

The Impact of Omni-Channel Commerce on Supply Chains

How to Make Sure You Effectively Deliver Products That Meet the Customer's Expectations

Management Summary

This white paper looks closely at the latest developments in e-commerce and at an omni-channel strategy as the new way to meet the empowered customer's expectations. These are discussed – along with associated effects on, challenges to, and potentials for a company's supply chain management – from various points of view. In addition, the paper briefly examines the currently leading e-commerce platform hybrids. It also provides best practice examples of how key players in the retail and e-commerce industry deploy omni-sales strategies, and their impacts on the supply chain.

The white paper is primarily aimed at decision makers in logistics, marketing, sales, and IT who work in supply chain management.

About the Authors

Hans Kourimsky

Hans Kourimsky is the business director for supply chain management at itelligence France. Since 2000, he has been active in supply chain implementations of SAP® software. As a specialist with long-term and far-reaching expertise, Kourimsky is in charge of strategic development and presales and delivery of supply chain implementations for itelligence France. He has worked in numerous industries, including spare parts, chemicals, food manufacturing, food distribution and consumer goods, providing a long track record in implementing systems for warehousing, transportation and customs operations.

Contact: hans.kourimsky@itelligence.fr

Marc van den Berk

Marc van den Berk is part of itelligence's global hybrid team and an expert in customer engagement and commerce. After his graduation in marketing, he held several different positions in marketing, commerce and sales, always at the cutting-edge of end-user communication and interaction, commerce and IT. In 2008 he joined itelligence BV in the Netherlands. Recently, van den Berk switched from manager e-business to the new area of customer engagement and commerce. He was one of the initiators of this white paper and contributed to the overall positioning.

Contact: marc.van.den.berk@itelligence.nl



Table of Contents

	Page
Management Summary	2
About the Authors	2
Meeting the Empowered Customer's Expectations	4
Multi-Channel vs. Omni-Channel – What is the Difference?	5
Multi-Channel – a Phase-Out Model?	5
Omni-Channel – a Different Mind-Set	5
The Impact of Omni-Channel Commerce on the Supply Chain	7
Processing Customer Orders	7
Expanding the Portfolio for Better Customer Engagement	8
Delivery From Store or Distribution Center?	9
Switching to an Omni-Channel Strategy	12
Impacts on Warehouses and IT	13
From Click to Ship – Fulfillment at Amazon	13
Meet the New Challenge with a Multi-Step Picking Process	14
SAP EWM – a Powerful Warehouse Management System	14
hybris – a Strategic Omni-Channel Platform	15
Summary: Where is Omni-Channel Commerce Taking Us?	16

Meeting the Empowered Customer's Expectations

The world of commerce in business to business (B2B) and business to consumer (B2C) is changing rapidly and it will change even faster in the years to come. Today's empowered customer expects a consistent buying experience across all retail channels – online, offline, or both combined.

Retailers, for example, must offer store pickup for goods ordered online. A recent Forrester study shows that “71% of all customers expect to view in-store inventory online, while 50% expect to buy online and pick up in-store. However, only a third of retailers have operationalized even the basics such as store pickup, cross-channel inventory visibility, and store-based fulfillment.” As if that isn't enough, retailers must also make sure that customers can choose how they return goods – either ship them back or bring them to the nearest store.

Omni-channel retailing involves seamlessly integrating the customer experience across all interaction channels – in store, on the web, and on mobile devices. As customers use almost every available buying channel, companies need to be omni-present. The buying process is no longer predictable. It is dynamic, driven by increasing internet and mobile use, and it has more “touch points” than ever. Moreover, thanks to social media, consumers have become more powerful. They can easily compare different offers to decide on the best match. If a company is not visible online, or does not show a solid mobile presence, it is inevitably losing market share.

» **Omni-channel retailing involves seamlessly integrating the customer experience across all channels – in store, on the web, and on mobile devices.** «

But it's not only about presence: Customers also expect a personalized shopping experience – in both their private and work lives, online and in stores. Innovative shopping facilities and excellent customer services are becoming standards, while brand loyalty is decreasing. A 2013 survey revealed that nearly 75% of consumers would switch brands if offered real time discounts and promotions on their smartphones in real time while they were shopping in a brick-and-mortar store. There can be little doubt that companies need to engage with customers on their terms – and in every relevant channel – to stay on top of the game.

In the B2C sector, this development is already quite obvious. It's less obvious in the B2B sector, as companies have to cope with more complex transactions and processes. Various business models and an eco-system of partners have to be integrated, which requires handling a huge amount of data. But saying it is “less obvious” does not mean that omni-channel has not yet arrived in B2B. It may be lagging, but it is catching up fast.

So how can your company prepare its supply chain for the challenges of a continuously changing, fast-paced commerce environment ruled by the empowered customer? This paper provides insight into the impact of an omni-channel strategy on a company's supply chain management.

Multi-Channel vs. Omni-Channel – What is the Difference?

Multi-Channel – a Phase-Out Model?

