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The Senior-most IT Leaders

I learned that in dealing with things, you spent much more time and energy dealing with people than in dealing with things.

—Buwei Yang Chao, *Autobiography of a Chinese Woman*, 1947

Some 330 individuals who occupy the senior-most information technology (IT) position and have overall responsibility for IT at their institution responded to the survey. This chapter focuses on these IT leaders in two areas. First, we integrate previous findings about the differences between senior-most IT leaders and other IT professionals and discuss additional leadership characteristics. Second, we consider Synnott and Gruber's original definition of a CIO¹ and its key components: title, reporting relationship, responsibilities, and, especially, membership on the president's/chancellor's cabinet.

How Are Senior-most IT Leaders Different?

Table 8-1 highlights senior-most IT leaders' overall profile compared with that of the other IT professional respondents, as discussed in previous chapters. We see that the senior-most IT leadership is still primarily white male, highly educated, hard working, older, and slowing down with respect to seeking higher positions (only 15.2 percent aspire to a higher-level position). They also have stronger transformational leadership behaviors and report that their central IT organizations have more support for innovation.

What about other leadership aspects? We asked survey respondents which skills

Key Findings

- ◆ The most important factor in the original Synnott/Gruber CIO definition is membership on the president's/chancellor's cabinet.
- ◆ Half of senior-most IT leader respondents have a seat on the president's/chancellor's cabinet.
- ◆ Senior-most IT leader respondents who are members of the president's/chancellor's cabinet have significantly more interactions with higher-level executives and the governing board, make greater use of planning processes and models, and participate more in non-IT institutional decisions.

they thought were most pivotal to their success in their current position. Table 8-2 shows that senior-most IT leaders and other IT professionals agreed on the top two skills—communication and strategic planning. However, senior-most IT leaders reported “understanding business processes and operations” as the third most important skill, whereas those at lower leadership levels saw technology as more important, ranking third the “thorough knowledge of technology options.” Further, respondents with higher transformational leadership skills were more likely to rate strategic thinking and planning as critical. Respondents to the *CIO Magazine* industry-wide survey² agreed with our senior-most IT leaders in their rankings of the top three pivotal skills.

Table 8-1. Respondent Profiles, by Role

	Senior-most IT Leaders (N = 330)	Other IT Professionals (N = 1,520)
Gender	78.6% male	59.2% male
Ethnicity	92.4% white	93.0% white
Graduate degree	78.2% (22.4% have doctorate)	56.8% (11.4% have doctorate)
Annual salary (median)	\$100,000–\$125,000	\$50,000–\$75,000
Age over 50 years	57.9%	35.7%
Work more than 50 hours a week	45.8%	24.8%
At current institution more than 10 years	35.2%	50.4%
In current position less than 5 years	58.4%	62.9%
Will remain in higher education 15 years or more	32.9%	43.0%
Will exit higher education in 5 years or less	24.7%	26.2%
Next planned career step a higher position in higher education	15.2%	40.8%
High transformational leadership style score	51%	35%
High or high-average central IT innovation climate score	63%	26%
Number of employees responsible for (median)	26–50	6–10
Size of budget responsible for (median)	\$1 million–\$5 million	\$250,000–\$500,000
Had or have a mentor	47.1%	47.2%

We also asked respondents about the top three barriers to success in their current position (Table 8-3) and found these to be the same for senior-most IT leaders as for other IT professionals. However, while industry CIOs agreed with our respondents on the most important skills, they ranked the top barriers to success differently. Industry CIOs don't seem as concerned about the pace of technology change and do seem more concerned about aligning IT initiatives with overall organizational goals.

Our survey also asked respondents about experiences in their roles at their institutions. These questions used a Lik-

ert scale (from 1 = strongly disagree to 5 = strongly agree). Table 8-4 shows that senior-most IT leaders agreed more often than other IT professionals that they are responsible for fostering change and that they maintain knowledge of both technology and higher education issues. Notably, senior-most IT leaders agreed that they were "knowledgeable about current and emerging technologies" somewhat more often than other IT professionals. Yet Table 8-2 shows that these same "other IT professionals" rated "knowledge of technology options" as more critical to success than did the senior-most IT leaders.

