

WEBUILD

BRIDGES AND VIADUCTS

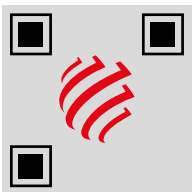
JUNE 2025

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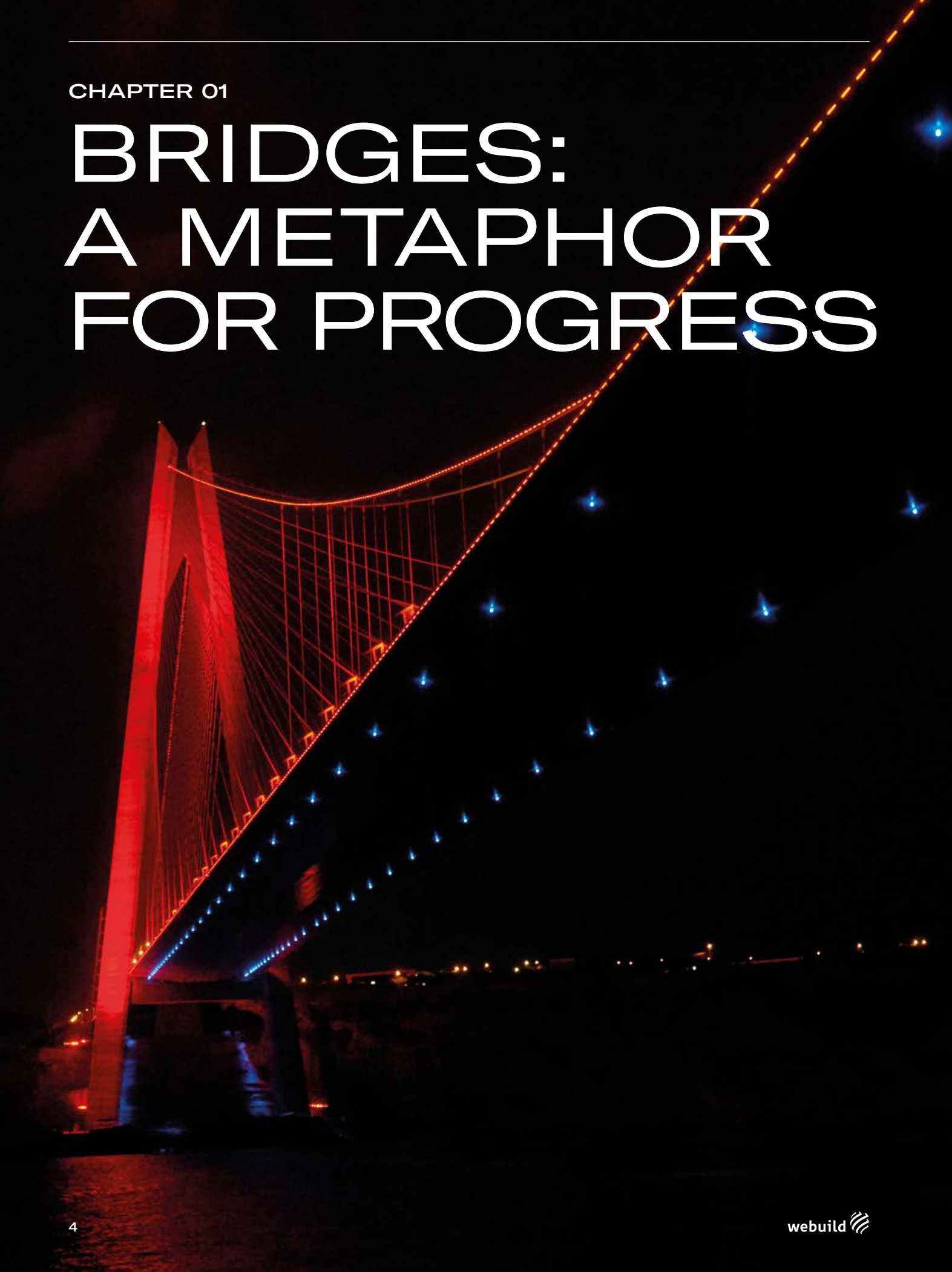
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CHAPTER 01

BRIDGES: A METAPHOR FOR PROGRESS



If progress had a monument, it would be a bridge.

