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Digital transformation in Retail-II

In the first part of the whitepaper, "Digital Transformation in Retail-I", we have seen how new technologies implemented in-store, enhances customer experience. Newer trends like online shopping are leading to transition in consumer behavior. This whitepaper talks about how organizations can implement next-generation software and data technologies, to bring about efficiency in their supply chain, and thereby improve the bottom line.

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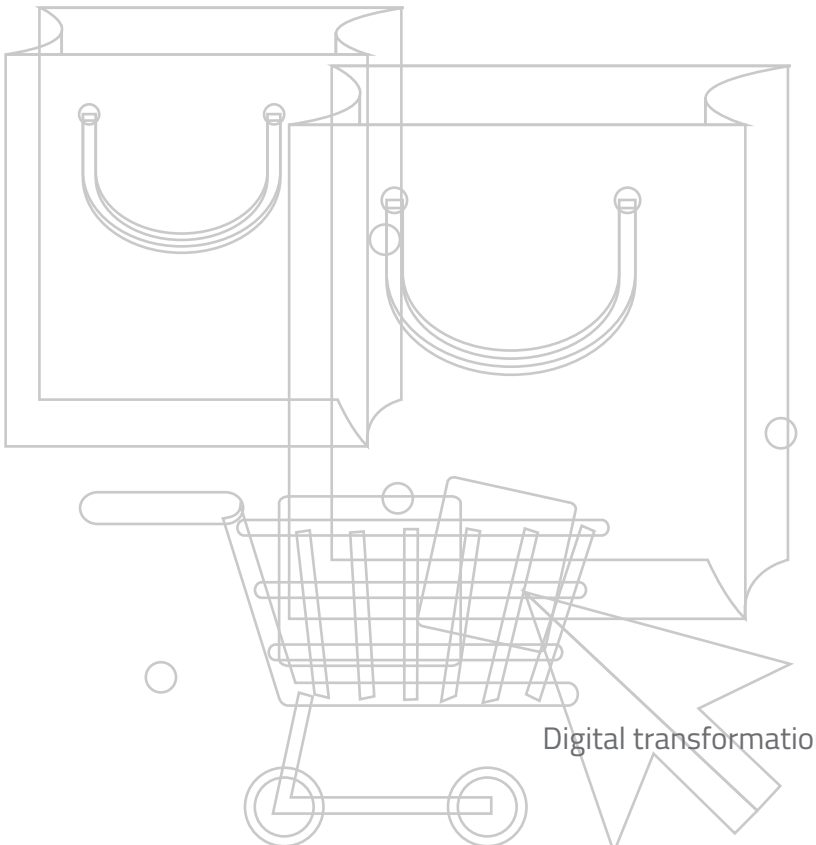
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Factors Encompassing Supply chain

By digitally restructuring processes, retailers can reduce operational costs and improve efficiency.

Today, Supply Chain Management is not merely about ensuring the right products reach the right place at right time. It is more dynamic. Need for data to be visible is most crucial. The role of technology is to enable the supply channel managers to know any information at any given time, based on which they can analyze in case of any glitches, and take action.

As part of digital transformation, several companies are allocating a good amount of their budget to move from a hybrid model to a digital supply chain model. Latest technology can predict product demand, allow real-time changes, and view stock from the time they leave the warehouse, until it reaches stores.

Supply chain includes warehousing, transportation, storage, inventory holding, packaging and even wastage. Speed in transportation and visibility in the supply chain can reduce costs, mitigate risk, and can avoid situations of over-stocking or under-stocking goods, especially during peak seasons.

A Harvard Business Review study estimates 16% of stock that was reported lost or stolen were actually misplaced, and this had a negative impact on profits by as much as 25%. Besides traditional retailers there are internet retailers and manufacturers selling directly to consumers who are fighting for market share. Even if the product is good, consistent delivery experience is necessary for loyalty. Unpleasant delivery experience can result in bad customer reviews, which can leave you vulnerable to intense competitive pressures.

Nearly 43% of small business owners in the U.S. still use pen-and-paper or spreadsheets to track inventory. Needless to say, disorganized stock levels lead to missed opportunities, and customer dissatisfaction if a displayed item is out of stock. In today's fast-paced and highly competitive business world, an automated asset-tracking system that tracks inventory in real time, and facilitate timely replacement are the way to go. If the inventory is streamlined well, it allows executives and business managers to avoid disruptive record-keeping and focus on selling.

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How to Leverage IT to Streamline Operations

Predictive analytics makes Supply Chain Management process more accurate, reliable, and cost-effective. This can be applied right from demand forecast to the process of procurement and logistics planning.

The new Hybrid Transactions Analytic Platforms (HTAPs) like SAP HANA can process both transactional and analytic queries simultaneously without any delay. The inflow of customer orders, current inventory positions, and any manufacturing or external delays is integrated and updated to supply chain forecasts.

- **A POS System** with automated inventory tracking is now within easy reach for even small businesses. Retailers can integrate the POS (Point of Sale/Service) terminal software with all the other retail systems. This investment pays off as efficiency improves and averts any missed sale opportunity for want of sufficient stock. An additional benefit is increased control over the business, and ability to assess the exact situation of the business at any given point of time.

