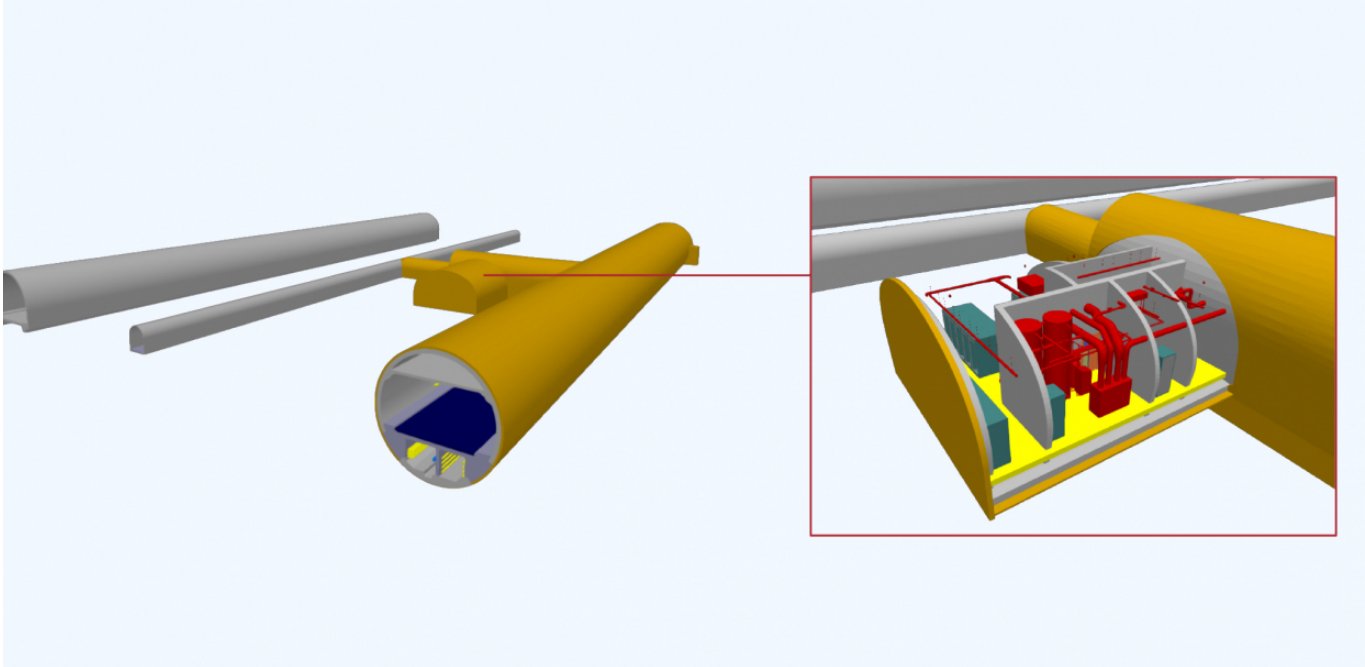
Project

Swiss FEDRO launches BIM pilot project for second tube of Gotthard road tunnel



The construction of a second tube parallel to the Gotthard road tunnel represents a monumental task for the Swiss Federal Roads Office (FEDRO). To assess the potential of building information modeling (BIM) to facilitate the project's completion, the FEDRO commissioned EBP to act as a BIM manager in the context of applying BIM in the planning of selected tube segments.

Owing to concerns relating to obsolescence and safety, the first tube of the Gotthard Road Tunnel must undergo complete renovation by the year 2035. This requirement prompted the Swiss Federal Council to pass a resolution on June 27, 2012 in favor of building a second tunnel tube, which is to be cut at a distance of 70 meters from the existing tube. The Swiss FEDRO seized the new tunnel project as an opportunity to expand its experience with BIM and to assess the suitability of deploying BIM throughout the project. To this end, BIM was used in the context of a pilot project to model an approximately 120-meter segment of the tunnel. The segment in question included a cross link, a substation, and an emergency shelter.

Securing the flow of information

Collaboration in the context of the pilot project was secured with the Bimsync CDE (Common Data Environment) platform. An openBIM process was used to exchange information, with the participating planners drafting and sharing technical models via the IFC (Industry Foundation Classes) data model, the BCF (BIM Collaboration Format), and native file formats. Using a pre-established project structure, the models were then

Client

Swiss Federal Roads Office (FEDRO)

Facts

Period	2019 - 2020
Project Country	Switzerland

Contact persons

Claus Maier
claus.maier@ebp.ch

Janine Felder
janine.felder@ebp.ch

analyzed with the help of the Solibri Model Checker.
In the context of managing the BIM application on behalf of the developer, EBP's responsibilities included:

— Setting the BIM pilot project's primary goals
— Ascertaining all BIM-related tasks, skills, and roles
— Securing all BIM results
— Inspecting and checking models for quality assurance
— Supporting all BIM project participants