

## Evolution of the Senior Technologist – CTO, CIO, CKO

*What's in a name, or in a title for that matter? It seems the pendulum keeps swinging back and forth on the importance of business titles. Remember in the late 80s when everyone at the senior level became a "chief?" Chief executive officer, chief financial officer, chief operations officer. Then, during the dot-com era, the notion of formal business titles was rejected in favor of "invented and inspired" labels. Chief Troublemaker. Corporate Evangelist. Digital Diva. (I thought "Grande Dame" would make a good one). Sure, they made for good conversation starters over business cards, but you never really understood what the person's function was within the enterprise.*

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The swing within associations these days appears to be toward more corporate titling as opposed to nonprofit labels. For example, executive directors are now called CEOs; division directors are retitled vice presidents. Perhaps this isn't surprising given that many of these senior-level professionals have careers that are now crossing over between the for-profit and not-for-profit sectors, and they are carrying their titles with them.

Another interesting trend is within the field of technology. As more organizations come to realize the value and importance of technology as a key business asset, the stature of the lead technologist becomes elevated. Once looked on as the "computer person," lead technologists in many organizations now have a seat at the table, as technology itself has transformed from an ancillary component of internal operations into a key strategic element. And this elevation in stature has as much to do with the sheer proliferation of technologies as it does the integration of technology into the shaping of broad organizational direction.

As the role of technology evolves, so, too, does the title of the lead technologist. But there is confusion about what to call the person who leads technology initiatives and operations in an enterprise. CIO? CTO? CKO? VP of technology? IT director? The list goes on — and with

this growing list of monikers come much ambiguity and confusion.

The chief technology officer (CTO) was the first executive title to bring technology from the back room to the boardroom. Somewhere in the past, a wise senior executive realized the power and potential that technology would have for his organization and believed that technological capital — like financial and human capital — needed to be on an equal plane in overarching organizational strategy as well as day-to-day decision making and system maintenance. And thus the first CTO was knighted and given a seat at the table.

During this nascent period, many of the individuals who made this hierarchical leap had backgrounds in computer science, engineering, or information systems and brought with them more of a focus on the hardware side of things. According to *InfoWorld Magazine*, 72 percent of CTOs have an undergraduate degree in technology, whereas only 38 percent of CIOs (chief information officers) have a technology degree. In some organizations, that legacy of being "about the boxes" has not left the position.

More recent on the landscape of titling is chief information officer (CIO), a title that subordinates focus on the hardware and software in favor of the information that is stored, processed, or cataloged on those systems. This is an important shift in defining the chief technologist of an organization, because it assumes a broader, more strategic role for the lead tech person. At present, CIO is the most pervasive title for the senior-level staff person who directs both the technology and the information architecture of an organization. To be fair, "CIO" is just more common. There really is no single industry definition or standard for these roles. *CIO Magazine*, for example, caters to any title that assumes the senior technology role in an organization, and it has published many editorials about the distinction between CIO and CTO. Even in the human resources industry, there is not one sanctioned and universally adopted job description.

Here, then, is yet another twist on these titles, because among association executives, it seems the question persists: "Does my organization need a CIO or CTO, and what's the difference?" The following distinctions may be arbitrary and born more out of semantics than anything else. And if you are seated under one of these titles, the descriptions that follow may not be altogether true for your circumstance. Still, these delineations are offered

as food for thought to the organization that is trying to answer the question: "Do we need one of those, and what do we call it?"

### **Chief Technology Officer**

The chief technology officer, as previously established, usually has a more keen focus on the actual technology itself. This may mean responsibility for the hardware and software infrastructure, the network and its performance, the selection of vendors and products to meet the association's business needs, and perhaps (especially in larger associations) a help desk to keep everyone up and running. Concerns such as system security, disaster recovery, Web hosting, hardware upgrade paths, and software engineering may fall under the domain of the CTO. The CTO manages the tangible technological assets of the organization and the systems that run on them.

One way of looking at this job definition would be to suggest that the CTO needs to understand the information and communication needs of the organization enough to secure and manage the tools to support those needs. However, the CTO does not necessarily have to be a strategist; he or she just needs to know what variables to manage in order to help the strategists execute their plans more effectively. This isn't to say that CTOs aren't involved in strategic decisions; the CTO rarely is simply a "mechanic" who doesn't need to know where the car's going but simply has to make sure that it can go. Most organizational leaders these days realize the undeniable convergence of technology decisions and strategic execution that has emerged over the past decade or so.

### **Chief Information Officer**

The chief information officer (CIO) is responsible for leading an organization's information technology division as well as developing and implementing the organization's IT strategy. The CIO must be able to communicate a compelling vision for how technology can serve the organization and also represent technology concerns to senior staff. The CIO needs to be visionary in nature: a well-informed, well-connected, articulate leader who can bring functional units together, guide technology planning, establish priorities, select new technologies and technology partners, and oversee the implementation of those selections.

The chief information officer — in an emerging number of cases — does not enter the organization with a technological background. You will find CIOs who come

from consulting, communications, education, and business backgrounds as well as those who migrate from traditional CTO positions. The CIO's job should focus on information as an asset of the organization and therefore be fixed on how information comes into the organization; how it is processed, disseminated, categorized, warehoused, and archived; and how it flows out of the organization. The CIO often is responsible for creating shared data structures and internal policies that govern and control the association's information assets. The CIO's primary domain is information, not specifically technology. But technology is very significant in the CIO's job. As technology and knowledge management have co-evolved — have in a sense become interdependent — the CIO's job is to manage the focal point where the two disciplines converge.

### **Chief Knowledge Officer**

The newest "term of art" title is chief knowledge officer (CKO). I'd like to argue that this role — while vital to every association — should not be falsely categorized under technology. Knowledge is not a synonym for information. Any one of us can imagine a person who is full of facts and figures (i.e., information) yet is devoid of the ability to apply them to everyday life (i.e., knowledge). The CKO is responsible for creating processes and systems that harness information and mold it into usable business intelligence.

Reggie Henry of The Center for Association Leadership perhaps defines this role best: "The CKO is responsible for ensuring that the organization turns information into wisdom." I would agree with him: that wisdom is when the organization's decision makers evolve beyond quoting data points and statistics and move to a higher level — that of collecting data, analyzing it against objectives, putting that intelligence into practice, and then repeating the cycle by assessing the outcomes.

In most cases, the distinction between CTO and CIO is largely semantic or preferential. There are legacy CTO positions called to serve a multidimensional role. Similarly, many CIOs are quite capable technologists who could double on the help desk if they had to. But for the most part, the CIO title is developing into a very different position with separate focal and functional responsibilities.

To illustrate this whole integration of CTO, CIO, and CKO, consider these analogies: Think of the CTO as being responsible for the system or structure, made up of various physical components that do different things.

It requires monitoring and maintenance. The CTO has to understand each component, as well as how they interact. Think of the CIO's domain as energy or fuel. This is the life force that is housed within the system but also what gives it life. In other words, if you didn't have data, you wouldn't need a database or a place to store it. The CIO has to understand how information flows into, through, and out of the organization and must understand what needs to be done to ensure that the flows are uninterrupted and productive. The CKO looks at the whole system, both structure and energy, and asks the question: "What can we do with this? How can we mobilize the entire system towards our mission?"

So does your organization need a CTO, CIO, or CKO?  
Yes.