Grupo Cementos de Chihuahua

RFgen

OVERVIEW

Global leader in the manufacturing of cement and concrete for the construction industry scales mobility solution for SAP S/4HANA across North America.

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the full case study

SNAPSHOT

INDUSTRY:
Construction, Building
Materials, Mining

ENVIRONMENT:
SAP S/4HANA

APPLICATIONS:
- Inventory Management
- Plant Maintenance
- Mobile App
  Development

CHALLENGES

1. Inaccurate, outdated spare parts inventory data due to opaque manual paper processes

2. High working capital expenditures from overstocking inventory to anticipate shortages

3. Upgrading to SAP S/4HANA with integrated supply chain mobility platform

GOALS ACHIEVED

1. Eliminated paper tracking by digitally automating spare parts inventory control

2. Mobilized SAP ERP using zero footprint RFgen ecosystem

3. Reduced on-hand inventory 10%+, freeing additional working capital

4. Preserved RFgen integration through SAP upgrade to S/4HANA

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> – Eduardo Lozano, Procurement Planning and Control Manager, Grupo Cementos de Chihuahua

THE CHALLENGE

Grupo Cementos de Chihuahua is a vertically integrated cement company headquartered in Chihuahua, Mexico that both manufactures and distributes cement and concrete products for the construction industry. As a large enterprise operation with facilities spread throughout Latin and North America and experiencing rapid growth, Grupo Cementos faced major challenges in managing spare parts inventory for maintenance, repair and operations (MRO). These spare parts are used in dozens of locations and include manufacturing plants for cement and concrete, several distribution centers, building materials locations and a coal mine.

Spare parts inventory movements were recorded by hand, causing discrepancies between what mechanics wrote down and what was entered into the system, creating inaccurate consumption and inventory reporting. Workers could inadvertently record a wrong part number, unit of measure or wrong description, which may then be misread and entered incorrectly by another worker when that data was keyed into the system.

To compensate for these discrepancies, the warehouse was forced to stock more parts to prevent shortages—a major challenge not just for Grupo Cementos, but for their entire industry.

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Eduardo Lozano, procurement planning and control manager for Grupo Cementos, was tasked with finding a solution to this problem, and to ultimately gain tighter control over their working capital and inventory movements.

"Spare parts inventories represent a considerable investment at the cement plants, so reducing inventories and keeping control over what we maintain is fundamental," states Lozano.

He set out to find a solution that integrated with their SAP ERP system that would not only solve current challenges but support scalability across multiple business types in order to solve potential future challenges as well.

THE SOLUTION

After researching several possible solutions to their inventory challenges, Lozano was able to build a strong business case for adopting RFgen Mobile Foundations for SAP, a supply chain mobility eco-system featuring a suite of pre-built, pre-validated mobile apps.

"We searched for an option that worked with SAP," explains Lozano. "But if we worked with another solution, we would need ABAP development to make adjustments in SAP. What we liked about RFgen was how well it connects to SAP using the existing ABAP and BAPI connections, which is not so intrusive—a strong point in RFgen."

As the lead on the project, Lozano worked with Marco Sanchez, IT change management specialist at Grupo Cementos, to implement RFgen in all of their spare parts warehouses distributed across different types of facilities, including cement and concrete plants and mining operations.

Their new RFgen solution enabled the company to receive, track and issue MRO inventory in an "open warehouse" setting so that internal customers can auto-

dispatch, create work orders and locate spare parts as-needed. Inventory can be issued to cost center, reservation, work order, production order, asset number or project. In addition, storeroom teams would be able to receive spare parts, execute cycle counts, change bin locations and perform other inquiries as well.

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Some of the more specialized mobile apps Grupos Cementos needed were developed by the team at RFgen Software to complete the implementation. These apps proved so useful that they were added to the standard RFgen open source app offering.

THE RESULTS

Both Lozano's and the RFgen Software teams worked together to successfully implement RFgen Mobile Foundations for SAP at Grupo Cementos. The new RFgen solution enabled Grupo Cementos to gain real-time mobile inventory tracking and visibility with perfect accuracy for every spare parts warehouse in their organization for plant maintenance (MRO).

