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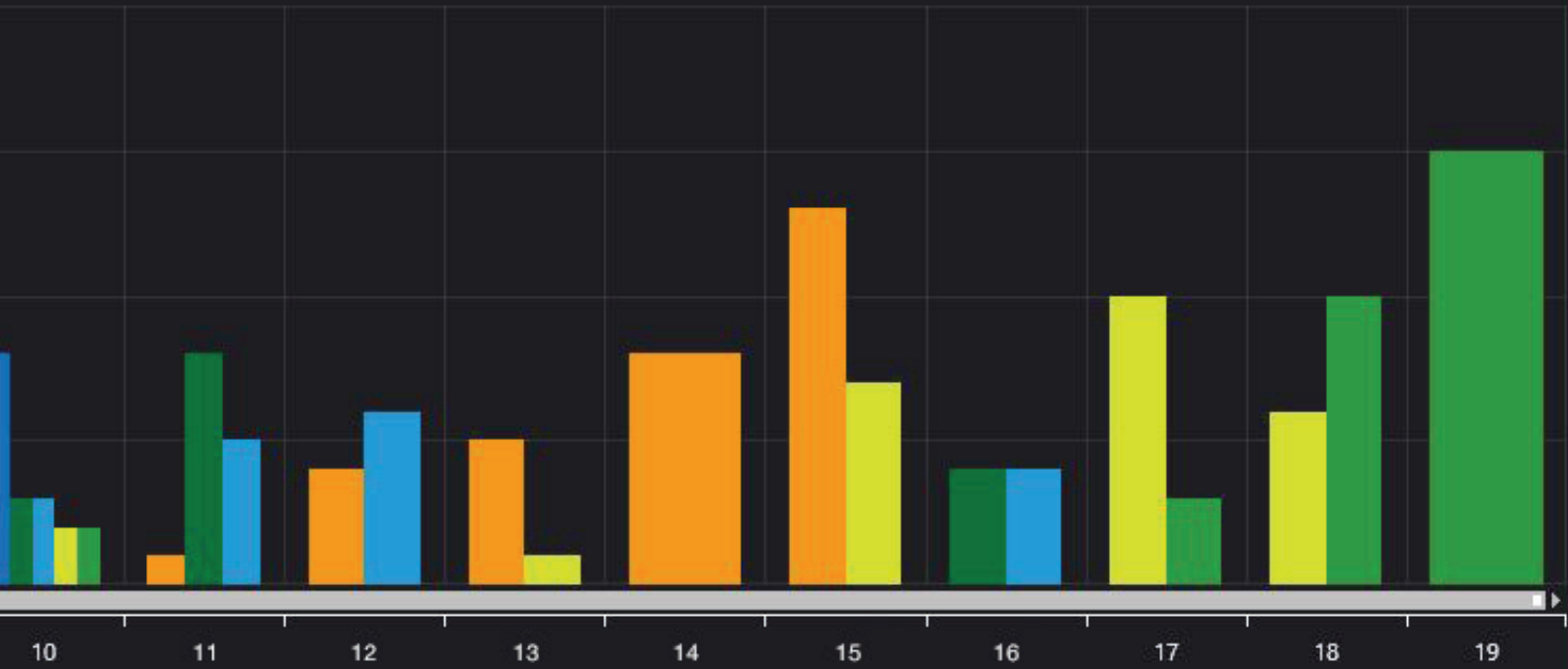
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Evolution

Agile scheduling

Strategic > Tactical > Optimised





Dynamic agile scheduling that maximises value

Maptek™ Evolution open pit mine scheduling maximises value without compromising operations. The solution applies evolutionary algorithms for scheduling across all of your mine planning horizons.

Maptek Evolution is an enterprise level open pit scheduling solution, which delivers practical, high value schedules throughout the life cycle of a mine.

Scheduling scenarios can be rapidly assessed to present the best options for development. Mine planners can then make efficient decisions regarding scheduling to reduce costs and maximise resource utilisation.

Maximise project value

Generating multiple schedules from a single simulation run, Evolution uses the entire dataset to schedule across the planning horizons. This helps ensure the consistency of tonnage and grade throughout the mine life. The fine granularity of Evolution means knowing which block ore has been mined from and where it will go, ensuring valuable ore is not left in the ground.

