The role of the CIO in higher education is continuously changing, and the career path to becoming a CIO is not always well defined. As campuses consider succession planning, and as CIOs and those who hope to become CIOs think about filling the IT leadership “pipeline,” the transformation both of information technology and of the CIO role can obscure the road ahead.
Several valuable studies—such as the ECAR Research Bulletin “The Future CIO: Critical Skills and Competencies” and the Center for Higher Education CIO Studies¹—offer help to current and future CIOs in navigating this changing landscape. But the information in these studies is delivered as the aggregated voice of the crowd. As the studies indicate, there are actually many different roads leading to the destination, and each road has its own scenery, detours, and on-ramps.

In the following panel discussion, six current CIOs and technology leaders explore their individual journeys.² They outline their backgrounds and their personal strengths. They talk about the backgrounds, strengths, and skills that will be needed for future CIOs. They consider the challenges of preparing the next generation of CIOs. They list the most critical competencies for current and future CIOs, and they debate whether these competencies are changing.

The move from the current generation of CIOs to the next generation of CIOs will consist of many journeys. Continuing the conversation about these diverse paths, and about the evolving role not only of CIOs but of technology itself in campus-wide leadership, can help all IT leaders prepare themselves and their institutions for the transition to come.

**Question:** How has your educational, professional, and experiential background helped you in your current position? How will this be the same or different for future CIOs?

**Ridley**
I came to this role from a relatively non-traditional background: I was a librarian, albeit a librarian with computing experience as a systems analyst and with an IT focus as part of my professional interests. My experience as Chief Librarian at the University of Guelph gave me academic exposure and credibility, since I already knew the deans and VPs at the university and had worked with them in an academic context. As a result, I had credibility that I was able to draw from at the beginning of my term as CIO. In addition to a graduate degree in library science, I also hold a master’s degree in theatre history. While the discipline is not particularly relevant, the experience in graduate work and research gives me another link to the academic community.

The academic appointment I hold as a librarian has also allowed me to teach. Being an active, engaged teaching faculty member has provided me with feedback on the role of faculty and the experiences of students, as well as insights into the mechanisms (and systems) that support teaching and learning on campus. This direct experience has been invaluable as we navigated through the challenges of information technology in the learning environment.

With a predominately academic and library background, my challenges were to convince business leaders, such as the CFO, that I cared about administrative processes and business systems and to assure the central IT unit that I understood their area and would have their interests as a priority. The CIO role is the ultimate “herding cats” assignment. The CIO strategy plan at Guelph identifies “one community, many neighborhoods” as a way to highlight the need for enterprise applications as well as unique, local solutions. Being able to both engage with the “many neighborhoods” and seek enterprise responses requires that the CIO listen carefully to the needs of a community with very different values, perspectives, and motivations.

CIOs come from diverse backgrounds, I believe this will remain the case, largely because the expertise and skill set essential for success are best nurtured through a variety of experiences. Higher education institutions should look for the type of CIO they need. In my case, the CIO role was new to Guelph—I am the first CIO. As a result, we decided that “CIO light” was a good strategy to help the community become comfortable with the emerging role. The next CIO will begin at a different
place; he or she will be able to build on the foundation established over my term and take the influence of the position to a new level.

Rowe
The common theme in my educational, professional, and experiential background is “variety.” I have not had the same one year of experience twenty times—I’ve truly had twenty years of experience. My second degree—a master’s in administrative leadership—prepared me for leadership, but in addition, this particular degree had a strong focus on program planning. I believe my academic background provides me with breadth of perspective, something that I think has been helpful to me in this role.

I also believe that I have been very fortunate because of the diverse work experiences I have been blessed with. In my career, I have had the privilege of working for twelve deans, five provosts, and two chief financial officers. This has exposed me to many different types of leaders, allowing me an inside view of their strengths, their challenges, and how they have executed complex roles. It has been like living in a laboratory—I was able to sort out what works, what doesn’t work, and the context in which something does or doesn’t work, all the while having the advantage of adding to my own repertoire those things I thought were important.

