

LEADING MEXICO RAIL OPERATOR MOBILIZES SMART LOGISTICS SYSTEMS WITH XPLORE RUGGED TABLETS

PROVEN TABLET PC TECHNOLOGIES PROVIDE
PERFECT PLATFORM FOR IMPLEMENTATION OF
AWARD-WINNING BUSINESS APPLICATIONS



F5 IS IDEAL TABLET PLATFORM

“The Motion F5 by Xplore rugged tablet has proven to be the ideal platform for our development and execution of smart logistics systems under “zero distance” philosophy”

Rubén Castillo Santistebe
— CIO, Ferrovale



Company **Ferrovale**
Industry **Transportation - Rail**
Location **México**

BACKGROUND

Ferrovale is a railroad and intermodal operator that receives and delivers an average of 20,000 trains and more than 1,000,000 railcars per year. Services include switching, terminal switching, origin switching, intermodal operations and other services within 200 hectares (494.2 acres) in operative yards for Mexico’s three line-haul carriers. Each — Ferrocarril Mexicano S.A. de C.V. (Ferromex), Ferrosur S.A. de C.V., and Kansas City Southern de México S.A. de C.V. (KCSM) — has a 25 percent stake in the Ferrocarril y Terminal del Valle de México. The government holds the remaining 25 percent in the terminal.

Ferrovale also owns Mexico’s largest intermodal facility, which has an annual capacity of approximately 450,000 containers as of 2015. Ferrovale Intermodal offers other services such as logistics, transload, warehousing, customs brokerage, recognition of merchandise and a host of other support services.

In recent years, the Ferrovale IT team led by Ruben Castillo Santistebe developed an additional niche. A 26-person IT unit develops, deploys and maintains most of Ferrovale’s software applications and hardware integrations in house. Under its “Zero Distance” philosophy Ferrovale uses a balanced scorecard methodology to deliver real-time information to its clients regarding every business perspective. In fact, InformationWeek México in 2012 and 2013 ranked Ferrovale respectively as first and fifth among Mexico’s 50 most innovative companies, and GE honored them a Fast Track Award in 2013, 2014, and 2016. Rubén Castillo Santistebe was also designated as one of the top ten leaders in the CIO100 awards by PC World México in 2014 and 2015.

CHALLENGE

Deliver Real-Time Data from Field across Railroad Operation to Clients, Replacing Pen & Paper

To an extent, Ferrovaille's IT Teamwork has been pushing the technology envelope and driving incremental innovation efforts ever since the Ferrocarril y Terminal del Valle de México and Ferrovaille Intermodal facilities were privatized in 1998. Software applications developed in house - such as the web-based container tracking Logistic Intermodal System first implemented in 2005 - are upgraded every year per Ferrovaille's CIO Ruben Castillo Santistebe. But in 2010, Ferrovaille recognized an increased need to share information "from the black box to the glass box" in real time to provide total transparency to clients.

With pen and paper processes still dominating most of their data systems, Ferrovaille sought a truly mobile computing solution that was safe to use in the terminal, the intermodal facility, and even on its locomotives on all routes. Ferrovaille aimed for a "zero distance" solution that would allow them to perform their duties at the scene, while en route to the next call, or at the station.

SOLUTION

Ferrovaille-developed Software to Run on Motion F5 by Xplore Rugged Tablets

Ferrovaille began testing tablet PCs in 2010 and did an exhaustive analysis (led by Hector Lopez Velazquez, its IT infrastructure expert) of the most durable options in the industry. They selected the Motion F5 by Xplore rugged tablet for many reasons. The F5 rugged tablet features a touch-enabled ViewAnywhere[®] Display, a removable battery, and rugged pens for data capture while walking and working. Plus, the F5 can be easily carried throughout Ferrovaille's terminal and intermodal facilities using the molded handle, shoulder strap or tablet-back hand strap. It can also be securely mounted in the locomotives and cranes for around-the-clock access while workers are on the move. The F5 provides a truly mobile, and full computing, solution for every member of Ferrovaille's workforce.

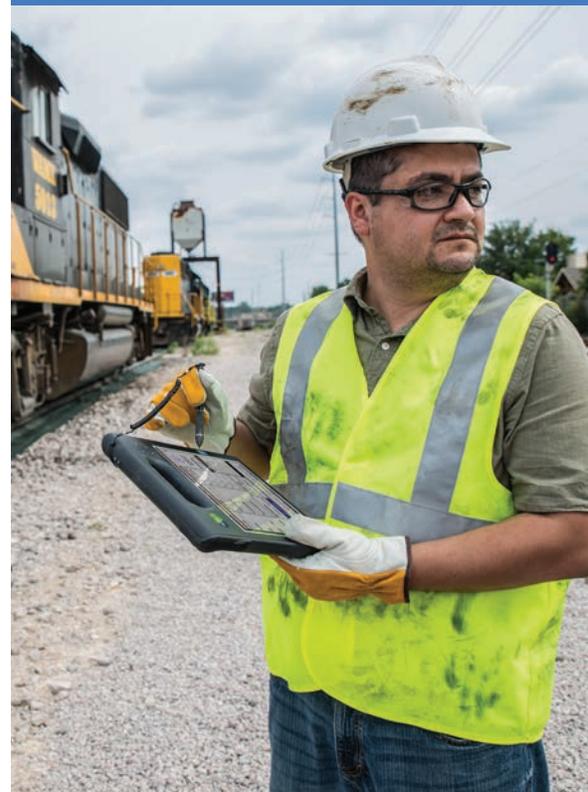
BENEFITS

Rugged reliability in extreme outdoor and railroad environments

Consistent and real-time data access across the entire operation

Ease of integration with business applications developed in-house

Flexibility to adapt and expand business systems on the same rugged tablet technology platform in response to new customer & business requirements





Ferrovalle was also impressed by the overall rugged durability of the Motion F5 by Xplore tablet PC. With its IP54 rating, shatter-resistant Gorilla® Glass, and MIL-STD-810G certification, the F5 rugged tablet proved resistant against the frequent vibrations, drops, shocks, extreme temperature variances, and corrosive elements it was exposed to during daily operations.

