Insights From the 2017 CIO Agenda Report:

Seize the Digital Ecosystem Opportunity

Gartner Executive Programs
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 2,598 CIOs across 93 countries, representing approximately $9.4 trillion in revenue/public-sector budgets and $292 billion in IT spending.

Here are some key insights from the 2017 report.
Get ready for the digital ecosystem surge, the next evolution of digitalization

As digitalization matures at most enterprises, participation in digital ecosystems is increasing, along with the reach and range of these networks.

The 2017 CIO Survey data reveals that one of the differentiating factors of a high-performance digital business is participation in a digital ecosystem. Gartner defines digital ecosystem as an interdependent group of actors (enterprises, people, things) sharing standardized digital platforms to achieve a mutually beneficial purpose.

For leading organizations, digital ecosystem adoption seems to offer enhanced market (or citizen) access, and thus is a medium for more rapid innovation and greater productivity growth.

The shift to digital ecosystem readiness is both an opportunity and a challenge for CIOs. Many will need to shift their enterprise from a linear-value-chain business, trading with well-known partners and adding value in steps, to being part of a faster and more multidimensional network. This transition will involve preparation in three areas: technology, organization and leadership.
The value connection between digital maturity and digital ecosystem participation

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 trailing performers.

An important differentiator in more digitally mature enterprises was participation in digital ecosystems: 79% of the survey’s top performers indicate they participate in a digital ecosystem vs. 49% and 24% for typical and trailing performers, respectively. Clearly, leading organizations are finding value there.

Though ecosystem participation can take different forms — providing or co-creating an ecosystem, selling or buying through one — an ecosystem creates value by supporting business models that enable participants to achieve performance superior to businesses that operate independently. Likewise, ecosystems enable public-sector agencies to gain efficiency dividends and deliver a superior citizen experience.

Unlocking the potential of the digital dimension allows:

A customer experience with increased “stickiness”?brand adoption (trust sustains use and opens users to providing more info)

Data-driven customer intimacy with faster feedback for quick learning (voice of customer inherent in activities)

Greater scale

Multidimensional mutual value creation (shared, combinatorial); more dimensions = more opportunities

Parallel, open and API-based innovation

Resilience through redundancy (web-scale)

A linear-value-chain business is one-dimensional and one-directional

A digital ecosystem business is multidimensional and multidirectional

Customers

Ecosystems

Intelligence

Things

IT systems
Is your enterprise “digital ecosystem ready”? 

Being ready to join a digital ecosystem, and subsequently reap the performance benefits, involves preparation across the enterprise — raising challenges for CIOs. 

Survey findings show that top performers have achieved “digital escape velocity” — moving their digitalization efforts so fast compared to peers that they escape their influence and accomplish new goals. They’ve done this by demonstrating panoramic thinking in three critical areas:

- Their **technology** infrastructure prioritizes interoperability.
- Their **IT organization** has a more external mindset.
- Their business **leadership** is more focused on mastering interdependence.

![Diagram showing the three critical areas:
- Interoperability: Extend your technology **core** to be “digital ecosystem ready.”
- Interdependence: Master “digital ecosystem ready” leadership.
- External mindset: Create a “digital ecosystem ready” organization.](image-url)

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Make **interoperability** the aim of your technology planning

A combination of core and evolving digital technologies enhances interoperability among digital ecosystem partners and supports the transition to ecosystem participation, especially in analytics, cloud services, digital market management and security.

BI/analytics persists as the No. 1 technology investment. Analytics underpin the mediation and value exchange occurring in digital ecosystems, and although top performers have a higher investment target than others, this capability is clearly seen by all as the key to digital value.

Please indicate the top 3 technology areas where your company/business unit/government or public entity will be spending the highest amount of new/discretionary funding in 2016.

<table>
<thead>
<tr>
<th>Technology areas mentioned within top 3 by at least 8% of respondents</th>
<th>Top performers (n = 178)</th>
<th>Typical performers (n = 2,165)</th>
<th>Trailing performers (n = 171)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BI/analytics</td>
<td>47%</td>
<td>38%</td>
<td>31%</td>
</tr>
<tr>
<td>Cloud services/solutions</td>
<td>34%</td>
<td>26%</td>
<td>29%</td>
</tr>
<tr>
<td>Digitalization/digital marketing</td>
<td>20%</td>
<td>17%</td>
<td>8%</td>
</tr>
<tr>
<td>Infrastructure and data center</td>
<td>20%</td>
<td>22%</td>
<td>27%</td>
</tr>
<tr>
<td>Mobility and mobile applications</td>
<td>16%</td>
<td>14%</td>
<td>16%</td>
</tr>
<tr>
<td>Cyber/information security</td>
<td>13%</td>
<td>16%</td>
<td>20%</td>
</tr>
<tr>
<td>Industry-specific applications</td>
<td>10%</td>
<td>9%</td>
<td>6%</td>
</tr>
<tr>
<td>Enterprise resource planning</td>
<td>8%</td>
<td>22%</td>
<td>30%</td>
</tr>
<tr>
<td>Networking, voice and data communications</td>
<td>8%</td>
<td>12%</td>
<td>13%</td>
</tr>
</tbody>
</table>
Focus investments on moving the technology core forward and experimenting with emerging technologies

Digital business outcomes rely on the implementation of key cross-industry technologies. This year’s survey findings can help guide those CIOs who haven’t started to invest in a transformed core.

