Digital Transformation

Scenario
Like many institutions, Cloverdale University is struggling to meet its student enrollment targets and balance its budget in the face of decreased state appropriations for higher education. CIO Maria Romani has had to absorb additional cuts in an IT budget that was already stretched thin. She fears that Cloverdale is slipping behind its peer institutions in its capacity to adopt emerging educational technologies. But she also has deeper concerns. Beyond specific solutions, Romani believes that technology offers broad ways to help Cloverdale operate more efficiently, support students better, adopt new pedagogic approaches, and enhance research. With the institution focused on survival, however, she has found it difficult to engage colleagues in conversations about technology’s broader potential.

As Cloverdale’s use of IT has expanded, Romani has seen her office evolve from essentially a cost center to a respected consultant for change across the institution. IT now has a seat at the table for the most important campus discussions. By regularly sharing her IT expertise and vision for technology, Romani has earned a reputation as a respected colleague and advocate for reform. Reviewing today’s landscape for higher education, she believes she must step up her game and try to spark some of the innovation that she believes Cloverdale needs. To that end, she has intentionally started to voice a new narrative about how technology can help the university not just survive but thrive in the days ahead.

In meetings as well as informal conversations, Romani has begun to frame budget constraints, the rapid advance of technology, and factors like the decline in public confidence in higher education and students’ increased expectations as drivers of significant, even seismic change for all colleges and universities. In particular, she tells colleagues, advances in analytics, intelligence, the cloud, mobile, consumerization, and social networks combine to help define an era of digital transformation. Those forces, she says, create countless opportunities for institutions to improve business practices, student service, teaching and learning, and research. By capitalizing on such opportunities, she argues, Cloverdale can position itself for a much stronger future. Romani is quick to say that incremental change won’t get the job done. Rather, she urges colleagues to help Cloverdale nurture an institutional culture focused on innovation and change management and to learn how to move with agility and flexibility to meet the fast-evolving challenges that characterize higher education today.

1 What is it?
The term “digital transformation” (Dx) encapsulates the seismic cultural, workforce, and technological shift under way as the diverse digital landscape influences—and changes—almost everything we do. This transformation is having a profound impact across all kinds of enterprises, including higher education. Dx requires college and university leaders to understand the extent of this transformation and initiate change—closely linked to an institution’s business model—to cultivate new practices that reflect today’s technology-enabled and technology-driven world. The rise of Dx greatly accelerates the evolution of IT—from technology provider to service provider to trusted advisor—and creates abundant opportunities for IT to fulfill its potential as a strategic campus partner in advancing the institution’s mission and goals.

2 How does it work?
In its cultural dimension, Dx requires that members of the institutional community collaborate across silos with a shared commitment to change management and the development of the agility and flexibility needed to meet quickly changing demands. Dx requires dramatic shifts in IT workplace skills at all levels and professional development that enables the IT workforce to keep pace with the rapid tempo of change. IT leaders and their organizations model Dx by adopting innovative practices and creating new digital architectures that enable the institution to rapidly and efficiently achieve—and expand—its strategic aims. Trends and changes in technology are revolutionizing everything from digital architectures to how campus leaders interact with the IT organization, creating unprecedented opportunities and raising expectations for competitive new business models, improved student outcomes, innovative teaching and learning methods, and groundbreaking research capabilities.

3 Who’s doing it?
Emerging activities at a variety of institutions show transformations that respond to the opportunities and challenges of Dx. At Brigham Young University, the Office of Information Technology has developed a University Application Programming Interface that allows the campus digital environment to quickly and efficiently introduce (and also sunset) network services and applications, enabling the environment to evolve in an agile and
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responsive manner. Davidson College extensively reorganized its IT department’s structure to facilitate deeper collaboration across the institution, add new services, and take an increasingly interdisciplinary approach to the future of its digital environment. Many institutions are forming consortia to enable members to address more ambitious challenges. For example, the Big Ten Academic Alliance camps for open educational resources (OER) will permit all participating institutions to move ahead much more rapidly with the adoption of OER and the reduction of student costs. MIT has announced a $1 billion commitment to address opportunities and challenges in computing and artificial intelligence (AI). Ivy Tech Community College tackled the challenge of analytics opportunities lost due to siloed data by developing a “data democracy”—a data system that lets users answer questions in seconds without having to engage IT or analytics staff.

4 Why is it significant?

Dx is being propelled by multiple drivers, from the pervasive adoption of technology across colleges and universities to external forces including reduced public funding, new expectations of technology from students, and increased skepticism about higher education. Technology trends alone include advances in analytics, artificial intelligence, the cloud, mobile, consumerization, social networks, and storage capacities. These forces create an imperative for significant change and offer extraordinary opportunities for institutions to rethink and restructure their core business practices to best serve students and other stakeholders. Demanding substantive changes in traditional thinking as well as core practices, Dx is fundamentally a reenvisioning of the value proposition for higher education.

5 What are the downsides?

The full scope of digital transformation, with its many facets and complicating factors, can be difficult to grasp and even harder to explain. Moreover, Dx demands that institutions get better at embracing and managing proactive change and establishing a culture open to wholly new ways of working. Getting buy-in for that degree of change will be a challenge. Envisioning what transformative change might look like is inherently difficult; enacting such change is even harder. The academy’s traditional resistance to change exacerbates these challenges. Another factor is that the costs of retooling for Dx may be formidable. Institutions that could be helped the most by Dx—those that are most imperiled today and have the most ground to cover to catch up to their peers—will be most challenged to fund the required innovations.

6 Where is it going?

Digital transformation is a relatively new trend, and no one can say with certainty exactly where it is headed. Nonetheless, Dx is already having significant effects on many businesses, and it will inevitably have a deep, pronounced impact on higher education. Given this trend, it is incumbent on every institution to comprehend digital transformation and determine how it can best be leveraged to help the institution survive and thrive in the challenging days ahead. Institutions can ill afford to be passive in this regard. Rather, they need to actively engage with Dx and retool themselves to embrace digital transformation agilely and proactively. Through its efforts surrounding digital transformation, EDUCAUSE is committed to helping the community address these issues and to helping institutions find the best path forward for their own transformation.

7 What are the implications for higher education?

Embracing digital transformation is about building on the core values of higher education and developing new and significantly more effective ways to enrich and expand higher education’s mission. Dx has the potential to facilitate creative new pedagogic strategies and reach a larger, more diverse circle of learners, including many seeking new kinds of skills and credentials. Dx also opens doors to improved research methodologies that make possible research previously thought to be unachievable, including those that can benefit best from access to big data. New fields of research and entirely new disciplines will emerge. These changes open the path for new business models, as institutional value continues to evolve. Dx also offers ways for institutions to improve their operations and business practices. Adapting to this unprecedented change will require most institutions to develop and hone their capacity for flexibility and proactivity, and the payoff could be significant in the form of productive changes in culture, workforce, and technology. In that sense, Dx can be a cornerstone of an institution’s strategic vision for a fruitful future.