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# From There to Here and Beyond: A Look at the AIDC Market

BY DAVID KREBS SEPTEMBER 2020

# Agenda – Key Topics

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**COVID-19: A Rare Catalyst for Innovation**

2

**Business & Operations Trends Driving AIDC Solutions Opportunities**

3

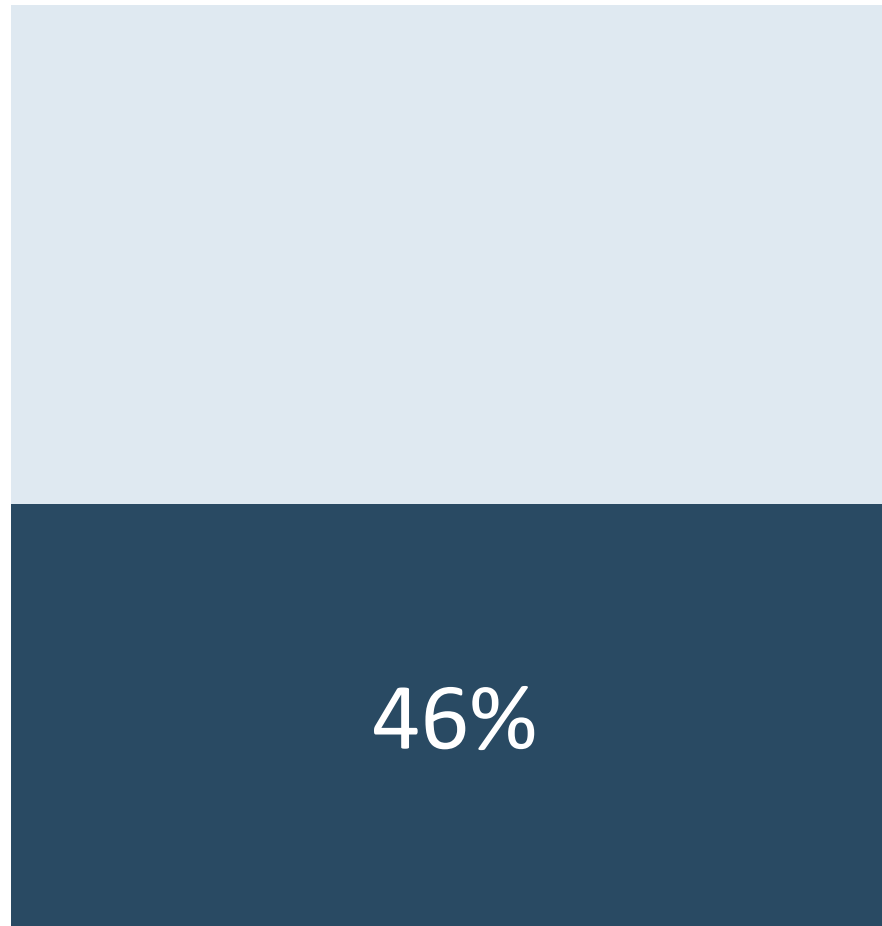
**AIDC Market Outlook: 2021 and Beyond**

