CELTIC-NEXT Proposers Day
26th of January 2022, Online via WebEx

RELIANCE

Elio Saltalamacchia – CTO SII Concatel
elio.saltalamacchia@concatel.com

Teaser

Fifth generation (5G) networks shall enable operators to host vertical industry segments by introducing new services and enhance business collaborations between operators and third parties

The main goal of **RELIANCE** is to extend the 5G network architecture with new functionalities needed for multi-service and multi-domain management, with the related abstractions, interfaces, while respecting the need for resilience, security & scalability.

Organization Profile

We are a leading French multinational in Information Technology and Engineering.

We are specialists in technology consulting, communications and infrastructure services, software, and product development, and industrial, aeronautical, energy and telecommunications engineering, and we implement and distribute our own products and those of our partners.

At SII we have been responding, for more than 41 years, to all kinds of industries and sectors through 360º technological services and solutions, offering a comprehensive value proposition to face transformation and innovation challenges.

+10.000	18	676,3 M€	41	88
Consultants	Countries	Revenue	Years of experience	Technical centers

+750	6	22	41,5 M€
Consultants	Technical centers	Years of experience	Revenue
	3 Barcelona | Madrid | Palma | Valencia		

R&D&i: we think, create, develop and maintain our own products and IT solutions.

ServiceONE®

ServiceONE is the most complete **Enterprise Service Manager (ESM)** on the market and offers specific solutions for the six major business areas that, according to Gartner, must meet an ESM solution.

ServiceONE allows creating personalized workflows and automating processes, integrating with IOT, Artificial Intelligence and with the main solutions on the market.

