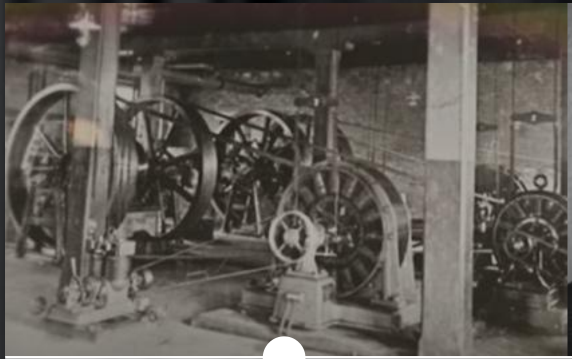
Welcome to a world engineered by AFRY

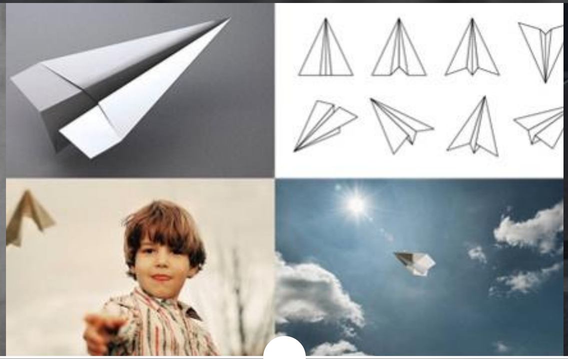
AFRY CORPORATE PRESENTATION

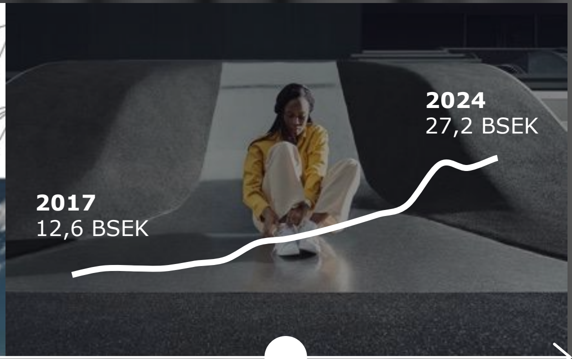
AFRY

AFRY'S JOURNEY

130 years to be proud of







1895

The steam boiler association is founded by owners of steam boilers and pressure vessels to prevent accidents

1958

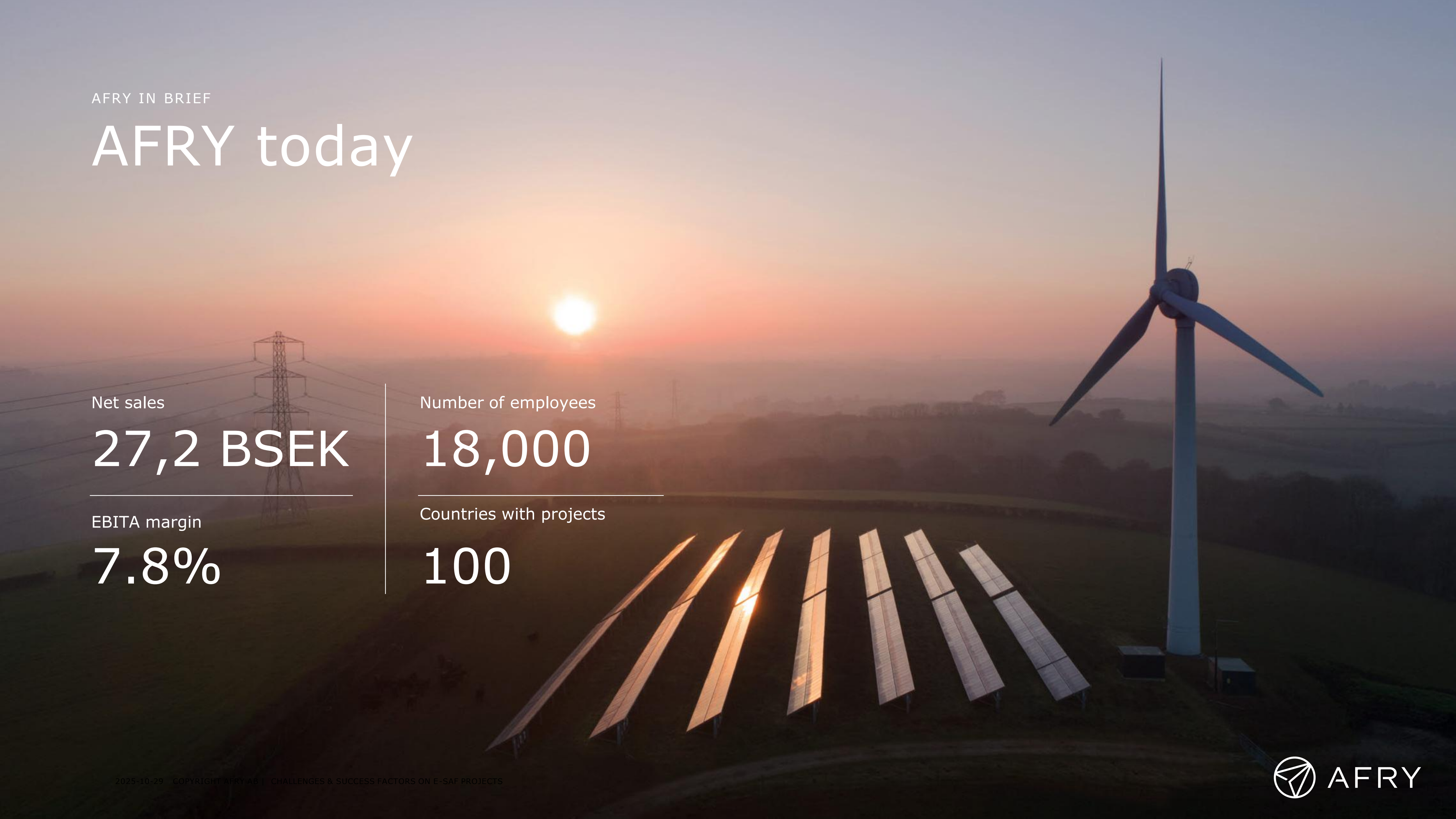
Jaakko Pöyry starts his business with the roots in Finnish forest industries

