Technology Leadership:
Today’s Higher Education CIO

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Overview

Over the past few decades technology has become increasingly pervasive, with far-reaching impact on both our personal and professional lives. Higher education is not immune to technological transformation, and leaders in the academic community must examine how technology will impact the future of their colleges and universities. To further institutional goals, they must embrace new technologies and leverage existing information technology (IT) while operating agilely and efficiently in a rapidly changing environment.

To lead the charge in addressing these issues, many higher education institutions created an IT executive position commonly termed the chief information officer (CIO). The CIO holds a complex position that oversees current technology and information assets and strategically plans with other organizational leaders for the future of the institution.

CIOs work in rapidly changing environments and face a variety of challenges: difficult funding, unique institutional cultures, differing administrative structures, tremendous privacy and security concerns, changing political climates, enormous expectations, intellectual property conflicts, inadequate management approaches, aging systems, increasing accountability, expensive initiatives, complicated governance structures, increasing strategic responsibility, and changing higher education priorities.

Due to the complexity of the CIO role, concerns have arisen about high turnover rates, lack of career progression, confusion regarding the proper training and background needed, unclear metrics for success, and a lack of people aspiring to the role.

Despite all of these challenges, colleges and universities require effective IT leadership. Thus, a success framework is needed for those in the CIO position, for those preparing for the role, and for those higher education leaders who evaluate and hire technology executives.

There is little quantitative research on how to succeed as a CIO. Available literature, often based on expert opinion, focuses on highlighting select roles in which a CIO must excel as well as describing the skills, abilities, attributes, and expertise a successful CIO should possess. This ECAR bulletin summarizes the literature surrounding the CIO position in higher education in three areas, specifically the:

- Constituents the CIO serves
- Variety of roles a CIO may be required to assume
- Skills, abilities, attributes, and expertise currently thought necessary for CIO success

It is hoped that this information can serve as a basis for future empirical studies aimed at developing a CIO success framework.

The importance of CIO success cannot be overstated. CIOs control information and technology assets, oversee vast resources, and enable the accomplishments of their institution and its members.
First appearing in higher education in the late 1970s, the position of executive technology leader is often given the title of CIO. More recently, the role has evolved from a technical authority to an institutional leader responsible for creating strategy and policy.

1. Constituencies the CIO Serves

As an important member of an institution’s executive administrative team, the CIO serves a number of varying constituencies, described below.

**Operational Administrators.** Operational administrators are defined here as senior administrative stakeholders who directly oversee day-to-day institutional operations. They include vice chancellors, associate provosts, vice presidents, departmental directors (finance, institutional research, libraries, advancement, student affairs, etc.), and similar positions. It is important that operational administrators understand their role in facilitating the achievement of campus goals through appropriate technology use.

The CIO must work effectively with operational administrators and encourage them to take a needed leadership role in strategic IT decisions. To do so, the CIO must have an appreciation and understanding of the operational administrators’ contributions to the organization. Successful CIOs need to know when to advocate for technology resources and when to reduce the importance of their needs in favor of other campus initiatives that should take precedence.

**Executive Leaders.** These individuals oversee operational administrators and have strategic responsibility for the entire college or university. Such positions include chancellor, provost, president, and similar titles. Executive leaders must realize that crucial IT decisions raise strategic issues comparable in importance to finance, government relations, and private fundraising where they have ultimate responsibility.

A critical function of the CIO is communicating resource and project needs in the proper goal-specific institutional context. To accomplish this effectively, the CIO must understand the mission and strategic direction of the institution and its leadership.

**External Executive Stakeholders.** External to the organization are trustees, boards of governors, legislatures, donors, and similar constituencies. Communication is challenging because CIOs rarely have direct contact with this group. At times, direct presentations are possible, but often CIOs reach these audiences through other channels such as executive leaders, publications, and the media. Little literature surrounds the best way to communicate effectively with this group, although it can be assumed that a similar strategy to that employed with executive leaders (insofar as promoting initiatives that advance the mission of the institution) would be well received. Additionally, the successful CIO should keep abreast of higher education issues and legislation, key political figures and donors (as well as their positions on issues), and the organization’s supporters and adversaries.

