



+ From digitization
to transformation



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Tackling digitization is challenging

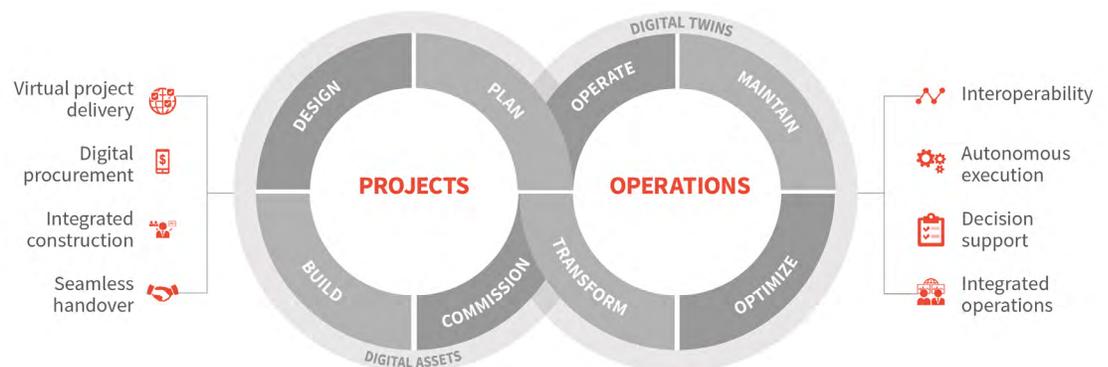


Unlock greater value in your operations to realize the full potential of your assets.

Market pressures and the widespread acceptance of rapidly maturing technology are driving digitization in industries of every kind. Where do you start? And once you do, how do you maintain momentum? How do you address the scarcity of new skills that are needed? Can you get out in front to meet the challenges that digitization presents for your organization and remain open to new opportunities? How do you create new business models that will transform your organization to unlock long-term, sustainable value for all the stakeholders in your value chain?

Offering digital solutions to the metals & minerals, energy, and infrastructure sectors to help you harness the potential of digital technologies across your entire value chain.

Technologically agnostic and with deep sector expertise, we bring the best consulting, engineered solutions, systems integration, off-the-shelf and bespoke applications, and services and support for your journey. We can help to transform your projects, operations, and value chain to make your business more efficient, optimized, and sustainable.



People, technology, and assets

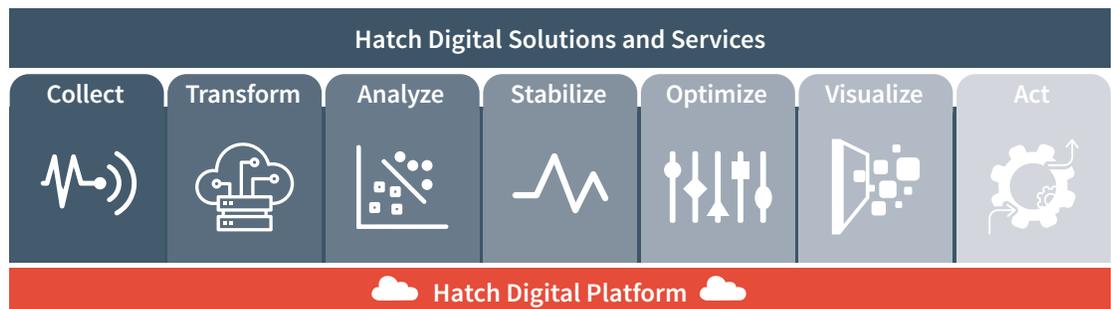
With advanced sensor technology, the pervasive reach of networking technology, and easy access to massive computing power, you can have a whole new kind of connected environment.

Imagine. People, technology, and assets sharing a single source of information, creating a common digital heartbeat that maximizes visibility, transparency, and sharing across the value chain. It's an expansive concept that enables powerful sources of information to inform and drive better decision-making.

On the digital transformation journey, data is the currency. It has the potential to go far beyond monitoring, reaching into real-time predictive and prescriptive applications. Digitization has matured to the point where reduced variability, higher efficiency, lower maintenance costs, and better safety outcomes are the new reality.

