

Yhteinen tietoympäristö hankeprojektien onnistumisen tukena

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A Finnish SMR technology company.

VTT Spinoff from
Technical Research
Centre of Finland
(VTT)

2023 Founded in 2023
& HQ in Espoo

75 Team of 75 nuclear
experts

>€100M Backed by leading
investors with
>€100M
in total funding



Backed by

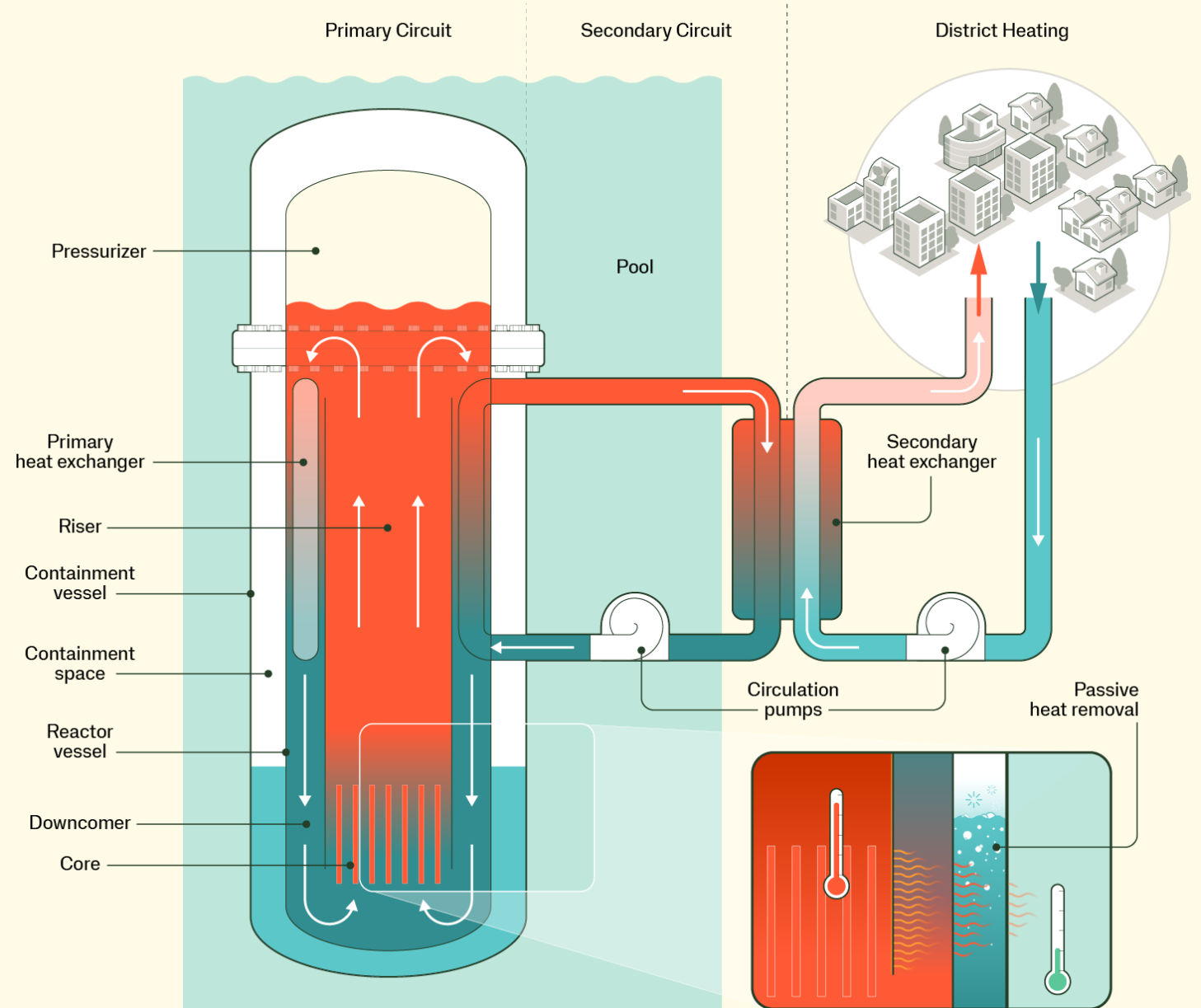