Multi-channel used to be an everyday phrase for multi-track sales and distributive channels. As the term indicates, many different channels are involved in the commerce processes. That sounds similar to the new buzzword, omni-channel. But there is a striking difference: multi-channel is characterized by “working in silos” – the channels exist side-by-side without interacting. Customers cannot buy across different channels, such as making an online order and picking the item up in the store. In other words: the channels are not integrated. Viewed from the consumers' shopping preferences, this model is now out of date. It is inefficient and threatens customer loyalty, because for customers the boundaries between individual channels are becoming increasingly blurred.

Omni-Channel – a Different Mind-Set

So why is omni-channel the better option? Again, many different sales channels are involved in the commerce process, but as the term “omni” suggests, all channels are in focus. The customer can buy across all channels, and all the information about the buying process is available on all channels, ideally in real time. Many retailers are already following this strategy. They are integrating their online and stores channel to leverage their vast customer reach and the convenience of Internet shopping to boost revenues.



Take Walmart: The worldwide leading retailer has deployed several omni-channel initiatives. For example, it offers a pay-with-cash option which lets customers order merchandise online and pay with cash at its stores. This permits customers who do not own a credit or debit card to buy online, which boosts online traffic. Also, office-supplies giant Staples has launched a “buy online, pick up in-store” program to fight declining in-store sales and profits.

» A crucial requirement for a successful omni-channel strategy is a single source of data for all sales channels. «

In addition, more Staples stores feature “kiosks”, where customers can go online, select from more than 100,000 items and have them delivered free, next business day, to more than 98 percent of North

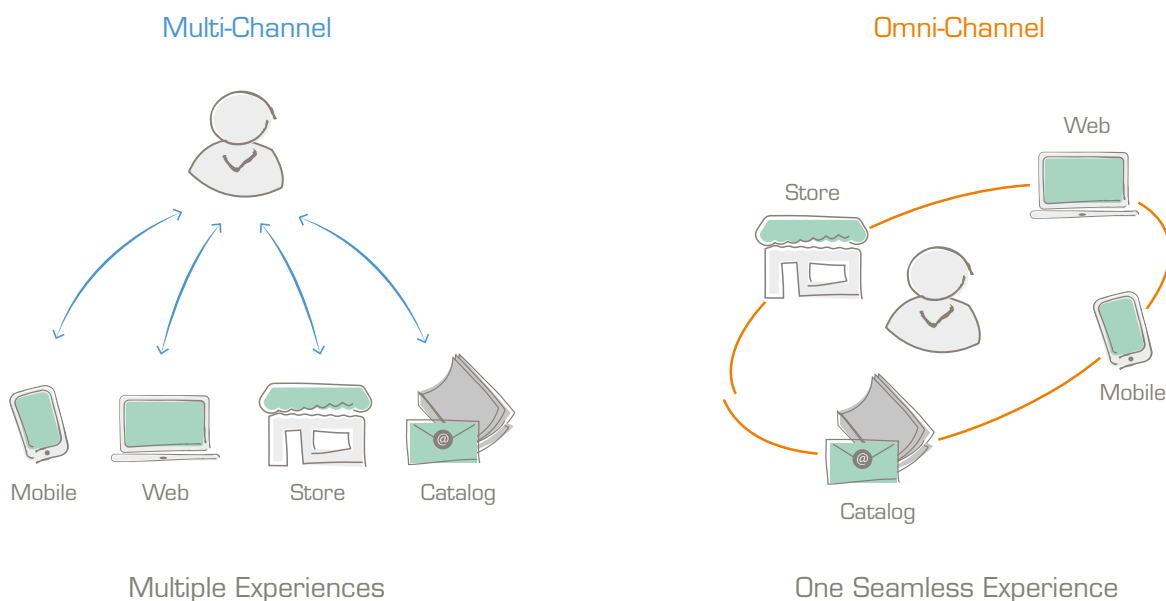
America. When they’re done shopping, customers can complete their transactions either at the kiosk or the store register.

Another highly innovative, omni-channel example: UK retailer Tesco opened a virtual grocery store in a South Korean subway station. Commuters can shop by scanning QR codes on their smartphones from a huge digital display that looks like a series of supermarket shelves. After the web-based shopping-cart transaction and payment are completed, the products are delivered to the user’s home within the day.

All of these service innovations are made possible through consistent data and cross-over processes. And all of these examples clearly show that omni-channel is not simply an evolution of multi-channel. Omni-channel is a completely different approach, a different mind-set for commerce processes. A multi-channel strategy focuses on optimizing sales activities within each channel; an omni-channel strategy concentrates on customers’ specific requirements and lifestyles, on overall revenue and creating a unique customer experience and lasting customer loyalty in the increasingly complex and dynamic world of commerce (see Figure 1).

A crucial requirement for a successful omni-channel strategy is a single source of data for all sales channels. And, seeing the supply chain as an essential part of the value chain, a single source of stock data is an absolute necessity.

