

CASE STUDY

E2E Automation

Becoming an Agile Wholesale Provider



"We always received a good response from the Celfocus team. We're very happy with the service that we receive; it's very responsive and always collaborative. Celfocus is a very customer-focused organisation."

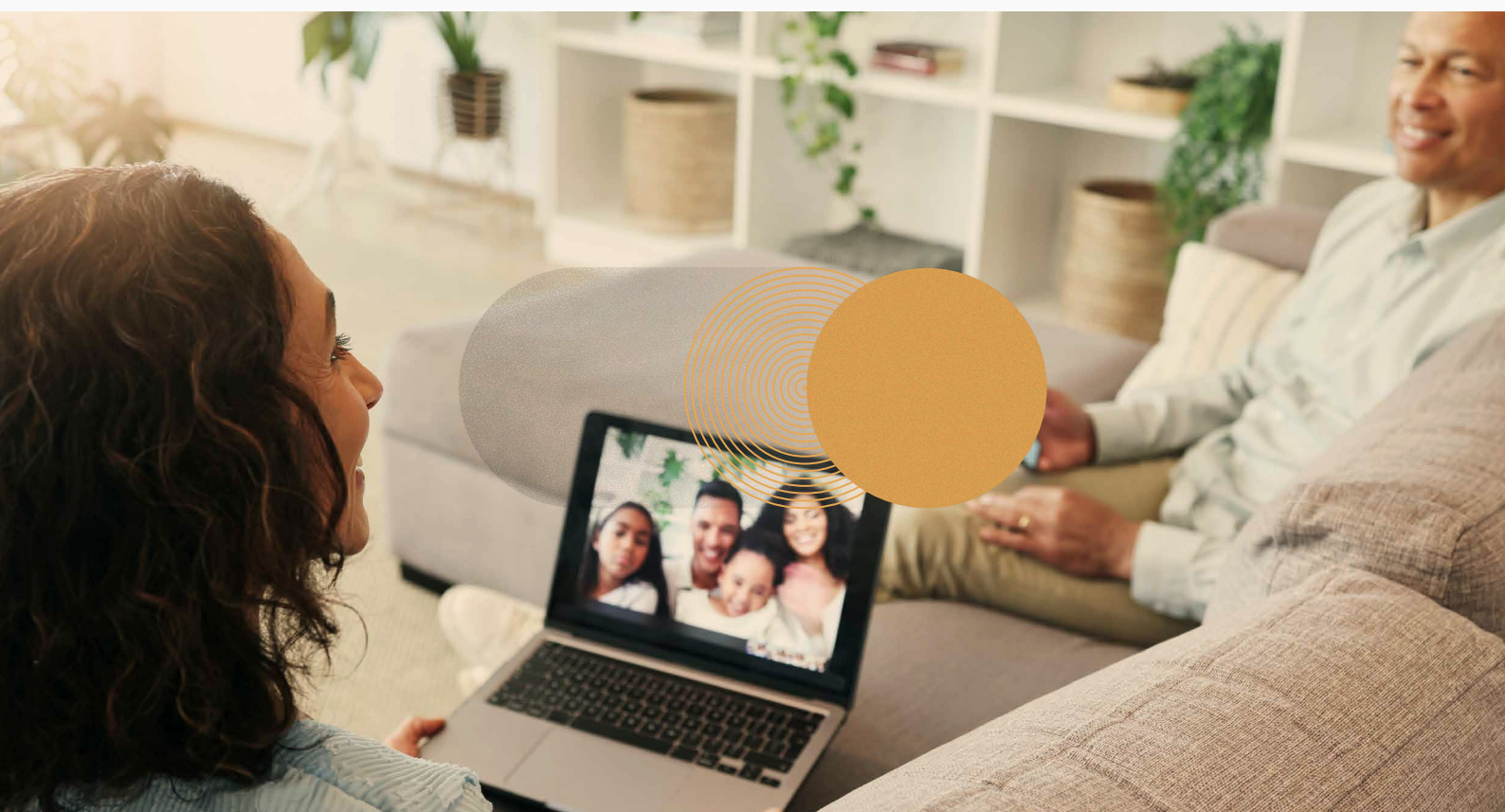
Lydia Martin

Head of IT and Business Transformation at SIRO

About SIRO

SIRO is a joint venture between ESB and Vodafone that has the goal of delivering 100% fibre to the home (FTTH) broadband to homes and businesses across Ireland. The wholesale operator was established in 2015 and aimed to connect 450,000 premises with 100% FTTH as part of the Phase One rollout.

