

Lean operations drive improved customer service



The Client, a chain of grocery supermarkets, needed a digital solution to streamline their shelf edge labelling processes. Objectivity delivered a comprehensive system encompassing a mobile application, backend services, and a website dashboard, all of which automated manual work and reduced the number of price discrepancies between shelves and tills.

Business Need

The Client needed an improved labelling system to produce the right labels at the right time. The legacy system they had in place wasn't automated, and the Client still had a time-consuming and error-prone paper-based process in place. The manual process was complex and lacked a performance tracking tool for the managers, which led to discrepancies between the prices displayed on the shelves and at the till. This was making the process of fulfilling regulatory compliance rather cumbersome and, at times, resulted in the store having to either refund the difference or charge less for certain products. Both of these scenarios had a significant impact on the Client's profits and customer experience. Handling the refund complaints also created additional work.

The expectation was to deliver accurate pricing for customers, so that instances of over- and undercharging would be at an absolute minimum. To achieve this, Objectivity was asked to deliver improvements through technological changes, which would make the labelling processes simpler and more efficient for the employees.



Project Details

Objectivity started with an in-depth analysis of the Client's current solution by conducting a series of interviews with front-line store staff. In the next steps, a Proof of Concept of the mobile application for Android handheld devices was created, and the usability of the solution was validated by the end users. Built-in analytics combined with user feedback helped recognise the most robust business process. The solution had to be easy to use, requiring as little interaction as possible.

Having found a solution to the Client's business challenge, Objectivity started to work on the backbone of the system: the Java backend microservices integrated with the Client's core services. This approach was selected to accelerate the time-to-market and ensure continuous delivery, which would allow for the product to be easily and quickly adjusted to meet business users' evolving needs. The system is hosted on the AWS cloud to ensure high availability, resiliency, and scalability. It was also equipped with extensive logging and alerting mechanisms that supplement the support of the application.

The next milestone was to create a website for store managers to monitor the progress of the employees' daily task workload and to validate the store's compliance with various regulations. The portal is accessible from the headquarters and the commercial team uses it to aggregate troubleshooting and to address multiple stores' issues. This allows the Client to save

time as they are able to avoid conducting the same task in every location through unifying solutions across the estate. The web pages were designed for Angular Material UI to ensure a seamless user experience and fast development cycles.

The system was released incrementally to accommodate the technology changes with a smooth transition of the in-store processes. In the first phase, the process was semi-automated, because of the limited capability of the legacy printing system and EAN8 barcodes displayed on the shelf edge labels. Users were equipped with mobile applications, which assist them in placing the right label in the right place and in optimising the store walk sequence to save time. Integration of the industrial barcode scanners provides reliable, fast, and seamless operations.

The next phase was a migration to the modern labelling solution, which supports ad hoc label generation on a mobile printer without the necessity of a time-consuming and inconvenient walk to the back office. The backend prepared a list of grouped, prioritised tasks in a way that allowed for the reduction of the number of labels placed for back-to-back promotions. Thanks to the advanced algorithms, the number of actions taken by the employees was reduced to a minimum.

The final rollout changed the entire landscape of the grocery store by replacing SEL's EAN8 barcodes with QR codes. They were enriched with additional metadata, which allows the system to identify if the label is up-to-date and, if required,

to automatically print a new one to replace it. This was a significant improvement for the shop floor staff. Prior to having implemented the solution, they had to manually compare the shelf tags with the expected handheld device label visualisation.



Business Benefits

The introduction of the new system significantly improved the Client's daily shelf tagging operations. The time-consuming and cumbersome paper-based process was replaced with an automated, simplified, and reliable tool. Now, stores receive only the labels they need, in an optimised store walk order.

Price cohesion between the display and till is heavily scrutinised. As such, it's vital to ensure that the store passes legal audits which are conducted both internally by the company and externally by a number of government institutions. Price errors identified when setting out labels can be logged and resolved before the trading starts. Objectivity's solution places trust in systems, removing the need to perform manual validation checks and a large amount of troubleshooting to maintain accurate shelf edge labels.

The reporting module presents legal compliance and provides management with key insights and the ability to audit work progress. There is an option to browse historical data and view the list of outstanding tasks. Thanks to the aggregation of reported exceptions, the commercial team can resolve outstanding tasks for every store simultaneously. This saves the customer-facing staff's time and renders the shelf edge labels accurate and unified across the estate.

Results by Numbers

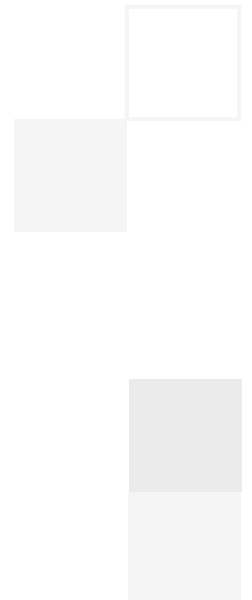
The automation of shelf tagging made the labelling process approximately 5 times faster, which helped to reduce the process duration to just a few hours. This also allowed the shop floor staff to further improve service, increase availability, and open more checkouts. Decreasing the number of daily printed shelf edge labels by up to 80-90% and getting rid of paper documentation saves costs and time, while reducing environmental impact.

