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Disruptions in Retail through Digital Transformation

Reimagining the Store of the Future

November 2017

Message from ICC Retail Summit Chair

The word "Innovative Disruption", to quote from Mr. Clayton Christensen, the Author of "Innovator's Dilemma", refers to an organization or entrepreneur anticipating Customer's needs, passionately falling in love with Customer and creating a market where none existed. The rapid pace of such disruptions mostly shake up established traditional business models and make the earlier known Rules of Success or Growth redundant in today's "Phygital" connected world especially Retail. Technology is getting intertwined and becoming seamless in both B2B as well as B2C experiences. Cycle times and Planning times are expected to shrink as complex processes get reconfigured through Bots and concepts like AI and IOTs.

With this backdrop and booming outlook for growth, Retail Sector in India is clearly poised to become one of the largest beneficiaries of the disruptive era that has begun. ICC is proud to associate with Deloitte team who have taken the efforts to bring out the "knowledge paper" on "Disruptive Digital Transformation in Retail" which will immensely benefit the businesses, Start-ups to SMEs to large enterprises and the various stakeholders in their journey of exciting growth ahead.

We wish to thank the Deloitte leadership team for the extensive work done including the interactions with Retail industry leadership teams in various Companies.

ICC is also delighted to host its First Retail Summit in Southern India and I thank the ICC leadership and MC members for the Initiative!

All the best,

S KANNAN
SUMMIT CHAIR

Foreword by Deloitte

The modern economy has been built on the foundations of the industrial revolution with its roots in scientific concepts of deductive reasoning and the economic logic of maximizing self-interest. Digital has helped build a parallel narrative of inductive doctrines where focus is on looking at **convergence** between sectors, breaking down functional silos within organizations by **customer-centric,** opportunities to collaborate even with competition by developing a **co-opetition** mindset, **co-ownership** of investments through franchisees/alliances for scalable growth with low levels of asset intensity, building relationships with the new generation of inter-connected customers who are involved in **co-creation** of products/services and a long term orientation of **continuous learning** through feedback to better improve the customer delivery model.

Retailers have had two options in the way they have responded to the digital opportunity. A vast majority have seen digital as an enabler of better customer service or greater operational efficiency and have hence implemented many digital technologies to improve their performance on these parameters. This approach is an incremental response to the opportunities presented by digital and is primarily driven by a low risk propensity to allocate scarce resources to what can be a fundamental disruptor to the business model of retailers. However, there have been a few retailers who have truly awoken to the possibilities presented by Digital. They have seen digital as an opportunity to shape a long term sustainable business model which is a departure from the paradigms of the past.

Integral to this digital approach is the view of the retail eco-system as a network of suppliers and franchisees supporting the central actor (retailer) in orchestrating a business model with the long term objective of maximizing **customer lifetime value** and not just focused on a transactional approach. The fundamental tenets of this approach is a collaborative mindset where the retailer is the first among equals in the wider network who invests in building the capabilities of the entire network to be agile and responsive to consumer needs. Attracting and retaining shoppers is the shared objective of the entire network and digital technologies help to understand consumer needs (e.g.: cognitive), provide greater assortment (e.g.: Visual merchandising), help shoppers decide (e.g.: Virtual Trial Rooms), lower cost (e.g.: robotics & process automation), increase loyalties (e.g.: blockchain) and enhance customer service (e.g.: AI base self-learning systems). However the risk is to view digital only through this prism of technology investments. At the core of digital for any retailer is a wider ability to build a culture of collaboration, the capability of using data to break through functional and organizational boundaries, the art of using technology to unearth new possibilities for enhanced customer value and in the process completely **reimagine the store of the future...**

Anand Ramanathan
Partner, Deloitte

Executive Summary

Digital provides opportunities for retailers to acquire new customers, engage better with existing customers, reduce the cost of operations, and improve employee motivation along with various other benefits that have a positive influence from a revenue and margin perspective.

For the purpose of this report, digital has been defined as a technology enabled combination of resources (can include instruments, devices, bots, tools, teams, protocols, processes, networks, methodologies) which enables the availability of content (can be data, information, expert/social reviews, reports, analysis, games) for the user (employee or customer) to make more productive (can impact cost, time or service level) decisions and satisfying choices.

The ability to collect, process and share large quantities of data has led to some fundamental disruptions in the design of business models. The key factors impacting this change include:

- **Convergence:** The traditional boundaries between sectors is collapsing. Innovation at the boundaries of sectors such as payment systems (Financial Services & Telecom), e-commerce (Retail & Telecom), Industry 4.0 (ICT and Manufacturing) etc. is fundamentally disrupting businesses. Any disruptive approach in digital transformation for retail hence, needs to factor in a multi-disciplinary view of implementation with a mix of analytical and creative capabilities

- **Customer Centricity:** Functional boundaries within organizations are also being dismantled to align structures to customer needs. The process has been further accelerated through digital as big data is now making it possible to analyze shopper behavior in great detail and customize the delivery format to individual consumer requirements through personalization

- **Co-opetition:** This is a revolutionary mindset that combines competition with collaboration. Suppliers and retailers are no longer competing for limited resources but are working together to profit from enhanced customer value being delivered. There have been several instances of collaboration between retailers even from an India context (e.g.: Future Group and Flipkart)

- **Co-ownership:** From a retail context digital has helped monitor and control quality in franchising agreements to achieve greater alignment of the business model to shopper requirements presenting an enhanced opportunity for retailers to drive scale at a fast clip without compromising on the brand promise and sharing the investment burden with their partners

- **Co-creation:** The new digital shopper is highly interconnected with his social peers and is more willing than ever before to share experiences and let others profit from his/her interactions with products/services. Consumers help co-create the value proposition basis their willingness to provide feedback which helps refine delivery models on an ongoing real time basis.

- **Continuous learning:** Self learning systems through AI and cognitive modelling has enabled feedback from past experiences to optimize the shopping experience for consumers and hence impacting satisfaction and loyalty to be enhanced.

This report focuses on the impact of Digital on three key elements of the retail business & operating model:

1. Strategy – includes elements of segmentation, positioning, operating formats and business models (location, assortment, size, pricing)

2. Front end - Customer facing operations including store front, Merchandising & Promotion, Customer experience including Loyalty, Marketing and Communications, Pricing & POS Solutions

3. Back end – Supply Chain, Logistics & Warehousing, Digital Procurement & Vendor management, Assortment mix & planning, People, Finance Automation

		Traditional Retailers...	Store of the future...	Illustrative Examples
Where to Play?				
Strategy	Segmentation	Adopt mass, demography based segmentation	Use data Analytics for micro-segmentation • Provide personalized offerings • Targeted communication	Advanced AI based analytics to create customer microsegments
	Positioning	Compete on price and quality alone	• Offer additional services & facilities • Leisure provisions and shopping environment • Convenience	Theme-based digitally-enhanced experiential stores
	Operating Formats	Predominantly Brick & Mortar led with a catchment-focus	Disruptive & innovative formats aided by digital-initiatives to expand reach (Omni channel approach)	On-demand grocery delivery
	Business Models	Adopt single dimensional business models	Disruptive business models using digital enablers	Subscription model, Hypermarket model

		Traditional Retailers...	Store of the future...	Illustrative Examples
Where to Play?				
Front end	Customer Experience	• Emphasize functionality across touchpoints • Focus on in-store journey	Holistic physical and digital experience across entire customer journey	Smart mirrors for providing virtual trials to shoppers
	Merchandizing	Focus on customer engagement through: • Visual Merchandizing • Store layouts	Digital merchandizing techniques – • Virtual fitting rooms • Digital kiosks • Augmented Reality	Virtual trial rooms and 3D try-on facility
	Loyalty Programs	Focus on: • Traditional loyalty programs like stamps on cards	Shift towards: • Mobile app based programs • Virtual reality tie ups • Blockchain based loyalty programs	Block-chain based loyalty programs
	Pricing and POS solutions	Rely on traditional pricing methods	• Advanced dynamic pricing strategies • Customized engagement and personalized deals for customers	Use of electronic shelf-edge technology

		Traditional Retailers...	Store of the future...	Illustrative Examples
Back end	**Supply Chain**	Linear supply chains	Shift towards a dynamic, integrated supply network - Digital Supply Networks	"Always-on" agile supply chain
	Logistics & Warehousing	Traditional logistics and warehouse management	Shift to: • Shared logistics capabilities • Digitally enabled logistics services • Continuous automated monitoring	Drone based deliveries
	Finance	Conventional financial reporting and management	Shift towards: • Use of RPA to automate financial functions • IOT-enabled processes	Crypto currencies such as Bitcoins
	Procurement and Vendor Management	Focus on: • Traditional supplier-customer relationships	Shift to: • Collaboration with vendors for success	Block-chain technology for contract management & supplier payments
	Assortment-mix & Planning	Decisions basis • Experience & judgement • Ad-hoc assortment prioritization • Historical baselines	Retailers use: • Data-driven algorithms for store's assortment planning • Adopt predictive models & real-time forecasting • Use dark analytics	RFID chips to make supply chain more responsive
	People & Organization Structure	• Traditional ways of training and managing resources • Adopted in isolation and based on historical values	• Simplifying employee processes through automation • Digital retail transforming KPIs being used to measure and reward staff	Adoption of smart systems to manage staff shifts and checkout procedures

Collaborative Mindset for Digital

Collaboration Type	Key Collaboration Areas leading to higher value creation	Select Examples
Supplier – Supplier	• Coopetition (Collaboration with competition)	• **Microsoft and Intel** tie up leading to a synergistic growth in sales for both software as well as the chips • **Google and Mozilla** working together (Google funded Mozilla's free, open-source Firefox web browser – a Chrome rival – to limit the influence of rival browsers, Microsoft's Internet Explorer and Apple's Safari) • **Refrigerants Naturally** is a non-profit that was established by fierce competitors **Coca-Cola, Pepsi Co, Red Bull, Unilever** and others to work jointly to develop sustainable refrigeration technologies to combat climate change and ozone depletion
Supplier – Retailer	• Revenue Margin Enhancement • Process Improvement • Cost Reduction • Sharing of POS data real time • Creation of ecosystems	• **Kellogg with Tesco:** Examining real time POS data to identify purchasing patterns at certain Tesco supermarkets. Adjustment in its shipping schedule helped Tesco recapture more than £2 million (US$4 million) in lost sales and improve customer satisfaction • **Kraft Foods Inc. used U.K. food retailer J Sainsbury PLC's** POS data to improve in-store availability of cheeses during promotional periods • **Apple** ties up with **Reliance Retail** for special offers and plans
Retailer – Retailer	• Extended networks • New channels	• **Walmart** plans tie ups with **Flipkart, Amazon** to tap the online retail opportunity • **Paytm** ties up with offline electronic stores to list them on their online platform
Retailer – Customer	• Co-creation of consumer focused content • Crowdsourcing for innovation	• **LEGO** Ideas is an online community where members can discover creations by other fans and submit their own designs for new sets
Retailer – Digital Ecosystem Player	• Consumer centric solution development	• **Walmart** and **Google** tie up for voice controlled shopping - Google, will offer hundreds of thousands of Walmart items on its voice-controlled Google Assistant platform

The digital age presents opportunities for retailers to bring in greater levels of operational efficiency and customer centricity in their business models. Digital is as much about people and mindsets as it is about technology. Hence it is imperative that the digital agenda in any retailer organization is driven by the CEO (Chief Executive Officer). Competition is increasingly not between individual retailers but the wider constellation of alliances that the retailer builds within their network. The ability to foster a culture of collaboration is a critical enabler for any disruptive transformation in the retail sector.

Contents

Introduction:
Digital impact on retail

Indian retail is undergoing a rapid transformation propelled by several factors such as rising household incomes, increased consumerism, e-tailing, favorable demographics, and easy credit availability. Today, the Indian retail industry accounts for over 10 percent of the country's GDP and around 8 percent of country's employment[1]. Indian retail is witnessing entry of new players at a speed never seen before and is expected to nearly double to US$ 1.3 trillion by 2020 from current US$ 672 billion. Equally fast paced, if not more is the growth trajectory of the Business to Business (B2B) e-commerce market, which is expected to reach US$ 700 billion by 2020, whereas Business to Consumer (B2C) e-commerce market is expected to reach US$ 102 billion by 2020[2].

Though we have experienced phenomenal growth over the past decade, share of organized retail still hovers around 8 percent, while the unorganized sector constitutes 92 percent of the overall retail industry, retaining its dominance. However, in the coming years, it is expected that organized retail will no more be just an urban phenomenon and tier 2 and smaller cities will evolve at a fast rate to constitute significant share of organized retail. The Digital wave is further expected to accelerate this growth opening up possibilities for disruptive customer oriented business and operating models. What is garnering the interest of all the industry experts is that how the entire growth dynamics in Indian retail and the implementation of GST is changing the way the industry is planning to ride the wave of the Digital revolution.

India: Digital Retail Statistics

650 MN — No. of internet users in India by 2021

USD 50 Bn — Projected Online retail spend by 2021

30% — Smartphone penetration in India

150 MN — Customers are currently digitally influenced in retail

Digital Influence: Consistent across age-groups

45-54 Years
35-44 Years
21-24 Years; 25-34 Years
18-20 Years

High Digital Influence Factor (DIF) across product categories

Average = 21%

Electronis	Apparel	Books/Music/Entertainment	Furniture/Home Furnishing/Home Improvement	Food/Beverages	Health/wellness/Beauty	Automobiles	Baby/Toddlers	Miscellaneous Supplies
24%	24%	22%	21%	21%	20%	19%	19%	19%
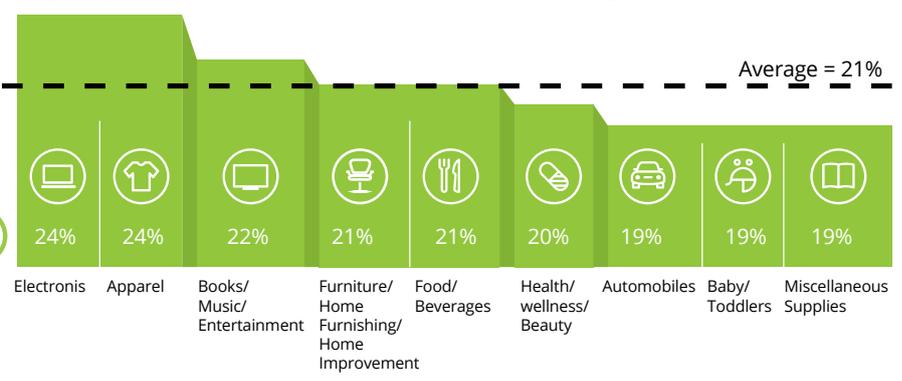
Digital influence factor is the % of in-store retail sales influenced by shopper's use of any digital device(laptops, desktops, smartphones, tablets, wereables) and in-store devices (i.e. kiosk, mobile payment device)

Source: Deloitte research, Industry reports

For the purpose of this report, we have defined digital as a technology enabled combination of resources (can include instruments, devices, bots, tools, teams, protocols, processes, networks, methodologies) which enables the availability of content (can be data, information, expert/social reviews, reports, analysis, games) for the user (employee or customer) to make more productive (can impact cost, time or service level) decisions and satisfying choices.

1. Retail Industry in India, January 2017 – www.ibef.org

2. Retail Industry in India, January 2017 – www.ibef.org

As retailers grow and evolve, they need to refine their business model to changes in the environment which offer them opportunities to enhance customer engagement and improve the overall shopping experience. Digital will be one such critical disruptor that is expected to have a profound impact on shoppers and retailers.

350 mn digitally influenced customers by 2020 to account for ~ **USD 250 Bn** of retail spend

By 2020, **85% of customers-enterprise** relations will exclude human interaction

Consumer industries account **for half of the country's advertising spends**

Digital Marketing is expected to account for **12% to 24%** of total advertising by 2020
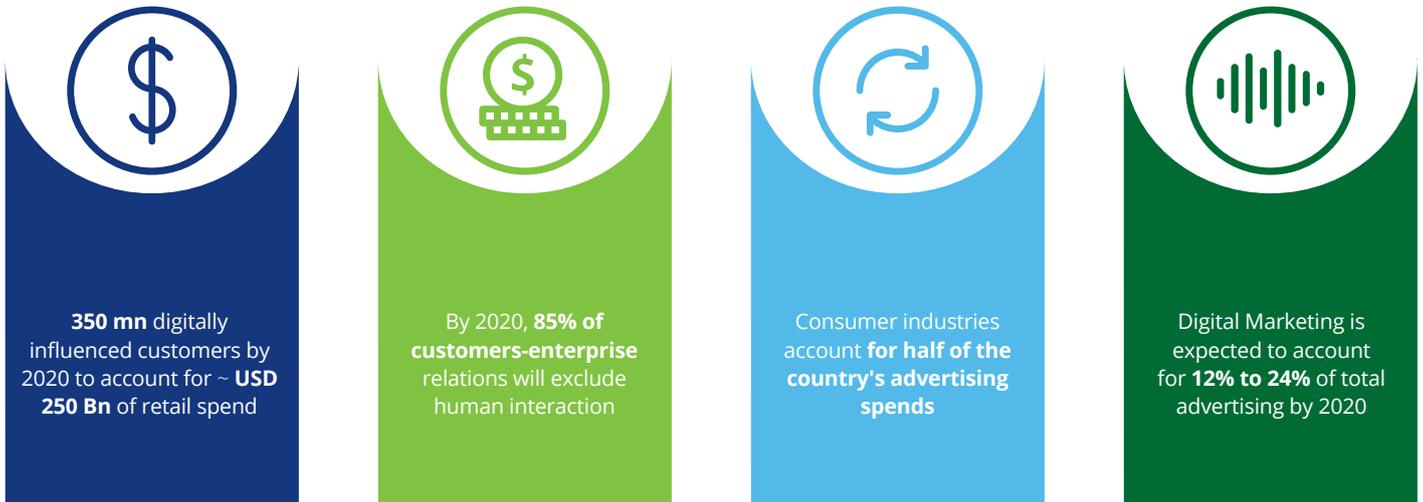
Source: CII National Retails Summit 2016 Report; Gartner Reserach

Key drivers shaping the digital trends of the future:

I. Rising number of internet and Social media users

Given the deep correlation between internet inclusion and economic affluence, connecting the next billion Indians to the World Wide Web will be the singular biggest challenge and opportunity for India. Increasing trend of accessing the internet through wireless devices enabled by technologies such as public Wi-Fi, 3G, and 4G has put mobility at center of next big revolution.

455 Million
Internet subscribers in India
~95% Wireless
~65% Broadband
~32% Rural

241 Million
Facebook users as on july 2017
Growth of
~70% from Mar 2016
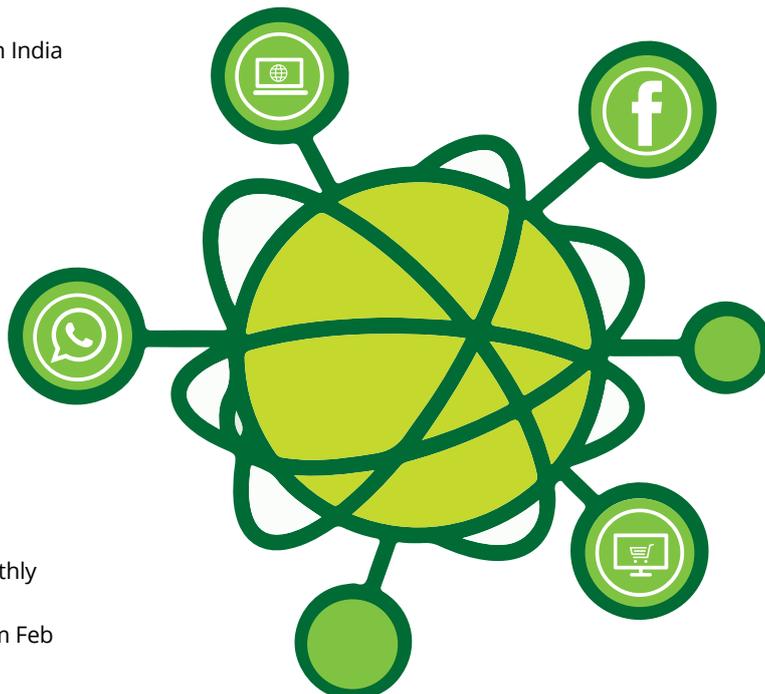
200 Million
WhatsApp active monthly users as on Feb 2017
Growth of **~100%** from Feb 2016

69 Million
Online consumers in India
Expected to exceed **100 Mn** in 2017

Source: Deloitte Research

II. Rising number of smartphone users and increasing m-commerce

- Smartphone users in India are expected to increase from 290 million in 2016 to around 470 million by 2021[4]
- This is expected to drive the share of m-commerce in Indian e-tail industry
- In 2016, 83% of the smartphone users in India made purchases through their mobiles

III. Favorable Demographics

India has the world's largest population of millennials (aged 18-35 years) who are more tech-savvy and prefer digital means for communication and shopping. The country's more than 400 million Millennials—those born after 1982—account for a third of India's population and 46% of its workforce.

India is on track to become the youngest country in the world by 2020, with a median age of 29, highlighting the outsized role of its millennial generation in spurring growth. They may be young, but they are already the chief wage earners in most households, with millennial income contributing to 70% of total household income. Millennials are leading India's smartphone revolution, with 84% of them already reliant on mobile broadband, spending an average of 17 hours a week online[5].

Millennials are watching more video content (34 hours/week). Average consumer has increased their mobile screen time by 4 hours every week; while their fixed screen time has reduced by 2.5 hours/week. 50% of this content watched by Millennials is user generated & On-Demand[6].

IV. Digital Infrastructure

Industry 4.0, or the fourth industrial revolution, is characterized by new technologies that blur the lines between physical and digital worlds—driving real-time access to new and existing data sources. Paired with powerful analytics tools, such as visualization, scenario analysis, and predictive learning algorithms, this access to data is fundamentally changing how companies operate. Companies can now gather vast data sets from physical assets and facilities in real time, perform advanced analytics to generate new insights, and execute more effective decisions. At its core, this digital revolution is likely changing the way products are designed, created, and delivered to customers—and it has tremendous implications for the retail value chain.

