



# The Digital Pulse of Retail

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# Executive Summary

The pandemic forced 52% of retailers to accelerate the shift to digital, and 58% of retailers said that digitalization is important or critical to success.

**Consumer-centric digital experiences** in shopping, fulfillment, and service have become the norm as consumers seek personalized convenience.

Successful retailers embrace digital- and cloud-first cultures focused on profitable growth. They use data to drive efficient, omnichannel experiences that delight customers.

With new business models and core operational processes, **the ability to experiment and adapt quickly** to wow customers and improve operational efficiency becomes paramount.

Infrastructure modernization with insight-driven processes and interaction automation are critical for retailers to deliver desired results and thrive.

**Retailers are embracing technology to be more resilient and seize competitive advantage.**

1

**Optimism and investment in innovation persist**, with 61% of retailers worldwide “returning to growth.” Many retailers struggle to fully digitize; 67% of retailers are in the early stages of digital maturity.

2

**Retailers prioritize digital transformation (DX)**, increasing IT spend to thrive. IT spend has increased an average of over 16% annually as the urgency for resiliency via migration to cloud-based infrastructure heightens.

3

The most digitally mature retailers invest in **enhancing the omnichannel experience from discovery to last mile while strengthening a secure, digital infrastructure** to improve resilience and competitive advantage in ecommerce, supply chain, and store operations.

# The Four Stages of Digital Maturity

Google commissioned IDC Retail Insights to conduct a survey of 900 retailers in North America, Latin America, EMEA, and Asia/Pacific in 2022 to understand the state of retail transformation and develop an index of digital maturity. This IDC InfoBrief analyzes the survey findings and highlights areas of **innovation and technology investments across the four stages of digital maturity**, by retail subsegment and by region.

## Stage 1: Digital Participant

- ▶ Digital entrants, their digital initiatives are isolated projects.

## Stage 2: Digital Explorer

- ▶ Short-term digital initiatives are tactical, aligned to immediate strategic priorities.

## Stage 3: Digital Aspirant

- ▶ Continuous planned and managed digital transformation initiatives integrate product, service, and customer experience.

## Stage 4: Digital Resilient

- ▶ An enterprisewide, dynamic, and disruptive digitalization approach innovates with new business models to become resilient and create new growth.

The purpose of the index is to assist retailers to benchmark progress and revise their digital road map for business transformation, resilience, and success amid shifting consumer needs and competitive pressures.



Retailers at the **most advanced stages** of digital maturity continually **adapt to shifting consumer behavior, workforce transformation, and supply chain constraints and opportunities.**

# Retailers Set Sights on Digitalization

**Optimism abounds** despite economic uncertainty, high inflation, and political upheaval:

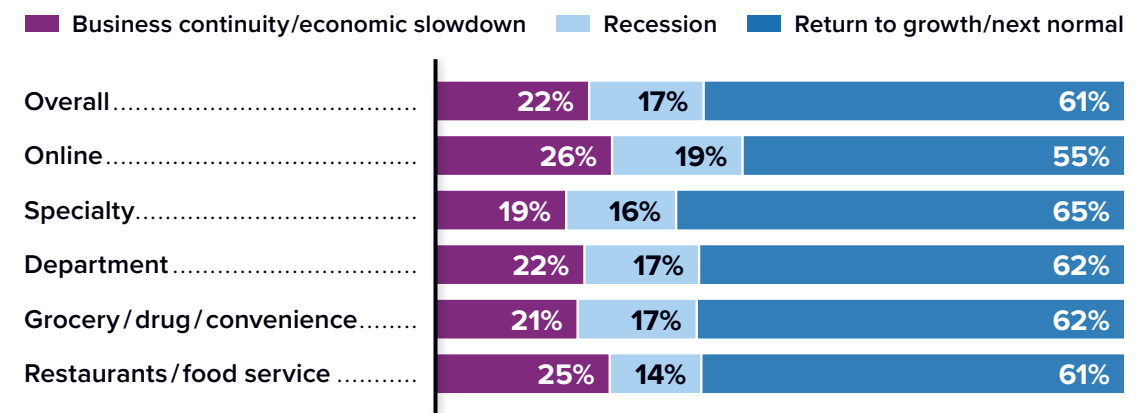
- ▶ An average of **61%** of retailers worldwide said they were returning to growth and planning for the future.
- ▶ **22%** said they were still in survival mode.
- ▶ **65%** of specialty stores are most likely to expect growth, and **55%** of online retailers are least optimistic as customers return to stores.

## Digitalization is key to success and growth.

- ▶ **58%** of retailers said **digitalization is either critical or important** for success.
- ▶ **40%** of retailers reported that **digitalization helped drive an average of 16% year-over-year revenue growth** in 2021.

## Retailers' Current State of Business

Which one best describes where your organization is currently?



## Importance of Digitalization for Resiliency






How important is digitalization for resiliency and adapting quickly to changing market conditions?



n = 900, Source: IDC's Google Cloud Digital Pulse Survey 2022

# Digitally Mature Retailers Adapt Quickly and Innovate Continually

The **Retail Digital Pulse Index** in Google Cloud’s Digital Pulse survey assesses the degree to which retailers are digitizing, building resiliency, and developing competencies to compete in a new digital era. The index gauges **retailers’ digital maturity in five dimensions** on a scale from 1 to 4, with 4 being most mature.

| THE FIVE DIMENSIONS OF DIGITAL MATURITY  |   |  |  |  |
|--|---|--|--|--|
| Strategy   | Process   | People   | Technology   | Data   |
|  |  |  |  |  |

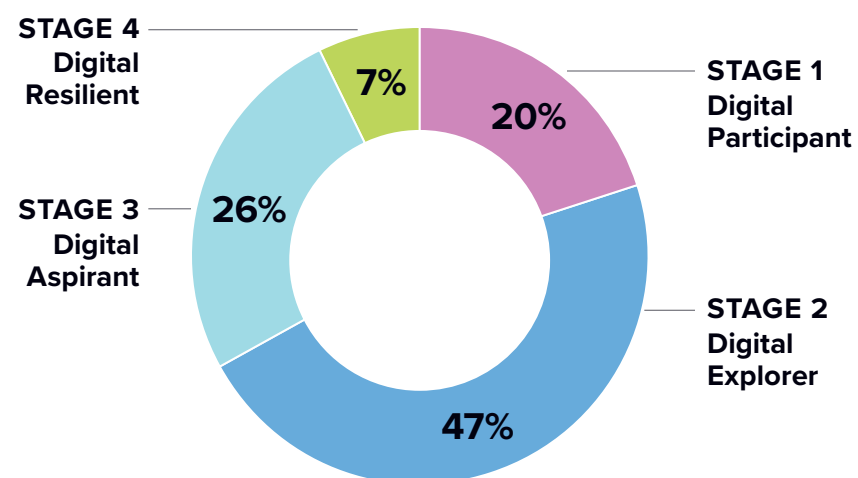
The **four stages of digital maturity** are: Stage 1 (Digital Participant), Stage 2 (Digital Explorer), Stage 3 (Digital Aspirant), and Stage 4 (Digital Resilient).

# Digitally Mature Retailers Adapt Quickly and Innovate Continually (continued)

**Digitalization is key to success and growth.**

**Nearly half of retailers worldwide are in Stage 2,** strengthening their digital infrastructure in tactical ways.

Another **26%** have elevated digital transformation to a continual, managed approach, but only **7%** are truly digital resilient retailers with an enterprisewide, dynamic, and disruptive digitalization with an innovative approach.



- ▶ Some organizations will need to develop and implement digital strategies, while others need to hone and maintain advantages gained.
- ▶ Digital resilience implies that an organization implements technology and data-driven business processes that enable continual innovation throughout the business.
- ▶ Focus areas include store operations, customer acquisition, merchandising, logistics and fulfillment, omnichannel commerce, and product life-cycle management.
- ▶ Core resiliency comes from **embracing infrastructure technology shifts**.
- ▶ Ongoing customer satisfaction comes from **embracing resilient, context-aware, and adaptable business processes and engagement strategies**.

n = 900, Source: IDC's Google Cloud Digital Pulse Survey 2022



# Most Retailers Are at the Digital Explorer or Aspirant Stage

Among all regions, most retailers are either at Stage 2 Digital Explorer or Stage 3 Digital Aspirant.

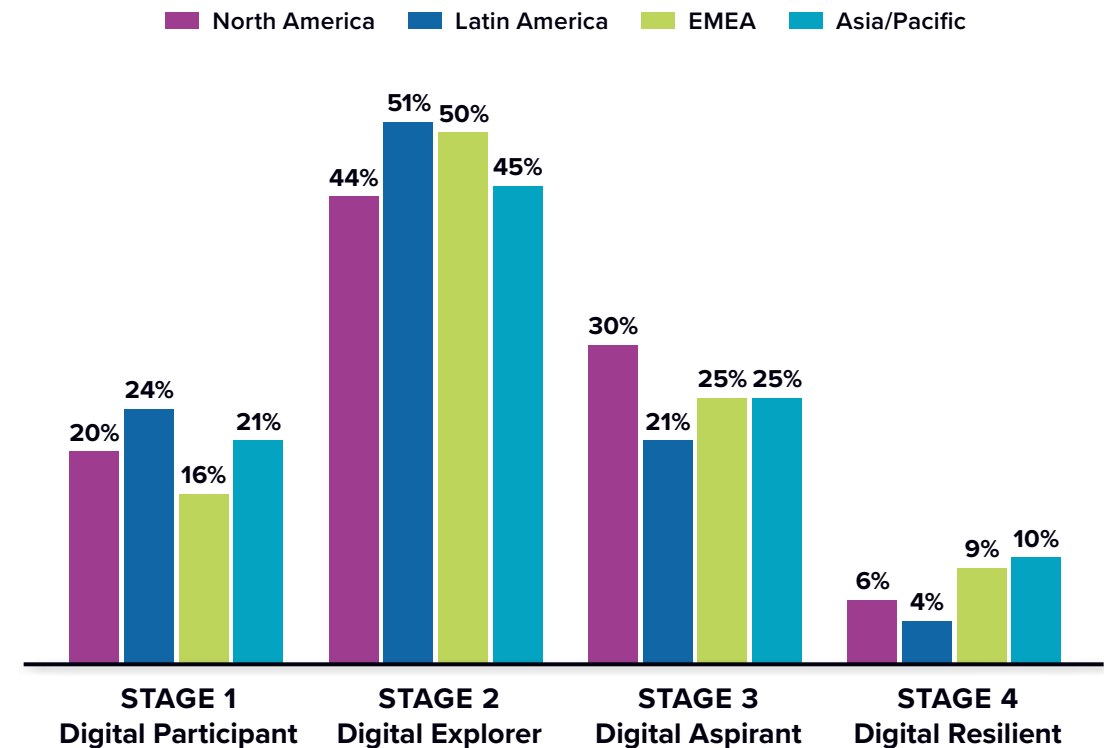
- ▶ EMEA has the most digitally mature retailers, with the fewest in Stage 1 and more than average in Stage 4.
- ▶ North America has more retailers in Stage 3 than any other region and about average in Stage 4.
- ▶ Latin America retailers are the least mature, with the most in Stages 1 and 2 and least in Stages 3 and 4. There are fewer large enterprise retailers in Latin America, so their data uniquely includes retailers with less than \$100 million in revenue.

While the pandemic moved many retailers to Stage 2, forcing a more tactical digitization, retailers in Stages 3 and 4 prioritize digital transformation.

The overall digital pulse of retailers is still relatively low as more than two-thirds of retailers are at Stages 1 or 2.