# Digital Transformation Efforts Taking on New Urgency

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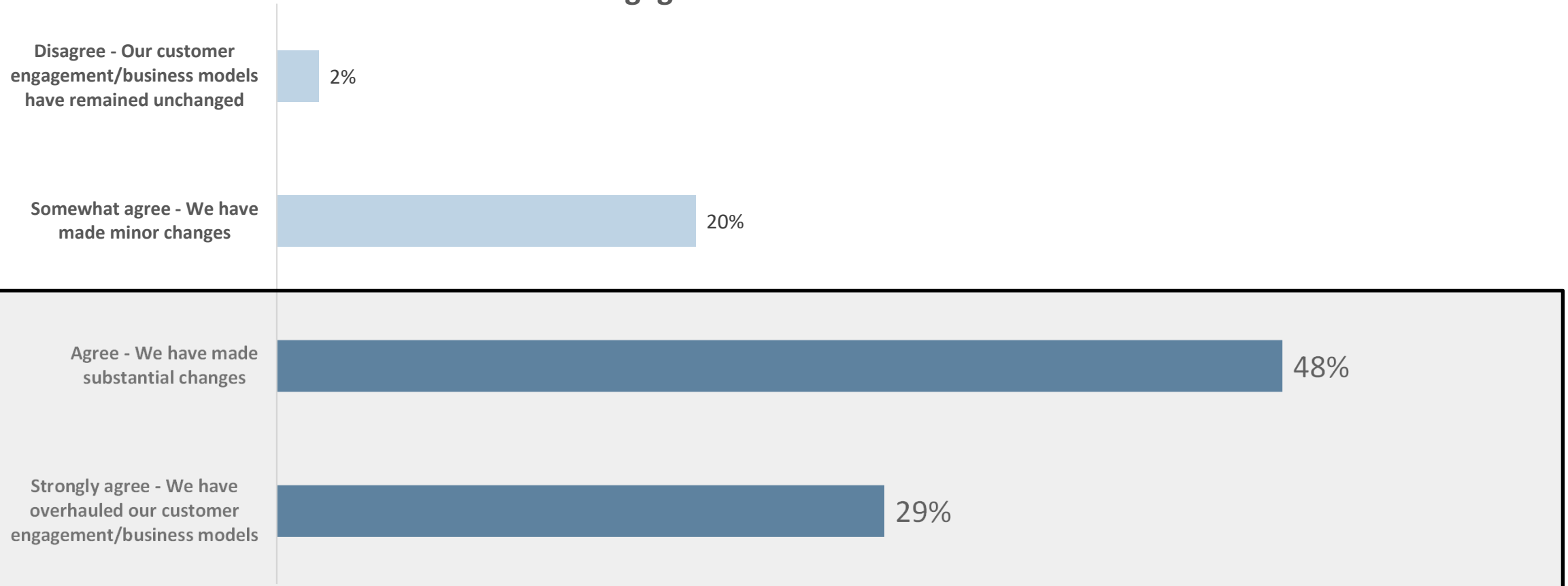
46% of CFOs Accelerating Automation as Part of Post-COVID Strategy



