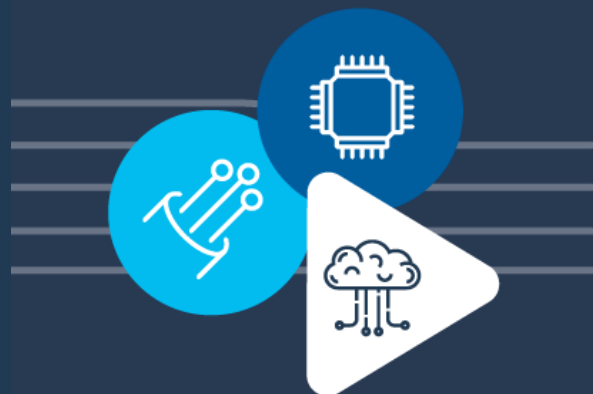
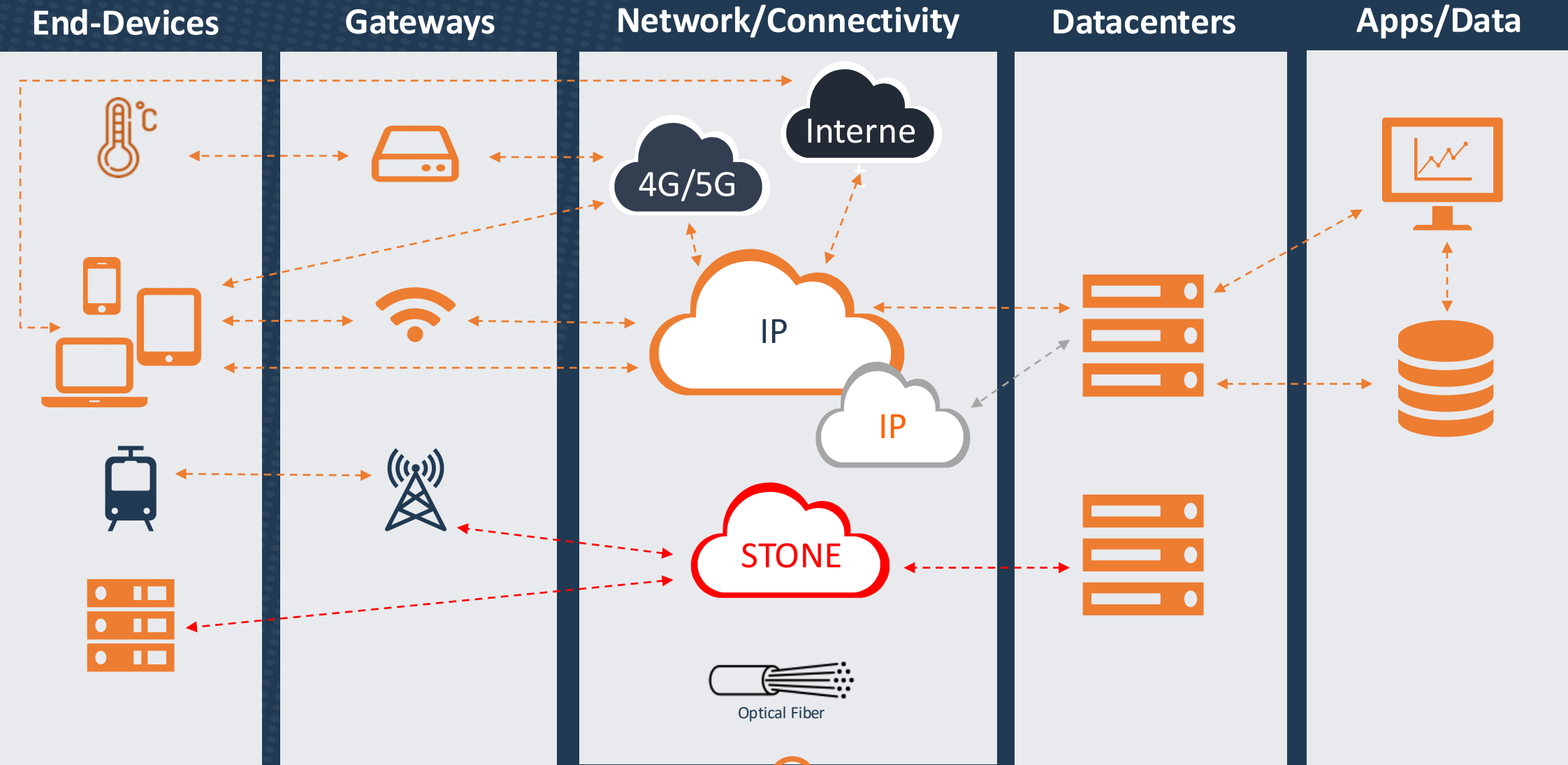




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I-ICT. 1



NEEDS

- Increase network capacity (fiber)
- Migrate to IP-MPLS
- Improve flexibility & scalability
- Ensure mission-critical networks

CHALLENGES

- Complex migration (SDH → IP)
- Network continuity management
- Significant investments
- Enhanced security