Solve complex real world problems

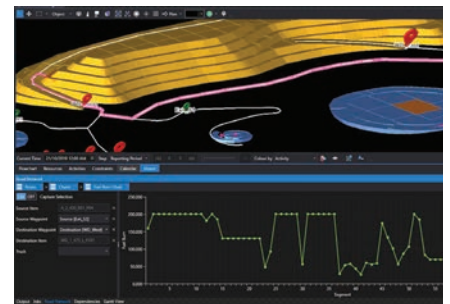
Evolution delivers a seamless workflow from strategic to short term scheduling using attributed solids or blocks. Your operation will benefit from multiple solutions run in parallel using high performance cloud computing, with solutions 'learning' from each other to continually generate new, better solutions that solve real world problems.

Streamlined workflow

Integrated with **Maptek Vulcan** to close the gap between design and scheduling, Evolution allows users to generate optimised schedules alongside practical production plans. Haulage, blending and waste landform optimisation are considered holistically, leading to an optimal schedule that maximises value.

Benefits

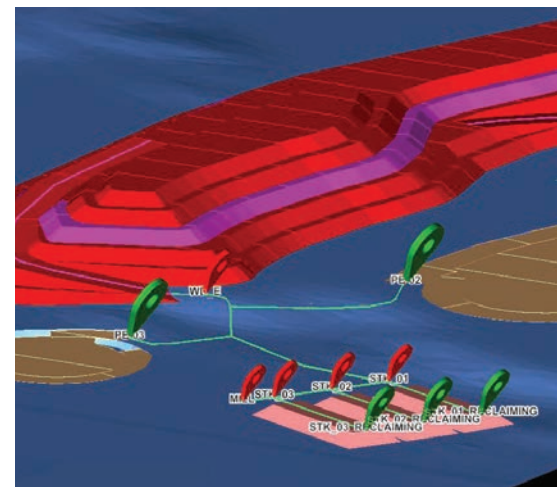
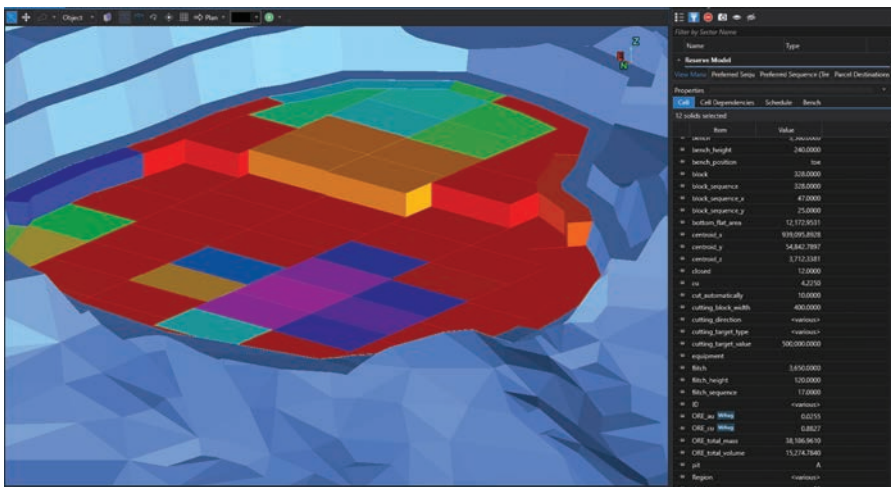
- Increase project value: Maximise value using cut-off grade optimisation techniques. Up to 30% increased value can be achieved.
- Improve productivity: Produce schedules up to 10 times faster and more cost effectively than other solutions.
- Maximise investment: Integrated solution generates optimal haulage routes and optimised waste dumps, lowering software investment by 30%.
- Reduce costs: Optimal fleet haulage routes deliver cost savings early in the schedule, improving value in the order of 5-10%.
- Optimise waste: Optimising the final waste landform minimises clearing costs and ensures rehabilitation can commence sooner, releasing bonds sooner.
- Effective rollout: Out-of-the-box scheduling solution without costly start-up or ongoing customisation. Start generating schedules within a day.
- Manage risk: Plan with confidence that the optimisation technique is agile and robust for generating optimal schedules in a changing production environment.



