

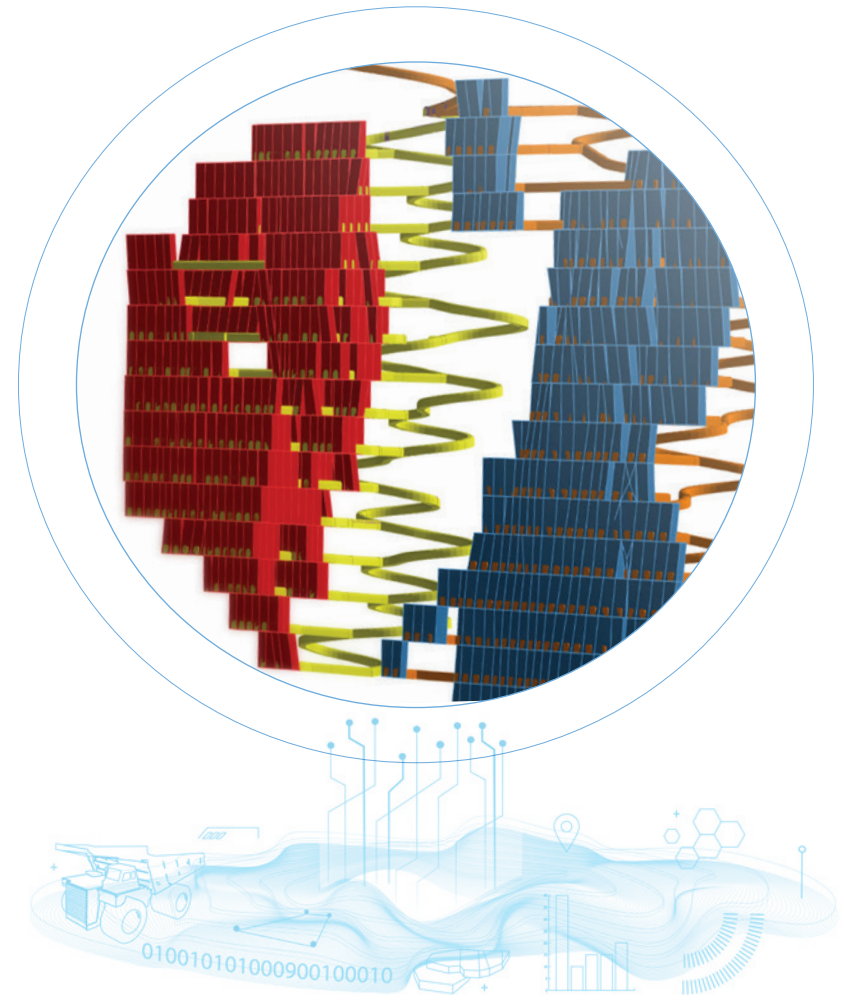
RPMGLOBAL



Strategic Design Optimiser

Strategic Design Optimiser (SDO) is an innovative design application that combines the complex tasks of **strategic stope and development optimisation** into a single, coherent process.

By harnessing a parametric approach to what has traditionally been a time consuming and manual process, SDO automates much of the tedious design tasks to generate first pass development networks required to access the stoping scenarios. Optimisation is taken to the next level by fully incorporating stope and development optimisation, allowing users to explore multiple strategic option scenarios and provide the full picture of a mine's potential reserves.



Benefits

Strategic capabilities

SDO enables users to rapidly understand the impact of changes to key economic drivers such as metallurgical grade, mining costs, revenue and the roll-on effects these have on accessing the mineral deposits to be mined. Determine the most economical network of tunnels to access and extract ore with the industry's premier strategic design optimisation tools together in one place.

Automatic generation of orebody wireframes and control surfaces

If an orebody wireframe is not available to import the automatic orebody generation feature can be used to identify and build a representative orebody wireframe from the block model.

When an orebody wireframe is either imported into or generated in SDO, the control surfaces required by the Stope Optimiser are automatically generated. Surfaces representing hanging wall, midwall and footwall can be viewed superimposed on the orebody wireframe(s) and are available for selection during the stope optimisation set up process.



> Example of a generated orebody wireframe

> Automatically generated stope control surfaces



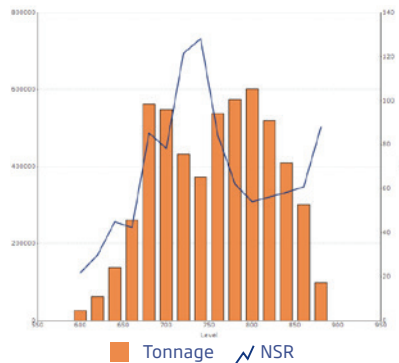
Stope optimisation

SDO leverages the strengths of the industry standard Mineable Shape Optimiser (MSO) with a visual, interface that allows users to view frameworks split into tubes based on the user-defined level and section slicing planes. Flexible option assessment allows users to pick and choose what combination of stope geometries and properties be run with each framework. SDO automatically manages the large volumes of data generated from the resultant stoping scenarios, making it easy to compare outputs of the different options.



