



CivilSub

Specialists in underground Works

CORPORATE PRESENTATION





“Alliance of a motivated team with solid experience in underground infrastructures”

“Civil engineering specialists in all forms of tunnelling work”

“Tunnelling staff dedicated to providing project support”



WHO ARE WE?

CIVILSUB rose out of an alliance of a motivated team with solid experience in constructing underground civil infrastructures and a vision of creating a project based on excellence and continuous improvement in a highly technical sector of civil works, and with a long road ahead of it from the standpoint of efficiency.

From the start CIVILSUB is establishing its brand in underground Construction works and Services at the service of large and medium civil works companies, offering high quality work with competitive prices through innovation, constant training and motivation of our teams, providing the client with a continuous consulting service made to measure in each case.

We are specialists on excavation and support of underground works by conventional methods and with tunnel boring machine TBM. We are also experts in the execution of concrete structures with sliding formwork systems. We are able to provide outsourced skilled labour force on-site and ongoing technical assistance.

WORK SYSTEM.

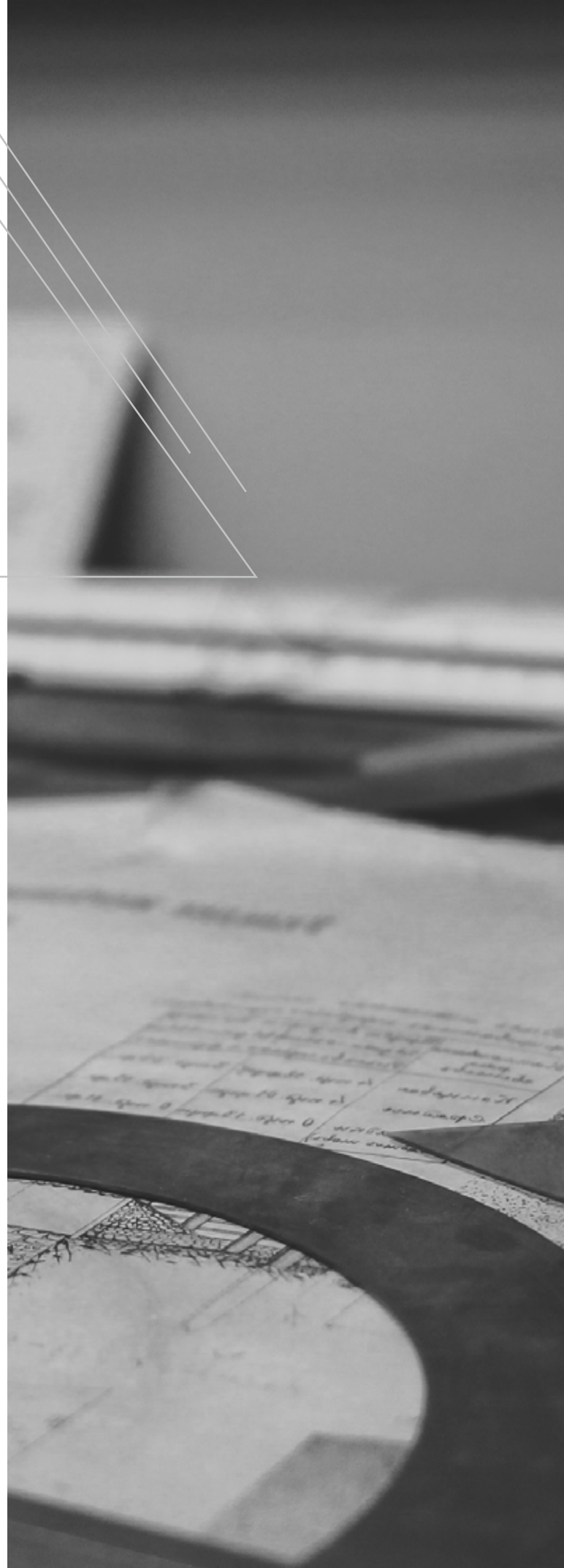
How do we make it?

In CIVILSUB, we try to maximize **value creation** for our clients and collaborators. To achieve our goal, we define a strategy based on merit and professional contribution of our people. We **promote and reward team work**, achieving common goals through collective contribution and participation.

The experience and dedication of our technical staff of engineers and on-site working teams enables us to a continual improvement process, managing to increase the profitability and quality of the final product efficiently and, in accordance, to increase our competitiveness and our clients'.

We promote cooperative, trusting and supportive medium-long term relationships, professionally and socially, through transparency and open communication for ultimate achieving a perfect alignment with customers' and partners' strategic goals. Our philosophy of closeness leads us to maintain, if our client requires, a continuous technical advice at the project set up phase and throughout the complete execution. In CIVILSUB we define a planning for the implementation of the project, following its progress periodically, in a personalized and flexible framework, trying to fit the final quality of our work with the deadline established by our client.

