

YOUR PARTNER FOR

GEO THERMAL ENERGY

OUR EXPERTISE
FROM SUBSOIL
TO SURFACE

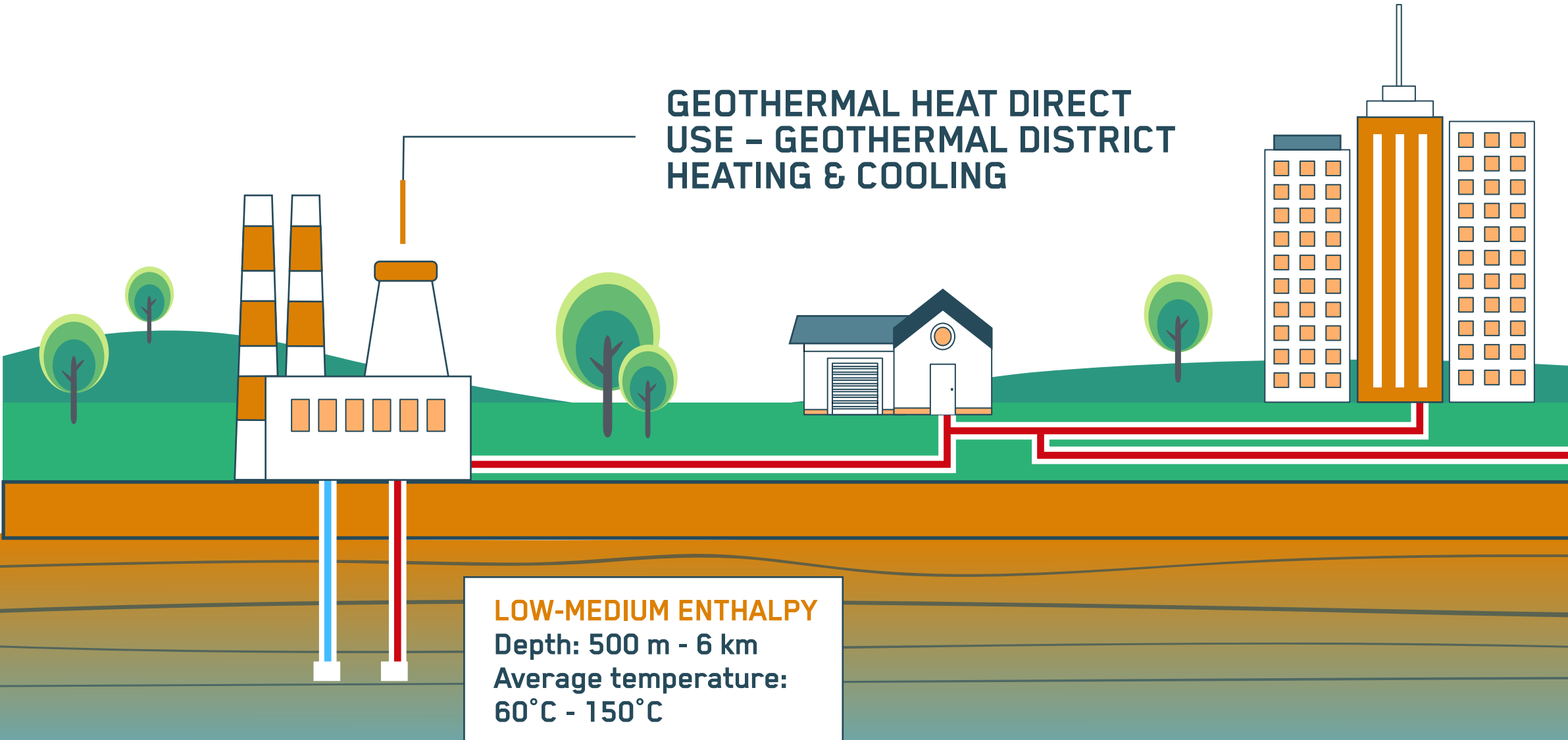
WHAT IS GEOTHERMAL ENERGY

AND WHAT IS IT USED FOR?

Geothermal energy is a renewable energy source derived from thermal energy stored in rocks and fluids deep within the Earth's crust. Through drilled wells, this energy is brought to the surface and can be used for a variety of purposes, including electricity generation and direct heat applications. It is particularly effective for urban heating, water heating, and industrial processes, and can also be employed for district cooling. Geothermal energy is available 24/7, offering a stable and continuous supply that supports a wide range of energy needs.