**Administrative Departments, Academic Departments, Professional Schools, and Colleges.** The constituents in these areas include deans, chairs, faculty, students, and staff (including decentralized IT staff). When communicating with these groups,
collaboration, enablement, and partnership must be emphasized. It is critical that the CIO have a true appreciation and understanding of these groups’ contributions to the institution and how they operate. The IT organization must strive to be seen as a strategic partner. To avoid misunderstandings, IT leaders should manage expectations by clearly communicating time frames, priorities, and resource information.

**Technology Department.** The CIO oversees the centralized IT department and in this role works with technology administrators, staff, business partners, vendors, and in some locations unions. The CIO should set clear expectations when communicating with this group. Additionally, engaging with staff, soliciting feedback, building relationships, valuing employees, and learning what motivates technology team members further contribute to the CIO’s success.

**Advisory/Governance Committees.** When effectively managed, advisory committees can be extremely helpful. These committees often serve a governance function that helps define direction and policy, since members normally comprise influential constituencies. The CIO must either act on the information they provide or sensibly explain why not in order to avoid participant drop-out or development of adversarial relationships. CIOs should make time to consult with key committee members outside meetings to further cultivate these relationships.

**Other External Audiences.** The CIO serves and interacts with various other external audiences including the general public, media, and community leaders and members. As with all constituencies, the technology executive must manage interactions with external audiences and understand their needs, expectations, and perceptions. Not only should the CIO prepare a sound bite that concisely states technology goals, plans, and achievements but also know how to communicate effectively with the media in less desirable situations, such as discussing a security failure.

**Peers.** IT professionals often publish as well as attend and present at industry conferences to network and expand their knowledge. This community of peers is a valuable resource to whom a CIO may turn for advice and professional development.

## 2. Roles the CIO Plays

According to available literature, the CIO in higher education may be expected to assume any of more than 50 distinct roles, many requiring differing skills, abilities, attributes, and expertise.

**Academic/Author/Researcher/Student.** Although there is debate as to whether the CIO should be an academic, it is clear s/he must have a solid understanding of the academic environment. Many technology leaders conduct research and contribute to industry and academic publications. Doing so fosters dialogue, facilitates relationship building, and encourages information sharing.

At the same time, technology and academia are constantly changing, and a successful chief technology officer must stay up-to-date on the fields of management, leadership, higher education, and technology. What leaders read shapes their views and grows their
knowledge. Continuous learning is essential to developing a broad strategic view of the factors affecting higher education and technology.14

Business Partner/Entrepreneur/Contract Overseer/Negotiator. The CIO should actively create partnerships with internal business units, other academic institutions, and private enterprise to gain economies of scale as well as to provide unique educational and support opportunities for his/her constituencies.

Additionally, the CIO is responsible for vendor relationship management and contract negotiation, supervision, and evaluation.19 This may include national and international negotiations.20

Central System and Infrastructure Provider. The CIO oversees the institution’s technology infrastructure. This usually includes administrative, instructional, and research computing as well as networking, data storage, and information security.20

However, library, academic, and administrative departments often have their own IT expertise specific to their respective areas and often determine which technology solutions they will implement. The CIO must realize this and work collaboratively to ensure decentralized solutions work with the overall campus technology infrastructure.11

Change Agent. Because technology implementation often involves change, the CIO must be able to facilitate institutional change.3,21 As a change agent the CIO’s “credibility comes from effectively communicating and realistically evaluating the goals, costs, options, tradeoffs, and risks associated with pursuing a proposed technological direction, implementation, or innovation.”3 To mitigate resistance, the CIO should have a clear understanding of the expectations regarding the scope of the change agent role and include constituencies when setting priorities and making decisions.16