FRMCS

// Suppliers day

Digitalisation

Train
Safety

Field worksites
protection

Tablets,
Smartphone

ATO
GoA2

IIoT

Safety

Focus of FRMCS:

1. GSM-R Obsolescence
2. Support Digitalisation with Connectivity along the tracks
3. Improve Resiliency

TODAY

- 650 GSM-R sites distributed along the tracks
- Objectives of the GSM-R to FRMCS migration :
 - Address GSM-R obsolescence
 - Ensure trackside connectivity to support digitalization: ETCS L2, Safer-W...
 - Increase resilience

CHALLENGES

- Network densification (new towers, ...)
- Prepare the base infrastructure (optical fiber, power supply, ...)
- First pilot linesDeploy 5G infrastructure (RAN and Core)
- Deploy MCXSecurity by design
- Study GSM-R to FRMCS migration
- Synergies with other operators

Camera As A Service

// Suppliers day

800 IT SOLUTIONS

3 DATA CENTERS

1500 SERVERS

7000 routers and switches

7387 KM optical fibres

5000 CAMERAS

2800 Wi-fi access points

800 M eur

RAILWAY INFRASTRUCTURE CHARGES



Camera As A Service

TODAY

Punctuality

Awareness at level crossings

Protection of Infrabel infrastructure

Train identification

Green camera

Train occupancy on a line

Drones as a mobile camera

Robot as a mobile camera

// **Suppliers day**



Reliable infrastructure to
guarantee improved train
punctuality

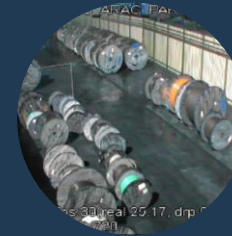
Raise awareness about
crossing level crossings,
which can be deadly!



EU requires improved pricing.
Cameras can be used to determine
which trains are parked on our
network and to charge for them



For example, every year, the theft
of copper cable has a significant
impact on our finances.



Essential for optimized
network management



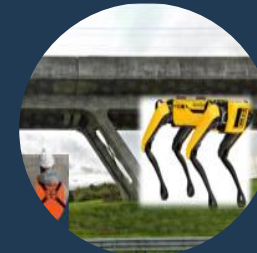
EVTOL (long distance flights)
Improve safety and security



Warehouse
inventories



Aqueduct bridge
inspection



Tunnel inspection
with a robot



NEEDS

- High-performance
- Safe products
- Intelligent products
- Energy-efficiency and sustainability