Taken together, these improvements can unlock a step change in performance. By embracing the power of digital technology, you can transform and optimize your business, finding and exploring new business models that can take it to new heights of efficiency. Let us show you how it can create new sources of value for your business and industry.

Reduce CAPEX and OPEX. Improve safety. Increase productivity. Optimize operations.





The digital transformation journey

Plan your journey effectively

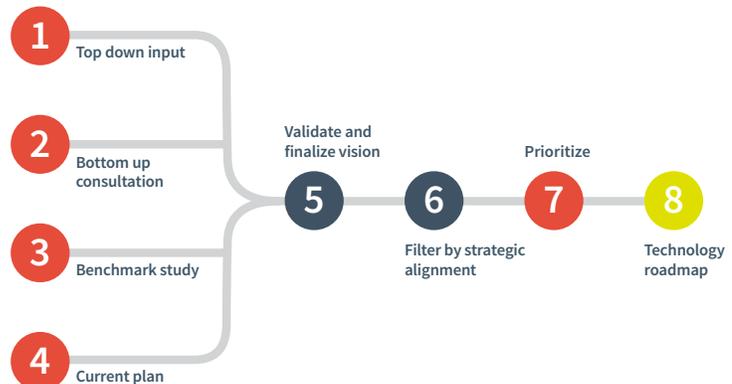
You need a roadmap that integrates people, processes, and technology.

It must consider all the stakeholders in your value chain: operators, management, clients, suppliers, and the communities in which you operate. It should address not just how you can use digital to streamline your current business processes, but how doing so can future-proof the next generation of operating equipment and methods. Our experts can help you define optimal processes supported by the right technology and an enabled workforce.

Improve project outcomes

With a seamless handover of critical project and asset information—digital assets—to operations, new levels of plant efficiency, uptime, and productivity can also be achieved.

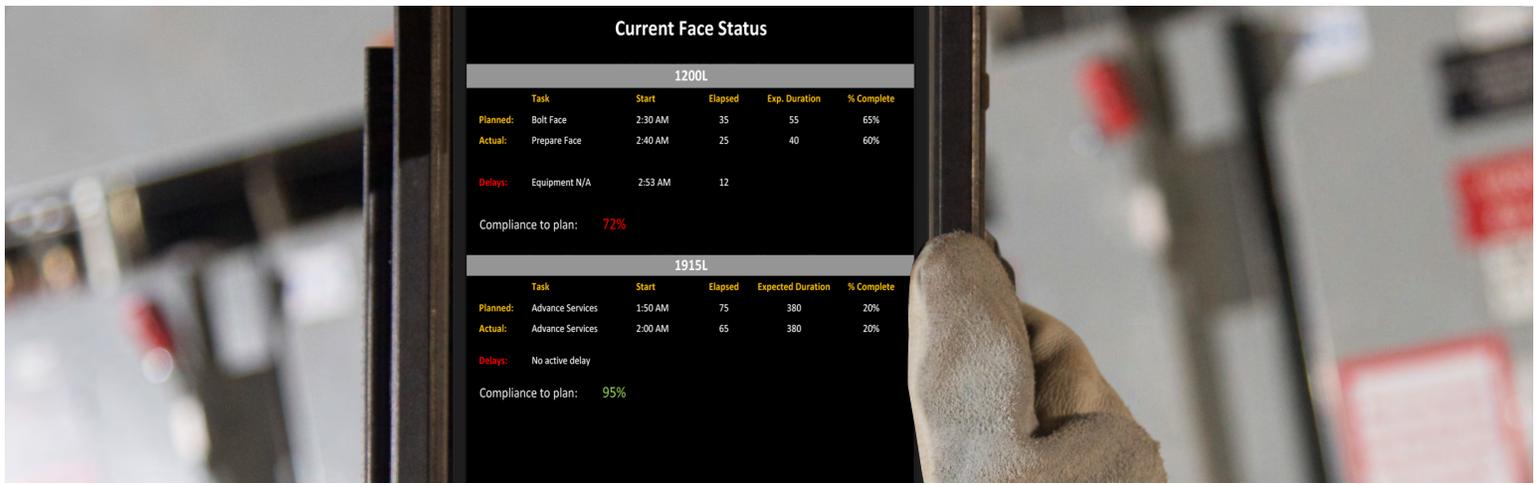
By combining digital design, procurement, and construction into a data-centric, virtual project-delivery capability, you can achieve meaningful improvements in safety, construction productivity, and site indirect costs.



