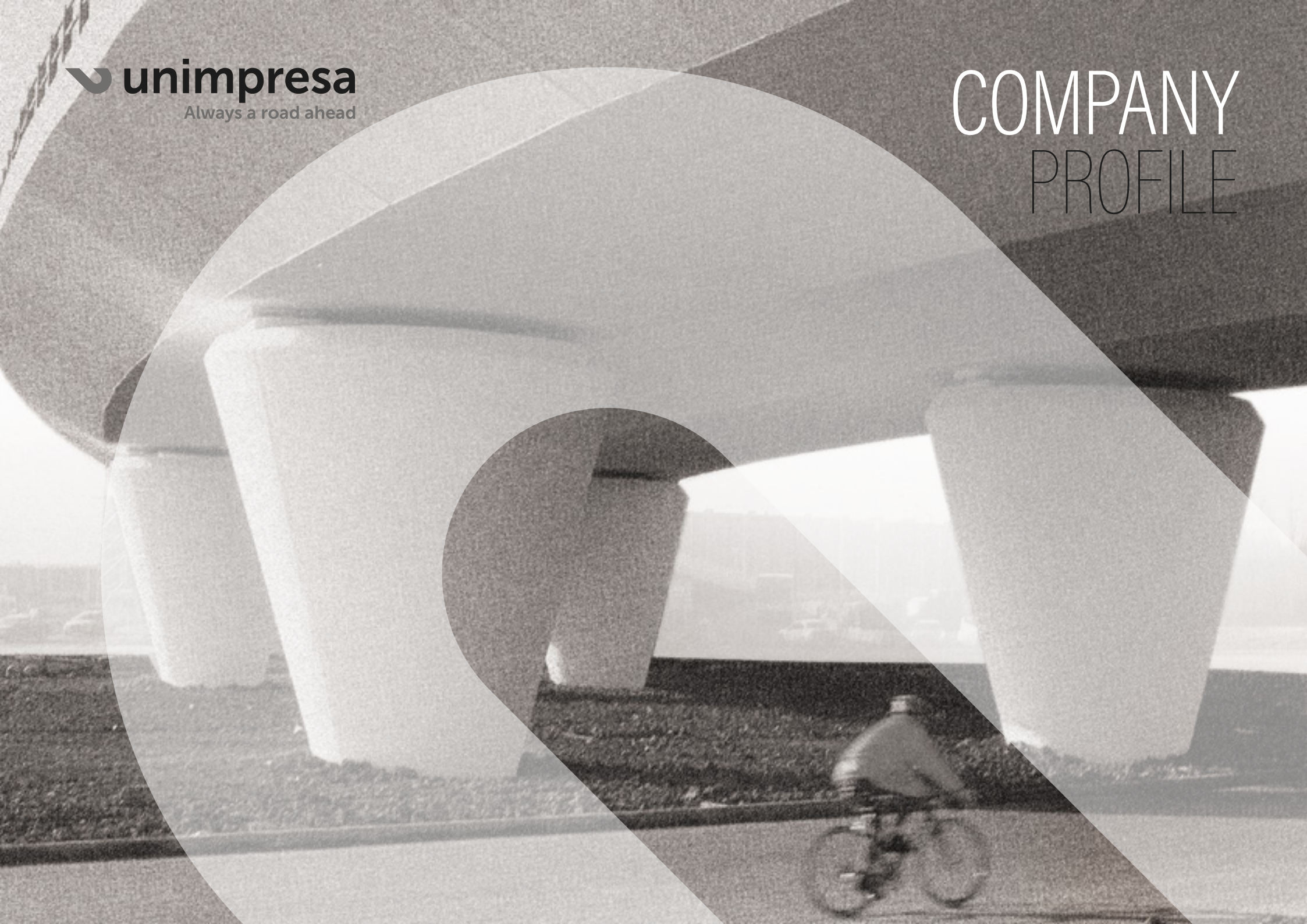
unimpresa

Always a road ahead

COMPANY PROFILE



Years of activity/ Since 1976

Companies belonging to the SpA/

UNIMPRESA SPA
- **UNIMPRESA BRANCH**
- **UNIMPRESA CONSTRUCTION PLC**

Number of offices/

REGISTERED OFFICE ITALY
Via Arangio Ruiz,
83 -80122 NAPOLI

OPERATIVE OFFICE ITALY
Via R. Livatino, 22-84083
CASTEL SAN GIORGIO (SA)

REGISTERED AND OPERATIVE OFFICE ETHIOPIA
UNIMPRESA CONSTRUCTION PLC/
UNIMPRESA BRANCH/ ETHIOPIA
Kirkos Sub City, Woreda 08,
Kazanchis, Black Gold Complex bldg,
7 Floor, Addis Abeba

Number of empoyees/ 300

Number of realized projects More than 100 contracts

Active works/in progress in Ethiopia
UNIMPRESA SPA + UNIMPRESA BRANCH
UNIMPRESA CONSTRUCTION PLC

More than 100 contracts

Map of offices

We have worked for/

Autostrade Meridionali S.p.A - ANAS Autostrade SPA

Romagnoli Spa - Naos Spa - Consorzio di Bonifica Agro Nocerino Sarnese

Società Interporto Sud Europa S.p.A - Ministero della Difesa - SCHIAVO & C. S.p.A.

Società Autostrada Tirrenica S.p.A - Comunità' Montana "Alto Tammaro" – Castelpagano (BN)

TOTO S.p.A FINEUROPA S.p.A, Roma - COMUNE DI PARMA - COMUNE DI POLLICA

COMUNE DI POMEZIA - COMUNE DI TAURANO (AV) - IMPREME S.p.A, Roma

COMUNE DI VENOSA - TECNOPOLO S.p.A - AUTOSTRADA DEL BRENNERO S.p.A

PROVINCIA DI SALERNO - COMUNE DI CAVA DEI TIRRENI (SA)

COMMISSARIO DI GOVERNO PER L'EMERGENZA IDROGEOLOGICA, Napoli - ITALFERR S.p.A., Roma

ACEA S.p.A., Roma - PROVINCIA AUTONOMA DI TRENTO

ETHIOPIAN ROAD AUTHORITY - MINISTRY OF DEFENSE OF ETHIOPIA

ETHIOPIAN AIRLINES.

Our story. The desire and passion to continue to build our road, our future

Unimpresa Spa is the last stretch of a road that began in 1961 thanks to the will, commitment and dreams of Guido Rainone, my father, and Ciro, his brother under the name of Impresa di Costruzioni Rainone SNC.

When in 2018 we widened our eyes admiring the race of thousands of gazelles on the asphalt of the great road just finished in Gambela, in western Ethiopia, some historic site managers with thousands of kilometers of roads built for the our group, told the young Ethiopian project managers about the excitement at the delivery of the works for the Kanu Khaduna motorway built in Nigeria in 1974, and the articles that mentioned our company, at the opening in 1996 of the 140 km of sections of the Motorway 9 Karachi Hiderabante and Moro Sukkur Pakistan.

Flashbacks of tapes cut by the authorities in front of the television cameras overlap with the memory of intercontinental phone calls with project managers at impossible schedules.
As I scroll through the photos and videos in the cell phone archive, old images of construction sites, workers, machines at work and yellowed articles also appear before my eyes.
During the daily streaming meetings I remember the homesickness that has always surprised me when observing those who returned to their homes, driving bridges and junctions built by our company on roads.
We have built hundreds of thousands of kilometers of roads and motorways in 4 continents, dozens of bridges, junctions and motorway junctions, urbanization systems, water and electricity networks, tunnels, airport runways and heliports, motivated by the passion to put together people and means on projects that connect what was previously distant, divided, unreachable, tiring to travel, unimaginable to recover, restore, and put back into operation.
We started practicing techniques and procedures 40 years ago that today represent our flagship for the most complex jobs and the most demanding clients. Our group of companies is also among those that have contributed to essential infrastructures for the development of road communications in Italy.
Choosing to work in Ethiopia for 5 years brings in my father's passion for distant horizons and condenses the professionalism, competence and initiative of the second and third generation of our family, trusting in young people, and in women, who occupy more than half of the key roles, both in our Addis Ababa offices and in the currently active construction sites.

THE EXPERTISE AND COMMITMENT TO POST-EARTHQUAKE RECONSTRUCTION AND POST FLOOD SINCE THE 80s

We contributed to the reconstruction of 5,000 lodgings in Monteruscello after the devastating earthquake in Irpinia; on behalf of the Hydrogeological Emergency Government Commissioner in charge after the flood of 1998, we carried out the restoration of the hydraulics of the Sarno and Solofra rivers and the rearrangement of the hydraulic functionality of the riverbeds in the municipality of Angri; we have been engaged for a long time in the construction of the third lane of the Salerno - Reggio Calabria road in the Naples - Pompeii - Salerno section.

