# How CTOs Can Create a Winning Digital Innovation and Enablement Function

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Initiatives: Digital Innovation and Enablement Function

CTOs should leverage four areas (teams, capabilities, techniques and focus) to build an effective digital innovation and enablement function that drives digital transformation. To succeed, they must be aligned with their CTO persona, as well as the business needs and culture of the organization.

#### **Overview**

#### **Key Findings**

- Many CTOs are tasked with competing priorities, unclear objectives and a broad set of ill-defined responsibilities. Creating a digital innovation and enablement function allows CTOs to prove their value to business stakeholders and align technology to their priorities.
- A well-structured digital innovation and enablement function will support six basic capabilities: technology innovation, technology strategy, managing partnerships, business operations, digital product development and digital platform management.
- CTOs can encounter challenges scaling up technology innovation prototypes beyond the digital innovation and enablement function to get business ownership for further development.
- Each of the digital innovation and enablement function's capabilities must be customized to align with one of the core CTO personas, the goals defined in the office of the CTO (OCTO) charter, business needs, the culture of the organization and other key CxO roles.

#### Recommendations

CTOs who are building or evolving their digital innovation and enablement function must:

- Identify the capabilities required for the digital innovation and enablement function to help the CTO drive technology innovation and transformation. Depending on the CTO's focus, these may include technology innovation, digital product development, digital platforms and ecosystem partnerships.
- Determine the roles and organization required to support the CTO's capabilities and assist the CTO in delivering their objectives. These should be defined by the digital innovation and enablement function's overall value proposition and the CTO's charter.
- Partner with business units, external ecosystems and technology providers to scale initiatives beyond the digital innovation and enablement function to create enterprisewide technological capabilities and an innovation culture.
- Adapt the set of capabilities that the digital innovation and enablement function offers based on the organizational context, the CTO's objectives and persona, and the needs of other CxO roles. Use the OCTO charter to communicate how the digital innovation and enablement function's value proposition will deliver on these objectives and provide business value to the organization through technology enablement.

#### Introduction

Many CTOs are tasked with competing priorities, unclear objectives and a broad set of ill-defined responsibilities, and they sometimes lack the authority to achieve their goals. Consequently, they can fail to deliver value through leveraging technology to enable digital business optimization and transformation and drive strategy execution. Innovation is a critical organizational competency for optimizing and transforming the business, as well as navigating the levels of disruption and uncertainty that have become normal. For these reasons, many CTOs are appointed to lead digital innovation in their organization. A well-structured digital innovation and enablement function provides the capabilities to enable the CTO to unleash the potential of emerging technologies to drive product and/or business model innovation.

The digital innovation and enablement function needs to adapt to increasing digitalization and democratization of technology. The involvement of external partners in business optimization and innovation, as well as changing relationships between the business and IT, further complicate the situation.

Four key factors impact how CTOs organize their digital innovation and enablement function:

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- The increasing adoption of digital product management
- The growing prevalence of business technologists and fusion teams
- The need to anticipate disruption and develop a proactive response using technology
- The requirement for CTOs to work with external business and technology ecosystems

CTOs find they need to evolve their digital innovation and enablement function regularly to account for the impact of these factors and for the function to remain effective in supporting the organization to achieve resilient growth.

Gartner defines the digital innovation and enablement function as a group reporting directly to the CTO that is responsible for providing the technologies and capabilities to support current and new business models and operations.

Figure 1 illustrates the four dimensions of an effective digital innovation and enablement function:

- The capabilities required to drive the organization's digital business transformation.
- The teams that either reside within the digital innovation and enablement function, or interact with it, to support the CTO's goals.
- The techniques required to scale up technology initiatives beyond the digital innovation and enablement function to execute digital business transformation.
- The focus on business and/or IT optimization, transformation and innovation, depending on the CTO's primary persona.

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Figure 1: The Four Dimensions for Establishing the Digital Innovation and Enablement Function

### The Four Dimensions for Establishing the Digital Innovation and Enablement Function



Source: Gartner 785424\_C

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In addition to these four dimensions, the presence of an OCTO is emerging as a critical practice for successful CTOs in large organizations. The OCTO is an additional function that reports to the CTO with the purpose of helping to run and manage the digital innovation and enablement function. These CTOs have more staff (usually over 100 employees) to manage within their digital innovation and enablement function. Consequently, it is much harder for the CTO to track how well the various teams are executing on goals.

