



Deswik.MDM

Mining Data Management

A spatial database
and process workflow
management tool



Workflow-driven management of mining data



Connecting the planning value chain

Integrated with Deswik.CAD, Deswik.MDM provides a spatial database, stand-alone viewer, and process workflow management tool for the entire technical services department. A single solution for spatial data security and management, Deswik.MDM supports versioning and auditing.

Built using modern web-based approaches, the system lets you organize and categorize typical mining data and documents from all departments. Data is tagged using attributes and edited through user-definable, auditable workflows. File management for any type of file and basic workflow tasks including approvals are available from any modern web browser. A standalone application with 3D preview window enables communication across a site.

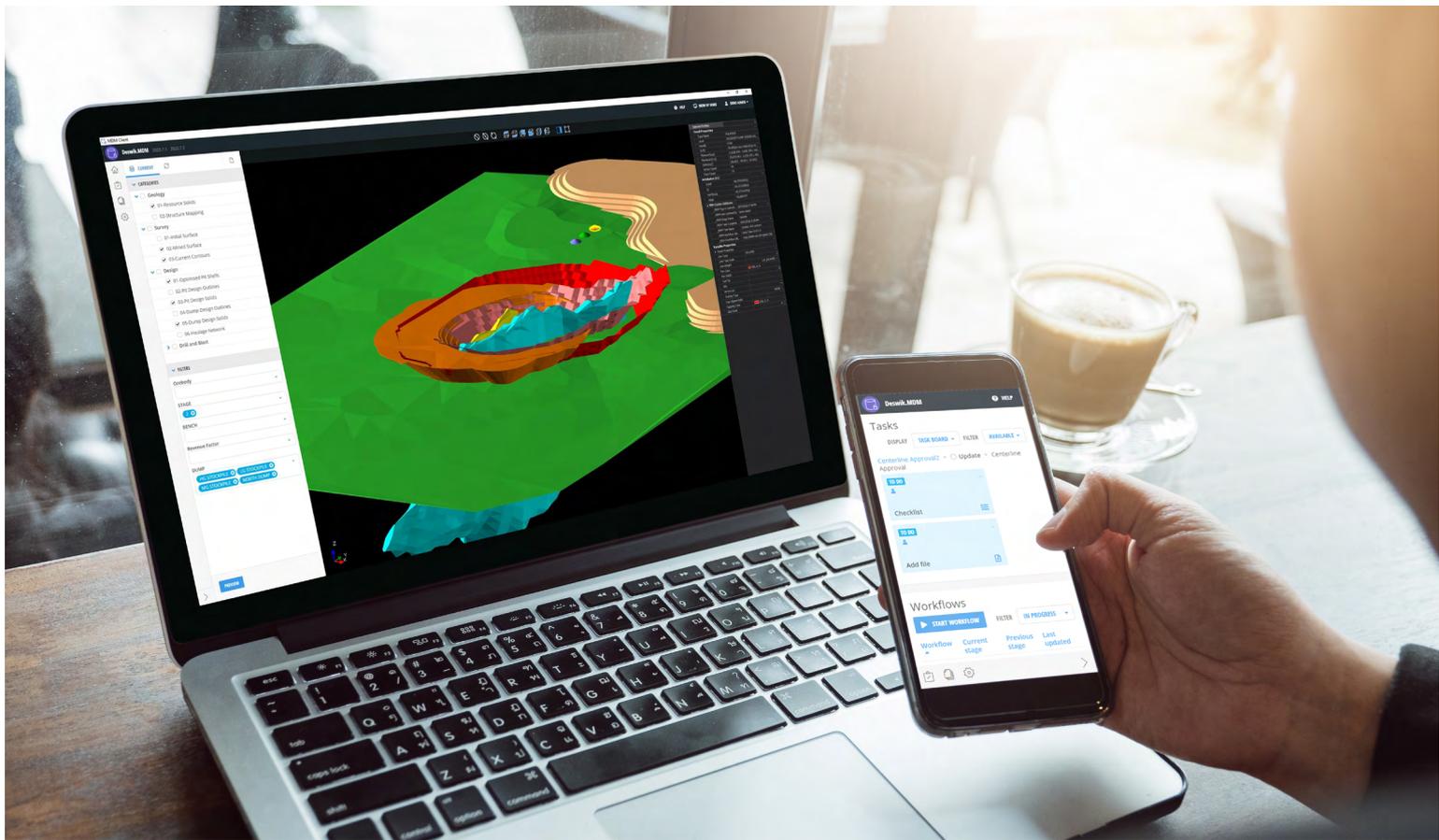
New problems demand new solutions

Leveraging decades of professional software development experience and a proven history of building technical mining applications, Deswik provides industry-leading tools to ensure that mine plans are robust, transparent and achievable. Our software is developed to take advantage of the latest high performance technologies and cutting-edge computing algorithms, all accessed through a flexible, intuitive interface.

By avoiding the legacy issues faced by other older packages, coupled with our outstanding customer support, we provide complete solutions to meet the demands of modern mining. Deswik is committed to delivering comprehensive tools and quality support for all mining sectors.

Delivering more value through effective mine planning

- » Centralize and manage the data critical to operating a mine's technical services department.
- » Improve planning efficiency with insight and control of team workflow and productivity.
- » Provide fast access to large datasets across poor network connections.
- » Link documents to graphical data to allow access to detailed information through interaction with the 3D design.
- » Streamline approval processes, reduce overlap and rework between teams.
- » Improve decision making by preventing the use of obsolete or incorrect data, e.g. designs kept on an engineers local machine.
- » Introduce better risk controls for safety-critical data and reduce reliance on weak administrative controls.
- » Implement repeatable workflows that deliver a consistent outcome from each planning process.
- » Enforce digital review and approval steps in workflows.
- » Share spatial information across everyone on your site using Deswik.MDM SiteView with customizable screen configurations to tailor the experience.
- » Integrate with third party reporting solutions to enhance your sites decision making.
- » Integrate with other site systems to share critical data.