From Ancient Rome to the present day, bridges have always contributed to economic growth and the development of countries. They are designed to meet an apparently simple need: joining two pieces of land, connecting people, improving trade, shortening the distances between otherwise distant communities.

The evolution in their design tells us a lot about how engineering has developed over time, and of the successes achieved by construction. From the first arch bridges to those that are suspended, they mark the journey of human civilisation.

«Building a bridge is a war with the forces of Nature,” Joseph Strauss, the designer of the Golden Gate Bridge in San Francisco, is quoted as saying. It is a war that expresses itself through the effort of joining two points by surpassing an obstacle: a valley, a river, a road.

An obstacle that, over time, becomes a reference point when assessing technical challenges and admiring the innovation behind these incredible pieces of infrastructure.

The Webuild Group has contributed to this journey during the last 100 years. Its track record reaches 1,022 kilometres of bridges and viaducts already built. Arch, cable-stayed, girder and suspended bridges along more than 300 large road, highway and railway projects: examples of how construction techniques have evolved during the last century.

It starts with the Recco Viaduct, built before 1922 and then rebuilt in 1948 after the bombardments of the Second World War. A railway viaduct 376 kilometres long, it has come to stand as a symbol of the Italian construction renaissance.

The Second and Third bridges over the Bosphorus greatly differ from the one at Recco. Between these two Turkish bridges there are almost 20 years (the second was completed in 1988, while the Third in 2016). They have in common the need to connect Europe and Asia, transforming Istanbul into a global capital. Also in Turkey, Webuild completed in 2016 the Osman Gazi Bridge. At the time of its inauguration, it was the world's sixth suspended bridge with regards to the length of its central span at 1,550 metres. It has since become the seventh longest.

Connecting the unending prairies in the United States, overcoming large rivers in South America, modernising Australia's cities, tracing new paths in the mountain regions of Italy... the bridges built by Webuild can be seen as little, tiny dots populating a world map, present at every latitude and longitude.

Some of them, like the Posadas-Encarnacion, connect different states (Argentina and Paraguay). Others, like the skytrain viaduct and curved cablestayed at for Sydney Metro Northwest, raised the bar for innovation and won the "2018 Project of the Year" award from Engineering News-Record, a respected U.S. trade magazine.

Innovation, design, technical and organizational skills: these are the essential qualities needed to manage feats like the construction of the Genoa San Giorgio Bridge. Completed in 2020 — just over a year since the project began — it helped heal the deep wound suffered by the city with the collapse of the Morandi Bridge. This is the meaning of bridges: an expression of engineering born out of the need to reach the other shore by foot, a shore that had previously been reached only with the eyes or the imagination.



CHAPTER 02

WEBUILD: BRIDGES THAT TELL THE STORY OF OUR EXPERTISE

Webuild — during its about 120 years of history — has globally built hundreds of bridges and viaducts, totalling 1,022 kilometres in overall length: single projects like the Genoa San Giorgio Bridge or ones included in over 300 large road, motorway, and railway projects.

The following are some of main bridges and viaducts already built in Italy:

- The new **Genova San Giorgio Bridge**, whose structure was completed in record time on April 28, 2020, after just 10 months from the jetting of the first sub-foundation;
- The **Sfalassà** and **Favazzina** Viaducts, of the Salerno-Reggio Calabria highway: the first with a central span measuring 376 metres; the latter, featuring a second cablestructure with a central span of 220 metres and two lateral spans of 110 metres each, with two towers, with a maximum height of 110 metres;
- The **Roma-L'Aquila** Motorway Viaducts, a very complex structure due to the difficult terrain, which crosses the Apennine mountain range;
- The viaducts of the **A5 Monte Bianco-Aosta highway**;
- The **bridge over the Po River** and numerous viaducts along the A1 Milan-Naples highway;
- The **Udine-Carnia-Tarvisio** highway, one of the main connections through the Alps between Italy and Central Europe;
- The bridges of the “**Direttissima**” Rome–Florence Railway, and of the Turin-Milan and Bologna-Florence lines;
- The bridges of the Genova-Ventimiglia and Genoa-La Spezia rail lines, among which the reconstruction of the **Recco Viaduct** after World War II.

