

Making Future

AFRY @ AG60 20221114



OUR MISSION

We accelerate the
transition towards a
sustainable society

A woman with grey hair and large green earrings stands on a bridge at night. She is wearing a dark, shiny, long-sleeved jacket. The bridge has a metal railing and is illuminated by several bright lights, creating a bokeh effect in the background.

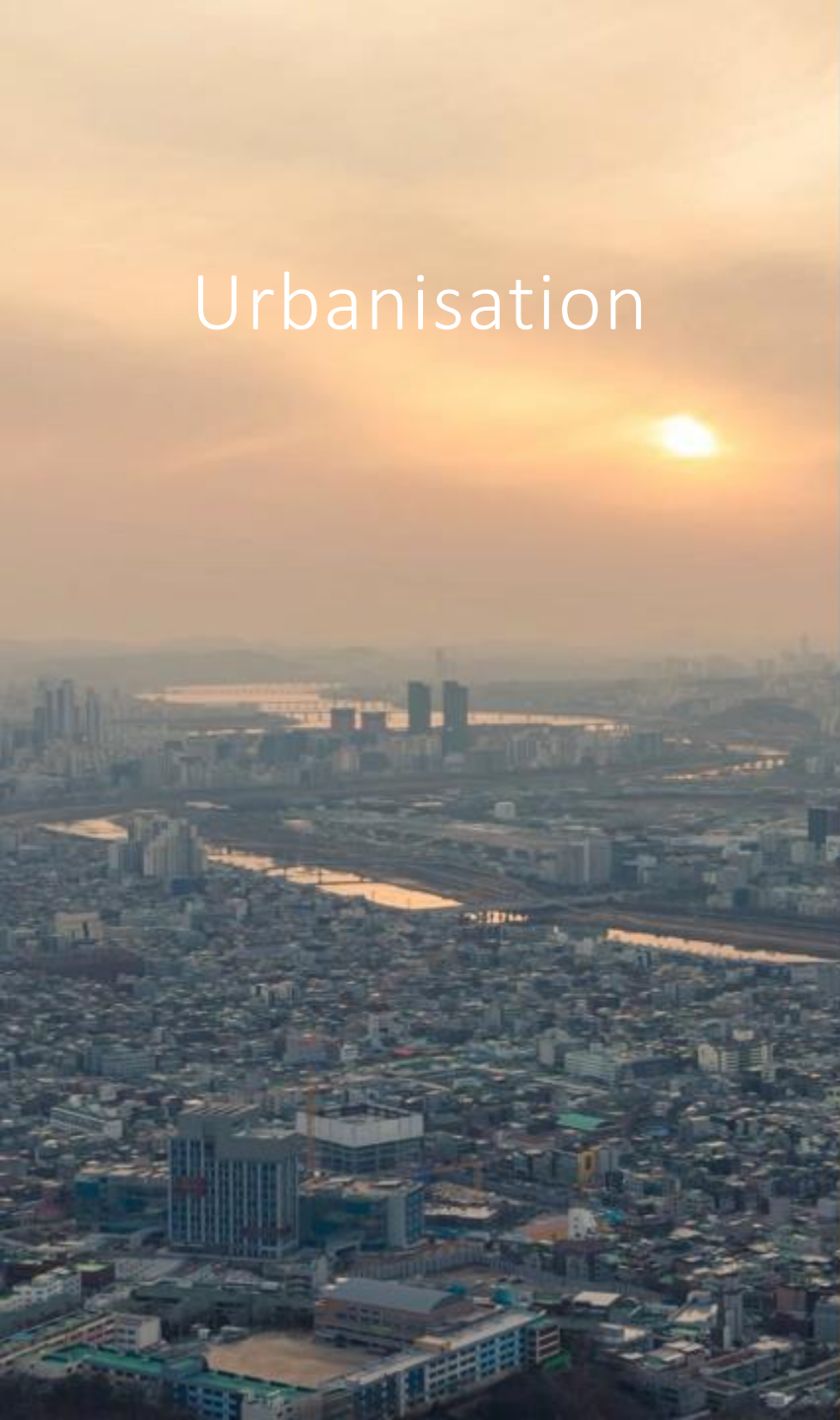
OUR AMBITION

A European leader in
sustainable engineering, design
and advisory
with a global reach

SUSTAINABLE SOLUTIONS

Our offering



An aerial photograph of a sprawling city at sunset. The sun is a bright orange orb on the horizon, casting a warm glow over the dense urban landscape. The city features a mix of low-rise and high-rise buildings, with a river or canal winding through the lower part of the frame.