SINCE THE LATE 90'S ITALY HAS BEEN MOVING ON ROADS BUILT BY OUR SICOB AND SOCOB

Our engineers, site managers, our vehicles, the specialization in asphalt and concrete are an essential part of the construction of roads, junctions, junctions and bridges on which millions of vehicles pass every day between Sardinia, Trentino, Liguria, Lombardy, Puglia, Lazio, Tuscany, Sicily, Calabria.

Coger, the headquarters in Rome and the complex urbanization projects of the 2000s

We started the urbanization works for the residential and commercial settlement in the Bufalotta area in 2002, a year after we had started the long and impressive urbanization works and road junctions on behalf of Interporto Sud Europa in the area between Maddaloni and Marcianise, where the Campania Shopping Center stands, and it is still nowadays one of the largest commercial parks in Europe. The primary urbanization works at Parco Talenti in Rome were carried out by adopting cutting-edge engineering solutions which at the same time made it possible to carry out excavations, lay pipes and allow the Archaeological Superintendence of Rome to examine fossil furnishings, tools, wells found on a territory inhabited for more than 700 thousand years; without stopping or delaying the operations. The rearrangement of the roadway and the redevelopment of the historic center of Pollica - Acciaroli with the elegant lava stone pavé also dates back to the beginning of the 2000s, a work that helped to conquer the small village under the guidance, at that time, of the late Angelo Vassallo, the denomination of Capri del Cilento.

THE LAST STRETCH OF THE ROAD: UNIMPRESA SPA AND THE LURE OF FOREING LAND WITH THE OPENING OF THE OFFICE IN ETHIOPIA

The three important works completed in Ethiopia from 2017 to 2020 have awarded our Ethiopian subsidiary Unimpresa PLC the definition of Grade First Company, the highest classification for contractors authorized to carry out the most important government contracts. The Ethiopian State values the works carried out with sustainable techniques and materials and requires a twenty-year guarantee for the works and materials. The system of 12 mechanically stabilized earth walls, completed in 2018 in the Efeson Ataye area, represents the natural evolution of the experience in the field of earth constructions that began in Venezuela in 1974 with the construction of the large 70-meter dam by El Guapo. The Refurbishment of the runway and turning pad of the Addis Ababa airport, designed to support the traffic of 2 million flights a year, is the result of a knowledge of asphalt and bitumen processing for which we are recognized in Italy and among the first in Europe and investments in research and development of materials, including a mobile laboratory that allows sampling and analysis of the materials used during all the construction phases of the site up to the final test.

OUR FUTURE

We will continue to work in Ethiopia where the works for the reconstruction of the second runway at Addis Ababa airport will start in September on behalf of Ethiopian Airlines and the construction of 100 km of road for the Ethiopian Authority Road and we would like to be present in at least two other African states, with our expertise and the credibility acquired from excellent partners of private companies and institutions.

But it is not our end point, of course. Beyond Africa we see an important decision: to return to the New Continent or head towards Australia.

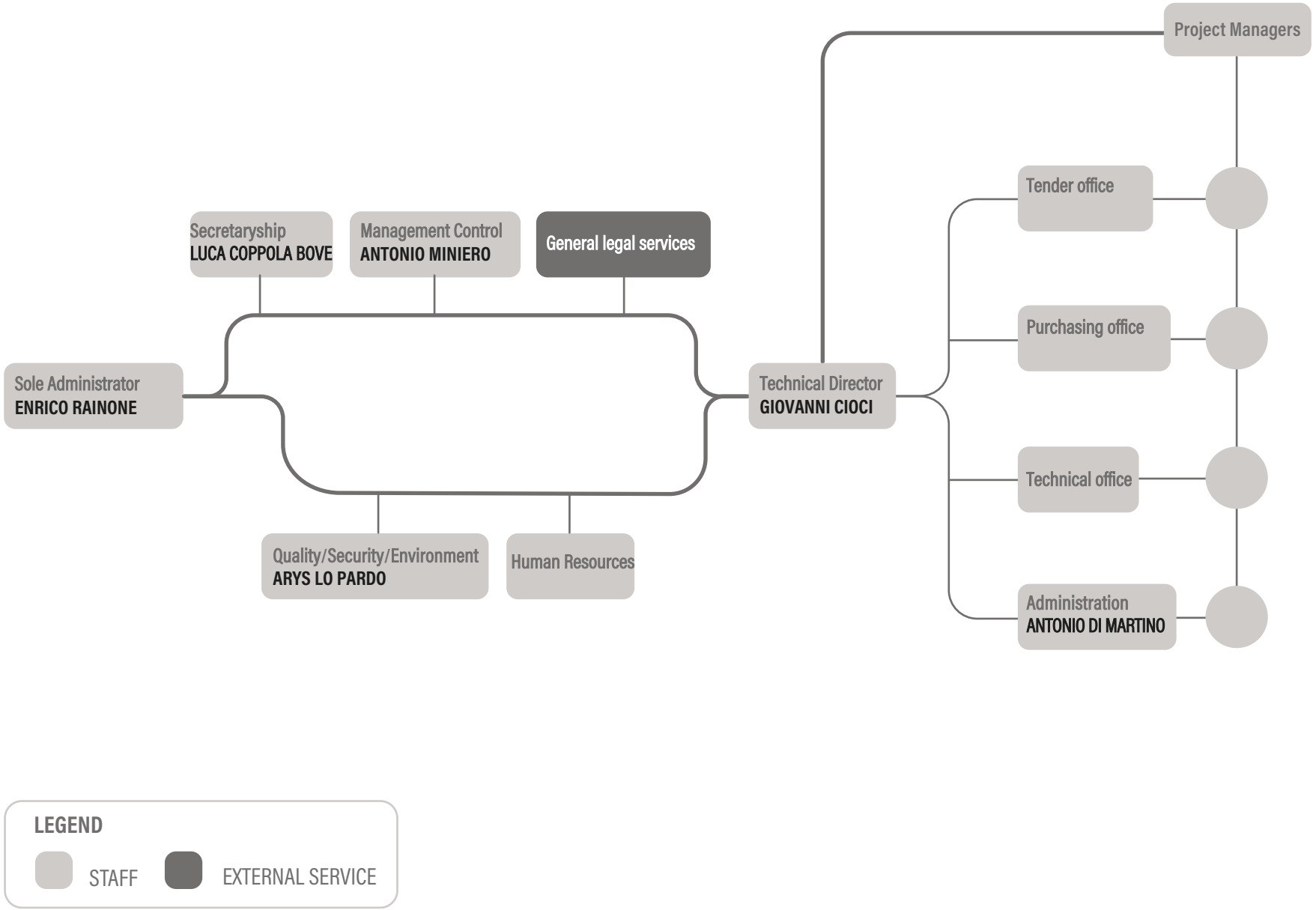
MISSION

Since 1961 we build roads with passion to reduce distances, broaden perspectives and bring the future closer.
We are a leading Construction Company in the implementation of infrastructure projects, with 60 years of experience in the building of roads, highways, bridges, junctions, tunnels, urbanistic constructions, water and sewage networks, airports and heliports in four continents.
UNIMPRESA SPA's offices are located in Naples and Salerno with an operational branch in Addis Ababa, and its Ethiopian companies controlled directly: Unimpresa Construction Private Limited Company and Trans Water Well Drilling, the latter specialized in the excavation of wells and in the realization of water networks.

