



Corporate Presentation

2015

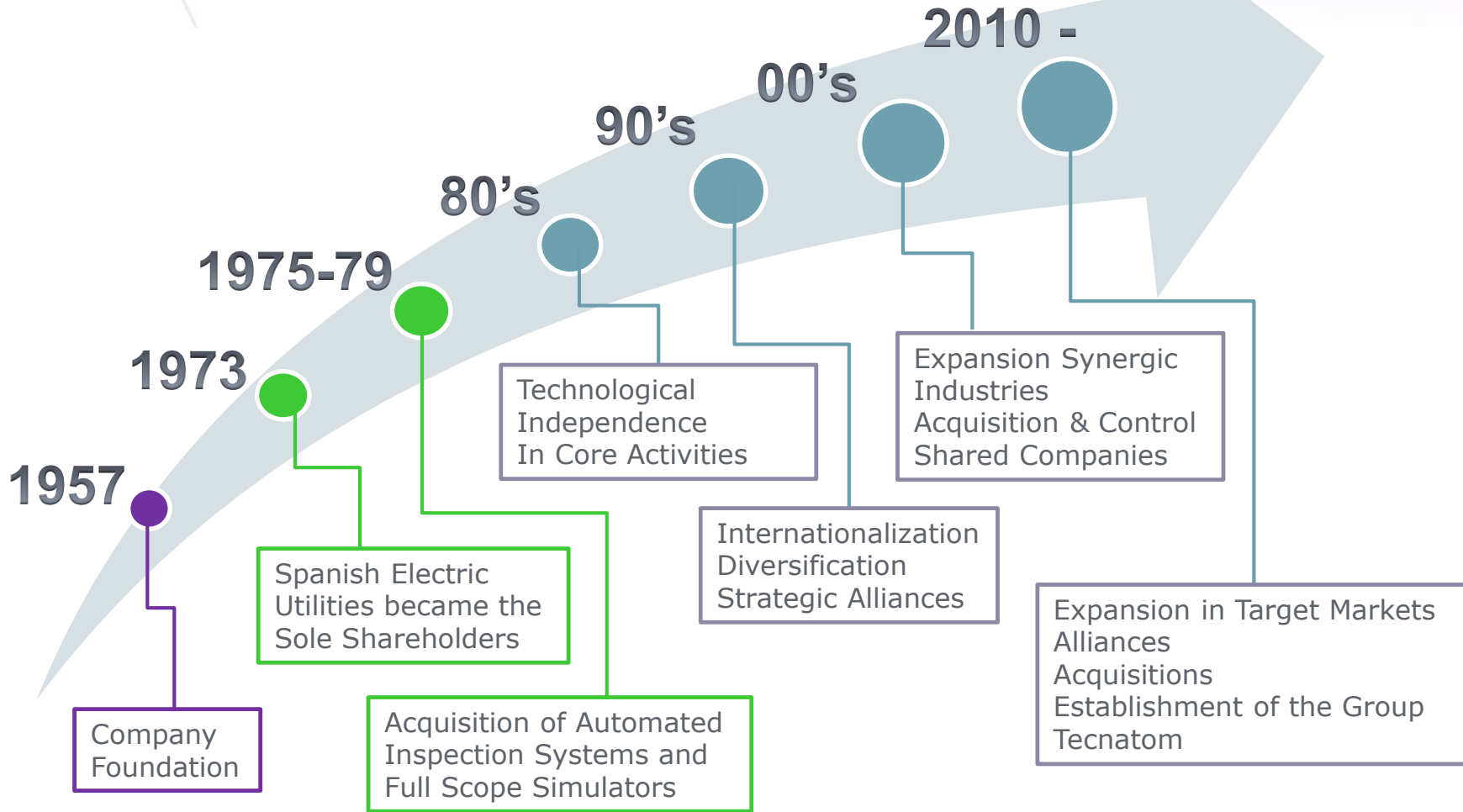




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Tecnatom
Group

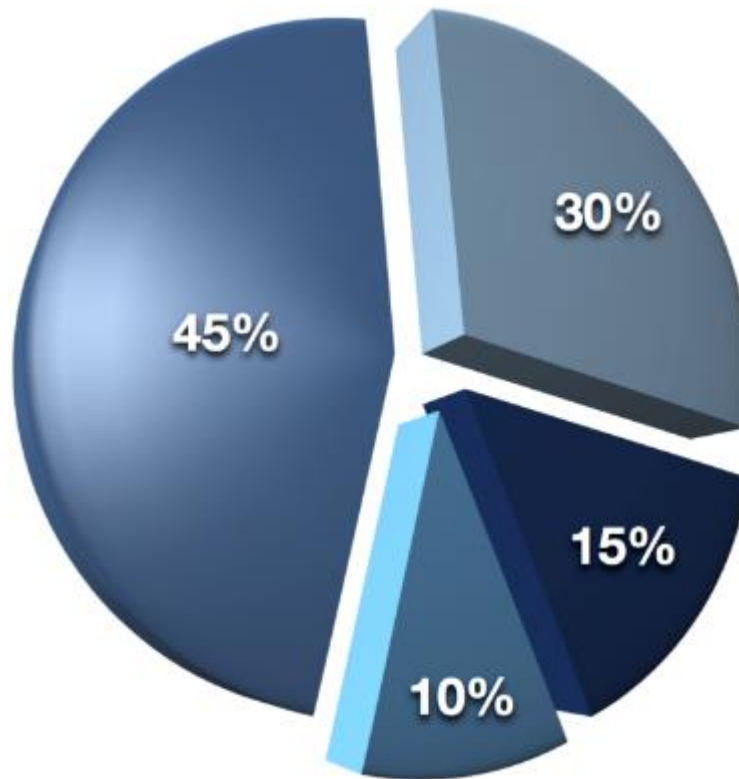
History



Shareholders



Income: 21,512 M€
Staff: 10,699
Power: 22,619 MW
Customers: 11.25 M
Countries: 8



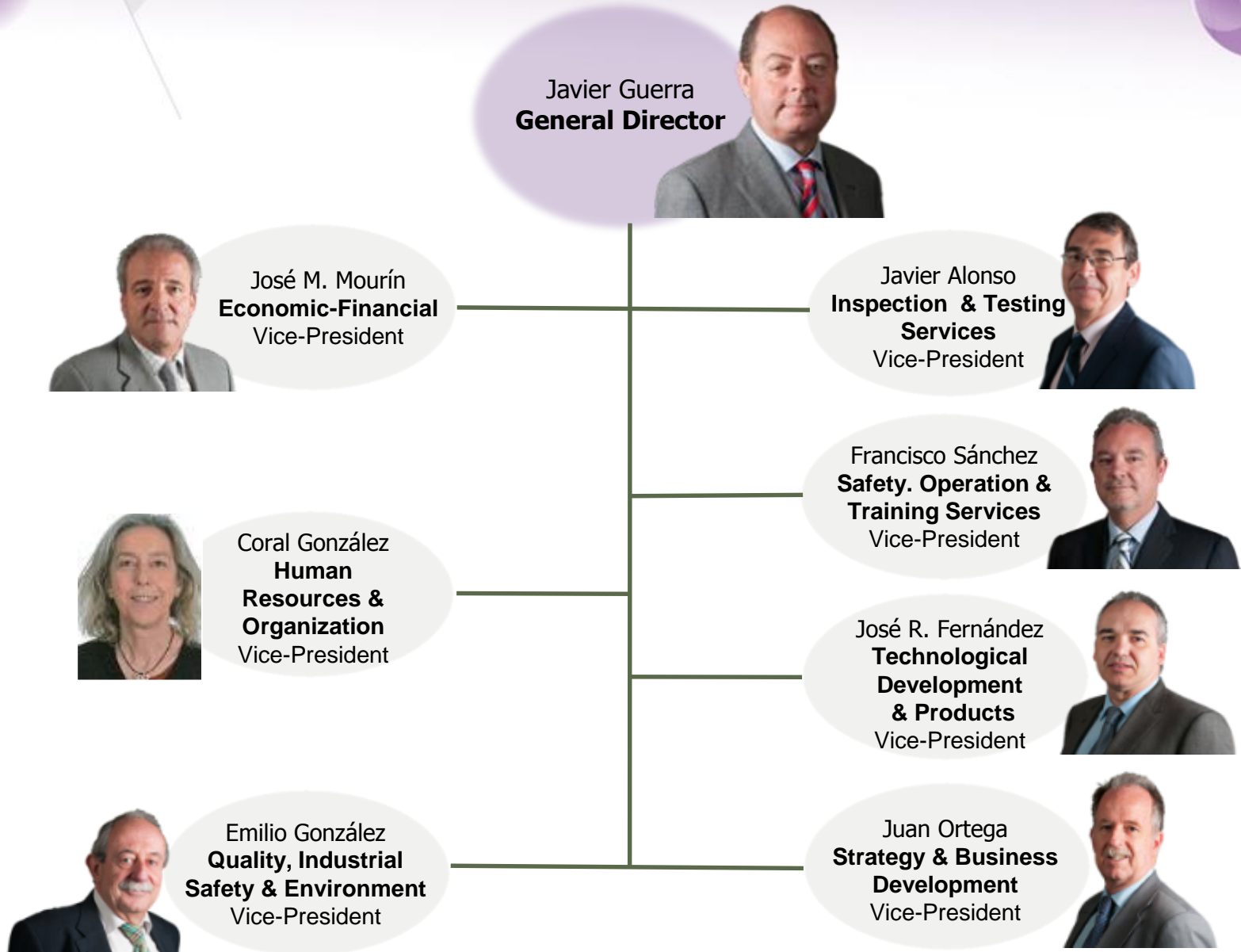
Income: 30,033 M€
Staff: 28,017