> Stope optimisation outputs

MSO tonnes by level



> Example of customisable analysis charts

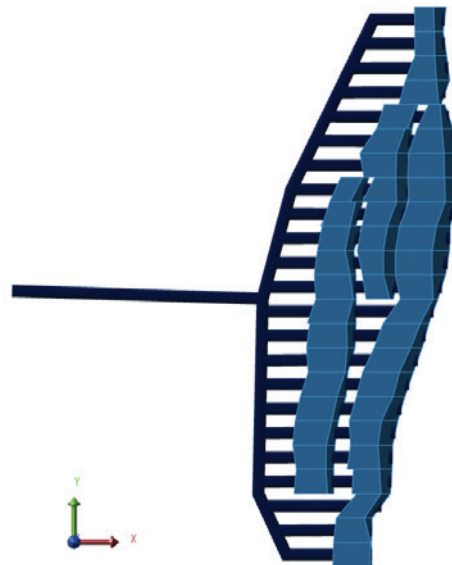
In addition to visualising the optimised stope shapes, customisable built-in analysis charts make it easy to summarise and assess stope optimisation outputs.

Optimised level development design

Instantly generate crosscuts and footwall drives for every stope on every level, based on user-defined geometric rules.

The first pass level access development is generated based on the least cost network to connect the stopes on a given level, the cost of hauling the tonnage mass to the designated point on each level, and the development cost per unit length.

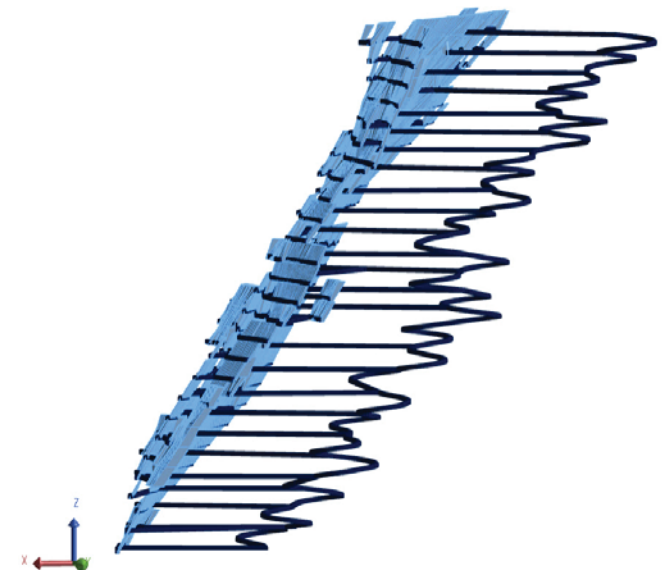
An automatic stope type detection feature can be used to generate development access layouts for transverse or longitudinal stopes. Connection to existing development networks is also supported.



> Automatically generated level development

Enhanced decline design

Easily identify and connect the access points on each level for single or multiple declines. SDO builds optimised declines considering development and haulage costs while honouring user-defined geometric constraints such as road grade and minimum turning circle radius. If the orebody contains discrete stoping areas, the decline is split at the optimal location. Editing tools make it easy to adjust decline and ripple changes back to level designs.



