

Client
**INTERBIAK,
UTE ARNOTEGI,
UTE PAGABIDEA,
UTE SEBERETXE**

Project date
2018 - active

BIM
**VARIANTE SUR METROPOLITANA
DE BILBAO**

**“A largely
collaborative and
interference-free
management thanks
to the possibilities
of BIM”**

Jesús de Paz, BIM Project Manager

VIRCORE
digital project management

| CIVIL WORKS

An aerial photograph of a highway interchange, likely the A-8 in Bilbao, Spain. The image is heavily tinted with a blue color. It shows multiple lanes of traffic, overpasses, and surrounding greenery. The text is overlaid on the left side of the image.

Started in 2019 and with completion planned for 2022, the project aims to decongest the A-8 as it passes through the metropolitan area of Bilbao, as well as to provide continuity to the Atlantic Corridor by establishing direct connections with the city's main infrastructures.

The work combines multiple and different complex constructive procedures (tunnels, viaducts, etc.) as a consequence of the orography of the territory on which it is carried out and the specific purposes of environmental protection with which it is being developed.

Due to its complexity, the project has been divided into three lots executed by different construction JV. The effective coordination of the teams that have collaborated has been one of the main priorities.

VIRCORE has allowed all the BIM models of the different lots to be combined, **identifying interferences at an early stage**, guaranteeing and facilitating the transition from the PIM (Project Information Model) to the AIM (Asset Information Model).

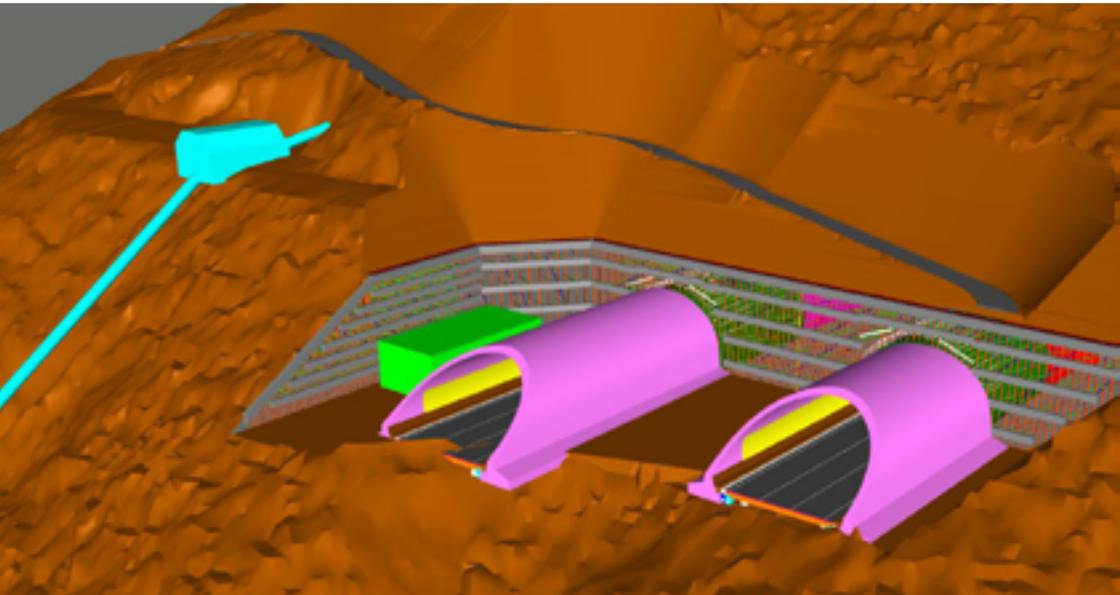
In addition, the possibility of centralizing all information in a single repository and integrated with the models, has provided **unprecedented capabilities to face the phase of operation and maintenance.**

VIRCORE has made it possible to achieve the main objectives of the project:

- 01**
Compliance with BEP (BIM Execution Plan) transversal to all stages of the project
- 02**
Implementation of BIM methodology for its use in the phase prior to the construction process, construction and subsequent exploitation, operation and maintenance
- 03**
Centralization of information and documentation to ensure quality control
- 04**
Planning and detailed follow-up of the entire process
- 05**
Interference detection before the start of the work
- 06**
Effective coordination of the 15 participating companies

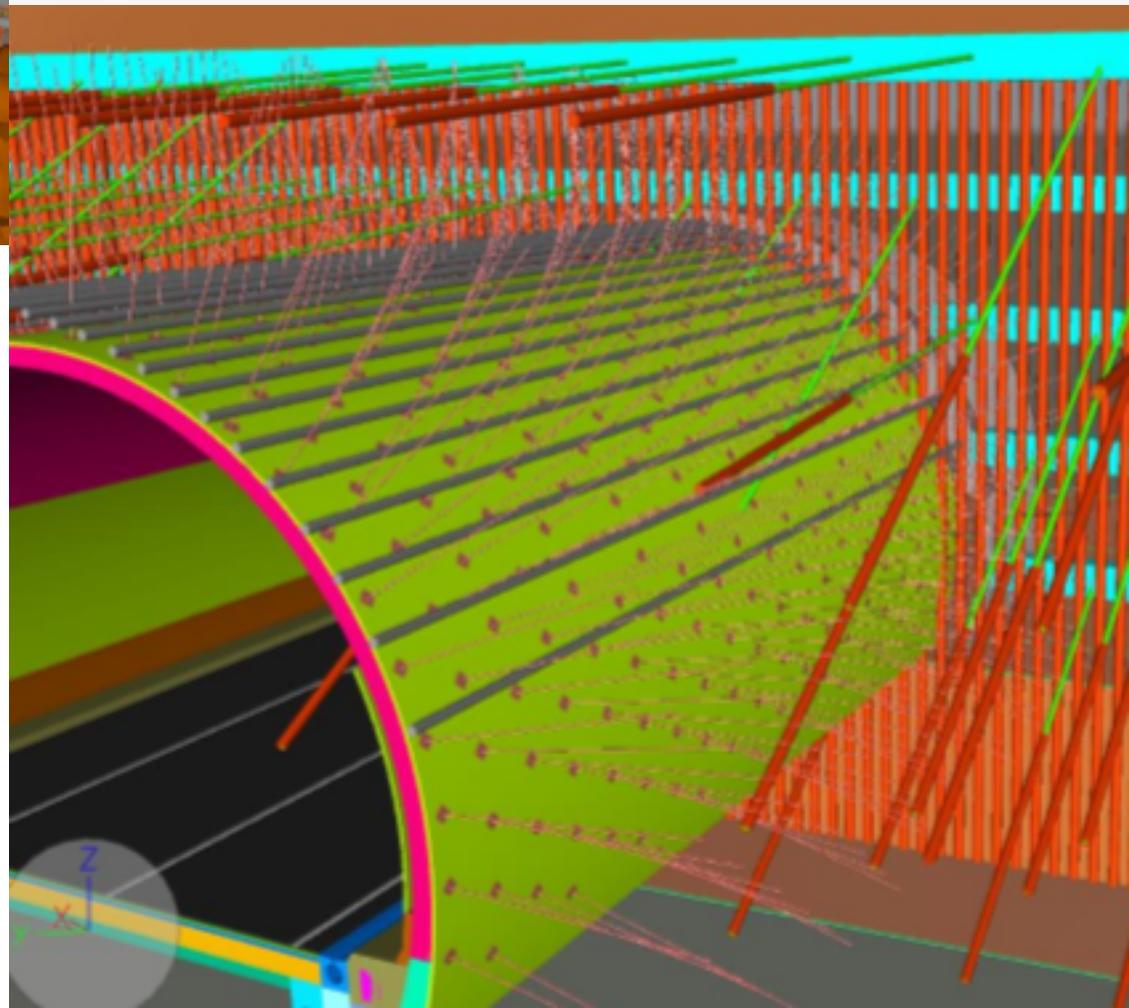
The process has been basically divided into three stages:

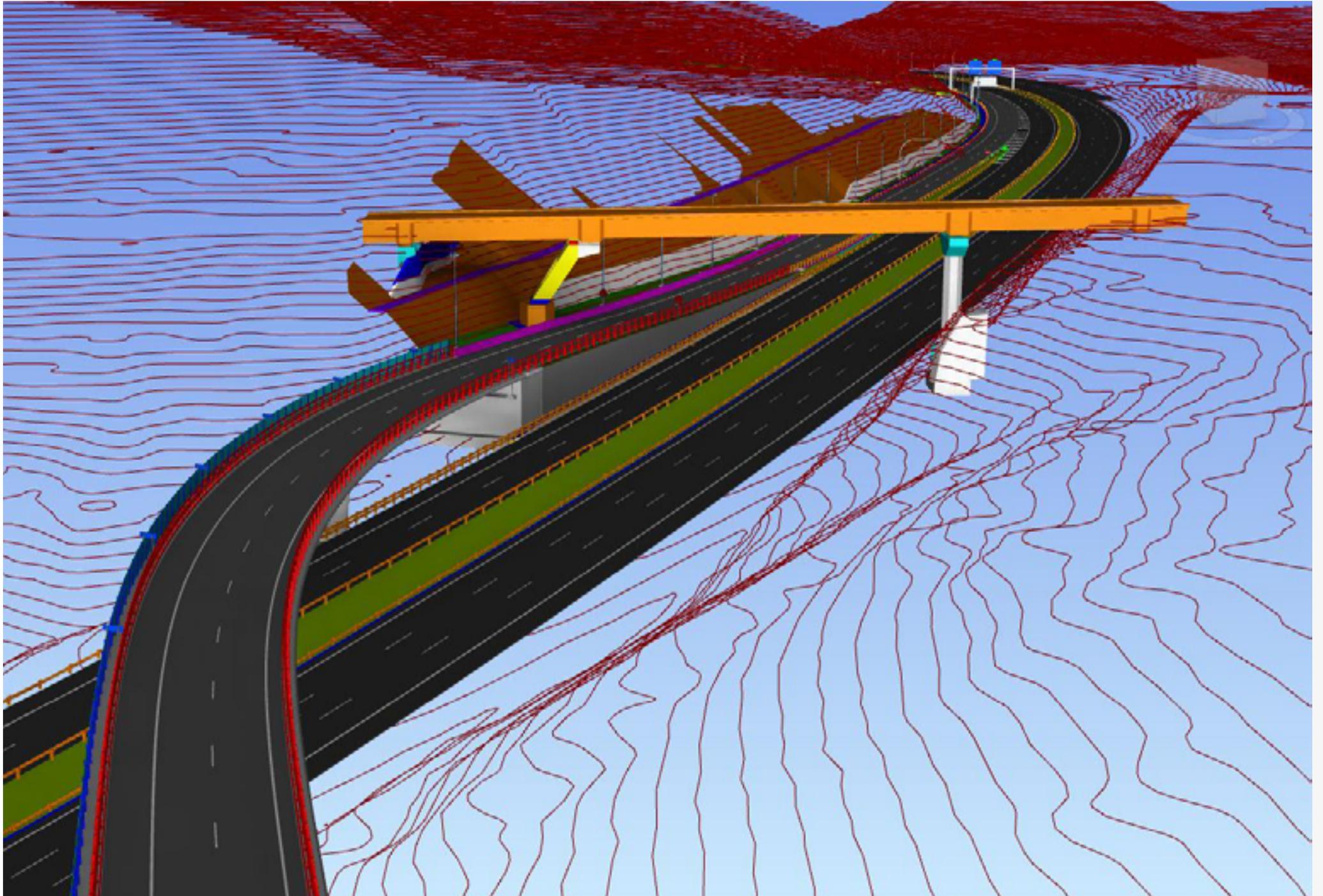
- 01**
Implementation of BIM methodology prior to the construction phase.
- 02**
Integrated management of the initial BIM model federated by disciplines.
- 03**
Follow-up of the construction project in a highly integrated collaborative environment (people, BIM models and perfectly integrated information).