Power: 45,089 MW
Customers: 32.63 M
Countries: 12



Income: 24,742 M€
Staff: 23,000
Power: 14,000 MW
Customers: 23 M
Countries: 32

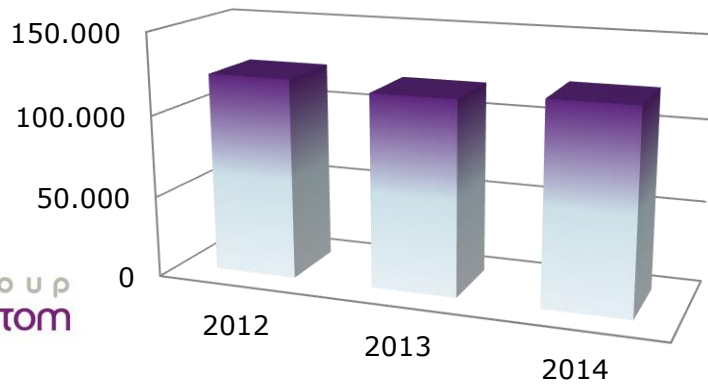
Treasury Stock

Organization



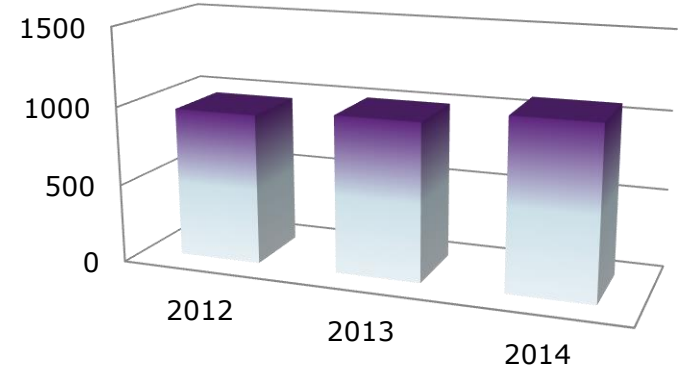
Figures (Year 2014)

Turn Over



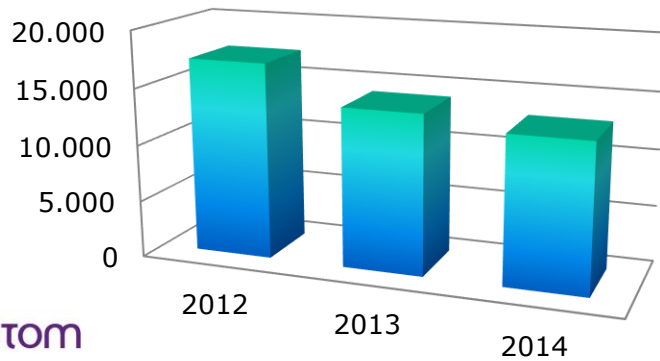
	2012	2013	2014
Thousands Euros	122.540	117.993	122.066