BRIDGES AND VIADUCTS

1,022 km

Other also characteristic bridges have also been built beyond Italy, including:

- **Bridge over the Danube river** in Braila, a spectacular suspended bridge approximately 1,975 metres long;
- The **Long Beach International Gateway** in California that improves the traffic flow in one of the most congested bridges in the United States and that stands as one of the highest bridges in the country;
- The **skytrain viaduct** and **cablestayed bridge** for the Sydney Metro Northwest that received many international awards;
- The **Third Bosphorous Bridge** in Turkey, the largest hybrid suspended bridge, besides also being the bridge with the world's highest towers at the time of its construction;
- The **Second Bosphorous Bridge** with a single span measuring 1,090 metres;
- The **Osman Gazi Bridge** in Turkey, which when it was built was the world's sixth longest suspended bridge (today it is the seventh) with a main span that measures 1,550 metres;
- The **"A. Max Brewer" Bridge** in the United States, which is 977 metres long including a main structure and three spans;
- The two cable-bridges of the Saint Petersburg highway junction (**WHSD**), a strategically important project for the city's transport system;
- The bridges and viaducts system — with a variable length of 74 metres to 1,225 metres for an overall length of more than 4 kilometres — along the **Anchieta-Imigrantes** motorway section, one of the busiest in Brazil;
- **Four bridges on the Paraná River**: the International Bridge between Posadas and Encarnación and the Brazo Largo cable-bridge — respectively 570 and 550 metres long — both with a central span of 330 metres; the bridge between the Chaco and Corrientes provinces and the bridge that connects Rosario to Victoria, measuring 610 metres in length with a central span of 350 metres;
- The **Bridge on the Magdalena River** at Barranquilla and the Plato-Zambrano Bridge in Colombia;
- The bridges of the **Trans-Iranian railway** built in the 1930s, one of the main engineering works of the 20th Century.



CHAPTER 03

10 BRIDGES AND VIADUCTS THAT TELL OUR STORY

	CONSTRUCTION PERIOD	PROJECT
01	2018 - 2023	BRIDGE OVER THE DANUBE RIVER IN BRAILA
02	2012 - 2020	LONG BEACH INTERNATIONAL GATEWAY
03	2019 - 2020	GENOA SAN GIORGIO BRIDGE
04	2014 - 2018	VIADUCT AND CABLE STAYED BRIDGE - SYDNEY METRO NORTHWEST
05	2014 - 2016	THIRD BOSPHOROUS BRIDGE
06	2013 - 2016	OSMAN GAZI BRIDGE
07	1967-1974 / 2009-2012	SFALASSÀ VIADUCT SALERNO- REGGIO CALABRIA MOTORWAY
08	2008 - 2010	FAVAZZINA VIADUCT SALERNO- REGGIO CALABRIA MOTORWAY
09	1998 - 2003	ROSARIO-VICTORIA MOTORWAY BRIDGE
10	1985 - 1988	SECOND BOSPHOROUS BRIDGE



COUNTRY	TOTAL LENGTH	LENGTH OF MAIN SPAN	TYPE
ROMANIA	1,975 m	1,120 m	Suspended
USA	2,680 m	310 m	Girder
ITALY	1,067 m	100 m	Girder
AUSTRALIA	270 m ponte 4,500 m viadotto		Cable-stayed/ Girder
TURKEY	2,164 m	1,408 m	Suspended
TURKEY	3,300 m	1,550 m	Suspended
ITALY	826 m	376 m	Girder
ITALY	440 m	220 m	Cable-stayed
ARGENTINA	610 m	350 m	Cable-stayed/Girder
TURKEY	1,090 m	1,090 m	Suspended

