



NUWARD™: a test-case for European cooperation

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NUWARD™
Experience Based Technology



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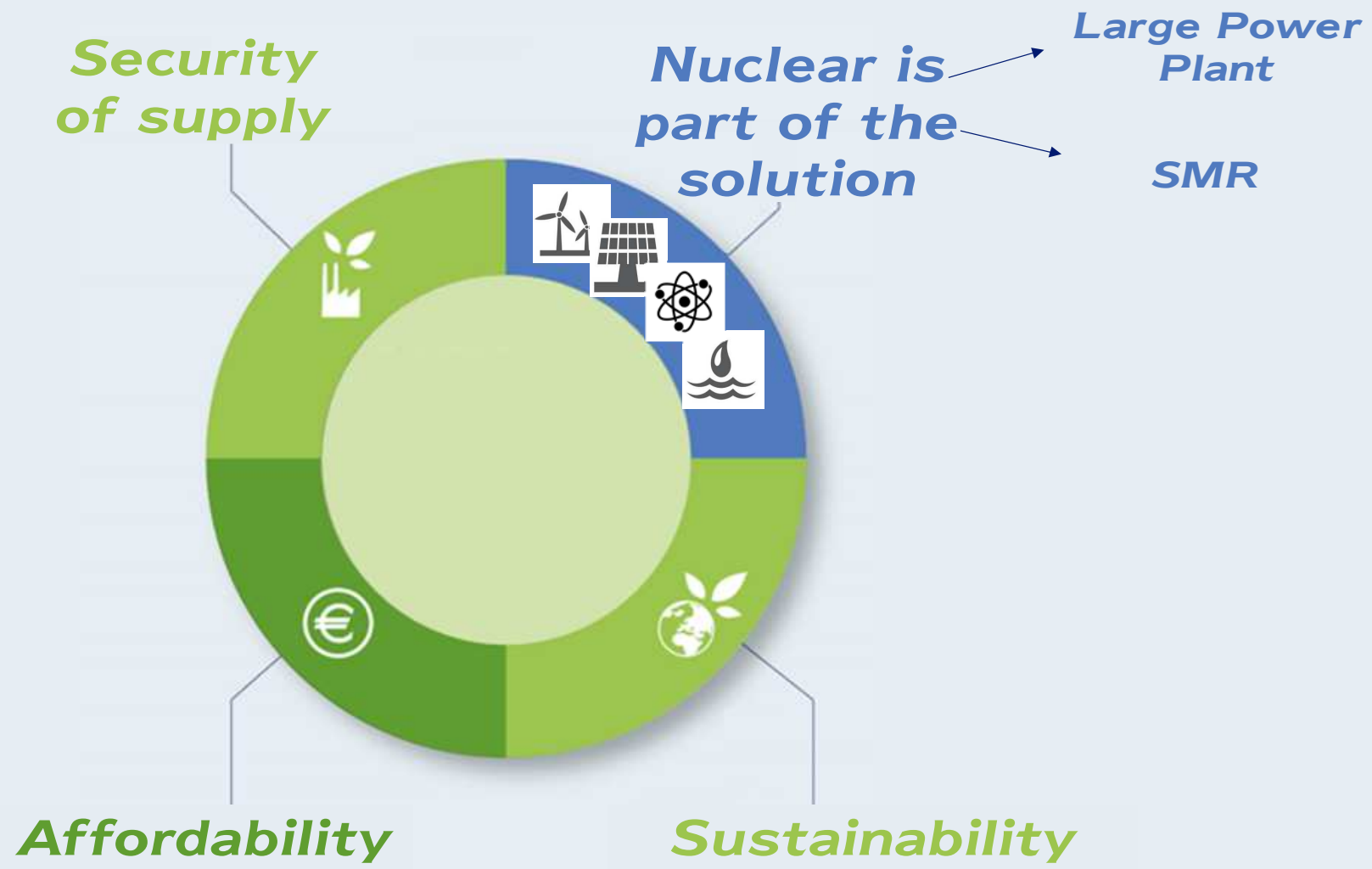
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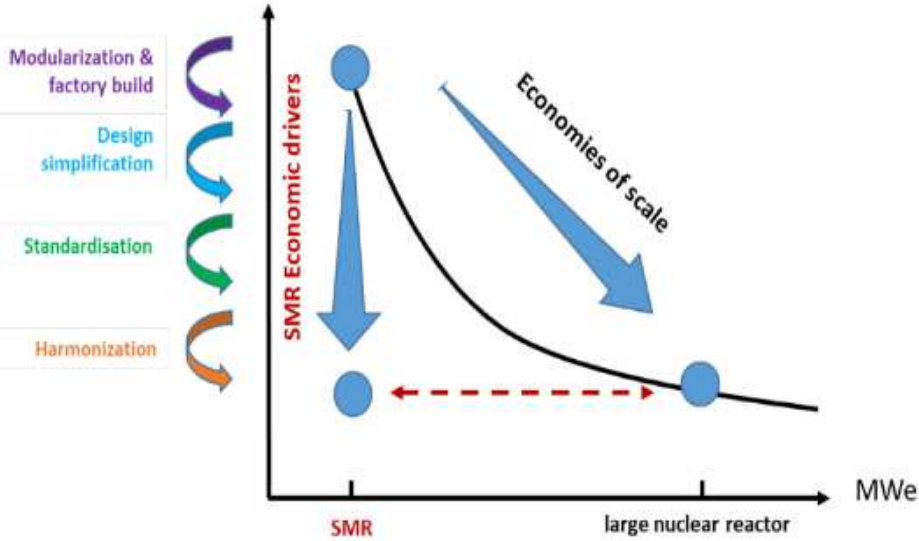
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Conditions for a lasting SMR market, ...