SIRO has over one-third market share in the fast-growing FTTH broadband category, which has doubled in the last 12 months while other segments are flat or declining. In 2017, SIRO and Vodafone established the Gigabit Hub Initiative (GHI). SIRO supports the Digital Agenda in Ireland by enabling homes and businesses to experience the gold standard of connectivity, rivalling countries like Japan and Singapore.

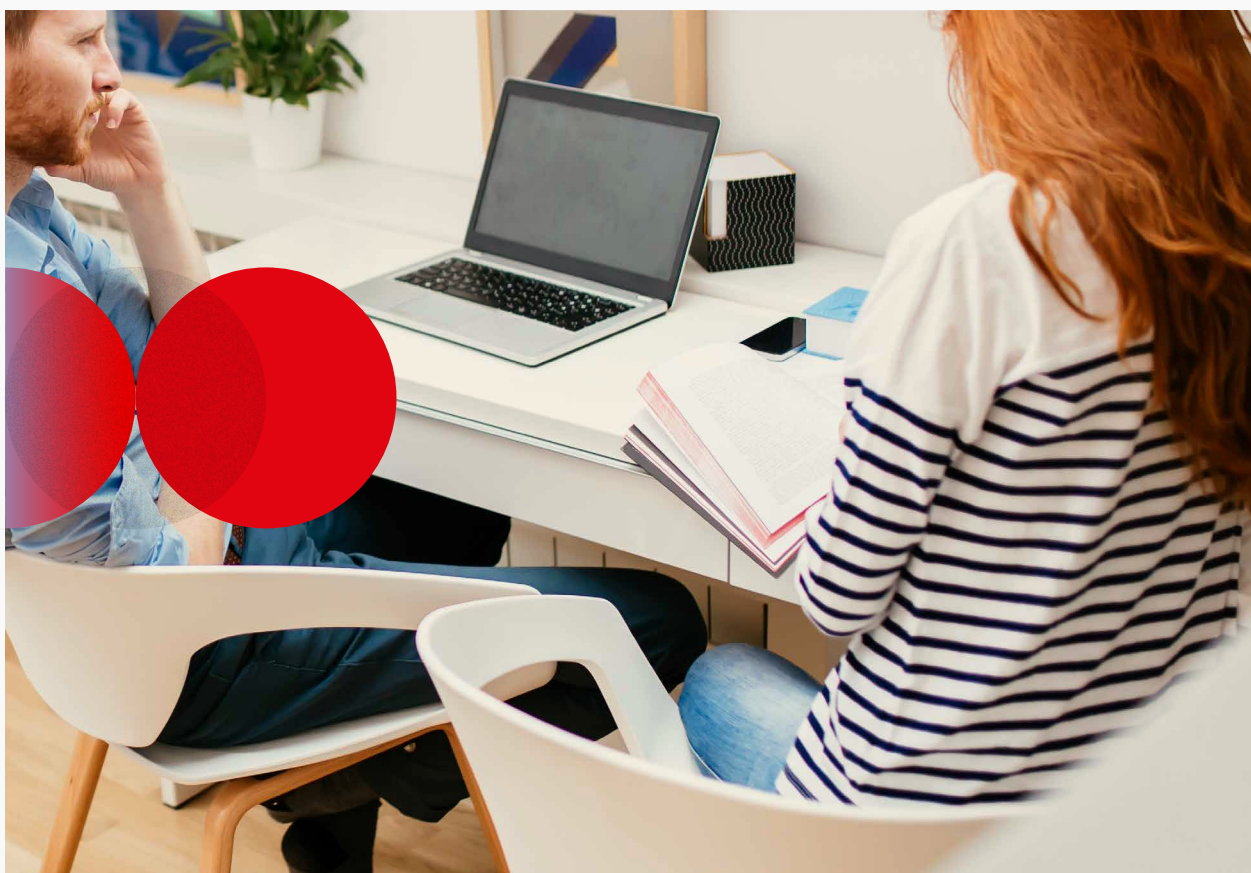


The Challenge

In 2015, the existing networks in Ireland were very dense but had high-speed connectivity limitations. SIRO was founded to challenge and provide a solution for the speed connectivity limitations by building a network from the ground up that would, in a short period, provide nation-wide high-speed connectivity.

