



The perfect integration of tradition and innovation in a UNESCO World Heritage Site



Bolsas y Mercados Españoles entrusted Ricoh with the digitisation of the trading floor at the Madrid Stock Exchange, using innovative video screens in the main hall of the historic site to provide a rich array of detailed real-time financial information to traders.

COMPANY & CHALLENGE

Bolsas y Mercados Españoles (BME) plays a pivotal role in the Spanish financial system. Founded in 1831, the company owns and operates the stock exchanges of Madrid, Barcelona, Bilbao, and Valencia. Part of the Swiss SIX Group, the third largest stock exchange operator in Europe, BME operates three main lines of business: stock exchanges, post-trading clearing and settlement services, and financial data and trading systems.

Of Spain's four regional stock exchanges, the Bolsa de Madrid (Madrid Stock Exchange) is the largest and most prestigious. Since 1893, the stock exchange has operated from the Palacio de la Bolsa, a magnificent neoclassical building that forms part of the Paseo del Prado and Buen Retiro UNESCO World Heritage Site. The building also hosts corporate events, including press conferences, product launches, and awards ceremonies, and the traditional bell ringing to signal the start of each trading session.

For many years, the Madrid Stock Exchange presented the current share prices for listed companies on analogue panels in the main trading hall. The electromechanical display boards were celebrated among traders for the famous rattling and clicking sound they made as share prices changed. But maintaining the aging panels was becoming difficult, with spare parts for the mechanisms proving extremely challenging to locate.



To provide more information to the trading floor, BME installed a large digital display screen alongside the analogue panels. However, changing the data displayed on-screen was complex and time-consuming, as BME had to ask the original vendor — based overseas — to process the updates.

As part of a wider refurbishment plan at the Palacio de la Bolsa, BME decided to modernise the display equipment in the main trading hall. The key objectives for the project were to broaden the range of financial information that was presented to traders, fund managers, and journalists working on the floor of the stock exchange, and to enhance the visual experience for visitors during corporate events and presentations.

There was an added complication, though. As the site is a protected historic building, drilling into the walls and columns to place extra cabling or install new screen mountings was forbidden. Instead, the renovations would have to use the existing structures, fixtures, and fittings, and any modification or reform would require the supervision and approval of the Heritage Commission that manages state and royal buildings in Spain. So, could BME find a partner that could supply new high-end screen equipment, and had the skills to manage such a demanding and sensitive implementation?



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Javier Bernárdez, Head of Large Accounts at Ricoh Spain



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Elena Carnicero, Director of Global Corporate Affairs, BME



SOLUTION

Following a recommendation from a trusted partner, BME engaged Ricoh to refurbish the main hall of the Madrid Stock Exchange. The key factor behind the decision was Ricoh's proven experience managing similar large-scale audiovisual deployments. In recent years, the Ricoh Spain team has executed several challenging auditorium refurbishments and unique large-scale spaces, including an award-winning project in 2022.

Javier Bernárdez, Head of Large Accounts at Ricoh Spain, states: "This is the digital transformation of a key aspect for the Madrid Stock Exchange, forming part of the core of the business. Surely, there isn't a more emblematic screen in the entire country, so this was a challenge that carries a high responsibility."

In just over a month, Ricoh completed the project, adapting standard installation procedures to protect the historic building. To replace the analogue display boards, Ricoh supplied and implemented custom-made LG digital video screens, equipped with LEDs for high-definition clarity to ensure visibility from the trading floor and when shown on television. Ricoh also installed 30 smaller 55-inch screens throughout the main trading hall to broadcast key financial

information, and will provide ongoing support for the equipment, including preventive maintenance and replacement parts for the digital screens.

For the complex cabling deployment, Ricoh engaged expert support from business partner Powernet. This was an important step, as the Madrid Stock Exchange simply cannot afford the digital screens to suffer failures or downtime during trading hours. With Powernet, Ricoh designed and implemented a network architecture that incorporates cabling redundancy, ensuring resilience and minimising the risk of incidents.

To manage the content displayed on the digital screens, Ricoh provided VuWall video management software. The solution enables a BME user working on a laptop on the trading floor to organise, arrange, and distribute graphics, charts, diagrams, videos, logos, and other visualisations across multiple screens.

Elena Carnicero, Director of Global Corporate Affairs, at BME comments: "As well as the stringent regulations on the installation of the equipment, this was a time-sensitive project, as we could not close the hall for a long period. The Ricoh team rose to the challenge, with meticulous planning, first-class solutions, and an efficient implementation. From the beginning, Ricoh has respected the historic building. They have taken exquisite care to maintain, conserve and not damage any of the architectural elements of the Palacio de la Bolsa."



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Elena Carnicero, Director of Global Corporate Affairs, BME



BENEFITS

With Ricoh, BME has successfully modernised the listing panels at the Madrid Stock Exchange, moving from aging analogue technologies to crisp, easy-to-read digital displays. The project has received much press coverage in Spain, with highly positive feedback from traders, investment managers, and financial journalists.

The move to five digital screens in the main trading hall enables BME to present a much wider variety of financial information, keeping traders on the floor of the stock exchange fully up to speed with the market. While the previous analogue panels were limited to the names of listed companies and their current share prices, the digital displays allow BME to present a dynamic mix of real-time information on the performance of the IBEX 35 — Spain's main stock index — as well as rich data on key market movers and other emerging trends.

Furthermore, BME now enjoys greater control over the content on display. Rather than having to send requests to update information on screen and wait for a vendor to apply the changes, users can now change graphics and company

logos with just a few clicks — for example, to publicise financial news or prepare the hall for corporate events. And the use of high-definition screens enables companies running conferences and other events to present in a dynamic and highly professional manner, ensuring their visitors enjoy a premium experience.

Another of the key benefits of the project is environmental sustainability. The new screens, fully digital and easy to operate, not only represent a leap forward in terms of innovation, but also in sustainability, since LED technology is highly efficient in terms of electricity consumption and the resources needed for its operation. The new screens are highly respectful of the history and tradition of both the building and the wider environment.

Elena Carnicero concludes: "With Ricoh, we have seamlessly integrated classical beauty and digital innovation, combining the iconic historical setting of the Palacio de la Bolsa with cutting-edge technology. The project will help to ensure that Spain's most important stock exchange is fit for the future, and will enhance the quality of services we provide to the traders and investment managers working on the floor of the exchange."

ABOUT RICOH

Ricoh is a leading provider of integrated digital services and print and imaging solutions designed to support digital transformation of workplaces, workspaces and optimize business performance.

Headquartered in Tokyo, Ricoh's global operation reaches customers in approximately 200 countries and regions, supported by cultivated knowledge, technologies, and organizational capabilities nurtured over its 85-year history. In the financial year ended March 2023, Ricoh Group had worldwide sales of 2,134 billion yen (approx. 16.0 billion USD).

It is Ricoh's mission and vision to empower individuals to find Fulfillment through Work by understanding and transforming how people work so we can unleash their potential and creativity to realize a sustainable future.