SPRINGBOARD
DIGITAL MANUFACTURING & OPERATIONS

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Introduction

The Consumer Goods Forum and Accenture hosted the first in a series of three unique virtual SpringBoard events on 19 January 2021. The event brought together senior supply chain, operations and product development executives to delve into the topic of digital manufacturing and operations. This comes at a time when it is more important than ever to rethink consumer goods and the role that digital plays in addressing some of the critical challenges faced by the industry. This Executive Summary provides an overview of the key themes unpacked at the event and offers insights into digital transformation, the role of digital in driving responsible value chains, the core themes in consumer goods digital operations, and more.
**Now More Than Ever it is Time to Rethink Consumer Goods**

Industry X, the digital reinvention of industry, serves a key role in improving lives and unlocking holistic value. This has never been more important than now in the context of the global pandemic, especially for consumer goods operations.

**Consumer Goods Manufacturers Are Laggards in Digital Transformation**

To understand where different sectors are on their journey to digital manufacturing operations, Accenture conducted a global survey across 600 companies and 10 industries to compare their relative ambition and maturity.

Based on this assessment, the consumer goods industry is the least mature industry with only 31.5 percent of companies fully deployed compared to an industry average of 39.3 percent.

At this point in time, this lagging result isn’t a surprise. A key factor inhibiting digital deployment in certain industries is when the overall product cost represents a relatively small share of sales, thus reducing the impact of cost reduction on the P&L. This is the case for consumer goods, where historically, digital operations are aimed more at flexibility, personalisation, and time to market than pure cost efficiency of manufacturing. However, the time has come where leaders are looking to digitally transform their back-end operations to enable their customer-centric vision and position for growth.

Connecting front-end demand side capabilities with a flexible, responsive, and sustainable back-end of supply will be required to differentiate consumer experiences and do it in an optimal way. Enabling consumer-centric manufacturing and supply chain capability through real time demand visibility, greater automation and optimisation through digital elements such as AI-led forecasting, planning, scheduling, packaging and production optimisation, will help to deliver an enhanced customer experience and the promise of the direction of the industry – the famous ‘lot size of one’.
Accenture has observed eight consistent key success factors to scale and realise responsible value.

1 Funding Strategy
First and maybe most importantly, the idea that digital can enable business transformation must be a belief held from the very top of the organisation. Enabling the transformation requires a meaningful financial investment and thus, leadership needs to believe that investment in digital will drive incremental and significant operational improvements within their core operations. According to Accenture’s research, $30-$50 Bn size companies are investing 1 – 1.6% of their revenue of revenue.

2 Holistic Business Case
As companies consider the business case, they must look beyond measuring one use case at one plant and look at the combined value across end to end transformation. Success should not be based solely on ROI from waste, productivity and OEE but rather consider the large scale value chain impact and collective effect of the use cases with an eye toward also delivering sustainable operations, culture change, and help to position for the workforce of the future. A good balance is when a specific year’s savings fund the investments of the next set of solutions. In other words, done right, digital generates a rolling ROI of about one year. Scaling is not easy and for consumer goods companies that have hundreds of factories, partners who can help innovate, scale and drive change are vital to success.

3 Linked to Lean Enablers
Many consumer goods companies have an operations management system and often have a continuous improvement program. Its critical to tie in the digital efforts to enabling the core manufacturing ways of working that have already been deployed to drive the next step change in performance.

4 Business, Technology, Ecosystem Alignment
Digital technologies are shifting drastically; costs are decreasing, vendor options are increasing, and niche players now exist. Constantly reviewing your ecosystem landscape to drive innovation is important, but so is taking actions today that allow companies to move forward at pace. Scaling makes the economics more attractive than classic IT programmes with a long payback horizon.

5 Path from Pilot to Scale
For consumer goods companies the governance of driving technology standards and guardrails for the plant sites are vital and choosing the right use case that can scale is pivotal in reaching the end goal of transformation. However, it is not just selecting the use case, but also building a robust digital backbone that enables the scaling process to occur – this includes an industrial-ready platform, standard data reference architectures, OT security, innovation, value realisation, and change management tools and techniques.

6 Ability to Maximise Legacy IT/OT
Most consumer goods companies have a highly fragmented manufacturing landscape with different product mixes, processes, machines, and data maturity. This makes digital deployment a daunting task and most do not want to replace what is already on their shop floors. The key is to start with leveraging and unlocking data from existing systems and processes to achieve immediate value and to build a flexible architecture and platform that allows for heterogenous plug and play strategies.

7 Cross-Functional Leadership Alignment
For the first time we are truly seeing Information Technology (IT), Operational Technology (OT), and Engineering Technology (ET) converge under the desire to release trapped value. In addition, attacking the trapped value in the organisation means breaking down functional silos and looking at the entire supply chain from R&D, Manufacturing, and Supply Chain. The ability to drive digital transformation at pace comes when all stakeholders – across technology and business groups align to the overarching strategic intent to solve complex and long-standing challenges and create a common language between the functional silos.

