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webuild group

sustainability

July 2022

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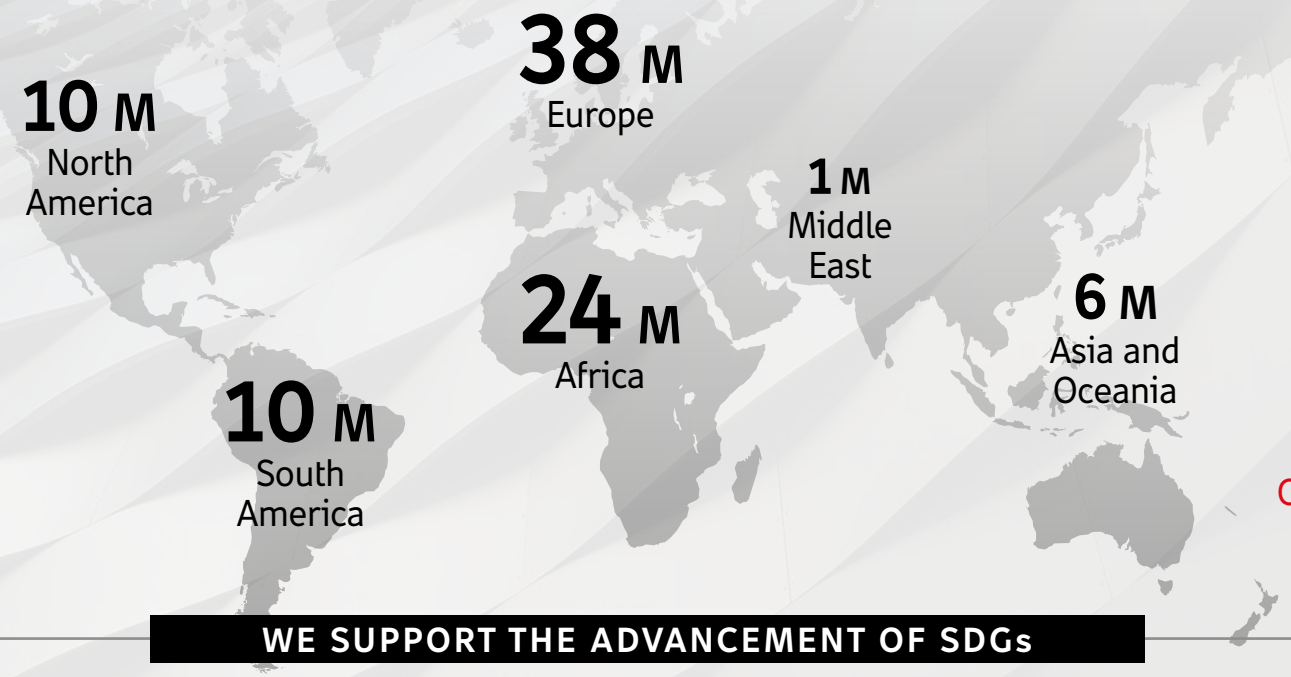
#WePromote a Sustainable World

WE CONTRIBUTE TO IMPROVE THE LIVES OF PEOPLE AND THEIR COMMUNITIES WHEREVER WE WORK

~ 89 M
people
benefiting from ongoing Group projects

WORLDWIDE



Sustainable mobility
43 M
people served

Clean hydro energy
23.4 M
eq. residents served

Clean water
16.3 M
eq. residents served

Green buildings & others
6.8 M
people served

WE SUPPORT THE ADVANCEMENT OF SDGs

7,000+
additional **hospital beds**

857 M
m^3 of **treated water daily**

14,000
MW of new **renewable energy** installed

50%
high-speed's travel time average reduction

3.2 M
avoidable car journeys per day thanks to metro projects

24 M
t CO_2 avoidable per year

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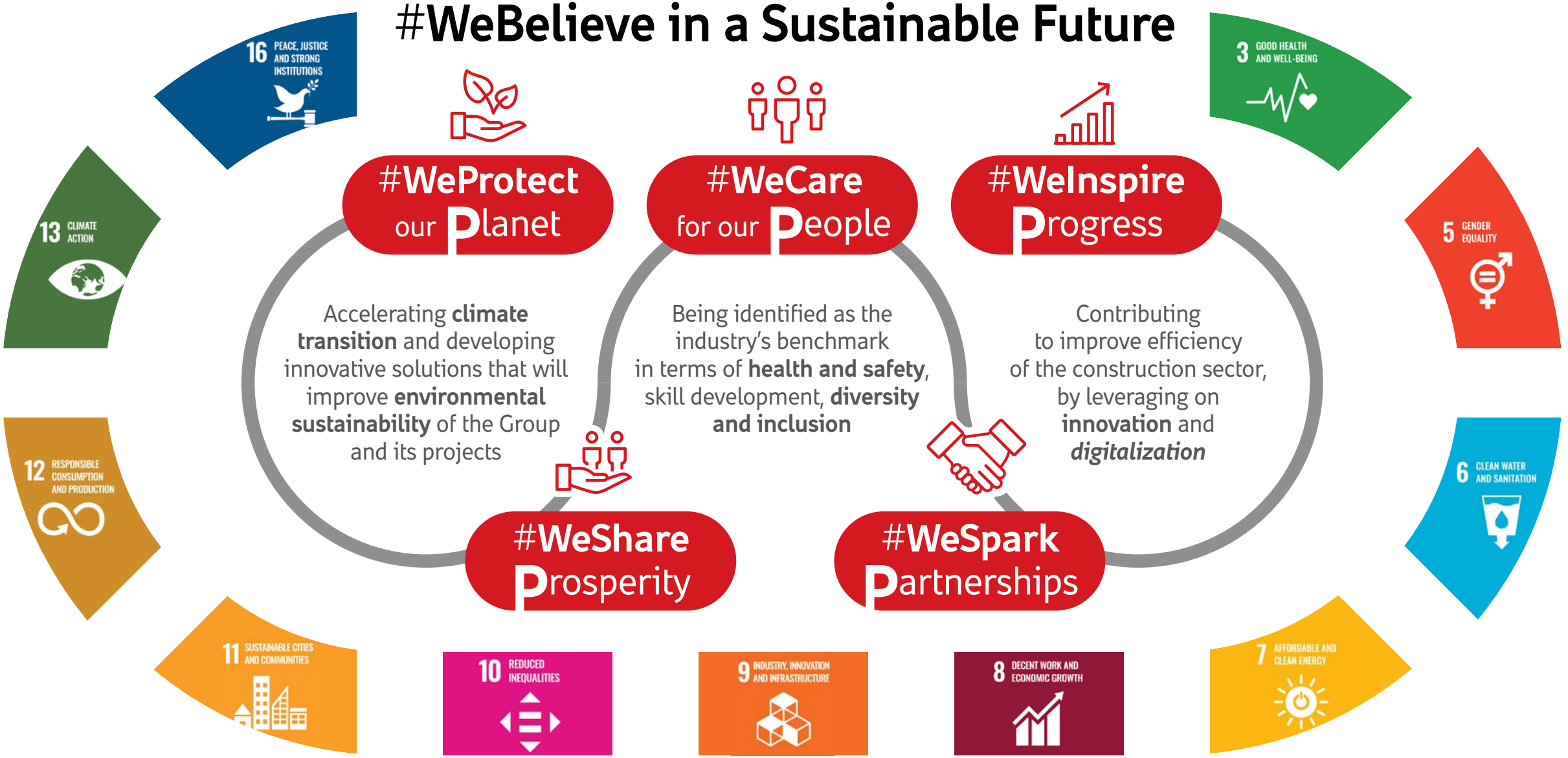
#WeBelieve in a Sustainable Future



#WeProtect our Planet

Accelerating **climate transition** and developing innovative solutions that will improve **environmental sustainability** of the Group and its projects

#WeCare for our People

Being identified as the industry's benchmark in terms of **health and safety**, skill development, **diversity and inclusion**

#WeInspire Progress

Contributing to improve efficiency of the construction sector, by leveraging on **innovation** and ***digitalization***

#WeShare Prosperity

#WeSpark Partnerships

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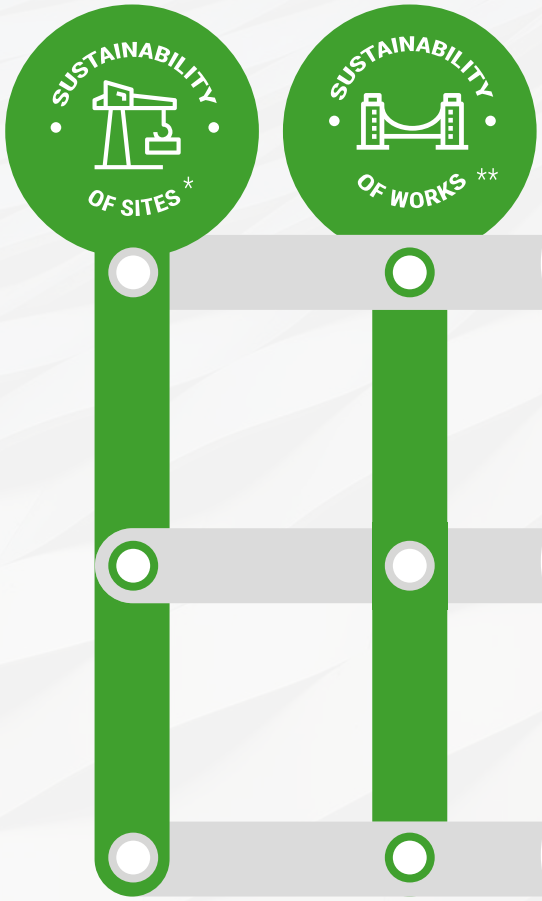
#WeInvest in Sustainability

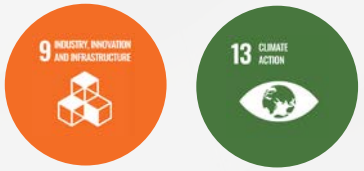
We invest in **3 sustainability "construction sites"** with programmes and ESG targets for the next three years.