## Digital Maturity by Region

Retailers' overall digital pulse is progressing, with one-third of global retailers at Stages 3 or 4.



n = 900, Source: IDC's Google Cloud Digital Pulse Survey 2022

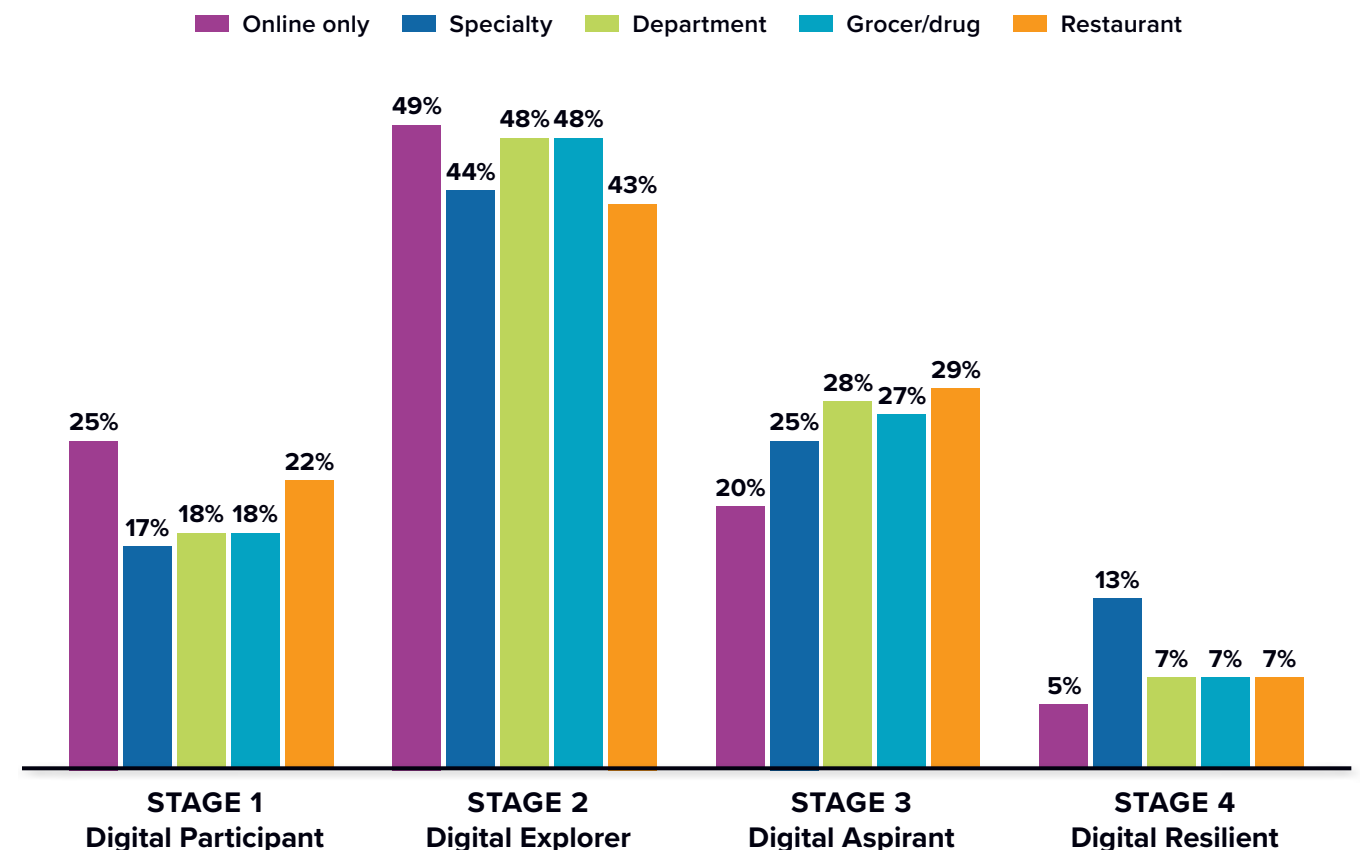


# Specialty Retailers Take the Lead In Digital Maturity

Digital maturity by industry follows the overall curve, but with some significant variation as specialty retailers gain traction in resiliency and innovation.

- ▶ Specialty retailers are most digitally mature overall, with the fewest at Stage 1 and the most at Stage 4, nearly double the average. Large specialty retailers lure customers with innovative, personalized, omnichannel experiences that tap into social commerce supported by dazzling loyalty and gift card programs.
- ▶ Online-only retailers are the least digitally mature; 25% are in Stage 1, higher than any other segment, and the fewest in Stage 4. An online presence alone does not make a retailer digitally mature, as supply chain, merchandising, and customer experience all play a role. Larger online retailers are beginning to recognize the value of a store presence or partnership to lower cost of delivery and returns, for example.

Digital Maturity by Industry Segment



n = 900, Source: IDC's Google Cloud Digital Pulse Survey 2022

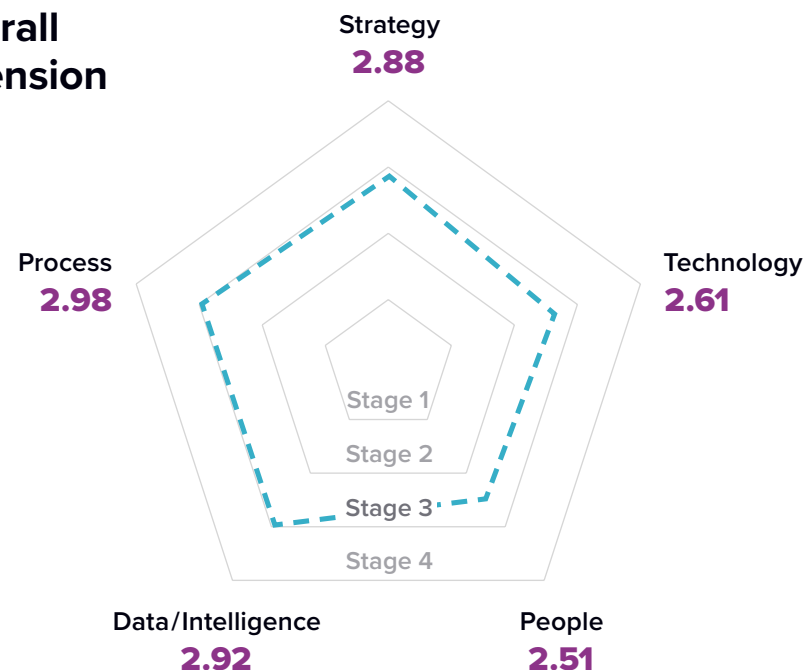
# The Drive for Digital Resilience

**As we look toward economic recovery and the next normal, the key to success will be digital resilience.**

IDC's *Google Cloud Digital Pulse Survey 2022* reveals that the **overall average scores of retailers globally are low**, given 67% of retailers are in Stages 1 and 2.

## Worldwide overall scores by dimension

— All regions



n = 900, Source: IDC's *Google Cloud Digital Pulse Survey 2022*

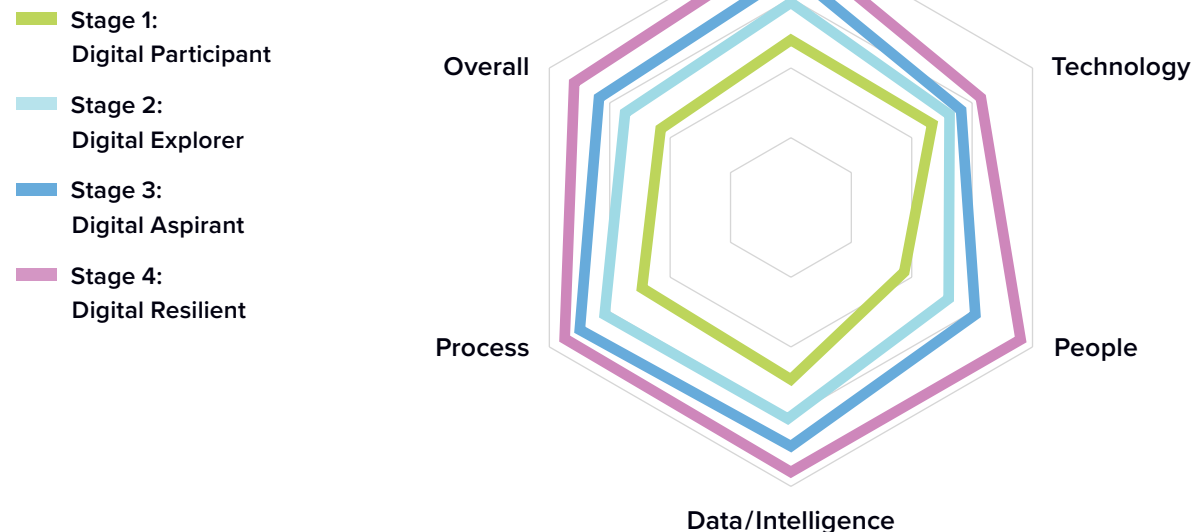
Advancing to the next stages will require retailers to take a digital approach to the five index dimensions and implement a plan to progress across all of these areas. **All organizations need to have these five dimensions in place to drive digitalization.**

- ▶ **Strategy** focuses on innovation strategy and digital transformation strategy.
- ▶ **Technology** explores the technology for infrastructure and cloud adoption.
- ▶ **People** looks at change management and transformation culture.
- ▶ **Data/intelligence** examines the management and use of data.
- ▶ **Process automation and change management** reviews the approach to both.

# The Drive for Digital Resilience (continued)

While the survey reveals that the overall average is low, **organizations that have invested in Stage 4 digital have moved ahead of their peers and set new benchmarks**, as shown by the gap between the 7% of organizations that are at Stage 4 (Digital Resilient) versus those that are in Stages 1, 2, or 3.

## Worldwide overall scores by dimension



n = 900, Source: IDC's Google Cloud Digital Pulse Survey 2022






Focusing on just one dimension will not lead to digital resilience. **Progress has to be made across all dimensions to build digital resilience.**

## There are variations across the five dimensions:

- ▶ The most advanced dimensions that retailers have in place are **data intelligence and process**. However, though plans are in place, the second-lowest ranking dimension is technology implementation.
- ▶ What marks the Digital Resilient group is that they have **optimized their strategy and people dimensions and are continually investing in technology**. As a result, they enjoy better business outcomes.
- ▶ There is significant variation across **geographies and retail segments**.

# Retail Digital Pulse Index

The Retail Digital Pulse Index was developed by analyzing survey results from 900 retailers that employ at least 250 employees in **North America (NA)**; **Latin America (LATAM)**; **Europe, Middle East, Africa (EMEA)**; and **Asia/Pacific (AP)** regions. The respondents were management level, including business owners, CEOs, and department heads with influence over IT purchasing decisions. They were scored on their progress in digital resilience across five areas: **strategy, technology, people, data/intelligence, and process**.

|  | STAGE 1  | STAGE 2   | STAGE 3  | STAGE 4   |
|--|--|---|--|---|
|  | Digital Participant  | Digital Explorer  | Digital Aspirant   | Digital Resilient   |
|  <b>Strategy</b>            | No long-term innovation strategy; fragmented DX initiatives  | Tactical DX initiatives; focused on immediate customer and product gains                  | DX strategy across products, services, and customer experiences; tactical in nature                        | Dynamic and disruptive DX strategy  |
|  <b>Technology</b>         | Legacy and uncoordinated groups of IT infrastructure with no or limited focus on leveraging cloud and data platforms | Cross-channel data sharing supported by siloed business processes and applications        | Data sharing between multiple ecosystem partners supported by cloud-enabled analytics frameworks           | Cloud-first strategy with outcomes such as hyper-personalization driven by cognitive and contextual data inputs |
|  <b>People</b>            | Limited by change management challenges and lack of executive support for DX initiatives                             | Ad hoc DX initiatives driven by cross-functional teams across specific business functions | Culture transformation and end-to-end DX program in place; limited budget and resources for implementation | Culture transformation driven by executive leadership with organizationwide participation in DX initiatives     |
|  <b>Data/Intelligence</b> | Lack of business data availability and taxonomy  | Data analysis done in silos; support for limited process objectives                       | Data management platforms available across the organization with standard definition sets                  | Holistic insights; data monetization a key aspect of business strategy  |
|  <b>Process</b>           | Lack of continuous process improvement initiatives   | Process changes reactive in nature; launched to address ad hoc issues                     | Focused teams that manage continuous process improvement and drive business innovations                    | Iterative process transformations embedded in organization's DNA  |

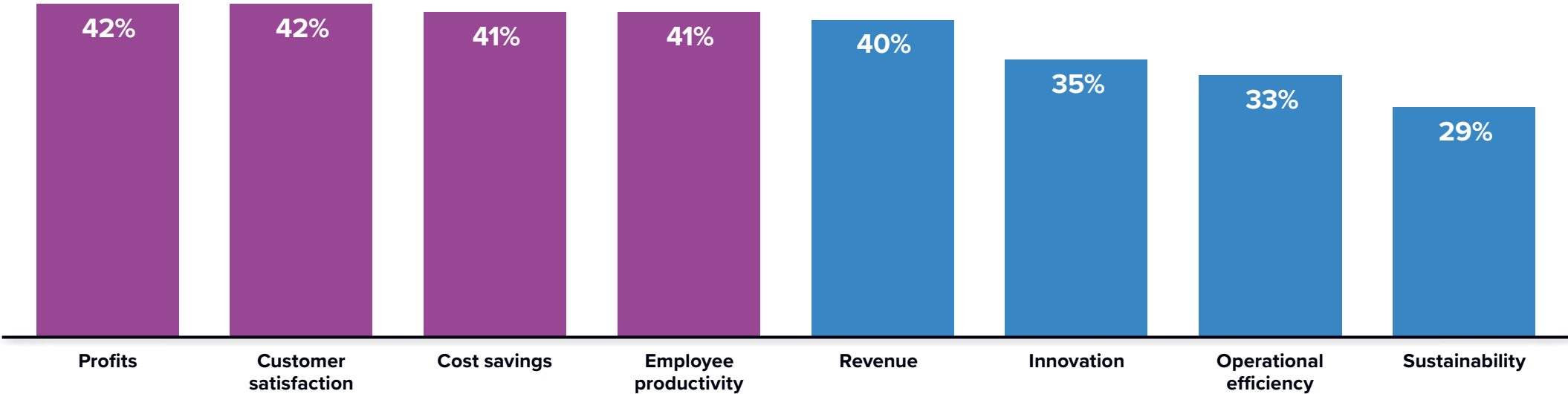


# Digital Resilient Organizations Enjoy Better Business Outcomes

The primary driver for C-level decision makers in retail organizations is to **improve their business outcomes by strengthening their digital operations and digital resiliency.**

