How to win New Build Supply Chain Challenges?

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An energy mix that meets our customers' requirements

- **World leader in nuclear power**
  - **A unique integrated model, from uranium mining to reactor design and related services to used nuclear fuel recycling**
- **A major player in renewable energies**
  - **A portfolio of diversified operations: offshore wind, bioenergies, concentrating solar power, hydrogen and energy storage**

Nuclear and renewables: contributing synergistically to a reliable, economical, carbon-free energy mix

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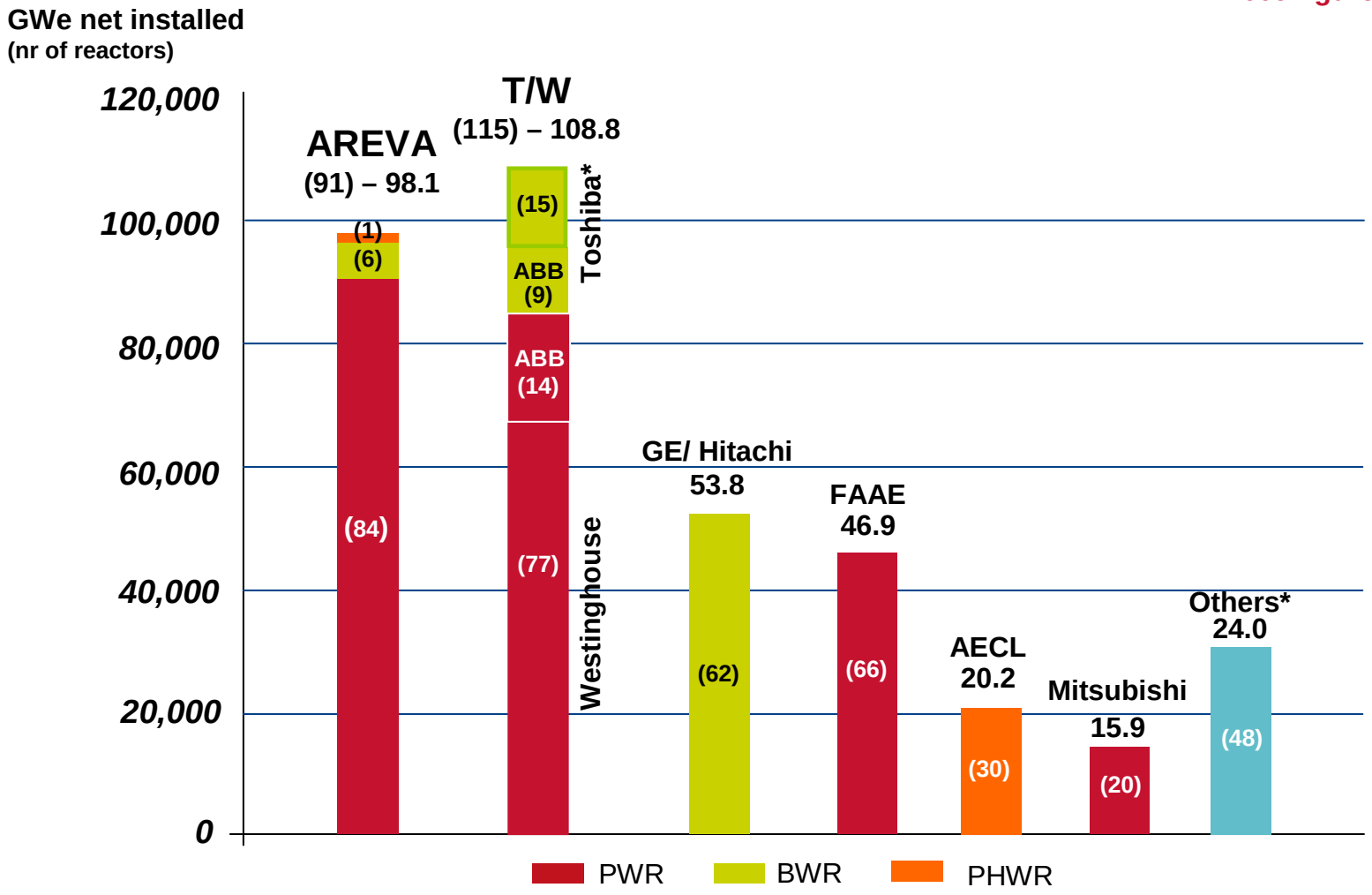
AREVA installed 26% of the worldwide generating capacity