Figure 1: Multi-channel vs. omni-channel – a different mind-set



Why SAP Goes Omni-Channel With hybris

With the acquisition of hybris, a market leader in e-commerce solutions, SAP has added proven omni-channel commerce capabilities to its portfolio.

hybris is a perfect match for manufacturers and distributors who are already using SAP ERP. They can now overcome complexities and barriers caused by data duplication of capabilities between hybris and SAP ERP – from product information/catalog management (PIM), pricing, and offer management up to promotions, personalization and order management.

SAP now has its own dedicated customer engagement and commerce platform that meets customers' increasing expectations about usability, flexibility, and a seamless shopping experience:

- A flexible, easy-to-adapt user interface compatible with all standard browsers and devices
- Easy administration and a flexible architecture that suits a fast-changing commerce environment
- Solid product information database for all channels



A perfect match

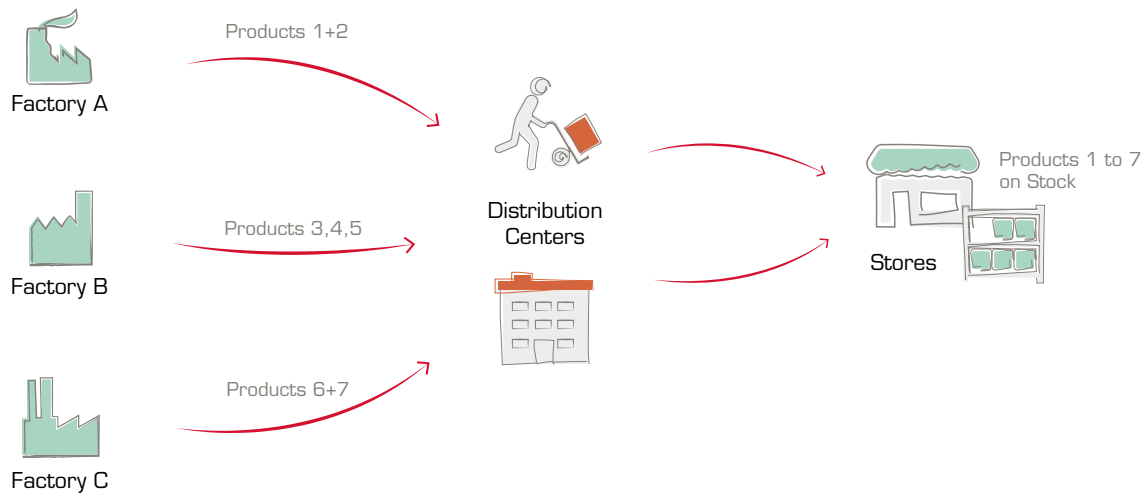
The Impact of Omni-Channel Commerce on the Supply Chain

Processing Customer Orders

In a traditional supply chain, to move goods from the factory to the end customer, you go through a multi-level supply chain built up of a factory warehouse, an international warehouse, distribution centers throughout the world, and stores.

The international warehouse handles mostly full pallets. So the distribution center receives huge pallets of single products that then have to be unpacked and shipped to their respective destinations. Finally, the store sells the products by the piece. So if a retailer wants to ship goods straight to a customer (e.g., because of an online order), the only place where all the products are in stock is the store level (see Figure 2).

Figure 2: The “traditional” supply chain



Expanding the Portfolio for Better Customer Engagement

The major impact would result from the implementation of a B2C channel, or a B2B channel that would significantly change the number of orders being processed. The physical processing is very different depending on whether you work from pallets shipped to stores or from boxes shipped to customers.

For most retailers, the distribution center ships as many deliveries as there are stores, with some deliveries being a full truckload. Shifting that volume of sales to a B2C channel requires filling a truck with boxes holding only one to five items, and many thousands of boxes a day. The major impact is increasing the number of deliveries exponentially while decreasing the number of line items in the system.

Also, the volatility of online ordering requires companies to broaden the portfolio of items they keep in stock to maximize customer demand – since having exactly the required product available is critical to retaining customers, who expect the quickest possible delivery. Thus, retailers must broaden the portfolio of stock-keeping units, and reduce the number of delivery lines shipped per delivery.

For example: Not long ago, to satisfy most customer requirements, a shoe retailer running a shop needed to have approximately 100 types of shoes – which was a lot. Today, in times of Zalando, Zappos, and shoes.com offering 20,000+ types to stay competitive, the same shoe retailer needs to be able to offer and ship almost every brand and type of shoe. Now, multiply that by the number of popular shoe sizes.

Figure 3 illustrates the increase in the average number of stock-keeping units (SKUs), the decrease in the average number of line items per delivery, and the increasing number of sales orders per channel a traditional retailer should be prepared to expect when engaging in e-commerce.

Figure 3: Fundamental effects of e-commerce engagement on a traditional retailer's supply chain

	Specialized retailer	General retailer	Market place
Increase in the number of SKUs available for picking	20,000 SKUs	180,000 SKUs	600,000 SKUs
Decrease in the number of lines per delivery	1.5	3.5	4.3
Increase in the number of orders per day	5,000	80,000	350,000

Delivery From Store or Distribution Center?