An OCTO provides strategic execution, performance management, financial management and talent management capabilities to support the digital innovation and enablement function in realizing its goals. This helps the CTO address common challenges in measuring strategic execution, managing funding for technology investments and innovation projects, sourcing talent, and allocating resources. Sometimes, there is an HR partner assigned to the digital innovation and enablement function who is responsible for talent management and cultural change. There may be a marketing and communication capability within some OCTOs, which supports CTOs who are technology evangelists and need to promote their success in technology innovation to the rest of the organization.

Gartner's 2020 Evolving Role of the CTO Survey1 revealed a positive correlation between the presence of an OCTO in the organization and better organizational performance.

While many factors can influence organizational performance, it is still interesting that organizations with an OCTO outperformed their competitors at customer satisfaction, and product innovation and quality. These performance measures for customer experience and product development are likely to be improved by the use of more relevant and sophisticated technologies.

Before building or formalizing an OCTO, CTOs should have created a charter for themselves and the OCTO. This defines the mission and purpose of CTOs and their staff, and the metrics by which they will be measured. The charter will also indicate which capabilities and teams should reside within the OCTO. For more details on creating a CTO charter, see Tool: How to Establish a Charter for the Office of the CTO.

#### **Analysis**

Identify the Capabilities Required for the Digital Innovation and Enablement Function

The purpose of the digital innovation and enablement function is to provide the technology, processes and skills to support the organization's current or future business models and its digital business transformation. This demands the six key capabilities outlined in Figure 2. CTOs may either lead or support each of these capabilities in partnership with IT and business leaders. Therefore, there needs to be clarity on which capabilities will be the direct responsibility of other IT or technology-focused executives such as the CIO, chief digital officer, chief data officer or chief information security officer. Sometimes, these roles may be part of the digital innovation and enablement function; in other cases, the digital innovation and enablement function should partner with these executives to collaborate on synergies and challenges that affect both parties.

Technology evolves rapidly. The digital innovation and enablement function should track and respond to this through technology innovation, while also ensuring that IT systems and business processes are agile enough to adapt to this rate of technological change. Digital platforms and products should be designed with both agility and security in mind. Overall, both IT and business operations should be resilient and adaptive to change and disruption.

CTOs should establish each of the six basic capabilities of a well-structured digital innovation and enablement function (see Figure 2).

Figure 2: Capabilities Required for the Digital Innovation and Enablement Function

#### Capabilities Required for the Digital Innovation and Enablement Function **Technology Innovation** · Technology planning, foresight and intelligence • Business planning/market intelligence Ideation and scaling/execution intellectual property licensing **Digital Platforms Technology Strategy & EA** Foundation and enabler for digital product Technology standards development e.g., cloud, AI, CX, IoT, Link to business strategy and business containers, Kubernetes architecture **Digital Innovation Capabilities Digital Product Development Commercial Partnerships** · Link to user, customer and Includes "venturing immersive experiences · Joint ventures, spinoffs Agile and Dev SecOps approach • Investment in startups, innovation Design thinking, lean startup incubators **Business Operations** Process automation and process mining • Total experience (customer, employee, user and multi-experience) · Link to digital products and platforms OCTO should link to communications and cultural change capabilities (EPMO/HR)

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#### **Technology Innovation**

Source: Gartner 785424 C

The digital innovation and enablement function should lead technology planning and inform and advise on business planning. Technology planning involves technology scanning/foresight (to identify opportunities for technology to transform the business) and technology intelligence/searching/trendspotting. The digital innovation and enablement function must actively prepare to respond to disruptions and anticipate change. CTOs should promote the use of technological, political, economical, social/cultural, trust/ethics, regulatory/legal, and environmental (TPESTRE) — what Gartner refers to as a "Tapestry" — factors and analysis to identify relevant accelerators and inhibitors (see The Gartner Trendspotting Framework: Driving Operations, Innovation and Strategy). This information provides a key input for shaping technology strategies.

Business planning covers intelligence on business operations, customer experience (including customer analytics and customer journeys that indicate how customers interact with the organization) and market intelligence (including regulation and competitor landscape).

CTOs need excellent working relationships with senior business executives so they can collaborate on business planning.

Business and market intelligence provide vital inputs for technology innovation.

