
Approaches to Maintaining and Building Organisational Knowledge

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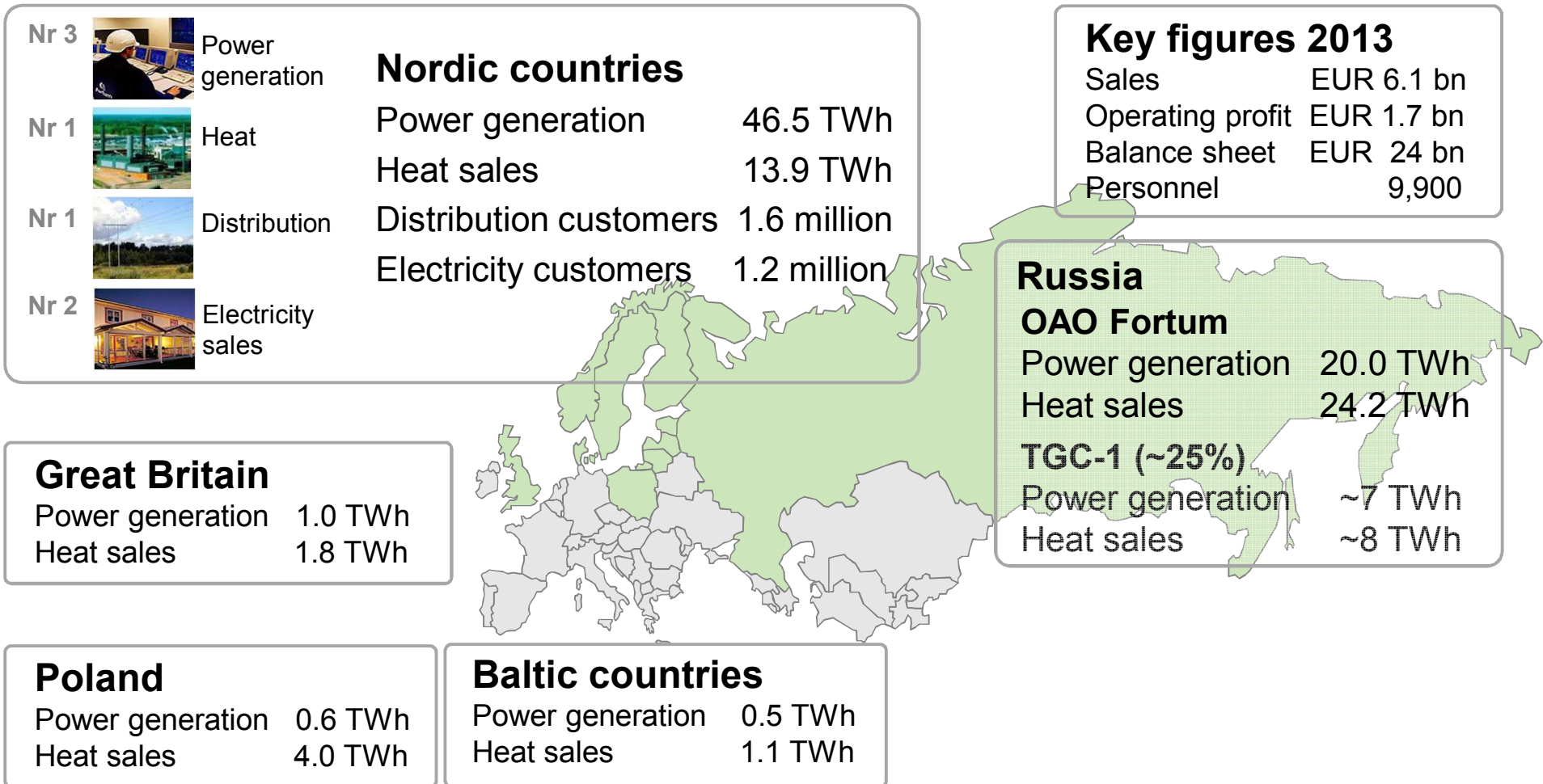


Fortum – Power and heat
company in the Nordic countries,
Russia, Poland and the Baltics