Some of the additional benefits of their new mobile inventory management software include:

Elimination of Paper Processes

RFgen helped Grupo Cementos eliminate manual inventory tracking using paper processes, fulfilling one of their primary objectives.

Prior to RFgen, the warehouse team documented inventory transactions on paper issue sheets. Mechanics filled out columns for material numbers, description, quantity, work order or cost center by hand—if at all. By the time these handwritten sheets were interpreted by another worker and input into the database, there was little or no connection between what was written down and what was physically on the shelf. Issue sheets could be difficult to read, had discrepancies or incorrect data in various columns, or had no data at all, leaving the team with no idea what their actual levels of physical inventory were.

"Sometimes they have greasy hands or are doing everything with gloves, or they didn't take the time to write things down because they considered it a waste of time," says Lozano.

Automating inventory transactions using RFgen digitized paper-based processes, eliminating these issues entirely.

Real-time Inventory Movement

"Executing the transaction on-site and being able to operate at the yards or remote locations gives us more mobility when

performing warehouse activities," explains Lozano.

Using RFgen for MRO control, workers can store, move and issue parts, look up inventory data, perform cycle counts and print labels directly from mobile devices at the point of work.

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RFgen mobile apps create the ability to transact inventory against the SAP system as and where transactions take place, eliminating the lag time between when work is completed and when the ERP's database is updated. This allows the Grupo Cementos team to operate and save vast quantities of time in conducting daily inventory activities, increase the speed of their warehouse transactions into real time, and reduce the discrepancies between the system's inventory data and the actual inventory on the shelf.

RFgen also helped the Grupo Cementos team reduce cycle count discrepancies by 20% in the first year.

Reduced Stock Levels by 15%, Safety Stock by 50%

The ability to see exact, accurate quantities for each spare part in each location at any given time enabled Grupo Cementos to reduce on-hand inventories that had been overstocked to prevent shortages. Reducing safety stock freed additional working capital, which could then be reallocated to other more important areas of the business.

Lozano explains: "What we found is that instead of maintaining 20 pieces of the same part, we were able to reduce that number to 10 because the system is more accurate. After a year, we were able to do a full analysis. We reduced stock levels for spare parts by 10-15%, as well as 'Out of Stock' parts by 10%."

Seamless Upgrade to SAP S/4HANA

In 2019, Grupo Cementos made the decision to upgrade their SAP system to S/4HANA to take advantage of its next-gen ERP capabilities. As only the second organization in Latin American to make the upgrade to S/4HANA, Lozano and Sanchez were concerned about its impact to the RFgen environment.

"From the SAP side, [the S/4HANA upgrade] was a huge process," recalls Lozano. "Marco Sanchez contacted RFgen support at the beginning to be sure it was compatible, to

see if everything was going to work. Then we went live." Since RFgen does not install in the SAP environment, Grupo Cementos' instance required only one form edit to continue communicating with SAP—due to SAP changing its handling of the field on the backend. Otherwise, RFgen continued working seamlessly.

"Overall, it was successful. The process is working. We are still able to sell concrete, produce cement and place work orders," says Lozano.

Simple, Fast and Flexible: An Excellent User Experience

Users at Grupo Cementos love RFgen's simplicity, flexibility, ease-of-use and custom development.

Lozano and his team cited the simplicity of the forms as one of RFgen's top features. "Having to scan and hit enter [a validation step] on only two or three data fields has made

things easier for our internal customers," says Lozano. He goes on to describe how simple it is to use RFgen: "[After] a quick login, you select the action to perform and just scan the part and type the quantity—it's way easier than using the SAP front-end. They like how it moves, how you access through the forms, how you see the quantity available, and how you see the descriptions."

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Users enjoy using RFgen on handheld barcode scanners as well. Lozano explains: "Something we discovered—especially with the younger guys, who are very savvy with smartphones and computers—when we gave them the handhelds, it was like a toy for them. So, it was pretty easy for them to start using the handheld scanners to select spare parts."