Technology innovations can be identified, deployed and scaled up in many ways. Sometimes, this will be the direct responsibility of the digital innovation and enablement function, and other times, it will be undertaken by groups such as enterprise architecture (EA) or R&D teams within business units. In such cases, the digital innovation and enablement function may be responsible for coordination rather than implementation. The digital innovation and enablement function will need a wide range of capabilities, from direct implementation to various forms of co-creation with partners. It is worth setting up an innovation lab to support co-creation and more disruptive innovation projects (see How to Build an Impactful Innovation Lab).

Technology Strategy and Enterprise Architecture

A CTO will typically determine the enterprise technology strategy and/or IT technology strategy. However, the CTO must partner with the EA team to shape the multiple and more detailed technology strategies. The EA capability will usually support the CTO in evolving the technology, data and solution architectures in response to the new technologies being implemented to enable business-IT operations or to drive innovation. However, EA should also leverage business architecture and business capability modeling to determine the impact of strategic change on the organization's existing capabilities. Identifying the organization's desired business and technology future state is critical to knowing what technologies will be required to achieve that state and determining the best technology strategies. This will typically involve links to business architecture initiatives.

#### **Commercial Partnerships**

Often, CTOs will encounter situations where the organization doesn't possess the right skills and capabilities and doesn't want to develop them in-house. External partnerships provide access to new knowledge, skills, expertise and capabilities, which can accelerate time to market for digital products. Partners are particularly likely to be valuable in domains where technology evolves rapidly and it's hard for organizations to keep up. Partnerships also allow the digital innovation and enablement function to benefit from shared funding and shared risk in innovations.

CTOs are likely to form a wide range of technical and commercial partnerships, which can take many forms such as:

- Joint ventures
- Setting up or participating in a venture capital (VC) arm
- Technology provider partnerships (e.g., in areas such as AI or cloud)
- Supplier or R&D firm partnerships
- Startup partnerships
- Academic institution partnerships
- Customer and competitor partnerships
- Participation in industry consortia
- Participation in private-industry innovation accelerators or incubators
- Establishing a corporate innovation accelerator or incubator

Increasingly, CTOs are participating in innovation ecosystems to gain the benefits of multiple partnerships and access to a greater pool of shared intelligence and capabilities. For more information, see Reimagine Innovation With an Adaptive Innovation Ecosystem Framework and Innovation Ecosystems Are the Right Way to Innovate in a Downturn.

#### **Digital Product Development**

Many CTOs own software engineering teams that leverage agile development, DevOps and techniques such as design thinking and lean startup. Nowadays, it is common for such teams to adopt a product-centric approach to development. Digital product development is the process of applying disciplined product management mindsets and practices to design, develop, and deliver business and IT capabilities (known as digital products) to internal business users and external customers.

The benefits include accelerated delivery, closer engagement with business units, a more consumer-centric culture, and the ability to develop and release more innovative solutions.

The digital innovation and enablement function must collaborate with key business stakeholders who will either use these capabilities or work with external customers and can provide essential feedback on how to evolve capabilities to improve customer experience.

If the digital product development team resides within the digital innovation and enablement function, it can benefit from close proximity to technology innovations and commercial partnerships. CTOs should ensure that the technology strategy also focuses on providing the technology foundation to allow digital product development to flourish. This will likely involve IT technologies such as cloud and containers; user experience technologies such as virtual reality and multichannel interactions; and new capabilities delivered using Al. CTOs with a strong IT focus may also champion other technologies such as open source (see A CTO's Guide to Open-Source Software: Answering the Top 10 FAQs).

#### **Digital Business Technology Platforms**

A key deliverable for many digital innovation and enablement functions is the enterprise digital business technology platform, which provides the foundation for, and enablement of, digital business transformation. The digital innovation and enablement function should incubate the necessary technologies and subplatforms required to create the platform, since it is not possible to buy a complete off-the-shelf digital business technology platform. For digitally mature organizations, the digital business technology platform is already part of mainstream practice. In the case of less mature organizations, the digital innovation and enablement function may need to develop and incubate the capabilities before transferring them to the business and IT organizations to become part of mainstream development practices.

#### **Business Operations**

CTOs can also be responsible for providing the technology to support and transform business operations. This can include business applications and digital workplace, transactional websites, and operational technology (OT). It can also extend to the creation and improvement of digital products to support customer and employee experience in more digitally mature organizations. If this is the case, then CTOs should develop a total experience strategy (see Quick Answer: How Do I Get Started With Total Experience?). This enables them to provide a more holistic approach to customer, employee and user experiences, while accounting for a multiexperience driven by the adoption of immersive technologies.

