Digital Transformation in Higher Education
How Content Management Technologies and Practices Are Evolving in the Era of Experience Management

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Executive Summary

The forces of digital disruption are radically altering how customers access and consume information, communicate and socialize, and shop and purchase. Connected devices, social networks, cloud services, and other innovations have essentially inverted traditional relationships between buyers and sellers, customers and brands – including students and schools.

Digital Clarity Group (DCG) is a research and advisory firm that tracks digital disruption and its impact on customer experience. As part of our coverage, we look at how different sectors and industries are managing customer experience in the age of empowered buyers, customers, and students. As part of that larger agenda, we undertook a study aimed at understanding how institutions of higher education are responding to the inexorable push for more compelling experiences. We aimed to answer the following questions:

- How are institutions leveraging digital content, technologies, and practices to engage and interact with education customers (primarily students and their families)?
- What is the current state of content management practices in higher education, and how do they underpin customer engagement and experience?
- What steps are institutions taking to expand their platforms and practices beyond web publishing to experience management?
- How do they gauge their own progress towards meeting the expectations of the types of students that they want to attract?
- What obstacles prevent them from improving their current content management practices, and from preparing for more engagement and less publishing?
- What can institutions do today to step more firmly onto the path of digital transformation or advance their progress if they have already begun?

Armed with answers to these and related questions, leaders within higher education will be in a position to make informed decisions about investments in people, processes, and technologies that will advance their digital competitiveness. Practitioners responsible for their university’s web presence will have insight into how they can build competencies that will improve current operations and build experience management capabilities. Technology vendors and service providers will have new insights into how to market and position their offers in ways that make their value clear to buyers and users. Finally, the study and the underlying research will serve the industry by providing a basis for dialog that moves digital transformation forward and grows the markets for technologies and services, which benefits all constituents within higher education.
Key Findings

1. Delivering an experience – rather than publishing content – is aspirational for institutions of higher education in the United States and the United Kingdom.
   - Web managers, content strategists, marketers, and leaders acknowledge that more advanced applications of digital content, technologies, and practices are becoming essential for a healthy and vital future. They recognize the growing need, and they want to be able to respond. But cultural, organizational, and technology obstacles are significant.

2. At the same time, institutions struggle to keep up with today’s current needs for creating, publishing, and managing increasing amounts of content.
   - Large volumes of content, multiple websites, lack of governance, and resource constraints are the primary pain points.

3. The institutions showing progress toward enhanced digital capabilities are working in pockets of change rather than at broader levels within the institution.
   - At the grassroots level, managers and influential practitioners within content, marketing, and web operations teams are taking on small projects for small wins.
   - At the top levels, digital leaders from outside academia are change agents, and the incoming generations of faculty are likely to bring more willingness to disrupt centuries-old practices.

4. Service providers who implement technology solutions (systems integrators and agencies) are key participants in the development of content infrastructure within higher education, but they are largely underused and undervalued.
   - Many service providers have expertise in digital capabilities that can move their clients along the transformation curve, but they find themselves ahead of their clients’ readiness for change.
   - Most service providers engage at the departmental level and are often hampered by narrow scopes and tight budgets.
   - In some cases, service providers function primarily as extended staff due to resource constraints.
Key Findings

The availability of proven technologies for content and experience management is not a key challenge. The technology landscape is mature and populated with choices that meet most institutional needs for content management, with some categories offering digital capabilities well beyond web publishing.

- Vendors in the vertically-focused category of CMS solutions for higher education have developed comprehensive and robust systems that aim to help institutions address their content challenges.
- Those that serve higher education clients with horizontal applications find it challenging to entice buyers beyond core content-management capabilities today, but they will play critical roles in helping leaders create a vision for their institutions’ digital capabilities and leading them toward digitally enabled experience management.

The tipping point for institutional leaders – the point where taking action is critical – will occur when the inability to meet the digital expectations of today’s education customers impacts the quantity and quality of students enrolling in their universities.

