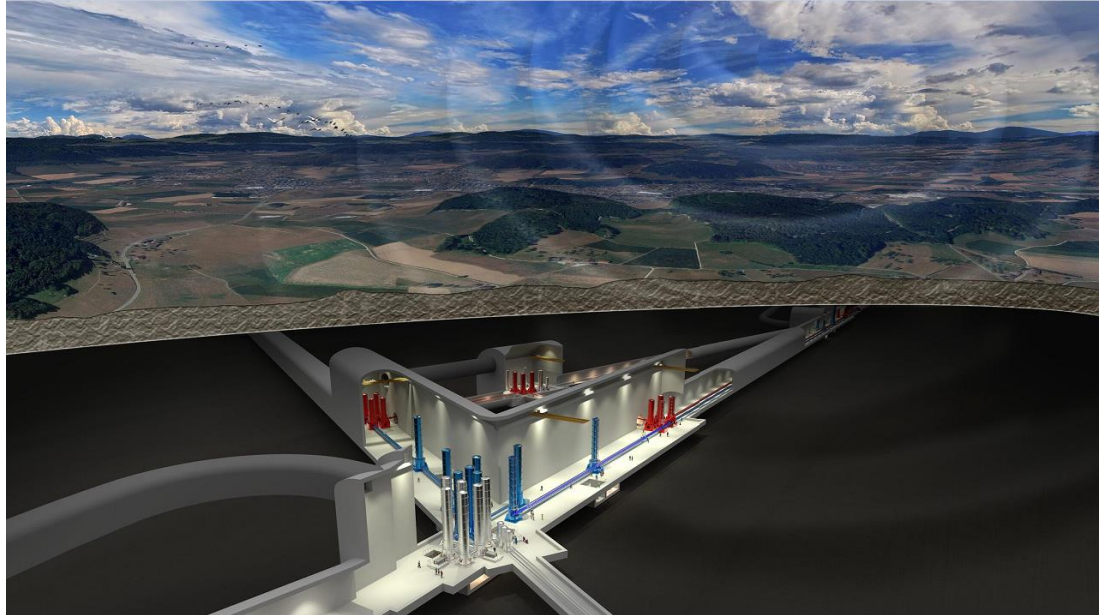


Project identification

Einstein Telescope

Type of project

Feasibility study on civil engineering



Client

Nikhef

In co-operation with

Lombardi, Amberg & Tractebel (consortium E=mc2)

Project assignment

Feasibility Study on Civil Engineering Conducted by Nikhef's Technical Team

Country

Netherlands

Location

Limburg

Project duration

2024-2025

Project phase

Feasibility

Construction cost

**t.b.d.
(excl. VAT)**

Consultancy fee

**1,4 million
(excl. VAT)**

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Project identification

Einstein Telescope

Type of project

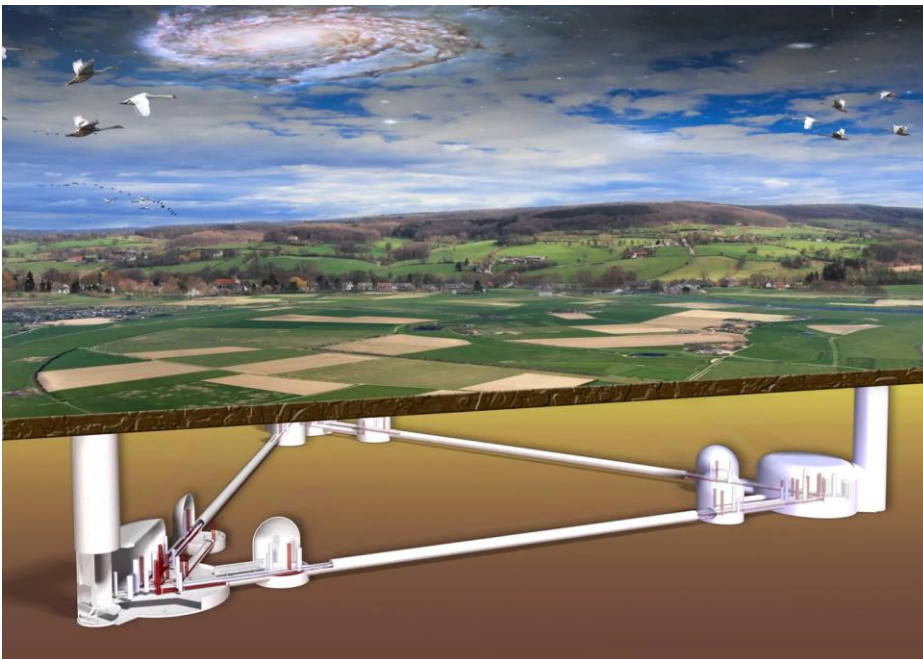
Feasibility study on civil engineering

Project description

The Einstein Telescope (ET) project aims to establish an underground observatory for gravitational waves and is a unique undertaking in the Euroregion Meuse-Rhine (EMR). Nikhef, in charge of the coordination of the project office for the local team in the EMR region, has assigned the consortium E=mc² the engineering feasibility study for the project. Together with all other parties involved, E=mc² contributes to the feasibility mission, providing Nikhef with technical engineering knowledge and practical construction management expertise.

With the Einstein Telescope, researchers will be able to hear black holes colliding and gain new insights into the early universe, right back to the Big Bang. They will be able to look at the birth process of black holes and neutron stars.

The Einstein Telescope will consist of a triangle of three vacuum corridors, each ten kilometres long, located 250 to 300 meters below the Earth's surface. There, gravitational waves are measured by constantly monitoring the length of its three detector corridors with sensitive lasers and vibration-free suspended lasers. If that length changes in a specific pattern, it is the signal of a passing gravity wave.



Scope of work

The final aim of E=mc² assignment is assessing the Einstein Telescope technical feasibility within the EMR region. This assessment will be considered input to the Bid Book, that shall aim for the project to be assigned to the Euroregion Meuse-Rhine.