



Nuclear Sector Activities

01

Nuclear Sector/



Group Presentation

SNEF is the lead company of the Group. It encompasses all historic businesses: electrotechnology, industrial processes (instrumentation, control systems, automation), IT professions and telecommunications, service maintenance and environmental engineering.

Groupe SNEF in brief

Since its creation in 1905, Groupe SNEF's has adhered to the double-track strategy of proximity and know-how. Over the years, our business has been transformed and enriched, and our locations have multiplied — always with the straightforward objective of providing high added-value services to our customers.

Born in the maritime sector, Groupe SNEF retained its high standards and rigor to further its development in the Industry, Energy and Infrastructure sectors, then in the Service sector.



1,9

Billion Euros
turnover



15,000

Employees
in the world



30

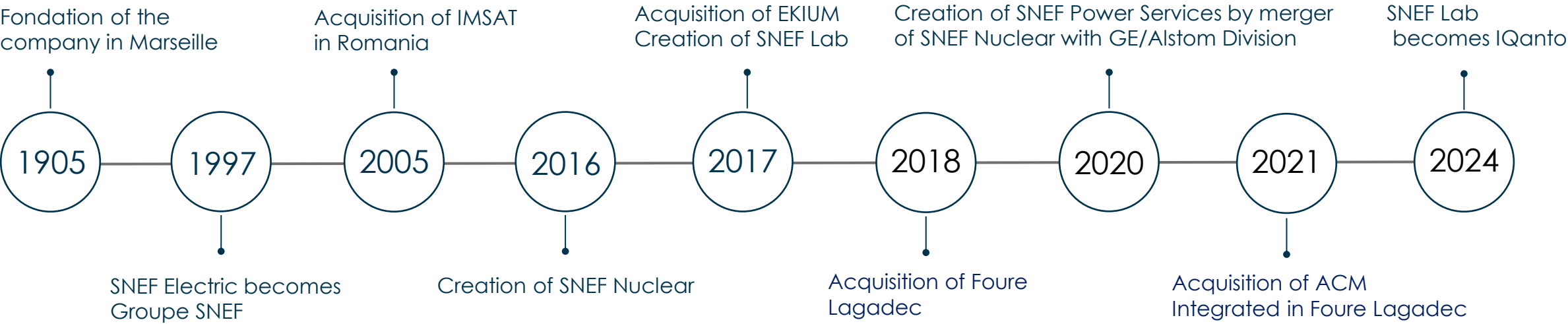
A presence in 30
countries

Groupe SNEF Nuclear Sector History & Development

The nuclear sector consolidated after the acquisition of the "BOP Electric" branch of General Electric (formerly ALSTOM) and the merger with SNEF Nucléaire division it brings together the know how of SNEF Groupe subsidiaries: Snek Power Services, Ekium, Fouré Lagadec, IQanto and Imsat

We propose to our customers design and execution offer as an EPC all trades company and digital solutions (predictive maintenance, Big Data, Cybersecurity, Cloud and AI)

SNEF Groupe companies operates throughout the entire fuel life cycle, from fuel enrichment plants to waste treatment and storage, as well as nuclear facilities (electricity production, research or military facilities)



Groupe SNEF Nuclear Sector Companies & Competences



ENGINEERING

- Functional Analysis
- Design
- Architecture
- Detailed studies
- R&D (Water and gas treatment)

ELECTRICAL

- Design
- Fabrication
- Integration
- Maintenance

SECURITY SYSTEMS

- Design
- Integration
- Maintenance



ENGINEERING

- Functional Analysis
- Design
- Architecture
- Risk studies (nuclear safety)
- Regulatory studies



- Data Science
- Cloud
- Cybersecurity
- Internet of Things
- Equipment monitoring
- Predictive maintenance



MECHANICAL

- Design
- Fabrication (boiler, pressure vessels, piping, heat exchangers, skids)
- Machining, tooling, welding
- Integration
- Maintenance



ELECTRICAL

- Design
- Fabrication (MV Switchgear, LV Distribution Panels, MCC, Control and Automation Panels, Lighting and Building Infrastructure Panels)

