

Educational briefing for non-IT executives

Chief Digital Innovation Officer

Executive summary

IT's role in health care continues to expand and must now be viewed as a potential industry disruptor in every corner of the business of health care. Becoming a digital health system is about building a strong platform and developing a set of competencies that enable ongoing, operational, strategic, and innovative change. Instead of deciding on a strategy and then asking how IT can support it, we are beginning to see health care organizations (HCOs) moving to a “digital first” approach as they start to transform their existing business around the new capabilities digital technologies bring. To be successful, innovation must be led by the chief executive officer (CEO) and supported by the C-suite. Without careful tending, innovation efforts can develop into a “thousand flowers blooming,” but in a garden that is haphazard and choked with weeds. To mitigate this risk and harness innovation at scale, we are seeing the emerging role of a chief digital innovation officer (CDIO), sometimes called a chief digital officer (CDO) or chief innovation officer (CINO).

How is a CDIO different from a CIO?

The remit of the chief information officer (CIO) is typically internally focused, concentrating on running IT infrastructure and operations, and supporting clinically led, IT-enabled projects. The remit of the CDIO, however, is to be more externally focused, leading IT-powered digital innovation while building and supporting the innovation capabilities of the HCO. To be effective the two roles need to work closely together, with the CIO running IT operations so that they enable digital innovations.

Differences between the CIO and CDIO roles

Chief information officer		Chief digital innovation officer
Runs IT operations, enables digital innovation	↔	Leads digital innovation
Focuses on operational excellence, agility	↔	Focuses on big problems without packaged solutions
Has more of an internal, automation focus	↔	Has more of an external, digitization focus
Addresses stability, risk mitigation	↔	Addresses speed, external threats, organizational agility
Builds and supports IT infrastructure	↔	Builds and supports innovation capabilities
Manages technology vendors	↔	Initiates and manages external partner relationships

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 The CIO is charged with keeping the trains on track and keeping them moving. My role is to ask: Where is this train going? How fast should it be going? Should we be on a train, or a rocket ship?
 Dr Rasu Shrestha, former chief innovation officer
 University of Pittsburgh Medical Center, US
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What does a CDIO do?

The CDIO needs to be insightful regarding “the art of the possible” for digital transformation, with the right combination of practicality, engagement, and vision. Their focus is to fundamentally rethink key customer and internal journeys to make the organisation ready for the future.

Given the difficulty of changing an organization’s culture and the changing business models in health care, transformation frequently occurs through a series of small steps rather than one giant leap. The CDIO focuses on both operational efficiency and the customer/ patient experience, addressing the quadruple aim of improving cost, quality, access, and the clinician experience.

Why is having a CDIO important?

Health care is notoriously slow to change, with some studies claiming it takes 17 years for a best practice to become a norm. On the other hand, unchanneled innovation can lead to the “thousand flowers blooming” situation, with many pilots but little change at scale. The role of the CDIO is to focus and align innovation efforts so the HCO’s digital transformation strategy is tied to its enterprise strategy.

What should a CDIO’s approach be?

The path to becoming a digital health system will probably invoke different types of improvement (e.g., incremental, big leaps, disruptive, etc.), with true digital transformation stemming from disruptive innovation.¹ Change and agility are at the heart of innovation. HCOs must build a culture that can adapt to potentially large volumes of change, move fast, and quickly course correct when needed, with the appropriate governance.

Being successful at this will likely require taking an agile approach (experiment, test and learn, repeat). This approach should be supported by cross-functional innovation teams that are developing and iteratively improving minimally viable products to either fail or get to value fast. The key is to focus on outcomes like improving some aspect of cost, quality, access, or the clinician experience—and to be specific about how to measure that improvement.

Questions that hospital executives should ask themselves

- Who will lead out organization’s digital innovation efforts?
- How does innovation fit into your governance structure?
- How will we provide initial and ongoing funding for innovation?
- How will we create and maintain a culture of innovation?
- How will we measure and reward successful innovations?

Additional Advisory Board research and support available

Checklist: [Get Started with Digital Innovation](#)

Blog: [Is your health system's chief digital or innovation officer positioned for success?](#)

Cheat sheet library: [Digital Health Systems](#)

Webcon: [Digital Health Systems: The Innovation Journey Continues](#)

1) Disruptive innovation displaces an established market. The business theory was proposed by Clayton Christensen in 1997.