Urbanisation

A close-up portrait of a man with a beard and black-rimmed glasses. He is looking down at a smartphone held in his hand, which is out of focus in the foreground. The background is a soft, out-of-focus indoor setting.

Digitalisation

An abstract, high-contrast image with a blue and white color palette. It features swirling, organic shapes that resemble ice, water, or perhaps a microscopic view of a material. The overall effect is dynamic and textured.

Climate
change

Transforming segments

INFRASTRUCTURE



FOOD & LIFE SCIENCE



CLEAN ENERGY



BIOINDUSTRY



Our offerings in six divisions

Infrastructure



Real estate
Rail & Road
Architecture
Environment
Water

Industrial & Digital Solutions



Food & Life Science
Product and
Software Design
Automation
Defense
Specialized Technical
Services

Process Industries



Pulp & paper
Mining & Metals
Steel Industry
Oil & Gas

Energy



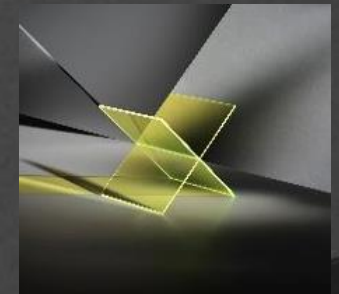
Hydro
Renewables
Nuclear
Transmission &
Distribution

Management Consulting



Bioindustry
Energy
Capital
Industry

AFRY X



Digital services
and products

One of the most attractive employers

B.Sc. ENGINEERING PROFESSIONALS

1. Sweco
2. IKEA
3. **AFRY**
4. Polestar
5. Volvo Cars
6. WSP
7. Volvo Group
8. NCC
9. Skanska
10. Tyréns

M.Sc. ENGINEERING PROFESSIONALS

1. Spotify
2. IKEA
3. Google
4. Northvolt
5. Polestar
6. Sweco
7. Volvo Cars
8. **AFRY**
9. RISE Research Institutes of Sweden
10. ICA

SCIENTIFIC RESEARCHERS

1. **AFRY**
2. Astra Zeneca
3. Volvo Group
4. Volvo Cars
5. Sandvik
6. ABB
7. Siemens
8. Scania
9. Ericsson
10. SAAB Group

Get inspired
by our cases

Sustainability boost for world's largest dissolving pulp mill

- AFRY collaborates with pulp and paper company Sappi in their efforts to propel the transition to more sustainable textile production.
- When the new production line is ready in 2020 Saiccor Mill in South Africa should account for 10 percent of global dissolving pulp production, but with a 55 percent reduction in CO2 emissions.



← New metal recycling plant – Customer ScanArc Hofors – End customer Metallo Chimique Bersee Belgium

The project included:

- A brand-new metal recycling plant for copper and zinc

The assignment included:

- Preliminary study and tender documents
- Strength calculations
- Design base
- Layouts + transport and assembly drawings
- Design piping for, among other things, the cooling water with 5 skids
- Manuals for maintenance
- Coordinator in Navis for all disciplines involved
- ATEX and SIL classification of the facility

AFRY's Technical Disciplines in the assignment:

- Mechanical design
- Calculation
- Piping design
- Safety

The customer benefit of using AFRY:

- The customer felt that AFRY could serve every demanded disciplines in an extremely effective way.



