ABB streamlines plant maintenance

When six chemical plants decided to consolidate their maintenance operations, they chose ABB to lead the effort. ABB cut downtime, raised the overall level of maintenance, reduced on-the-job injuries—and saved money.

Client: Qenos, Orica, Huntsman
Location: Matraville, Australia
Scope of Work: Routine maintenance management

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Garry Fox
Utilities plant manager
Qenos

Plant maintenance is a safety, health, and environmental issue. It’s also a profit issue.

ABB overhauled maintenance at six chemical plants simultaneously.

Now those plants are spending a fraction of their former maintenance costs, while they mark improvements on every safety, health, environmental, and production scale.

Six plants owned by three separate companies share one of Australia’s largest chemical and industrial sites, the Botany complex. These plants produce chemicals and specialty surfactants, including raw materials for the automobile, mining, agricultural, plastics, and rubber industries.

The plant owners (Orica, Huntsman Corporation, and Qenos) knew they shared more than the same site. They shared the same concerns over plant downtime, safety, health, and the environment. They decided it was time to join forces to streamline and upgrade their maintenance operations.

Among their many reasons for choosing ABB to direct this effort, they especially noted ABB’s prior experience in change management, proven ability to handle health and environmental problems, and commitment to safety. Because ABB has assisted in countless plant shutdowns over the years, our understanding of maintenance comes from real, on-site, hands-on experience.

When ABB arrived at the Botany complex, each plant was responsible for its own maintenance. Forty independent contractors oversaw a staff of 200, generated pages and pages of incompatible reports and invoices, and easily expended over US$ 10 million annually.
ABB’s task--to improve overall performance and safety, identify weaknesses, standardize on strengths, cut downtime, and cut costs--began with a review of mechanical and electrical maintenance, shutdowns, and capital works at all six plants. ABB’s review encompassed equipment reliability and the effectiveness of reporting procedures, working methods, and the organizational structure. ABB audited the maintenance organization and its systems to identify their financial and environmental impact. We made recommendations and we implemented them. In the end, these efforts changed the entire maintenance culture.

The extent of ABB’s success in managing this change can be measured in hard numbers. The maintenance organization was pared down to one main contractor overseeing seven subcontractors, with a combined staff of 140. As standardization took hold, costs plummeted. Maintenance costs fell 20 percent in the first year. As ABB brought the new organization up to ISO 14001 and ISO 9001 standards, staff pride and dedication rose. No industrial actions have occurred on site since ABB’s arrival. Injuries have fallen, from 78 per 200,000 person-hours to less than half that amount, culminating in 500 days with no injuries at all.

The benefits from new maintenance procedures and tools have been felt throughout the plant. As just one example, plant administrators no longer have to deal with dozens of separate invoices. ABB introduced Maximo software and the maintenance organization now produces one invoice per plant per month. Further, plant management can now access information that lets them monitor and analyze the maintenance function. This information is enabling management at each plant to recognize opportunities for further improvements in productivity and efficiency: the potential to save energy, upgrade equipment, automate, and consolidate.

Garry Fox, Utilities plant manager at the Qenos plant, sees the fruits of these changes every day. “ABB has given Qenos access to maintenance data and knowledge it never had before, and uncovered the competitive advantage in highly effective maintenance systems. We can also now obtain a real-time snapshot to identify areas for improvement, which is vital to optimize the 24x7 workings of a petrochemical plant.”

At the Botany complex, ABB has assisted six chemical plants through a revolutionary change in their maintenance organization and met the goals of three separate owners. But we haven’t stopped there. With performance up, costs down, communications improved, and measurable results at every plant site, ABB has made sure that the new maintenance organization has the skills, procedures and resources needed to keep on improving.

For more information visit us at:
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Benefits

- Reduce on-site injuries
- Reduce maintenance costs by at least 20%
- Reduce the administrative burden
- Increase accountability and communications
- Uncover opportunities for future improvement