Winning in a Business 4.0™ World: a TCS study tracks the adoption and impact of Business 4.0

Industry focus: Retail and Consumer Goods
CONTENTS

05 About the Research

06 Key Findings

11 The Road to Business 4.0

23 The Challenges Ahead

26 Speeding Up Technology Adoption

29 Conclusion
Business 4.0™ is the next wave of change breaking over organizations across the world. Digital technologies such as the cloud, the internet of things (IoT), analytics, automation, robotics, and artificial intelligence (AI) are vital enablers of this transformation, but it is not enough to use these to simply mechanize existing functions.

Instead, firms are using technology as a foundation for four critical business behaviors that will help them move to the next level:

**Driving mass personalization** – personalizing products and services to a market of one customer, often even of one transaction, and at scale.

**Creating exponential value** – adopting business models that leverage value from transactions at multiple levels and address new markets.

**Leveraging ecosystems** – collaborating with partners inside and outside the supply chain to create new products and services.

**Embracing risk** – moving beyond rigid planning and operational barriers with an agile strategic approach.
CS Business 4.0 Global Study shows the way forward by helping organizations benchmark their progress against peers. This report discusses the level of adoption and impact of Business 4.0 in the retail and consumer goods sector, the benefits industry players have seen, and their plans for the next three to five years.
CS surveyed 1,231 respondents from firms across 11 industries and 18 countries, including 192 executives working in the retail and consumer goods sector.

All firms included in the survey report annual revenues of at least $500 million. All survey respondents were either directly involved in or were aware of their firm’s digital transformation plans. Almost half of the respondents (42%) were from the C-suite, while the rest were manager-level and above.

The survey was conducted in November – December 2018. In addition, we conducted in-depth interviews with 30 experts and business leaders from across industries worldwide.
One of the first to experience the transformative power of digital technologies, the retail and consumer goods sector is in the midst of a seismic change. As online marketplaces open up borderless trade routes worldwide, the barriers to entry for brands to sell and distribute products have never been lower. Some retail and consumer goods companies have been slow to react, but the more innovative ones are rising to the challenge by adopting the four Business 4.0 behaviors – driving mass personalization, creating exponential value, leveraging ecosystems, and embracing risk.

A majority of retail and consumer goods companies, like those from other sectors analyzed in our study, have adopted at least one of the four behaviors. Nonetheless, this sector contains fewer 'leader' organizations than most of the other industries we surveyed (see Figure 1).
Leaders, early adopters, and followers

We have identified three distinct groups in the survey based on their adoption of Business 4.0 behaviors:

- **Leaders**: organizations that have adopted all four behaviors
- **Early adopters**: organizations that have adopted one, two, or three behaviors
- **Followers**: organizations that have adopted none of the behaviors

*Figure 1*: Industry-wise share in the leaders, early adopters, and followers groups
o an extent, this relative lack of maturity could reflect a wide variance in performance by the sector’s respondents, as well as marked differences between the two sub-sectors. It is also worth noting that retail and consumer goods firms are contending with many complex sector-specific imperatives – including a general decline in consumer brand loyalty, a growing role of algorithms in customer outreach and engagement, and rising interest in direct-to-consumer platforms and other non-traditional approaches to commerce.

Following are the key findings of our research:

**Industry players are making strides in their Business 4.0 journeys.** Across industries, mass personalization and leveraging ecosystems are the behaviors that are most likely to have been adopted. A clear majority of retail and consumer goods companies are personalizing products and services, and are more likely than their peers in other sectors to collaborate with multiple partners to create new products and services.
Gains from the adoption of Business 4.0 behaviors are tangible. Larger addressable markets, higher profitability, reduced customer churn, better access to scarce resources, and improved innovation capabilities are some of the prominent benefits that retail and consumer goods companies are realizing as they go along on their Business 4.0 journeys.

Technology is increasingly vital. While most retail and consumer goods companies are working with cloud environments and IoT ecosystems, there is considerable scope for them to grow digital capabilities – particularly in relation to automation, blockchain, and AI – and many are determined to up their game in the next three to five years.
The Road to Business 4.0
any of the world’s largest retail and consumer goods companies have histories spanning decades. However, with the advent of digital platforms – which support online-only retailers, allow affordable personalization, and enable direct-to-consumer business models – legacy businesses recognize the need to modernize their offerings.

