

newcleo's projects for clean, safe and sustainable energy

April 2024

Our solution to the global energy supply challenge

- The world needs clean, sustainable, GHG-free, reliable, and abundant energy source to satisfy a steadily growing demand
- We believe that nuclear power has the capacity to satisfy these requirements today in a sustainable way

Our company

The project is the result of **decades of research**, building a new competitive standard in nuclear energy that quickly and efficiently addresses the main concerns of our industry today: **waste, safety and costs**

Our product: **AMR (Gen-IV SMR LFR) and MOX**

newcleo is working to design, build, and operate Generation IV Small Modular Lead-Cooled Fast Reactors using MOX fuel, with the objective of providing **safe, clean, economic** and practically **inexhaustible** nuclear energy



Launched in
SEPTEMBER 2021



Presence across
Europe



ACQUISITIONS

FUCINA ITALIA
A *newcleo* company



RUTSCHI
A *newcleo* company



700
EMPLOYEES



25+
YEARS OF RESEARCH

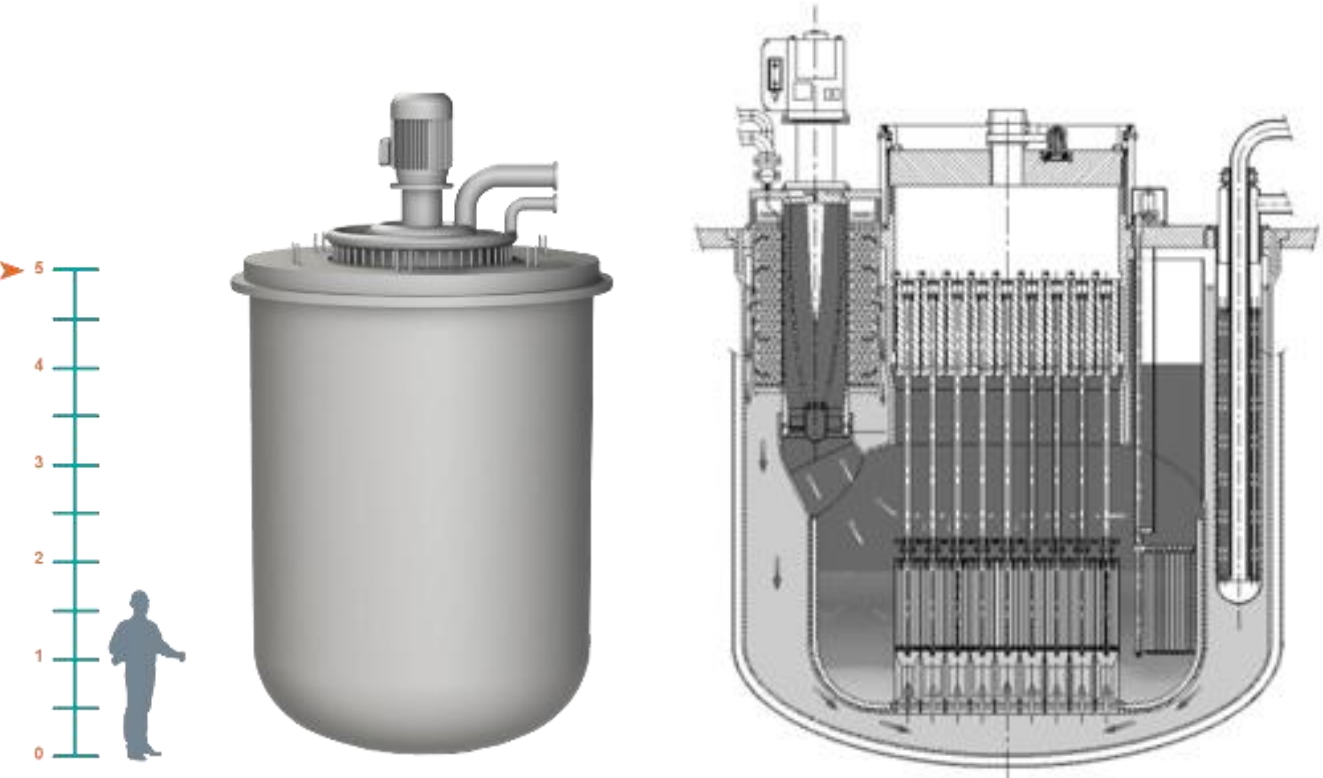


14+
PATENTS



€400 MILLION OF PRIVATE FUNDS
3 MANUFACTURING SITES (IT, FR, CH)
€40 MILLION TURNOVER IN 2024

newcleo, a new, innovative player in nuclear energy



Reactor technology: Lead-cooled Fast Reactors

- Fast reactors enable recycling reprocessed spent fuel and allow for a more efficient use of fuel
- Lead’s intrinsic characteristics, together with our design provisions, enhance safety, simplicity and compactness