2009 figures



*Others: 8 DHIC, 16 NPCIL, 18 GCR, 4 CNNC & 2 FBR

Source: AREVA

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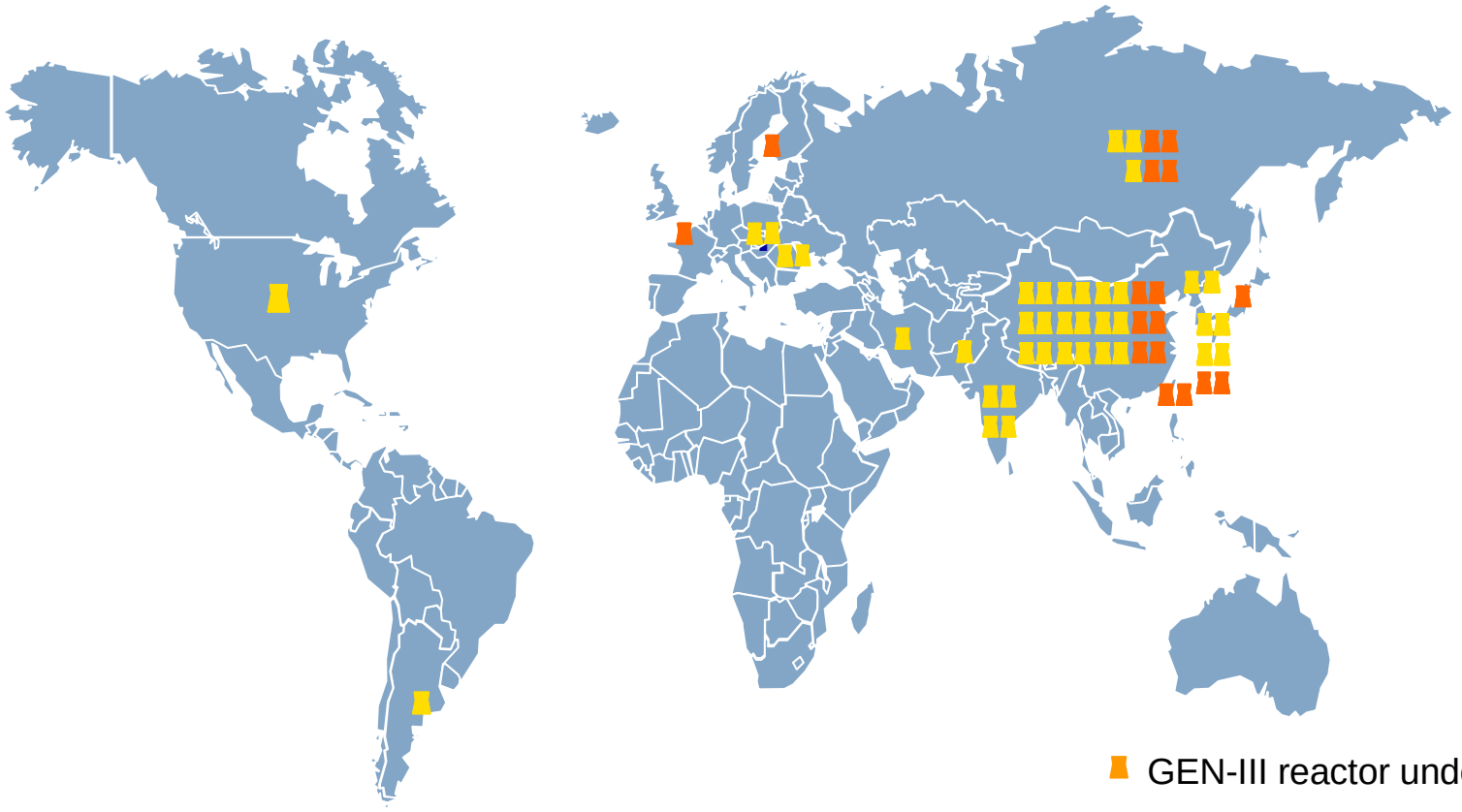
Plants under construction



GEN-III reactor under construction

GEN-II reactor under construction

Most ongoing construction in Asia
In transition to a new generation of plants

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4 EPR™ Units Under Construction

Flamanville 3

Olkiluoto 3

Taishan 1&2

The World's First Gen III+ Fleet to be deployed

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Olkiluoto:
The most advanced Gen3+ construction in the world

