



CASE STUDY

Panasonic opened their own FamilyMart convenience store

Panasonic has worked alongside FamilyMart to open a convenience store in Japan which utilises IoT technologies.

Client: FamilyMart Co., Ltd.

Location: Kanagawa, Japan

Product(s) supplied: **Electronic Shelf Labels**

Challenge

To create a convenience store of the future which improves the customer experience and sales operations

Solution

The installation of a number of IoT technologies and smart processes into the demonstration store facilitated data marketing, facial recognition and monitoring of the store in real time

"By developing our knowledge and expertise through an actual store operation, we are pursuing a format for the next generation of convenience stores."

Mr. Suguru Fujita, Store Manager of FamilyMart Saedo store (Panasonic)

FamilyMart operates across 16,400 stores in Japan alone. At the heart of their stores, FamilyMart provides lifestyle support services and localised store operations which supports the local community.

To meet the increasing demands of this diverse customer base, FamilyMart has paired with Panasonic to realise the potential for enhanced shopping experiences, through a variety of in-store technologies. This has led to an enhanced customer experience, which also improved FamilyMart's workflows and operation burdens required from employees. A particular focus for FamilyMart has been the promotion of a cashless society with a barcode payment system. In addition, Panasonic's vision for the "Gemba Process Innovation" enables innovation in supply chain management for retail stores and warehouses. Together, the partnership between Panasonic and FamilyMart has ensured the development of a demonstration store which will meet the demands of current and future generations.

The FamilyMart store is currently being managed by Panasonic employees on a day-to-day basis, in a bid to gain vital firsthand experience of retail operations. This includes customer service, employee operations, sales floor management and warehouse operations. Combining this personal insight with data gathered from edge devices in store, Panasonic is better placed to optimise store operations and increase business revenues with existing technologies, whilst also considering retail innovations for the future.

The first technology solutions to be tested at the demonstration store included: IoT Data Marketing, Electronic Shelf Label (ESL), Automated Shelf Monitoring, Work Assist System, AI check-out register by Face Recognition and object detection system, Space production and atmosphere, CCTV and Mobile ordering/delivering.

Enhancing the customer experience

To enhance the customer experience, facial recognition technology has been used in store to support entry management and improve the customers' payment experience. Facial recognition uses deep learning technology to ensure the world's highest level of facial recognition accuracy, recognising faces captured at an angle, wearing glasses, and those which have changed with age. In addition, product image detection has been implemented and used at checkout points to operate alongside facial recognition to deliver a smooth, accurate and modern shopping experience. Used together, these technologies promote a cashless society which allow customers to purchase items without requiring cash or a bank card.

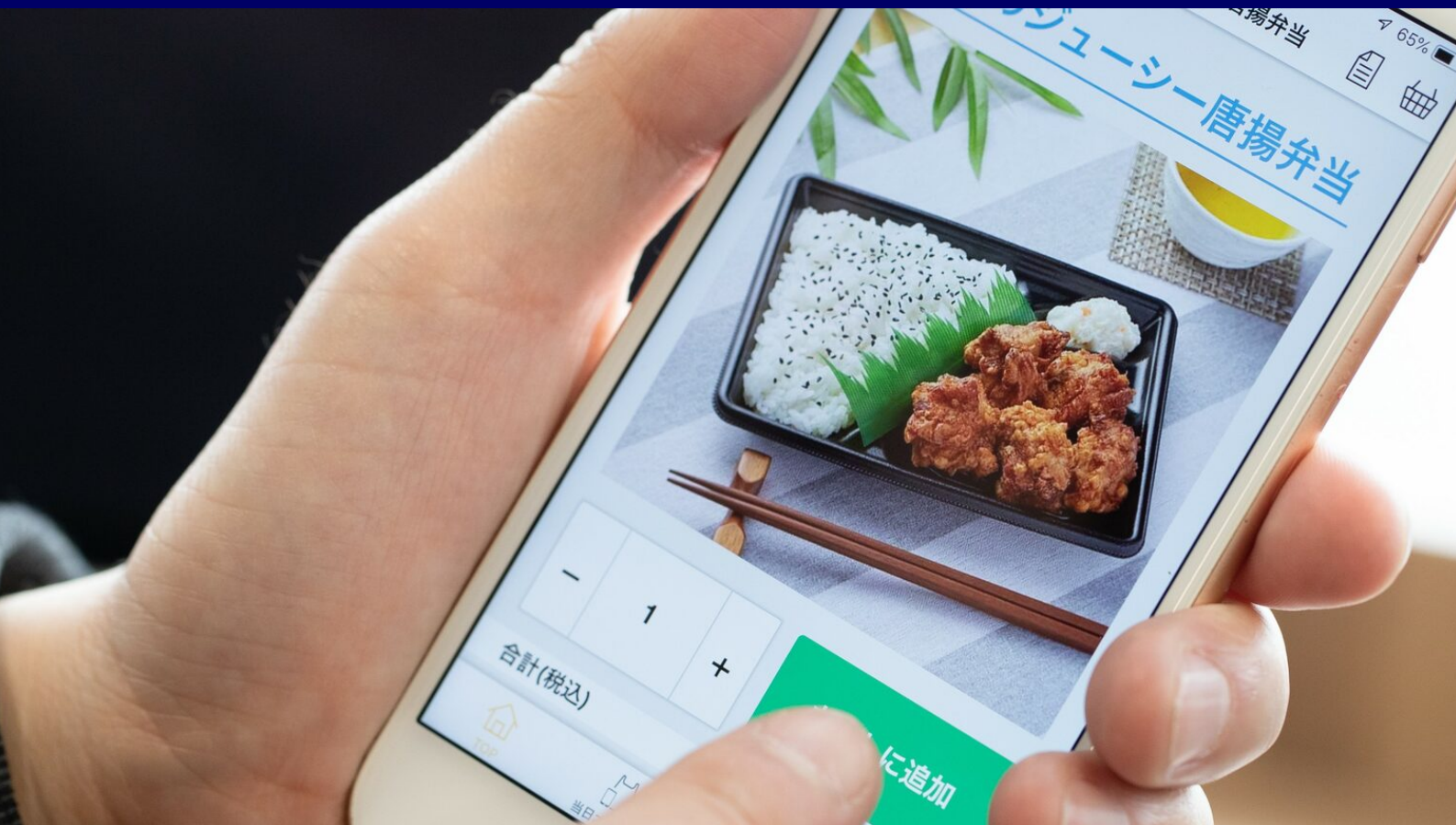
To opt into this service, customers register their face and credit card information on the app or on a tablet at the store and follow five simple steps to check out:

1. Go to the store and select items for purchase.
2. Take them to the checkout and put them on the table. The system automatically detects and identifies these items.
3. All detected items are displayed with associated prices automatically and the system proceeds to payment.
4. The system recognises the customer's face using the camera at the check-out and confirms the payment.
5. Check out is now complete and the customers can leave the store. All data collected in the process is carefully managed in a secure environment.

Alongside the new and improved customer experience, these solutions support the expansion of added value store services and a reduction in employee labour requirements. Store staff are better placed to assist customers around the store, rather than being limited to a manned check-out. (This service is currently limited to FamilyMart and Panasonic employees.)

Monitoring the shop floor in real time

By utilising a work assist system and small wearable devices, employees are capable of responding to shop floor management in real-time. The technology notifies employees regarding out of stock items and congestion status, in order of priority. This enables the store to optimise operations which, in turn, enhance the customer experience in-store.



Improving operational efficiency

Panasonic and FamilyMart have installed approximately 3,000 digital price tags throughout the store to work alongside Electronic Shelf Labelling technology (ESL). This provides an agile pricing approach to products which can be changed in real time, replacing the time consuming and costly manual price altering process. As a result, the technology has ensured a significant positive impact to store operation.

IoT Data Marketing

By combining conventional POS data with dwell time and heatmaps created from in-store cameras and sensors, the store can gather valuable data intelligence. This has been supported by smartphone questionnaire responses from existing customers, to combine intelligence and manage the store more efficiently around customer's needs. In particular, this led to creation of the best store layout and a selection of goods that are most convenient for shoppers.

Creating comfortable in-store atmospheres

In addition to the traditional convenience store, FamilyMart has introduced an eat-in space for customers to enjoy a comfortable shopping experience. These spaces are enhanced by projection mapping and lantern type digital signage stages, which provide an engaging experience and deliver additional information in a smart way that does not disrupt the shopping experience.



Bridging the gap between online and in-store

To bridge the gap between ecommerce and bricks and mortar, shoppers can order and pay for their shopping via a smartphone. Commenting on this technology, Mr Fujita, Store Manager of FamilyMart Saedo store (Panasonic System Solutions Japan Co., Ltd.), said, "Our Mobile ordering and delivery service is one of the most satisfying experiences for our customers. Currently, (as the service is limited to Panasonic employees) ordered items are delivered to an entrance of Panasonic office building. As a result, customer feedback tells us that employees are really happy with convenience of this service. This is especially useful for customers on a rainy day, as they don't need to go outside."

In fact, feedback has shown that the number of orders received on a wet day is 1.5 times higher, with customers suggesting the service is key to their shopping experience and satisfaction levels. As a result, the store has also benefitted from the expansion of their trade area.

A multi-cultural environment

Panasonic and FamilyMart have installed a face to face translator at check-out points to ensure bi-lingual communication between store staff and international shoppers.

Summary

By combining all new technologies in store, Panasonic and FamilyMart have created a convenience store of the future which provides an enhanced shopping experience to a diverse range of customers. Customers enjoy quick and easy cashless shopping, while employees are better placed to attend to their needs with streamlined working processes. In addition, the store is capable of reaching its customers beyond its four walls, with connected technologies which enable a delivery service.

"Our target is to expand our solutions, tested in this store, to all other FamilyMart stores. Toward this target, development plans are set by each solution and turning Plan-Do-Check-Action cycle at a high speed by testing what is already available in some other stores and find new rooms to be improved," added Mr. Miyashita, Managing Director of Store Business Solutions Co., Ltd. (an affiliate of Panasonic System Solutions Japan Co., Ltd.)