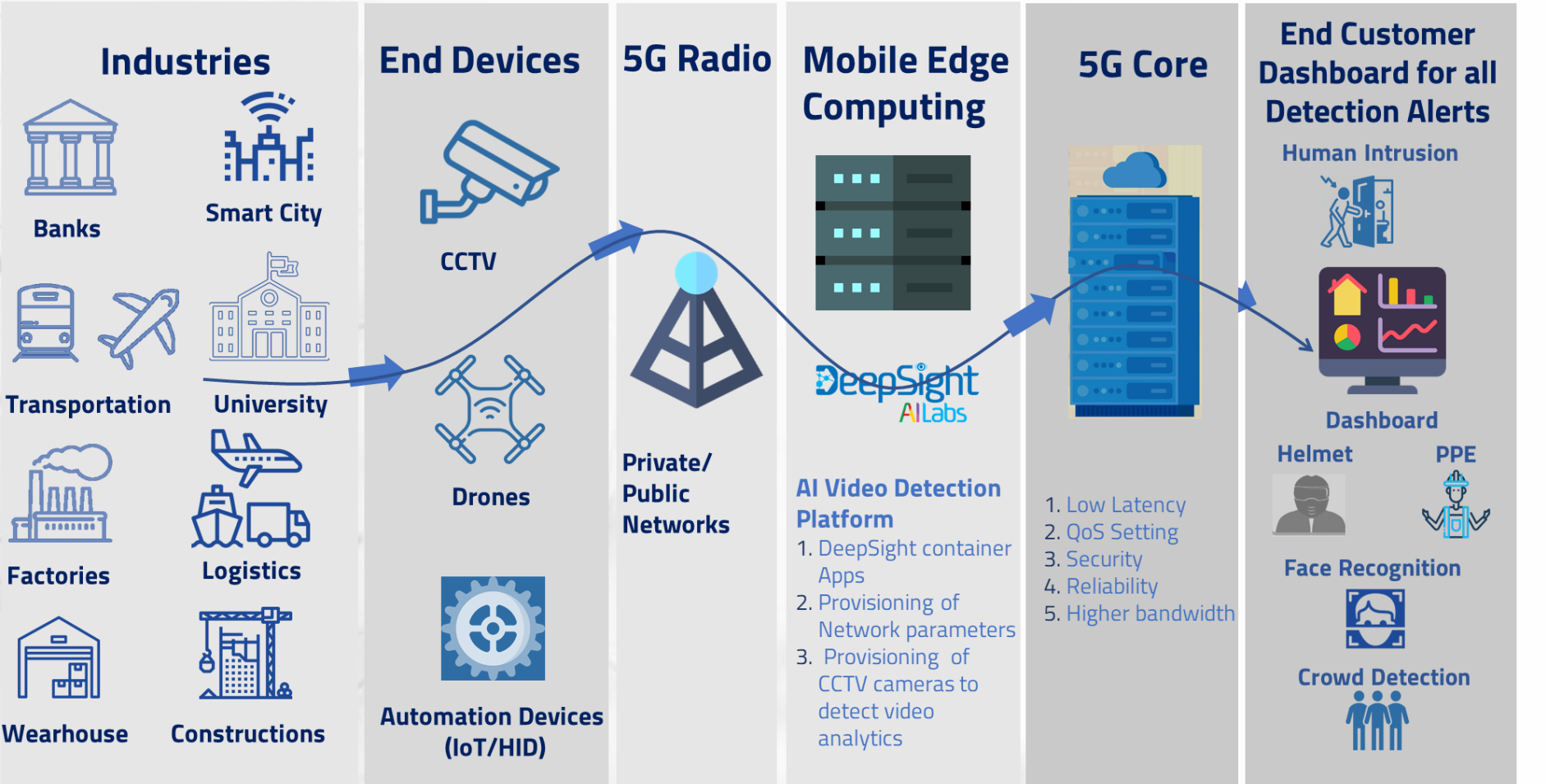- Factories
- Hospitality
- .........

