

Process Optimization

Consulting, advanced process control and instrumentation



Dedicated to
boosting the
performance
of your entire
operation from
mine to plant



Process Optimization (PRO)

CONSULTING

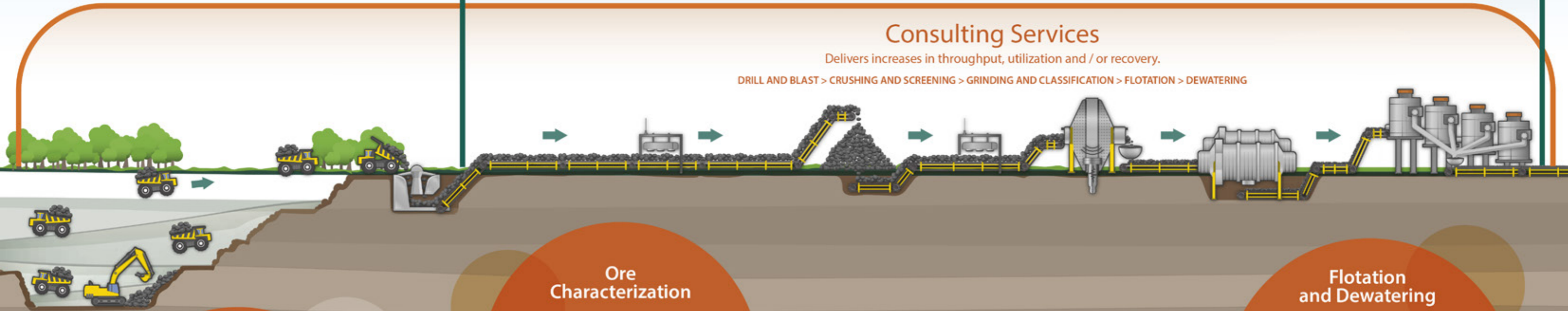
The Metso Process Optimization group assists our customers in solving complex operational issues using analysis techniques, laboratory testing, and advanced control systems. Our professionals have a history of successfully applying our tools: Improving recoveries, de-bottlenecking processes, increasing availability, and sustainably optimizing the overall mine to plant process. PRO solutions and capabilities are scalable from a single crusher circuit to an entire mine-to-port study, depending on your requirements.

Advanced Process Control with our state of the art platform OCS-4D™

Control strategies that increase throughput, stability, utilization and recovery.
CRUSHING AND SCREENING > GRINDING AND CLASSIFICATION > FLOTATION > DEWATERING

Consulting Services

Delivers increases in throughput, utilization and / or recovery.
DRILL AND BLAST > CRUSHING AND SCREENING > GRINDING AND CLASSIFICATION > FLOTATION > DEWATERING



Drill and Blast

Maximize the throughput and efficiency of your operation with optimized blast designs for each ore domain to improve Run-of-Mine fragmentation.

Ore Characterization

Achieve improved plant performance and stability with advanced tools and tailored test work programs designed to understand the characteristics and variability of your orebody.

Crushing and Grinding Optimization

Increase the throughput and efficiency of your crushing and grinding circuit using benchmarking, modelling and simulation tools. These tools help identify strategies to eliminate bottlenecks, improve energy efficiency and reduce operating cost.

Flotation and Dewatering

Assess flotation performance with detailed mineralogical and operating data analysis to increase grade, recovery or optimize reagent consumption. Reduce water loss and reuse with a water accounting assessment.

Process Optimization (PRO) PRODUCTS

Our experts are dedicated to improving the performance of your entire operation - from mine to plant.

The process knowledge of our experienced team combined with the use of specialized tools and methods allow us to provide solutions that maximize your profitability.

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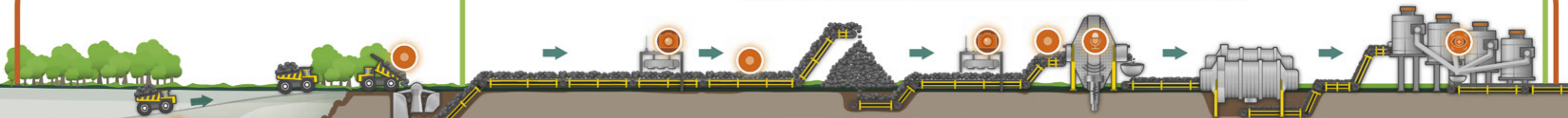
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SmartTag™

Boost your plant performance using SmartTag™, which tracks ore types from mine to plant using robust RFID technology. You gain the ability to implement pro-active plant control based on incoming ore types as well as more efficient reconciliation and better resource models.

VisioRock™

Optimize production with VisioRock™, which measures on-line conveyor belt fragmentation. Use the monitored data on rock properties and size distribution for on-line crusher gap control, better feeder balancing and improved performance.

SmartEar OCS™

Minimize mill damage with SmartEar OCS™ technology. By measuring steel-on-steel impacts and noise level within the mill, feedrate and mill speed can be controlled and optimized.

VisioFroth™

Improve your flotation process performance with VisioFroth™. By measuring flotation parameters such as bubble velocity, size and stability, concentrator flow control and reagent use can be optimized.



Metso's PRO team combines consulting expertise, advanced process control and instrumentation to improve plant performance.

CONSULTING SERVICES:

PRO provides consulting services from drill and blast right through to dewatering. As part of its flagship Process Integration & Optimization (PIO) studies, PRO will audit, benchmark and model current operations. With this information, PRO will help you optimize your overall operations to provide increases in production, decreases in energy consumption and overall better profitability.

ADVANCED PROCESS CONTROL (APC)

PRO's Optimizing Control System (OCS-4D™) sits above a plant's regulatory control system and uses APC methods to optimize set points throughout the plant. It is among the most cost- and time-effective proven tools for improving metallurgical plant performance: continuously maximizing plant throughput, metal recovery, and optimizing production costs.

ADVANCED INSTRUMENTATION

PRO provides a range of advanced instrumentation that can be fully integrated into an APC solution or used as stand alone instruments. PRO provides instruments designed for:

- Tracking ore (SmartTag™)
- Online measurement of rock fragmentation (VisioRock™)
- Online measurement of mill acoustics (SmartEar OCS™)
- Online measurement of flotation performance (VisioFroth™)
- A range of other applications where our instrumentation can be customized to your needs

Examples Of How PRO Can Help

PRO will deliver the best combination of services and products to meet your needs.

		APPLICATION				
		Mine Fragmentation Optimization	Crushing Throughput and Stability	Grinding Throughput, Utilization and Stability	Flotation, Recovery and Stability	Water Management
STANDARD OFFERINGS	APC with OCS-4D™		•	•	•	•
	VisioRock™	•	•	•		
	VisioFroth™				•	
	SmartEar OCS™			•		
	SmartTag™	•	•	•		
	Process Integration & Optimization	•	•	•	•	•
	Drill & Blast Optimization	•	•	•		
	Crushing & Screening Optimization		•	•		
	Comminution Optimization			•	•	
	Flotation Optimization				•	•
CUSTOMIZED OFFERINGS	GeoMetso™	•	•	•	•	•
	VisioTruck™	•				



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