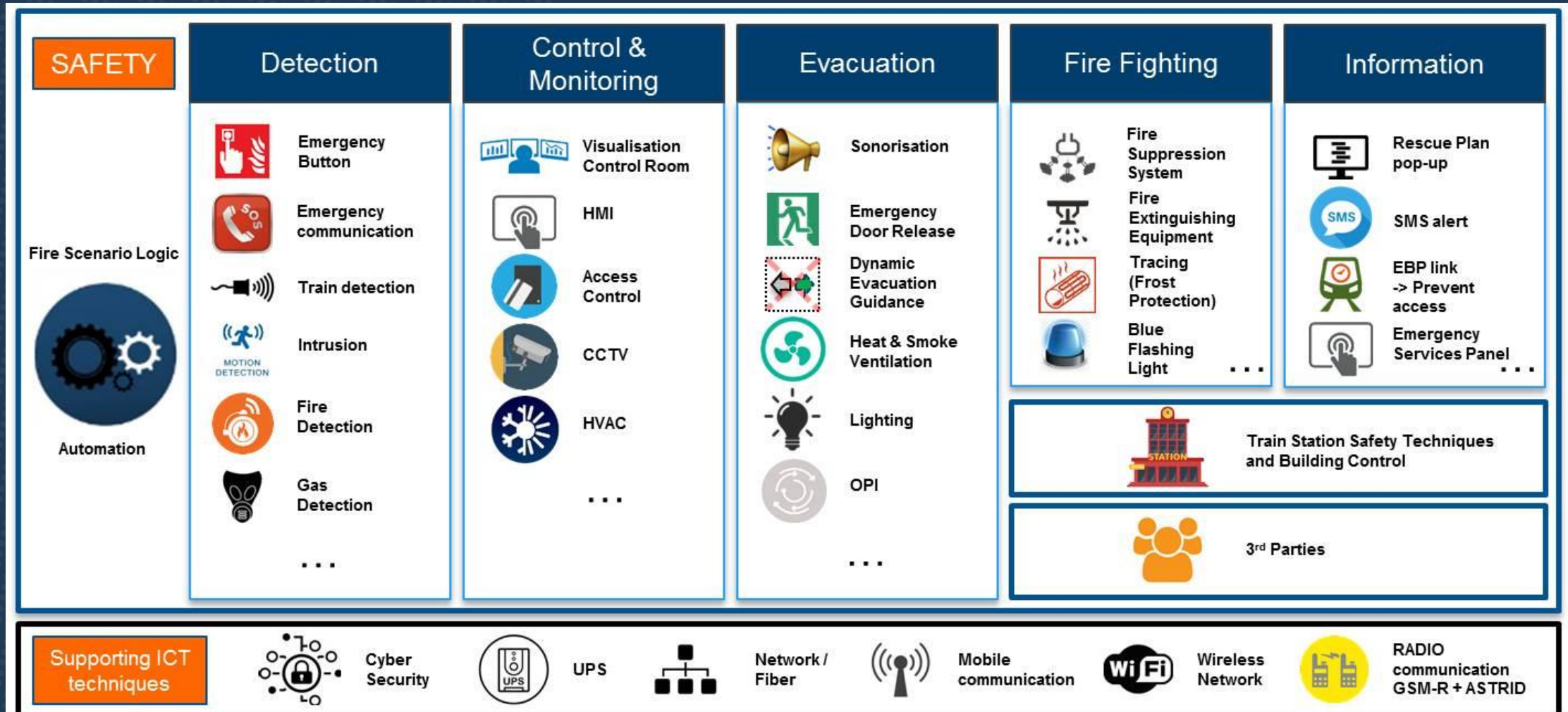
//GreenICT

CHALLENGES

- New tenders for drones & robots
 - Purchase of Diab
 - Drone flights as a service
 - Robots
- Maintenance 4.0 (predictive maintenance) with AI

Tunnel Automation

//Suppliers day



Tunnel Automation

// Suppliers day

Diabolotunnel :

Long-term renewal program ensuring the reliability and safety of the Diabolo tunnel through critical infrastructure upgrades, with tender planned for January 1, 2028 and works starting January 2030

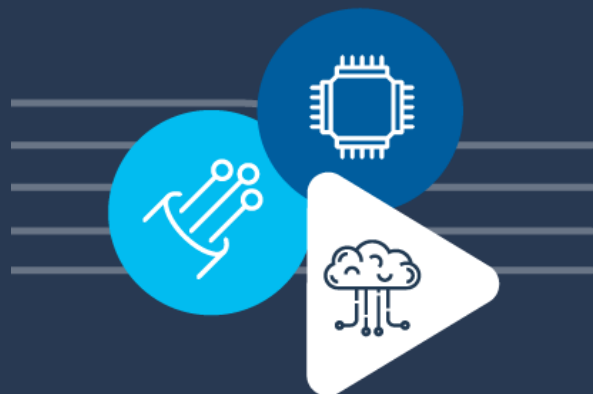
NEEDS

- Future-proof, scalable and standardized
- Project Executor (2028)
- Modular Service Cabinets
- Evacuation Signage
- Sonorisation
- Communication (Emergency communication between tunnel and control room)
- PLC Systems



CHALLENGES

- Aging systems and end-of-life components
- Scarce expertise in legacy technologies
- Upgrades under strict operational constraints (limited downtime)
- Complex multi-system integration and limited supplier market



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I-ICT. 2

DevSecOps Solutions & Partners

// Suppliers day

Infrabel **accelerates the digitalization of train planning and traffic management** to improve safety, reliability and capacity of the railway for a sustainable mobility.

We expect our suppliers to deliver **secure, compliant and futureproofed** DevSecOps solutions that create real value.



INDUSTRIAL-GRADE

Solutions must be robust, scalable, maintainable and ready for production environments.



SECURITY & COMPLIANCE BY DESIGN

Compliance with the EU AI Act, NIS2 and strong cybersecurity standards are expected. We require transparency, explainability and clear governance of data and algorithms.



TRUSTED DATA & SOVEREIGNTY

Data protection and controlled hosting environments are essential. We favor interoperable and sustainable solutions that limit vendor lock-in.



BUSINESS VALUE FIRST

We should deliver measurable value across all our domains: operations, safety, maintenance, assets, planning, passengers, freight, support functions and more.



COLLABORATION & PRAGMATISM

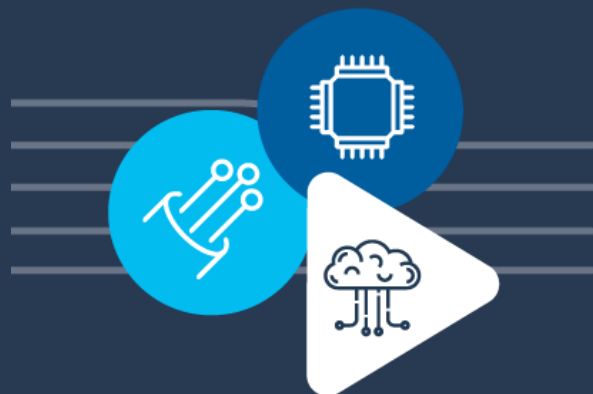
We are looking for partners who understand operational realities, propose concrete use cases and support industrialisation beyond proofs of concept.

