An outlook on nuclear developments around the world from a global supplier

Polymers in Nuclear Applications 2024

Tomas Nälsén
Chief Engineer, Nuclear
Habia Cable

Your partner for
specialized cables
and connectivity needs.

Solutions beyond the ordinary…

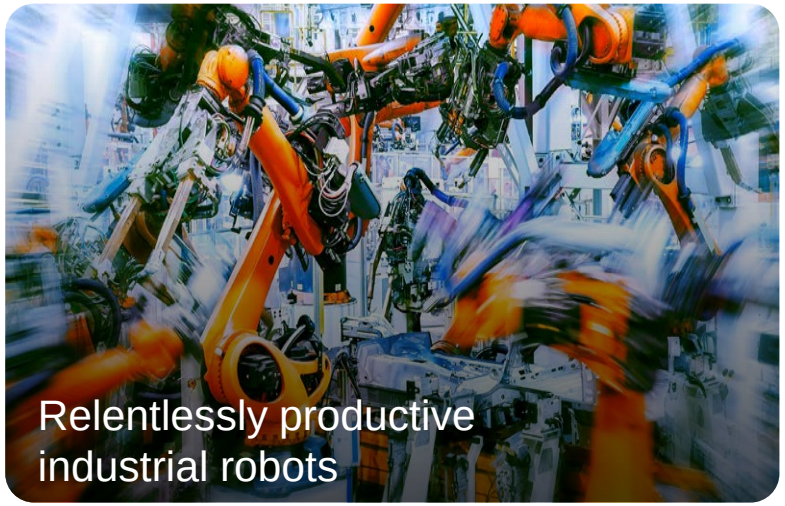

Electric airplanes powered by clean hydrogen

Surgical robots for minimally invasive procedures


Submarines relying on sonars to detect the slightest man-made sounds


Sensors measuring and calibrating car engines to perfection, reducing emissions


Nuclear reactors generating clean energy for 60 years or more


Relentlessly productive industrial robots

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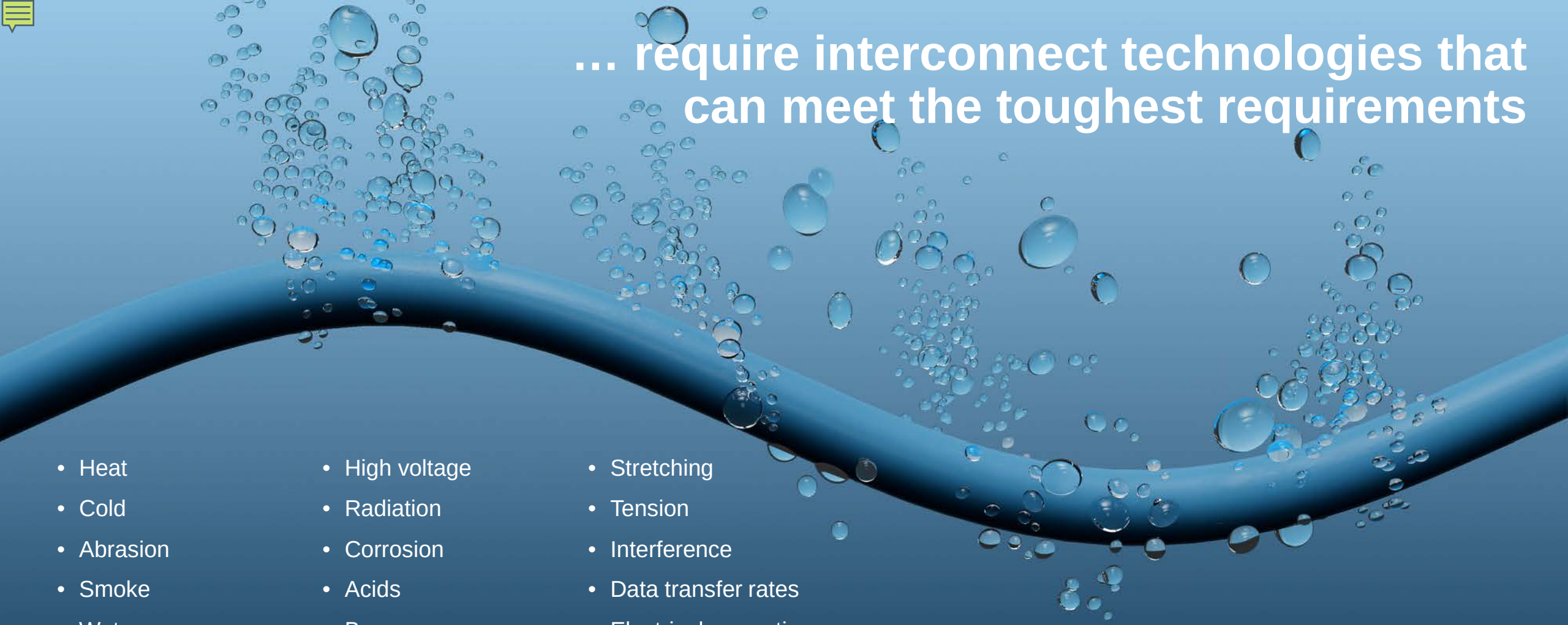
… require interconnect technologies that can meet the toughest requirements