A key part of optimizing business operations involves improving and automating processes. Advances in process mining tools now make it easier to discover, monitor and improve processes, to ensure process design truly supports business needs prior to further automation. This means that CTOs responsible for optimizing business operations should familiarize themselves with process mining (see Process Mining Can Support Business Operations in Driving Resilient Growth and Innovation Insight: Process Mining and Task Mining) and process automation technologies (see Market Guide for Business Process Automation Tools). Furthermore, they would benefit from setting up a center of excellence for business operations that captures knowledge and expertise in the technologies, skills and techniques for process mining and process automation.

# Organize the Digital Innovation and Enablement Function to Align With the CTO's Goals

The CTO role is very diverse, and CTOs are often expected to deliver more than is realistically possible. Furthermore, their key responsibilities are often poorly defined. The CTO must create a digital innovation and enablement function with the right mix of individuals and teams necessary to achieve the CTO's goals.

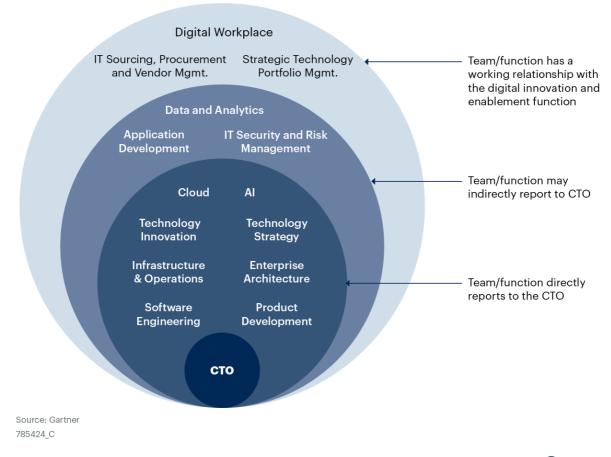
In practice, the digital innovation and enablement function will consist of some teams that directly report to the CTO, and others with which the digital innovation and enablement function has relationships. These can vary from tight dotted-line reporting to loose collaboration, as illustrated in Figure 3.

A typical team composition of a digital innovation and enablement function includes:

- A technology innovation team that includes trendspotting scouts and software engineers experimenting with innovative IT solutions.
- An enterprise architecture team, consisting of business, IT, solution and data architects (sometimes there might also be cloud, Internet of Things [IoT], automation, security and other technology-domain-specific architects).
- Platform development teams aligned by technology domain (for example, Al, security, hybrid cloud, automation).
- A digital product development team.
- An infrastructure and operations team that covers infrastructure modernization and related technologies like cloud and containers. This team may also cover the more traditional I&O disciplines like IT service management, legacy infrastructure and networks.

Figure 3: Teams That Reside in, or Interact With, the Digital Innovation and Enablement Function

### Teams That Reside In, or Interact With, the Digital Innovation and Enablement Function



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In all cases, the CTO must identify which capabilities are the responsibility of the digital innovation and enablement function itself and which are already addressed by other functions in the organization. Where necessary, the CTO must build partnerships with other executives, as described in The Chief Technology Officer's First 100 Days.

#### These may include:

- The chief information security officer
- The chief data and analytics officer
- Business leaders responsible for digital product innovation
- Business leaders responsible for customer experience

The CTO must also address issues of digital innovation and enablement function structure, which will be influenced by corporate culture and the CTO function's metrics. This can range from a centralized digital innovation and enablement function (best suited to hierarchical organizations) to a federated/distributed CTO function with a lightweight central function and representatives embedded in business units. This issue will be dealt with in more detail in other research.

# Tailor Your Digital Innovation and Enablement Function Capabilities to Your CTO Persona

The CTO role is very diverse, so the CTO's responsibilities and objectives will vary substantially between organizations. The CTO's charter is a key tool to define what the organization expects of a CTO and how the role's success will be measured. It will describe how the mission, purpose and value proposition of the digital innovation and enablement function aligns with both the CTO's objectives and the strategic business outcomes that the organization aims to achieve with its digital business transformation. This charter will determine how the capabilities of the digital innovation and enablement function are customized to fit each organization's requirements.