## Post-Deployment

### (5G + VA+ AI Offerings)

## Private & Public Networks

- Use case based on Enterprise Video Analytics
- AI Video Analytics Deployments
- End to end AI video Analytics deployment

# DeepSight Platform is "5G Ready"



**Industries**

Banks

Smart City

Transportation

University

Factories

Logistics

Wearhouse

Constructions

**End Devices**

CCTV

Drones

Automation Devices (IoT/HID)

**5G Radio**

Private/ Public Networks

**Mobile Edge Computing**

DeepSight AILabs

**AI Video Detection Platform**
1. DeepSight container Apps
2. Provisioning of Network parameters
3. Provisioning of CCTV cameras to detect video analytics

**5G Core**

1. Low Latency
2. QoS Setting
3. Security
4. Reliability
5. Higher bandwidth

**End Customer Dashboard for all Detection Alerts**

Human Intrusion

Dashboard

Helmet

PPE

Face Recognition

Crowd Detection

# 5G AI Ongoing Use Case

## 04

5G & AI Video Analytics  - Power of "TWO"

DeepSight
AI Labs

# Technology companies teamed up to make this successful deployment in Spain through 5TONIC

**5G network Provider**

**AI Based Video Analytic Provider**
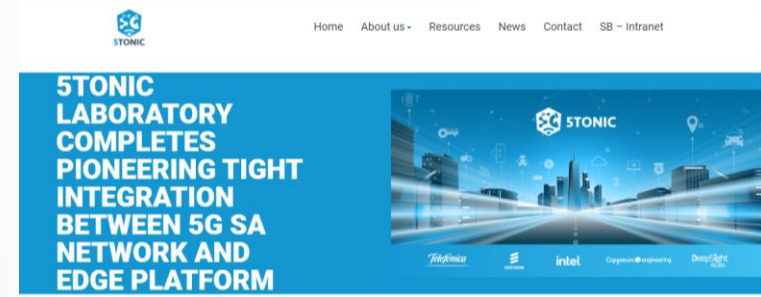
**MEC Platform**

**5G Core hardware**

**5G Consortium**

**Intel Smart Edge Open**

# Use Case

## One of the first standalone 5G use case combining 3 key technologies

- **5G Network**

- **AI based Video Analytics**

- **MEC Deployment**



*https://www.5tonic.org/news-20210412-5tonic-laboratory-completes-pioneering-tight-integration-between-5g-sa-network-and-edge-platform/*

