

# Quick Answer: What Are the Components of a CTO Operating Model?

Published 28 March 2023 - ID G00768592 - 5 min read

Samantha Searle

Initiatives: [Digital Innovation and Enablement Function](#)

CTOs should create a well-defined operating model aligned with their CTO functional activity map. The operating model defines how the CTO will achieve the goals defined in their charter and mission statement, and it can expose challenges of responsibility or organizational structure.

## Quick Answer

### What is a CTO operating model?

- An operating model bridges the gap between a CTO's strategy and its execution. It defines how the CTO function achieves the goals defined in its mission and charter.
- A common set of components underlie all operating models; however, the details vary significantly because of the great diversity of the CTO role and the differing goals of alternative CTO personas.
- A CTO operating model should be derived from the goals defined in the CTO mission and charter and aligned with the CTO responsibilities, as defined in Gartner's IT Score for CTO activity map.

## More Detail

### The Structure of an Operating Model

An operating model defines how a CTO delivers against the mission and goals defined in the CTO's charter. It applies to those CTOs who manage a CTO organization, as opposed to a CTO embedded in the IT organization who is subject to an existing IT operating model. It explains "how things get done here" and typically addresses 12 key areas, as illustrated in Figure 1. For more information on our definition of CTO personas and responsibilities, see the Recommended Reading section.

Figure 1: The CTO Operating Model

The CTO Operating Model



Source: Gartner  
768592\_C

Gartner

Each hexagon in Figure 1 represents a set of related tasks, deliverables, capabilities and responsibilities, which are explained in Table 1 below. Most CTOs have some involvement in each of the areas listed; however, different CTO personas (see Note 1) will prioritize areas differently, so they will employ different processes, organizational structures and deliverables to achieve their goals. For example, a CTO focused on digital business innovation will operate in a very different way than a CTO focused on IT optimization.

**Table 1: Operating Model Components**

(Enlarged table in Appendix)

Component ↓	Description ↓
Financials	A CTO's budget and financial plans.
Governance and Decision Rights	Decision rights; think of this as a RACI matrix associated with key deliverables, policies, processes and strategies.
Performance & Metrics	The CTO charter usually defines high level metrics, objectives and key results, targets, or equivalents. However, the CTO will also define more detailed metrics for each area of their responsibility.
Talent Management	The CTO will be responsible for staffing the CTO function. They will often have organizationwide talent management responsibilities based on their understanding of future business and technology plans and the skills that those plans demand.
Sourcing & Vendors	Many CTOs are responsible for technology sourcing strategies and managing relationships with key vendors.
Organizational Structure	Reporting structure, including direct and dotted-line relationships. Identifies the key teams that report to or collaborate with the CTO; for example, platform teams or enterprise architecture (EA) teams.
External Ecosystems	CTOs often manage relationships with external ecosystems in areas such as business ecosystems, academic partnerships, innovation ecosystems and technology collaboration programs.
Locations & Task Forums	Places, offices and virtual spaces. This area addresses both physical offices and the forums in which decisions are made and services are delivered. For example, review boards, workshops and communities of practice.
Tools	Tools used by the CTO organization, such as EA tools, ideation tools, collaboration tools, and modeling and simulation tools.
Working Practices and Deliverables	The processes, teams and deliverables that are used to achieve the CTO's goals. Examples include technology strategies, forecasts, technology roadmaps, radar screens, platform APIs, business proposals, standards and best practices. Processes and teams could include centers of excellence, workshops and platform teams.
Culture & Change Management	Those elements of organizational culture and change management for which the CTO is responsible, or can influence. Examples include innovation culture, technology decision culture (centralized versus decentralized) and change management driven by the CTO function.

Source: Gartner (March 2023)

## Jobs and Functions: A Complementary View of the Operating Model

A complementary view to help create and validate the operating model involves consideration of the capabilities the CTO and their team must carry out to achieve expected strategic goals. In this context, a “job” is a key task or responsibility that may be decomposed into subtasks. The CTO functional activity map used in Gartner’s [IT Score for CTO](#) is our recommended starting point. For example, consider the short excerpt below.