What are your company/business unit/government or public entity’s plans in terms of the following digital technologies and trends?

On average, top performers expect to develop 40% of their new digital solutions in-house, because these components don’t exist externally and startups either aren’t making them or can’t provide the necessary scale. Strongly implied is that typical and trailing performers can get what they need because they are not trying to deliver a transformational capability, or they rely on innovation to come from outside — an example of the inertia holding them back from becoming leaders.

Startups, the new blood of business, are ignored by 45% of trailing performers, putting them at risk of being outpaced, disrupted or both. Not surprisingly, top performers engage with startups in every possible way — creating them, buying them or investing in them.
Address skill barriers and master bimodal innovation to build a resilient IT organization

The move to digital ecosystems changes the required IT capabilities. CIOs must build bench strength that combines basic and specialist skills with an effective bimodal IT organization focused on external developments and business value.

CIOs across the board identify lack of skills and other human resources as their No. 1 barrier to success. Trailing performers also cite lack of management sponsorship; they may see opportunity but can’t act due to lack of senior leadership vision and support — a roadblock to digital business progress. Information and analytics talent gaps persist, with basic skills also in short supply.

What is your biggest barrier to achieving your objectives in your role?

<table>
<thead>
<tr>
<th>Top 8 barriers overall</th>
<th>Top performers (n = 162)</th>
<th>Typical performers (n = 1,976)</th>
<th>Trailing performers (n = 160)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skills/resources</td>
<td>27%</td>
<td>26%</td>
<td>22%</td>
</tr>
<tr>
<td>Funding/budgets</td>
<td>19%</td>
<td>17%</td>
<td>16%</td>
</tr>
<tr>
<td>Management sponsorship/understanding/relationships</td>
<td>10%</td>
<td>8%</td>
<td>16%</td>
</tr>
<tr>
<td>Technology challenges (legacy, security, etc.)</td>
<td>8%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>IT-business alignment</td>
<td>6%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>Lack of leadership/planning/strategy</td>
<td>4%</td>
<td>5%</td>
<td>6%</td>
</tr>
<tr>
<td>Lack of time/capacity</td>
<td>4%</td>
<td>3%</td>
<td>2%</td>
</tr>
<tr>
<td>Culture/structure of organization</td>
<td>4%</td>
<td>8%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Adoption of bimodal IT is up, at 43% vs. last year’s 38%. Top performers far outpace the others, with 68% of them saying they have bimodal vs. 43% for typical performers and 17% for trailing performers.

In a successful bimodal discipline, experimentation leads to scalable functionality that is serviced by, and eventually part of, the business capability and technology platforms. All respondents report nearly identical benefits as a result of bimodal adoption; however, top performers are more likely to report innovation as a result, a telling detail.
Set business priorities, win over stakeholders, and determine the right balance of cost and value targets

Survey results show that top-performing CIOs echo their CEOs’ priorities, with a tight focus on business growth and digitalization — a focus not seen in the other groups.

Ecosystem mastery requires rapid speed of response, yet innovation represents the biggest difference in CIOs’ strategic priorities: 20% of top performers see it as one of the top 3 vs. only 13% of typical performers and 9% of trailing performers.

Effective stakeholder engagement is a key component of success in digital ecosystems. Again, a notable difference between top performers and the rest is their ability to engage with, and win the support of, their peers.

Top performers are also far more focused on supporting business initiatives, as opposed to simply optimizing IT costs. They are prioritizing business value while also contributing to overall corporate cost reduction activities — in other words, behaving like high-level business executives.

For each pair, which is more important for your IT department?

- **Optimize IT costs**
- **Support digital business initiatives**
- **Run day-to-day IT services**
- **Deliver innovation**
- **Optimize IT costs**
- **Optimize overall business costs**
CIOs need to prepare their enterprises for digital interdependence

Digitalization continues to gain momentum. As it does, the need for membership in digital ecosystems also increases.

In a digital ecosystem, sharing trumps protectionism, shaking the foundation of legacy business models, but also paving the way toward enhanced market/citizen access and greater productivity growth.

Preparing an enterprise for participation in an ecosystem has profound implications for the CIO. Gartner recommends that CIOs make digital ecosystem readiness a priority in their 2017 planning.

To that end, the insights, analysis and action plans in this year’s CIO Agenda will help CIOs build that readiness in the three domains propelling top performers toward “digital escape velocity”: technology, organizational capabilities and enterprise business leadership.

Note: All graphics are excerpted from 2017 Gartner CIO Survey data.
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