- Heat
- Cold
- Abrasion
- Smoke
- Water
- Oil
- Toxicity
- Flexibility
- High voltage
- Radiation
- Corrosion
- Acids
- Bases
- Bending
- Fuels
- Pressure
- Stretching
- Tension
- Interference
- Data transfer rates
- Electrical properties
- Dimensional tolerances

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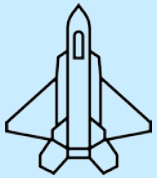
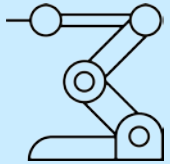
Our solutions are found in these areas…

Defence & Aerospace



Military-grade solutions designed for some of the world's toughest defence specifications

Robotics



Robust and durable cabling solutions for all common robot types.

Marine

Marine-grade certified cables and harnesses for offshore applications.

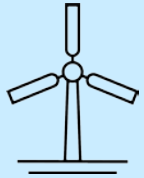
Nuclear

High specification range of safety-critical signal and control cables for installation inside nuclear power plant.

Medical

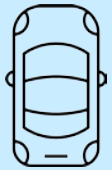
Wide range of medical sensor cables, including micro cables for ultra-sensitive applications.

Wind energy



Wide range of custom-tailored wires, cables and harness solutions for wind turbine power applications.

Automotive



Customized wires and cables for exhaust aftertreatment and brake sensors.

Sensor technology

Custom cable solutions for sensors used in demanding automated environments.

…and many others

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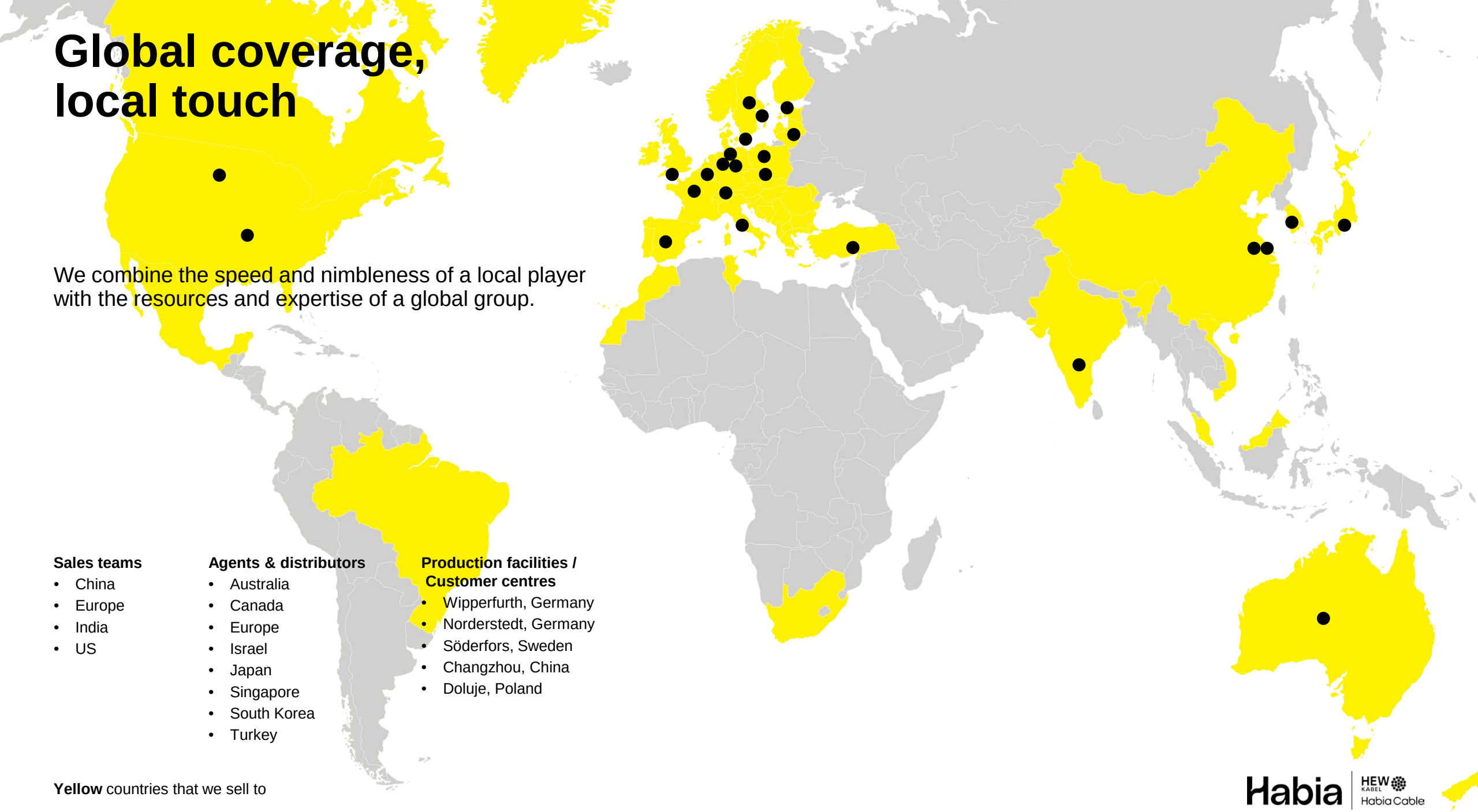
Global coverage, local touch

