

# Aligning Your Data Collection and ERP Implementation Decisions

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## A Tighter Ship: The Vision of Business Beyond the Year 2000

In every sector of business, from high-tech to industrial manufacturing, the market is forcing companies to stay competitive by taking proactive steps to improve operations—and to do it through more than just cost-cutting or re-engineering. In the pursuit of profitable growth in a global marketplace, executives are looking for new strategies to roll out new products more quickly, access new markets around the world, develop new distribution channels and forge new value-added relationships with suppliers and customers.

Simultaneously, customers have become more sophisticated. Executives have to balance all this with, among other things, globalization, multi-sites and multi-nationals. But for those executives who want firm control of information assets that pertain to business operations at every level of production, there are even more IT challenges looming on the not-so-distant horizon:

- A need to realize a higher ROI on their enterprise software investment
- Aging legacy systems that are increasingly unable to fulfill information management requirements.
- Rapid evolution of information technology
- Rapid change in all of society-business, economic, environmental, regulatory, social, etc.

To not only survive, but to prosper in this context as global leaders, executives must correctly anticipate, adapt to and manage

each one of these market dynamics. How? By seizing control of what has become the single most powerful resource in business in the 90's: accurate information.

Companies that have been successful at this effort have sought to proactively exploit information about their internal operations to balance and optimize financial, manufacturing and

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distribution resources. Indeed, businesses that want to prosper must rapidly and flawlessly deliver high-quality products designed for specific markets and users, while maintaining profitability and industry leadership.

### A Review of ERP

An Enterprise Resource Planning system is a suite of integrated corporate wide software applications that drives manufacturing, financial, distribution, human resources, and other business functions in real time. In the past, organizations used separate applications to automate these business functions. What's different about ERP systems is that they integrate across functions to create a single, unified system rather than a group of separate, insular applications.

### The Origin of the ERP Solution

The concept of unifying enterprise-wide information management systems and the robust technologies that make it happen may no longer be new to the world of business. The use of software for resource planning is anything but.

ERP has its root in well-established Material Requirement Planning (MRP) systems that have evolved over the last quarter of a century. Thousands of manufacturing operations around the world have implemented some kind of MRP or MRP II (Manufacturing Resource Planning) system to improve efficiency at specific levels of production.

As data from the factory floor, warehouse or distribution center began to impact more areas of the company, the need to disseminate this data across the entire enterprise demanded that other business areas interoperate with the MRP system. Suddenly, MRP systems had responsibilities they couldn't fulfill, which led to the development of MRPII systems, which have now given way to ERP.

ERP systems have stirred a lot of well-deserved buzz in a lot of different sectors of business. In part, it's because so many software solution providers have seen the writing on the wall. Companies like Baan, JBA, JD Edwards, Oracle, PeopleSoft, QAD, SAP, SSA, Symix and more are enjoying the reward of dramatic growth as manufacturers move away from legacy MRP II systems and begin the process of ERP implementation. The solutions they deliver are more robust than any host-based MRP system yet.

### The Value of Automated Data Collection

It's easy to be consumed by the capabilities of ERP. And it's easy to be consumed by the actual implementation of an ERP system. But the most critical issue for every executive to remain focused on is the catalyst for ERP: the company's survival.

From that point of departure, there evolves an array of other crucial strategic initiatives; industry leadership, for instance. But a company's decisions on information technology are almost always a matter of strategic planning.

The catch is that the software component of the ERP solution neither solves business problems nor executes a strategy.

What a company invests in selecting, implementing or using an ERP system is not the point. Forget how robust a given system can be. If the data that goes into the ERP system is not accurate or immediately accessible, the whole system becomes suspect. The catalyst for an ERP system may be a company's need to survive, but the success of ERP is predicated on the simple concept of collecting accurate, timely data.

In the absence of reliable data, ERP is deficient at best, a failure at worst.

## The Role of ADC

Because the ERP system represents an enterprise-wide solution, executives tend to expend resources on high-level applications, and often ignore the business processes where the most significant data entry really occurs—on the shop floor and in the warehouse. That's often a function of misunderstanding the role of automated data collection (ADC).

In the days of MRP/MRP II and surprisingly, even in some of today's most robust ERP systems, ADC has been mislabeled an "exotic" technology.

The alternative is ironic.