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Olkiluoto 3 moving forward:
First Heavy components installed, the RPV

June ‘10

Lifting of the RPV with the temporary crane

RPV installed

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Taishan 1 & 2

A pair of EPR™ units built with CGNPC, our Chinese partner

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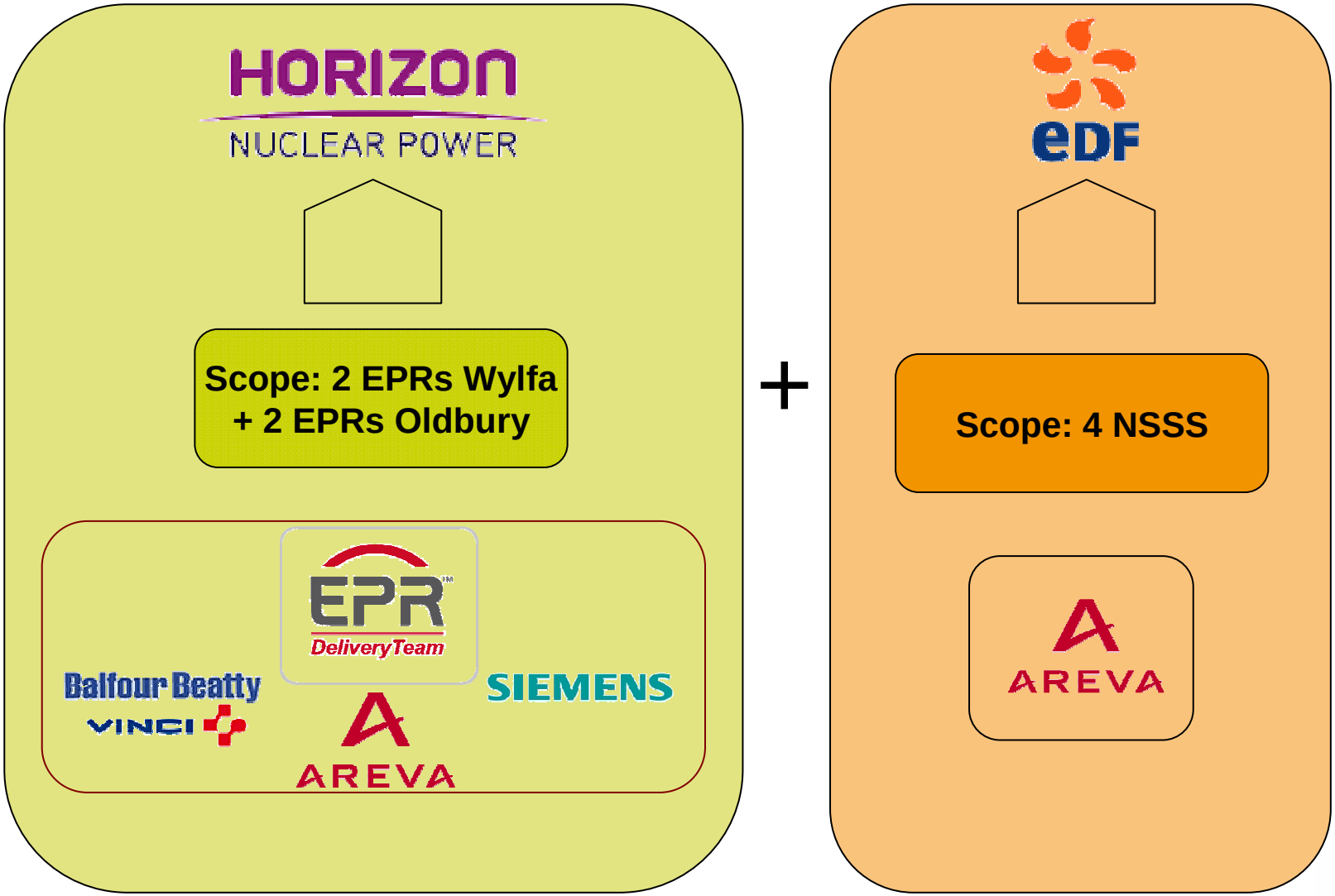
Taishan 2 start:
First concrete