The interplay between my degrees and my range of experiences has made me more empathetic with differing perspectives. Each succeeding experience has resulted in a veil being lifted from my face, allowing me to see things I had not seen before. Having worked in or having directly supported the student side of the university, the business side of the university, and the academic side of the university was an advantage. As a result, I do not need to guess how stakeholders in these communities will respond; I often can predict their reactions from having lived in their cultures.

I hope that future CIOs will bring a wide base of experience to the table, search committees are going to be looking for. I see many announcements for CIO positions that require a degree in computer science or a related field—which I feel is unnecessarily limiting.

Wandschneider
I have a postgraduate degree in economics and spent ten years working in an academic unit. During this time I was a jack-of-all-trades (and some might say master of none). This was during the transition from such things as VT100s and DEC Writers and mainframes to desktop microcomputers and ubiquitous network access. I spent a lot of my time trying to get things off of my plate and over to the central IT organization. Since we were flying by the seat of our pants, strategic IT planning and commodity information technology simply weren’t in the vocabulary.

At the same time, I provided data analysis and statistical computing support, embedding myself in the research enterprise. Although focused on one department, I spread myself broadly across the college and beyond as the need for these skills increasingly outstripped demand. I also engaged in teaching and the use of technology in teaching. This...
was critical for me in developing an understanding of the academic side of the house and in building relationships that are still active today.

My first step into “core” information technology was focused on the establishment of a data resource center—a one-stop shop for acquiring secondary data and obtaining assistance in its use. I worked with teachers, researchers, and students and developed partnerships with other colleges and universities. I was working out of the library, a situation that was very beneficial in helping me to understand how building relationships and sharing service delivery can help to meet ever-increasing demands. For me, developing partnerships was key. Building relationships and a track record is essential and is something that should be worked on throughout a career.

Paige
My degree had an emphasis on logical philosophy. My undergraduate experience was at an institution that was selective and had very high expectations, instilling the importance of perseverance, dedication, commitment, and quality—each of which I have found to be important qualities that I also see reflected in CIOs and other technology leaders around me. I went on to business school, where I formalized my IT education with an M.S. in computing and information systems. In addition to the specific techniques and practices surrounding IT management, I learned project management, finance, and the legal environment of business, and I completed technical industry certifications in network technology. I have also completed courses toward a Ph.D. I have spent time working in both the public and the private sector for small and large companies, providing me with a variety of opportunities to develop personal and professional skills. And I have been a student of the professional-development experiences offered by EDUCAUSE, including the Leadership Institute and Hawkin’s Leadership Roundtables. The academic progression has been helpful for me to understand the higher education environment, and the business and leadership courses have given me important “finishing school” opportunities. However, the best preparation for my current job has been in the “school of life”—planning, leading, and managing several technology and business-process projects, building teams, rebuilding teams, and managing change.

Woo
Although I have always worked in higher education, I first worked in the environmental health and safety area of a university. Today, in order to understand how our campus clients might react to actions taken by those of us in the central IT organization, I still draw on the perspective of someone who worked in a non-IT campus area. Another advantage of having worked in a health/safety field is that doing so has provided me with experience in handling incidents and emergencies, experience that is transferable to the IT realm. In addition, obtaining a doctorate, even though it is not in an IT-related field, has been very useful for me. In talking to faculty, I’ve found that sharing common experiences from graduate school can be excellent for establishing and bonding relationships.

Of course, I would not be where I am now without the help and guidance of mentors over the years. I owe much to all of my former managers, who not only have generously provided me with the insight of their own experiences but also have been strong proponents of formal and informal professional-development activities. Because of them, I am an EDUCAUSE Institute triple-attendee: the Management Institute, the Leadership Institute, and the Frye Leadership Institute. All of the institutes were incredibly valuable—the more so because I attended each at the right time in my career. Many of the connections that I made exist to this day and have been major contributors to my career development.

I think that future CIOs will continue to come from diverse backgrounds, perhaps even increasingly so as the need to be a part of, and understand, the “business” side of higher education remains important. Mentoring and professional development will also continue to be significant, though it’s possible that the nature of professional development will change as the role of the CIO changes.