# COVID Impact on Customer Engagement

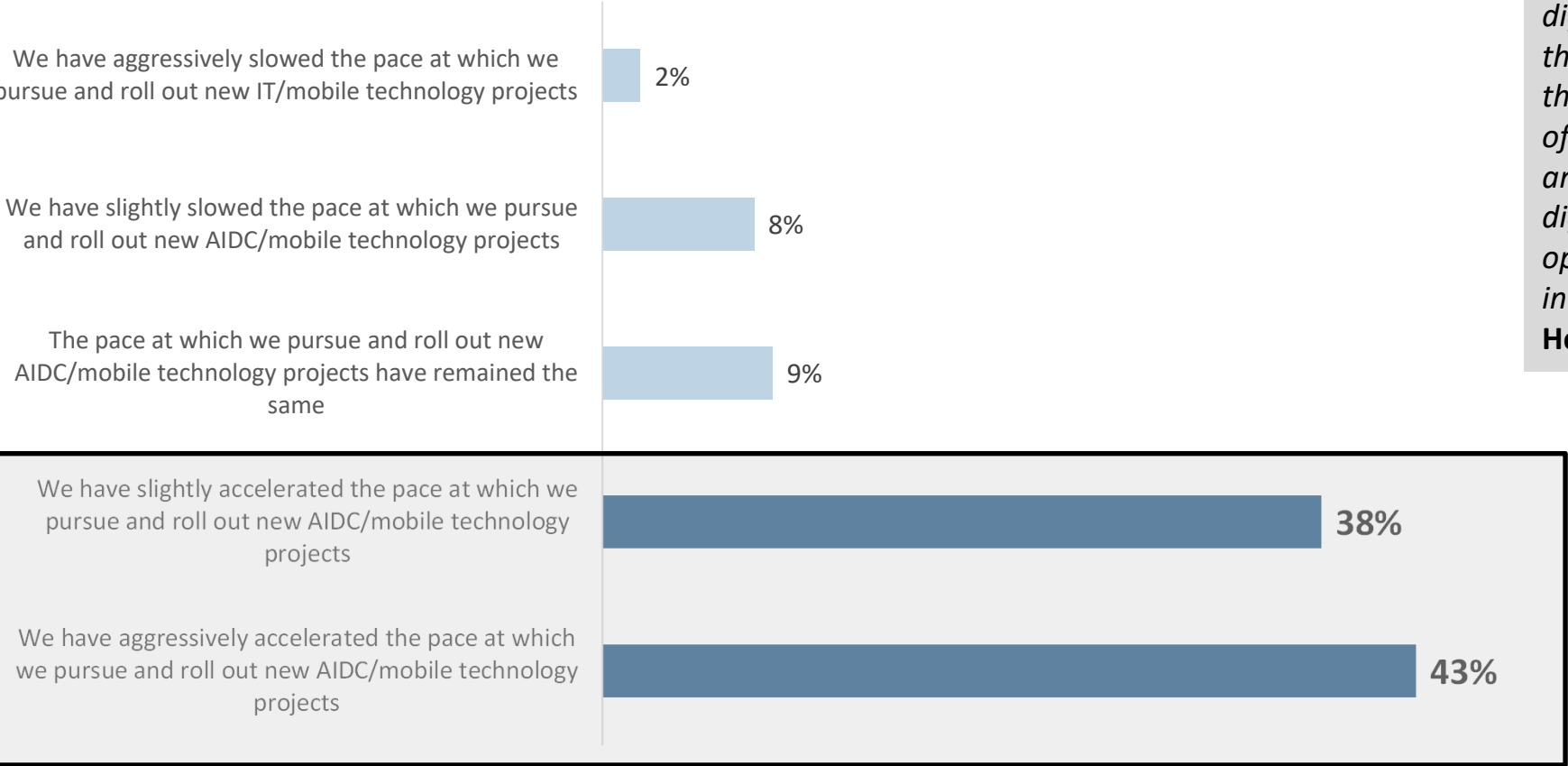
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**77% of Organizations Agree or Strongly Agree with Need to Make Changes to Customer Engagement Models Post-COVID**