We combine the speed and nimbleness of a local player with the resources and expertise of a global group.



Sales teams
- China
- Europe
- India
- US

Agents & distributors
- Australia
- Canada
- Europe
- Israel
- Japan
- Singapore
- South Korea
- Turkey

Production facilities / Customer centres
- Wipperfurth, Germany
- Norderstedt, Germany
- Söderfors, Sweden
- Changzhou, China
- Doluje, Poland

Yellow countries that we sell to

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Habia at a glance

~1,000
employees in Europe and Asia

5
production facilities

~10,000
products sold / year

Sales to
~2,000
customers / year

Sales to
~60
countries / year

Turnover
~200
million Euro 2022

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125 years of creativity and innovation

We are building on a strong foundation, uniting two dynamic and innovative speciality cable groups, each with its own entrepreneurial legacy. By harnessing our collective knowledge, pooling our resources, and expanding our global reach, we can serve our local and global customers even better than ever.

Isotec Kabel GmbH

1973
Founded by Wiltrud Haas and Martin Schächter in Norderstedt, near Hamburg, Germany

1950-57
First cable are manufactured

Habia Cable

1941
Founded in Stockholm, Sweden by Carl “Charlie” Herbert Jacobson to make Bakelite components

1945-55
One of the first in Europe to manufacture components in PTFE

1969
Habia opens first international sales office in Breda, Holland followed by sales and production companies in Europe, Asia, and the US

1977
Habia is sold to Beijer Sponsor, which continues the international expansion until the mid-1980s. New factories were set up, each with a different product focus. Sales offices were also established in France, Germany, UK, Spain, Belgium and the US

HEW-KABEL

1964
HEW-KABEL is founded by Heinz Eilentropp in Wipperfürth, near Cologne, Germany, and managed as a family business for 34 years

1969
Move to the new (current) location in Wipperfürth, Klingsiepen

Optinova

PolyOne

Axon Cable

1980
Establish first Cable Systems Department. Pressure-tight glands for submarines are the first products manufactured

1985
Habia is split up. Beijer Alma, controlled by Anders Wall, acquires what becomes Habia Cable

1985-90
Other parts of Habia end up as Axon Cable, Habia Technoflour, and parts of General Cable, PolyOne and Optinova