- Integration
- Maintenance

MECHANICAL

- Design
- Fabrication (piping, structures)
- Integration
- Maintenance

SECURITY SYSTEMS

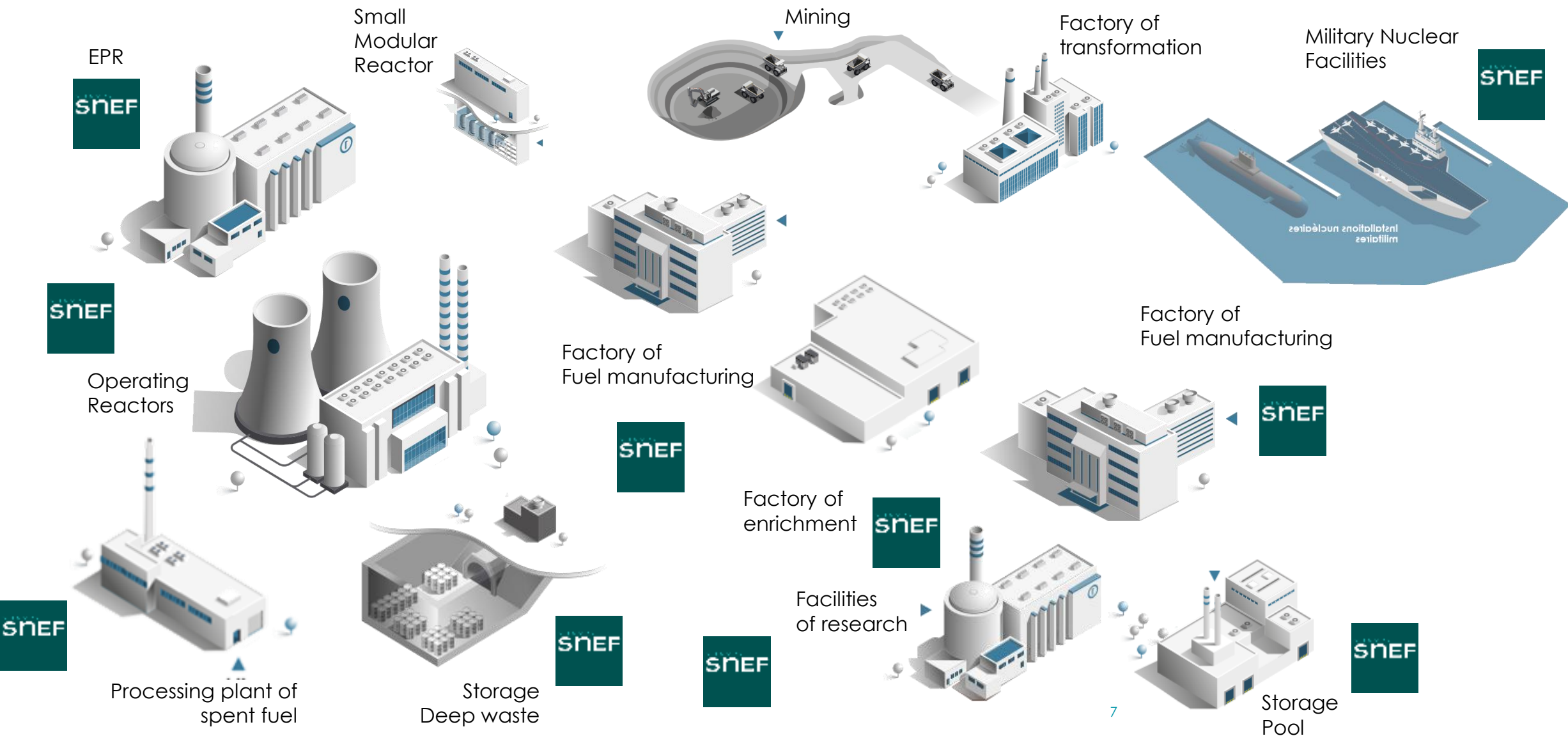
- Design
- Integration
- Maintenance

Groupe SNEF Nuclear Sector Territorial Network



Groupe SNEF Nuclear Sector

Presence through **nuclear life cycle**



02

Nuclear Sector/



IMSAT Presentation

We have been part of SNEF Group (with a 120-year history) since 2007. Today, SNEF Group has over 15,000 employees worldwide, generating an annual turnover of about Euro 1.9 billion.

