

In this part we both try to highlight some major tunnelling projects all over the world and also to give a brief history of the tunnelling construction from the early ages to the time being.

- [Images gallery](#)

## History

### [Ancient Period](#)

Already in the 40'000 b.C., Neandertal men excavated manually the ground in what is considered today the oldest mine ever done, in the Bomvu hill, Swaziland.

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### [XIX Century \(before 1914\)](#)

The experience acquired in tunneling engineering due to canal construction during the XVIII century paved the way for the big development in tunnel construction that came along with the industrial revolution and the boom in railway transportation.

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### [1914 -1950](#)

### [1950 - 1980](#)

### [After 1980](#)

After 1980, a new leap in tunnel engineering is made due to the quickly generalization of high speed railway lines, which need strictly low steepness values and very long radius for curves, leading to long and deep tunnels.

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## [Cases](#)

In this section of the site, you will find cases that are described as deeply as possible. They have been chosen due to their characteristics during the construction phase or for their final use.

### [Trans Tokyo Bay - Japan](#)

The Trans-Tokyo Bay Highway, also known as the Tokyo Bay Aqualine, is a 15.1 km marine crossing through the middle of Tokyo Bay connecting Kawasaki City in Kanagawa Prefecture with Kisarazu City in Chiba Prefecture on the Boso Peninsular.

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### [Calle 30 – M30 Madrid](#)

The Madrid M30 motorway, the inner ring road of the city, has been at the centre of a major urban renewal project where the motorway has been redirected underground.

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### [Gotthard Base Tunnel GBT](#)

The Gotthard Base Tunnel (GBT) is a railway tunnel under construction in Switzerland

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### [Boston's Central Artery/Tunnel \(CA/T\)](#)

Recognized as the largest, most complex, and technologically challenging highway project in the history of the United States, the Central Artery/Tunnel Project significantly reduced traffic congestion and improved mobility in one of America's oldest and most congested major cities.

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### [Cairo Metro](#)

Greater Cairo underground metro is considered one of the most important national projects executed in the Republic during the second half of the twentieth century.

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### [Seikan tunnel - Japan](#)

In 1954, a typhoon sank five ferry boats in Japan's Tsugaru Strait and killed 1,430 people. In response to public outrage, the Japanese government searched for a safer way to cross the dangerous strait.

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### [Seoul metro - Korea](#)

The Seoul Metropolitan Subway is one of the most heavily used rapid transit systems in the world, with well over 8 million trips daily on the system's ten lines totaling 287 km.

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### [SMART - Malaysia](#)

Malaysia Kuala Lumpur's Stormwater Management and Road Tunnel (SMART) is a unique solution to the Malaysian capital's long-term traffic and stormwater management problems and the first tunnel of its kind in the world.

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