Next generation
energy company



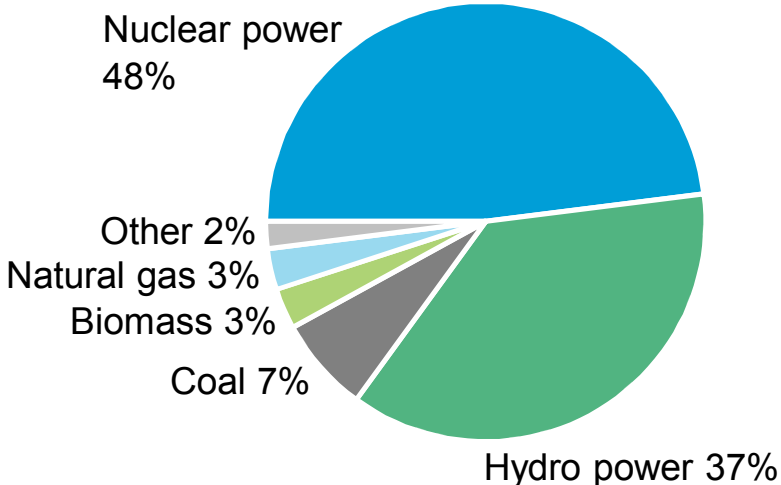
Our geographical presence today



Fortum's European power generation based on hydro and nuclear power – wide flexibility in heat production

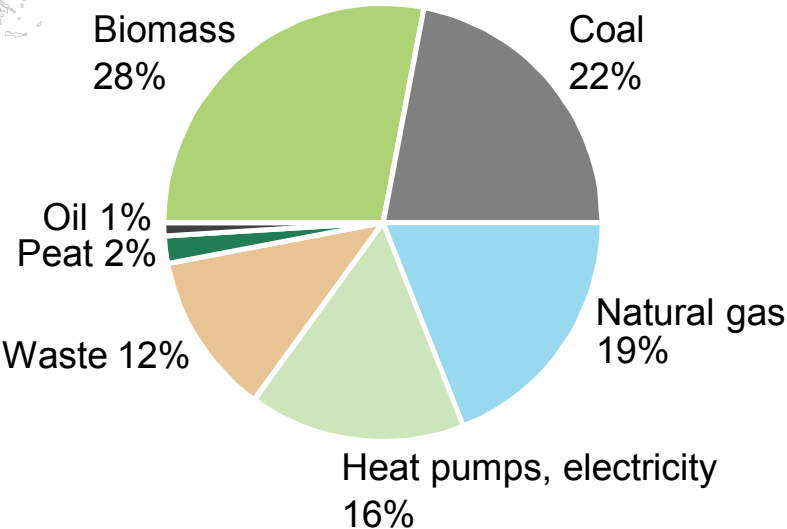


Fortum's European power generation in 2013



European generation 48.7 TWh
(Generation capacity 10,873 MW)

Fortum's European heat production in 2013



European production 18.6 TWh
(Production capacity 8,193 MW)

Fortum's reporting segments and divisions

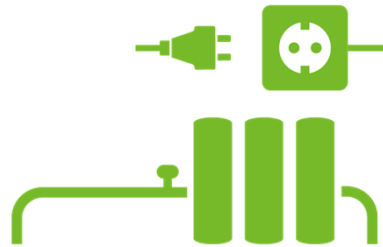


Power and Technology

- Hydro, nuclear and thermal power generation
- Power Solutions with expert services
- Portfolio management and trading
- Technology and R&D functions

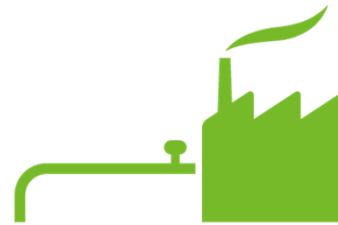
The segment incorporates two divisions:

- **Hydro Power and Technology**
- **Nuclear and Thermal Power**



Heat, Electricity Sales and Solutions

- Combined heat and power (CHP) production
- District heating activities and business to business heating solutions
- Solar business
- Electricity sales and related customer offering
- Corporate Sustainability



Russia

- Power and heat generation and sales in Russia
- Includes OAO Fortum and Fortum's slightly over 25% holding in TGC-1