Green Builders

Safe and Inclusive Builders

Innovative and Smart Builders



* Construction phase ** Operational phase

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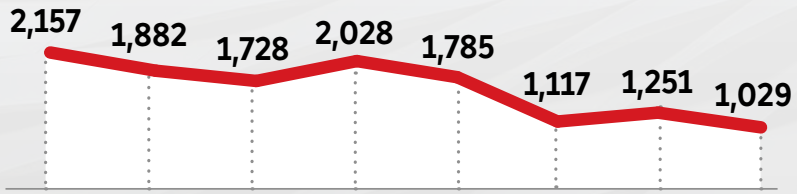
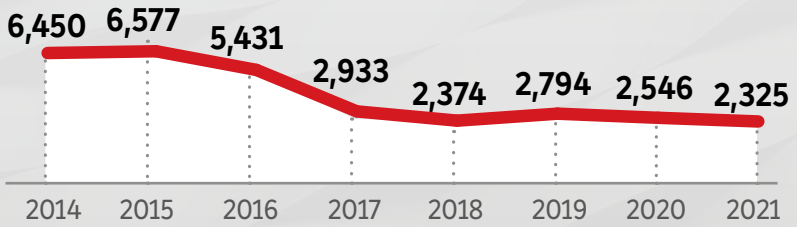
Green Builders

Energy intensity
(GJ/€m)



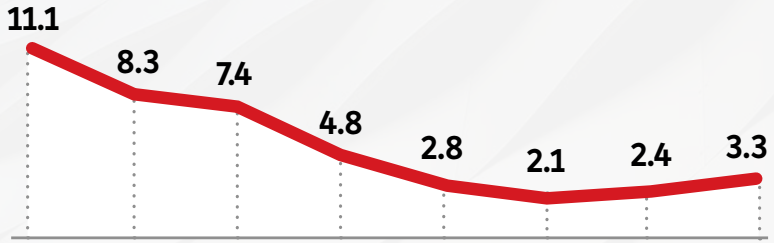
Water intensity
(m^3/€m)



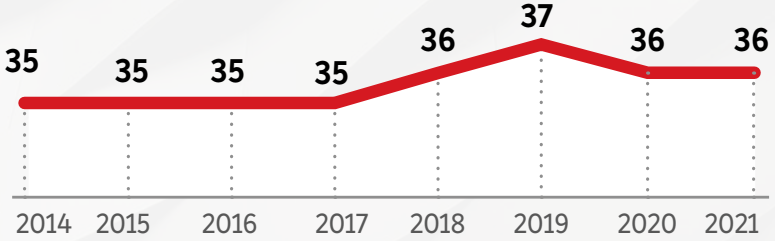
Safe and Inclusive Builders

WEBUILD'S TRACK RECORD

Lost Time Injuries Frequency

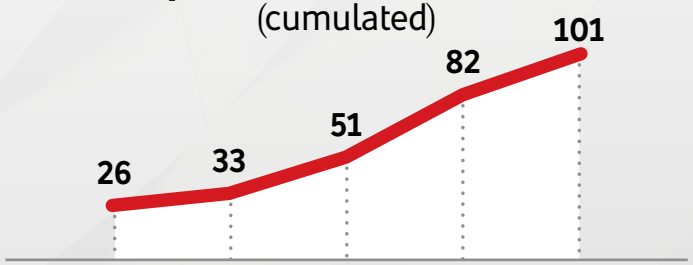


Women working at HQ
(%)

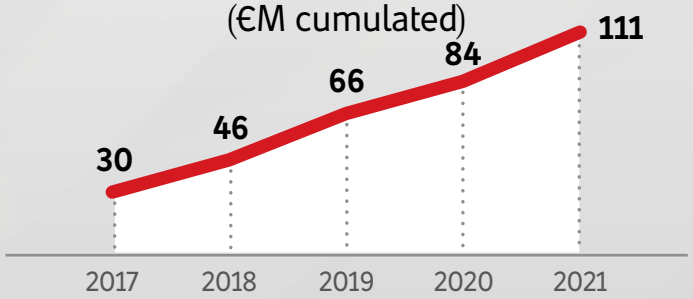


Innovative and Smart Builders

Developed innovative solutions
(cumulated)



Investments in innovation
(€M cumulated)



EU "GREEN" TAXONOMY

2021 Revenue recognised by the EU Taxonomy

2021 CapEX recognised by the EU Taxonomy

2021 OpEx recognised by the EU Taxonomy

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Target

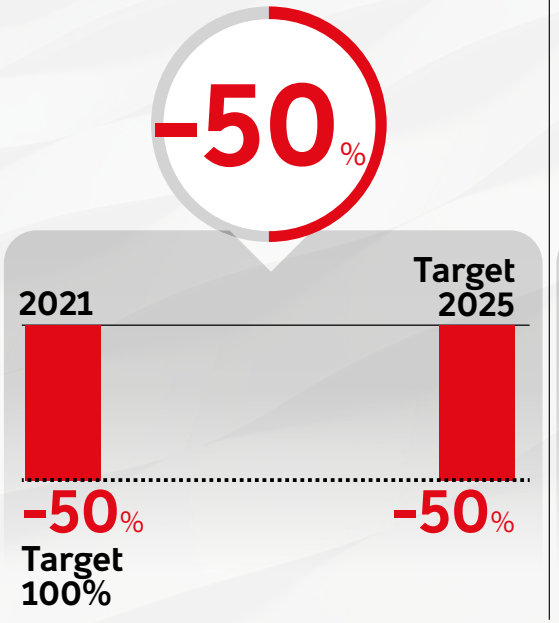
-50% Greenhouse gas emission intensity scope 1&2[1] (2025 vs 2017)

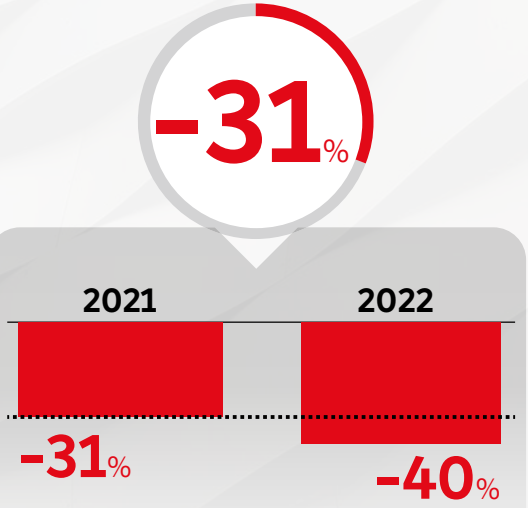
-40% Lost Time Injury Frequency Rate (LTIFR)[2] (2022 vs 2017)

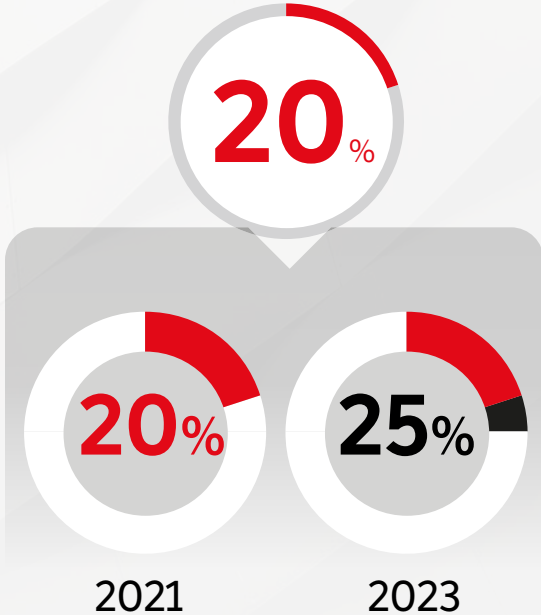
25% Women identified in the key role succession planning (2023)

+30 mln € Investments in innovative projects (2023)

2021 Results







1. Scope 1&2 indicate CO2e emissions coming from the consumption of fuels (scope 1) and electricity (scope 2) per million euro of revenues
2. LTIFR shows the lost time (days) frequency rate for injuries occurred per 1 million worked-manhours

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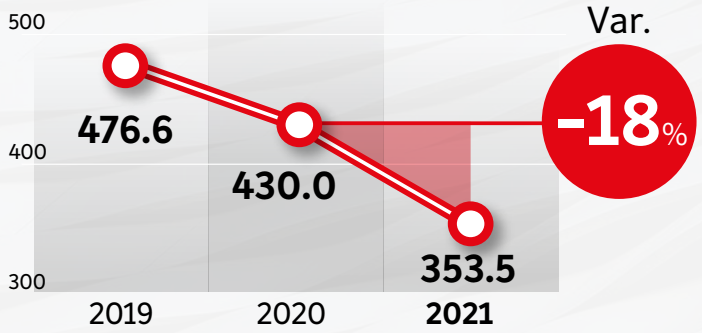
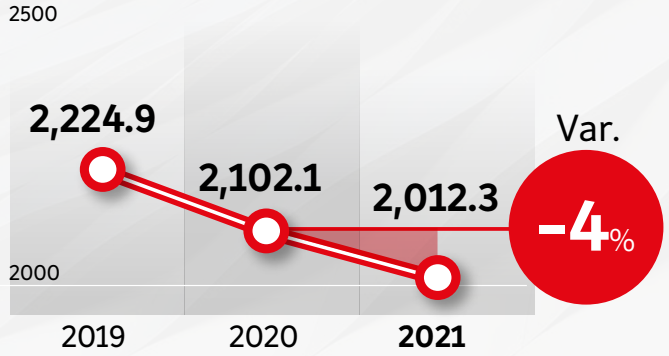
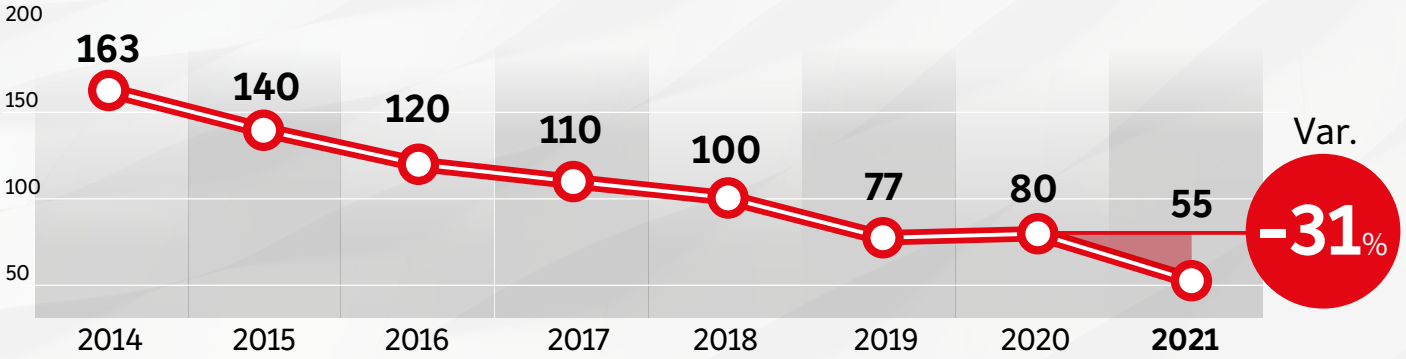
Emissions Scope 1-2[1] (kt CO2e)