2019

ÅF and Pöyry join forces, creating a leading company within engineering, design and advisory services

Today

Pioneers of technology and leading partner in the sustainability transition



AFRY IN BRIEF

AFRY today

Net sales

27,2 BSEK

EBITA margin

7.8%

Number of employees

18,000

Countries with projects

100

AFRY

Challenges & Success factors on SAF projects

CATARIYA LUNDGREN, BUSINESS SECTION MANAGER – CHEMICALS & BIO-REFINING

PEOPLE

Reactive tasks

Not enough staff at the right time

Lack of hands-on experience

STRATEGY / PROJECT

Start ups alongside major investment projects

Unawareness of existing procedures

Developer expectations do not meet reality

PLANT

Constrained brownfield sites. Investment tied to full order books.

Economies of scale plateau due to complexity

STRATEGY PROJECT

Investors' understanding of projects

Traditional expected timelines unsuitable first of a kind large projects

EPCs with high contingencies

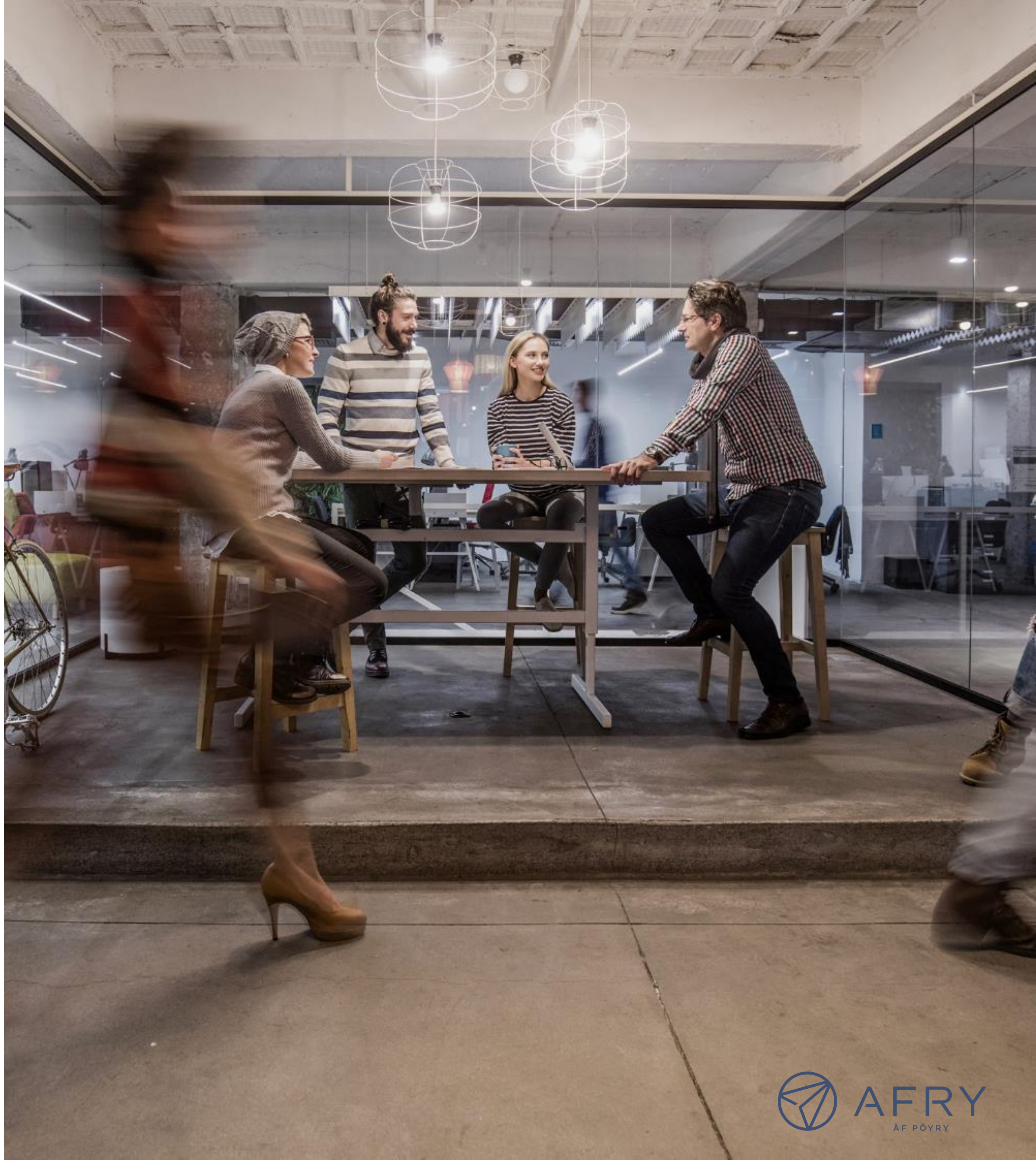
PEOPLE

Stable teams through the project phases

Qualified and Experienced Personnel with hands-on experience on key technologies (bio-processing and & downstream SAF production)

Understanding on licensors and OEMs scope, strengths and limitations

Ability to combine procurement & contracting competence along with technical know how