# COVID Impact on AIDC/Mobility Investments

## 81% of Organizations “Slightly” or “Aggressively” Accelerating Pace of AIDC/Mobility Investments Post-COVID



*“We can already see that the pandemic has caused changes in customer behavior that will accelerate the digitalization of our industry. To meet this future, we will continue adapting the organization and improve our ways of working to become more flexible, fast and efficient. As we are accelerating our digital development, we continue optimizing the store portfolio and integrating the channels.”* **H&M CEO Helena Helmersson**

# Grocery, Fresh Food & Pharmaceutical Delivery: Emphasis on Cold-Chain Solutions

## KEY OPPORTUNITIES

**1** Online grocery volume more than doubles in 2020 create new business opportunities

**2** Demand for new packaging solutions to boost cold-chain quality

**3** Use of wireless/IoT solutions for greater visibility & collaboration

## KEY CHALLENGES

**1** COVID-influenced hygiene requirements

**2** High cost and return/reverse logistics challenge of temp-controlled packaging

**3** Maintaining accurate real-time temp and condition monitoring



# Logistics Market Places Addressing Distribution Inefficiencies

## KEY OPPORTUNITIES

**1** Optimization of capacity utilization to reduce empty rides

**2** Demand for value add services like real time tracking, cross-border delivery

**3** Emergence of on-demand warehouse marketplaces

## KEY CHALLENGES

**1** 25% of trucks travel empty each day

**2** Last mile delivery responsible for 1/3 total transportation cost

**3** Spiraling delivery costs as consumer shipments outpace higher profit B2B

# Omni-Channel Logistics Hits Overdrive – 90% of US Retailers to Offer BOPIS by 2021

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## KEY OPPORTUNITIES

**1** Optimize inventory through supply chain leveraging precise inventory control

**2** RFID playing critical role in driving retailer and brand owner agility

**3** Migration from legacy systems to open real time data across organization

## KEY CHALLENGES

**1** High cost of migrating from inefficient legacy systems

**2** Siloed mindsets and lack of information sharing among trading partners

**3** One chance to get it right – very challenging customer expectations

# Reimagining Packaging – Balancing Customer Engagement with Sustainability and Low Cost

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## KEY OPPORTUNITIES

**1** Increase automation to speed up packaging process

**2** Customer engagement and connecting the physical and digital

**3** E-commerce return rates of 30%+ driving demand for multi-trip packaging assets

## KEY CHALLENGES

**1** Sustainability – only 14% of plastic packaging is recycled

**2** Investment required to manage circular flow of reusable packaging

**3** Higher cost exposure of sustainable packaging and lack of coordinated approach

# Artificial Intelligence & Its Impact on Predictive Logistics

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## KEY OPPORTUNITIES

**1** AI-powered automation & robotics to drive 5% of cost reduction

**2** Intelligent computer vision turning dumb scanners into solutions with sight

**3** Enhanced customer engagement through service personalization

## KEY CHALLENGES

**1** Pushback from workforce regulatory bodies

**2** High investment hurdle in computing power & workforce skillsets

**3** Ethical concerns

# Blockchain & The Need for a Single Source of Truth

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## KEY OPPORTUNITIES

**1** Greater transparency among trading partners to drive process optimization

**2** Product traceability a leading use case driving blockchain investments

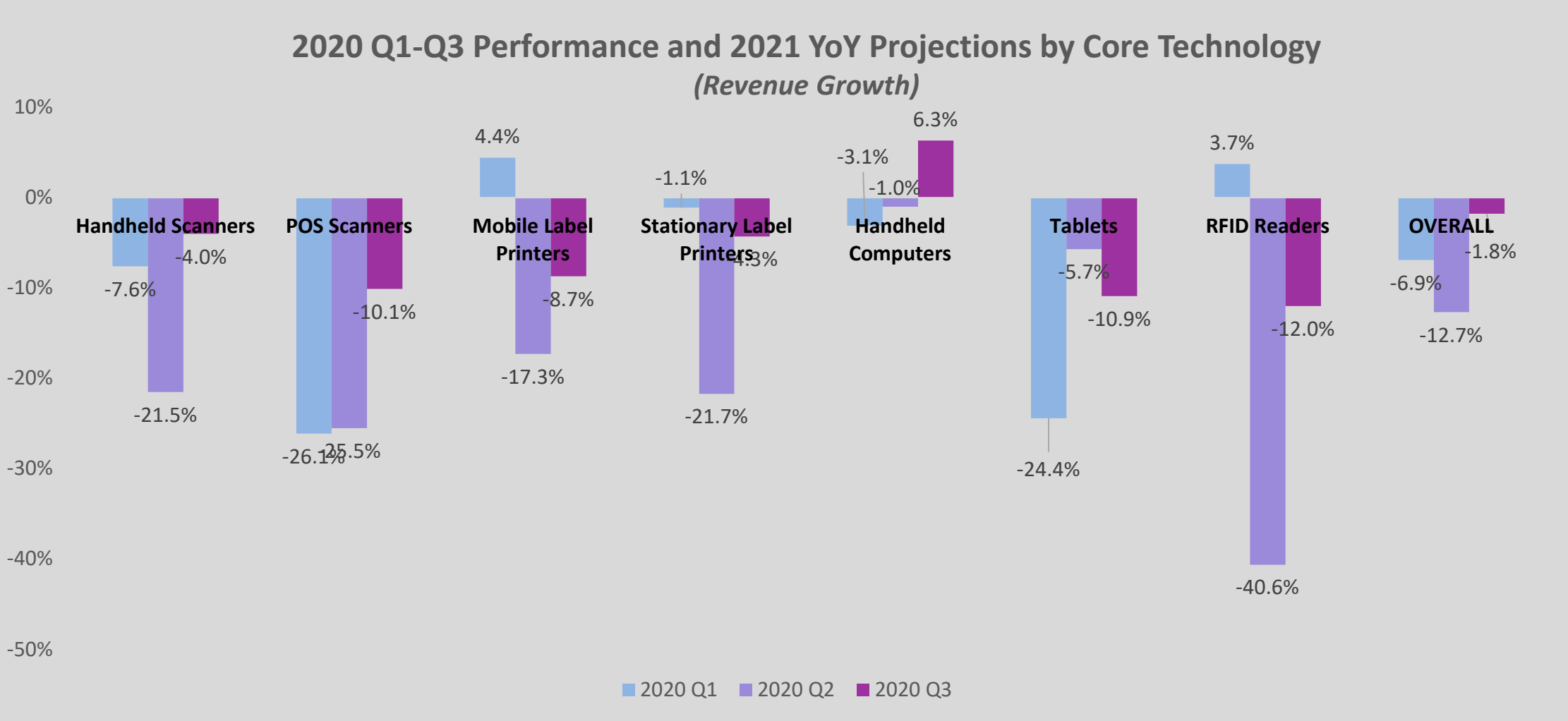
**3** Smart contracts introducing additional process efficiencies