Table 8-2. Skills Rated as Pivotal to Success, by Role

Skill	Senior-most IT Leaders (Percentage)	Other IT Professionals (Percentage)
Ability to communicate effectively	89.4	87.6
Strategic thinking and planning	84.5	66.7
Understanding business processes and operations	40.0	35.7
Thorough knowledge of technology options	34.2	42.9
Ability to influence/salesmanship	25.5	17.0
Negotiation skills	11.8	13.4
Technical proficiency	10.6	30.1

Table 8-3. Barriers Rated as Impeding Effectiveness, by Role

Barrier	Senior-most IT Leaders (Percentage)	Other IT Professionals (Percentage)	Industry CIO Ranking
Lack of adequate financial resources	50.6	44.7	1
Conflicting priorities among organizational units	31.5	41.6	2
Shortage of time for strategic thinking and planning	29.1	30.4	4
Lack of key staff/skill sets	28.8	24.6	6
Overwhelming pace of technology change	24.8	19.7	12
Aligning IT efforts with institutional goals	22.1	26.8	3
Unrealistic user expectations and ineffective user communications	18.5	22.3	9
Risk and uncertainty due to volatile economic and environmental conditions	17.0	11.4	5
Difficulty in assessing and proving the value of IT	16.4	13.7	7
Managing and building staff	16.4	12.5	14
Leadership/institution knowledge within IT department	9.1	15.1	11
Weak institutional financial performance	8.8	5.2	8
Poor vendor support and service levels	5.2	4.1	13
Conflicts with peers	3.6	8.0	10
Inability to effectively influence technology vendors	1.5	1.6	15

Table 8-4. Percentage of Respondents Who Agree/Strongly Agree with the Following Statements

Statement	Senior-most IT Leaders	Other IT Professionals
I consider it my responsibility to foster change at my institution	94.2	78.5
I am knowledgeable about current and emerging technologies	91.7	80.9
I maintain a broad-based understanding of higher education trends and issues	90.5	74.4
I receive frequent requests from peers for information, ideas, and opinions about IT	85.0	84.1
My interactions with executives and managers frequently result in ideas about how to use IT in new ways	79.6	64.2
I am frequently solicited to participate in resolving issues that are highly sensitive	73.7	66.9
I am frequently invited to speak or be a panel member at national conferences on technology issues	20.8	13.4
I am frequently invited to speak or be a panel member at national conferences on higher education issues in general	7.4	7.6

Senior-most IT leaders typically meet with senior administration, faculty, and deans more frequently than do other IT professional respondents (Table 8-5), who in turn meet with managers, supervisors, and technical peers more often than senior-most IT leaders do. Meetings with institutional constituents seem to be reasonably close to what we might expect, given the respective positions each group occupies within the institution.

Synnott and Gruber (Classic) CIOs

When Synnott and Gruber first coined the term CIO, they defined the role as a senior executive responsible for IT policy, management, control, and standards. This concept grew out of the information resource man-

agement movement as difficult issues of IT organization, standards, and infrastructure were emerging. The CIO construct addressed these issues by integrating and consolidating the control of IT functions under a single high-level IT position. The intent was to position IT as a strategic resource and facilitate alignment between technology and overall organizational strategies. This implied a high-level reporting relationship and a place on the president's cabinet.

Using this definition, we reviewed the survey data to find the senior-most IT leader respondents who conformed to this profile. In fact, 120 of our 330 senior-most IT leader respondents, approximately one-third (36.4 percent), met Synnott and Gruber's criteria. As illustrated in Figure 8-1, we term these leaders the "classic" CIOs³ in that they

Table 8-5. Percentage of Respondents Meeting Frequently/Often with Constituent Groups

Constituent Group	Senior-most IT Leaders	Other IT Professionals
Others in own unit	85.3	89.5
Immediate management	82.1	81.5
Provost/academic VP/VC	79.1	17.1
Administrative executives	76.4	57.3
Deans	66.6	27.9
Faculty	60.2	54.9
Managers/supervisors	57.7	73.1
Department/unit heads	54.9	65.1
President/chancellor	54.2	3.7
Functional peers	47.2	51.7
Technical peers	41.5	56.0
IT vendors	35.2	27.8
Governing board	25.8	2.3
Students	25.6	32.4

- ◆ report to at least the vice president/chancellor or vice provost level;
- ◆ have a title of CIO or at least assistant/associate vice president/chancellor or assistant/associate vice provost;
- ◆ have management responsibility for at least academic computing/instructional technology, administrative systems, data communications, institution-wide IT policy, institution-wide IT planning, and user support and training; and
- ◆ are members of the president's/chancellor's cabinet.

We next looked at how these classic CIOs differed from senior-most IT leaders who didn't meet the above criteria. Although these two respondent groups are similar in most respects, they do differ in ways we'd expect on the basis of the definition. Specifically, classic CIOs have more interactions with the president/chancellor and governing boards, generally higher salaries, and slightly more formal edu-

cation. They also make more use of planning processes and participate significantly more in non-IT-related institutional decisions.

