

# NEC's "NeoSarf/DM" E-Commerce Solution and the Omni-Channel Era

YOSHIHIRO Tasuku

## Abstract

When it comes to shopping, modern consumers are presented with a panoply of choices that make it possible to purchase what they want, when they want, where they want, and how they want, thanks to advances in ICT technology. From using their smart-phone to pay for goods in a traditional bricks-and-mortar store to buying a product online from the comfort of their home, consumers expect to enjoy a seamless shopping experience no matter where they are or what shopping method they choose. This, in turn, is prompting retailers to shift from conventional single- or multi-channel sales to omni-channel sales. As omni-channel focuses on the integration of all touch points, it requires seamless integration of all channels on the back end. In other words, information about the customer and their previous purchases - whether purchased online or in a store - must be accessible to customer service representatives at any touch point. This paper discusses the background and reasons why the omni-channel is now attracting attention, future direction of systems required for the omni-channel era, and the concept underlying NEC's solutions.

### Keywords



omni-channel, customer experience (CX), digital management platform (DMP), personalized experience, acceleration of PDCA, NeoSarf/DM, component-based system

## 1. Introduction

Omni-channel (**Fig. 1**) is a new marketing buzzword that suddenly attracted attention when the US National Retail Federation (NRF) introduced Omni-Channel Retailing in a blueprint detailing the practice of mobile commerce.

The term's popularity was given real impetus when the CEO of Macy's - the largest and one of the oldest department store chains in the United States - announced that the venerable retailer would be restructuring its marketing and merchandising

services in a manner consistent with the company's goal of becoming an omni-channel retailer. In a world where the department store's role as "the place to find everything" had been rendered obsolete by the omnipresence of the Internet and new devices that made it easier than ever to access, Macy's was determined to redefine its role and develop omni-channel strategies that would give customers compelling reasons to shop there.

In omni-channel retailing, which has also been gaining traction in Japan over the past few years, all the channels that serve as touch points with customers are integrated to ensure a seamless shopping experience, no matter how the customer chooses to access the store's products. This paper outlines the background of omni-channel marketing and highlights the reasons behind the surge in interest in this novel approach to retailing and marketing. We will also look at the future of the omni-channel era and explain the concept underlying the omni-channel solutions proposed by NEC.

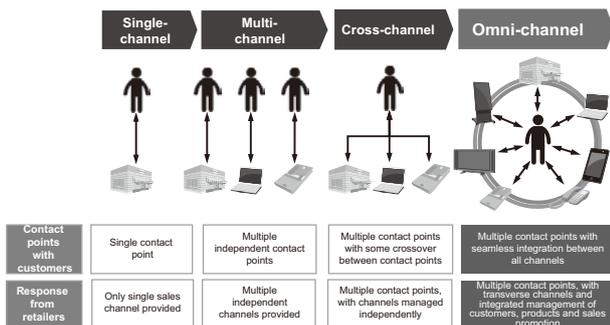


Fig. 1 Omni-channel.

## 2. Expansion of the Internet and Changes in Consumer Behaviors

One of the reasons why omni-channel has become the latest buzzword is the rapid expansion of e-commerce (EC) markets.

While the scale of the Japanese retail market is leveling off from its peak in 1996, the business-to-consumer e-commerce (B2C-EC) market has been expanding at a phenomenal pace, with sales in 2014 reaching 11.2 trillion JPY (a 17.4% increase over 2013) with an EC ratio of 3.67% (a 0.6 point increase over the previous year).<sup>1)</sup> Globally, B2C-EC sales are expected to reach 1.5 trillion USD this year, a 20.1% increase over 2014, climbing to 2.345 trillion USD in 2017.2)

Key to this explosion in e-commerce is the proliferation of smartphones and social networks (SNS) that have facilitated closer contact between people by enabling them to exchange information anytime and anywhere and to take action on that information as and when required. As a result, dramatic changes in buying behavior have taken place, rewriting the competition rules in the retail industry. This has finally destroyed the barriers between the Internet and the real world, forcing retailers to use every available and possible touch point, discarding old assumptions about the intrinsic existence of separate individual channels.

### 3. Making the Switch to Omni-Channel

Companies from across the business spectrum are looking for ways to apply the omni-channel concept to their operations. For example, there is a service to attract more customers to brick-and mortar stores by awarding them points. Another service creates opportunities for new encounters by integrating the inventory data for both online and physical stores. This encourages customers to visit the stores by enabling them to search inventory online. Clothing retailers have an online service that displays only the products that match the customer's size information based on their purchase histories at physical retail outlets. A multitude of such services are available, but one thing they all have in common is that they operate on the assumption that the more channels do not necessarily ensure a better service; instead, an absolute focus on "customer-centered service" is required in order to become "the choice of customers (= creation of new value)".