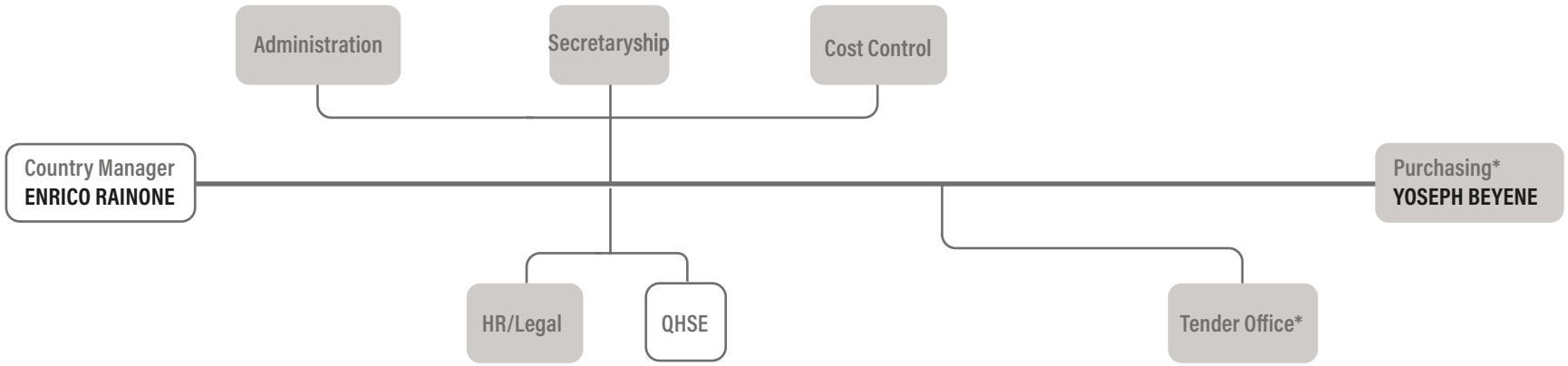
VISION

We are a company that combines passion, experience and initiative of three generations.
After working for about 30 years
In our next future, we will continue to contribute to the great modernization plan of public and private transports in Ethiopia. Moreover, we are working to be present in at least two other African states, with our expertise and the credibility acquired as excellent partners of Corporate Companies, Public Authorities and Organizations.
However, needless to say, this is not our final destination. In addition to Africa, we have a major decision: return to the American continent or turn our head to Australia.
Having endless passion for building roads to link territories and people, opportunities and projects, present time and possible futures.

UNIMPRESA SPA ITALY



UNIMPRESA SPA BRANCH ORGANIZATION

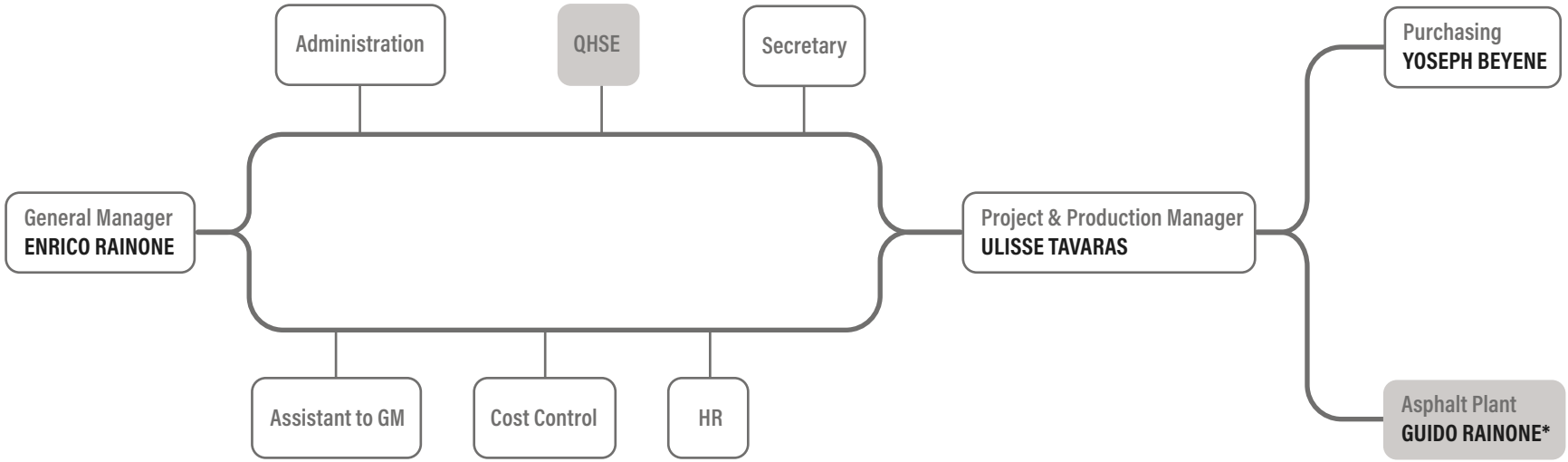


LEGENDA

*EXTERNAL STAFF
BELONGING TO UNIMPRESA PLC

STAFF

UNIMPRESA CONSTRUCTION PLC

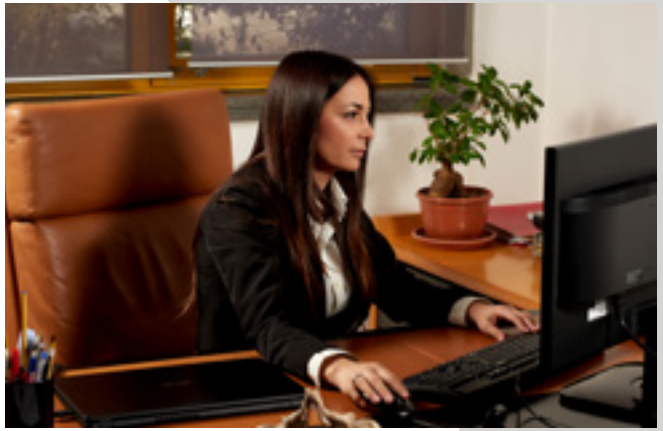


LEGENDA

*EXTERNAL STAFF
BELONGING TO UNIMPRESA SPA

STAFF








unimpresa
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Enrico Rainone

GENERAL MANAGER UNIMPRESA SPA

Surveyor, expert in bitumen and bituminous conglomerates, he has been working on the construction sites of the family business since he was 17, acquiring the experience "on the job", which allowed him to play an essential role during 25 years when the group of companies belonging to the Rainone family was growing in the field of great public works, and until all capital, men, means and experiences flowed into the company Unimpresa S.p.A.

In the 1990s, while his father's company was building roads and bridges in Pakistan, in the United Arab Emirates and Latin America, Enrico, for 10 years followed up the activities
of SOCOB, the family business specialized in the production of bituminous conglomerates, and he acquired a solid and recognized experience in the field of bitumen, which led him to work with wellknown companies in the construction of major road works and gave him the opportunity to work with leading clients such as ANAS, Società Autostrade Meridionali; Autostrade del Brennero, and other Italian public entities owning or managing roads.

In SO.COB he carried out the complex activities of the construction works of the Interporto Sud Europa - Polo Marcianise - Maddaloni, Interporto di Marcianise - Nola, which include the construction of a section of railway connecting the freight terminal of Marcianise/Maddaloni and the Interporto Southern Europe, the construction of the intermodal yard for storing and maneuvering of the containers, as well as the internal connection roads and connections roads to the town centre, sewage networks, public lighting, fire prevention network, and the aqueduct drawing from the Campania aqueduct.

Since 2002 he managed the company CO.GE.R, which acquired the company branch of SOCOB, specialized in the execution of public works. CO.GE.R. took charge of the works of the
Interporto Maddaloni/Marcianise and, in 2002, it acquired one more contract with Interporto Sud Europa for the construction of a Commercial Park within the municipality of Marcianise.

In 2005 also the construction works of the external viability of the "Campania Commercial Park" with the construction of underpasses, overpasses, junctions and connections between the shopping centre, the A1 motorway and the neighbouring municipalities were contracted to CO.GE.R.

From 2002 to 2010, under Enrico's management and direction, CO.GE.R. carried out other works of great importance and impact on the communities which they served, such as the articulated series of Urbanization interventions of the Parco Talenti in Rome, with the recovery of sections of road and the expansion of major arterial roads, the overpass viaduct of the Via Langhirano roundabout in Parma, the arrangement of the pavement and dangerous curves of the SS Carlo Felice in

Sardinia, the Trento Sud motorway station for the Brennero motorways and, in collaboration with the Romagnoli S.p.A. company, the expansion works of the Naples – Salerno A3 motorway in the Pompei –Scafati – Torre Annunziata section.

UNIMPRESA S.p.A. was born in 2010, and initially carried out part of the works entrusted to SOCOB and CO.GE.R., until, in 2017, it was awarded an international tender for the rehabilitation of the New Runway of the Bole Airport in Ethiopia and in 2018 and it opened an office in Addis Ababa for the execution of the works.

The applause and satisfaction of the client Ethiopian Airways translated into the assignment to Unimpresa also of the rehabilitation of the Old Runway, which was followed by orders from the Ethiopian Ministry of Defense and the Ethiopian Road Authority. Enrico Rainone's skills and the network of relationships with the leading companies in the chain of major road works, established over three decades of previous collaborations, are the founding elements of Unimpresa's expansion over the African continent.