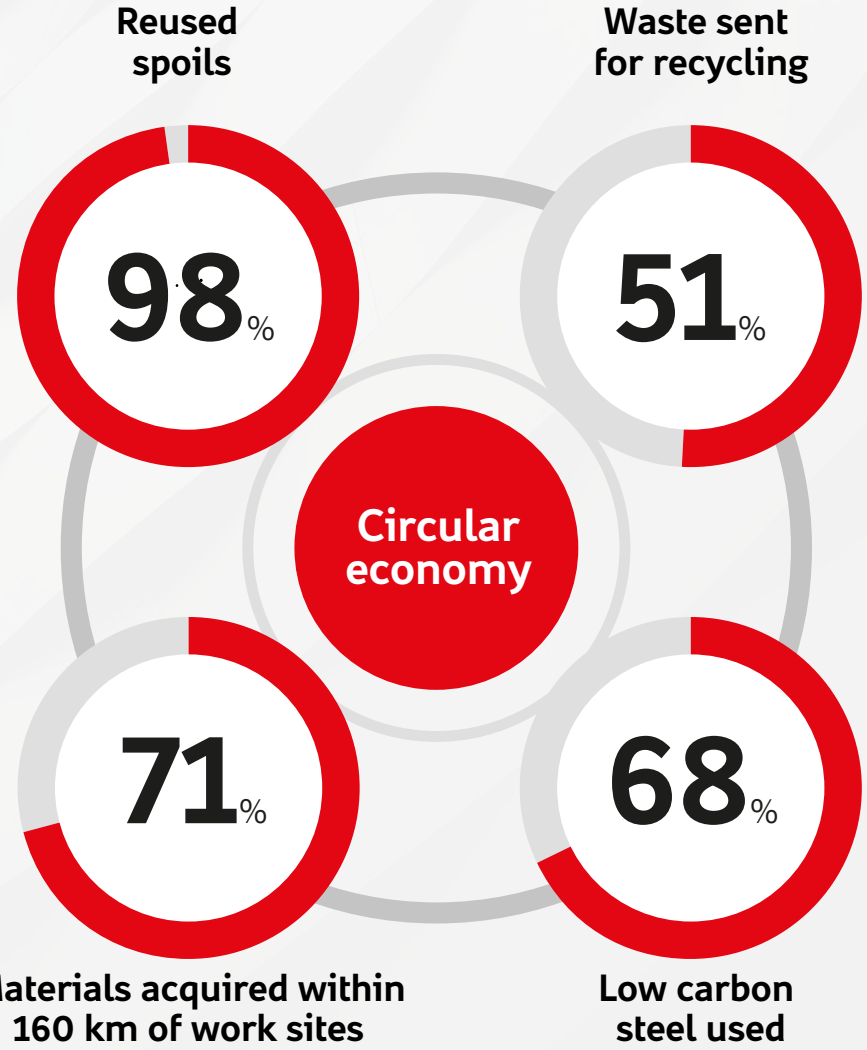


Emissions Scope 3[2] (kt CO2e)



Emissions Intensity[3]





1. Scope 1&2 indicate CO2 emissions coming from the consumption of fuels (scope 1) and electricity (scope 2)
2. Scope 3 (indirect emissions from purchased goods and services, Business travel, Employee commuting, Waste disposal)
3. Emissions Scope 1&2 per million euro of revenues (tCO2/€m)

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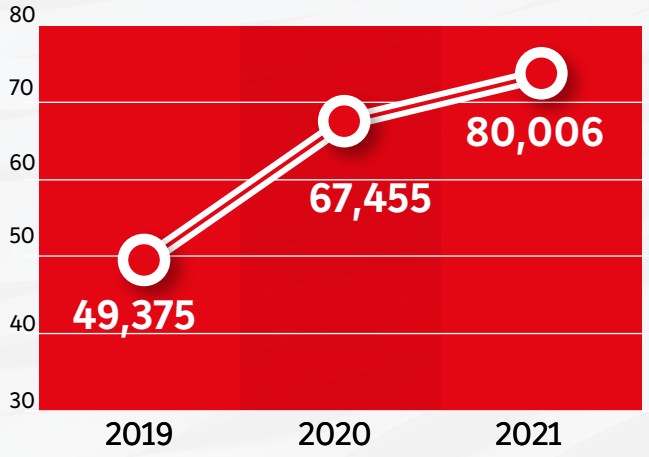
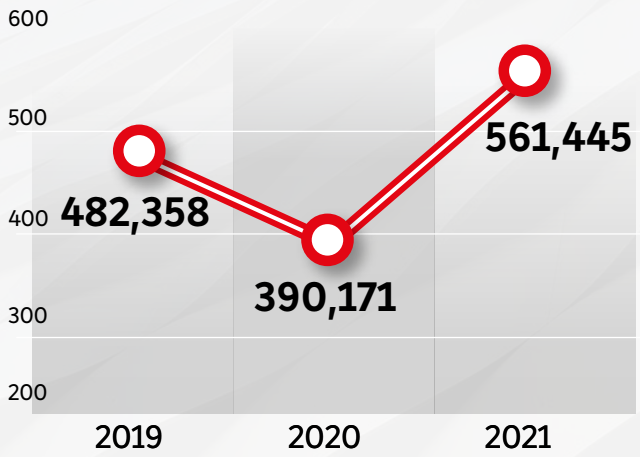
Direct and third party employees

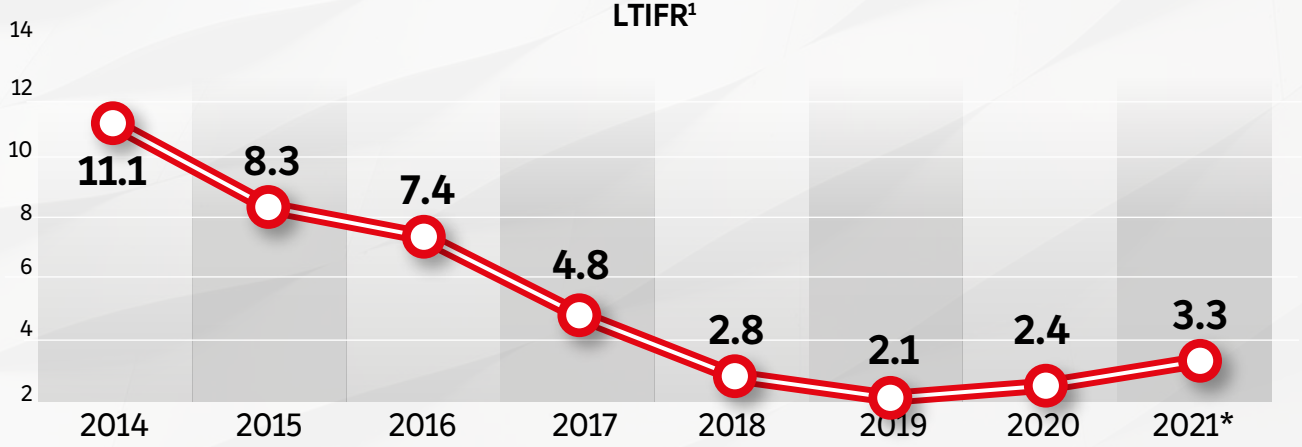


Training (hours)



Safety

LTIFR[1]



Employees Under 35

43%

Women at Corporate level

36%

Inclusion and diversity

Key roles held by international staff

23%

1. Lost Time Injuries Frequency Rate - Injuries occurred per 1 million worked-manhours | *Astaldi included

Green Builders

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ENERGY AND CLIMATE

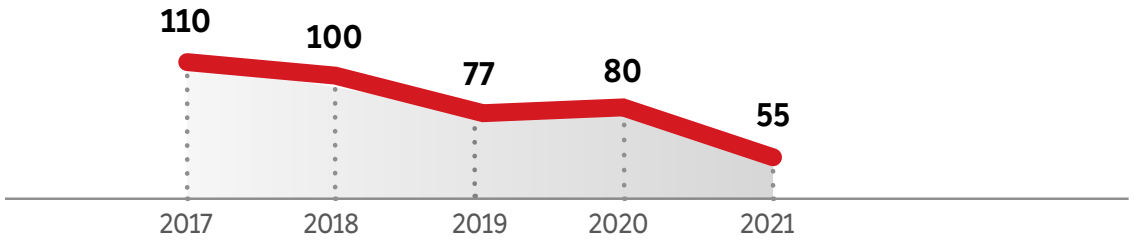
WEBUILD'S ACHIEVEMENTS

Constant reduction in CO_2 emissions

-50% (2021 vs 2017)

Intensity of CO_2 emissions

($t\ CO_{2e}$ scope1-2/€m)



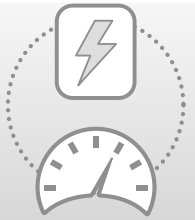
Increased investment in *low-carbon* solutions

50
Solutions
tested and implemented in the last 3 years

205k t CO_{2e}*
Avoided emissions
in last 3 years with low-carbon solutions

Webuild Solutions

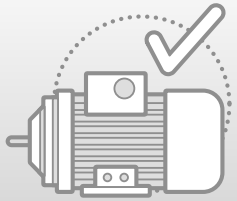
Power quality for electricity systems



Central station to supervise and stabilise electricity supply

Reduced consumption

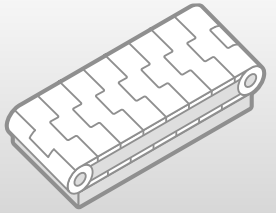
Efficient machinery



Highly efficient catalitic systems

Reduced consumption and pollution

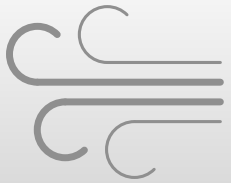
Automated conveyor belt for materials transport



Conveyor belts for earth removal

Elimination of trucks and related pollution

Highly efficient tunnel ventilation systems



Air quality sensors

Reduced consumption and improved comfort

* CO_2e = CO_2 equivalent

Green Builders

SUSTAINABILITY OF SITES

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ENERGY AND CLIMATE

WEBUILD'S COMMITMENT

Sustainable Construction Sites
Webuild solutions for clients wanting net zero construction sites

Integrated approach to ***carbon neutral*** **solutions**

Innovation in construction techniques and technology

35% electricity generated by **renewable sources**

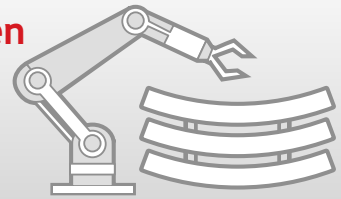
Webuild solutions in development

Green TBM

Optimise onboard TBM systems

Reduced water and energy consumption

Robotic green precast



Pre-cast concrete tunnel segment plant

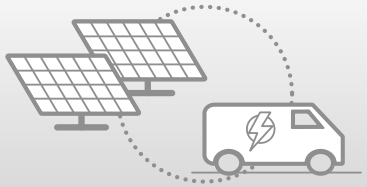
Reduced lifecycle footprint of segments

Preventive maintenance of temporary installations

Sensors and artificial intelligence to anticipate repairs

Reduce consumption and running costs

Renewables and low-carbon vehicles



Solar panels, mini-hydro, storage, hybrid/electric vehicles

Reduced consumption and emissions

Green Builders

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ENERGY AND CLIMATE

WEBUILD'S ACHIEVEMENTS

Consolidated experience in projects with high **standards in certified sustainability**

LEED · GSAS · ISCA · ENVISION™

Dozens of completed **resilient and low carbon projects**

Resilience
Re-engineered projects with climate risk assessment

Low carbon
Project solutions for reduced *embodied carbon*

Completed Webuild projects

Sidney Metro NorthWest

Re-engineered project for climate in 2100

Reinforced support structure, expanded rain discharge system

Re-engineered permanent materials

Material footprint reduced by 1/3 (-33%)