Coalition Builder/Collaborator/Facilitator/Enabler. The CIO must be a coalition builder.3 Collaboration is necessary to build coalitions and to overcome the academic and IT cultural divide. To achieve this level of collaboration, the CIO and academic leaders “need to commit to, plan for, and model collaborative behavior.”22 The CIO should not unilaterally make decisions and sell the campus on specific technologies but, instead, must act as a facilitator “who listens to many campus constituencies, encourages involvement and ownership of technological tools and processes, synthesizes the many needs and ideas, and articulates the collective IT vision for the campus.”11

All CIOs are in the “service” business and assist the campus community (students, faculty, and staff) in determining how information technology can help them achieve their goals. The chief information officer must communicate effectively, listen, and establish trust in order to be perceived as acting in partnership with end users while being careful not to overstep the boundaries of his/her expertise.14

Committee Member/Leader. CIOs often serve on and/or lead committees such as institutional strategic planning committees, educational committees, advisory committees, governance committees, or others. It is important for the CIO to know how to commission and lead committees including what their role should be and what types
of responsibilities are best undertaken within a committee structure. The CIO must also understand his/her role on the committee and participate accordingly.\textsuperscript{3,21,23}

**Communicator/Public Speaker/Presenter/Public and Media Relations Manager/Spokesperson.** A successful CIO must be an effective communicator.\textsuperscript{14,21} The technology leader must plan for communication by thinking explicitly about who needs to be involved in the communication network, how frequent communication needs to be, and which activities will be the most effective.

Strategically planned communication supports successful long-run collaborations.\textsuperscript{22} Necessary communications include more than one-way information dissemination. The CIO must learn the perceptions and requirements of his/her constituencies by spending time listening to and asking about their needs.\textsuperscript{16} S/he must be comfortable communicating using business and higher education vocabularies and be able to clearly communicate without technical terms.\textsuperscript{19,24} Successful communication requires planning and follow-through; therefore, the CIO may be well served to hire someone specifically responsible for maintaining communication.\textsuperscript{22}

The CIO must also be a skilled public speaker, since the position often involves persuasively communicating future plans. Success as a public speaker ultimately depends on the technology leader’s credibility.\textsuperscript{3} Due to the increasing dependency of higher education institutions on IT, there is more and more public interest in what schools are doing with technology. It is therefore also important that the CIO know how to communicate effectively with the media.\textsuperscript{14}

**Educator/Advocate/Salesperson/Liaison.** The CIO provides information about the ways in which new technologies affect higher education.\textsuperscript{14} S/he must encourage strategic technology use and educate the academic community on how IT adds organizational value\textsuperscript{19} as well as on limitations to technology.\textsuperscript{10} The CIO must be an advocate to both internal and external constituencies, often acting as a liaison between these groups and the IT organization, college, or university.\textsuperscript{5,20,25}

**Evaluator/Monitor.** As technology continues to pervade the academic environment, IT departments will be valued for the achievements they make possible rather than for quantitative efficiency measures. This means the CIO must be able to demonstrate and communicate that resources are appropriately targeted and contribute to institutionally valued and prioritized achievements.\textsuperscript{16} CIOs need to assess and evaluate IT efforts including identifying the benefits of IT investments, evaluating employee and project team performance, and calculating return on investment. There is a gap between the number of CIOs who believe evaluation to be important and the actual level of current assessment taking place.\textsuperscript{26}

**Financial Manager/Fundraiser/Politician/Resource Allocator.** “Successful IT leaders need to understand the financial environment in which the institution operates in order to best plan and implement supporting information technologies.”\textsuperscript{27} To do so, the CIO must comprehend higher education finances and financial reports. The technology executive should track key numbers, understand the financial strength of the organization, and know the financial resources necessary for success.\textsuperscript{13} Additionally, the technology executive should be familiar with higher education issues and legislation.
The CIO must manage in all directions to obtain the technology resources and influence necessary to carry out strategic technology plans.\textsuperscript{21,26} This includes knowing the key political figures and donors and their positions on important issues, as well as the organization’s supporters and adversaries. Finally, the technology leader should read relevant higher education media reports.\textsuperscript{13}