Rapid development of digital infrastructure and digital money transfer options would lead to an increasing presence of Omni-channel retailers. The boundaries between virtual and physical retailers is already collapsing as evidenced by Amazon's acquisition of Whole Foods Market Inc. and Walmart's acquisition of Jet.com (fastest growing e-commerce company). The spread of Omni-channel retailing with the objective of ensuring a seamless experience for the shopper is only expected to further intensify in the future.

Case in point: Growing acceptance of Internet of Things (IoT) in India

Growing IoT acceptance and usage by retailers is likely to generate more consumer data, helping retailers and consumer companies to deliver more personalized experience to the next-gen shoppers. IoT primarily helps the brands in location-based marketing to target the tech-savvy population. By using IoT, the retailers are enhancing their ability to collect crucial insights, which is helping them to provide an exclusive shopping experience. According to the market sources, the number of IoT connected devices globally are predicted to increase more than two-fold to reach 20.4 billion in 2020 as compared to 6.4 billion in 2016[a]. In India, the adoption of IoT came reasonably late as compared to developed economies, but the adoption rate is growing at pace and expanding the existing base faster than other countries.

Number of IoT connected devices - Global vs. India (in billion units)
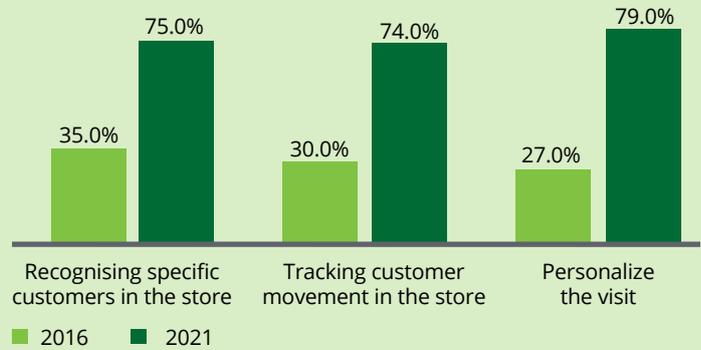

CAGR: 33.6%
6.40 (2016) → 20.40 (2020F)

CAGR: 137.2%
0.06 (2016) → 1.90 (2020F)

■ Global ■ India

Source: Company database

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4. Statista

5. Morgan Stanley Research report 2017

6. Ericsson Consumer Labs Report 2016

The global retailers are increasingly using IoT for customer recognition, tracking store movement, etc. to understand the purchase patterns. The Indian retailers could also explore IoT for generating these insights to take marketing decisions related to product display, placement, and personalization. The Beacons are one of the most popular tools to track customers and sending them personalized offers.

a – Gartner Research report, 2017

% of global retail stores use/plan to use IoT to enhance customer experience is likely to increase ~2,5X by 2021

	2016	2021
Recognising specific customers in the store	35.0%	75.0%
Tracking customer movement in the store	30.0%	74.0%
Personalize the visit	27.0%	79.0%

Source: Reinventing Retail: 2017 Retail Vision Study, 2017, Zebra Technologies

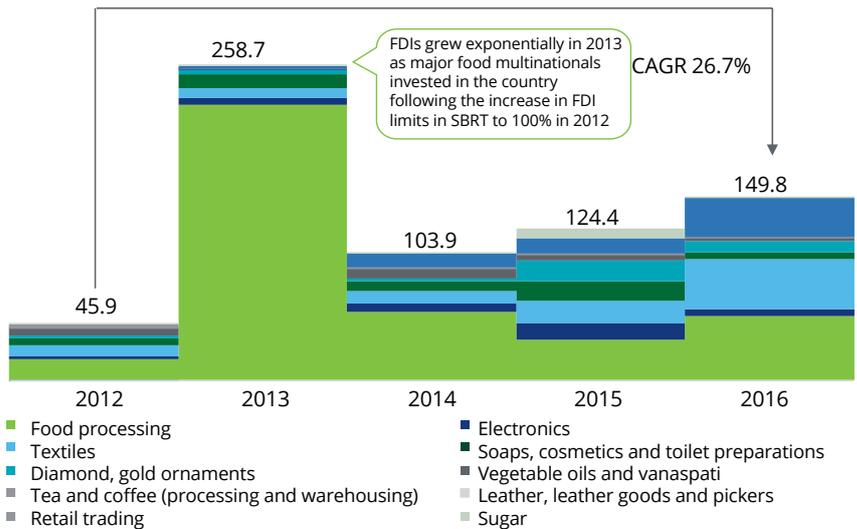## V. Investments into India driving digital growth

According to the UNCTAD's World Investment Report 2017, 20% of the global executives favored India as the host destination for investments during 2017-19, ranking the nation third after the US and China. Given the increasingly favorable macroeconomic environment in India and the government's consistent focus on making the business environment more conducive, the nation has witnessed a steady growth in FDI and PE/VC investments in the consumer driven sectors.

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This report focuses on the impact of Digital on three key elements of the retail business & operating model:

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Annual FDI in India (Consumer industry)
Figures in INR billion

FDIs grew exponentially in 2013 as major food multinationals invested in the country following the increase in FDI limits in SBRT to 100% in 2012

CAGR 26.7%

- Food processing
- Textiles
- Diamond, gold ornaments
- Tea and coffee (processing and warehousing)
- Retail trading
- Electronics
- Soaps, cosmetics and toilet preparations
- Vegetable oils and vanaspati
- Leather, leather goods and pickers
- Sugar

Source: Department of Industrial Policy & Promotion (DIPP)

PE/VC investments in India (in INR billion*)

Between 2012-15, the deals in consumer staples and consumer discretionary consistently formed more than 20% of the total PE/VC investments in India

PE deals in consumer discretionary were fewer and smaller compared to 2015, when huge funding was witnessed in Indian ecommerce space

	2012	2013	2014	2015	2016
Total PE/VC deals value	780.8	780.8	1,017.6	1,574.4	1,004.8
Deals in consumer discretionary	115.2	140.8	313.6	307.2	121.6
Deals in consumer staples	38.4	12.8	25.6	38.4	12.8
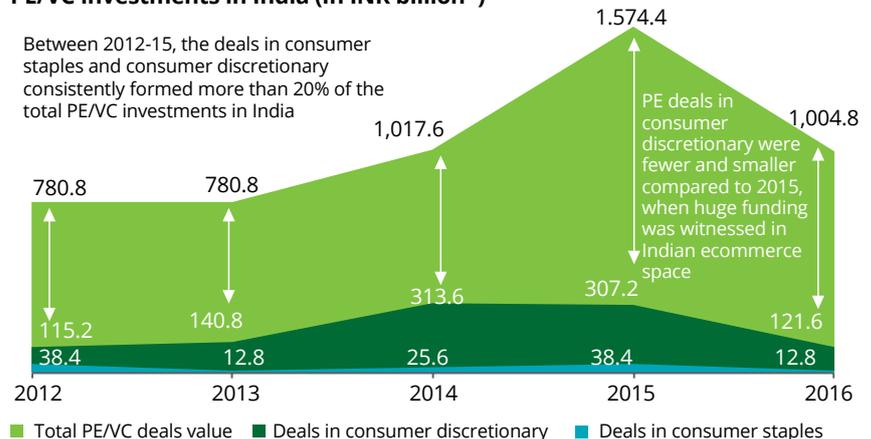
*Constant currency conversion rate of 1 USD = INR 64 taken
Source: Company database and analysis

3. Back end – Supply Chain, Logistics & Warehousing, Digital Procurement & Vendor management, Assortment mix & planning, People, Finance Automation

Impact of Digital on Retailers

Strategy

Business model innovation

Segmentation

Positioning

Operating formats

Front end

Gamification

Virtual trial rooms

Digital Assistants/ Kiosks

Augmented reality

Mobile Webrooming

Wearable Tech

Back end

Recommendation engine

Real-time forecasting models

Dynamic Vendor collaboration

Block-chain based loyalty engine

Dark Analytics

Key enablers

People & Organization structure

IT/Digital Infrastructure

Data & Insights

Finance

Source: Deloitte Analysis

(A) Retail Strategy:
Digital Disruptions

The ability to collect, process and share large quantities of data has led to some fundamental disruptions in the design of business models. The key factors impacting this change include:

- **Convergence:** The traditional boundaries between sectors is collapsing. Innovation at the boundaries of sectors such as payment systems (Financial Services & Telecom), e-commerce (Retail & Telecom), Industry 4.0 (ICT and Manufacturing) etc. is fundamentally disrupting businesses. Any disruptive approach in digital transforma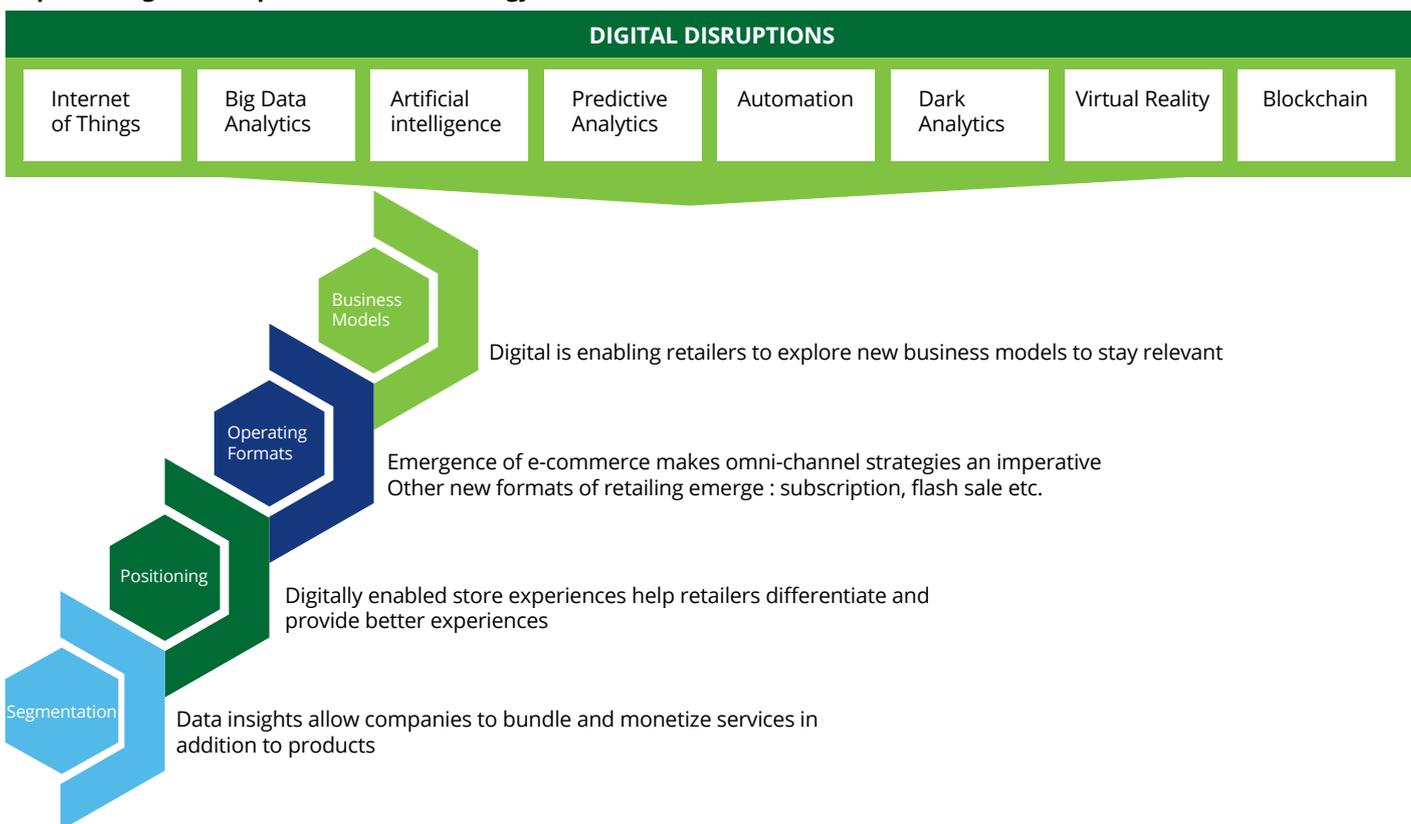tion for retail hence, needs to factor in a multi-disciplinary view of implementation with a mix of analytical and creative capabilities

- **Customer Centricity:** Functional boundaries within organizations are also being dismantled to align structures to customer needs. The process has been further accelerated through digital as big data is now making it possible to analyze shopper behavior in great detail and customize the delivery format to individual consumer requirements through personalization

- **Co-opetition:** This is a revolutionary mindset that combines competition with collaboration. Suppliers and retailers are no longer competing for limited resources but are working together to profit from enhanced customer value being delivered. There have been several instances of collaboration between retailers even from an India context (e.g.: Future Group and Flipkart)

- **Co-ownership:** From a retail context digital has helped monitor and control quality in franchising agreements to achieve greater alignment of the business model to shopper requirements presenting an enhanced opportunity for retailers to drive scale at a fast clip without compromising on the brand promise and sharing the investment burden with their partners

- **Co-creation:** The new digital shopper is highly interconnected with his social peers and is more willing than ever before to share experiences and let others profit from his/her interactions with products/services. Consumers help co-create the value proposition basis their willingness to provide feedback which helps refine delivery models on an ongoing real time basis.

- **Continuous learning:** Self learning systems through AI (Artificial Intelligence) and cognitive modelling has enabled feedback from past experiences to optimize the shopping experience for consumers; enhancing both satisfaction and loyalty.

Traditional sources of differentiation for retailers have been on the basis of superior customer service, high operational efficiency or on account of a superior product/service value proposition. Digital has enabled retailers to enhance delivery on each of these outcomes. This chapter focuses particularly on the strategic areas of segmentation, positioning, operational formats and new emergent business models in the era of Digital.

Impact of Digital Disruptions on Retail Strategy

DIGITAL DISRUPTIONS							
Internet of Things	Big Data Analytics	Artificial intelligence	Predictive Analytics	Automation	Dark Analytics	Virtual Reality	Blockchain

Business Models — Digital is enabling retailers to explore new business models to stay relevant

Operating Formats — Emergence of e-commerce makes omni-channel strategies an imperative
Other new formats of retailing emerge : subscription, flash sale etc.

Positioning — Digitally enabled store experiences help retailers differentiate and provide better experiences

Segmentation — Data insights allow companies to bundle and monetize services in addition to products

Source: Deloitte Analysis

1   Segmentation

In the rapidly emerging digital era, every customer regardless of their social or economic similarities will belong to their unique segment- a segment of one. Digital is enabling retailers to touch new horizons in customer segmentation empowered by increased availability of data. They are thus moving from a model of mass targeting to micro segmentation.

Earlier, a "handful" of segments could be identified based on only demographic data due to limited availability of other statistics. Today's customers' demand personalized interactions with retailers throughout their journey from initial contact to completion of transaction. Slowly, retailers are dividing customers into many "hundred" segments using advanced analytics engines based on attribute data such as: products purchased, previous buying behavior, timing of purchase, context of purchase and channel of purchase.

Artificial Intelligence solutions for customer segmentation are already emerging which will allow retailers to personalize the customer journey even further This not only enables retailers to provide personalized product offerings e.g.: recommendations based on previous browsing history, purchases, "likes" on social media, usage and latest trends; but such segmentation also helps them in using personalized contextual communications and promotions such as: "It's a foggy day, try our new hot beverage"
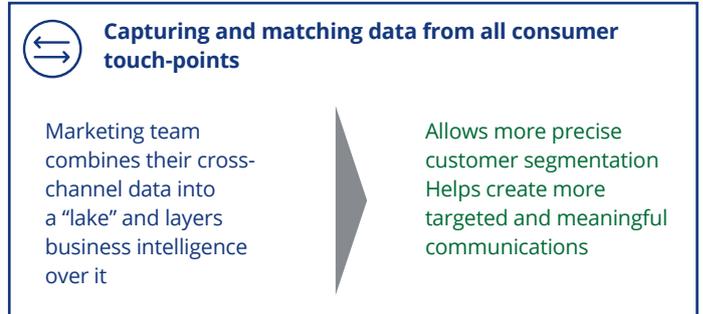
Case (TARGET):

One of the retail majors deployed a model analyzing the shopping pattern of customers and concluding their chances of Parents-to-be in recent future. The retailer then was able to send promotional offers related to baby products according to the pregnancy scores.

Source: News Articles

One of China's largest e-commerce marketplaces, specializing in lifestyle and retail brands

Big data recommendations for customer segmentation

New customers are organized into clusters that are continually refined as the platform "gets to know you better"

Allows customized outreach to consumers Rakes in a 5-6% conversion rate

One of the largest global footwear & accessories retailers for both men and women

Capturing and matching data from all consumer touch-points

Marketing team combines their cross-channel data into a "lake" and layers business intelligence over it

Allows more precise customer segmentation Helps create more targeted and meaningful communications

Source: News Articles

2 Positioning: Emergence of Destination Retail

With the advent of online shopping, it is no longer sufficient for the brick and mortar stores to compete on price and quality alone. Retailers now have to offer a strong reason for people to come to their store. The concept of a near-by convenience store may not be that attractive as it used to be a decade ago. The physical space and overall experience must set apart the brick and mortar stores. Some of the factors that influence the customers' decisions are additional services & facilities, leisure provision, shopping environment etc. Therefore, the importance of destination retail is expected to further strengthen in the future.

Case Study: Lowes Foods

Lowes Foods, a food retailer in the Carolinas and Virginia states, redefined its customer engagement strategy by "Disneyfying" its retail experience. The grocery chain transformed its stores into a themed entertainment marketplace to become an experience-oriented retailer. It disrupted the grocery retailing market by uniquely positioning itself as a destination, appealing to customers' inner child, where shoppers are entertained during an otherwise mundane, routine activity. As a result, Lowes Foods saw increases in both average basket size and number of transactions[7].

One of the largest sportswear manufacturers and retailers in the world

Digitally enabled store experiences

65" interactive surface with multi-touch features piloted at the Berlin location
Display includes product videos, league statistics, product comparisons, review etc.

Engages the consumer while providing product information and online purchase options

American luxury apparel retailer with global operations

Creating a differentiated in-store trial experience

Introducing new technologies like the 'memory mirror' allowing 360-degree video of consumers while trying on clothes
Can also save the videos in the app for later online or in-store purchase

Gives consumers greater confidence in purchases while keeping the consumer engaged with the brand

Source: News Articles

Case study: Bonobos – Boosting engagement for men's apparel purchases

Founded in 2007, New York-headquartered Bonobos positions itself as "the largest clothing brand ever built on the web", designing and selling a new type of smarter men's apparel. It is disrupting the menswear market by providing high-engagement in-store shopping experiences to supplement its e-commerce presence. In 2012, it opened physical stores in response to online customers' desire to try on clothing before ordering, and now has almost 20 stores in major cities across the United States. These "guideshops" act as product showrooms: they have items in every colour, size, fit and fabric available to try on, but keep no product in stock for immediate purchase. These stores provide high-touch, highly personalized experiential components that cannot be replicated online. Upon entering, a guide (style assistant) provides a one-on-one service to help customers find the items with the best fit and style, which are then ordered and delivered directly to their home. Appointments can last up to 45 minutes, and there is a lounge area with free beer, soda and water. Moreover, the trial of clothing before online purchase minimizes the chance of returns, as it is estimated that e-commerce purchases typically have a 30% return rate; a greater portion of new customers come to Bonobos through the guideshops than online.

Source: Shaping the Future of Retail for Consumer Industries, World Economic Forum 2017

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7.   Retail in the digital age | CNBC News article

Case study: Rebecca Minkoff – Developing connected stores

Rebecca Minkoff partnered with eBay and Magento to create a digitally connected store, which uses "connected glass shopping walls" and digital fitting rooms to guide shoppers through the experience, while collecting data about customer preferences and trends. Within six months of implementation, Rebecca Minkoff saw a six to sevenfold increase in ready-to-wear sales, which it attributes to enhanced in-store experiences.

Source: Shaping the Future of Retail for Consumer Industries, World Economic Forum 2017

Case study: The Mall of the Emirates in Dubai – An experiential lifestyle hub

Majid Al-Futtaim's Mall of the Emirates in Dubai is one of the first "next-generation" malls. It is a multi-level, luxury shopping mall that goes beyond shopping to provide stimulating, one-of-a-kind customer experiences. Beyond its 630 retail outlets, more than 100 restaurants and cafes, 80 luxury stores and 250 flagship stores, there are entertainment options including a cinema, indoor ski resort and snow park, community theatre and arts centre, and Magic Planet – one of the Dubai's largest indoor family entertainment centres. The mall hosts special events, including celebrity concerts, luxury fashion shows and even a life-sized Monopoly game, which created a unique customer experience while raising money for charity. For those who need more than a day to cover its 2.4 million square feet, there are a number of hotels available on site.

Source: Shaping the Future of Retail for Consumer Industries, World Economic Forum 2017

3 Improving operational formats

In years past, it was easy to spot a retailer. It bought and sold goods, either in store or online. The Do-It-Yourself (DIY) movement, the sharing economy, and other factors have made it increasingly difficult to define what a retailer is and does. In 2017 and beyond, market fragmentation in the retail space will continue to grow. While the retail sector is being disrupted by new-age digital retailers (adopting innovative business models), traditional retailers are attempting to bridge this gap by adopting appropriate digital initiatives. Low barriers to entry have led to the pop-up of new "digital-retailers". Some of the new & growing formats are "Flash-sale", "Subscription", "and On-demand delivery". As disruption and alternative business models persist, retailers will need to reinvent themselves by adopting digitally-driven "Omni-channel" approaches. Relevance will also be determined by the ability of retailers to meet the on-demand mind-set of the modern customer. Apparel retailers have already felt the effect of on-demand fulfilment and the frontier is shifting to grocery, automotive and services.

Coupled with store formats, influence of digital technologies allowing for centralized inventory, same-day pick up or delivery, purchasing on mobile devices etc. is leading retailers to change the size of the storefront. On-the-go consumers are increasingly shopping from a place and time of their own choice, leading to a transformation in retail store sizes as focus shifts from 'where' the sale takes place to the 'how' and 'when' to make a sale happen. Digital provides an opportunity to right size the store and decrease the downward pressure on retailer margins on account of rentals while offering a similar or better

shopping experience without the need for more space. Digital can allow retailers to offer the same shopping experience (in terms of SKUs range, depth, availability etc.) without the need for more space. Stores are likely to transform into showcases' with minimal SKUs where customers can physically engage with the product which they have already explored in advance. In addition, stores might have dedicated backrooms or locker areas for catering to BOPIS (Buy Online Pickup In Store) orders.