WORLD SCENARIO ON GEOTHERMAL ENERGY

GEOTHERMAL HEAT DIRECT
USE – GEOTHERMAL DISTRICT
HEATING & COOLING



INVESTMENTS

By 2023, global investments surpassed \$47 billion.

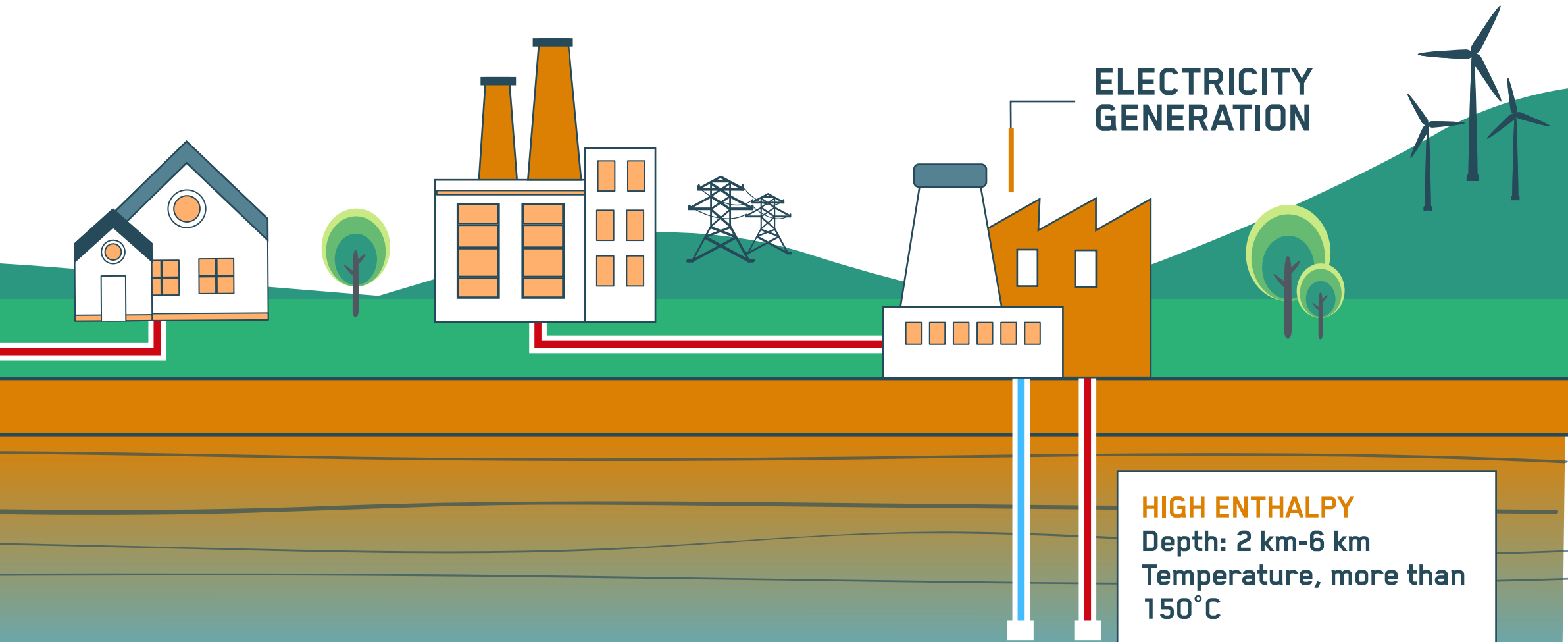
GROWTH PROJECTION

Accounting for 0.8% of global energy demand, it is expected to grow by 50% by 2030.

TECHNICAL POTENTIAL

It has the second-highest potential among renewables, with 4,000 PWh annually. It is about 150 times the world's current electricity demand.