**Location – Spain**
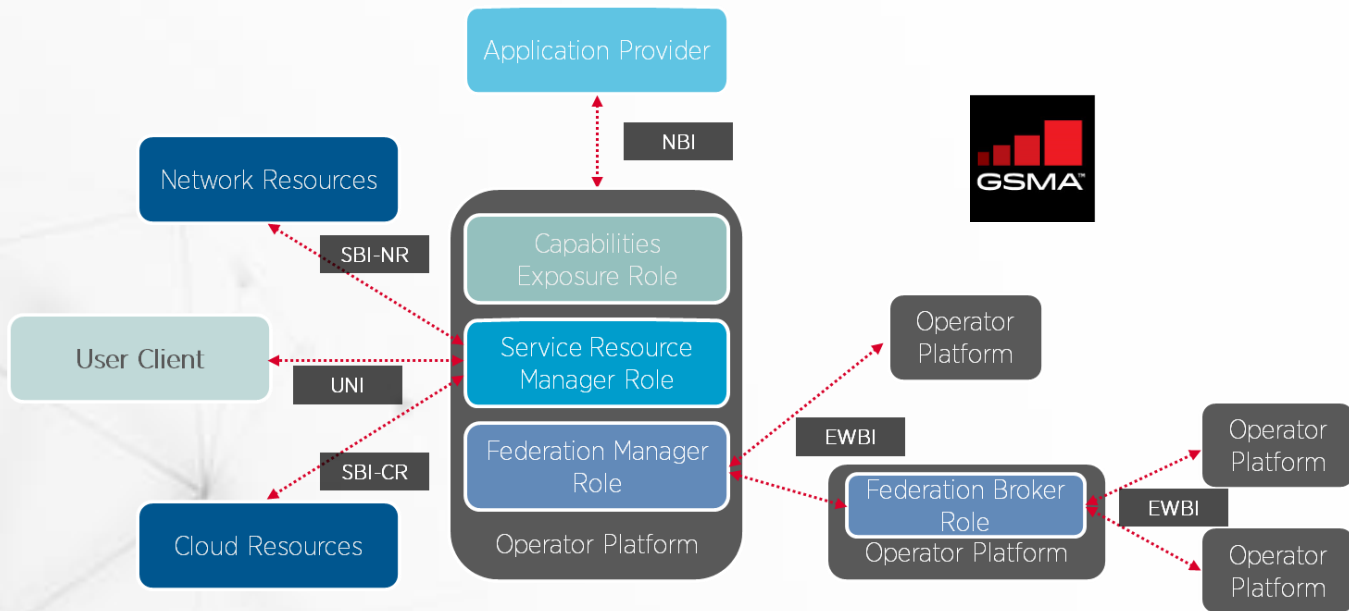
**Duration – 3 Months (Dec '20 to Mar '21)**

**Lab – 5Tonic**

# Edge OPG architecture
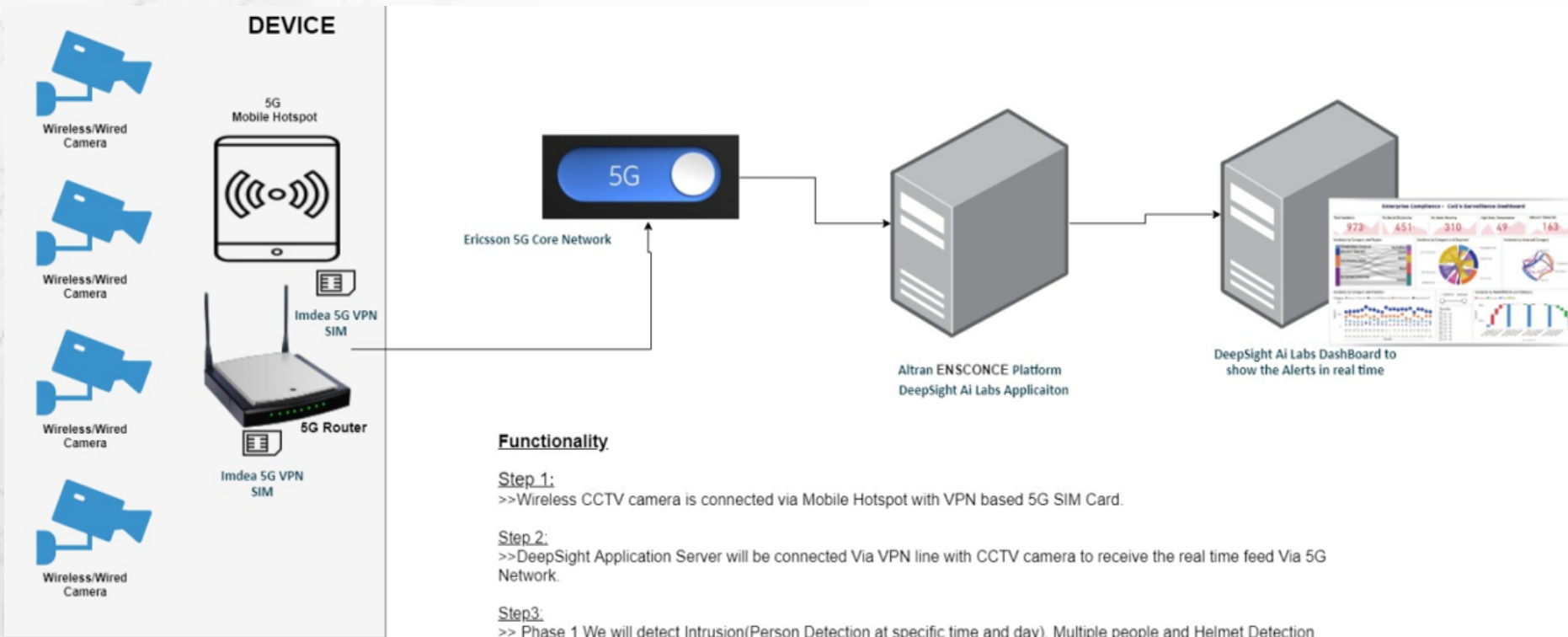
GSMA Operator Platform Group reference architecture, including the actors and interfaces of an end-to-end edge service delivery.