For a traditional company, implementing an omni-channel process usually requires creating or enhancing a “standard” e-commerce strategy. Somewhere along the chain, the company needs to halt the distribution process and ship goods directly to the customer.

The distribution center is the most likely choice because it is close to the end customer, and the warehouses are already set up to deliver boxes, which simplifies the switch. But stores may be supplied from several distribution centers, so a customer order might need to be fulfilled from several distribution centers.

In this case, delivery from the store to the customer may be easier. Depending on variables like transportation cost, picking efficiency or trained manpower, supply chains will have to choose between the two models – store delivery or distribution center delivery.

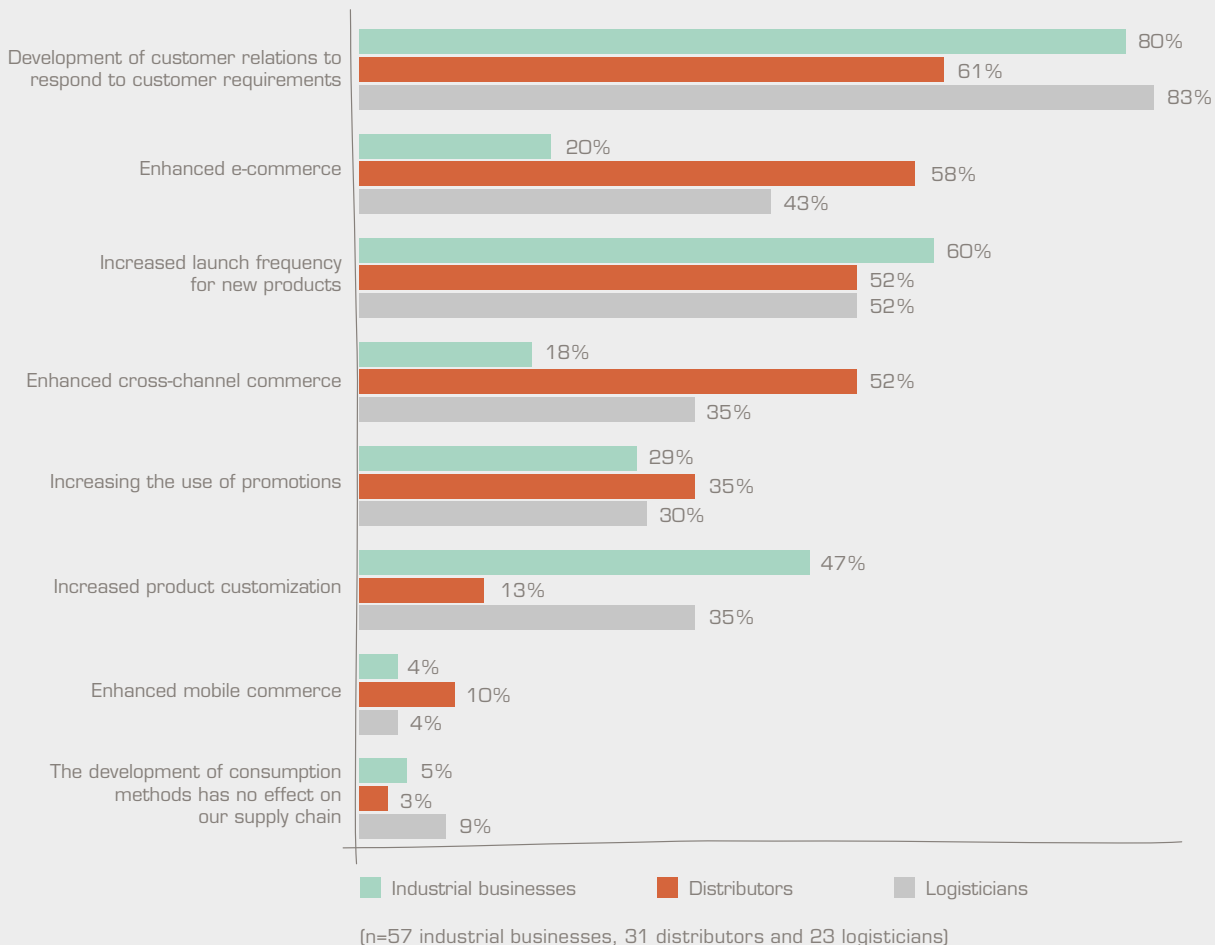
Study

How Companies Use Supply Chain Management Software

Only 18% of companies running cross-channel activities have separated logistical operations, according to the new market study “Supply Chain Management Software: Is it capable of meeting today’s challenges?” conducted in France by independent analysts le CXP and Supply Chain Magazine, in partnership with itelligence. This means that for the remaining 82% the operations are pooled, either partially (44%) or entirely (38%).

Challenges hit the IT systems from a number of trends affecting the supply chain. Changing customer relations and requirements concern more than 60% of the participating distributors. Other important strategic challenges for distributors include the development of e-commerce activities (58%), cross-channel activities (52%), and the increased frequency of new product launches (52%). All of those challenges cause far-reaching organizational changes within companies and the value chain.

