The Case for a Nordic Research infrastructure and a Nordic Research Reactor

Anders Bergdahl, Founder & CEO, NA2 · CET Conference, Oskarshamn · 29–30 September 2026

WHO WE ARE

A team built across the full nuclear value chain

Six founders, senior industry and academic leaders, committed to remove the bottlenecks holding back the Nordic nuclear ecosystem.

Anders Bergdahl

CEO

Global Head of Controlling Uniper
Board member Swedish nuclear assets
Board member European utilities
Board member venture tech

Thomas Wiese

CTO

Senior nuclear tech
European fuel services
Technical project management

Stefan Jakélius

COO

C-suite business and government executive
Board professional
Private Equity investor

Jonas Hjelm

Industry lead

C-suite industry executive R&D, Innovation, Corporate strategy and change expert in global process industry

Victor Krüeger

PMO

Industry and investment analyst
Public funding expert
Programme manager

Pär Olsson

CSO

Senior academic leadership at KTH and EDF R&D | Reactor physics and nuclear materials | Leads national research environments

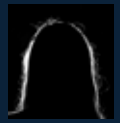
Advisory Board

Former Swedish Minister for Industry & Trade
Former President LO Sweden.
Industrial policy, politics and public affairs.

Karl-Petter Thorwaldsson

Senior Professor Aerospace KTH
ESA astronaut
Science and systems expertise
Physics researcher

Christer Fuglesang



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To be disclosed

Steering group, reference group and hang-arounds form as we speak

NA² NORDIC ASSOCIATION FOR NUCLEAR ACCELERATION

Addressing the very real bottlenecks that threaten progress for all parts of the Nuclear eco system

MISSION

Accelerate nuclear capability, for strategic resilience in the Sweden and the Nordics.

VISIONS

Support platform for future generations in nuclear.

GOAL

Build a nuclear research infrastructure for research, education, isotope production and materials testing.

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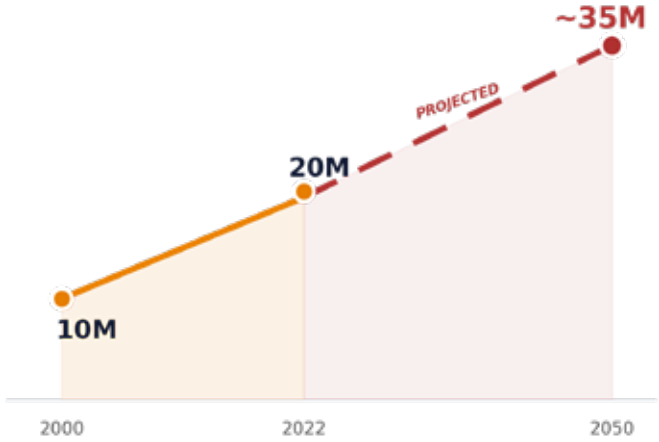
THE DEMAND

Cancer care is driving explosive, ever-widening demand for radioisotopes



New cancer cases worldwide, per year

> *"Nuclear medicine saves millions of lives and represents a source of great hope for the fight against cancer."*
>
> **EESC opinion on security of medical radioisotope supply, May 2024**

>10 million
radioisotope-based procedures every year in Europe

From diagnosis to therapy
new treatments keep widening who isotopes can help

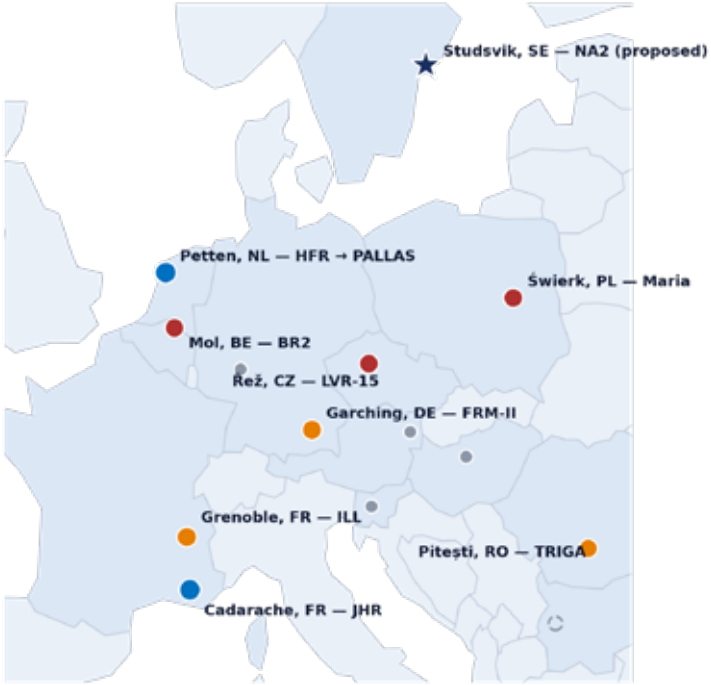
Capacity, not science
production capacity is now the binding constraint

A 77% rise in cancer cases by 2050 — every new patient is a potential isotope patient.

Sources: WHO/IARC, Global Cancer Burden 2022 & 2050 projections (Feb 2024) · IARC, World Cancer Report 2003 · EESC opinion TEN/833

THE SUPPLY GAP

Global reactor-based isotope supply is capped today — and declining after 2035



STATUS

- **Declining after 2035**
- **New build under way**
- **Producing isotopes today**
- **NA2 proposed reactor**
- **Operational — no isotope output**

  Budapest (HU), Ljubljana (SI), Vienna (AT), Mainz (DE). Sofia (BG): status unconfirmed.