Specialized Technical Services

BU PROJECT CONTROL & MANAGEMENT

Project Control & Management

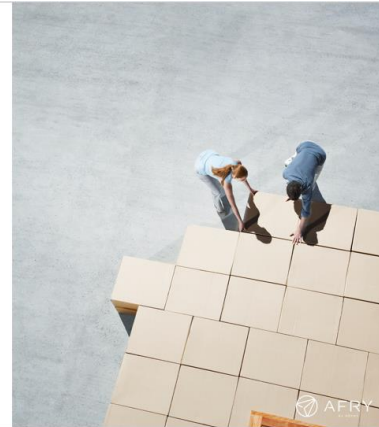
- Project & Program Management
- Project Control
- PMO development
- Interim Management
- Future Concept



BU SUPPLY CHAIN MANAGEMENT

Supply Chain Management

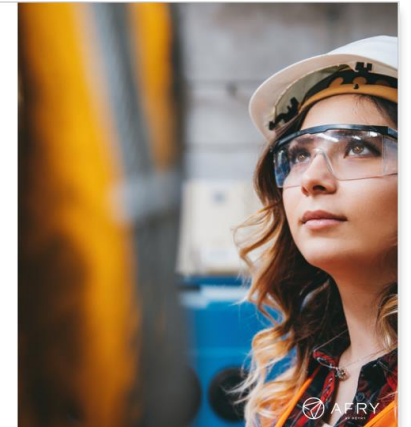
- Logistics
- Production simulation
- Management and Planning
- Purchasing
- Packaging Solutions
- Supply Chain 4.0



BU SPECIALIZED OPERATION EXCELLENCE

Specialized Operational Excellence

- Machinery Safety
- Compliance and Quality Management
- Technical Communication
- Visualisation & Animation
- Safety & EHS
- Digital Products
 - Machinery Safety AFRY Zert RM
 - Technical documentation AFRY Zert CLM
 - Compliance AFRY PRS
 - Supplier risks AFRY BCM



BU TECHNICAL ANALYSIS

Technical Analysis Computational Aided Design

- Structural analysis FEM/FEA (Finite Element Method/Analysis)
- Computational Fluid Dynamics (CFD)



BU QUALITY ENGINEERING

Quality Engineering

- Supplier Evaluation and Expediting
- Quality Management
- Welding and Materials – Welding Engineers
- Accident Investigation
- Quality Assurance & Control including DT/NDT



BU TEST AND QUALIFICATION CENTER

Test and Qualification Center

- Test Center (Swedac accredited)
 - Environmental testing
 - Mechanical Testing
 - Nondestructive testing (NDT)
 - Field Measurements

- Qualification Center (Swedac accredited)
 - Certification of welding operators
 - Certification of weld procedures



AFRY Test & Qualification Center

Test Center (Swedac Accredited ISO17025)

- Environmental testing
- Mechanical testing
- Non destructive testing (NDT)
- Measurement operations
- Testing equipment
- Material testing

Qualification Center (Swedac Accredited ISO 17024)