Main consequences of the development of consumption methods – Strategic challenges for 59% of distributors

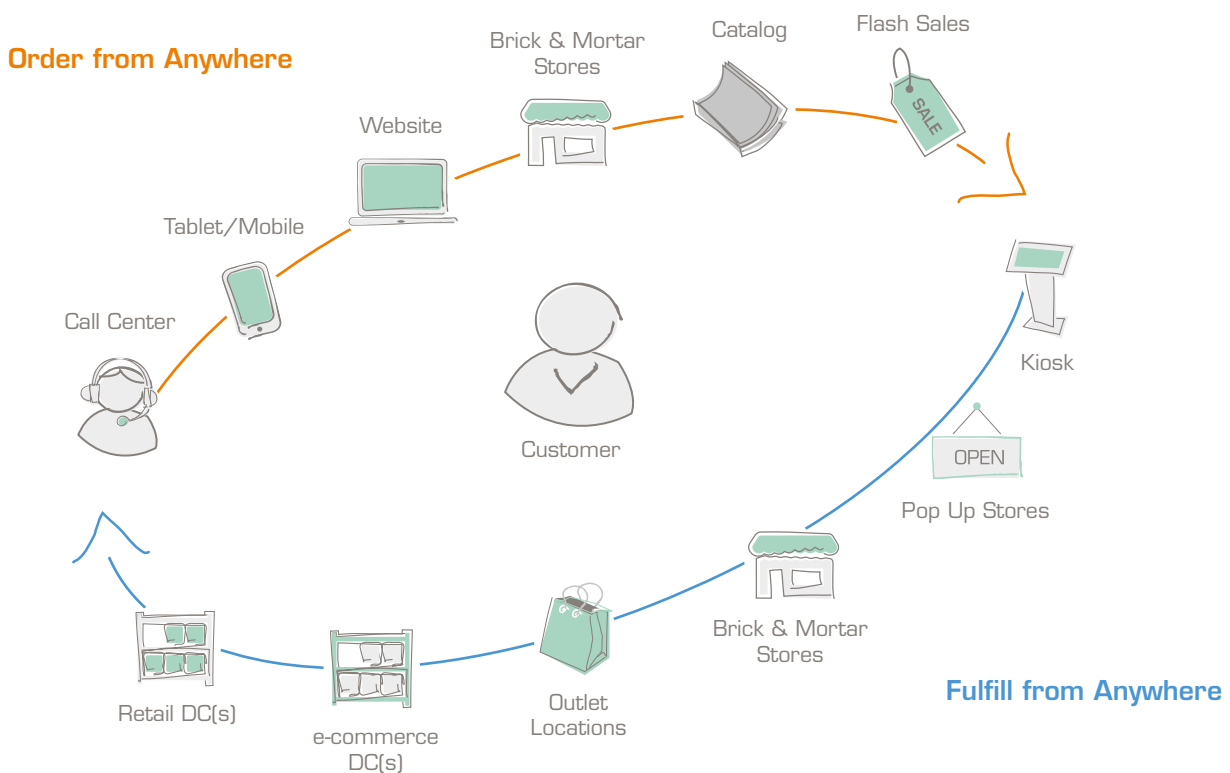


Which is best? There is no overall answer. And once a choice is made, the answer for some customers can change over time.

So, how to start? Basically the route to the best strategy for omni-channel fulfillment starts with four steps:

1. Looking for synergies across channels
2. Evaluating the optimal operating model
3. Choosing the right technologies and processes for the operating model
4. Defining the most efficient flow paths for all nodes in the supply chain

Figure 4: Omni-channel supply chain in retail



Switching to an Omni-Channel Strategy

One of the largest US retailers built its entire supply chain around delivering to stores. Disrupting the current process could risk leaving stores out of stock: The warehouse would be spending much of its time processing B2C orders, while its IT tools were geared to determine stock levels, and create purchase orders based on store requirements – not on the requirements of stores combined with B2C orders. So when this retailer introduced deliveries directly to homes, they chose to deliver from the stores.

In this example we see that one of the critical challenges of implementing an omni-channel process is that the safety stock levels and stock deployment must be re-determined throughout the supply chain. Sales forecasts will have to adapt, and service levels will need to be re-evaluated.



More data is
becoming available

Adapting sales forecasts requires visibility along the entire supply chain. The good news: More data is becoming available and can be used to tune the models. This data can derive from collaboration with other channels (distributors ...), from social media measuring tools or from web statistics. The bad news: The digital customer expects to be informed of every step and any delays in the supply chain. So companies need an end-to-end view based on aggregated information – from their vendors to the consumer.

Inventory Optimization & Sales and Operations Planning

Optimizing inventory levels is at the heart of supply chain management. Even a small edge in inventory management efficiency can pay huge customer and financial dividends. Given today's market dynamics and global competition, companies following an omni-channel strategy will also need to explore new ways to optimize inventory.