- Once this happens, they will be playing catch-up with leaders who have been willing to make bold investments in strategy development, contemporary technologies for CMS and digital marketing, and partnerships with service providers that can bring skills that are essential to experience management but not widely honed in higher education today.
The scope of this research covers universities’ journey from publishing content to managing experience. It focuses on the digital content, technologies, and practices that institutions use to engage with their audiences.

The research is not about efforts to create a digital campus (using digital technologies to manage campus operations), nor is it about the digital delivery of education. It does not cover the broader transformations taking place within higher learning, although we refer to key factors as far as they impact content practices. The scope excludes learning content (and therefore learning content management systems); information published by schools about their programs is, however, within the scope of our focus on content for engagement.

This research tracks digital transformation in the nonprofit sector of higher education, looking specifically at institutions offering four-year and advanced degrees in the United States and the United Kingdom. For-profit education businesses and online-only nonprofit institutions were excluded from scope.

Because the pursuit of higher education is becoming increasingly borderless for students throughout the world, it was important to look outside a single geographic region. To bring an international perspective to the research within a manageable scope, we focused the investigation on higher education in the United States and the United Kingdom. The populations are similar in their general familiarity with and adoption of digital content technologies in all sectors. Education customers in the United States and the United Kingdom evaluate a similar set of factors when making their choices, including the level of investment and the potential for gainful employment afterward. They employ a similar approach to making their final decisions, combining online research and, when possible, physical experiences like campus visits in the United States and open days in the United Kingdom.

To our knowledge, this is the first report of its kind to investigate digital transformation from a 360° perspective. Our research encompasses frontline insights from the institutions, the technology vendors, and the solution providers that are active in the higher education vertical. This report is also the first independent analysis of the current state of content management practices in higher education, presenting a balanced view that is not possible from vendor surveys and white papers only.

Our research encompasses frontline insights from the institutions, the technology vendors, and the solution providers that are active in the higher education vertical.
Terminology

“Customers” are individuals in various personas who interact with an institution, including prospective and current students, their families, donors, alumni, faculty, administration, and the local community. We most often use the term education customers to refer to students.

“Customer experience” (CX) is the totality of a customer’s interaction with an institution, with the emphasis on totality – that is, online and offline.

“Customer experience management” (CEM) is a business practice comprising the strategies, processes, skills, technologies, and commitments that aim to ensure positive and competitively outstanding customer experiences.

“Digital transformation” refers to the strategic use of digital content, technologies, and practices to transform the ways that institutions connect with and engage their customers and prospects. This research focuses on content management and not on other practices related to customer experience management, such as collaboration, social media management, and marketing automation.

“Leaders” are individuals who oversee content-related functions within an institution but do not do the hands-on content work themselves. They are decision-makers and influencers. We use the term for leaders within the institutions, not executives within technology companies or service providers who serve the higher education market.

“Practitioners” are the people who do the everyday work of maintaining an institution’s web presence, including operating the website infrastructure and creating, managing, and publishing content for an institution’s websites and other digital channels. Roles include content creators, content managers, marketing professionals, web operations team members, and IT.

“Service providers” is DCG’s term for those entities that provide services and/or products in support of content management or CEM initiatives, ranging from user research, design, and business strategy to technical implementations, custom coding, and, in isolated cases, sales of software solutions. Most of the service providers identify their companies according to one of the established categories: systems integrator, digital/interactive agency, marketing communications agency, or advertising agency. In this report, we use the term to refer to the first two categories (integrators and agencies) and to the vendors’ professional services teams where applicable.
The Demand for Digital Content and Experiences

If information is power, then digital information available 24/7 on multiple devices across multiple channels is power amplified exponentially. Consumers have seized the advantage granted to them by digital disruption in ways that many organizations are only beginning to appreciate. They are incredibly demanding and fickle. They do not hesitate to take action when they are disappointed. Eighty-nine percent report that they have switched their business to a competitor after a poor experience. They are so hungry for positive experiences that 86% say they will pay extra to ensure them – up to 25% more.