Traditional retailer adopting omni-channel approach
- An **upmarket department store chain in UK** started investing in omni-channel from 2011
- Launched personalized shopping experience, 24-hour virtual shops and i-phone app
- **Mobile shopping grew by 200%** in 2 years

On-demand delivery format
Amazon Now, Big Basket and other on-demand delivery options in grocery space have forever altered customer expectations for fulfilment in India

Digital subscription format
Dollar Shave Club.com offers a **blades-by-subscription service for $3 a month.** Adopts a **disruptive digital subscription-based model with direct to consumer marketing** tactics

Flash sale model
Vipshop.com, $8 Bn Chinese e-commerce firm adopts **flash-sale model (time-limited discounted model)** to reach out to customers. 90% sales from outside Tier-1 cities

Source: : Global Powers of Retalling - Deloitte Thought Leadership, News articles

Large American manufacturer and retailer of outdoor wear with a focus on footwear

Using near-field technology (NFC) and touch to merge the physical and digital worlds

"TouchWalls" display online-only inventory while providing product information on each. Consumers can also tap a NFC-tagged inventory to gain rich product information

Provides exposure for lesser known products while expanding the in-store inventory without increasing store size

Source: : Newspaper Articles

Second-largest discount store retailer in the US

Traditional retailers also stepping into the subscription services model

Target has introduced subscription services in specific product categories Programs like Target Beauty Box and Target Arts & Crafts Kit have been launched

Provides an additional revenue stream for the retailer
Ensures continues consumer engagement

Case study (ADIDAS GROUP) :

With 500 plus stores for Adidas and 250-plus stores for Reebok, Adidas Group in India aggressively rolled out an Omni channel strategy in 2015 to integrate its vast retail expanse with shopper-friendly technology. Adidas Group has also identified three key pillars to merge its online and offline worlds: create strong in-store experiences, move from data to actionable data and provide seamless experiences across channels.

Going Online
As a first step, the website and mobile site for both Adidas and Reebok were set up in early 2015

Endless Aisles
The 'endless aisle' technology equips Adidas and Reebok franchise stores with iPads where shoppers can browse and order for items that are not in stock at the physical stores. The group has managed to transform its 227 offline stores in the past seven months. By end 2017, this number is likely to jump to 750 stores.

Net Promoter Score
The company did a pilot to record real time Net Promoter Score (NPS) at the stores to help the stores to enhance the customer experiences on an ongoing basis. The solution is managed by an Adidas Group franchisee. The entire technology has been developed in-house

Cross Channel Marketing
Digital marketing techniques to provide automated and cross-channel coverage.

Next Steps:
• Focusing on acquiring meaningful consumer data through mobile, e-com, and retail POS.
• Target of acquiring one million consumers.
• Marketing campaigns in which the traffic is being guided to retail stores via E-commerce and vice-versa
• Integrating the following programs with the Omni-channel strategy:
  – Loyalty program
  – Reward points
  – Ship-from-store
  – Customer centric app and
  – Social media listening and engagement

Source: Newspaper articles

Digital enabling store of the future

Retail Journey	Traditional Store	Store of the Future	Ease of Implementation	Priority
Discover and Create Awareness	• Newspaper ads • Television marketing • Leaflets	• Predictive analysis of social media profiles of customers for targeted marketing • Micro Segmentation based Digital Marketing • Push notifications on customer's devices to create awareness	● (full)	● (full)
Research and Comparison	• Store staff driven research • In-store signage and display to direct customers towards chosen products	• Digital kiosks present in the stores to enable product search • Virtual shelves • Endless Aisles • Smart Beacons detect customers, profile them and redirect them within stores • In-store navigation • Wearable tech and mobile shopping assistants	◑ (half)	◔ (quarter)
Selection	• Physical trial rooms	• Virtual mirror • Virtual trial rooms • Click & Select option on mobile devices • Personalization enabled by recommendation engine, product customization	● (full)	● (full)
Purchase	• Physical point of sale	• Multi nodal purchase options – click & collect, mobile POS, digital wallets • Attractive pricing using precision marketing • Self Check out • Mobile web-rooming	◔ (quarter)	◑ (half)
Retention & Loyalty	• Traditional membership and card based loyalty programs	• Block chain based loyalty programs • Automatic discounted prices offered to loyal customers • Bundling of services / products for loyal customers • Subscription and auto replenishment	◔ (quarter)	◑ (half)
Logistics & Warehousing	• Linear supply chains • Traditional logistics and warehouse management	• Digital Supply Networks • Shared logistics capabilities • Digitally enabled logistics services • Continuous automated monitoring • Drone based deliveries	◑ (half)	◔ (quarter)
Finance	• Conventional financial reporting and management	• Use of RPA to automate financial functions • IOT-enabled processes	◕ (three-quarter)	◑ (half)
Procurement and Vendor Management	• Traditional supplier-customer relationships	• Collaboration with vendors for success • Block-chain technology for contract management & supplier payments	◔ (quarter)	● (full)
Assortment-mix & Planning	• Decisions basis experience & judgement • Ad-hoc assortment prioritization	• Data-driven algorithms for store's assortment planning • Adopt predictive models & real-time forecasting • RFID chips to make supply chain more responsive	◔ (quarter)	◑ (half)
People & Organization Structure	• Traditional ways of training and managing resources • Adopted in isolation and based on historical values	• Simplifying employee processes through automation • Digital retail transforming KPIs being used to measure and reward staff • Adoption of smart systems to manage staff shifts and checkout procedures	◔ (quarter)	◑ (half)

Case study (Shoppers Stop): Major Indian multi-brand retailer

One of the major multi-brand retailers in India, which enjoys eminent presence through its 81 brick-and-mortar stores spread across 37 cities in India, planned to get an Omni-channel makeover in a period of three years. The objective was to increase the brand's online presence, keep customers engaged and happy, and take on the competition from online retailers.

The company adopted a three-pronged strategy to provide a seamless and unified shopping experience to its customers across its multiple retail channels. It laid down a phased 3-year approach with INR 60 crores budget dedicated towards the overhaul of technology, strengthening the digital supply chain and optimizing digital marketing operations

Digital capability buildout (2015)

- E-commerce and partnerships
  - Partnered with a software company which provided platform for commercial activities
  - It also launched its revamped website which helped in doubling the conversion rate for the retailer and also formed strategic alliances with major Indian e-tailers
- Warehousing: To enhance the shopping experience for customers and provide seamless and unified experience across all its multiple channels it invested in warehouse management system
- Technology: In addition, it introduced in-store technologies such as 'magical mirror' to enable customers try different products virtually
- Payment solutions: The retailer allowed its consumers to pay through different payment modes – wallets, plastic money, digital transfer, etc.
- Customer relations: It also rolled out customer relationship management (CRM) to further enhance the consumer experience

Multi-channel capability (2016)

- Mobile apps: In 2016, the retailer launched new mobile applications on various platforms to offer its products and services on web, app, and store – all three platforms
- In the second phase, the retailer focused on customer service, inventory management and order delivery management to enhance its multichannel capabilities

Completely Omni-channel (2017)

- By the end of FY17, the retailer aims to become a completely Omni-channel enabled player
- While its share of online retail was 1% in FY15, it reached 5% by FY16. The company further aims to take its share of online retail to 15% by FY18

Source: Newspaper articles
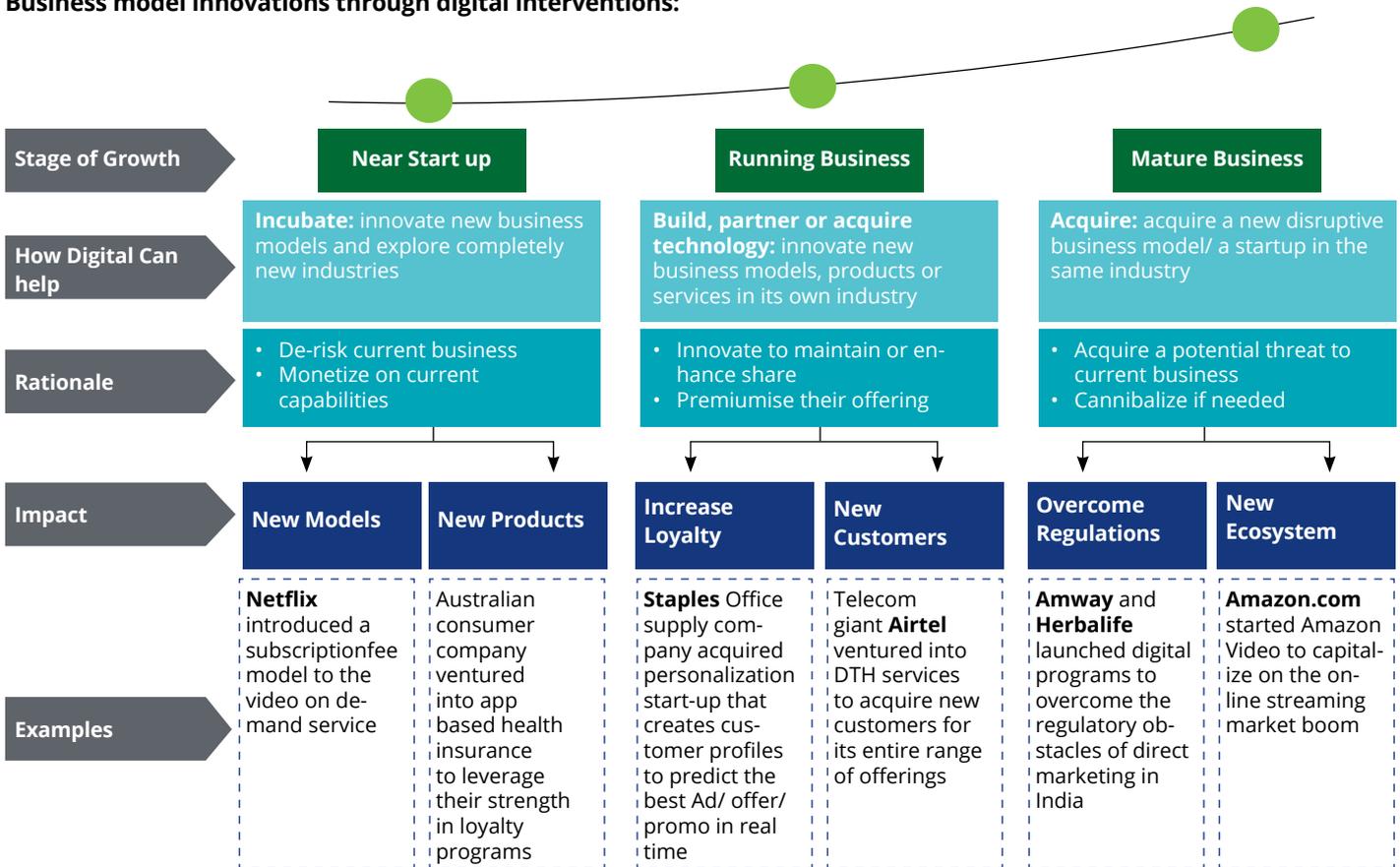
4   Changing Business Models

With the advent of digital disruptions, the boundaries between the digital and physical worlds continue to blur — with profound implications for the way retailers function. Virtually every retailer is impacted in this ongoing digital transformation, whether from its own initiatives or due to pressure from competitors.

Though business models have always evolved over time, but the confluence of technologies such as mobile, cloud, social, and Big Data analytics has accelerated the pace at which today's businesses are evolving — and the degree to which they transform the way they innovate, operate, and serve customers. For some businesses, digital transformation is a disruptive force that leaves them playing catch-up. For others, it opens door to unparalleled opportunities.

How a retailer can leverage digital intervention to change its business model depends on the stage of growth the company is in. For near startup companies, digital intervention opens doors to innovative business models and synergistic products and services. For running businesses, digital interventions can help in both increasing loyalty of existing customers and gaining new customers. For mature businesses, digital disruptions can help overcome threats and explore new ecosystems.

The retail landscape of the world is currently witnessing an explosion of connections, data, and innovations. And even though this hyperconnectivity has changed the game, it's the customers that are radically changing the rules – demanding simple, seamless, and personalized experiences at every touch point.

Business model innovations through digital interventions:

Stage of Growth	Near Start up		Running Business		Mature Business	
How Digital Can help	**Incubate:** innovate new business models and explore completely new industries		**Build, partner or acquire technology:** innovate new business models, products or services in its own industry		**Acquire:** acquire a new disruptive business model/ a startup in the same industry	
Rationale	• De-risk current business • Monetize on current capabilities		• Innovate to maintain or enhance share • Premiumise their offering		• Acquire a potential threat to current business • Cannibalize if needed	
Impact	**New Models**	**New Products**	**Increase Loyalty**	**New Customers**	**Overcome Regulations**	**New Ecosystem**
Examples	**Netflix** introduced a subscriptionfee model to the video on demand service	Australian consumer company ventured into app based health insurance to leverage their strength in loyalty programs	**Staples** Office supply company acquired personalization start-up that creates customer profiles to predict the best Ad/ offer/ promo in real time	Telecom giant **Airtel** ventured into DTH services to acquire new customers for its entire range of offerings	**Amway** and **Herbalife** launched digital programs to overcome the regulatory obstacles of direct marketing in India	**Amazon.com** started Amazon Video to capitalize on the online streaming market boom

Source: Deloitte Analysis, Newspaper articles

Case Study: How Kohl's operationalized its digital strategy

The Kohl's Corporation is one of America's largest department store retailing chain. Kohl's Omni channel strategy centres on accentuating its existing differentiators — including store convenience, a loyal customer base, and well-trained store associates — with digital enhancements that encourage and reward loyalty and streamline fulfilment.

Kohl's leveraged digital to build on its existing advantages
a) **Hired a digitally fluent COO to make Omni channel work:** An ex Walgreens head of digital and chief marketing officer.
b) **Built an Omni channel foundation with the customer top of mind:** In 2016, Kohl's improved shipping and fulfilment expenses as a percentage of digital sales, while increasing the speed to customer by half a day overall.
c) **Converted associates from shopkeepers to fulfilment and service ninjas.** On Cyber Monday 2016, Kohl's store associates across the US fulfilled "buy online, pick up in-store" and ship-from store orders equal to the volume fulfilled by three corporate fulfilment centres.
d) **Bet the house on mobile and monetized its strategy with a digital wallet.** Over 60% of Kohl's digital traffic comes from mobile devices, and the Kohl's app has 18 million downloads.

Kohl's' Future Focuses on Better Application of Its Data
Kohl's is entering the next phase of its digital journey by getting smarter with the application of data.
a) **Using store Wi-Fi to drive deeper customer engagement.** Kohl's rolled out a new store Wi-Fi system that helps it understand shopper patterns and the fixtures consumers are browsing. As an added benefit, Wi-Fi will soon help logged-in customers navigate stores to find items.
b) **Personalizing messaging, especially to capitalize on local store inventory.** Kohl's pushes information about product availability to online shoppers that is customized to their local stores. Additionally, Kohl's uses customer data from its app and digital wallet to make product recommendations. When a product is out of stock at a local store, the Kohl's app makes it easy for the shopper to seamlessly order the item from her smartphone.
c) **Treating the associate digital experience like the customer experience.** Soon, Kohl's mobile POS systems will act as mini-CRM systems, giving associates data about the customer they're serving in real time to improve customer interactions. Kohl's also analyzes operational store data to automate and streamline as many tasks as possible.

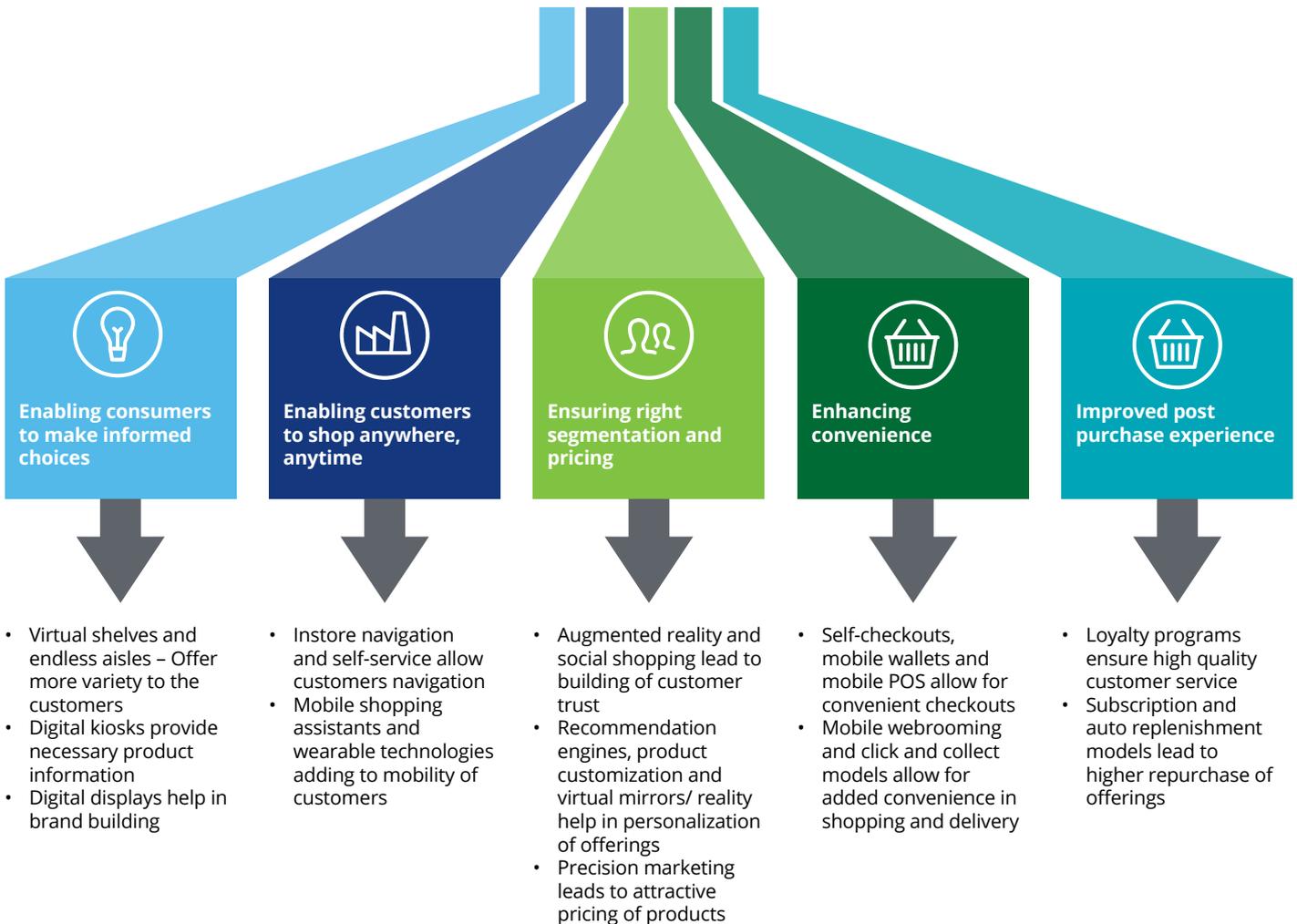**Source:** Case Study: How Kohl's Operationalizes Its Digital Strategy, Forrester, 2017

More and more players are using social and digital communities to provide services, share insights, and engage in commerce. This is resulting in creation of new channels for engaging with customers, and emergence of new ways for making better use of resources. To capitalize on these opportunities, retailers need to not only go beyond sensors, Big Data, analytics, and social media, but they need to reinvent themselves in a manner that is compatible with an increasingly digital world and its consumers.