Source: OECD/NEA

1. MODULAR DESIGN	Modular design and manufacturing (construction cost decrease, shortened on-site construction duration)
2. SIMPLIFICATION	Simplification of design (architecture, components, regular civil structure, easy and quick to build)
3. STANDARDISATION & SERIES EFFECT	Standard design and series effect (production of components in series, standardisation, large new build program, etc.)
4. HARMONISATION	Harmonised and adapted design for worldwide deployment: regulatory requirements, in-factory certification, passive system qualification
5. FINANCING	Revenue guarantee, manageable construction risk profile, adapted regulatory framework
6. INTERNATIONAL MARKET	Access to worldwide market

...international cooperation is of the essence.




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NUWARD™ – a test-case for European cooperation





NUWARD™ at a glance




 A nominal power of **340 MWe**. High operation flexibility with 2 integrated reactors of 170 MWe each

 **>90%** availability and compatible with ENTSO-E network requirements

 **Safety objectives** that meet the best international standards

 **Modular** approach and **simple competitive design** : 40-month construction duration

 Improved **landscape** integration

 **Multipurpose by design** (H2, district heating, desalination, heat & electricity cogeneration, CO2 capture)

 **Designed for export**, allowing adaptation to multiple markets without significant re-design

 **First Nuclear Concrete in France in 2030**



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NUWARD™ Timeline



NUWARD™ - Experience Based Technology



- Technological research, development and innovation expert in low carbon energies



- The European leader in the Naval Defence Industry, designs, builds and maintains most advanced warships, including nuclear propelled vessels



- Specialised in design, construction, commissioning and operational maintenance of compact nuclear reactors



- Designer and supplier of nuclear steam supply system and nuclear equipment, services and fuel for high levels of safety and performance



- Architect engineer and responsible designer for the Belgian nuclear fleet since 1960's, with highly skilled, experienced and adaptive experts