NEEDS

- Industrial-grade, secure and production-ready DevSecOps solutions
- Simplified and well-governed application landscape
- Strong data governance, sovereignty and compliance (EU AI Act, NIS2)
- Cloud and architecture strategy balancing cost, performance and interoperability
- Fast, value-driven delivery with clear business impact

CHALLENGES

- Legacy complexity and application landscape fragmentation
- Ensuring security, compliance and explainability at scale
- Controlling cloud costs and avoiding vendor lock-in
- Moving from PoC to industrialized and operational solutions (AI, DevSecOps)
- Keeping systems future-proof in a fast-evolving technology landscape

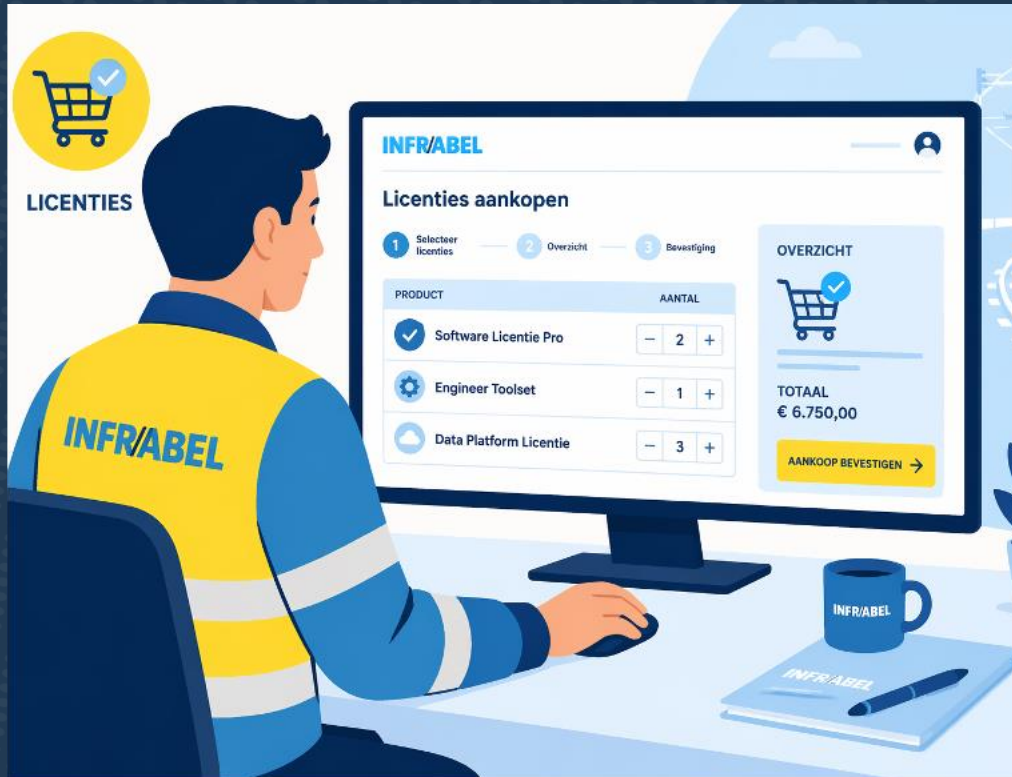


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I-ICT. 3

IT Infrastructure : Licences

// Suppliers day



- **Core infrastructure coverage** : Linux OS, databases, monitoring, container platforms and collaboration tools
- **Large-scale environment** : ~2,500 OS instances across IT & OT systems
- **Key technologies** : Red Hat Enterprise Linux (incl. SAP HANA), PostgreSQL, MariaDB, MongoDB, Zabbix, OpenShift, Atlassian tools
- **End-to-end services** : Licences, support, upgrades and limited expert assistance
- **Business objective** : Ensure stable, secure and scalable operations for critical railway infrastructure
- **Forward-looking procurement** : New tender planned in 2028

NEEDS

- Open source licenses (OS, DB, monitoring)
- Regular support & upgrades
- Wide coverage (~2500 instances)
- SAP compatibility (RHEL for SAP HANA)
- Ad hoc assistance (expertise)

CHALLENGES

- Handling large volume
- Heterogeneity of technologies (OS, DB, tools)
- Complexity of maintenance & upgrades
- Cost optimization vs. support needs

IT Infrastructure : Enterprise Storage

// Suppliers day



- Backbone of Infrabel's IT and data platforms
- Hybrid environment balancing performance, capacity and archiving
- Supports critical business, operational and analytics workloads
- Key enabler for data availability, integrity and business continuity

IT Infrastructure : Enterprise Storage

// Suppliers day

NEEDS

- High-performance storage solutions (NVMe, object storage, NAS)
- Large-scale volume management (~40 PB)
- Backup & geo-redundancy
- Legal archiving
- Design & implementation support

CHALLENGES

- Very large data volumes
- Multi-solution complexity (NVMe, object storage, NAS...)
- Infrastructure & storage costs
- Performance vs capacity management
- Dependency on external expertise

IT Infrastructure : Serveurs Compute

// Suppliers day



- Core compute foundation supporting all IT, OT and business-critical applications
- Mix of standard x86 platforms and specialized Unix (AIX) environments
- Designed to support diverse workloads, from virtualization to AI and legacy systems
- Strategic evolution towards more advanced, high-performance and resilient architectures

IT Infrastructure : Serveurs Compute

// Suppliers day

NEEDS

- Renewal of x86 servers (1500–2000)
- Support for diverse workloads (VM, DB, AI, OT)
- GPU capacity & AI integration (liquid cooling)
- Renewal of Unix servers (AIX)
- Support for critical applications (SAP, MQ, planning)
- Technical support & assistance