Workforce

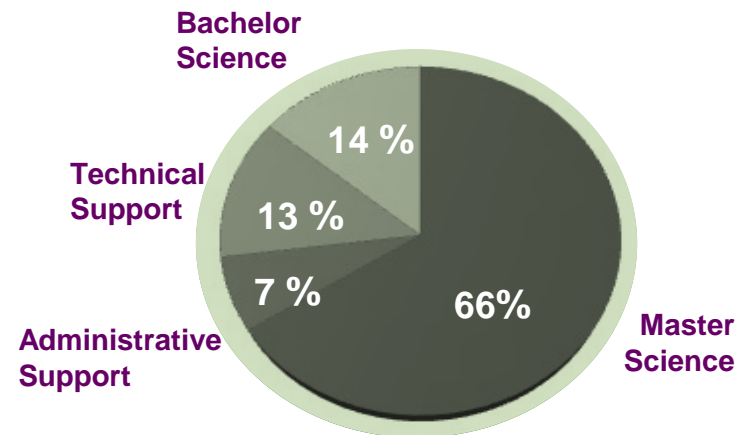


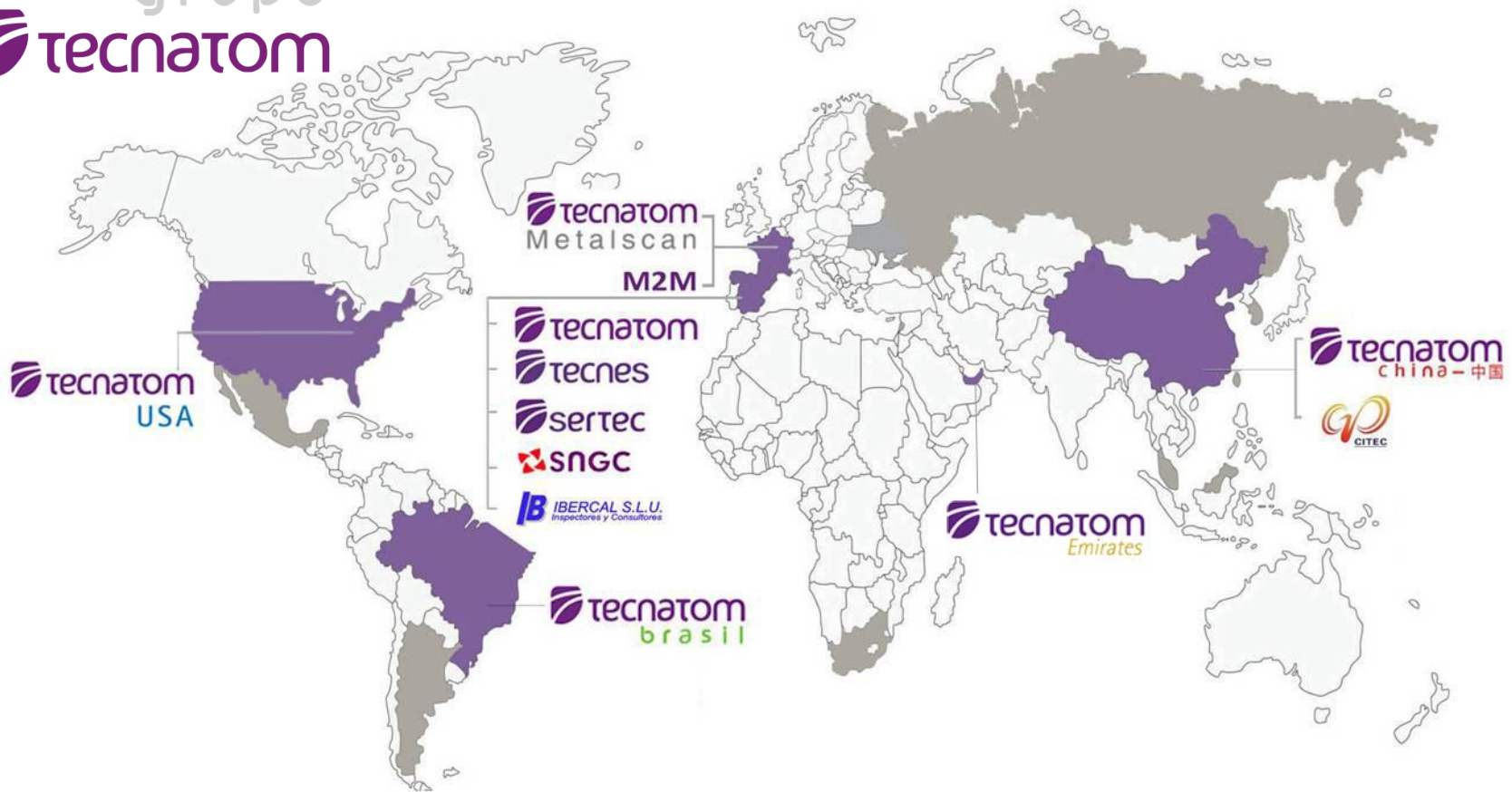
	2012	2013	2014
Workforce	956	998	1080

Investment



	2012	2013	2014
Thousands Euros	17.250	14.000	12.927





Group Tecnatom

Tecnatom	M2M
Tecnatom Metalscan	Tecnes
Tecnatom USA	Sertec
Tecnatom do Brasil	Ibercal
Tecnatom China	SNGC
	CITEC

Technical Support Centres

Tecnatom Tarragona
Almaraz Nuclear Power Plant
Cofrentes Nuclear Power Plant
Garoña Nuclear Power Plant
Trillo Nuclear Power Plant

Agents

Argentina	Mexico
Russia	South Africa
South Korea	Taiwan
China	Ukraine
UAE	Israel
Malaysia	USA

Tecnatom Europe

Objectives: Development and manufacturing of inspection equipment and UT probes, consulting and non-destructive control services

Tecnatom Sharing: 100%



Objectives: Development and manufacturing of UT and Eddy-currents NDT systems, based on the most advanced Phased Array technologies

Tecnatom Sharing: 53,45%



Objectives: Management of the Emergency Support Center (CAE) and Operational Support to power plants

Tecnatom Sharing: 100%



Objectives: Support Tecnatom in the delivery of high added value services

Tecnatom Sharing: 100%



Objectives: Wide range of non destructive testing services and support within the industrial, energy and aerospace markets

Tecnatom Sharing: 100%



Tecnatom America



Objetives: Support and development of Tecnatom capabilities in the domestic and international market in nuclear and diversified activities.