Much has changed, of course, since Synnott and Gruber's 1981 proposal. Universities and colleges are more complex, IT is more mature, and institutions have had years of experience in dealing with organizational structures, IT standards, and infrastructure. This led us to ask if any key factors in the classic CIO definition accounted for the differences between the classic CIOs and other senior-most IT leaders. Indeed, analysis of our survey population and the classic CIO definitional factors—title, reporting relationship, responsibilities, and cabinet membership—revealed that driving the difference in responses is membership on the president's/chancellor's cabinet. These data suggest to us that cabinet membership is an important consideration in constructing a top-level IT position at an institution.



Figure 8-1.
IT Leadership Roles

A Seat at the Table

A 1999 Gartner study projected that by 2003 nearly half of CIOs would be operating as full or equal cabinet members at their respective institutions.⁴ Of our 330 senior-most IT leaders who have overall responsibility for IT at their campuses, about half are right on schedule: 167 (50.6 percent) have a seat on the president's/chancellor's cabinet.

Many respondents believe having a seat at the table is critical to performing their jobs because it provides entrée to institutional discourse and decision making. North Carolina Agricultural and Technical State University's Rodney Harrigan expressed this view when he said, "Technology needs a voice around the decision makers because technology affects every aspect of the organization. The voice needs to be at the table so the CIO can give the technological implications of the decisions they are making. On the other hand, the CIO needs to hear what the cabi-

net is planning to do, to help formulate IT strategies. You lose it in the translation when you are not sitting at the table; there is really no one else around the table that has that expertise. If you don't get there, you will not be able to do your job right." Or as Bobby Schnabel, associate vice chancellor, University of Colorado at Boulder, said, "It is not just an IT job anymore. It is part of the highest level of university management."

Since the classic CIO job definition includes access to the organization's highest level, we looked at respondents' meetings with institutional constituents (Table 8-6). Cabinet members do appear to run in higher management circles; they reported having more access to the president/chancellor (with whom 79.6 percent meet frequently or often), compared with noncabinet senior-most IT leaders (28 percent). Cabinet members also have more contact with the governing board: 38.8 percent meet with the board

Table 8-6. Relationship between Cabinet Membership and Meetings with Constituent Groups

Constituent Group	Percentage of Senior-most IT Leaders Who Meet Frequently or Often with Each Constituent Group	
	Cabinet Members	Non-Cabinet Members
Provost/academic VP/VC	86.1	71.9
Others in own unit	85.4	85.1
Immediate management	83.1	81.2
President/chancellor	79.6	28.0
Administrative executives	78.9	73.9
Deans	71.8	61.3
Faculty	58.5	62.1
Governing board	38.8	12.4
Managers/supervisors	48.4	67.1
Department/unit heads	47.8	62.1
Functional peers	46.3	48.2
IT vendors	34.1	36.3
Technical peers	39.3	44.0
Students	22.8	28.6

frequently or often, compared with 12.4 percent of non-cabinet members. Cabinet members also seem to meet somewhat more frequently with academic executives, including the provost and academic vice chancellor. John Bruno, vice provost, University of California at Davis, said, "It is the only reason I was interested in the job. The position is now a vice provost, so my colleagues are the other vice provost and vice chancellors. Although the job has a big management component with a complete staff organization, it also has a lot of features of senior leadership and collaboration with senior leadership."

Dennis Trinkle, coordinator of information services and technology, DePauw University, has a cabinet-level position and reported, "I go door to door, sit down with other cabinet members, and offer to work on problems and issues with them, even when they do not

involve IT. I give them the one gift I know I can always give, which is my time."

Table 8-7 shows the overall portfolio of responsibilities on the basis of whether a senior-most IT leader has a seat at the cabinet table. Responsibilities do not vary significantly, with two exceptions. First, 83.8 percent of cabinet-member IT leaders have responsibility for voice communications, whereas non-cabinet IT leaders include this function in their portfolio only 66.9 percent of the time. Second, and more interesting, respondents with library responsibility also reported cabinet membership more frequently: 23.4 percent of respondents with cabinet seats have library responsibility, compared with 9.2 percent of respondents without cabinet seats. This may reflect the fact that higher education institutions already highly value libraries as a strategic resource.