The workforce organisation, reporting, and audit features allowed the Client to flatten the management tree. Shop floor employees can now focus on customer-facing activities and improvements in the brick-and-mortar stores' everyday tasks. The optimisation of staffing costs is crucial for Client to be able to offer bargain prices to shoppers in-store and to retain market share amid fierce competition, particularly from discount chains.

The number of price discrepancies between shelves and tills has been reduced, making the stores legally compliant. The reduced amount of price discrepancies also improved customer experience and decreased the occurrence of time-consuming refund complaints.

About the Client

The Client is one of the United Kingdom's largest chain of supermarkets. The company has hundreds of superstores across England, Wales, and Scotland, offers online home delivery, and serves millions of customers on a weekly basis.



Contact us to learn more

Please get in touch if you would like to discuss this, or other digital strategies, in more detail.

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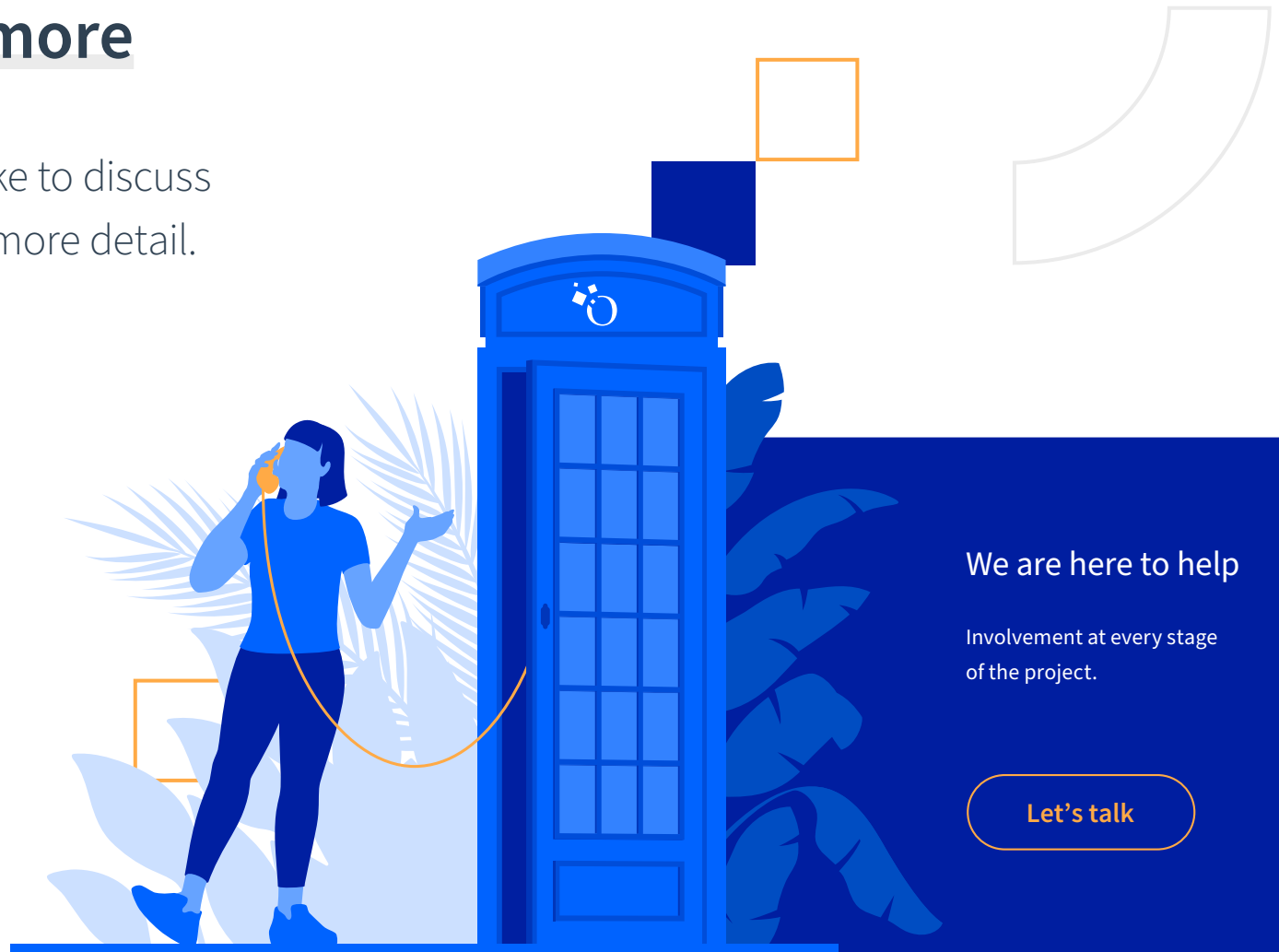
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We are here to help

Involvement at every stage
of the project.

Let's talk