

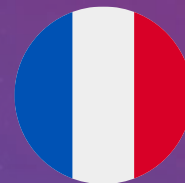
Shaping the future of Connected Airports



We Are Alcatel-Lucent



*The European global leader
in network and communications*



➤ HQ in Paris, France

➤ >3200 partners

➤ >1M customers

>50M Network ports

>50M Phone lines

>5M Collaboration users

➤ >100 years' experience
and innovation

➤ Global presence

>50 countries

with local reach

>120 countries

Agenda

- Some Key References
- Key Trends In Aviation
- Our Key Pillars For A Connected Airports
- Solutions, Services & Use Cases
 - Resilient Network Infrastructure
 - Mission-Critical Communications
 - Airside, Satellite & Radar Systems
 - Airport Operations & Passenger Experience
 - Crisis & Mission Management
- The Power To Connect



Some Key References



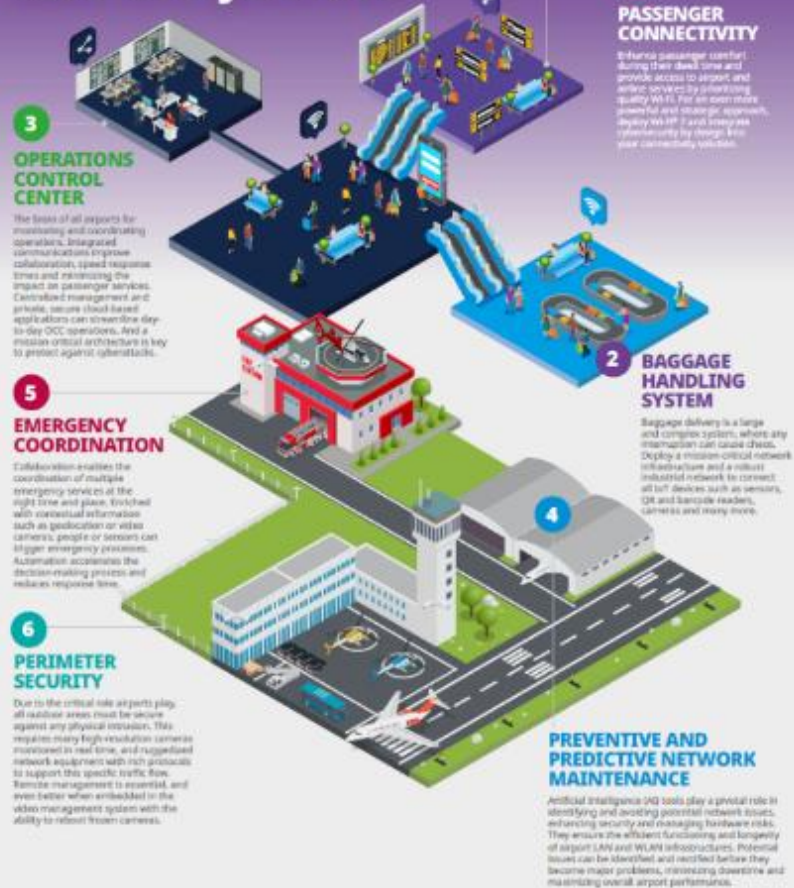
100+ ATI customers Worldwide

- 
- **Aena (20 Spanish airports)**
 - **Luftfartsverket (Norwegian Civil Aviation Administration)**
 - München Airport
 - Berlin Airport
 - Deutsche Flugsicherung "DFS" (German air traffic control)
 - **Aéroport Marseille Provence**
 - Air France
 - Aéroport Brest Bretagne
 - **DGAC (French traffic control)**
 - Société Air Tahiti
 - KLM Royal Dutch Airlines
 - Toscana Aeroporti S.P.A.
 - Naples Airport Authority Usa
 - Dresden International Airport
 - **Skeyes (Belgium traffic control)**
 - Gibraltar International Airport
 - DHLHub Leipzig Freight Airport
 - **Asecna (22 African airports)**
 - Ethiopian Airlines
 - Turkish Airlines
 - IGA (Istanbul Grand Airport) Havalimanı İşletmesi
 - *GACA (Saudi airports)*
 - Emirates Airline
 - Dubai Airport
 - Algeria Airport T2
 - Air Nav Indonesia,
 - Angkasa Pura II Kuala Namu International Airport Indonesia
 - **Manila Aquino International Airport** Philippines
 - Regio Aviasi Industri Indonesia
 - Airports of Thailand
 - **Airservices Australia**
 - Kuala Lumpur International Airport
 - Changi Singapore Airport
 - Jet Airways
 - Delhi International Airport Ltd
 - Air Traffic Management Bureau Eastern Area China
 - China Eastern Airlines
 - **International Airport Sao Paulo**
 - Lehigh Valley International Airport
 - John Wayne Airport
 - Greater Orlando Aviation Authority
 - Arnold Palmer Regional Airport USA
 - Chile Dirección General de Aeronáutica Civil
 - Civil Aviation Authority - Pakistan
 - Bata Airport in Equatorial Guinea

Key trends In Aviation



THE OPERATIONAL AIRPORT JOURNEY



Airports Go Digital



Digital everywhere!

- WiFi Passenger connectivity
- Ticketing & Baggage handling system
- Private 5G operations
- Operation Control Center / Emergency coordination
- Securing perimeter with CCTV

Challenges The Industry Is Facing

Challenges		Solutions
• Safety and security • Carbon footprint reduction • Cybersecurity • Regulation		• Converged mission critical multiservice network • CCTV high availability network • ANSI and DOD validated • Certification & CSR plan to Zero
• Digital transformation • Techno obsolescence & smooth migration • Large scale network • Maintenance, automation, IoT		• Robust communication & multiservice network infrastructure • End-to-end Management smart OCC • Pro-active maintenance and remote assistance • Long term support services > 10 years
• New usage and consumption • New services • New types of customers • New business models		• Innovative Business Models • API and SDK for cloud deployments • Flexibility for deployment • Shared data across subsystems

Different Requirements, Similar Challenges

Stakeholders

- A** Airlines
- T** Air Traffic Control
- O** Operators
- P** Airports

Digital Transformation

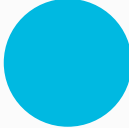


Digitalization & Innovation

the common enabler



Shared Outcomes



Enhance Safety
& Security



Boost Operational
Efficiency

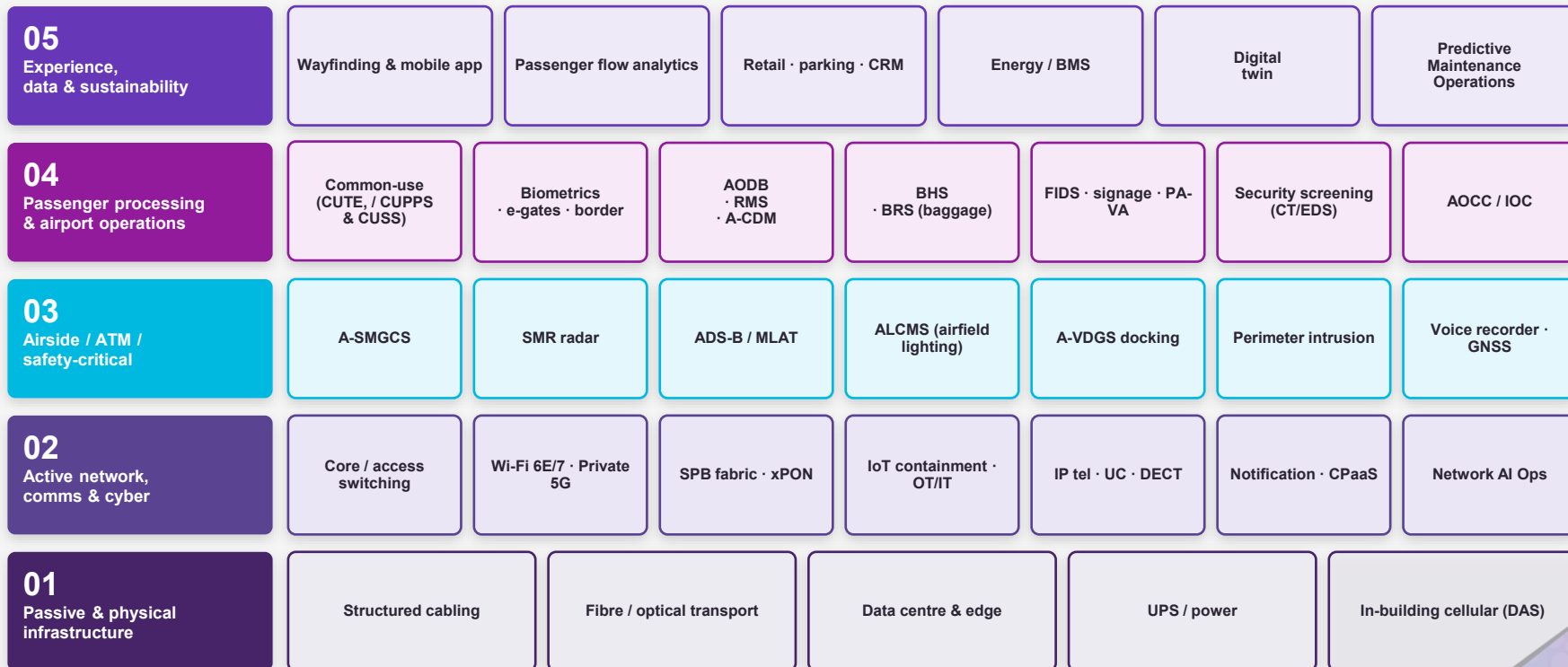


Improve Passenger
Engagement

Our Key Pillars For A Connected Airports



The end-to-end airport framework



Connected Airports Value Proposition

Empower Mission-Critical Operations And Passenger Experience Through Secure, Intelligent, And Resilient Digital Environments

Resilient Network Infrastructure

Build a converged, high-availability network fabric — wired, Wi-Fi and Private 5G — that keeps every airport system running without interruption

Mission-Critical Communications

Connect teams, tenants and travelers through secure real-time voice, video and data, from the control center to the apron

Airside, Satellite & Radar Systems

Deliver a fused, real-time airside picture — surveillance, radar and satellite-based tracking — engineered for the highest levels of safety and navigation precision

Airport Operations & Passenger Experience

Orchestrate the entire airport from a single operational view while delivering a smooth, intuitive journey for every passenger

Safety & Crisis Management

Create a safe, resilient airport where security, emergency response and business continuity are coordinated end to end, whatever the situation

Resilient Network Infrastructure



Our Network Portfolio

Alcatel-Lucent 



OmniSwitch LAN

Advanced Edge

Industrial environment

Core & Data Center

Value Access

Shortest Path Bridging

Ruggedized

Mission critical networks

Single OS

iFab

ISSU

MACsec



OmniSwitch plugin for

Seamless integration with the VMS

Reboot the POE of camera port

Block Mac@ on port



OmniAccess Stellar WLAN

Wi-Fi 7

Wi-Fi 6E

Wi-Fi 6

Indoor

Outdoor

Distributed architecture

Flexible deployment

Stand-alone cluster or fully managed mode



N77

Indoor

Outdoor

Distributed or Edge architecture

Enterprise-friendly integration (NAC/QoS)



Network Management

Unified for LAN & WLAN

IoT inventory

Product Lifecycle Management

Analytics

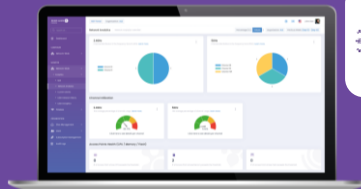
Network Access Control

Zero-Trust Architecture

Cloud-based or on-premise

Full supervision (LAN, WLAN & private 5G)

OmniVista



Network Advisor

AIOps

Machine Learning

Real-time anomalies detection

Improve QoE

Predictive maintenance

Detect & fix issues in one tap

Auto-remediation

The world's leading and the largest supplier of optical fibre preforms, optical fibres & cables



Full series small-diameter multi-core optical cables for massive E2E connections in parks