- ▶ **Profits, customer satisfaction, cost savings, and employee productivity were the top business outcomes** as a result of their investments in digitalization.
- ▶ Digital Resilient organizations achieved from **30% to 2X better business outcomes.**

Top Business Outcomes for Retailers via Digitalization of Investments and Digital Transformation

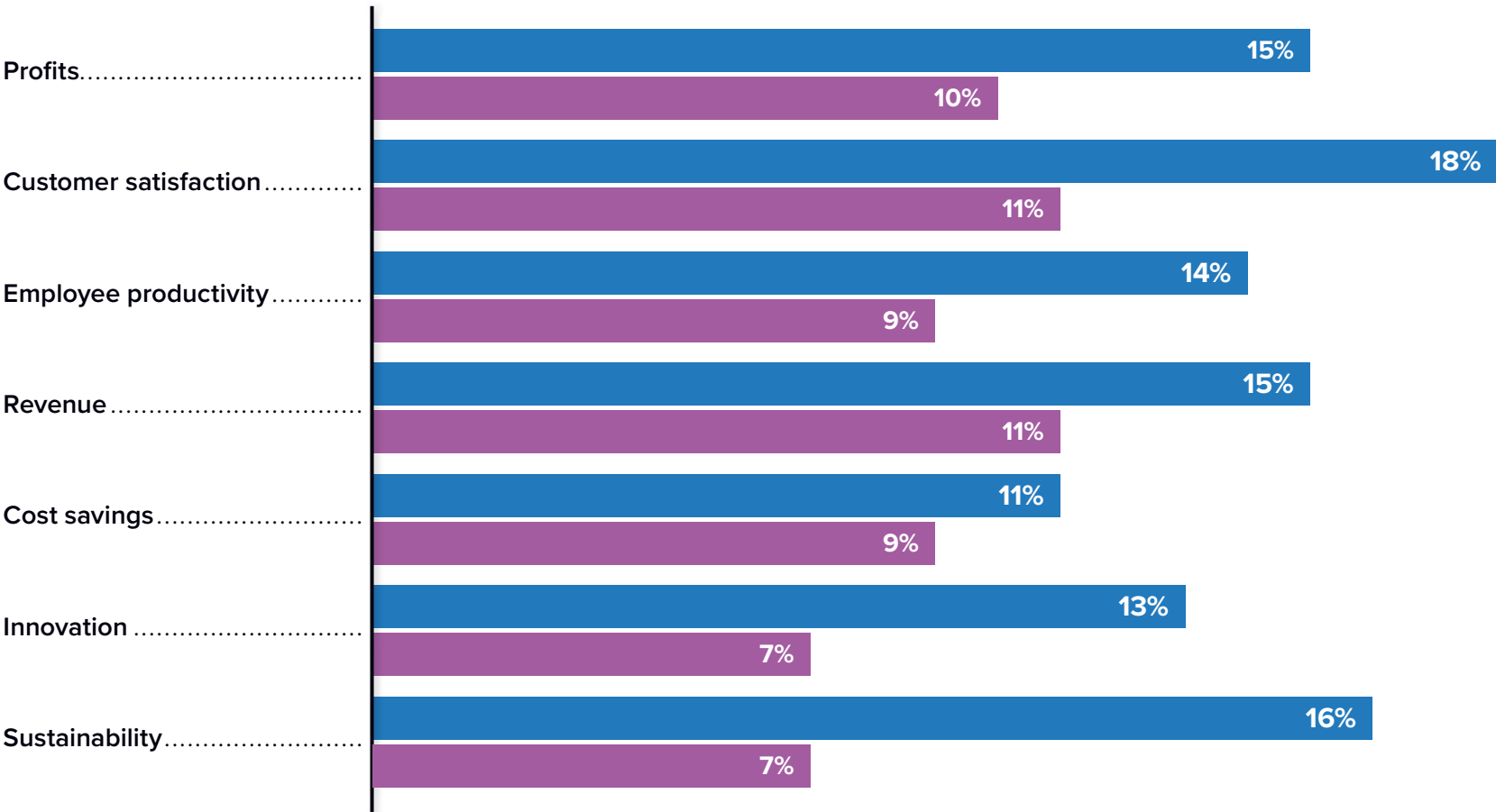


n = 900, Source: IDC's Google Cloud Digital Pulse Survey 2022

# Digital Resilient Organizations Enjoy Better Business Outcomes (continued)

## Annual Business Outcome Improvements Over Last Two Years

■ Digital Resilient  
■ All others



n = 900, Source: IDC's Google Cloud Digital Pulse Survey 2022

# The Path to Resilience Requires Transformation

## Retailers increase IT spend for resilience.

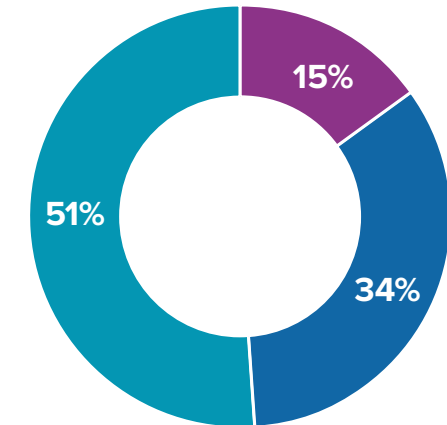
- ▶ **IT spending worldwide is rising in 2022**, outpacing growth in 2021.
- ▶ Half of retailers reported **actual IT spending in 2021 was higher** than originally budgeted, especially in North America (55.3%).
- ▶ **IT spending will rise even more rapidly in 2022**; 57.2% of retailers worldwide expect IT spending in 2022 will exceed 2021 levels.
- ▶ **Retailers reported an average increase of 17.9% in 2022** after being over budget by an average of 15.9% in 2021.

## Investing in technology is more important than ever.

- ▶ **Business digitization is a core part of retail strategy** to become more resilient and customer-centric, responding better to changing customer needs from COVID-19, inflation, geopolitical pressures, and changing lifestyles.
- ▶ Retailers in the Digital Resilient group (Stage 4) indicate **higher-than-average IT spending in 2021 and 2022**.

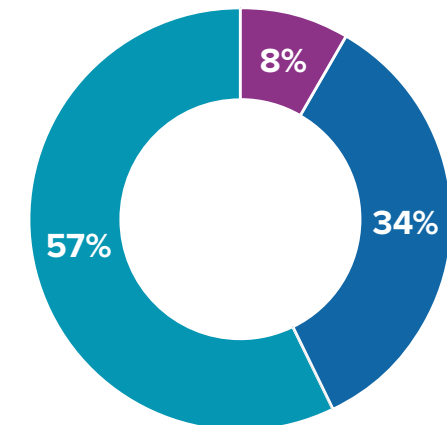
### IT Spending in 2021

- Lower than expected
- No impact
- Higher than expected



### IT Spending in 2022

- Lower than in 2021
- No impact
- Higher than in 2021



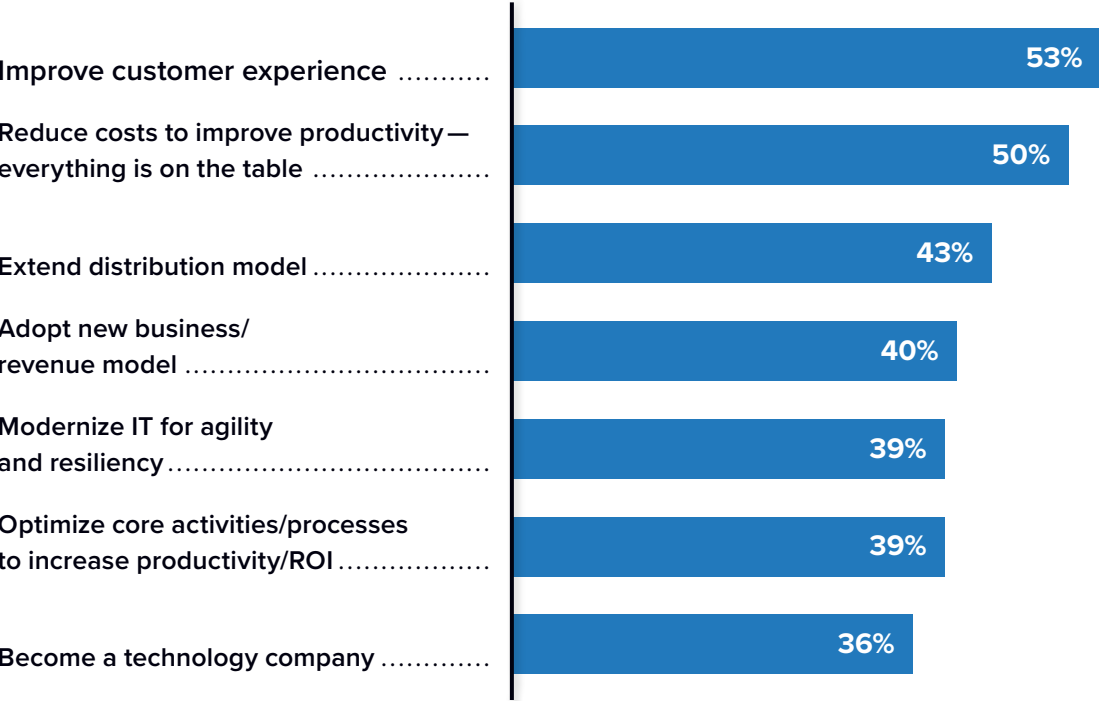
# Companies Fall Behind by Failing to Invest in Transformation

**Resilience and efficiencies result from data and AI-driven improvements in customer experience, omnichannel commerce, and supply chain planning and execution.**

- ▶ Retailers transform most by improving customer experience and productivity or efficiency, each mentioned by more than half of retailers. Engaging customers and reducing costs lead to profitability and growth.
- ▶ Investments in digital modernization of IT for agility and resiliency have improved productivity by double digits.
- ▶ Retailers are looking for new ways to grow. They are extending the distribution model to offer more convenient services or to mitigate risks in supply chain disruption.
- ▶ Partnering with or acquiring adjacent businesses provides new revenue streams and enlarges the community, creating a one-stop shopping experience that encourages greater loyalty and engagement.

## How will your company transform its business model over the next three years?

Choose top 3 areas.





# Improving Customer Experience and Acquisition Are Innovation Priorities for Resilience

**Improving store operations experience and customer acquisition are top priorities globally** as retailers are keen to win new customers and keep them, growing both frequency and basket size.

- ▶ When asked to specify the top 3 areas for digital innovation investment, **North American retailers were more apt to say store operations (43%)**.
- ▶ **Asia/Pacific retailers** were the least focused on store operations (33%) and instead **give more priority to logistics and fulfillment**.
- ▶ **Latin America and EMEA** are most likely to be **focused on customer acquisition**, such as loyalty programs, marketing optimization, and personalization.

Global Innovation Priorities: Top 5 by Region

| Areas for Innovation<br><i>rank in order of importance</i>   | NA | LATAM | EMEA | AP |
|--|----|-------|------|----|
| <b>1</b> Store operations; seamless customer experience      | 1  | 2     | 3    |    |
| <b>2</b> Customer acquisition                                | 5  | 1     | 1    | 1  |
| <b>3</b> Logistics and fulfillment                           | 3  |       | 4    | 2  |
| <b>4</b> Omnichannel commerce                                | 4  | 3     | 2    |    |
| <b>5</b> Human resources and finance; corporate applications | 2  | 5     |      | 4  |
| Merchandising: demand planning, promotion/pricing, inventory |    |       | 5    | 5  |
| Product life-cycle management, assortment optimization       |    |       |      | 3  |
| Other enabling technologies and tools                        |    | 4     |      |    |