Genova San Giorgio Bridge

Re-engineered project for climate in 2100

Strengthened structure for wind resistance and water discharge

Permanent installed systems

Service system and diagnostic robots powered by solar panels

Green Builders

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ENERGY AND CLIMATE

WEBUILD'S ACHIEVEMENTS

Sustainable infrastructure
Webuild solutions for net zero infrastructure

Integrated approach to develop **carbon neutral *design solutions***

Innovation in planning methodology

Materials and renewable energy

Webuild solutions in development

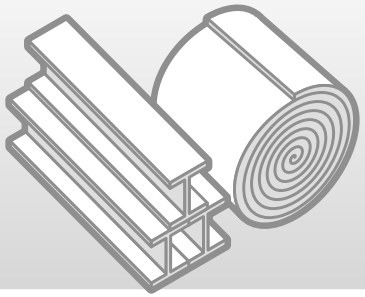
Lifecycle design

POLITECNICO DI TORINO

Research into developing software to calculate carbon footprint at the design stage

Reduce carbon/energy footprint throughout the life cycle of the infrastructure

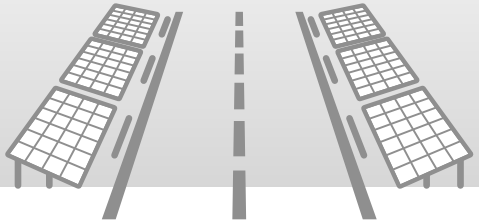
Low carbon materials



Research and development of materials, mixtures and compounds with high level of recycled ingredients/low virgin material content

Reduced embodied carbon materials

Self-sufficient permanent installations



Research and development of renewable installations to power per permanent systems

Reduced energy consumption for functioning of public work

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SAFETY

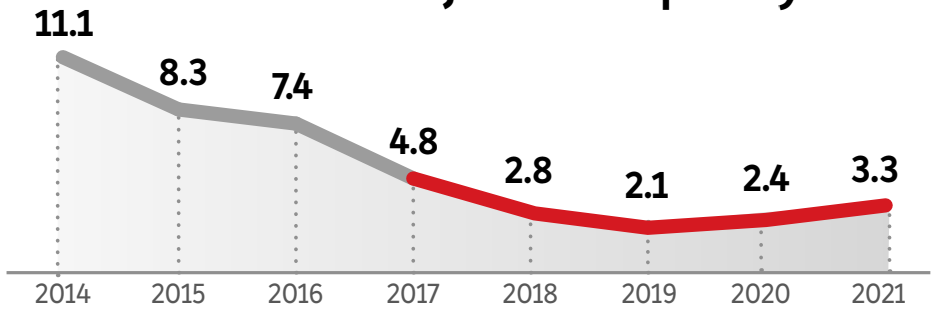
Safe and Inclusive Builders

WEBUILD'S ACHIEVEMENTS

Constant decline in rate of accidents

-31% reduction in LTIFR* index (2021 vs 2017)

Lost Time Injuries Frequency



Increased investment in safety

Leadership
Programmes to turn employees into Safety Builders

*LTIFR shows the lost time (days) frequency rate for injuries occurred per 1 million worked-manhours

Webuild programmes implemented

FOUR YEARS OF valyOu
Our Health and Safety Way

2021 ROSPA Gold Award

Training and Internal Communication programme, cascading from the Board of Directors to all employees

Valyou - Safety Builders Program 2018 - 2021

- **37** work sites and offices
- **2,833** managers and supervisors involved
- **200+** workshop
- **≈14,000** Hours of training

World Safety Days 2016 - 2021

- **19,000+** participants
- **170+** work sites
- **2,000+** photos
- **225+** videos

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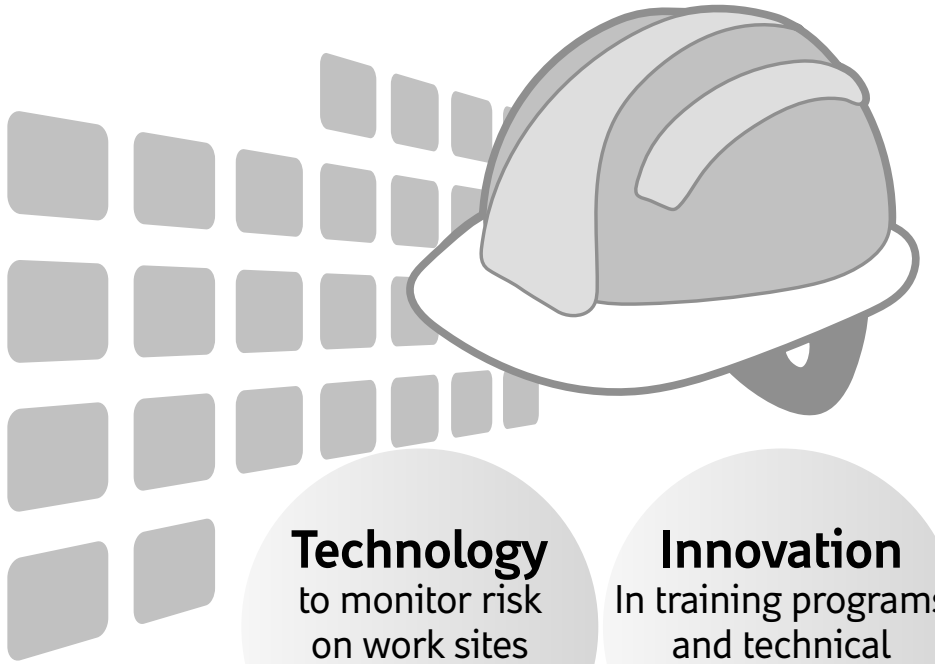
SAFETY

Safe and Inclusive Builders

WEBUILD'S COMMITMENT

Safe construction sites

Webuild solutions for zero injuries on construction sites



Technology
to monitor risk on work sites

Innovation
In training programs and technical communication

Webuild solutions in development

Smart safety

Technological development (sensors for vehicles, scaffolding, helmets, equipment) to collect in real time data on possible risks (collisions, falls...) and alert workers

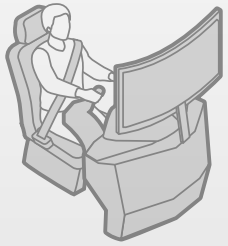
Reduce accident rate

Remote-Controlled Rover

Highly innovative remote-control system to replace humans in exploring potentially dangerous niches and tunnels.

Tunnel explorations conducted in safety

Innovative safety training



New technical and communication programs for construction workers using simulators and 3D-4D technology (vehicle simulators)

Better training and risks reduction

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SAFETY

Safety on all work sites

ACTIVITIES AT WEBUILD SITES IN ITALY

130
H&S inspectors

>18,000
average hours per year of direct employee training

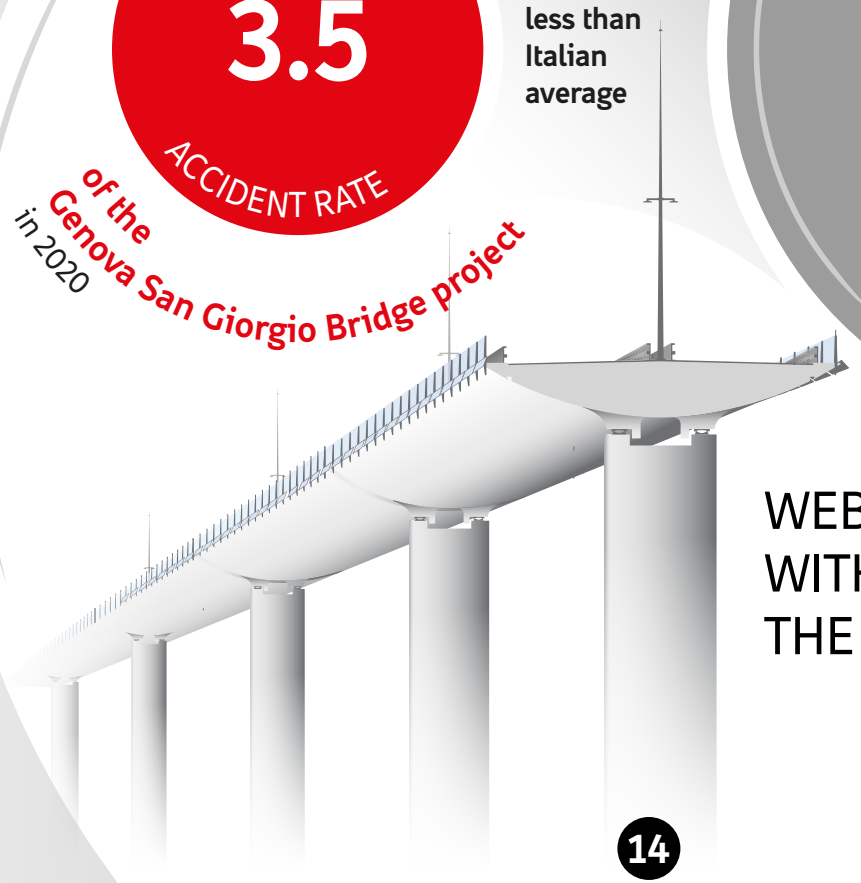
>1,500
people trained
in 2021

RESULTS ACHIEVED

3.5
ACCIDENT RATE

four times less than Italian average

of the Genova San Giorgio Bridge project in 2020



WEBUILD SAFETY LEADER WITH INFLUENCE OVER THE SUPPLY CHAIN

ACTIVITIES FOR SUPPLY CHAIN IN ITALY 2021– 2022

138
skill training sessions

322
safety training sessions

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SAFETY

Safety: initiatives taken on the Genova San Giorgio Bridge Project

THE GENOVA MODEL FOR SAFETY

GROUP ACTIVITIES INCLUDING THE SUPPLY CHAIN

CONTINUOUS **ON-SITE TUTORING** + **ADDITIONAL SAFETY GEAR FOR MACHINERY** + **ANTI-COLLISION PILOT PROJECT** FOR VEHICLE ON VEHICLE, VEHICLE ON HUMAN + **LEADERSHIP PROGRAMME ON SAFETY** + **SAFETY AWARENESS EVENTS FOR STAFF**