Emerging digitally disruptive business models

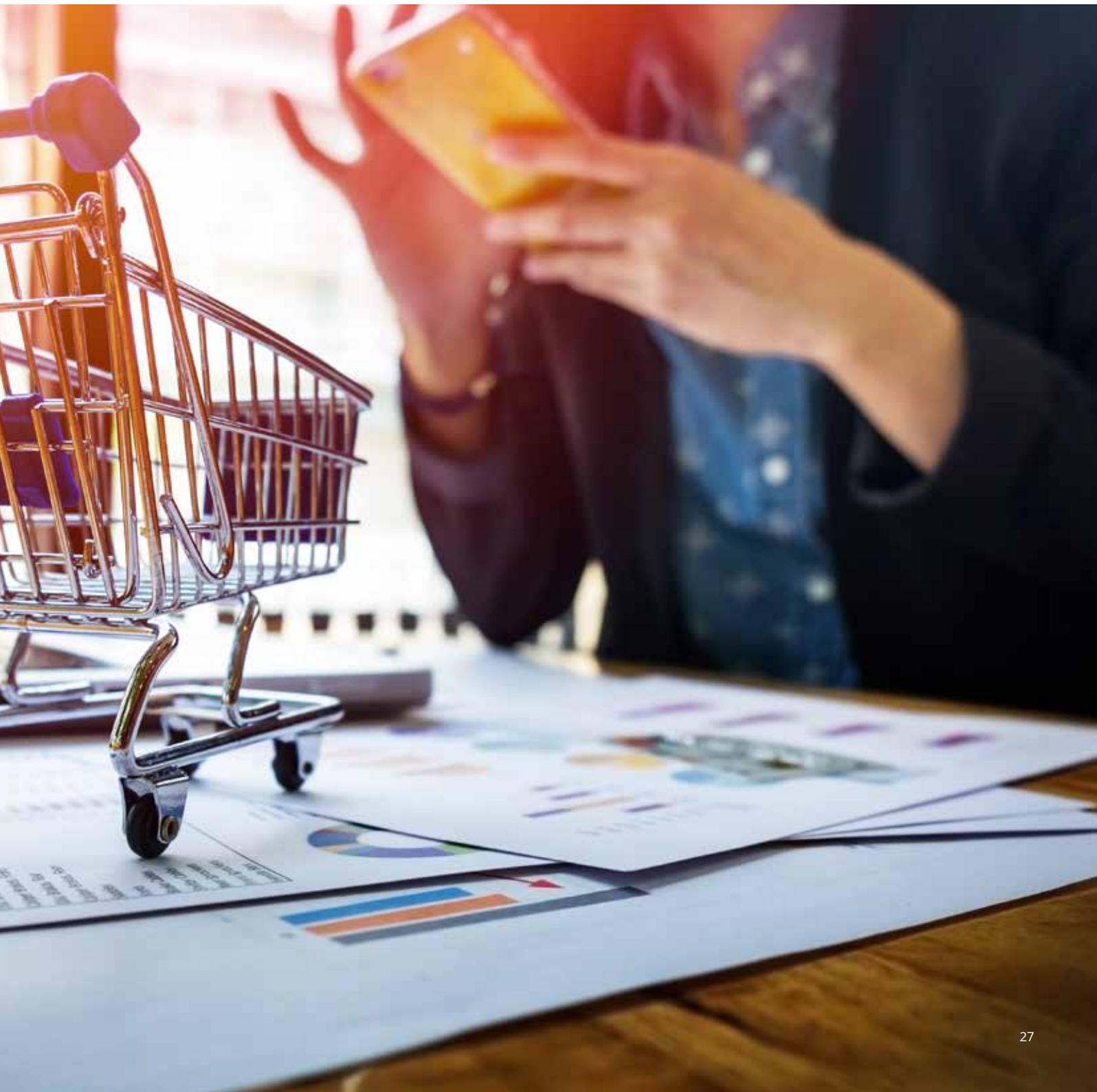| S. No	Model	Description	Examples
1.	**The Subscription Model**	Disrupts through "lock-in" by taking a product or service that is traditionally purchased on an ad hoc basis, and locking-in repeat customer by charging a subscription fee for continued access to the product/service	Netflix, Dollar Shave Club, Apple Music
2.	**The Freemium Model**	Disrupts through digital sampling, where users pay for a basic service or product with their data or 'eyeballs'. Rather than money, and ten charging to upgrade to their full offer. Works where marginal cost for extra units and distribution are lower than advertising revenue or the sale of personal data	Spotify, LinkedIn, Dropbox
3.	**The Free Model**	Disrupts with an 'if-you're-not-paying-for-the-product-you-are-the-product' model that involves selling personal data or 'advertising eyeballs' harvested by offering consumers a 'free' product or service that captures their data/attention	Google, Facebook
4.	**The Marketplace Model**	Disrupts with the provision of a digital marketplace that brings together buyers and sellers directly, in return for a transaction or placement fee or commission	eBay, iTunes, App Store, Uber, AirBnB
5.	**The Access-over-Ownership Model**	Disrupts by providing temporary access to goods and services traditionally only available through purchase. Includes "Sharing Economy" disruptors, which takes a commission from people monetizing their assets (home, car, capital) by lending them to 'borrower'	Zipcar, Peerbuy, AirBnB
6.	**The Hypermarket Model**	Disrupts by 'brand bombing	Amazon, Apple
7.	**The Experience Model**	Disrupts by providing a superior experience, for which people are prepared to pay	Tesla, Apple
8.	**The Pyramid Model**	Disrupts by recruiting an army of resellers and affiliates who are often paid on a commission only model	Amazon, Microsoft, Dropbox
9.	**The On-Demand Model**	Disrupts by monetizing time and selling instant-access at a premium. Includes taking a commission from people with money but no time who pay for goods and services delivered or fulfilled by people with time but no money	Uber, Operator, Taskrabbit
10.	**The Ecosystem Model**	Disrupts by selling an interlocking and interdependent suite of products and services that increase in value as more are purchased. Creates consumer dependency	Apple, Google

Source: Digital Transformation, a book by Jo Caudron and Dado Van Peteghem

Digital presents opportunities for a complete redesign of value capture through physical stores. The store of the future needs to be a destination format that is fully integrated with the consumer's digital journey right from awareness building to searching/comparing options to triggering purchase to loyalty - all of which is convenient and seamless enabled by automation, analytics and digital technologies. This will require retailers to significantly unlearn, dismantle existing business models and refresh their value proposition focused on enhancing shopper satisfaction through the effective use of digital enablers.

Enabling consumers to make informed choices

Enabling customers to shop anywhere, anytime

Ensuring right segmentation and pricing

Enhancing convenience

Improved post purchase experience

- Virtual shelves and endless aisles – Offer more variety to the customers
- Digital kiosks provide necessary product information
- Digital displays help in brand building

- Instore navigation and self-service allow customers navigation
- Mobile shopping assistants and wearable technologies adding to mobility of customers

- Augmented reality and social shopping lead to building of customer trust
- Recommendation engines, product customization and virtual mirrors/ reality help in personalization of offerings
- Precision marketing leads to attractive pricing of products

- Self-checkouts, mobile wallets and mobile POS allow for convenient checkouts
- Mobile webrooming and click and collect models allow for added convenience in shopping and delivery

- Loyalty programs ensure high quality customer service
- Subscription and auto replenishment models lead to higher repurchase of offerings

Source: Deloitte Analysis

(B) Impact on the Front end –
The Digital Customer

The retail industry is rife with digital innovation and organizational change. Consumers— drawn to the ease and convenience of always being just a click away from user reviews, comparison pricing, and endless aisles—have come to rely on online and mobile shopping. It is no surprise that traditional retailers are bringing digital channels into stores to tap those consumer preferences.

At the same time, historically pure-play online retailers are increasingly opening brick-and-mortar shops in high-profile locations, seeking to capitalize on the tangible experiences that cannot be delivered through a device. Both traditional stores and pure-play online retailers are working towards the same goal: to create a highly personalized, consistent, and integrated shopping experience across all points of contact between them and "The Digital Customers".

The impact of digital on the front end of the retail value chain is significant and revolves around "The Digital customer" experience as the pivot, with merchandizing, promotions, loyalty programs as well as point of sale (POS) related digital solutions enriching that experience.

1   Customer Experience

Increasingly connected and informed consumers are now digitally influenced across each touchpoint of their purchase journey right from inspiration to purchase validation. According to Deloitte, 71% of Indian shoppers use digital before their

Kay Areas of impact of Digital on the Front End

Source: Deloitte Analysis

purchase journey[8] Nearly 70% of Indian shoppers prefer digital devices1 (own or kiosk) rather than sales associates for in-store activities such as comparison of product pricing, obtaining product information, checking product availability etc. It is imperative for retailers to complement traditional methods with new-age digital technologies to provide a seamless shopping experience.

Digital interventions in store and Omni-channel to elevate customer experience
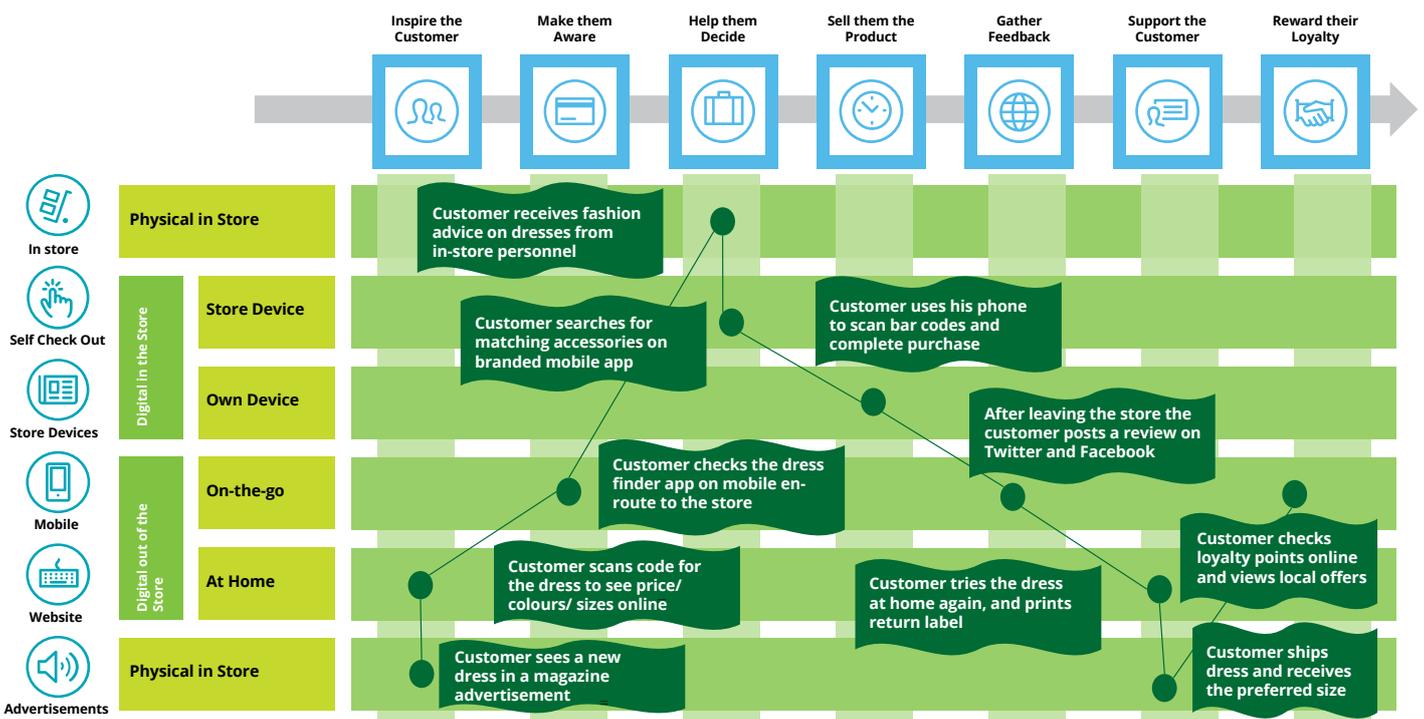
Source: Industry reports, Deloitte Analysis

8.   Navigating the new Digital Divide – Key Imperatives for Indian Retailers : Deloitte thought leadership on Retail
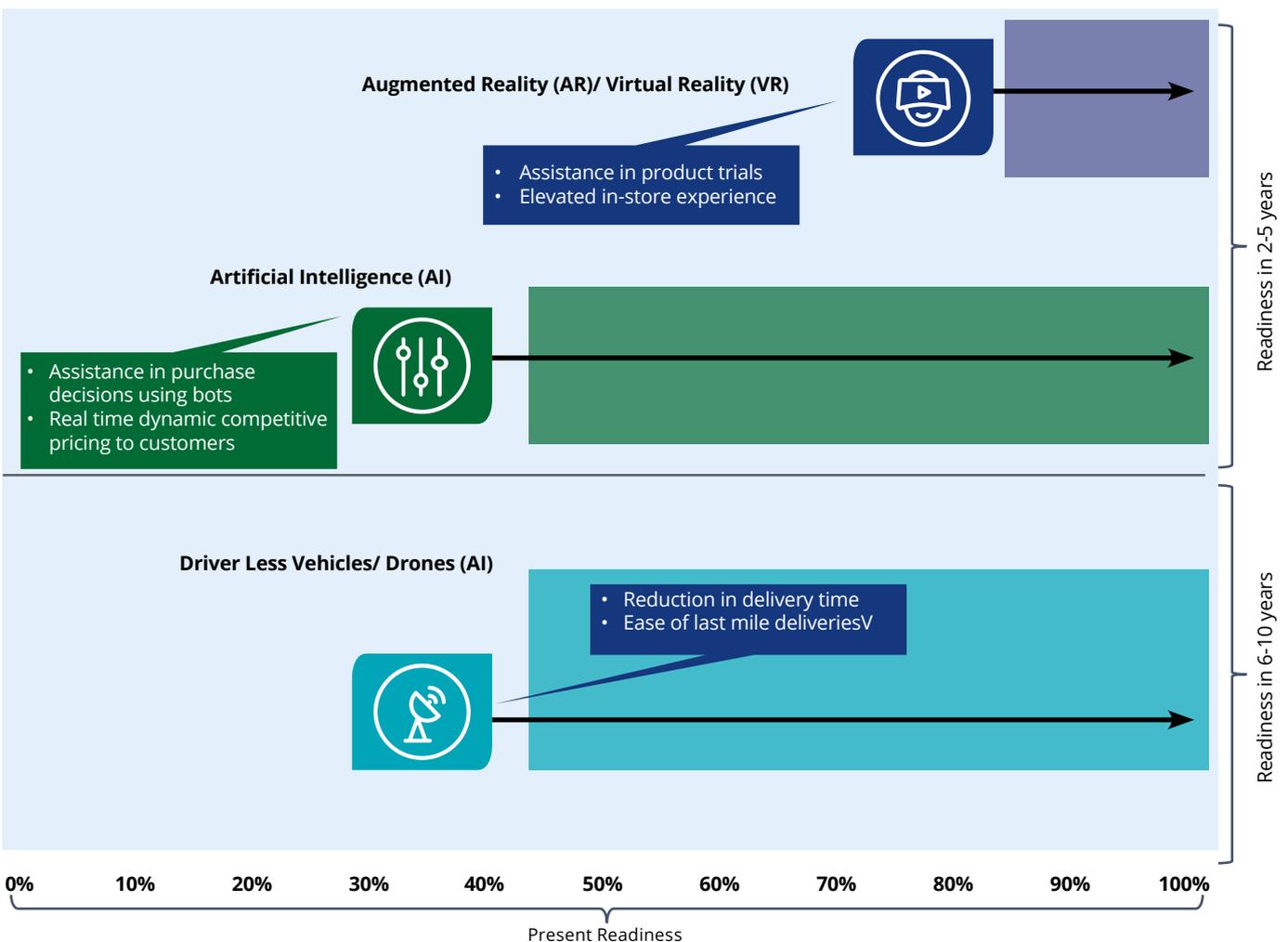
Customer experience is significantly elevated by employing digital across in-store processes, merchandizing, marketing and promotions. The Digital customer journey encompasses the complete lifecycle from discovery to loyalty and is increasingly becoming complex.

However retailers continue to invest in apps which are deployed on mobile devices provided to store associates. In order to truly create a customised experience, retailers should look at providing information on the customer's device itself. Technology is playing a major role in enhancing this experience and presents a huge opportunity for retail brands to gain the first mover tech-advantage.

The product-focused approach is not anymore the sole factor in driving the brand sales. Various customer engagement techniques through AR, VR and AI are gaining traction and bringing changes in customer interactions at a faster pace. Though India is a little slow in adopting major global technologies, the evolution and impact are expected to reach full potential in coming years. The major bottlenecks inhibiting Indian companies to use these technologies are largely related to high investments and uncertain business returns. However, the growing number of smartphone users, improved 4G networks and the role of technology start-ups in the country are predicted to change not only the business perceptions, but also the way shoppers transact and pay. While Driverless vehicles and drones are yet to reach the desired maturity levels globally as well as in India, technologies like AI and VR are taking the centre stage in the retail world.

Maturity of major emerging technologies in retail and CPG (Global and Consumer focused)

Augmented Reality (AR)/ Virtual Reality (VR)
- Assistance in product trials
- Elevated in-store experience

Artificial Intelligence (AI)
- Assistance in purchase decisions using bots
- Real time dynamic competitive pricing to customers

Driver Less Vehicles/ Drones (AI)
- Reduction in delivery time
- Ease of last mile deliveriesV

Readiness in 2-5 years

Readiness in 6-10 years

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Present Readiness

Source: Shaping the Future of Retail for Consumer Industries, January 2017, World Economic Forum
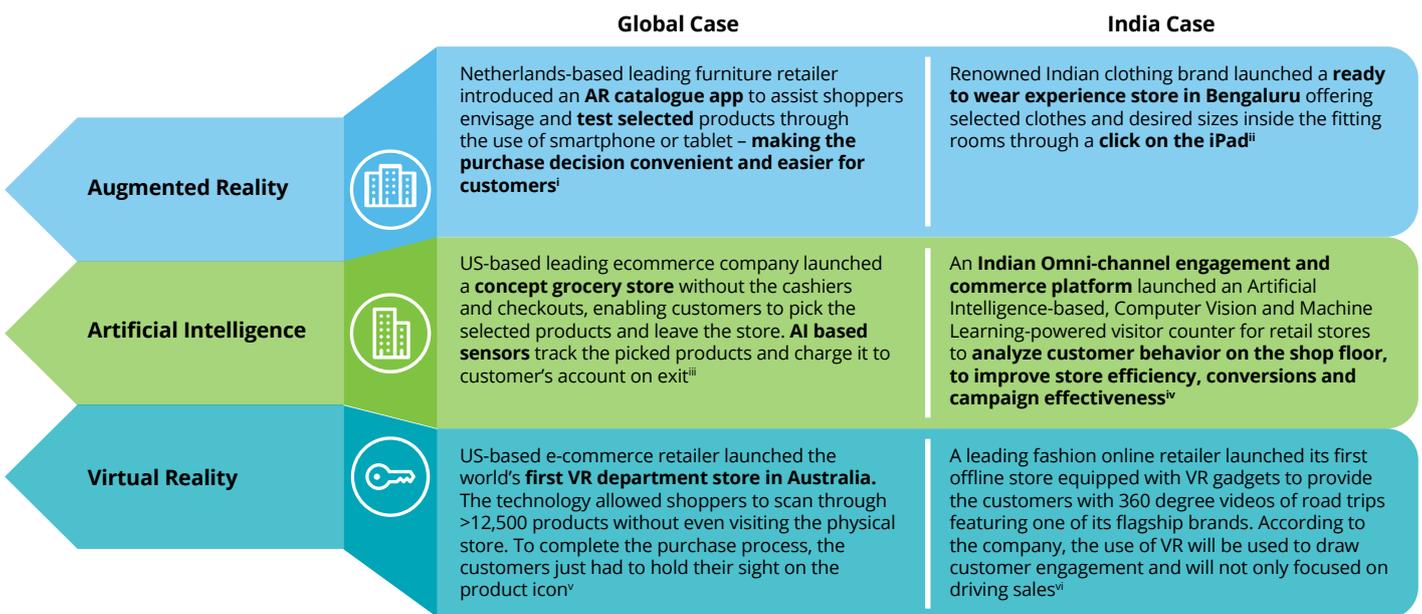
These technologies help brands to provide an exceptional service in the form of experiencing the actual look and feel of products while browsing at home, virtually trying items without actually going to the trial rooms, personalized communications basis the needs and requirements, knowing product information through bots, etc.

By leveraging such technologies, retailers are able to provide an immersive experience. Future possibilities include concepts such as the store being brought to a customer's home through use of VR headsets or hollo-lens technology. Devices such as Amazon Echo are already automating order placement by enabling customers to order products on Amazon using voice commands. This virtual and physical interaction between customer and product is leading to new horizons for customer engagement and an opportunity to build long-lasting relationships.

While the technologies become more ready for global retailers and CPG companies, the improving infrastructure and rise in millennials are likely to push Indian brands to be more active in adoption. However, the implementation and execution do face a few issues related to readiness of industry participants and high digital costs.

The scenario in India is yet to reach the level of maturity seen in developed markets, but the country is rapidly overcoming the traditional challenges related to execution. While a few brands have already started using some of the most evolved technologies (especially AR), the increase in adaptation would be critically dependent on various factors related to digital spends, infrastructure, leadership etc.

Figure 4: Usage of digital technologies in retail – Global and India examples

		Global Case	**India Case**
Augmented Reality		Netherlands-based leading furniture retailer introduced an **AR catalogue app** to assist shoppers envisage and **test selected** products through the use of smartphone or tablet – **making the purchase decision convenient and easier for customers**[i]	Renowned Indian clothing brand launched a **ready to wear experience store in Bengaluru** offering selected clothes and desired sizes inside the fitting rooms through a **click on the iPad**[ii]
Artificial Intelligence		US-based leading ecommerce company launched a **concept grocery store** without the cashiers and checkouts, enabling customers to pick the selected products and leave the store. **AI based sensors** track the picked products and charge it to customer's account on exit[iii]	An **Indian Omni-channel engagement and commerce platform** launched an Artificial Intelligence-based, Computer Vision and Machine Learning-powered visitor counter for retail stores to **analyze customer behavior on the shop floor, to improve store efficiency, conversions and campaign effectiveness**[iv]
Virtual Reality		US-based e-commerce retailer launched the world's **first VR department store in Australia.** The technology allowed shoppers to scan through >12,500 products without even visiting the physical store. To complete the purchase process, the customers just had to hold their sight on the product icon[v]	A leading fashion online retailer launched its first offline store equipped with VR gadgets to provide the customers with 360 degree videos of road trips featuring one of its flagship brands. According to the company, the use of VR will be used to draw customer engagement and will not only focused on driving sales[vi]

Source:
i   IKEA catalog uses augmented reality to give a virtual preview of furniture in a room, 14 August 2013, Newatlas
ii   Traditional retail ups its digital quotient, 26 January 2016, Financial express
iii Amazon Go grocery store replaces cashiers with automation and AI, 5 December 2016, TechRepublic
iv   Capillary Technologies develops AI-based footfall analysis product for offline retailers, 16 October 2017, LiveMint
v   eBay Australia launches 'world's first' VR department store, Virtual Reality News.Net, 16 May 2017
vi   VR, AR, and Giant Touchscreens: Myntra's Vision for Offline Stores Goes Live in Bengaluru, 17 Mar 2017, NDTV

Case study: Amazon Go – A check out-free shopping experience

In December 2016, Amazon introduced Amazon Go, which is a 1,800 square foot grocery store in Seattle, Washington (USA) with the most advanced shopping technology so customers can shop and then walk out with their products without waiting in lines or checking out. Shoppers use the Amazon Go app and the store is enabled with their "Just Walk Out" shopping experience, which leverages multiple technologies such as computer vision, sensor fusion and machine learning. The virtual shopping cart tracks items and when leaving the store, the shopper's Amazon account will be charged.

Source: News Articles

2   Merchandizing and Promotions

Merchandizing

One of the most important ways of improving customer engagement within stores is to focus on merchandizing. Typically retailers face challenges around following aspects in merchandizing –

- Optimal space allocation across categories within stores
- Visual merchandising & store layout
- Appropriate zoning of "promotion hot-spots" within stores

Digital technologies help address this challenge and also hold great promise for improving the presentation of store merchandise. Apparel retailers, for instance, can drive customer excitement by using 3D scanning technologies to create virtual fitting rooms that allow shoppers to see what specific items might look like on them. This technology records a customer's dimensions and contours, features questionnaires on style preference and clothes the customer already owns, and then creates a personalized profile that is accessible in all stores and online. Customers can do a virtual try-on of garments for a quick comparison and also share images with their social network to get instant feedback from friends. Virtual fitting rooms can be coupled with a personal digital assistant that makes recommendations based on information given by the customer, the customer's purchase history and current sales within the store.