As omnichannel becomes the norm, retail and consumer goods companies are moving away from the traditional model – manufacturing, supply chain, followed by sales outlet. A growing number of organizations are introducing subscription-based product and service combinations, often in partnership with other players in their ecosystems.

UK retailer Asda, for example, offers its stores as collection points for online retailers, against whom it may be competing in some areas. In addition to resulting in a new revenue source for Asda, this model has helped the retailer drive sales of its own products to customers visiting its stores to collect their deliveries.¹

¹ Asda, toyou: We’ve simplified the way you collect and return everyday items. accessed September 4, 2019. https://www.asda.com/toyou/ie_not_supported.html
any more retail and consumer goods firms have embraced Business 4.0 behaviors to innovate and reshape their business models. The surveyed firms are fairly well represented across all Business 4.0 behaviors, notably, leveraging ecosystems to create new products and services (see Figure 2).

Figure 2: Adoption of Business 4.0 behaviors in the retail and consumer goods sector
mass personalization: Connecting to the segment of one

Retail and consumer goods companies that are personalizing at scale are seeing a significant reduction in customer churn, sending a strong message to peers that are struggling to build loyalty. Nike is a good example of a brand that has shifted from mass production to mass personalization with consummate ease. Through its Nike By You platform, the brand invites active consumer participation, allowing choice over style, color, fabric and design details.

Adam Warne, CIO of UK retailer N Brown, believes mass personalization is the next stage in the evolution of customer service. “It’s the thing that makes customers feel loved by a brand,” he explains.
Other benefits include a notable rise in profitability, as well as an increase in the value of customer transactions (see Figure 3).

To fully tap into the potential presented by mass personalization, organizations need to be able to calculate offers and pricing continuously, on a granular level, per transaction, and every time. They also need to actively identify other customer-facing processes where personalization can be applied to, for instance, returns.

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Higher customer profitability</td>
<td>58%</td>
</tr>
<tr>
<td>Increased value of customer transactions</td>
<td>56%</td>
</tr>
<tr>
<td>Increased volume of customer transactions</td>
<td>63%</td>
</tr>
<tr>
<td>Reduced customer churn</td>
<td>36%</td>
</tr>
</tbody>
</table>

**Figure 3:** Top benefits of personalizing at scale for retail and consumer goods companies
Driving exponential growth with subscription models

Consumers today can buy products through any channel at any time, with online retailers and direct-to-consumer manufacturers offering short lead times and low prices. This has driven traditional industry players to explore new business models – leveraging their partners and suppliers – to deliver a superior customer experience.

Recent years have seen the launch of niche ‘in a box’ subscription services, providing everything from home-cooking kits to mattresses, from fresh flowers to razorblades, under one roof. Amazon Prime offers reduced prices for goods such as baby food and cleaning products through its Subscribe & Save offering, while Best Buy offers Geek Squad subscriptions to increase customer stickiness. Value-adding services like these help retailers forge stronger connections with digital customers than traditional loyalty programs, which were built around the points-and-rewards concept and were slower to lock in customer loyalty.
Operating models that create exponential growth in value – such as by unlocking new repeatable revenues through innovative subscription services – are creating clear benefits for businesses across the retail and consumer goods sector. As illustrated in Figure 4, these benefits include expanding addressable markets and attaining higher profitability and sales.

![Figure 4: Top benefits of an exponential business value model for retail and consumer goods companies](image-url)
onsumer goods retailer Best Buy adapted its business by moving from a product-only sales model to one offering complementary services and support. Total Tech Support, for instance, is a subscription service where Best Buy’s Geek Squad looks after customers’ home technology, while the company’s GreatCall business provides connected health services to aging consumers.

An annual fee of $199.99 gives members unlimited access to technical support for their personal devices in-store, by phone, and online through their portal as well as the Best Buy Home app.

For Best Buy, the aim is to build a more profitable, predictable, and long-term business model. Reporting on its financial performance in 2018, Best Buy’s chairman and CEO commented: “We are energized by our continued momentum and overall performance and see significant value-generation opportunity ahead of us by successfully enriching lives with technology and providing services and solutions that solve real customer needs.”