8 Change Management
One of the most important stages in a successful digital manufacturing programme is increasing the digital maturity and fluency of the operations, maintenance and engineering groups. The value will only be realised when the manufacturing employee understands why, what and how the digital solution will make their life better and safer. A best practice is engaging the person responsible for executing the work on the shop floor early through user-experience design and often in the design of new solutions. This last mile focus should not be underestimated in the programme as adoption equals value realisation.
The Bonus? Digital Will Help Accelerate the Shift to More Responsible Value Chains

The consumer goods industry is at an inflection point in meeting their commitments to a sustainable and responsible world. Many of the top leaders have made bold statements of reducing carbon footprints and yet the path to get there remains unclear.

Companies who effectively pursue these success factors (including ensuring sustainability is an equally important part of the business case) and commit to working across functional silos to release trapped value, will achieve a more transparent, efficient, and responsible end-to-end value chain. The intersection of digital technologies and sustainability holds tremendous value for consumer goods companies, not only for accelerating recovery from the economic effects of the pandemic, but also for positioning for future growth.

Digital solutions enable end-to-end transparency, greater control, and measurement of data and standards from the very start of production through to customer engagement including:

- Strategically sourcing raw materials through intelligence
- Achieving zero waste manufacturing
- Transporting product with low carbon or zero carbon footprint
- Building trust across supply and distribution channels and consumers
- Driving circular economy product and business models

Digital will enable a real shift to more responsible value chains

**SOURCE**
- Responsible sourcing
- Intelligent agriculture

**MAKE**
- Zero waste manufacturing
- E2E traceability & transparency

**MOVE**
- Low carbon Logistics

**RETAIL**
- Authentic communication

**USE**
- Circular products & business models

**END OF LIFE**
- Value from waste
Product Optimisation enabled by Digital Twin

A digital twin is the virtual representation of a physical object or system across its life cycle. It uses real-time data as well as historical sources to enable learning, reasoning and dynamic recalibrating for improved decision making. This means creating a virtual representation that is the mirror counterpart (or twin) of a physical thing or process. The digital twin helps optimise production and delivers a new level of speed to value and scalability.

The manufacturing twin is the cornerstone of “digital continuity” and the foundation of what we call a Digital Plant.

Agile Packing enabled by Advanced Robotics

Consumer goods demand is shifting to low volume, high variety but their operations are unprepared for this shift. In the past the approach was “cut the tail”, but this is no longer sufficient. As customer demand for more variety increases, operations will need to adapt. Many consumer goods companies are looking to robotic automation to support late differentiation in packing, which brings new levels of growth (accelerated launch and fulfillment of new and custom formats), and efficiency (minimised changeovers, repacking costs, and waste). Robotics today and in the future will continue to be more flexible and versatile using computer vision, AI optimisation and direction, and IoT platforms to enable production and packing at scale.

Empowered Workforce enabled by XR

Properly understanding the workers environment, jobs, and processes they use, can help consumer packaged goods companies deliver experiences that simplify, inform, and don’t get in the way of letting workers deliver to their full potential, while providing enterprises with the tools and information to optimise processes and operations.

By leveraging human centric technologies (such as our example of product changeovers), companies can create a more capable and purposeful workforce, one that is smarter, augmented and more independent. Alongside an improvement in the workers experience, we see meaningful improvements in work efficiency, process simplification, and significant improvements in product quality.
Conclusion

While it may be painful to see consumer goods at the bottom of the pack in scaling maturity, the good news is we can learn a lot from the leading industries on what works well and what does not. As confirmed by the participants in the Consumer Goods Forum Accenture SpringBoard event, the value is real, the challenges are great, but there are best practices we can leverage and share to help ensure we are as competitive and customer centric as possible.

Thanks for everything and see you at the next SpringBoard!
About The Consumer Goods Forum

The Consumer Goods Forum ("CGF") is a global, parity-based industry network that is driven by its members to encourage the global adoption of practices and standards that serves the consumer goods industry worldwide. It brings together the CEOs and senior management of some 400 retailers, manufacturers, service providers, and other stakeholders across 70 countries, and it reflects the diversity of the industry in geography, size, product category, and format. Its member companies have combined sales of EUR 3.5 trillion and directly employ nearly 10 million people, with a further 90 million related jobs estimated along the value chain. It is governed by its Board of Directors, which comprises more than 50 manufacturer and retailer CEOs.

For more information, please visit: www.theconsumergoodsforum.com

About Accenture

Accenture is a global professional services company with leading capabilities in digital, cloud and security. Combining unmatched experience and specialized skills across more than 40 industries, we offer Strategy and Consulting, Interactive, Technology and Operations services — all powered by the world’s largest network of Advanced Technology and Intelligent Operations centers. Our 514,000 people deliver on the promise of technology and human ingenuity every day, serving clients in more than 120 countries. We embrace the power of change to create value and shared success for our clients, people, shareholders, partners and communities.

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