Drive process improvement with the digital twin

Trustworthy information in the right format, at the right time, to the right people.

Digital twins are virtual representations of your assets. They are key to unlocking the process improvements you need to optimize operations and maintenance activities. Digital twins can model, analyze, and simulate process operations so you can identify and correct sources of variability. Data-rich and data-centric, twins take the digital assets created in the project phase and couple them with real-time operational and enterprise data. With advanced data analytics and machine learning, process variability becomes easy to identify, so you can find new approaches to problem solving.



Unlock more value from your systems through interoperability

We solve the toughest challenges of systems connectiveness and resiliency, making contextualized and timely information available at your—and your stakeholders’—fingertips.

With everyone sharing the same information at the same time, silos will begin to break down. You’ll begin to unlock greater value in your operations—to realize the full potential of your assets. In this new environment, workers, systems, equipment, and devices will be able to communicate in meaningful ways. You will have a fully connected ecosystem of people, technology, and assets, sharing a single source of information, creating a common heartbeat that maximizes visibility, transparency, and sharing. You’ll get powerful sources of information to advise you and drive better decision-making.

ArcelorMittal Long Products Canada GP Canada

We automated the collection of data from utilities, manufacturing execution systems (MES), web services, and enterprise resource planning (ERP) software such as SAP. With a better understanding of the overall costs associated with its gas and electricity consumption, efficient energy planning and monitoring are now possible and, enabling continued cost-saving.

Sibanye-Stillwater Canada

We developed a safer and more accurate data collection for key furnace operating parameters, coupled with advanced analytics to provide “anytime/anywhere” access to data. Results included faster and safer start-up and handover, a quicker ramp-up to nameplate performance, improved monitoring measurement, and better prediction of the furnace’s ongoing integrity.

Glencore Canada

Hatch teamed with Glencore to implement operational management system (OMS) philosophies to reduce in-shift variability, increasing mining intensity in a safe and cost-effective manner. Addressing process variability is one of the most effective ways to reduce costs and create value for an underground mining operation.



Improve decision making with advanced decision support

Advances in data science, machine learning, and artificial intelligence are transforming industries, making them more algorithm-intensive.

The paradigm is shifting from one of detection and control to one that also includes prediction, optimization, and other sophisticated data-analysis strategies. With our smart digital platform environment, you can collect, aggregate, cleanse, and process large amounts of complex, structured, and unstructured data. With time-series data from programmable logic controllers (PLC), distributed control system (DCS), and supervisory control and data acquisition (SCADA) systems, to information from your enterprise data historians, ERP, or MES, we make sense of it all.

Hatch has extensive experience developing and deploying first-principles value chain models that can be seamlessly integrated and optimized. With state-of-the-art methods like linear programming, nonlinear programming, and mixed-integer linear programming, the possibilities are astounding.

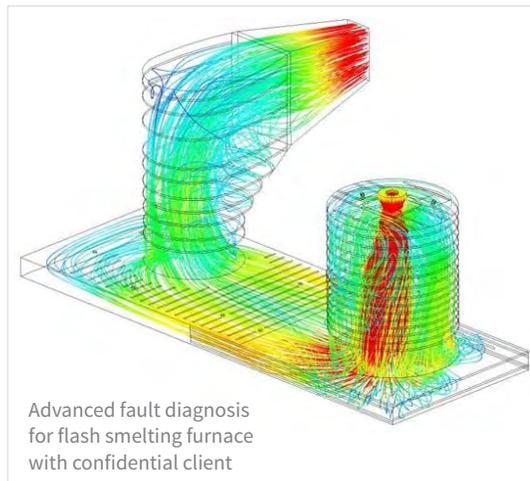
We can model, simulate, and optimize your operations to improve predictability and drive new levels of productivity. You'll be amazed at what's possible when uncertainty, risk, and value destroyers are controlled.