Gartner has identified four CTO personas that are common in end-user organizations (see How Chief Technology Officers Can Deliver Value by Using Our Four Personas).

The four personas are the CTO as digital business leader, as business enabler, as IT Innovator and as COO of IT.

The COO of IT is primarily responsible for running daily IT operations and managing infrastructure. Since they tend to have little or no responsibility for leading technology innovation, this persona won't be covered in this research. Figures 4 through 11 illustrate how the first three personas can influence the design and capabilities of the digital innovation and enablement function. Figures 4, 6, 8 and 10 use the 29 activities that form the foundation of Gartner's IT Score for CTO maturity assessment, which CTOs should lead or be closely involved in.

#### CTO as Digital Business Leader

This CTO persona focuses mainly on using innovative technologies to transform the business model, products and services. They often "push" technology toward the main business functions and frequently oversee how these technologies are deployed architecturally in the business. This CTO is also responsible for creating the company's digital business technology strategies, along with leading the teams that will build the required digital platforms.

Consequently, a CTO as digital business leader should be responsible for all activities related to enabling digital business and leading technology innovation, as shown in Table 1. Due to their focus on leveraging technology innovation to create new business models, these leaders may also need to manage external partnerships and either lead, or participate in, innovation ecosystems. These responsibilities are in addition to the core activities that any CTO is responsible for, such as technology strategy, and managing the OCTO and digital innovation and enablement function. This CTO can also advise on how future technology plans can align with the organization's approach to sustainability.

Table 1: How to Adapt the Activities of the Digital Innovation and Enablement Function by CTO Persona: Digital Business Leader

(Enlarged table in Appendix)

Enable the Digital Business <sup>↓</sup>	Lead and Manage Technology <sup>↓</sup> Innovation	Develop and Implement Technology Strategy	Optimize Technology ↓ Operations	Manage OCTO $_{\downarrow}$
Build Digital Product Capabilities	Perform Trendspotting and Continuous Foresight	Own Technology Strategy	Evolve Technical Architecture	Determine and Track Metrics
Innovate Digital Products	Manage Innovation Portfolio and Funding	Optimize Business Operations	Manage Strategic Technology Vendor Relationships	Manage Org Structure & Governance
Drive Business Model Innovation	Lead Ideation and Innovation Management	Manage Technology Life Cycle	Lead Infrastructure Modernization	Manage Day-to-Day Operations
Apply Business Architecture	Establish and Manage Technology Innovation Team	Build Technology Roadmaps	Maintain IT Service Management	Socialize OCTO Value Proposition
Evolve Customer and Employee Experience	Create an innovation culture	Manage Technology- Related Risk and Security	Develop Shared IT Services	Manage Technology Talent Strategy
Manage Evolution of Digital Business Platform	Act as Technology Evangelist	Drive Technology- Related Corporate Sustainability		Manage External Partnerships

Source: Gartner (June 2023)

To execute on these responsibilities, CTOs as digital business leaders need the right teams reporting to them that can contribute to these activities. Figure 4 provides an example of teams that typically report to a CTO as digital business leader. These CTOs require people who can develop and support digital platforms and products, as well as customer, employee, user and multiexperience (encompassing a total experience strategy). It is also important to have an enterprise architecture team, which includes business architecture, to envisage what new business capabilities are required to support new business models and digital platforms, and how the business architecture needs to evolve.

Inevitably, an organization may not have all the technical expertise and capabilities inhouse, which is where external commercial partnerships can help. It can be challenging to orchestrate multiple partnerships. Appoint a relationship manager who can ensure that all partners work toward the same desired business and innovation outcomes to get the most out of these collaborations.

It is becoming more common for CTOs as digital business leaders to establish good working relationships with data and analytics teams so they can adopt a data-driven approach to identifying innovation opportunities. Since a key part of their role involves experimenting with new technologies, they should also liaise with the security and risk management team to assess any potential risks associated with implementing these new technologies.

Figure 4: Teams Typically Reporting to CTO as Digital Business Leader

#### - Direct Reporting -- Indirect Reporting **CTO** as Digital **Business Leader Digital business** Digital product User, customer and **Enterprise** Commercial platform multiexperience engineers architecture team partners and developers designers (including business relationship and product managers architects) Data and Security and analytics team risk management team Source: Gartner

#### Teams Typically Reporting to CTO as Digital Business Leader

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#### CTO as Business Enabler

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This CTO persona focuses on optimizing and maintaining technology that supports the current business model and operations. The CTO as business enabler is responsible for maintaining the existing technology estate across business and IT, including business applications, transactional websites, OT and employee devices. Technology must be responsive and available, and must change in lockstep with the business. Ensuring that business and customer needs are met is a high priority. A coordinated, responsive IT delivery mechanism, with focused leadership and chain of command, is essential. A CTO of this type enables the CIO to ensure the high levels of support and focus the business needs so that the CTO can concentrate on business relationships, strategy and planning.