n = 900, Source: IDC's Google Cloud Digital Pulse Survey 2022

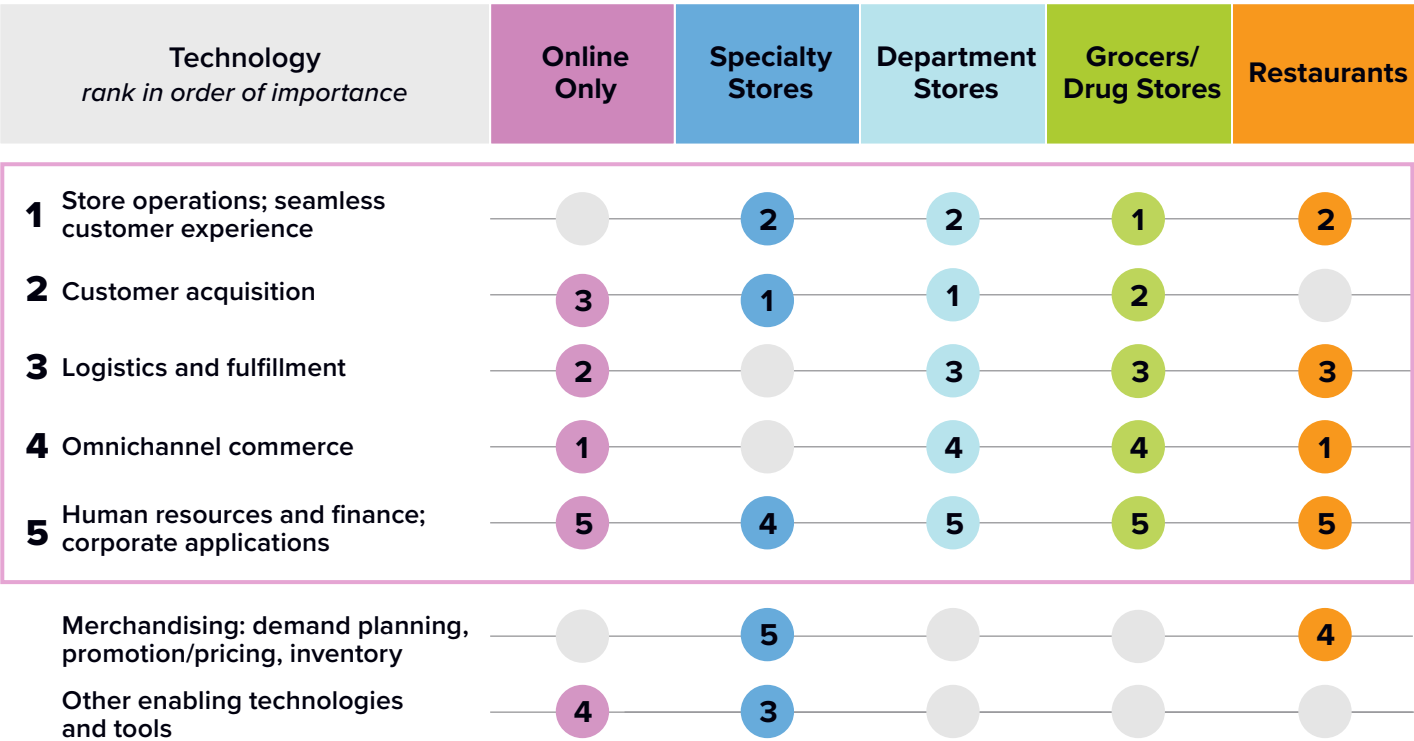
# Use Case Priorities by Subsegment

## Show Important Differences

**Store operations and customer acquisition** are the top innovation investments in every segment except online retailers where store operations are less applicable.

- ▶ **Customer acquisition** is the top priority for specialty (42%) and department stores (44%).
- ▶ **Logistics and fulfillment** ranked second or third for all segments except specialty retail.
- ▶ Online retailers ranked **omnichannel commerce** as their number 1 priority.
- ▶ **Omnichannel commerce** is also a top priority for restaurants (42%), which are currently balancing physical business needs with increased digital orders and delivery needs.

Global Use Case Priorities: Top 5 by Subsegment



n = 900, Source: IDC's Google Cloud Digital Pulse Survey 2022

# Digitally Mature Retailers Focus on Omnichannel Experience and Advanced Store Operations

The journey to digital resilience is not simple. Retailers need to integrate many use cases using **the right underlying technology and a digital framework that leverages data** to make better business decisions and automate processes.



# Digitally Mature Retailers Focus on Omnichannel Experience and Advanced Store Operations

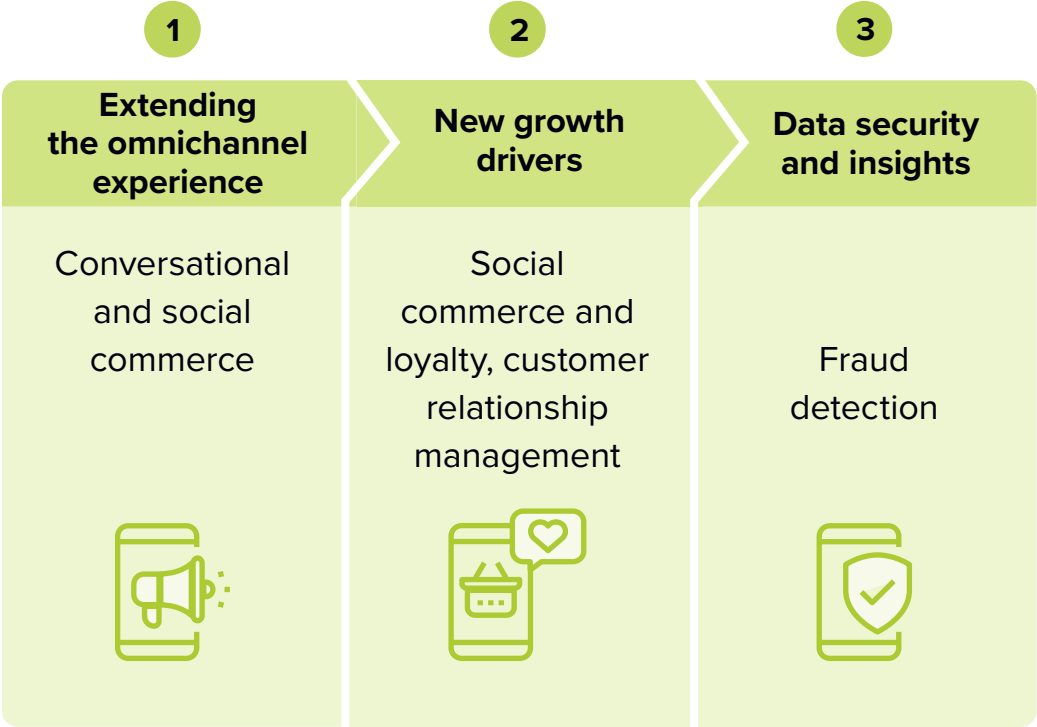
(continued)

Global Customer-Centric Use Cases: Top 5

| Use Cases<br><i>rank in order of importance</i> | STAGE 1<br>Digital Participant | STAGE 2<br>Digital Explorer | STAGE 3<br>Digital Aspirant | STAGE 4<br>Digital Resilient |
|---|--------------------------------|-----------------------------|-----------------------------|------------------------------|
| <b>1</b> Loyalty program/CRM                    | 2                              | 2                           | 4                           | 1                            |
| <b>2</b> Marketing optimization                 | 1                              | 5                           | 2                           | 2                            |
| <b>3</b> Personalization                        | 3                              | 1                           | 3                           |                              |
| <b>4</b> Customer data platform                 | 4                              | 3                           | 1                           | 4                            |
| <b>5</b> Product discovery and search           |                                | 4                           |                             | 5                            |
| Fraud detection                                 |                                |                             |                             | 3                            |
| Social commerce                                 |                                |                             | 5                           |                              |
| Optimized returns                               |                                |                             |                             |                              |
| Customer care chatbots                          | 5                              |                             |                             |                              |

n = 900, Source: IDC's Google Cloud Digital Pulse Survey 2022

Stage 4 Retailers Pivot Towards More Advanced Use Cases





# Retailers Invest in Technologies to Improve Customer Engagement



**Online** Top investment area is to enable “physical” retail virtually and improve supply chain metrics.

Online retailers are largely at Stage 3 with fewer at Stage 4. Innovation is concentrated in areas where store retailers have leverage, including virtual try-ons, inventory optimization, and last-mile fulfillment. Customer-facing use cases such as loyalty, personalization, and marketing optimization follow.



**Restaurants** Investments center on store profitability.

Restaurants are the most digitally mature segment with the fewest in Stage 1, and 49% in Stages 3 or 4. Restaurants are prioritizing data-driven supply chain and merchandising investments, including pricing optimization, inventory optimization, and demand planning. They are also optimizing the digital experience, product search and discovery, personalized recommendations, and returns optimization.



**Specialty** Investments focus on marketing and loyalty.

Specialty stores are focused on customer loyalty/CRM, marketing optimization, personalization, and store operations as extended store closures in 2020 changed consumers' store loyalties.



**Department stores** Priority investments go to omnichannel customer targeting and fulfillment.

Department stores are most focused on improving the customer experience by optimizing omni-fulfillment, personalization, and marketing, as well as improving the stores' ability to pick/pack orders and optimize associate task assignments.



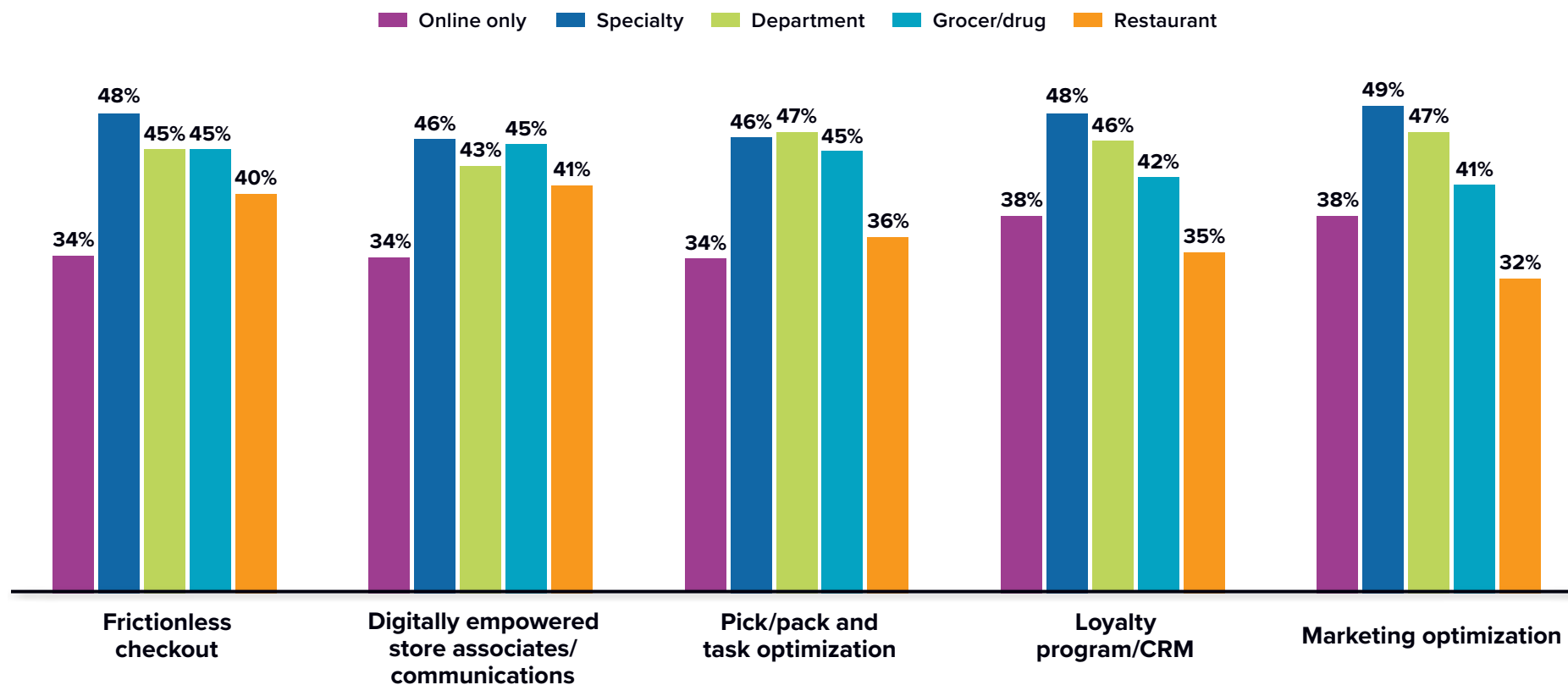
**Grocery/drug** Stores are extremely focused on the omnichannel value of stores.

Grocery stores' top investments are digitally empowered store associates and communications, frictionless checkout, pick/pack and task optimization, and workforce productivity/labor management.

# Retailers Invest in Technologies to Improve Customer Engagement (continued)

## Top 5 Customer-Facing Digital Innovations

Have you implemented, or do you plan to invest in the following digital innovations over the next six months?