Confidential client

Australia

Previously, important data was not always available to decision-makers where and when they needed it. Because it was residing in many different places and managed by different people, it was impossible to have a complete, consistent picture of the track condition and degradation trends without conducting visual inspections. This led to an inefficient, ineffective maintenance strategy.

Now, our client can access a single source of the truth and use it to plan and optimize inspection and maintenance activities that address potential risk areas. The rail and asset management experts at Hatch can also use this important information to build a cost-effective, predictive maintenance strategy that reduces costs and improves track availability and safety.



Advanced fault diagnosis for flash smelting furnace with confidential client



Safer and less costly water sampling at depth with our unmanned aircraft systems (UAS), or drones, solutions.

Reduce manual interactions, repetitive, or unsafe tasks through autonomous execution

Execute work more consistently with automated inspections, fleets, and solutions that reduce process variation. Our award-winning solutions are helping to transform industries. Our experience and expertise span the entire range: autonomous fleet management, automated dredging systems, drones, and systems that monitor product transportation, route control, and stockyard automation, just to name a few.

With improved sensor technologies, machine learning, and advanced process control, it is easier to improve safety and drive efficiency across the value chain.



Patent-pending virtual spud dredging at TiZir's Grande Cote Mineral Sands project, Senegal.



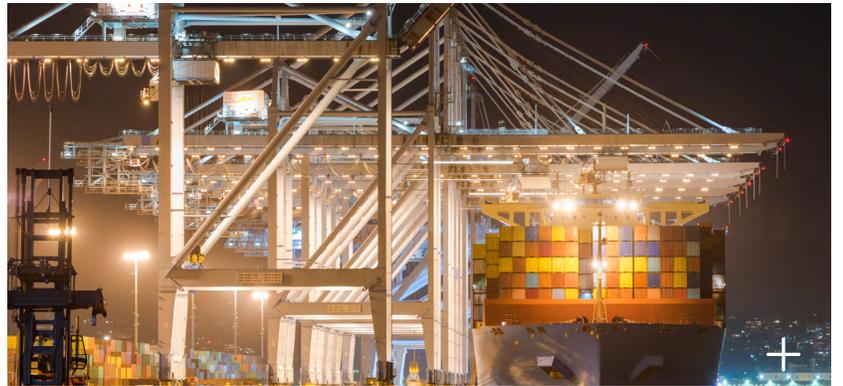
The Hatch product transport system addresses the challenges associated with bulk material handling facilities, and improves safety and stockyard utilization.



TraPac

Los Angeles, California, USA

Advisory and consulting services are helping this expanding port to make the transition from conventional container-handling operations to highly automated systems that include a new automated on-dock rail. Hatch is responsible for several improvement initiatives, including the vision, implementation, and support for a system that enables terminal-wide performance monitoring and data analytics.



Port automation and integration.

Aluminerie Alouette

Sept-Iles, Canada

Hatch reviewed the metal management process and optimized it with dynamic simulation techniques. With the sow-handling equipment for shiploading now automated at this aluminum producer, the result is a safer, more productive plant.