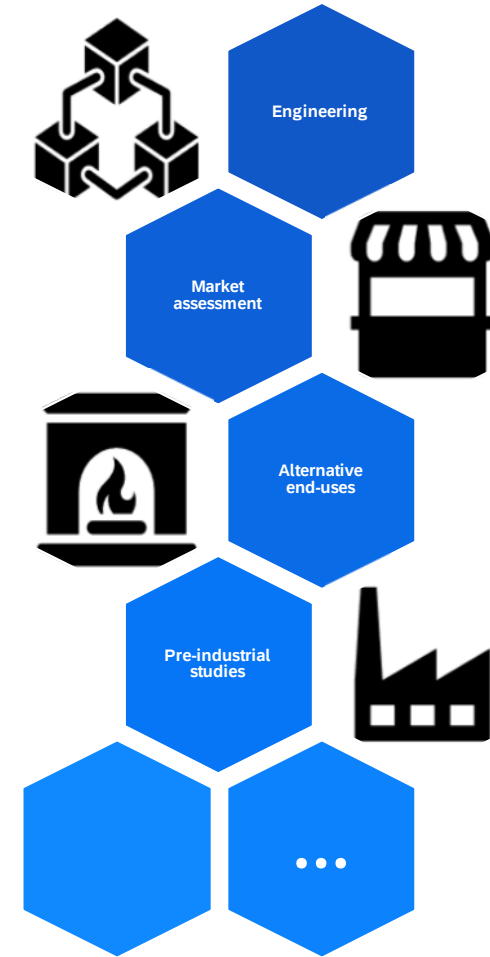
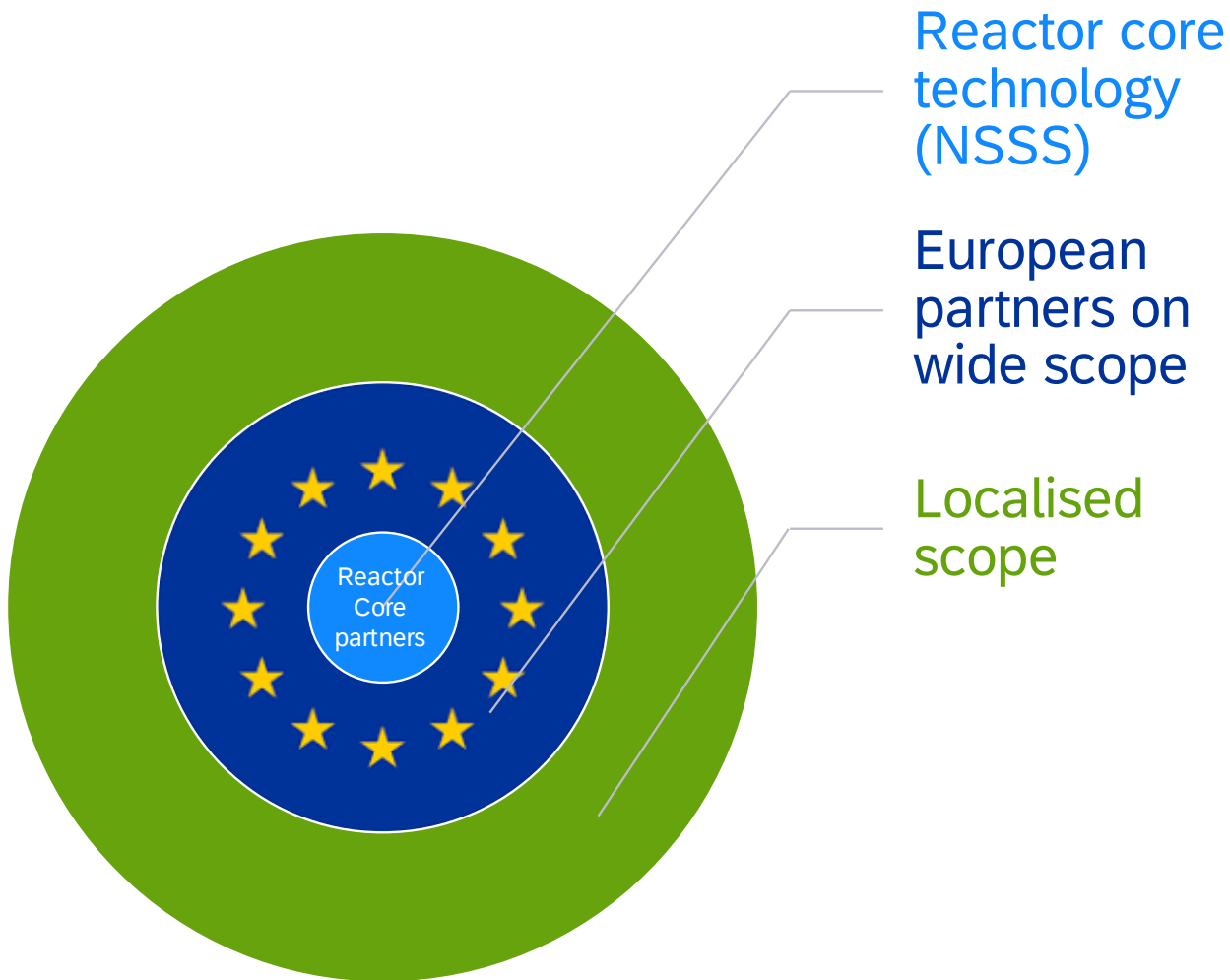
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Helping create the conditions for SMR international licensing



