



“RFgen has eliminated waste in data collection and improved information flow complementing our Lean Manufacturing initiative, bringing us one step closer to a true ‘perfect’ plant. RFgen has provided transparency across the organization including efficiency, utilization, quality, and late order alerts.”

DAVID KELLY | BUSINESS ANALYST

## Madix

*Successful manufacturer of retail displays uses RFgen Mobile Data Collection to improve inventory accuracy and implement real-time production monitoring.*

### At a glance...

**Industry**  
Manufacturing

**Application**  
Inventory Control

**Environment**  
SAP

In the highly competitive retail industry, sales success does not come from great products alone—it’s equally important to display those products effectively in the store. That’s the specialty of Terrell, Texas-based manufacturer, Madix. With three state-of-the-art manufacturing facilities in Texas and Alabama, Madix develops and produces display fixtures and racks for leading retailers within a range of industries including grocery stores, home improvement stores and general merchandise stores. Madix has maintained continuous growth and has expanded its facilities to include over 2.4 million square feet of manufacturing and storage space.

### The Challenge

Like any successful organization, the professionals at Madix set goals to improve operational efficiency and effectiveness. Last year, the entire upper management team set a “wildly important goal” to increase overall inventory accuracy in all three manufacturing facilities.

The Madix team would be responsible for achieving better inventory accuracy from the systems side. The right solution would need to work with the Madix SAP enterprise resource planning system. Employees would need to be able to update inventory information in real time from anywhere within the company’s three massive manufacturing facilities.

SAP Support Manager Gary Jones recalls, “The whole company focused on achieving the goal of having more accurate inventory. To do it, we deployed wireless scanning technology in our warehouses and production facilities and implemented mobile data collection by RFgen.”

### The Solution

RFgen is a mobile and wireless data collection framework that helps Madix capture key information about inventory and production, eliminating paperwork throughout its manufacturing operation and improving information accuracy. As employees move material around the plant, they scan it quickly and the information is collected by RFgen and sent to SAP.

The Madix team selected RFgen because the company is a certified SAP partner and the solution met their key criteria at a lower total cost of ownership than other software options. The technical consultants at RFgen Software were able to meet very tight deployment deadlines to have the system up and running quickly. Gaining the ability to modify transactions in-house was an added bonus—all RFgen applications use drag and drop technology to quickly develop fully functioning mobile applications. Further, RFgen’s embedded VBA/.NET scripting framework enables developers to step outside of the box and rapidly achieve professional grade results with only a small investment in training.

RFgen comes standard with prebuilt inventory, order management, purchasing, manufacturing, and plant maintenance transactions. Soon after implementing RFgen to improve inventory accuracy, it became evident that the solution could help Madix drive much greater efficiencies. Managers in the production facilities wanted status information for individual employees and jobs. Upper management requested real-time insight into operations as well.

“Our project actually evolved into something a lot bigger. Beyond inventory, we wanted to know where product was at any given time,” said Jones.

Business analyst David Kelly described the process for monitoring production before RFgen: “We had something set up that we called the ‘dog track’. It was a big magnetic board and our Shop Floor Controller had to physically walk around to each machine and collect paper tickets from the operators. As tasks were finished, the controller moved the magnet on the dog track.”

“This created lots of problems. First, it was manual, so human error was a big factor. Sometimes machine operators didn’t fill out their tickets. Lastly, the board was difficult to read. Obviously, none of the information was available to other parts of the business,” he acknowledged.

Jones added, “Quantities on hand in the system during the day were never accurate because of the delay in time. With so much paperwork, there was no real accountability.”

### The Result

Because RFgen updates inventory in SAP in real time, inventory managers can identify material depletions sooner and restock before production is impacted. Materials are tracked from location to location in the warehouse and manufacturing floor with minimal effort.

Approximately 600 employees at Madix use RFgen. The interface is easy to learn and use. It takes just one click to start a job and no more than three to complete a job. All three plants run in multiple shifts and with RFgen, employees complete their now paperless “paperwork” before the next shift arrives. Employees on the shop floor can use the scanning guns much faster than filling out paper.

Key information about every manufacturing job is captured on the shop floor using RFgen and leveraged so that everyone can benefit from a real-time production environment. Now all of the information that used to be on the dog track can be seen in live live snap shots displayed on about 30 monitors located on the manufacturing floor in each department so employees and managers can see status.

The Madix live production snap shot lets managers see:

- How many employees are on the shop floor.
- How many of them are actively working on a job.
- The total number of jobs in process.
- When a job was started and when it should finish.
- How many jobs are running on time versus behind schedule.
- The stage of the process each job is in.
- The identity and shift of the operator working on each job.
- The type of job being performed.
- The machine being used for each job.
- The order that the operator is working on the input material.

When each job is finished, RFgen writes all of the data collected to a different database for further analysis, so managers can go back and review analytics about past employee utilization, on-time percentage of jobs, and efficiency.

“We have a lot of visibility now out there on the plant floor. We can see how long jobs are taking. If we see that the same job can be completed more quickly by one employee than another, we can try to figure out why. RFgen provided the tool for analyzing that data and our own analysts and programmers are developing it further as we go along,” explained Jones.



“Now, with the information collected by RFgen, our managers can see employee utilization. They can see how many jobs are running and avoid any being past due. If jobs are running late, managers can get alerts,” added Kelly. In the future, the team at Madix is planning at least five enhancements for RFgen to leverage the solution for additional efficiencies. They want to make real-time production information from RFgen accessible through a web portal so managers can view it anywhere, and have already extended it to Apple® iPads® for a few managers and executives.

Kelly concluded, “Today, management and support is informed about any activity in any plant across the organization whether in the office, on the shop floor, or at home.”

### About RFgen Software

Incorporated in 1995, California-based RFgen Software provides flexible and reliable mobile supply chain solutions that solve real-world business challenges. As a certified Oracle, SAP, Microsoft, Deltek and Vocollect partner, RFgen actively seeks companies facing challenges managing their internal supply chain operations and solves them using real-world experience, industry best practices, and state-of-the-art technology. RFgen’s Mobile Framework division specializes in development tools for mobile, wireless and voice environments and provides open standards based connectivity to a multitude of systems (database, SOA, legacy, etc.). RFgen’s ERP Integration division focuses on providing certified, open-source transactions and integration expertise for Oracle E-Business Suite, Oracle JD Edwards, SAP, Deltek Costpoint and Microsoft Dynamics solutions.

RFgen’s Mobile Framework is an open systems development platform that speeds the path from idea, to proof-of-concept, to solution deployment. RFgen provides built-in, native functionality for extending real-time and on-demand access to enterprise data to almost any mobile device available today. RFgen’s Mobile Solutions are currently installed in more than 35 countries, in over 2,600 locations, and are supported by a certified group of over 125 solution partners.

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