Giovanni Cioci

TECHNICAL DIRECTOR UNIMPRESA SPA

Graduated in civil engineering with an experimental thesis on "Study of the correlation between the Marshall stability test and the diametral compression rupture test (Brazilian test) in bituminous conglomerates", published in 1982 in the AUTOSTRADE magazine.
While he was still in the initial stages of his experience as construction manager for private construction companies, in 1984 he won the competition for teaching Construction and Construction Technology and the following year he also won the competition for the drawing chair Technician, Topography and Topographic Drawing, but he never taught, preferring to continue his activity for companies specialized in the construction of large public works. He directed the construction sites for bridges, viaducts, tunnels, railway bypasses, large above-ground and underground water supply systems, with Romagnoli Spa of Milan from 1981 to 2006, Pisa Costruttori of Brescia from 2006 to 2009, and then he participated as technical director in projects that have determined the company history GO.Ge.R. from 2009 to 2011, and of Unimpresa Spa from 2011 to today, taking care of the coordination of planning, work teams, relations with technical partners and being indispensable in the management of relations with public and private customers.
Four decades of project management and construction site management experience for some of the most complex public works carried out in Italy (Campania Shopping Centre, Castel Romano Outlet expansion, hydraulic works for catchment on the Ofanto river and supply of large diameter pipelines serving the Bari coastal strip , disconnection artifacts of the "Ofanto – Locone" irrigation complex in Basilicata, "Traversa sul Trivigno – Acerenza dam" hydraulic adduction tunnel in Basilicata, construction of the "Ofanto – Rendina" connecting canal in the Municipality of Melfi (PZ), Aqueduct Vesuviano, extension to three lanes of the A3 Naples - Pompeii - Salerno motorway, Construction of the external variant of the inhabited area of Roccella Ionica - Reggio Calabria, construction works of deep wells (1500 m) for the integration of irrigation flows of the right district of Ofanto in Basilicata, construction of a new road axis in the municipality of Torre del Greco, upgrading works for the "Carlo Felice – S.S. 131" in Sardinia, redevelopment of the "New Runway" runway at Addis Ababa International Airport in Ethiopia, just to name a few); with his talent to make tutorship skills and abilities available to projects for the training of young resources, combined with a precise analytical approach, Giovanni Cioci is a pivot of the strong expansion of Unimpresa spa in Africa, starting from the projects carried out in Ethiopia from 2018 onwards. He is a speaker at conferences on road construction materials and techniques, and is often consulted for the correct technical/ administrative management in the context of the construction of public works and is an expert in the management of disputes deriving from the interruption of works and the termination of contracts.

ROADS AND HIGHWAYS

We design and build road and motorway works:

- long stretches of high-speed roads
- road paving
- overpasses and underpasses
- viaducts
- motorway stations
- galleries

References

- **Extension of the Naples-Pompeii-Salerno section p. 33/35**
- **Viaduct of Parma p. 37/38**

We design and build:

- adjustments, maintenance and road requalification

References

- **Municipality of Pollica historic centre recovery work p .27/29**

RAILWAYS AND AIRPORTS

We build railway bypasses and works for the adjustment and crossing of railway sections.

We also deal with:

- rehabilitation of airport runways
- construction of tourpads, taxiways and junctions
- construction of heliports

References

Old and New Runway, Bole Airport, Ethiopia P. 44/46

URBANIZATION WORKS

We design and build:

- squares
- roundabouts and connected roads
- railway sidings with superstructure
- electrical and fire-resistant systems
- recovery works for historic centres
- arrangement and furnishing public spaces

We also build:

- primary and secondary urbanization works

References

- **Parco Talenti, Rome** P .39/41

HYDRAULIC ENGINEERING

We carry out hydraulic engineering works such as:

- water networks
- water purification installations
- forest plumbing arrangements
- consolidation of the slopes of torrential courses both underground and above ground
- works for the hydraulic arrangement of the reclamation channels
- water supply works in industrial and residential areas
- reactivation of water systems and drilling of deep wells for the irrigation of flows
- construction of supply lines from dam to power grid
- creation of a surface water disposal network

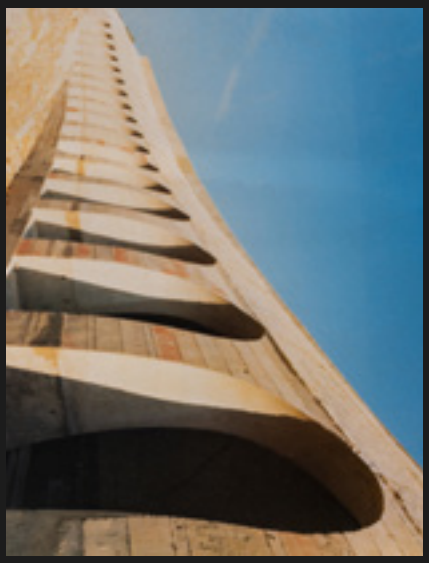
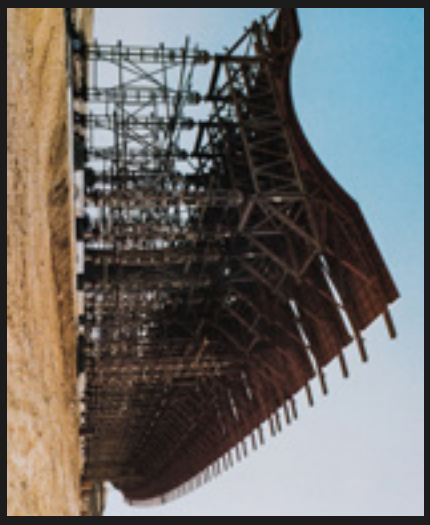
We also deal with:

- sewer works
- tank construction
- interventions to restore the hydraulic functions

References

- surface water disposal network and regional pipeline adduction works of the Campano Aqueduct
- water supply works in industrial areas in Pomezia
- water supply works in residential areas
- **Gaudino di Lavello (PZ)** p. 22/23
- **Parco Talenti, Rome** p. 39/41








TECHNOLOGIES AND PROCESSES COGER - ITALY

Throughout the first decade of the 2000s, the extent and complexity of the road works entrusted to the company CO.GE.R, part of the Unirainone group, required procedures for the construction of "box" structures, i.e. concrete monoliths built on site off- work, and then fixed/ placed in the bodies of the road and/or motorway embankments to be crossed, by means of thrust with hydraulic jacks, to allow the maintenance of the vehicular traffic present therein. This same technology has also been adopted for road and/or motorway underpasses and to allow the passage of water supplies in the aqueduct field.

- During the first batch of Anas works for the construction of the third lane of the A3 Naples – Pompeii – Salerno section, a reinforced concrete box structure was built off-work (with the aim of being a "micro tunnel") to give continuity to the railway track of the Circumvesuviana located adjacent to the Pompeii motorway exit towards Naples. The box-shaped monolith in question, with the geometric dimensions of the longitudinal development of 60 m and the cross section such as to allow the passage of the Circumvesuviana trains, was built on site off-work, and then fixed/placed in the body of the motorway embankment to be crossed by half of hydraulic thrust exerted by suitable hydraulic jacks, maintaining in any case, during the execution of the works, the operation of the vehicular traffic present on the A3 Naples – Pompeii – Salerno motorway.

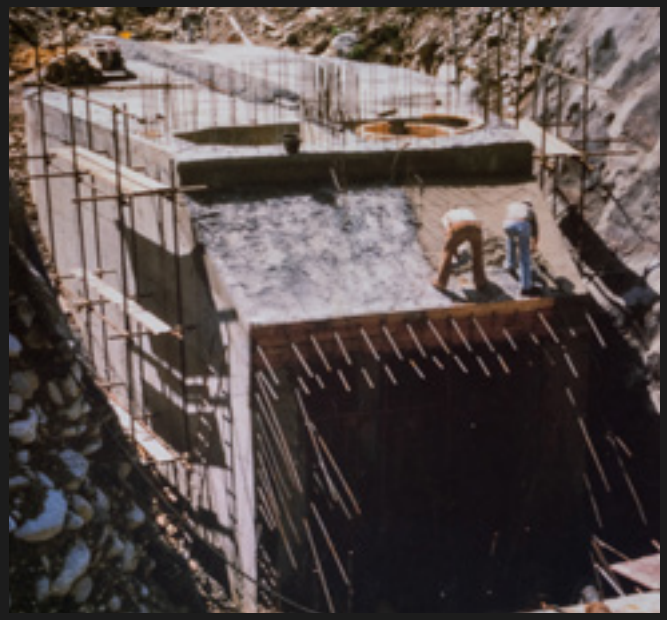
▪ The technique of building the monolith was undertaken also for the series of works for construction of the Centro Commerciale Campania and the access road to the commercial area. For the construction of the underpass, a reinforced concrete monolith was built with external dimensions of m. 11.30 x 9.00 and a length of 60.00 meters.

