

# OpenTunnel<sup>TM</sup> Designer

Other software only scratches the surface.  
Dig deeper with OpenTunnel.

Bentley®

# FINALLY, A DESIGN SOLUTION DESIGNED FOR YOU!

**You need a solution that works the way you do.** As a designer or engineer you are challenged to design tunnel projects with software made for other industries.

Using multiple applications, coding specialists, and lengthy workarounds, decrease your productivity, and accuracy.

**That's why we built OpenTunnel.** The only true tunnel design software that can increase productivity, decrease design time, reduce overhead costs, prevent risk, and mitigate tedious, manual, and error-prone work.





# DIG DEEPER WITH PURPOSE-BUILT **TOOLS THAT REDUCE DESIGN TIME BY 50%**

- > What if you didn't need to use software made for other industries and types of infrastructure?
- > What if you could export your design models for analysis with the click of a button?
- > What if you could fix broken workflows to prevent unnecessary data loss and rework?

**YOU DON'T. YOU CAN. YOU WILL.**

# ENTER OPENTUNNEL

## IMPROVE PRODUCTIVITY UP TO 50%

Significant investment in road, rail, water and energy infrastructure will drive a strong pipeline in tunnelling for the next decade. The successful delivery of these tunnel design and construction projects will require your team to seamlessly collaborate across disciplines with knowledgeable and experienced civil engineers, geotechnical engineers, structural engineers, and geologists. You need a digital solution that keeps you ahead of the curve while ensuring an informed decision-making process.

Easily combine, organize, and manage geotechnical and existing conditions data faster without sacrificing accuracy.

Model the full excavation shape, excavation tracks, tunnel lining and reinforcement with native modeling tools.

Save valuable design time, as your model updates automatically to any change made in the tunnel template or alignment geometry.

Once you've finished modeling, maximize productivity by creating multiple analytical models in minutes not days with the push of a button, no coding required.



# OPENTUNNEL: ONE TOOL FOR THE ENTIRE PROCESS



## INCORPORATE ALL YOUR DATA

Combine, organize, and manage geotechnical and existing conditions data faster without sacrificing accuracy.

Reference road and rail corridors, and bridge models in your OpenTunnel BIM model and quickly import soil meshes with IFC versions 4.0 and 4.3



## MODEL & SIMULATE TUNNEL CONSTRUCTION

Simplify your design process with native modeling tools. Model the full excavation shape, excavation tracks, tunnel lining and reinforcement with native modeling tools. Save design time, as your model updates automatically to any change made in the tunnel template or alignment geometry.



## PERFORM GEOTECHNICAL ANALYSIS

Maximize productivity and save time by creating multiple analytical models in minutes not days. Simply specify stations for the cross section as the basis of your 2D analytical model or send entire tunnels from your 3D BIM model to PLAXIS\* with the push of a button, no coding required.



## TUNNEL DRAWINGS AND REPORTS

Streamline your plan production process. Plan, profiles, and cross section drawings can easily be created using OpenTunnel Designer's powerful drawing production tools. Keep your projects on track, with tunnel specific reports based on the latest changes for up-to-date accurate costing and quantities.

\*Additional software subscription required

# OPENTUNNEL: ONE TOOL FOR THE ENTIRE TEAM



## GEOTECHNICAL ENGINEER

Easily compare the results from the structural model and the geotechnical model to have a clear vision about the soil structure interaction

Seamless integration with PLAXIS allows you to create an analytical model with a click of a button.

Quickly identify errors and create alternatives for optimum design, safety, and performance prior to construction.

Determine the deformation and stability of geotechnical engineering and rock mechanics to assess the geotechnical risk.



## TUNNEL ENGINEER

Create and analyze designs faster with automated and parametric tunnel design tools for conventional and mechanized tunnels.

Model interior objects that are to be extruded along the tunnel length .

Save time with workflows that allow you to place single interior objects by path with the click of a button

Simplify clash detection with objects automatically reflected in your visualizations, plan production, and quantities reports.



## STRUCTURAL ENGINEER

Use purpose-built tools to model and detail the rebar reinforcement for the tunnel lining.

Save valuable design time with the ability to reference your OpenTunnel tunnel lining model in ProConcrete\* and see changes automatically reflected in the reinforcement data and deliverables based on the tunnel lining geometry changes.

Using the advanced soil structure interaction capabilities of PLAXIS, reduce the geotechnical risk from early stages of design.



## DRAFTER

Plan, profiles, and cross section drawings can easily be created using OpenTunnel Designer's powerful drawing production tools.

Prevent manual error and rework across teams with dynamic change management. Edits automatically update throughout the project ensuring you are working with up-to-date data.

# ADDITIONAL SOLUTIONS FOR TUNNEL PROJECT DELIVERY



## FOR GEOLOGISTS

### LEAPFROG

Rapidly integrate, communicate, and interpret geological data with industry-leading 3D modelling

- > Build complex geological models rapidly from drillhole data, structural data, points, polylines, and meshes in the project.
- > Easily build isosurfaces from drillholes and point data. See visual trends in the data and continuity in surfaces.
- > Interactive 2D and 3D visualization tools aid in analyzing your data and spotting correlations and patterns. View a model from any angle, discover trends, and detect errors.