Customer experience management (CEM) is a business practice that is a direct response to the critical need to deliberately craft better, more engaging, and more compelling experiences. Every organization delivers an experience – some bad, a few good, mostly mediocre. In the age of the empowered consumer, however, experience cannot be left to chance. The winners will be those organizations that recognize the need to take charge of the experience they deliver and proactively manage it to align with goals and objectives.

Information flow is the essence of engagement, making content management practices and technologies foundational to customer experience management. Over the past decade, content management technologies have fine-tuned web content delivery, and responsive design has become a best practice. This evolution means that web content can now be published reliably across desktops, laptops, and mobile devices. Omnichannel content delivery is only possible because of the robust capabilities of today’s solutions. Content management technologies have also emerged to play a key role as an integration layer or hub for systems of engagement, including marketing automation tools, customer relationship management platforms, commerce systems, and so on.

If web content and content management practices are linchpins for engaging experiences, they are good starting points for exploring readiness for digital transformation in higher education.

If information is power, then digital information available 24/7 on multiple devices across multiple channels is power amplified exponentially.
The Current State of Content Management in Academia

Factors in the higher education environment

Our research indicates that four characteristics of the nonprofit sector of higher education influence content management and experience management strategies and practices.

1. **Academic culture drives investments and changes.**

The institutions within this research scope are mission-driven organizations. Although operating with fiscal responsibility is essential, the university mission is to prepare individuals for productive lives (employment, careers, and contributions to society); to advance knowledge in science, medicine, and technology; and to further the practice of arts and other intellectual pursuits. Their primary purpose is not to develop products and services that make money for shareholders. At nonprofit organizations, the bases for decision-making are not the same as those that drive decision-making within commercial organizations. Leaders have different priorities than business executives who are driven by next quarter’s earnings, often creating environments that lack a sense of urgency. Decision-making happens slowly, often within complex hierarchies that include multiple parties (such as trustees, faculty, and administrators) whose interests are not always aligned.

2. **Diverse customer needs drive an attitude of specialization.**

Institutions of higher education serve a wide variety of constituents. These diverse audiences – prospective and enrolled students, faculty, administration, alumni, and parents – have different information needs. This diversity encourages a deeply ingrained attitude of specialization. Department managers and content owners believe that their content needs are unique, and that they know what their particular audience needs better than anyone else. This attitude creates barriers to collaboration, and it undercuts efforts to instill content and website governance.

3. **A highly decentralized operating model creates silos.**

Institutions tend to be highly decentralized, largely as a response to the first and second factors outlined above. They generally function like a city – as a federation of many smaller organizations, each with its own mission, function, goals, objectives, operating models, budgets, and leaders. There are academic units (e.g., a school of medicine or master’s business program), operational units (e.g., admissions and financial aid), and logistics units (e.g., dining, housing, and student life). In business terminology, they are analogous to silos, except there are dozens or even hundreds of these units within a single institution. The result is a highly decentralized operating model.
4. **Funding uncertainty increases investment risk.**

Many institutions operate in a constant state of budgetary uncertainty, as they are heavily dependent upon public funds. Lack of control over sufficient and reliable budgets spawns cautious spending environments and deeply risk-adverse cultures. The case for investment in technology infrastructure, including content management, is difficult to make; multi-year investments are perceived as especially risky. This results in spending on projects that are small in scope and tactical in nature.

These characteristics of higher education environments give shape to content-centric practices in myriad ways, as referenced throughout this report. As these characteristics are unlikely to change within the next decade, standing on the sidelines and waiting for philosophical, cultural, and organizational change in higher education is likely a path to eventual irrelevance. Institutions may recognize the problem before getting to this point, but when they finally do take action, the race to catch up will be highly stressful and costly. The challenge for leaders and practitioners, then, is how to make progress with digital initiatives within the current environment.

*Standing on the sidelines and waiting for philosophical, cultural, and organizational change in higher education is likely a path to eventual irrelevance.*
Content management needs and requirements

Managing content inside the campus is, for many, an effort to operate effectively in a steady state of controlled chaos.