Distribution

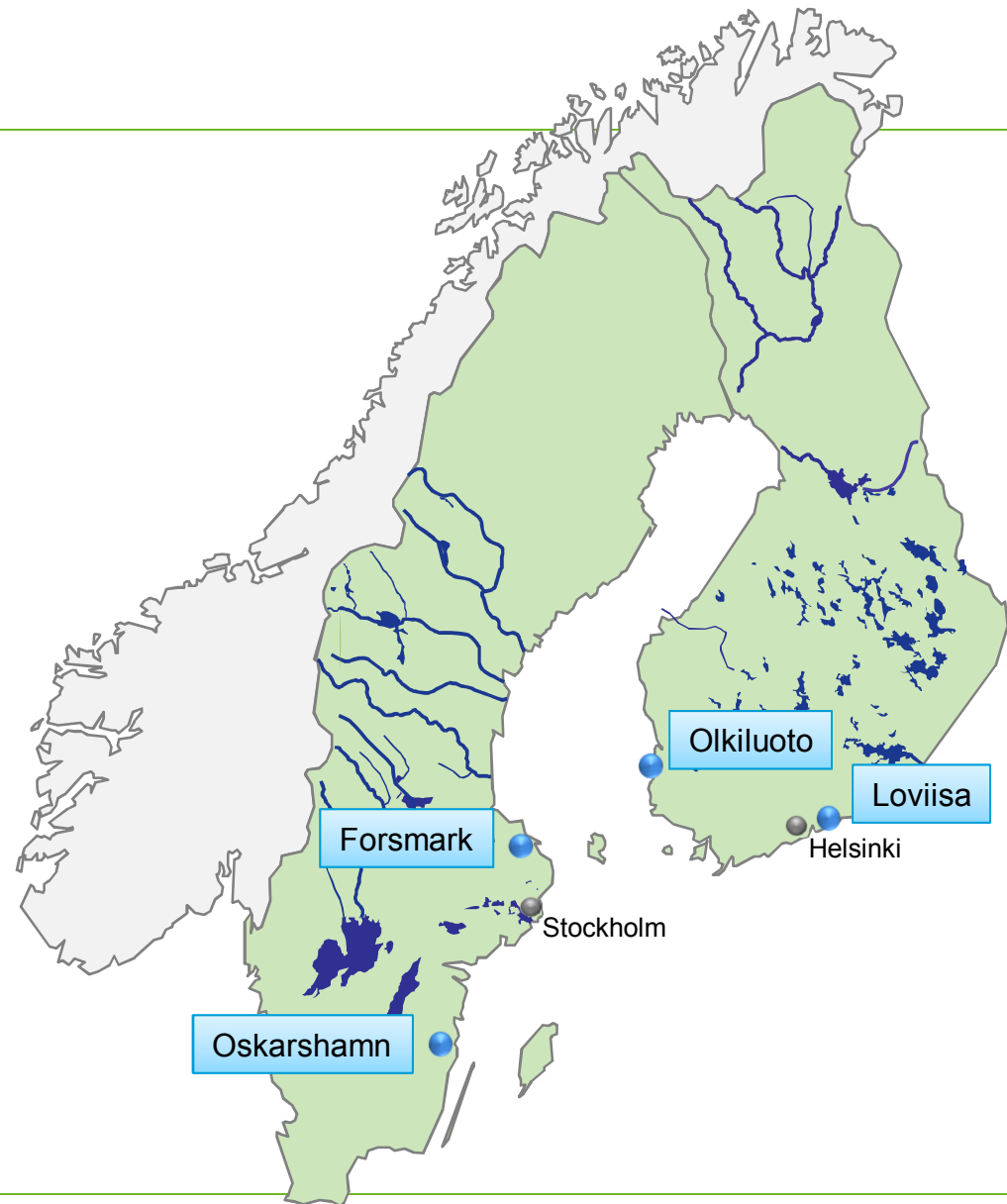
- Electricity distribution activities

Nuclear power* capacity

Nuclear power ●	MW
Fully-owned	
Loviisa	992

Co-owned	
Olkiluoto (TVO)	468
Oskarshamn	1 089
Forsmark	699
Total	3 248

- A fully-owned nuclear power plant in Loviisa
- Co-owned nuclear assets:
 - 26.6% interest in TVO's power plant units in Olkiluoto, Finland.
 - 22% interest in the Forsmark units, Sweden
 - 43.4% interest in the Oskarshamn units, Sweden



* Power capacity refers respectively to Fortum's shares of fully and jointly-owned power plants.

