2019 CIO Agenda: Secure the Foundation for Digital Business

Six key take-aways for a successful transformation
Prepare for the new era of enterprise IT

Digital at scale demands new ways of doing business:

- Better consumer engagement
- Faster delivery of digital ‘products’
- A sound, secure information and technology foundation
You and your IT organization are center stage in building this foundation.

The 2019 CIO Survey reveals that digital business is maturing from tentative experiment to application at massive scale.

This era of digitalization is focused on long-lasting, far-reaching business model changes in most sectors of the economy — changes that hinge not only on technology, but also on your leadership.

CIOs, you’re not alone on the journey. This guide compiles key insights and emerging best practices from the 2019 CIO Agenda report to help you:

• Compare your views of the future with over 3,000 peers
• Learn from top-performing organizations
• Refine your strategy for 2019 and beyond so you can move forward with confidence.

99% of top performers* say IT is very or extremely important to business model change.
The rules of digitalization have changed

In just the past 12 months, digital business reached a tipping point as organizations scale their digital capabilities. Digitalization, along with growth, is now top priority for both private- and public-sector organizations.

To create digitalization at scale, CIOs and senior IT leaders are focused on building capabilities to support consumer engagement.

How should CIOs respond?

Strengthen your organization’s capabilities in three areas:

• **Volume**: Access more consumers and more transactions via digital channels
• **Scope**: Enable consumers to perform a variety of different services and activities
• **Agility**: Increase ability to change quickly based on shifts in consumer demand

33% of organizations have reached digital scale (up from 17% in 2018).
Enterprises want digital-fueled growth
Percentage of Respondents

1. Digital initiatives 22%
2. Revenue/business growth 22%
3. Operational excellence 13%
4. Customer experience 8%
5. Cost optimization/reduction 8%
6. Business or financial goals 7%
7. Industry-specific 6%
8. Business model change 6%
9. Data and analytics 6%
10. New products and services 5%

Source: Gartner (October 2018)
Q. What would you say is your organization’s top priority for 2018 and 2019?
Base: All answering, excluding prefer not to answer, n = 2,743.
Showing the 10 most common answers, coded open-text responses, multiple responses allowed.
Percentages may not total 100% due to rounding.
Business model change is inevitable

In response to digital drivers, organizations are shifting their focus from what they sell to how they sell.

The most common external drivers of business model change relate to consumer expectations and brand while the most common internal drivers relate to the search for growth or cost pressure.

**How should CIOs respond?**

- Stay active in business transformation discussions
- Infuse business strategy with your understanding of IT capabilities and possibilities

49% of respondents report their organization’s business model has already changed or is changing.
Case study

University delivers a transformative digital education model

**Challenge**
The institution aims to attain an enrollment of 300,000 students by 2022 at scale.

**Initiative**
The executive vice president for technology and transformation at the university is working with a B2B partner to develop a competency-based learning program that can be delivered in just 45 days. The team is digitalizing how the student progresses from enrollment to course completion — all with the goal of driving down competency program costs to about $1,000 per year.

**Result**
The university’s digitalization initiatives already give it a 60% market reach. “We are driving an enormous amount of change very quickly with success,” says the VP. “We’re disrupting not only ourselves, but also the industry.”
The consumer is at the center

Digital offers new ways to engage your audience, deliver a superior experience across the consumer life cycle and manage costs.

As private-sector organizations, not-for-profits and government agencies alike succeed or fail through consumer engagement, these activities are critical for growth.

How do you measure progress? Gain buy-in on digital transformation plans, adjust as necessary and prove digital ROI down the road by creating a set of relevant KPIs from the start.

89% of top performers measure ROI of digital investments (versus 43% of trailing performers) * and favor consumer metrics as indicators of success.

**How should CIOs respond?**

- Drive toward improved customer engagement
- Measure what matters

“Ultimately, CIOs should focus on being able to baseline business outcomes such as customer retention and time to market to measure the impact of their investments through hypothesis-driven projects.”