Content volume

A primary factor contributing to the chaos is the huge volumes of content that universities and colleges create, publish, and keep—more than typical organizations in many other industries (with the possible exception of government). One UK institution included in this study reported that it maintains over 1,500 websites serving six million pages, and another publishes one million pages. The web teams represented in our research had no more than 15 members, but the volumes of content they managed or advised on varied greatly. Hundreds and thousands of content assets can be spread across hundreds of websites, all managed by different schools and departments in a highly devolved, decentralized way. The UK university with 1,500 websites has only a few websites with more than 100,000 pages; the rest are 1,000 pages or less. Theoretically, all require management, but this does not always happen due to resource constraints. Many web teams are under-resourced for their content workloads. As a result, web pages are out of date, inaccurate, and contradictory. The content is of inconsistent quality and contains broken links (and broken customer journeys that lead nowhere). The sites have poor metadata and therefore exhibit poor findability.

Workflow and governance

Managed workflows could considerably streamline content processes and make life easier for web teams, but workflow management is almost nonexistent as regular practice today. The words workflow and workflow management were rarely mentioned in our interviews with institutions, vendors, and service providers. But we certainly picked up on the symptoms of their absence—delays in publishing and bottlenecks due to lack of resources, poor efficiency due to lack of training, and the use of older CMS technologies that still require IT to publish new content. If teams do any process management around web publishing, it is largely informal and haphazard. One practitioner told us that “universities rely on the goodwill of employees” as a substitute for workflow. Simple software-based workflow management capabilities that can be implemented quickly and easily at the small-team level would offer value, assuming a team member could be trained to create and manage them. This functionality would also enable basic governance, which is sorely lacking today.

Managing content inside the campus is, for many, an effort to operate effectively in a steady state of controlled chaos.
A major source of frustration on the part of the practitioners we interviewed is the woeful state of content and website governance within their institutions. Whether mentioned explicitly or implied by symptoms, the lack of governance is a significant pain point. It is exacerbated by the highly decentralized models that characterize many universities and by perceived cost of governance technology. Given the impact that governance has on the ability to improve content management practices and to enable digital engagement, we discuss its challenges later in this report in the section on opportunities and threats.

Ease of use

It is no surprise that “ease of use” was the most frequently mentioned requirement for content management systems in our interviews with practitioners and leaders. This is not unique to higher education. Ease of use is a universal requirement articulated by buyers across all verticals. After all, no organization wants a content management system that is difficult to use. Every vendor claims ease of use as a key feature of its tools and systems. As a result, taking the phrase ease of use at face value does not help buyers evaluate the differences between various systems. If we peel back the ease-of-use requirement in higher education, however, many practitioners we interviewed related it to the ability of content creators to publish content on the website quickly and efficiently. Whether the creator is publishing directly, or producing content for a web team that manages publishing, ease of use in higher education typically translates to a streamlined way to make publishing as simple as possible, with as little training as possible. Although this need is not limited to the higher education vertical, it is critical to the success of CMS projects and affects the success of a university’s digital pursuits.

Practitioners and leaders interviewed for this research do their best to deal with these issues by implementing content management systems that address these needs for higher education.

Ease of use in higher education typically translates to a streamlined way to make publishing as simple as possible, with as little training as possible.
Content management solutions landscape for higher education

The technology landscape for CMS in higher education, as illustrated in Table 1, is mature and offers a variety of options for web teams of all sizes and scopes of responsibility. Technologies range from low-end web publishing tools to sophisticated high-end platforms that provide core content management integrated with other capabilities for applications such as digital marketing.

- Web publishing tools are a good choice for nimble, isolated project with a defined timeline, such as marketing campaigns, an event or conference, research project websites, and blogs.
- Vertical market solutions are a good choice when an institution is in need of foundational content management capabilities fine-tuned for the higher education environment. The teams need solid capabilities for managing the content chaos that results from large volumes, multiple websites, and decentralized operating models. These solutions may offer built-in integrations with other tools that are specific to the academic environment, such as student portals and learning management systems.
- Horizontal solutions are a good choice when an institution is establishing (or aspiring to establish) leadership in digital capabilities and striving for innovation. These users have resolved the common content and digital challenges in higher education. They are in a position to learn from other industries and adopt forward-thinking approaches. A digital innovator such as Open University in the United Kingdom is a leading example in this category of adopter.