Loviisa nuclear power plant - Benchmark availability, performance and safety culture

- Loviisa NPP includes two PWR units VVER-440, 976 MW (2 x 488 MW).
- Loviisa 1 (LO1) started operation in 1977 and Loviisa 2 (LO2) in 1980.
- Key figures measuring plant's safety and performance reliability have been good throughout its operational history.
- The annual load factors have risen to and even exceeded 90%.
- In 2012 Loviisa produced 7.61 TWh of electricity.
- Capacity factor describing the power plant's availability was 87.4%.



Safety is vital for us

- Safety is the most important factor guiding Fortum's nuclear power production operations
- Continuous operational improvement in accordance with the latest requirements ensures the plants'
 - safe operation
 - good availability
- In terms of safety and availability, Loviisa is among the world's best nuclear power plants
- Safety is a shared issue for the entire industry
- Fortum is an active participant in WANO operations
 - In positions of trust, work groups and international assessments



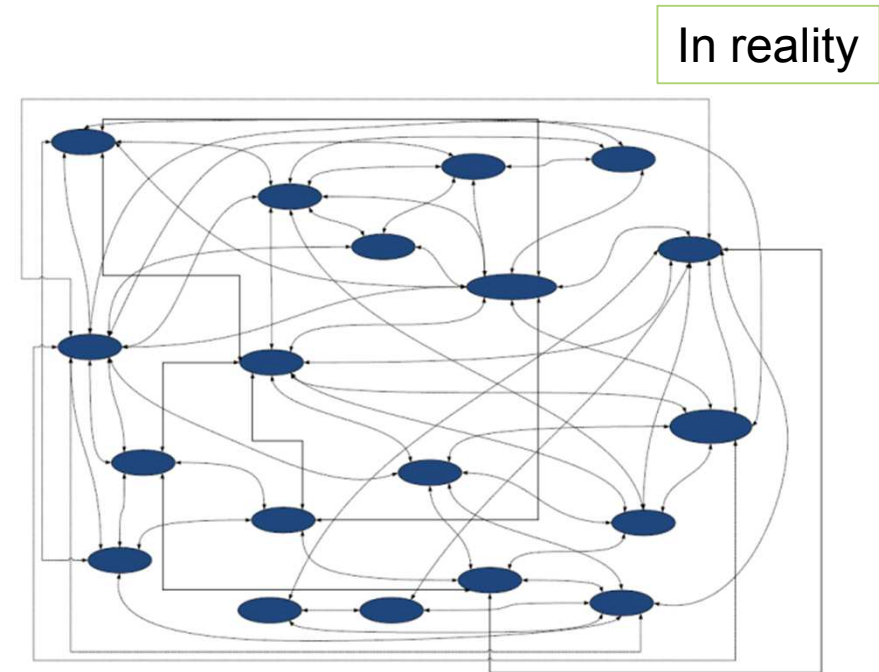
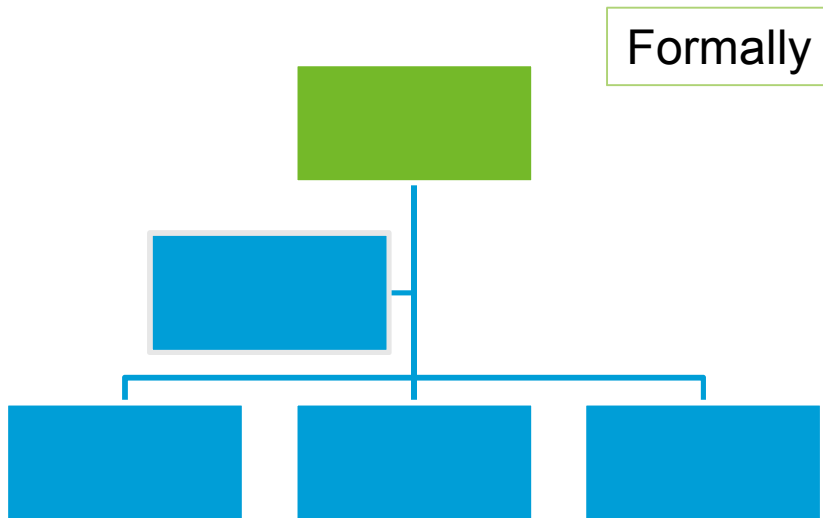
KM Objective and Focus

