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# Customer Experience in the Digital World: High-Tech and Manufacturing

**How to deliver tomorrow's CX today**



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Digitization is having a transformational impact on the High-Tech and Manufacturing (HTM) industry. The arrival of this “fourth industrial revolution” has changing everything—from the way products are manufactured to the way they’re serviced and sold.

Manufacturers have never had such a huge opportunity to launch disruptive new products and services, reduce time to market, change the way customers consume products and services, optimize the supply chain, improve product quality, and enhance customer experiences. Companies with the agility to embrace these breakthrough technologies can capitalize on the opportunities they offer and succeed greatly.

**Those who don’t adapt and change will likely start to decline.**



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# The “Amazon Effect” on Customers

The B2B manufacturing industry has historically been a little slower than B2C markets with regards to prioritizing customer experience improvements or adopting new customer experience channels and engagement tools. However, individual evaluators, influencers, and buyers within these companies have grown accustomed to easy and seamless omnichannel interactions with brands from their personal experiences as consumers.

Amazon has been the disruptive force behind setting higher customer expectations and demands. As a result of new innovations, online shoppers now expect free shipping, instant delivery, personalized recommendations, effortless product search capabilities, and instant, generous, free customer service from all brands. Further, if they like or dislike their experience, they're not shy of expressing their thoughts through detailed feedback and reviews.

This Amazonization of businesses continues unabated today across both B2C and B2B industries. New channels, devices, marketplaces, and ecosystems are swiftly evolving globally. The growing majority of B2B buyers want the ability to interact with companies in real time through their channel of choice. They also expect full transparency during brand interactions and won't hesitate to switch suppliers if they don't receive the end-to-end experience they expect.



# The Rise of Product-As-A-Service

One of the ways to meet new customer expectations is by creating more convenient and flexible customer experiences. Manufacturing companies have historically focused on selling physical products in a one-time transaction. Product-as-a-Service (PaaS), on the other hand, typically combines physical products, related installation and maintenance services, monitoring, and customer support into packaged offerings. Here, the buyer typically no longer 'owns' the physical product as an asset, but rather subscribes to the complete package as a service, paying a recurring fee.

Car manufacturers have been early adopters of this business model by offering comprehensive leasing programs which include routine maintenance, warranty, and allowance to drive certain number of miles per year until their lease is up. More recent evolutions of this model enable customers to pay a monthly fee and have the flexibility to exchange cars once or twice a month.

PaaS not only gives buyers plenty of choice and flexibility, but it also allows manufacturers to generate new recurring revenue business. It can also help the manufacturer penetrate new market segments it hasn't been able to tap into before. If executed with the intent to build long-term customer relationships and loyalty by delivering high quality experiences, the manufacturer has a lot to gain.

The journey to PaaS can be daunting especially for companies that have never done it before. PaaS may decrease initial revenue and result in short-term margin pressures. However, with buyers becoming more educated about the flexibility of this model, manufacturers can no longer avoid this business model option.



**70%**  
of  
manufacturers  
will provide  
product-as-a-  
service  
platforms by  
2022.

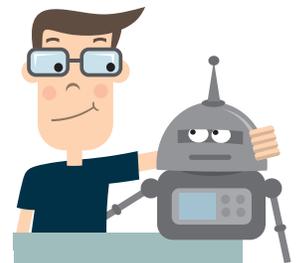
# Game-Changing Technologies for HTM

As alluded to earlier, **technology is playing a major role in how HTM companies better connect with their buyers.**

## ARTIFICIAL INTELLIGENCE (AI) AND MACHINE LEARNING (ML)

AI allows businesses to automate processes usually associated with human intelligence. Today's AI-enabled computers can recognize images, understand language, and perform complex reasoning while making decisions based on sophisticated mathematical analyses. AI enables better-informed decisions, and AI systems learn over time—becoming better at spotting new opportunities and exposing unseen risks. It augments human intelligence with powerful computing and decision-making informed by precise data analysis.