The increasing gap between available funding and technology expectations requires that the CIO make strategic choices for how to use technology resources effectively.\textsuperscript{6} Fund allocation decisions should be a direct outcome of strategic discussions. Unfortunately, IT resources are frequently given out across constituencies, “satisfying everyone a little and no one completely.” Allocating resources in this “political” manner is not strategic.\textsuperscript{15,29} In addition to financial resources, the CIO must also determine how best to distribute human and information resources.\textsuperscript{9,25}

**Informaticist/Information Manager/Information Security Provider/Policy Maker/Standards Developer.** The CIO must secure, manage, and preserve the institution’s data assets.\textsuperscript{19} The IT executive should know what information is needed and make it accessible, as well as ensure that data is presented in a way that results in value and information creation.\textsuperscript{30} Security, privacy, and academic freedom are top concerns for CIOs. Therefore, it is important that policies and practices are vetted, understood, and authorized by campus constituencies.\textsuperscript{15}

CIOs frequently have institutional policy development responsibility\textsuperscript{12} and are often involved in technology policy issues. The technology leader aligns campus policy with federal policy, regulatory demands, and campus operations and therefore must be aware of relevant policy issues.\textsuperscript{3} Additionally, the CIO should ensure that one person’s technology use does not negatively impact another’s or compromise security.\textsuperscript{20} It is essential that CIOs work with other campus leaders to set a reasonable standard of service in line with available resources. The CIO must provide campus leaders with the options, costs, and trade-offs involved in policy decisions so that the group can work together to implement standards.\textsuperscript{15}

**Innovator.** The CIO must be able to identify organizational needs and develop innovative solutions. “A major responsibility of the IS manager is to ensure that rapidly evolving technical opportunities are understood, planned, implemented, and strategically exploited in the organization.”\textsuperscript{31} Toward this end, the CIO should periodically scan the environment for new innovations.\textsuperscript{31}

Studies show that IT leaders who foster innovative environments may positively impact their institution. Technology staff who believe they work in innovative environments agree more that their department is influential, that IT is an essential part of institutional strategic plans, that IT contributions are valued, that IT facilitates positive cultural change, and that the institution is technologically forward thinking.\textsuperscript{8}

**Leader/Decision Maker.** Leaders bring people together for a shared goal.\textsuperscript{3} As the technology leader, the CIO must be able to align IT with business to meet the institution’s goals.\textsuperscript{10,32} As executive leaders, CIOs should focus on creating value for their institution. “Our goal as CIO leaders must be to take this mass of commoditized
technology and apply it to today's problems in creative and fundamentally different ways. That's where IT remains strategic, and it's how we can provide value as CIO leaders. 

CIO leaders make decisions in support of the university's mission and priorities. Before making a decision, it is the CIO’s responsibility to make sure s/he is well informed and well advised. A CIO’s advisors may include IT staff, faculty, colleagues at other institutions, members of professional organizations, or others. Furthermore, the technology leader should consult academic evidence. By drawing on a multitude of resources, a CIO can make decisions using a more extensive base of knowledge.

Manager/Administrator/Coach/Motivator/Mentor/Mentee. The CIO should clearly and widely communicate his/her management philosophy including which management theories s/he respects and what strategies s/he believes are best for the organization. It is also crucial that the CIO understand the latest in organizational development strategies and have the ability to build and retain a talented staff and management team. The CIO should define the roles of the organization and communicate those to his/her staff so that staff members understand how their jobs are relevant to larger institutional goals.

The CIO is increasingly expected to assume the role of coach and mentor. Often, CIOs have been mentored, and mentoring relationships are important in nurturing organizational talent.