Tunnel exit seen from inside the mountain. View of all the elements used to detect interference between the bolts, the micropile screen (in red and vertical at the bottom), the anchors (green inclined and horizontal) and other elements such as beams, and tunnel supports.

Tunnel exit seals from Arnotegi to the Bolintxu viaduct. In purple, false tunnels that give continuity to the viaduct, which is not visible in the image.



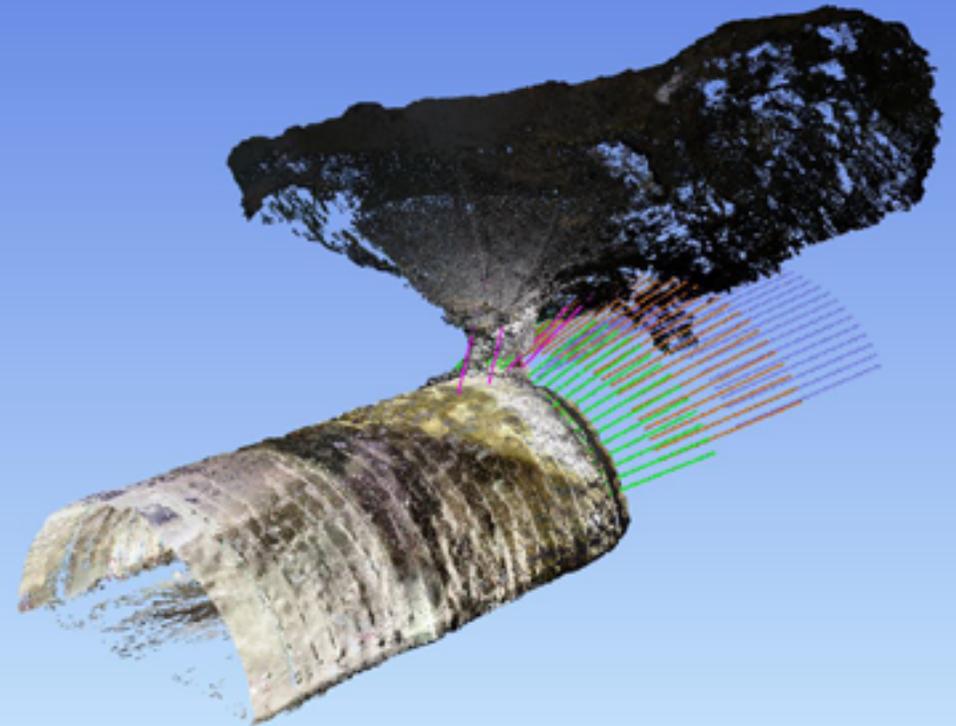


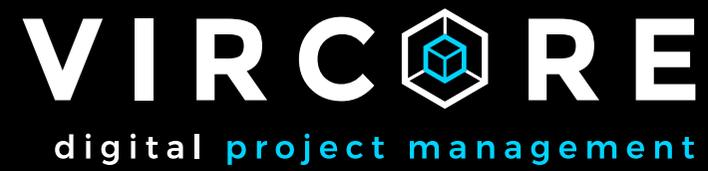
Connection link to the existing freeway.



Connection link with high level of detail of all the signaling, beaconing and defense elements, modeled and currently managed in its operation phase through VIRCORE.

Coordination between BIM models and cloud of points of failure and terrain discontinuities that allows decision making among the participating teams.





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