The increase of competitiveness in the construction sector, parallel to the market displacement towards the outside, leads us to face the challenge of internationalization with great enthusiasm. This represents a valuable opportunity to take advantage of our dynamic and proactive nature, as well as, to increase our business improvement. This combination has allowed us to obtain the necessary degree of flexibility to relocate our activities with agility to other countries in the European continent, so that the large and medium size construction companies can continue placing their trust in us in their internationalization process.





MISSION.

Why do we exist?

Increase the competitiveness of our customers through innovation and personalized service.

Be an efficient and innovative construction and service company of underground works and structures. Increase the competitiveness of our customers and partners. Promote and develop stable medium and long-term relationships. Execute highly qualified products with competitive prices through continual improvement processes, relying on technology and personalized framework schemes for which a constant formation and motivation of our experienced working teams are required, basing in principles such as honesty, coordination and responsibility.

VISION.

What do we aspire to?

Be a reference and a sustainable company with goals focused on value creation for our clients and welfare of employees, customers and society.

We aspire to be identified as a reference company, with a broad and stable participation in the European market in terms of welfare for our stakeholders, sustainability and commitment, with highly motivated and structured working teams. We want to create the value that our employees, customers, partners and suppliers require by proposing sensible and consistent solutions, exceeding our stakeholder's expectations through a culture of personalized service, creativity, innovation and future vision.

VALUES.

What is the most important thing for us?

We look for Excellency throughout the entire organization to achieve complete satisfaction of both customers and employees.

Our culture is forged by combining a set of values on which our organization is based. These values are:

Professionalism, responsibility, discipline and a work effort played every single day by each member of our organization.

We believe in a system characterized by teamwork and communication, as a way to increase creativity and cohesion within the members of our team.

The culture of Transparency and Closeness with clients, implemented through active listening and communication.

Ethical integrity and commitment to our stakeholders: Customers, employees, suppliers, public and private partnerships.

Innovation and continuous improvement as a key to develop efficient and profitable processes that ensure our competitiveness and our clients'.

Flexibility to changes and goal-orientation, as a way to overcome challenges ensuring our market position.

SERVICES

TUNNELLING & MINING

The evolution of technology has enabled strong improvements in current methods of excavation, in both conventional mining and civil works. The result of these improvements has had an undeniable impact on our life quality as citizens. Thanks to them, linear infrastructures are built much more efficiently, improving layouts and making possible to connect geographically isolated areas as well as transportation of resources between places with complex orographies. All this has been possible thanks to a greater social awareness about environment, to a considerable reduction in production costs, and to a spectacular improvement in health and safety in the workplace.

TBM EXCAVATION

The global technological developments of recent years, coupled with sustained periods of favorable economic climate, have fostered the development of newer and more efficient tunneling techniques, both in terms of a technical perspective and economic and labour safety considerations.

The emergence of TBMs has allowed industrialization in full section tunnelling, by placing the concrete cladding on its way and leaving the structural section completed to resist the thrusts of the soil. TBMs have not only set an engineering new milestone, but also enable us to reduce work accidents in a remarkable way. In economic terms, it is also an effective alternative way of addressing projects in long tunnels.

CONCRETE COATING AND STRUCTURES

A complementary activity, but not less important, is the execution of concrete structures. The know-how of our technical team of Civil and Mining Engineers, trained in the construction of large infrastructure projects, linked to the vast experience of our on-site skilled workforce, make this activity, like the previous ones, one of our favorite disciplines.

We carry out almost any type of concrete structures. We are experts in the operation of sliding formwork carriages for the execution of New Austrian Tunneling Method coatings and modular linear structures. In addition, we can assemble all the metal support structures of the formwork. Our experience in this field has enabled us to expand our offerings to more complex structures, such as reinforced-concrete caissons in marine works. We also do concrete pumps, with stationary pump and over long distances.

CIVILSUB owns both machinery and experienced technical staff means that have completed some civil works of great relevance.

OTHER SERVICES

Renewable Energies are a powerful commitment to the future and a guarantee for the welfare of generations to come. Wind Energy is one of the cleanest and most sustainable and the association of a specific amount of wind turbines is necessary for the transformation into electrical energy, forming what is known as Wind Farm.

PROJECTS

“MAGISTRALA 5” TUNNELLING. BUCHAREST UNDERGROUND.

Client: JOINT VENTURE ASTALDI SpA.- FCC- DELTA
AG- AB CONSTRUCT

This work includes realisation of nine stations and two parallel tunnels, each one 6223 m long and a sum of works of art among which ventilation shafts, power stations and substations.

Excavation has been carried out by closed shield tunnel boring machine with 660 cm diameter.

CIVILSUB professionals have worked in tunnelling and other duties such as assembling and disassembly of the TBM, conveyors and many other mechanical equipment.



CAÑIZO V.I. TUNNEL

Client: JV ASSIGNIA-COPCISA-VELASCO

New Spanish High Speed Line (AVE) connecting Madrid with Galicia. The project relates to the Tunnel Execution of 5,350 meters of excavation with a 74sqm section. The geological profile of the tunnel is complex and differentiates between two areas: hard granite areas of approximately 3,900 meters and another of weathered slates areas of approximately 1,450 m.