Tecnatom Sharing: 100%

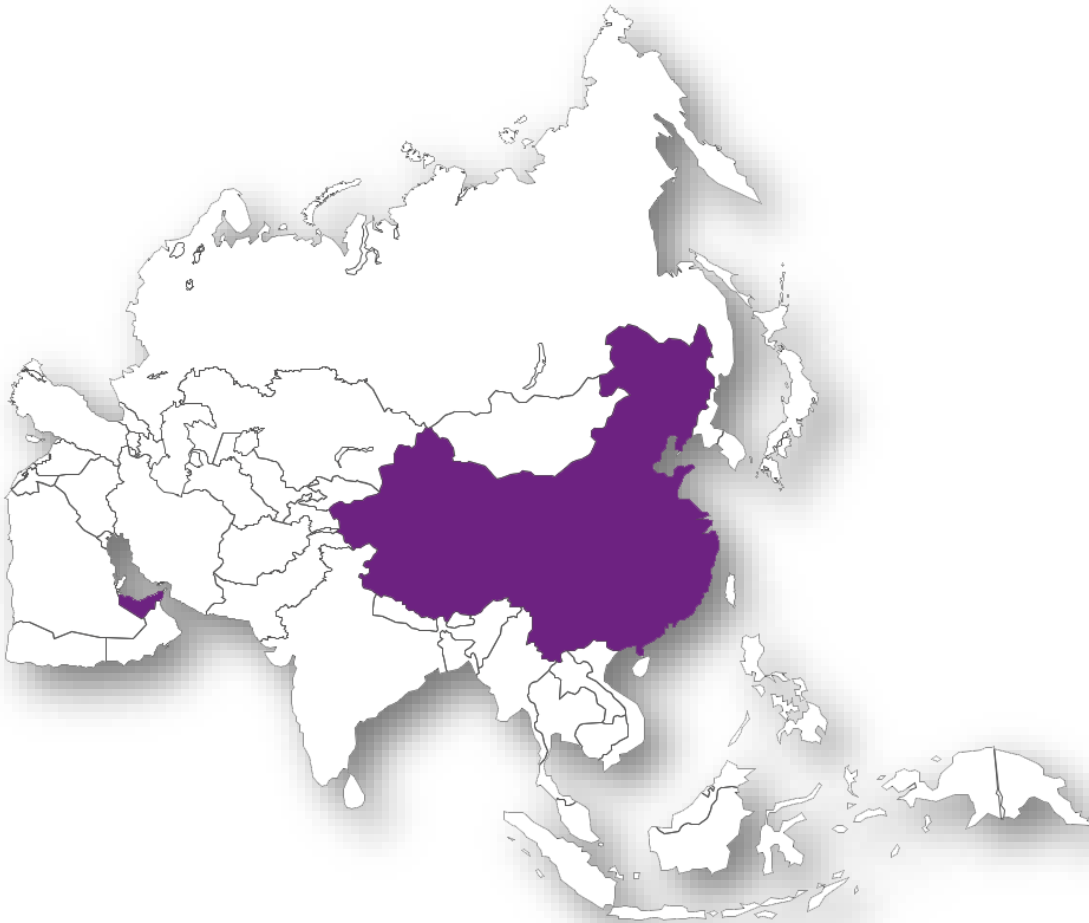


Objetives: Support and develop the establishment of Tecnatom within the nuclear, thermal and aerospace markets in Brasil

Tecnatom Sharing: 90%



Tecnatom Middle East & Asia



Objectives: Deliver a wide range of pre-service and in-service inspection services to the chinese nuclear power plants

Tecnatom Sharing: 25%



Objectives: promote and develop the power generation and aerospace markets in China in the areas of Safety, Operation, Training and inspection equipment

Tecnatom Sharing: 100%



Objectives: promote and develop the power generation and aerospace markets in Arab Emirates and in the areas of Safety, Operation, Training and inspection equipment

Tecnatom Sharing: 100%





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TECHNOLOGICAL
CAPABILITIES

- Training
- Simulation
- Control Rooms
- Operation Support
- Emergency Support
- Engineering
- Inspection
- Tests
- END Systems
- END Products



Technological Capabilities

Training Services

- ✓ Training Centres Organization
Design, Organization, Management
- ✓ Integral Training Services
Recruitment, Selection, Qualification
- ✓ Development of Advanced Training Tools and e-learning
Training Programs, Field Simulators, etc.
- ✓ Training Operation License & NLO Personnel
- ✓ Training based on SAT Methodology (INPO Standards)
- ✓ Training in Emergency Response
- ✓ Nuclearization Training Programs
- ✓ Master Courses in Electrical Generation



Technological Capabilities

Simulation Technologies

- ✓ **Simulator Supply and Upgrade**
Different Scopes and Technologies
- ✓ **Modernization of Simulator Platforms**
Best-estimate models implementation
New Simulation Tools
- ✓ **Operation and Maintenance of Simulators**
Management System Configuration
SW and HW Corrective Maintenance
Plant Modifications Implementation
- ✓ **Simulator Assisted Engineering**
Safety Analysis Support
Plant Design Modification Assessment
Plant Procedures and I&C Systems Validation
Virtual Reality



Technological Capabilities

Control Rooms

- ✓ Human Factor Engineering (HFE)
- ✓ Human Machine Interface Engineering (HMI)
Analysis, Design and V&V
- ✓ Control Room Design and Supply
- ✓ I&C System Modernization
Control Room Modernization
Digital Control Systems
Plant Process Computers
- ✓ Computerized Operation Support Systems