April ‘10
First Concrete for unit 2

AREVA's 2 Delivery Models for UK clients



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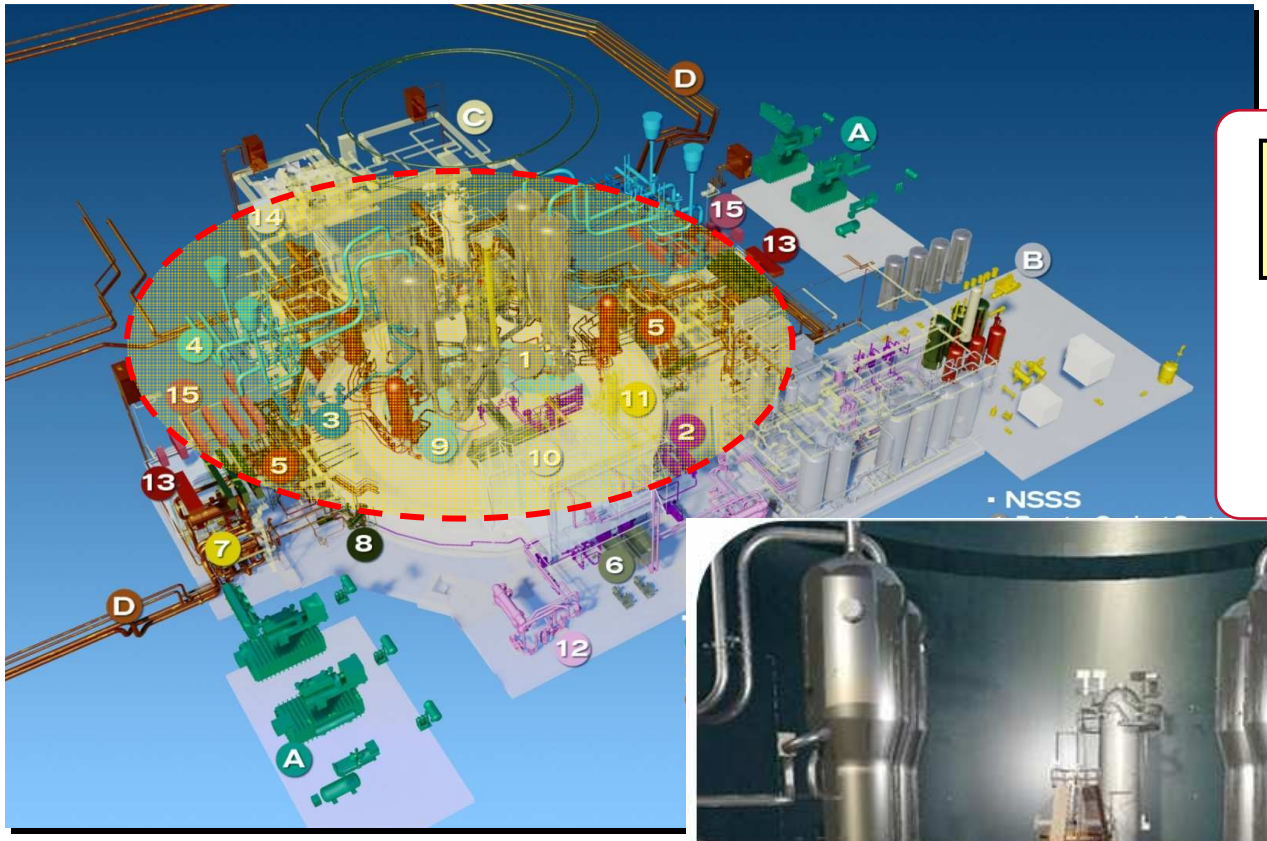
EDF Scope : the Nuclear Steam Supply System



Circa 30-40% from AREVA's plants, using 40+ global sub-suppliers

Remaining 60% of scope is available to other global suppliers.