Drilling and blasting were used on excavation, as well as, backhoe loader equipped with a hydraulic hammer for the specific granite area, which thereafter was supported by gunite in several layers. The slates zone also requires the placement of TH-29 and HEB- 160 metal trusses in every meter of excavation.

There are also several connection galleries with the parallel tunnel, every 400 meters.



DANES TUNNEL (ROMANIA)

Client: JV FCC-Azvi-Alpine-Straco

This is one tunnel of new pan-European railway line, connecting several Central European regions with Turkey. The work is set in the stretch Atel-Micasasa.

The tunnel has a length of 969 meters and a variable excavation section between 134,05 sqm and 153.67 sqm. The excavation material consists of very cohesive and compact clays and silts. The tunnel is separated into 747 m of mining excavation section and three artificial tunnel segments totaling 222m.

Construction method chosen is drilling and blasting by mechanical means, excavating by pre-tunnelling and bench excavation, with the projection of gunite in several layers as support. HEB-160 trusses are placed each meter of tunnel excavation.



SIGHISOARA TUNNEL (ROMANIA)

Client: JV FCC-Azvi-Alpine-Straco

As Danes tunnel, is one tunnel of new pan-European railway line, connecting several Central European regions with Turkey. The work is set in the stretch Atel-Micasasa.

Unlike the previous, this tunnel is of higher complexity because it is an urban tunnel with some areas of lower coating, sometimes behind a meter. The tunnel has a length of 401 meters and a variable excavation section between 134,05 sqm and 153.67 sqm. The excavation material, as in Danes, consists of very cohesive and compact clays and silts. The tunnel is separated into 325 meters of

mining excavation section and two artificial tunnel segments totaling 76 meters.

Construction method chosen is drilling and blasting by mechanical means, excavating by pre-tunnelling and bench excavation, with the projection of gunite in several layers as support. HEB-160 trusses are placed each meter of tunnel excavation.

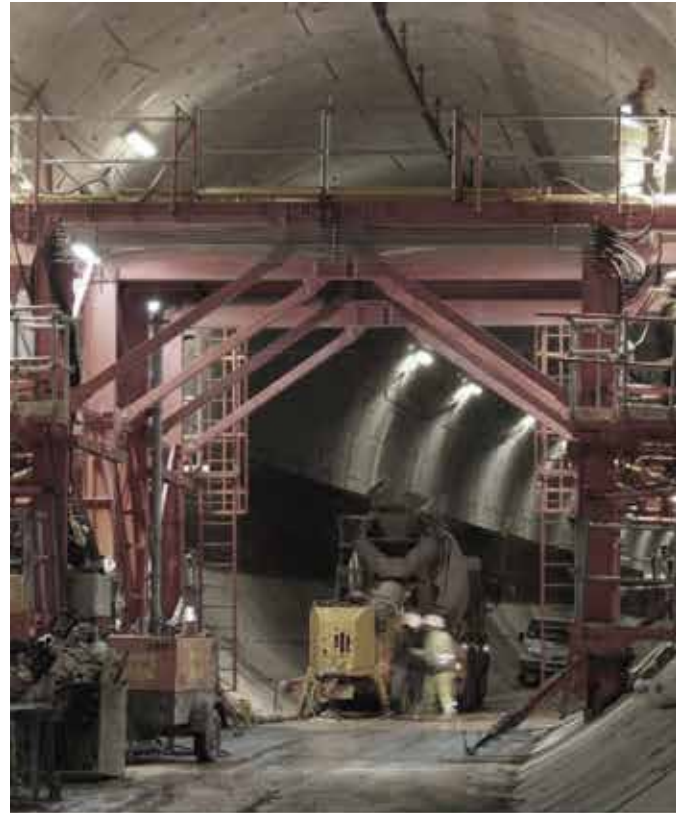


C-17 HIGHWAY TUNNELS

Client: JV FCC-COPCISA-COMSA-COPISA

Tunnels of one of the stretches of C-17 highway, owned by CEDINSA, which connects the localities of Vic and Ripoll.

Teams of CIVILSUB have carried out drilling, mining, shotcreting, concrete coating, waterproofing and paving in three of the tunnels.



BARCELONA UNDERGROUND

Client: JV FCC-FERROVIAL-OHL-COPCISA-COPISA

Metropolitan Railway Line of 47.8 km, connecting different areas of Barcelona with El Prat Airport. Four TBMs have been required for the excavation of the whole line. The tunnel is divided in two sections, one upper and one lower. Train will operate in both sections, after its final implementation.

CIVILSUB teams have participated in the construction of almost 7 km of the intermediate prestressed-concrete slab that separates the upper and lower tracks of the tunnel. We have also executed internal structures of ramps, walls, platforms, and technical rooms, facilities of BT and AT. For its implementation, four corbels formwork carriages have been used, as well as two monorails in order to fit prefabricated slabs and distributing the material. Upper and lower embedded via and civil works in station dwells have also been concreted by us.





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