  These days the inventory management software includes features that cater to, CRM, financials, membership system, supplier record, book-keeping, issuing of purchase orders, stock transfers, barcode label creation, sale reporting and in some cases remote outlets networking or warehousing. For the right reason, this system is now popularly known as the retail management system. Cashiers can now instantly retrieve customer information from third-party customer databases at the point of sale. As the selling price is linked to the product code, it makes it easy for the cashier as he/she has to just scan the code. In times of promotion or when the product is added as a fresh stock, the price change is reflected in the system.

  Today's consumers will expect to be able to pay the way they want. If Business Insider's word is to be believed, by 2020 mobile payments will account for $503 billion in sales. All those retailers who don't want to risk losing sales, will have to implement mobile payment solutions like mobile POS systems, third-party options like Apple Pay or custom mobile payment apps such as Kohl's Pay. One of the key features of SAP POS is enhanced security strategy like encryption of sensitive data, increased support for centralized transaction services including Electronic Funds Transfer and compliance with Payment Card Industry Data Security Standard (PCI DSS) requirements.

- **RFID and NFC:** Integrating tracking system using Radio frequency identification (RFID) has seen its use since decades, especially in transport and warehouses. Used in automatic identification procedures, an RFID reader or an NFC (Near Field Communication) enabled phone or tablet can be used as a reader to transmit information from the tag. Both RFID and NFC can be used in broad range of industries as it gives the flexibility for contactless data transfer.

  Warehouses can receive real-time updates on inventory levels and reduce operational cost, using RFID Forklifts for rack management. Businesses will need to evolve according to customer expectations. Companies which integrate NFC into their business, offers its customers the convenience of getting out of the check-out line much quicker, easily track their reward points, and offer a secure payment option through their wireless wallet.

  Starbucks invested $25 million in NFC enabled machines to shorten the waiting period for its customers, and they have probably generated more revenue in the process.

- **Advance Bar Coding Methods:** Generically referred to as automatic identification and data capture (AIDC), Barcodes became commercially successful when they automated supermarket checkout systems. In point-of-sale management, barcode systems can provide detailed up-to-date information on the business. Fast-moving items can be automatically re-ordered, profitable items can be given the best place instore and one can prevent inventory build-up of slow moving goods.

  Some retailers these days levy large penalties for non-compliant barcodes, which can reduce a manufacturer's revenue by 2% to 10%. QuaggaJS is a barcode-scanner entirely written in JavaScript supporting real-time localization and decoding of various types of barcodes such as EAN, CODE 128, CODE 39, EAN 8, UPC-A, UPC-C, I2of5 and CODABAR. The library is also capable of using getUserMedia to get direct access to the user's camera stream. Although the code depend on heavy image-processing even recent smartphones are capable of locating and decoding barcodes in real-time.

- **Enterprise resource planning (ERP):** This software helps enterprises to track the usage of their inventory. The system indicates when the stock levels drop below a certain point, to replenish them on time.

  With thousands of items in a hypermarket, having an ERP software to automatically place orders with the store's vendors when products drop to a certain level, will be of great help for the business to keep track of its items, and to ensure that the store shelves are never empty.

  The Genesys program is an integrated SAP Enterprise Resource Planning (ERP) solution that is in the process of replacing Coca Cola Enterprise's legacy systems, and shorten the cycle time of "order to cash," "requisition to payment," and "record to report." The new software will bring more visibility and productivity into the business and improve decision making.

- Leveraging on Web 2.0 technologies (social networking forums, podcasts and web surveys, to name a few), enterprises can interact with their primary and secondary customers, understand their requirements and integrate the information gathered for inventory and assortment planning.

- By 2020, most of the supply chain technologies will be delivered and consumed via SaaS (software as a service), especially with the rise of cloud computing. In this case, the user will have to pay only for the ability to use the capability and will not have to incur the large fixed costs of ongoing maintenance, upgrades, and infrastructure expenditures that can amount to almost 25 to 30 percent of the cost of ownership.

- Fulfillment involves delivering finished goods inventory, and out-bound logistics. Shoppers' demand for lightning-fast delivery is here to stay. A recent study by Temando found that "80% of shoppers surveyed want same-day shipping, while 61% want their packages within 1-3 hours of placing an order." Retail-centric apps and outsourcing to third-party services are commonly used by retailers to get their products into consumers' hands quickly. For example, Apple has teamed up with logistics company Postmates to offer same-day delivery to its customers, while AT&T has partnered with Enjoy to hand-deliver to set up phones for their customers.



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How IoT transforms Supply Chain

IDC predicts that by 2018, analytic applications aligned with the IoT will result in a 15% productivity improvement for manufacturers in terms of innovation, delivery and supply chain performance.

IoT presents a huge opportunity for supply chain specialists. In the near future, the entire supply chain including products and smart objects used to monitor the processes will be connected. Industry refers to IoT-related products by the function each one performs, such as wayfinding, consumer journey heat mapping, asset tracking, sensor-enabled inventory management, or personalized interaction rather than referring it as IoT. "Industrial Internet of Things (IIoT)" is a term that has emerged to describe how companies are bringing about operational efficiencies by leveraging cloud, mobile, big data and other technologies to integrate the digital and real world.