An upcoming trend in data analytics used by retailers is "Dark Analytics" which taps into non-traditional unstructured data to derive consumer insights. Unstructured data may be in the form of in-store videos, social media images and so on. Stitch Fix, for example, is an online subscription shopping service that uses images from social media and other sources to track emerging fashion trends and evolving customer preferences[9].

Promotions

Quite often in this new digital world, merchandizing and promotion strategies go hand in hand. A robust communications and in-store promotions strategy has been the cornerstone of successful retail. However, in today's digital age we are witnessing a paradigm shift as retailers leverage digital technologies to proactively enlighten customers. According to a Deloitte survey, 84% of customers9 'webroom' or logon to the retailer's online/mobile portal before planning on an in-store visit. As more and more customers, particularly millennials rely on digital channels for product discovery and information, retailers need to ensure that product information is consistent across platforms.

Social media integration is becoming integral for a retailer as customers use it to obtain validation from personal network, gain awareness, research products and get feedback from friends/family. However, for real-time engagement and interaction retailers need to tap into micro-communities such
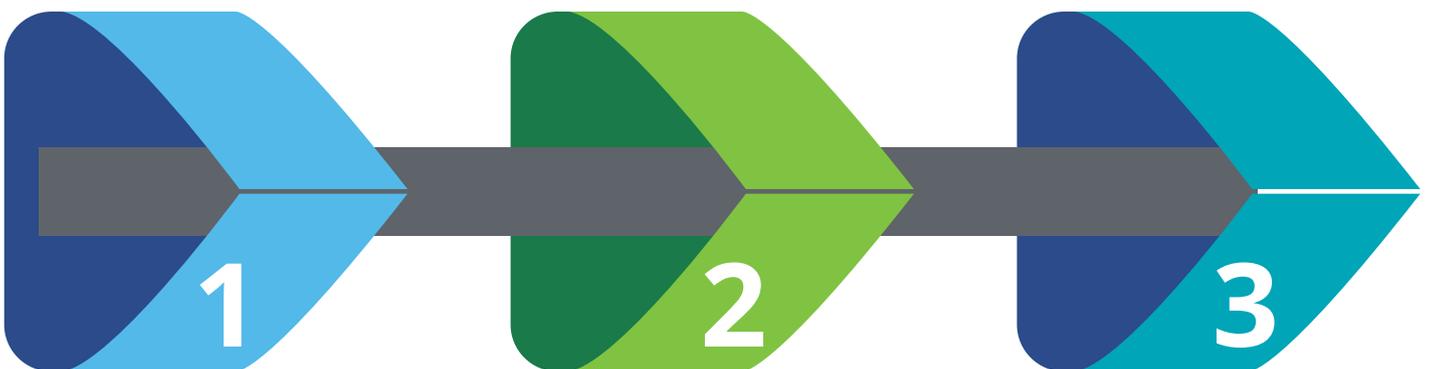
Online eyewear portal Lenskart recently enabled users to try glasses on **realistic 3D models** of themselves just by clicking a selfie using their webcams

Online jewellery platform CaratLane's buyers can use its mobile application to see how its products will look on them before placing an order

Burberry - Digital merchandizing by using **RFID e-tags to provide customers access to additional information.** Scanning an item in front of a **"magic mirror"** will call up details on how the product was crafted, along with other suggestions

Source: News Articles

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9.   Dark analytics: Illuminating opportunities hidden within unstructured data | Deloitte Thought Leadership

Smart Beacon technology
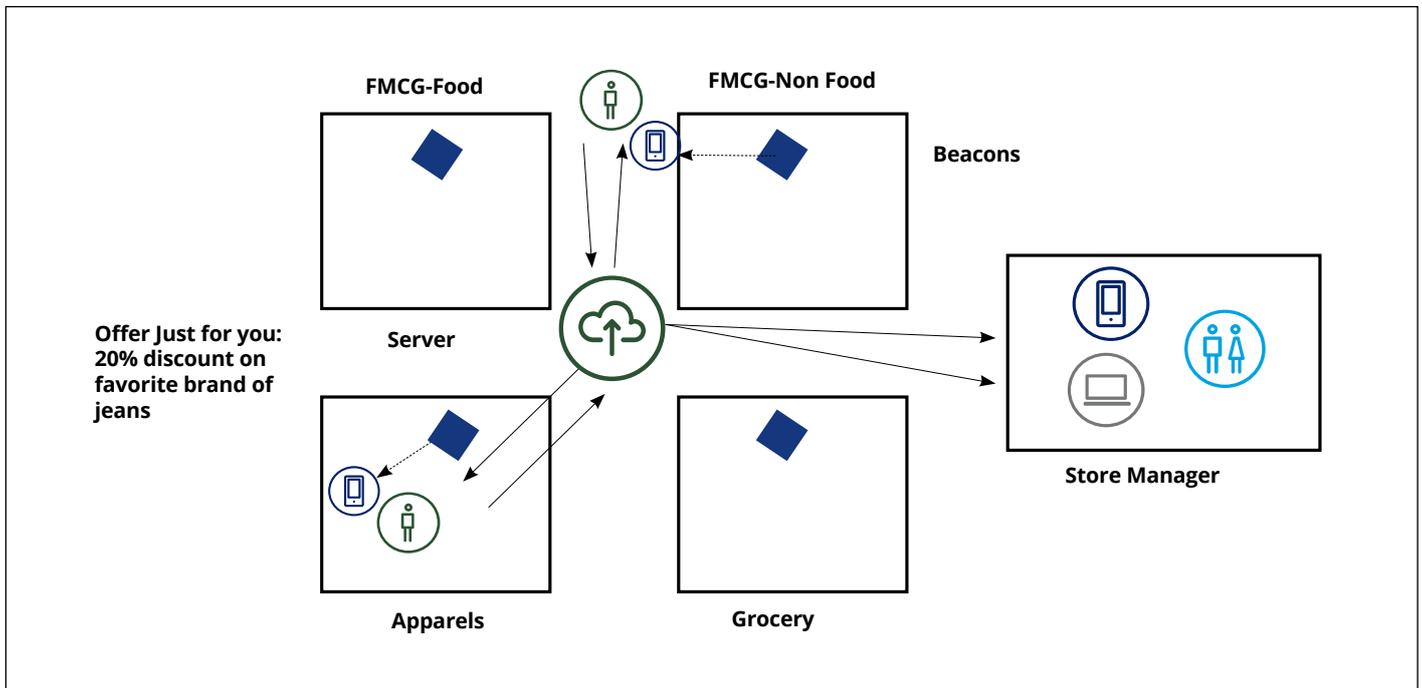
as Facebook groups, Instagram, Hashtags etc. Retailers now have dedicated influencers following latest trends and engaging regularly with customers. In addition, social media analytics can help in gaining critical insights on buying behaviour and shopper feedback, thus creating long-term loyalty.

While digitally enabled promotions have been traditionally linked to online sales, retailers are increasingly using them to drive in-store sales. Retailers can leverage analytics to provide targeted and contextualised promotions based on past purchases which can be pushed to the customer on their mobiles or wearable tech gadgets.

Case in point – Beacons Technology

Keeping in view the limited success of blanket discounts, retailers are now shifting to the idea of one-to-one marketing. In this context, Beacons technology is a classic example as to how use device, location, and other contextual data to make

personalization more dynamic and create a great sense of urgency.

Beacons are installed at various points in the retail store such as entry, exits, and various sections. As and when customers with smartphone and app installed walk by these beacons, their location is uploaded to a server. The server based upon customers' location, and purchase history can send customized offers (even when he is just passing by the store).

Suppose a person named Alice is standing in the apparels section of a store. Beacon technology can identify Alice's location and preferences in real time based on her purchase history. It can then act and send, a customized discount with a higher probability of conversion.

Retailers have already started to pilot test such technologies. For example, Virtuous Retail deployed 300 beacons across its shopping center in Bengaluru[10].

Case study: Carrefour – Leveraging Internet of Things via iBeacon to collect consumer data

French supermarket chain Carrefour is one of the first retailers to extensively pilot iBeacon networks across its stores. Customers can use mobile phones or tablets attached to shopping carts to receive in-store routes and personalized promotions. As customers are guided around the store, the beacons collect data about their behaviour and purchasing patterns, which the retailer uses to continuously improve operations and store layout. With more than 600 beacons deployed across 28 supermarkets, Carrefour has seen a 400% increase in its digital application's engagement rate and a 600% increase in app users

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10.   Bangalore startup deploys beacons to create IoT enabled shopping district DqIndia News Article

3. Loyalty Programs

Consumer preferences around loyalty are changing rapidly. For instance, as per a recent global pulse survey conducted, friends and family are much more influential than celebrity/blogger on loyalty (43% vs. 24%), at the same time 20% of the customers in the age group 18-34 are willing to publicly endorse a company on social media to show their loyalty (21% of emerging markets vs 10% mature markets across ages).

Customer loyalty and engagement can make or break companies, and as such, loyalty reward programs represent strategic investments for all types of organizations. The breadth and variety of reward programs is vast, ranging from Virgin Atlantic's tiered points program (Virgin Atlantic Flying Club), which connects to rental cars, airport parking, hotels, and massage services, to Amazon's upfront fee program (Amazon Prime), which provides free shipping and media services, to Patagonia's and eBay's joint loyalty program (Common Threads Initiative), which allow customers to resell clothing bought from the former on the platform of the latter.

As choice increases, loyalty becomes more fragile, and "The Digital Customer" becomes more empowered. Technology enabled loyalty programs have seen a significant success globally. Loyalty programs have moved beyond paper and plastic to mobile apps. Customers want a seamless cross-channel experience, where they can view and redeem their points across multiple channels. With technology, brands can do that and much more.

Brands can use **mobile apps** to facilitate self-service. The **Hilton hotel** enables their most loyal customers to book and check-in to their rooms and even enter their rooms using their mobile app, all without having to approach their front desk. This makes it easy and convenient.

Virtual reality enables customers to 'try before they buy'. Brands can tie this into their loyalty program so that their loyal customers have a richer experience when shopping with the brand. In Europe, several retailers provide nutrition or sourcing information on their products through apps or augmented reality.

Social listening can help brands understand customer's needs. Brands are still coming to terms with how to engage with customers using wearable tech. For brands in the fitness and healthcare industry, **wearable tech** offers immense potential to increase engagement with valued and repeat customers.

Brands can also utilize **chat bots, gamification, social badging, and the internet of things** (like Amazon's dash buttons) to make engagement easier and more convenient. The loyalty program of the future is one where the retailers should link loyalty programs to their customer experiences in ways that create value for shoppers beyond product discounts.

Blockchain based loyalty programs

Blockchain technology has a significant potential to transform loyalty programs as it can allow retailers to reduce costs, control programs in real-time, enable a frictionless system and assign certain benefits to individual users.

A trust-less distributed ledger, blockchain allows participating agents, which in the case of loyalty rewards programs include loyalty reward program providers, administrators, system managers, customers, etc. to intersect and interact in one system without intermediaries and without compromising privacy or competitiveness. For loyalty rewards program providers, blockchain has the potential to streamline execution and administration of their programs with near-real-time transparency, resulting in cost savings that can be realized in the medium term. For loyalty rewards programs that currently have competitive advantage through scale, including their own degree of interlinking networks, joining a blockchain-based network is a trade-off worth making given that they may join on their own terms, controlling how they wish their customers to interact with their rewards programs and others. And for small operators, an interlinked network provides them unprecedented scale.

From the viewpoints of "The Digital Customer", Refer Figure - "Typical customer loyalty program in a blockchain world" which outlines the journey of "Alice", provides some insight, and we will elaborate on Alice's rewards experience as we discuss how blockchain, by its inherent design, can connect

Case in Point – Starbucks

Starbucks has been credited with revolutionizing the coffee industry. Starbucks Rewards is often regarded as one of the best retail loyalty programs in existence. They have created a loyal following of customers both with their customer experience and revolutionary rewards program.

1. Starbucks uses geo-targeting well when it prompts its customers to enter a store that is close to where the customer is located.
2. Effective Mobile Experience: Starbuck's app makes their loyalty program more interactive and more effective. The app makes it easy to see how many "stars" (points) you currently have, as well as make orders and payments right from your phone. You can even use the service to find the nearest Starbucks location
3. Collaboration and tie up with other Retail stores: Starbucks was able to expand the scope of its loyalty program by introducing points for purchases outside of their retail locations. Starbucks sells many products outside of their retail locations, including: coffee beans, tea, K Cups, and ready to enjoy drinks.

Typical customer loyalty program in a blockchain world

1 **Alice buys airline tickets from Los Angeles to Miami using her credit card**	
• Alice gets her tickets • Her credit card transfers loyalty tokens to Alice's loyalty rewards programs digital wallet • The airline transfers loyalty tokens to her wallet	• Alice gains current asset • The airline and credit card company have current liabilities
2 **Alice checks into a major hotel (a national chain) in Miami and realizes she can use points accumulated earlier**	
• Alice checks into a chain hotel and uses her credit card points to upgrade to a suite • She also uses her airline points to hire a hotel limousine and posts pictures on social media	• Alice has a fantastic experience • The airline's and credit card company's liabilities are partly cleared while the hotel gets free advertising and a brand advocate
3 **Alice meets Bob who wants to hop onto the last flight of the day to LA after missing a flight with another airline**	
• Alice transfers her airline points to Bob in exchange for his points earned from the hotel chain • She uses them to extend her holiday while Bob gets a discounted ticket back to LA • Liability is cleared from the airline's books as the points have been completely used	• Alice gets an extended holiday while Bob gets a timely, discounted flight • Liabilities cleared from the airline's books while the hotel and airline get a happier and new customer, respectively

Source: Deloitte Analysis – Making blockchain real for loyalty rewards

the largely disconnected world of loyalty rewards programs, reduce costs, eliminate friction, bring loyalty rewards crediting and redemption into near real time, provide a more secure environment, and facilitate business relationships.

Blockchain has the potential to allow instantaneous and secure creation, redemption, and exchange of loyalty reward points across programs, vendors, and industries through a trust-less

environment using cryptographic proofs in lieu of trusted third parties and administrators. Through a rigorous online protocol, well-programmed building blocks, and smart contracts, blockchain has the capability to operate without intermediaries.

The key elements of such a blockchain solution are a loyalty network platform, reward applications, and loyalty tokens.

Blockchain based loyalty networks
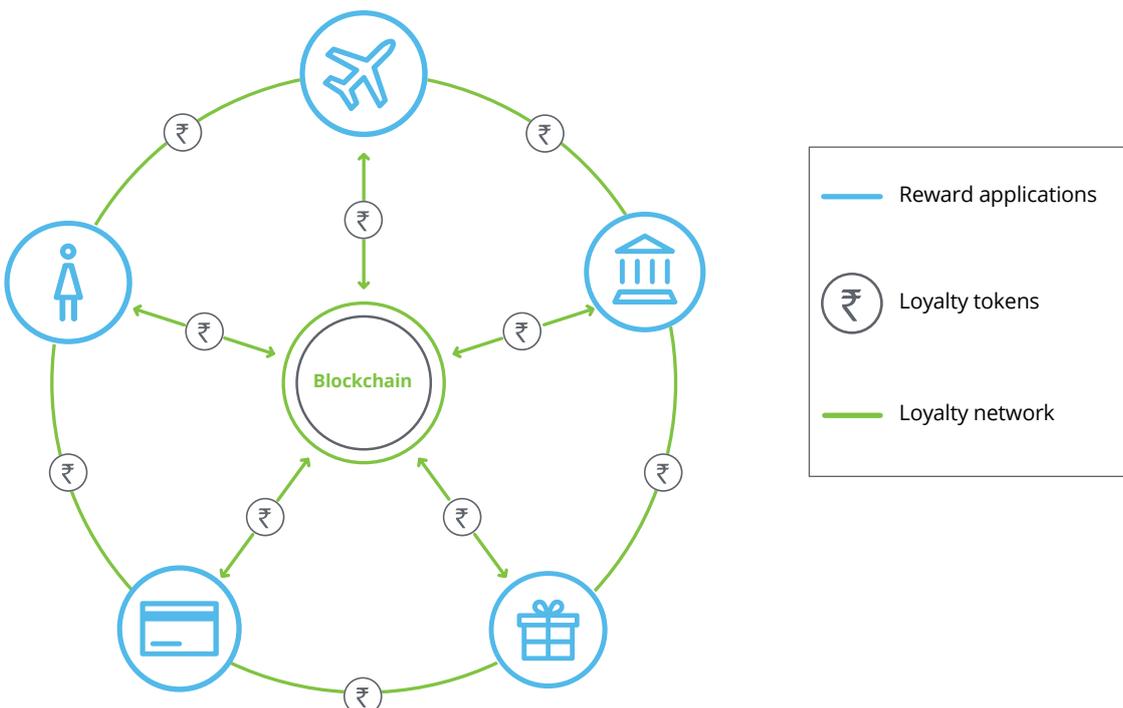
Source: Deloitte Analysis – Making blockchain real for loyalty rewards

Such digital techniques are helping the businesses to deliver prodigious customer experiences. While e-commerce paved the way for the Omni-channel route, new technologies are shaping up to improve business interactions and increasing the engagement levels. With this transformation, various technologies have already made their impact with the growing level of acceptance across all business lines, and are likely to be fully ready in the span of next 2—10 years.

4 Pricing and POS Solutions

In this digital retail era, retailers can no longer rely on traditional pricing methods. Sophisticated price comparison engines not only display competitors' pricing instantly but also track prices over time and forecast changes. Online retailers especially Amazon are following advanced dynamic pricing strategies to respond to price changes in less than an hour. In addition, shoppers are increasingly seeking customized engagement and personalized deals that reflect their needs.

Individualization and interactivity are the two key themes emerging for retailers in a digitally influenced age. In the former case, retailers can have customized prices or tailor-made discounts based on personal shopping preferences across channels. In the latter case, retailers can utilize dynamic pricing strategies which allow prices to be changed easily based on customer feedback.

One such technology that combines both capabilities is the use of electronic shelf-edge technology comprising e-ink or color displays which replace traditional paper based labels. It offers the chance for retailers to be proactive in their pricing strategies by dynamically controlling prices for an entire cluster of stores from one location. In addition, these displays can be used for targeted communication, displaying product reviews & recommendations and reducing time and effort in manually printing and changing labels for the "The Digital Customer".

POS Solutions

Payments and checkout is a significant pain point for customers in retail stores as they encounter long queues severely impacting shopper experience.

Recent development in technology for financial transaction has increasingly fuelled the use of electronic-based payment instruments globally. In advanced countries such as the United

Self Edge Technology: Illustration of typical application at a retailer

Store 1

Store 2

- Price changes based on customer data (online, in-store) and competitor pricing fed into POS system
- Price updated on shelf-edge label

Head Office
Can control pricing across stores from a central location

Store 3

- Centralized pricing across stores
- Instant Price changes
- Can display product reviews & recommendations
- Targeted promotions

E-ink displays deployed on shelf edge instead of manual labels

Store n

States, France etc. the use of cash for purchasing consumption goods has declined since 1980. Electronic payments have made substantial inroads among consumers in these countries accounting for ~ 60% of all consumer transactions.

Instead of legacy payment terminals, Indian retailers too can utilise self-checkout options which can be integrated with digital wallets or Aadhaar Pay / UPI. Initiatives such as Samsung Pay or Apple pay which are integrated with customer smartphones can also be tapped for faster payment.

Retailers can also leverage some of these payment solutions that are being used to revolutionize the Banking & Public Distribution worlds by providing accessibility to electronic banking service in Rural & Urban Districts. Particularly in India we see such examples in the form of:

Digitally Enabled Payment Solutions are changing the retail landscape in India and enabling a highly customer centric experience

Aadhaar Enabled Payment System (AEPS)

A bank led model which allows online interoperable financial inclusion transaction at PoS (MicroATM) using the Aadhaar authentication
IT enables four basic types of banking transactions i.e. Balance Enquiry, Cash Withdrawal, Cash Deposit & Aadhaar to Aadhaar Funds Transfer

Aadhaar eKYC

Aadhaar ekyc is a paperless Know Your Customer (KYC) process, wherein the Identity and Address of the subscriber are verified electronically through Aadhaar Authentication

Digital Wallets

ePaisa, Paytm, and the likes are playing an important role in the convenience of payments for the customers

RuPay

Card payment scheme launched by the National Payments Corporation of India (NPCI), to offer a domestic, open-loop, multilateral system allowing all Indian banks and financial institutions to participate in electronic payments

(C) Impact on Back-end:
Agile Retail Organization

1 Supply Chain: Shift from traditional supply chain to Digital Supply Networks (DSN)

In traditional supply chains, information travels linearly, with each step dependent on the one before it. This chain of events is linked in a very structured way: develop, plan, source, make, deliver, support. There is lack of transparency in the chain at each supply nodes and inefficiencies in one step can result in a cascade of similar inefficiencies in subsequent stages.

Shift from traditional supply chain to digital supply network

Traditional supply chain

Digital supply networks

Source: Deloitte analysis.