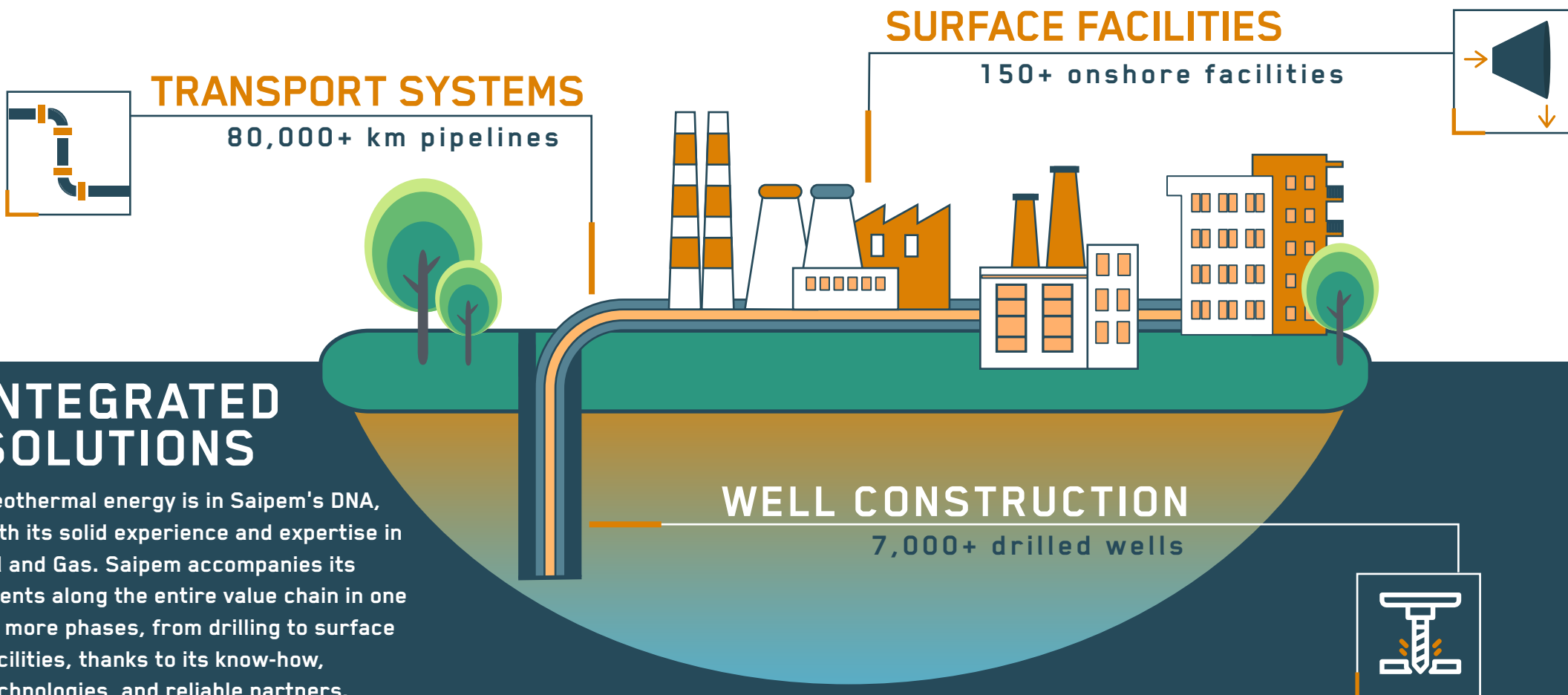
*Source: "The Future of Geothermal Energy", IEA (International Energy Agency), 2024





YOUR PARTNER FOR LOW-MEDIUM
AND HIGH-ENTHALPY

GEO THERMAL ENERGY



TRANSPORT SYSTEMS

80,000+ km pipelines

SURFACE FACILITIES

150+ onshore facilities

WELL CONSTRUCTION

7,000+ drilled wells

INTEGRATED SOLUTIONS

Geothermal energy is in Saipem's DNA, with its solid experience and expertise in Oil and Gas. Saipem accompanies its clients along the entire value chain in one or more phases, from drilling to surface facilities, thanks to its know-how, technologies, and reliable partners.