## KEY CHALLENGES

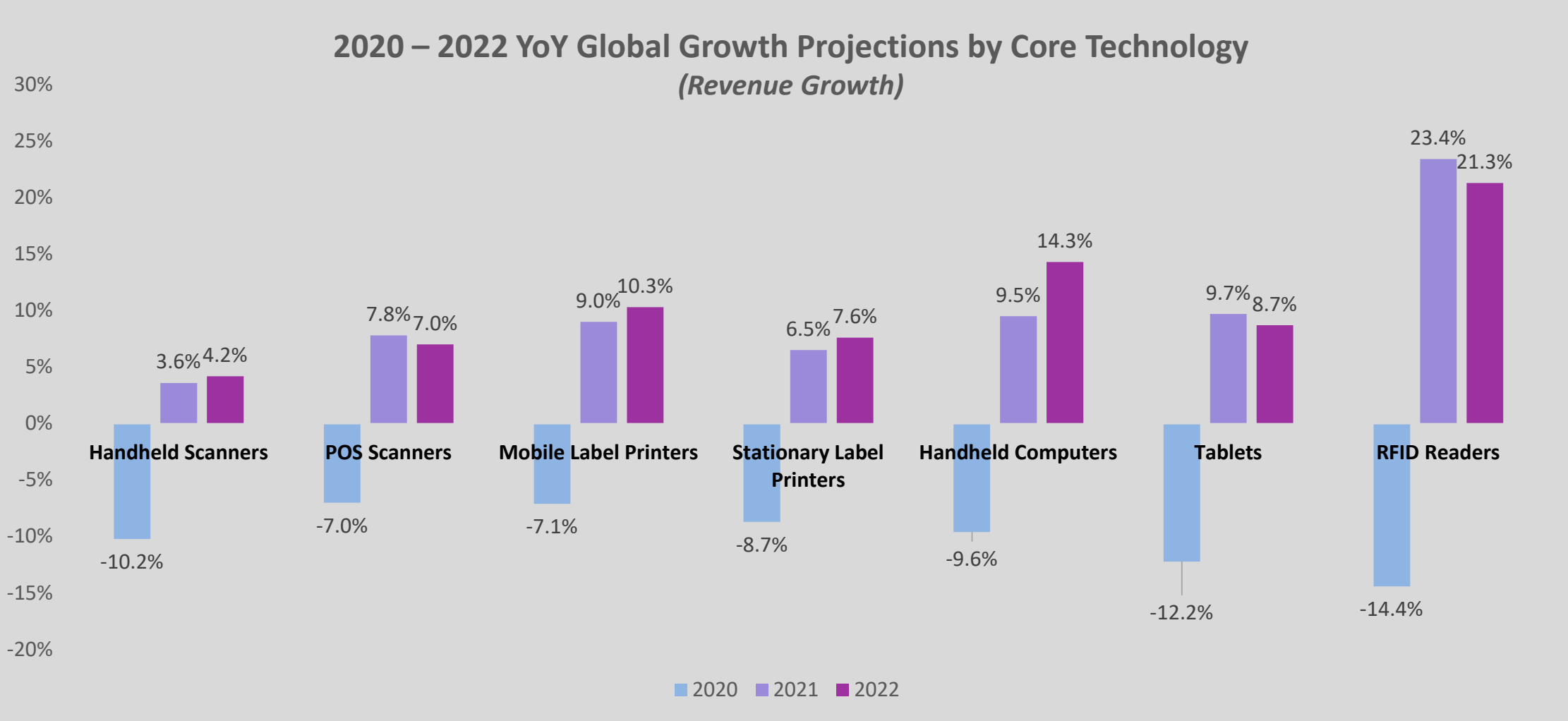
**1** Industry fragmentation creating scalability challenges

**2** Technical headwinds such as scalability and power consumption

# 2020 Quarterly Performance for AIDC Product Categories



# 2020 Through 2022 Projections



# Key AIDC Trends by Industry Sector

	Retail Services	Food & Beverage	Manufacturing	Logistics/ Transportation	Healthcare
Share of AIDC Market	20-25%	10-15%	20%	25-30%	5-10%
Key Trends	<ul style="list-style-type: none"> <li>• Retool demand forecasting with emphasis on identifying minimum required inventories</li> <li>• Agility and ability to respond to customer purchasing habits and fulfillment options under pressure</li> <li>• Greater need for information sharing across trading partners</li> <li>• Contactless requirements opening opportunity for new retail engagement models (smart vending?)</li> </ul>	<ul style="list-style-type: none"> <li>• Temporarily not enforcing onsite vendor audit requirements due to travel restrictions</li> <li>• Pandemic-induced surge in demand overwhelmed supply chain capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Continued efforts to diversify supply chains</li> <li>• Emerging sectors such as cannabis/horticulture driving new AIDC investment opportunities</li> </ul>	<ul style="list-style-type: none"> <li>• Capacity and cost strain of last mile delivery services</li> <li>• Accelerated push towards digital services and traceability</li> <li>• RFID footprint expansion into logistics/ supply chain environments for improved location and tracking accuracy</li> </ul>	<ul style="list-style-type: none"> <li>• Temporary exemptions to DSCSA requirements for distribution of drugs for emergency medical reasons (emergency use and use to diagnose, cure and treat COVID-19)</li> <li>• UDI deadlines extended for low-risk medical devices (for Class I and unclassified devices, UDI direct mark requirements pushed out to Sept. 24, 2022).</li> </ul>



# About VDC Research

Scale 1:85,000,000 at 0°  
Miller Cylindrical Projection

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# Who We Are

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