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Example Vendors</th>
<th>Implementers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Web publishing tools</strong></td>
<td>Software for publishing web content</td>
<td>Drupal, WordPress, open source tools</td>
<td>Internal, service provider</td>
</tr>
<tr>
<td><strong>Vertical market solutions</strong></td>
<td>PPackaged WCM to meet higher education requirements</td>
<td>Hannon Hill, OmniUpdate, TerminalFour</td>
<td>Vendor professional services</td>
</tr>
<tr>
<td><strong>Horizontal solutions</strong></td>
<td>WCM+ horizontal suites and platforms customized or configured to meet higher education requirements</td>
<td>Acquia, Adobe, Microsoft, Sitecore</td>
<td>Service provider</td>
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</table>
When selecting a new content management system (CMS), universities take multiple factors into consideration when identifying their best-fit content solution:

- Technology stack prevalent in the existing environment: LAMP, .Net, or Java.
- Licensing model: open source, proprietary, or hybrid.
- Technology delivery model: installed on premises, cloud-based SaaS, or managed services.
- Implementation services: in-house resources, vendor professional services, or independent service provider.
- Migration path for or needed to accommodate legacy websites, such as static HTML in Dreamweaver.
- Features and functions that align with the institution’s requirements.
- Budget for technology and services.
- Requirements for implementation expertise.

It is impossible to overstate the importance of evaluating and selecting a service provider as an integral part of choosing CMS technology. Too many organizations suffer the results of “service provider afterthought syndrome” – selecting the implementation team as an afterthought. There are significant risks with this approach, including project delays, restarted implementations, and meandering project courses. In some cases, the service provider is the solution. One practitioner said that his institution’s short list included four solutions: one vertical market platform and three Drupal solutions proposed by three services providers. In this scenario, the service provider’s capabilities were the basis for decision-making, not the technology.

It is impossible to overstate the importance of evaluating and selecting a service provider as an integral part of choosing CMS technology.
The role of the service providers

Regardless of sector or vertical, choosing the best-fit technology is not the only key to success with solution deployment and adoption. The right people with the right skills and competencies (including but not limited to technology fluency) are also essential – perhaps even more so with the emerging practice of customer experience management. Systems integrators and digital agencies are key participants in the development of content infrastructure within higher education. Those with a proven track record with implementations in higher education can bring deep technical and vertical expertise to their clients.

- **These firms understand the unique higher education environment** (large volumes of content, multiple websites, decentralized operations, and so on), and they know how to navigate the stakeholder landscape and address key challenges.

- **They have developed deep appreciation for institutional goals and objectives**, such as recruiting new students, garnering donations from former students, increasing communications and awareness for schools and departments, and improving the experience for currently enrolled students. They come to the table knowing how different institutions address these goals, and they understand the politics that often drive behind-the-scenes conversations. Armed with these knowledge assets, they are able to get projects underway faster and more seamlessly.

- **They know how to speak the language of higher education.** Because institutions are not managed as businesses, they often do not use the customer experience terminology that is common across other industries. Service providers with deep vertical expertise have honed their communication skills and know how to present value in a way that resonates with higher education clients.

Some of the practitioners we interviewed reported mixed experiences with their service providers. A common complaint was that the service provider’s technical approach did not fit the realities of the higher education environment, although the implementation might have worked perfectly fine in other industries. This finding illustrates why due diligence to validate a service provider’s claims of expertise in higher education is critically important.
The Current State of Content Management in Academia

**Relationships and expertise**

Our research identified five types of relationships between services providers and their clients in higher education, as shown in Table 2.

The most prevalent relationships are the first three. Knowledge transfer is important in the first two scenarios, ensuring that staff members can maintain the system or application after the service provider leaves. Strategic partnerships and management consulting remain aspirational for the service providers.

We asked the service providers about keys to realizing successful outcomes.

- According to one of the service providers interviewed for the research, the most successful projects are “when IT is involved, but we [the service provider] drive the business value.” In scenarios like these, the service provider brings the two parties – IT and the department or function – together in a meaningful and productive way.