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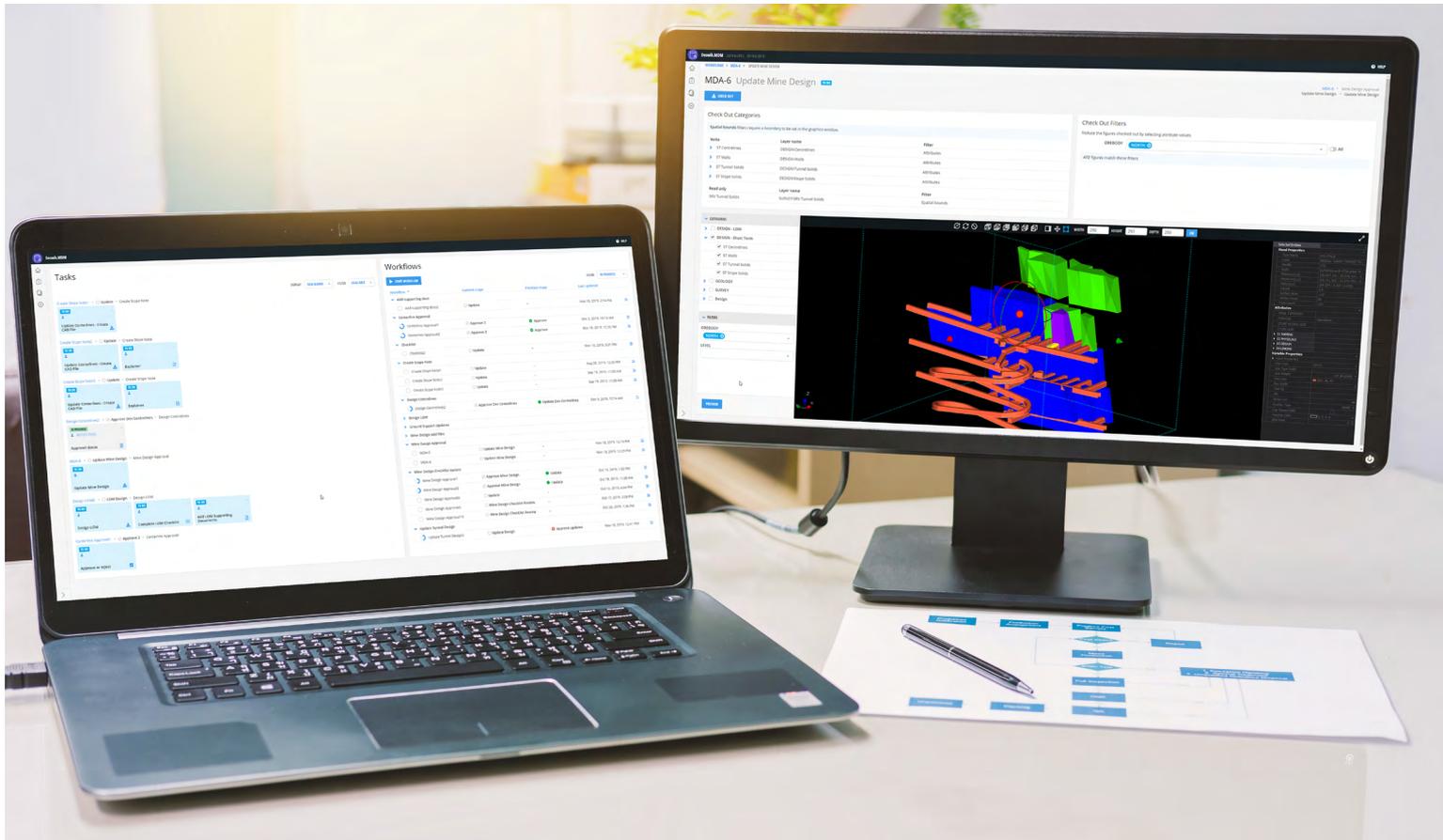
One version of the truth held in central data storage

- » Management of mining data and associated documents using multiple data stores and workflows:
 - Mining data: e.g. block models, grid models, polylines, surfaces, solids, and schedules.
 - Associated data: e.g. PDF, Excel files etc. can be stored in the file management section of Deswik.MDM and linked to spatial entities or attached to workflows.
- » Data is split into configurable, logical categories to provide ease of access and visibility to the organization.
- » Attributes (metadata) are stored against all data to provide meaning and context.
- » Enforces site planning processes using workflow control and electronic approvals.
- » Simplifies the number of site systems and through integration provides access to data stored in external databases.
- » Provides data for reporting on planning information and workflow progress.
- » Audit trail of all changes, backups and versioning.
- » Provide access to data for users located remote from a mine site.

Governance

Risk management and quality control

- » Implement risk controls to manage critical data and workflows.
- » Simplify, streamline and automate planning and approvals:
 - Streamlines and records approvals.
 - Data visibility of approved data can be controlled.
 - All plans must pass through business planning tollgates.
 - Electronic workflows to implement approved business processes.