Technological Capabilities

Operation & Emergency Support

- ✓ Licensing and Start-up Support
- ✓ Operation Procedure Development
 - Operation, Radiological Protection, etc.
- ✓ Incident Analysis
- ✓ Operation Experience Management
- ✓ Severe Accident Management Guidelines Tools
- ✓ Emergency Plans Development
- ✓ Dosimetry Services:
 - Internal and Bioassay
- ✓ Emergency Support Center (CAE)
 - Design Development and Management
- ✓ Monitorized System & Cycle Optimization
 - TECSOLCEP©
- ✓ Safety Culture Management
 - Leadership, Coaching, Safety Assessments



Technological Capabilities

Engineering Services

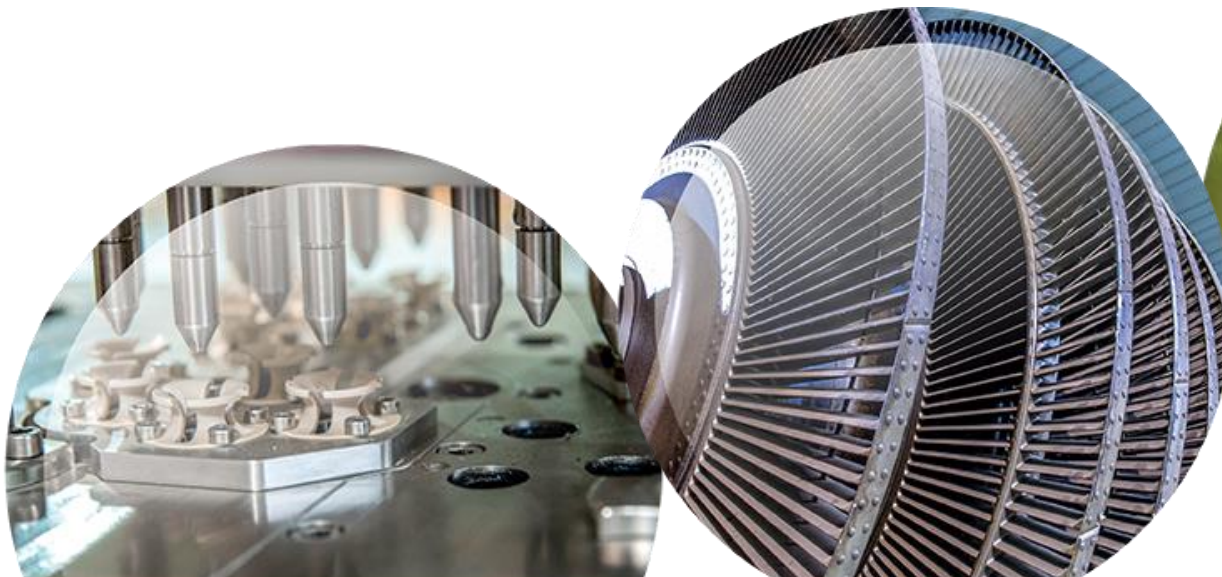
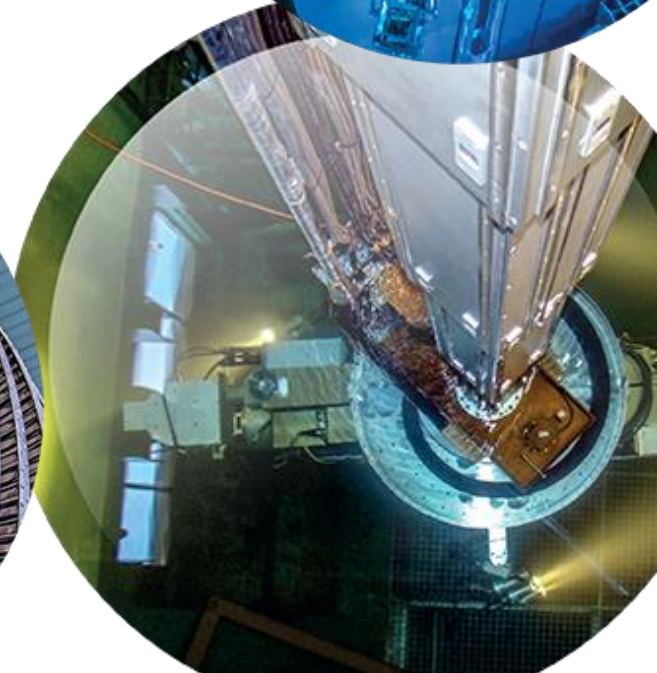
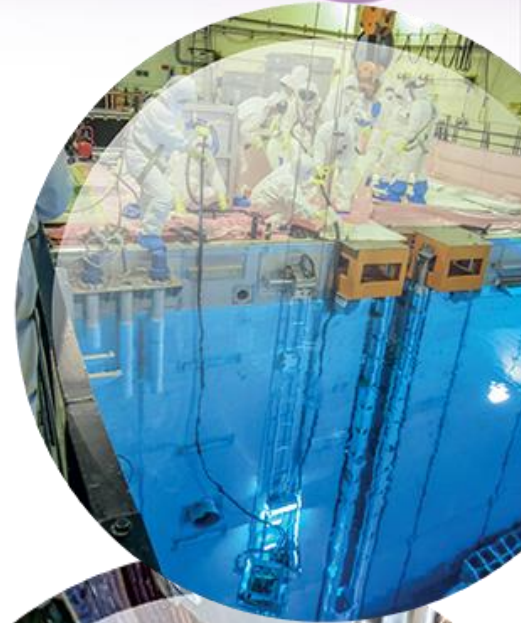
- ✓ Engineering and ISI Programs
- ✓ Structural Integrity Assessment
- ✓ Materials Characterisation
- ✓ Long Term Operation Engineering (LTO)
- ✓ Qualification of Safety-Related Component
- ✓ Dedication of Commercial Grade Component
- ✓ Warehouse Optimization Services
- ✓ Maintenance Optimization Services
- ✓ Supply of Nuclear Class Equipment & Spares