1. **Lead Technology Innovation**
  - 1.1 Carry out trendspotting and foresight
  - 1.2 Manage the innovation portfolio
  - 1.3 Lead idea and innovation management
  - 1.4 Manage the technology innovation team
  - 1.5 Create an innovation culture in the organization
  - 1.6 Act as a technology evangelist

For each of the tasks and capabilities, ask:

- *What key deliverables result?* For example, deliverables for activity 1.1 might include technology roadmaps and radar screens, working papers, or presentations on strategic trends.
- *Who performs the job?* Determine which staff or teams will be involved.
- *Who are the stakeholders?* Which stakeholders are responsible, accountable, consulted and informed and who is the customer for whom the work is being undertaken?
- *Where and how is the job performed?* For example, what forums, processes and working practices are involved?
- *Who funds the job?* Whose budget pays for it?
- *What tools are required?* For example, activity 1.5 might need enterprisewide ideation tools.
- *What vendors or external partners might be involved?* For example, activity 1.3 might involve academic partnerships.

The answers to these questions will help populate and validate the operating model.

## Conclusion

A CTO's mission and goals are defined by their charter and the set of responsibilities/tasks/deliverables for which they are responsible. The purpose of an operating model is to define how the job gets done. The operating model should be developed in conjunction with a CTO charter and CTO activity map, and aligned with it. A clear operating model can also highlight challenges such as too many responsibilities, or outcomes for which the CTO is responsible but cannot control. Also, the CTO operating model doesn't exist in isolation, but must be aligned with other key operating models in the organization; the alignment process can help to identify issues such as unclear or conflicting organizational responsibilities.

## Note 1: CTO Personas

Gartner identifies four basic CTO personas, although in practice, many CTOs wear multiple hats. The four basic personas are discussed in more detail in [How Chief Technology Officers Can Deliver Value by Using Our Four Personas](#), and are:

1. CTO as digital business leader.
2. CTO as digital business enabler.
3. CTO as IT innovator.
4. CTO as COO of IT.

The last case (COO of IT) may not have an organization or operating model separate from that of the wider IT group.

## Recommended by the Authors

[IT Score for CTOs](#)

[The Chief Technology Officer's First 100 Days](#)

[Tool: How to Establish a Charter for the Office of the CTO](#)

[How Chief Technology Officers Can Deliver Value by Using Our Four Personas](#)

© 2023 Gartner, Inc. and/or its affiliates. All rights reserved. Gartner is a registered trademark of Gartner, Inc. and its affiliates. This publication may not be reproduced or distributed in any form without Gartner's prior written permission. It consists of the opinions of Gartner's research organization, which should not be construed as statements of fact. While the information contained in this publication has been obtained from sources believed to be reliable, Gartner disclaims all warranties as to the accuracy, completeness or adequacy of such information. Although Gartner research may address legal and financial issues, Gartner does not provide legal or investment advice and its research should not be construed or used as such. Your access and use of this publication are governed by [Gartner's Usage Policy](#). Gartner prides itself on its reputation for independence and objectivity. Its research is produced independently by its research organization without input or influence from any third party. For further information, see "[Guiding Principles on Independence and Objectivity](#)."

Table 1: Operating Model Components

<i>Component</i> ↓	<i>Description</i> ↓
Financials	A CTO's budget and financial plans.
Governance and Decision Rights	Decision rights; think of this as a RACI matrix associated with key deliverables, policies, processes and strategies.
Performance & Metrics	The CTO charter usually defines high level metrics, objectives and key results, targets, or equivalents. However, the CTO will also define more detailed metrics for each area of their responsibility.
Talent Management	The CTO will be responsible for staffing the CTO function. They will often have organizationwide talent management responsibilities based on their understanding of future business and technology plans and the skills that those plans demand.
Sourcing & Vendors	Many CTOs are responsible for technology sourcing strategies and managing relationships with key vendors.
Organizational Structure	Reporting structure, including direct and dotted-line relationships. Identifies the key teams that report to or collaborate with the CTO; for example, platform teams or enterprise architecture (EA) teams.
External Ecosystems	CTOs often manage relationships with external ecosystems in areas such as business ecosystems, academic partnerships, innovation ecosystems and technology collaboration programs.

Component ↓	Description ↓
Locations & Task Forums	Places, offices and virtual spaces. This area addresses both physical offices and the forums in which decisions are made and services are delivered. For example, review boards, workshops and communities of practice.
Tools	Tools used by the CTO organization, such as EA tools, ideation tools, collaboration tools, and modeling and simulation tools.
Working Practices and Deliverables	The processes, teams and deliverables that are used to achieve the CTO's goals. Examples include technology strategies, forecasts, technology roadmaps, radar screens, platform APIs, business proposals, standards and best practices. Processes and teams could include centers of excellence, workshops and platform teams.
Culture & Change Management	Those elements of organizational culture and change management for which the CTO is responsible, or can influence. Examples include innovation culture, technology decision culture (centralized versus decentralized) and change management driven by the CTO function.

Source: Gartner (March 2023)