24/7 CAPILLARY COVERAGE OF ALL WORK SITE AREAS AT EVERY SHIFT

24 H&S staff

Webuild best practice in Safety

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SAFETY

GENOVA SAN GIORGIO BRIDGE

2019-2020

3.5
ACCIDENT RATE IN 2020

2021 ROSPA Gold Award

BEST PRACTICE IN ITALY

>1 mln hours
WITHOUT ANY RELEVANT ACCIDENT

SUPPLY CHAIN
>300
BUSINESSES INVOLVED

>1,300
SAFETY AND INTEGRATION PLANS

Valyou
Program

CONTINUOUS ON-SITE TUTORING

CITYRINGEN, COPENHAGEN

BEST PRACTICE ABROAD

2019 ROSPA Gold Award

2011-2019

3.3
ACCIDENT RATE IN 2019

>1 mln hours
WITHOUT ANY RELEVANT ACCIDENT

8 years
22 work sites
Zero serious accidents

Think Safety
Program

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INCLUSION

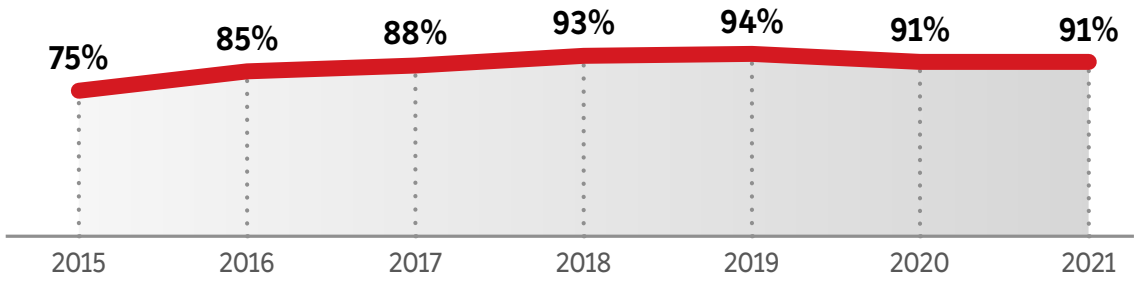
Safe and Inclusive Builders

SUPPLY CHAIN INVOLVEMENT

80,000
Average number of employees, direct and third party

15,000+
Suppliers from 70 countries

Purchases from local suppliers



84%
Workers hired locally

36%
Women working at headquarters

100+
Nationalities among workers on construction sites

Economic impact on areas where projects are being built

Webuild policy to rely on local workers and suppliers to support economy of areas where projects are being built

7x
Jobs created for every direct Webuild employee*

€3.6x
GDP generated for each euro of added value

€3.5
Income multiplier for every euro paid in salary by Webuild

≈8
Multiplier for every euro paid in taxes by Webuild

* Values refer to Group's main markets based on input-output matrixes

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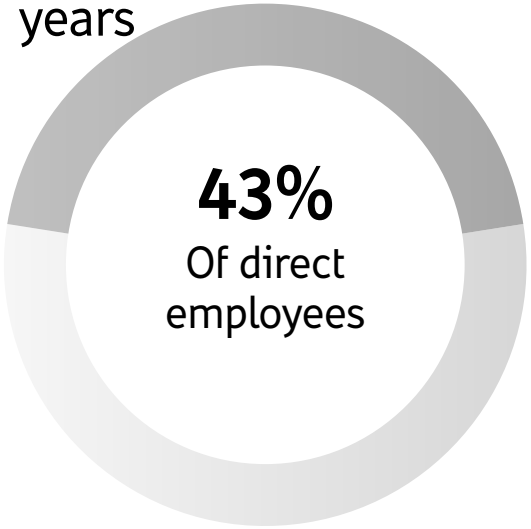
INCLUSION

Safe and Inclusive Builders

TALENT INCLUSION

Under 35
years



Dedicated Programs
to include young talent

Inclusion criteria
in research, development and evaluation of performance

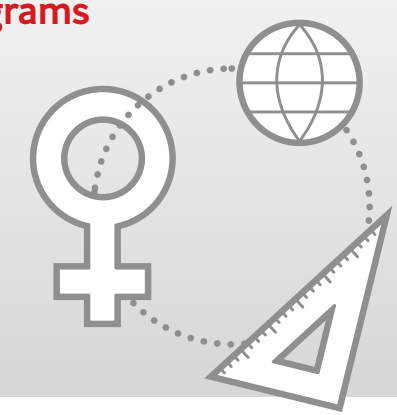
Webuild programmes implemented

Universities

Università Commerciale Luigi Bocconi
UTS
POLITECNICO MILANO 1863
THE UNIVERSITY OF MELBOURNE
Università di Genova
THE UNIVERSITY OF QUEENSLAND AUSTRALIA

Partnerships and collaboration programs with domestic and foreign universities to support strategic markets and provide training for employment at Webuild with a focus on young women in STEMs

Inclusion programs



New training and internal communication programmes for young talent, women and new colleagues (ie. Astaldi), with a focus on age, gender and culture inclusion

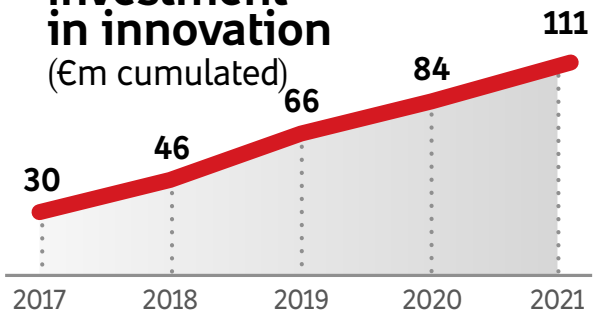
Innovative and Smart Builders

INVESTMENT IN INNOVATION

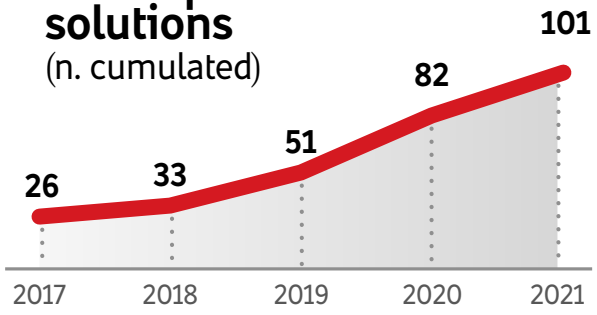
~290

Average number of employees per year dedicated to innovation, R&D

Investment in innovation
(€m cumulated)



Developed innovative solutions
(n. cumulated)



Webuild's approach
Innovation at all of the stages of the business process

Some Webuild solutions

- Techniques to reuse TBM materials
- Vertical Risers (Vertical pipe-jacking)
- Tailor-made concrete mix design
- Tunnel WeView System
- Intelligent Biodiversity Monitoring

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Ratings achieved in 2021

MSCI ESG	CDP Climate	ISS ESG	VigeoEiris	Ecovadis
Rating A	Rating B	Rating Prime	Rating Advanced	Rating Gold

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Our best practices in sustainability

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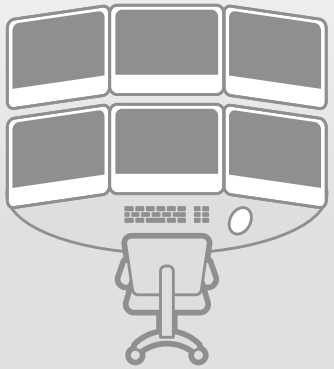
POWER QUALITY IMPROVEMENT

We have developed, tested and implemented **technology to make electric systems at work sites more efficient** to reduce energy consumption, CO_2 emissions and operating costs Implementation

Energy Monitoring System

- Monitoring of electricity currents
- Data collection on server



Energy Management and Data Analytics

- Analysis of energy consumption
- Identify ways to improve efficiencies

PQI technologies

- Technology installation
- Test and analysis of results

Analysis / Validation of results

9% Reduction of CO_2 emissions

9.1% Reduction in energy consumption

10% in cost savings

Phase 1 → Phase 2 → Phase 3 → Phase 4

Implementation

- **Brenner Base Tunnel**
- **New projects at the start-up phase in Italy and abroad**
- **Multi-sector**

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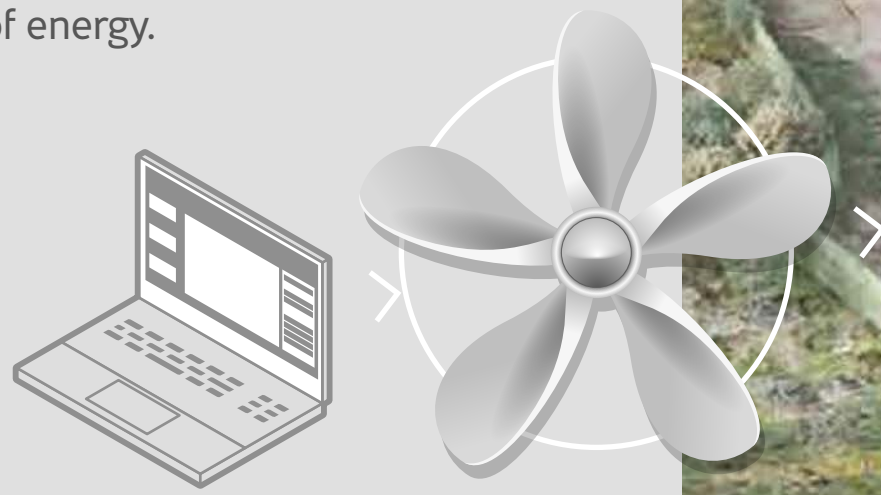
SMART AIR MONITORING SYSTEM

The system **controls the ventilation and air quality in the tunnel**, enabling the plants to **operate at the required rather than maximum level**. It provides optimal comfort and an efficient use of energy.

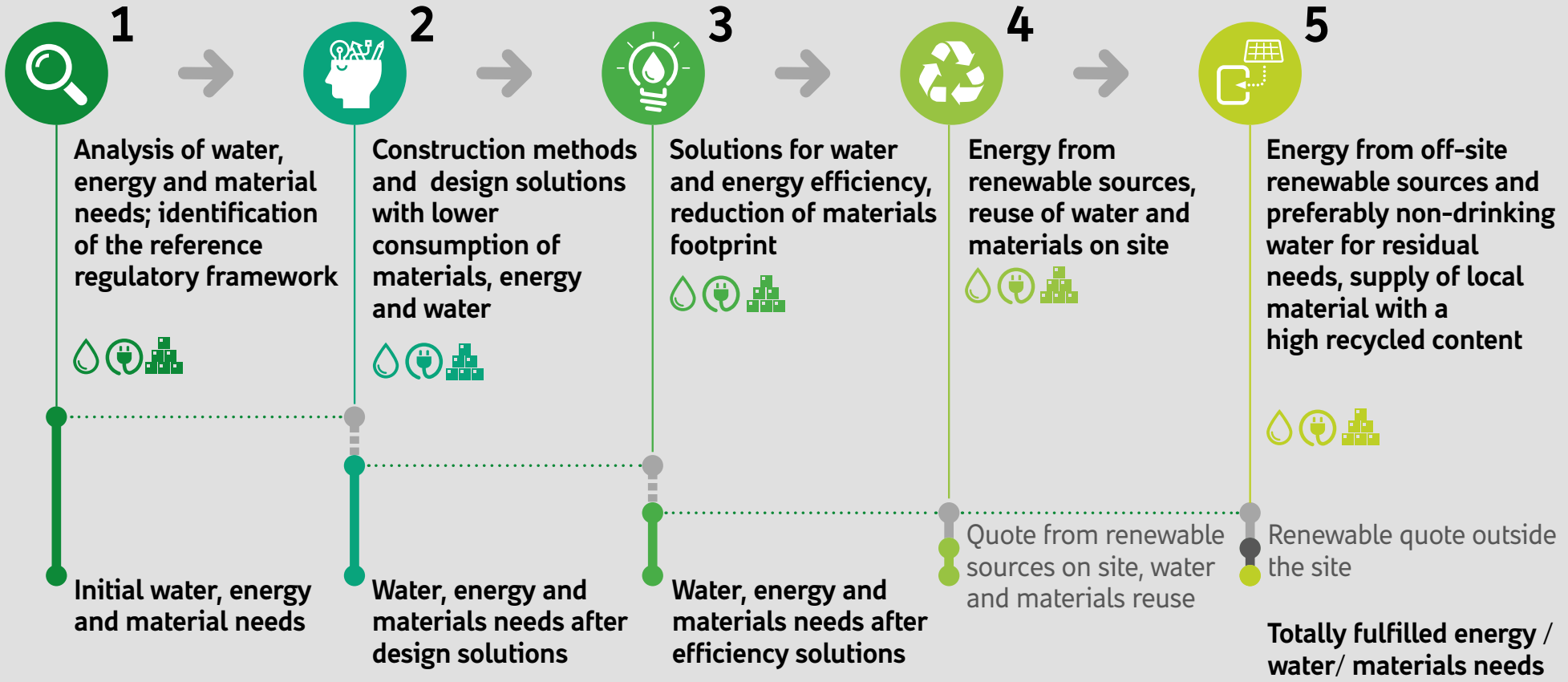


Implementation

- **Rogun hydropower dam, Tajikistan**
- **New projects in start-up phase in Italy**
- **Multi-sector**