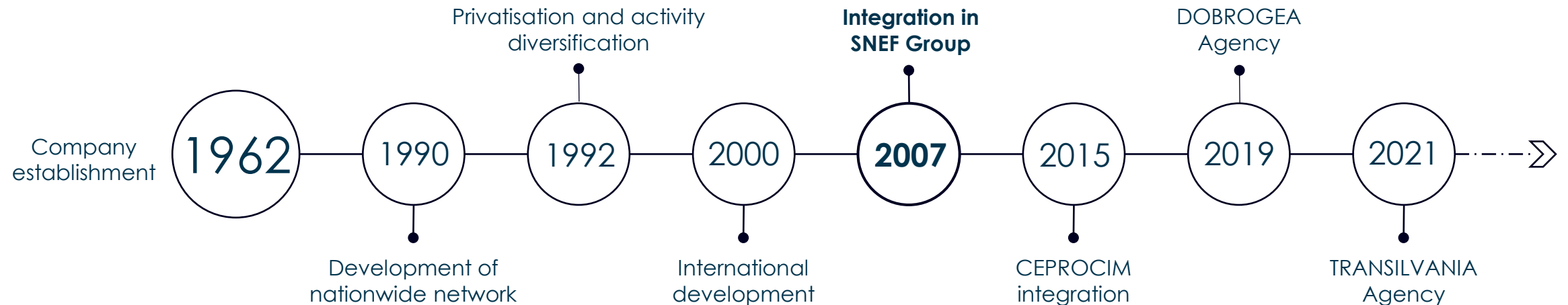
Set up in 1962, designer and integrator of multi-technical solutions, IMSAT is a Romanian specialized company in the electrical, mechanical, automation, weak currents, HVAC, robot integration fields.

About **IMSAT**

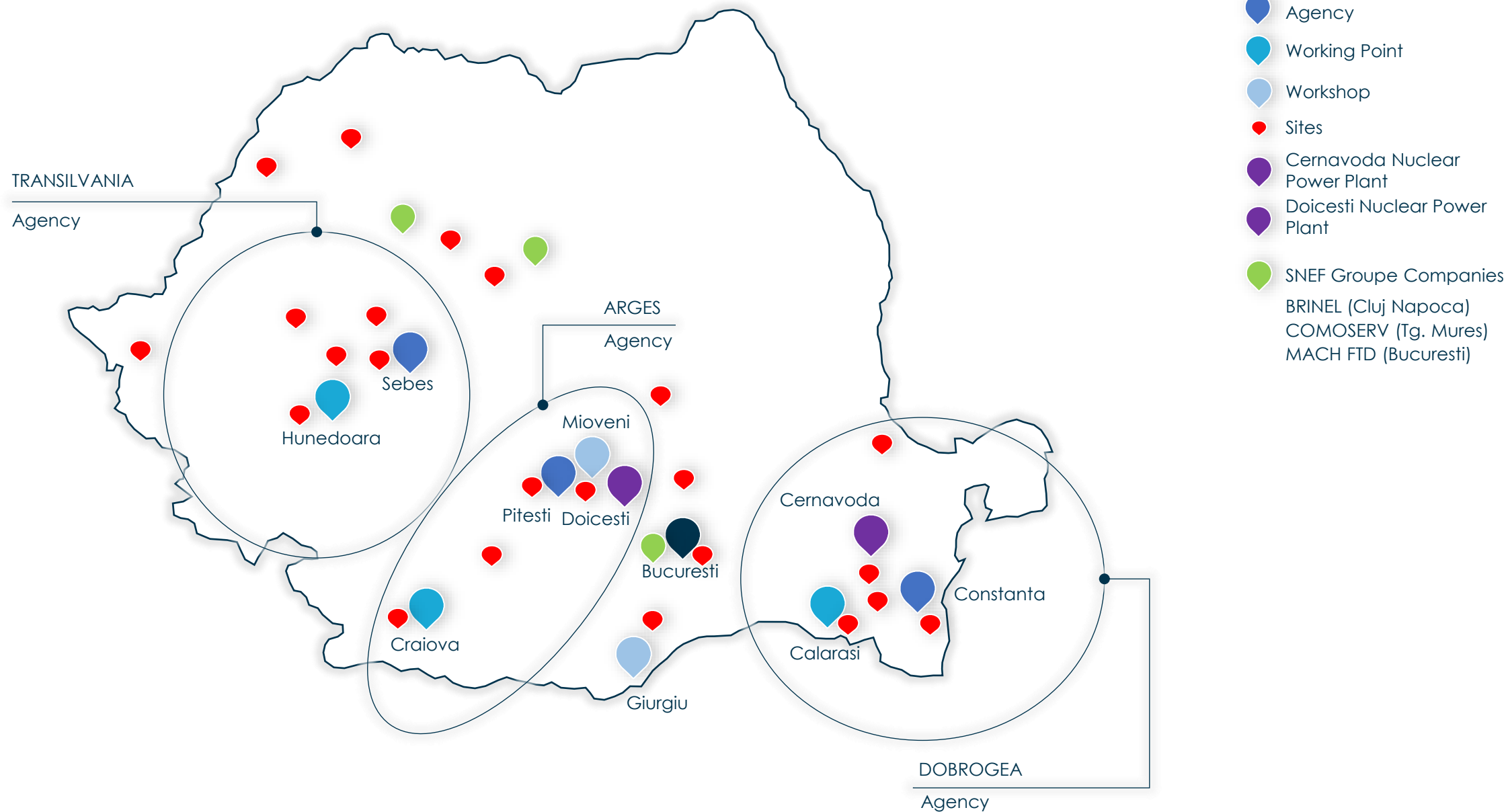
Today, the company has around 950 employees, with a vast experience in projects implemented in Romania as well as in over 35 countries on four continents.