Ultra-wide, large-capacity & highly reliable data center products

Backbone Network

Cloud computing network solutions



G.654

G.652

5G solution

MAN

Dense networking and cabling scheme



High performance fibre unit



Microduct air-blown cables



G.655/
G.652



High fibre density cable

Access Domain

Front-haul cable



Remote optical fibre cable

Hybrid Cable

Optical modules



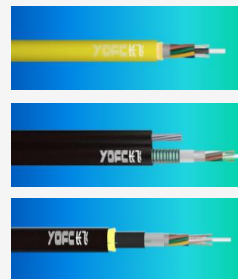
25G



100G



Personalized module-based optical distribution & connection products



Customized Optical Fibre Cables for Diversified Indoor/Outdoor Scenarios

Zero Trust Network Access (ZTNA)

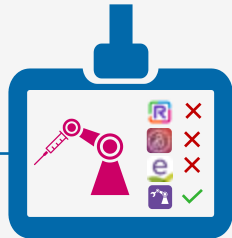
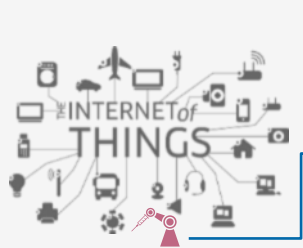
Minimize your attack surface



Discover &
classify

Virtual
Segmentation

Continual
Monitoring





AI Configuration
*Knowledge at
your fingertips*



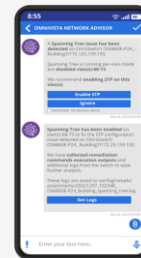
AI Analytics
*Real-time data
reasoning*



AI Workflow
Automated tasks



AIOPS
*AI-assisted
network monitoring*



**Improved
user experience**



**Improved
security**

LAN That is Fast and Future Proof

Flexible
Uplinks
Options
10G to 200G

Comprehensive
Multi-Gig
2.5G/5G/10G

High-Speed
VFL (VC)
100G/200G

Advanced PoE
/HPoE up to
95W

High
Performance
400G



+

Fabric Technology

Scalability

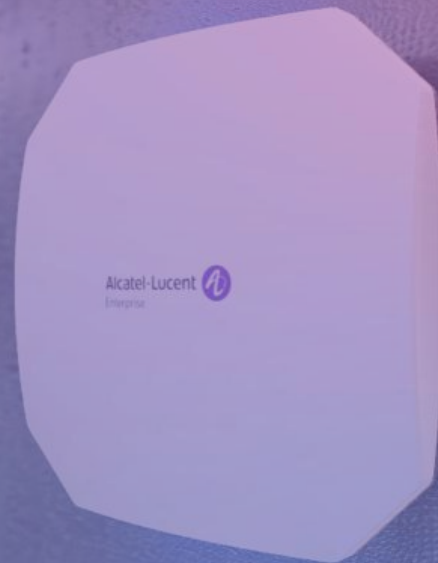
High Performance

Redundancy

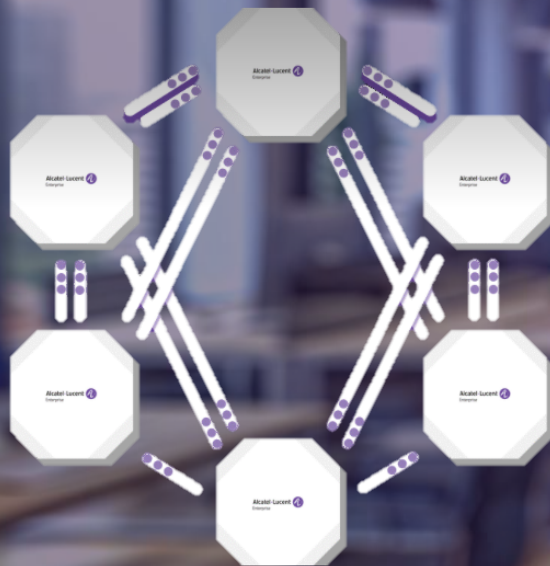
Simplified Management

Security

Flexibility



Smart Wi-Fi

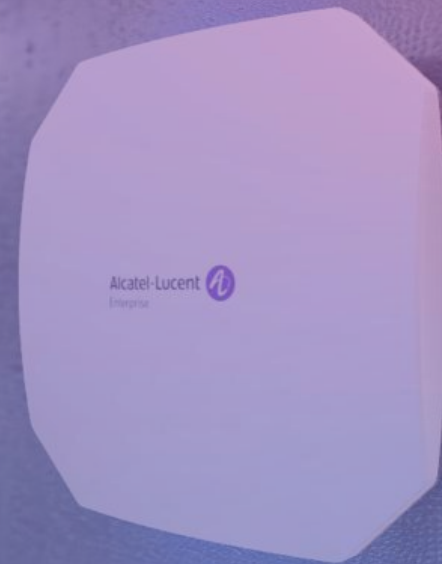


**Controller-less
architecture**

**Distributed
Intelligence**

**Scalable,
Resilient,
Redundant**

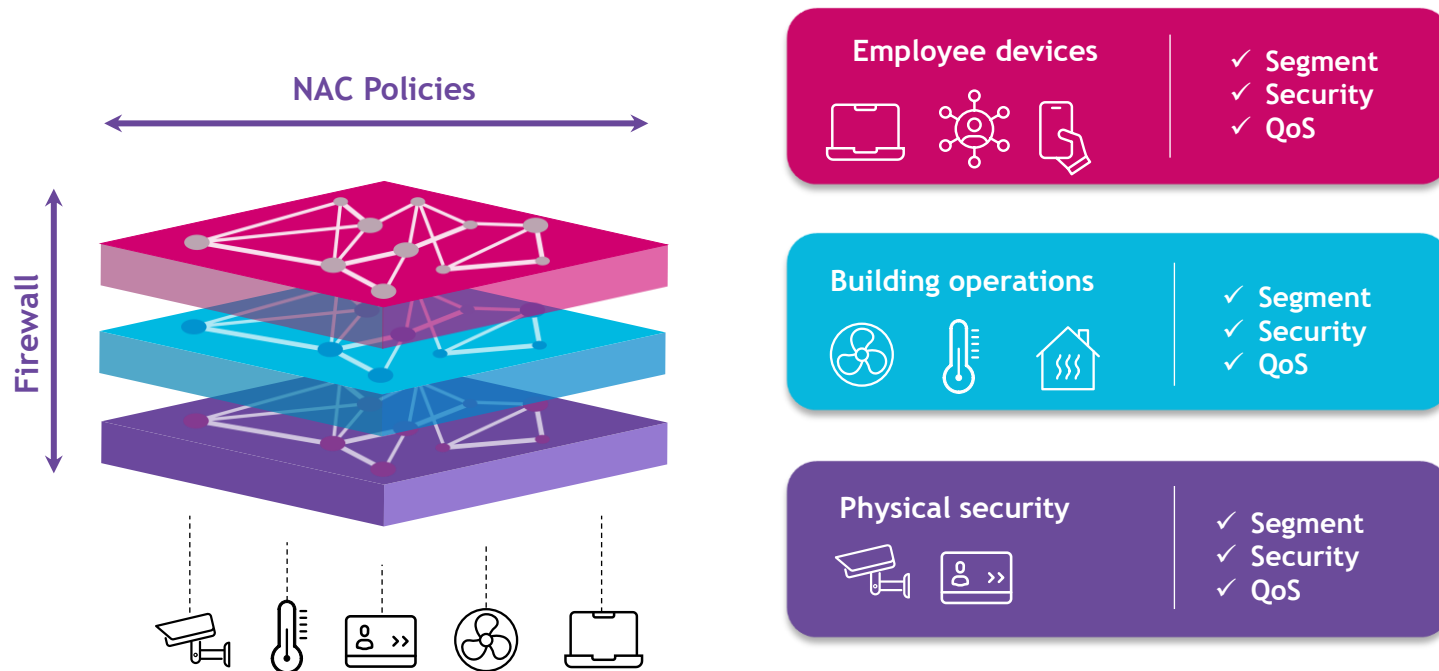
**Application
Visibility**



**Wi-Fi 7 boosts speed and reliability
Deploy it with the right architecture**

Zero Trust Network Access (ZTNA)

Automated Network Segmentation for IT and OT



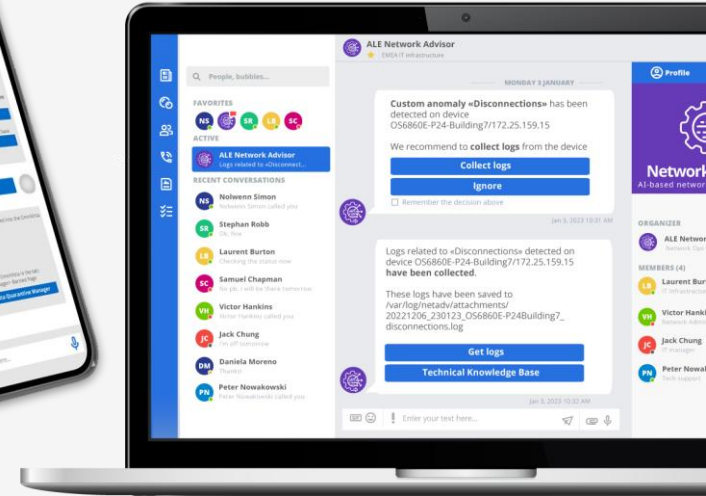
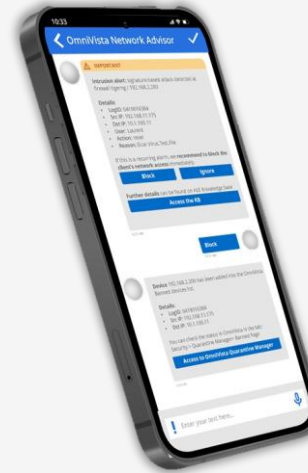
**Macro & Micro segmentation across the network
user/device security policies**

Continuous Monitoring Of Your Network's Security And Performance

Autonomous Network AI-BASED network OPS companion

24/7 Effortless with non-stop monitoring:

- OmniSwitch 6900
- OmniVista Cirrus
- OmniVista Network Advisor



OmniVista Network Advisor
the cybersecurity / troubleshooting
companion

Customers

- Berlin Brandenburg Airport (BER) handles up to 25,5 million passengers in 2024 with three modern terminals and two parallel runways. It covers approximately 1,470 hectares.
- Flughafen Berlin Brandenburg GmbH supports over 20,000 jobs and drives economic growth in the region.

Customer Challenges

- Replacement of all EoS/EoL switches in the access area, approximately 1,000 switches.
- Must connect to Nokia MPLS core and distribution

Solution

- OmniSwitch 6860N, Omniswitch 6465, OmniSwitch 6865
- DHL connectivity (Dual Home Link)

Winning factor

- Easy to use and robust equipment.
- Good pricing.
- Excellent and long-lasting relationship with the customer(+20 years).
- Reliable products covering the customer's needs.



Frankfurt Airport

Customers

Fraport AG is a global leader in airport management, operating 29 airports across four continents.

Its flagship, Frankfurt Airport, is Germany's largest air traffic hub, employing over 80,000 people.

In 2024, it handled 61.6 million passengers, 440,853 aircraft movements, and offered connections to more than 330 destinations via 174 airlines.

