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PEOPLE | KNOW HOW | PRODUCT

Your solution provider

Large Projects

Large Projects are the goal of any ground engineering worker giving the opportunity to be part of something great, important, something that really matters and will last over time.

We define “Large”, those projects that are time-consuming and expensive , and the completion of which has a strong impact on places and people.

Projects commonly known as “Mega Projects” and the restoration of the treasures of the world fall into this category.

Large Projects are certainly the most complex challenges in ground engineering: that’s why they are also the most fascinating.

Megaproject

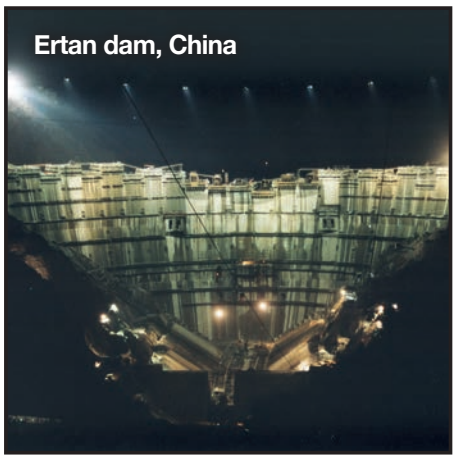
Megaprojects are large-scale ventures that carries a price tag of more than 1 billion US Dollars and take many years to move from design to build, involving both public and private companies.

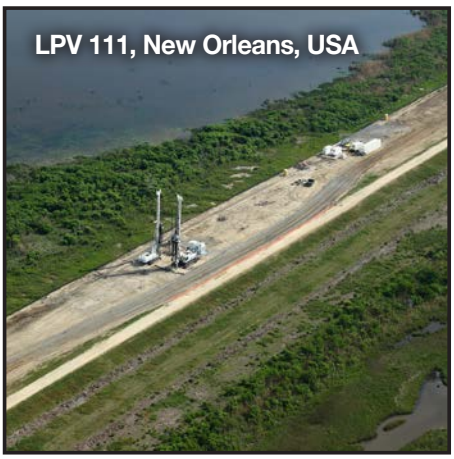
Megaprojects are strategic projects which have a profound impact on the area in which are located and affect million people. The complexity of Megaprojects ranges from their size to high costs and time factors. To these complexities are also added the difficulties related to the timelines typical of most of these projects, which are subject not only to the life cycle of technologies but also to political issues. Megaprojects play an important role in promoting infrastructure development, benefits in terms of economic growth, social change and environmental protection. Examples of megaprojects are infrastructure projects such as **metro, high-speed railway lines, airports, energy projects, logistics for large supply chains**, and so on.

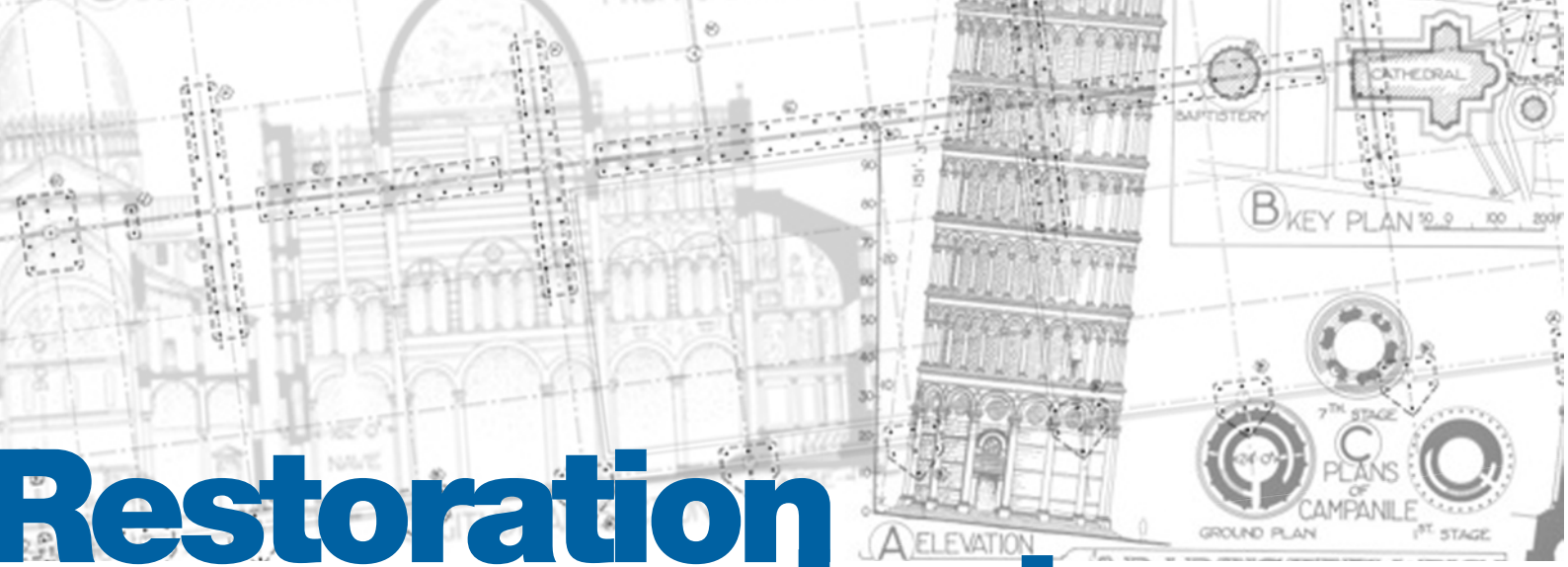
Due to their nature, the Megaprojects usually are heavy-structures that require deep foundations to support their weight and guarantee solidity to the structures and safety for users. Many are the challenges to be faced for the construction of the Megaprojects. Understanding the behavior of the ground, especially in very deep foundation, to evaluate the impact of excavation on nearby structures. Construction sites located in restricted working area for example with a limited headroom, in a urban area or on the median of the road. The time factor is the most relevant: whereas ground engineering works are the first to be implemented, it is essential to choose the most functional drilling method together with efficient ecological technologies.