▪ This building was inserted below the motorway level without interrupting traffic, making use of the proprietary methodology "GRUPPO U.C.S. – Underground Crossing System" by the Engineer Cicora of Livorno. The implementation of the building took place by means of hydraulic thrust "in a blind hole" and did not require any provisional support for the crossed entities.

▪ In the scope of long urbanization works of the Parco Talenti in Rome, in order to protect the water pipeline with steel pipes with a diameter of 2 m. which crosses the street of District Casal Boccone, a large reinforced concrete box structure was built. At the ends of this road, before entering the roundabout where Via Ojetti flows into, the bridge named "Ponte della Cecchina" was built to cross the "Fosso della Cecchina" which is part of the rainwater collection system of Parco Talenti. This building, whose abutments rest on large diameter poles, has a span of 11 metres and a width of about 25 metres, including the tunnels for the underground utilities and the pavements.

▪ The construction works of Parco Talenti required complex excavation phases, during which some archaeological findings emerged from the perimeter wall of a villa from the Roman Era. The Company CO.GE.R. performed a targeted and detailed survey and the relative graphic recontruction on behalf of the Works Management for the purpose of designing works to protect the site and for its location.

▪ These protective works, carried out by CO.GE.R., consisted in the filling of the excavations, the appropriate compaction and execution of a reinforced concrete slab of suitable thickness, to safeguard the archeological finds, as they were subject to vehicular traffic.



TECHNOLOGIES AND PROCESSES ETHIOPIA

The type of commitment, the complexity of the projects, the challenges imposed by the Ethiopian territory have been the driving force and the testing ground for important partnerships and cutting-edge technologies and construction processes for Unimpresa.

Surveying Technologies of the Pavement Deep State of the New Runway

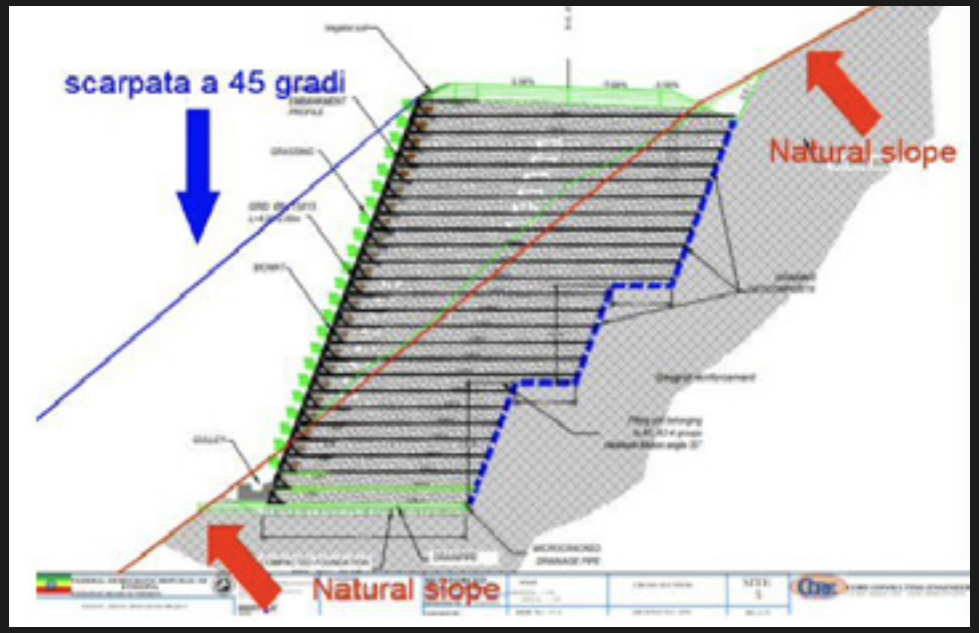
The rehabilitation of the New Runway of the Bole Airport in Addis Ababa required the deployment of a series of technologies and processes which made it possible not only to complete the works with the quality specifications and within the required times, but also the possibility, for Unimpresa S.p.A., to optimize the methodologies for using instruments such as the Heavy Weight Deflectometer (HWD) and the Ground Penetrating Radar (GPR) in partnership with Dynatest Italia and the supervision of Prof Alessandro Marradi (Professor of Road Construction, Railways and Airports at the University of Pisa, pavement expert and technical director of Dynatest Italia).

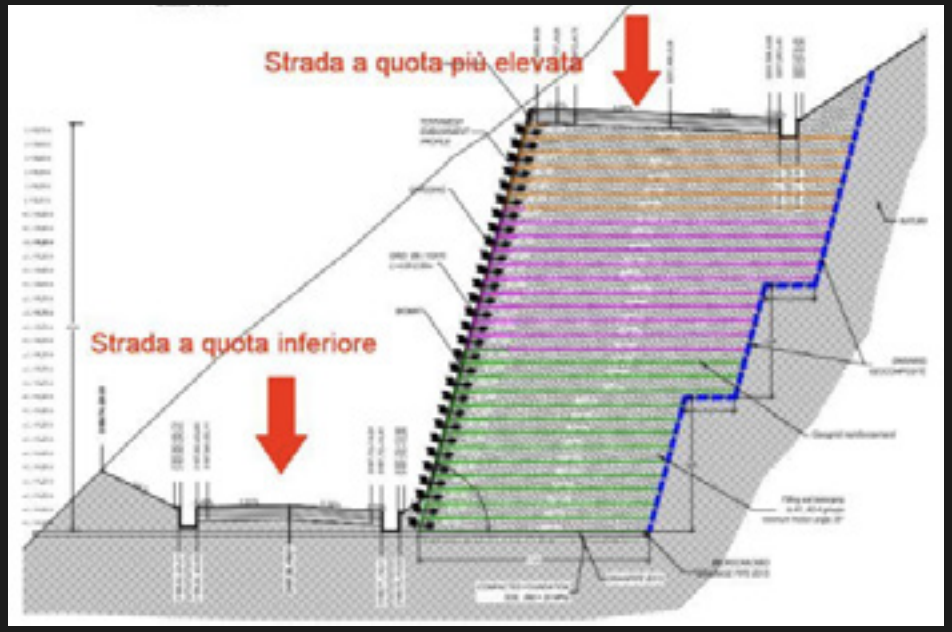
In order to be aware of the "health" condition of an airport runway pavement, which from a simple visual examination should reveal cracks and/or deformations, it is necessary to carry out an investigation campaign, among which it is particularly fundamental, if not necessary, the use of the " Falling Weight Deflectometer ", tools specified above, for the determination of the deflection of a flexible pavement caused by the application of a load pulse generated by a falling weight.

A mobile laboratory has a "Heavy Weight Deflectometer" equipment - Dynatest type weight deflectometer (HWD). This equipment makes it possible to evaluate the layers stiffness features of the pavement, including the relative substrate. The HWD makes it possible to measure the "area of deflection" generated by the application of a recognised load with a precision superior to the other existing methods.

The HWD applies a load of impulsive type to the pavement (a falling weight of known weight) which optimally simulates that impressed by an aircraft wheel in dynamic conditions. The impulsive force generated on the pavement has a duration of about 25 ÷ 30 micro seconds, and is variable according to the height of the falling weight. The deformation (lowering) of the pavement surface is measured by a series of geophones aligned at different distances from the load axis. The values of the deflections and the relative applied forces are stored in the on-board computer and the relative data are processed using specific programs, prepared for this purpose, in order to determine the numerical values of the "Dynamic Elastic Modules" referred to each single layer of the pavement.

Airport runways are peculiar because the entity of the loads, to which the central strip of the pavement located adjacent to the runway axis is subjected, are elevated as are the areas where the aircraft traces curvilinear paths on the runway, generating high tangential and torsional forces which stress the bituminous conglomerates of the pavement layers.





The system of Geo-mechanically reinforced walls of the Efeson – Ataye road.

Reinforced soils, intended to be a set or block of " geogrids for soil reinforcement + backfilling soils" are works that act as support elements (NTC 2018) to be used for various geotechnical, environmental or naturalistic purposes or as embankments for road construction with angles of sub-vertical slopes, however with slope angles higher than those of simple earth embankments whose angles will not exceed 45 degrees from the horizontal axis.
It is for this last reason mentioned above, and therefore for uses in road applications, that the reinforced soils are easy-to-use in the works of the new road linking the cities of Epheson-Ataye and Mehal Meda.
In these road works, the problems to be solved were essentially two: the presence of extremely steep slope profiles and strong overhang of the road embankment outside the slope profile for seven construction lots.

Extremely steep slope profiles and strong overhang of the road embankment outside the slope profile for seven construction lots.