The competence range of IMSAT covers engineering and assembly for electrical and mechanical installations, industrial process, air conditioning and security systems. Within the sphere of Industry 4.0 technologies, our capacities include automation, robotic systems and solutions, preventive and predictive maintenance services.

In the Energy sector, we are a development partner holding the necessary experience and skills to provide the highest level of quality in all the stages of a project, from design and installation, to commissioning and maintenance for all types of energy conventional, nuclear and renewable



Geographical coverage



Multi-business skills in nuclear sector



Electrical Automation

- Electrical schematics and calculation
- Control panels
- Motor control center (MCC)
- Network calculation short circuit and flow analysis
- Arc flash studies
- Electrical room layouts
- Cabling and wiring
- Electrical panels manufacturing
- Commissioning



Mechanical

- Steel structures fabrication, delivery and erection
- Cladding installation
- Equipment erection
- Mechanical and civil supervision works
- Commissioning



Security Systems

- Fire detection
- Fire fighting
- CCTV
- Security access control
- Video survey
- HVAC
- Maintenance



Piping

- Isometrical Drawings
- 3D Modeling
- Hangers and pipe rack design and calculation
- PI & D diagrams
- Piping fabrication
- Skids
- Complete mechanical installation
- Commissioning



After Sales Service

- Technical assistance
- Upgrade & revamping services
- Expert services
- Logistic & Spare parts management

Our Team

950 employees, out of which:

- **White collars – 420** (project managers, design/execution engineers, site managers, support staff)
- **Blue collars – 530** (electrical/mechanical workers, welders, locksmiths, etc.)

Safety – 20

Technical Resources ~ 780

- Project managers ~ 50
- Engineering team (civil, mechanical, electrical and automation) ~ 100
- Execution engineers ~ 100
- Electrical execution ~ 260
- Mechanical execution (including welders, locksmiths) ~ 270

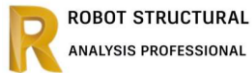
QC/QA – 15



Our Software

- Electrical design calculation
- Civil & structural design
- Mechanical design
- BIM
- Automation / SCADA
- Piping Stress Analysis
- Flow rates and pressure drop

Etap, Eplan, Caneco BT
 Autodesk Robot Structural Analysis, SAP, Etabs, Idea Statica
 SolidWorks, Autodesk INVENTOR
 Autodesk Revit, Navisworks, Recap PRO
 Siemens Simatic, Rockwell Automation, GE Cimplicity
 Caepipe 3D FEM, Rohr 2 3D FEM, Tricad MS Piping
 Applied Flow Tech Fathom, Pipe Flow Expert



Our Facilities

Piping Fabrication

- 2000 sqm piping fabrication facility
- Tee forming and stub end forming machines (up to ND150)
- Orbital welding machines, bending machines
- Stainless steel, painted/galvanized carbon steel, PPH, PVC, PP materials
- Welded, threaded, grooved, pressed pipes