CHAPTER 03

OUR GLOBAL BRIDGES AND VIADUCTS



CHAPTER 03

MAIN BRIDGES AND VIADUCTS

UNITED STATES

Unionport Bridge, New York 

Max Brewer Bridge Replacement
2013

Halls River Bridge Replacement
2017

Long Beach International
Gateway
2020

COLOMBIA

Barranquilla Bridge
1974

ARGENTINA

Posadas-Encarnacion
Bridge
1990

Chaco Corrientes Bridge
1973

Brazo Largo Bridges
1976

Rosario-Victoria
Motorway Bridge
2003

 ----- In progress

xxxx Completion date

ITALY

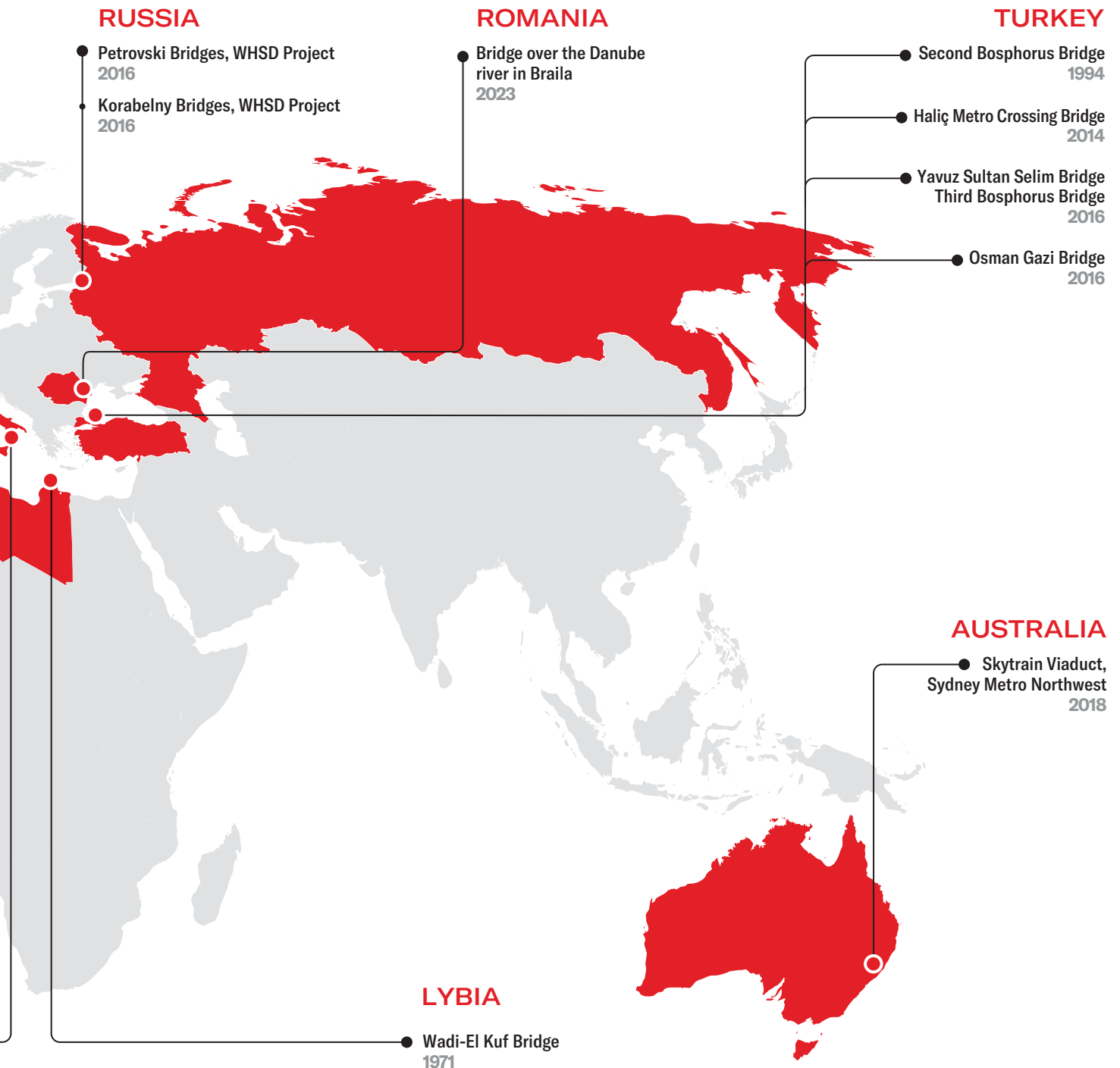
Recco Viaduct
1922

Genoa San Giorgio Bridge
2020

Bridge on the Trebbia River,
Travo
1925

Bridge on the Taro River,
Fornovo
1911

Favazzina Viaduct
2014





NORWAY

SOTRA CONNECTION PPP PROJECT

A system of bridges, roads and tunnels, destined to improve Italy's internal mobility

The project foresees building a new strategic road system for Norway's internal mobility, becoming one of the nation's most important PPP (Private-Public Partnership) projects foreseen by the plan to strengthen infrastructure which has been resolved by the Norwegian government for the 2018-2029 period. It will allow building a system of bridges, roads and tunnels in the County of Vestland, Norway, with the aim of improving mobility between the city of Bergen and the island of Sotra, on the western coast. The contract includes funding, designing, constructing and managing for many years the 4-lane-road connection that extends for 9 kilometres in length, including building 4.6 kilometres of main tunnels (12.5 kilometres including secondary tunnels), and a suspended bridge. The suspended bridge will have 4 lanes that extend for approximately 900 metres in length (including access viaducts) and 30 metres in width, with piers reaching 144 metres in height. Three smaller bridges will also be built. The road system will also comprise pedestrian paths and bike lanes, extending for 14 kilometres in total.