– Sanil Solanki, Senior Director, Analyst, Gartner Research
Top performers favor consumer metrics over internal metrics
Percentage of respondents

<table>
<thead>
<tr>
<th>Internal metrics</th>
<th>Consumer metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time savings for the organization</td>
<td>Number of consumers that are regular users of our apps</td>
</tr>
<tr>
<td><img src="#" alt="Bars" /></td>
<td><img src="#" alt="Bars" /></td>
</tr>
<tr>
<td>Top: 41%</td>
<td>Top: 46%</td>
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<tr>
<td>Typical: 36%</td>
<td>Typical: 26%</td>
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<tr>
<td>Trailing: 23%</td>
<td>Trailing: 41%</td>
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<tr>
<td>Percent of revenue from new digital channels, products and services</td>
<td>Impact on consumer experience</td>
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<td><img src="#" alt="Bars" /></td>
<td><img src="#" alt="Bars" /></td>
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<tr>
<td>Top: 39%</td>
<td>Top: 43%</td>
</tr>
<tr>
<td>Typical: 23%</td>
<td>Typical: 32%</td>
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<tr>
<td>Trailing: 9%</td>
<td>Trailing: 16%</td>
</tr>
<tr>
<td>Speed of new service/product innovation</td>
<td>Number of consumers that have downloaded our apps</td>
</tr>
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<td><img src="#" alt="Bars" /></td>
<td><img src="#" alt="Bars" /></td>
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<tr>
<td>Top: 32%</td>
<td>Top: 32%</td>
</tr>
<tr>
<td>Typical: 18%</td>
<td>Typical: 17%</td>
</tr>
<tr>
<td>Trailing: 7%</td>
<td>Trailing: 6%</td>
</tr>
<tr>
<td>Percent of services/products delivered via digital channels</td>
<td>Time saving delivered to consumers</td>
</tr>
<tr>
<td><img src="#" alt="Bars" /></td>
<td><img src="#" alt="Bars" /></td>
</tr>
<tr>
<td>Top: 32%</td>
<td>Top: 30%</td>
</tr>
<tr>
<td>Typical: 18%</td>
<td>Typical: 20%</td>
</tr>
<tr>
<td>Trailing: 6%</td>
<td>Trailing: 11%</td>
</tr>
<tr>
<td>Percent of margin from new digital channels, products and services</td>
<td>Deeper understanding of consumer behaviors and needs</td>
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<td><img src="#" alt="Bars" /></td>
<td><img src="#" alt="Bars" /></td>
</tr>
<tr>
<td>Top: 22%</td>
<td>Top: 28%</td>
</tr>
<tr>
<td>Typical: 12%</td>
<td>Typical: 19%</td>
</tr>
<tr>
<td>Trailing: 3%</td>
<td>Trailing: 8%</td>
</tr>
<tr>
<td>Impact on net promoter scores</td>
<td>Impact on consumer experience</td>
</tr>
<tr>
<td><img src="#" alt="Bars" /></td>
<td><img src="#" alt="Bars" /></td>
</tr>
<tr>
<td>Top: 25%</td>
<td>Top: 25%</td>
</tr>
<tr>
<td>Typical: 16%</td>
<td>Typical: 16%</td>
</tr>
<tr>
<td>Trailing: 4%</td>
<td>Trailing: 4%</td>
</tr>
</tbody>
</table>

Source: Gartner (October 2018)
Q. What metrics or KPIs does your organization use to measure ROI on its digital investments?
n = 237 (top performers), 2,369 (typical performers), 282 (trailing performers).
With consumer engagement comes reward — and risk

We’ve seen many public examples this year of the blow brands endure when they lose consumer trust. As consumers become central to business models, protecting their data is critical for success.

Although most CIOs surveyed agree that cybersecurity threats will continue to increase, and it tops the charts this year for disruptive technology deployment, there’s less consensus on where the responsibility for cybersecurity lies.

Top performers understand the wider responsibility and behavior shift required within the organization to effectively counter these risks.

How should CIOs respond?

• Recognize that the IT organization can’t provide cybersecurity alone
• Educate the board and senior leadership on how to think about and take more responsibility for cybersecurity risk

“The ultimate purpose of the cybersecurity strategy is to establish and maintain the enterprise and its people, partners, services and things as trustable, resilient participants in the digital economy.”