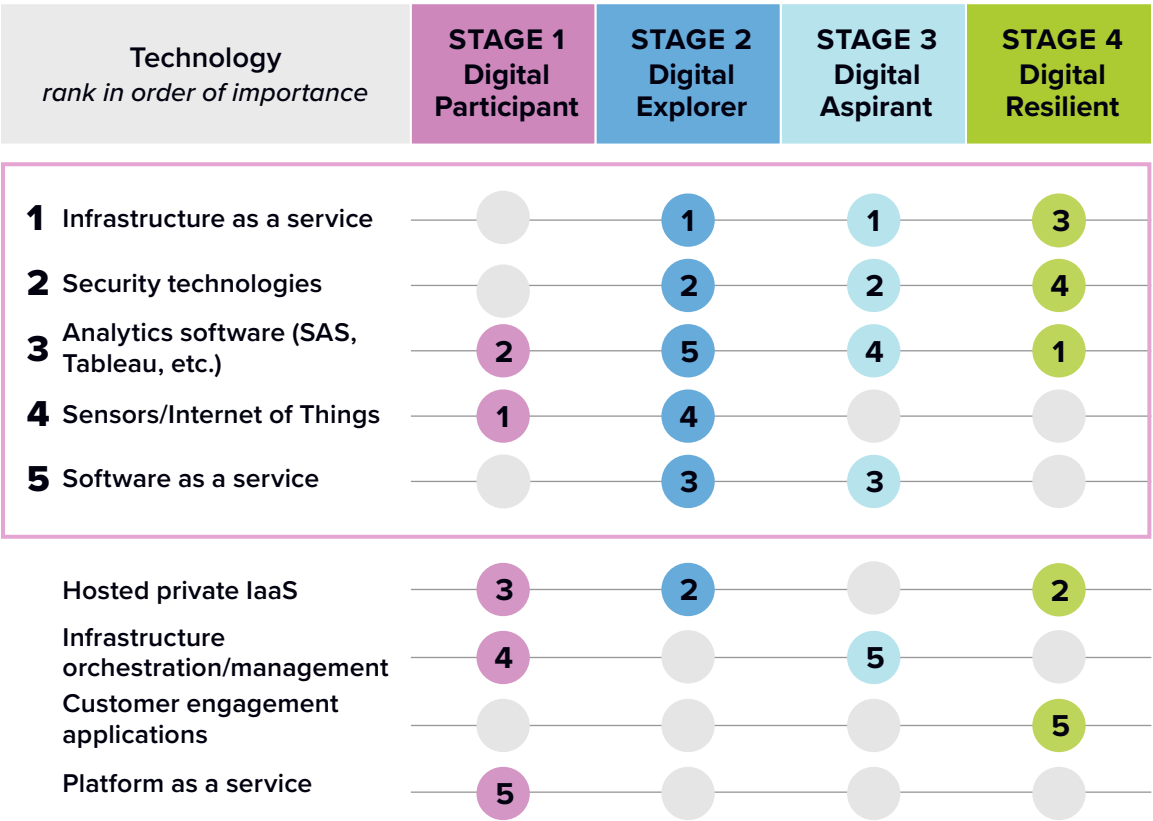
n = 900, Source: IDC's Google Cloud Digital Pulse Survey 2022

# Cloud and AI Underpin Technology Adoption Globally

**Technology adoption across the different stages** shows a distinct difference between retailers in Stage 4 and those in Stages 1 and 2, with slight variations from Stage 3.

- ▶ Stages 2 and 3 ranked **infrastructure as a service (IaaS)** number 1.
- ▶ Stage 4 retailers have a key focus on **analytics software** (ranked number 1) and **advanced as-a-service technologies**, with **hosted private IaaS** ranked second and **IaaS** ranked third.
- ▶ **Security technologies** ranked second overall, but even Stage 4 retailers continue to prioritize **security**.
- ▶ **Sensors/Internet of Things (IoT)** ranked number 4 overall and continue to increase in importance as retailers improve the accuracy of real-time information to strengthen the efficiency and profitability of the supply chain.

Global Technology Adoption: Top 5 by Digital Maturity Stage



n = 900, Source: IDC's Google Cloud Digital Pulse Survey 2022

# Cloud Adoption and Security Are Priorities for Most Subsegments

Cloud adoption and security technologies are top investments in each subsegment surveyed, with at least 70% adoption in every segment except restaurants, whose technology adoption is lower than any other segment, but still ranked them as the top two investments.

Sensors/IoT are a top technology investment in each subsegment, especially specialty stores (73%), department stores (72%), and restaurants (66% but ranked third).

Global Technology Priorities: Top 5 by Subsegment

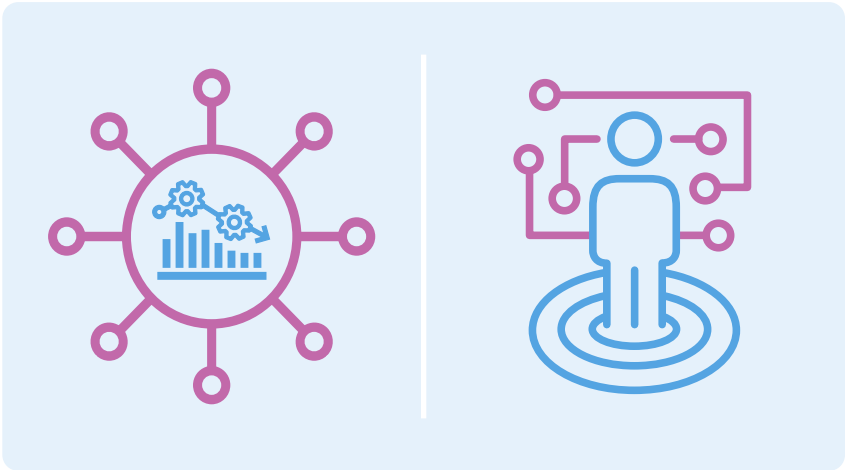
| Technology<br>rank in order of importance        | Online Only | Specialty Stores | Department Stores | Grocers/<br>Drug Stores | Restaurants |
|--|-------------|------------------|-------------------|-------------------------|-------------|
| <b>1</b> Infrastructure as a service             | 5           | 1                | 1                 | 1                       | 1           |
| <b>2</b> Security technologies                   | 1           | 3                | 3                 | 2                       | 2           |
| <b>3</b> Analytics software (SAS, Tableau, etc.) |             | 5                | 5                 |                         |             |
| <b>4</b> Sensors/Internet of Things              | 4           | 2                | 4                 | 4                       | 3           |
| <b>5</b> Software as a service                   | 2           |                  | 2                 | 5                       | 4           |
| Hosted private IaaS                              |             | 4                |                   | 3                       |             |
| Platform as a service                            |             |                  |                   |                         | 5           |
| Edge infrastructure                              | 3           |                  |                   |                         |             |

n = 900, Source: IDC's Google Cloud Digital Pulse Survey 2022



# Biggest Challenges Continue to Be Budget and Skills

Globally, retailers cited many challenges to digitalization, with **the lack of budget or management commitment** and the **shortage of digital skills and talent** topping the list.

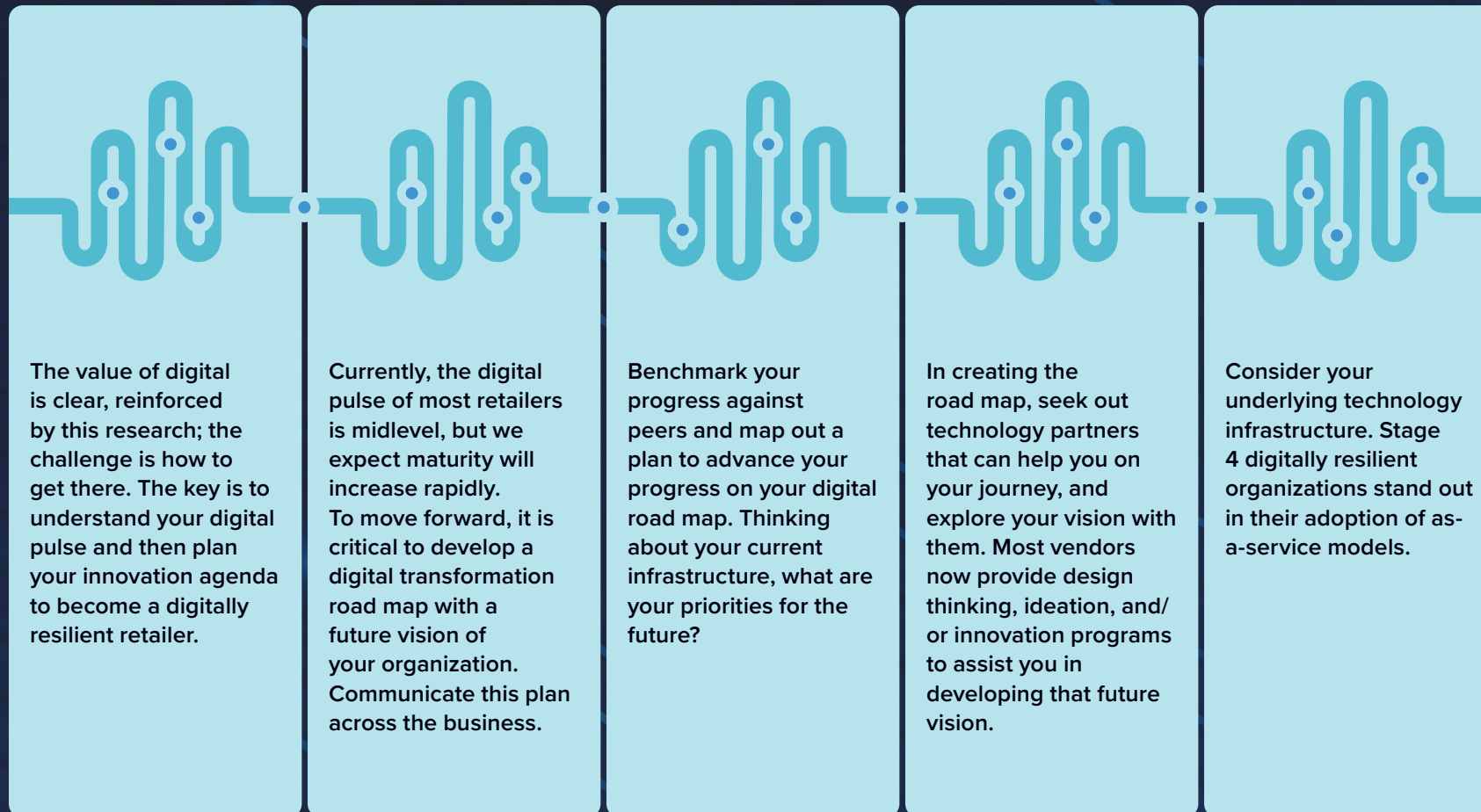


Biggest Challenges Globally: Top 5 by Region

| Challenge<br><i>rank in order of importance</i>  | NA | LATAM | EMEA | AP |
|--|----|-------|------|----|
| <b>1</b> Lack of budget/<br>management commitment  | 2  | 1     | 1    | 2  |
| <b>2</b> Shortage of digital skills<br>and talent  | 3  | 2     | 4    | 3  |
| <b>3</b> Digital transformation is<br>not understood at senior<br>levels in the organization | 1  | 5     | 3    | 5  |
| <b>4</b> Lack of operational and<br>customer data  | 5  | 4     | 2    | 4  |
| <b>5</b> Lack of proper digital<br>transformation road map                                   |    | 3     | 5    | 1  |
| Lack of digital mindset/<br>cultural   | 4  |       |      |    |

n = 900, Source: IDC's Google Cloud Digital Pulse Survey 2022

# Essential Guidance



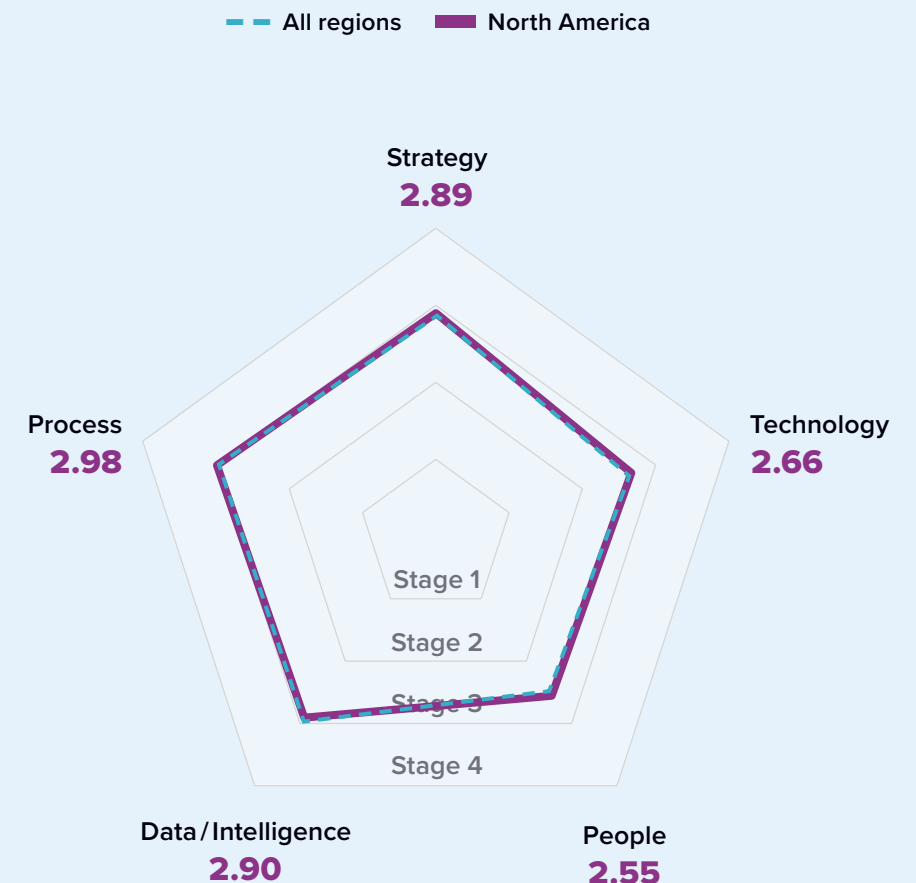
## A guide for the future:

- ✓ **Embrace** digital.
- ✓ **Develop** a clear road map for use cases and technologies.
- ✓ **Plan** to leverage the map to focus on the key areas in your digital transformation progression.
- ✓ **Adopt** as-a-service technologies as a key differentiator.
- ✓ **Partner** with technology providers that can help you; explore your vision with them.