- **NBI** to allow developers to onboard and configure applications

- **SBI** to request resources, both for cloud and network

- **EWBI** to federate with other operators, enabling the roaming of applications and users.

- **UNI** to communicate with the devices.

# 5G and AI based Video Analytics deployment in Spain 5TONIC lab



**DEVICE**

Wireless/Wired Camera

Wireless/Wired Camera

Wireless/Wired Camera

Wireless/Wired Camera

5G Mobile Hotspot

Imdea 5G VPN SIM

5G Router

Imdea 5G VPN SIM

5G

Ericsson 5G Core Network

Altran ENSCONCE Platform
DeepSight Ai Labs Applicaiton

DeepSight Ai Labs DashBoard to show the Alerts in real time

## Functionality

**Step 1:**
>>Wireless CCTV camera is connected via Mobile Hotspot with VPN based 5G SIM Card.

**Step 2:**
>>DeepSight Application Server will be connected Via VPN line with CCTV camera to receive the real time feed Via 5G Network.

**Step3:**
>> Phase 1 We will detect Intrusion(Person Detection at specific time and day), Multiple people and Helmet Detection Feature.

**Step 4:**
>> As soon feature detected, Alerts are being sent to DashBoard Server via Internet.
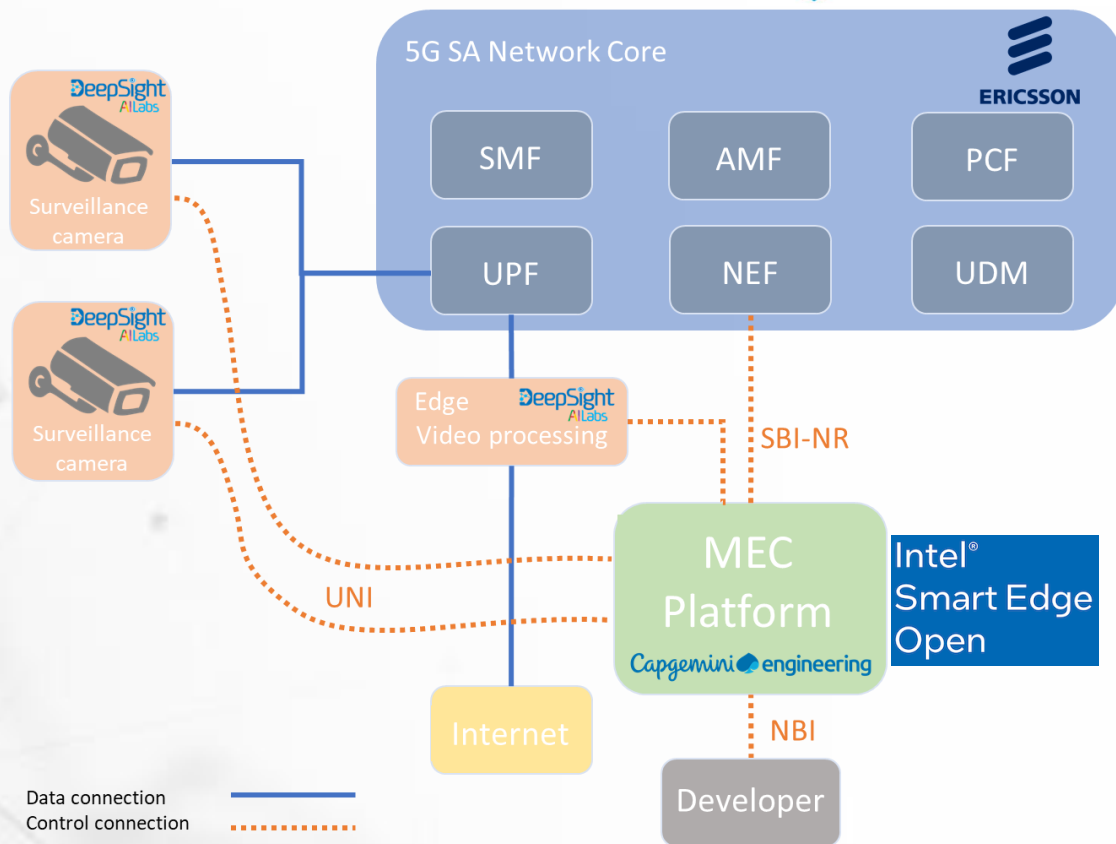
# 5TONIC MEC SA Integration