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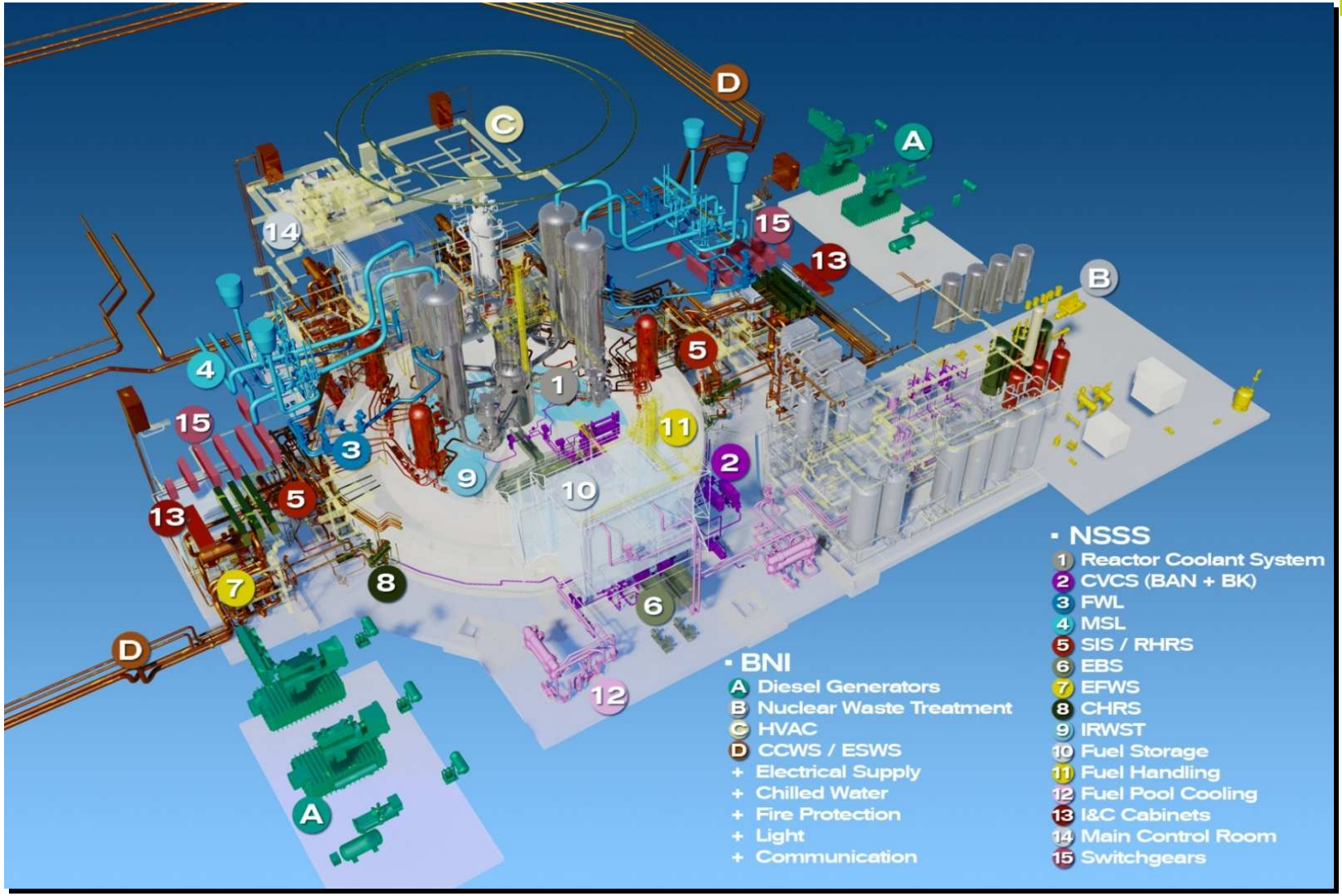
HNP scope – Full NI