Partnered with

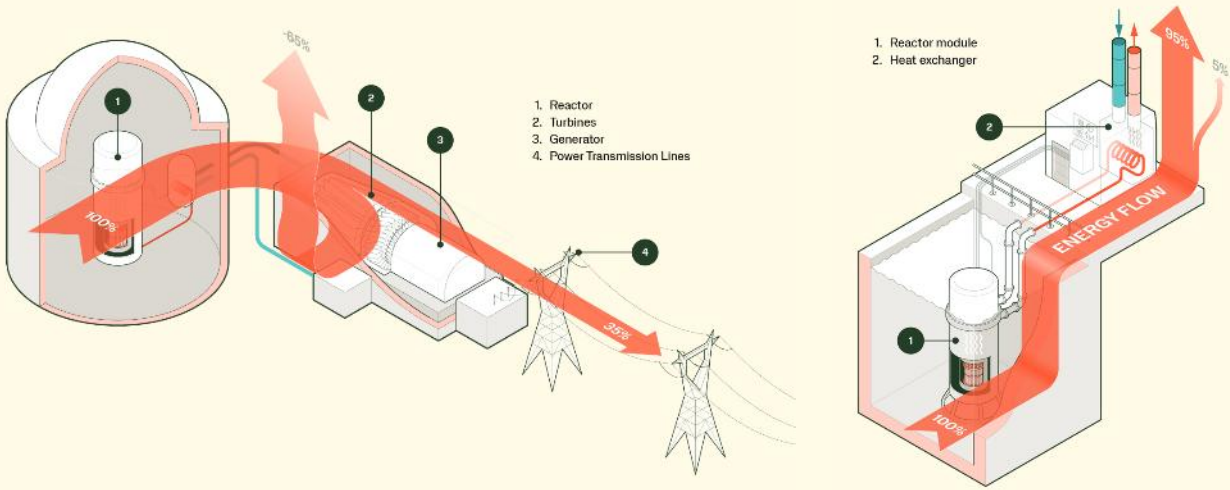


Proven, then improved.

- Based on proven Light Water Reactor technology
- Thermal power 50 MW per reactor
- Low operating temperatures and pressures
- Patented passive heat removal system
- The reactor is the size of a shipping container



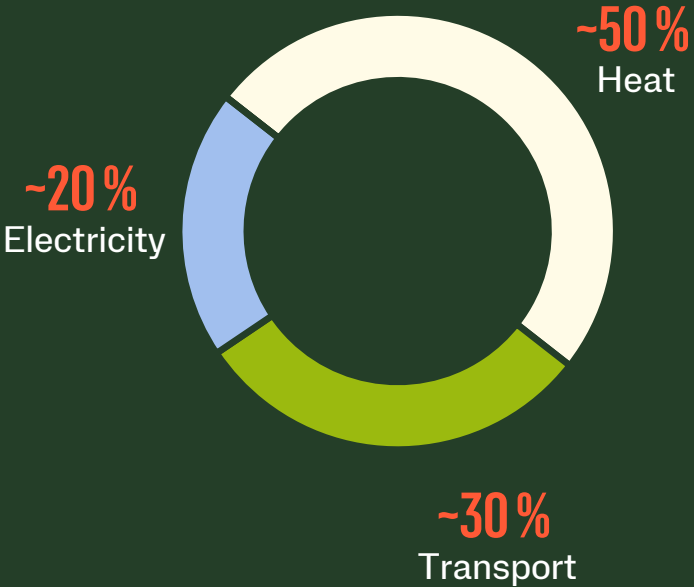
The most impactful market-fit for nuclear is heating.



