

The five common CTO personas and what they do

The chief technology officer, or CTO, is one of the least understood of all C-level positions, because the role is often tasked with pursuing abstract goals such as innovation. Success and progress in these areas can be qualified in many different ways and mean different things in different contexts, so the role itself is not consistently defined.



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Gartner research director Mike Walker has been studying a broad range of companies that have CTOs. He has identified five distinct personas to help demystify the CTO role.

“CTOs and other technology innovation leaders can use these personas to help them decide what kind of CTO works best for their organisation,” says Walker. “Moreover, they can use the personas to help clarify their position with relevant stakeholders, and set expectations and objectives accordingly.”

The chief business-led innovation technology officer

This is typically a board-level position with visibility at the most senior levels of an organisation’s business and technology divisions. This type of CTO is common in industry sectors that have been, or will be, heavily driven by market disruptions — such as retail, technology, media, telecom and banking.

The role has a very broad scope and impact, with the potential to be applied to all kinds of businesses as the world becomes more digital. However, it requires vision and commitment from executive leaders to ensure the CTO can be effective in delivering against such a broad remit.

Typical responsibilities include:

- Partnering with business executives to identify, rationalise and roadmap new business models and capabilities.
- Leading business units that drive innovative and strategic thinking for the company, such as enterprise architecture, innovation management and R&D.
- Holding the funding and decision-making authority for innovation-driven technology investments.

The chief technology innovation officer

This persona typically holds an executive position within IT and reports to the CIO. This type of CTO is a technology visionary who leads groups such as enterprise architects, innovation managers, and professionals and specialists with shared IT services.

The approach of this CTO is often that of pushing technology best practices toward the main business functions, while providing architectural oversight on how these technologies are deployed within the organisation.

Typical responsibilities include:

- Determining how mainstream and emerging technologies should be used to advance business strategy.
- Serving as the central point for technology innovation within IT.
- Making key decisions on technology investments.
- Piloting and establishing emergent platforms (e.g., digital platforms).

The chief innovation guru

Sometimes referred to as the chief architect, this type of CTO is often an individual contributor operating in a small-to-midsize business or within an industry focused on providing expert business or technical knowledge.

Typical responsibilities include:

- Serving as a thought leader who provides senior executives with guidance on which mainstream and emerging technologies to use to advance business strategy.
- Contributing lightweight governance frameworks for technology use, and advising on key technology decisions.
- Engaging in pilots of emerging technologies.

The chief operating officer of IT

This is a common role in businesses that do not look at the IT and technology departments for thought leadership or innovation. Typically, in very large organisations with significant IT head count, the CTO is focused on the day-to-day running of IT. This frees the CIO to work at a more strategic level across the business.

Typical responsibilities include:

- Running and maintaining IT operations through all or some of the following: IT service management, vendor management, shared IT services, data centre, telecommunications and security.
- Assisting in developing the vision and roadmap to execute current and future company goals and objectives to provide the best technology.
- Ensuring that internal and external systems are running and performing as they should by actively monitoring and

responding to incidents that might affect highly available and performant systems.

- Engaging in major decisions and procurement of technology centred on technology modernisation, optimisation and consolidation, as well as major IT systems such as CRM or ERP.

The chief operational technology officer

In industries where technology is a key part of the company's product or product delivery, CTO is often used to mean the person in charge of that technology — sometimes called operational technology (OT). For example, in a telecom company, the CTO may be in charge of the telecom network, while the CIO is in charge of internal IT. In this scenario, the CTO and CIO often have separate lines of reporting.

Typical responsibilities include:

- Working collaboratively with the product and engineering teams on the development of new products as well as product enhancements and product redesign
- Establishing and communicating requirements in acquiring technology applications, services, systems and equipment; negotiating and managing vendor contracts to cost, safety and performance standards.
- Ensuring internal and external systems are safe and secure as well as running and performing as they should, by actively monitoring and responding to incidents that might affect highly available and performant systems.

"These personas are intended as a guide more than an exhaustive list," explains Walker. "Indeed, if we look at high-tech industry organisations, we see additional common personas, with the CTO often acting as a technology evangelist, or even as the person leading the invention and design of the core product."

The most important thing, Walker says, is that CTOs and their organisations agree on what their role means in its unique context, and how to clearly communicate the definition to all relevant parties.

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