CHALLENGES

- High volume of renewals
- Growing AI / performance requirements
- Cooling complexity (air → liquid)
- High hardware costs
- Operations & maintenance management
- Limited but critical volume (~100 servers)
- Dependency on AIX / IBM
- Constraints related to legacy applications
- Potential evolution towards new architectures (fault-tolerant)

Datacenters infrastructure

// Suppliers day



NEEDS

- Transition to liquid cooling (AI readiness)
- Infrastructure renewal (power, cooling, security)
- Intelligent PDU
- Enhanced security (access control)

CHALLENGES

- High investment costs (cooling, infrastructure)
- Rapid technological transition (air → liquid)
- Complex lifecycle management
- Security in critical sites

Operations

// Suppliers day

The I-ICT.31 “Operations” division serves as **the control tower for all ICT systems and services.**

- 24/7 monitoring of all ICT environments
- Early detection of anomalies
- Service restoration in case of degradation
- Incident management and coordination
- Preparation and support for the deployment of new solutions



NEEDS

- Centralized monitoring (metrics, logs)
- Historical incident analysis
- AI for correlation & guidance
- Automated incident resolution

CHALLENGES

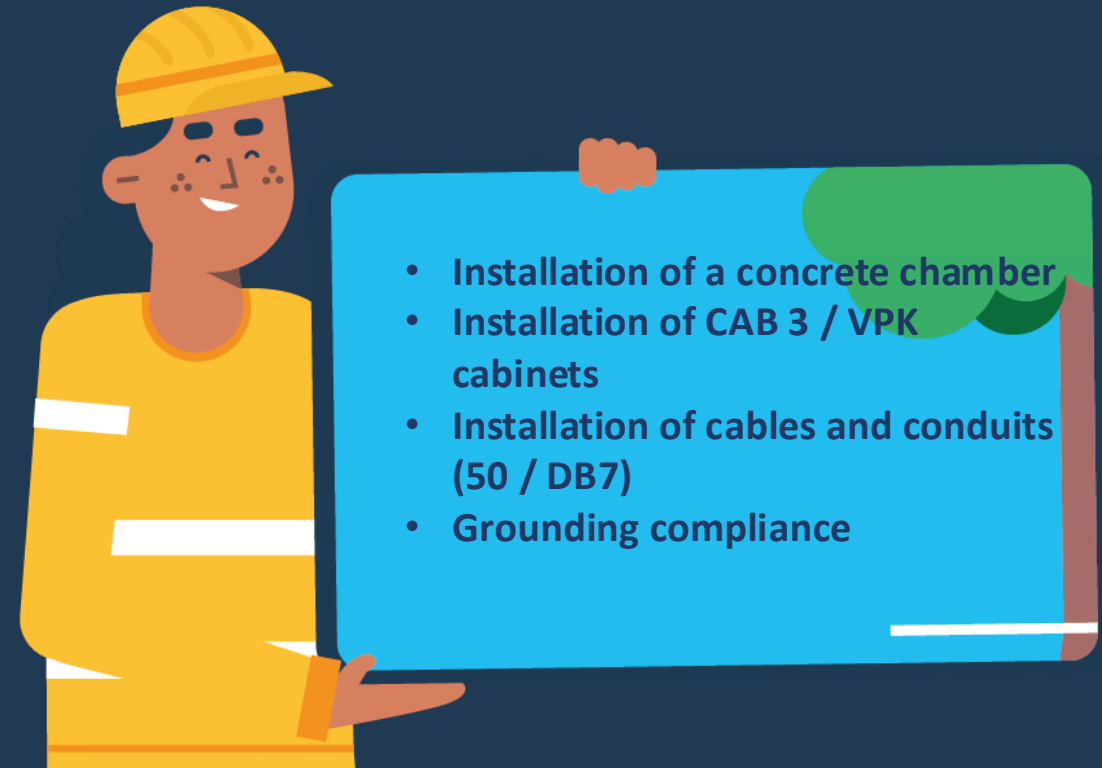
- Data quality & integration
- IT systems complexity
- AI industrialization

Decentralized intervention teams

// Suppliers day

A partner (technicians in electrical, electromechanical, and electronics fields) under a bundling model

- Perform minor works without requiring "optical fiber" certification
- Trained in electrical safety risks (BA5)
- No work along railway tracks (railway safety)
- Equivalent to 3 to 5 FTE
- Project-based mode (planned works)
- Nationwide scope
- Framework agreement of 4–5 years (starting from 2027)



Intervention teams

NEEDS

- Partner capable of providing technical teams
- Perform minor ICT works without requiring optical fiber certification
- Personnel trained in electrical safety risks (BA5)
- Nationwide deployment capability
- Work in project mode
- Establish a long-term framework agreement (4–5 years)

CHALLENGES

- Finding qualified and versatile technical profiles
- Railway safety constraints (no work along the tracks)
- Need to train resources on specific Infrabel standards

