

White Paper

REDUCE THE RISKS WHEN
DEPLOYING DATA COLLECTION
TECHNOLOGIES: OUTSOURCE
IMPLEMENTATION SERVICES

The prospect of implementing new data collection technologies such as batch bar coding, WLAN networks and RFID is not a pleasant one, especially if the technology is new to the client company. How can the client properly gauge the risks involved, or even identify them? Is the IT staff up to the task? Which technology is most appropriate, given the business model and expectations for ROI? Are all the contingencies covered? What are the “total costs” of the project including direct and indirect outlays?

Technology outpaces client IT staff knowledge and experience

Given the rapid change in new technologies—especially RFID and WLAN—the likelihood that the client’s IT staff is sufficiently knowledgeable to implement these systems entirely on its own diminishes with each passing day.

“Even in mature manufacturing environments the need to achieve interoperability of business and operating systems presents challenges to internal staffs. It is difficult to maintain their skill sets at the level required as integration needs evolve in complexity.”¹

Estimates indicate that even the simplest RFID project requires consideration of hundreds of thousands of variables, including all the useful combinations of read-rates, antenna arrays and antenna tuning, tag properties, tag programming, tag attachment, etc.

“With the rapid advances in software, changing business work processes, and shorting of the lifecycle of system and application capabilities, keeping the skills sets of internal technical staffs current is difficult and expensive. For companies that still maintain internal staffing, often these internal groups do not possess expertise for newer product or system offerings. Well over half (57%) of survey respondents use outsourcing for SI because of lack of required skill sets by internal staff.”²

Can the client make an objective decision about which technology to employ?

Before a company asks if it can perform data collection technology implementation in house, its management and IT staff should consider whether or not they should be doing the project at all. Is the client and its IT staff confident that they are able to judge the merits of the various data collection technologies relative to their operations, and choose the one (or the combination) that best meets the company’s business plan and ROI needs?

Consider the following scenario: The management team of a major warehousing operation is feeling a lot of pressure from the boardroom to “not miss the boat on this RFID thing.” The team scrambles for a solution, buys a ton of RFID equipment, installs it—with or without outside help—and discovers that their operation’s productivity does not increase, but actually goes down—dramatically. Was the equipment faulty? No. The company’s underlying business processes could not effectively be supported by RFID. The technology was not the best match—an important detail best determined before implementation—indeed, to be determined during or even before design phases.

To outsource or not?

As shown in Table One, below, the top two reasons for IT project failure are a) the technology didn’t work as expected when delivered; and b) even if the system did work, it didn’t match the requirements. A knowledgeable outside vendor that is interested in the client’s repeat business will have an objective opinion as to the appropriate data collection technology to implement.

**Table One:
The Reasons for IT Project Failure³**

1	Technology did not work
2	The system delivered did not meet the requirements
3	It met the requirements, but was late
4	It met the requirements, but these requirements had changed by the time it was delivered
5	The system worked but the users would not use it
6	It was used as intended, but did not produce the expected benefits
7	Benefits were obtained, but they no longer mattered to the business
8	Failure in business-change management
9	Other reason(s)

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Can the client's IT staff adequately cover all aspects of a technology deployment?

Let's assume the new technology chosen to support the client's business plan is appropriate to the business. And let's further assume that the client's staff can handle the mechanical aspects of the deployment and launch. Can the client's staff also provide all the necessary project management, the training (including change management), the documentation, ancillary application-related software development, and on-going support and maintenance of the system? Clearly, the potential for failure is high when an inadequately prepared, shorthanded in-house staff tries to go it alone.

Consider total costs in addition to the vendor's "price" for project completion

Although cost savings are assumed to flow naturally from in-house, "do-it-yourself" approaches, outsourcing provides the real returns. For the most part, client companies consider a project's up front costs when planning the IT budget. But what happens to the budget when an IT project is late, over allocation, or—perhaps worst of all—does not deliver on ROI? What about the long-term, indirect costs of a system that was improperly designed and installed? The cost of failure can easily outstrip the upfront price of outsourcing the appropriate implementation expertise. Consider all the costs to the business—direct and indirect—before implementing a technology project.

Deciding between using in-house or outsourced resources?

Implementing a simple add-on to the current system may not be much of a stretch for the "home team," but if the new technology is largely unfamiliar to the IT staff (and for RFID, that would include just about everyone, at this point), the associated risks must be carefully considered. Which of the following scenarios would characterize the client's organization if it deployed data collection technology with in-house resources today?

- Key staff diverted from core activities for the deployment duration—and possibly beyond
- IT staff on a steep, and perhaps insurmountable learning curve
- Requires extraordinary staff training, or even hiring requirements—perhaps long term
- A need for out-of-core-competency project management expertise
- Requires out-of-core-competency systems operation and maintenance expertise

The client should also consider the answers to these critical questions before deciding whether to outsource technology implementation or not.

Is there a high degree of confidence that

- the business problem(s) have been properly identified and defined?
- the technology chosen for deployment actually solves the business problem(s) identified?
- there is sufficient data to make a judgement?
- the judgement is objective?
- all the costs (not just the budget for project completion) have been calculated?

Getting it done right—the first time—is its own reward

In a February 2005 report (see Table One, above, extracted from that report) Gartner stated that the top three reasons why IT projects fail, as cited by users, are: a. the technology did not work; b. the system delivered did not meet the requirements; c. the system met the requirements, but was late. Failure to deliver the specified system by the due date was cited in 62 percent of projects.⁴

With an effective Service Level Agreement in place, client companies will avoid the most common reasons for project failure, as listed in Table One. Engaging a technology vendor that guarantees its implementation services eliminates “technology did not work” as a reason for failure.

A client often has more control over vendors than its own staff, and will have difficulty avoiding the “Met the requirements but was late” scenario. “The system worked but the users would not use it,” reason can be eliminated by providing the thorough, real-world based training available through experienced vendors. Finally, if a vendor with sufficient expertise is chosen, the “It was used as intended, but did not produce the expected benefits” result can be eliminated as well—provided that the project moves forward only if the appropriate technology can be identified. Look for a vendor with the integrity to recommend the best fit—even though the choice may not favor the vendor.

Choosing a technology implementation services provider

“Price alone is not a thorough evaluation of service providers; you need to perform a benefits analysis.”⁵

Working with outside implementation-service providers simplifies and accelerates technology deployment projects—from the initial decision making and project start-up on through to completion. Working with a well-established, knowledgeable supplier of these services also ensures access to technical expertise and the resources necessary to complete the job to specifications. This expertise helps customers avoid mistakes and duplication of efforts.

Peace of mind is included with the invoice from a vendor that understands the complexities of data collection, whether it’s in batch, WLAN, WWAN or RFID environments. Reputable vendors stand behind their implementation services, work with the customer until the system is operating to specifications, then provide service and support of the system and its components. Outside service professionals also provide an objective perspective of the project, and can serve as on-site educators for IT management and staff.

A professionally trained service consultant will determine if a technology change is warranted. This service can be of tremendous value, especially if the consultant has a broad understanding of the client’s business goals and limitations. Consultants also will know the appropriate questions to ask before recommending a technology, and will guide the customer in arriving at answers. Consultants should know the technology inside and out, but they also should have extensive knowledge of and experience within the client’s industry.

Based on a 2005 ARC Research study of IT professionals, “Product knowledge was selected as the top selection criteria by survey respondents. Other highly rated criteria were previous positive experience with an integrator candidate and vertical-industry knowledge.”⁶ Select a vendor whom you trust, keeping in mind that trust should be earned by the vendor’s experience and credentials. Price should not be the determining issue. If hiring an implementation consultant makes sense for your company, let the research and interviews begin. Each candidate’s abilities and qualifications in the following areas should be carefully considered, and, if necessary, questioned. Make potential vendors do their homework; you will be rewarded.

Does your technology implementation services provider have the following?

- Years of experience within your industry, your vertical, your application
- Other customers within your industry
- Other customers using your applications
- Expertise in the target technologies (such as WLAN and RFID)
- Financial stability
- Direct capability (as opposed to third-party dependencies)
- Capability where you need it. That is, can they deliver a uniform solution wherever the technology needs to be deployed?

Conclusion

Depending on the strength and capabilities of the client's IT staff, using a qualified and experienced outside supplier of IT implementation services can ease the pain of new technology deployments for data collection, and greatly improve the chances of bringing projects in on time and on or under budget. This is especially true for leading-edge technologies such as RFID and wireless LAN when IT staff has neither the experience nor the time to properly address the inherent issues and unanticipated problems that may arise. Quality, not price, should determine whether or not your company will outsource IT implementation, and with whom you place your company's trust.

A Word about Intermec Technologies—Automated Data Collection Pioneer

Intermec Technologies has been part of the development and advancement of RFID and wireless technology and implementation for data collection since the advent of those technologies. Intermec consultants and technicians have been implementing RFID data collection systems since 1999 and wireless networks since 1986. Known for its work in some of the largest and most complex wireless environments, and with field offices in all major markets around the world, Intermec Technologies Implementation Services staff provide the best in data technology deployment.

Annotations

1. "System Integrator Selection and Utilization Management", page 3; ARC Strategies (July, 2005); Russ Novak.
2. "System Integrator Selection and Utilization Management", page 6; ARC Strategies (July, 2005); Russ Novak.
3. "The User's View of Why IT Projects Fail", page 2, Gartner Research (February 4, 2005), ID Number: G00124846, David Flint.
4. "The User's View of Why IT Projects Fail", page 2, Gartner Research (February 4, 2005), ID Number: G00124846, David Flint.
5. "System Integrator Selection and Utilization Management", page 11; ARC Strategies (July, 2005); Russ Novak.
6. "System Integrator Selection and Utilization Management", page 12, ARC Strategies (July, 2005); Russ Novak.

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