Design: Small Modular Reactors

- Smaller than conventional nuclear reactors (<300 MWe)
- Designed to be manufactured at a plant and transported to a site for installation
- Economies of scale → economies of series

Fuel: MOX

- *newcleo* is investing in MOX fuel manufacturing, which is obtained from byproducts of the current nuclear industry, enabling the fuel cycle closure

SAFE

Patented lead-cooled technology benefits from **natural radiation shield** and **passive safety features**

CARBON-FREE

Zero-carbon baseload **dispatchable** generation to complement growing renewables

CIRCULAR

Unique solution of **waste-as-a-fuel**, eliminating the need for further uranium mining and enrichment and **significantly reducing** long-lived waste

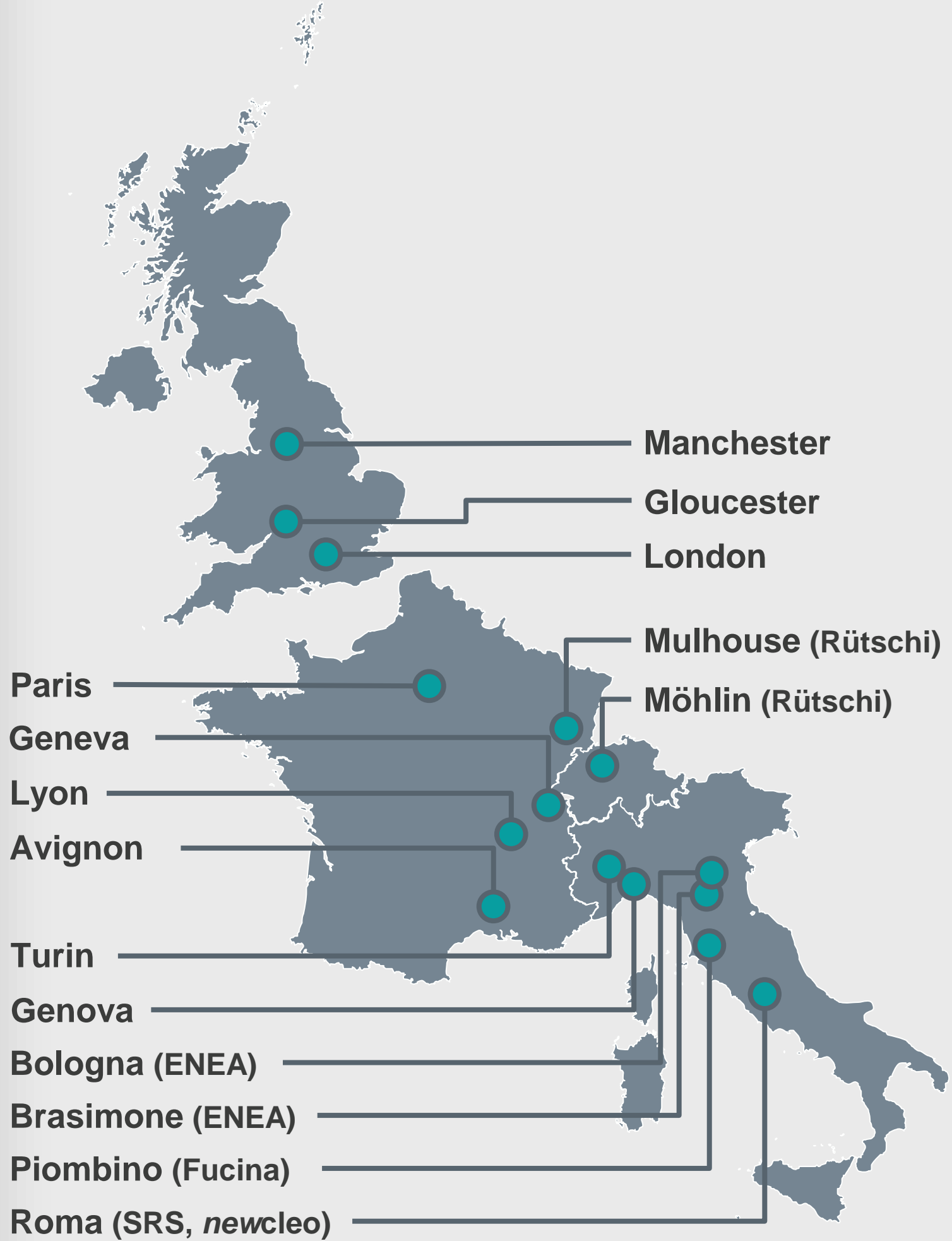
ECONOMIC

Affordable design benefitting from **modularity, portability** and **standardisation**

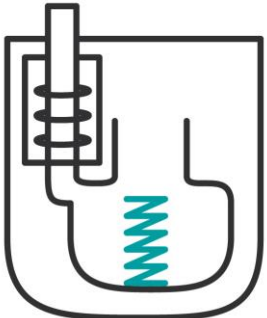
A fast growing company

newcleo was incorporated in September 2021 with **€100 million**, later in June 2022 raised an additional **€300 million** of seed funding, and has recently launched a capital raise of up to **€1 billion**.

The company counts on two acquisitions and around **700 employees**, growing up to 1000 by 2024, across Europe:



newcleo's plan-to-market



2026

R&D and Precursor

Several R&D facilities, and a 10 MW non-nuclear facility with turbo-generator