SIRO sought a technology partner to help create this network, build the IT stack, define all the processes and ensure they were working correctly and ready to hit aggressive targets.

At its core, the project had to guarantee SIRO would be a **competitive and innovative** wholesale provider.



The Solution- The Story of a Great Partnership

Celfocus partnered with SIRO since day one to create and develop the IT systems along with the **business processes and workflows that allowed SIRO to be an agile player** in implementing high-speed connectivity. The project began with the identification and definition of business processes and workflows, as well as technology mapping. To do so, the teams used Celfocus Facilitation Maps® – a big format framework that maps customer experience with the business processes and technical solution under implementation.

The processes were designed with efficiency and agility at their core. They included the definition of how SIRO should operate, launch services, execute physical operations – such as fibre installation –, and perform the onboarding of new retailers.

The business requirements, BSS and OSS Architecture, and the B2B Interface specification were also defined during this phase. **With the feasibility plan in motion, the teams started developing and implementing the OSS infrastructure, which included:**

- 1 | Network build support from planning, deployment and ready for service.
- 2 | Network resource inventory to register the active and passive network objects.
- 3 | Service provisioning for service activation over the network layer.
- 4 | Network operations support and troubleshooting for all retail customers on top of a unified IT solution architecture supporting wholesale business.

The FTTH Network Performance and Capacity Management were also defined in this phase. The **performance management system** deployed, collected, aggregated and made available real-time network data. The **capacity management system** used Cramer Resource Inventory as a source of truth for resource consumption and the proactive management of network expansion activities.

While implementing the OSS foundations for FTTH and the BSS, the teams placed other workstreams in motion, namely SIRO Business Readiness, Business Intelligence End-to-End and DNOC Setup and Onboarding.



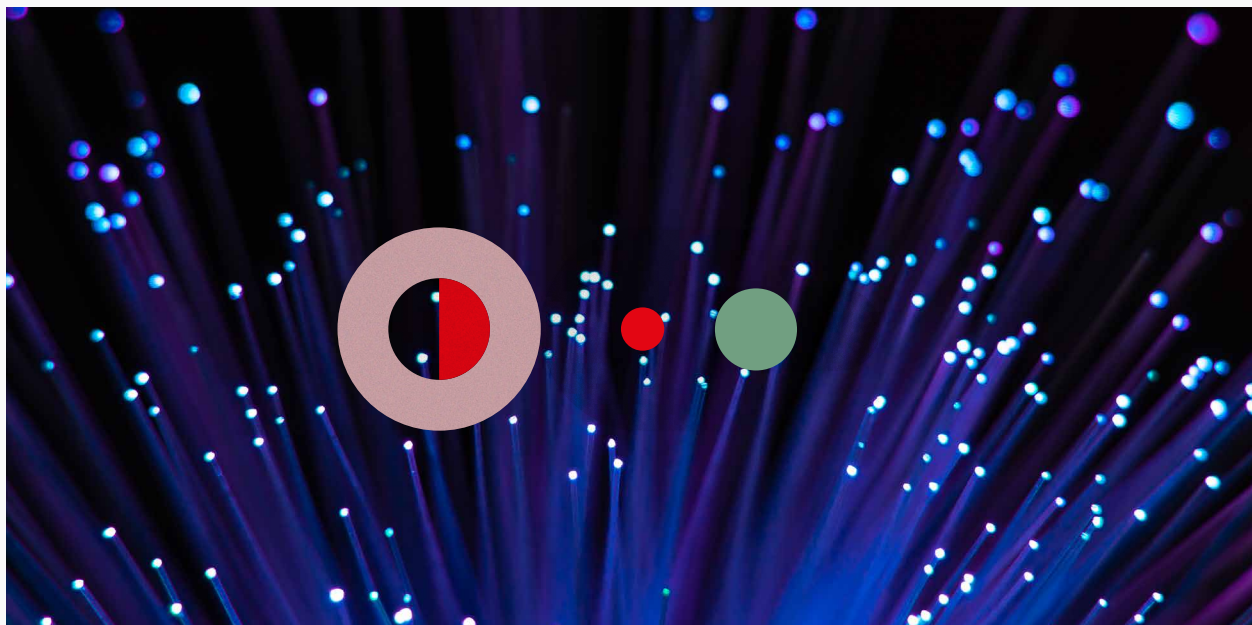
Figure 1 - Project Timeline with development and implementation stages.