# North America Market Highlights

North America has the largest number of retailers and IT spending, and digital maturity is above average compared to their international counterparts. North American retailers lead all other regions in strategy and technology maturity and overall have the largest percentage of organizations in Stages 3 and 4 (36%).

- ▶ Both revenue and profitability drive business transformation in North America, but **senior management must better understand the need for digital transformation and commit budgets to push innovation forward.**
- ▶ **Store operations innovations, including a digitally enabled workforce, task optimization, and frictionless checkout,** are the highest priorities in North America.
- ▶ North American retailers are migrating from legacy systems to **safe and scalable IaaS solutions, with analytics, SaaS applications, as well as security technology** to gain more resiliency and innovative services.



n = 900 all regions, n = 300 North America, Source: IDC's Google Cloud Digital Pulse Survey 2022

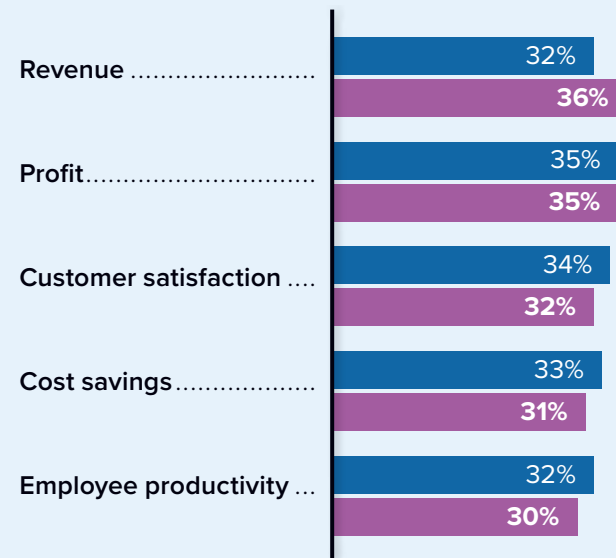
# Retail Digital Pulse Index: North America

|               | Average Stage | STAGE 1<br>Digital Participant | STAGE 2<br>Digital Explorer | STAGE 3<br>Digital Aspirant | STAGE 4<br>Digital Resilient |
|---------------|---------------|--------------------------------|-----------------------------|-----------------------------|------------------------------|
| All regions   | 2.21          | 20%                            | 47%                         | 26%                         | 7%                           |
| North America | 2.21          | 20%                            | 44%                         | 30%                         | 6%                           |

| Use Case                                | Average all regions | North America |
|---|---------------------|---------------|
| Digitally empowered store associates    | 42%                 | 47%           |
| Frictionless checkout                   | 43%                 | 46%           |
| Workforce productivity/labor management | 40%                 | 45%           |
| Pick/pack task optimization             | 42%                 | 44%           |
| Shrink reduction                        | 40%                 | 44%           |

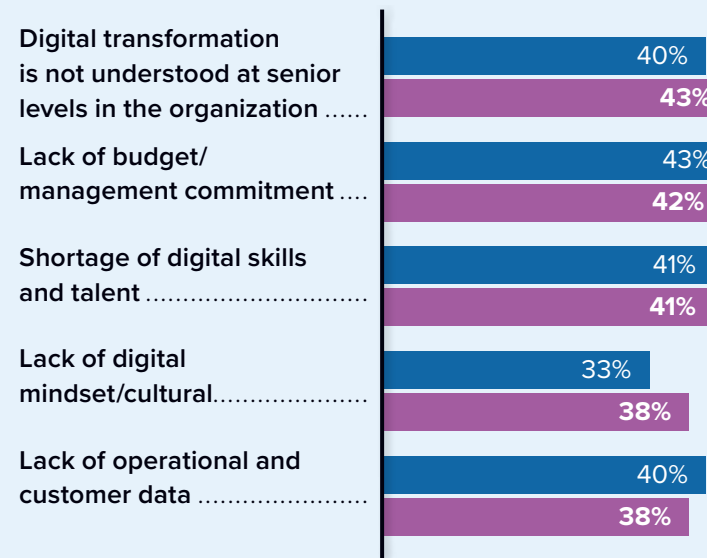
## Top 5 Business Priorities

■ All regions ■ North America



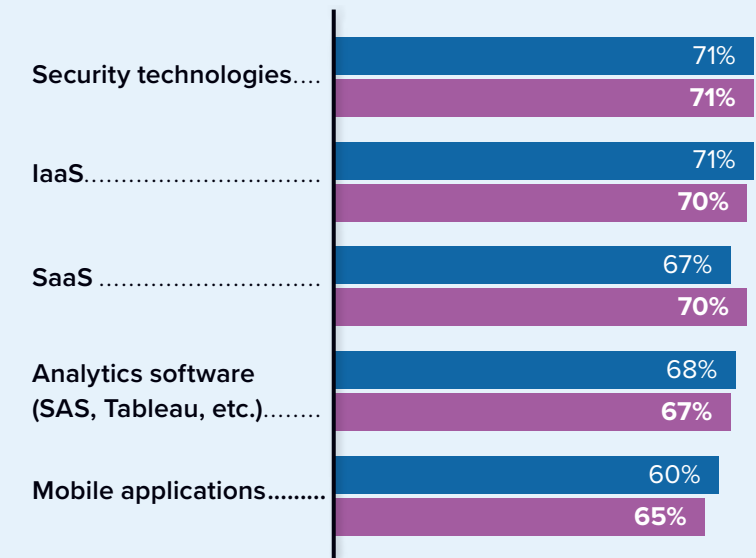
## Top 5 Biggest Challenges in Digital Transformation/Digitalization

■ All regions ■ North America



## Top 5 Technologies Implemented or Planned for the Next Six Months

■ All regions ■ North America

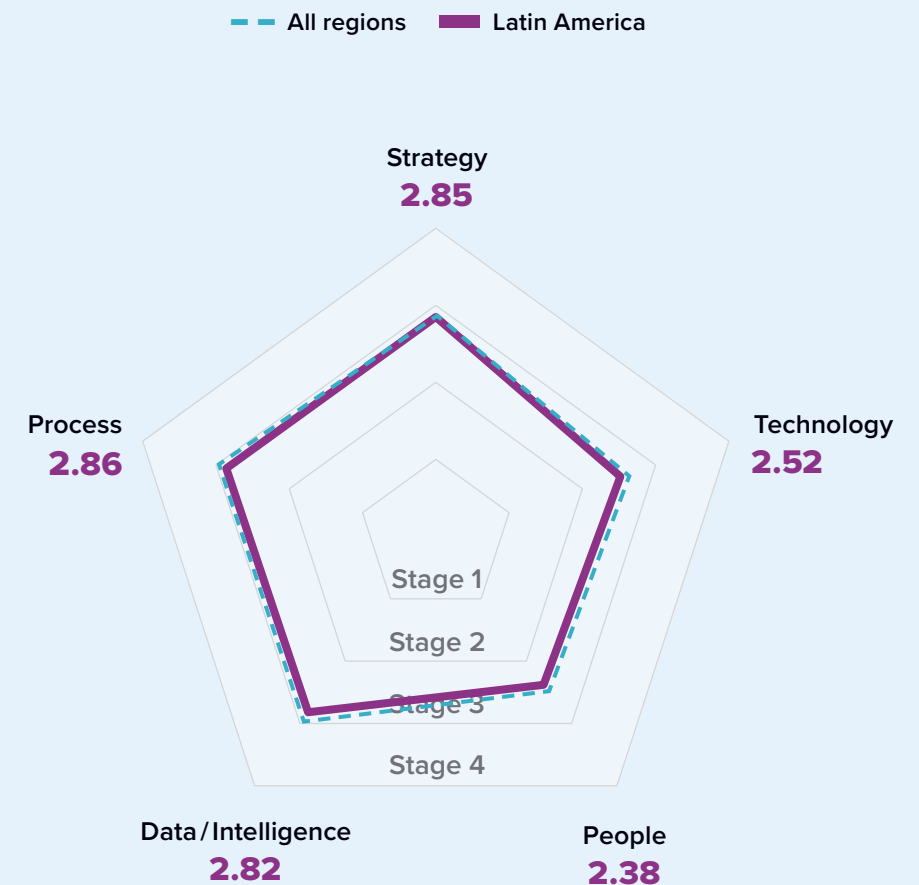


n = 900 all regions, n = 300 North America, Source: IDC's Google Cloud Digital Pulse Survey 2022

# Latin America Market Highlights

**Latin America has the lowest maturity level;** 75% are at either Stages 1 or 2 compared to 67% on average and only 4% reached Stage 4, far less than any other region.

- ▶ **Improving customer satisfaction and cost savings** are top priorities driving digitalization.
- ▶ **Retailers in Latin America have higher-than-average investment** in sensors/Internet of Things (72% versus 67% average) and are focused on cloud infrastructure (primarily IaaS) and security.
- ▶ Focus is strongly on **customer satisfaction and customer acquisition**.
- ▶ Top use cases are **loyalty/CRM and marketing optimization, as well as frictionless checkout and inventory optimization**.
- ▶ Back-office functions such as **workforce productivity, inventory optimization, and task optimization** are also the top planned or implemented use cases in Latin America.
- ▶ **Budget constraints and lack of digital skills and talent** pose the greatest challenges to greater digital investment.



n = 900 all regions, n = 150 Latin America, Source: IDC's Google Cloud Digital Pulse Survey 2022

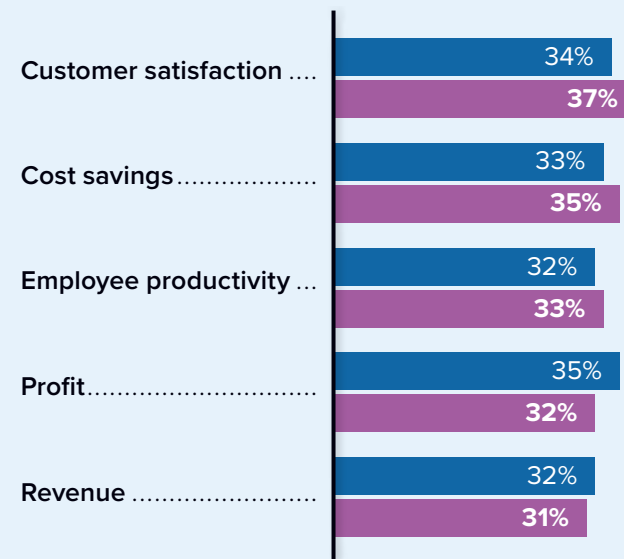
# Retail Digital Pulse Index: Latin America

|               | Average Stage | STAGE 1<br>Digital Participant | STAGE 2<br>Digital Explorer | STAGE 3<br>Digital Aspirant | STAGE 4<br>Digital Resilient |
|---------------|---------------|--------------------------------|-----------------------------|-----------------------------|------------------------------|
| All regions   | 2.21          | 20%                            | 47%                         | 26%                         | 7%                           |
| Latin America | 1.02          | 24%                            | 51%                         | 21%                         | 4%                           |

| Use Case                    | Average all regions | Latin America |
|-----------------------------|---------------------|---------------|
| Pick/pack task optimization | 42%                 | 46%           |
| Frictionless checkout       | 43%                 | 45%           |
| Inventory optimization      | 38%                 | 44%           |
| Loyalty program/CRM         | 42%                 | 44%           |
| Marketing optimization      | 41%                 | 43%           |

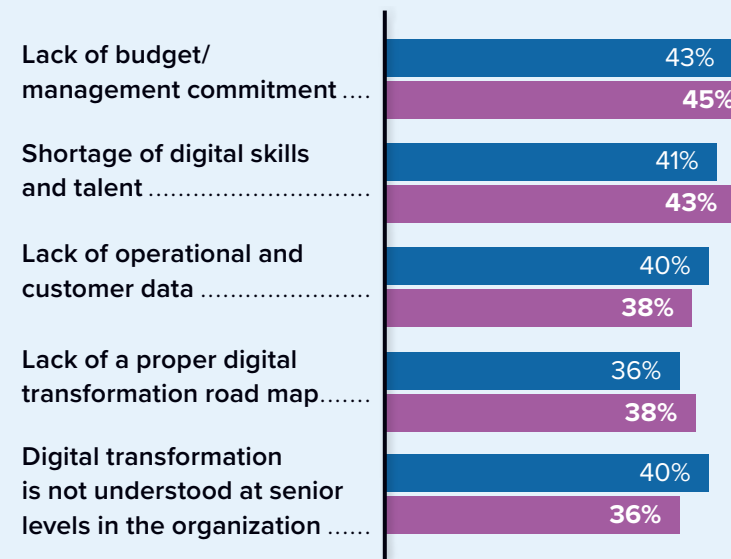
## Top 5 Business Priorities

■ All regions ■ Latin America



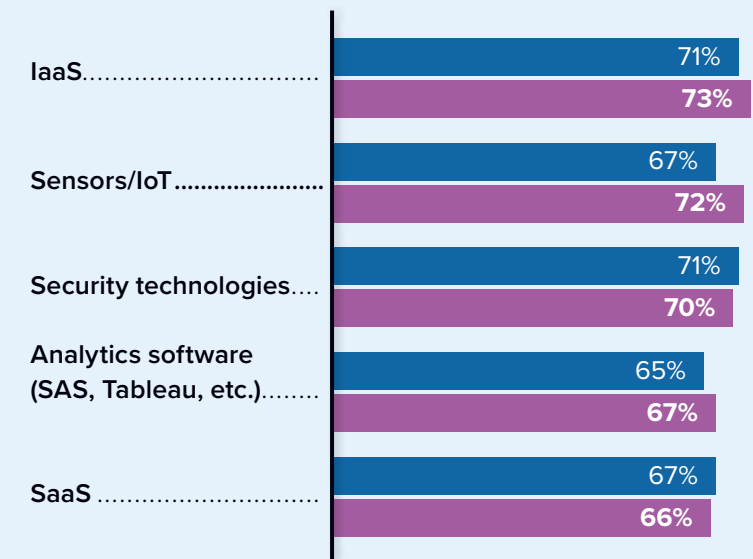
## Top 5 Biggest Challenges in Digital Transformation/Digitalization