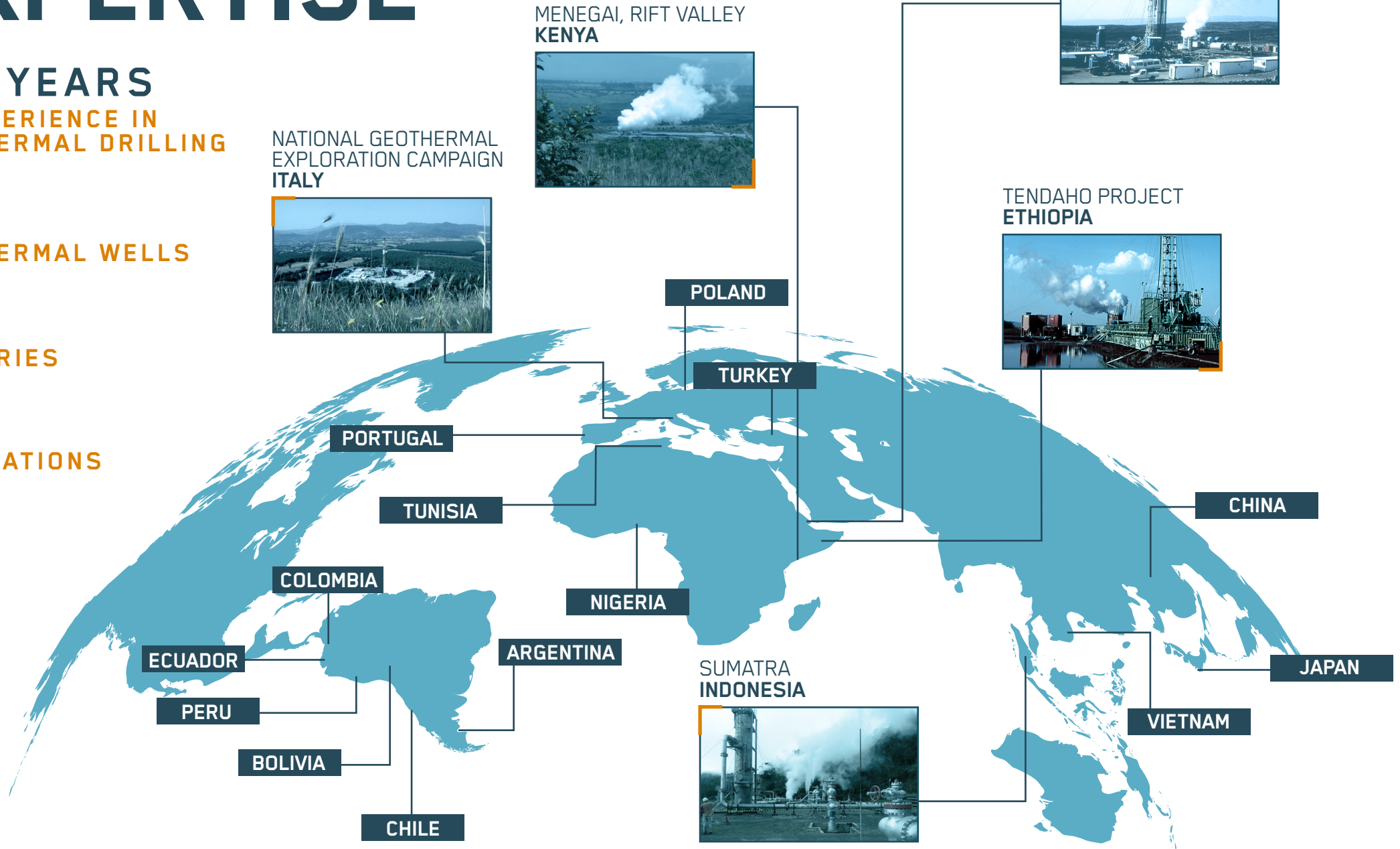
OUR GLOBAL EXPERTISE

50+ YEARS
OF EXPERIENCE IN
GEOTHERMAL DRILLING

40+
GEOTHERMAL WELLS

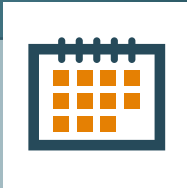
20+
COUNTRIES

80+
PUBLICATIONS



OUR VALUE PROPOSITION

ACROSS THE ENTIRE VALUE CHAIN



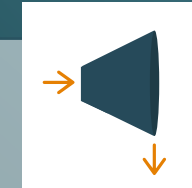
SOLUTIONS PORTFOLIO

- Feasibility studies
- Project Management Consultancy
- Resource assessment
- Engineering
- Construction
- Maintenance



WELL CONSTRUCTION

- Well engineering
- Well-pad design
- Borehole drilling
- Completions
- Well integrity