## FOR GEOTECHNICAL ENGINEERS

### PLAXIS 3D /2D

PLAXIS 3D /2D offers CAD-like drawing capabilities to help with the analysis of subsurface environments for geoengineering projects.

- > Create FE models quickly and efficiently.
- > Get realistic assessments of stresses and displacements.
- > Drive efficiency with multidiscipline workflows

## FOR DRAFTERS

### PROSTRUCTURES

Efficiently create accurate 3D models for structural steel, metal work, and reinforced concrete structures.

- > Model parametric structures.
- > Share structural models
- > Track and rollback structural design changes
- > Utilize international section profiles
- > Produce design and construction documentation

# PARTNERSHIP FOR SUCCESS

Bentley makes it easy for organizations to find the product license that offers the best options, affordable price, and the training you need to be successful. Whatever subscription is right for you, you'll get access to our Expert Services, and the ability to leverage one-to-one mentoring by Bentley project experts, personalized training for your team, and on-demand learning.

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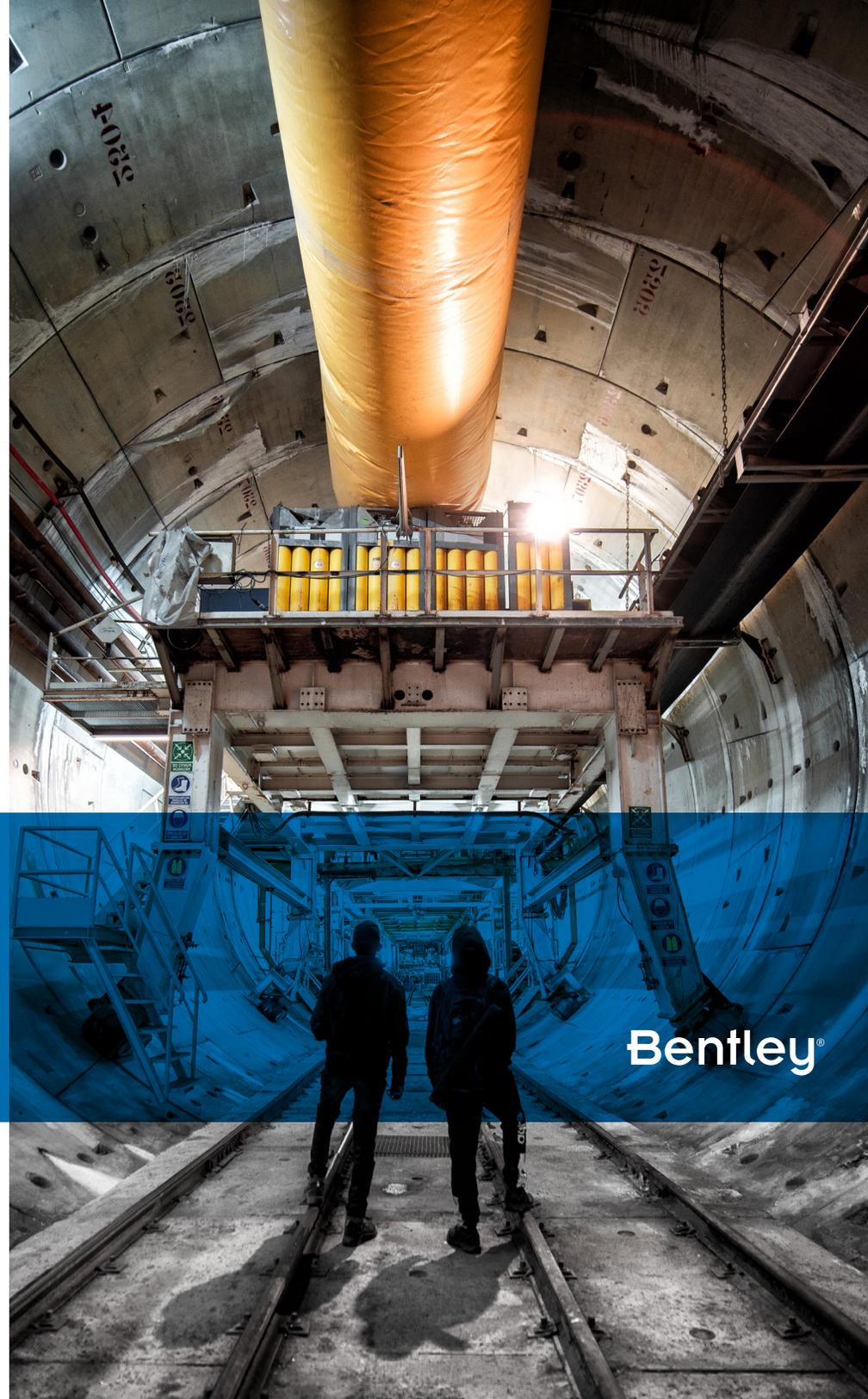
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