As should be clear by now, the omni-channel in itself is only a means and never an end. Moreover, the actual values offered to customers differ from one company to another; in other words, omni-channel strategies are company-specific. The true purpose of omni-channel marketing is to improve the customer experience (CX) by making the customer feel special, to thrill them with products specially selected to meet or even surpass their expectations. In order to achieve this, it is necessary to approach customers via variety of touch points and also to provide "customer-centered service." To improve CX in the omni-channel era, three key concepts are of critical importance - integration of information, personalized experience, and acceleration of PDCA.

### 3.1 Integration of Information

If the customer experience is inconsistent across channels - for example, having checked out the product on a webpage or leaflet, they visit the physical store specifically to purchase that product, only to find out that it is out of stock or the clerk at the physical store recommends a product that they have already purchased via the Internet, and so on - then the customer will be disappointed and may lose interest in shopping at that particular company's stores, both virtual and physical.

While social environments and technology continue to evolve at a dizzying pace and touch points with customers continue to increase, a seamless experience (CX) can be offered based on the digital management platform (DMP) - where information from multiple data sources is integrated. With this service, products can be browsed, purchased, and returned without any inconvenience. This is the first step towards creating an omni-channel (Fig. 2).

### 3.2 Personalized Experience

The next step is to draw from the integrated customer data to visualize the circumstances, interests, and concerns of each customer. It is important to focus on such questions as how did the customer come to know the company's products and services, how do they acquire information and deepen their understanding, what incites them to take action, where they are from, what obstacles they may experience, in what situations and under what conditions they access the service, and, of course, what they are looking for. As we have already pointed out, it is important in the omni-channel era to offer customers a positive and encouraging experience with appropriate service content at every touch point. To achieve this, it is necessary to provide each customer with a personalized experience, an experience that is differentiated by focusing on the individuality of the customer - by visualizing their goals, actions, touch points, and thoughts/feelings based on hypotheses derived from analysis of quantitative and qualitative data.

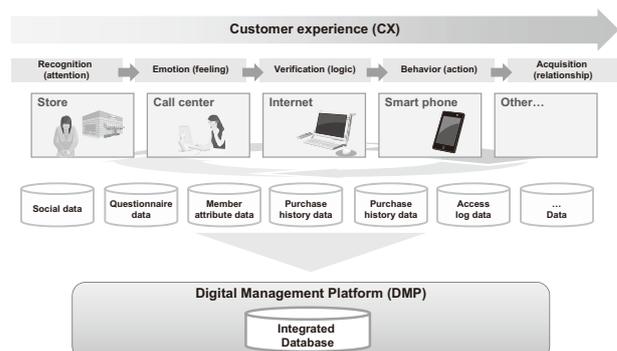


Fig. 2 Integration of information.

### 3.3 Acceleration of PDCA

Personal action needs to be taken for each and every customer by taking advantage of the integrated data. However, once an action has been taken, this does not end the process. Customer needs are always in a state of flux. It is important to repeat PDCA (plan-do-check-act) cycles, while keeping pace with changes in needs and environment and always listening to the customer's voice. In other words, it is of vital importance to keep talking to and thinking about customers at all times.

## 4. Future Direction of Systems Required in the Omni-Channel Era

The EC market is growing worldwide and is becoming more and more familiar to consumers thanks to the rapid proliferation of smartphones. Changing customer profiles mean that the time has come for EC to shift to a new paradigm, serving not merely as one sales channel among many, but as a window on the customer's world, providing access to crucial actionable data on customer needs.

At the same time, because it is important in the omni-channel era to improve CX while providing customers with a positive and compelling experience, actual brick-and-mortar stores continue to play a crucial role as it is at these stores where customers and sales representatives can make close contact. Against this background, whether stores are virtual or physical, it is essential that systems in the omni-channel era have mechanisms that enable continuous, optimally timed, and seamless communication with customers by fully utilizing optimal touch points based on the integrated data (Fig. 3).

Similarly, the services demanded by consumers are con-

stantly changing. Here too, omni-channel systems must be able to adapt and respond to the ever-evolving needs of customers. All of these changes are accompanied and abetted by rapid advances in technology with new services and devices such as SNS and smart glasses emerging one after another. Such events make it more important to link with relevant services and expand their systems in the omni-channel era. It is essential that today's systems accelerate the modularization of functions and offer maximum compatibility with various new services and technologies. By effectively applying these techniques and technologies to provide a welcoming environment and emotionally satisfying customer experience, it is possible for a retailer to attract new customers and build loyalty.