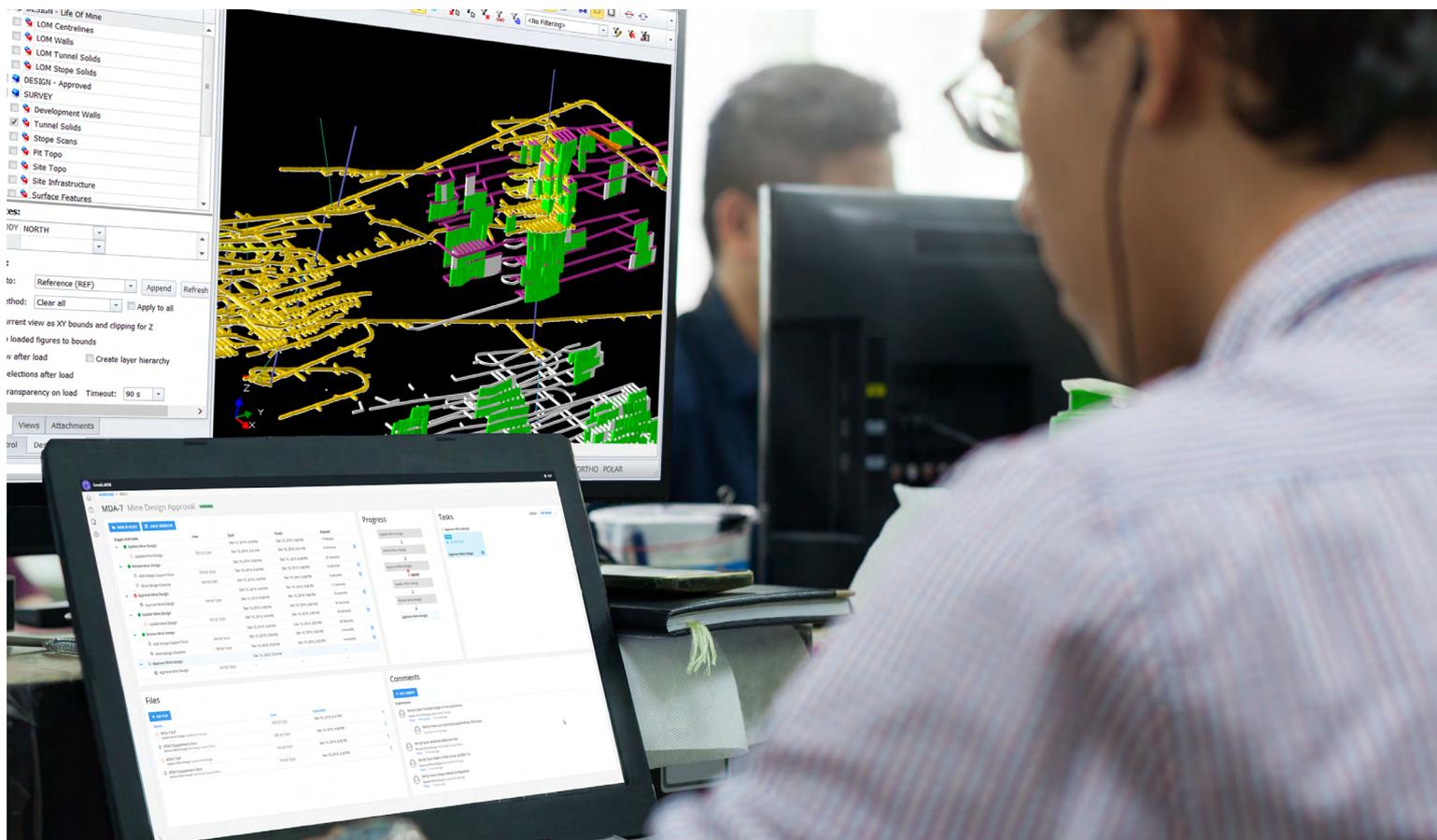


Process Management

Actively manage complex processes and technical workloads to improve productivity

- » Workflows can be created to manage planning processes. Workflows provide formalized, repeatable processes that ensure data validity and auditability.
- » Superintendents and managers can view outstanding workflow items across departments and re-allocate tasks to balance workloads.
- » Transition draft designs to groups of users, through a controlled workflow process before being visible to all users in an organization.
- » Reduce system maintenance through centralized data and template configuration.
- » Minimize training of new staff as workflows are easily repeatable and can simplify complex processes.