Question: How have your personal strengths positioned you for your current success? What strengths have you focused on for your current position, and what strengths are you focusing on for your next role?

Ridley
Other people probably see my strengths and weaknesses more clearly than I do. However, I do think of myself as a curious person with a holistic view of the university. I am motivated by a strong interest in ideas and in how innovation and change can articulate and implement a transformational vision of information technology, libraries, and higher education. For me, this means a full
commitment to collaboration and to the building of strong, diverse partnerships. I have been successful in establishing shared objectives and in building large consortial agreements that manage costs and enhance services. I believe that large-scale collaboration is essential if we are to innovate and succeed within constrained financial and human resources. Yet collaboration is a muscle: the more you engage it, the better it performs. CIOs and other institutional leaders need to find ways to collaborate more often in order to achieve common objectives and to build capacity for additional cooperation.

Although I am technically aware, I am not a technical expert. I had to learn how the various components of the IT environment fit together. I don’t need to know exactly how everything works, but I do need to know why the various aspects are important and how they all interrelate. As a result, I focus on keeping current and on putting IT developments into the appropriate context. I follow many bloggers, I read the trade literature, and I engage with anything that can give me a perspective on emerging trends and an understanding of the benefit to Guelph.

One way I hone my ideas and challenge my perspectives is to speak and write about IT-related issues. In part I do this to promote the university and raise the profile of Guelph. However, my own blog, Twitter feed, columns in professional journals, and conference presentations also allow me to test ideas, gather feedback, and attract the interest of other experts with whom I would like to connect.

Rowe
It took me a long time to recognize and understand my personal strengths. I have strong listening, facilitating, organizing, and idea-synthesizing skills. I have strong analytic and logic abilities. My personal ethical compass is steady. I understand my own learning style, and I have made a personal commitment to learn as much as possible about any given technical solution. I also have the professional perseverance to make sure that I learn what I need to learn. We can’t sit back and let our careers happen to us while we just go along for the ride. It takes an amazing amount of perseverance to maintain technical knowledge, develop professionally, and move through all the activities that add up to a successful career.

For me, the recognition that I needed to hone my presentation skills was key. In my youth, I was totally unable to give a presentation, either around a table or in a class. I worked very hard to get past this fear, starting small with the presentation
of ideas around a table of peers and eventually going through a “baptism by fire” event of leading a meeting.

Other personal goals have included developing a strategy for handling highly stressful situations and sharpening my negotiation skills. Much of what we do with information technology involves negotiations. Most of the time, we think of negotiations in a vendor context, but we also negotiate with advisory groups, senior executive leaders, project teams, and staff members. A knowledge of contracts, licenses, statements of work, and basic legal language is key in this area.

Finally, I work hard at evaluating and developing the skills of the people in my organization and at matching them to jobs that showcase their skills and allow them to make the strongest-possible contribution.

In addition to all of the above, the next generation of IT leaders will need to have strengths in two other areas. First, they will need to be able to support remote teams and a mobile workforce. The ability to manage everything from a distance, including people and projects, is going to be increasingly important.

Second, the next-generation IT leaders will need to be able to create a cohesive technology mesh or framework, with a variety of solutions including in-sourced, outsourced, open sourced, and partnership sourced. The successful leader will not be attached to a single sourcing strategy but will be open to many sourcing strategies and will be able to build this mesh with reliable, quality, and cost-management strategies in mind.

Maas
I am a principle-centered individual, I operate out of strong core values, and I strive to be consistent. I seek to be predictable so that others know where I stand on issues and how best to work with me. I believe it is important to be respectful of everyone who is a part of our higher education ecosystem and to recognize the value that each role brings to the university. Modeling consistent leadership behavior can be challenging at times, and it brings about useful humility when you need to self-correct occasionally.

For me, higher education is a calling, and I feel the stewardship expected of us by students, parents, and the public requires that we ceaselessly strive for learning, efficiency, and effectiveness throughout our careers. All the organizations I have led have embraced employee development and investment in our people as a core value. I think this will be increasingly important as IT leaders’ roles change from the present model of leading premise-based IT services to a new model of leading an organization responsible for a multi-sourced portfolio of services that are changing rapidly.