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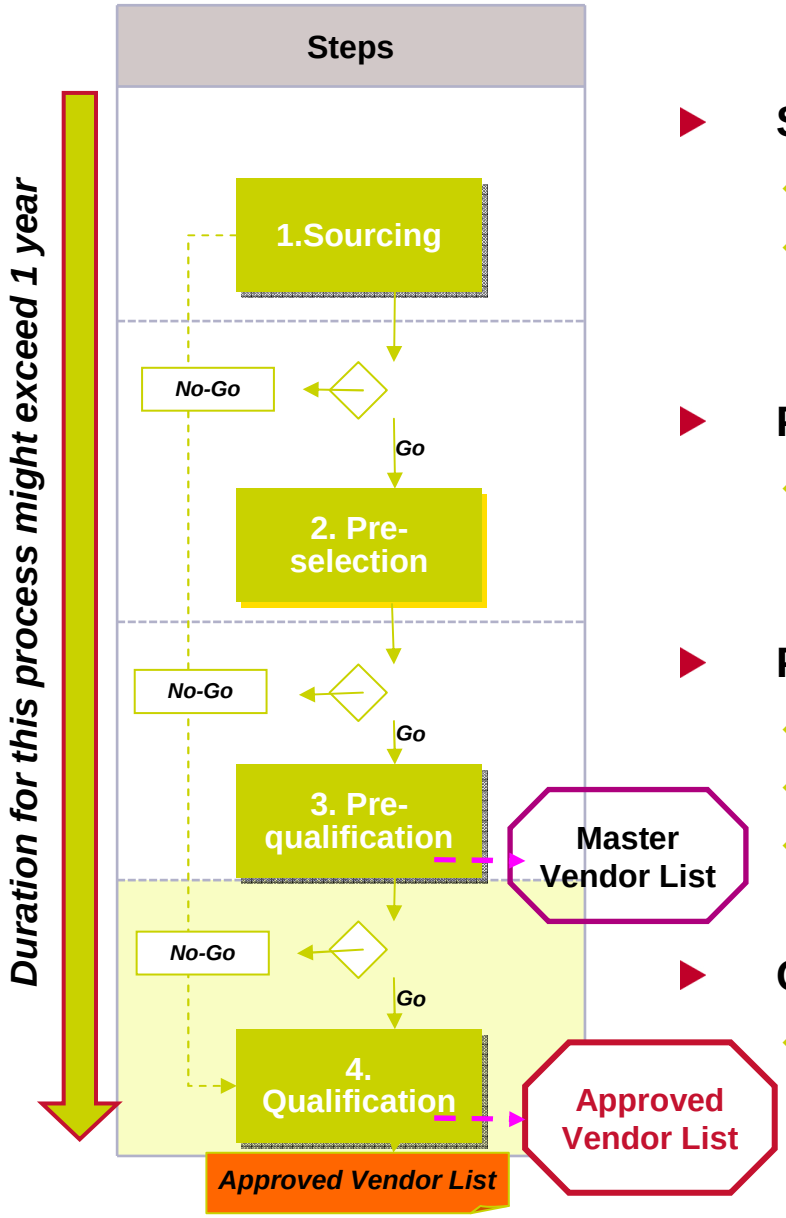
Sourcing Process & Interfaces



- **Sourcing:**
  - Request For Interest
  - Supplier Pre Selection according to RFI's Feedback analysis
- **Pre selection:**
  - Supplier Pre Assessment (**Quality management, design, manufacturing**,..)
- **Pre Qualification:**
  - **Action Plan** definition and follow up
  - Product or process **qualification tests** as necessary
  - Blank RFQ for detailed **technical assessment**
- **Qualification:**
  - **Before contract**, when the Qualification is satisfactory, approval of the Supplier **(Approved Vendor List)**

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UK suppliers - Manufacturers and Equipment

- **Suppliers Day: Birmingham, March 09,**
  - **some 120+ potential UK suppliers.**
- **250 companies RFI…**
- **Last 12 months: Visited over 50 potential suppliers,**
- **We are finding great companies: One company was signed up and started supplying AREVA within 6 months of our visit,**
- **Today:**
  - **18 UK companies supply AREVA for reactor projects including OL3, FA3, Taishan = AVL**
  - **A further 35 have been signed up as potential AREVA suppliers = MVL,**
- **What is next?**
  1. **Estimate some 60+ potential AREVA suppliers (AVL + MVL) by mid / late 2011, majority in Manufacturing,**
  2. **Individual "Company Improvement Programmes" to address those issues that limit that company's ability to tender and win… programmes that will run from mid 2011, a deep dive into key areas such as Quality, Safety, Accreditation, Cost Control etc**
- **All of this is focused on AREVA issuing "call for bids" for equipment as shown on following slide …**

AREVA ready to bring local certainty to new build projects.