> Automatically generated connecting decline

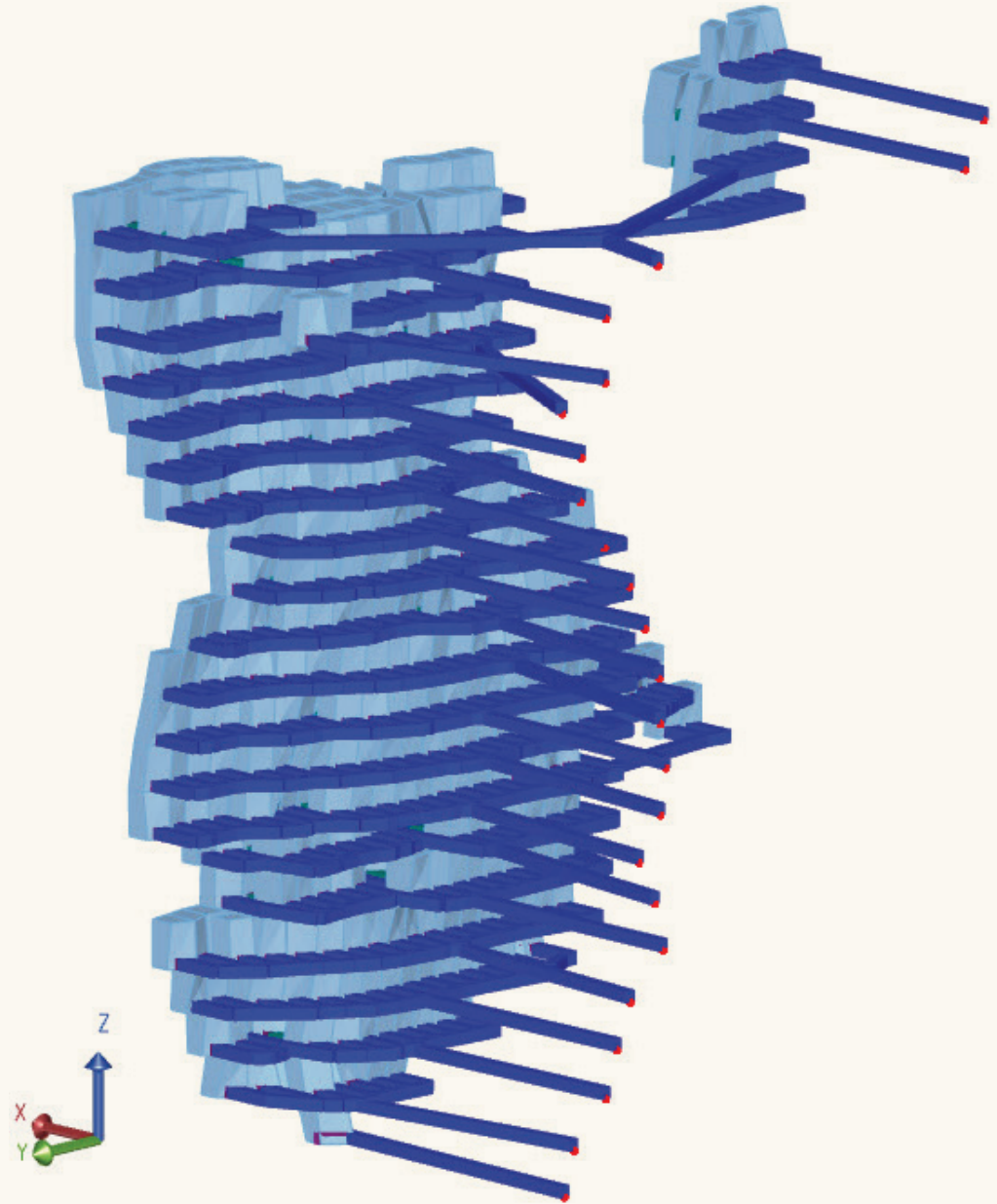
Features

Complements existing software

SDO is a standalone strategic design package that integrates seamlessly with any existing design or scheduling packages. It can be used with your existing design tools and will automate many of the tedious and repetitive processes that are currently required. It is also offered as a fully integrated end-to-end enterprise solution as part of RPMGlobal's Underground Metals Solution.

Simple, easy to use and quick to learn

Get the results you need quickly with minimal training and implementation costs. SDO is quick to get up and running and has a highly visual UI that makes it easy to navigate. Planners will feel confident to use SDO within a couple of hours and won't require continuous support from third party consultants.



> Automatically generated development for all stoping levels

Robust process flow

The robust, intelligent process flow guides users through the steps required to create a strategic mine design, with immediate feedback enabling users to see different designs in 3D. SDO's intuitive workflow highlights changes and errors that prevent the solution from creating a usable output and provide sensible feedback on what is wrong and what needs to be fixed to generate the plan.

Scenario management

SDO's fundamental design is based on parametric principles which allows the user to run multiple scenarios quickly and easily. Different sets of optimisation properties can be defined to represent different evaluation parameters for different parts of the orebody. Each framework can be optimised with different sets of properties running in parallel. SDO automatically manages the large volumes of data generated for each scenario and makes it easy to compare the outputs of different options.



True enterprise mining solution

Optimisation capabilities digest data from any software application across the mining value chain, and together with RPMGlobal's Enterprise Planning Framework (EPF), provide information in context to amplify your decision-making capability. SDO can seamlessly integrate with enterprise resource planning (ERP) systems and other enterprise-enabled software to maximise the value of your operation.

About RPMGlobal

RPMGlobal is the global leader in the digital transformation of mining. We provide data with context, transforming mining operations. Our Enterprise approach, built on open industry standards, connects systems and information to amplify decision-making across the mining value chain. RPMGlobal integrates the planning and scheduling, with maintenance and execution, with simulation and costings, on RPMGlobal's Enterprise Planning Framework, the mining industry's only digital platform that delivers insight and control across these core processes.

With origins dating back to 1968, we have proudly delivered premier consulting and advisory services to the global mining industry for more than 50 years. RPMGlobal's Advisory Team advise the global mining industry on their most critical issues and opportunities, from exploration through to mine closure. Our deep domain expertise, combined with a culture of innovation and global footprint, ensures our mining customers continue to lead. RPMGlobal is the global leader in Enterprise mining software, Advisory services and Professional development, operating offices in 22 locations across 13 countries and have worked in over 125 countries. For more information visit rpmglobal.com or email info@rpmglobal.com.