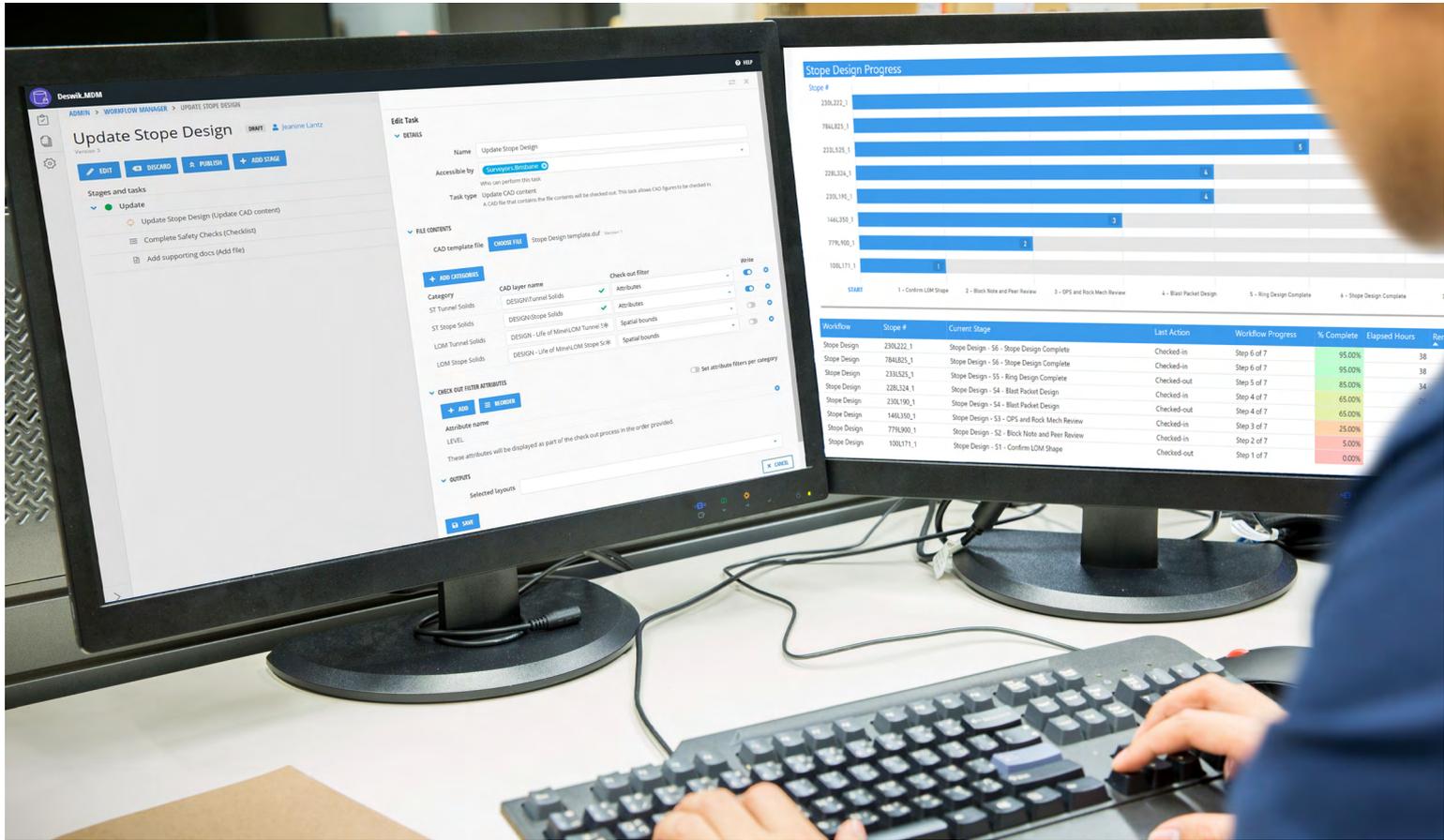
“Capture and store associated documents or metadata during the process of completing a workflow.”