1990
The coaxial wonder cable Flexiform™ is introduced, a solution that revolutionises the antenna industry

1997
The Cassini Orbiter begins a journey to Saturn with special cables from Habia Cable

1982
Introduction of PTFE tape in oval shape

1984
Konfektion E founded in Kreßberg-Marktlustenau

1987
Start of production of HEI-TAPE® (Gore-Tex)

1998
Company takeover by CDT Group

2000
Low-noise cables

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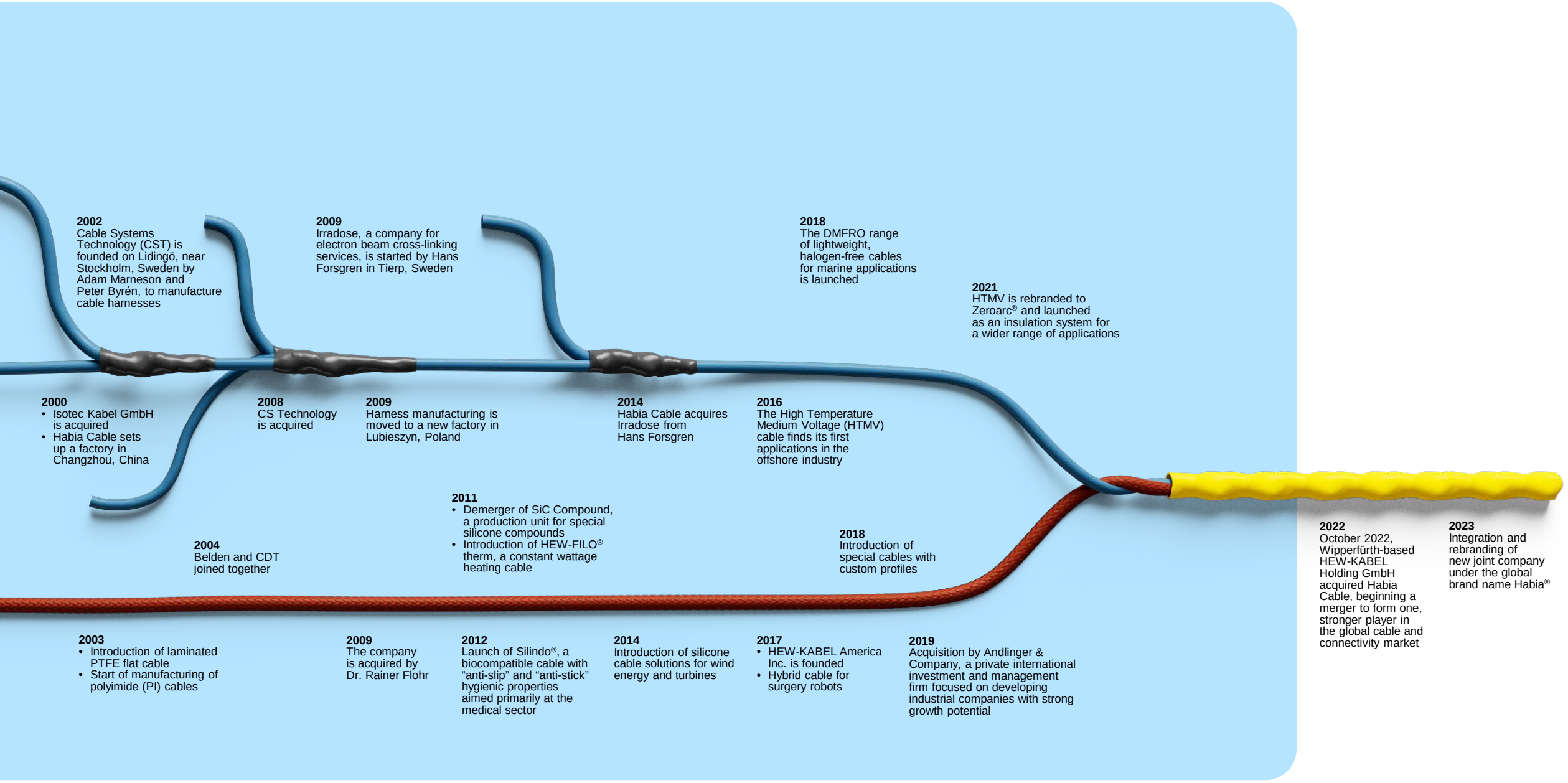

2000
- Isotec Kabel GmbH is acquired
- Habia Cable sets up a factory in Changzhou, China

2002
Cable Systems Technology (CST) is founded on Lidingö, near Stockholm, Sweden by Adam Marneson and Peter Byrén, to manufacture cable harnesses

2003
- Introduction of laminated PTFE flat cable
- Start of manufacturing of polyimide (PI) cables

2004
Belden and CDT joined together

2008
CS Technology is acquired

2009
Harness manufacturing is moved to a new factory in Lubieszyn, Poland

2009
Irradose, a company for electron beam cross-linking services, is started by Hans Forsgren in Tierp, Sweden

2009
The company is acquired by Dr. Rainer Flohr

2011
- Demerger of SiC Compound, a production unit for special silicone compounds
- Introduction of HEW-FILO® therm, a constant wattage heating cable

2012
Launch of Silindo®, a biocompatible cable with “anti-slip” and “anti-stick” hygienic properties aimed primarily at the medical sector

2014
Habia Cable acquires Irradose from Hans Forsgren

2014
Introduction of silicone cable solutions for wind energy and turbines

2016
The High Temperature Medium Voltage (HTMV) cable finds its first applications in the offshore industry

2017
- HEW-KABEL America Inc. is founded
- Hybrid cable for surgery robots

2018
The DMFRO range of lightweight, halogen-free cables for marine applications is launched

2018
Introduction of special cables with custom profiles

2019
Acquisition by Andlinger & Company, a private international investment and management firm focused on developing industrial companies with strong growth potential