Deloitte University Press | dupress.deloitte.com
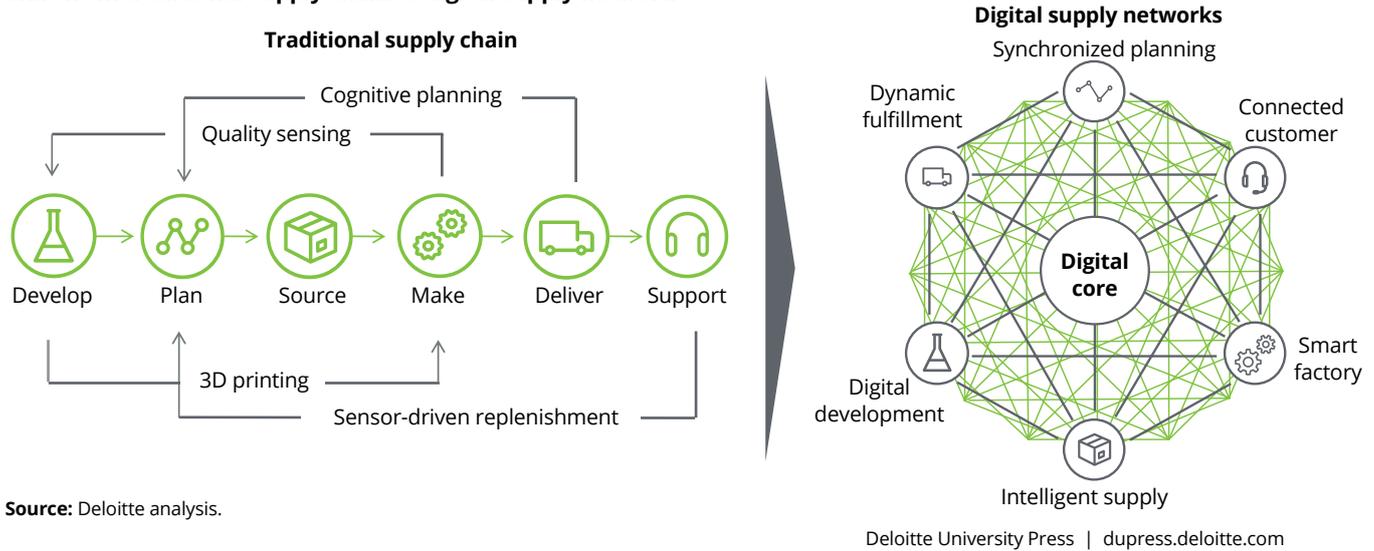
As each supply node becomes more capable and connected, however, the supply chain collapses into a dynamic, integrated supply network, also known as Digital Supply Networks (DSN). DSNs overcome the delayed action-reaction process of the linear supply chain by employing real-time data to better inform decisions, provide greater transparency, and enable enhanced collaboration across the entire supply network.

The main characteristics of the DSN: always-on agility, connected community, intelligent optimization, end-to-end transparency, and holistic decision making. Each of these characteristics plays a role in enabling more informed decisions and can help organizations address the central question in their strategic thinking: **How to win**

The characteristics of a digital supply network

"Always-on" agility	Connected community	Intelligent optimization	End-to-end transparency	Holistic decision making
Securely, DSNs pull together traditional data sets with new data sets that are, for example: • Sensor-based • Location-based • "Right-time" vs. "real-time"	Real-time, seamless, multimoidal communication and collaboration across the value network with: • Suppliers • Partners • Customers	A closed loop of learning is craeted by combining: • Humans • Machines • Data-driven analytics • Predictive insights • Proactive action	Use of sensors and location-based services provides: • Material flow tracking • Schedule Synchronization • Balance of supply and demand • Financial Benefits	Based on contextually relevant information, functional silos are now transparent and deliver parallel visibility, such as: • Performance optimization • Financial objectives • Trade-offs
Outcome: Rapid, no-latency responses to changing network conditiojns and unforeseen situations	**Outcome:** Network-wide insights from centralized, standardized, synchronized data	**Outcome:** Optimized human-machine descision making for spot solutions	**Outcome:** Improved visibility into critical aspects of the supply network	**Outcome:** Better decision making for the network as a whole

Implications

Companies can achieve new levels of performance, improve operational efficiency and effectiveness, and **create new revenue opportunities**

As companies leverage their full supply networks, the **traditional barriers of time and space shrink**

Source: Deloitte analysis.

Deloitte University Press | dupress.deloitte.com

Walmart: Adoption of Digital Supply Chain Network to add value to retail eco-system

Digital plays a key role in Walmart's supply chain, serving as the foundation of their supply chain. It has incorporated various aspects of DSN to add value to retail eco-system.

- **"Always-on" Agility and Connected Community:**
  - Walmart in US implemented the first companywide use of **Universal Product Code bar codes,** in which store level information was immediately collected and analyzed, the company then devised Retail Link, a mammoth database.
  - **Through a global satellite system,** Retail Link is connected to **analysts who forecast supplier demands to the supplier network, which displays real-time sales data** from cash registers and to Walmart's distribution centers.
  - Suppliers and manufacturers within the supply chain **synchronize their demand projections under a collaborative planning, forecasting and replenishment scheme,** and every link in the chain is connected through technology that includes a central database, store-level point-of-sale systems, and a satellite network.

- **Intelligent Optimization:**
  - Walmart leverages predictive analytics to optimize inventory in the system thereby saving on transportation & handling costs

- **End-to-end transparency:**
  - Wal-Mart uses radio frequency identification tags (RFID), which use numerical codes that can be scanned from a distance to track pallets of merchandise moving along the supply chain. As inventory must be handled by both Wal-Mart and its suppliers, Wal-Mart has encouraged its suppliers to use RFID technology as well.
  - It also adopts smart tags, read by a handheld scanner, that allow employees to quickly learn which items need to be replaced so that shelves are consistently stocked and inventory is closely watched.

All these initiatives enabled Walmart to adopt a holistic decision making and removed siloes within the organization

Source: News Articles

2   Logistics & Warehousing

The rise of e-commerce has led to new digital entrants in the last-mile delivery market. Digital platforms will become increasingly important in the logistics industry, allowing small companies in India to have a global reach and compete with the sector's established giants. Over the next few years, the race to build a dominant global platform will transform the customer's experience of logistics and will be the central issue in determining which enterprises will be the winners and losers in a truly digital logistics industry.

According to World economic Forum (WEF) estimates, there is $1.5 trillion of value at stake for logistics players and a further $2.4 trillion worth of societal benefits as a result of digital transformation of the industry up until 2025. In other words, digital transformation initiatives are a priority for retail and consumer sector companies given the potential for significantly higher value to be created for society than for industry. Following are key themes that will be central to digital transformation of logistics –

Augmented by the Internet of Things, the web enables the continuous automated monitoring of logistical elements, from shipments and transportation assets to infrastructure, workers and customer requirements. It also enables communication between control operations and these elements.
E.g.: Unilever, P&G and Dell have reduced inventories in excess of $500 million by 25 to 40%, lowered delivery costs by 10 to 20%, cut warranty costs by 12 to 25% and shrunk labor costs by 20 to 30%

Retailers can also benefit from sharing economy as it allows all participants to share fixed costs, enabling them to make several smaller investments rather than a single large investment.
E.g.: Nestlé and PepsiCo share warehouse capabilities. Through this, they share storage, packing operations and distribution of fresh & chilled food products for their retail customers in Belgium & Luxembourg.

Digitally-enabled logistics services will help in trade growth through creation of digitally enhanced cross border platforms which will help retailers to satisfy the growing need of customers
E.g.: LightInTheBox, a China-based e-tailer, delivers direct to customers around the world by incorporating Global logistics price comparison engine, route optimization tools, and integrated logistics tracking facilities

Delivery methods are starting to change given the adoption of digital by incumbent retailers and also emerging digital retailers. The trend of crowdsourcing, innovations in manufacturing (3D printing) and technology (drones, autonomous trucks) have widened the range of Options.
E.g.: Amazon piloting drone-based deliveries in US

Information Services

Logistics Services

Key digital themes in logistics

Shared logistics capabilities

Delivery Capabilities

Source: World Economic Forum whitepaper: Digital transformation of Industries, 2016

Retailers in this digital age are required to innovate in 3 key dimensions: **Location, Immediacy and Cost.** All of this can be addressed by real estate solutions (Store + Warehousing)

Retailer challenges

Location	Immediacy	Cost
Proximity of retailers' real estate to customer base	Reducing the lead time between capturing and delivering an order	Understanding fulfilment costs; store vs E-commerce
Accessibility of warehouse for deliveries and staff pool	Flexibility of delivery option - convenience, choice and precise timings	Ensure supply chain does not impact profitability
Closer collaboration with all supply chain partners from start to finish	Provision of click and collect as part of retail offering	Timely stock Knowledge - understanding product movements and ensuring returned stock becomes available
Ensuring that 'last mile' delivery solution is in place		moving from traditional logistics model to an omnichannel environment
	Using 'big data' to understand customers	

Source: The shed of future – Deloitte Report

Part of the solution involves greater use of 'big data' and associated technology to enable a better, more holistic understanding of the exact location of individual stock items. In order to achieve this more granular understanding of stock levels, on-going investments in technology will be required. Technology solutions can range from robotic stock picking to software which enables workers to maximise space availability, through narrower aisle widths as well as more effective staff deployment. Although costly warehouse automation will continue to improve and increase in popularity in order to achieve maximum efficiency.

What will the logistics & warehouse of future look like?
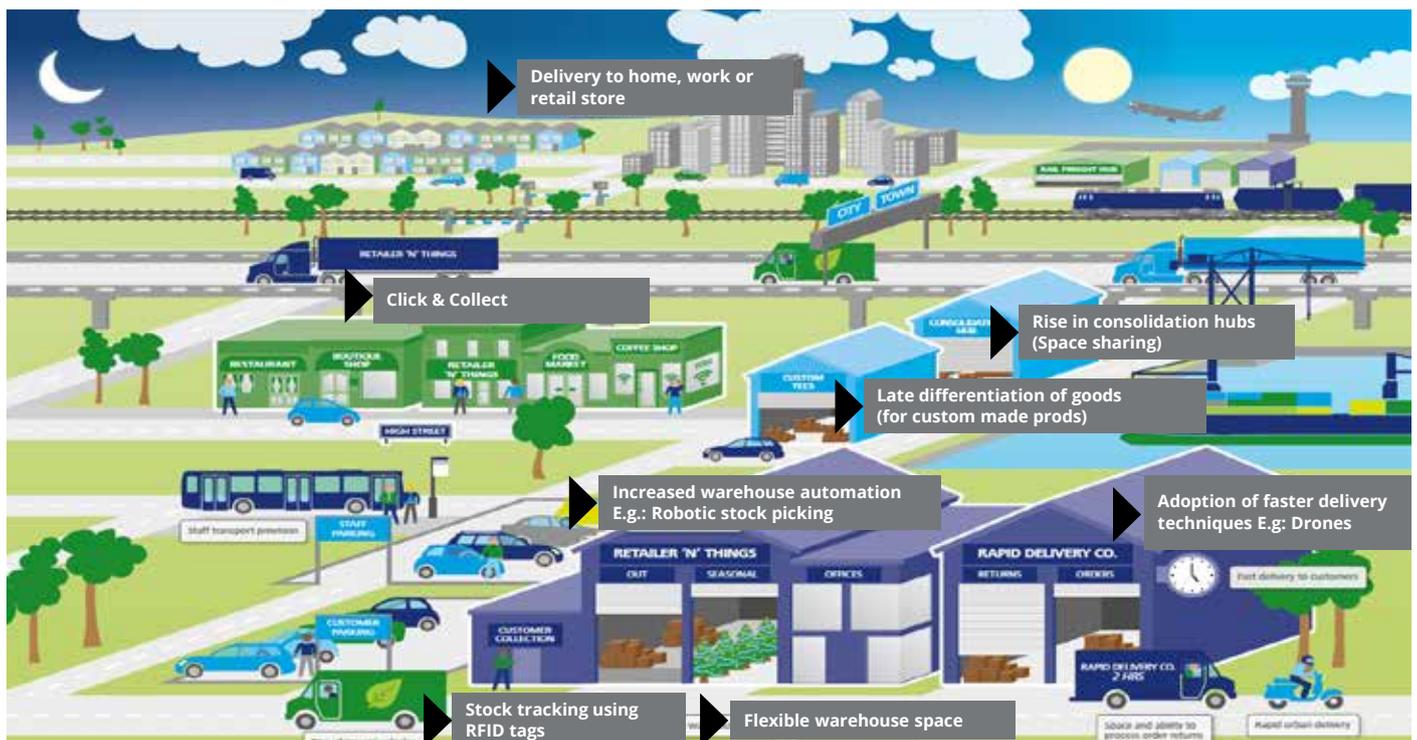
Source: The shed of future – Deloitte Report

3   Finance

The 21st century CFO is getting ready to shift gears to the world of "Digital Finance". Today, Digital Finance is far beyond incremental technology tweaks; it is an eco-system that brings together the forces of exponential computing power and the behavioral disruptions of socio-economic forces. Digital Finance is the next generation Finance ecosystem that utilizes disruptive technology, innovation, data, and people to elevate and differentiate the capabilities of the Finance function

Themes of Digital Finance

Most finance processes are likely to be run in a "factory" model – inter-connected, automated, and predictable.

Most finance processes are likely to be run in a "factory" model – inter-connected, automated, and predictable.

Predictive analytics – from internal and external sources, based on structured and unstructured data – will be the norm and not the exception. The availability of cognitive skills to synthesize information, will differentiate leading finance organizations

Finance talent will come from non-traditional sources with Gen Y/Z leadership and novel value systems. Millennials in finance teams will demand and expect different models of rewards and work ethos.

The role of the CFO will continue to evolve further and morph into that of a Chief Performance Officer. Cash, Risk, Reputation, and Economics will be the guiding forces in the CFO profiles.

Source: Finance in the digital age, Deloitte Analysis, 2017

Finance must take advantage of break-through technologies to drive exponential benefits around economics, risk, and value to the stakeholder.

Digital Finance Ecosystem

Robotic Process Automation

In-Memory Computing

Machine Learning

Natural Language Processing

Cognitive Analytics

Internet of Things

BUSINESS FINANCE

OPERATIONAL FINANCE

SPECIALIZED FINANCE

How Finance delivers value

What enables finance

FINANCE STRATEGY

PROCESS & POLICY

INFORMATION & SYSTEMS

ORGANIZATION & PEOPLE

Big Data

Augmented / Virtual Reality

Cloud Computing

Blockchain / Cryptocurrencies

Cyber Security

Mobile

Social Media

Source: Finance in the digital age, Deloitte Analysis, 2017

Technology enablers for the Digital Age:

1. **Robotic Process Automation (RPA) :** Software algorithms (BOTs) preprogrammed to perform repetitive finance processes can automate transactional processes in Finance

2. **Cognitive Analytics:** Cognitive technologies have a deterministic way for exception handling and are ideal fit for cognitive automation, thus creating bandwidth at all levels in Finance

3. **Natural Language Processing (NLG):** NLG can benefit financial planning and business reporting as much of

analysis and narratives can be digitized, based on past trends, and discernable patterns that can be harnessed for predictive outcomes.

4. **Internet of things (IOT):** IOT-enabled processes can grow revenue, cut costs, and save time.

5. **Blockchain:** Blockchain technology can eliminate intermediaries (e.g., central banks), cut time and costs, and provide an unprecedented transactional transparency— all in a secure closed group network. Blockchain is the technology underlying crypto currencies, such as Bitcoins.

4   Procurement & Vendor Management

Rapid advancements in digital technologies are remaking business supply chains, and are poised to transform how the procurement function delivers value. Low-cost computing and data storage have enabled advancements in mobile technology and the cloud, constant connectivity is the norm, and sensors bring devices and machines to life in the Internet of Things. The application of these disruptive technologies to procurement is already fundamentally altering the impact of this function. Strategic sourcing is becoming more predictive, transactional procurement is becoming more automated, and supplier relationship management is becoming more proactive. Digital

procurement solutions are enabling this future by providing access to previously unavailable data, or bringing order to massive (but unstructured) data sets; driving more complex analysis and better supplier strategies; and enabling more efficient operations. For organizations looking to embrace digital solutions, the path has never been easier. Many of these emerging technologies work to enhance the value of legacy systems, involve minimal investment, have low requirements for integration, and have payback periods measured in weeks not months.

Today's digital technologies and degree to which the capabilities are being deployed in Procurement

Cognitive Computing / Artificial Intelligence

Intelligent Content Extraction

Predictive / Advanced Analytics

Visualization

Collaboration Networks

Crowdsourcing

3D Printing

Robotics

Block Chain

Sensors / Wearables

Cyber Tracking

Virtual Reality / Spatial Analytics

- Spend Analytics
- eSourcing
- Electronic Catalogs
- Contract Management
- Supplier Information Mgmt
- eProcurement
- eInvoicing
- eAuctions

Emerging | Solutions that could impact procurement in the future

Maturing | Solutions that are transforming procurement with minimal investment

Core | Solutions that are already procurement mainstays; Larger systems with longer implementation

HIGH ◀   CURRENT DEPLOYMENT IN PROCUREMENT   ▶ LOW

Source: Deloitte Thought Leadership - The Future of Procurement in the Age of Digital Supply Networks

Digital procurement solutions are allowing for many more physical and digital inputs to be connected, driving better decision making and improving efficiency, and ultimately producing results in the form of:

- Improved insights and strategies, leading to accelerated cost leadership
- Enhanced process excellence, leading to greater organizational efficiency and effectiveness
- Better assurance of supply and improved risk mitigation
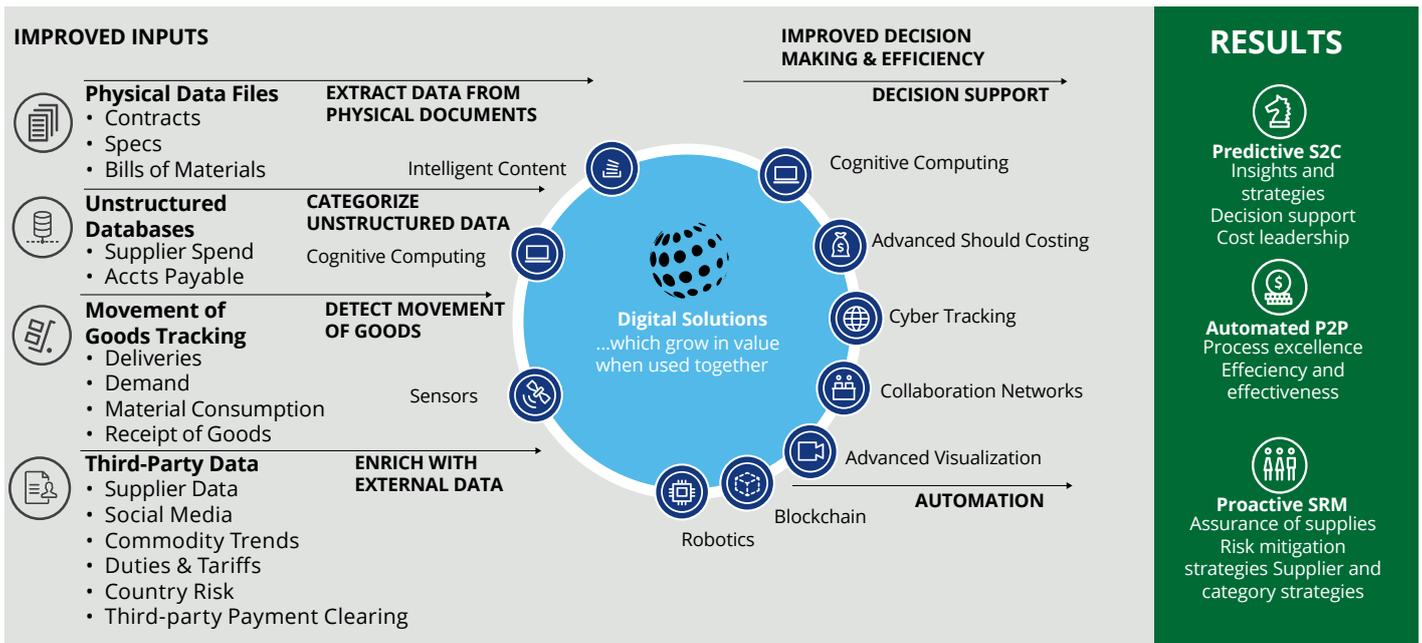
Source: Deloitte Thought Leadership - The Future of Procurement in the Age of Digital Supply Networks

As more and more information goes digital, there is an increased level of visibility (in terms of stock availability, assortment-mix) from both a vendor and retailer perspective. However digital is also enabling retailers to redefine relations with vendors or brands. Blockchain based solutions have already been launched for contract management and vendor payments that will streamline processes and enable real-time settlement.

Retailers can look to collaborate with brand partners who are already experimenting with virtual showrooms and displays using virtual reality. By sharing data around shopping behaviour which can be invaluable to a brand owner, retailers can participate in real-time personalization. In addition, retailers need to make vendors a part of their digital journey by advocating outcome based contracts based on digital sales.

The Home Depot: Overhaul of Supplier Performance Management program to improve supply education and compliance

From the beginning, Home Depot laid out goals for improving the performance of its suppliers. They would be held to strict standards, based on clear metrics and guidelines conveyed through streamlined, centralized communications.

- **Launch of Online Supplier Center:** It features continuously updated information on how to do business with Home Depot, including the corporate performance policy, updates, news, information on events and training, and scorecards.
- **Cognos 8 Business Intelligence suite:** Supplier scorecard is tracked in this BI suite. The scorecard can draw on data from a variety of sources, including warehouse management systems, purchase orders and a repository of contract terms. Actual performance is measured against established targets in order to grade suppliers.

Source: News Articles

5 Assortment mix & Planning

While traditional retail assortment-mix & planning focuses on the product, today's most successful brands focus on the customer when making retail assortment planning decisions. To attract shopper traffic, companies now adopt a demand-driven, customer-centric assortment optimization strategy. This is enabled by digital transformation which in turn brings accuracy to the assortment-mix & planning process. It helps address following challenges faced by retailers:

- Are we holding the right merchandize?
  - Merchandise customized to catchment
  - Appropriate SKU width and depth mapped to format of store
  - Initial assortment allocation & replenishment frequency
  - Merchandise ageing in stores & liquidation policies
  - Categorization of merchandise – Core vs. Non-core vs. Hygiene products vs. Redundant long-tail
- Is the right merchandise available at all times?
  - Stock-out tracking to avoid lost sales
  - On-time replenishment of essential merchandize
  - Availability tracking of seasonal products & timing of seasonal launch

Accuracy is an imperative both while procuring/replenishing and fulfilling orders, making it critical to monitor these processes. Technologies such as RFID, IoT (Internet of Things) etc. help retailers keep a tab on them through real-time updates of on-hand, on-order, in-transit and open-to-buy products. Such technologies also help retailers extract insights on customer demands across channels, including customer product ratings and social sentiments, ensuring that channel and micro-segment specific forecasts yield better results. Since the goal is to get as close to personalized assortments as possible, to address specific demands, many retailers now try to involve customers in the buying process. They enable buyers and category managers with tools that can help them do their job on-the-go and collaborate more with end-users, so they can bring in first-hand insights on tastes and trends.