- Tom Sholtz, Distinguished VP, Analyst, Gartner Research
Cybersecurity threats can't wait

Expectations about cybersecurity threats by percentage of respondents

- 95% Believe security threats will increase
- 4% Believe security threats will stay the same
- 1% Believe security threats will decrease

Source: Gartner (October 2018)

Q. In three years, do you believe cybersecurity threats will decrease, remain the same or increase? n = 2,868. Multiple responses allowed.

Responsibility for cybersecurity

Percentage of respondents

<table>
<thead>
<tr>
<th>Role</th>
<th>Top</th>
<th>Typical</th>
<th>Trailing</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIO</td>
<td>41%</td>
<td>24%</td>
<td>57%</td>
</tr>
<tr>
<td>Board of Directors</td>
<td>14%</td>
<td>11%</td>
<td>14%</td>
</tr>
<tr>
<td>CISO</td>
<td>14%</td>
<td>12%</td>
<td>12%</td>
</tr>
<tr>
<td>CEO</td>
<td>12%</td>
<td>14%</td>
<td>11%</td>
</tr>
<tr>
<td>Other</td>
<td>7%</td>
<td>6%</td>
<td>5%</td>
</tr>
<tr>
<td>CFO</td>
<td>2%</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>LOB Heads</td>
<td>0%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

Source: Gartner (October 2018)

Q. Who is ultimately accountable for cybersecurity in your organization? n = 228 (top performers), 2,313 (typical performers), 275 (trailing performers). Base: All answering, excluding don’t know/prefer not to answer.
A product-centric approach is better

Flexibility is crucial for digitalization and business model transformation. To succeed, organizations must move from project-based episodic delivery to continuous integration and delivery.

Adopting a product-centric model builds trust across the organization and fosters better engagement between IT and business stakeholders as people work toward a common goal and see results.

By clearing that path to product delivery, your IT organization can drive quicker, higher-quality business outcomes while improving customer satisfaction and employee engagement.

How should CIOs respond?

• Determine the technical barriers to product-centricity and engage peers to work on a collective resolution
• Pay attention to the human issues — address both culture change and skill gaps
• Build relationships with the business and other stakeholders while communicating the value of IT for digital business

55% of organizations report they are moving from project to product delivery.
Use targeted and capability building techniques to move from projects to products

How to implement product-centric delivery by percentage of respondents

### Targeted techniques

- **Invested in devOps**
  - Top: 54%
  - Typical: 35%
  - Trailing: 25%

- **Defined new architecture and tools**
  - Top: 51%
  - Typical: 39%
  - Trailing: 24%

- **Speed of new service/product innovation**
  - Top: 48%
  - Typical: 42%
  - Trailing: 34%

- **Hired for developed new skills**
  - Top: 34%
  - Typical: 32%
  - Trailing: 35%

- **Rationalized and optimized functions and systems**
  - Top: 33%
  - Typical: 34%
  - Trailing: 34%

- **Secured new funding**
  - Top: 16%
  - Typical: 16%
  - Trailing: 18%

### Capability techniques

- **Invested in IT culture change**
  - Top: 53%
  - Typical: 49%
  - Trailing: 61%

- **Educated stakeholders**
  - Top: 44%
  - Typical: 45%
  - Trailing: 51%

- **Phased approach**
  - Top: 36%
  - Typical: 41%
  - Trailing: 38%

- **Defined metrics**
  - Top: 31%
  - Typical: 24%
  - Trailing: 24%

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Source: Gartner (October 2018)

Q. Which techniques did your organization adopt to facilitate its adoption of product-centric delivery?

n = 154 (top performers), 1,055 (typical performers), 71 (trailing performers).

Base: Organization's IT department using product-centric delivery, excluding not sure.
Digital transformation is a rebalancing act

Digital business hinges on sound IT, combining new, disruptive technologies like AI with a rebalancing of existing infrastructure. The choices you make as CIO are essential to success.

As digital scales, both private- and public-sector organizations have transformed their enterprise operating models to:

• Improve and retool business and IT processes and capabilities
• Provide innovative and transformative products and services
• Change the customer experience
• Deliver results

CIOs are also increasing their investment in off-premises capabilities while decreasing investment in on-premises capabilities. In many cases, prior capabilities such as ERP are still required but the means of delivery have evolved.