EFFICIENT AND LOW CARBON SITE

Webuild designs and implements construction sites used to build its infrastructure, by subjecting all industrial processes to the **assessment, efficiency and optimization** of environmental components, particularly **water, energy and material consumption**.

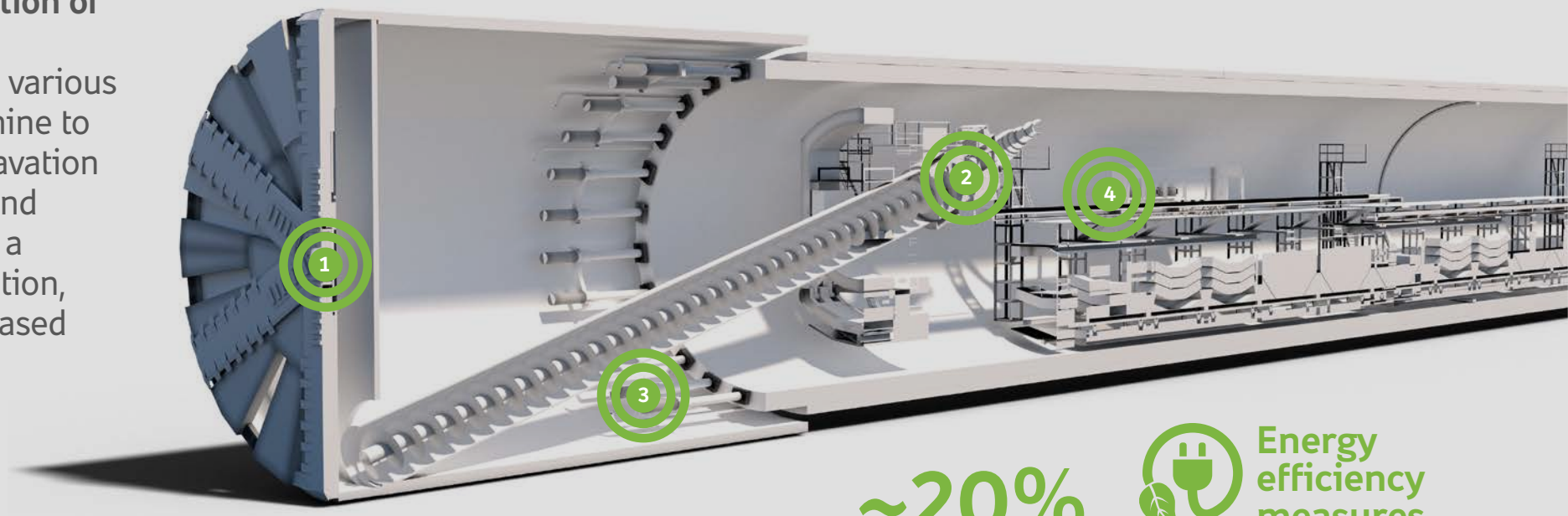


Implementation

- **New projects at the start-up phase in Italy and abroad**
- **Multi-sector**

GREEN TBM

Study of the use of an **green TBM** capable of reducing the **energy consumption of the TBM** (KWh) **by 20%**.
This is possible by optimizing the various systems and devices on the machine to improve the efficiency of the excavation and all the numerous functions and auxiliary equipment; the result is a reduction in the energy consumption, faster excavation times and increased safety.



Implementation

- **New projects at the start-up phase in Italy and abroad**
- **Multi-sector**

~20%
Reduction of energy consumption

Energy efficiency measures

1. Cutterhead
2. Muck transport
3. Hydraulic system
4. Other services

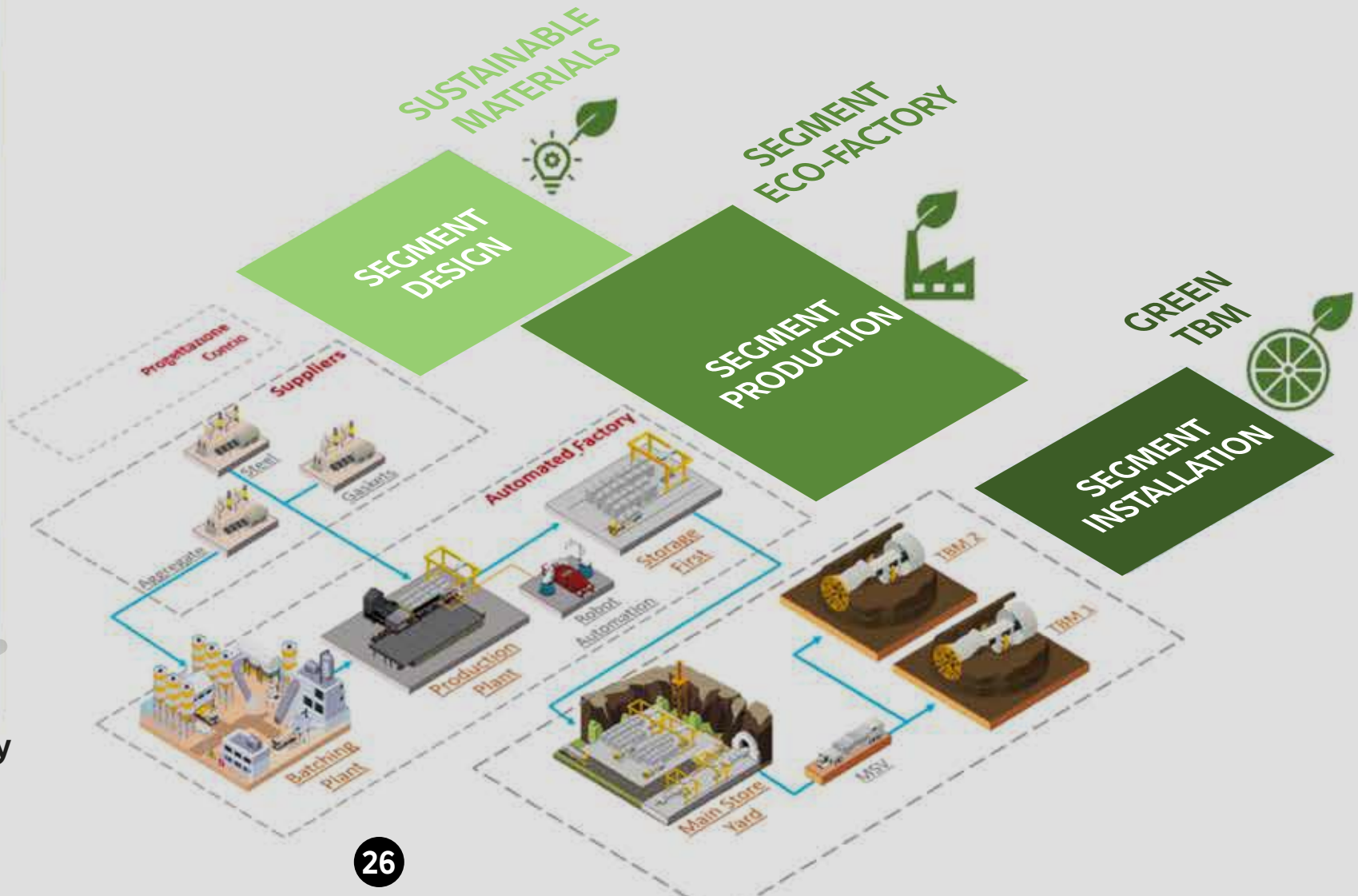
SMART&GREEN SEGMENT FACTORY

Automated system that uses **high efficiency** robotic technology with a systematic integration of innovative solutions, efficiency, circular economy, environmental footprint reduction, and the development of a more resilient and performing product.

The **robotic factory can be dismantled and reinstalled** in another area, according to a design-for-deconstruction perspective.

Planned Implementation

- **New projects in start-up phase in Italy**
- **Multi-sector**



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REDUCTION IN EMBODIED ENERGY

Thanks to **Design Optimization**, Webuild can **reduce the use of prime materials**, such as concrete and related CO_2 emissions.

>60,000 fewer tons of concrete used

-33% material footprint reduction

>30,000 tons of avoided CO_2 emissions

275 kW renewable capacity

Implementation

- **Sydney Metro Northwest, Australia**
- **Forrestfield-Airport link, Perth, Australia**

ROBOT MONITORING / CLEANING

Two types of **robots** with innovative applications: an **inspection robot** that scans and monitors the steel surfaces of the external deck to ensure the highest levels of control and safety; a totally eco-sustainable **robot-wash** used to clean the glass and photovoltaic panels on the deck.
This application allows an optimization of control activities, by reducing their frequency and increasing their reliability at the same time.
This solution increases the work's safety and reliability, also reducing management costs.

Implementation

- **San Giorgio Bridge - Genoa**

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INNOVATIVE MATERIALS

Draining backfill material for TBM tunnels, to reduce external hydraulic loads. These materials also allow a structural optimization and an increased durability of the work.

Ultra-high performance backfill grout for TBM. This material increases the work's ultra-high performance back fill grout and reduces construction risks.