2021
HTMV is rebranded to Zeroarc® and launched as an insulation system for a wider range of applications

2022
October 2022, Wipperfürth-based HEW-KABEL Holding GmbH acquired Habia Cable, beginning a merger to form one, stronger player in the global cable and connectivity market

2023
Integration and rebranding of new joint company under the global brand name Habia®

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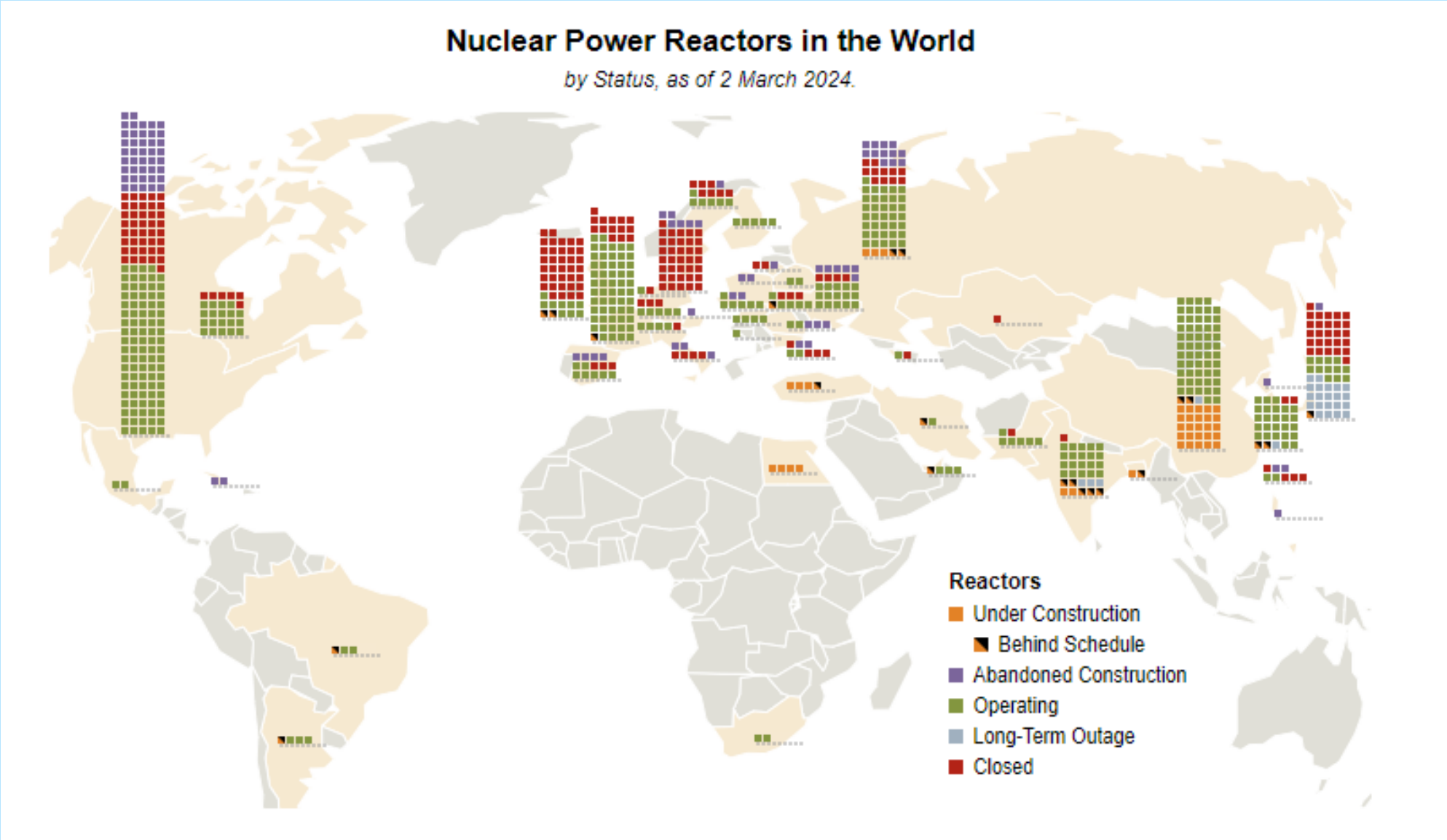

Source: https://www.worldnuclearreport.org/reactors.html#tab=iso;