TECHNICAL/PRODUCTION KPIs

900 m
length of suspended bridge

30 m
width of suspended bridge

144 m
height of piers

SUSTAINABILITY KPIs

14 km
of pedestrian and bike lanes
(total length)



USA

UNIONPORT BRIDGE, NEW YORK

Destined to lighten traffic in one of the most congested neighbourhoods of the city

The project involves replacing a bascule bridge - inaugurated in 1953 - which allows the Bruckner Expressway to cross Westchester Creek. It will ease traffic congestion in the Bronx, one of the most heavily congested areas in New York. Works are being carried out without interruption to traffic, both for the expressway and the navigable canal. This has been made possible by building two temporary bridges and positioning the last tilting span in open position. Unionport Bridge is crossed by some 60,000 vehicles every day. It is a fundamental connection for local traffic and for other uses too. It is the sole connection between Bruckner Expressway and Cross Bronx Expressway towards Hutchinson River Parkway and all other destinations in the more northern areas.

TECHNICAL/PRODUCTION KPIs

60,000

number of vehicles traversing the bridge daily

2

temporary bridges

SUSTAINABILITY KPIs

Reduction of CO₂ emissions



ROMANIA

BRIDGE OVER THE DANUBE RIVER, BRĂILA

The second-longest suspension bridge
in continental Europe

At 1,975 m long, the Brăila Bridge over the Danube is Romania's longest and continental Europe's second- longest suspension bridge. The central span measures 1,120 m, with a width of 31.7 m and two towers at just over 192 m high. The project includes 23 km of linked roads. Its construction has required some complex operations. Like the assembly of its two load-bearing cables, created by twisting over 18,000 steel wires (more than 9,000 for each cable), with a total weight of 6,775 tonnes. Or the assembly of the steel deck: more than 250 workers and specialist technicians installed the 86 segments of the deck – each with an average weight of 260 tonnes – using a specially designed launching and installation process. The bridge connects the two sides of the Danube in the Galati and Brăila area, reducing crossing times for around 7,000 vehicles every day from at least 45 minutes to a mere two on weekdays.

TECHNICAL/PRODUCTION KPIS

297,000 m³
concrete

52,360 tons
steel

19,000 m²
of 1m-thick diaphragms

SUSTAINABILITY KPIS

7,000
vehicles/day

From 45 to 2 min
reduction in river crossing time
on weekdays

Reduction of CO₂ emissions



USA

LONG BEACH INTERNATIONAL GATEWAY, CA

An iconic project for the city of Long Beach that has helped to improve traffic flow and road safety

The Long Beach International Gateway, a cable-stayed bridge, is a strategic hub for links between the city and the port of Long Beach, whose skyline it has helped to redefine. It has a total length of 2,680 m, with a main span of 330 m and access viaducts stretching approximately 2 km. Its construction was intended to replace an existing structure – the Gerald Desmond Bridge – with a more modern infrastructure that better conformed to earthquake resistance requirements, as well as to improve traffic flows and ease congestion. The capacity of the previous bridge, built in the 1960s, could no longer keep up with the city's ever-growing volumes of traffic. The project to build the Desmond's replacement was exceptional due to the technical and organisational solutions adopted, which are typical of strategic infrastructures, where new structures must be built without obstructing the existing ones. Working without hindering the rail, road and maritime traffic was an essential condition for its successful construction.