Decentral Housing

// Suppliers day

To strengthen the robustness, resilience, and security of our technical rooms, huts, and technical cabinets, we are looking for:

- OT solutions for temperature monitoring, remote control, and home automation
- “Low-cost” electronic access control solutions for certain cabinets with physical keys
- “Low-cost” guarding solutions (“drone in a pocket”) to perform checks on high-risk sites
- Software solutions to map the interior of huts and rooms for capacity management purposes



Decentral housing

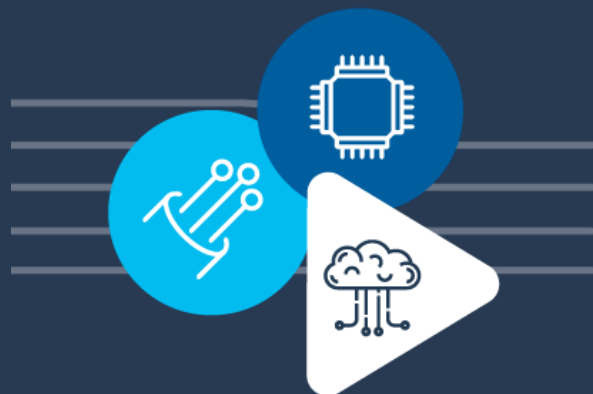
// Suppliers day

NEEDS

- Temperature / environmental monitoring
- Remote control (OT / home automation)
- Low-cost electronic access control
- Surveillance solutions (drone, remote check)
- Facilities mapping / capacity management
- Robust and secure solutions

CHALLENGES

- Heterogeneity of sites (huts, cabinets, rooms)
- Large-scale deployment
- Cost constraints (low-cost expected)
- IT / OT integration
- Security of isolated sitesField maintenance & reliability

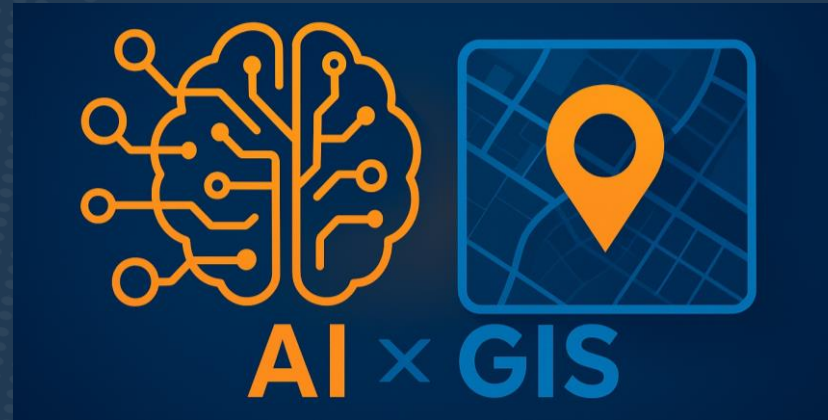
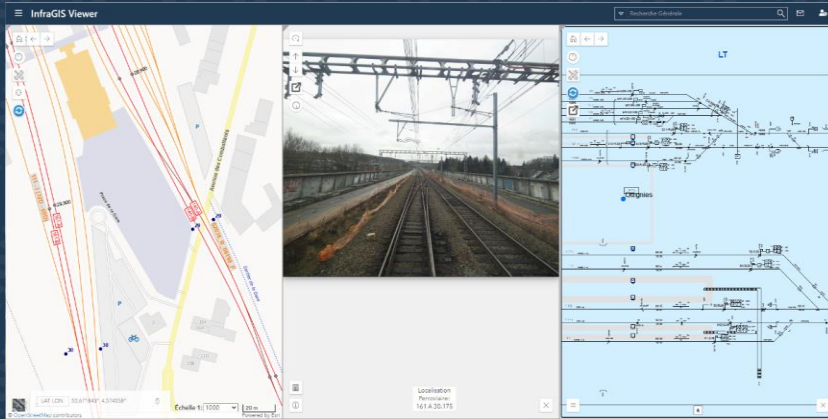


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I-ICT. 4

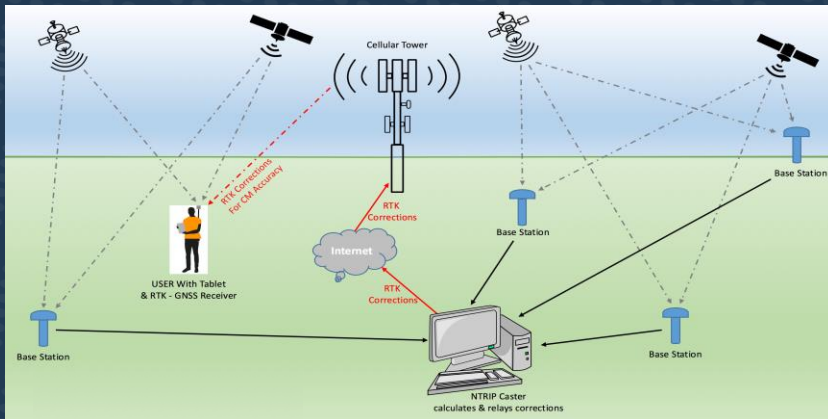
Geospatial & Geolocation

// Suppliers day



**Geospatial &
Geolocation
@ Infrabel**

**What we expect from GIS
& Location-Based Solutions
Partners**



Infrabel is accelerating its Geospatial and Geolocation capabilities (GIS, GNSS/RTK, tracking, virtual fencing, Geo-AI) to support safe operations and real-time visibility. We expect robust, interoperable and production-ready solutions delivering business value.