Table 8-7. Cabinet Membership and Areas of Responsibility

Responsibility	Percentage of Senior-most IT Leaders	
	Cabinet Members	Non-Cabinet Members
Data communications	98.2	94.5
Institutional IT policy	97.6	95.7
Institutional IT planning	97.6	95.7
Administrative systems	96.4	95.7
Institutional IT security	96.4	94.5
Software licensing	96.4	94.5
Academic computing	92.8	92.0
User support and training	91.6	87.7
Web support services	88.6	87.1
Voice communications	83.8	66.9
High-performance computing and networks	49.1	39.9
Television services	44.9	38.7
Instructional development	43.1	31.9
Library	23.4	9.2
Institutional research	13.2	10.4

Table 8-8 shows respondents' involvement in planning activities at their institutions. Cabinet-member IT leaders appear to be somewhat stronger proponents of IT planning processes; 66.3 percent use an institutional planning process for IT, compared with 55.6 percent of non-cabinet IT leaders, and they are also more likely to use a planning model. We also asked survey respondents to tell us what their IT plan did best. A higher proportion of cabinet-member IT leaders said their IT strategic plan was best at "communicating IT strategies and priorities" (63.5 percent versus 52.8 percent of non-cabinet members) and at "aligning IT investments with institutional strategic priorities" (56.9 percent versus 41.7 percent). IT leaders tend to have similar perspectives on other outcomes of the IT strategic plan.

Cabinet-member IT leaders are also more likely to chair IT steering committees that are less likely to have budgetary authority (11.2 percent) than IT steering committees at institutions where the top IT position is not cabinet level (20.8 percent have budgetary authority). These data suggest that individuals with cabinet-level responsibility have a larger role in IT governance and are less subject to IT committee budgetary processes.

The survey data confirm that senior-most IT leaders who participate in their president's/chancellor's cabinet have greater exposure to the board and the top senior administration, and that they make more use of IT planning processes and methodologies. They would therefore seem to have better opportunities to positively impact the institution. It is not a stretch to suggest that sitting on the cabinet

Table 8-8. Cabinet Membership and Institutional Planning Activities

Institutional Planning Activity	Percentage of Senior-most IT Leaders	
	Cabinet Members	Non-Cabinet Members
Institution publishes an institution-wide plan	76.6	73.0
IT uses a planning process	66.3	55.6
IT uses a planning model	52.1	39.8
IT publishes an institution-wide IT plan	62.0	60.9
CIO chairs top IT steering committee	51.8	32.1

by definition enlarges one's view to the enterprise level and that this enlarged view (and associated relationships) results in enhanced ability to shape both academic and business decisions. In fact, 60.8 percent of cabinet-member IT leaders said they "almost always" participate in non-IT institutional decisions, compared with only 15.1 percent of non-cabinet-member IT leaders. As Bobby Schnabel of the University of Colorado at Boulder put it, "If you simply live inside the IT organization, IT can easily become an end in itself. If you are exposed to the full range of strategic choices, you carry forward that thinking."

The CIO Executive Success Cycle

A Gartner Executive Programs team that included 30 leading IT executives from around the world evaluated leadership practices and created a "CIO executive success cycle."⁵ This model consists of the following four "habits" they agreed were found in the most successful CIOs.

- ◆ *Shape demand.* Effective CIOs position themselves so they can have real input. This means maximizing exposure to top executives to build their trust, garner their support, and wield influence. Success in achieving these goals involves both knowing the business and engaging the key decision makers.
- ◆ *Set expectations.* Successful CIOs develop the habit of negotiation without compromising important relationships. They need

to know how to analyze, then communicate their findings to executive colleagues so that everyone knows what is possible and can make informed trade-offs.

- ◆ *Deliver.* CIOs interviewed said that CIOs are expected to "deliver, deliver, deliver." CIOs must address shifting business needs through partnerships and use architectures and demanding time frames to change the way IT performs and how executives think about delivery.
- ◆ *Lead.* CIOs have a unique perspective across the enterprise, enabling them to spot opportunities and to solve business problems. Positional power makes a CIO head of the IT group, but it does not bestow the right to be seen as a true leader. CIOs must earn that right by demonstrating leadership qualities.

The team went a step further and developed a self-assessment instrument and scoring system to determine whether a CIO has these habits. Each question used a Likert scale of 10 = almost always, 6 = sometimes, 3 = rarely, and 0 = almost never. Meeting the requirements for a successful CIO means a perfect score of "almost always" on each question. For our use, we modified the questions slightly to reflect the higher education environment. Table 8-9 presents the results for the 330 senior-most IT leaders in our sample.