The issue is clearly visible in the following figure, taken from the architectural/ structural drawings of the road project in question.
As can be noticed in the figure, the overhang of the road embankment outside the profile of the natural slope is clearly depicted. The extension of the road embankment towards the outside of the extremely steep mountain profile of that area would have entailed, if moved further inland, a considerable and unthinkable excavation work upstream of the escarpment itself.
Moreover, if it had been thought to build a simple embankment in unreinforced soil with a slope of a maximum of 45 degrees, again from the figure, it may be noted the considerable extension that this embankment would have had and the considerable volume of embankment material, which would have been necessary to carry over to reach the project road level.

ISO 9001: 2015

It is an internationally recognized standard for the creation, implementation and management of a Quality Management System for any company. It is designed to be used by organizations of any size or sector, as well as by any business. As an international standard, it is recognized as the basis for creating a system that ensures customer satisfaction and the improvement of processes and methods of product/service provision.

SOA

The SOA Certification is a mandatory certificate (issued by authorized Certification Bodies) which proves the economic and technical ability of a company to qualify for the execution of large public works contracts valued over € 150,000.00 and also confirms that the individual/company certificated is in possession of all the necessary requirements for public contracts.

ISO 14001: 2015

It is a standard aimed at demonstrating that the certified organization has an adequate management system to keep the environmental impacts of its activities under control, and systematically seeks improvement in a coherent, effective and, above all, sustainable way.

ISO 39001 2012

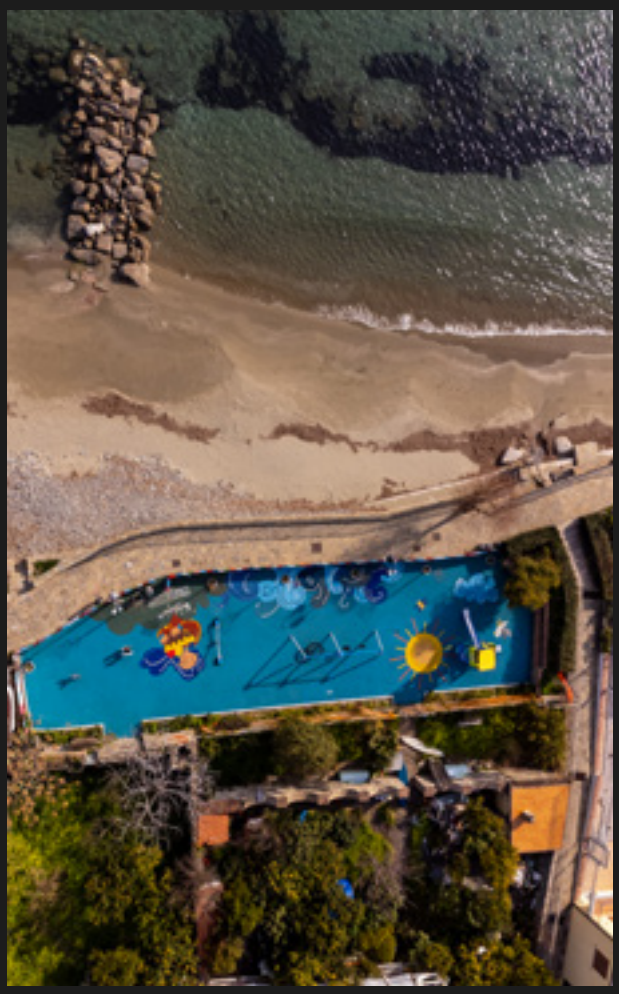
It is the international standard that provides the framework for the road safety management system. It can enable organizations working with road traffic systems to improve overall safety and reduce the risk of injury or death from traffic accidents.

ISO 45001: 2018

This International Standard specifies requirements for Occupational Health and Safety (OH&S) Management System and provides a guide for its use, in order to allow organizations to provide safe and healthy workplaces, preventing work-related injuries and illnesses, as well as proactively improving their performance related to OH&S.

Municipality of Pollica Restoration works Historical centres, and urban furniture

Client	Municipality of Pollica (SA)
Amount of works	€ 2.215.952,000



Shopping Centre Campania Marcianise

Client	Interporto Sud Europa
Amount of works	€ 25.000.000,00
Duration of works	2001-2006

The group of companies RAICAL/COGER carried out the construction works of a "Commercial Park" and its roads, on the areas of the municipality of Marcianise (CE), in the framework of the broader development project of the area involved in the construction of the Southern Europe Freight Village Nola - Maddaloni - Marcianise. The works consisted in the construction of a shopping center and the correlated internal road system with parking lots, including the road system for accessing the commercial park and connecting it with neighbouring towns. The company Co.GE.R. S.p.A was responsible for the construction of the road network, the parking areas and the construction of the access road to the commercial area.

Works have been carried out as follows:

- Excavation of the former agricultural area and subsequent stabilization of the land with lime treatment.
- Construction of a sewer system for the disposal of sewage conveyed to a purification plant to then be introduced into a connection channel built for the purpose.
- Creation of a capillary network for the disposal of rainwater, introduced for treatment in de-oiling tanks, for the separation of oils and hydrocarbons from rainwater and from water coming from unloading and from the vehicles parking areas.
- Construction of a large parking area, with the correlated stalls, consisting of grass panels and plant accommodation, including internal roads paved with bituminous conglomerate and signposted.

The most important and technologically advanced intervention of the entire project, which brought substantial changes to the daily life of the users of the shopping centre and to the residents and users coming from the municipalities of the surrounding area, was the access road to the commercial park without interruption of the traffic, consisting of:

- construction of a motorway overpass on the motorway A1 Naples-Rome developed over two beam spans 40 mt, resting on two abutments and a central pier, resting, in turn, on large diameter poles. The deck was built with steel beams and an overlying completed slab in reinforced concrete. The cross section, including the sidewalks, is mt 15.50. The launch of this structure took place during the night in n. 2 phases (during 2 nights) with interruption of the motorway traffic.
- Construction of the motorway underpass to the A1 motorway with the off-site construction of a reinforced concrete monolith with external dimensions of m. 11.30 x 9.00 and a length of 60.00 meters.
- Construction of a junction between the interport road network and the S.S. 87 and the aforementioned motorway overpass, and building an underpass at the same road, to allow users to access the interport road system directly from the motorway exit of Caserta Sud.
- Construction of the access ramps to the S. P. 335 of the "Ponti della Valle", an intervention that made it possible to put into operation a road, named in the 70s "ASSE DI ANDATA AL LAVORO", which was interrupted inside what would be 30 years later it became the area of the Marcianise-Maddaloni Freight Village. These access and exit ramps have transformed and speeded up the communication between the centres close to the CAMPANIA Commercial Park, important for the viability and communication with the same neighbouring centres. Today this road is called S.P. 335 of the "Bridges of the Valley".

Widening of the road Naples-Pompeii-Salerno

Client	Autostrade Meridionali S.p.A.
Total amount of works	€ 15.350.000,00
Duration of works	1998 - 2003

- Works to widen the road to three lanes, between km 17+568 and km 19+269 of the Naples-Pompei motorway.
- Construction works of the new road linking Via Sant'Elena and Via Scappi in the municipality of Torre del Greco (NA)
- Construction works for the 3rd lane between km 22+400 and km 25+300 and modernization of the Scafati junction ramps.

As part of a complex series of works financed by ANAS and contracted out by Società Autostrade Meridionali, the widening of the A3 Naples-Pompei-Salerno motorway to three lanes in each direction represented the first lot of works involving the exit Pompei Scafati and the stretch that goes from the Scafati exit to Torre Annunziata. The construction of the 3rd lane on the Naples-Pompei-Salerno motorway made this major arterial road much smoother, reducing journey times and significantly raising the safety levels of the road axis, which is affected by considerable traffic flows from its construction in the 70s.

During the excavation works, archaeological finds were discovered and made safe and the works were carried out in concert with the Superintendency of Environmental and Archaeological Heritage, as for the choice of materials used to cover the concrete and to protect the centenary Mediterranean pine trees existing while constructing the new road axis between Via Sant'Elena and Via Scappi in the Municipality of Torre del Greco (NA).