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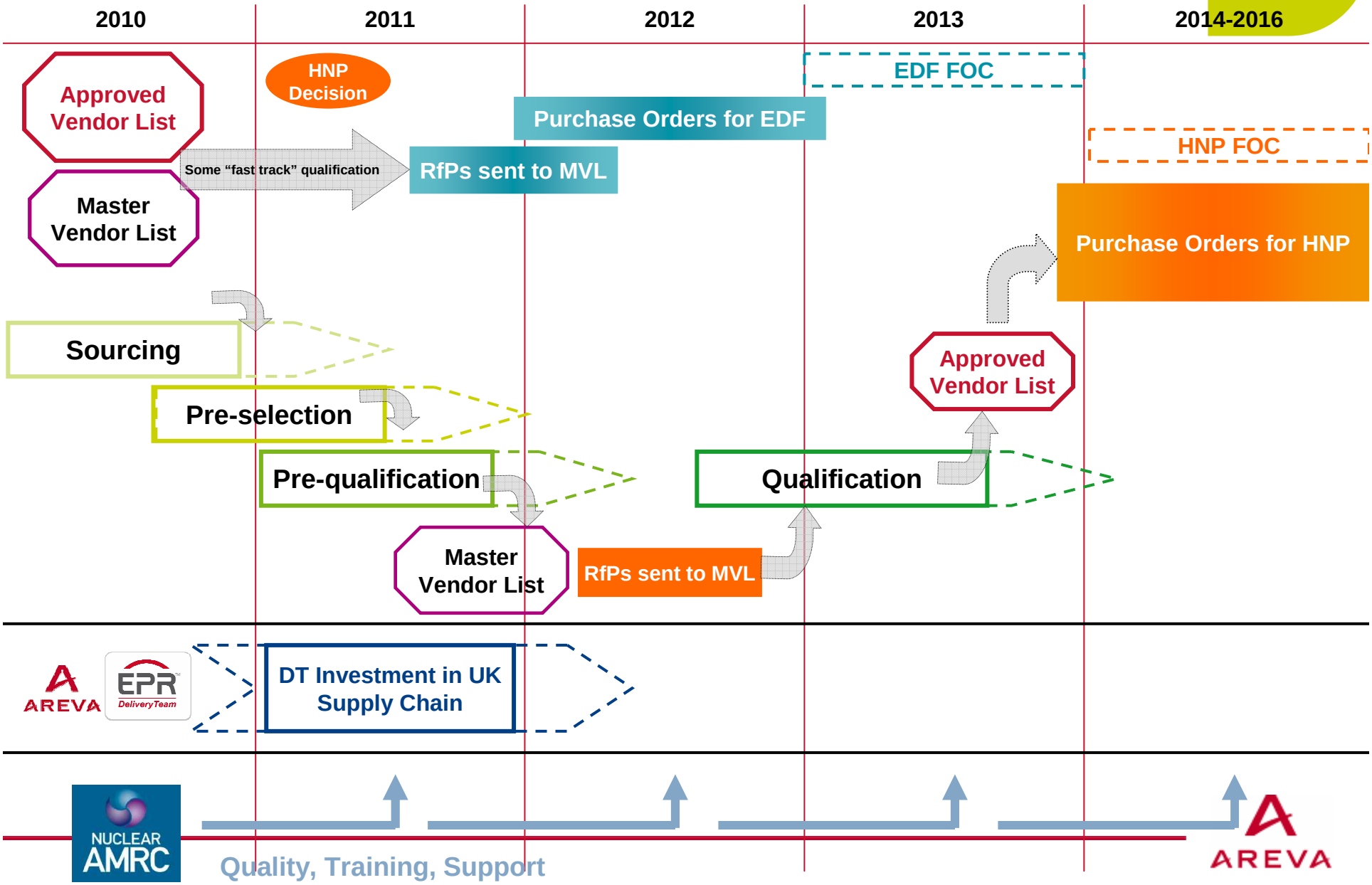
AREVA Equipment Purchasing Timeline, EDF & HNP



How to become an *EPR™* supplier:

- **Respect Sustainable Development**
  - Sign AREVA Sustainable Development Charter
- **Target the right product**
  - Supplier should have the required technical capabilities
- **With the right quality requirement**
  - Supplier & product should be qualified
- **At the right cost**
  - Supplier should be competitive
- **Be on-time**
  - Supplier should have a proven reputation for on-time delivery

The Supplier should have project management capabilities for the scope of supply

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Quality Standard in Nuclear Industry

Presentation at Nuclear Platts Conference, June 2010
by
Thierry ZUMBIHL (AREVA) and
Philippe JEANMART (Bureau Veritas)

explaining the joint development of a new
Quality Standard
called
“NSQ100”

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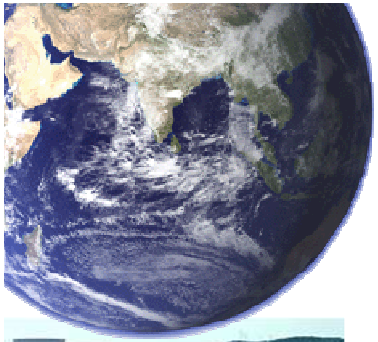

Why a « new » quality standard?

