



# Eight Elements of a World-Class Automated Data Collection System

If you are reading this report, it is likely that your company either owns an automated data collection (ADC) system or is looking to invest in one. Although this report is written specifically for current owners of ADC systems, there is also some very good information offered for potential purchasers of new systems looking to implement the best solution possible given the available technology.

If you currently own an ADC system, it is almost guaranteed that it does not do everything you would like it to. Are there transactions that are either missing or unavailable? Are your processes dependent upon too much paper? Is an upgrade to wireless technology in your future plans? However you approach this report, it will contain information to assist you in your research process.

When the typical ADC system is analyzed, a set of eight distinct elements can be identified as those providing the most ROI per implementation dollar spent. Taken individually, each element can almost immediately increase the ROI of an ADC system. Taken collectively, these elements can lead to a true, world-class automated data collection system that pays for itself several times over each year. But what exactly are they? And more importantly, how does your current ADC system stack up? These are the questions that this report will attempt to answer.

## 1 **The Ability to Easily Add New Transactions or More Transaction Volume**

As your company grows, it will eventually experience the need to add new data collection transactions, and there will likely be a driver or two within your company prompting the change. For example, new transactions such as work in process tracking and serial number tracking might need to be added as a result of new compliance labeling mandates or lot tracing requirements. Or for some companies, it is likely there were transactions not implemented in Phase I of the data collection project that can now be definitively cost justified through ROI analysis.

Along with new transactions, additional transaction volume may also be required at some point. Investing in a flexible, scalable system will prepare your company to extend data collection to these new pieces of the puzzle with little or no system interruption and minimal out-of-pocket expense. Investing in the wrong system, on the other hand, will commit your company to spending countless hours integrating and standardizing its data collection system as transactions and users are added—and costs increase exponentially.

## 2 **The Ability to Eliminate Paper From the Data Collection Process**

Your company has taken a giant step toward increased efficiency by automating the actual collection and entry of data. But when does all of the paperwork go away? Standard data collection systems can do many things, but only a select few can take the burden off of the user and create repeatable, non paper-based, automated processes.

Although most systems depend upon the user to lead activities, true paperless data collection actually drives worker tasks and scripts the entire data collection process. By allowing the data collection system to drive work functions and dictate which events happen next, companies are provided with a number of advantages over paper-based systems. In addition to speeding the time of new hire training, there is a noticeable decrease in missed steps, an increase in overall data accuracy, and more corporate-wide consistency in processes—all due to a system that introduces standardization and repeatability.

## 3 **The Ability to Validate Data in Real Time**

Although standard data collection systems do a wonderful job of replacing their manual counterparts, most systems do not take advantage of the ability to validate data in real time. Companies not utilizing real-time data validation are exposed to the possibility, for example, of entering transaction steps out of sequence. Or spending three hours working on the wrong order. Or completing an entire 10-hour shift, only to find that data entry errors were made in the first minute and not caught. Do any of these sound familiar to you?

With real-time data validation, the average company can eliminate literally hundreds of errors per day—errors that would otherwise need to be manually tracked down and corrected at some point in the future. In fact, with good reason most experts agree that

real-time data validation is the single-most important feature of any data collection system. By definition, a data collection system without real-time data validation simply allows you to make more mistakes faster, and execute poor processes more efficiently.

## 4

### **The Ability to Perform Work in Process (WIP) Tracking**

If you compare the performance of a cross-section of manufacturers and distributors from 10 years ago to those of today, you can draw several obvious conclusions. In today's economy you have to be leaner, more responsive and do more with less than you did a decade ago. As much as manufacturing processes have changed, requirements and expectations have changed even more dramatically; and whereas labor was the focus 10 years ago, visibility into materials is now the key for many companies.

It is well known that all ERP and MRP systems can schedule production and order materials. But many ERP and MRP systems fall woefully short in terms of functionality when it comes to processing the activities involved from the time materials are received until the time they are shipped. With an ERP or MRP system, for example, there is limited visibility into serial numbers and product receiving. But on the flip side, the level of tracking offered by the best ADC systems can provide the granularity needed for managing recalls, tracking genealogy, coordinating warranty programs, documenting repairs and so on.