Additionally, the CIO must build and sustain a viable governance structure. A governance structure identifies those with input and decision rights and defines IT accountability.

Marketer. A common message should be given as to what can be expected from the IT department. A clear, constant message, if well communicated and understood, enables everyone to accurately represent what the technology organization does. It is important to identify those who make information technology decisions and those who influence them as primary marketing targets. The IT leader must also be aware of possible marketing pitfalls. Marketing efforts will be unsuccessful when IT’s credibility is low and if constituent experiences are counter to what is communicated. Effective marketing requires understanding how users define value and ensuring “that IT is both delivering against their tangible expectations and over-delivering on the intangibles.”

Project Manager/Team Builder. Technology leaders need project management skills. The CIO, who is responsible for critical and complex institutional projects such as enterprise resource planning (ERP) implementations, has to be capable of successfully completing large, complicated, costly, impactful initiatives.

The CIO must strategically design teams by identifying their type and goals and developing their structure and capabilities. Once teams are in place, the leader must ensure their effectiveness by providing conflict resolution and interpersonal communication training, building group trust, engendering mutual respect, and developing commitment and cohesiveness.

Visionary/Consensus Builder/Strategic Planner. The CIO must be a visionary with the ability to generate a shared vision for the organization’s future. Building a
campus-wide vision for information technology is for the most part a consensus-building task that requires the CIO to have developed trust with the many campus constituencies. The trust needed is “founded upon good communication within the campus concerning IT issues, concerns, and developments, the existence of a true service attitude toward the delivery of technical support and services, and a history of acting in a collaborative manner.”11

Strategic planning is an important responsibility of the CIO due to rising costs and productivity and accountability demands as well as increasing pressure from the economy, competition, and government regulation.10,11,19 Strategic technology plans must align with both the academic and business missions of the institution.33 To be a respected member of the executive team, the CIO must contribute beyond IT-specific initiatives by understanding institution-wide issues and participating in strategizing solutions for them.13

Support Provider/Secure Service Provider. The CIO is responsible for technology support, responsiveness, and security.19 Many institutions are moving to a more flexible multi-tiered support structure where there are both centralized and distributed support services. The CIO ensures that the core centralized services are “stable, well supported, and cleanly delivered”6 and that initiatives undertaken outside of the central IT organization work with the campus infrastructure.11 In this type of partially distributed environment, it is important to focus on achieving goals by collaborating across organization boundaries.6

In summary, the CIO position is complex and comprised of many roles. Table 1 recaps the roles suggested in the higher education literature.

Table 1. The Roles Identified for the CIO in Higher Education

<table>
<thead>
<tr>
<th>Academic</th>
<th>Consensus Builder</th>
<th>Innovator</th>
<th>Public and Media Relations Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrator</td>
<td>Contract Overseer</td>
<td>Leader</td>
<td>Public Speaker</td>
</tr>
<tr>
<td>Advocate</td>
<td>Decision Maker</td>
<td>Liaison</td>
<td>Researcher</td>
</tr>
<tr>
<td>Author</td>
<td>Educator</td>
<td>Manager</td>
<td>Resource Allocator</td>
</tr>
<tr>
<td>Business Partner</td>
<td>Enabler</td>
<td>Marketer</td>
<td>Salesperson</td>
</tr>
<tr>
<td>Central System Provider</td>
<td>Entrepreneur</td>
<td>Mentee</td>
<td>Secure Service Provider</td>
</tr>
<tr>
<td>Change Agent</td>
<td>Evaluator</td>
<td>Mentor</td>
<td>Security Provider</td>
</tr>
<tr>
<td>Coach</td>
<td>Facilitator</td>
<td>Monitor</td>
<td>Spokesperson</td>
</tr>
<tr>
<td>Coalition Builder</td>
<td>Financial Manager</td>
<td>Motivator</td>
<td>Standards Developer</td>
</tr>
<tr>
<td>Collaborator</td>
<td>Fundraiser</td>
<td>Negotiator</td>
<td>Strategic Planner</td>
</tr>
<tr>
<td>Committee Leader</td>
<td>Informaticist</td>
<td>Policy Maker</td>
<td>Student</td>
</tr>
<tr>
<td>Committee Member</td>
<td>Information Manager</td>
<td>Politician</td>
<td>Support Provider</td>
</tr>
<tr>
<td>Communicator</td>
<td>Infrastructure Provider</td>
<td>Presenter</td>
<td>Team Builder</td>
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<td></td>
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<td>Project Manager</td>
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</table>

