

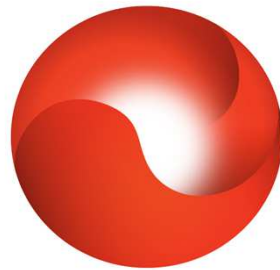
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**Attracting and Retaining Talent and Building Knowledge
Networks in the Global Nuclear Industry**



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Agenda



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Introduction to Thomas Thor Associates

What type of people
do we recruit?

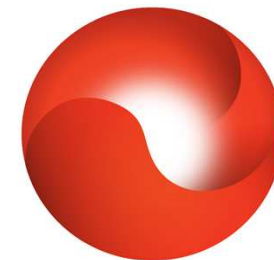
Executives
Commercial
Business Dev.
Engineering
Safety
Regulatory
Technology
Support Services

Which organisations
do we recruit for?

Governments
Regulators
Operators
Utilities
Supply Chain
Consultancies
Legal

What services do we
provide?

Executive Search
Staff Recruitment
Recruitment Campaigns
Temporary Contracts



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How are we different to other recruitment providers?

- > Absolute focus in nuclear
- > Local networks and presence in all developed nuclear countries
- > Experts in international relocation of nuclear professionals
- > Track record of successful delivery in nuclear.



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Projects and plants where we provide HR & Recruitment services

NPP New Build:

France
UK
Finland
Poland
Slovakia
Russia
UAE
Saudi Arabia
China

Decommissioning:

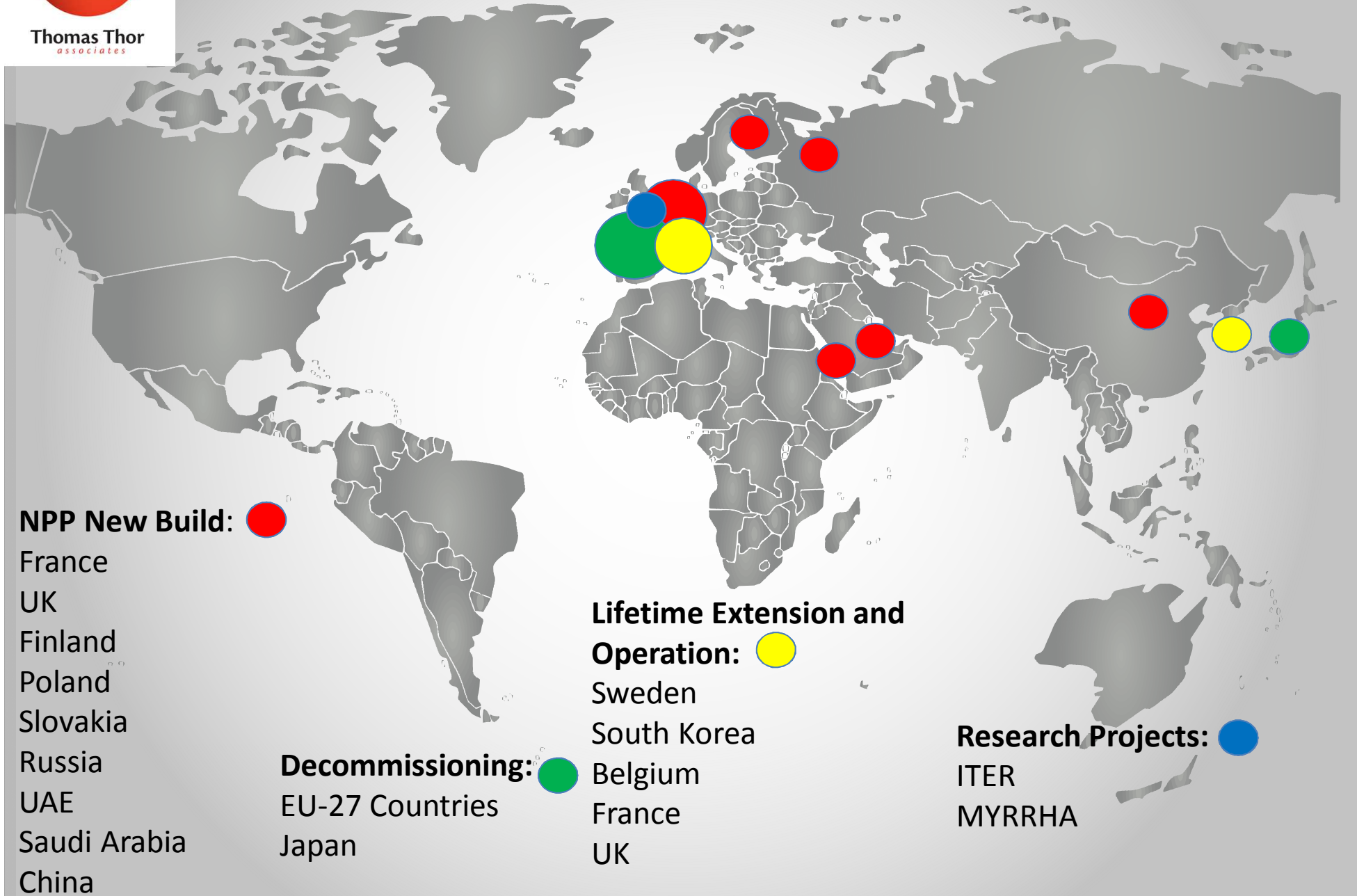
EU-27 Countries
Japan

Lifetime Extension and Operation:

Sweden
South Korea
Belgium
France
UK

Research Projects:

ITER
MYRRHA





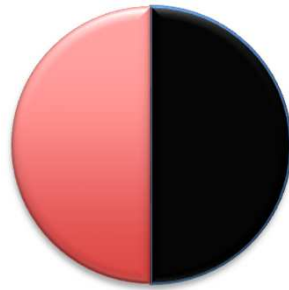
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Supply and Demand of Human Resource Capital in Nuclear



Supply – The European Picture (Source 2012)

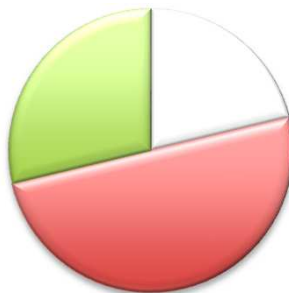
2011 – 80,000 ‘Nuclear Experts’



■ Retiring before 2020

■ Longterm Workforce

2020 – 63,000 ‘Nuclear Experts’



■ Unreplaced Retirees

■ Experienced Workforce

■ New Entrants



Supply – The US Picture (Source - NEI 2013)

- > 38% of people in nuclear industry are eligible for retirement now
- > Only 6% retired in 2012
- > On target hiring - Nuclear industry hired 4500 people in 2012 (5000 in 2011)
- > “Skills pipeline for US nuclear industry is stable.”



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Demand – Global Nuclear Skills

2014 (figures from WNA April 2014)

- 434 Commercial Plants in Operation
- 60 Plants in Decommissioning
- 72 Reactors under construction

2020 – Estimates (based on WNA and NEA reports)

- | | |
|--------------------------------------|-----------|
| • 430 Commercial Plants in Operation | + 0% |
| • 100-160 Plants in Decommissioning | + 67-167% |
| • 60-150 Reactors under construction | + 0-150% |



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Significant Changes in the Skills Need

- > Geographical shift and language requirements
- > Increase in Decommissioning projects
- > Increase in New Build projects
- > Increase in Research projects.



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Summary of the Human Resource Situation

- > A high proportion of nuclear professionals will reach retirement age by 2020
- > New entrants will not replace the number of retirees immediately
- > Competition for graduates with relevant education is high
- > Competition for experienced engineers and technicians is high
- > Nuclear professionals are willing to move.



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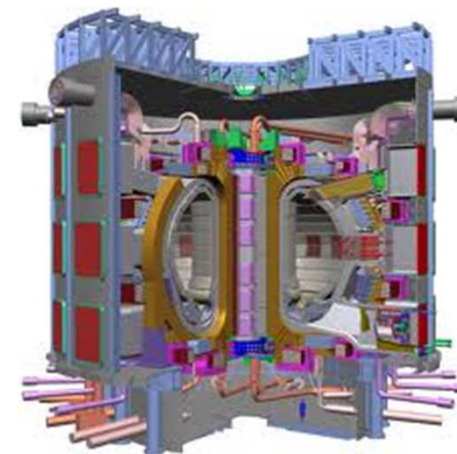
Recruitment and Capacity Building Best Practice & Lessons Learned



ITER – 500 staff, 31 nationalities



- Establishment of 'Domestic Agencies'
- Engagement with 'Domestic Agencies'
- "Excellence attracts excellence"
- Proactive project promotion
- International relocation friendly
- Decentralised process = more time
- "Fair distribution" challenge



"An international project to design and build an experimental fusion reactor based on the "tokamak" concept."



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China – Nuclear New Build

- New build programme since the 1990's
- Migration of 'best and brightest' to nuclear from other industries
- Effective Technology Transfer from Supply Chain
- Effective Knowledge Transfer from Supply Chain
- Low reliance on long term expat knowledge workers
- Full localisation of the industry and infrastructure takes a long time



United States – Nuclear New Build

- Nuclear new build started again after long break in 2008
- Dissection of all disciplines – Nuclear (regulatory, C&I, Fuel, Waste etc) and Non-Nuclear (Construction, Engineering, Project Support etc)
- Focus on Training, Supervision and Work Control
- Strong feeders of new entrants to the nuclear industry (Colleges, Community Colleges, Unions and Military)
- Competition challenge (eg. Coal plant refurb, post hurricane recon.)



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Effective Recruitment



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The Need for Nuclear Expertise on a Nuclear Programme

Nuclear

Non-Nuclear Core Skills





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Effective Recruitment Strategy

- > Distinctly separate strategies for Nuclear and Non-Nuclear
- > Engagement with nuclear communities
- > Investment in the recruitment process – both time and personnel
- > Selecting supply chain partners that match objectives
- > Different approaches for different demographics



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Recruiting 'Non-Nuclear' Candidates

- > Test the market by placing adverts
- > Identify differentiators (longevity of project, interesting nature of work etc)
- > Online and offline recruitment (local and international) managed by recruiters
- > Efficient and timely interview process
- > Time and cost advantages through volume.



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Recruiting 'Nuclear Experts'

- > Detailed job descriptions written by nuclear experts
- > People with strong nuclear knowledge involved throughout recruitment process (internal and external) – ***'Excellence attracts excellence'***
- > 'Best Athlete' recruitment approach – passive and active candidates
- > International search
- > Higher investment in each case.

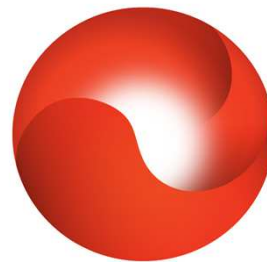
Summary

Excellence
Attracts
Excellence

Separate
Strategies for
Nuclear and
Non-Nuclear

Be Ready to
Compete

Relationships with
Nuclear
Communities



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Invest in Strong
Recruitment
Capability

Thank You



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www.thomas-thor.com

c.thomas@thomas-thor.com

Global Nuclear Recruitment

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