IT SERVICE MANAGER

INTEGRATED WORKPLACE MANAGEMENT SYSTEM

ASSET MANAGEMENT SOLUTION

FIELD SERVICE MANAGER

WORKFORCE MANAGER

BUSINESS SERVICE MANAGER

CLIENT

Software **Development**

Communications and Infrastructures

Our **IT Solutions**

Engineering and R&D&i
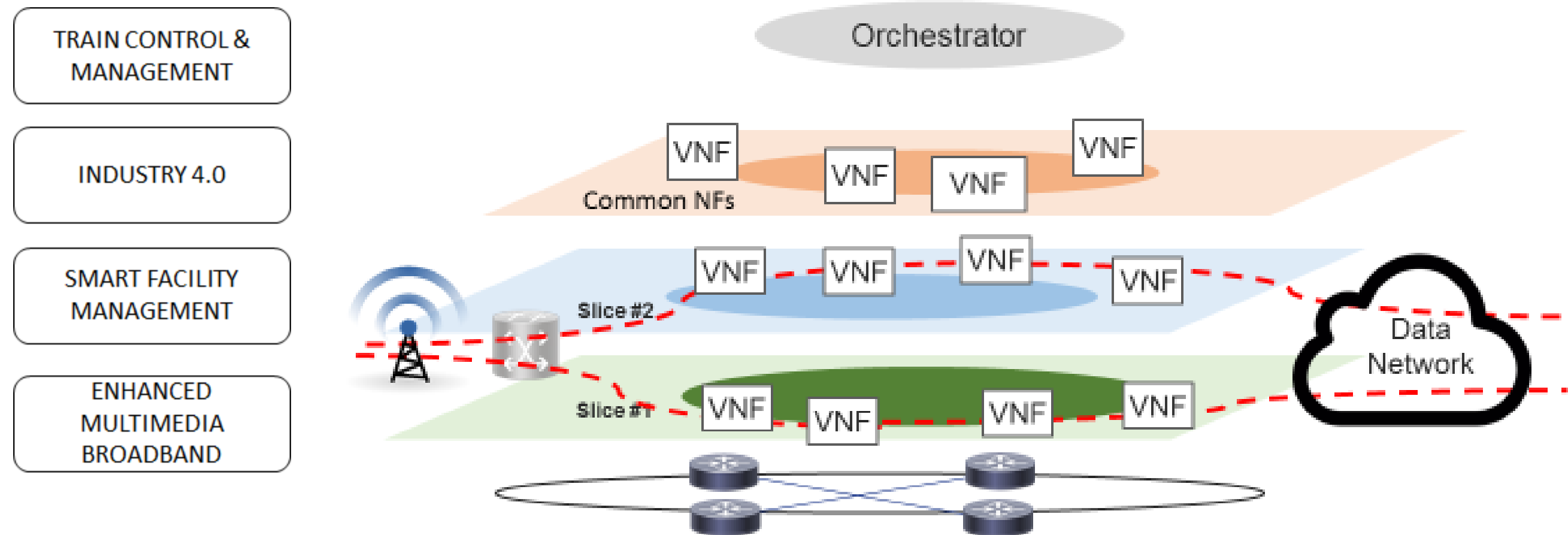
IT Consulting

Outsourcing Solutions

Proposal Introduction

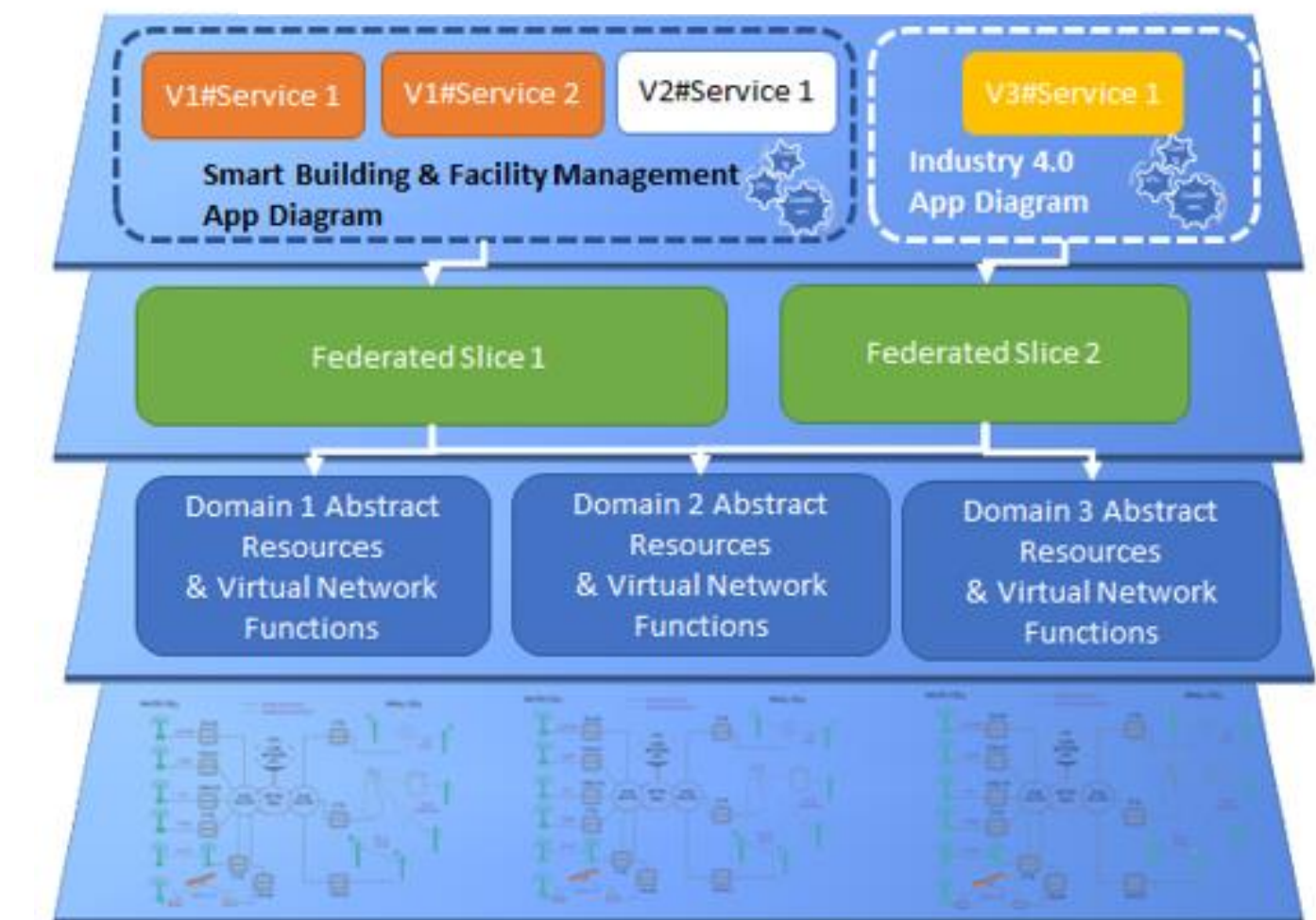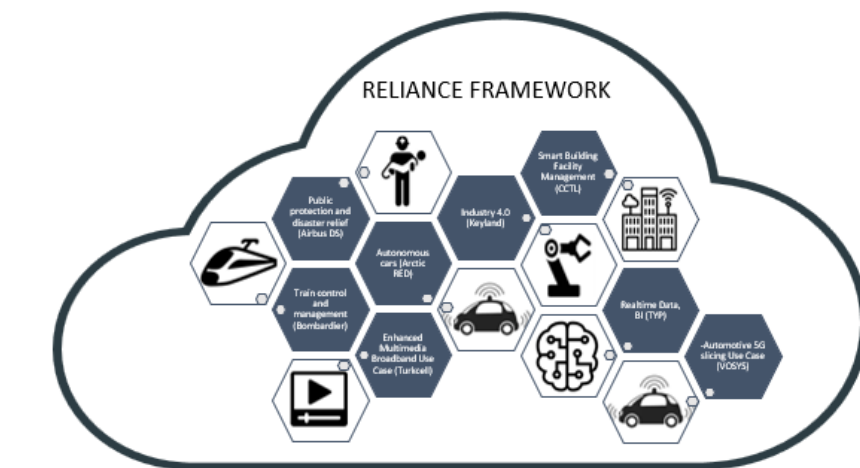**Resilient and Scalable Slicing over Multiple Domains**