However, the primary reason Ferrovalle invested in the Motion F5 by Xplore rugged tablet was its proven and consistent delivery of real-time data access in all of the company's operating environments. The logistics software that Ferrovalle developed internally to drive its intermodal logistics systems, logistics services, and traffic control center. That's because Xplore rugged tablets were both backwards-compatible and future-ready, able to interface with other smart devices, geolocation applications, and the Internet of Things.

"The Motion F5 by Xplore rugged tablet has proven to be the ideal platform for our development and execution of smart logistics systems under a "zero distance" philosophy," explained Rubén Castillo Santistebe, Ferrovalle.

Upon the completion of its extensive field testing in 2010, crane operators in the terminal's intermodal yard immediately began using the Wi-Fi-enabled F5 rugged tablets to track containers in real time. By the first year's end, each of Ferrovalle's 31 locomotive cabs was equipped with Motion by Xplore rugged tablets as well. Over the next five years, both the F5 and Motion R12 by Xplore rugged tablet models were introduced into Ferrovalle's operations. Intermodal yard technicians, train operators, and crane operators are still using the two Xplore rugged tablet platforms (F5 and R12) for container tracking, damage inspection, delivery and shipping, and work order completion.

As of 2015, Ferrovalle had completely replaced their paper-based systems with a combination of Xplore mobile and fixed computing solutions across their entire rail operation.

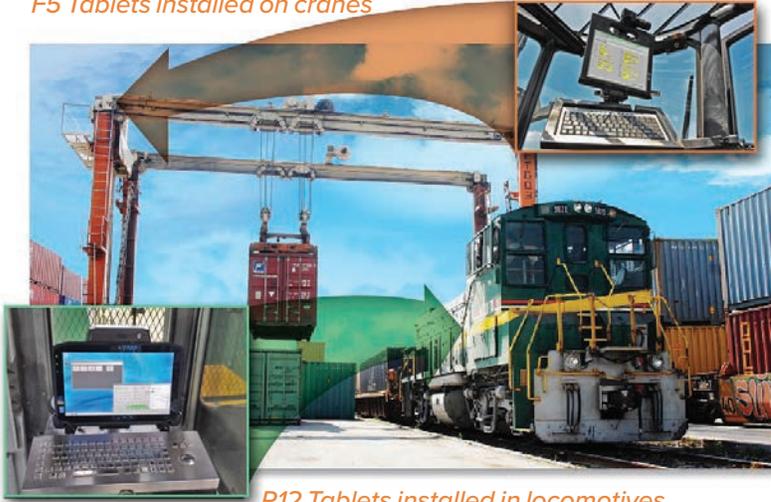
"The flexible mounting options offered by Xplore allowed us to confidently equip every train cabin and intermodal crane lift with rugged tablets. The F5 is used 24/7 in the yards and operates in extreme conditions – heat, cold, rain, and sun – tracking thousands of containers a day. As a result, the rugged tablets have served as powerful and effective 'zero distance' tools in the transfer of real-time data from the field to each business unit, and even to customers seeking real-time tracking of their goods."

RESULTS

Rugged Tablet PC Performance and Constant Connectivity Pay Dividends

Ferrovalle saved more than 5 million pesos within the first year of implementing the new Xplore rugged tablet-based systems. At the same time, the company increased revenues in their receiving, storage, and merchandise warehousing operations, achieving nearly a 40 percent increase in comprehensive income during those 12 months. Additional cost savings were achieved as productivity increased and crews could access up-to-the-minute data from a multitude of systems, whether they were

F5 Tablets installed on cranes



R12 Tablets installed in locomotives

in the yard, inside train cabins, or operating a crane. Employees could immediately access and complete checklists and provide container status updates, including damage reports.

“Ferrovale’s employees are much more focused now that they have the Xplore rugged tablets to support their daily tasks,” Rubén Castillo Santistebe noted. “They have also become more driven on the job. They feel that they are part of something important as the result of our combined innovation and implementation of impactful mobile technology solutions.”

The real-time data insights and decision-making capabilities have enabled Ferrovale to become much more customer oriented. The railroad has really improved its customer service capabilities, as well as its own internal efficiencies.

“Xplore Technologies and Ferrovale have a long working relationship, complementary operating methodologies, and a technology architectures synergy,” explained Rubén Castillo Santistebe. “This collaborative mobility partnership has allowed us to successfully implement a number of innovative and productive logistics business applications developed by our in-house team. Xplore’s rugged tablet technology and unique expertise in the transportation and mobility space has allowed us to execute several effective mobile solutions that have garnered national and international recognition.”

WHAT’S NEXT

Introduction of new rugged tablets and workflows

Ferrovale is currently evaluating the Xplore XSLATE B10 Fully Rugged Tablet PC for use in new operations and on a new crane. They also plan to transition to the B10 when it is time to replace older Motion F5 by Xplore rugged tablets currently utilized for terminal, intermodal, and locomotive-based workflows.

In addition, Xplore rugged tablet technologies have allowed Ferrovale to refine and validate its logistics software solutions in real-world rail transportation environments. As a result, Ferrovale has launched an initiative to sell its proven business applications to other train operations.

At this moment, the IT Team Ferrovale has achieved the first sale of one of its products and they are working on additional sales opportunities.

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