

# Increasing production levels while reducing maintenance costs through reliability

Pharmaceutical  
Manufacturer  
Case Study

Client	Location	Solution
Large international pharmaceutical manufacturer	North America	ABB Reliability Consulting North America

## Business challenge

A large international pharmaceutical manufacturer in North America was in the final stages of a plant expansion that would double plant production and, as a result, create additional maintenance needs. Due to a large maintenance work backlog, relatively old equipment and high turnover for contracted employees, the manufacturer needed to identify the optimal mix of in-house maintenance employees versus contractors, and improve current maintenance and reliability processes.



## Solution

ABB Reliability Consulting North America was chosen to help achieve and sustain the manufacturer's production goals. After performing ABB's World-Class Reliability Benchmark®, an assessment comparing reliability and maintenance work practices against world-class standards, ABB discovered three key improvement areas.

### ***First improvement area: develop the maintenance organizational structure and work processes***

The first step towards leveraging plant improvement opportunities was developing a cross-functional Leadership Team led by a Senior Functional Manager and composed of ABB subject matter experts and managers from Maintenance, Engineering, Manufacturing and Finance. The team met weekly over the first seven months to guide and provide support for changes. This was crucial in developing and reinforcing a new maintenance organizational structure and supportive work practices. A subsequent step involved creating a formal Planning and Scheduling group. Once the new organizational structure was established, job descriptions including specific

roles and responsibilities were prepared for the new positions based on the new business processes. To ensure successful implementation and sustainability, Work Management Process training was provided to employees.

### **ABB's solution helped instill a disciplined process for effectively executing scheduled work.**

### ***Second improvement area: execute new planning and scheduling processes***

Implementing ABB's solution involved executing a simulated maintenance scheduling meeting with a draft weekly schedule. The scheduling process was piloted in one manufacturing area. Following the simulation, the first weekly schedule for the manufacturing department was issued and reviewed by representatives of all manufacturing sections during the weekly scheduling meeting. Improvements were made, and the final schedule was issued according to the process. The following week all craftsmen worked from the enhanced schedule.

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**Third improvement area: increase focus on core**

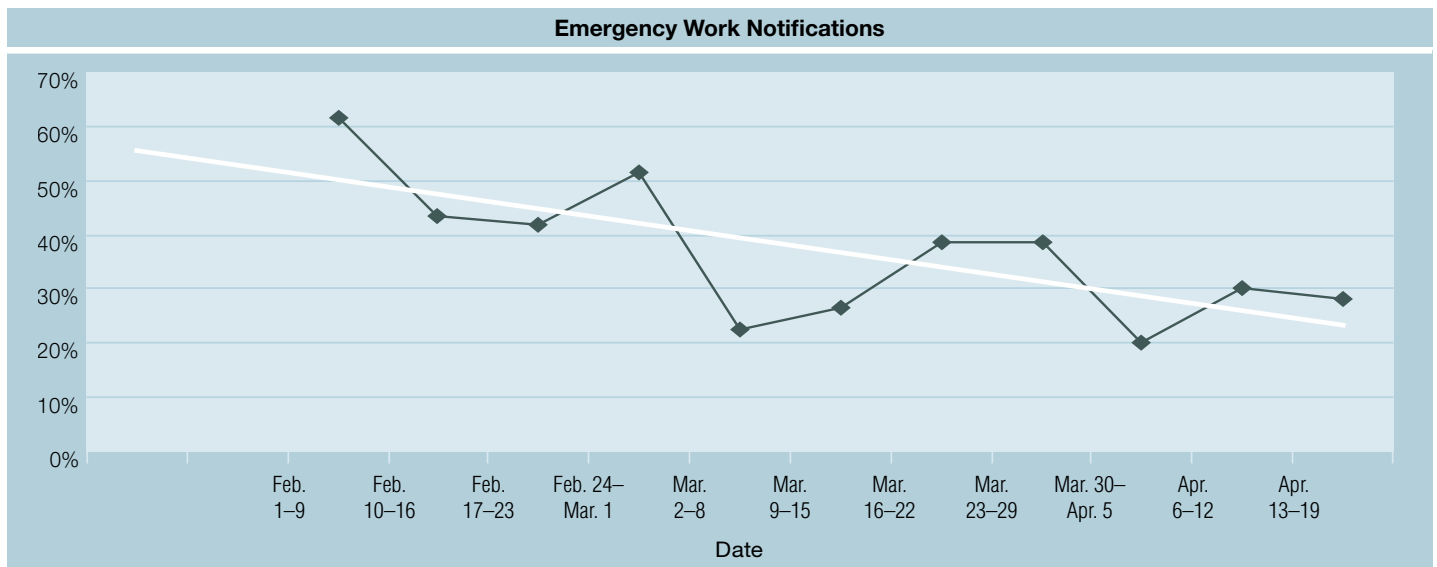
Contract maintenance workers were converted to employees to perform core tasks while remaining contractors performed non-core activities. This strategy helped decrease turnover among core personnel by assuring longer-term job security. It also aligned the most highly skilled workers with the most important work activities.

**Results**

By improving the maintenance organizational structure and reducing backlog and emergency work through new work management processes, the manufacturer avoided hiring additional maintenance personnel for the new assets of the major expansion. This resulted in more than \$850,000 in annual recurring savings. In addition to avoiding these employee costs, other benefits accrued. Less than two months after the planning and

scheduling process started, the plant's scheduler and craftspeople worked down the maintenance backlog to three weeks. This metric indicated better worker utilization and allowed management to consider downsizing through attrition or reassigning personnel to higher value activities.. Management eventually decided to allocate existing maintenance resources on performing more preventive and predictive maintenance, which will further reduce unplanned asset breakdowns and increase plant productivity.

Prior to working with ABB, the manufacturer was in a reactive mode with the majority of work being performed on an emergency or urgent basis. After implementation of new management work processes, emergency and urgent work decreased by more than 50% and significantly reduced labor requirements associated with the repairs.



The chart shows emergency and urgent work decreased by more than 50% following the start of formal work planning and scheduling.



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