Planned Implementation

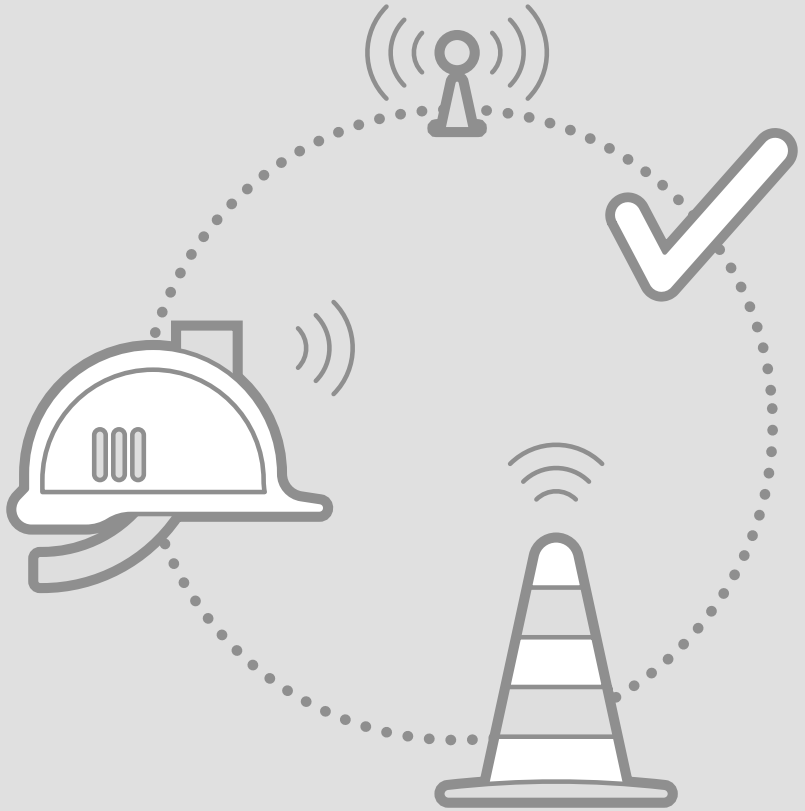
- **HS / HC Naples-Bari rail line, Apice-Hirpinia section**

Implementation

- **Snowy 2.0 Hydropower project, Australia**

SMART SAFETY

Pilot projects with **sensor systems** for: interaction between human and machine, and/or human and suspended loads, delimitation of more dangerous areas, in-Vehicle Monitoring Systems. Construction-site vehicles equipped with cameras and white noise buzzer.



Implementation*

Multi-sector

* potential

SUSTAINABILITY OF SITES

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WEBUILD'S REMOTE-CONTROLLED ROBOT

Project TELT - TURIN-LYON HIGH-SPEED RAILWAY
"Nicchie la Maddalena" construction site

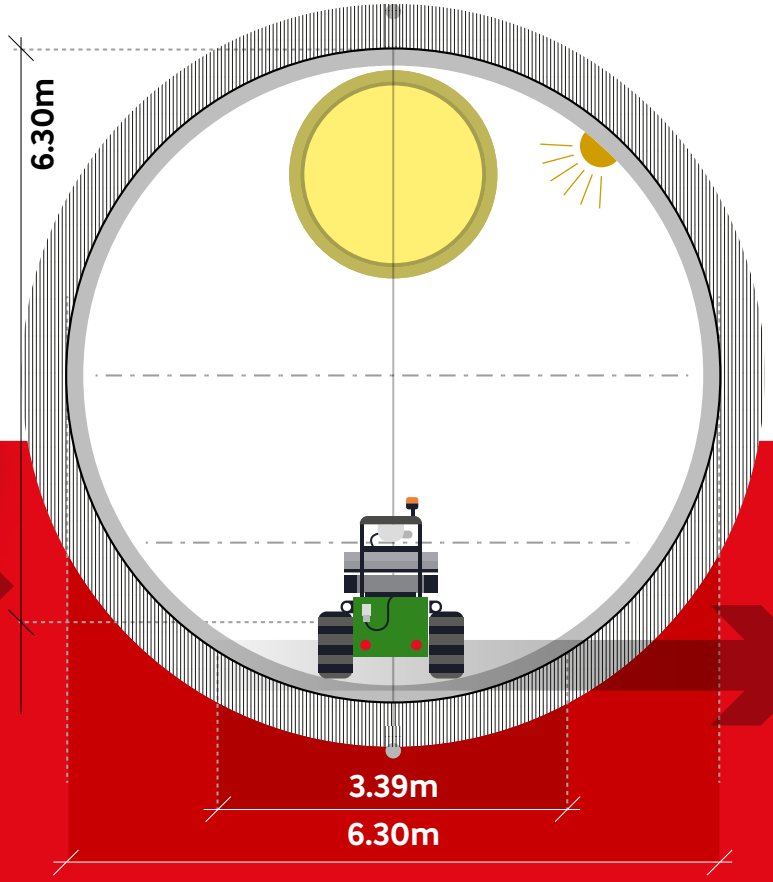
World-First Robot Prototype For Inspections by Remote

Maddalena Tunnel

Diametre	Length	Humidity	Temperature
~6 m	~3 km	95%	~40°C

Remote-controlled robot for tunnel inspections

The Rover



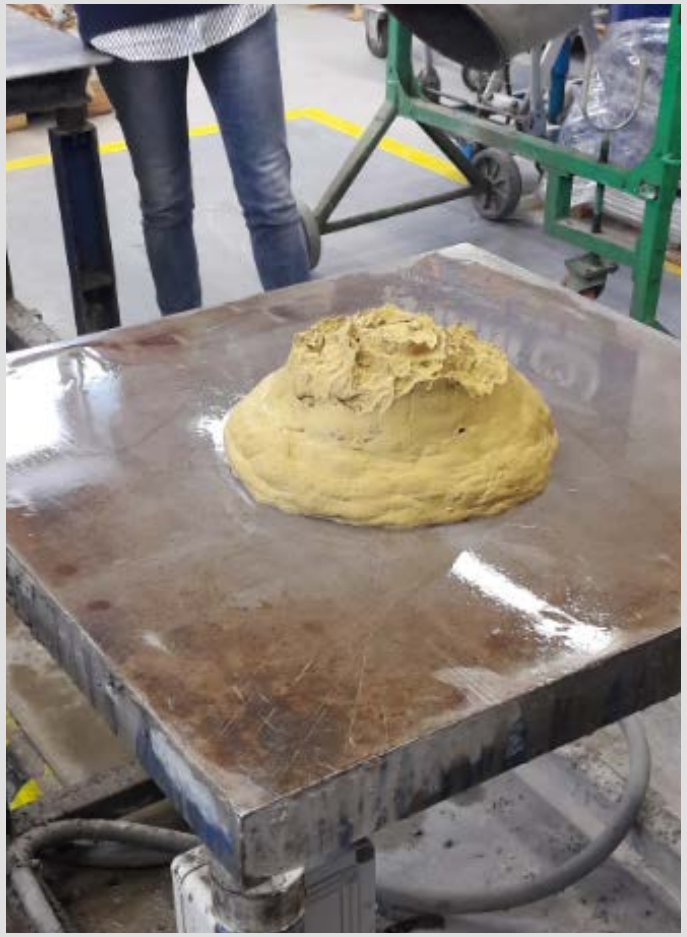
Width	Wheelbase	Traction	Wheel diametre
1.6m	~2m	Four-wheel	>60cm

axel
AUTONOMOUS EXPLORATION ELECTRIFIED VEHICLE

developed with CIM 4.0

TBM MATERIAL REUSE TECHNIQUES

Study concerning the **reuse of materials excavated by the TBM**, as embankment materials to decrease the environmental impact and project costs, from a circular economy perspective.



Implementation *

Multi-project

* potential

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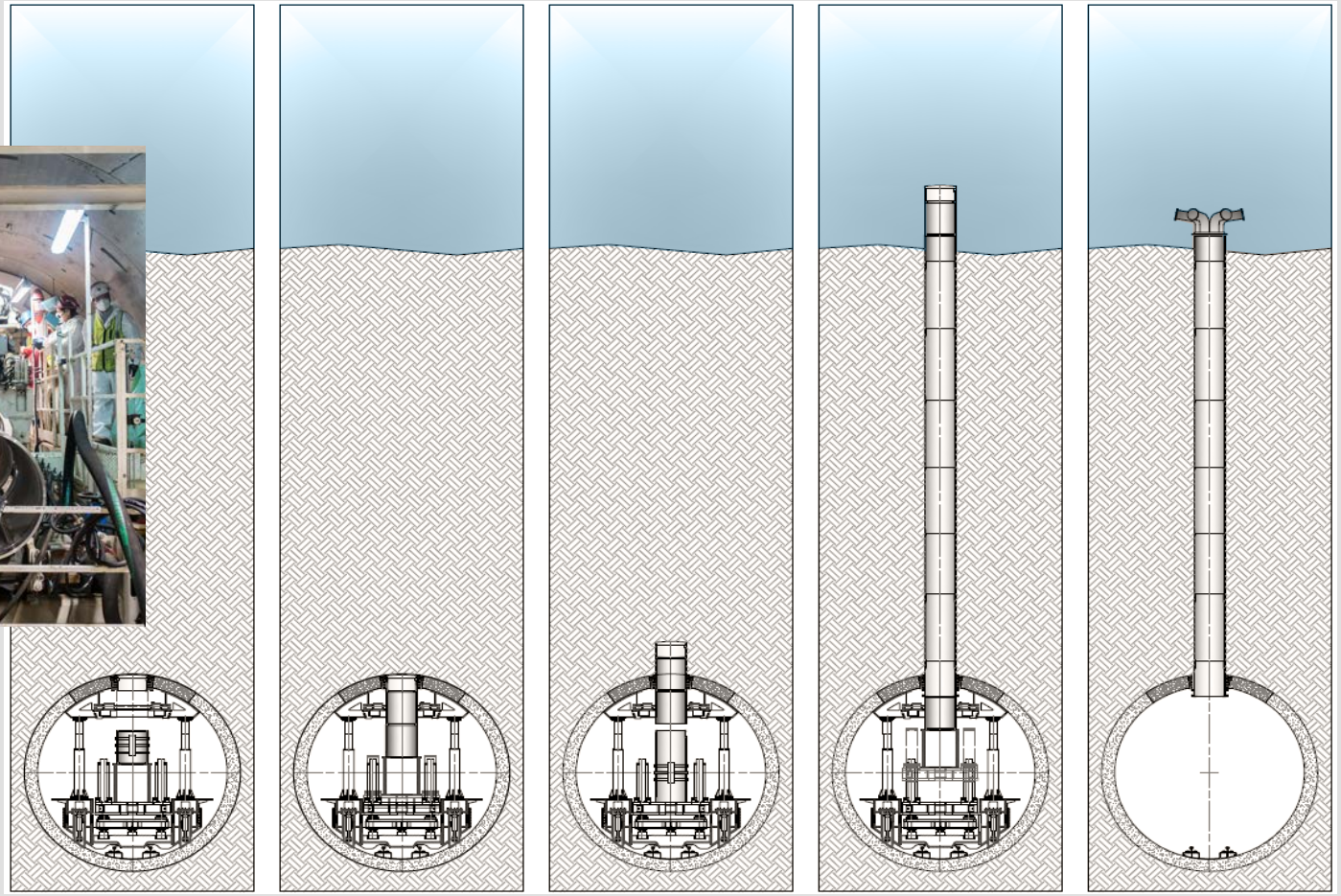
VERTICAL RISERS (VERTICAL PIPE-JACKING)

This innovative **methodology**, was **used for the first time** in the world **by Webuild**, to install **vertical risers** (**vertical pipe-jacking**), operating from the inside of a submarine tunnel, allowing the mechanization of the work process, also improving workers' safety, reducing risks and bringing environmental benefits and improved construction times



Implementation

- **Riachuelo environmental restoration system, Argentina**
- **Multi-project**

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TAILOR-MADE CONCRETE MIX DESIGN

Concrete mix designs, and their related production processes, are **developed** and optimized **by Webuild,** even in poorly served areas. This is done to fully meet the technical specifications, also considering executive issues, durability, logistic organization, and transport optimization. And also, material usage, environmental protection and territorial context matters.