Challenges

The project needed a new core system, along with the necessary services. With a modern, scalable and robust architecture design for stability, future-proofing and low total cost of ownership (TCO)

Solution

- Core OmniSwitch 9900, supplemented by 10G transceivers
- OmniSwitch 6560/E,



AENA – Malaga Airport

Increase Operational Efficiency



Improve ground personnel productivity with WLAN devices and travelers' comfort with WLAN Internet – 13.6 million passengers per year

Provide best-in-class multi-cast communications infrastructure

Deliver a turnkey integrated voice and data communication network including:

- LAN/WLAN/WAN/MAN solution (end to end)
- Multi-service and multitenant secured Transport Network
- Access Network, Core Network, WLAN Network, and Video Network based on OmniSwitch family

Philippines DITO Project

Alcatel-Lucent 

华信邮电
HUAXINPT

DITO
TELECOMMUNITY

Base station



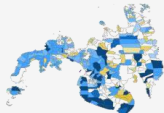
1000+

Fiber



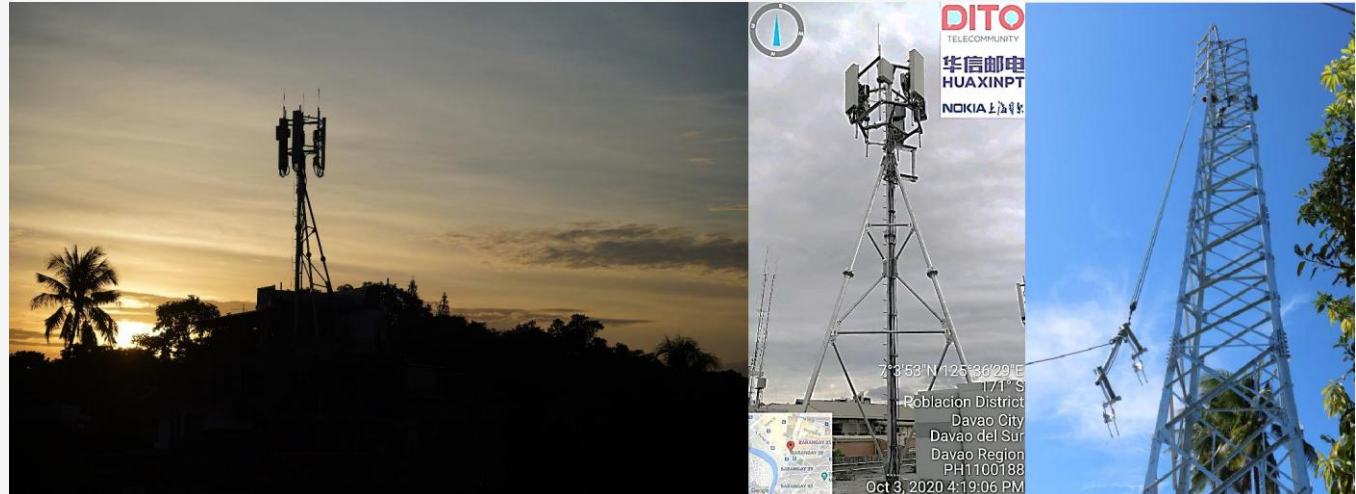
3000km+

Coverage



5.5 M+

- DITO Telecommunity began its commercial operations in March 2021.
- Commercial wireless services through its 4G LTE, and LTE-A networks, with 5G currently being deployed in key locations in the Philippines.
- As of August 2023, DITO's total mobile subscriber base stands at 7.74 millions.



Mission-Critical Communications



Our Communications Portfolio

Employee Experience *Hybrid Workplace*



Work from anywhere, mobility, inclusive communications and team collaboration



Customer Experience *Empowered Relations*



Welcome and dispatch, personalized conversations and omnichannel interactions



It Operations *Automate & Innovate*



Any cloud deployment, cybersecurity and resiliency, automation and as-a-Service



Our Communications Portfolio

Wired and wireless terminals

Alcatel-Lucent 

On-site mobility

DECT Handsets



WLAN Handsets



Desk phones

Alcatel-Lucent DeskPhones

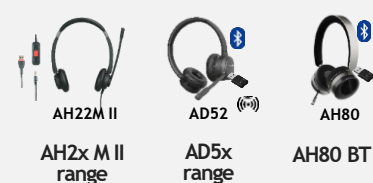


Alcatel-Lucent SIP DeskPhones



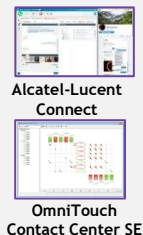
Headsets

Alcatel-Lucent Aries range

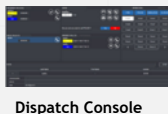


Business and vertical applications

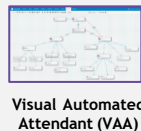
Contact Center - Dispatch



Recording



Attendant



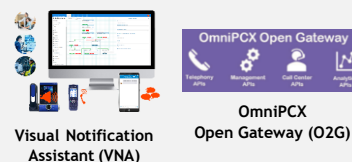
Softphones



UC/Collaboration



Business workflows and APIs



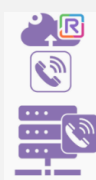
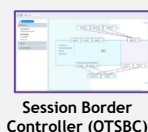
Comms & management platforms

Connected platforms

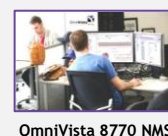
SMB



Medium and Large Enterprise

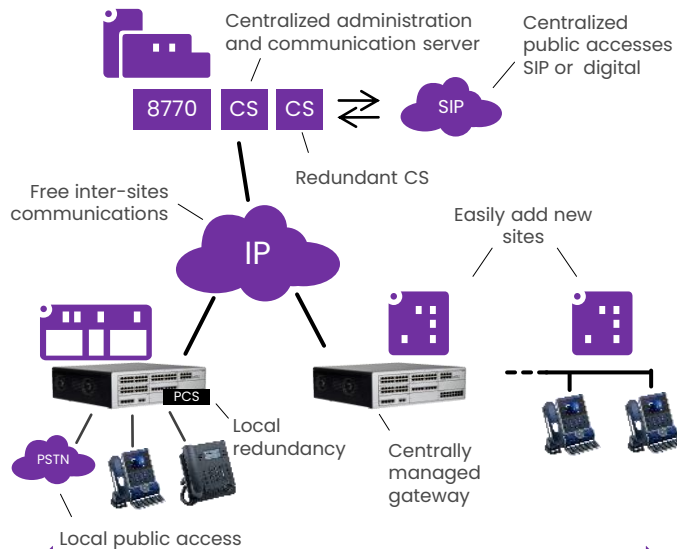


Management and Services



OmniPCX Enterprise Purple

Cost-effective – reliable – secure – scalable multi-site comm.



- One system for multi-site communications, with centralized management
- Same service level and user experience on all sites
- Scalability: up to 15000 users, 20000 devices, 5000 analog/TDM phones and 240 sites per CS
- Go IP at your own pace
- Native encryption

Works on any network

IP

SIP+

Digital

Analog

DECT

IP-DECT

WLAN

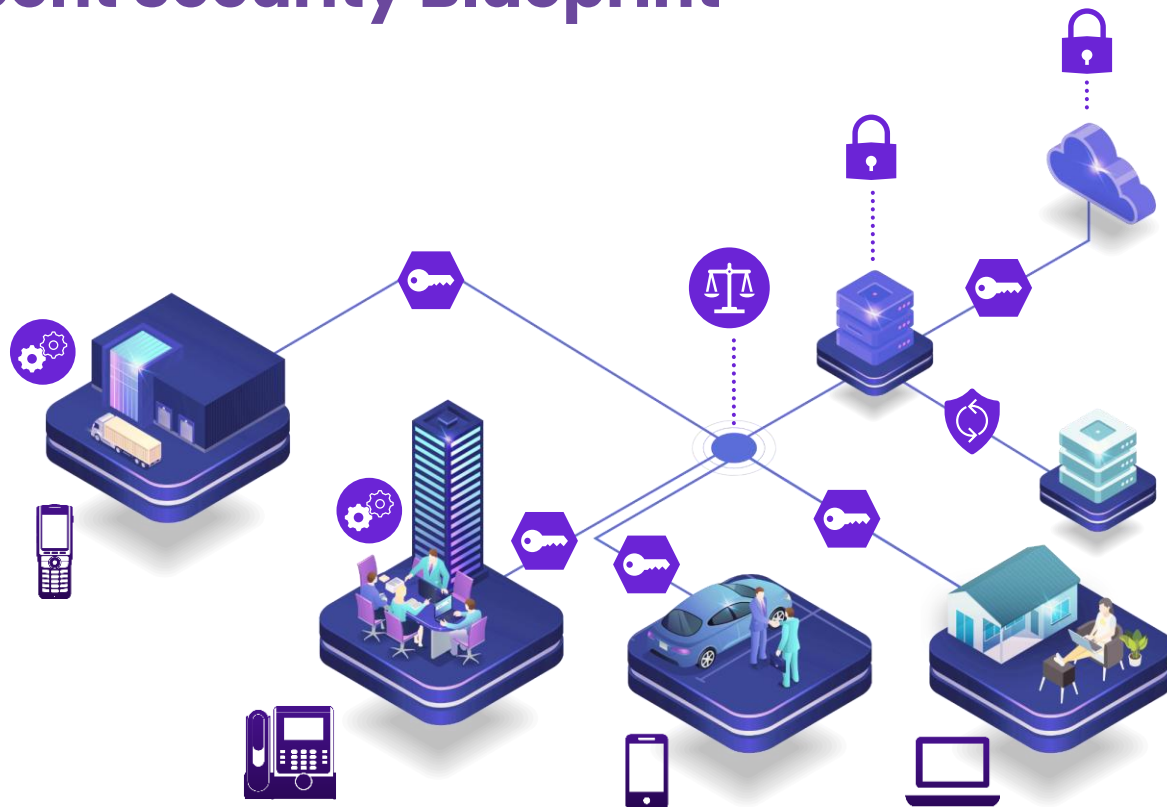


Building Trust And Reliability With Alcatel-Lucent Security Blueprint

#BusinessContinuity

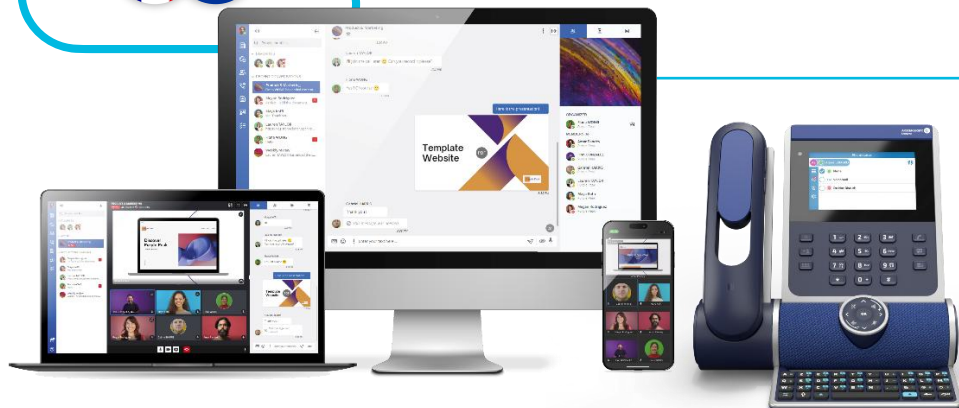
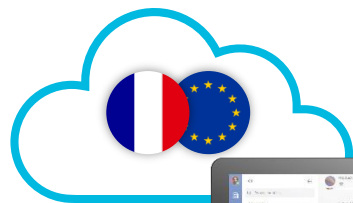
#PrivacyFirst

#Compliance



Rainbow Platform

Unified Collaboration And Telephony Made Simple



Everything your team needs

Chat, video calls, and file sharing in one place

Work from anywhere

Use the same tools on mobile, desktop, or web

Built-in business calling

Phone system designed for growing businesses

Webinar

Engage your audience and drive growth

Open Platform

Connect people, IoT and processes

All-in-one
platform

Mobile-ready

Modern
DeskPhones

Rainbow Ai-augmented Comm.