Analytics plays a key role across retail value chain, esp. in assortment mix and planning for retailers.

Plan & Market			**Make, Buy & Move**		
Assortment Planning	Geospatial Analytics	Space Optimization	Vendor Intelligence	Assortment Localization	Fulfilment Intelligence
Market Analysis	Pricing Strategy	Financial Forecast	Category Intelligence	Inventory Diagnostics	Supply Chain Diagnostics
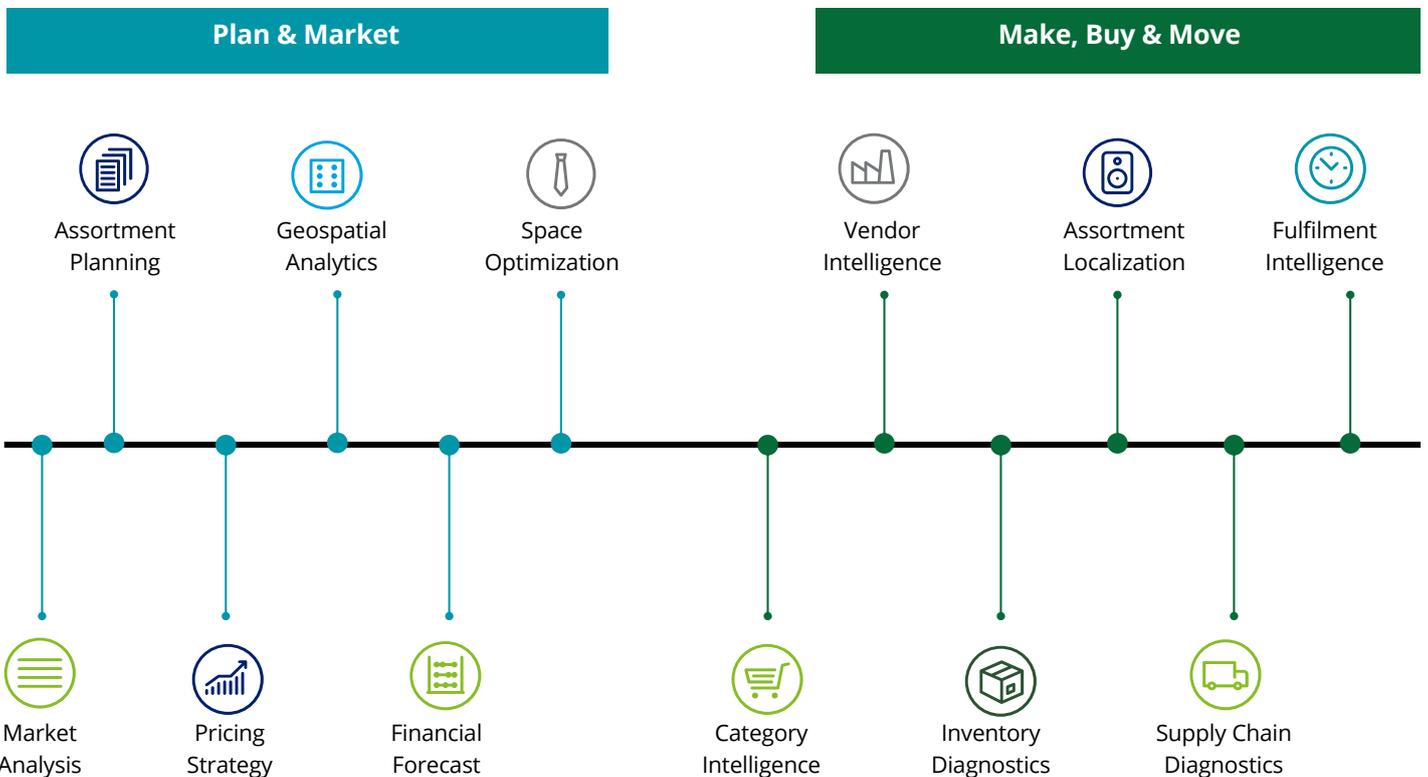
Source: Deloitte Retail Analytics Point of View, 2016

In the Plan & Market process of the retail value chain, focus is on determining potential improvements and optimizing strategies through analytics (with use of Big Data, Predictive and Traditional Analytics). It helps retailers in merchandizing and assortment planning.

Plan & Market

Market Analysis
Focuses on analysing the market –using internal and external data –in which the company is operating by providing geographic and demographic insights, competitive intelligence, current performance and trends. Main outcomes are the identification of key opportunity areas to grow or improve the business.

Assortment Planning
Aimed at improving the products offered and in what quantities they are offered. Insight are gathered based on demand forecasting, historical sales analysis and market basket analysis to improve merchandisers' decisions on the assortments.

Pricing Strategy
Analyses focus on how demand varies at different price levels and with different promotion/rebate offers and is used to determine optimal prices throughout product/ service lifecycle and by customer segment. Benefits include increasing sales margin, decreasing need for markdowns, and aiding inventory management.

Geospatial Analytics
The main goal of geospatial or store location analysis is to provide insights into how to improve store portfolio performance, based on characteristics of the real estate, formulas and socio/ demographics of the catchment area. Focus is on increasing existing store performance, changing formula or banner, opening versus closing of stores.

Financial Forecast
Translates company strategy into financial projections and scenarios by developing financial forecasting, based on inputs from other analyses such as market analyses, store potential and assortment planning, combined with external drivers.

Space Optimization
Deals with Macro and Micro space analysis to improve store layouts and store planning as well as optimization of shelf-space to assure most optimal arrangement of goods (individual placement of goods and relation to other goods on the same shelf).

Source: Deloitte Retail Analytics Point of View, 2016

In Make, Buy & Move process of the retail value chain, focus is on optimizing sourcing and assortment as well as improving supply chain performances

Make, Buy & Move

Category Intelligence
To optimize the sourcing strategy, different insights can be generated by analyzing the overall spend, quantifying the value of strategic partnerships with suppliers, optimizing the supplier base and shortening lead times.

Assortment Planning
By increasing intelligence on the vendors, retailers can improve negotiation results. Analyses focus around the supplier cost drivers and developments over time, providing insight into supplier margins and quantifying supplier investments in the relationship.

Inventory Diagnostics
Aimed at optimizing the inventory mix, levels, and locations. Maximizing inventory turns by having the right product inventory by location to capture new sales. Minimizing excess and obsolete inventory and analyzing inventory levels and demand by location.

Assortment Localization
The main goal is to optimize the assortment of different retail outlets and/or channels. By executing geospatial analysis and clustering of retail outlets and measuring customer behaviourat different locations and channels, the assortment can be differentiated to provide a better fit to the location/channel.

Supply Chain Diagnostics
Supply chain diagnostics aims at enabling and improving the ability to view every item (Shipment, Order, SKU, etc.) at any point and at all times in the supply chain. Furthermore its goal is to alert on process exceptions, to provide analytics, and to analyze detailed supply chain data to determine opportunities of cycle time reduction.

Fulfilment Intelligence
Focuses on increased reliability of purchase order submission process until delivery. Analyzing supply chain for identification of common or consistent disruptions in fulfilment of orders. Reliability is key, even more so than speed.

Source: Deloitte Retail Analytics Point of View, 2016

Tesco: A study in revenue maximization by reducing stock-outs due to accurate forecasting

- Tesco, a multinational grocery retailer, tries to maximize revenue by reducing the chance of product stock-outs. Tesco feeds weather data into its **predictive analytics tool to forecast demand of weather-dependent products** (such as coleslaw and ice cream), and adjusts inventory and supplier orders in advance on a store-by-store basis to minimize missed revenue.
- Such analysis **saved the company approximately $140 million,** mainly through the **reduction of wasted stock.**
- Although historically, Tesco may have had the foresight to adjust orders when warmer weather was forecast, traditional supply chain latency may not have allowed a fast-enough reaction time to prevent a stock-out.
- A **Digital Supply network helped Tesco sidestep that latency by making changes based on data,** communicating changes throughout the supply network in real time.

Source: "Supermarket Tesco pioneers Big Data," Dataconomy, February 5, 2014, Deloitte University Press report

ZARA
- Global fashion retailer Zara has been a long-standing user of RFID chips, which store product data and send it via radio signals to a scanner
- Chips are set inside existing plastic security tags, so they can be reused, and are automatically removed when the garment leaves the store
- As each item is sold, data from its RFID chip prompts an instant order to the stockroom requesting a replacement, making Zara's supply chain more responsive to store stock levels and avoiding stock deficiencies, which in turn aids in customer satisfaction

Source: News articles

6   People

Today's environment has compelled retailers to relook at their strategy towards success. The definition of success, which was a few decades back, extensively around attracting and retaining customers, and providing consistent customer experience, has now expanded to encompass the employee aspect as well. Many retailers are planning, if not have already started implementing, digitization of processes for their store level employees to support them in becoming more efficient.

Three primary building blocks that form the cornerstones of the digital transformation at workplace that have led to improved employee efficiency involve:

Empowering through simplification & building a community

Digital transformation at workplace

Training On-demand

Building People Analytics Capability
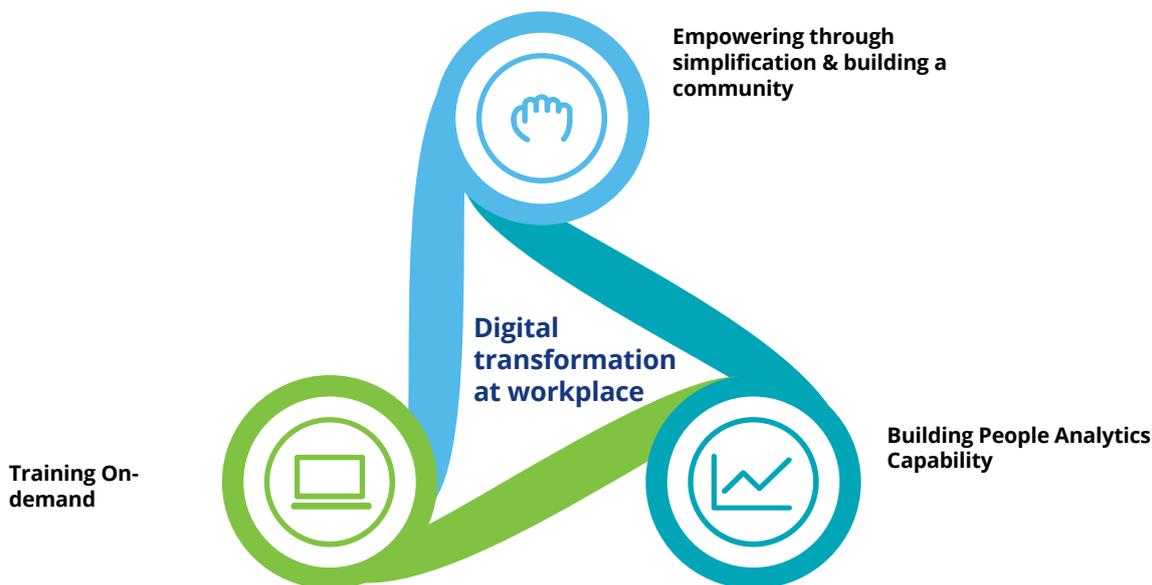
Source: Deloitte Though Leadership – Surfing tides of Retail Change

- **Empowering through simplification & building a community:**

  Retailers are striving hard to replace the manual processes with fluid, automated processes which have empowered the store employees to make faster decisions with reduced turnaround time from days to minutes. Many retailers have implemented apps to allow the associates to save time on mundane and repetitive tasks. For example, one of the electronics retailers has allowed its employees to validate their identities each time they have to sign-on for a shift. This has simplified the tracking and attendance maintenance process to a large extent, while raising the employee satisfaction levels as well.

  In order to enhance the store management, retailers are encouraging the store employees to install apps and software in their own devices. These apps are built to provide real time stock information (quantity, category and price) to the employees, reducing their effort and aiding them in providing better customer experience. Many retailers have also built their digital capabilities by implementing smart systems to predict the queue length and customer footfall at different times of the day. These systems are programmed to alert the store managers when the expected footfall is higher than the set threshold. This has enabled them to manage the staff shifts and checkout procedures in a much more smooth and efficient manner.

- **Training On-demand:**

  The organizational capabilities necessary for retail success have fundamentally changed over the past decade—but even more acutely in the last five years. As a result, the skills needed at the employee and leader levels have also evolved. There are a lot of remarkable initiatives being taken by some of the retailers. The most recent trend in learning and development has been availability of vast amount of online training courses, which can be accessed right through an employee's device (phone, computer or tablets). On the other hand, the millennial generation employees are proactive participants and value training as a means to reach their goals.

In addition to module based trainings, organizations are also exploring new ways of fostering a learning environment. Creating collaboration communities via virtual classrooms, mobile wireless courseware, self-study learning guides, workshops, emails and online discussion forums are a few ways by which employees are being empowered today. And hence, employees are being supported in all ways, both at the store level as well as the corporate level, to boost their efficiency and raise their everyday contribution towards the organization.

- **Building People Analytics Capability:**

  Retailers have recognized they need data to figure out what makes people join, perform well in, and stay with an organization; who will likely be successful; who will make the best leaders; and what is required to deliver the highest quality customer service and innovation. All of this can be directly informed by people analytics. Development and adoption of sophisticated technology to analyze employee data is something on the to-do list of many retailers. The leaders are recognizing the fact that to get the best performance from the store employees, who are both the biggest asset and the biggest source of expense, it is high time to resort to analytics.

  People analytics technologies are being used in providing valuable data in regards to determining traffic flow, identifying traffic trends over time, optimizing labor, enabling more effective facility management, and determining conversion rates. Understanding traffic flow allows for cost effective and efficient labor scheduling. For example, lunch time and holidays tend to be peak traffic periods for many retailers. However, all businesses are unique in the audience that they serve, so while some peak times may overlap, others may not. People counters are vital to accurately determining these periods.

Gamification

1
- A leading UK pharmacy retailer was looking to enhance employee knowledge about seasonal products during the Christmas period.
- Adopted a gamification approach, by setting up a digital board game and allowing players to select their own characters
- Boosted engagement rates by 200% & improved completion rates by 50%

Simplifying Processes

2
- A leading Indian Women's Fashion brand has recently shifted to and automated attendance monitoring system based on facial recognition
- A major American Fast-food restaurant in India, hands over tablets to their customers for ordering food, simplifying the order management and billing process

On-demand Training

3
- A US based retailer has implemented high definition video conferencing at each store to deliver on-demand employee learning & store collaboration
- A major Indian Apparel retailer has created a repository of custom e-learning ourses for mobile and adaptive learning on the run, providing employees a media-rich experience on demand.

Source: News Articles

How Titan was able to enhance employee performance using Behavior-shaping nudges

Titan Industries deployed an **innovative product from worxogo,** a persuasive technology startup which uses an **AI–based personal digital coach,** which nudges individual sales team members to improve their performance.

Challenge faced by Titan:

Management of Titan, despite having industry leading technology solutions and a driven sales team, faced typical challenges that sales team face:

- Small percentage of the team hit their targets
- Inability to upsell higher margin products
- Inadequate use of existing sales tools
- Large month-end skews in sales performance
- Sales being the only objective measure of sales team performance

Digital Intervention:

Using worxogo's AI-based digital coach, mia, Titan sales team was able to:

- Get **75% of the sales team to hit their targets** consistently
- **Increase focus-product sales by 20%**
- **Increase sales spread & engagement** with the long tail
- **Increase sales performance** in double digits
- **Reduce month end-skews** yielding a steady sales trend through the month
- **Increase usage of existing CRMs** and other tools

This was possible using mia, which:

- Established an objective performance system including outcomes (sales) and lead indicators
- Deployed behavior nudges to the team by
  - Assessing individual performance across all KPIs daily
  - Providing clear call-to-action insights

Source: Industry discussions

(D) Collaboration in the digital age:
Retail ecosystem
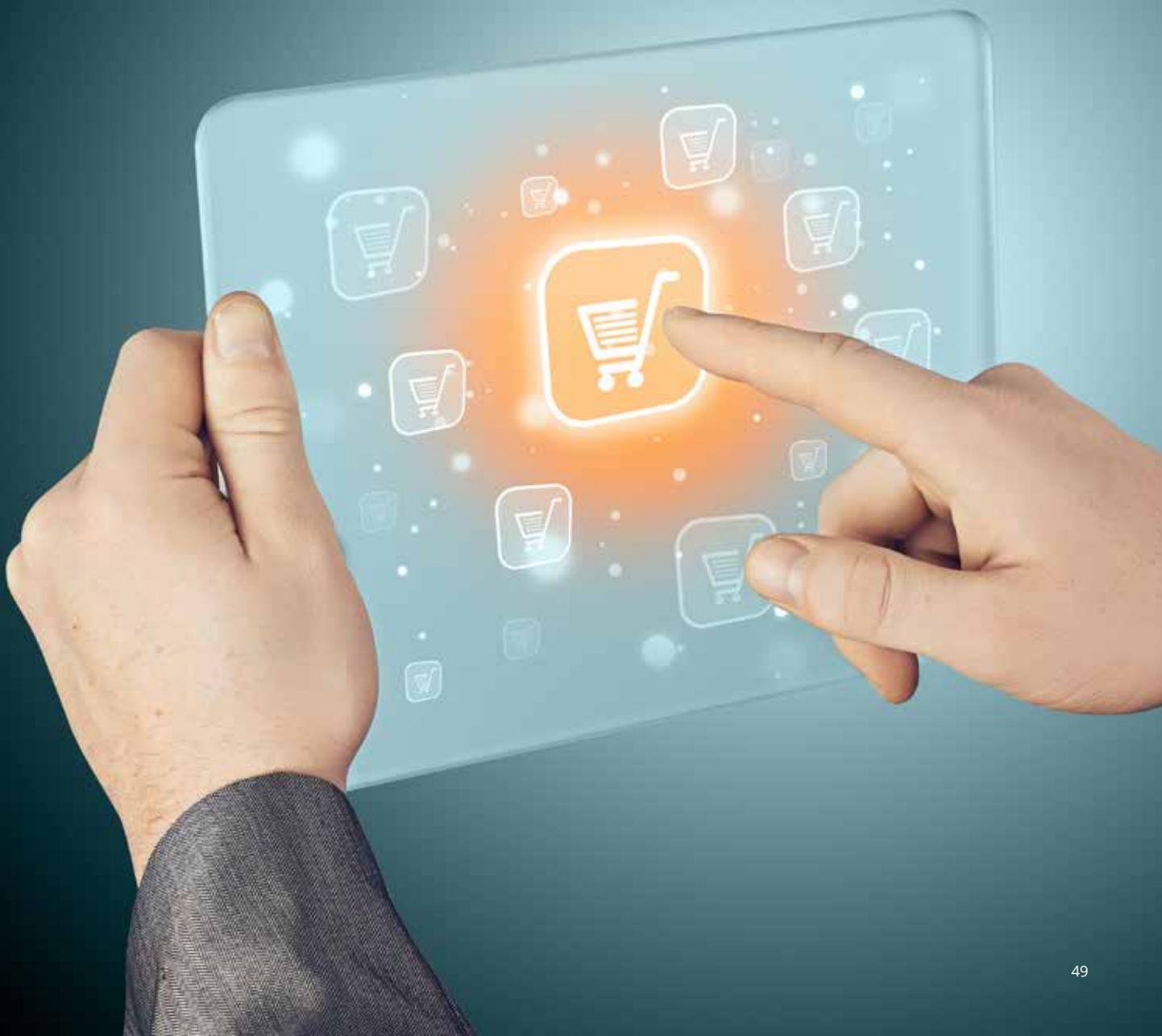
In this new digital world – where personalization no longer simply tailors assortments, but predicts the needs of individual consumers – companies will need to dramatically enhance their capabilities to keep up with the accelerating expectations of consumers. To effect this transformation, retail players will need to form ecosystems or "coalitions of the willing" to both provide full consumer solutions and secure key capabilities.

One of these must-have capabilities for retail organizations includes the partnership or collaborative mindset - To keep up with the rapid pace of technological change, all participants will have to develop a culture of collaboration and pursue intra and extra-industry partnerships, rather than just rely on building their own capabilities. Hence, increasingly we have seen companies moving away from competitive business models to cooperative ones, and in the process extract an incremental value from the networked retail ecosystem.

Technology is playing a major role in this process, thereby creating a new generation of companies that increasingly choose to collaborate as a coordinated ecosystem, even if they have overlapping or competitive offerings. This transparent way of doing business is transforming the way services are delivered, products are developed and the marketplaces are evolved.