A visit to most warehouses or factory floors will more often than not reveal workers collecting data on clip boards, shop tickets or a variety of other paper-based methods before inputting the data to

the ERP system on a terminal. It's an archaic but persistent routine in applications like inventory management, time and attendance, shipping, receiving, picking, putaway, work-in-process: transactions throughout the supply chain. Why is it crucial for executives to keep these areas squarely in sight? Because data is typically collected there by hourly

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laborers, including assemblers, clerks and operators.

Research shows that manual data collection such as this tend to have one error with every 300 keystrokes. In a warehouse that processes 10,000 order lines each day with an average of 10 keystrokes per line, that's 333 data errors every day, or 17,000 data errors each year. Where does that erroneous data go? Straight into the ERP system. And straight to the hands of strategic decision makers.

### **ADC Integration: It's a Different World**

Acknowledging the importance of accurate and timely data in an ERP system is a good start, but is not enough. Rather, aligning decisions about ADC with an ERP implementation is equally important. To appreciate the significance of aligning the two, it's important to understand how ADC has evolved.

In concert with the evolution of MRP to ERP, the integration of ADC has undergone notable change. For starters, most MRP/MRP II systems didn't integrate ADC technologies. Instead,

their method for collecting data was through paper and keyboard. When they were used, attaching data collection scanners, printers and hand-held terminals to those systems was a fairly simple matter of emulating terminal characteristics and functions.

With the rise of ERP have come upgrades like a GUI (graphic user interface) for the end-user and Object-Oriented Technology (OOT) interfaces. For automated data collection systems, these technology advancements have an important effect. But, if not carefully planned for, they can present an interesting challenge to the smooth execution of an ERP implementation.

This occasional discrepancy between GUI functions and ground-level operational functions is a good example of the broader challenge to the implementation of ERP and ADC systems. In the world of GUI, dialog boxes, functions, or text requirements, the conversion of the graphical interface screen to traditional text-based is a real challenge. All too often, a simple data collection task in an Enterprise software application can require between three to eight screens to fill in a few relevant fields of data.

To maximize ADC, the software should distill those screens to provide prompts on data collection equipment that simplify and minimize that process of data entry. This doesn't happen just by purchasing the best data collection products. It's a combination of data collection systems that seamlessly integrate with the ERP system, as well as good operational processes.

## Aligning ERP and ADC Through GAP Analysis

To properly balance and align real-world business processes with ERP functionality, executives and ERP teams have to engage in an important process known as a "GAP Analysis." Gap Analysis is critical not only to determine the overall ERP implementation strategy, but to pinpoint the ADC requirements for the ERP system. The exercise forces thorough scrutiny of the processes used to collect and move mission critical company data to an ERP system.

In short, Gap Analysis is the evaluation of the functions provided by the ERP system compared to the operational processes necessary to run your business. The disconnect between software functions and operational process requirements is known as the "gap."

The gap requires executives and ERP teams to proactively take a few crucial steps: 1) examine a business process to match an ERP function; 2) enhance the business process to meet the needs of the desired ERP system outcome; 3) employ middleware to bridge the gap; 4) determine if it is necessary to add a custom bolt-on application for a critical function that the ERP system does not address.

While it's significant to the overall ERP implementation strategy, the GAP Analysis also forces companies to determine if their current processes make sense. The examination of a company's routine processes can serve to reveal substantial truths about what actually works and what doesn't. That's important, because a key rule in implementing any system, whether ADC or ERP is: "don't automate a bad process." In its simplest form, the Gap Analysis will point to areas in which business processes ought to be modified or to those that must remain intact.

## Conclusion

The concept of leveraging internal information to improve operational issues and achieve strategic goals is nothing new. But the tools for that effort have never been more robust. And the stakes have never been higher.

To not only survive, but to prosper in today's business context as global leaders, executives must correctly anticipate, adapt to and manage a diversity of shifting market dynamics. How? By seizing control of what has become the single most powerful resource in business in the 90's: information.

Complete, reliable, real-time control of accurate information from across the enterprise lies at the heart of ERP systems. But the success of those systems is predicated on the integrity of the data that goes into them. Plotting a course to the successful implementation of a robust ERP system in conjunction with a powerful ADC system can be an intricate but revealing process. And its rewards are manifold: increased productivity, enhanced customer satisfaction and greater profitability.

The right ADC system, then, is more than just a smart addition to ERP. It's a mandatory component. Because, without reliable data, every ERP system, no matter how robust, will be deficient at best, a failure at worst.

For executives making multi-million dollar decisions about their companies, the mandate is clear: align your data collection and ERP implementation decisions proactively.

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