Intelligent Workflows, Powered By AI

Valuable Data

Transform calls & meetings

Rainbow Bubbles: transcription, summary & recording nav

BYO prompt for personalization

Live caption, File translation

Live translation

Rainbow Agentic AI

Hybrid calls transcript & summary

Simple & Sovereign

AI made simple

Rainbow AI (*powered by Chapsvision*)

Bring your own AI



Differentiation

How we differentiate

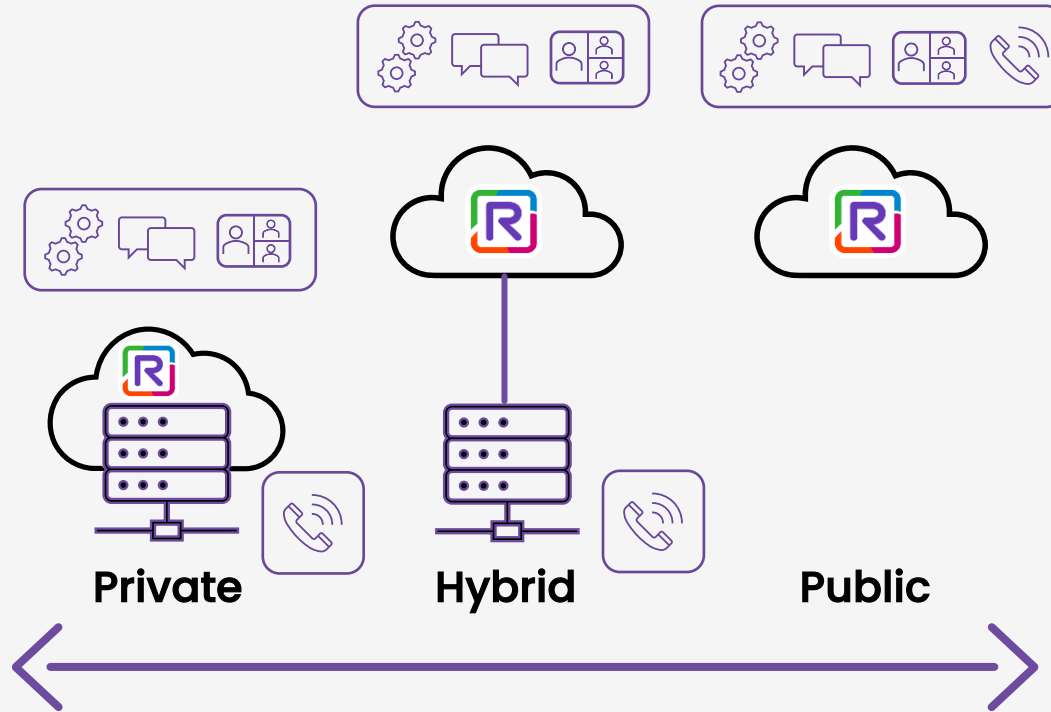
One app: built-in experience

Sovereign AI: built-in Rainbow AI or BYO flexibility

BYO prompt: adapt to customer context



Agility at the Core of our Solutions



**Flexibility in every
Cloud Journey**

#YourChoice

#ConnectedPlatforms

#SmoothTransformation

Angkasa Pura Airport

Indonesian enterprises owned by Department of Transport, founded 1962



Alcatel-Lucent 

Two Companies operating all Indonesian airports

- PT Angkasa Pura I (15 airports)
- PT Angkasa Pura II (Western Indonesia – 16 airports)

Huge strain on operations and need to scale up network and communications systems

- Additional ground crew
- Additional security
- Operations team maintained

New system could not add any more burden on IT

Outcome: Simplified operations

- Fully converged Network & Comm. solutions, highly secure
- Automated IoT deployment and containment
- Reduction of operational intervention
- Collaborative working between departments



Government Department (Germany)



Rainbow Edge, Private Cloud

- Rainbow is the UCC part of a complete modern workplace
- Rainbow is customized to fully integrate with the customer's SSO, mail, open office & document management system (Keycloak (SSO), OpenXchange (mail), Nextcloud (office app.) and OwnCloud (file storage))
- Running on Secunet SINA workstations with an Oracle virtualization client
- OXE is used for PBX functions
- Rainbow alert (pager replacement solution) will be integrated with their alarm server
- **ANSSI / BSI CSPN certification**



Rainbow Guardian



Faster reaction to unplanned events

Crisis communications
for Business continuity teams

Employees can always communicate

Ready to use fall back communications
and telephony environment for all employees

Crisis management team sees how the company behaves

Statistics to understand what is happening
in real-time

People know what is happening

News and alerts to communicate efficiently

Why your own AI Data center ?

What It Enables

- **Train and serve large AI models** on a lossless, low-latency fabric.
- **Scale from a single pod to multi-rack clusters** while preserving deterministic performance for distributed training and inference.
- **Run demanding workloads** – LLMs, computer vision, scientific HPC on the same converged infrastructure.

Why It Matters for Connected Airports

Keep passenger and operational data under your control

Passenger records, biometric data, booking information, and surveillance feeds stay on sovereign infrastructure, never exposed to public clouds or cross-border transfers. You decide who accesses what, in full compliance with GDPR and aviation data-protection obligations.

Protect safety-critical and operational systems

Air traffic coordination, baggage handling, access control, and operational technology remain within secure, controlled environments, shielded from cyberattacks and disruptions that could ground flights, compromise safety, or paralyze terminal operations.

Real-time AI at the edge, where operations happen

A validated blueprint supports on-site, low-latency processing, so AI workloads (passenger flow optimization, predictive maintenance, anomaly detection, security screening) run reliably on-premise, independent of external connectivity and fast enough for live operations.

Lower TCO across a complex operation

An open Ethernet fabric and efficient power envelope reduce CAPEX and operating cost per GPU, stretching budgets across sprawling airport and transport networks while maximizing capability per site.

Sovereignty & trusted supply chain

A secure, auditable supply chain and European roots give airport operators and transport authorities full control over their AI stack, essential for critical-infrastructure designation, regulatory compliance, and the trust of passengers and partners alike.

What We Offer

- **A complete, pre-integrated AI datacenter** – compute, networking, management and NOS delivered as one rack-ready solution.
- Built on **open standards** so customers choose their GPU, their NOS and their cloud – without lock-in to a single AI vendor.

Your own AI Data Center

Keep full ownership & control of your AI, data, and operations

01



Scalable & Flexible

Meet rapidly changing AI requirements as workloads move from pilots to organization-wide deployment

02



Open & Trusted

High-quality, reliable software stack optimized for AI workloads, while maintaining security, reliability, and compliance.

03



End-to-End

We differentiate with Integration & performance, End to End support, Lower TCO and Faster -Simpler deployments.



Air, Satellite & Radar Systems



Air, Satellite & Radar Systems

Technologies to deploy



Radars: PSR / SSR · SMR (Surface Movement Radar) · weather radar

Satellites: V-SAT (Very Small Aperture Terminal) · ADS-B · GNSS positioning & timing

Microwave: point-to-point microwave links · 94 GHz FOD detection radar

Optical network: fiber backbone · DWDM/SDH · MPLS transport

Smart Connectivity: A-SMGCS · MLAT · ALCMS · NAVADS integration

Smart Communication: VCS (Voice Communication System) · TETRA / private 5G · V-SAT backhaul

Air Traffic Management



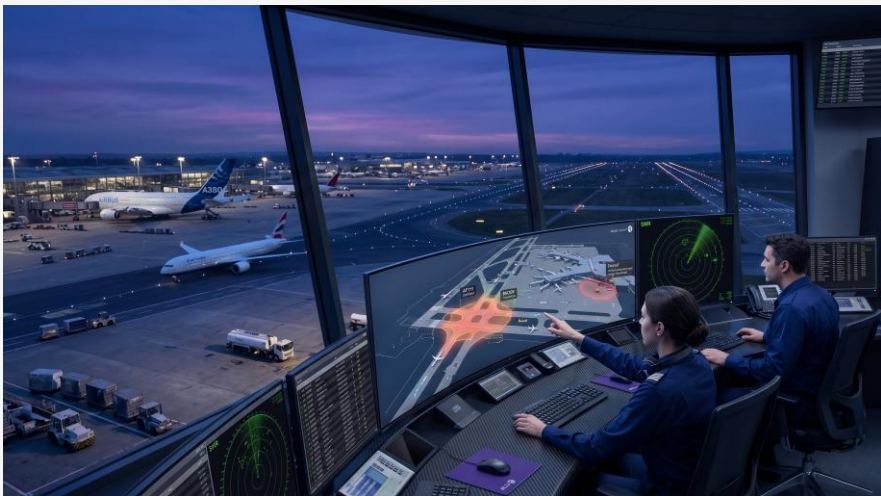
- Global real-time aircraft tracking
- Coverage over oceans, deserts, polar regions (impossible for ground radar)
- Reduced aircraft separation to increase traffic
- Improve navigation and positioning shorter route, fuel savings, greener
- Voice & data communications
- Air Traffic Control

Smart Tower & Airport Surface Solutions



Integrated intelligent operation system covering airport surface surveillance, air traffic control command, digital tower management and full-process intelligent operation management.

Taxiway Conflict & Area Intrusion Detection



- Real-time detection of conflicts on taxiways and apron, automatically flagging aircraft-to-aircraft and aircraft-to-vehicle collision risks
- Area intrusion alerting, instant warning when aircraft, vehicles or personnel enter protected or restricted zones
- Surface-safety intelligence layer that fuses surveillance inputs (A-SMGCS / SMR / radar) into actionable alerts for tower and apron controllers
- Reduced risk of ground incidents and runway/taxiway incursions, strengthening overall airside safety performance

Built on the Alcatel-Lucent network foundation: low-latency, resilient, time-synchronized transport carrying surveillance data and pushing safety alerts instantly to controllers, vehicles and apron staff, on a hardened OT network isolated from IT

Air Traffic Control

Alcatel-Lucent



- Surveillance
- Communication
- Navigation
- Safety
- Operations
- Resilience

Air Security FOD

(Foreign Object Debris)



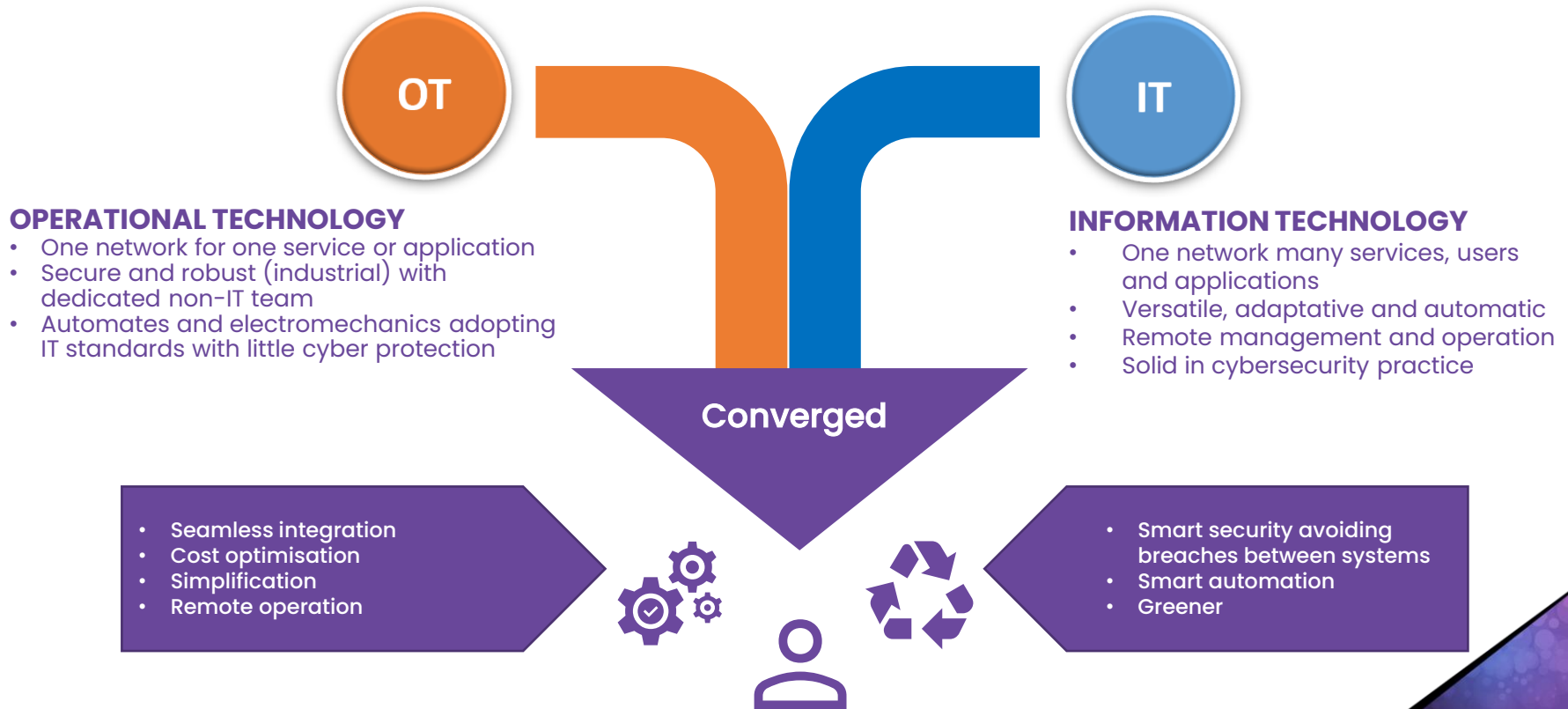
- Automatic runway FOD (Foreign Object Debris) detection across runways, taxiways and apron: protecting aircraft from debris-related damage
- Radar + optical sensor fusion for high-accuracy detection and visual confirmation of objects on the movement area
- Flexible deployment: tower-mounted or integrated into runway edge-lights for distributed, full-length coverage
- Centralized info-management platform: real-time surface view, automatic alerting, and event logging for rapid response