Supply chains evolve into value webs

Linear supply chains are evolving into...   complex, dynamic, and connected value webs
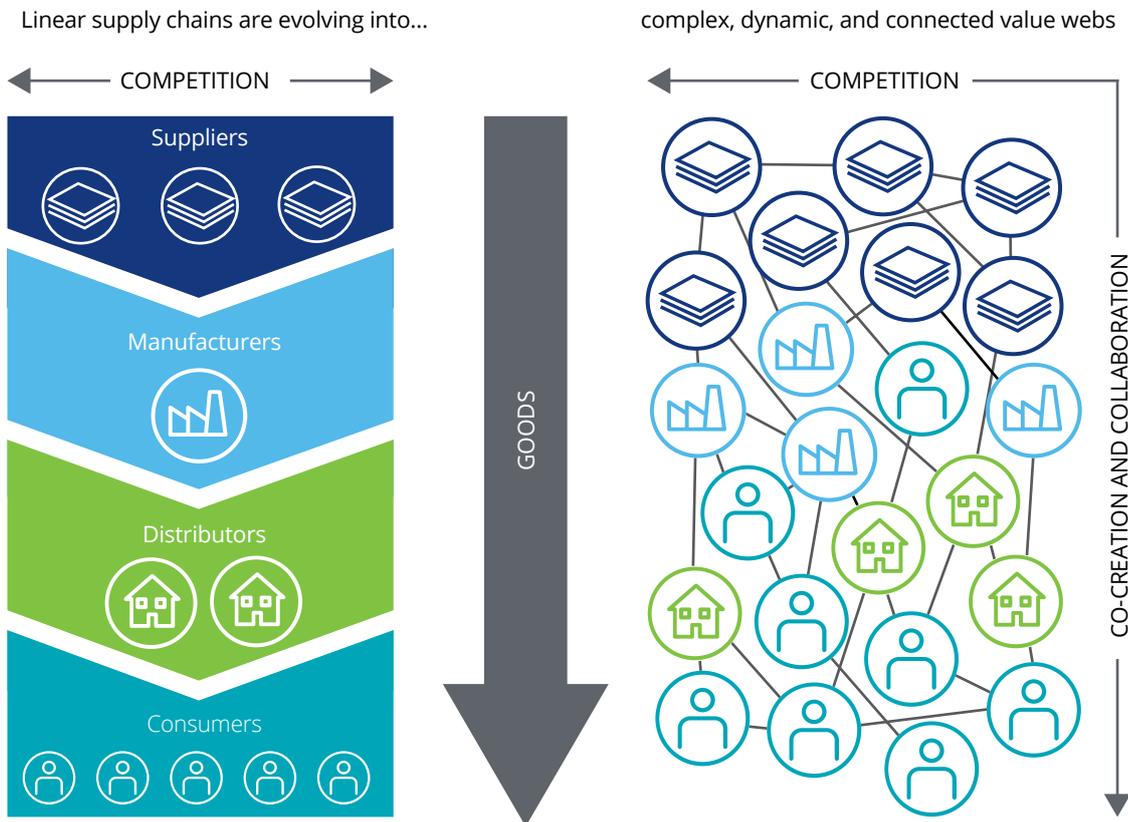
Value is based on the production of goods and services

Value is based on knowledge exchange that drives proactive production of goods and services

Graphic: Deloitte University Press | DUPress.com

Source: Deloitte analysis

As every business becomes a digital business, together they can effect change on a much bigger stage, collaborating to shape experiences, and outcomes, in ways never before possible. As a result, these leading enterprises are shaping a new economy — where **Digital Value Creation** is leading to the **"We Economy** or the **Collaborative Economy"**

Figure: Collaborative Economy

For more than a decade, retailers and suppliers have tried to learn to collaborate more and move beyond the old zero-sum games. Their initiatives have included assigning "captains" to work with each other on ways to drive category growth and forming industry groups (such as Efficient Consumer Response and Collaborative Planning, Forecasting, and Replenishment) that pursue supply chain optimization.

Figure: Marketplace for everything

The changing consumer behaviour has changed the way how companies are engaging and interacting with their customers. This disruption in the industry value chain is the major reason behind the increase in opportunities in the new economy called **"Marketplace of Everything".** This is leading to an increased velocity in innovation by driving models such as Crowdsourcing, Co-creation, higher business growth and a superior engineering efficiency for most businesses.

The retail ecosystem is undergoing a paradigm shift due to these disruptions and it has impacted all the actors of the industry including manufacturers/ suppliers, retailers, digital solution providers as well as the customers. While the traditional collaboration models between suppliers and retailers become robust and more intricate with the usage of technology like real time POS data analysis, and dynamic pricing models; Coopetition (Collaboration with competition) and collaboration between retailers and digital ecosystem players is the latest trend being seen in the industry.

There are multiple models of Coopetition being followed in the retail world:-

Vertical Co-opetition: The scale of operations of retailers gives them substantial leverage in negotiations with producer-suppliers and hence the category captain arrangements are diffused and unclear. Additionally the increasing consumer expectation levels force these retailers to be less tolerant to quality debasement externalities. Hence, careful monitoring and control over the entire delivery process becomes important and

substantial collaboration is required with partners to ensure that consistent quality expectations are maintained. Vertical co-opetition between channel partners is now seamless with the boundaries of individual entities becoming diffused in an increasingly networked technological environment

Horizontal Co-opetition: Suppliers are forced into horizontal co-opetition with these large retailers. They compete with the private labels introduced by these retailers while simultaneously collaborating in category management initiatives to improve the efficiencies of all participating brands. Efficient consumer response and joint inventory management systems need to be deployed to ensure supply chain efficiencies. Hence, in contrast to the social bonds that glued the channel partners in traditional channels, structural bonds enabled by joint investments in technology facilitate the transfer of information. Point of sales data captured by the retailer and shared with suppliers provide yet another instance of how these structural bonds lead to shared interdependencies promoting co-opetition as a viable and necessary arrangement.

Retailers themselves are forced into co-opetition with each other. They come together to form common purchasing and sourcing groups to take advantage of efficiencies in consolidated buying. Formation of alliances also helps them in negotiating with suppliers. On the consumer front joint loyalty programmes help in the introduction of cross promotions and thereby help deliver better value for their consumers

Coopetition in Retailing

COOPERATION VETICAL

Supplier and Intermediary
• Category Management
• ECR initiatives

HORIZONTAL

Intermediary and Intermediary
• Joint Purchasing Groups

Ⓢ Supplier   Ⓡ Retailer

COOPERATION VETICAL

Supplier and Intermediary
• Private Labels

HORIZONTAL
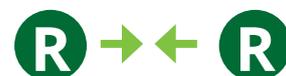
Intermediary and Intermediary
• Market Share

Source: Deloitte analysis

Thus, as depicted in the above figure, the distribution channel is no longer the well-defined, secluded hierarchy administered by producer-suppliers but is a loose coupling (Weick, 1976) of diverse actors who compete and co-operate depending on the problem situation at hand, the function they are in or the consumers they need to retain. Thus, the channel system is a dynamic and evolving network with a constant churn in the role and status of the partners and collaborators.

While Coopetition is driving the supplier, supplier as well as retailer equations, there are multiple collaborative models that are emerging because of digital disruptions and thereby creating a holistic collaborative retail ecosystem.

Multi collaboration models

Collaboration Type	Key Collaboration Areas leading to higher value creation	Select Examples
Supplier – Supplier	• Coopetition (Collaboration with competition)	• **Microsoft and Intel** tie up leading to a synergistic growth in sales for both software as well as the chips • **Google and Mozilla** working together (Google funded Mozilla's free, open-source Firefox web browser – a Chrome rival – to limit the influence of rival browsers, Microsoft's Internet Explorer and Apple's Safari) • **Refrigerants Naturally** is a non-profit that was established by fierce competitors **Coca-Cola, Pepsi Co, Red Bull, Unilever** and others to work jointly to develop sustainable refrigeration technologies to combat climate change and ozone depletion
Supplier – Retailer	• Revenue Margin Enhancement • Process Improvement • Cost Reduction • Sharing of POS data real time • Creation of ecosystems	• **Kellogg with Tesco:** Examining real time POS data to identify purchasing patterns at certain Tesco supermarkets. Adjustment in its shipping schedule helped Tesco recapture more than £2 million (US$4 million) in lost sales and improve customer satisfaction • **Kraft Foods Inc. used U.K. food retailer J Sainsbury PLC's** POS data to improve in-store availability of cheeses during promotional periods • **Apple** ties up with **Reliance Retail** for special offers and plans
Retailer – Retailer	• Extended networks • New channels	• **Walmart** plans tie ups with **Flipkart, Amazon** to tap the online retail opportunity • **Paytm** ties up with offline electronic stores to list them on their online platform
Retailer – Customer	• Co-creation of consumer focused content • Crowdsourcing for innovation	• **LEGO** Ideas is an online community where members can discover creations by other fans and submit their own designs for new sets
Retailer – Digital Ecosystem Player	• Consumer centric solution development	• **Walmart** and **Google** tie up for voice controlled shopping - Google, will offer hundreds of thousands of Walmart items on its voice-controlled Google Assistant platform

Digital technologies are playing a pivotal role in this increased collaboration economy. Internet of Things (IoT) — i.e., the interconnection of embedded computing devices within the existing Internet infrastructure — is seeing a rapid growth as companies are using these connections to offer new services, reshape experiences and enter new markets through these digital ecosystems.

Home Depot, for example, is trying to shape the way people live through an emerging connected home market. The retailer is working with manufacturers to ensure that the connected home products it sells are compatible with the Wink connected home system, thereby creating its own connected home ecosystem, with a wide range of services that are easy to install.

Philips is taking a similar approach with its healthcare practice **teaming up with Salesforce** to build a platform that they believe will reshape and optimize the way healthcare is delivered. The envisioned platform will create an ecosystem of developers building healthcare applications to enable collaboration and workflow between doctors and patients across the entire spectrum of care, from self-care and prevention to diagnosis and treatment through recovery and wellness.

By tapping into digital ecosystems, these and other companies are making big bets on opportunities that have the potential to bring about change on a global scale, realizing ambitions that transcend any single business or industry. Upcoming technologies like Blockchain are enabling these opportunities by creating a seamless and a robust retail ecosystem.

Figure: Usage of Blockchain in a retail ecosystem

Blockchain-based Collaboration Drives Supply Chain Visibility, Transparency & Trust

Source: Industry report - How Blockchain can help retailers fight fraud, boost margins and build brands

While the collaboration is being seen globally as well as few select cases in India, it is important to note that, for retailers, brands and technology providers to embrace each other to fully understand the consumer – whether it's through sharing data, technology software or hardware, or simply sharing ideas and experiences. And hence in the increasingly complex landscape, businesses must develop a strong ecosystem of partners stretching across the customer value chain

None of this will be easy, but the effort has the potential for tremendous rewards. The new age of the digital ecosystem isn't only about changing an individual company; it's about shaping entire markets. Each enterprise will determine its own fortunes — and that's an opportunity that no company will want to miss.

Companies that ride on this collaboration wave shall be the master orchestrators that place themselves at the center of these digital ecosystems. These leaders will quickly master new digital relationships with their customers, end users, suppliers, alliance partners, developers, data sources, makers of smart devices, and sources of specialty talent. All will share the same goals: to grow new markets... and their individual businesses.

Value Creation through Collaboration
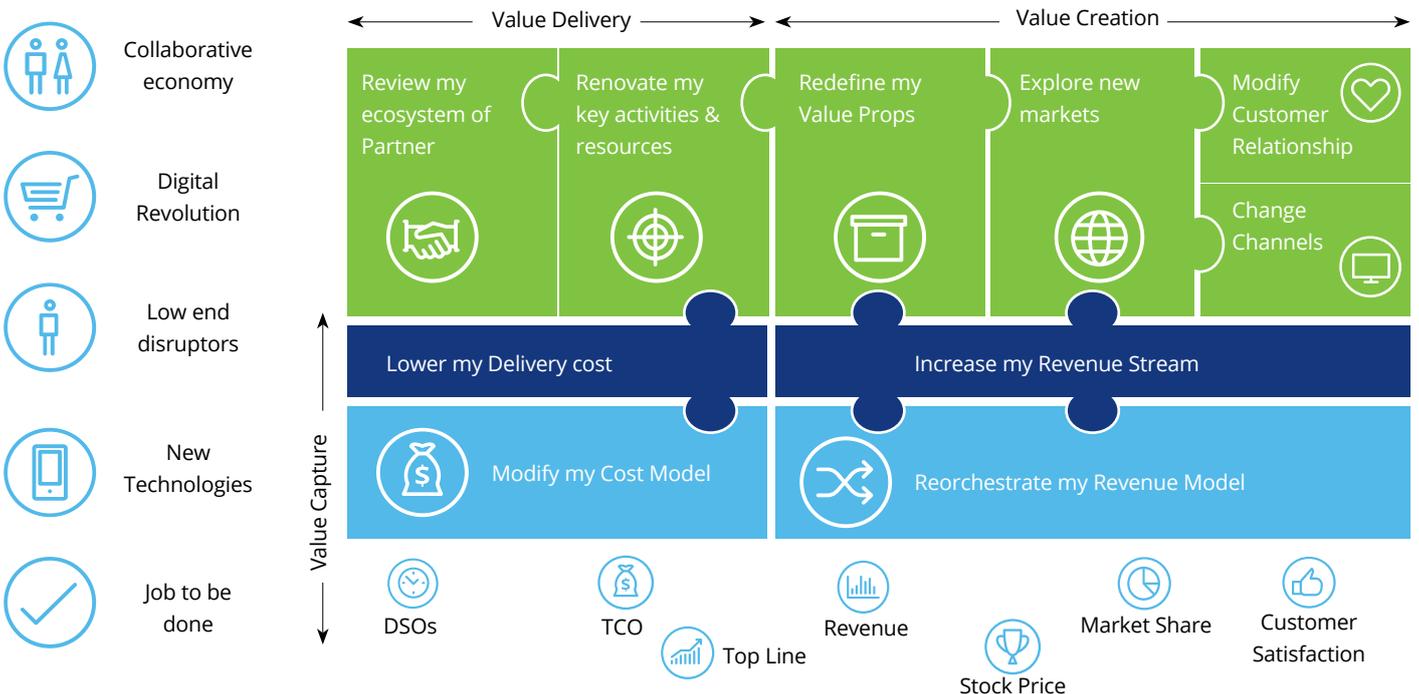
Source: Business Model Innovation Canvas: Value Creation, Value Delivery and Value Capture, SAP

As companies, start collaborating not only with their suppliers, vendors, customers, digital service providers as well as their competitors and focus on gathering outside in views for attaining the goals of high quality customer service, it leads to an exponential jump in the digital value creation and hence leads to a significant benefit not only to the customer but also to the entire network/ retail ecosystem.

This exponential value delivered by a Digital Supply Chain if captured leads to the following benefits/ improvements, leading to an overall accentuated network value as depicted below:-

- Better Decisions and transparency
- Increased SCM flexibility
- Higher product and service quality
- Lower inventory and warehousing costs
- Lower risk and complexity
- Lower logistics and transportation costs

These improvements are not focused to a specific function/ actor of the value chain but across the entire gamut of processes.

However, currently the companies are witnessing multitude of impediment to collaboration, which need to be overcome to ensure a successful digital value creation in the retail industry and create a holistic digital retail ecosystem.

Digital Value Creation for the entire Network

The Demand-Driven Maturity Model Provides a Path to Profitable trade-offs

MINDSET

Outside-In

Outcome: Cost optimized and scalable Recognizing that value = profit

Stage 5
Demand / Supply / Enterprise outcomes / Product

Stage 4
Customer Value / Demand / Supply / Product

Outcome: Scalable, value-centric outcomes Adaptable and highly profitable

Stage 3
Internal Result / Demand / Supply / Integrated Supply Chain / Product

Outcome: Revenue focus, but... not scalable Adaptable, but... expensive

Inside-Out

Stage 2
BU BU BU
Function Function Function
Function Function Function
Function Function Function

Stage 1
BU BU BU

Outcome: Standardized, but... one-size-fits-all Scalable, but... not adaptable

TARGET

Cost   Service

Source: Gartner

Impediments to Collaboration

<table>
<tr>
<td>**1**</td>
<td>**Conflicting agendas**
Currently, collaboration between retailers and manufacturers has been limited to a few areas such as merchandising and promotions, and oftentimes is driven by tactical short-term goals. The retailer is always focused on maximizing store profitability and category optimization, while the manufacturer's focus is squarely on its brands</td>
</tr>
<tr>
<td>**2**</td>
<td>**Lack of Trust**
A lack of trusted data on products, pricing, competitors and purchases often holds back effective collaboration. The reasons are many—inaccurate data capture, inconsistent data sharing formats, idiosyncratic changes to decisions on what to share and what not to share, etc.</td>
</tr>
<tr>
<td>**3**</td>
<td>**Information Asymmetry**
Digital technologies and social media have reduced the information asymmetry between the retailer and the consumer, but the same cannot be said of the information asymmetry between retailers and manufacturers. Retailers often do not have credible demand information about new products, while manufacturers lack insight into retailer actions targeting specific customer segments.</td>
</tr>
</table>

Source: Deloitte Analysis

GST and Collaboration in the Retail industry:

GST is a tax on value addition at each stage of supply of goods and services. The overarching purpose of the staged collection process of GST is to ensure that the businesses shall not bear the burden of taxes and enable the flow through of taxes to the final consumers. Now, during the GST scenario, there is an urgent need to re-evaluate the key strategic decisions that will be impacted. retail value chain. With advent of GST, there is a likelihood of a collaborative eco-system where data is shared across the value chain and benefits being accrued.

Digital enablers are ensuring greater levels of data sharing among the various stakeholders in the post GST retail scenario. This is also adding to more transparency and traceability of not only taxes, but also margins, value additions and volumes of products being sold. For instance, previously there was no need for distributors to share their information or data with retailers. But now, data transparency is evident across the value chain from manufacturer to small suppliers to wholesalers to distributors to retailers. This traceability would be almost impossible to achieve without the use of digital technologies and real time data management.

Impact on Retail Margins	• Retailers should consider the following while determining impact on margins:
	  – The four-tier GST rate structure may vary the tax burden compared to taxes levied under current regime.
	  – Retailers will see an increase in input tax credit of taxes paid on procurement of goods and services as taxes such as excise duty, CST, octroi, LBT, service tax, which were non-recoverable will be subsumed in GST and whole of the GST paid on procurement of goods and services will be available as input credit for adjustment against GST liability on sale of goods.
	• Retailers will have to negotiate margins based on consideration of output tax liability and increase of input tax credit

Sourcing of goods	• GST brings elimination of tax barriers for procurement of goods on an inter-state basis. Similarly, GST will also reduce non-recoverable import duties on procurement of goods from outside India. • Retailers have an opportunity to re-evaluate sourcing pattern of goods and may try to benefit from tax neutrality and economies of scale by centralizing procurement from best vendors, irrespective of their locations. • Also, Retailers may have to negotiate/ discuss the pricing policy of its suppliers in view of enhanced credits that may be available to suppliers in GST regime.

Source: Deloitte Thought Leadership – Impact of GST on Retail Industry

Conclusion

The digital age presents opportunities for retailers to bring in greater levels of operational efficiency and customer centricity in their business models. Digital is as much about people and mindsets as it is about technology. Hence it is imperative that the digital agenda in any retailer organization is driven by the CEO (Chief Executive Officer). Competition is increasingly not between individual retailers but the wider constellation of alliances that the retailer builds within their network. Digital helps firms to stay connected with this network of vendors, employees and customers on a real time basis and factor in the feedback from the network into business operations on a day to day basis. It is hence core to the business model of retailers and performance in the future will be driven by how quickly digital gets embedded to increase cohesion, agility and responsiveness within this network.

	Topic	Recommendations to retailers
Strategy	**Business Models**	• **Increase engagement with customers** that will help add value and create an opportunity to develop long lasting relationships • Explore avenues to **build services as a proposition** around products
	Operating Formats	• Examine the importance of **Omni-channel strategies** from a retail point of view with the emergence of e-commerce.
	Segmentation and Positioning	• Explore the opportunities arising from **micro-segmentation** by leveraging data and advanced analytics engines • Provide a richer experience to customers in retail stores by positioning **digitally enabled store factors** to aid the same • **Focus on personalization** to meet accelerating expectations of customers
Front-End	**Customer Experience**	• Invest in **device agnostic applications** which could be accessed by customers on their devices as well, rather than just store devices • Ensure **seamless customer experience** online and offline
	Merchandizing and Promotions	• **Tap into micro-communities** such as Facebook groups, Instagram, Hashtags etc. for real-time engagement and interaction with their customers • **Leverage analytics (e.g. Dark Analytics)** to derive consumer insights and provide targeted and contextualized promotions based on past purchases
	Loyalty Programs	• Utilize existing customer data to **align and reward customers** for their loyalty and to move beyond just being a discount-retailer
	Pricing and POS Solutions	• Employ **dynamic pricing models** for the products which are based on the customer's profile, shopping habits and feedback • Explore avenues of **revenue enhancement by enabling tie-ups with different payment providers –** Wallets, Plastic money and Digital transfers
Back-End	**Supply Chain, Logistics and Warehousing**	• Shift from **traditional supply chain to Digital Supply Networks (DSN)** • DSNs can leverage real-time data, leading to better decisions, greater transparency and enhanced collaboration • Explore solutions involving use of **'big data' and associated technology** to enable a better, more holistic understanding in locating stock items • Adoption of **warehouse automation** to achieve maximum efficiency
	Assortment Mix and Planning	• Adopt a **demand-driven, customer-centric assortment optimization** strategy by use of heuristics-based analytics • In order to get a real-time tab on on-hand, on-order, in-transit and open-to-buy products, retailer can avail of **emerging IoT and RFID technologies**
	Procurement and Vendor Management	• **Enable strategic sourcing** to be more predictive, transactional procurement more automated, and supplier relationship management more proactive • **Redefine relationship with suppliers** through data-sharing thereby enabling transparency and also communicating effectively through Social Media tools
	Support Functions	• View the advantages brought about by **break-through technologies (RPA, Blockchain, Big Data, NLP, IOT, etc.)** in Finance, from a larger perspective, to drive exponential benefits around economics, risk, and value to the stakeholder • Implement People Analytics, training on-demand and build a sense of community within the organization • **Digitally monitor, track and drive salesforce & channel partners** to meet their KPIs and to incentivize accordingly

Glossary

3D	3-dimensional		KPI	Key Performance Indicator
AEPS	Aadhar Enabled Payment System		KYC	Know your Customer
AI	Artificial Intelligence		LA	Los Angeles
AR	Augmented reality		Mn	Million
B2B	Business to Business		NFC	Near-field technology
B2C	Business to Consumer		NLG	Natural Language processing
Bn	Billion		NPCI	National Payments Corporation of India
BOPIS	Buy Online Pickup In Store		NPS	Net Promoter Score
CAGR	Compound Annual Growth Rate		P2P	Procure to Pay
CEO	Chief Executive Officer		PE	Private Equity
COO	Chief Operating Officer		POS	Point of Sale
CFO	Chief Financial Officer		RFID	Radio Frequency Identification Tags
CPG	Consumer Product Goods		RPA	Robotic Process Automation
CRM	Customer Relationship Management		S2C	Source to Contract
CRM	Customer relationship management		SKU	Stock Keeping Unit
DIY	Do it yourself		SME	Small and Medium Enterprise
DSN	Digital Supply Networks		SRM	Supplier Relationship Management
FDI	Foreign Direct Investment		UK	United Kingdom
FMCG	Fast Moving Consumer Goods		UNCTAD	United Nations Conference on Trade and Development
FY	Financial Year		UPI	Unified Payments Interface
GDP	Gross Domestic Product		US	United States
GST	Goods and Service Tax		USD	United States Dollar
ICC	Indian Chamber of Commerce		VC	Venture Capital
ICT	Information and Communications Technology		VR	Virtual reality
INR	Indian National Rupee		WEF	World Economic Forum
IoT	Internet of Things			

Acknowledgement

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