TECHNICAL/PRODUCTION KPIs

7,650 tons

structural steel

23,500 tons

reinforced steel

190,000 m³

reinforced concrete

SUSTAINABILITY KPIs

1,200

vehicles/hour

100 anni

expected life span

Accessibility of the port for the latest generation of cargo ships



ITALY

GENOA "SAN GIORGIO" BRIDGE

A smart and sustainable bridge for connections and transport in Liguria and Italy

The bridge has a continuous steel deck 1,067 metres in length with 19 spans supported by 18 elliptical piers made of reinforced concrete, the majority of which positioned 50 metres from each other. The collection of sunlight through its photovoltaic solar panels will allow the structure to produce the energy required for the night and day operation of all its systems, such as lighting, sensors and plants. The high quality of the structure of steel and cement will guarantee its longevity while maintaining the highest levels of safety thanks to a special system that will dehumidify the inside of the structure to avoid condensation and corrosion. The construction of the bridge, achieved in record time (a mere 15 months from start to finish), has become the symbol of Genoa's rebirth after the city was wounded by the collapse of the Morandi Bridge, but also of a new developmental phase for Italy. Underpinning the success of its construction is a model centred around collaboration between large companies working closely with one another and the public.

TECHNICAL/PRODUCTION KPIs

67,000 m³
concrete

24,000 tons
steel

80,000 m³
open excavations

SUSTAINABILITY KPIs

100%
reused excavation waste

95%
the energy needed for the functioning of the bridge's system is produced by photovoltaic solar panels



AUSTRALIA

SKYTRAIN – SYDNEY METRO NORTHWEST

An elegant, innovative, environmentally sustainable project unlike any other in Australia

The Skytrain project for the Sydney Metro Northwest railway involved the construction of eight stations and approximately 15.5 km of tunnels, running from Epping to Bella Vista, as well as the construction of a 4.5 km-long viaduct – partly formed of a 270 m-long curved cable-stayed bridge – connecting the areas of Bella Vista and Rouse Hill. Every last aspect of the project is nothing short of outstanding, starting with the machinery used to construct it. Take for instance the two gigantic gantry cranes, each 150 m long and weighing 600 tonnes, used to lower the 1,200 precast concrete segments into place in order to form the viaduct. One of the greatest engineering challenges of this project involved overcoming the considerable torsion effect caused by the curvature of the bridge, in the presence of its railway loads and stays. An elegant, innovative, environmentally sustainable bridge unlike any other in Australia, it has garnered countless awards, including being named ‘2018 Project of the Year’ by Engineering News-Record (ENR).

TECHNICAL/PRODUCTION KPIs

4,500 m

total length of the viaduct

270 m

length of the cable-stayed bridge

1,200

precast concrete segments comprising the viaduct

SUSTAINABILITY KPIs

ENR's 2018 Project of the Year



TURKEY

NORTHERN MARMARA MOTORWAY AND YAVUZ SULTAN SELIM BRIDGE – THIRD BOSPHORUS BRIDGE

Europe and Asia getting closer thanks to the bridge of records

The construction of 150 km of the Northern Marmara Motorway stretch included the Third Bosphorus Bridge (now named Yavuz Sultan Selim Bridge) which is:

- the world's longest and widest hybrid bridge (width of 59 m and main span of 1,408 m);
- the first bridge designed to host an 8-lane highway and a double-track railway all at same level;
- the bridge with the highest tower in the world, above 320 m.

TECHNICAL/PRODUCTION KPIs

241,000 m³
concrete

5,000 tons
steel

897,000 m³
open excavations

SUSTAINABILITY KPIs

39,000,000
people in the catchment area

3.5%
energy consumption driven from
renewable energy sources (during
operation phase)



TURKEY

THE SIXTH-LONGEST SUSPENSION BRIDGE IN THE WORLD AT THE TIME IT WAS BUILT

The sixth-longest suspension bridge in the world at the time it was built

The Osman Gazi Bridge is a cable-stayed suspension bridge that forms part of the wider project of constructing the Gebze-Orhangazi-İzmir Motorway. It was built on the Gulf of İzmit, on the easternmost edge of the Sea of Marmara, near the city of İzmit and approximately 50 km southeast of Istanbul, Turkey. The bridge spans a total of 3,300 m and, at the time it was built, it was the sixth-longest suspension bridge in the world (now seventh) in terms of length of the main span, which is 1,550 m long. The bridge is suspended 64 m above sea level, with steel pylons standing at just over 230 m high. Comprising six lanes overall (three going in either direction), its construction has reduced the time taken to cross the bay from 60 minutes down to a mere six. The bridge was built in one of the most earthquake-prone areas in the world and so, to make the bridge as sturdy as possible, the pylons were built on a concrete base which rests on a large bed of gravel, allowing the pylons freedom to slide around in case of severe seismic events.