AFRY ÅF PÖYRY

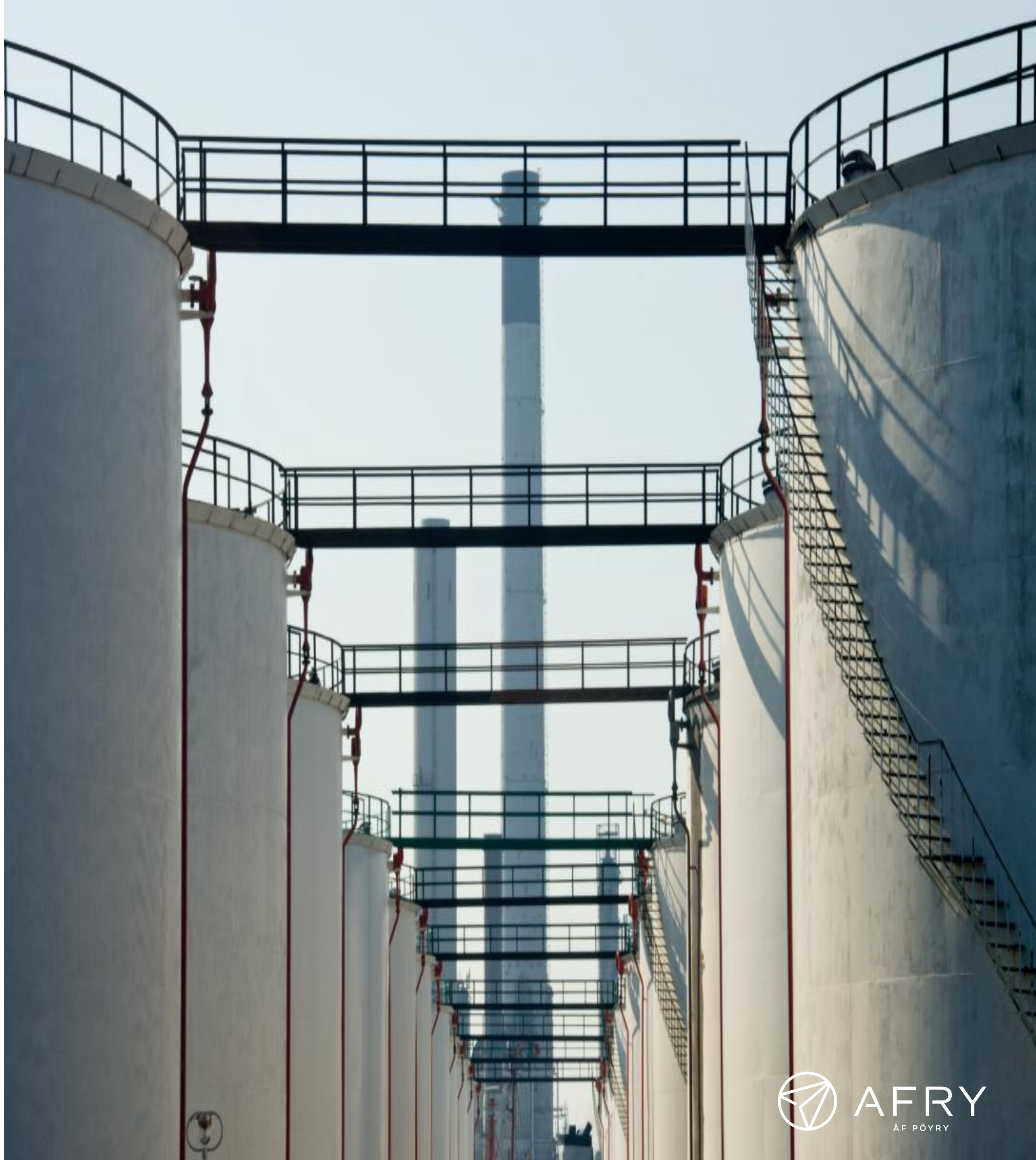
AFRY RECOMMENDATIONS

PLANT

Strong Balance of Plant (BoP) integrator

Minimise technical complexity by using modular plant-level designs

RAM studies for Final Investment Decision (FID) and repeat as design matures



AFRY RECOMMENDATIONS

Strategy & Project

Set up well-defined processes for project development:

- Strategies defined during development impact heavily the investment size
- Structured development to minimize risks (FEL/Front end Loading)
- Strong cost and change control (limited costs on initial phases)
- Prioritise project critical path and plan with long lead items during dev. phase.