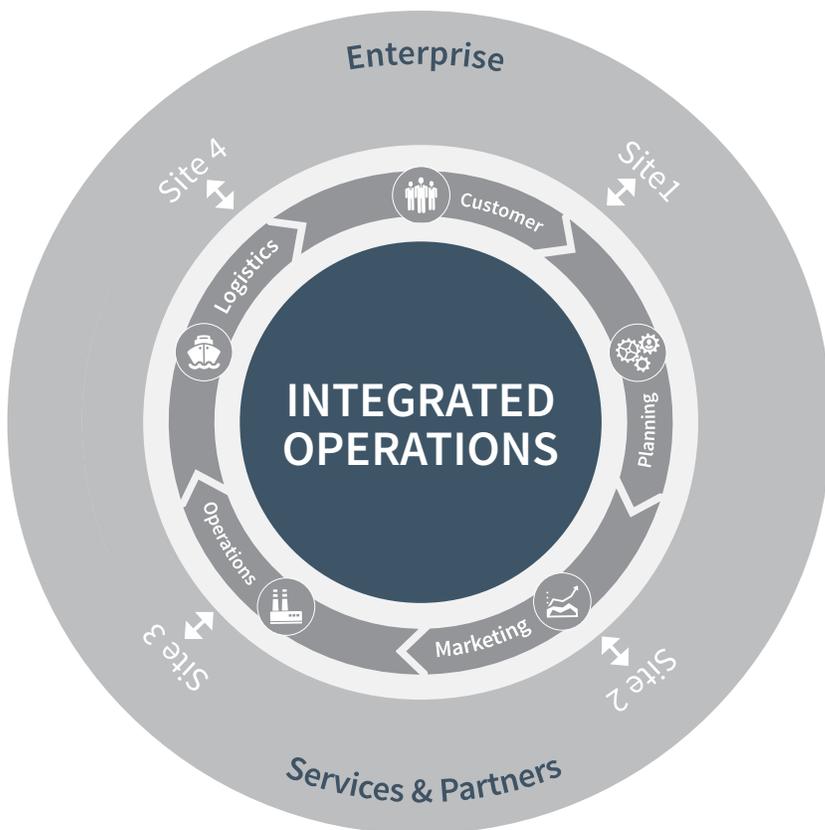


Automated guided vehicle system integration for Aluminerie Alouette, Sept-Iles, Canada.

Improve team collaboration with integrated operations and performance centers

Improve team collaboration for better decision-making and solve your talent-shortage challenge, too.

In this new, fully-connected ecosystem, you can maximize the flow of material and services across your assets over time. The prerequisite is a common heartbeat across your operations—one that's enabled by our digital platform. We can contextualize the data from your various systems and link it with subject matter expertise that our professionals provide. Your teams get facilitated analysis and decision support for continuous improvement and capital project planning.



A connected value chain where orders are fulfilled to quality, quantity, and time.

Confidential client

Global iron ore producer

Hatch is leading the feasibility study and developing technology road maps, including those for the information systems and communications infrastructure plan. Our aim is to improve overall safety, facilitate knowledge management, and simplify the integrated decision-making process. Ultimately, the goal is an optimized value chain across all its operations.

Port Authority of New York and New Jersey (PANYNJ)

USA

Hatch prepared the 30-year master plan to ensure better revenue, land use, and operational efficiency for this principal maritime gateway of the eastern United States and Canada.

Operational experience with modern systems and software solutions working for you

With multidisciplinary teams all over the world, we have the know-how and industry experience to provide systems for mission-critical business functions and analytic solutions that support management decision-making.

Combining our deep understanding of our clients' technologies, business and operational processes with leading software development methodologies, we build and support systems on a variety of platforms and architecture to drive better business outcomes.

Our deep experience in process control and automation coupled with advanced cyber-resiliency strategies ensure that we connect your devices, equipment, systems, and workers in your ecosystem, safely and efficiently.

Helping you realize your vision

One size doesn't fit all. We understand that companies are at different points of maturity in their digital journeys.

Independent and agnostic to particular vendors and technologies, Hatch has established the service framework to help you plot the best course. We have more than twenty years of experience assisting clients with value creation. We use digital visions and strategies in their projects and operations, always considering the convergence of operational technologies and

information technologies, and aligning them with our clients' business value creators, operating models, and game-changing technology.

Unlock greater value in your operations. Realize the full potential of your assets. Hatch, helping you realize your ambitions and tackle your toughest digitization challenges.





About Hatch

Whatever our clients envision, our engineers can design and build. With over six decades of business and technical experience in the mining, energy, and infrastructure sectors, we know your business and understand that your challenges are changing rapidly.

We respond quickly with solutions that are smarter, more efficient, and innovative. We draw upon our 10,000 staff with experience in over 150 countries to challenge the status quo and create positive change for our clients, our employees, and the communities we serve.

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