- **The Nuclear Renaissance**
  - An increasing demand in the next 15 years
  - Involving countries having a nuclear background as well as newcomers in the nuclear energy world
  - Supporting the development of their local economy
- **A supply chain to be re-installed**
  - Loss of competencies in traditional suppliers due to the lack of new constructions in the past years
  - A more diversified and complex supply chain due to globalization effects
  - New supply chain players without nuclear experience
- **Control of the supply chain considered by Authorities as a key mechanism in the Nuclear renaissance with higher safety and quality expectations,**
- **Customers expect certainties regarding quality of products, services and lead time**

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Objectives of the new quality standard

1. **Improve understanding of our QA requirements by the suppliers**
   - Translating very general requirements and providing guidance for implementation

2. **Take benefit of existing industry quality standards and practices**
   - Combining both product and production orientations
   - Complemented by nuclear quality requirements including all safety related requirements

3. **Standardisation..**
   - Developing a common language
   - Integrating the major nuclear quality codes and standards

4. **A single, shared quality platform to help our suppliers**
   - To be better prepared and to use external supports to get support for developing and verifying their level of compliance
   - To increase capitalization of experience and know-how in nuclear quality

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The method used to develop this standard

- **Based upon ISO 9001:2008 structure : an industry consensus quality standard ensuring the integration of Nuclear QA requirements in well-known industrial quality practices**

- **Integration of two major reference nuclear codes**
  - **IAEA GS-R-3:2006**
  - **ASME NQA-1-2008**

- **Development process inspired by the approach followed in other industries, mainly Aircraft Industry**
  (EN 9100 Quality management systems / Requirements for Aviation, Space and Defense Organizations)
  - **Similar context: strong safety requirements, high quality and industrial expectations combined with a product/process and low production volume orientation**
  - **Integration of specific requirements into a largely deployed standard**

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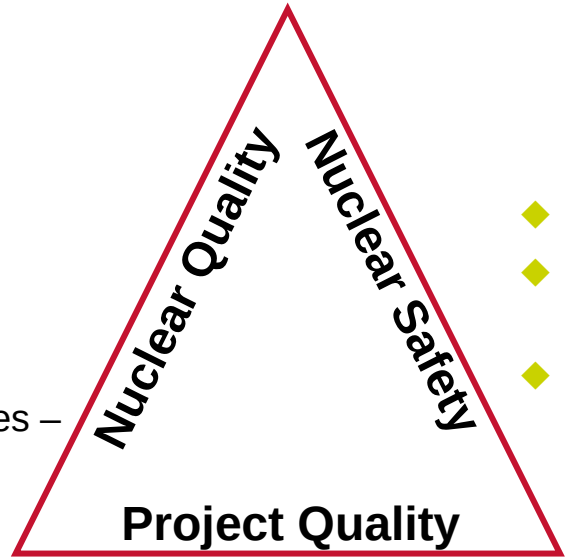
Focus on main requirements

3 main orientations

- Independence of review and surveillance activities
- Control of non conforming product and production processes
- Management of competencies – qualification of personnel



- Safety culture
- Grading application of quality requirements
- Classification of product

- Time management : planning and time schedule
- Risk management and mitigation
- International environment - language

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Progress status: Where are we today?

- **Standard = QA specification**
  - **A first version of the new standard has been developed**
- **Guidance book = provide additional explanations, implementing methods**
  - **in preparation and first version will be available by the end of 2010**
- **Pilot phase with some selected suppliers**
  - **Get feedback on accessibility, clarity of requirements, effort of implementation**
  - **Develop auditing tools**

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Next steps: a joint work open to partners

- **A joint AREVA and Bureau Veritas work**
  - **AREVA will implement this new quality standard up from 1st January 2011**
  - **AREVA Suppliers workshops to present this new standard**
  - **Information/communication to nuclear safety authorities and operators**
  - **Bureau Veritas will train and qualify auditors worldwide**

- **But non exclusive and designed to be open to all major nuclear procurement organizations: utilities, engineering, major vendors**

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Next steps: joint work open to partners

- **Our proposal = an industry association**
  - **Promote the application of the standard**
  - **Provide a framework for further evolutions of the standard**
  - **Set a “nuclear oriented” supplier evaluation process to further prepare a new certification scheme**

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