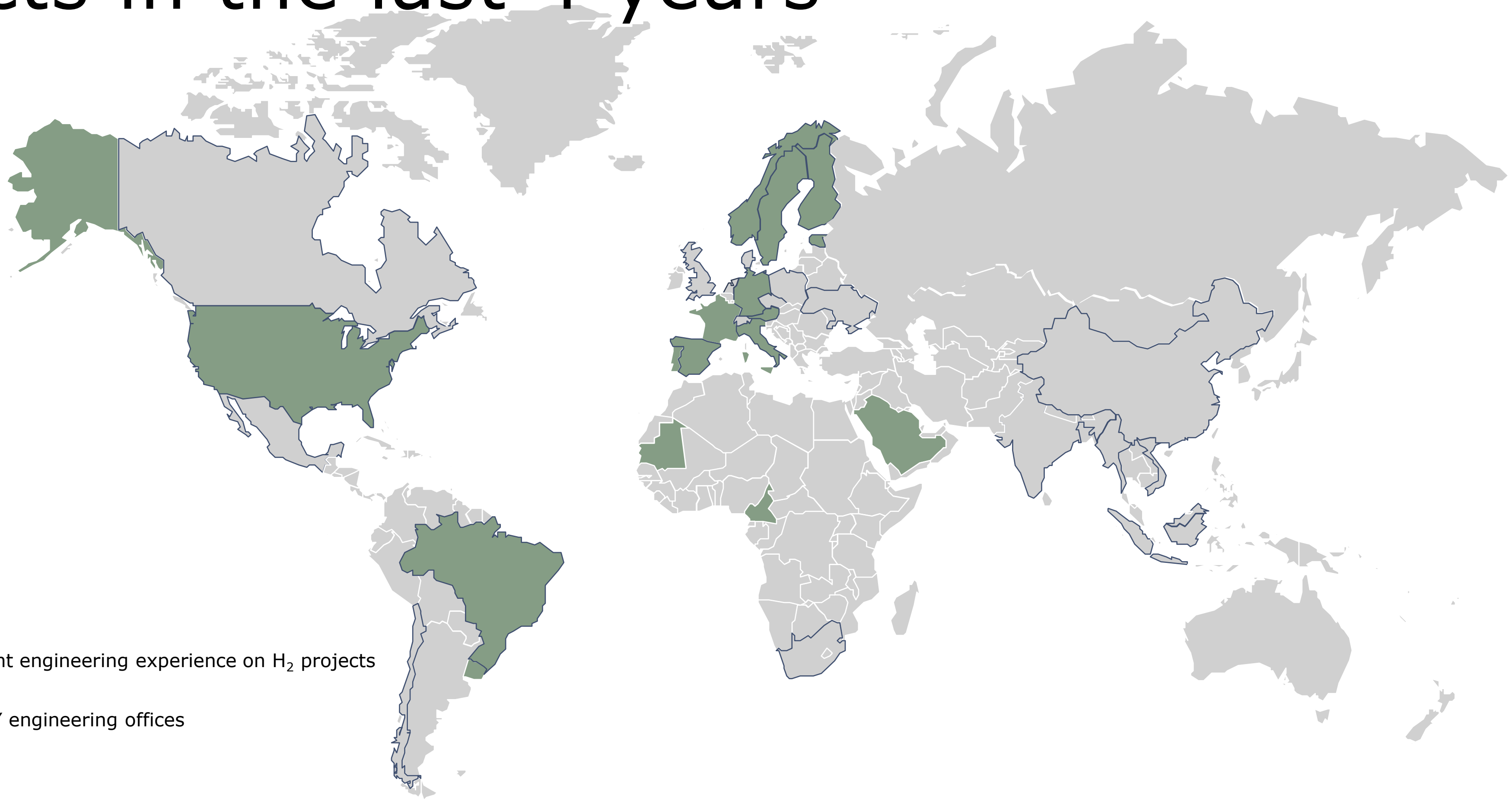
AFRY RECOMMENDATIONS

Strategy & Project

- Up-front agreements before FID
  - Municipalities & communities
  - Off-takers
  - Grid connection
  - CO_2 sourcing
  - Water availability
- Implementation strategies
  - Contract model: EPC vs EPCm (Shared risk allocation between Owner & Contractor)
  - EPC up to 30% increase on TIC
- Cheap doesn't mean best
  - Quality / availability / references / standards

GEOGRAPHICAL EXPERIENCE

Over 300 Power-to-X, hydrogen, CCUS, bio & e-fuels projects in the last 4 years



Countries with recent engineering experience on H_2 projects

Countries with AFRY engineering offices

AFRY ÅF PÖYRY

INTERNAL

AFRY WAY OF WORKING

Minimising risks on projects

Advisory services to understand market development and essential requirements of projects

Owner's Engineering in large CAPEX projects as well as Technical and engineering services to develop projects from initial concept through FEL to deliver FEED studies built on strong engineering fundamentals to reduce risks and minimize project costs.