SIRO Business Readiness regarded E2E Business Processes such as network build and maintenance, provisioning, field force, problem handling, and the bill and collect. The teams resorted once more to Celfocus Facilitation Maps® where they discovered, designed, shared, gathered inputs, and defined processes.

Later, Vodafone Ireland wanted to extend the competences provided by SIRO OSS System to deliver fundamental capabilities for the Network Operations Team, so a DNOC project was deployed with:

- Trouble Ticketing and Incident Management with HP Service anywhere
- Integration between HP Service Anywhere and BSS Systems
- Fault Management and Network Monitoring with HP TeMIP
- CELFOCUS Omnichannel Portal
- Training the DNOC in Bucharest

As SIRO and the project evolved, efficiency and data value became critical assets. The teams understood that specific tasks could be automated, and that data could provide powerful business insights. In addressing this opportunity, a cloud-based analytics solution was implemented to convey a new breed of data integration, data analysis, and reporting capabilities that guaranteed efficiency and speed of delivery to SIRO's analytical landscape.

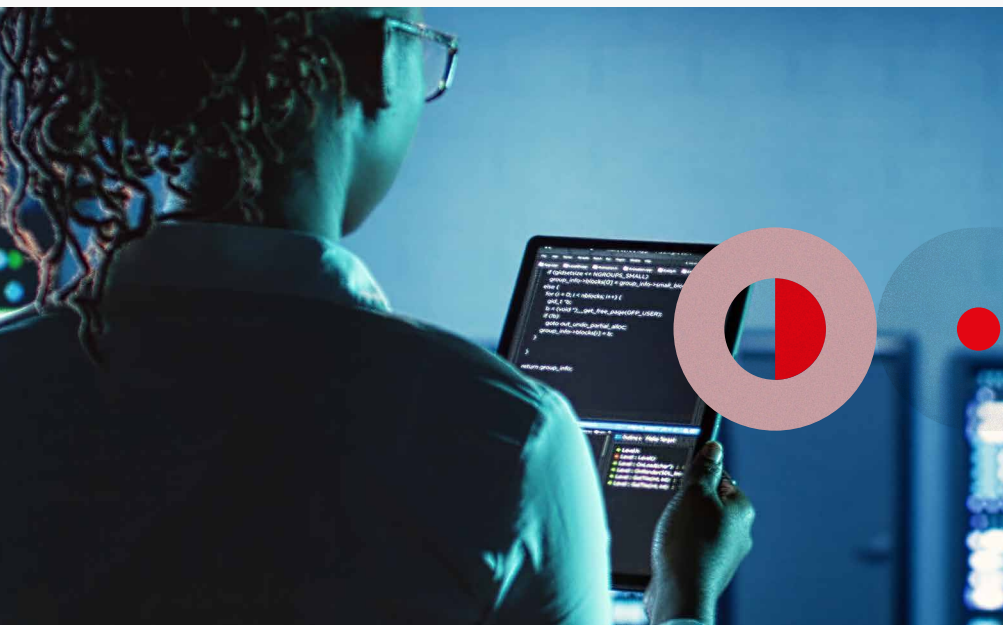


The solution was SaaS Azure-based, using analytics and database services. Moreover, an end-to-end reporting solution based on Power BI was also deployed to cover BSS and OSS domains, service requests and availability as well as order fulfilment.

Many manual tasks, from provisioning to operations, were automated, improving fact-based decision-making and speeding up data analysis activities.

The collected indicators, dashboards and developed KPIs (business, operational, sales, installation, cloud capacity) gave the teams important insights in near real-time.