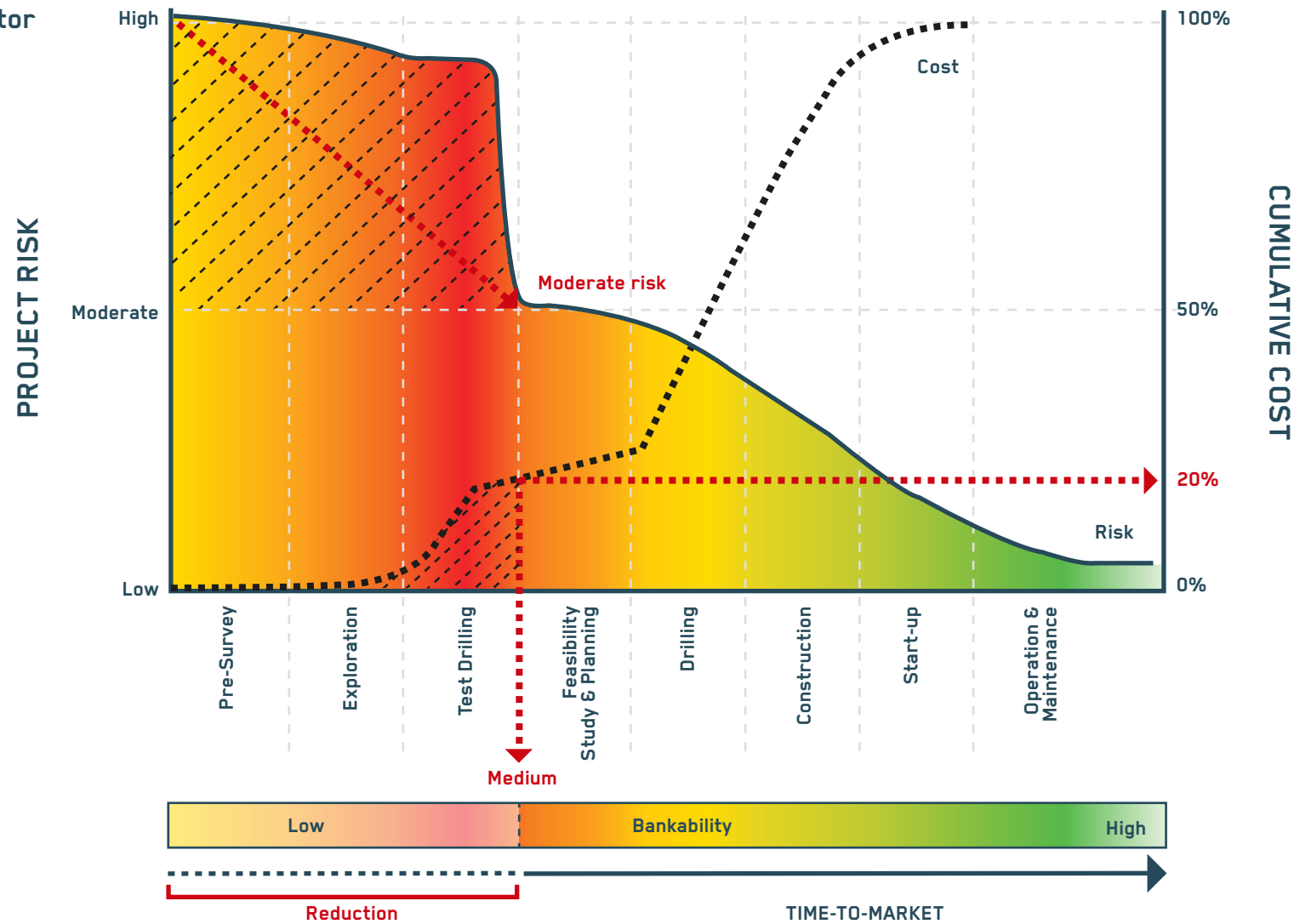
SURFACE FACILITIES

- Power plants
- ORC plant
- Transport systems
- Equipment
- Balance of Plant

LEVERAGING OIL & GAS KNOWLEDGE

Subsurface know-how from the Oil & Gas sector can significantly reshape the cost and risk profiles of medium-enthalpy geothermal projects.

- Enabling up to 20% cost reduction
- Lowering risk
- Accelerating time-to-market
- Enhancing bankability