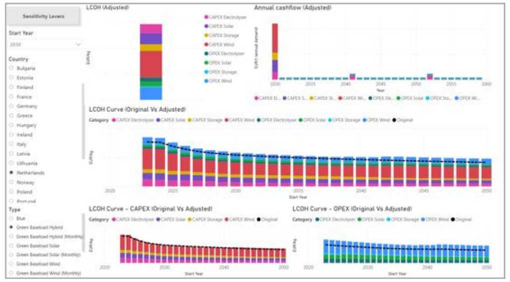
Engineering & advisory services supplied to over

25 $MTCO_2/a$

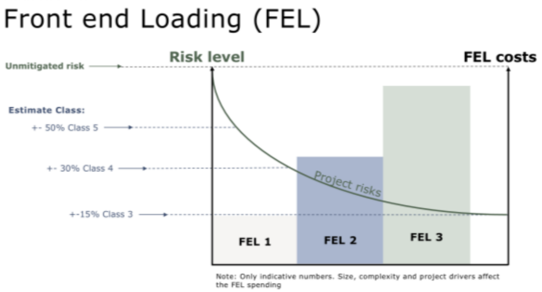
Captured, or planned to be captured

➢ Strategy development & execution ➢ Regulatory frameworks ➢ Investment advice ➢ Power Sourcing ➢ Offtake identification	➢ Concept design study ➢ Pre-feasibility ➢ AACE CLASS 4/5 ➢ -50/+100%	➢ Feasibility Study ➢ Pre-FEED ➢ AACE Class3 ➢ +/- 20%	➢ Basic Engineering ➢ FEED Study ➢ AACE Class 2 ➢ +/-10%	➢ EPCM approach ➢ Engineering ➢ Procurement ➢ Construction ➢ Commissioning

Analysis



Front End Loading (FEL)



Technical & engineering services to over

20GW

of electrolyser capacity

KEY TAKEAWAYS

Success factors on SAF projects

Off taker agreements before FID

Solid Implementation strategies (EPCM vs EPC)

Strong BOP integrator

Simple design and key technology know-how

Cost and Change control along Front end development


Making Future
AFRY
ÅF PÖYRY