- ➤ **Vision:** Realization of a highly resilient and scalable network slicing *architecture* for enabling end-to-end 5G-based services across multiple technical and administrative domains.

- ➤ **Motivation**
    1. Explosion of 5G verticals with varying requirements in terms of both network and computational resources, performance, resilience and service
    2. A significant number of verticals demanding 5G-based mission-critical applications with ultra-reliability support (e.g., autonomous cars, industrial control, remote surgery, public safety services, etc.)
    3. The key motivation is to develop highly innovative technological and architectural solutions for a dynamic, flexible and scalable slice management plane that enables the offering of vertical-tailored slices "as-a-Service".

- ➤ **Content:** Advanced federation strategies for scalable network slicing over heterogeneous admin/technology domains, unified reliability framework, field trials and verification with verticals
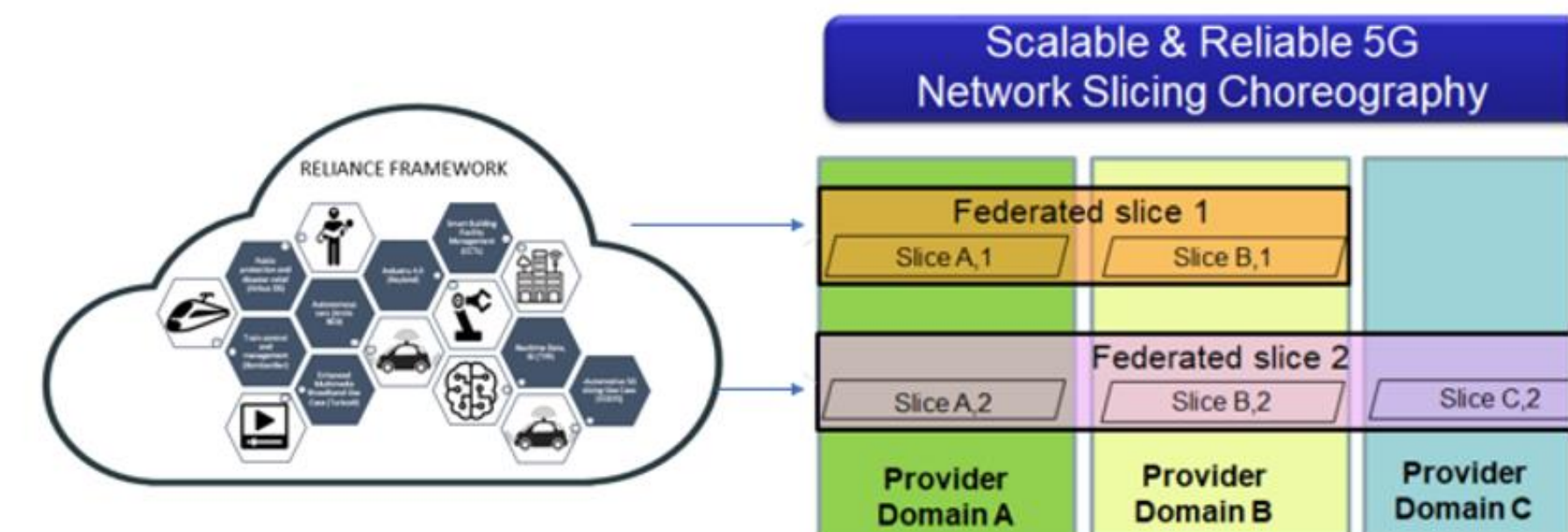
Proposal Introduction

- **RELIANCE** aims to conduct research activities on the concept of **federated network slicing** to compose end-to-end services that span across different technical and administrative domains.
- A key innovation of the project is the **highly scalable and robust slice choreography plane** that enables the offering of vertical-tailored slices "as-a-Service", ensuring the required scalability, security, and resilience features.
- It facilitates the mapping of service requirements from the verticals with their **predicted traffic demands into dedicated networking and cloud resources** through automated multiparty negotiation.
- Scalable slice federation is complemented with protocols for deployment and runtime adaptation of resilience and security mechanisms over heterogeneous infrastructures, so to enable a unified reliability framework.

Proposal Introduction

RELIANCE provided a better understanding of the opportunities and current constraints of Network slicing from the vertical point of view:

- Enhanced **Augmented Reality**-based support system for IIoT (Keyland)
- **Augmented, Volumetric Streaming** in real-time for Smart Facility Maintenance Operations (SII Concatel and TyP)
- Enhanced **diagnostic and maintenance** system for Train Control and Management System (TCMS). (Bombardier)
- New technical specifications of 5G router prototype for train application, evolving the existing train to the wayside communication system (Westermo and Eduro)
- Improved **video conferencing** platform with an intent-based routing engine to improve video quality. (Turkcell, Netas, Ulak)