Built on the ALE network foundation: resilient, time-synchronized, PoE/fiber connectivity linking distributed FOD sensors to the management platform, with the detection system

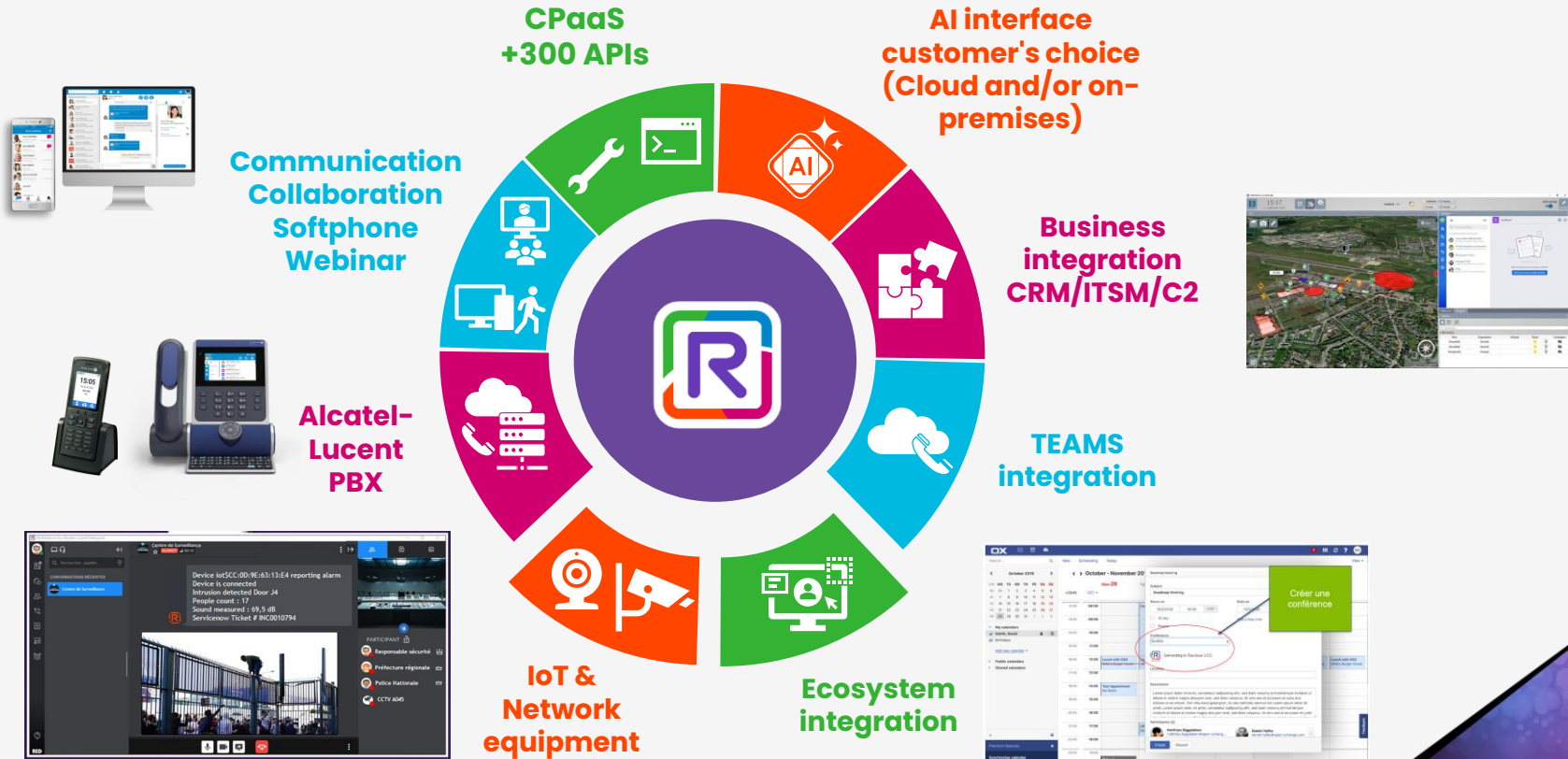
Airport Operations & Passenger Experience



OT* And IT* Convergence



Rainbow Open World Catalyst For Innovation



OT/IT Convergence For Airports Operations

Requirement

Avoiding network multiplication and operational silos, while having the ability to deploy various endpoints and platforms to become smarter, more sustainable and more efficient military bases.



- IOT on boarding
- Interoperability
- Security & Resilience
- Scalability & Simplicity
- Performance

Our Solution

Our Network & Communication advantages for OT/IT seamless integration:

- IoT intelligent on-boarding & management
- Micro & Macro segmentation / SPB
- Network Advisor
- Rainbow CPaaS / IoT Hub / Workflow

MGMT Platforms



ALE Secured network



IoT Middleware



Operational Efficiency

Building Automation

- Integration with a 3rd party automation systems for a centralized control
- Smart control of lights, A/C, curtains from mobile phone, smart deskphone, chatbot ...
- Provide analytics to monitor and improve energy consumption and operating costs

Control and monitor spaces automation:
lighting, heating, cooling, door opening systems, ...



Global Building Certifications



Occupiers



Landlords and developers



Investors



Building operators

Global standards & certifications for smart building technologies



Connected Airports Also Host Connected Hotels



Hotel Specific Applications

Powered by Rainbow



Guest

Hotel Presentation

Flights Schedule

Room Service

GRMS – Av – Tv Control

Door Locks

Location Based Services

Check In/Out

Loyalty Pgm

Call – Chat – Video



bowo

 **hudini**

 **chyma.**

TAPENDIUM

Transforming a dumb box into a smart box

Physical security by dry contacts



- Dry contacts used to understand if cabinet has been opened and or closed
- Alarm and video feed sent to security personnel
- Configuration disabled until **granted**

Simplify Your Video Surveillance Operations

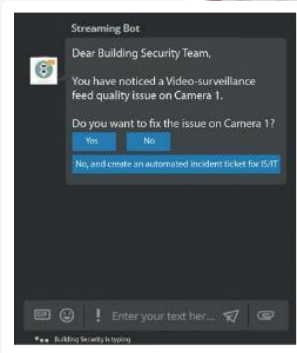


Problem

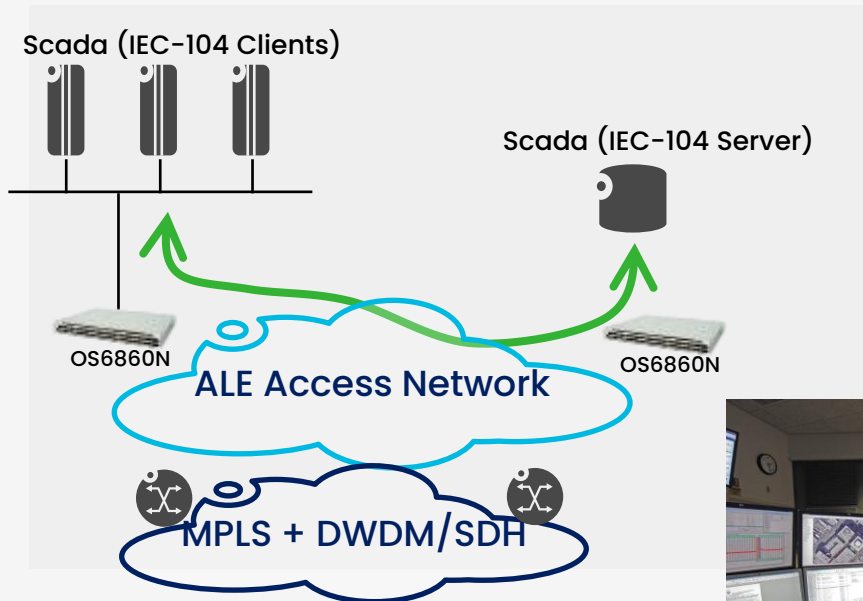
Camera management with remote reset of cameras

Solution

- ▶ Native plugin for  **milestone**
- ▶ The plugin allows PoE control, per port, from the video management system (VMS) allowing to **easily reset the camera by the video surveillance team**



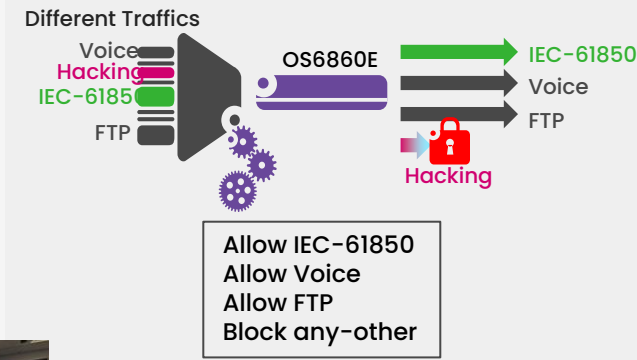
Application aware – Scada Signature



- Operational Networks moving towards IT
- Application aware
 - Customized L7 Application Signature
 - e.g.: SCADA signature – IEC 60870-5-104



Secure operations



- Stop L7 Attacks at the access
- Provide appropriate Network resources to each IEC-104 commands
 - e.g.: priority to critical commands vs FTP uploads

Transportation Systems Solution

FSCADA system

Alcatel-Lucent

华信邮电
HUAXINPT



- Real-time supervision of distributed trackside and field equipment along the entire route, from a single control-center view
- Resilient fiber-optic backbone — ring-protected: transport that keeps monitoring alive even through a cable cut
- Centralized alarm management with device-level fault localization, status, and event history for faster response
- Fiber as a distributed sensor: intrusion, vibration, and temperature detection along the right-of-way, pinpointed to within meters

Built on the ALE optical and IP foundation, integrating SCADA applications into one supervised, secure infrastructure

Baggage Handling Systems (BHS)



- Real-time bag tracking: passengers follow their luggage from check-in to carousel via mobile notifications (IATA Resolution 753)
- Self-bag-drop and smooth check-in: fast, intuitive, common-use enabled baggage drop that cuts queue time
- Fewer mishandled bags and faster reclaim: reliable reconciliation (BRS) means peace of mind and shorter waits at arrival
- Proactive service recovery: instant alerts and tracing (e.g. WorldTracer) when a bag needs rerouting, delivered with our baggage partner

Built on the ALE network foundation — resilient, high-availability fabric and secured IoT connectivity linking scanners, bag-drop units and tracking points, so the real-time bag-status data passengers rely on always flows

Remote Visual Assistant (RVA)

Requirement

Urgent need to intervene on an airport location where no experts are available to attend site



- Getting remote assistance with real-time visualization/communication/actions/results
- Including anyone needed internal or external
- Supervising and recording the operation
- Suitable for training & supervised practices

Our Solution

Wearable IoTs:

- Headset
- Camera
- Smartphone
- Connected bracelet



- Multimedia
- Secured
- Internal
- External
- Multi-party

Deliver Smart Operation With Rainbow And Bots

CHALLENGES

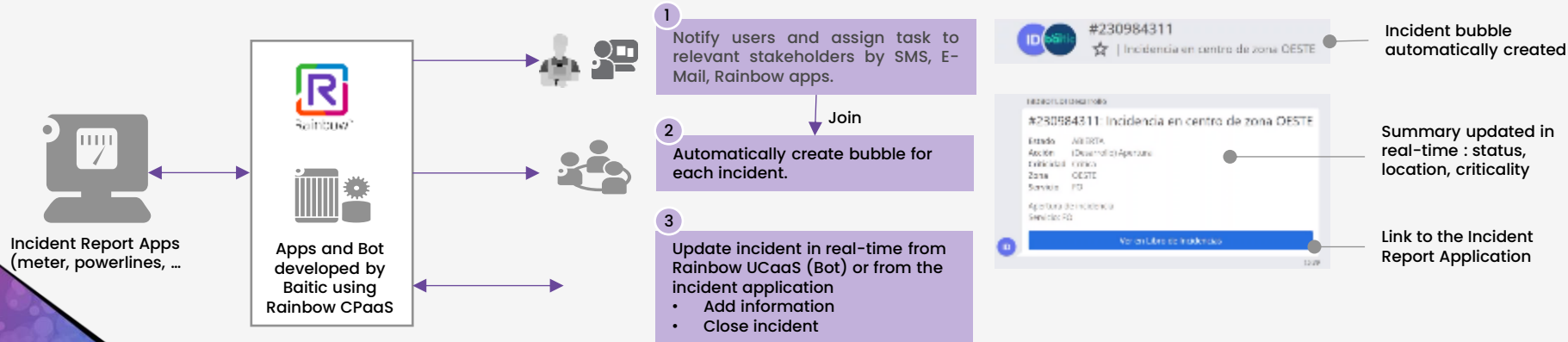
- Stop using WhatsApp to collaborate on incident resolution
- Improve efficiency across teams

SOLUTIONS

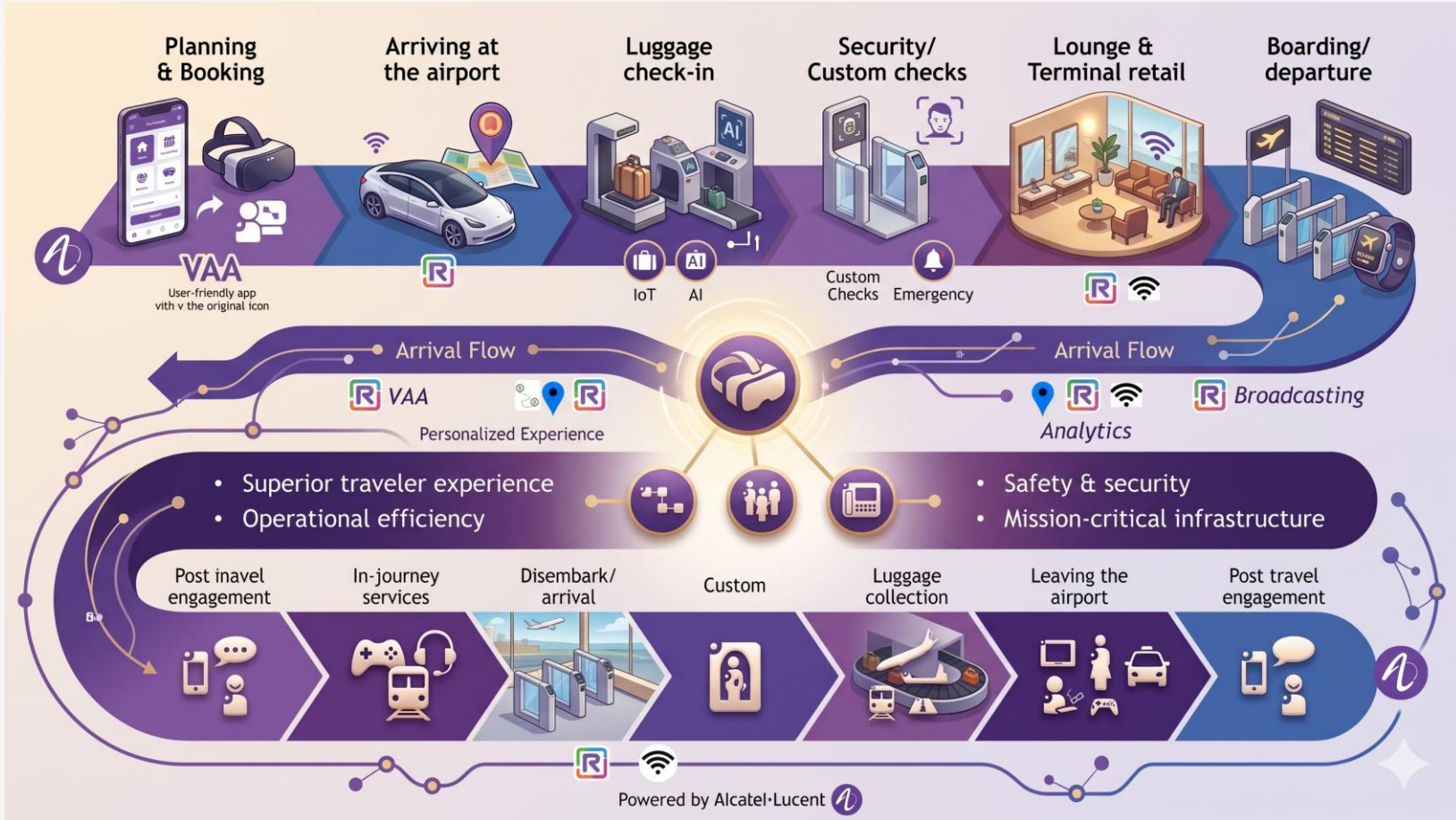
- Rainbow as operational communication tool
- Integrate Rainbow with Incident Report Application

BENEFITS

- Improve communication between back-office & field worker
- Ease information sharing
- Quick and simple access to relevant information



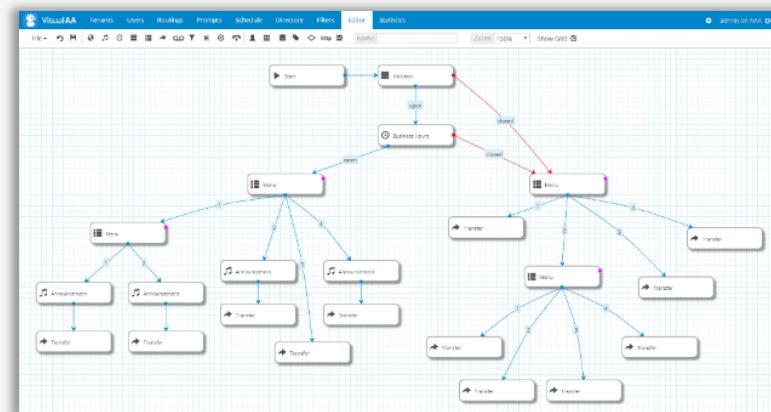
Passenger Experience



Personalized Welcome For Everyone

Visual Automated Attendant: Automated call answering and routing 24/7

- Offer a personalized and professional welcome
- Instantly adapt call routing to your needs
- Save time, money and reduce frustration



Simplified
management of
scripts without
service interruption



Opening hours
and calendar
management

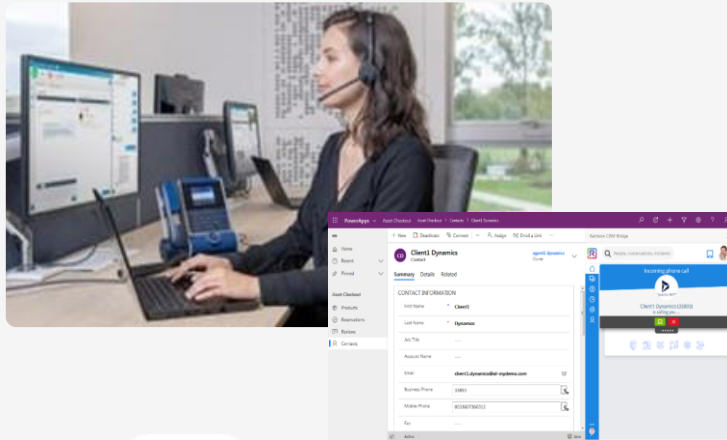


Measurement /
day of use and
email notification

Customer Relationship Made Easy

Engage with your guests from before booking to long after check-out
Personalize guests' communications with CRM information

Comfort Cardex popup



Rainbow connect

Contact Center Solutions




OmniTouch™ Contact Center
Standard Edition


ALE Connect

German Pension

Easy Access To Services For All Citizen

German Pension Insurance: Chat / Video Consultation Service vs .Customer Visit on-site



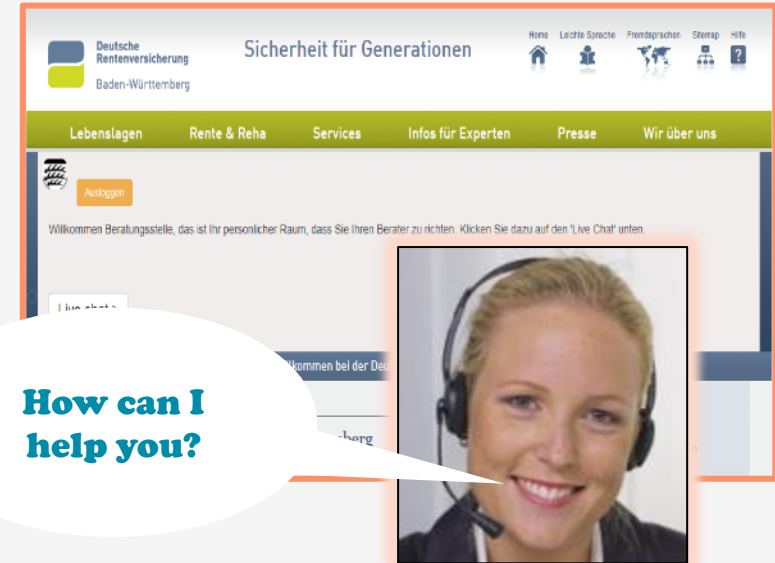
Challenge

- End-customers have to travel to a central site to be served
- Some elderly the ill or customers had difficulty moving around
- Insurance agents need to travel extensively to meet customers

Solution

- Rainbow offers an easy interface to connect with end-customers via chat, voice and video
- No need to travel long distances

Easier, more efficient, cost-effective and sustainable!



Transportation Systems Solution

Passenger Information Display System (PIDS)

Alcatel-Lucent

华信邮电
HUAXINPT



- Real-time travel information across all station and platform displays: arrivals, transfers, connections and surrounding transport
- Centralized content management: author once, schedule and push to every screen from a single template-based console
- Dedicated emergency: message mode that instantly switches all displays to incident and evacuation guidance
- Rich media support: live video streaming, scrolling messages and dynamic content for clear, multilingual passenger communication

ADA System

Built on the ALE network foundation: resilient PoE, multicast streaming and time-synchronization driving hundreds of display endpoints reliably

Remote Multimedia Kiosks



Call support



Connected with
Customer
Services

Any Phone Number (voice only, including CC)

Rainbow users (voice, video, screen sharing)



Connected PBX (voice, video, sharing)



Passenger requests assistance
from kiosk or ticket machine.
Press the call assistance button

Traditional push notification versus Rainbow context aware communication

From push notification experience

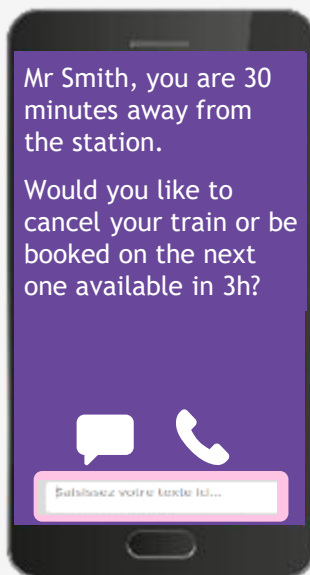
Last minute change, all passenger for HSR 456 are expected platform 31, not platform 42.