To stand out in a crowded, intensely competitive market and to better cater to customers' needs, SIRO needed to be flexible and innovative. The adaptation and move to an agile delivery model allowed the company to flex and scale efficiently. As opposed to yearly change releases, SIRO is now able to react quickly and make small changes as often as needed. This influenced the operator's efficiency in regards to their customers since changes in the retailers' businesses were easily and speedily reflected on SIRO's side.



High-Level Solution Building Blocks

Several key aspects were defined and considered during SIRO OSS architecture design to enable commercial launch and future operational success. The most important elements were:

- 1 **Agile Operations:** SIRO should be as agile as possible. This would entail process automation from operational readiness to fulfilment and assurance while respecting solution simplicity.
- 2 **Self-Servicing:** As a wholesale provider, important OSS & Network features should be available as-a-service. This would enable frictionless business with partners, suppliers, and allow the retailers to be self-sufficient with minimal effort on behalf of Backoffice teams.
- 3 **Knowledge of Network:** As a critical business pillar, SIRO's FTTH network should be well tracked and managed – careful modelling and management of physical and logistical resources were of high importance.
- 4 **Quality of Service:** Service quality would be essential for SIRO's success, so monitoring network faults and performance KPIs should have real-time capacity and maximum reliability.



To answer these needs, a full OSS stack for quick key process delivery was designed and deployed in 3 phases. The solution, although simple and light to operate, addresses all required complex SIRO business & technical processes:

Operational Readiness - A network inventory tool to track and manage resources. Automated processes and synchronised data from strategical planning tools and an additional eligibility cache enabled fast availability without stressing critical inventory tools.

Fulfilment - Business process management and service order activation tools were coupled to perform orchestration of inventory service/design and assign capacity management functions alongside resource activation with element managers.

Assurance - Fault and performance management tools perform a reliable collection and presentation of significant faults and data statistics from the network. The filters and correlations are made for more straightforward rootcause analysis while automation facilitates incident creation with attached service impact assessment. The Network KPI reporting gives service quality insights to NOC teams to achieve proactive management.

Finally, there are two cross-cutting components in the architecture. The **Operations Portal** provides E2E OSS process visibility and control while complementing tools with a GUI that simplifies usual operational tasks. The **OSS gateway**, while streamlining and abstracting OSS and network functions to BSS, also seamlessly integrates components into a unified, holistic OSS solution.