Design, manufacturing and operation in progress

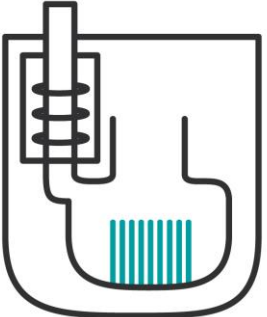


MOX
2030

MOX production

FR-MOX production facility, starting from available (separated) material in France

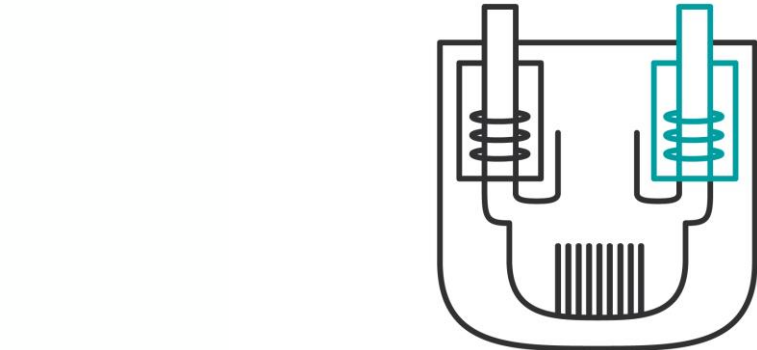
Basic Design and pre-licensing in progress: technical meetings with ASN and IRSN started in mid-2023



AS-30
2031

LFR-AS-30

30 MWe nuclear demonstrator and irradiation reactor with core outlet at 430/440° (later 530°)



AS-200
2033

LFR-AS-200

200 MWe FOAK, also for non-electrical uses (e.g. cogeneration and chemicals production)

Conceptual design in progress

What sets us apart

WE WANT TO DEPLOY OUR REACTORS AND SELL ELECTRICITY

We aim at installing our fleet using only our own private funds, progressively consuming plutonium

VERY HIGH LEVEL OF PRIVATE FUNDING

- Founded in 2021 with 100 M€ followed in 2022 by a 300 M€ capital increase
- €40 million turnover in 2024

newcleo LEAD-COOLED FAST SMALL MODULAR REACTORS

Lead features enable higher efficiency and improved intrinsic safety. Our simple and compact design minimises costs and deployment time

MOX

Using as fuel what today goes to *waste* (Pu, depleted U), reducing the high-level nuclear waste volume, reducing uranium mining and boosting energy independence

**The future
belongs to
those who have
the **energy** to
imagine it.
And build it.**



Thank you