

Consumer Products, Retail, Sector Analysis: Distribution and Transport

Testing times as sector changes



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The Consumer Products, Retail, Distribution and Transportation (CPRDT) industry sectors are going through profound changes as a result of the digitalisation of everything from customer interaction to shopping, products, and channels. This has opened up unparalleled opportunities but also poses existential threats to current business models.



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As a result, organisations in the CPRDT sectors are now co-innovating and collaborating with partners and customers to enhance products and services.

Some of the key trends across the CPRDT sector are:

- 1. Digital customer experience:** This focuses on offering compelling customer experience and engagement across physical and digital channels – enabled by mobile and online to offline integration. It also supports personalised, relevant and real-time offers based on deep customer insights.

2. **Digital supply chain:** Encompasses end-to-end supply chain performance using capabilities such as real-time and granular visibility of demand and supply across the ecosystem, and next generation of pick-pack-ship. These capabilities in-turn enable a seamless digital customer experience.
3. **Sharing economy and crowd-sourced models:** The transportation sector is being disrupted by continuous growth in the sharing economy. Consumers and enterprises are moving away from owning vehicles and subscribing to alternate transportation methods. Models such as crowd-sourcing are disrupting last mile delivery and driving third-party logistics and fleet management firms to adopt or acquire such capabilities.

Although spend on technology as a percentage of overall revenue is amongst the lowest in these sectors, early adoption of digital technologies offers organisations the chance to be at the forefront of innovation and drive consumer engagement.

However, Quality Assurance (QA) is no longer enough when it comes to building and running a business assurance and engineering capability that is geared for continuous change, especially with one eye on improving speed - market, assuring business outcomes and transforming non-stop.

The move from QA to Quality Engineering (QE) is not an option. The equation is simple: Test less and assure more. Serious and continuous disruption in IT means the way testing and QA has been approached in the past must be overhauled.

As the transport and distribution sector is rapidly changing from a product centric model to a customer centric model,

so is the need to try newer channels, technology and integration platforms, value-added services and, above all, better customer experiences. This is critical for success.

Business models are changing to seize new opportunities which need to be supported by new technologies – such as neuro-linguistic programming, bots, mobile and wearables, Artificial Intelligence [AI] and Machine Learning [ML], the Internet of Things (IoT) – and the complex integration of these technologies and legacy systems.

Quality needs to be embedded from the idea inception phase to cut the time and effort of testing towards the end, thereby improving the time-to-market.

While automation in testing was as the heart of QA in 2018, it was only a start and as we continue to embrace DevOps and Agile, test automation will play a key role in QE. [quote] The benefits of test automation include improved test cycles, test coverage and earlier detection of bugs. As DevOps spreads it is imperative that software – with the continuous development – needs to be continuously tested. This needs a paradigm shift in the skills of a developer and tester as the thin line between these skills is disappearing and same individuals are required to do both.

Automation allows the user to do more and faster. The Internet of Things, AI and ML are proving to be key drivers of test automation. Much like QA to QE, performance testing is going through a similar change to performance engineering. Simply, performance is key for customer experience and needs to be thought through and embedded in the process from the start.