Application intelligence deployed on the network border, close to the UPF.

Direct access from the remote cameras, lowest latency possible to the application intelligence on edge servers.

Control connection from cameras to the MEC platform for discovering edge video processing server.

Control connection from MEC platform to 5G core (NEF) to request for capabilities:

- Device information, e.g. location
- Request for guaranteed quality of service.
- Request for modification on charging policies
- Optimize network routing of edge applications.



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# Results Outcome – 5 G Ready

**DeepSight AI Video analytics onboarded on MEC to detect objects in real time & send alerts on the 5G network**

<30 ms
Latency

400 mbps
High Speed

Real Time Alerts on 5G for Human Intrusion
Alerts

# Customers

**05**

5G & AI Video Analytics  - Power of "TWO"

# Our Customers – Globally

# Our Customers – Telecom



Telefonica

5TONIC

ERICSSON

Intel® Smart Edge Open

SK telecom

vodafone

verizon

Capgemini engineering

Tech Mahindra

# 2021 –
## "*Best AI Use in Smart Cities*"
*for Police & Forest department projects*

# OUR ACHIEVEMENTS

**Media**

10 Indian Startups That Are Leading The AI Race: 2019

Top 10 Best Artificial Intelligence Startups in India

https://bit.ly/2XqO9iJ

**Technology Partnership**
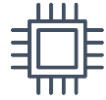
Jitendra Chaddah on Intel's game plan to get India's hardware startups on the map

SOFTWARE & ANALYTICS PROVIDERS

https://bit.ly/38pmox8

**Global – On going Deployments**

| Dubai | South Africa | Belgium |
|-------|--------------|---------|
| US | Hong Kong | |

Meet Top 8 Emerging Tech Startups From Zeroth.AI's First-Ever India Accelerator Programme  https://zeroth.ai/portfolio

Axilor Ventures Announces Startup List For Its Winter 2018 Accelerator Cohort  https://bit.ly/2XsiYni

**SOLUTION BRIEF**
Network Analytics

DeepSight AI Labs Provides Contextualized AI-based CCTV Analytics

DeepSight's SuperSecure+ is a retrofit CCTV analytics solution that provides real-time threat and tamper detection. The solution utilizes Intel® Xeon® Platinum processor-based edge servers, OpenNESS and Intel® Distribution of OpenVINO™ toolkit.

Millions of CCTVs, but No Analytics

https://intel.ly/3qfekp5

5TONIC

https://bit.ly/3osL25v

AI特化アクセラレータZeroth、第4期修了チームなど世界の29チームが東京でピッチ——日本・中国・東南アジアの企業との業務提携も明らかに

AI特化の起業支援会社、都内でイベント

2019/3/19 20:08

https://bit.ly/3nsZuJq

https://bit.ly/3q3pOvK

**Global Awards**

NDTV

https://bit.ly/3q8S2VY

AI venture labs

https://bit.ly/3brtymy

Create@ 阿里巴巴诸神之战创客大赛
Create @ Alibaba Cloud Startup Contest
太原VS孟买双城对战

| | | |
|---|---|---|
| Taiyuan | 圣点科技 | |
| Munbai | deepsight | |
| Taiyuan | 乐高播 | |
| Munbai | litmusworld | |

获胜团队
WIN TEAM

Create @ Alibaba Cloud Startup Contest announces six winners from the city rounds across India

**DEEPSIGHT AI LABS Pvt Ltd**

**RECOGNITION & ACCOLADES**

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