One good option is SAP Enterprise Inventory Optimization. This solution uses a stochastic, multi-stage approach, solving multiple mathematical equations to determine the optimum balance between service-level and inventory investment throughout the supply chain.

Inventory optimization works still better when supported by effective sales and operations planning demand-sensing tools that combine next-generation forecasting methods with Big Data technologies. For example, SAP Enterprise Demand Sensing, SAP Supply Chain Control Tower and SAP Sales and Operations Planning are all applications built on the SAP HANA platform, can handle large sets of data from products and from the supply chain, and deliver accurate data and forecasts in near real time. The software's algorithms are self-learning – letting planners focus on value-added activities rather than fine-tuning forecast models. Embedded analytics allow users to gain insights into demand patterns and take immediate action. Important KPIs – such as on-shelf availability, market-share analysis, promotion effectiveness, and sales productivity – can be recorded and analyzed by recovering data from points of sale, social media, wholesalers, distributors, and ERP systems.

Impacts on Warehouses and IT

Because of transportation and workforce issues, most companies will still want to adapt their distribution center to deliver B2C orders. This will have a physical impact on the warehouse: New areas will need to be set up for packing stations and consolidation. In some cases, distribution centers will need to be relocated to cover a wider portfolio of

goods. Apart from the physical aspect, there will be a significant impact on warehouse IT processes.

Revamping traditional warehouse processes to handle web-based orders is just one of the many impacts that the warehouse management system must face.

» **Revamping traditional warehouse processes to handle web-based orders is just one of the many impacts that the warehouse management system must face.** «

From Click to Ship – Fulfillment at Amazon

Making the received goods available for immediate sale is a key challenge for retailers switching to having the distribution center ship goods directly to the end customer. In most distribution centers stock is sorted before being put away, so that it can be easily found and grouped for picking.

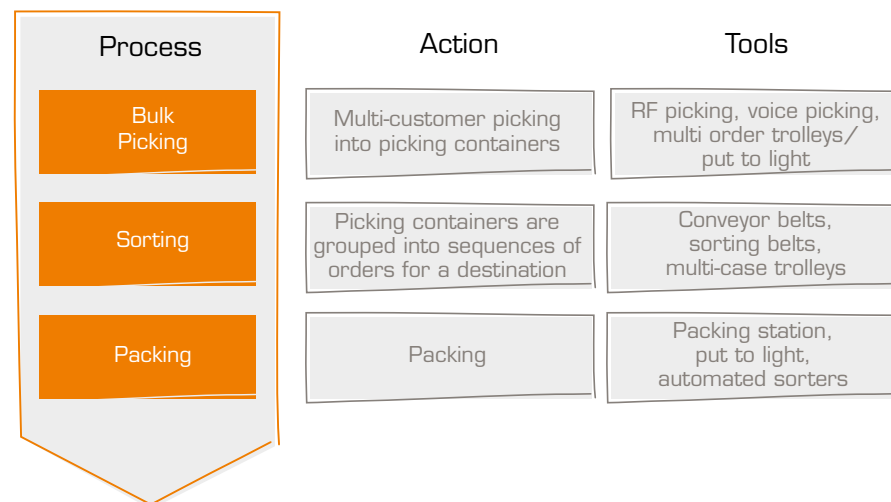
Having built its supply chain on B2C, Amazon applies a very different logistical process for receiving goods. At the warehouse, incoming goods are immediately put into the closest available bin. Commonly, goods are considered available only if they are in a bin from which they can be picked. Amazon applies this principle to the maximum: To avoid lost sales from a “no stock available” notice online, Amazon prefers to unload and put away the goods as fast as possible, even if it means putting cosmetics, shoes and books in the same storage bin. Mixed goods are stored wherever there is bin space – as close as possible to the receiving area. This leads to more complex sorting and packing later on. But the huge volume of sales and number of line items to be picked individually lets Amazon do massive detail picking, then convey the picked goods to a sorting/consolidation area.

This way of receiving goods allows Amazon to reduce stock levels in the distribution centers and to free up cash. By contrast, in the traditional automobile spare-parts industry, although the distribution centers can be as large as the Amazon fulfillment centers, the average time for a product to be moved from the receiving area to a storage bin can take up to three days!

Meet the New Challenge With a Multi-Step Picking Process

Warehouse shipping processes are even more impacted. Distribution centers will not generally change their complete physical layout and receiving process to match what Amazon is doing, but they will have to adapt their shipping operations significantly.

Figure 5: Best practice for B2C picking



Internet sales are much smaller and more numerous than regular B2B processes, so the distribution center will have to set up a multi-step picking process. Picking will usually be “consolidated”, meaning that a warehouse operator will pick for several sales orders at a time. These items will be conveyed, usually by automated conveyor belt, to a packing station where the consolidated picks will be packed into a box for the end customer. This way can provide sorting of up to 26,000 items per hour for up to 6,000 orders. The packed

» Automated sorting conveyor systems allow sorting of up to 26,000 items per hour for up to 6,000 orders. «

box then needs to be directed to the correct carrier, again often via an automated conveyor system. Some large-scale distribution centers even require sorting after picking and before packing supported by an automated conveyor belt.

