

Building a business case of RFID White Paper



Radio Frequency Identification is a technology used to identify, track and locate assets. The vision that drives the developments at the Auto-ID Center is the universal unique identification of individual items. The unique number, called EPC (electronic product code) will be encoded in an inexpensive Radio Frequency Identification (RFID) tag. The EPC Network will also capture and make available (via Internet and for authorized requests) other information that pertains to a given item to authorized requestors.

The benefit of an EPC code is primarily derived from the ability to automatically pin-point the exact location of goods and documents anywhere within an extended enterprise. Such ability leads to the following benefits:

- Enhance supply-chain control. As the location of a part can be identified at every transfer point with accuracy, the whole supply-chain can be controlled with close to 100% accuracy.
- Security and authentication. A RFID tag can be written with an identifier chosen by the enterprise. This unique identifier can be used to authenticate a part or a document. The RFID technology also supports encryption and other security models so that a tag cannot be easily duplicated or forged.
- Enhanced customer service. The RFID technology can promote customer service by allowing faster check-outs, returns, and personalization of service.

While the vision of a unique EPC code for each item – a document or a product – in an organization is profound, most organizations choose to make an incremental progress towards such a vision as RFID is still an emerging technology in some aspects. Standards will change and costs of tags, readers will drive down. It is important that organizations develop a process to periodically revisit their analyses and decisions based on new developments, as well as the means to capture knowledge gained during analysis and trials. The key steps in building the business case are described below.

Team Building. Organizations must recognize that adopting and deploying RFID technologies affect more than the IT department. Virtually all parts of the organization could be impacted, as well as suppliers and customers. Accordingly, organizations need to build their teams to include all stakeholders. C-level participation is mandatory, because a failed RFID implementation has the potential to disrupt supplier or customer relationships and may risk an organization's brand itself.

Learning. This is a key component of the RFID strategy and is an ongoing program, particularly because technology and standards are changing rapidly,

and affecting the ways in which RFID can be used. An RFID education plan should include not only the basics of the technology (e.g., components, terminology, uses) to establish a common understanding, but also training on aspects of privacy and consumer perception.

Evaluate Benefits, Business Drivers, and Prioritize. This exercise helps to prioritize the scenarios in preparation for selecting the most promising for the final business cases. RFID scenarios may differ in their benefits (e.g., visibility, control, customer service). Each opportunity should be linked to a business driver (e.g., price, cost, customer satisfaction, product performance) that is measurable and contributes to the organization's mission (e.g., low-cost leader, innovator, customer intimacy). ROI is just one consideration in the go/no-go decision. Evaluating an RFID deployment based solely on ROI is limiting, at best, and ignores the greater contribution to the organization's mission.

Identify Candidates and Analyze. With scenarios prioritized based on their contribution to corporate value, it is time to analyze them with respect to feasibility and cost. The feasibility analysis examines what is achievable from technology, process, and organizational standpoints, while the cost analysis examines current and future costs based on market trends and economies of scale. ROI is also included in this step, but it is very important that organizations differentiate between investments that are run the business, grow the business and transform the business, because investments in these categories are managed differently. Applying Run the business investment management principles (e.g., reducing costs) to a transform the business investment - where the venture is high risk/high reward - could kill an organization's strategic advantage. Not every RFID project will have (or must have) a short payback period or high ROI.

Examine Financial Impact. This step moves beyond cost analysis and studies the quantitative benefits from the scenario. Cost reduction (e.g., from inventory optimization), cost avoidance (e.g., from improved maintenance processes), revenue increases (e.g., from fewer stock-outs), operational efficiencies (e.g., from streamlined production processes) all contribute to the financial impact. For scenarios that involve trading partners (suppliers or customers), this analysis can become cumbersome and, if not done correctly, can obscure the real benefits. Organizations should consider using specific tools for this analysis.

Create the Roadmap. The roadmap incorporates the results of the completed analyses into a proposed plan of action. This is a high-level program plan that sequences the most suitable implementations, taking into account the priorities, the resources needed, the investment plan, and partner timing. At this point, milestones and key metrics should be defined and plans made to measure and act on the information. This completes the business-case phase and sets the stage for the project phase.

Bottom Line: Most companies are focused on comparing the costs of tags and readers to the costs of bar codes. But to appreciate the business case and return on investment for RFID, companies must look beyond that narrow focus, beyond the initial infrastructure costs and beyond the benefits from a single application. Companies have to look at the overall application scenarios and business processes. The benefits should be studied quantitatively and qualitatively; they can be measured in terms of familiar variables, such as increased safety, increased worker productivity, reduced headcount, improved data accuracy, reduced losses, improved security, improved decision making, and improved customer satisfaction.

Business Impact: Organizations that develop a strategic plan for deployment of RFID technology are poised to gain competitive advantage as the technology matures and new applications arise.

RFID4U is the partner of choice for suppliers of Wal-Mart, Best Buy, Albertsons, and the Department of Defense, among others. Headquartered in California, RFID4U has assembled a full curriculum of courses to help companies and individuals align technology with business objectives. Vendor-neutral classroom courses, online e-courses, customized on-site trainings, and vendor-authorized courses allow each professional to choose the training that best suits his or her schedule, budget, learning style, and skill level. All courses are taught by senior RFID practitioners/trainers with practicality in mind, offering the techniques and tips that ensure rapid RFID evaluation and deployment. Classes are highly interactive, and participants receive individual attention as well as follow-up assistance in applying the new skills in the real world. RFID4U is a cornerstone member of the CompTIA's Advisory Committee for RFID Certification, EPCglobal member, Microsoft RFID Council member as well as TI Tag-it member.