Access and Control

Sharing relevant data with those who need it

- » Integrated with planning environment: directly import or reference data into Deswik.CAD.
- » Accessible across site:
 - Stand-alone dashboard provides overview of spatial data, and associated documents to anyone on site.
 - Only approved plans are visible in the database, while plans under construction are not.
- » Access just the required data using attribute or spatial filters.
- » Group permissions maintain data integrity:
 - Permissions govern users' rights to access the data and workflows.
 - Deswik.IMS (Identity Management System) provides user authentication via integration with Microsoft Active Directory.
- » Check-in / check-out:
 - Extract portions of data for editing and then merge back into the entire dataset.
 - Data is locked for editing purposes by other users during checkout to ensure a single version of the truth is maintained.
 - The latest published versions of the data are still available for read-only, reference purposes.
- Validation occurs on committing changes.
- When data is checked-in, email notifications can be sent to groups of users.
- » Data security:
 - Users are assigned rights to only allow read or write access to specific categories of data.
 - Users can be grouped to allow multiple people to work on common tasks as available.
- » Approval authority can be delegated between users to support variable availability and dynamic role changes.
- » The Deswik.MDM SiteView module provides a site configurable way of displaying digital level or bench plans containing the latest approved data to end users (available separately).



Reporting and Analytics

Turn data into knowledge

- » All data stored in Deswik.MDM can be made visible via API's for reporting solutions.
- » Present report data to third-party data warehouses for dashboard reporting, such as Microsoft PowerBI.
- » Manage your team's productivity:
 - Deswik.MDM reports detail of all workflow actions including time taken for completion per task.
 - Monitor task progress and allocate work to available team members.

“A spatial database and process workflow management tool”

Our industry leading software solutions include

Deswik.CAD

Design & Solids Modeling

A powerful design platform with superior data handling – the next generation of planning tools for mining.

Deswik.AdvSurvey

Advanced Survey

Fast, efficient point cloud handling.

Deswik.Agg

Coal Seam Aggregation

Simplifying complex aggregation processes to create fit for purpose Run-of-Mine reserves.

Deswik.ASD

Auto Stope Designer

Automatically create mineable stopes for narrow-vein vertical mining methods.

Deswik.DD

Dragline & Dozer Section Designer

Automated dragline section design tool with direct integration into Deswik's mine design, scheduling and data management tools.

Deswik.DO

Dig Optimizer

Design of optimum dig lines for open pit grade control.

Deswik.OPDB

Open Pit Drill & Blast

Fast, efficient drill and blast design for surface mining methods.

Deswik.SO

Stope Optimizer

Underground stope shape optimization using the latest version of industry leading SSO.

Deswik.UGDB

Underground Drill & Blast

Fast, efficient drill and blast design for underground mining methods.

Deswik.Sched

Gantt Chart Scheduling

A powerful Gantt chart scheduler specifically designed to handle the challenges of mine planning.

Deswik.OPS

Operations Planning and Control

Collaborative short-term planning and shift execution tool for monitoring and managing compliance to plan.

Deswik.Blend

Material Flow Modeling

Optimize your product value with material flow modeling for both coal and metals.

Deswik.SOT

Schedule Optimization Tool

Realize more value from your resource with an NPV optimized schedule.

Deswik.IS

Interactive Scheduler

Bridging the planning gap between designing and scheduling.

Deswik.LHS

Landform & Haulage

Understand material movement like never before with scenario-based modeling and analysis.

Deswik.OPSTS

Open Pit Short-Term Scheduling

Short-range ore control modeling and design tool.

Deswik.MDM

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Deswik.Mapping

Mapping app

Perform geological mapping on-the-go.

Deswik Advanced Modules

Advanced functionality tailored to the specialized demands of the specific mining sectors.

