



Written by Lafarge Holcim and Schenck Process Europe

World Cement

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Customer-centric digital solutions

Introduction

Lafarge Iraq, part of leading global Construction materials and solutions company, the LafargeHolcim Group, leads the way in efficiency and customer service through digital technology. Lafarge came to Iraq in 2008 and has since developed leading market positions in all of its business lines. It is one of the largest non-oil investors in Iraq. The Bazian cement plant, located in Sulaymaniyah, Iraqi Federal Region of Kurdistan, is one of the two cement plants operated by Lafarge in Iraq. It has a capacity of 2.5 million tpy, producing ordinary portland cement (OPC), portland limestone cement (CEM11) and high sulphate-resistant cement (SRC).

Lafarge Iraq's Customer First programme

At the end of 2017, Lafarge Iraq launched its countrywide Customer First programme, which aimed to transform the business and the company from a product-driven to a customer- and end-user-driven organisation. The programme's objectives were to change the mindset, business model, and value levers. This programme has recently been internally recognized by the LafargeHolcim Group as the group's 'best commercial transformation programme' in the Middle East Africa Region.

Supply chain management forms a significant part of Lafarge Iraq's Customer First programme, with more than 20 development projects completed by 1Q18. It is imperative that cement deliveries are on time and correct i.e. exactly as the customer requested. At the customer end of the chain, Lafarge Iraq has introduced a mobile phone application called Lafarge 45 – 45, which gives customers, customer representatives, and retailers round-the-clock access to their accounts via Android or iOS devices. This includes information about delivery status, down to the exact location of delivery trucks.

At the production end of the chain, the Bazian cement plant has now optimised its automated dispatch processes and weighing technology, in a move towards becoming a fully integrated 'smart factory'. Since the beginning of the year, LOGiQ® logistics software by Schenck Process has integrated all process and data management relating to dispatch services at the plant. The data is collected automatically, using contactless identification and sensors.



Picture: Logistics Manager Ahmed Mukerji in front of the new self-service terminal for trucks.

LOGiQ® logistics software from Schenck Process

LOGiQ® is the flexible solution for automated movement of goods and provides efficient logistics tailored to the Bazian plant's operations. Seven days a week, the software provides 24 hours of continuous operation, with fully automated processes, from order to shipment, precise loading of trucks without human intervention, control of goods flow, and seamless documentation of all processes.

LOGiQ® satisfies the Bazian plant's requirements for seamless and highly responsive dispatch services, at a reduced cost. All major components of the hardware and software modules from the LOGiQ® portfolio are now in use at the plant, with the entire end-to-end shipping process controlled by the software, to save precious time and materials.

Schenck Process software engineers, working in partnership with the team at Bazian, successfully customised the LOGiQ® software to the plant's workflows and integrated it with Lafarge Iraq's ERP order processing, and accounting systems. The implementation consists of two servers hosting the LOGiQ® software and database, two dispatch operator stations, six large-size displays for the call-up of trucks, and a registration and printing terminal at the exit gate.

In terms of plant layout, the system automates plant access with entrance and exit gates. Exit gates open when they detect an approaching vehicle. Two weighbridges enable fully automated weighing at the entrance and exit. Schenck Process also supplied four bulk loading terminals and control equipment for the loading stations under the cement silo.

Complete control equipment (sensors and traffic lights) for all truck scales provide full position control for incoming and outgoing vehicles. High workloads do not limit individual terminals because the installed stations only handle dedicated tasks. Every station provides information on the present status via network communications. Since the data transmitted from each station is just a few bytes, the system is highly scalable and suitable for future extensions. Local stations can operate autonomously

Automated shipping processes interlock new hardware and software components with existing ones, while relying on networking local intelligence. LOGiQ® controls the workflow management system, from incoming orders to automatically printing delivery notes in the customer's language. All transactions between the delivery point, mixers and scales, operator terminals, and loading bays are logged, stored, and archived. The orders are smoothly reported to the ERP system (SAP) without loss.

LOGiQ® thus achieves maximum automation, while eliminating the possibility of manipulation or human error, thereby greatly reducing complaints about anomalies in deliveries. Moreover, in the rare cases of technical issues, the system's data logging features help to identify the source of problems quickly, and reduce repair time.

Eliminating paperwork while ensuring security

An important feature of this installation is the RFID system, which is widely used in LOGiQ®.

Contactless identification not only optimises the registration and identification process, but also eliminates all avoidable paperwork, making the whole process secure, reliable, and highly efficient. LEGIC ID cards allow truck drivers to operate the system on a self-service basis, 24 hours a day, seven days a week.

"We were suffering from the routine of the manual queue previously," said Fuad Khamis, a flatbed driver.

"The new automated system brought comfort to drivers by automating the queue and by using cards; drivers do not have to get out of the truck within the cycle anymore. Thank you for this new service."

Conclusion

With the help of LOGiQ®, and the team at Schenck Process, the complete hardware and software installation at Lafarge Iraq was completed in January 2018, and has been fully operational since June 2018.

"We are headed in the right direction towards a fully automated dispatch process," said Ahmed Mukerji, National Logistics Manager, and Kazei Kurda, Project Coordinator, at Lafarge Iraq. "With LOGiQ®, waiting times are shortened, and we can manage and document all stages of our logistics. In the near future, we are planning to cover the full loading cycle under the umbrella of automation."

About the authors

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