Electrical Panels Manufacturing

- 2500 sqm workshop
- Medium Voltage Switchgear (Secondary Circuits)
- Low Voltage Distribution Panels (400VAC)
- Motor Control Centers (400VAC)
- Control and Automation Panels (400/230VAC)
- Lighting and Building Infrastructure Panels (400/230VAC)
- Mechanical assembly
- Electrical Wiring
- Integration (Schneider, Eaton, ABB, Siemens, Cubic / IEC-UL / CSA-CCC, GE Sen Plus / IEC, Rittal)
- Test and Simulation
- Packing



03

Nuclear Sector/



IMSAT References



MRI project

Context of the project:

Compliance with regulatory deadline of 03/12/2021 on the removal of ionic detectors from all industrial and tertiary buildings at all nuclear power plants.

IMSAT scope of work (subcontractor for SNEF)

Execution on site during operation

Electrical installation activities for fire detection system (tertiary building):

- Cable trays installation
- Installation of the fire detection equipment
- Cables laying
- Cables connections

Market Segment

Energy
Nuclear

Trades

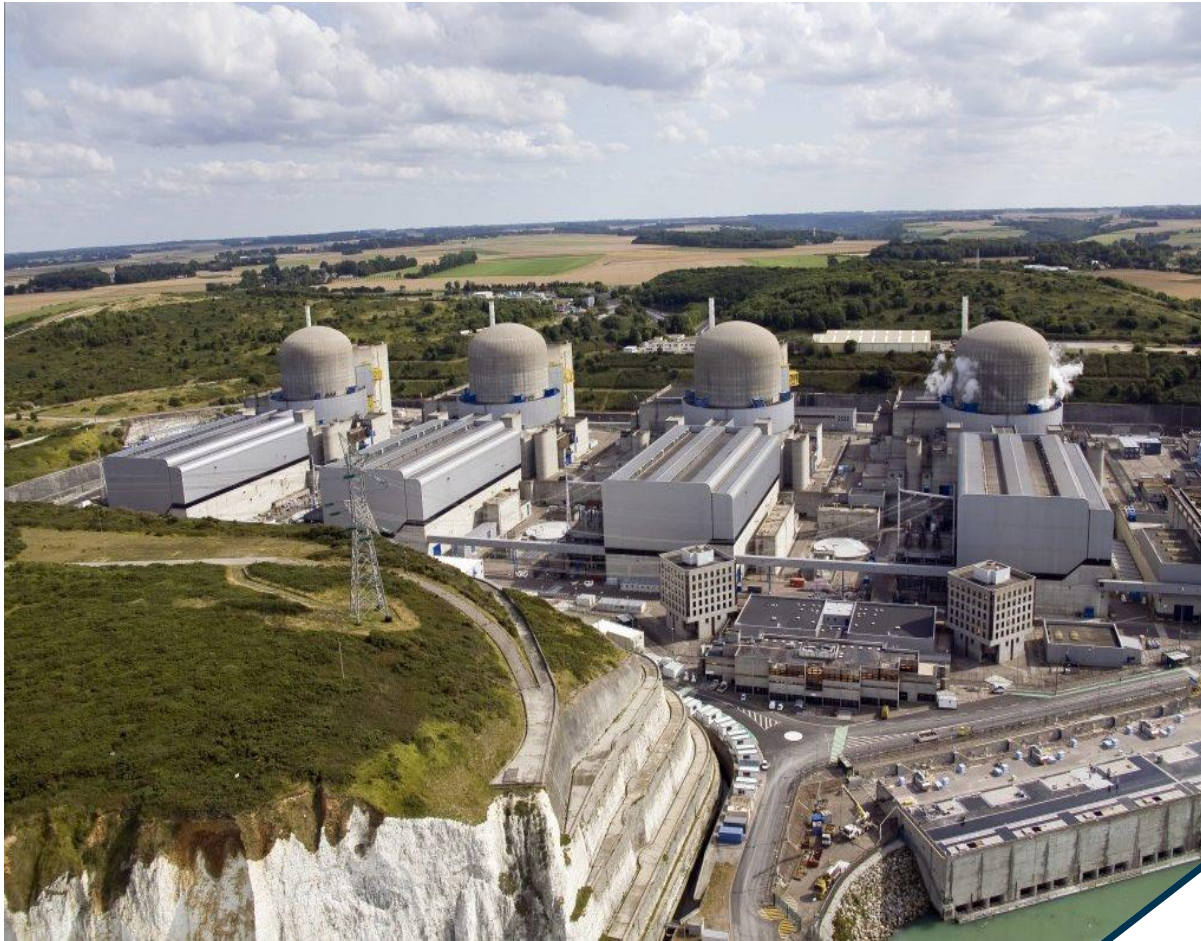
Electrical
Security Systems

Period

2021

Location

Blayais,
France



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Market Segment

Energy
Nuclear

Trades

Electrical
Security Systems

Period

2021

Location

Paluel,
France

**Market Segment**

Energy
Nuclear

Trades

Design
Electrical
Instrumentation

Period

2015 - 2020

Location

Pierrelatte,
France

Project COMURHEX II

Context:

ORANO aims to increase the conversion of uranium ore into uranium hexafluoride (UF₆), a key stage before the enrichment and fabrication of nuclear fuel.

The COMURHEX II project will involve the modernization and upgrading of the installations, processes and techniques, improve the production performance, reinforce nuclear safety in the facilities, and reducing the environmental impact of the activities.

IMSAT scope of work (subcontractor for SNEF)

Building 62A, 62E, 64, 65, 68

Design for electrical activities:

- equipment, cables trays and supports integration
- single line, connection and panel diagrams
- lighting calculation
- cable routings
- bill of materials

Electrical and instrumentation installation
(cables and cable trays, equipment and connections)



EPR 3rd generation reactor

Context of the project:

In partnership with Framatome, EDF chose to develop the EPR third-generation reactor

IMSAT scope of work (subcontractor for INEO Equans)

Electrical installation activities for fire detection system:

- Cable trays installation
- Installation of equipment
- Cables laying