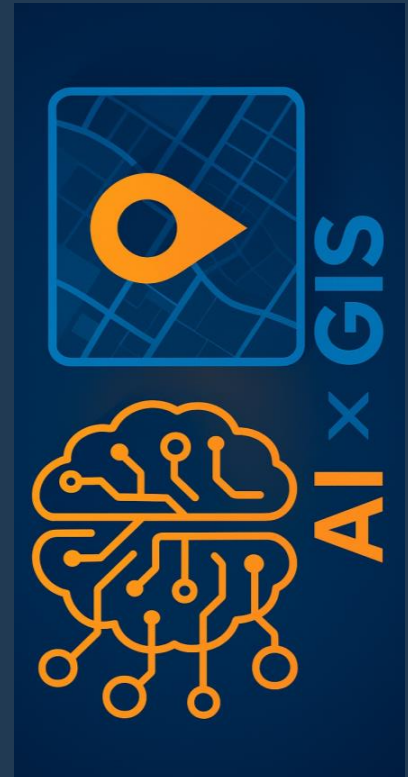
GIS | GNSS | RTK | Asset Tracking | Virtual Fencing | Geo AI |
Real-time Positioning | Interoperability | Digital Twin

NEEDS

- Real-time visibility
- High-precision positioning
- Interoperable systems
- Geo-AI & Digital Twin capabilities
- Scalable & production-ready solutions
- Secure & Soverain data handling

CHALLENGES

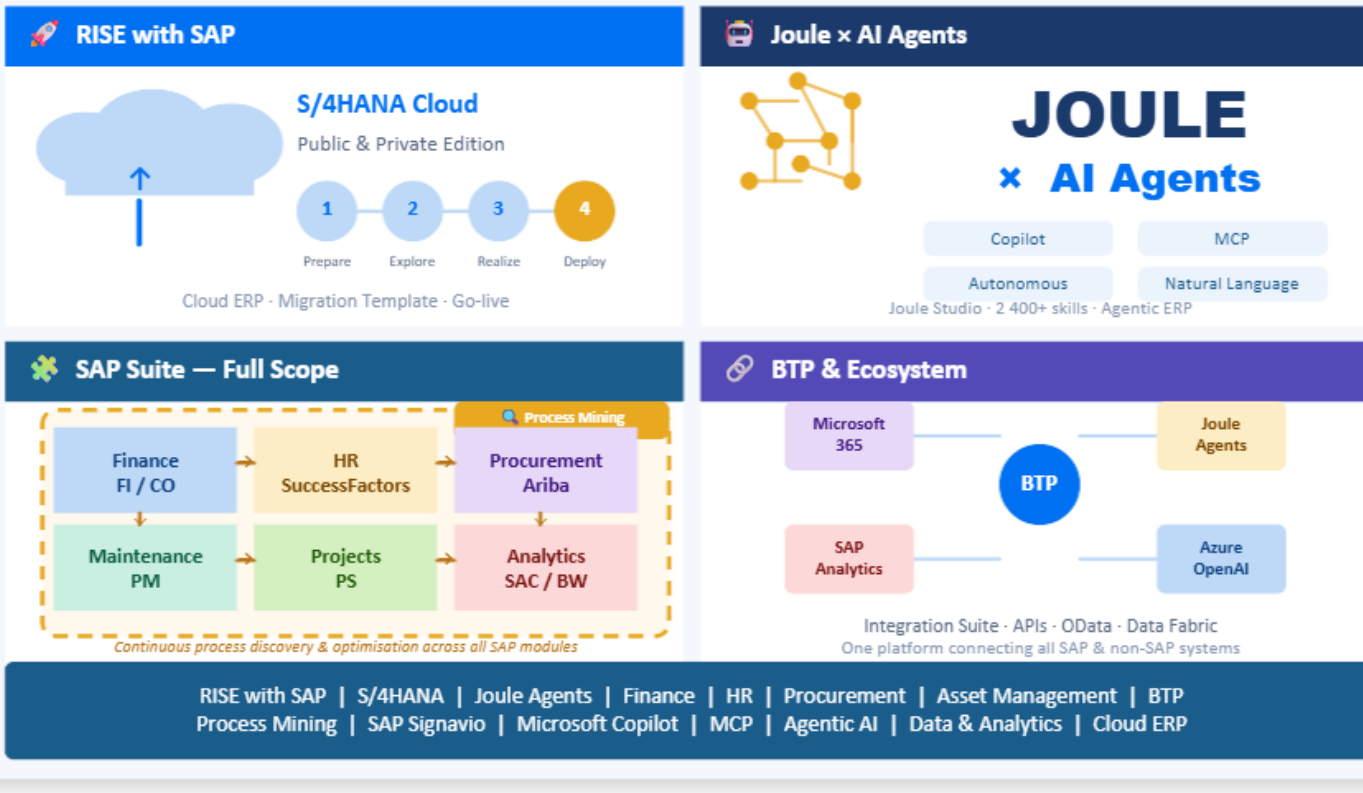
- Complex flied environment
- GNSS limitations / Coverage
- Complex IT/OT integration
- Data quality & governance
- Regulator & Security constraints