IoT had begun showing its impact in logistics, inventory management, security, and payments long back ago. By tracking assets in real time, suggesting an alternate route in case of any glitches on the way, and ensuring timely delivery of products is one of the biggest advantages of IoT in logistics. A digital supply chain ensures superior network and extensive information availability, resulting in improved agility, reliability and effectiveness. Intelligent Mobility (IM) will have a deep impact on the way people and goods move around the globe.

According to a case study put together by IBM "The smarter supply chain of the future," not just customers, suppliers and IT systems in general, but extensive connectivity will enable worldwide networks of supply chains to plan and make decisions together. This will bring stability and better visibility in the chain.

RealD case study

REAL D

Using Salesforce as the platform, Suyati successfully implemented a cost-effective and efficient business process for RealD, a 3D cinema technology company in the US. Suyati tracked the assets, right from the manufacturing plant of RealD, until the shipment reached the vendors, and in case of damaged products, the shipment was again tracked back from the vendor to the client.

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How IIOT can transform the In-store Experience of Tomorrow

The combination of the Industrial Internet and IoT devices could add more than $14 trillion to the global economy by 2030.

In few years, IoT will transform food industry's entire business process from design to distribution. By integrating the retail IoT, predicted systems, and smart shelves, food manufacturers, retailers and suppliers can avoid costly out-of-stocks or missed sales.

- RFID tracks inventory as it moves across the supply chain
- Beacons gives out complete information about shoppers
- Smart thermostats/lighting improves energy use
- Machines autonomously replenishes stock to arrange products
- Smart price tags can be changed in real time during promotions or as per need
- Sensors on smart shelves notifies when inventory decreases in store
- Time spent in front of a specific category of products can be an early indicator to change suggestions or promotions.
- Shipment information sent by suppliers can be tracked too.
- Real-time tracking of inventory using bins that automatically indicate when they need to be replenished.
- Predictive maintenance alerts in case of any impending equipment malfunction, and fixes them automatically before they occur.
- Remote monitoring about the expiry of perishable items and the quality of the final product.



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Case Study

In April 2016, True Religion - a denim brand, equipped all their sales associates in New York and LA with Apple watches. They partnered with Aptos and Formula 3 Group to bring real-time inventory information to assist shoppers. Associates have an option to cast their watches onto larger digital screens in-store for the shoppers to see and order their needs on the spot, instead of sending them online or to another store. As a result of using smart watches and offering personalized interaction between the sales staff and customers, in a couple of weeks, managers noted an increase in sales.

Whether to integrate with file distribution systems, traditional ERP API or communicate with sensors and application languages (Python, ShinyR, etc.) are the challenges faced by every company going the IoT way. Industry experts have launched PaaS (Platform as a Service) to integrate this growing IoT technology.

Retailers that understand and take advantage of IIOT will be best positioned to deliver seamless retail experience.

Conclusion

Retailers need to tap into the rapidly shifting consumer expectations by embracing the wave of disruptions. Gazing into the future to understand—and begin planning for—the next wave of game-changing technology is important.

Integrating data and insights across the entire process is a complex one, it will take time for it to trickle down into their current processes. Nevertheless, having good supply chain planning tools in place, can help you evaluate past sales, margins, returns, finances and merchandise way ahead. Those companies that roll out technologies and tools to make transformation a reality will experience an intrinsic competitive advantage in their businesses.

Through our customized digital solutions, Suyati assists enterprises, be it manufacturer or a retailer, to be successful and reach new heights.

Please share your feedback with us: ***services@suyati.com***

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S. Karthikeyan, or **SK** as he is better known, has 19 years of experience in designing, leading and delivering world-class software solutions. His specialties include Product Ideation, Innovation & Strategy, Enterprise & Solution Consulting, Data Science Solutions, and Digital Transformation. As Chief Innovation Officer, SK ensures that experimentation and innovation continues unfettered at Suyati Technologies. He leads the Mekanate team that is developing a Digital Transformation platform using AI, ML, IoT and Big Data technologies. He holds a Masters Degree in Computer Application, and Advanced Certificate in Information Technology Management from IIM, Kozhikode. The opportunity to build technically complex solutions is what runs through his mind all day, and probably keeps him awake at night! Connect with him on **LinkedIn.**



About Us

Suyati is a fast-growing, digital transformation solutions company that helps you rebuild your customer experience for the digital consumer. We collaborate with businesses to strategize and implement impactful digital initiatives that position our clients ahead of the competition. We are digital-first and we focus on delivering digital transformation solutions that support your various engagement strategies. With our niche and rich expertise in a wide range of technologies and services- CMS, CRM, e-commerce, Cloud, IoT, Data Analytics, and Product Engineering- we help companies leverage their best on web/cloud/mobile platforms.

We enable you to create insights driven customer engagement across all touch points to build a unified marketing approach. Our custom technology solutions have been deployed successfully in companies across the globe, especially in the US, UK, Europe and Australia.

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