That's the great thing: unpredictable.


Causeway project, Kuwait


Ertan dam, China


LPV 111, New Orleans, USA



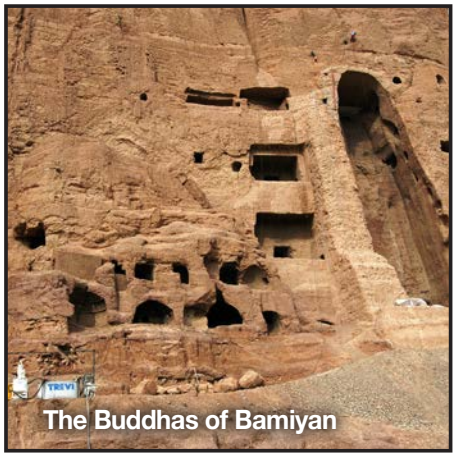
Restoration project

Certain symbols represent the world, **expressing ideals of culture, beauty and tradition, unique works that must be safeguarded with attention and precision.**

The world's heritage restoration projects have an inestimable value and needs to be faced without causing any damage. It is necessary a careful prior analysis of the risks related to both ground condition and monument condition. The work projects are continuously monitored through sophisticated measurement devices to verify, in real time, any settlements or structure alterations. Stabilization and waterproofing works are the commonly used methods for restoration projects.

Deep ground foundations aim is to fortifies the existing ones and to increase the amortization capacity of the surface area foundations to guarantee both security and longevity. It's often necessary to use different technologies in the same project which will be selected according to the specific situations. Works are executed in limited space, with all the fascination and difficulty of working in a complex of such a great value, in a unique area of the world.
Technological, operative and, above all, mental flexibility are essential to successfully completing the restoration projects. In this delicate and fascinating tasks, we are there, ready to support so much splendor.

Because what it's beautiful is also good.


The Buddhas of Bamiyan


Pisa tower

San Marco bell

Skyway Stage 3
Manila (Philippines)

Bored Piles

Skyway Stage 3 was the **largest and most prominent project in the last few years in Philippines**, both from a technical and logistical point of view.
Technical, because the largest diameter of the piles was 3500 mm with an average depth of 40 linear meters. Logistical, because the route of the highway crosses the whole city of Metro Manila, with very huge traffic problems.

Grand Paris Express
Paris (France)

The Grand Paris Express is the largest infrastructure project currently under construction in Europe and, once completed, it will contribute to make Paris even more splendid and enjoyable.
The Project owner is Société du Grand Paris and a total amount of Euro 35 billion are planned for the construction of **200 km of a modern public transport network** consisting of the extension of line 14 of the metro and the **construction of the new lines 15, 16, 17, 18** for more than **60 new stations.**

Diaphragm walls

Bored piles

Vasco Da Gama bridge
Lisbon (Portugal)

The construction of the Vasco Da Gama bridge over the Tagus river, which opened to traffic in March 1998, was one of largest civil engineering projects ever undertaken in Europe. With its **18 km of extension**, the bridge greatly alleviates traffic congestion of the city centre, by completing Lisbon's ring road network it also provided a new route for vehicles travelling between northern and southern Portugal and Spain.