Adapted by Saipem from Gehringer & Loksha (2012). ESMAP/The World Bank

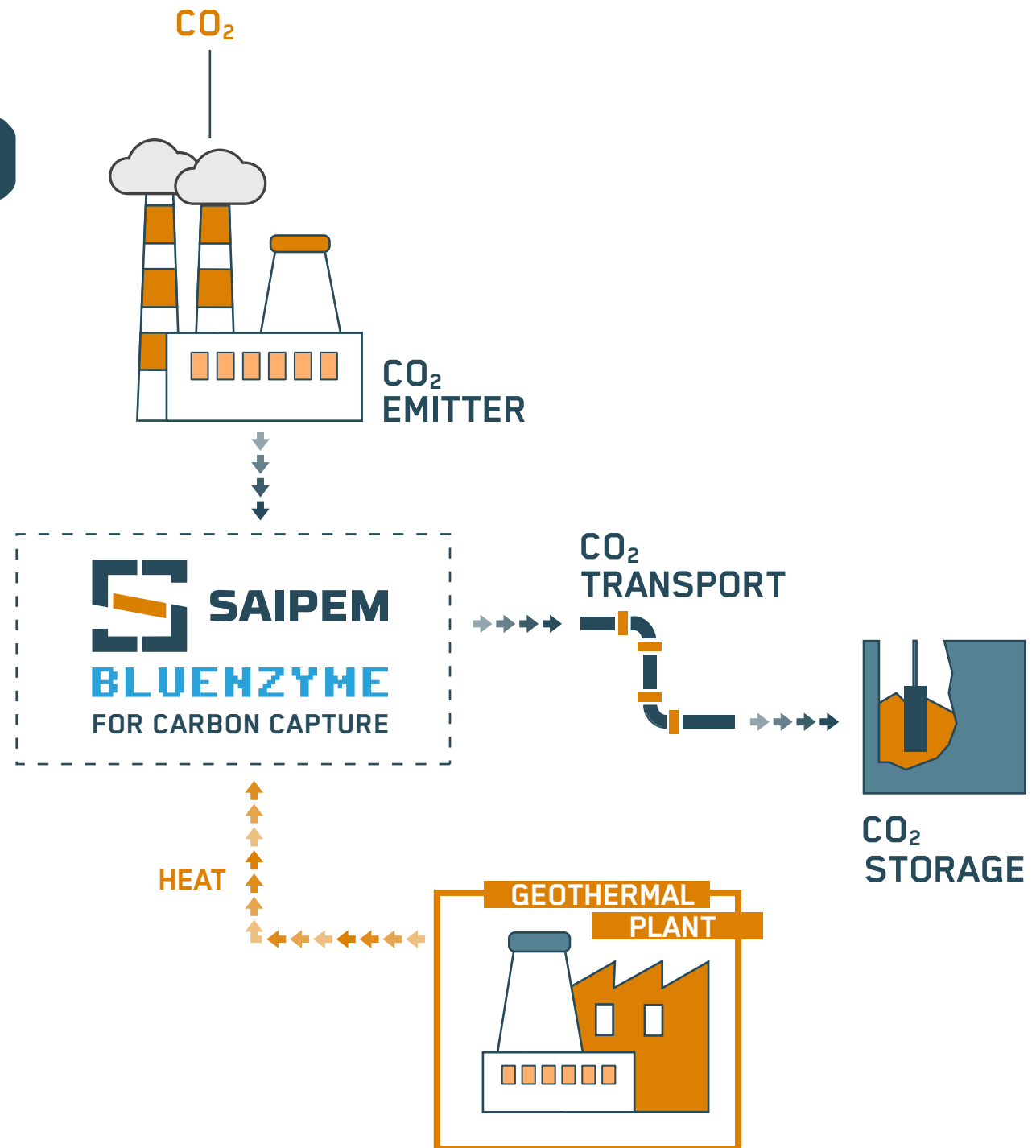
SAIPEM'S INTEGRATED OFFERING

HYBRIDISATION IN GEOTHERMAL ENERGY

As part of hybrid decarbonisation strategies, geothermal energy can be combined with carbon capture to build integrated and sustainable energy platforms.

Bluenzyme™ is a modular post-combustion carbon capture solution developed by Saipem, utilising a proprietary technology based on an enzyme-catalyzed aqueous solvent, which is regenerated at low temperatures compatible with low-medium enthalpy geothermal resources.

The integration of Bluenzyme™ with renewable geothermal energy offers a powerful synergy that makes CO₂ capture more efficient, more sustainable, and uniquely positioned for the energy transition and the net-zero decarbonisation pathways.



LOOKING TO THE FUTURE

ADVANCED APPLICATIONS

From unconventional geothermal to offshore and O&G reuse, Saipem is once again pushing toward a climate-neutral future, contributing to global decarbonisation efforts by working on four fronts.

1 — Reuse of **O&G INFRASTRUCTURE AND KNOW-HOW** for geothermal energy

2 — **RECOVERY OF MINERALS** from geothermal brines, adding value and supporting sustainability

4 — Comprehensive, tailored feasibility assessments for **OFFSHORE GEOTHERMAL** developments

3 — Next generation technologies such as **CLOSED-LOOP SYSTEMS** which exploit geothermal resources without extraction by circulating a carrier fluid from outside to heat it



CONTACT US TO LEARN MORE
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LET'S KEEP IN TOUCH



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