Table 2 indicates which activities are most important for a CTO as business enabler to succeed. Given that this persona is focused on customer and business/employee needs, they may need to be involved in building product capabilities. This can mean they have a focus on incremental innovation to improve existing products, but would not lead or manage a technology innovation team. Security risks are always a top concern for product development, so it is wise for this CTO to work with the CISO to ensure any risks are identified and mitigated.

Table 2: How to Adapt the Activities of the Digital Innovation and Enablement Function by CTO Persona: Business Enabler

(Enlarged table in Appendix)

Enable the Digital Business <sup>↓</sup>	Lead and Manage Technology Innovation	Develop and Implement Technology Strategy	Optimize Technology ↓ Operations	Manage OCTO $_{\downarrow}$
Build Digital Product Capabilities	Perform Trendspotting and Continuous Foresight	Own Technology Strategy	Evolve Technical Architecture	Determine and Track Metrics
Innovate Digital Products	Manage Innovation Portfolio and Funding	Optimize Business Operations	Manage Strategic Technology Vendor Relationships	Manage Org Structure & Governance
Drive Business Model Innovation	Lead Ideation and Innovation Management	Manage Technology Life Cycle	Lead Infrastructure Modernization	Manage Day-to-Day Operations
Apply Business Architecture	Establish and Manage Technology Innovation Team	Build Technology Roadmaps	Maintain IT Service Management	Socialize OCTO Value Proposition
Evolve Customer and Employee Experience	Create an innovation culture	Manage Technology- Related Risk and Security	Develop Shared IT Services	Manage Technology Talent Strategy
Manage Evolution of Digital Business Platform	Act as Technology Evangelist	Drive Technology- Related Corporate Sustainability		Manage External Partnerships
	•	Enabler		

Source: Gartner (June 2023)

The CTO as business enabler needs to work closely with the CIO as they are complementary roles. Figure 5 illustrates teams that typically report to this type of CTO. To succeed in delivering on their responsibilities in optimizing customer and employee experience, they require teams supporting these areas to report to them. In turn, architecture and infrastructure needs to be adaptive to changing customer and business needs, while infrastructure should be resilient to minimize any disruption in business continuity. Therefore, it makes sense to have architecture and infrastructure teams that also report to this type of CTO. Teams focusing on applications, digital workplace, data and analytics, and security and risk management tend to report to the CIO. Given that these teams also contribute to supporting customer and employee experience, it is important the CTO as business enabler has a good working relationship with them.

Figure 5: Teams Typically Reporting to the CTO as Business Enabler

Teams Typically Reporting to the CTO as Business Enabler

#### - Direct Reporting -- Indirect Reporting CTO as **Business Enabler** Digital product User, customer and **Enterprise** Infrastructure and operations multiexperience architecture team teams to support engineers designers (including business teams to optimize customer and employee and product business experience architects) operations **Applications** Data and Security and Digital team analytics team risk management workplace team team Source: Gartner

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CTO as IT Innovator

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This CTO persona is a technology visionary and change agent for IT. The CTO as IT innovator provides leadership to groups that include enterprise architects, innovation managers, expert technology specialists and professionals in shared IT services in large to extra-large businesses. This CTO persona may also be the head of architecture, guiding the architectural impact of IT innovations. As an IT innovator, this CTO drives technology innovation and transformation in IT and leads agile/DevOps teams. This individual often leads cloud transformation initiatives, and brings newer technologies into IT, such as APIs, microservices, containers and Kubernetes.

Table 3 shows the key activities that are most critical to the success of a CTO as IT innovator. This type of CTO leads technology innovation within IT, as well as infrastructure modernization initiatives. They also manage external commercial partnerships. These partnerships bring expertise in new technologies and can speed up time to value if the organization lacks internal expertise in implementing these technologies. They should also explore how the technology strategy supports their organization's sustainability goals.