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3. Skills, Abilities, Attributes, and Expertise Needed for CIO Success

In addition to the qualities outlined within the various roles above, many CIOs and industry experts offer insight into what skills, abilities, attributes, and expertise they believe one needs to be a successful IT leader. These include boundary-spanning ability, familiarity with academia, technological skills and understanding, priority and direction-setting ability, flexibility, pragmatism, expectation management capability, organizational behavior expertise, ability to align IT with institution goals, planning and assessment expertise, and the ability to focus on outcomes.

A few empirical studies offer data on skills associated with CIO success. “Higher levels of perceived effectiveness in the core activities of planning, governance, and communication do indeed result in higher levels of perceived alignment between IT and the institutional purpose.” Mentoring may contribute to CIO success and “leadership style appears to play an important role in CIO effectiveness.”

Table 2 recaps the skills, abilities, attributes, and expertise suggested for college and university CIOs.

Table 2. Skills, Abilities, Attributes, and Expertise for the CIO in Higher Education

<table>
<thead>
<tr>
<th>Ability to Align IT and University Goals</th>
<th>Alliance Building Skills</th>
<th>Innovation</th>
<th>Political Savvy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to Align IT and Individual Goals</td>
<td>Boundary-Spanning Ability</td>
<td>Institutional Commitment</td>
<td>Pragmatism</td>
</tr>
<tr>
<td>Ability to Align Planning and Assessment</td>
<td>Business Acumen</td>
<td>Interpersonal Skills</td>
<td>Relationship Management Skills</td>
</tr>
<tr>
<td>Ability to Build Alliances, Coalitions, and Strategic Partnerships</td>
<td>Change Management Ability</td>
<td>Knowledge of Academia</td>
<td>Respect for Colleagues</td>
</tr>
<tr>
<td>Ability to Build and Retain Talented Staff</td>
<td>Collaboration Skills</td>
<td>Knowledge of Marketing</td>
<td>Self Confidence</td>
</tr>
<tr>
<td>Ability to Enable the Success of Others</td>
<td>Communication Skills</td>
<td>Knowledge of Organizational Culture</td>
<td>Strategy Development Skills</td>
</tr>
<tr>
<td>Ability to Engender Trust in Others</td>
<td>Creativity</td>
<td>Leadership Skills</td>
<td>Strong Work Ethic</td>
</tr>
<tr>
<td>Ability to Focus on Outcomes</td>
<td>Credibility</td>
<td>Listening Skills</td>
<td>Technical Knowledge</td>
</tr>
<tr>
<td>Ability to Prioritize</td>
<td>Decisiveness</td>
<td>Management Skills</td>
<td>Trustworthiness</td>
</tr>
<tr>
<td>Ability to Secure Financial Resources</td>
<td>Evaluation Skills</td>
<td>Networking Skills</td>
<td>Understanding of CEO’s Outlook and Direction</td>
</tr>
<tr>
<td>Ability to Set Direction</td>
<td>Expectation Management Skills</td>
<td>Organizational Behavior Skills</td>
<td>Understanding of Fellow Executives</td>
</tr>
<tr>
<td>Ability to Sustain a Viable Governance Structure</td>
<td>Financial Management Skills</td>
<td>Organizational Skills</td>
<td>Understanding of User Satisfaction</td>
</tr>
<tr>
<td>Adaptability</td>
<td>Flexibility</td>
<td>Planning Ability</td>
<td>Vision</td>
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</table>
What It Means to Higher Education

The CIO in higher education holds a complex and challenging role. The literature clearly highlights this complexity in the vast number of roles, skills, abilities, attributes, and expertise suggested that a CIO excel in and/or possess. It is hard to imagine a single person able to excel in every role and attribute listed in the literature.