The CIO executive success cycle scores for cabinet-member IT leaders compared with those for other senior-most IT leaders are

Table 8-9. Relationship Between Cabinet Membership and "CIO Executive Success Cycle" Assessment Scores

Self-Assessment Statement	Percentage of Senior-most IT Leaders Scoring "Almost Always"	
	Cabinet Members	Non-Cabinet Members
Habit #1: Shape Demand		
I can sustain a conversation with my president or chancellor about the financial issues and pressures facing our institution	80.8	49.7
I know what keeps my president/chancellor and executives awake at night and how IT could help	55.1	29.8
I participate in shaping institutional academic directions	4.7	14.3
I participate in shaping institutional business directions	52.4	21.1
Habit #2: Set Expectations		
I can quickly assess the ability of IT to deliver on new offerings or service	74.7	67.7
I am engaged in regular executive discussions about the IT implications of institutional decisions	82.6	45.3
I spend time working with executives to set expectations and delivery commitments based on what is possible	69.5	44.4
My negotiations strengthen rather than weaken relationships between IT and rest of the institution	85.0	67.5
Habit #3: Deliver		
I use IT architectural considerations to focus design and delivery efforts	62.3	55.1
My major campus stakeholders understand and support the need to adopt IT standards for key IT infrastructure and IT-enabled services	49.7	53.1
My institution understands importance of maintaining an up-to-date IT infrastructure	68.9	54.4
My executive colleagues accept appropriate responsibility for business programs and projects that have a large IT component	42.5	30.0
Habit #4: Lead		
My executive colleagues think of me as an effective partner	82.0	64.2
My executive colleagues know my vision for IT and can articulate it if asked	39.5	23.3
My executive colleagues view my participation in their projects as essential to their success	58.7	41.9
My executive colleagues respect my knowledge of IT	90.4	77.7

striking.⁶ We see the strongest difference in the Shape Demand habit, followed by the Lead and Set Expectations habits. Cabinet members operate within the executive suite and therefore perceive themselves as having significantly more impact on the institution. They are exposed to critical institutional information and have an outlet for expressing higher-order direction-setting and decision-making skills at the institutional level. We saw smaller differences between cabinet-member and non-cabinet-member CIOs for the Deliver habit. These skills are directed more at the implementation level and, not surprisingly, appear less dependent on regular access to executive levels of the institution.

Finally, we looked at the CIO executive success cycle self-assessment instrument in relation to transformational leadership style—and again, leadership style matters. Regardless of whether respondents had a seat at the table, those with higher transformational leadership behaviors were much more likely to answer “almost always” to all questions in the Shape Demand, Set Expectations, and Lead categories. Again, differences in the Deliver habit were minimal. This finding implies that leadership style may affect individuals’ ability to play a role in both shaping the institution’s direction and generating IT solutions to institutional problems. And those who are cabinet members have an opportunity to exercise these transformational skills at a different level than those not on the cabinet.

These important findings raise many questions. What factors determine whether

an institution benefits by including IT leadership at the cabinet level? What configurations of executive organization are most effective? Under what organizations can IT leaders most positively impact academic and business directions and align IT with institutional goals? Future research can and should address these and related questions.

Endnotes

1. W. R. Synnott and W. H. Gruber, *Information Resources Management: Opportunities and Strategies for the 1980s*, John Wiley and Sons, 1981, pp. 66–68.
2. L. C. Ware, “The Survey: What You Have to Say,” *CIO Magazine*, 1 Apr. 2003, retrieved from <<http://www2.cio.com/research/surveyreport.cfm?id=63>> on 25 Apr. 2003.
3. Individuals who responded as the single senior IT leader; report to at least the vice president/vice chancellor or vice provost level; have a title of CIO or at least assistant/associate vice president/vice chancellor or assistant/associate vice provost; have management responsibility for academic computing/instructional technology, administrative systems, data communications, institution-wide IT policy, institution-wide IT planning, and user support and training; and are on the president’s/ chancellor’s cabinet were determined to meet the Synnott and Gruber criteria.
4. M. Zastrocky and F. Schlier, “The Higher Education CIO in the 21st Century,” Research Note COM-09-8087, Gartner Group, 30 Nov. 1999.
5. Gartner, Inc., produced in conjunction with Korn/Ferry International as an *EXP Premier Report*, October 2001.
6. Statistically significant differences exist between cabinet-member IT leaders and other senior-most IT leaders on 10 of 16 of the Gartner-Korn/Ferry self-assessment CIO executive success cycle survey statements at the $p \geq 0.01$ level. All Shape Demand habits were significant at this level.