## 5

### **The Ability to Integrate With Multiple Host Systems**

Those of you who own and maintain a variety of systems already know the importance of multiple host integration. Because all ERP systems have inherent gaps in functionality, many companies have chosen to pursue a "best of breed" approach, whereby the organization invests in the most appropriate solution for their particular situation—regardless of vendor. Due to this strategy, companies often find themselves running sales force automation tools from Company A, inventory management tools from Company B and shipping management tools from Company C—along with a warehouse management system (WMS) from Company D.

It may seem nearly impossible to get all of these systems to share information, but with the right data collection system it can be done. The key is to build in maximum flexibility by actively seeking an easily customizable data collection system that offers a variety of out-of-the-box interfaces. The more up-front flexibility built in by the vendor, the higher your company's chances of success in a multiple-host type of situation.

## 6

### **The Ability to Access Data Using Mobile/Wireless Technology**

Unlike in decades past, companies are now being held to incredibly high standards when it comes to customer response time. Whether you're talking about the ordering process, the sales force, the customer service staff or the delivery function, the infrastructure and devices for wireless access to real-time data are now in place—and customers are expecting you to utilize it.

The obvious benefits of wireless technology appear in situations requiring inventory management at remote sites, field service operations or asset management. But imagine the power of a sales person being able to give real-time order and delivery status—from the customer's office? Or a manager addressing a stock-out situation—from an industry conference six states away? It seems that the potential for applications of wireless technology are only limited by the imagination of the person implementing them.

## 7

### **The Ability to Provide Warnings About Upcoming Events**

In a warehouse or distribution center with thousands of SKUs, it is impossible for one person to actively monitor the current inventory level of every single item. But with the right data collection system, managers can shed the proactive portion of inventory control and let information come to them. Today, the best data collection systems can generate instant, real-time notifications when key items—items critical to production, items with longer lead times, and items with a high turnover rate—reach a defined low stock point. These notifications can be sent in a variety of ways, including via e-mail, to a paging device or even to a cell phone as a voice message. In addition, event notification can be used at any point where data is being electronically collected—including the receiving dock, the shipping area and the time clock.

# 8

## The Ability to Provide Real-Time Management Visibility

In a marketplace driven by information, a company's competitive advantage begins with the ability to effectively manage supply chain performance. Companies that utilize automated data collection (ADC) systems are capable of capturing business process and performance information throughout the enterprise—but few of them truly use this information to their advantage.

By adding management visibility to an existing ADC system, managers and key personnel can track supply chain performance metrics in real time, using the power of personal digital assistants (PDAs) and the Internet. With access to performance and operational assessments on a continuous and real-time basis, shop floor managers can make immediate decisions on staffing, maximize labor efficiencies, control order fulfillment and monitor machine utilization—from virtually any location. In addition, executive managers can use this visibility to track organizational trends in areas such as sales, customer service, purchasing, receiving and distribution. In fact, if configured correctly, the entire organization can benefit from increased visibility—from shop floor workers all the way to customers.

### Conclusion

So with all of this in mind, does your automated data collection system have what it takes to be considered "world-class?" If not, can your company get there given its current state? Only you know the answer to the first question, but the answer to the second question is a definite "yes." If your existing system cannot be upgraded to meet current needs, there is still good news—it may be less expensive and more efficient to invest in a new one.

Even in the short term, the decision to purchase an adaptable ADC system can pay huge dividends, and having the features outlined in this report could mean the difference between long-term success and ongoing erosion of ROI.

### About HighJump Software, a 3M Company

*HighJump Software, a 3M company, is the global leader in providing highly adaptable, best-of-breed supply chain execution solutions that streamline manufacturing and distribution from the point of source through consumption. HighJump's tightly integrated solutions empower operational excellence in the warehouse and optimize the flow of inventory throughout the supply chain by facilitating collaboration with customers, suppliers and trading partners. These comprehensive solutions combine robust, standard functionality, a best practices-based implementation methodology, and a uniquely adaptable architecture that facilitates fast, cost-effective system modifications. The result: the industry's lowest total cost of ownership for more than 700 satisfied customers worldwide. As part of the 3M family, HighJump leads the industry in financial strength and delivers on an unmatched commitment to innovation and quality. HighJump leverages these advantages to continually expand its solution footprint and empower operational excellence for domestic and multinational customers.*

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