Technological Capabilities

Inspection Services

- ✓ Automated In-Service Inspections
- ✓ Inspections of Mechanical Component
- ✓ NSSS Component
- ✓ Nuclear Fuel
- ✓ Safety-Related Component
- ✓ BOP and Turbo Generators



Technological Capabilities

Testing Services



- ✓ Valves Diagnosis and Leak Testing
- ✓ Calibration & PSV Leak Testing
- ✓ Containment Leak Testing (ILRT)
- ✓ HVAC Testing
- ✓ Electrical Testing
- ✓ Plant and Cycle Efficiency Testing
- ✓ I&C Testing
- ✓ Snubbers & Springs Testing
- ✓ Certified Laboratories

Pressure, Temperature & Gas Flow Rate

Technological Capabilities

Automated Robotized NDT Systems

- ✓ Tailored for Metallic and Composite Materials
- ✓ Suitable for Energy and Aerospace Industries
- ✓ Highly Integrated NDT & Motion Controlled Products
- ✓ In-line and Off-line Inspections
- ✓ Robotized Immersion Tanks
- ✓ Portal Gantry & Robotized Systems
- ✓ UT, Eddy Current and Phased-Array Technologies



Technological Capabilities

NDT Products

✓ Instruments & Sensors (Electronic & Software)

Ultrasonic (SONIA, Inspectview)
Eddy Current (Etbox, Teddy)

✓END Methods

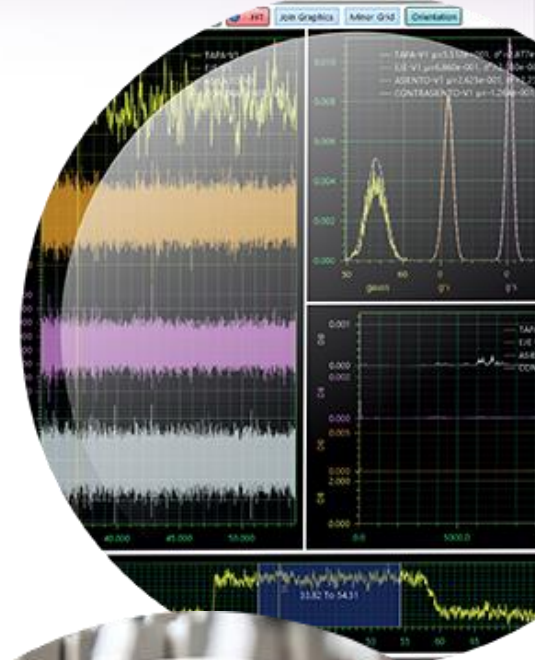
Ultrasonic
Eddy Current,
Visual
Thermography

✓Sensors for Gammagraphy

✓Technological Independence

✓Markets

Energy
Aerospace
Oil&Gas
Railway



3 Markets

Activities

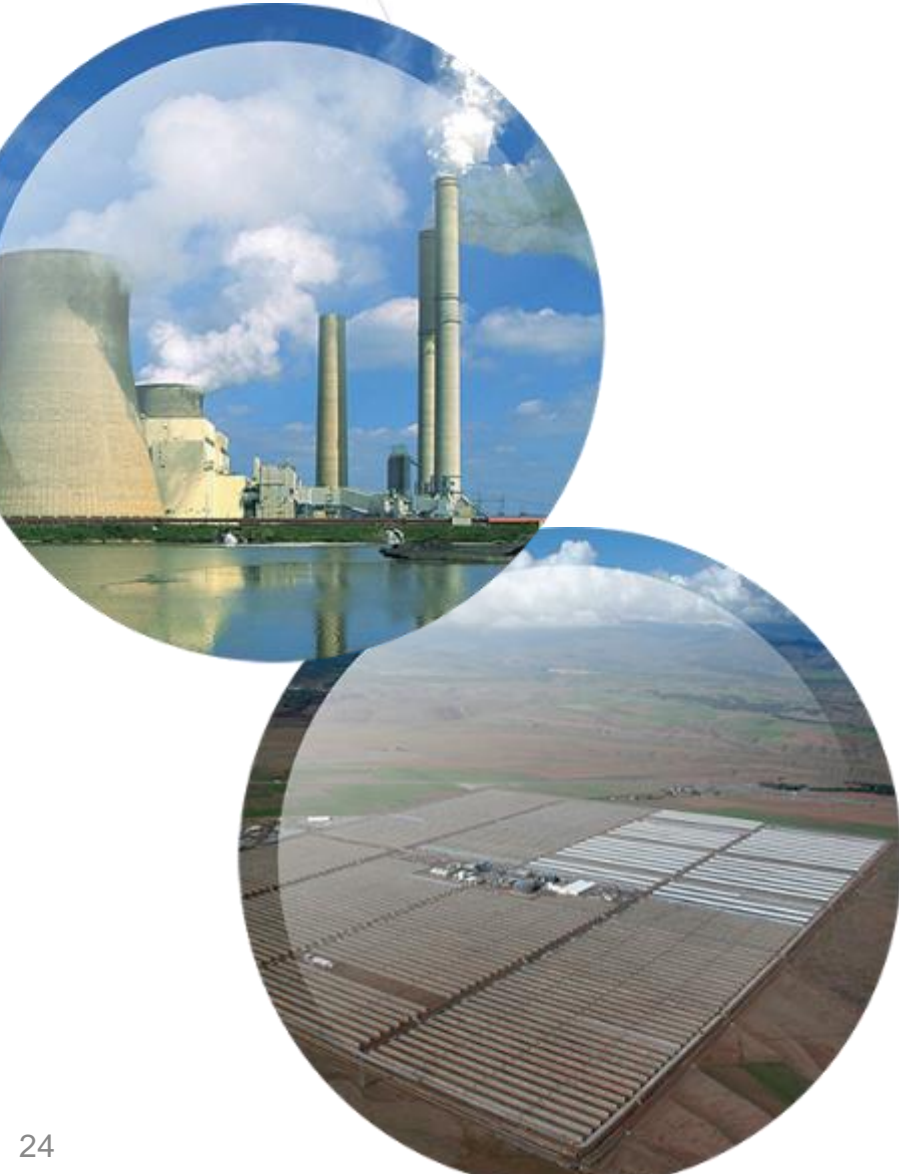
Nuclear Power Plants

- ✓ All Technologies
PWR, BWR, PHWR
- ✓ All Reactor Models
Westinghouse, GE, VVER, KWU, APR-1400,
CNP-600, CPR-1000, AP-1000, ABWR,
ESBWR, CANDU
- ✓ NSSS & BOP
- ✓ Integral Training Services
- ✓ Training Programs and Advanced Tools
- ✓ Simulators
- ✓ Control Rooms Design and Upgrading
- ✓ Plant Operation Support
- ✓ Testing and Inspection Services
- ✓ Maintenance
- ✓ Spare Parts and Component Supply