Table 3: How to Adapt the Activities of the Digital Innovation and Enablement Function by CTO Persona: IT Innovator

(Enlarged table in Appendix)

Enable the Digital Business <sup>↓</sup>	Lead and Manage Technology Innovation	Develop and Implement Technology Strategy	Optimize Technology ↓ Operations	Manage OCTO $_{\downarrow}$
Build Digital Product Capabilities	Perform Trendspotting and Continuous Foresight	Own Technology Strategy	Evolve Technical Architecture	Determine and Track Metrics
Innovate Digital Products	Manage Innovation Portfolio and Funding	Optimize Business Operations	Manage Strategic Technology Vendor Relationships	Manage Org Structure & Governance
Drive Business Model Innovation	Lead Ideation and Innovation Management	Manage Technology Life Cycle	Lead Infrastructure Modernization	Manage Day-to-Day Operations
Apply Business Architecture	Establish and Manage Technology Innovation Team	Build Technology Roadmaps	Maintain IT Service Management	Socialize OCTO Value Proposition
Evolve Customer and Employee Experience	Create an innovation culture	Manage Technology- Related Risk and Security	Develop Shared IT Services	Manage Technology Talent Strategy
Manage Evolution of Digital Business Platform	Act as Technology Evangelist	Drive Technology- Related Corporate Sustainability		Manage External Partnerships
Key: ■Key capability for CTO ■Key capability for all C ■Supporting activity for ■Not a key capability fo	TO personas CTO as IT Innovator			

Source: Gartner (June 2023)

Figure 6 shows teams that typically report to the CTO as IT innovator. The main difference from the other CTO personas is that this type of CTO has a dedicated technology innovation team, consisting of Agile and DevOps-focused software engineering teams. Product engineering teams may reside here or may be separate if they are aligned to a specific product line or line of business.

Figure 6: Teams Typically Reporting to the CTO as IT Innovator

#### - Direct Reporting -- Indirect Reporting CTO as an Innovator **(III)** </> Digital product Technology **Technology Enterprise** Infrastructure and planning and innovation team engineers architecture operations aligned including software strategy including by technology team engineering teams trendspotting (e.g., cloud, AI) (Agile, DevOps, product or line of DevSecOps) business Data and Security and analytics team risk management team Source: Gartner

Teams Typically Reporting to the CTO as IT Innovator

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#### **Evidence**

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<sup>1</sup> Gartner's 2020 Evolving Role of the CTO Survey was conducted online from 19 August through 28 September 2020 with 411 respondents from the U.S. and U.K. in order to explore the evolving role of the CTO, including responsibilities, emerging challenges and success of the role. Respondents were screened to have the title "CTO" or to be one layer away from that title in their organizations — as either a direct report or a manager of a CTO. Additionally, a small number of executive-level peers (without a direct reporting relationship to the CTO) were also included in the study. CTOs in this study are at organizations of at least \$250 million in annual revenue, from a wide range of industries.

Disclaimer: Results of this survey do not represent global findings or the market as a whole, but reflect sentiment of the respondents and companies surveyed.

Our analysis of the capabilities that CTOs lead and teams that report to them comes from multiple sources:

- Client interaction data.
- An analysis of 559 CTOs and their direct reports from The Official Board (a global data boutique that provides detailed corporate organization charts).

#### **Document Revision History**

Establish 5 Capabilities to Create a Winning Office of the CTO - 27 August 2021

#### **Recommended by the Authors**

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Table 1: How to Adapt the Activities of the Digital Innovation and Enablement Function by CTO Persona: Digital Business Leader