TECHNICAL/PRODUCTION KPIs

3,000 m

length of the bridge

1,550 m

length of the main span

230 m

maximum tower height

SUSTAINABILITY KPIs

From 60 to 6 min

reduction in bay crossing time



RUSSIA

KORABELNY BAY BRIDGE, WHSD OF SAINT PETERSBURG

Cable-stayed bridge as a sort of entrance point to the sea that has become a symbol of the city

It is the largest bridge built for the most complex section of the Saint Petersburg (WHSD – Western High- Speed Diameter) motorway access road project to ease traffic. The project offers a strong visual impact and has been designed as an open door that looks over the sea. This cable-stayed bridge stands 35 metres above sea level, with a central span of 320 metres and steel and concrete towers reaching 124 metres in height.

TECHNICAL/PRODUCTION KPIs

320 m
length of the central span

124 m
height of towers

35 m
height above sea level

SUSTAINABILITY KPIs

100
people employed to build the Korabelny bridge, among technicians and workers (daily average)



TURKEY

HALIÇ METRO CROSSING BRIDGE

Important infrastructure of the city of Istanbul that has contributed to improving urban mobility

The Haliç Bridge crosses the famous cove called the Golden Horn on the European side of the Bosphorus, connecting Topkapi to Galata. Overall, the route extends approximately for one kilometre, allowing the passage of the new Unkapanı-Yenikapı metro line of Istanbul. The structure foresaw building a new steel cable-stayed bridge that is 387 metres long, and a 120-metre-long spring bridge that can be crossed underneath by ships.

TECHNICAL/PRODUCTION KPIs

1
cable-stayed bridge

387 m
length of the cable-stayed bridge

1
spring bridge

SUSTAINABILITY KPIs

Reduction of CO₂ emissions



ROMANIA

BASARAB OVERPASS IN BUCHAREST

Record-breaking structure with a complex seismic isolation system for bridges

The Basarab Overpass, built according to the most advanced European standards, is the largest infrastructure project in the transport sector built in Bucharest in the 20 years prior to when it was completed, and one of the most important projects in Romania for the type of anti-seismic systems used. The work connects two areas of the city with heavy traffic. It includes a complex system of viaducts and bridges, which extend for approximately for a total of 1.5 kilometres. The structures host 2 double carriageways for vehicles and 2 tram lines and allow crossing the Dâmbovița river. The structure foresees an access ramp facing south that measures approximately 160m, which reaches a metal arch bridge of 120 metres that allows crossing the bridge. It then continues with a 790-metre-viaduct until it reaches a railway near Gare du Nord, crossed by a cable-stayed bridge. The viaducts are built with post-tensioned reinforced concrete and have 115 lights with lengths ranging from 12 and 35 metres. Of the 2 bridges foreseen by the project, the cable-stayed one, when it was completed, was actually Europe's widest cable-stayed bridge (44m), and the only one hosting a tram station.

TECHNICAL/PRODUCTION KPIs

1
cable-stayed bridge

250 m
length of the cable-stayed bridge

1
arch bridge

SUSTAINABILITY KPIs

Reduction of CO₂ emissions



ARGENTINA

BRIDGE OVER THE PARANÀ BETWEEN THE PROVINCES OF CHACO AND CORRIENTES

A new threshold for the art of building,
a symbol of creativity of Italians worldwide

The Bridge stretches across the Paraná River, the second longest in South America, connecting the Chaco and Corrientes provinces. As a suspended structure, it was a novelty for its construction features. It is the first example of bridge with a large suspended pre-compressed reinforced concrete span, and a prefabricated deck. It was a new achievement at the time in terms of construction technique in light of the bridge's scale. The bridge comprises a suspended structure with a central span of 245 metres and two lateral spans, each measuring 163.9 metres, connected to the structures on the ground by a series of portal-type girders with spans measuring 83 metres. The length of the part of the project standing over the river measures approximately 1,700 metres. The width of the road section is 14.34 metres for the large central spans and 12.4 metres for the access spans and for the viaducts on the ground. At the time of its construction, the features of the riverbed, its depth, the speed of the water, the differences between peak and minimum water levels, and the frequency of the river floods and riverbed geology represented an important engineering challenge.