Why use Maptek Evolution?

You want mine schedules that maximise value and practical plans that can be implemented in the real world.

- Ease of setup and use
- Maximise project value
- Maximise resource utilisation
- Reduce operating costs
- Efficient decision making
- Align planning horizons
- Integrated haulage
- Hit blending targets
- Consider capex timing
- Holistic scheduling
- Block-by-block scheduling
- Schedule auditability



Evolution Strategy

Evolution Strategy is a strategic mine planning and optimisation tool for running scenarios based on cut-off grade optimisation and sequencing to maximise NPV. A single interface handles complex real world scheduling scenarios, modelling multi-process, multi-mine operations with multiple constraints to deliver high value schedules.

Evolution Origin

Evolution Origin generates detailed scheduling scenarios from life-of-mine to short term planning horizons. Integration with Vulcan closes the gap between design and scheduling. A holistic approach allows operations to include haulage, blending and waste landform optimisation, and apply optimisation policies generated by Evolution Strategy.

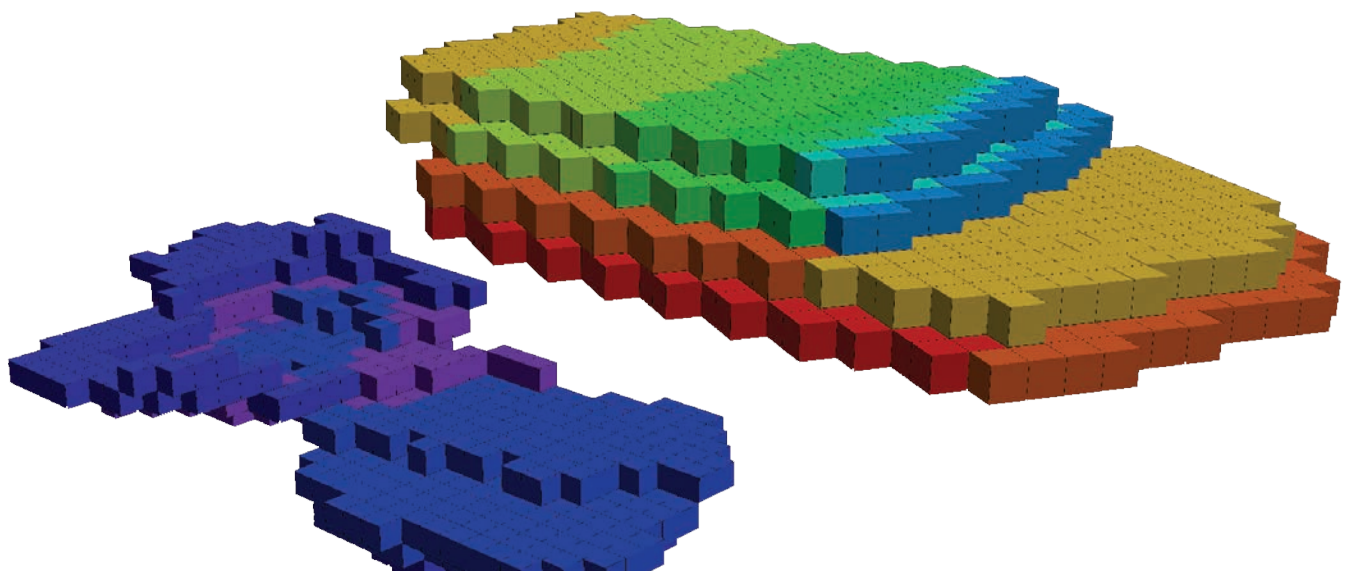
Evolution Epoch

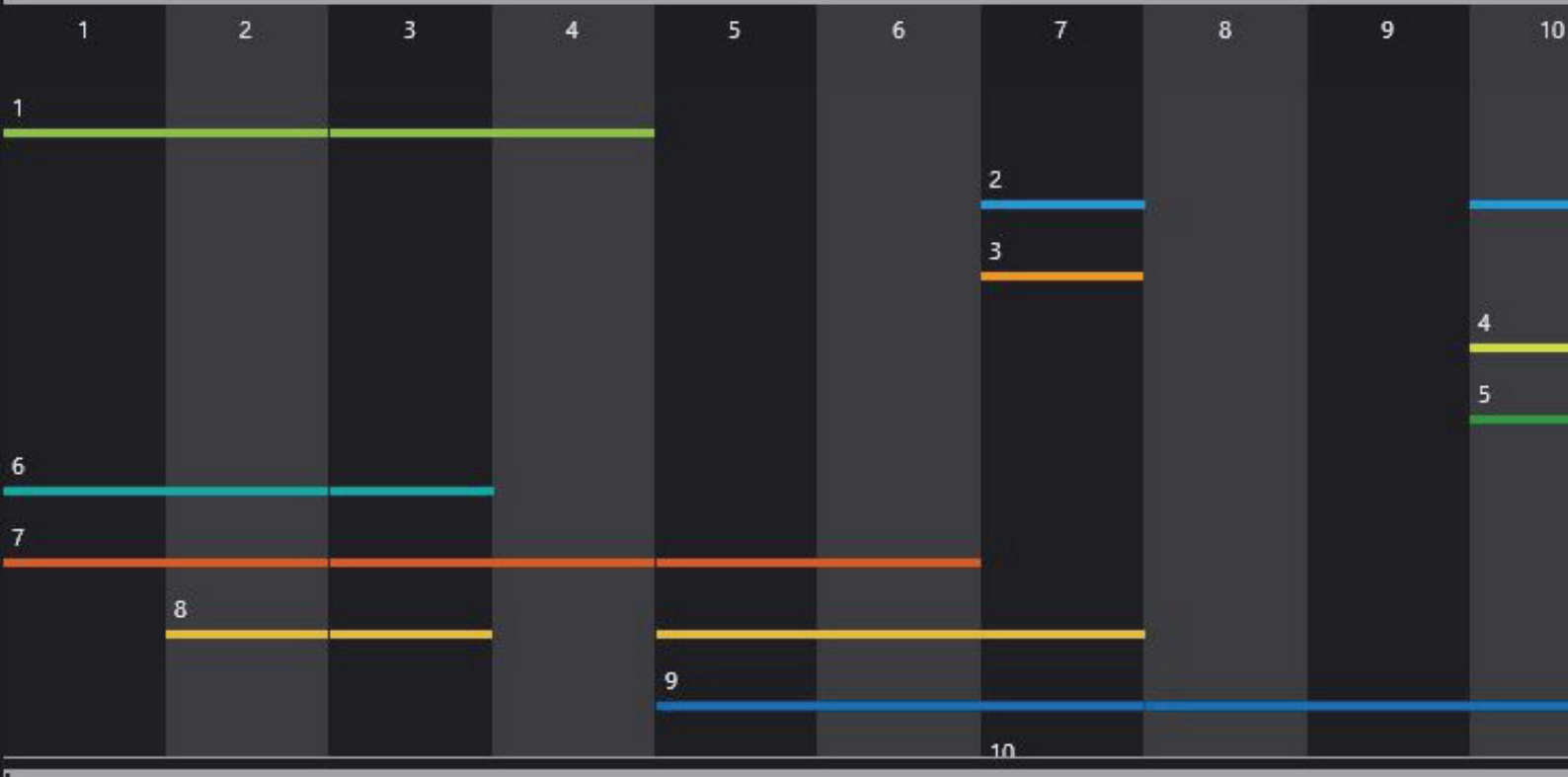
Evolution Epoch short term scheduler aids mine planners in producing operationally viable schedules by providing a holistic approach to excavation, haulage and dump scheduling. This handled through flexible and automated sequencing, schedule visualisation and dynamic reporting. Integration with both the long term schedule and Vulcan mine plans ensure that short term gains do not result in long term losses

Additional modules

Evolution Phase provides integrated and automated tools to manipulate optimal shells developed in pit optimisation. Users can adjust, split and combine shells and write new stage codes back to the model for testing, improving NPV while achieving practical mining shapes.

Evolution Stratigraphic Transform allows stratigraphic operations to calculate ore and waste quantities and qualities as they change at every stage of the mining process. A flexible workflow guides users to define relevant parameters and output can be consumed by Evolution Origin.





Bench Turnover



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