

Ingersoll Rand Makes Materials Management Core Competency

Ingersoll Rand applies APICS standards to improve customer experience and increases delivery performance 86%

Goals

- Achieve operational excellence
- Turn materials management into a core competency
- Improve inventory turns, delivery performance and customer satisfaction

Approach

- Deploy companywide work standard based on best practices
- Establish a common language
- Develop people through education and certification
- Partner with operations management authority, APICS, to develop playbook

Results

- 86 percent delivery improvement
- \$5.5 million in cost savings over three years
- Inventory turns improved 10 percent; freeing up cash assets of \$125 million
- 85+ CPIM-certified materials personnel making three times higher inventory turns
- 200+ employees engaged in training and certification program supporting operational excellence

A New Focus to Get Behind

When Ingersoll Rand says it is committed to advancing the quality of life by creating comfortable, sustainable and efficient environments, it attributes this ambition not just to its products, but to the people behind the products—their valued employees. So in 2010, when—under the new leadership of Chief Executive Officer Mike Lamach—the company set out to realign their focus on achieving operational excellence, it was no surprise that they turned to their employees first.

Leaders at Ingersoll Rand quickly realized that to achieve their strategic goal of turning materials management into a core competency, they had to establish a common, companywide operational foundation. The company’s two business sectors—climate solutions and industrial technologies solutions—functioned independently of one another, revealing the need to establish standardized operational best practices. There also were key performance indicators such as delivery, inventory turns and inventory accuracy that needed improvement.

“We needed to create a common approach as we moved to an operations-driven company,”
 — Clark Ponthier, CPIM, Vice President Operations/Integrated Supply Chain, former Vice President of Materials Management and SIOPI, Ingersoll Rand

A Common Language

To make materials management a core competency, inventory turns, delivery performance and customer satisfaction

all had to be measured and improved. But, there was no guiding framework to set the company work standards. Company leaders understood that to elevate operational best practices, it was essential to develop what would come to be called the *Materials Management Playbook*—ensuring employees a universal understanding of materials management roles and processes, and establishing a fundamental common language companywide.

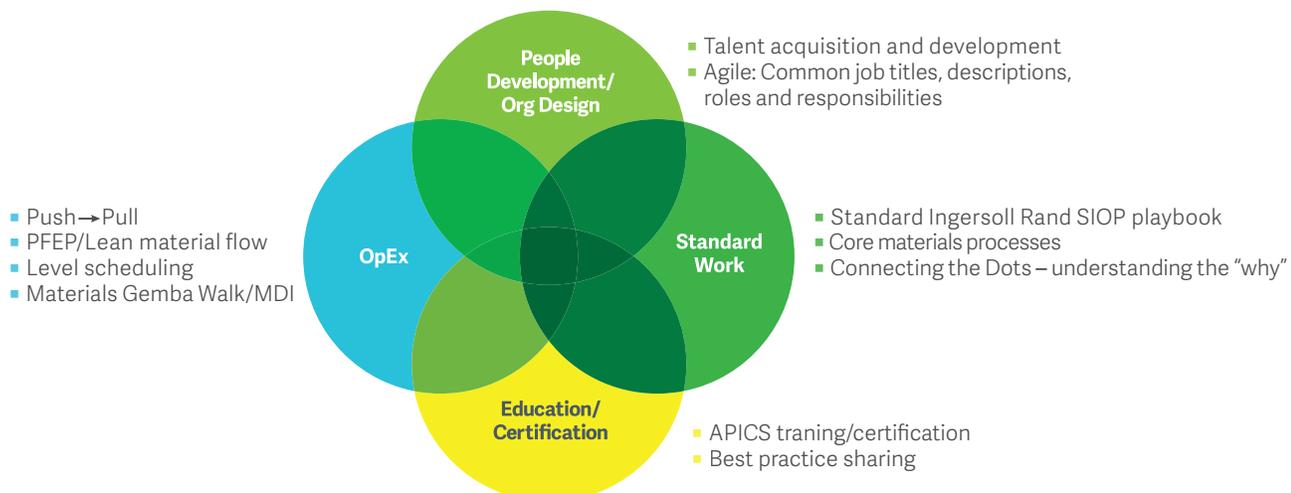
Early on, Ponthier, who was leading the charge to elevate the company’s materials management, organized the Ingersoll Rand Materials and SIOPI Council—composed of key materials experts who would govern the new standard of work throughout the organization. After an assessment of the core processes, the council determined that one of the keys to their success would be to focus on establishing proven best practices through industry-leading knowledge, education and certification.

Ingersoll Rand already had a business operating system in place (BOS), so this approach aligned with the company’s overall strategy. The approach also was designed to support and promote Ingersoll Rand’s Materials and SIOPI Council. The mission of the council is to “lead customer fulfillment, develop our people and drive inventory performance through process excellence and by deploying standard work and tools in materials and SIOPI.” Figure 1 details Ingersoll Rand’s improvement strategy.