Client	Autostrade Meridionali S.p.A.
Total amount of works	€ 670.000,00
Duration of works	2002 - 2003

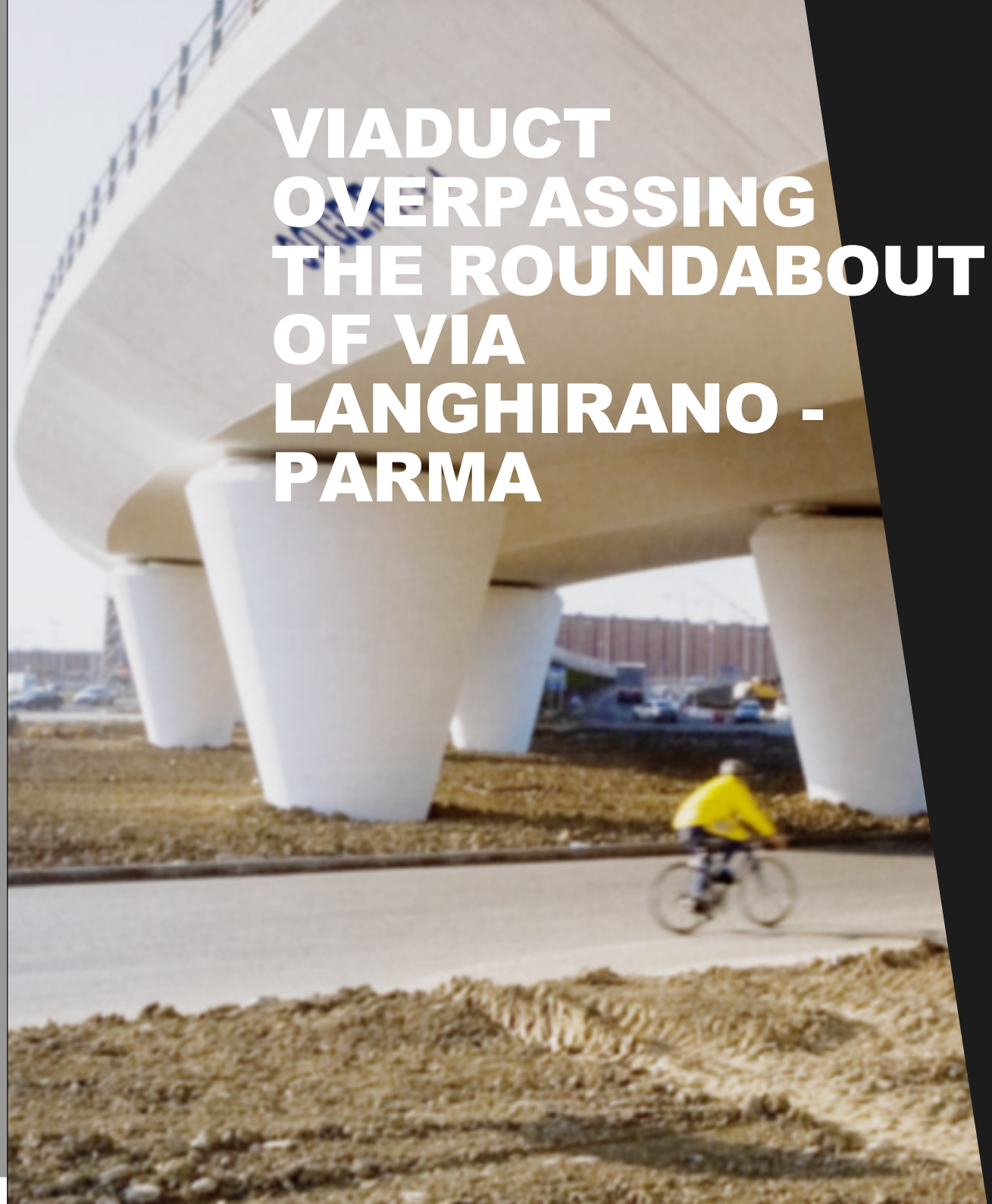
Completion of the main lot of works also required search, localization and movement of sub-services interfering with the construction of the 3rd lane between km 22 +400 and km 25+300 and the modernization of the Scafati junction ramps of the A3 motorway.
The Scafati and Castellammare junctions were also affected by hydraulic works, while the visit of Pope John Paul II to Madonna di Pompei sanctuary made it necessary to carry out a series of urgent interventions to adapt the Pompeii-Scafati junction to incoming traffic.

The works involved design and construction of:

- A large roundabout between the adjacent intersections – access to the A3 motorway (Scafati exit) – Via Acquasalsa – Via Lepanto.
- A second roundabout on Via Lepanto at the crossroads with the entrance to the junction.
- A water delivery pipeline was also restored in via Acquasalsa, with relative flooring and the lighting system of the Scafati tollbooth was also upgraded.

Client	Autostrade Meridionali S.p.A.
Total amount of works	€ 2.171.544,00
Duration of works	2003 - 2005

This intervention is committed to the expansion and modernization of the Naples-Pompei-Salerno motorway section and relates to the construction of the new road axis connecting Via Sant'Elena and Via Scappi in the Municipality of Torre del Greco and the A3 motorways.



VIADUCT OVERPASSING THE ROUNDABOUT OF VIA LANGHIRANO - PARMA

Client	Municipality of Parma
Total amount of works	€ 7.041.427,63

The construction of the viaduct on the Via Langhirano roundabout has represented a difficult and fascinating challenge for our company from the outset. The particular location of the site, on a road with a considerable volume of traffic to be constantly guaranteed for the entire duration of the works, combined with the design peculiarity of the work conceived by prof. Martinez y Cabrerà of a curved viaduct, cast on site and without intermediate joints, required planning in the execution of the works with elaborations of extremely detailed work phases, with particular reference to times and safety conditions. These phases were fully respected thanks to the professionalism of the site personnel, the continuous attention and assistance guaranteed by the construction management, the client's ability to quickly understand and resolve the problems that emerged during construction.

The stages of the work

The overpass of the via Langhirano roundabout is part of a larger project to connect the eastern and southern roads of the city of Parma which extends over a total length of approximately 2,200 metres.

For the first 450 meters, the project envisaged a reprofiling of the road, which turns west with the four-span viaduct on the roundabout in via Langhirano with the related junction branches and subsequently the single-span cable-stayed bridge of 130 meters over the Parma stream. The road layout then heads towards the Mariano AMPS plant. To allow for circulation, the entire work thus described was created in 3 excerpts.

In the first section, the graft at grade on the Via Langhirano roundabout, the new bridge over the Parma stream and the temporary junction on the Argini road immediately south of the AMPS area were envisaged.

In the second section, the crossing of the AMPS area was envisaged, the artificial tunnel under the Argini road roundabout with the related junction branches and the final dismantling of the temporary junction on the Argini road. The third and final section concerned the reprofiling of the road up to Via Langhirano, the crossing of the roundabout with a viaduct and the creation of the related junction branches. The implementation of the environmental mitigation works and the related green areas were carried out at the same time as the construction of the three functional sections.

The obstacles overcome

The main technical difficulties arose in the executive phase with the construction of a temporary roundabout built in several phases so as not to interrupt traffic and minimize inconvenience for citizens and in the construction of the deck. The deck, of the cassion type with post-tensioned prestressing cables, with a circular radius of curvature and with an altimetric curvature as well, required extremely demanding operational precision on the formwork with topographic monitoring of the formwork support towers, in order to ensure continuously the perfect correspondence of the castings to the geometric parameters of the project.

The use of innovative materials with a low environmental impact, such as the wear and tear mats with sound-absorbing bituminous conglomerates, the painting of the building with "smog-eating" photocatalytic paint, the reinforced earth and subsequent grassing for the embankments have contributed to making it well inserted in the landscape context an already impressive work from a technical design point of view.

Urbanization works in Parco Talenti - Rome

Client	FINEUROPA SPA
Total amount of works	€ 114.632.144,00
Duration of works	2003 - 2011

These works were contracted to Co.Ge.R S.p.A. by the company FINEUROPA S.p.A (client), forming part of the FINEUROPA/MUNICIPALITY OF ROME Agreement, dated 20 May 2001, with the Municipality of Rome, for the implementation of the "Parco Talenti" Urban Programme.

This program gave way to the Rione Rinascimento and involved the construction of new roads and parking lots, the redevelopment of existing roads, the construction of new sewage networks and the preparation, for the future installation of all the necessary public services (electricity, water, gas and telephone) through the preparation of cable ducts and the construction of reinforced concrete tunnels aimed at receiving the specified underground services, including the construction of some sections of cycle path.

Over the course of eight years of work, the company has carried out a series of crucial works for the improvement of

life, traffic and safety in the residential area of Parco Talenti, such as:

Road works:

- The realization of the doubling of Via di Casal Boccone with two lanes in each direction of travel - an important arterial road connecting via della Bufalotta and via Nomentana - was certainly the most complex intervention, which required a considerable workforce, resources and technologies to overcome obstacles that arose during the works and carry out restoration and safety measures for existing structures.

- During this intervention, the enclosure wall of about 270 meters of the Institute of the "Pie Venerine" Sisters, demolished following the widening of the roadway, was rebuilt. Other stretches of enclosure walls were rebuilt in reinforced concrete again due to the widening of the roadway.

