Reimagining Tailings Management: What can digital tools offer?

ICMM / MIT Global Tailings Summit, 19-20 Sept 2024

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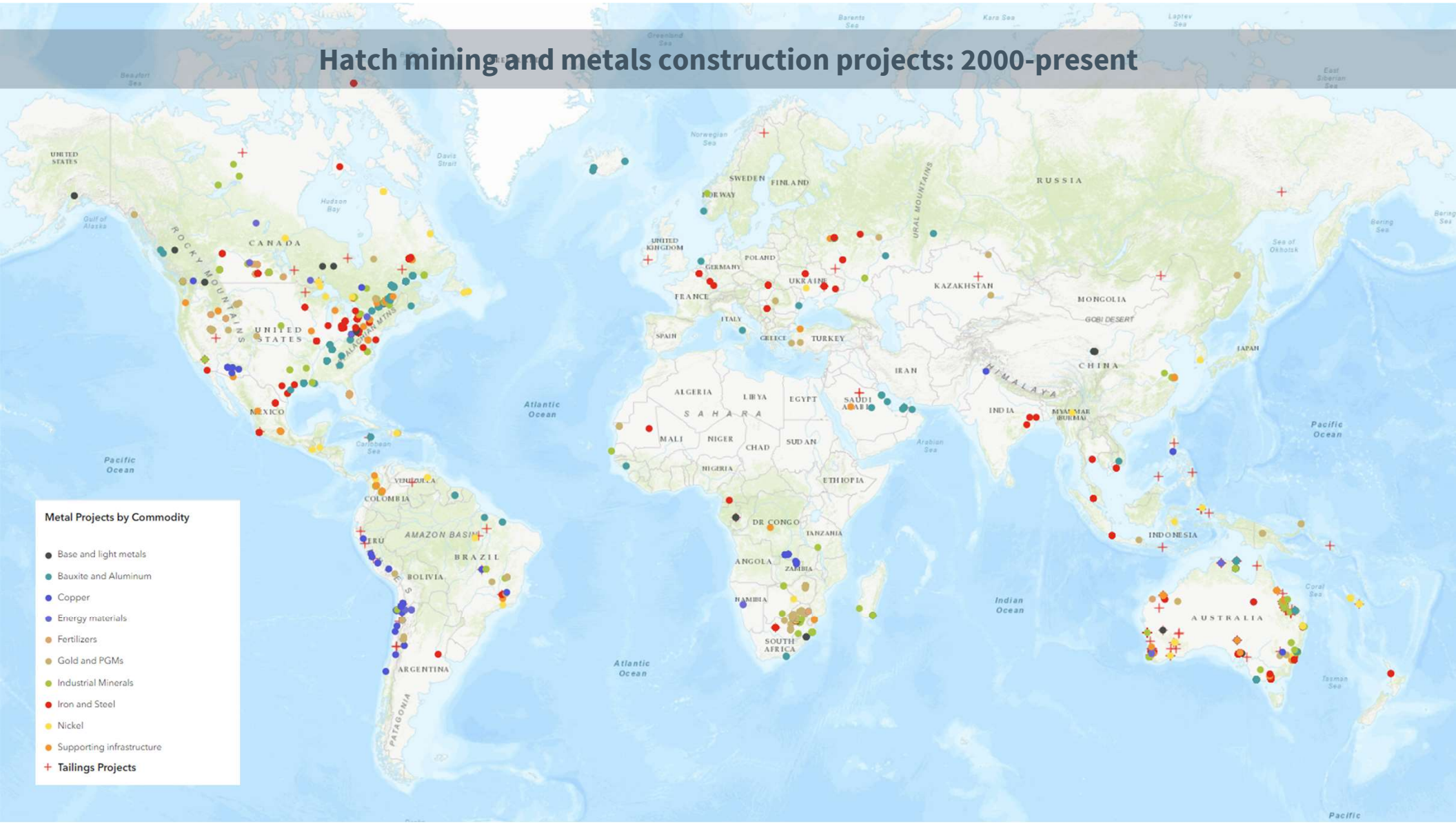
Hatch mining and metals construction projects: 2000-present



Integrated Tailings Management Solution

Hatch has developed a holistic Tailings Management Solution for mining companies worldwide. It provides users with integrated, intelligent, and timely insights and actions designed to:

- Increase the safety and reliability of tailings facilities
- Improve the operational effectiveness and efficiency of teams
- Enhance the speed and integrity of governance and compliance
- Help maintain social license to operate