Wandschneider
A few years ago our management team did a StrengthsFinder exercise, and it revealed that my strengths were the following: Strategic, Arranger, Visionary, Connectedness, Learner, and Compassionate. The first four of these are critical, I believe, to success as an IT leader. In addition, compassion clearly plays a role in building trust and allows one to lead more effectively. Maybe more illuminating for me is what was missing from the list: Passion. Passion gives one the ability to move forward on a vision and to inspire others. Recently, in the context of a project I was involved in, I was described as having tenacity. Thinking of tenacity as perseverance, persistence, and determination, I think these are also key strengths, ones that help me move forward on a vision.

As for strengths I am developing, I have three focus areas. First is what has been referred to as “encouraging the heart”: expressing confidence in people and praising people for a job well done. I am working to be deliberate and explicit in ensuring that people know how I feel about their work. Praise needs to stay at the forefront, and be ongoing, so that it doesn’t get lost in the shuffle. The second area I am focusing on is building relationships—getting out there and trying to understand people’s needs and the higher-level objectives of the institution. I think I have always been able to see the bigger picture, but now I am trying to be very deliberate and intentional in understanding the bigger picture. In addition, I am trying to build more relationships with people from other institutions so that I can better understand their perspectives on our similar problems. My third area of focus is being clear and deliberate about philosophy and direction for my unit and the broader institution. Seeding ideas early on can help in getting buy-in and leveraging partnerships. You can’t do it all on your own, you need people working with you, sharing expertise and ideas and resources.

I also think it’s important not to worry about everything, and although we all have a tendency to want to focus on the future, every once in a while we need to look back. Taking notice of past achievements can be used for motivation to overcome the obstacles that lie ahead.

Paige
I am collaborative and missional in my approach to work. This aligns particularly well with higher education, where the university mission reflects
CIOs need to model the way by working at the leading edge and encouraging staff to take chances.

Our roles are about transformational change, which is an exciting thought for many but a source of uncertainty and anxiety for some. The job is not merely to placate the unease but to translate the complexity of information and information technology into a positive vision of the evolving university.

CIOs need to be able to communicate effectively with widely diverse groups (e.g., faculty, students, staff, alumni, vendors, other CIOs). They need to be sensitive to the different audiences and also must be prepared to change their own minds. For CIOs not to be seen as merely meddling in everyone’s business, they must establish a track record of making a difference. This means promoting risk taking and managing the impact (and learning) of failure. The priorities of service excellence and IT security can mute the need for innovation and exploration.

CIOs need to model the way by working at the leading edge and encouraging staff to take chances. As I’ve said publicly before, I’m a serial failure and proud of it.

Ridley

The critical competencies for a CIO are the same as those for any senior administrator: clear vision, the ability to nurture trust and commitment from staff, and a future focus that articulates the meaning of the work we do. The technology- or information-centric perspectives of most CIOs further underscore the need to engage the heart as well as the mind.
petencies didn't replace each other but were added into a competency portfolio—along with developing an organization structure, assessing skills and abilities, and creating the “IT organization” that is appropriate to the situation and environment.

Successful CIOs will understand their strengths and weaknesses in that portfolio and will develop necessary skills to compensate. Compensating may mean evaluating strengths in the people in the organization and delegating responsibilities appropriately.

Also, with the consumerization of technology, many technical directions are being set through the introduction of “edge” devices. As decisions about future directions move more to the edge, the central IT organization will take on more of a follower role, requiring new skills in assessment, planning, and reaction. How we approach technology will change if we are following decisions based on edge-device adoption. Future CIOs must be able to make the technology framework understandable and manageable for the organization—and perhaps do so without the project control of the past.

The ability to share or submit the “ego-less idea” is also critical. Leaders need to be able to take what I call a “gardening approach” to ideas: planting seeds and nurturing growth. They need to be confident in presenting ideas during a quiet phase and allowing the ideas to grow. Just like with perennial gardening, some seeds will sprout and flower in one year, and some will take several years. Some of my most important organizational contributions have been “gardening” ideas, and in some cases I’ve received no credit for the contribution (but I’m comfortable with that).