TECHNICAL/PRODUCTION KPIs

~1,700 m
approximate bridge length

245 m
central span

163.9 m
length of lateral spans

SUSTAINABILITY KPIs

Reduction of CO₂ emissions



ITALY

SFALASSÀ VIADUCT – SALERNO-REGGIO CALABRIA MOTORWAY

One of Europe's most spectacular viaducts, awarded more than once for its design and construction excellence

Part of the larger modernization project of the Salerno-Reggio Calabria Motorway, the Sfalassà Viaduct has a total length of 826 metres, it is 19.10 metres wide and presents a main span measuring 376 metres in length, which at the moment of its inauguration, was celebrated as Europe's longest. The bridge floats above the steep mountains of Calabria. It has thrice won the CECM prize, which is given in case of design excellence and construction of metal structures, a prize that is very prestigious in the large infrastructure sector, and that was won in 1968, 1970 and 1972.

TECHNICAL/PRODUCTION KPIs

826 m
total length of the viaduct

376 m
length of the main span

19.10 m
width of the viaduct

SUSTAINABILITY KPIs

CECM Prize: won in 1968, 1970 and 1972



ITALY

FAVAZZINA VIADUCT – SALERNO-REGGIO CALABRIA MOTORWAY

Engineering that is suspended between the sky and the sea

Just like the Sfalassà Viaduct, the Favazzina Viaduct is part of the larger modernization project of the Salerno-Reggio Calabria motorway, and is one of its most complex works. The Favazzina Viaduct is located in the heart of a barren and unpolluted Apennine mountain, a few metres off Scilla, one of the most beautiful sea resorts in Calabria. It stands in the mountains between two tunnels, the Brancato tunnel (on the Reggio Calabria side) and the Muro tunnel (on the Salerno side). The Favazzina Viaduct is made of two distinct parallel cable-stayed bridges, a deck in each direction, each of these 440 metres in total length, a central span of 220 metres, and two lateral spans of 110 metres. Each deck is supported by two steel towers measuring 110 metres in their maximum height, with a diapason shape. The project also foresaw environmental safeguarding interventions. Oaks, chestnut trees and olive trees, typically present in that area, were planted. The river channel and the two mountain sides were requalified within Favazzina Valley.

TECHNICAL/PRODUCTION KPIs

440 m
total length

220 m
length of the central span

110 m
height of towers

SUSTAINABILITY KPIs

Requalification of the river channel of Favazzina Valley



ARGENTINA

BRAZO BRIDGES ON THE PARANÀ RIVER

The first road and rail cable-stayed bridges with a large span built worldwide

The work comprised building two distinct bridges on the two branches of the Paraná River, (Guazú and Las Palmas), separated by 24 kilometres. The two bridges were built to also allow transatlantic ship navigation; each has a cable-stayed metal structure, where the navigable canal is located, and two viaducts connecting to the banks. The cable-stayed structure is 550 metres long. It has a central span that measures 330 metres, 50 metres over the peak river flow level. It comprises a railway track and four road lanes. Overall, the connecting road viaducts are 6.5 metres long, while the railway ones, running separately, measure 10 kilometres. The main towers are built in reinforced concrete, reaching a height of 120 metres over the peak flow level of the river waters; they rest on reinforced concrete plinths supported by two-metre-diameter piles that reach a maximum depth of 73 metres.

TECHNICAL/PRODUCTION KPIs

550 m

length of the cable-stayed bridge

330 m

length of the central span

50 m

height of the cable-stayed structure over the level of maximum water level of the river

SUSTAINABILITY KPIs

Reduction of CO₂ emissions



COLOMBIA

BRIDGE OVER RIO MAGDALENA, BARRANQUILLA

Strategic infrastructure for urban mobility in Colombia

Building the bridge over the Magdalena River represented an important phase of the integration process of the coastal region, which has since become more connected with neighbouring countries Panama and Venezuela and the Colombian hinterland. The bridge has a total length of 1,500 metres. The structure comprises a cable-stayed bridge that is 279 metres long, with three main spans (one at 140 metres; two at 69.5 metres) in correspondence with the river's navigable canal, and 26 standard spans of 45 metres. The structure's slim feature and uniformity is particularly interesting from a technical standpoint. The design is also original due to the main spans, made from a continuous caisson-type girder of precompressed reinforced concrete resting on rigid support structures (piles) and elastic ones (the ends of the tie rods, also in pre-compressed reinforced concrete).

TECHNICAL/PRODUCTION KPIs

1,500 m
total length of the bridge

1
cable-stayed bridge

3
the main spans of the cablestayed bridge

SUSTAINABILITY KPIs

Reduction of CO₂ emissions





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