

Five Fatal RFID Project Mistakes to Avoid

or

RFID Lessons from the Field

Since you're reading this blog and, if you're not an RFID professional, it's likely your company is considering RFID technology to address a business problem. You've probably researched the marketplace on the internet, conducted some conference calls with various vendors and perhaps watched an RFID software demo or two. And now you're wondering if RFID is advanced to the point where you can solve some of your company's asset tracking and inventory management inefficiencies.

Knowledge alone, however, does not ensure a successful RFID implementation. Some lessons on what works best can only be achieved through experience in the field overcoming mistakes, faulty hardware, tags or just bad luck (e.g. COVID 19).

We've identified through personal experience in multiple RFID projects Five Fatal RFID Mistakes that can be anticipated and eliminated. Here we go....

Fatal Mistake Number 1: Skipping the Site Survey

Most RFID projects begin with several conference calls and the exchange of emails. Project scope and objectives are discussed, documents and maybe a video or two are exchanged. Larger organizations tend to do their in-house data gathering about possible RFID technology partners, issue a Request for Information and pare down the list of possible vendors to send out a Request for Proposal. You know the process...finally, a winner is declared and a contract awarded. No matter what the actual procedures for the beginning of a project turn out to be, a documented, paid-for site survey by an experienced RFID engineer, in our opinion, is a never-to-be missed milestone. An alternative approach is to include the Site Survey and related pricing in the initial vendor proposal and to perform that step as one of the first actions after a PO is issued.

Failed projects, in our experience, often have the Site Survey step poorly done or missing altogether. We recommend that a spectrum analysis to accurately document the power and location of known and unknown RF signals in the area(s) be included in the Site Survey. The resulting Site Survey Report will outline the specific RFID components and services necessary to satisfy the business requirements. Further, being on-site with customer personnel allows for accurate measurement for the location of fixed readers and general discussions about customer processes and RFID expectations. There is no substitute for face-to-face meetings to

get the facts straight and begin to build trusted working relationships between Project Team members.

Fatal Mistake Number 2: Failure to Create an RFID Project Plan

From the smallest to the largest RFID project...**CREATE A PROJECT PLAN**. A Project Plan document establishes such items as...

- Project Activities
- Project Schedule
- Project Deliverables
- Project Task Assignments
- Project Personnel Training
- Project Adjustments to the Original Plan

If you want your project to finish on-time and under budget, don't neglect this step. In fact, one of the most common characteristics we find in unsuccessful RFID projects is the lack of or the failure to follow an established Project Plan. For an example of a basic Project Plan that you can download free from our website, see <https://www.dataspan.com/specialties/rfid-active-passive-consulting-design-services/>.

Fatal Mistake Number 3: Infrequent Stakeholder Contact

We call this a sure "Kiss Of Death" omission when key project team members are not regularly talking with or sending emails/texts between RFID Project Team members on various project issues. Sometimes RFID projects go off the rails due to unforeseen problems such as component delivery delays or a key technical person is sick or out of town. There will always be a challenge or two to overcome and one of the best ways to survive these situations is to set up and maintain regular communications with ALL THE STAKEHOLDERS. We recommend a weekly update with the entire team of designated vendor and client project personnel on the same day and time each week. During the call, the Project Manager displays online the aforementioned Project Plan with any new updates since the previous week's call. Deadlines and various activities are discussed with all personnel and the Plan is adjusted on-the-spot as appropriate. This weekly call builds Project Team trust between members that is critical when trying to work out joint solutions to unforeseen project difficulties.

Fatal Mistake Number 4: Lack of Talented & Dedicated RFID Personnel

RFID and IT technical projects are very similar in one respect. The better trained, certified and experienced technical personnel on your team...the easier it is to tackle and successfully complete an RFID project on schedule. The vendor team has an experienced technical member who can dig into the details of what tags and what readers will perform best for the client's environment and applications. It's not uncommon for large projects to require several different

tag types (e.g. passive, active, metal mount, sizes, sensors, etc.). Therefore, a technical expert on the Vendor Team will need to assess those requirements properly along with the appropriate mobile or fixed readers. RFID data integration to a client's legacy back-end system will often require expertise in networks, database design or in-depth knowledge of an ERP or ITSM system from any of a number of providers. Both the client and the software/integration vendor will need to work together closely to meet the established schedules.

Fatal Mistake Number 5 – Letting RFID Performance History Influence Your Next Steps

The early years of RFID performance were overhyped as the technology was not yet ready for "prime time". Several companies followed Walmart's lead in 2003 and began testing the RFID tags and readers of that era. They generally found that tag cost, tag read range and reader sensitivity did not meet expectations.

However, by 2015, the Gen 2 update to the EPC standard was introduced and RFID component costs began to lower. Readers were brought to market that were much more sensitive, providing increased read rates of about 1,200 tags per second and listing approximately at ½ their 2010 cost. Passive tags with new advanced antenna design have smaller footprints and can be printed on-site and are readily available with metal mount versions. Passive sensor tags are also now accessible to detect a large variety of environmental conditions such as temperature, humidity and moisture changes.

RFID technology is now ready to cost-effectively tackle a wide variety of applications with vastly improved performance, reliability, and selection options...and all of it compliant with the ISO 18000-6C international standard.

Don't make the fatal mistake of not attacking your asset tracking and inventory applications with RFID. Finally, the RFID 2021 technology has caught up with business expectations and will meet or exceed your needs.

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