- Fostering transnational cooperation on safety and licensing
- Encouraging collaboration on international licensing conditions
- Early insights on design and safety options for EU market
- Joint early review of design

NUWARD™ Technology partnership approach...



...open for early cooperation



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A European fleet to benefit construction and operation



Bringing significant added value to the customer

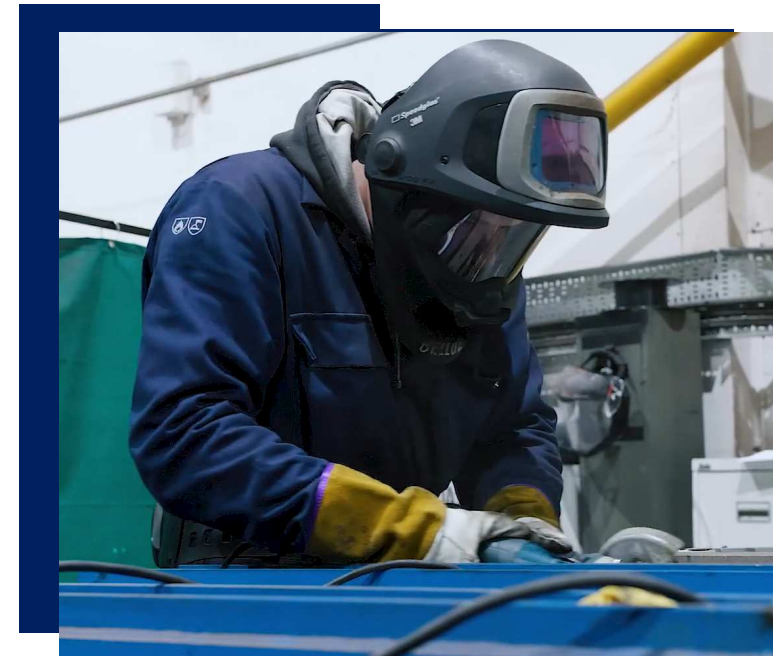


Design & Construction :

- ✓ Fleet effect approach
- ✓ Developing a leading European Supply Chain

Operation and Maintenance :

- ✓ Significant experience as operator of NPP already benefiting to the NUWARD™ design.
- ✓ Gathering a European community of plant operators



Thank you

Tack

For more information:

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Web site: www.edf.fr/nuward-smr

The nuward logo features a large, semi-circular graphic on the left, split vertically into a dark blue upper half and a bright green lower half. To the right of this graphic, the word "nuward" is written in a bold, lowercase, blue sans-serif font.

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