■ All regions ■ Latin America



## Top 5 Technologies Implemented or Planned for the Next Six Months

■ All regions ■ Latin America



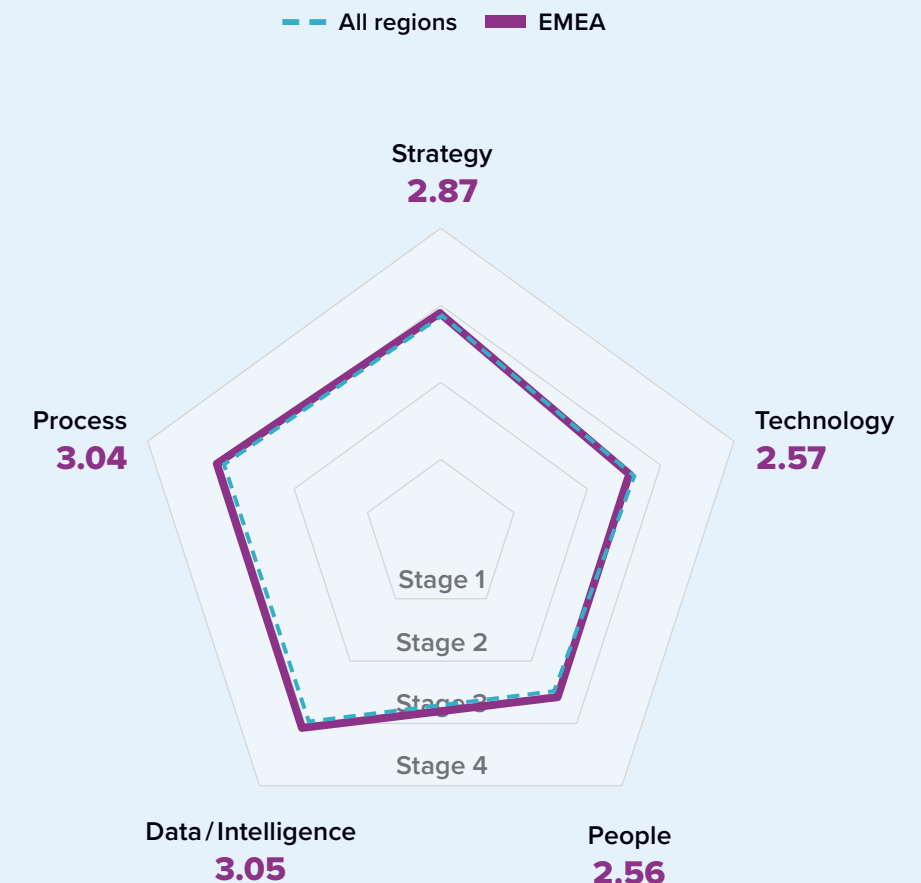
n = 900 all regions, n = 300 Latin America, Source: IDC's Google Cloud Digital Pulse Survey 2022



# EMEA Market Highlights

**EMEA is the most digitally mature region in the world;** 34% are at Stages 3 or 4, and it has the smallest number in Stage 1 (16% versus 20% average).

- ▶ **Profits and employee productivity** are the top business priorities in EMEA. European workforce policies with longer holidays make employee productivity increasingly important.
- ▶ Legacy systems prevail in Europe, but European retailers are quickly adopting **hybrid cloud environments**.
- ▶ Hosted, private, and public IaaS implementations with **security technology, analytics, and sensors with IoT applications** are the top technology investments.
- ▶ **Customer acquisition and omnichannel commerce** are the top innovation areas.
- ▶ **Loyalty programs, marketing optimization, personalization, and customer data platforms** are the top use cases.



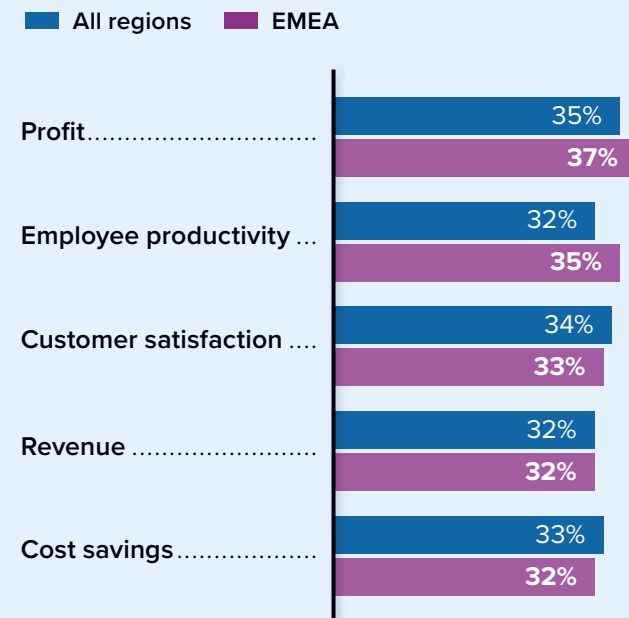
n = 900 all regions, n = 250 EMEA, Source: IDC's Google Cloud Digital Pulse Survey 2022

# Retail Digital Pulse Index: EMEA

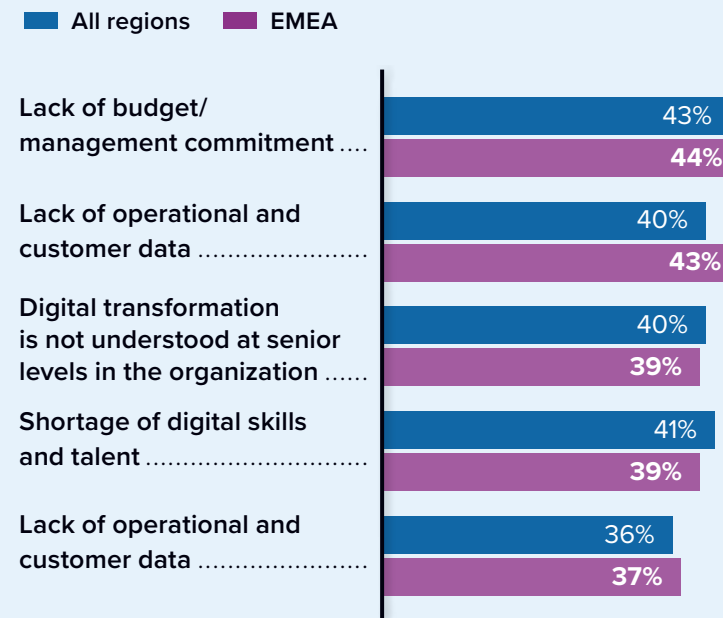
|             | Average Stage | STAGE 1<br>Digital Participant | STAGE 2<br>Digital Explorer | STAGE 3<br>Digital Aspirant | STAGE 4<br>Digital Resilient |
|-------------|---------------|--------------------------------|-----------------------------|-----------------------------|------------------------------|
| All regions | 2.21          | 20%                            | 47%                         | 26%                         | 7%                           |
| EMEA        | 2.27          | 16%                            | 50%                         | 25%                         | 9%                           |

| Use Case                             | Average all regions | EMEA |
|--------------------------------------|---------------------|------|
| Loyalty program/CRM                  | 42%                 | 44%  |
| Marketing optimization               | 41%                 | 43%  |
| Personalization                      | 41%                 | 43%  |
| Digitally empowered store associates | 42%                 | 43%  |
| Customer data platform               | 41%                 | 42%  |

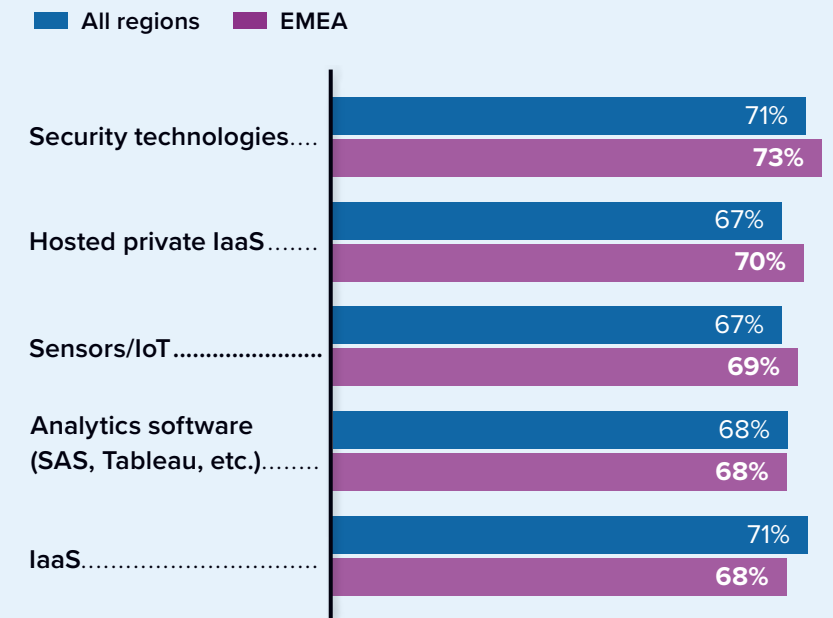
## Top 5 Business Priorities



## Top 5 Biggest Challenges in Digital Transformation/Digitalization



## Top 5 Technologies Implemented or Planned for the Next Six Months

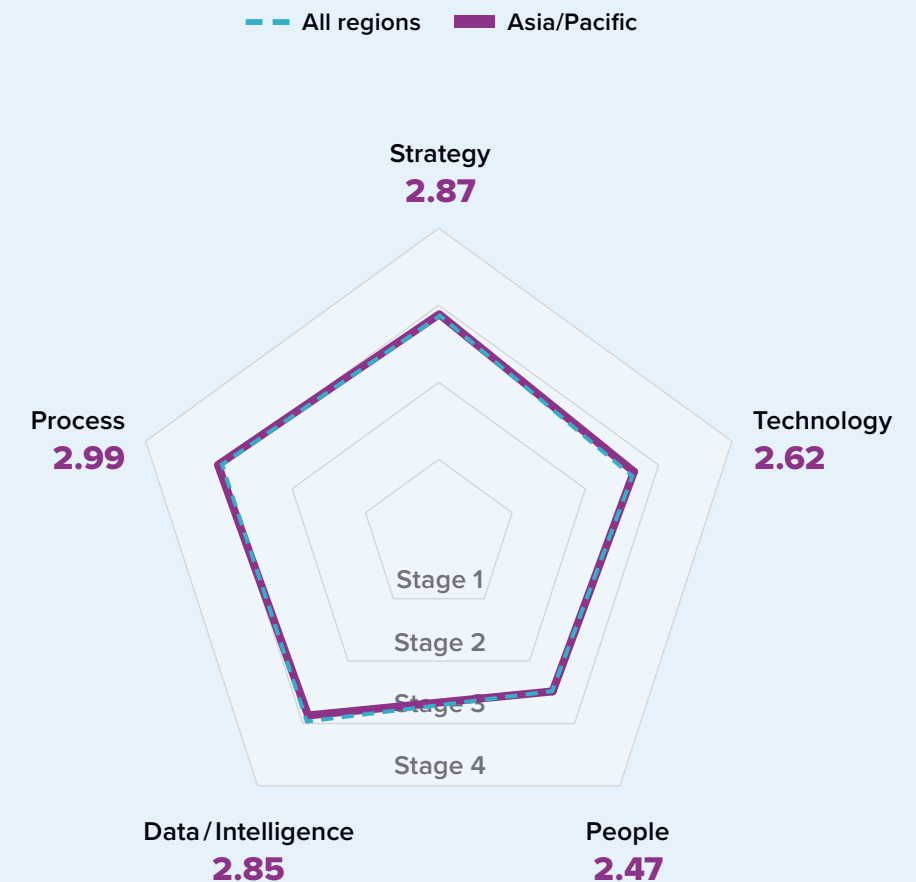


n = 900 all regions, n = 300 EMEA, Source: IDC's Google Cloud Digital Pulse Survey 2022

# Asia/Pacific Market Highlights

**Asia/Pacific is just below average in digital maturity**, with 35% of retailers in Stage 3 or Stage 4, including the highest in Stage 4 (10%).