- Creation of a two-lane road system with a traffic divider on Via Umberto Fracchia, providing for areas for parking, sidewalks, public lighting, sewage systems and subservices.

- Construction of a stretch of Viale E. Pound, including the road in mixed grain size "Viale Angelo Mancia" which winds through the "Parco dei Cinque Sensi", starting in Viale E. Pound and ending in via A. Cajumi to merge onto via Ugo Ojetti.

Sewage works:

- **Construction of a deep sewage collector, 10 ÷ 15 meters from the street level of Via Dario Nicodemi and related road works** (sidewalks, public lighting, etc.), including the operations of laying the bituminous conglomerate. Given the considerable depth of the excavations, it was necessary to carry out the same excavations on n. 2 levels in order to be able to reach deep depths with the excavator arms, even if already equipped with an extended arm.

- **Creation/implementation of the sewage network in Via Ugo Ojetti, including the rainwater disposal network, the construction of sidewalks with travertine cordons and concrete paving**, posts for public lighting and preparation for the installation of poles.

- **Construction in via Fracchia, via Baccini and in via di Casal Boccone of a total of 270 meters of underground crossings for sewage works passing under roads open to intense city traffic.** After having created very thick walls to withstand the hydraulic thrust of the pipe jacking machine, large diameter reinforced concrete pipes were pushed, so as to avoid further excavation operations.

Roundabouts:

- **Construction of a roundabout where the streets U. Fracchia, Viale Ezra Pound, Via Riccardo Bacchelli converge/depart.**

- **Creation from scratch of the connection between the roundabout where via Ojetti and via di Casal Boccone and Via Nomentana meet,** in order to lighten the junction of via di Casal Boccone on Via Nomentana. These roads are now called Viale Ave Ninchi/Viale Sora Lella and were built through excavation, stabilization of the road foundation with lime treatment in order to make the roadbed suitable for receiving loads.

- **Construction of urbanization works on via Giovanni Verga, via Luigi Pirandello, via Giacomo Zanella, via Giuseppe Giacosa and via Adriano Tilgher.**

Reinforced Earth walls for Epheson/Ataye Mehal Meda Street

Client	Yencomad Construction Plc
Total amount of works	€ 2.000.000,00
Duration of works	2018-2019

Unimpresa Spa Branch was commissioned by Yencomad Construction Plc to carry out the works aimed at the construction of inclined walls in reinforced earth as part of the construction of the new 60 km road linking the cities of Ataye (1400m asl) and Mehal Meda (3400m asl) in the Ahmara Region, located 300 km northeast of the capital Addis Ababa. The construction of this reinforced earth system, internationally recognized as "Natural Engineering Works" required an investment of over 1 million and 27 months of work and constitutes the first experience with this construction technology in the Ethiopian nation. The Ethiopian Road Construction Authority ERA (Ethiopian Road Administration) has enthusiastically appreciated the design choices, technological solutions and results of the works and foresees future applications in other road construction projects.

Construction of the first mechanically reinforced earth walls in Ethiopia

These are municipalities embankments in backfilled and mechanically compacted earth, in which, at regular intervals and with depths depending on the height of the embankment, reinforcing elements are inserted which allow the creation of geomechanically and geotechnically stable embankments, with escarpments at higher slope angles at 60° and up to 75° (surveyed without reinforcements, in fact, they are never built beyond the 45° slope of the escarpments).

Specifically, from the point of view of the project approved by the Ethiopian road management body ERA and by the Core Consulting construction management, this construction technique was envisaged to be built in 12 lots.

The distribution of these construction lots in the total road layout, for 9 of them in particular, was found to be concentrated in a section of approximately 2 km in length characterized by morphological slope conditions between 40 and 45°.

In these conditions, the plan of the project road in section resulted for half or even entirely jutting out of the slope profile, a condition which would have made it impossible to build a road embankment both with the technique of the fill at 45° of angle of rest of the escarpment (need for large quantities of material to be returned and excessive occupation of the ground on the valley side of the road) and with the technique of a dry stone wall, in English "masonry wall" (high production costs, high safety risk for workers, need to employ large numbers of personnel).

Addis Ababa Bole International Airport NEW RUNWAY Rehabilitation Design and Construction

Client	Ethiopian Airlines Group
Lender	Ethiopian Airlines Enterprise

Cost of works	€ 17.500.000,00
Surveys and design	July/December 2018
Execution of works	17 January 30 July 2019

In 2017, Unimpresa Spa was awarded the first lot of works at Addis Ababa's Bole airport through an international tender, concerning the design and rehabilitation of the NEW RUNWAY runway. The company has built up a work team that saw the participation of Dynatest Italy (Design of flooring and civil works), Tecno Engineering 2C Srl (TE2C) Ing. Carlo Criscuolo (Design of new AGL OLD RWY, redevelopment of AGL NEW RWY and plan as well as AGL CAT 3 concept design) and CORE CONSULTING PLC (drainage system design). The coordination of the design team was carried out by Prof. Alessandro Marradi as Director of Dynatest Italia.

Located at an altitude of 2400 meters, Bole airport has in the NEW RUNWAY about 4000m long with a total width of 60m including two side abutments each 7.5m wide, the main runway. The existing asphalt pavement was covered with a deteriorated porous layer with a thickness of between 40 and 50mm, which had to be milled and removed to proceed with a 60mm asphalt overlay, due to the development of extensive and serious stress conditions.

The project was organized in 4 different phases, starting from the construction of the new inversion stands on the ends of the OLD RWY 07L/25R on which the traffic was then moved, to allow the closures of the NEW RWY necessary for the rehabilitation of the latter.

Of the foreseen budget, 80% covered the rehabilitation operations of the NEW RUNWAY, drainage, lighting, signaling and landscaping works, while the remainder was used for the restoration and maintenance of the OLD RUNWAY which hosted the bulk of the air traffic during the closures of the NEW RUNWAY.

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2@= 9JJ9F?=E=FL G> L@= =PAKLAF? JMFO9Q K9O L@= 3FAEHJ=K9 technicians engaged in the enlargement of the fillet of the existing taxiways and of all the remaining works, operations which required the milling of the existing deteriorated bituminous conglomerate, levelling of the surface of the runway with the laying work of a new layer of bituminous conglomerate, including the construction of road markings.

Furthermore, the design and construction of the lighting system (AGL) concerning the runway axis and the related runway edges was also carried out, including the design and execution of all the necessary horizontal signs.

In addition, drainage works were carried out with masonry stones for an overall development of 1,750 m2 and the arrangement of an area of 301,200 m2 of green works after land arrangement, including all plowing and levelling works.

Expansion and maintenance of the connection road between Adama and Assela

Client	Ethiopian Road Autority
Cost of works	€ 15.000.000
Execution of works	May 2022 April 2025

Unimpresa Branch started in May 2022 and will finish in April 2025 the works for the expansion and maintenance of the 78 km development road linking the city of Adama in Central Ethiopia south of the capital Addis Ababa with the city of Assela where there is an airport, within the Alemgena RNSMBD project.

The maintenance works consist essentially in the adoption of various RAP technologies, hydraulic rehabilitation and widening of the road carriageways, for a total amount of the works of approximately 15 million Euros.

Construction of Iteya-Robe Seru link road

Client	Ethiopian Road Autority
Cost of works	€ 42.000.000
Execution of works	May 2022 April 2025

Also from May 2022 to April 2025, Unimpresa Branch was carrying out the construction of the second lot referring to the works for the construction of the 68-kilometer development road that connects Iteya-Robe Seru and for the total amount of the works of approximately 42 million EUR. The goal of the program is to contribute to the development of Ethiopia's tourism sector by improving access to the country, as well as to provide better and safer transport links for trade and commerce, in order to stimulate the economy. The improved communication routes will also allow for better access to the country's mineral deposits, boosting Ethiopia's mining and quarrying sectors.

HOLETA POLYTECHNIC COLLEGE
Department of Agriculture and University College facilities

Cost of works	€ 16.442.565,73
Duration of works	2022-2024

In the context of the huge investments of the East Africa Skills for Transformation & Regional Integration Project (EASTRIP) program, in association with Bridge Construction PLC, Unimpresa Spa carries out the construction of the structures of the Regional Department of Agricultural Technology of the Holeta Polytechnic College and works of adaptation of the University college.

The Holeta ATVET Institute in Ethiopia aims to provide education, training and applied research in the field of quality, gender-sensitive, demand-oriented and entrepreneurial commercial agriculture. The new department will also be home to a hub that incorporates the evolving needs of the labor market and the private sector into its training programmes.

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