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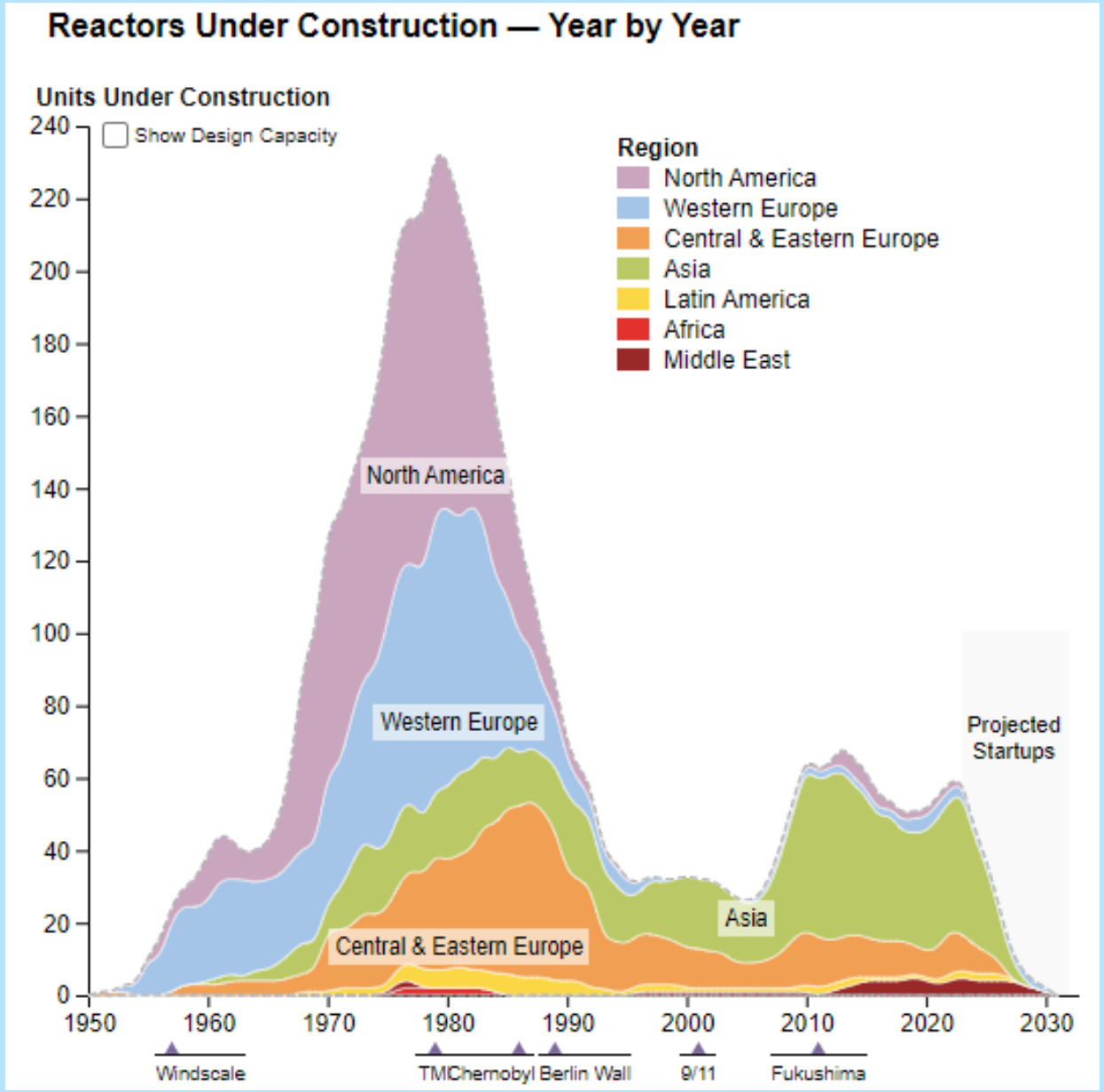
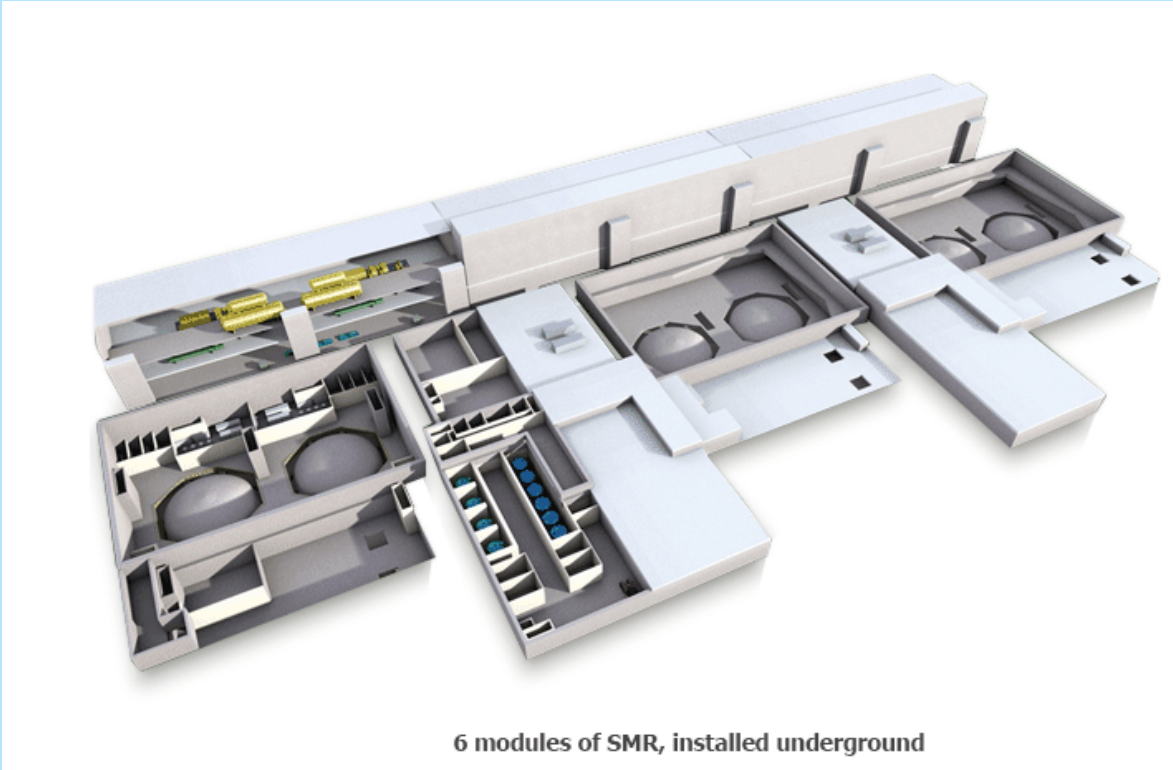