Activities

Fossil and Renewable Plants



- ✓ All Technologies

- CCGT
- Fossil Plants
- Renewables

- ✓ Training Services

- Integral Training Service (SIF)
- Specific Courses
- Training Programs
- Advanced Training Tools

- ✓ Plant Operation Support

- ✓ Simulators

- ✓ Maintenance

- ✓ Testing and Inspection Services

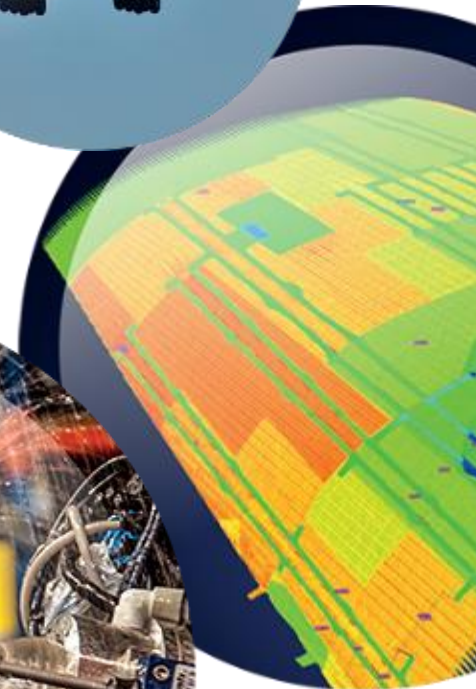
- NDT (principal components)
- Leak Testing
- Electrical Testing

- ✓ Spare Parts and Component Supply

Activities

Aerospace

- ✓ **Automatic Inspection Systems**
Robot, Cartesian, Customized System, Immersion Pool
- ✓ **Semi-Automatic & Manual Inspection Systems**
- ✓ **Different Inspection Techniques**
Ultrasonic (Pulse-Echo, Transmission, Multi-techniques)
Eddy Current
Other Technique (Visual, Thermography, etc.)
- ✓ **Technologies**
Conventional
Phased Array
Ultrasonic by Laser
Multi-frequency
- ✓ **Data Acquisition Systems**
- ✓ **Inspection Services**
- ✓ **Engineering & Technical Assistance**



Activities

Industrial

- ✓ **Industrial Sector**
 - Oil & Gas (Upstream y Downstream)
 - Petrochemical
 - Process Industry
 - Railway

- ✓ **Operation Support**

- ✓ **Human Factors Engineering**
 - Control Room Modernization

- ✓ **Simulation**

- ✓ **Training Services**

- ✓ **Human Factors**
 - Safety Culture, Organizational Culture & Behaviour

- ✓ **Testing and Inspection Services**
 - END Components and critical equipment
 - Leak Testing
 - Electrical Testing



Activities

Advanced Reactors

Started in **1991**

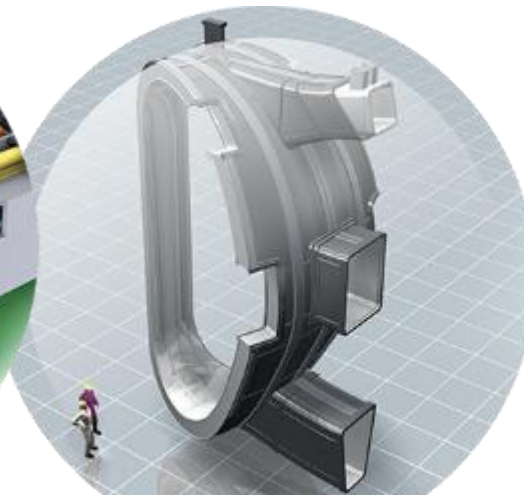
“SBWR and ABWR Reactors of General Electric”
“AP600 of Westinghouse”

Since **1997**

“Lungmen NPP” (Taiwan): ABWR of General Electric”

Now

ABWR and ESBWR of General Electric-Hitachi
AP1000 and ABWR of Westinghouse-Toshiba
CPR1000 / CNP600 of CNPE
APR-1400 and EPR: advanced reactors PWR
Halden – Generation IV research (Norway)
JHR – Jules Horowitz Reactor (France)
ITER – Fusion Technology (France)
IFMIF – Materials Irradiation Facility (Japan)



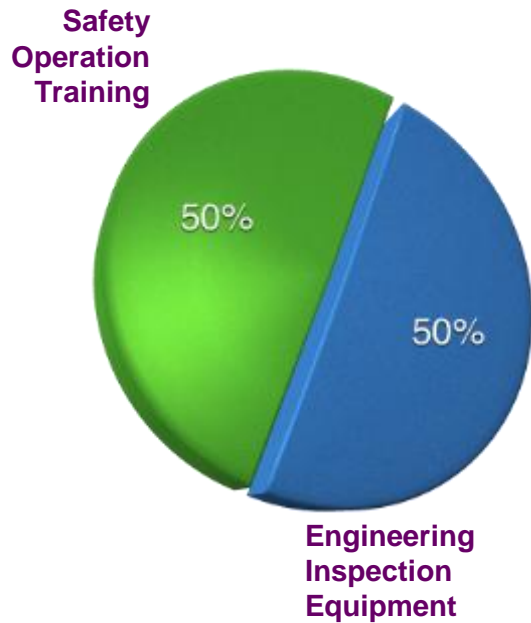
Our Clients

Certified by Customers at 30 different countries
QA System extensively Audited: Average of 25 audits/year as
Service and Technology Provider