- Certification of welding operators

TDOK 2014:0587, version 2.0

SS-EN ISO 13585:2012

SS-EN ISO 14732:2013

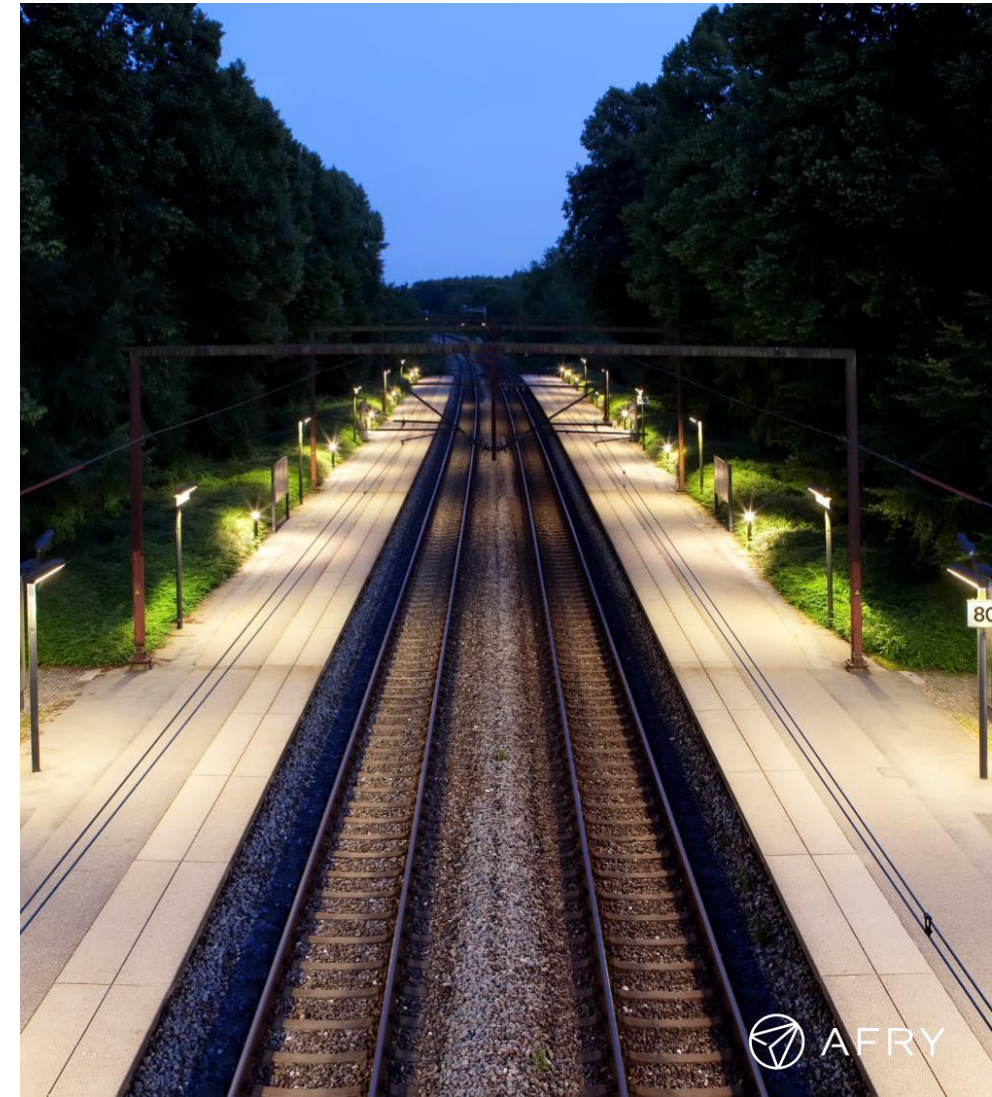
SS-EN ISO 9606-1:2017

SS-EN ISO 9606-2:2005

SS-EN ISO 9606-3:1999

SS-EN ISO 9606-4:1999

SS-EN ISO 9606-5:2000

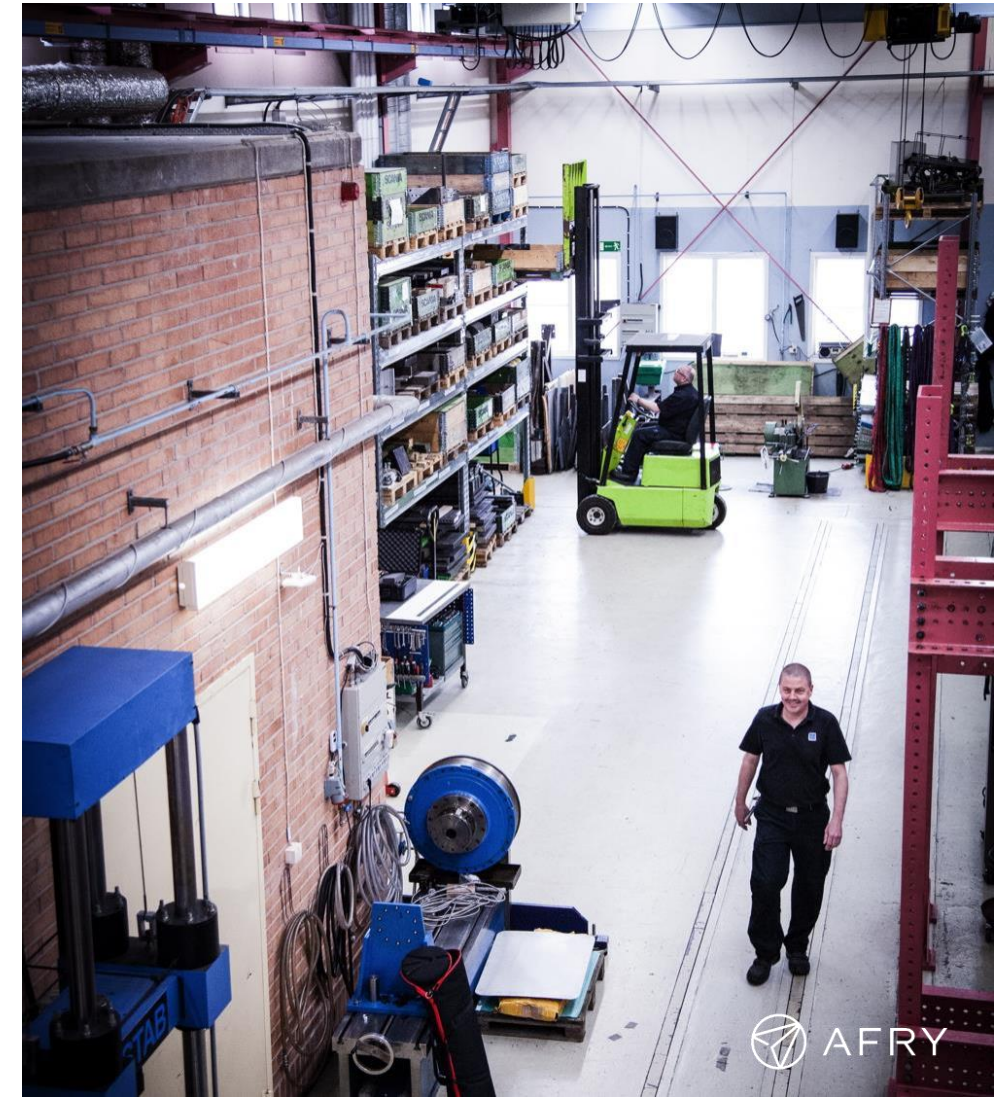


AFRY Test & Qualification Center

Special designed testing facility/lab

- The lab and testing equipment are designed for testing components and systems.
- Modular test portals, fixtures & brackets
- Control- & measuring systems, sensors etc.
- Hydraulic- and pneumatic actuators
- Workshop
- Climate chambers
- Material test equipment
- Equipment for Non-Destructive Testing, NDT
- Equipment for testing of rail welds

A team with focus on welding and testing



AFRY Test & Qualification Center

Previous assignments Within testing & verification

- Fatigue testing of mechanical components.
- Static testing of mechanical components.
- Impact test of both mechanical objects and electronics.
- Drop test of both mechanical objects and electronics.
- X-ray testing of mechanical components and electronic devices and circuit boards.
- Nondestructive testing of components by using different methods as penetrant, ultrasonic and fluorescent magnetic powder.
- Mechanical and environmental resistance testing.
- Mechanical and environmental resistance testing of electrical wire harness.
- Material analysis and identification of materials in components.
- Climate and environmental testing of both mechanical objects and electronics.
- Resources for field measurements at customer sites in Sweden and abroad.
- Total responsibility of measurement campaign on test objects and machines.
- Extensive and long experience of mounting strain gauges and other types of sensors as well as measuring equipment on and in machines and vehicles.
- Material testing regarding hardness, impact strength, tensile, bending



Questions / Discussion

Welcome to contact us and visit our test facility

Where?

At Dalarna Science Park
Forskargatan 3, Borlänge, Sweden

Contacts?

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