- Knowledge should be timely available where needed
- Knowledge needed for business objectives; Safe and Reliable Operations
 - “What do we need to be able to do?”, “What do we need to know in order to do?”
- Organisational knowledge



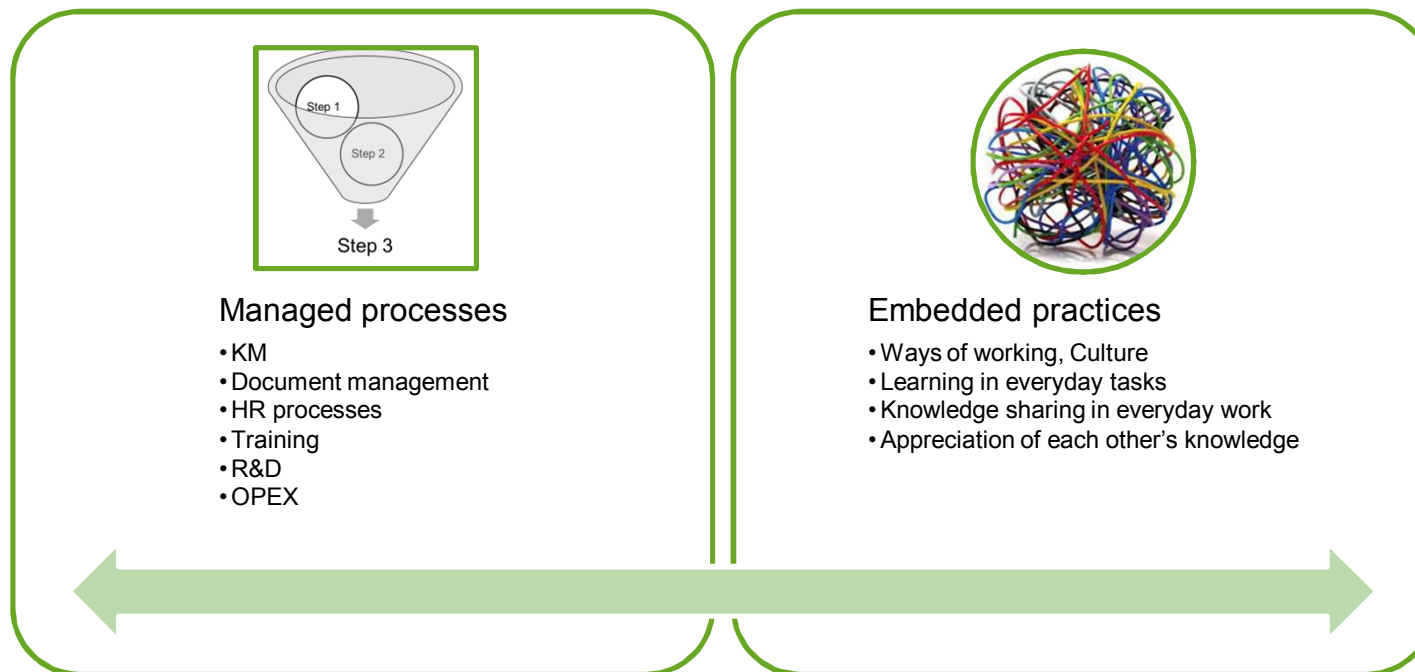
Focus of KM - Organisational knowledge

- Context specific know-what, know-how, know-who
- Knowledge embedded in people, ways of working, processes, technical solutions
- Team level knowledge, objectives are achieved with a combination of people
- Cooperation between expertise areas
- Networks