Operational Water Management

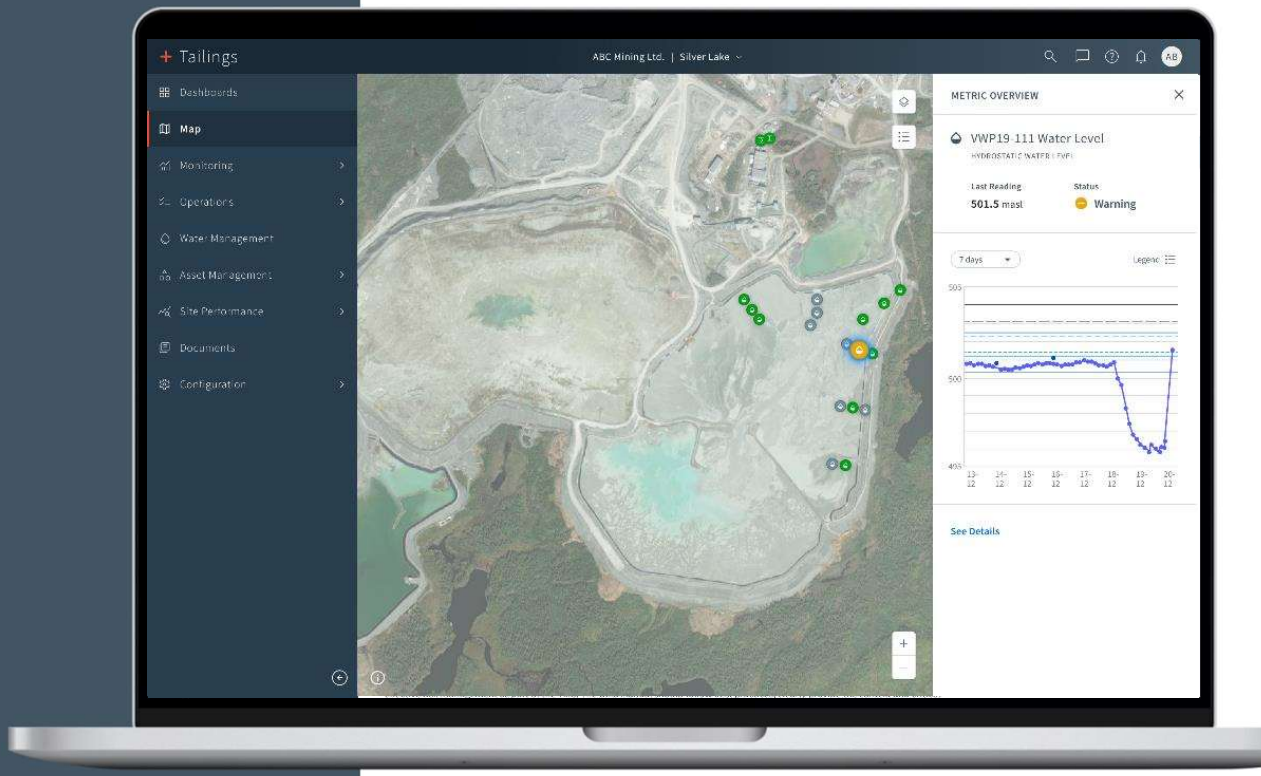
Auditing & Governance Standards

Geospatial Data Management

Integrated Monitoring

Operational Management

Anomaly & Change Management



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Risks Faced by Tailings Facilities

Some Challenges	Risks	Some Consequence
• Manual data collection	Stability and Structural Integrity	• Dam Failures / Stack Failures / Pit Failures
• Delay in decision-making	Management and Governance	• Regulatory Compliance / Operational Challenges
• Large volume of historical data • Lack of integration of tools • Spatial data on tailings deposition • Recovery simulations and industry safety	Technological and Engineering Issues	• Construction Methods • Tailings stacking operation • Digitization Limitations • Tailings Reprocessing
• Non-management • Non-use of the QA/QC	Environmental Impact	• Seepage and Contamination of water and soils • Dust Emissions
• Lack of open and transparent dialogue with the communities • Land conflicts: • Health and safety conditions	Social and Economic Factors	• Community Impact • Reputation and Trust