I do believe that CIOs need to have a background with a particular technical specialization in order to have the support and respect of the IT organization. But managing an organization of people, with all the balance and fairness and change required, is a much bigger challenge than managing one small team focused on one type of technology.
I believe that leadership is the definitive competency. Anyone leading a school, college, or division needs a base level of subject expertise. A leader does not need to be able to perform detailed technical work, but he or she does need to know how everything is related. And especially, a CIO should deeply understand the core business of the university, which is academics. Together, teaching, learning, and research are broadly categorized as academics. Other areas—such as business affairs, student affairs, school/college administration—exist for the purpose of supporting academics.

Those of us in IT careers chose them. No one forced us to become IT leaders. We chose a career of service. We thus need to be really committed to excellent customer service within the framework of our resource base. We also need to be good at finding ways to deliver core services while reducing costs. This means skills and competencies in financial planning, consensus building, trust building, and service delivery. We use strengths-based leadership concepts in our organization. We take the point of view that a team needs to make sure it has coverage in all areas: a leader can come from many different strength portfolios as long as there is balance provided by the broader team.

Finally, a leader needs to be able to inspire others to be better and to achieve more than they ever thought possible. That can be helped with a wide range of competencies, but not without a core of strong leadership skills.

The role of information technology in higher education will continue to evolve. The need to understand the business of the institution is becoming critical. It is no longer enough for the CIO to be a solution and service provider. Instead, the CIO needs to partner with business leaders on campus. At Guelph, we are looking to develop more business analyst skills in our IT department, and that involves working closely with the business leaders to understand their requirements and business-improvement opportunities. This information is then translated into knowledge and technology solutions. Likewise, the role of the CIO also needs to evolve to encompass an understanding of the business of the institution—whether it is teaching, research, or administration.

I think competencies associated with technical acumen are becoming less relevant. At Guelph, we have a list of fourteen desired leadership competencies for our managers and our cluster leads. Two additional competencies—“big picture orientation” and “negotiation”—are specific to managers. For a CIO position, I would also add the competencies of partnership development, relationship building, and communication.

A commitment to the institution, and not strictly to information technology and the IT organization, seems to be foundational. CIOs need to see themselves—and not just the technologies, systems, and processes—as the asset.

To borrow a motto from the Boy Scouts, I believe that future CIOs need to have a “be prepared” attitude. Trend tracking and forecasting is more important than ever to the CIO role, since it can take months or years of advanced preparation to deliver on what is perceived to be a “hot technology.” Technology development is no longer linear; it requires keen strategic thinking, as well as a deep awareness of technology and information trends.

CIOs need to be not only IT-savvy but also able to communicate the capabilities, constraints, and opportunities related to information technology. They need to be able to “keep the plane flying” at the same time they are willing to reinvent and rebuild the plane in “mid-air,” as the organization changes.

The role of technology and information was (and continues to be) important to an institution. But today, information technology also needs to be meaningful, and a competent CIO will be able to parlay importance into meaningfulness. Anything that is meaningful is valuable.

There will always be a need for CIOs to have competencies in leadership and strategic planning. In addition, future CIOs may need to increase their flexibility and business acumen in order to handle the rapidly changing and demanding technology environment. The abilities to build and maintain relationships and to communicate to a broad range of audiences have become increasingly important as information technology has become recognized as critical to the business of the institution. The adoption of consumer devices on campuses, the growth in service sourcing choices, and the democratization of technology will continue to accelerate. With central IT organizations no longer controlling technology choices, the CIO will need to rely even more heavily on his or her ability to build relationships and communicate effectively across the college or university.

Notes
2. When this collaborative discussion was first conceived, the participants consisted of two IT leaders—a CIO and a senior IT leader reporting to that CIO—from each of three different institutions. Reflecting the turnover often characteristic of higher education IT organizations, three participants have since moved on from their earlier positions.