China

- Starting to use western suppliers more?!
- High-Temperature Reactor, SMRs Conventional NPP’s

South Korea

- Building again - SHN 3&4
- SMR
- Export



6 modules of SMR, installed underground

India

- NPCIL own design (and Rosatom) as well as EDF/Framatome (EPR 2).

KKNPP 5

France

- 6 new reactors; site chosen
- EPR 2

FA 1,2,3

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Denmark

- Floating NPP, Seaborg
- Co-operation with Samsung

The Power Barges are modular and can produce from 200-800 MW of electricity (Image: SHI/Seaborg)

Czech Republic

- EDF or Kepco
  decision in June
- Westinghouse excluded
- Dukovany site (currently VVER 440)

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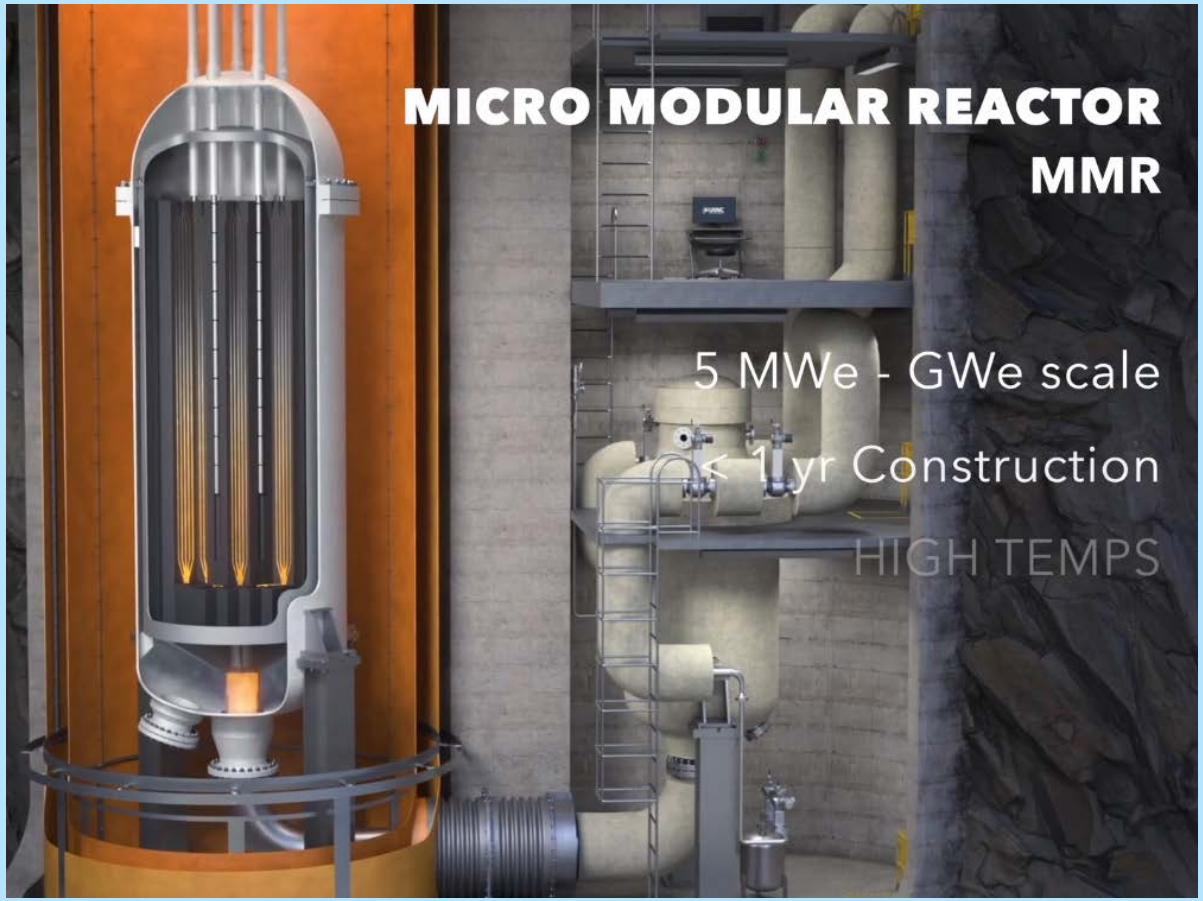
Sweden