Train 456 is delayed due to weather

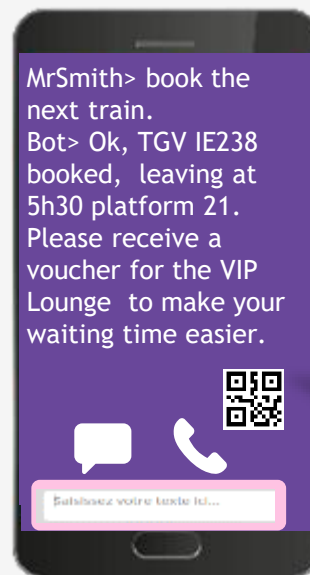
Delay for Eurotunnel 8729 to London is now estimated to 50min. More info will follow

Push of successive information, no interaction, no context!

To Rainbow multimedia communication experience



Context aware: passenger name, intent, localization

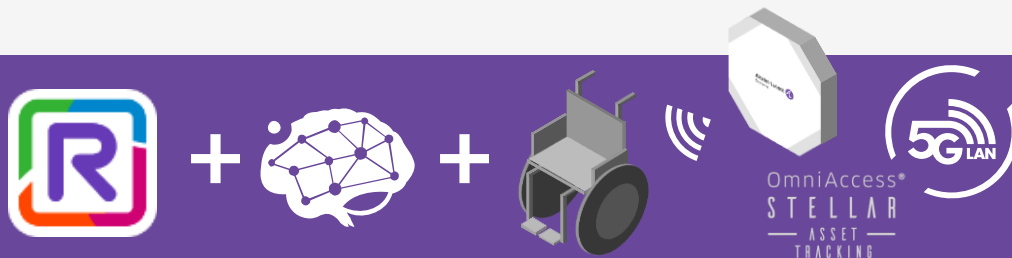


Connected Bot for automatization

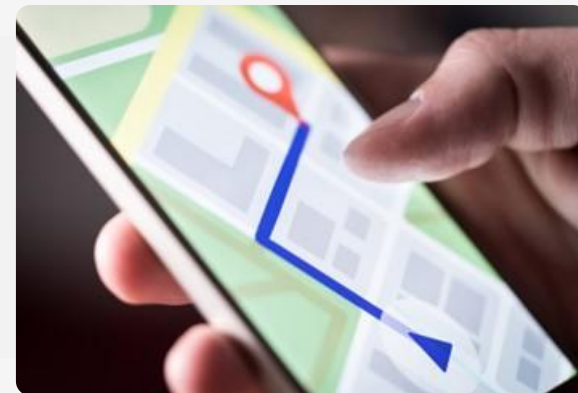
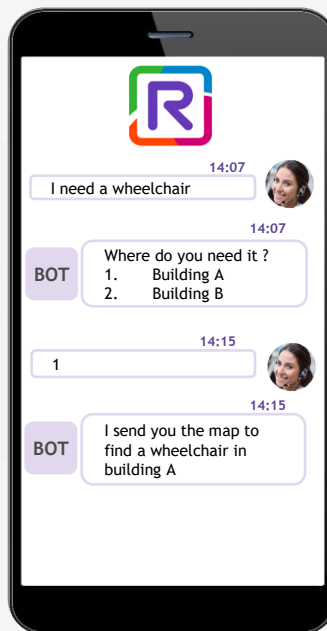


Multichannel

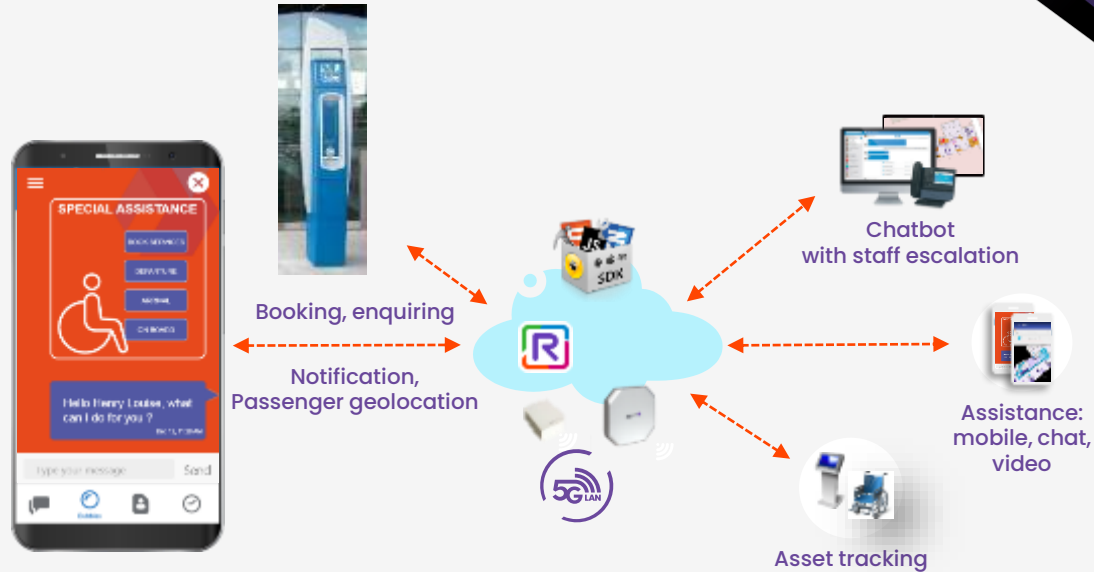
Asset Tracking Chatbot



«I need a wheelchair in the building A»
« where is the nearest defibrillator?»
«Give me the list & location of fire extinguishers»



Passenger With Reduced Mobility (PRM)



- Rainbow
- Location-Based Services
- Bots / AI

- Notification
- Business applications
- Emergency



Dubai Airport (Terminal 3)

Best-in-class security services to airport tenants and passengers

Automated interaction between all security subsystems

Supply, integrate and deploy the communications and security systems

- Access control system (10,000 points)
- CCTV (1500 cameras)
- Integrated security command and control
- PIDS (passengers' info)
- Digital radio (TETRA)
- 7000 km structured cabling network connecting all systems



Crisis & Mission Management



Crisis Briefing With Rainbow Room

The Solution For Group Conferences, Presentations, And Briefings



One-click video-meetings



Invite a Rainbow Room into your Bubble



User-friendly interface



Market-leading audio quality and video resolution



Optimized time management



Improve Crisis Management



Augment awareness

Improve safety through swift awareness of emergency events



Coordinate

Communicate & collaborate with first responders - coordinating activities to ensure a swift and safe conclusion



Communicate

Broadcast localized emergency communications to Audio and visual devices and applications

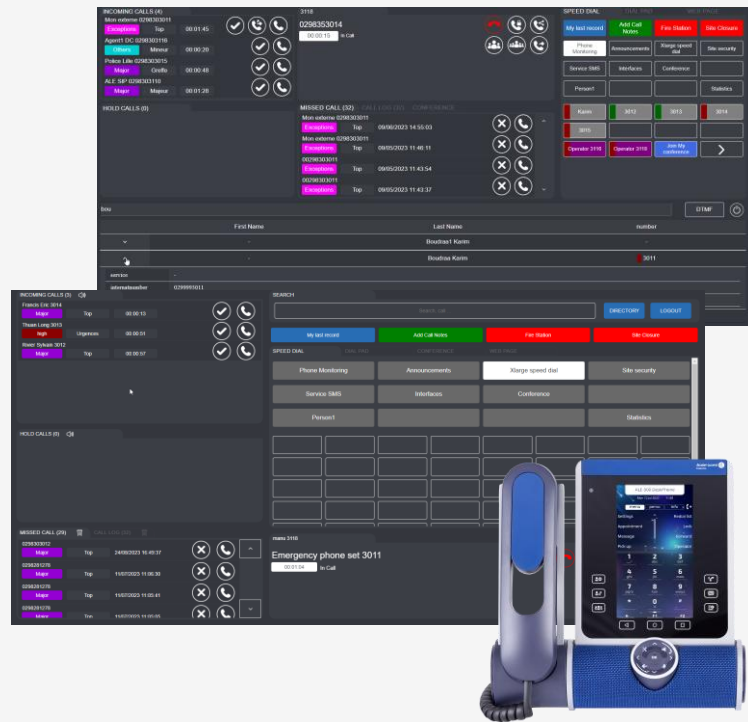
Control Room Prioritize incoming calls



The **Dispatch Console** is used to manage and prioritize incoming calls from both technical incidents from customers and field agents.

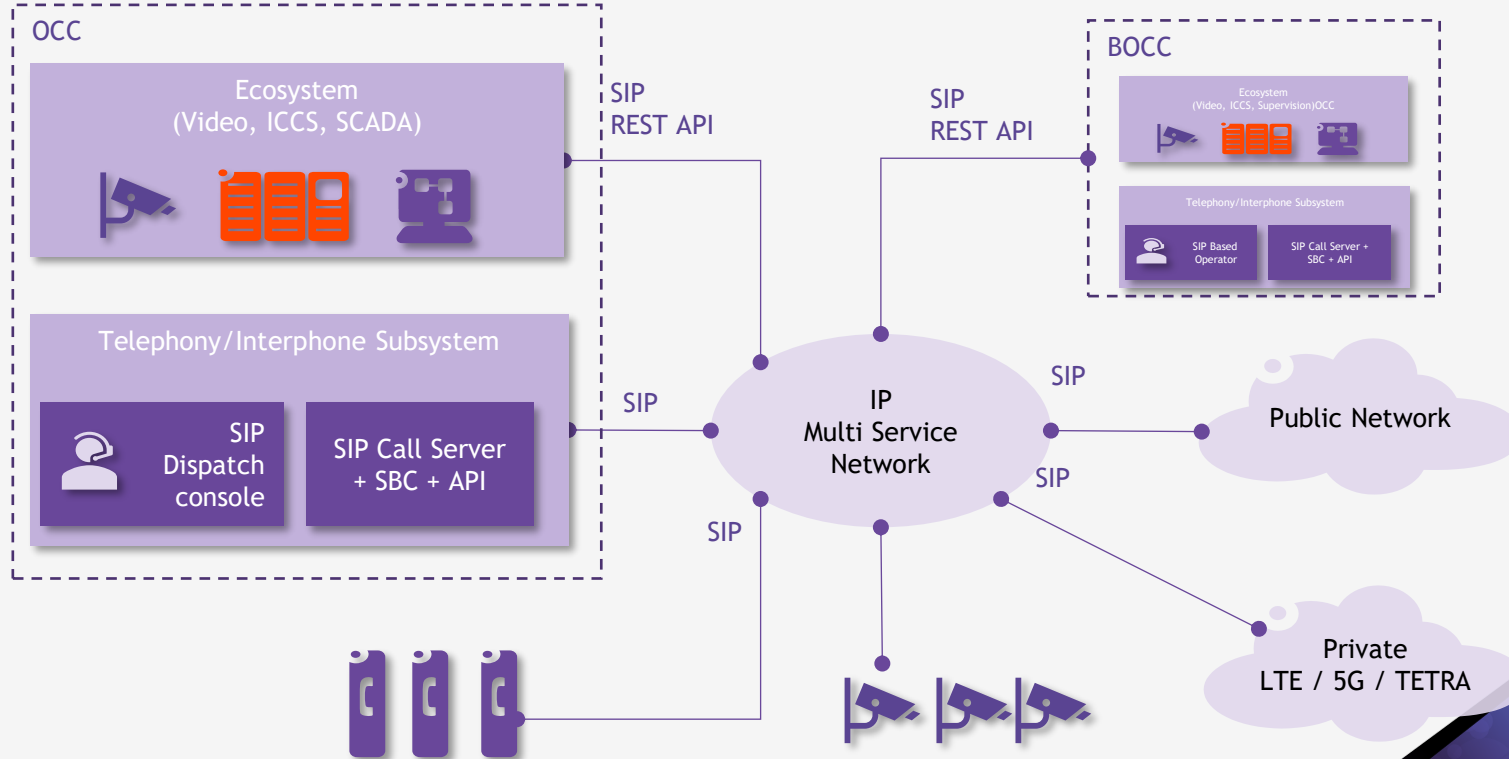
Touch screen, integration with IP Desktop Softphone, USB Handset push to talk or push to silent with additional high speaker, goose neck mic and headset.