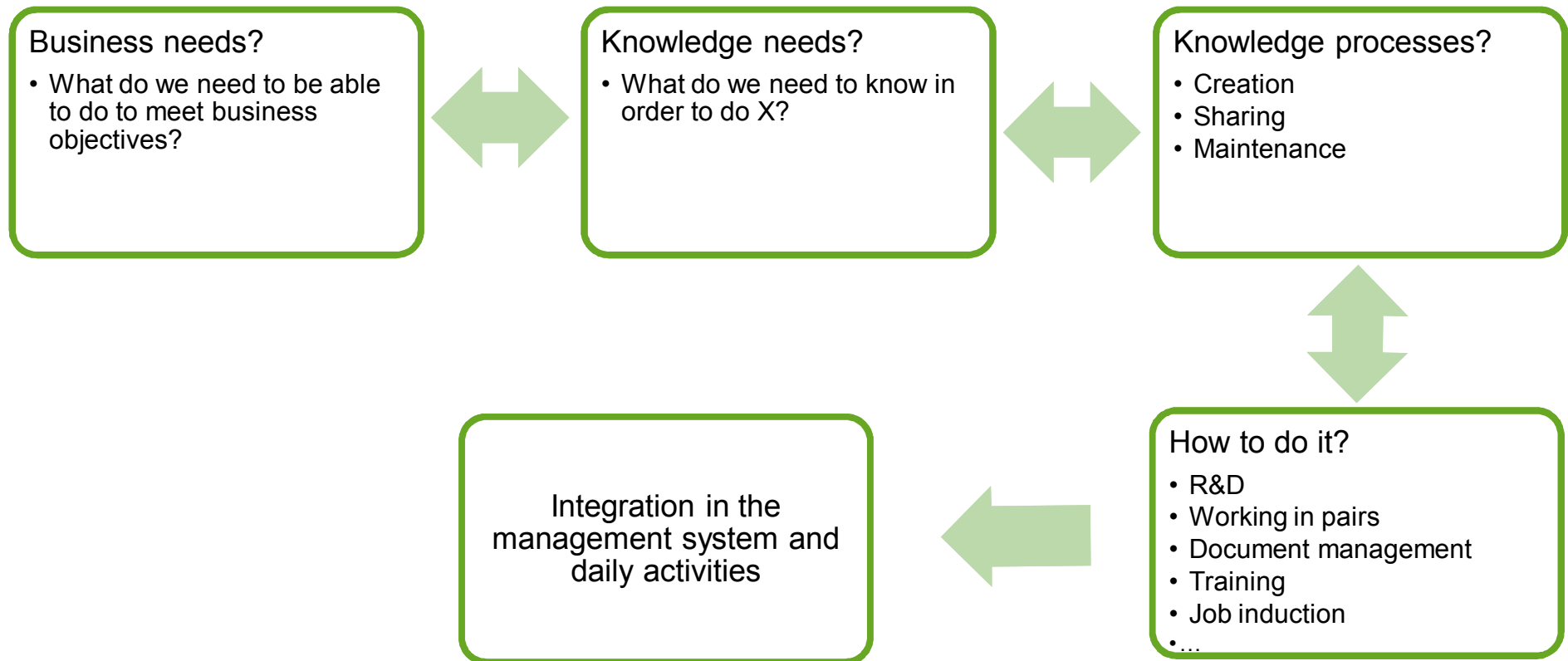


KM Approach

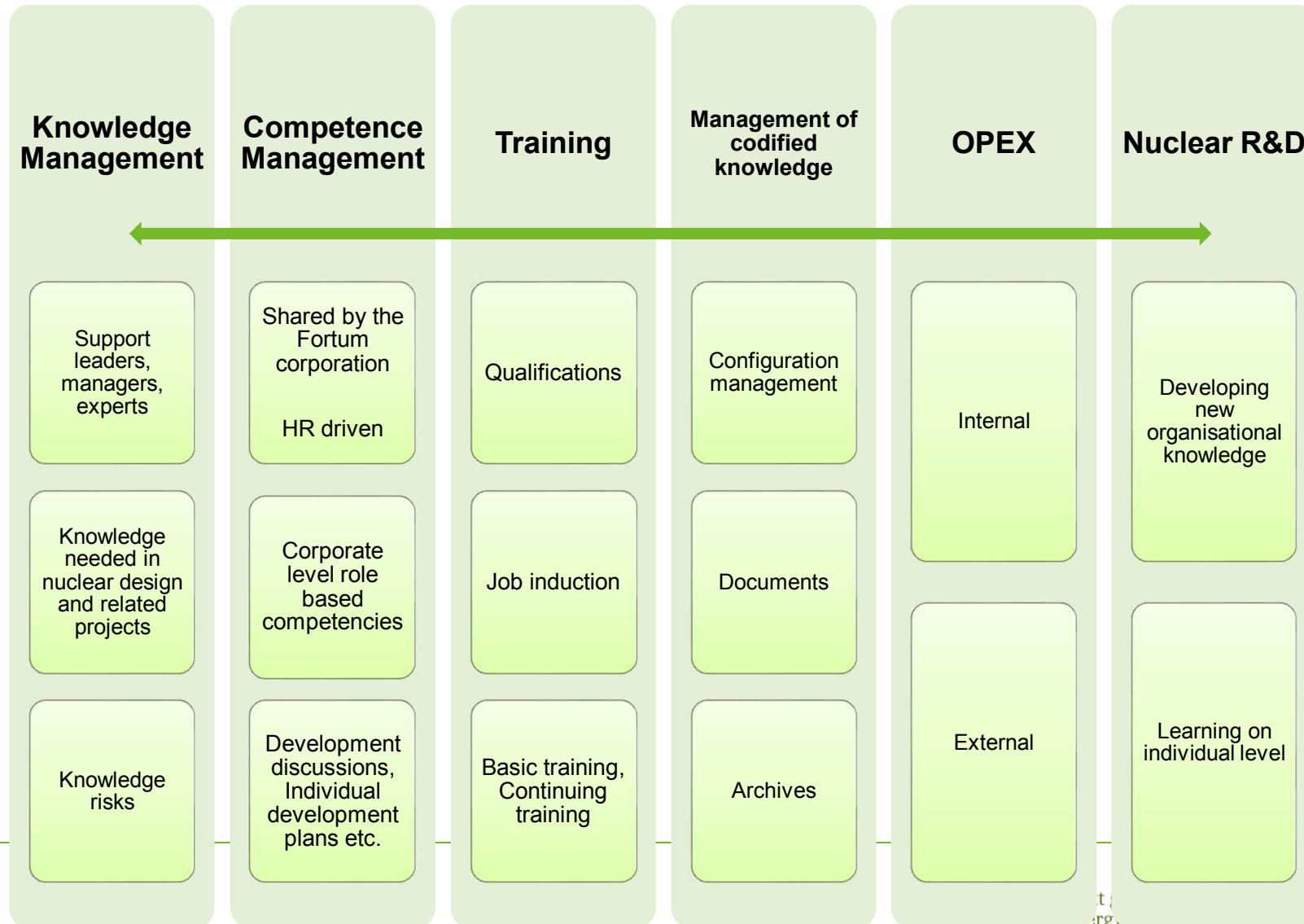
- Combination of formal processes and practices embedded in everyday tasks
 - Formal and informal practices support each other
- Involvement of people
- Formal support for knowledge activities



KM Approach – Why, What, How



KM Approach – Alignment of Formal Processes



KM Roles

- Involvement of people
 - In practice, knowledge is handled by people
 - Ultimately managers and team leaders are responsible for the knowledge as well
 - Culture that values knowledge and its sharing is essential (embedded KM practices)
- Formal KM
 - Structures are needed to support knowledge related activities
 - Support for management
 - Coordination of the system formed by formal and informal elements
 - Knowledge risk analysis
 - Develop the KM approach and tools
 - Collect, document and share good practices



Conclusions

- Involvement of people is one of the most important enablers of successful KM
- KM focuses on organisational knowledge that is needed for achieving business goals
- Working culture and KM activities embedded in the ways of working are essential for management of organisational knowledge
- Formal KM approach is needed as well, and one of its objectives is to support informal KM activities
- For a successful management of organisational knowledge, KM related functions need to be identified and understood as one entity