Big Dig
Boston, MA (United States)

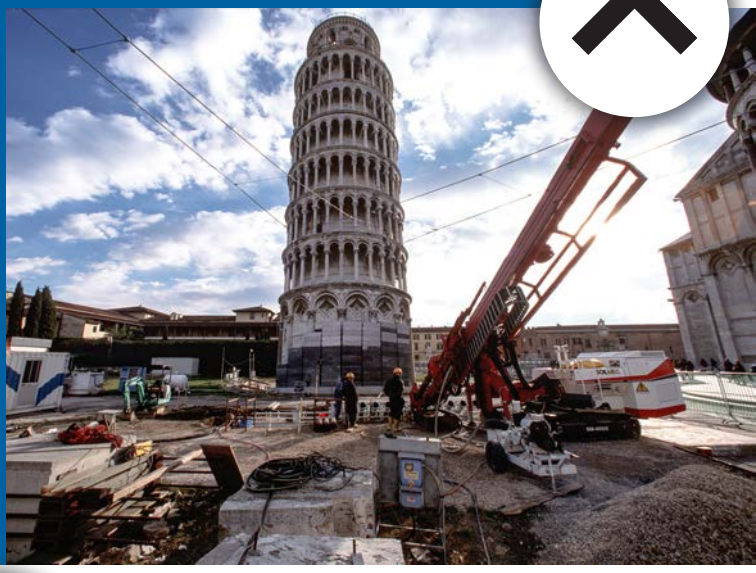
Diaphragm walls

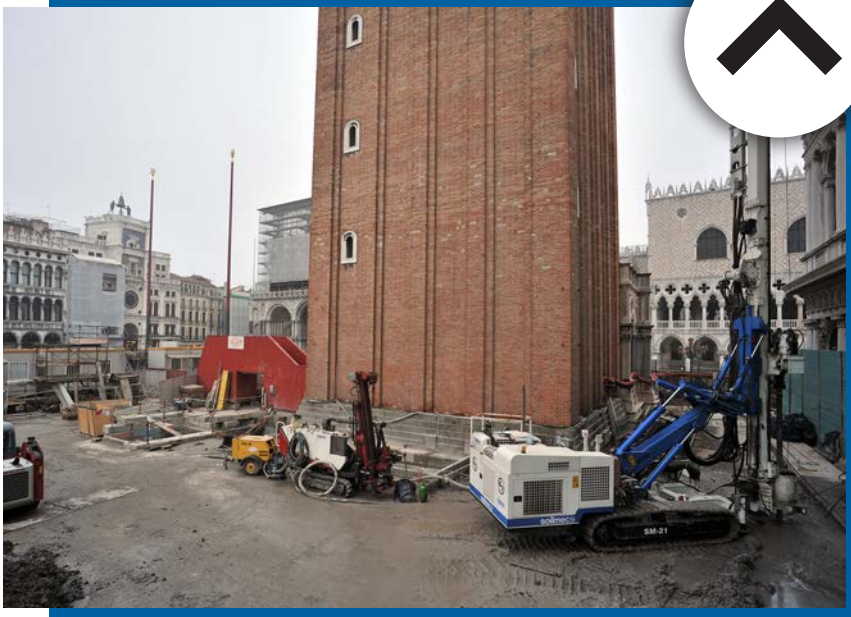
Bored piles

The final master plan for the **Central Artery/ Tunnel Project**, also known as the Big Dig, called for construction of a 1.5 mi *(2.4 km)* long tunnel 8 to 10 lanes wide directy beneath the Central Artery; two new bridges across the Charles River at the northern edge of the city; and a 1.6 mi *(2.6 km)* long tunnel south of downtown area that would begin at the interchange of the interstates 90 and 93 and take motorists beneath South Boston and Boston Harbor to Logan International Airport.

Leaning Tower of Pisa
Pisa (Italy)

The Duomo bell tower, universally recognized as the Leaning Tower of Pisa, is a truly unique building. Beginning with the mystery surrounding its creator, still unknown to this day, this symbol of Italian architectural beauty is a continuous challenge to the laws of physics. The stabilization of the Leaning Tower of Pisa was completed 20 years ago, on June 16, 2001, the day of Saint Rainier *(Pisa's Patron Saint)*, when the citizens of Pisa were returned their monument.





San Marco Bell
Venice (Italy)

The Ministry of Infrastructure and Transport - Venice Water Authority, through the concessionary Consorzio Venezia Nuova, drew up the plans for this restoration. The intervention consists of installing two levels of prestressed titanium rebars into the foundation block, to increase the overall flexural stiffness of the foundation. It was necessary to drill through the concrete to insert the bars along the four sides of the foundation in the correct position.