Desk light column for agent presence can be integrated.

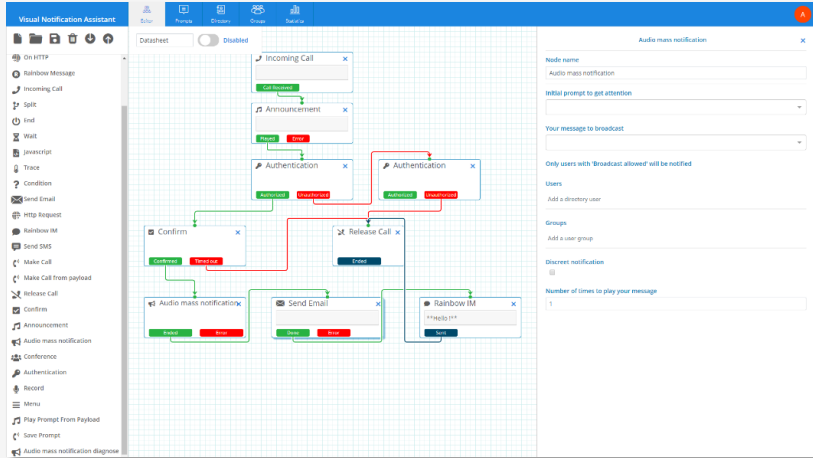


- Call pickup, priorities, speed dial, directory, conferencing
- Openness to Rainbow, TTS, STT and translation
- Airport application integration, API

Operations Control Center (OCC)



Visual Notification Assistant (VNA)



Single web interface to create notification scenarios, conferences...

Notify

Everyone

- Send to all users, from DeskPhones to Rainbow mobile application

Easily

- No IT skill required
- Select specific people or groups

And fast

- Use DeskPhones for audio multicast notification

Personalized Multi-channels notification

Event triggers

Called service:

- Phone call
- Alarming button

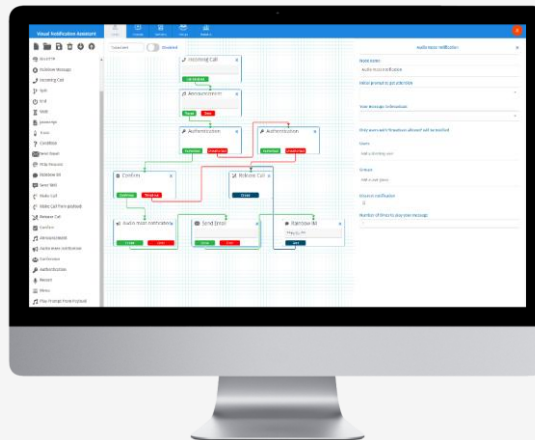
Application / IoT / Bot

Schedule

- Ex.: « Every Tuesday at 3pm »

Instant message

Notification scenarios



Notification media

Audio

- Simple call
- Audio notification:
 - Mass mode (*multicast*)
 - Direct mode (*live broadcast*)
- Conference

Instant messages

eMail, SMS

Application / process

Dynamic Operations Control Center

IoT Notification

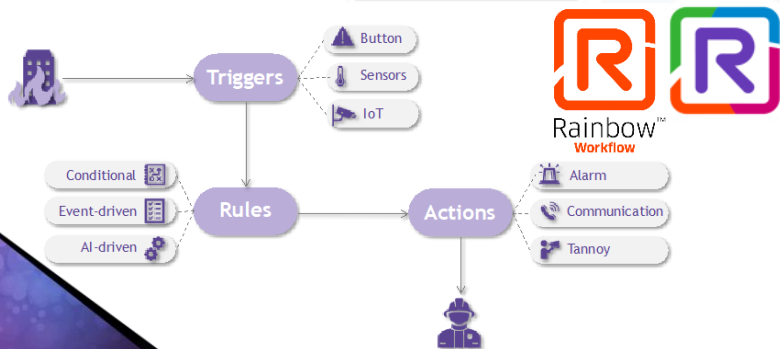
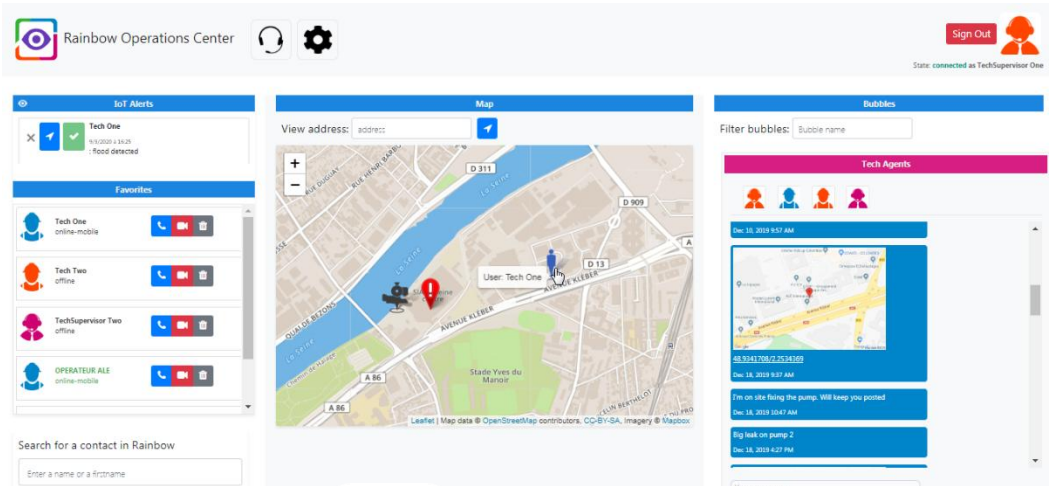
Integration of
citizen audio &
video

Team coordination

Indoor & outdoor
geolocation

Dynamic
collaboration

Mass Notification



- Centralized notification from different triggers
- Coordinate communication for a better collaboration
- Integration of external participants (eg Citizen)
- Integration of AI / ML

Improved Security With Workflow Management

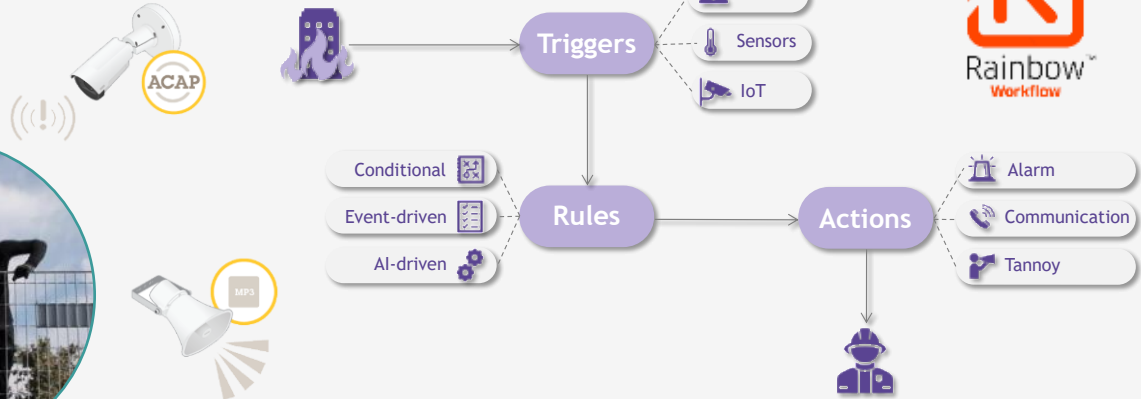
Requirement

Automate processes to be more efficient:
save time and money, prevent and alert



- Someone entering in a restricted area
- A gas leak detection
- A man-down detection
- A failure on a connected equipment

Our Solution



A pre-defined set of **rules** that result in a series of **actions** taking place once specific **triggers** have been activated



Triggers

Workflows are triggered by events that take place in customer environments



Rules

During initial Workflow creation process, pre-configured rules are agreed and applied securely



Actions

Once a trigger is activated and the rules are 'met', this launches a series of actions

Next Generation Operations Control Center

Advanced Crisis Management

Requirement

Instant coordination between the Army, Police, Civil Defense, Medics and the Mayor is needed for riots in a city.



Connect the different forces

Connect external participants

On site and remote



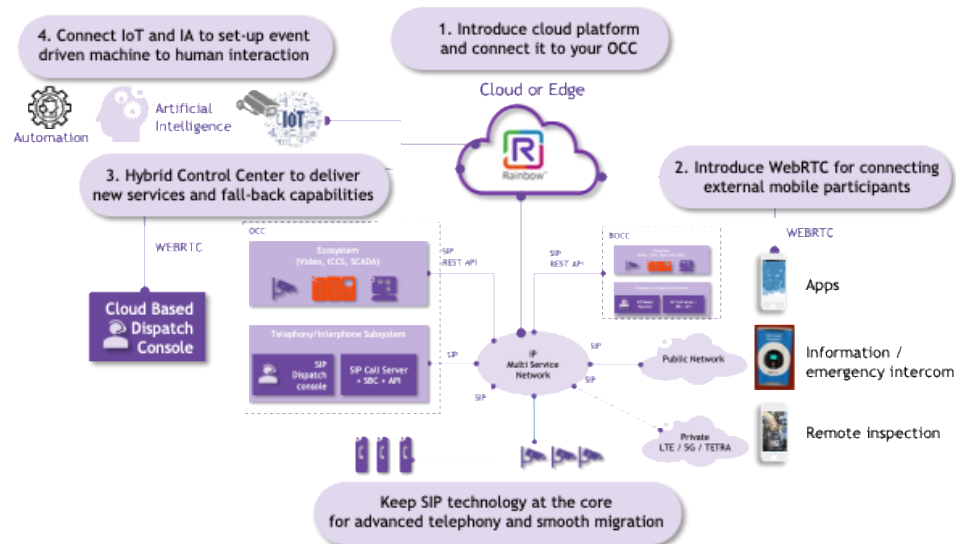
Multi-media contextual info to share

Real-time communication

& collaboration

Our Solution

Enriched C² with secured on-boarding of IoT, AI and Web RTC communications



Paris 2024 Olympics

Advanced Crisis Management



- 1/ Crisis response plan management
- 2/ Secure access to a data pool, for data correlation and analysis, AI driven
- 3/ Collaboration space and sessions
- 4/ Interactive report sharing, improvement loop thanks to machine learning functions



The Power To Connect



Cybersecurity

A Challenge For Everyone, Our Priority!



We are committed to your cybersecurity!



Delivering Technology For A Sustainable Future



DRIVING AMBITIOUS CORPORATE CLIMATE ACTION



Environmental
sustainability

Corporate
governance

Social
responsibility



We provide technology solutions for
the good of the environment, people and business

Why National Defenses Choose Alcatel-Lucent



Choice by design

Because National Defense environments and services are not one-size-fits-all. Choose the deployment model that fits your reality on-premises, hybrid, private or public cloud, reflecting data sovereignty, national regulations, legacy systems, and funding constraints.



Integration-ready with existing ecosystems and business processes

Because National Defenses must avoid lock-in and protect long-term public value. Standards-based architectures that enable integration, interoperability, and freedom of choice across departments.



Security at the core

National Defense security cannot be optional, bolted-on, or complex to manage. Multi-layer network security built in by design, with simplified licensing supporting compliance, risk reduction, and operational simplicity. Main cybersecurity certifications from global security agencies.



Mission-critical

Because National Defense operations must remain available even in crisis. 5x9s high-availability communications that support critical operations where downtime is not acceptable.



Ready to scale

Because National Defense solutions must last beyond political and budget cycles. Architectures designed to scale from local deployments to national infrastructures: supporting growth, reform, and long-term continuity.

The Power To Connect



Deployment freedom

Cloud, on-prem, edge, or hybrid customers choose how they deploy and consume, without losing **control, consistency, or security**.

One secure converged foundation

A single, secure, AI-driven infrastructure unifying **AI data centers, networks, communications, and security** built for **mission-critical reliability and sovereignty**.

Outcomes that matter

By connecting **people, devices, AI agents and data**, Alcatel-Lucent turns connectivity into **automation and Insights for real impact**.

Thank you