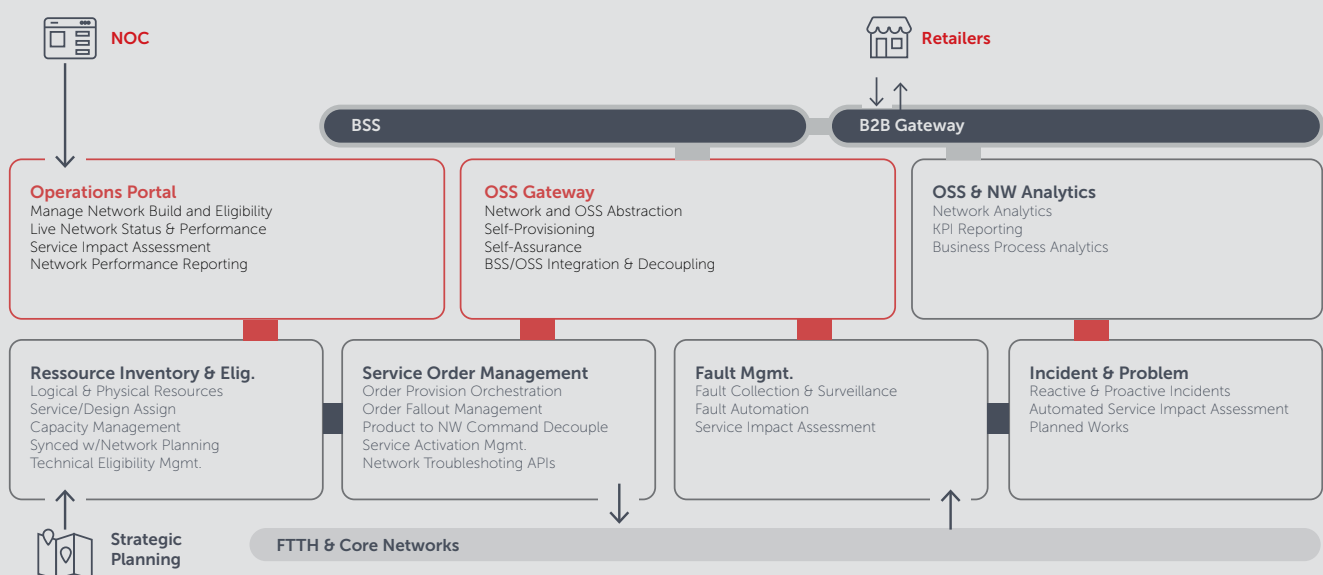


Figure 2 - High-Level Solution Building Block

Benefits

Celfocus's combination of solutions, professional services and expertise enabled SIRO to become an agile wholesale provider, able to compete with the already established providers.

By being present since day one, Celfocus helped shape the process and architecture definition. The solutions improved process efficiency and delivered:

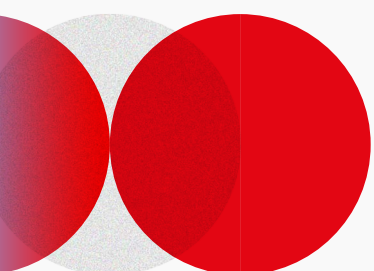
- Automatic handling and delegation of all interactions with the retailer
- Total integration of SIRO systems with operator systems
- Exposure of operator features to their customers through APIs and portals
- Fully automated processes
- More streamlined access and usage

The Analytics and BI solution automated time-consuming tasks, allowing SIRO to allocate resources to work on roadmap items that bring value to the business, such as predictive models and better integrations. Since information access is quicker, SIRO was also able to understand better its customers' needs, trends, and different opportunities.

"The Celfocus project automated critical part of operations, built a data warehouse to bring as many integrations into it as it could. The output of that was more automated and more real-time access to data."

Lydia Martin

Head of IT and Business Transformation at SIRO



The Analytics and BI solution also entailed the following benefits:

- 1 **Performance:** whether it's computed, storage, database, or networking, the solution runs on a high-performing, low latency cloud infrastructure that has virtually unlimited capacity, provides high availability, and responds to changing needs quickly, without any impact on performance.
- 2 **Availability and Reliability:** Microsoft Azure regions are designed for physical redundancy and provide resilience, enabling uninterrupted service even in the event of power outages, Internet downtime, floods, and other natural disasters.
- 3 **Security:** meeting data security requirements by running on an infrastructure that is monitored 24/7 to help ensure the confidentiality, integrity, and availability of SIRO's data.
- 4 **Scalability:** As a cloud-based solution, the solution has conceptually infinite scalability. Since the Microsoft Azure compute capacity is increasing at an unprecedented rate, SIRO can quickly spin up resources as it needs them in a matter of minutes.

Why Celfocus

Celfocus possesses a high level of Telco business knowledge, experience, flexibility, and delivery capabilities that were pivotal to the project's success. The company's expertise and competence in different technologies and businesses combined with an impeccable track record and forefront vision allowed Celfocus to understand and successfully deliver the project.

Celfocus and SIRO team worked closely as a single unit, tightly connected since day one. Collaborative work and transparency were vital, leveraging strengths and commitment to deliver the best connectivity to SIRO customers.

"Partnering with Celfocus helped us to move quicker, be innovative and rely on a partner with the right experience and expertise, especially in the early days. I feel like the Celfocus team is a Siro team – we don't have a customer-provider relationship."

Lydia Martin - Head of IT and Business Transformation at SIRO

About Celfocus


Celfocus is a European high-tech system integrator, providing leading edge professional services focused on creating business value through Analytics and Cognitive solutions – addressing Telecommunications, Financial Services, Retail, Energy & Utilities, Pharmaceutical, and other markets' strategic opportunities.

As a highly specialised engineering company, Celfocus helps clients undergo their innovation path, providing technological solutions to extract value from data and make it actionable.

Serving clients in +25 countries, Celfocus delivers solutions that boost customer experience and enhance operational efficiency, via our Cognitive Automation, Data & Analytics and Digital offers.

Founded in 2000, Celfocus started as a joint venture between Novabase and Vodafone Portugal and is now entirely owned by Novabase. The company is listed on the Euronext Lisbon Stock Exchange.

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