- Cables connections

Market Segment

Energy
Nuclear

Trades

Electrical

Period

2019

Location

Flamanville,
France



Unit 2 – Cernavoda Nuclear Power Plant

Context of the project:

A consortium of Canadian AECL and Ansaldo Nucleare from Italy, along with Romania's nuclear public utility company Nuclearelectrica was contracted in 2003 to manage the construction of the partially completed Unit 2 power plant and to commission it into service.

Unit 2, a CANDU 6-reactor, began operating at full capacity in 2007, producing 705,6 MW

IMSAT scope of work :

Installation of electrical, instrumentation and control systems in the reactor and in the services building

Market Segment	Trades	Period	Location
Energy Nuclear	Electrical Instrumentation	2007	Cernavoda Romania

Quality, Health, Environment and Safety

Compliance with the requirements of the international standards ISO 9001, ISO 14001, ISO 45001 respectively ISO 27001, the continuous concern for the satisfaction of the demands and expectations of all interested parties as well as the optimization of the processes in order to achieve the objectives has been materialized for IMSAT S.A. with the certification of an Integrated Management System, with international accreditation, respectively the authorization of the activities for the nationally regulated fields.



Management
System
ISO 9001:2015
ISO 14001:2015
ISO 45001:2018

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ID 9108653621

CERTIFIED
ISO 27001



ISO 3834-2
BUREAU VERITAS
Certification



EN 1090-1

FPC certified
according to AVCP 2+ by

BUREAU VERITAS



INSEMEX
INSTITUTUL NATIONAL DE CERCETARE - DEZVOLTARE
PENTRU SECURITATE MINIERA SI PROTECTIE ANTIEXPLOZIVA

ecovadis

Compliance



Integrity



Ethics



Responsibility



Environment

IMSAT constantly supports through the corporate governance practices **the values of honesty, integrity, risk management and loyalty.**

The main axes of the conduct regulations are:

- Respecting the rights of the employees
- Respecting competition rules
- Respecting laws against corruption
- Prevention of conflicts of interest
- Respecting the environment, occupational safety and quality

IMSAT has in place a set of regulations regarding compliance and an alerting mechanism through which can be notified by employees or external collaborators situations presumed as potential non compliances with the regulations.

Alerts can be sent to the following coordinates:

Phone: +40 21 316 66 00
E-mail: compliance@imsat.ro





More about us on: www.imsat.ro