The flexibility and agility offered by **RELIANCE** in the provisioning and management of slices will encourage vertical industry actors to access this new network slice marketplace, thus bridging the gap between verticals and telco industries.
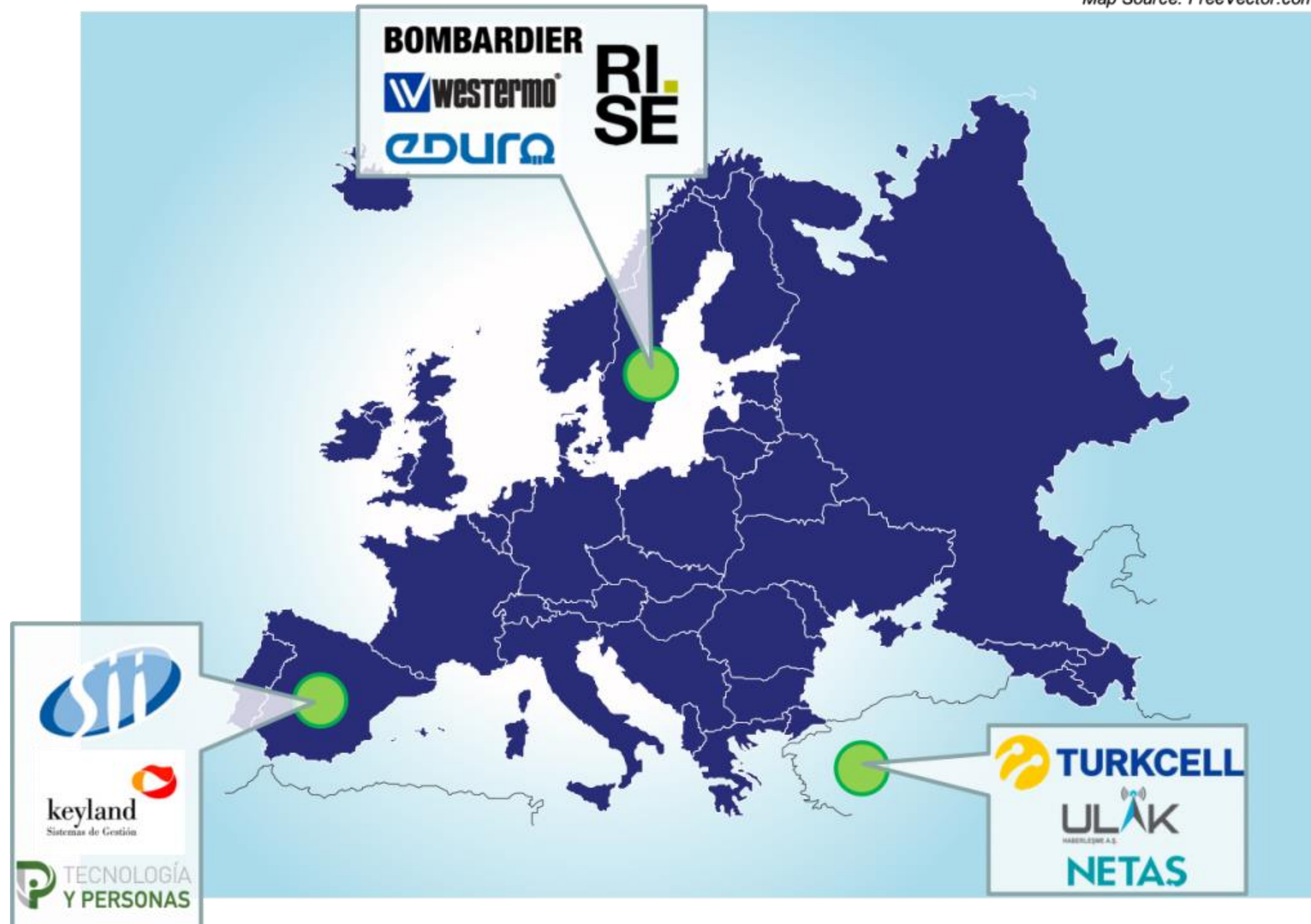
Partners

Map Source: FreeVector.com

- **SII Concatel S. L.**, Spain
- **Keyland Sistemas de Gestion S. L.**, Spain
- **Saint Patrich Technology S. L.**, Spain
- **RISE SICS Västerås AB**, Sweden
- **Bombardier Transportation Sweden AB**, Sweden
- **Westermo Network Technologies AB**, Sweden
- **Eduro AB**, Sweden
- **Turkcell Teknoloji**, Turkey
- **NETAS Telecommunications A.S.**, Turkey
- **ULAK Communications Inc.**, Turkey

Contact Info

For more information and for interest to participate please contact:

Elio Saltalamacchia – CTO SII Concatel

elio.saltalamacchia@concatel.com

+34 607 201 846

Av. Carrilet 3 – Edificio D – Planta 10

08902 – L'Hospitalet de Llobregat

Barcelona - Spain

https://sii-concatel.com/

Presentation available via: