

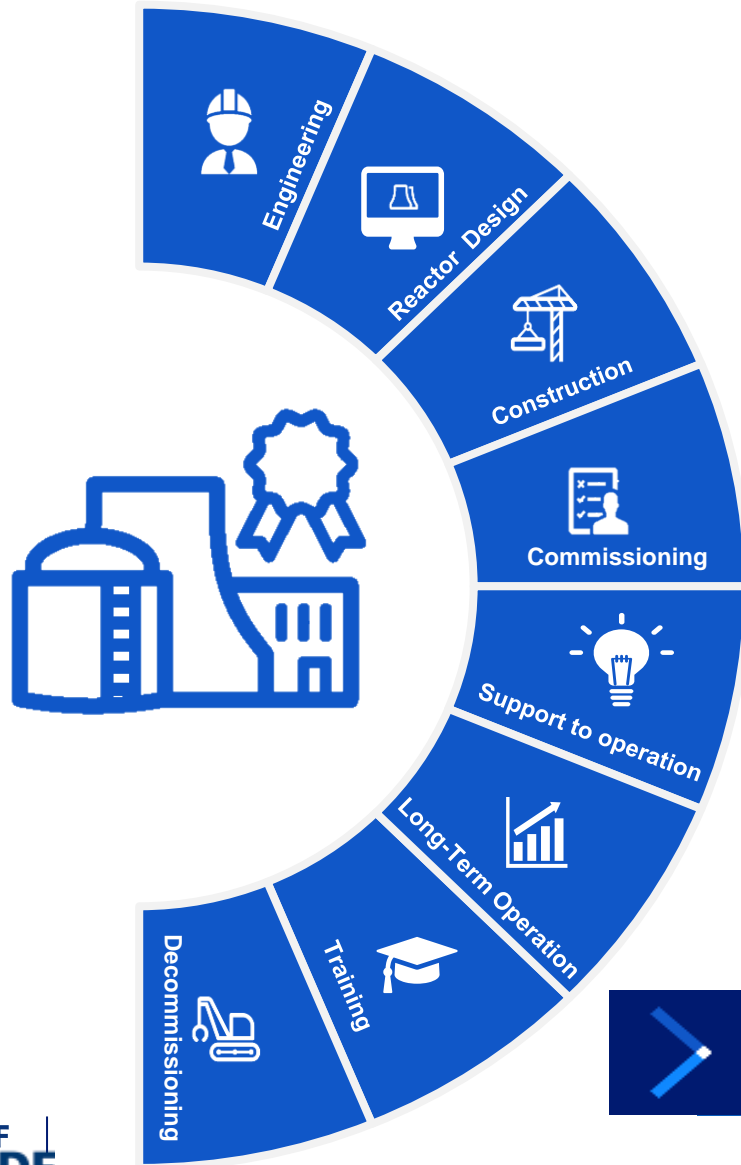


SUPPLY CHAIN

EDF Supply Chain
France nuclear strategy in a
European context - Nuclear Supply
Chain and Industrial Opportunities

EDF, THE WORLD LARGEST FLEET OPERATOR

SUPPLY
CHAIN



57 reactors
in operation
63 GWe



9 reactors
in operation
5,9 GWe
2 reactors in
construction (HPC)



2 Reactors in operation*
* EDF minority shareholder



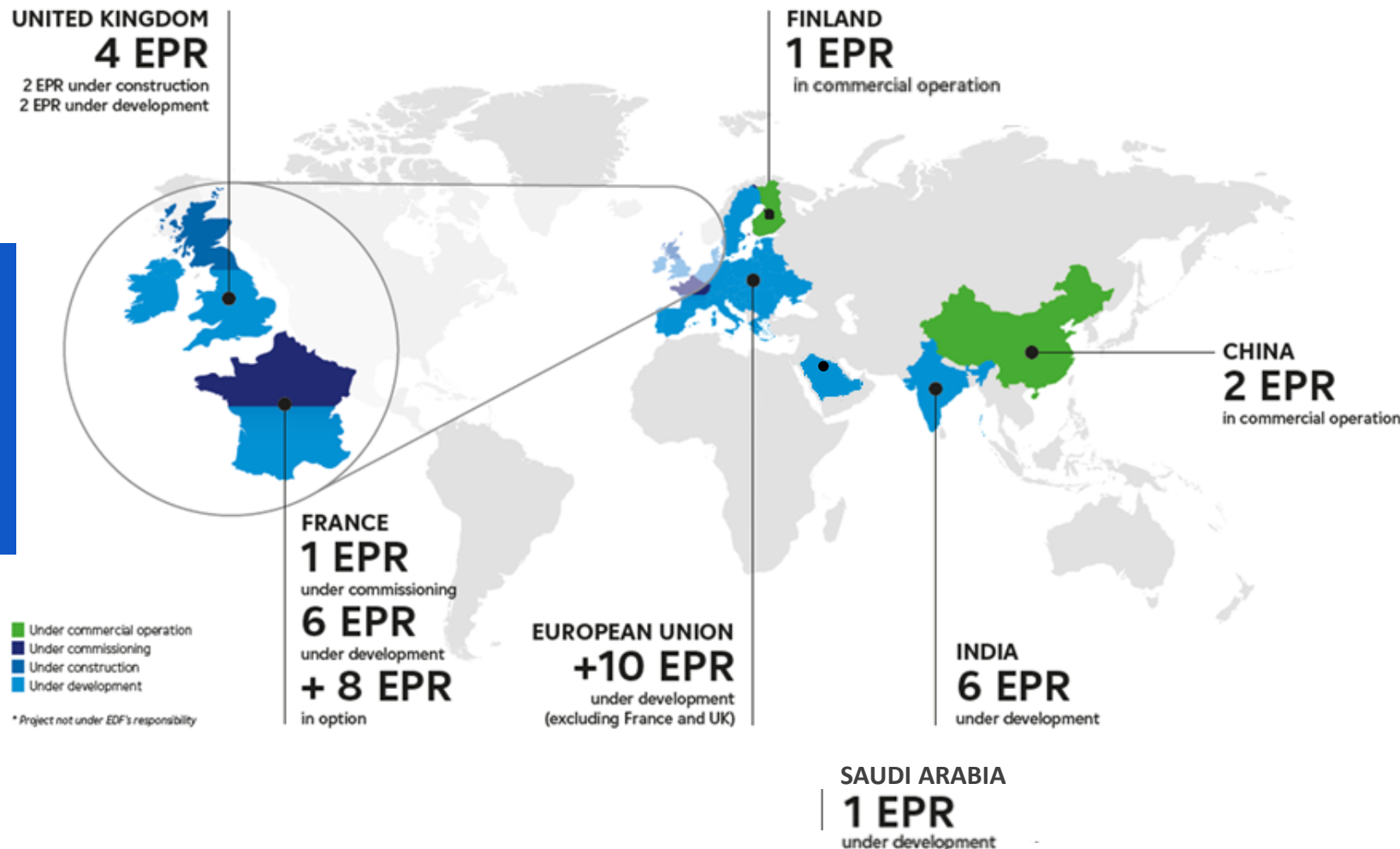
- **2200 reactor-years** of operating experience
- **French Government's commitment** to a fleet expansion programme of **6 to 14 EPR2 units**
- **UK Government's commitment** to continue the EPR program with **2 more units at Sizewell C**

EDF is the only operator & vendor with ongoing construction activities in Europe and a strong domestic program

A CONCRETE PERSPECTIVE FOR UP TO 30 EPR PROJECTS ACROSS THE WORLD

SUPPLY
CHAIN

NUWARD : 11
prospect
countries in
Europe and 20
worldwide



EDF is fully engaged in nuclear new build activities and is committed to supporting several countries in their nuclear program development with a focus on Europe and India

BUILDING A LOCAL SUPPLY CHAIN : HINKLEY POINT C EPR, THE UK EXAMPLE

 **£18 Billion**

The total projected economic value to the UK.

 **71,000**

The total projected jobs to be supported by the project.

 **£3.2 Billion**

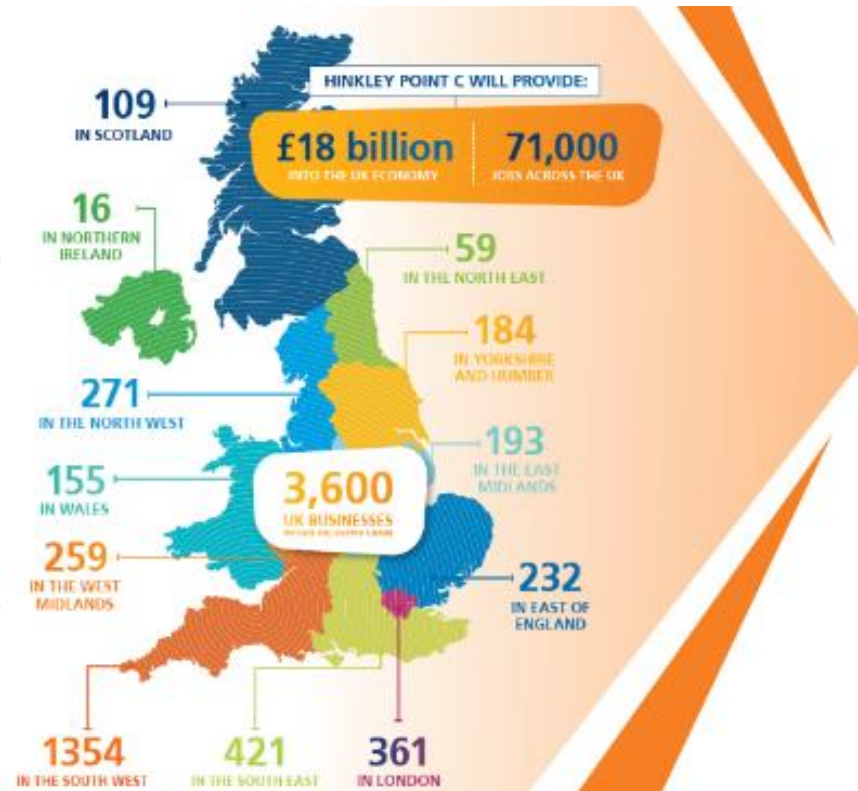
spent with companies in the South West to date against a target of £1.5 billion during construction.

 **£140 Million**

spent with companies in Wales to date.

 **64%**

of the value of Hinkley Point C contracts have been awarded to UK-based companies to date against a target of 57%.

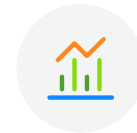


The UK experience is a demonstration of EDF's strong capabilities to create direct local value, with a long-lasting impact for the neighbouring regions and overall nuclear industry

SUPPLY CHAIN MANAGEMENT BY EDF

SUPPLY
CHAIN

- ✓ Definition of long-term strategic policies and panels
- ✓ Qualification of EDF's suppliers
- ✓ Assessment of manufacturing and installation activities
- ✓ CFSI assessments and audits
- ✓ Suppliers risk assessment
- ✓ Supplier development / recovery



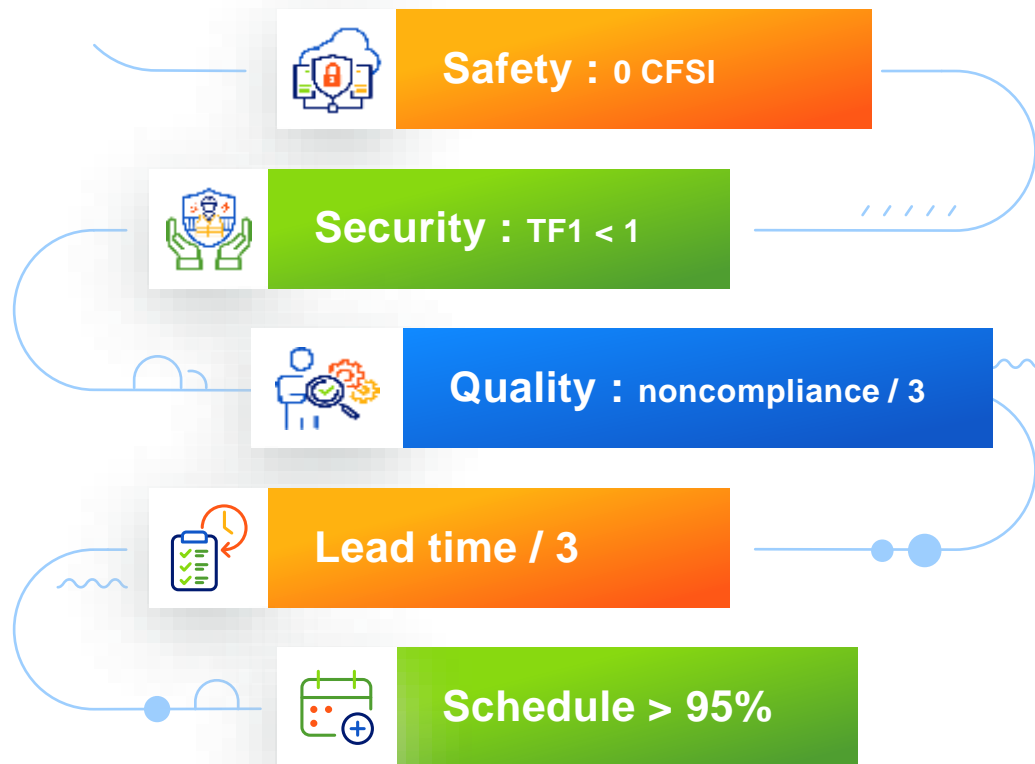
In Brief

EDF internal network :
Engineering, operators' and subsidiaries (EDF, EVVANCE, FRAMATOME, ARABELLE SOLUTIONS, DALKIA) share information, practices and learned lessons.

EDF's external networks :
GIFEN (French Nuclear Industry Association – more than 3,000 companies and 22,000 employees) and takes part in several professional associations' networks all around the world.

SUPPLIERS INDUSTRIAL PERFORMANCE

To achieve its goals in terms of safety and performance, the nuclear industry is aligning itself with the best practices and fundamentals of operational excellence. Targets:



Excell Manufacturing system



PRACTICAL STEPS FOR A ROBUST SUPPLY CHAIN

REGULAR TARGETED SUPERVISION AND OVERSIGHT

SUPPLY
CHAIN

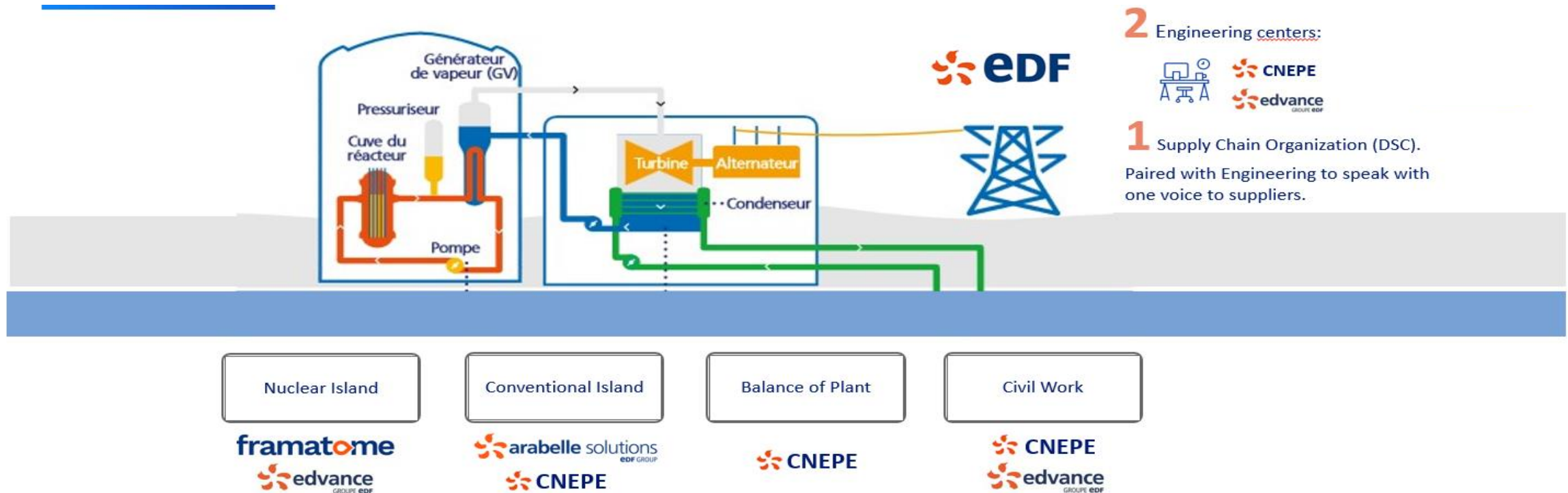
MANUFACTURING EXCELLENCE STRATEGY AT EDF

- ✓ Supervision is based on a **risk analysis** and **focused** on high **priority activities**, keeping in mind that suppliers remain responsible for their manufacturing and control
- ✓ Supervision takes into account **accumulated project experience**
- ✓ Supervision is performed both at the **equipment** and **plant process** level
- ✓ As much as possible, supervision activities are grouped in a **limited number of visits**, set-up in cooperation with suppliers and taking into account industrial constraints
- ✓ Supervision includes CFSI prevention and detection actions such as **unexpected** visits, repeat inspection (Non destructive or destructive testing) ...

EDF FAMILY FOR THE EUROPEAN REACTORS

OPPORTUNITIES WITH EDF'S MAIN PARTNERS AS TIER 2 & 3

SUPPLY
CHAIN



SUPPLIERS ENTER EPR VALUE CHAIN DIRECTLY VIA EDF, ITS PARTNERS OR ITS SUPPLIERS

A COLLABORATIVE APPROACH TO DEVELOP PARTNERSHIP BETWEEN HISTORIC EPR SUPPLIERS AND THE LOCAL INDUSTRY

SUPPLY
CHAIN

Local industry

Thorough
knowledge of
country
legislation

Experience of
local nuclear
market &
regulations

Familiar in
domestic
standards &
industrial
practices



Experience in
EPR
technologies

EPR Suppliers

Familiar with
worldwide
nuclear
requirements

Benefit from
experience
feedback on
previous and
undergoing
projects

Nuward’s goals bring changes to the value chain: long-term, partners, involved early, across multiple geographies, bringing modularity and EPCC expertise

Nuward targets	Implications for our value chain
Aim for several SMRs by 2050	 Build long-term commitment with key partners for invariant items, in a Program strategy, to secure economies of scale and experiences gains for them and us
Be export-ready	
Design the product prior to sites identification	 Involve partners (designer, manufacturers) early in the Design phase of the program
Deliver projects in 48 months at a competitive price	 Develop an international supply chain spread across targeted countries
Maximize value for Nuward	 Secure new types of partners for modularity, digital and overall EPCC delivery

Thanks