Figure 1

Enterprise Sales Inventory Operations Planning and Materials Management Strategy

Transform SIOPI and materials management to be an Ingersoll Rand core competency through education/certification and deployment of standard work, organizational design and lean manufacturing.



APICS Sets the Standard

Ingersoll Rand knew they would need to align with a reliable operations management authority to address several of the facets within their improvement strategy. When it came to education, certification, deployment of standards and organizational design, they turned to APICS.

Materials Management Playbook and the APICS Operations Management Body of Knowledge

As the Materials and SIOP Council worked to define and document their organizational design, they focused their efforts on developing a playbook based on best practices and common ways to approach the work. The *APICS Operations Management Body of Knowledge* and *APICS Dictionary*—developed and validated based on proven, industry-leading operations management design—served as the foundation to quickly establish their *Materials Management Playbook*.

“As we got together to try to create our own standard work set, we quickly realized that in all of our experiences and leadership, the one barometer we all turned to was APICS,”

— Jason Hill, Program Manager of Strategic Initiatives, Ingersoll Rand

The *Materials Management Playbook* set the organization’s two business segments up for successful, standardized materials processes—ABC classification, inventory management, cycle counting and ordering methodologies—all examples of key processes that today are defined and executed in a standard way. Hill continues, “Incorporating APICS processes and definitions got everybody talking on one term, and that was really key in bringing it all together. Now everybody who’s come in since is speaking the same language, which we adopted from APICS.”

Over the last two years, the *Materials Management Playbook* has grown to include advanced materials management techniques and has become the main source for standard work best practices, a central part of the company’s operational success.

Education and Certification

It was clear to the members of the Materials and SIOP Council that investing in education and certification was also critical to their success. They believed that to increase the overall competency of the organization, all materials managers needed to be aligned. And so, to bolster their belief that certifying and training materials managers would deliver bottom-line results, the company adopted a policy that required all materials managers to become APICS Certified in Production and Inventory Management (CPIM) designees within 18 months.

To sustain the company’s investment in education and certification, they also rewrote the materials management job descriptions to require APICS CPIM certification for incoming materials managers. In addition, staffing personnel now target CPIM-certified candidates for open positions, improving the quality of hired leaders within the company.

To ensure employee success, Ingersoll Rand relied on APICS Corporate Services to tailor a training and certification plan that would prepare materials managers to pass the series of tests required for CPIM designation. While some chose to self-study, the majority took advantage of an online classroom, delivered through Fox Valley Technical College, which prepares candidates and incorporates group discussions and instructor engagement. After embracing this educational program, Ingersoll Rand’s CPIM certification exam pass rates exceeded the global average of APICS exam takers. In fact, Ingersoll Rand employees score substantially higher than the global average on all five of the exams required to obtain the CPIM designation.

Now, Ingersoll Rand has over 200 participants through the program with more than 85 materials personnel currently CPIM designees. This employee development initiative is fully funded by the company. Ingersoll Rand’s total investment in employee education and certification since 2010 has exceeded \$1 million—and this investment has paid off. Ingersoll Rand’s corporate finance team conducted an analysis and found a direct correlation between materials managers’ performance and CPIM certification (see Figure 2). The study compared improvement in cash and delivery performance at factories with CPIM-certified materials managers to factories that had non-certified materials managers.

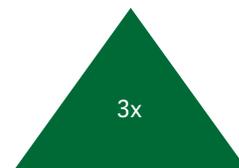
Figure 2

Performance Comparison of CPIM-certified Materials Manager

The data showed those with CPIM certification could improve key performance indicators at a higher rate than their counterparts.

Inventory Turns

CPIM certified materials managers achieving 3 times higher inventory turns improvement



Past Due Days

CPIM certified materials managers achieving 0.6 days less Past Due Backlog



Results That Measure Up

Since 2010, Ingersoll Rand has completely redesigned their materials management organization. They created a standard organizational structure, standard job descriptions, clear roles and defined responsibilities, and a competency assessment for materials managers—all contributing to \$5.5 million in labor productivity savings. Savings were achieved primarily by reducing waste and adjusting work level, and measured through comparisons to standard resource models. These savings were then redeployed to other supply chain areas to support growth and ensure customer focus.

The company also saw significant results in delivery performance, particularly in the reduction of the past due backlog. Delivery has improved more than 86 percent across all business units since 2011 and inventory accuracy has substantially improved. In addition, monthly inventory turns improved 10 percent from 2011 to 2013 year end, resulting in \$125 million in freed up cash assets.

Ingersoll Rand has reaped the rewards of developing a standardized operational foundation—based on a common language—to ensure key roles and processes were founded on best practices and then deployed through employee training and certification to ultimately achieve greater customer satisfaction. The *APICS Operations Management Body of Knowledge* provided this foundation. Today, company compliance with the *Materials Management Playbook* is at 90 percent globally.

“As far as metrics, we’ve seen a dramatic improvement around our ability to serve the customer,”

— Clark Ponthier, CPIM, Vice President Operations/Integrated Supply Chain, former Vice President of Materials Management and SIOP, Ingersoll Rand

About ASCM

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