

## Faster, More Cost-Efficient Projects

### Trying to meet today's challenges with outdated technology?

Whether in the oil sands of Ft. McMurray or drilling in the deep water off the coast of Angola, risk-reduction is the goal of every resource development company. In countless cases, technology has made previously uneconomical recovery viable. From steam-assisted gravity drainage in place of conveyer belts for the oil sands projects, to directional drilling from deep-water platforms, new technologies are making the difference.

The same challenges hold true in process automation. Although engineering and operation have been made much easier— with digital automation solutions like the DeltaV™ system— interconnection among various information technology layers increases complexity. The fact that industry standard protocols exist doesn't necessarily mean the various layers will exchange critical information seamlessly. To meet this challenge, you need a master-level integrator to help architect and implement the flow of information among systems and your organization.



What you need is a new construction methodology that engages process automation partners at the front end of the project.

### Buying today's automation technology the old way is doomed to failure

Here's why:

- Process automation is the central nervous system of the process
- The process automation system is 3 to 5 percent of the total project value
- Traditional construction methods like "three bids and a buy" engage process automation thinking far too late in the project planning.

The result is a mismatch of technology, requiring longer checkouts and limited functionality.

### Creation by design

Even though the central nervous system makes up only 5 percent of human total body weight, it is essential for motor control. Process automation supplies the same function on a platform or in an onshore field. Key planning and implementation strategies include:

- Smart sensors that serve as a front-end alert system of pending failures
- Digitally-controlled valves that provide critical process health information to the central control room



But with technology comes a price— complexity. Think of trying to service your automobile without the diagnostics equipment to read all the embedded microprocessors.

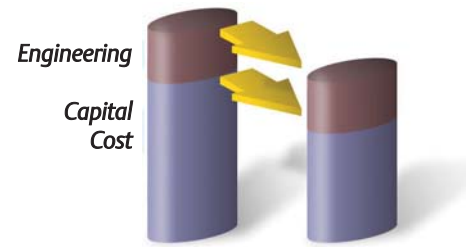
- Bus wiring with state-of-the-art fieldbus to minimize costs while increasing reliability
- Pre-engineered connectivity between the process automation and enterprise layers to eliminate retro-fitting costs

- Advanced process control algorithms designed up front minimize the need for mechanical or hard-wired optimization techniques.

### PEpC process

The Construction Industry Institute has established a process whereby process automation system design is done at the earliest stages of a project. This planning is critical to optimizing operationally efficient technologies in the design. The PEpC process steps include:

- Procuring critical suppliers upfront before engineering is done
- Engineering the system by employing the latest state-of-the-art products/practices
- Procuring the commodity products
- Constructing the project.



PEpC process reduces project costs.

### Savings

Construction Industry Institute studies indicate engineering savings of 10% and capital savings of 25%.



*“Working with Emerson as a main instrument and control contractor, (MICC) helped deliver an estimated 30% savings on process automation content, compared with traditional methods.”*

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