

# Health Sciences Operations

CASE  
STUDY

## Enterprise-Wide Pharmaceuticals Operations

### Lean Cost Reduction in Pharmaceutical Industry Operations

#### Situation – Implementing lean manufacturing principles to reduce cost in pharmaceuticals

Changes in the U.S. health care industry demanded improved capabilities from pharmaceuticals manufacturers. Customers wanted flexible ordering options, shorter cycle times, new packaging, increased service support—and lower prices. The company's new production campus would enable this new flexibility, increase productivity and deliver sustainable cost reduction. But it was still under construction. Existing facilities had to adapt using lean operations management principles to reduce cost.

Three consecutive internal lean consulting teams had failed to noticeably improve end-to-end operating capabilities. Although each team held kaizen events, these identified “big ideas” that depended on new technology and infrastructure. One team leader learned about The Lab's non-technology improvement templates and arranged a meeting

#### Client Description, Project Scope, Objectives

The company is the U.S. subsidiary of a Top 3 global pharmaceuticals industry firm. Nearly 5,000 employees oversee research, development, manufacturing, sales and distribution. The improvement effort focused on supply chain operations, including sourcing, order management, production, distribution and customer service (3,000 employees).

The Lab's 7-week, Phase I analysis effort documented the end-to-end workflow for all 3,000 employees. Operational efficiency and employee productivity were evaluated at the work activity level (10-15 minutes each). Over 400 opportunities for innovation and continuous improvement in pharmaceutical manufacturing required no investment in new technology or equipment.

The 8-month Phase II implementation effort was able to increase productivity, compress cycle times, improve customer service and deliver cost reduction. Non-operating time in the plant fell by three-quarters. Line item order fill rates improved by 30 percent. Customer service issues were cut by half

#### Lean Six Sigma Implementation in Pharmaceuticals Examples

The Lab implemented over 400 non-technology pharmaceuticals process improvements. Examples:

**Lean Pharma Quality Assurance (QA) Operations Management**—The Lab helped streamline the supplier certification program. Inbound testing was moved further upstream, to the receiving bay sometimes. In the QA testing lab, process standardization and application of six sigma unified fragmented operations. Within weeks, new productivity metrics showed a 35 percent gain from a lean QA continuous process improvement program.

**Packaging Simplification**—Pareto analysis of packaging stock keeping units (SKUs) indicated low usage, even obsolescence, for most SKUs (85 percent). Process improvement for packaging design and sourcing reduced vendors and eliminated two-thirds of SKUs. Cost cutting opportunity came in the form of reduced packaging inventories and simplified packaging line operations.

**Implemented Lean Six Sigma Scheduling Discipline**— Executives disrupted scheduled production with customer or regulatory concerns. Most existing standards for bills of material, production labor, machine rates, etc., were overly complex and outdated. A lean redesign of standards, combined with scheduling process improvement reduced unplanned disruptions by 70 percent.

### Top 3 Global Pharmaceuticals Firm

#### Pharmaceutical Operations

United States

#### Project Sponsor:

##### Senior Vice President, Operations

Non-technology, self-funding operational improvement implementation

- No new technology
- End-to-end supply chain
- 8-month implementation

#### Project Objectives:

- Increased production
- Waste reduction
- Lean process improvement

#### Project Scope:

- Customer service
- Order management
- Production scheduling
- Materials management
- Production operations
- Internal distribution
- Returned goods

#### Implementation Results:

- Operating cost . . . . . ↓ 34%
- Non-operating time . . . . . ↓ 75%
- Customer service issues. . . . . ↓ 50%
- Line item fill rate . . . . . ↑ 30%
- Break even point . . . . . 7 mos.
- ROI (12 month). . . . . 4X

HS01.SC06.170725