Lead and Manage Technology Innovation <sup>↓</sup>	Develop and Implement Technology ↓ Strategy	Optimize Technology Operations ↓	Manage OCTO ↓
Perform Trendspotting and Continuous Foresight	Own Technology Strategy	Evolve Technical Architecture	Determine and Track Metrics
Manage Innovation Portfolio and Funding	Optimize Business Operations	Manage Strategic Technology Vendor Relationships	Manage Org Structure & Governance
Lead Ideation and Innovation Management	Manage Technology Life Cycle	Lead Infrastructure Modernization	Manage Day-to-Day Operations
Establish and Manage Technology Innovation Team	Build Technology Roadmaps	Maintain IT Service Management	Socialize OCTO Value Proposition
Create an innovation culture	Manage Technology-Related Risk and Security	Develop Shared IT Services	Manage Technology Talent Strategy
Act as Technology Evangelist	Drive Technology-Related Corporate Sustainability		Manage External Partnerships
	Perform Trendspotting and Continuous Foresight  Manage Innovation Portfolio and Funding  Lead Ideation and Innovation Management  Establish and Manage Technology Innovation Team  Create an innovation culture	Technology Innovation  Perform Trendspotting and Continuous Foresight  Manage Innovation Portfolio and Funding  Lead Ideation and Innovation Manage Technology Life Cycle  Establish and Manage Technology Roadmaps  Technology Innovation Team  Create an innovation culture  Act as Technology Evangelist  Implement Technology  Own Technology Strategy  Optimize Business  Operations  Manage Technology Life  Cycle  Build Technology Roadmaps  Manage Technology-Related  Risk and Security  Drive Technology-Related	Technology Innovation  Perform Trendspotting and Continuous Foresight  Manage Innovation Portfolio and Funding  Lead Ideation and Innovation Manage Technology Life Cycle  Establish and Manage Technology Roadmaps  Technology Innovation Team  Manage Technology Roadmaps  Technology Innovation Team  Manage Technology Roadmaps  Technology Innovation Culture  Manage Technology-Related Risk and Security  Act as Technology Evangelist  Drive Technology-Related  Develop Shared IT Services

Source: Gartner (June 2023)

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Table 2: How to Adapt the Activities of the Digital Innovation and Enablement Function by CTO Persona: Business Enabler

Enable the Digital Business ↓	Lead and Manage Technology Innovation <sup>↓</sup>	Develop and Implement Technology ↓ Strategy	Optimize Technology Operations ↓	Manage OCTO $\downarrow$
Build Digital Product Capabilities	Perform Trendspotting and Continuous Foresight	Own Technology Strategy	Evolve Technical Architecture	Determine and Track Metrics
Innovate Digital Products	Manage Innovation Portfolio and Funding	Optimize Business Operations	Manage Strategic Technology Vendor Relationships	Manage Org Structure & Governance
Drive Business Model Innovation	Lead Ideation and Innovation  Management	Manage Technology Life Cycle	Lead Infrastructure Modernization	Manage Day-to-Day Operations
Apply Business Architecture	Establish and Manage Technology Innovation Team	Build Technology Roadmaps	Maintain IT Service Management	Socialize OCTO Value Proposition
Evolve Customer and Employee Experience	Create an innovation culture	Manage Technology-Related Risk and Security	Develop Shared IT Services	Manage Technology Talent Strategy
Manage Evolution of Digital Business Platform	Act as Technology Evangelist	Drive Technology-Related Corporate Sustainability		Manage External Partnerships
Key: ■Key Activity for CTO as Digita ■Key Activity for all CTO Perso ■Supporting Activity for CTO a ■Not a Key Activity for CTO as	nas s Digital Business Enabler			

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Table 3: How to Adapt the Activities of the Digital Innovation and Enablement Function by CTO Persona: IT Innovator

Enable the Digital Business ↓	Lead and Manage Technology Innovation <sup>↓</sup>	Develop and Implement Technology ↓ Strategy	Optimize Technology Operations ↓	Manage OCTO ↓
Build Digital Product Capabilities	Perform Trendspotting and Continuous Foresight	Own Technology Strategy	Evolve Technical Architecture	Determine and Track Metric
Innovate Digital Products	Manage Innovation Portfolio and Funding	Optimize Business Operations	Manage Strategic Technology Vendor Relationships	Manage Org Structure & Governance
Drive Business Model Innovation	Lead Ideation and Innovation Management	Manage Technology Life Cycle	Lead Infrastructure Modernization	Manage Day-to-Day Operations
Apply Business Architecture	Establish and Manage Technology Innovation Team	Build Technology Roadmaps	Maintain IT Service Management	Socialize OCTO Value Proposition
Evolve Customer and Employee Experience	Create an innovation culture	Manage Technology-Related Risk and Security	Develop Shared IT Services	Manage Technology Talent Strategy
Manage Evolution of Digital Business Platform	Act as Technology Evangelist	Drive Technology-Related Corporate Sustainability		Manage External Partnerships
Key: ■Key capability for CTO as IT II ■Key capability for all CTO pers Supporting activity for CTO a ■Not a key capability for CTO a	sonas s IT Innovator			

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Source: Gartner (June 2023)

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