**Findings of Interest to CIOs and Those Evaluating CIOs**

Given the complexity of the role, it is no wonder a recent study found only 59 percent of participating CIOs had a clear understanding of what metrics are used in their performance evaluations. Current CIOs and those who evaluate them are encouraged to use the information in this bulletin to select the characteristics and expertise they determine to be most necessary for this role. Using this information as a basis, institution-specific evaluation metrics can be developed and clearly communicated to all concerned. Additionally, the CIO should analyze where his/her strengths lie and identify what attributes should be sought out and cultivated among others in the IT organization.

As technology continues to commoditize, its return on investment depends heavily on people and processes. Furthermore, evidence-based management literature points to a direct relationship between management practices that value employees and organizational success. Therefore, the CIO who can inspire, motivate, direct, and cultivate a strong technology organization is in a better position to achieve these institution-specific success metrics.

As this bulletin makes clear, there is more to a CIO’s success than having the right mix of attributes and expertise. Understanding the differing constituencies is also of critical importance. Simply knowing who they are and their respective roles and responsibilities is not enough. The CIO must use that knowledge to tailor a strategic communication plan for each audience in order to engage the entire academic community and garner indispensable support.

**Findings of Interest to Aspiring CIOs and Those Hiring CIOs**

Future CIOs may use the information presented here to assess their strengths and areas of opportunity. Putting together a professional development plan from the results will provide a guide for improving areas of inexperience.

Information from this bulletin can be used to identify specific hiring criteria for an institution’s CIO. The hiring committee or executive leadership can review the roles, skills, abilities, attributes, and expertise described here and strategically decide which are more or less important for their institution. These criteria should be used to screen applicant abilities and let candidates know the responsibilities and expectations of the CIO role at their particular institution. Acknowledging the vast requirements for the position also highlights the importance of selecting a candidate who understands the position as well as his/her strengths and limitations and can “assemble the right people with the right technical and soft skills” to complement his/her skill set.

Likewise, candidates who have familiarized themselves with the CIO position and acquired the proper experience can better communicate an understanding of the role and use concrete examples to highlight their abilities and preparation. Candidates
should use their familiarity to ask questions to accurately understand the role envisioned for the CIO at a particular institution and on what basis CIO performance will be evaluated before accepting a position offer. This information is critical for both sides when negotiating terms of employment and determining if the job expectations are reasonable and success in the position is attainable.

**Looking Ahead**

This bulletin serves as a basis for future empirical studies needed to validate, expand, and revise these current success recommendations. Empirical research toward a framework for CIO success will assist in addressing concerns surrounding the position, including high turnover, lack of career progression, confusion regarding the proper training and background needed, unclear metrics for success, and a lack of people aspiring to the role. CIOs and their staff facilitate the success of many throughout the higher education community, improving education, scholarship, and service and better positioning the higher education organization for the future.

**Key Questions to Ask**

- Who are the CIO’s constituents at your institution?
- What roles must the CIO at your institution assume? Which can be delegated to or cultivated in the IT team?
- What skills, abilities, attributes, and expertise must the CIO possess at your institution? Which can be delegated to or cultivated in the IT team?
- On what basis will CIO performance/success at your institution be evaluated?
- Future research question: Which of the roles, skills, abilities, attributes, and expertise currently professed as necessary for CIO success actually impact CIO success?

**Where to Learn More**


Endnotes


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**About the Author**

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