## 5. NeoSarf/DM

The NEC NeoSarf/DM is an integrated solution for e-commerce and mail-order retailing in the omni-channel era. Flipping conventional thinking on its head, this system was built based on the assumption that change is inherent. In a world where the social and technological environment is morphing with incredible speed, it is simply impossible for conventional purpose-built systems to operate effectively. Only a system platform designed and built based on the assumption that change is a constant, can evolve to meet changing needs and situations.

Using a service-oriented architecture (SOA), the NeoSarf/DM is a component-based system that modularizes loosely coupled functions (Fig. 4). Under this concept, components designed to achieve specific functions are completed and assembled and can be added as required, as opposed to the

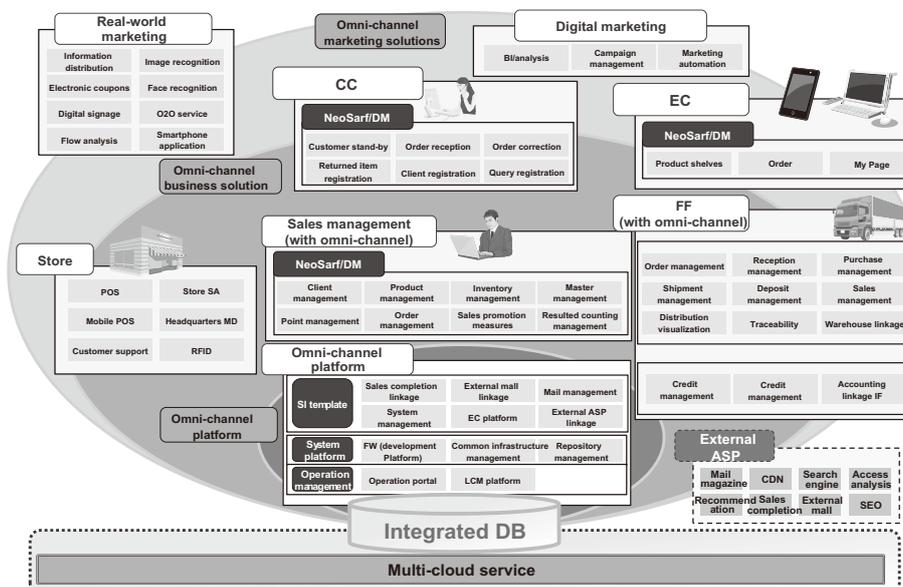


Fig. 3 Conceptual illustration of omni-channel solutions.

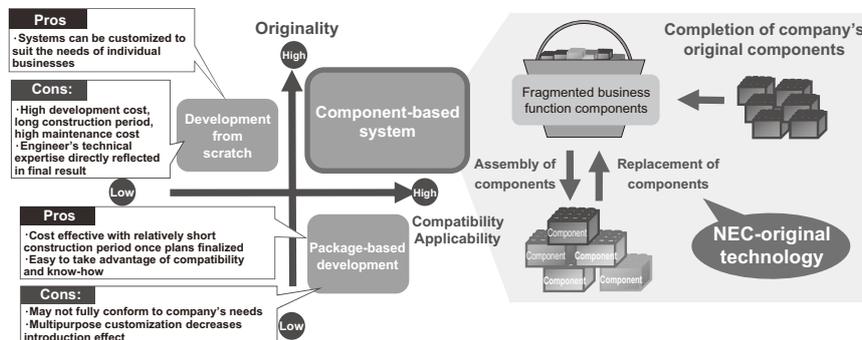


Fig. 4 Component-based system.

conventional concept in which functions are made available through customization of packages and development from scratch.

This approach makes possible flexible, prompt addition of functions, replacement of functions, and linkage with other systems and services as needed to cope with future changes in the business environment, thereby providing the speed and originality required to adapt to and take advantage of changes in consumer behavior and technological innovation.

## 6. Conclusion

Dramatic shifts in consumer buying patterns are now being driven by rapid advances in technology. These shifts have brought about equally dramatic changes in the retailing industry as it strives to keep pace with evolving consumer needs. No longer is it enough to simply have an online adjunct to the physical store. Instead, omni-channel - that is, seamless, integrated shopping across all channels and via all devices - has become the key to success in the contemporary retail environment. At its core, this means improving CX while utilizing every touch point. With years of experience in both the real and online worlds, NEC's understanding of business and expertise in component technology is unrivaled. This ideally positions us to implement and advance omni-channel solutions, and we will continue to support the development of the retailing industry by providing appropriate ICT.

### Authors' Profiles

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