

Seven Eleven is a global company founded in 1927 in Dallas. Seven Eleven is the largest convenience store chain in Japan, with around 12,753 operating stores.

How is Data Analytics helping Seven-Eleven?

With the rise of technology and digitalization, retailers have felt the pressure to meet evolving consumer needs and expectations. Seven Eleven Japan (SEJ) has been on the forefront of this to the way they develop and invest in IT. SEJ since the start has been proactive in adopting information technology, which mainly relied on technology solutions from Japan's leading vendors. Datasets and business logic were combined and built into legacy environments that gradually lead into data silos.

Data Analytics & Demand Management

SEJ viewed information system as critical to managing all its SKU's, given the limited shelf spaces at stores. SEJ's average store size was 1200 square feet which made extremely important to decide which items should be kept on the shelves and how many items should be ordered to prevent stockouts and overstocking. To optimize profits given the shelf space constraints, SEJ majorly focused on obtaining high volume products and discontinued poor sellers. The data analytical system differentiated SEJ from other convenience store chains and retailers throughout the industry. System included the ability to forecast future trends and demand data to project future consumer needs.

Data Analytics & Procurement Management

SEJ introduced an on-line ordering system that enabled SEJ to streamline its order processing using in-store terminal that were later connected to the headquarters host computer. (**Exhibit 1**) Store managers could obtain real time information through the Graphic Order Terminal (GOT) on site, which allowed managers to analyze data such as scrap trend analysis, sales trends for new products, hourly sales trends by customer profile and stockout ranking by individual items. SEJ kept track of sales trends for each item and decided whether to keep selling or dropping the product. When per-store sales declined to a certain level, the product was immediately deleted from the recommendations list.

Data Analytics & Fulfilment Management

SEJ adopted a Graphic Order Terminal (GOT) to speed up the order processing time. POS data were central to order processing. Acting on the available information, the store manager would re-arrange products several times a day for the ease of the consumers to easily pick the product depending on the time of day, eg-350ml milk packs were bought by 30% of people on their way to work (**Exhibit 2** – overview of the results of analysis provided by store computer of POS Data). Additionally, SEJ, used Scanner Terminal (SJ) to check the freshness of the product. SEJ formed a new company 7dream.com with 6 Japanese companies with a mission to create an electronic commerce model to complement the convenience store business in Japan. Consumers could place order from large pool of products on 7dream.com website and pick up the order from SEJ store within 2-3 days. 7dream.com enabled SEJ stores to sell millions of items with carrying any inventory.

Limitations and Challenges of using Data Analytics

Collecting data is challenging, but what is even more challenge is to convert this data into knowledge and maximizing its usage for the organization's beneficial gains. Data analytical systems were expensive to establish and maintain as every stage of SEJ's supply chain from its Point of sales (POS) system to new product development was implemented within the overall information system. The Point of Sale (POS) system was only one way communication of uplinks without a down-link. Problems also included inability to efficiently retrieve data when needed, delays in accessing data collected in individual stores, and difficulties taking measurements at the right time in business operations that asked for real-time responsiveness. The bandwidth of IT available was insufficient to handle the enormous flow of information within SEJ. After reading and analyzing the case of Seven Eleven, according to me the most difficult sector to integrate data analytics for SEJ was fulfillment management through the evolution of IT. There were way too many tools and programs like Graphic Order Terminal, Scanner Terminal, Point of Sales system that had to be integrated with one another to serve the consumers with fullest satisfying capacity. In addition, there was a high cost in setting these systems up and there were times when the bandwidth of the program was not able to take in all the data that SEJ had. Training the staff to new innovative programs, increasing application cost with not sufficient data storage bandwidth and technology being easily copied by others in the market didn't suffice into fulfillment management.

To get the edge over the competitors SEJ even today continues to innovate and improvise its supply chain operations.

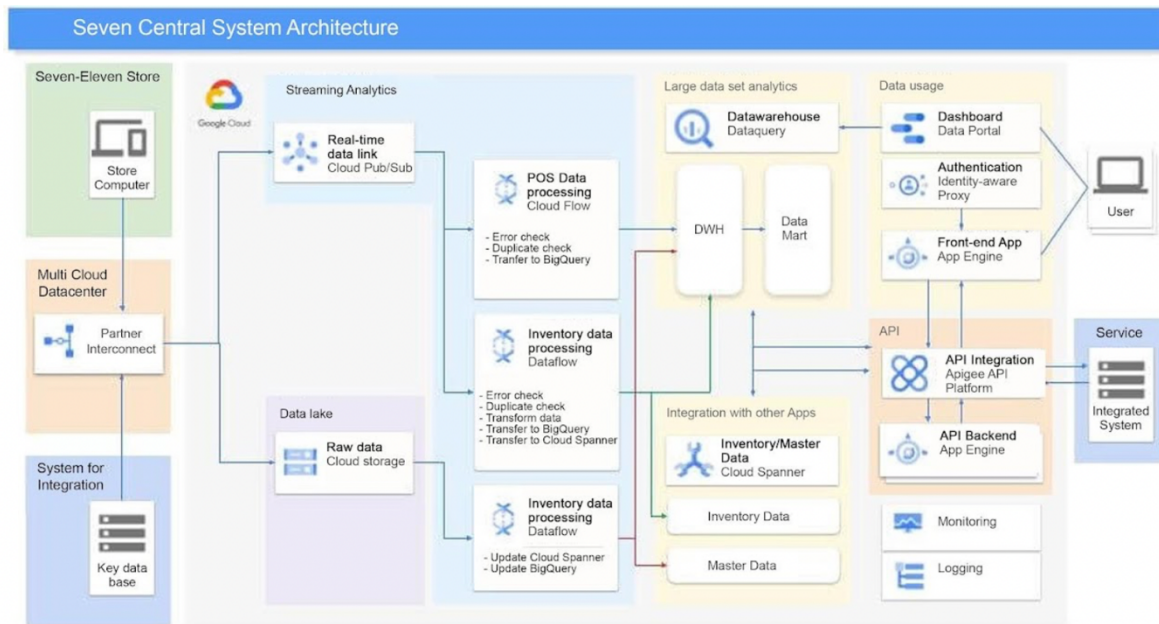


Exhibit 1 , source - <https://www.cloud-ace.com/case-study/japan-case-studies/case-study-seven-eleven>

Exhibit ② Information Analysis of POS Data

- Sales analysis of product categories over time
- SKU analysis
- Analysis of waste or disposal
- Ten-week sales trends by SKU
- Ten-day sales trends by SKU
- Sales trends for new products
- Sales analysis by day and time
- List of slow-moving items
- Sales analysis by product categories
- Analysis of sales and number of customers over time
- Contribution of product to sections in store display
- Sales growth by product categories
- Evaluation of merchandising

Exhibit 2, source- <https://cdn.website-editor.net/25dd89c80efb48d88c2c233155dfc479/files/uploaded/Case%2520study%2520-%2520Seven-Eleven%2520Japan.PDF>