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Using ecosystems as networks of value

Price, choice, and availability have been major influencers on purchases, driving innovation across supply chains and just-in-time networks. To make the most of digital technologies such as IoT and AI, retail and consumer goods companies are exploring alliances and ecosystems within and beyond the industry.

Walmart’s trialing of a delivery service with Udelv, a manufacturer of autonomous vehicles, delivers products hand-picked personally by shoppers and is one example of traditional players engaging with niche technology developers.3

At the same time, consumer goods companies are using digital brand platforms to engage with new suppliers and partners. Italian manufacturer Moleskine, for example, operates an open innovation program that encourages startups to contribute business proposals that will complement the Moleskine product suite.4

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Retail and consumer goods companies that are leveraging their wider ecosystems are seeing significant benefits, including the ability to develop more innovative products and services and drive higher revenues (see Figure 5).

<table>
<thead>
<tr>
<th>Benefit</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Ability to develop more innovative products and services</td>
<td>45%</td>
</tr>
<tr>
<td>Higher revenues</td>
<td>45%</td>
</tr>
<tr>
<td>Access to new markets</td>
<td>44%</td>
</tr>
<tr>
<td>Ability to act faster to satisfy customer demand or perceived appetite for new products or services</td>
<td>41%</td>
</tr>
</tbody>
</table>

**Figure 5:** Top benefits of leveraging ecosystems for retail and consumer goods companies
embracing risk to respond to change

For retail and consumer goods companies, embracing risk is about balancing investment with customer demand, particularly when focusing on capital-intensive real estate and logistics, along with new technology infrastructure that enables the omnichannel experience.

One form of ‘risk-openness’, demonstrated by the most successful brands, is flexibility in business planning, enabling greater adaptability to changing customer demands and market conditions. Adopting agile methodologies across the enterprise, not just in IT, is one way to create this flexibility.

In retail, another way to create it is through AI-enabled store-space planning, which optimizes store layouts much more quickly than manual approaches – reducing the process from months to weeks. This frees planners from mundane tasks and allows them to experiment with different strategies aligned with business priorities, thereby fostering the spirit of risk-taking.

Firms moving away from traditional planning cycles can shift course quickly, according to changes in circumstances, whether this involves initiatives with a risk of failure or market opportunities that come to the fore. “The world’s so fast, now, that opportunities just come at you,” says N Brown’s Adam Warne. “I think we need to create a business that is agile enough so we can respond to those opportunities as and when they arrive.”
embracing risk in this way is not yet widespread in the sector today (see Figure 6). A higher proportion of consumer goods than retail firms continue to work with five-year planning cycles, suggesting that a more traditional approach prevails in this sub-sector.

Nonetheless, embracing risk brings advantages. Companies that have become more open to risk say they have greater productivity, can bring new products and services to market more quickly, and are able to expand their market and customer bases.

We work to three-year planning cycles with finite resources and budgets allocated 36%

We work to five-year planning cycles with finite resources and budgets allocated 21%

We adapt and transform continuously to market conditions, making resources and budgets available as needed 8%

We plan for the year ahead with finite resources and budgets allocated 19%

We plan for the year ahead but are flexible on resources and budgets depending on market conditions 15%

Figure 6: Retail and consumer goods companies’ appetite for risk when planning ahead
The Challenges Ahead
Executives in retail and consumer goods companies are guardians of huge volumes of customer data. If this data is breached, the impact on the company's brand is considerable. For good reason, therefore, respondents in this sector are more concerned than those in the others about security threats. Risks to data security are seen as barriers to adoption of two Business 4.0 behaviors in particular: changing models to create new sources of value and working with ecosystems.

Another challenge faced by retail and consumer goods companies is that legacy thinking and technologies are preventing businesses in the sector from embracing risk. A traditional corporate culture, inefficient data-capture mechanisms to support flexible planning, and inflexible IT are the top three barriers to adopting this behavior.
his needs to change, believes Adam Warne of N Brown. “For me, it’s about placing smaller bets, learning from them really fast, and then either doing more of it, less of it, or stopping completely,” he says. “It is a cultural change that needs to happen through all levels in the industry, but I think creating and stubbornly sticking to a five-year plan is pretty much dead for businesses that really want to succeed.”