Machine learning exploits and uncovers unseen patterns in human, operational, and system activities, delivering significant benefits for all functions—extending to the enterprise ecosystem. It can help to enhance customer experience with technologies such as intelligent chatbots, and arm operational staff with the knowledge to improve performance and outcomes. For HTM, machine learning presents an opportunity to add value through prediction, personalization, and customization.



Artificial intelligence will double the economic growth rate of 12 developed countries by 2035.

—Accenture, 2018

## THE INDUSTRIAL INTERNET OF THINGS (IIOT)

The Internet of Things (IoT) is giving rise to a wealth of new connected products and services—from smart home gadgets, smartwatches, and connected cars to smart cities, assembly lines, and even entire smart factories. It's predicted that the worldwide install base of IoT-connected devices will be close to 25 billion by 2021.

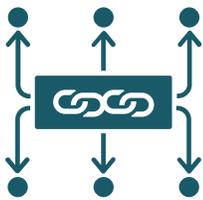
From a manufacturer's perspective, the Industrial Internet of Things (IIoT) connectivity has enabled manufacturing processes to improve product quality, minimize lead times, improve efficiencies, and reduce costs. In the supply chain, IIoT provides real-time delivery and performance insights. This connectivity has enabled new business models—such as remote monitoring, and connected, automated services, consumption-based subscription services, and more. The vast quantities of data generated by IIoT is becoming an asset for manufacturers by enabling them to create new business models, enhance existing business processes, reduce costs, and offer new value-added services.

# Game-Changing Technologies for HTM

## BLOCKCHAIN

A blockchain is a digitized, distributed ledger that records every transaction across a peer-to-peer network. Blockchain has the potential to become a game-changer by being reliable, tamperproof, and secure. It removes the ‘third party’ element from all kinds of digital transactions, eliminating the need for 3rd party trust verification when transferring funds or sharing sensitive information. This can speed up transactions, and lower costs of authentication and transactions.

For HTM, blockchain has the potential to revolutionize the supply chain and bring orders of magnitude improvements in scalability and efficiency, automate existing processes, improve transparency, trust, and security.



“If the blockchain vision holds true, supply chains will become more efficient and automated, costs will be reduced, and an entirely new system of business trust will be enabled.”

— John Barcus, VP of Industry Solutions, Manufacturing, High Tech, and Automotive, Oracle

## 3D PRINTING

3D printing is changing the way products are designed, manufactured, distributed, and consumed. Companies are beginning to print products on demand, disrupting how traditional equipment and spare or maintenance parts are supplied. Companies like Carbon are now offering 3D printing services exclusively, rather than selling the printers themselves. 3D printing has disrupted the medical technology, automotive, fashion, and manufacturing industries, and many more are likely to follow.

**85%** of spare parts suppliers will incorporate 3D printing in their businesses within five years.

*Strategy& and PwC, 2017*

**75%**  
of large manufacturers will update their operations with IoT and analytics-based situational awareness to mitigate risk and speed time to market.

# Game-Changing Technologies for HTM

## VIRTUAL REALITY (VR) AND AUGMENTED REALITY (AR)

After a shaky start with Google Glass and Pokemon Go game, these technologies are starting to find a host of new practical applications—from Snapchat filters to the heads-up displays in executive cars to the entertainment industry. VR and AR are enabling fundamental changes to the way we see—and interact with—things in the real world. When the virtual world can effectively simulate real-world conditions, costs for a number of things can fall dramatically. Training, production, quality, testing, and service are all areas where virtual interaction offers improvements at significantly lower costs—through both simulation, and active engagement with a virtual twin of the product or service.

## DRONES AND AUTONOMOUS CARS

The technology that underpins self-driving vehicles, like drones and autonomous cars, is being perfected. Drones are fast becoming the delivery mechanism of choice for remote locations. As the technology evolves, they'll become even more disruptive, completely replacing the final leg of the delivery supply chain. Autonomous vehicles will take this a step further, as the technologies evolve to change the way businesses, supply chains, cities, and customers interact with each other. The technologies will impact how we transport, sell, buy, and manufacture products.



“This new [VR, AR] method increases engineers’ accuracy to 96%, while working 30% faster.”