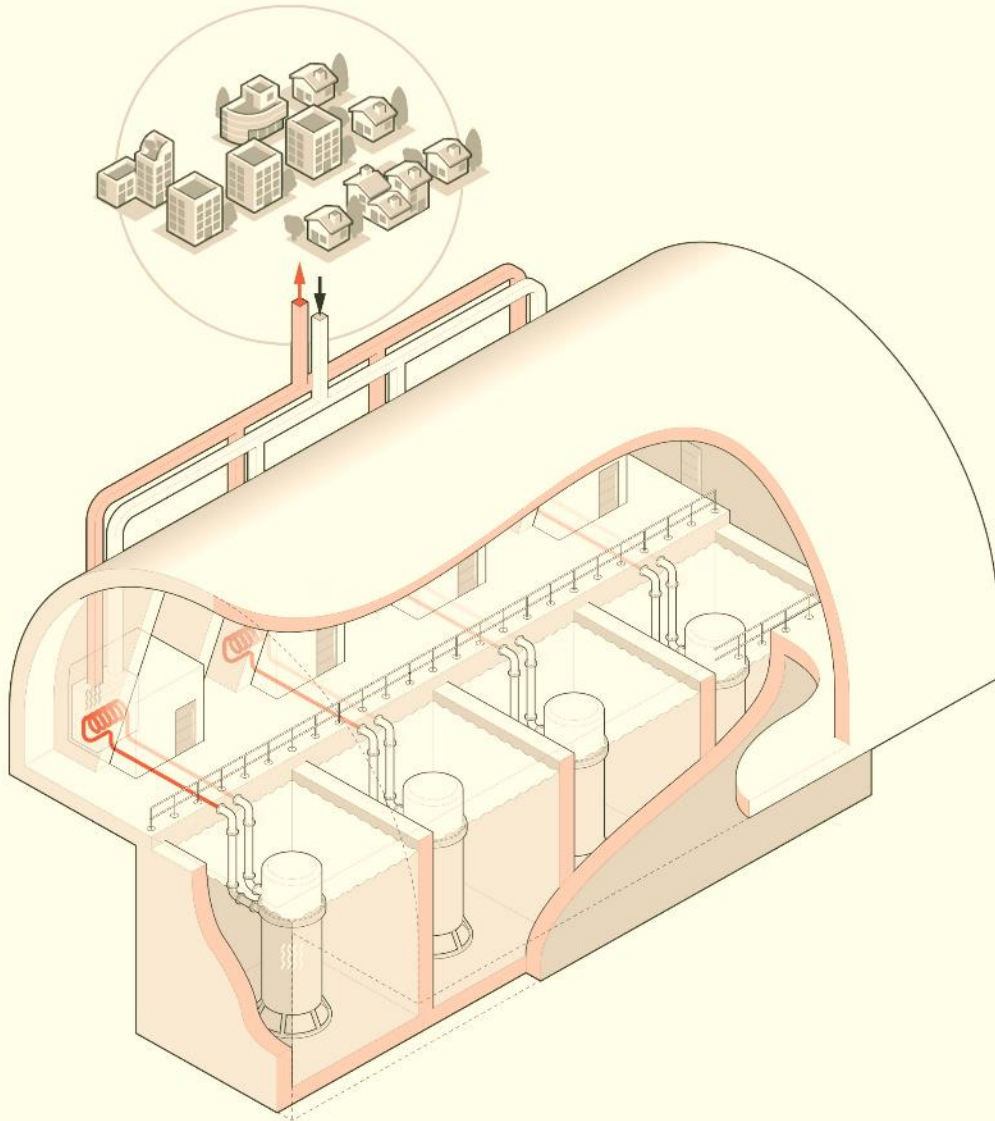
Conventional nuclear (electricity)	
Share of final energy demand	25%
Process efficiency	35%
Volatility of market	HIGH

Steady Energy nuclear (heat)	
Share of final energy demand	<50%
Process efficiency	95%+
Volatility of market	LOW

Share of final energy consumption (global)



IRENA (2023)
IEA (2023)



What we offer.

01

Nuclear heating units

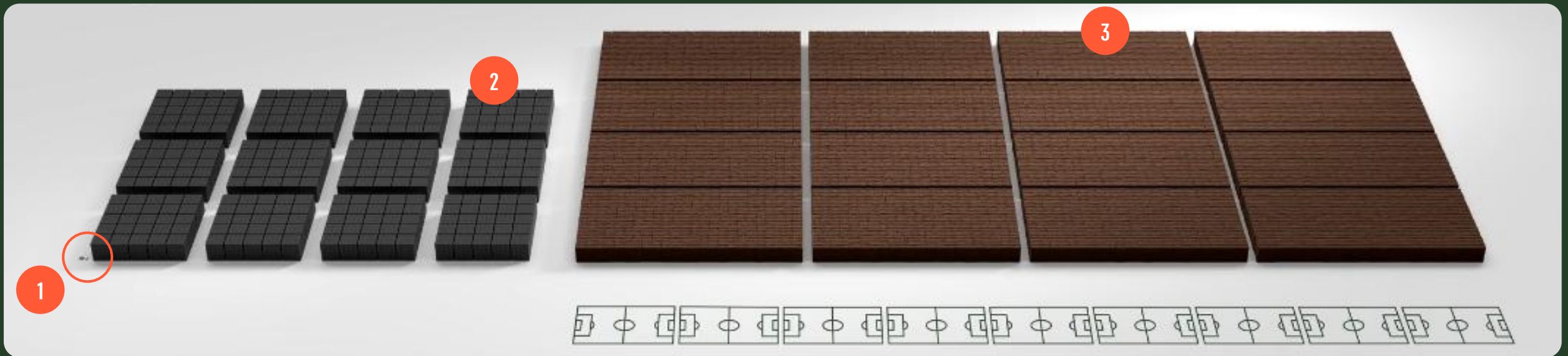
Consists of one or more 50 MWt thermal units

02

Business models – Turnkey or Heat-as-a-Service

We provide our clients with fuel, operating and maintenance services

Nuclear energy can help decouple energy production from the use of natural resources.