By 2040 only few of Europe's isotope reactors remain online with limited possibilities for isotope research and production.

"Due to their short half-lives, any disruption to production or delivery can seriously affect patient care" (EANM) — and the EU remains reliant on third countries for key source materials (EMA/HMA, Apr 2025).

Sweden has already been called out — and Brussels is starting to act

SWEDEN, CAUGHT OUT

2010 & 2024 — Karolinska and Linköping both postponed cancer care after foreign reactor outages

Zero backup, by design — no domestic isotope reactor since R2 closed; every gram is imported

By 2040, only two of Europe's isotope reactors remain online — as cancer cases keep rising

BRUSSELS RESPONDS — ERVI

European Radioisotope Valley Initiative, announced 10 Sept 2026

R&D agenda for next-generation radioisotope technologies

Capacity investment — domestic HALEU production & reactor upgrades

Diversifying supply chains away from Russia, with the UK and US

New market-monitoring observatory & streamlined cross-border regulation

NA²'s research reactor is a shovel-ready answer — to Sweden's exposure, and to Brussels' call for new capacity.

BEYOND ONE PROJECT

A real nuclear nation needs more than reactors — it needs the people to run them

“Sweden should investigate building a new research reactor — as a Nordic collaboration.”

Carl Berglöf, Sweden's National Nuclear Coordinator, report to the Government, Feb 2026

“Research reactors and associated experimental facilities play an essential role in supporting the safe operation of nuclear power plants, through fuel testing, materials irradiation, and safety research.” –

IAEA Safety Fundamentals: SF-1 – Fundamental Safety Principles

A generational handover - A new-build wave – A system not yet sized for either

The nuclear-engineer job market has been flat for decades and the regulator lacks staff for full license reviews; in 2026 the government funded Uppsala, KTH and Chalmers to close the gap.

A research reactor is where operators, regulators and engineers actually get trained — the shared infrastructure the whole ecosystem is missing.

THE OPPORTUNITY FOR SWEDEN AND THE NORDICS

The problem is real. The solution is ready. The opportunity is for Sweden and the Nordic's to take.

Medicine

Theranostics is becoming the standard of care in oncology, many depending on reactor-based isotopes. Short half-lives make local production a clinical necessity, not a preference.

Energy

Irradiation testing, materials qualification, fuel behaviour data, and advanced diagnostic for operating assets and in support of lifetime extensions. SMR and AMR developers need a platform for qualification, materials and fuel testing etc.

Defence and space

Radiation-hardened materials, isotope power sources and strategic autonomy in a market where the US has introduced export restrictions on isotopes and nuclear materials.

Industry and food

Industrial isotopes, sterilisation of medical devices, irradiation services and non-destructive testing for Nordic manufacturing.

Competence & education

A real nuclear nation needs more than reactors — it needs the people to run them! The nuclear workforce is retiring. A reactor is the single most effective magnet for the researchers, engineers and regulators the whole sector needs.

Europe is running out of capacity

A strategic research infrastructure anchored by a modern research reactor: it secures the skills, materials and industrial capacity that positions Sweden and the Nordics to lead the new nuclear revolution.

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WHERE WE ARE

Pre-feasibility study complete and feasibility study ready to launch

POLITICAL & PUBLIC DIALOGUE

PROJECT PREPARATION — FENJA

FINANCING

INDUSTRY DIALOGUE

THE PRE FEASABILITY STUDY SURVEY

158 stakeholders, 201 questions — clear backing for a Nordic platform

8.54/10	78%	72.8%	158
Overall commitment	Support the benefit case	Respondents based in the Nordics	Respondents · 201 questions

STRATEGIC PILLARS — MEAN SCORE (1–5)

Education & Competence	4.46
Isotope Production	3.83
Fuel Cycle	3.79
Fission → Fusion	2.96

TOP RISKS — SHARE FLAGGING AS #1 CONCERN

Political / funding volatility	83%
Regulatory capacity & pace	45%

REACTOR CONCEPT — ASSESSMENT (1–5)

A	Fast Breeder 2.98 / 5	B	High-Flux Thermal 2.82 / 5
C	Halden 2.0 2.76 / 5	D	TRIGA (small-scale) 3.16 / 5

PREFER EUROPE OVER NORDIC INFRASTRUCTURE?

"Today what we cannot produce ourselves becomes a weakness that can be used against us."

THE OPPORTUNITY FOR SWEDEN & THE NORDICS

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52.3 MSEK total budget

39.4 MSEK applied for from the Swedish Energy Agency

33.5 MSEK of purchased services

14 Months of work

Nine work packages

AP1	Project management and communication	**AP2**	Stakeholder and needs analysis
AP3	**Technology selection and concept design**	**AP4**	**Site analysis**
AP5	**Permits, regulation and licensing framework**	**AP6**	IT, OT, AI, information security, export control
AP7	Competence supply and education strategy	**AP8**	Indirect value creation
AP9	Business development and financing plan		

Output: an investment-grade decision basis — technology selected, site assessed, licensing path mapped, business and financing plan ready for public and industrial investors.

NA2

NORDIC ASSOCIATION FOR NUCLEAR ACCELERATION

Thank you

NA2 looks forward to continuing the conversation at CET Oskarshamn

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