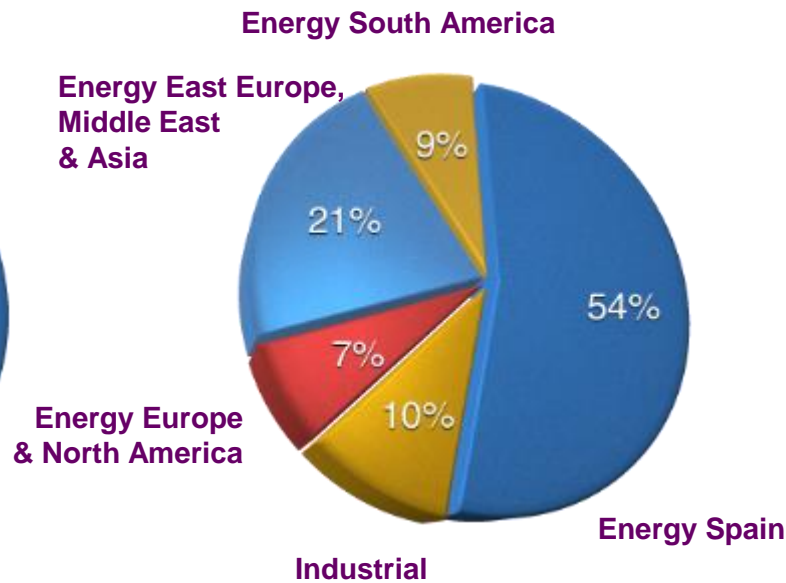


Market Breakdown (Year 2014) Tecnatom S.A

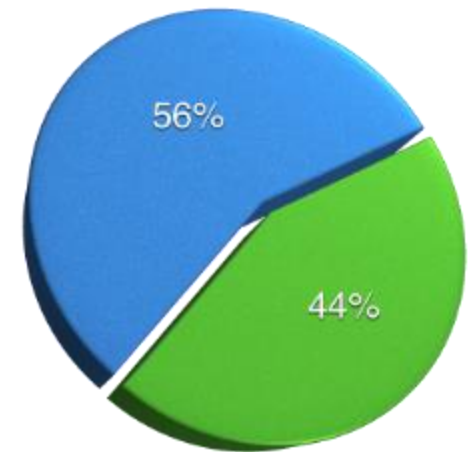
Activities



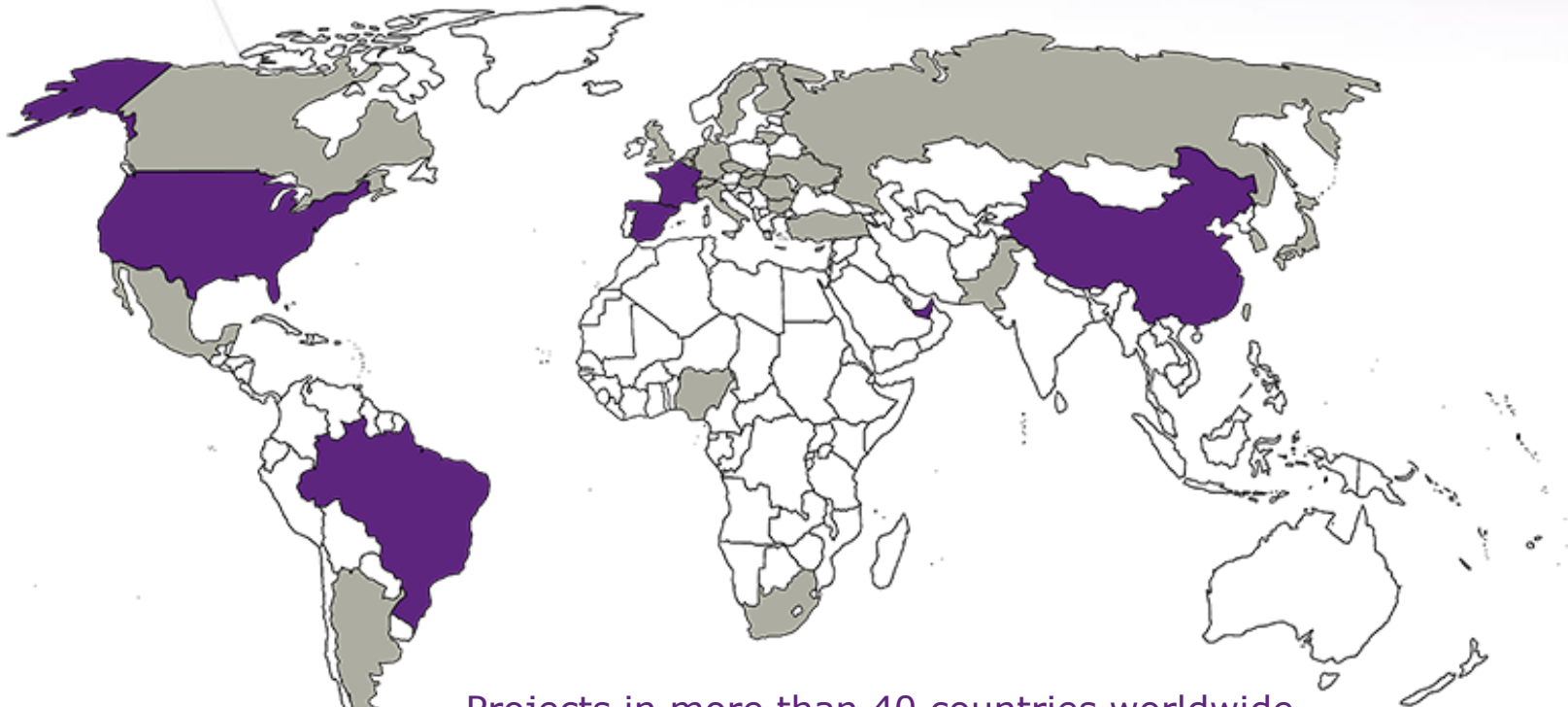
Markets



National / Exportation



References



Projects in more than 40 countries worldwide
Large Portfolio of Technical Capabilities and Services Range
All Reactor Technologies and Advanced Reactors
Fossil and Renewable Power Plants
Aerospace and Industrial Systems
Oil & gas
Technological Independence for Services and Equipment Supply
Business Group with a global presence
Highly Qualified Professionals



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