1 Fuel consumed by a single reactor over its entire lifetime **would sit inside two parking spaces.**



2 It would take **12 million barrels of oil** to produce the same amount of energy.



3 It would take **10 million cubic meters of wood** to produce the same amount of energy.

Turning potential into progress.

01

**Up to 20+ units
potential in Finland**

02

Projects in Finland:

Helen

Kuopion Energia

Keravan Energia

Alva

03

**Multiple ongoing discussions
across Europe**



Potential sites identified for Helsinki SMR plant

Monday, 10 November 2025



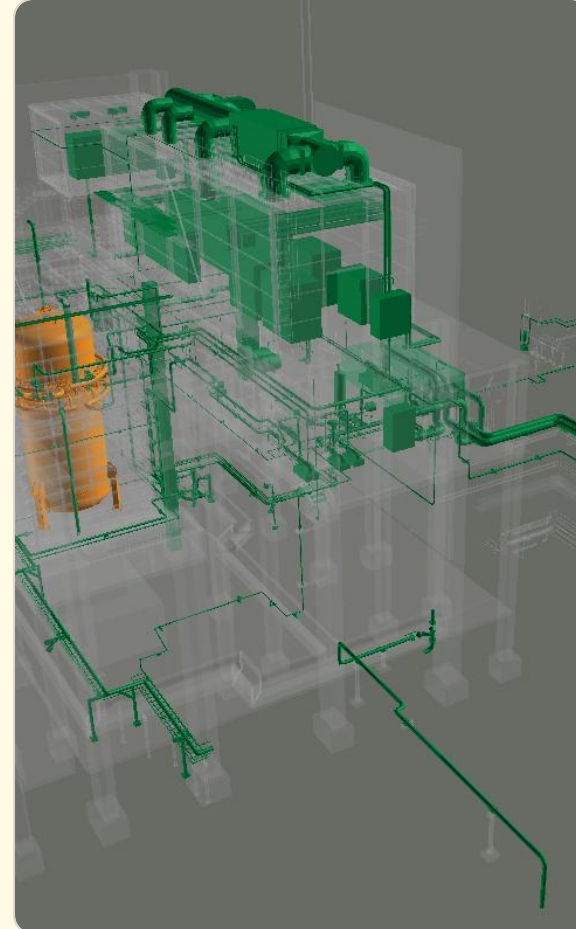
Helsinki's nuclear programme is proceeding.

- Helen (Helsinki's local utility) announced in November 2025 that they are looking into three suitable sites for SMRs
- Helen expects nuclear heating plants to be operational within ten years

LDRe pilot plant 2026

Project Purpose: The pilot will generate critical data on thermal-hydraulic behavior, with a focus on natural circulation in the primary circuit.

- **Test Module:**
Height: 10 m
Diameter: 4 m
Reactor pool volume: 400 m³
- **Instrumentation & Monitoring:**
Over 300 sensors in the reactor module and the pool
- **Heat Transfer System:**
Heat transferred to the district heating (DH) network
- **Residual Heat Simulation**
A 6 MW electrical core is used to simulate reactor residual heat following shutdown.



Yhteinen tietoympäristö hankeprojekien onnistumisen tukena

- Vaatimustenhallinta
- Ydinturvallisuus
- Reaktorisuunnittelu
- Laitossuunnittelu
 - Prosessisuunnittelu
 - Rakennesuunnittelu
 - HVAC
 - Mekaniikkasuunnittelu
 - Sähkösuunnittelu
 - Instrumentointi & Automaatiosuunnittelu
 - Paloturvallisuus
 - **Layout & Putkistosuunnittelu**
 - Laitteiden sijoitus
 - Turvallinen operointi, Huollettavuus, Rakennettavuus
 - Tietomallin kehitys ja ylläpito

Yhteinen tietoympäristö hankeprojekien onnistumisen tukena

- **Mikä on tietoympäristö - Mitä laitossuunnittelussa halutaan?**
 - Prosessitietokanta - putkisto
 - Tietomalli – 3D+data
 - Dokumenttien työkierto
 - Versioiden vertailu, mitä on muuttunut?
 - Standardiprojektin kopiointi asiakasprojekteiksi
 - Keskitetty kommentointi ja kommenttien seuranta osapuolten kesken

Yhteinen tietoympäristö hankeprojekien onnistumisen tukena

- **Laitoksen tietomalli
tietoympäristönä**
 - **Autodesk Forma**
 - Kommentointi ja kommenttien kategorisointi
 - Kommenttien seuranta ja yhteenveto
 - Versioiden vertailu

Yhteinen tietoympäristö hankeprojekien onnistumisen tukena

- **Laitoksen tietomalli tietoympäristönä**
 - **Autodesk Forma**
 - Review-toiminto työkierrossa
 - Projektien hallinta

Kiitos!