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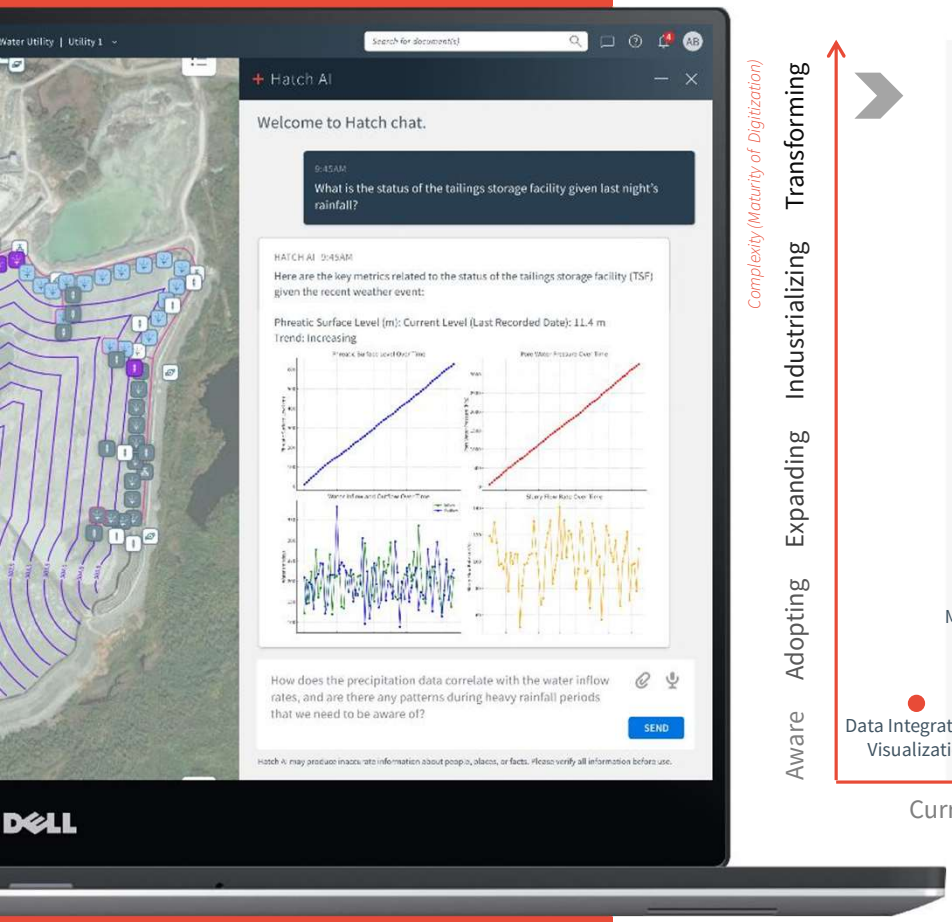
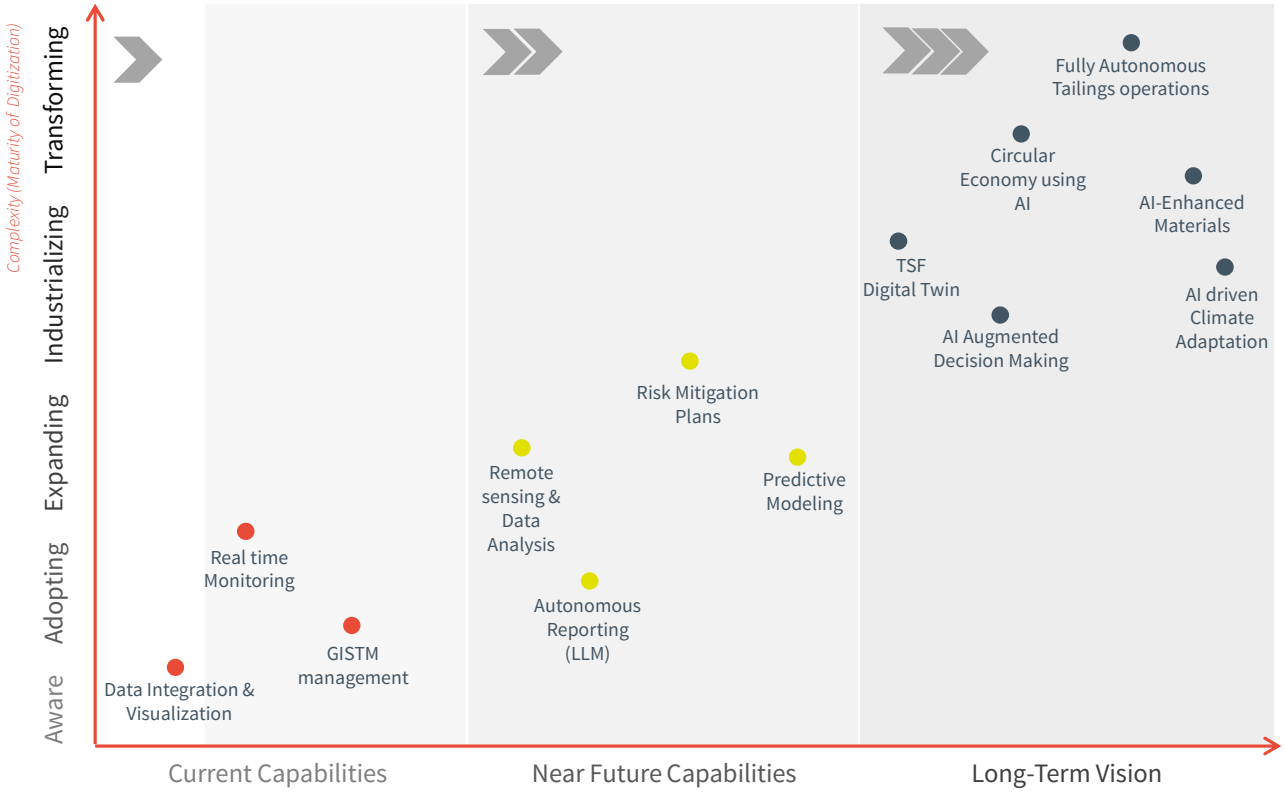
Future Tailings Operation – V1





Conclusion

- **Human-Machine intelligence:** ML assisting experts in decision making, risk identification, deposition management, reducing errors and most importantly – Saving time!
- **Greater Transparency**: Succinct presentation of data to public to allow for better transparent and to demystify tailings facility operation.
- **Intelligent and Fail-Proof Systems**: Robust systems that minimize errors.
- **Safety and compliance**: Ensuring the highest safety standards

Thank you

For more information, please scan the QR code

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