Rapid Mobile App Modification and Creation with Mobile Development Studio

One of the core features Lozano's team enjoyed was the Mobile Development Studio, a low-code mobile app development platform (MADP) with partially pre-built, pre-validated mobile supply chain apps based on modern design concepts to accelerate and shorten the entire development process.

Using the Mobile Development Studio, RFgen reveals its true flexibility. RFgen apps can be customized to fulfill nearly any supply chain transaction without a highly-trained developer. Even business analysts and junior programmers can rapidly build mobile supply chain apps using visual drag-and-drop elements.

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"It's surprisingly easy to use, even for guys like me that are not very literate in how to code," says Lozano. "The ease of use for forms, how you can configure them, re-arrange fields, etc.—it's pretty intuitive. For example, when we were implementing the solution, we wanted people from Plant A to only be able to configure RFgen for their plant, and people from Plant B to have specific default information attached to their user. It was easy for us to add those configurations and lines in the program to identify which user belongs to which plant. By doing that, we added extra value and an extra time savings for the user."

Unlike SAP's Fiori, RFgen transactions do not need to be configured from scratch because the core functionality is already pre-built for supply chain tasks. This makes mobile apps developed in RFgen more plug-and-play, easily transacting against SAP with less configuration and no third-party development costs. Mobile Development Studio enabled Grupo Cementos to become self-sufficient in modifying, tweaking and developing mobile apps with ease.

"Everything was pre-configured and made in the code. It was easy to use," explains Lozano. "When we acquired S/4HANA, Fiori came in the bundle but it's not as easy as plug-and-play. Fiori is more complex, requiring specific people with knowledge of ABAP. It's definitely not as easy as RFgen to configure."

Training: Easy to Learn and Scale

RFgen proved so user-friendly, easy to teach and intuitive to learn that Grupo Cementos didn't require RFgen staff to help roll out the solution at additional sites. End users were not the only employees to benefit. IT

RFgen

personnel also like how easy RFgen is to configure.

The implementation team went to each plant to train end users into "champions," usually inventory administrators, who would then train additional users at their respective sites. Training new users was a short process.

Lozano explains: "Every time a new user is required to use the system, we use a 'hands-on' methodology during training, requiring them to pick something from the warehouse. Because the system is very intuitive, usually they are ready to go on their own after two or three visits to the warehouse."

CONCLUSION

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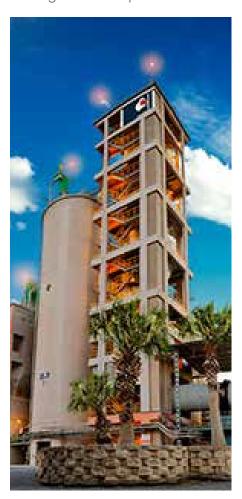> All expectations have been fulfilled or better.
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After the implementation was completed, Lozano concluded that "all expectations have been fulfilled or better." The Grupo Cementos team felt the RFgen solution was "definitely worthwhile."

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When asked about the biggest highlight of implementation for Lozano, he remarked "How easy everything is to configure. The coding is not complicated."

LOOKING AHEAD

Grupo Cementos continues to develop and expand their use of RFgen across the enterprise. Their biggest priority moving forward is to continue scaling RFgen to more locations. Next, they are exploring additional functionality in mining production, maintenance, warehouses and distribution centers.

RFgen Mobile Foundations for SAP offers a vast amount of capabilities, only some of which Lozano's team have begun to explore.

Future plans include equipping workers with iPhones, integrating batch mode functionality to automate field operations, and mobile apps for mining inspection, MRO mobile maintenance and plant maintenance work order creation. Lozano's team also plans to extend RFgen "underground" into mining operations as well.

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ABOUT GRUPO CEMENTOS

Grupo Cementos de Chihuahua (GCC) is a global leader in cement and concrete for the construction industry with a focus on sustainability and innovation. Founded in 1941, Grupo Cementos is a vertically integrated controlling company with operations in Mexico, the United States and Canada with subsidiaries devoted to the producing and selling of gray Portland cement, mortar, ready-mix concrete, aggregates, concrete blocks, plaster and other construction materials.