



Hatch Systems experience optimizing industrial solutions from mine to port

Tight integration of the automation, process control, manufacturing execution and enterprise resource planning systems in production facilities is the key to achieving maximum performance from capital assets.

SOLUTIONS ACROSS ALL ASPECTS OF THE OPERATION

Hatch provides a wide range of services covering all aspects of the operation's systems landscape including automation and control; manufacturing execution systems; shared service systems; enterprise resource planning systems; and integration platforms and portals. These services are aimed at optimizing and integrating the process, production, operation and maintenance. Our multidisciplinary approach, blending industry and process know-how with technical expertise, allows us to deliver complete engineering solutions for the mining and metals, infrastructure, and energy industries.

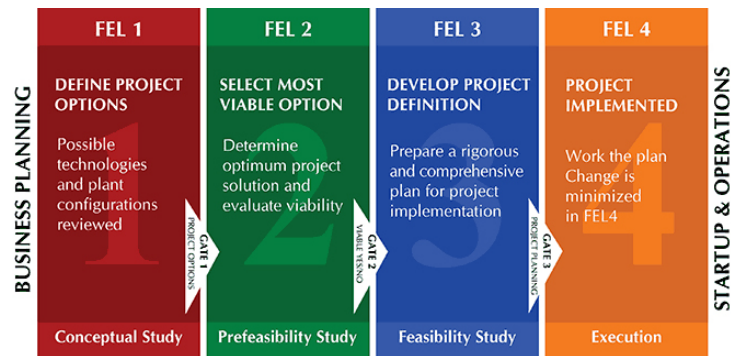
SERVICES

Hatch's System and Process Control (S&PC) Group provides a range of services including:

- Conceptual design and review
- Feasibility studies
- Energy efficiency and carbon abatement solutions
- Strategic planning and system architecture
- Business requirements analysis and auditing against standards and frameworks (ISA-95, COBIT)
- System design, integration and implementation
- Hazard and operability studies
- Performance assessment and system and process optimisation
- Critical system auditing, safety integrity level (SIL) analysis, failure analysis and operational security studies
- Process modelling and development of advanced control strategies
- Risk management and contingency planning
- Project management
- Support and training.

BENEFITS

- Reduced operating costs
- Increased efficiency and utilization of capital assets
- Increased safety and managed risk
- Faster plant startup
- Facilitates ongoing performance enhancement

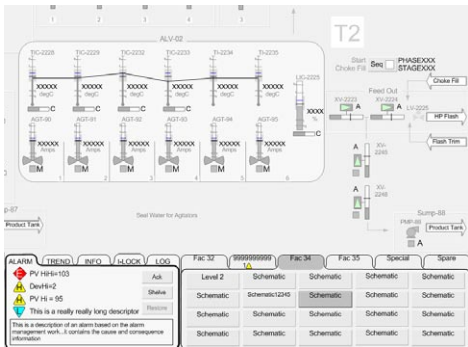


Hatch S&PC methodology is aligned with the principles of the Front-end Loading (FEL) process to manage deliverables, achieve desired project outcomes and optimize cost certainty

Systems and Process Control Group

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Human machine interfaces (HMIs) designed to optimize operational effectiveness

EXPERIENCE

Hatch has significant experience in providing seamless, integrated systems and process control solutions to industries from mining through to manufacturing within a broad spectrum of environments including both new and existing plants:

- Mining and mineral processing
- Petro-chemical industries
- Rail and transport
- Bulk materials handling
- Metal processing (e.g. steel, copper, manganese, aluminium, nickel, silicon)
- Electric furnaces
- Rolling mills
- Continuous strip/web process lines.

We leverage the diversity of our experience with the technologies, concepts and techniques used in these environments, along with our ongoing research and development of new control technologies and concepts, to deliver the most innovative and commercially-effective solutions to meet client needs.

PHILOSOPHIES

We believe in whole of life engineering and a fully integrated solution from shop-floor-to-top-floor, taking full advantage of technology to help maximise your business outcomes. Our automation solutions eliminate data synchronisation problems, ensuring data is captured, contextualized and transferred seamlessly across the entire control system through to manufacturing execution systems and business systems. This facilitates sound business decisions at all levels of operation. Similarly, we can provide embedded diagnostic and testing facilities in our process control and automation systems solutions to facilitate plant maintenance.

In keeping with our ethic of “Getting it right the first time”, we practice:

- Paying close attention to clients’ business objectives and requirements
- Intensive upfront control hazard and operability studies
- Strategies to safely manage and recover from abnormal situations
- Preparation of detailed specifications prior to commencement of engineering
- Analysis, modeling and simulation to minimize uncertainty of outcomes
- Extensive offsite simulation testing and shutdown planning to minimize downtime and ensure smooth startup
- Rigorous change management and documentation.



Effectively designed control rooms present control system data "at-a-glance"

SKILLS

We believe systems and process control solutions do not stop at software or computer hardware; the solution must consider the mechanical, electrical, physics and chemistry aspects of the entire process in order to deliver business benefits. Our group has developed strong process and operational knowledge to complement our technical skills in:

- Industrial computer systems
- Programmable Logic Controllers (PLC)
- Operator Interface Systems (OIS)
- Distributed Control Systems (DCS)
- Emergency shutdown and fire and gas systems
- SCADA and telemetry systems
- Field bus networks
- Local area networks
- Telephony and radio systems
- Electrical power delivery, conversion and utilization
- Electromagnetic compatibility and power supply quality
- Variable speed drives
- Field instrumentation
- Manufacturing execution systems/production systems (mining, plant, lab)
- Integration – MES to ERP
- Integrated logistic systems such as stockyard management with fully automatic mobile machines and inventory tracking systems.

The depth of experience and broad range of skills available enables us to provide you with the solution of greatest value to your business.