More than half of organizations surveyed have moved at least one function to the cloud, and 1/5 of top performers are running completely cloud-based ERP.

How should CIOs respond?

• Find ways to redistribute investments between business-as-usual systems, which consume 71% of the budget, and the new, potentially disruptive technologies.
• Build relationships with the business and other stakeholders while communicating the value of IT for digital business

AI: Proceed with caution

AI topped the list of game-changing technology in the year’s survey — but beware the hype.

“Projects will only succeed where there is significant resource investment, and probabilistic models depend on significant investment in data authority and scope.”

– Whit Andrews, Distinguished VP, Analyst, Gartner Research

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Rebalance your technology portfolio toward digital transformation
How to implement product-centric delivery by percentage of respondents

<table>
<thead>
<tr>
<th>Digital Transformation</th>
<th>Percent of respondents decreasing investment</th>
<th>Percent of respondents increasing investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business intelligence or data analytics solution</td>
<td>1%</td>
<td>45%</td>
</tr>
<tr>
<td>Cyber/information security</td>
<td>1%</td>
<td>40%</td>
</tr>
<tr>
<td>Cloud services or solutions (SaaS, PaaS, etc.)</td>
<td>2%</td>
<td>33%</td>
</tr>
<tr>
<td>Core system improvements/transformation</td>
<td>10%</td>
<td>31%</td>
</tr>
<tr>
<td>Digital business initiatives (including digital marketing)</td>
<td>1%</td>
<td>31%</td>
</tr>
<tr>
<td>Customer/user experience</td>
<td>1%</td>
<td>29%</td>
</tr>
<tr>
<td>Artificial intelligence/machine learning</td>
<td>1%</td>
<td>27%</td>
</tr>
<tr>
<td>Automation</td>
<td>2%</td>
<td>22%</td>
</tr>
<tr>
<td>Mobile applications</td>
<td>3%</td>
<td>21%</td>
</tr>
<tr>
<td>Technology integration</td>
<td>3%</td>
<td>21%</td>
</tr>
<tr>
<td>Software development or upgrades (licensing, maintenance and support)</td>
<td>13%</td>
<td>20%</td>
</tr>
<tr>
<td>Customer relationship management solutions</td>
<td>4%</td>
<td>19%</td>
</tr>
<tr>
<td>Infrastructure and data center</td>
<td>35%</td>
<td>17%</td>
</tr>
<tr>
<td>Internet of things</td>
<td>2%</td>
<td>15%</td>
</tr>
<tr>
<td>E-commerce/citizen portal/website</td>
<td>4%</td>
<td>14%</td>
</tr>
<tr>
<td>Enterprise resource planning</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Networking, voice and data communications</td>
<td>16%</td>
<td>10%</td>
</tr>
<tr>
<td>Communications/connectivity (Wi-Fi and internet access)</td>
<td>8%</td>
<td>9%</td>
</tr>
<tr>
<td>Industry-specific solution</td>
<td>1%</td>
<td>4%</td>
</tr>
</tbody>
</table>

Source: Gartner (October 2018)
Q. What are the technology areas where your organization will be spending the largest amount of new or additional funding in 2019? n = 3086
Q. What are the technology areas where your organization will be reducing funding by the highest amount in 2019 compared to 2018? n = 2,819.
Multiple responses allowed, excludes don’t know.

* Based on self-reported IT and enterprise performance scores on aspects of digital maturity, we divided this year’s survey respondents into three categories — top, typical and training performers.
Note: All graphics are excerpted from 2019 Gartner CIO Survey data, except where noted.
About the Gartner CIO Agenda Report

Each year Gartner conducts the world’s largest CIO survey to track how senior IT leaders around the globe are balancing their strategic business, technical and management priorities. We then generate the annual Gartner CIO Agenda Report, which presents survey findings and case studies, plus expert analysis and insight — enabling CIOs to compare priorities and actions with global peers, and glimpse what the future may hold.

This year’s survey includes the views of 3,102 CIOs across 89 countries, representing approximately $15T in revenue/public-sector budgets and $284B in IT spending.

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