SAP @ Infrabel

What we expect from SAP & Enterprise Solutions Partners

Infrabel is transforming its enterprise backbone with SAP S/4HANA (RISE), covering Finance, HR, Procurement, Asset Management and Operations — while embracing Joule AI Agents and Microsoft Copilot to unlock intelligent automation across the entire SAP suite. We expect partners who master the full SAP ecosystem and deliver integrated, cloud-ready, AI-enabled solutions with measurable business value.



NEEDS

- End-to-end integrated SAP processes
- Cloud-ready and scalable solutions
- AI-enable automation (Joule, Copilot)
- Advanced data & analytics capabilities
- Strong ecosystem integration (SAP BTP)
- Standardised & Industrialised processes

CHALLENGES

- Complex S/4HANA transformation
- Heavy migration & legacy systems
- Limited AI maturity & adoption
- Data governance & quality issues
- Complex system interoperability
- Security & compliance constraints

Infrabel accelerates the industrialisation of AI to improve safety, reliability and capacity of the railway for a sustainable mobility



INDUSTRIAL- GRADE AI

Solutions must be robust scalable, maintainable and ready for production environments



SECURITY & COMPLIANCE BY DESIGN

Compliance with EU AI Act and strong cybersecurity standards are expected.



TRUSTED DATA &S SOVEREIGNTY

Data protection and controlled hosting environments are essential. We favor interoperable and sustainable solutions



BUSINESS VALUE FIRST

IA should deliver measurable value across all our domains: operations safety, maintenance, assets, planning, passengers, freight and more



COLLABORATION & PRAGMATISM

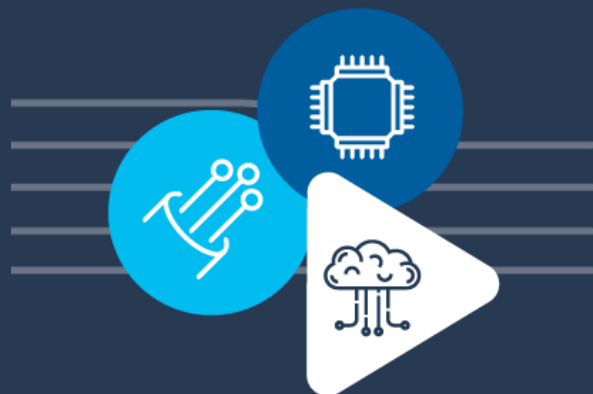
We are looking for partners who understand operational realities, propose concrete use cases and support industrialisation beyond proofs of concept

NEEDS

- Industrial-grade, scalable and production-ready AI solutions
- Strong security, compliance (EU AI Act) and governance
- Trusted data management and sovereign hosting
- Interoperable solutions integrated with existing systems
- Business-oriented use cases with measurable value

CHALLENGES

- Ensuring compliance with evolving regulations (EU AI Act, cybersecurity)
- Managing data quality, access and governance at scale
- Avoiding vendor lock-in and ensuring interoperability
- Moving from PoC to industrialized, operational AI
- Aligning AI solutions with real operational needs



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I-ICT. 5

E-Market

Specialized consultancy profiles
1 tender = 1 profile = 1 person

- Very specific profiles
- Outside the scope of the Bundles
- Occasional needs

Objectives: ensure the diversity and specificity of profiles to meet business needs

Bundles

Structured Framework Agreements
1 tender = several profiles = several people

- Grouping by generic profiles (assistants, testers,...) or by key technologies (SAP, Java, AI,...)
- 1 bundle
 - a 6-year framework agreement
 - cascading allocation = multiple winners

Objectives: ensure the growing demand for certain key resources in an agile way

NEEDS

- Highly specialized profiles (deep expertise)
- Flexibility for ad hoc needs
- Diversity of skills
- Complement to bundles

CHALLENGES

- Difficulty finding rare profiles
- Individual management (1 profile = 1 contract)
- Lack of scalability
- Sourcing delays

E-Market & Bundles

//Suppliers day

BUNDLES	STATUS
IT Assistants	Assigned
.NET Developers	Assigned
Java	Assigned
SAP Functional Fico-HR	Assigned
SAP Technical Developers	Awarded - Stand-still period
SAP Technical Architecture	Pending award
SAP Technical Authorizations	Pending award
SAP Technical Open Text	Pending award
SAP Functional Supply	Pending award
SAP Functional Plant Maintenance – Functional Analyst	Pending award
SAP Functional Plant Maintenance – Local support	Pending award
Data Analytics	Pending award
Testers	Planned
IA	To open
RCS Resources	To open