- ▶ **Increasing profits, cost savings, and customer satisfaction** are top business priorities driving digitalization.
- ▶ Asia/Pacific retailers are most likely to cite the **lack of a digital road map and budget constraints** as the top challenges to digitalization.
- ▶ Cloud migration in Asia/Pacific is moving quickly to highly secure IaaS platforms as retailers focus on **analytics and IoT** to increase operational efficiency and improve the customer experience.
- ▶ **Customer acquisition and omnichannel commerce**, including loyalty programs, personalization, and inventory and omnichannel fulfillment optimization are top current and planned investments.



n = 900 all regions, n = 200 Asia/Pacific, Source: IDC's Google Cloud Digital Pulse Survey 2022

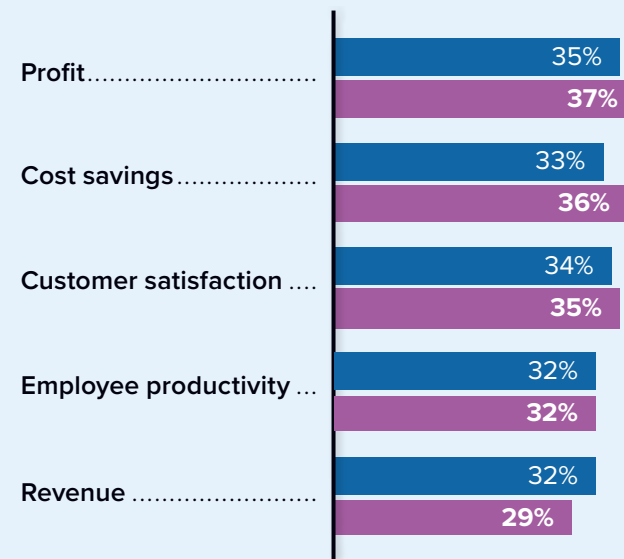
# Retail Digital Pulse Index: Asia/Pacific

|              | Average Stage | STAGE 1<br>Digital Participant | STAGE 2<br>Digital Explorer | STAGE 3<br>Digital Aspirant | STAGE 4<br>Digital Resilient |
|--------------|---------------|--------------------------------|-----------------------------|-----------------------------|------------------------------|
| All regions  | 2.21          | 20%                            | 47%                         | 26%                         | 7%                           |
| Asia/Pacific | <b>2.20</b>   | <b>21%</b>                     | <b>45%</b>                  | <b>25%</b>                  | <b>10%</b>                   |

| Use Case                      | Average all regions | Asia/Pacific |
|-------------------------------|---------------------|--------------|
| Loyalty program/CRM           | 42%                 | <b>43%</b>   |
| Marketing optimization        | 41%                 | <b>42%</b>   |
| Personalization               | 41%                 | <b>42%</b>   |
| Inventory optimization        | 39%                 | <b>41%</b>   |
| Omni-fulfillment optimization | 39%                 | <b>41%</b>   |

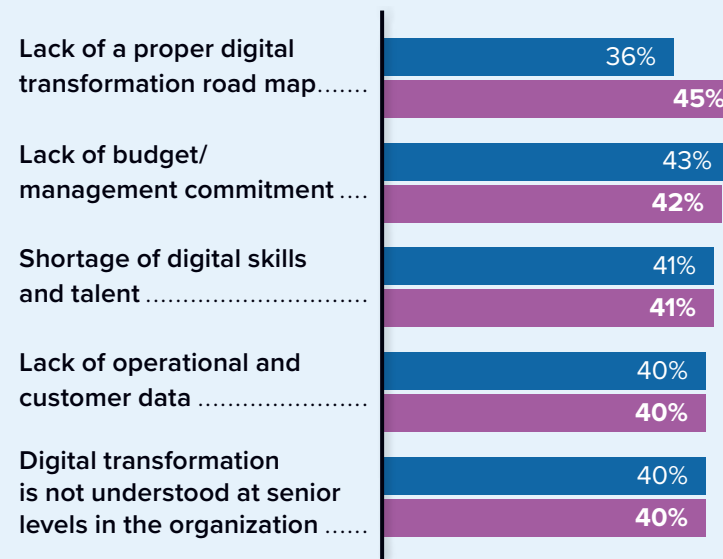
## Top 5 Business Priorities

■ All regions ■ Asia/Pacific



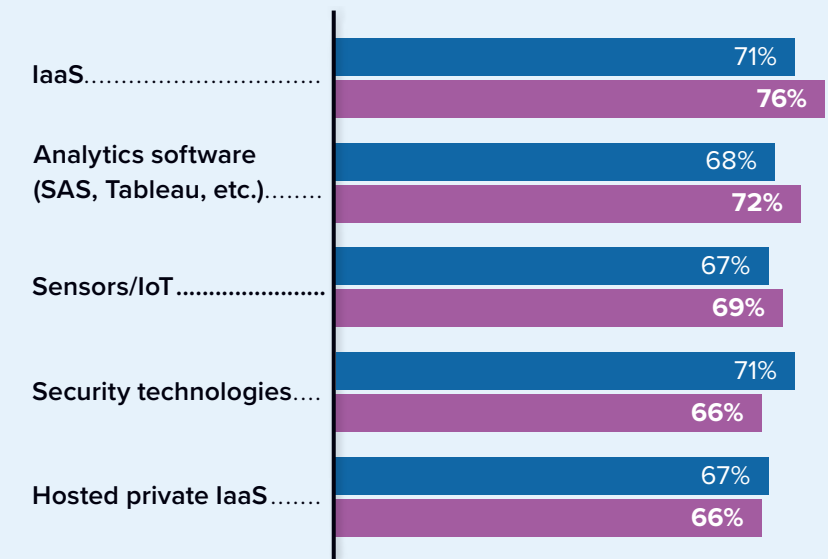
## Top 5 Biggest Challenges in Digital Transformation/Digitalization

■ All regions ■ Asia/Pacific



## Top 5 Technologies Implemented or Planned for the Next Six Months

■ All regions ■ Asia/Pacific



n = 900 all regions, n = 300 Asia/Pacific, Source: IDC's Google Cloud Digital Pulse Survey 2022

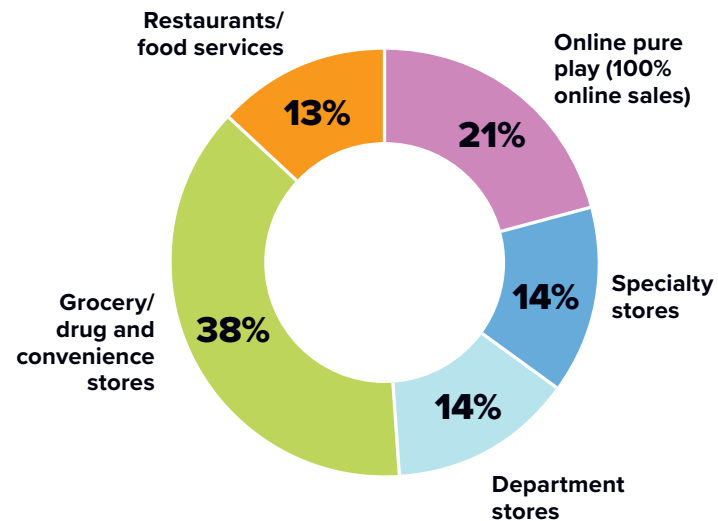
# Survey Demographics

## Survey sample size:

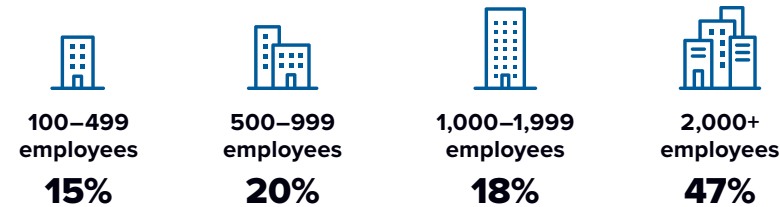
900 retail organizations across 24 countries in four regions

In November 2021, IDC conducted a global survey to capture the peer maturity data from 5 retail subsegments.

## RETAIL SUBSEGMENT



## COMPANY SIZE



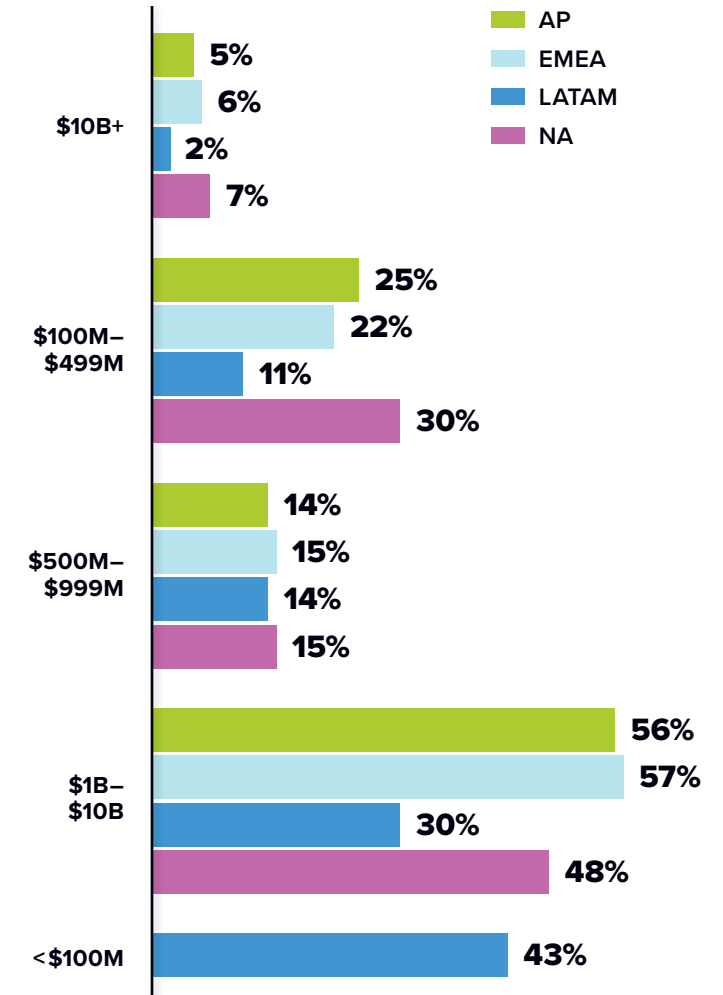
## GLOBAL REVENUE IN 2020 (APPROXIMATE)



## REGION



## REVENUE IN 2020 BY REGION



# About the Analysts

**Leslie Hand**

Group Vice President, IDC Retail and Financial Insights, IDC

As group vice president, Leslie Hand is responsible for the research direction and teams supporting IDC Retail Insights and IDC Financial Insights. Leslie works closely with the teams to help guide technology suppliers and buyers to develop best practices and strategies, aligned with where they are and where they want to go, leveraging IDC quantitative and qualitative data sets. Leslie's specific research focus includes a particular emphasis on the digital transformation of the future "store," which operates in real time, is AI-enabled, and connects omnichannel customers to the frictionless, "touch-free," and secure experience they desire.

[More about Leslie Hand](#)

**Karen Augustine**

Research Manager, IDC Financial Insights, IDC

Karen Augustine is research manager for IDC Financial Insights, responsible for supporting the global banking practice. Karen's core research coverage includes cloud deployment, developing fraud and security risks, and the push toward digital transformation of the worldwide banking industry.

[More about Karen Augustine](#)

**Randy Perry**

Vice President, Sales Enablement Practice, IDC

Randy Perry is vice president of the Sales Enablement Practice at IDC Worldwide Custom Solutions. He is responsible for helping IT providers sell their products and services to C-level decision makers through tying technology initiatives to improved business outcomes. He is currently working on multiple projects linking IT initiatives (cloud, mobility, AI, social, and IoT) to improving business outcomes such as increasing agility, improving customer experience, and becoming more innovative; and quantifying the financial impact in terms of business metrics (revenue growth and lower operational costs). In his previous role, he developed and has led IDC's Business Value Strategy practice for over 20 years. As IDC's thought leader in promoting the financial benefits of IT, he has pioneered return-on-investment and cost-of-ownership methodologies and business value sales tools development and sales training, completing more than 1,000 studies.

[More about Randy Perry](#)



# Message from the Sponsor

## Partnering With You to Transform Your Retail Business

Google Cloud partners with retailers across the world helping them become customer centric and data driven, capture digital and omnichannel growth, modernize the store experience, and drive efficient and sustainable operations. Built on the same flexible, reliable and scalable infrastructure that powers YouTube, Search and other Google products globally, Google Cloud's eCommerce hosting and data-scaling capabilities help retailers easily handle peak shopping moments, giving teams the confidence — and time — to focus on innovation and improving customer experience. In addition, integrated data and analytics offerings drive real-time insights and accelerate innovation through the smarter use of data at scale. Easy-to-use artificial intelligence and machine learning capabilities are embedded within core solutions and infrastructure, making them accessible and easily deployed across the retail enterprise.

[Learn more about Google Cloud for retail offerings](#)

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