The traditional corporate culture may also be dissuading senior executives from releasing budget for investment in innovative digital strategies. A higher proportion of retail and consumer goods companies than those in the other sectors report that lack of budget is the biggest barrier to adopting mass personalization, for example (see Figure 7).

<table>
<thead>
<tr>
<th>Business 4.0 behavior</th>
<th>Main barriers to adoption</th>
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<tbody>
<tr>
<td>Driving mass personalization</td>
<td>36% Lack of budget</td>
</tr>
<tr>
<td>Creating exponential value</td>
<td>43% Risks to data security</td>
</tr>
<tr>
<td>Leveraging ecosystems</td>
<td>36% Risks to data security</td>
</tr>
<tr>
<td>Embracing risk</td>
<td>36% Traditional corporate culture</td>
</tr>
</tbody>
</table>

Figure 7: The top barriers to adopting Business 4.0 behaviors
Speeding Up Technology Adoption
The adoption of Business 4.0 behaviors goes hand in hand with the development of strong digital capabilities. Our results indicate that, while cloud adoption in the retail and consumer goods sector is broadly at par with the other sectors covered in the study, progress is slower than average in the use of automation, IoT, blockchain, and AI (see Figure 8).

This is set to change, and fast. A majority of executives in the sector are confident that they will adopt all of these technologies by 2021, bringing them in line with other industries and enabling their companies to make progress towards Business 4.0.

AI is particularly high on the agendas of executives in the sector and will see healthy adoption rates in the next few years.

In our view, the biggest gains lie in functions such as design and sourcing, assortment, space, store operations, supply chain, and logistics. Algorithmic interventions in these areas are shortening the ‘design to rack’ cycle, speeding up last-mile fulfillment, improving availability, and transforming store experiences, thereby creating a far deeper impact on the future of retail.
In addition to playing catch-up with other sectors in their adoption of core technologies, retail and consumer goods companies have scope to grow their use of agile beyond the IT department. Just over a quarter of retail and consumer goods organizations have adopted agile for every business process, which is lower than the average across all sectors.

**Figure 8:** Technologies adopted by retail and consumer goods companies today
Conclusion
s our research indicates, retail and consumer goods companies recognize the need to become Business 4.0 enterprises, with several being a fair way along on the road to transformation. Nonetheless, legacy thinking, inflexible technology, and traditional business models stand as barriers and need to be addressed – especially as new entrants continue to emerge and challenge the incumbents.

- **Investment is necessary to initiate digital change.** Industry players are investing in new technologies, but a heightened focus is needed. To keep up with challenger brands in a rapidly evolving sector, investment in digital strategies is vital, especially for mass personalization and the adoption of AI.

- **Enterprise-wide agility is the need of the hour.** The adoption of agile practices has brought significant benefits to IT functions in organizations across sectors. It is time to recognize the advantages that agile can bring to other functions of a business in terms of speed, quality, and risk management.

- **Business 4.0 is reshaping the traditional industry.** Almost nine in 10 retail and consumer goods companies plan to adopt a new business model within the next five years, reflecting the fast-paced nature of the Business 4.0 world. Organizations can no longer afford to stand still in such a dynamic environment and must have a definitive action plan in place.
About Tata Consultancy Services Ltd. (TCS)

Tata Consultancy Services is an IT services, consulting and business solutions organization that has been partnering with many of the world's largest businesses in their transformation journeys for the past 50 years. TCS offers a consulting-led, cognitive-powered, integrated portfolio of business, technology and engineering services and solutions. This is delivered through its unique Location Independent Agile delivery model, recognized as a benchmark of excellence in software development.

A part of the Tata group, India's largest multinational business group, TCS has over 424,000 of the world's best-trained consultants in 46 countries. The company generated consolidated revenues of US $20.9 billion in the fiscal year ended March 31, 2019, and is listed on the BSE (formerly Bombay Stock Exchange) and the NSE (National Stock Exchange) in India. TCS' proactive stance on climate change and award winning work with communities across the world have earned it a place on leading sustainability indices such as the Dow Jones Sustainability Index (DJSI), MSCI Global Sustainability Index and the FTSE4Good Emerging Index.

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