

Case Study

About The Company

ACE Controls Inc., located in Farmington Hills, Michigan, is a leading innovator in deceleration and motion control technology. Its global customer service network includes offices in England, Germany, India and Japan with distributors in over 110 cities in 35 countries.



For over 48 years, ACE Controls has provided superior deceleration products to meet the needs of the automotive, robotics, material handling, packaging, steel, machine tool, lumber, amusement, medical and other industries.

Locations:

- All U.S.A. operations are combined in one manufacturing facility located in Farmington Hills, Michigan.
- In addition to offices and distributors around the world, the company also has a manufacturing facility in China.

The Challenge

ACE Controls has been a QAD customer since 1999. Over the years, as the QAD Enterprise Applications streamlined many of their business processes, it became increasingly clear that they could leverage their QAD capability and investment by implementing an automated data collection (ADC)/bar coding system.

They saw the potential to increase both speed and accuracy in their manufacturing operation. For example, some of the things they faced on a daily basis included:

- The use of handwritten labels – sometimes illegible, often inaccurate, sometimes lost altogether
- Extensive and very specific training requirements, which made it unrealistic to move employees easily from one section of the plant to another when needed; employee turnover dictated expensive and time-consuming training of new employees
- Entering a transaction at a terminal was subject to interruptions, error and even the employee's ability to remember what had been moved – and where
- Some transactions literally took hours; planners had no real-time access to information
- Data errors and discrepancies, which threw off repetitive runs
- A two-stage backflush operation, which caused one department to wait until the backflush was completed
- Identification and traceability from the label was essential in meeting ISO standards
- The inability to look up a location while in the warehouse
- Compiling all the paperwork, then sitting down and entering the transactions might include over 300 backflushes a day plus component issues, P.O. receipts and Work Order receipts.

The Solution: Why Eagle?

In March 2007 the company began researching the possibility of an automated data collection/bar coding solution that would integrate seamlessly with QAD. According to Rob Joiner, Traffic and Material Handling Supervisor, ACE looked at two other ADC/bar coding vendors but were dissatisfied. One of those solutions was "not QAD friendly," and the other required a dedicated server to convert the information before uploading it to the QAD database. "That was not our solution," said Joiner.

In the end, it took a full year from the beginning of the research process to go-live in March 2008. Compared to many Eagle implementations, that sounds like a long time. But Mary Valk, Quality Systems Specialist, points to the company's uncompromising application of Six Sigma principles, taking the time needed to ensure that they would be able to quantify the results in a meaningful, statistical fashion.

During the evaluation process, ACE received a recommendation of Eagle's solution from both QAD and nearby QAD-Eagle customers. Along with Joiner and Valk, Natalie Jewell, IT Manager, and Barb LaFave, Database Specialist, were able to undertake site visits, which were consistently positive, and the decision was an easy one. Eagle offered:

1. **A seamless, direct connection to QAD with no middleware.**
2. **A vendor with a close, long-term relationship with QAD.**
3. **The functionality they needed.**
4. **Proven ability to support their customers.**

With 800+ customers at 3,000 sites around the world, Eagle had no shortage of references, including references outside North America in Asia-Pacific and Europe.

The Benefits

1. Real time access to information replaced transactions that used to take hours.
2. Data accuracy improved to 99%.
3. Other departments and planners were no longer impacted by lengthy delays
4. Label output when handwritten had been "a big deal" to accomplish, since it had to incorporate P.O. number, item description and more. Eagle's ability to generate the labels ACE needed was a big plus.
5. During the run-up to implementation, ACE contacted their suppliers, letting them know about the new system and worked with them to set up standards for bar coding any shipment to ACE Controls. While there were a few very small

vendors who were unable to do this, over 90% of the material that reaches ACE today is scannable.

6. Identification and traceability from the label simplified the process of meeting ISO standards.

Interestingly, some benefits were unexpected. When the economy went into a downturn in 2009, ACE Controls had to lay off 14 employees. Had that happened prior to the Eagle implementation, it would have created a very serious disruption because of the time it took to train employees, and the lack of cross-training to function in different parts of the plant.

With the Eagle solution in place, the company had the ability to train employees to perform all ADC/bar coding functions. And complete the training within two hours. An additional benefit was that the same training was applicable throughout the plant, making it possible to move employees to a different location as needed, creating a more flexible and efficient work force.

Quantifiable Cost Savings

With bar coding implementation, the transactions performed in the receiving area showed a 50% improvement for an annual cost savings of over \$12, 000. The receiving transaction sigma before bar coding was 3.5 with a yield of 97.67%. After the implementation of bar coding the receiving transaction sigma is now 3.9 with a yield of 99.15%.

The handwritten labels generated in receiving, inventory control and assembly before bar coding implementation had a yield of 87.92% with a sigma of 2.7. Since the implementation of bar coding the labels are printed automatically. The absence of handwritten labels has improved the sigma from 2.7 to 6.0 and the yield from 87.92% to 99.99%. That translates to a saving of over \$12,000 annually by automatically printing labels vs. handwritten labels/tags in receiving, inventory control and shop floor.

At the outset of the project, Return On Investment was expected to take 2 ½ years; instead, it took only two years.

The Future

At present, the company uses bar coding strictly in house. The goal was to get up and running in-house first, after which Phase 2 would expand the use of bar coding into production.

The ACE Controls plant in China is running QAD but the volume is not yet at a level to implement Eagle's solution. However, when the volumes do increase as expected, Eagle's ability to support the facility in China will be an important asset in meeting the company's global standardization model.

About Eagle

Eagle Consulting & Development is the leading provider of portable wireless technology solutions for users of QAD Enterprise Applications worldwide. Eagle's product, RF Express™ for QAD Enterprise Applications, provides functionality for fault-proof, real-time automated data collection and bar coding at the single site or multinational level enabling manufacturers to achieve their data accuracy, inventory accuracy, labor cost and efficiency goals. Over 800 QAD customers at 3,000+ sites around the world have chosen Eagle to meet their automated data collection needs.

For more information, visit www.eaglecondev.com or contact Bill Paone at +1.973-838-5006 ext 119. RF Express™ for QAD Enterprise Applications is a trademark of Eagle Consulting & Development.