—K.R. Sanjiv,  
Chief Technological  
Officer, Wipro

**75%** of large manufacturers will update their operations with IoT and analytics-based situational awareness to mitigate risk and speed time to market.

*IDC FutureScape: Worldwide Manufacturing 2017 Predictions*

# What to do Now to Change and Adapt for Future Success

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The same technologies that are disrupting the HTM industry also provide opportunities to better understand the hyperconnected customer, and deliver the frictionless, personalized experiences they demand through traditional direct and distributor channels, and through new digital channels.

Potential customers are no longer simply visiting resellers or contacting sales reps, as they've done in the past. They're doing much more upfront research on their own, meaning any influence companies may have needs to begin well before the buying cycle starts—in both B2B and B2C interactions. Compounding this trend are millennials entering the business world and demanding the simplified, seamless buying experiences they've become accustomed to. Years of brand building can be destroyed by one careless act, or by ignoring a series of complaints. The result is that HTM companies have become hyper focused on the customer.

Providing business model flexibility, digital and traditional channel flexibility, a consistent and seamless user-friendly omnichannel experience, along with proactive monitoring and relationship cultivating, are critical for success. Customers expect complete solutions, where hardware, software, and services are bundled and work seamlessly together, with price flexibly as monthly or outcome-based subscriptions. More complete insights into these customer behaviors is also driving supply chain and innovation to more effectively match product/service offerings and delivery to the needs of customers.

There's an urgency for manufacturers to invest in new technologies to capture the opportunity.





# Accelerating Transformation in 2 Key Areas

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## 1 CREATE EXCEPTIONAL DIGITAL CUSTOMER AND PARTNER EXPERIENCE

- Enable complete, 360-degree digital customer view processes across marketing, sales, service, finance, supply chain, and operations.
- Leverage advanced technology, like AI, IoT, and analytics, to deliver intelligent and consistent outcomes across all channels.
- Power effective digital self-service by providing guided recommendations, next best actions, perfect fulfillment, timely renewals and support across all channels.

## 2 MAXIMIZE ON PRODUCT-AS-A-SERVICE OFFERING

- Enable everyone from product marketers who create packages, to pricing experts, to marketing professionals who launch these solutions, to sales people who sell them and get compensated for these sales, to finance professionals who invoice and bill customers, to installations, service, and support personnel who take care of the customer after the purchase.
- Offer flexible subscription services for product, services, fulfillment, monitoring, support, and asset lifecycle management.
- Increase revenue and margins with AI-powered digital engagement and incentives.
- Improve customer satisfaction and retention with predictive digital service enabled by proactive monitoring and AI.



# Why Integrated CX Solutions are the Answer

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The Oracle CX is delivering dramatic value for HTM customers around the world. It enables great customer experiences throughout your customers' journey, and lets you effectively engage with the right customers at the right time with the right offers across physical and digital channels to dramatically improve customer acquisition, retention, life-time value capture, and brand advocacy.

For the HTM industry, Oracle's portfolio of CX solutions helps brands identify and engage with the right customers, make relevant and timely offers and promotions at customers' 'moment-of-need', streamline sales through both traditional direct and distribution channels as well as through B2B eCommerce channels, and deliver excellent proactive support and service by leveraging IoT and AI.

**Here are a few examples of the kinds of benefits our customers are realizing with Oracle CX.**

99%

A global consumer electronics manufacturer was able to reduce lead processing times by 99% by implementing modern campaign management and rules-based scoring and routing.

40%

With the leverage of embedded IoT sensors in their equipment, 40% of relationship manager calls made by an innovative 3D printing company are proactive, identifying issues before the customer experiences them.

21x

A global consumer electronics manufacturer was able to increase FAQ access rates by 21x increasing customers' and dealers' ability to self-service themselves and reduce burden on their call center support agents. This resulted in dramatic improvement in customer satisfaction from 5.9% to 77.8%.

# It's Time to Deliver Tomorrow's CX Today.

How are you currently performing in CX?

[Contact us >>](#)

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### Integrated Cloud Applications & Platform Services

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