SAP EWM – a Powerful Warehouse Management System

All these new requirements directly impact the warehouse management systems used in the distribution centers. Detail requirements can vary widely depending on, e.g., different product characteristics, product flows, or picking strategies.

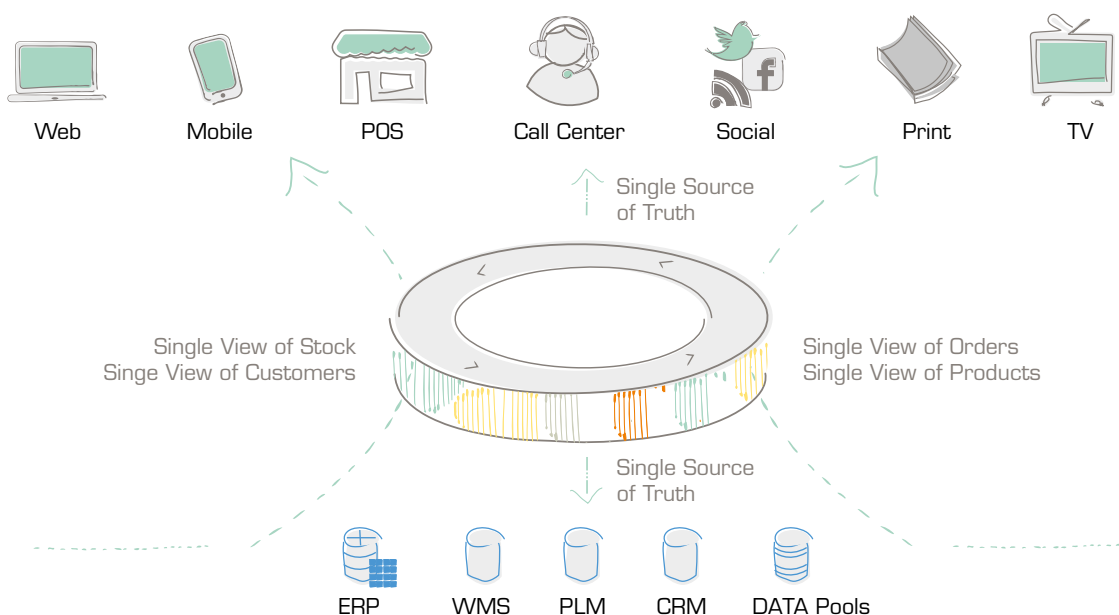
For most flexible operations, SAP Extended Warehouse Management (SAP EWM) is considered a best-of-breed/best-in-class system. It is a proven solution across all industries that can handle complex as well as simple operations. Supporting both distribution centers and production warehouses, it can also operate automated warehouses and allows for multiple scenarios within the same warehouse – from production supply to cross-docking and complex high-volume picking. A further advantage: SAP EWM is now available on the SAP HANA platform, and allows users to perform in-memory labor planning and reporting based on near real time analysis of warehouse tasks, productivity reporting, and other warehouse operations.

hybris – a Strategic Omni-Channel Platform

hybris, noted by Gartner and Forrester as a leader, is an omni-commerce platform that enables companies to promote and sell products via every channel and device. It employs a unique and powerful “single source/single view” model and a special tool for product information management. The platform allows the aggregation and enrichment of data from different sources in a single place, providing a single data source for all channels and across all markets. This ensures a single view of product data, pricing and promotion for both customers and providers.

Using the hybris platform, a company or an advertiser can offer optimized communication of data and brand at every touch point (web, mobile app, catalog, call center, etc.) in real time – in other words: it can give its customers an optimized buying experience, leading to increased customer loyalty and return sales.

Figure 7: How to deal with omni-channel and increased data complexity?

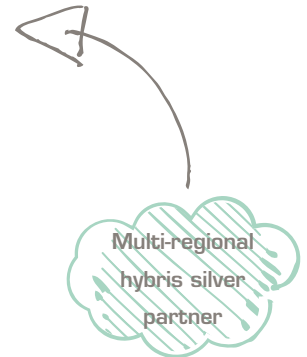


hybris & itelligence – The Right Choice for Successful Omni-Channeling

As a multi-regional hybris silver partner, itelligence implements customized omni-channel strategies using hybris software. Clients profit from:

- Cutting-edge solutions for predictive analysis and customer engagement
- 25 years of expertise in logistics and supply chain management solutions (important in selling and delivering products)
- In-depth knowledge of SAP ERP core processes: sales, distribution, finance ...
- One-stop-partner for IT architecture and infrastructure management – from integration and execution to hosting solutions
- Unique 24/7 application management services

itelligence is a long-term SAP Global Partner and one of the leading full-service providers worldwide. International customers benefit from itelligence's experience and expertise in both SAP solutions and commerce.



Summary: Where is Omni-Channel Commerce Taking Us?