Implementation

- **GERD Dam, Ethiopia**
- **Koysha Dam, Ethiopia**
- **Neckartal Dam, Namibia**
- **Multi-sector**

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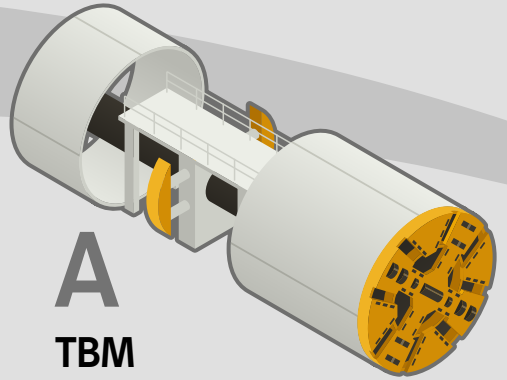
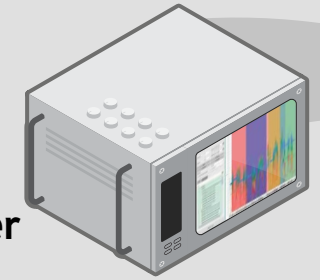
TUNNEL WEVIEW SYSTEM

The **Tunnel WeView System** has been designed and developed to collect, process and display, in real time, all the data collected by the TBM, and all systems and equipment used on site, including monitoring ones.
The system collects information from different sources in the site, transforming **disaggregated data** into information available in a single control room, which is then integrated and can be used.

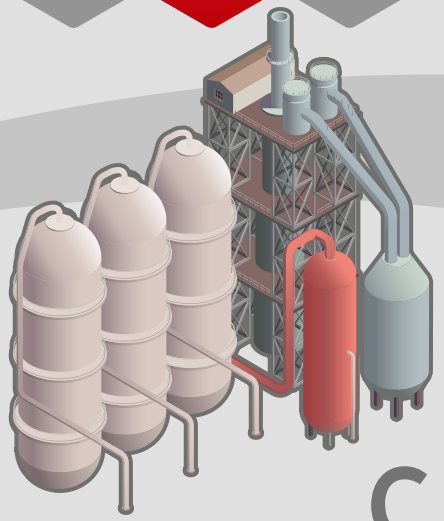


A
TBM control systems

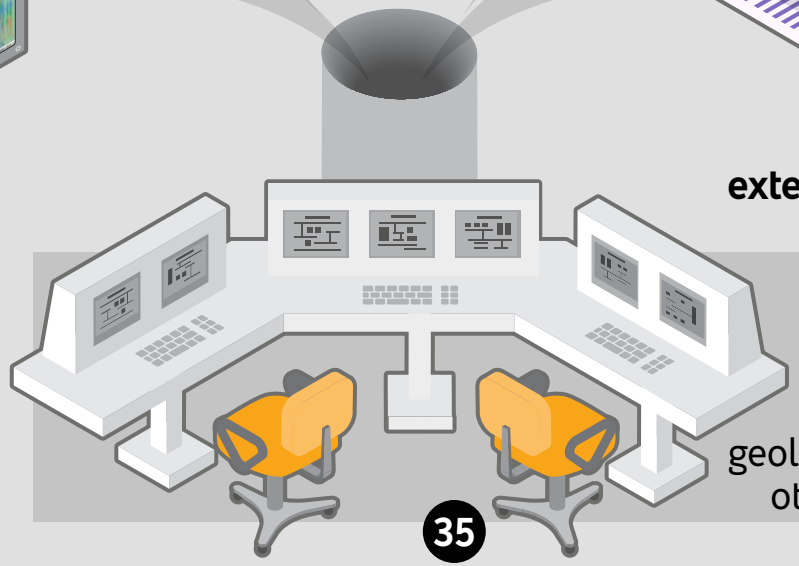


B
Other TBM systems

D
Additional data/documents, external to the monitoring system



C
Other systems and machinery



Implementation

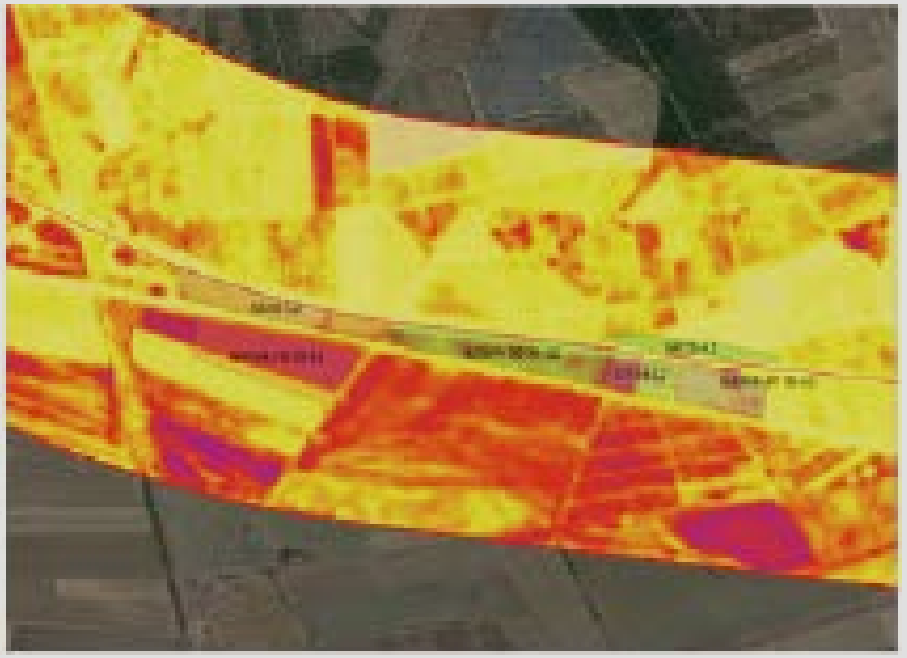
- **Snowy 2.0 Hydropower project, Australia**
- **Multi-project**

Interrelation between operations, production, geological data, and other parameters

INTELLIGENT BIODIVERSITY MONITORING

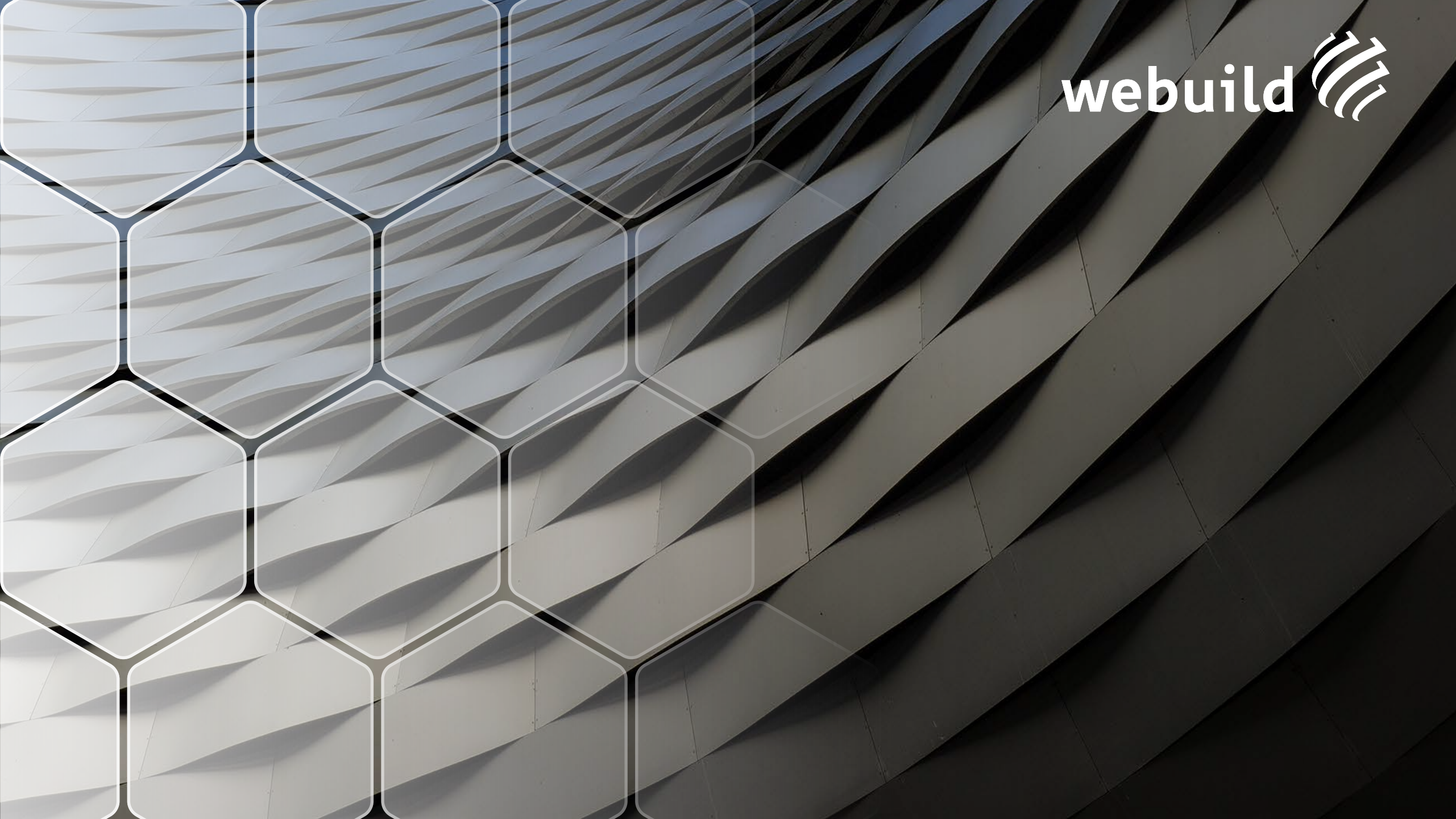
Webuild **protects the territory** that hosts its construction sites establishing a close relationship with it. This is achieved through innovative and smart best practices to safeguard the territory's peculiarities, fauna, flora and biodiversity.

Among the activities carried out: monitoring valuable crops through a satellite multispectral analysis; use of motion detection cameras for wild-life monitoring purposes.



Implementation

- **Bicocca-Catenanuova rail section**
- **Multi-sector**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