- Leadcold

Poland

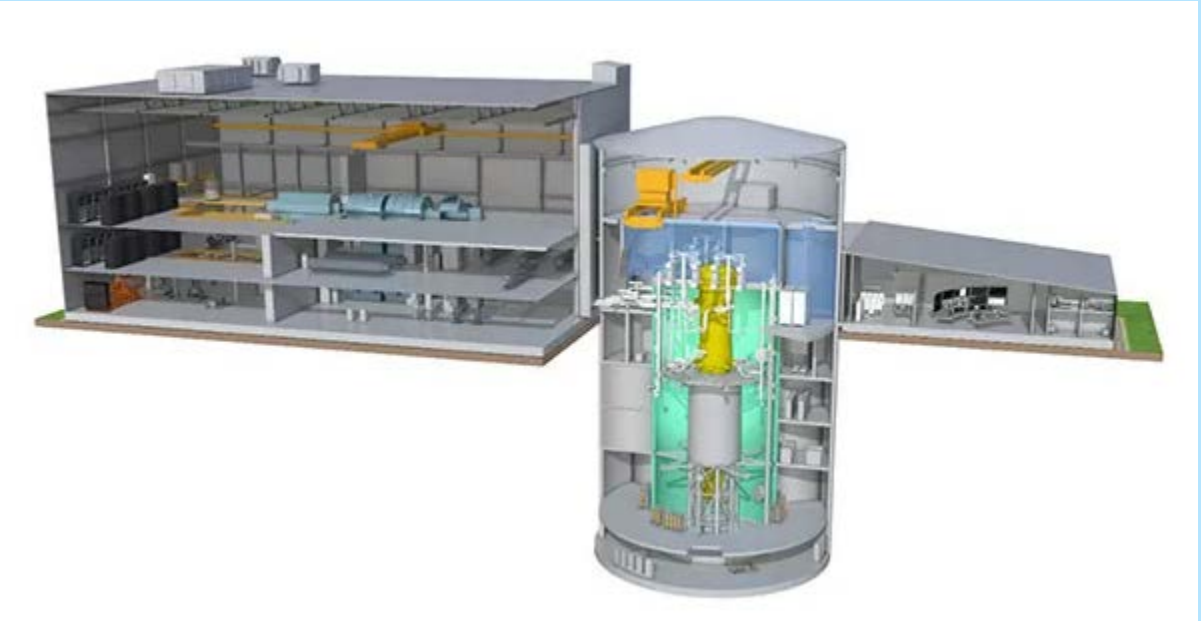
- Westinghouse, Kepco
- SMR’s: Nuscale, USNC, …
- Challenge financing



USNC MMR

Canada

- First SMR
- Conventional NPP’s, EDF



GE Hitachi BWRX-300

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Turkey, Hungary

- Rosatom

New technologies/manufacturers

- Nuscale
- Leadcold
- Ultra-Safe Nuclear
-....

- Not always aware of requirements
- Common regulation needed