In a world of commerce changing faster than can be imagined, companies in B2B and B2C commerce must be as flexible, and as omni-present as possible. As customers become ever more volatile, the challenge is not only to keep an existing customer base but to win back lost market shares and gain new ones.

Having to compete with Amazon and other aggressive, pure online players, a traditional retailer must develop its individual omni-channel strategy that links physical store advantages with digital edge into a unique, authentic, and seamless shopping experience for the consumer.

To do so, IT systems must be not only flexible but simple, transparent, and easy-to-use. And since it is a complex process to build simple solutions, corporations should go for seamlessly integrated systems with a single source of the truth and a single-view environment for all users and related processes. It also has to be as rich as possible in features and in opportunities to expand to new processes.

Mobile channels in particular will be in focus for many companies within the next months and years. Many brick-and-mortar stores will experience a complete makeover. Leading retailers rollout thousands of devices to put their store associates on a somewhat equal footing with today's digitally empowered customers.

But none of this will be of any use if a company's supply chain management is not also raised to the next level.

With a commerce platform as flexible and tailor-made for omni-channel as hybris, and warehouse management as well as supply chain solutions as powerful as those of the SAP portfolio, corporations can efficiently switch from multi-channel to the even more complex and challenging omni-channel commerce of the future.

Identifying and implementing the right software for an omni-channel strategy requires advice and development support by experts with in-depth knowledge of state-of-the-art technological capabilities as well as industry-specific challenges and opportunities.

Read more ...

... about future-orientated strategies and software solutions in our series of white papers. To find out more about omni-channel commerce, please contact the authors or visit us online at: www.itelligencegroup.com

References

<http://www.forbes.com/sites/greatspeculations/2014/03/27/what-is-wal-mart-doing-to-ramp-up-its-e-commerce-business>

[http://www.ey.com/Publication/vwLUAssets/This_time_it_is_personal_-_from_consumer_to_co-creator_2012/\\$File/Consumer%20barometer_V9a.pdf](http://www.ey.com/Publication/vwLUAssets/This_time_it_is_personal_-_from_consumer_to_co-creator_2012/$File/Consumer%20barometer_V9a.pdf)

<http://www.forbes.com/sites/brianwalker/2014/05/06/why-e-commerce-still-isnt-clicking-with-b2b-executives>

<http://archive.wkyc.com/news/article/271503/442/Look-around-Amazon-Warehouse-113012>

<http://www.forrester.com/Retail+Stores+Are+Set+For+A+Digital+Makeover/-/E-PRE5384>

<http://www.pymnts.com/news/2014/staples-goes-omnichannel>

<http://www.news-sap.com/sap-named-market-leader-transportation-management-systems-selected-warehouse-management-system-segments-arc-advisory-group/#sthash.OGBQ4Out.dpuf>

Warehouse Management Systems: Global Market Research Study by ARC, August 2013

Customer desires vs. retailer capabilities: minding the omni-channel commerce gap. A Forrester Consulting Thought Leadership Paper, January 2014

Omnichannel Retail. Delivering on Customer Expectations. Darrell Rigby/Julia Kirby, Harvard Business Review. November 2011

Videos:

A Day in the Life of an Amazon Package: <http://youtu.be/8-DgmfMa5Zk>

Tour an Amazon Fulfillment Center: <http://youtu.be/OB-J6y3KicA>

Tesco's virtual subway store South Korea: <https://www.youtube.com/watch?v=fGaVFRzTTP4>



About itelligence

itelligence is one of the leading international full-service providers for SAP® solutions, employing more than 3,800 highly qualified employees in 22 countries. Our SAP expertise is unrivalled and has been developed over the last 25 years, supplying specialized integrated business solutions for over 5,000 customers worldwide. Our service portfolio includes SAP Strategy, SAP Licensing, Implementation and Process Consulting, Outsourcing and Application Management Services. We are pioneers in the development of industry-specific solutions and our experts work hand in hand with SAP on new scenarios and ground-breaking solutions for business analytics, in-memory computing and SAP HANA®, cloud, and mobility. In 2013, itelligence generated total sales of EUR 457.1 million.

www.itelligencegroup.com



Austria
Belgium
Canada
China
Czech Republic
Denmark
France
Germany
Hungary
India
Malaysia
Netherlands
Norway
Poland
Russia
Slovak Republic
Spain
Switzerland
Turkey
Ukraine
United Kingdom
United States of America

itelligence NTT DATA Business Solutions

This white paper outlines our general product direction and must not be relied on in making a purchase decision, as it is not subject to your license agreement or any other agreement with itelligence. itelligence has no obligation to pursue any course of business outlined in this white paper or to develop or release any functionality mentioned herein. This white paper and itelligence's strategy for possible future developments are subject to change and may be changed by itelligence at any time for any reason without notice. This document disclaims any and all expressed or implied warranties, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, or non-infringement. itelligence assumes no responsibility for errors or omissions in this document, except if such damages were intentionally caused by itelligence or its gross negligence.

Imprint/Contact

itelligence AG ■ Königsbreede 1 ■ D-33605 Bielefeld ■ www.itelligencegroup.com