- Projects are most likely to succeed when they come from the university’s chief technology officer or another top-level leader who understands the bigger challenges and can run cross-functional or cross-departmental teams to address problems or remove obstacles.

- Projects are more likely to succeed when one party – often the service provider itself – aligns perspectives to ensure that each department’s interests and goals are addressed and that constituents are working together to create a good project experience for all participants.

<table>
<thead>
<tr>
<th>Service Provider’s Role</th>
<th>Services Focus</th>
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<tbody>
<tr>
<td>In-house resource</td>
<td>Performs tasks as part of a team. In extreme cases, acts as an extension of the web development/operations team, undertaking tasks that would be handled by an employee in a staff position if there were sufficient budget and personnel.</td>
</tr>
<tr>
<td>Special project resource</td>
<td>Delivers on-time projects, often to take the pressure off the in-house team.</td>
</tr>
<tr>
<td>Specialized expertise</td>
<td>Fills gaps in missing competencies, such as search engine optimization.</td>
</tr>
<tr>
<td>Strategic partner</td>
<td>Establishes long-term relationship with the institution over time by engaging at a cross-functional level, typically with IT.</td>
</tr>
<tr>
<td>Management consultant</td>
<td>Works with top leaders to advise them on transformational change and organizational change management. Can fill gaps until university executives bring in digital leaders from outside.</td>
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Opportunities and threats

Our research shows that resource pressures, weaknesses in three capabilities, and a leadership void are the key opportunities and threats facing institutions as they strive for better content management and new capabilities for experience management.

Today’s vertical and horizontal solutions help web teams deal with volume, multi-site management, and workflow. But many institutions have not yet invested in those classes of technologies. Even though the technical capabilities are available, many still use the more basic tools, make do with outdated technologies, and/or rely on manual processes for publishing content. A lack of financial and staffing resources – often rooted in insufficient funding – is generally part of the picture.

Resources

The issue of limited resources casts a shadow across the entire breadth of digital transformation, inhibiting not only improved content management practices today, but also the ability to deliver great digital experiences tomorrow. The impact of insufficient resources surfaced in every dimension of our research scope. For example, technologies must be easy to use because training new content creators and publishers is difficult to support financially or operationally. As another example, service providers act as extended staff because web and marketing teams are under-resourced. As noted above, however, making things work within a resource-challenged environment is a fact of life in higher education. Leaders and practitioners have resigned themselves to it, even as they are well aware that they could be more effective, efficient, and strategic in their content practices.

In addition to threats and missed opportunities that arise from the lack of resources, many institutions are falling short in key areas that would significantly improve content management practices today. When asked about what could work better in higher education, three themes emerged throughout our interviews with all constituents – practitioners and leaders, service providers, and vendors.

1. Content governance and impact on website maintenance
2. Business strategy for website operations and business cases
3. Analytics
Governance

Governance is the systematic management of online content in a controlled and orderly way. The intention of good governance is to provide operational stability that allows web and marketing managers to focus on goals. Effective governance frameworks require strategy, policy, and standards. Regulatory overlays are part of the governance landscape with requirements to adhere to accessibility standards such as Web Content Accessibility Guidelines (WCAG) 2.0. The scope of effective governance covers all content touch points, including websites, mobile sites, and social channels. Governance typically works best when administered as a centralized function, with clear operational guidelines that can be followed across multiple decentralized groups. Governance improves collaboration among groups or teams by establishing the ground rules for content, but it also requires a collaborative mindset to get started and to incorporate it into daily practices.

Instituting and executing content governance is challenging enough across all verticals and sectors. Many factors in higher education present even greater challenges to governance. Decentralized operating models and the attitude of specialization can conflict with the collaborative mindset that makes governance work effectively. Collaboration can exist within web teams, but often stops there for these reasons.

The lack of governance contributes to the steady state of controlled chaos that defines content management practices in higher education today. It exacerbates the volume problem because web teams have no formal mechanism for retiring old content. Practitioners recognize that a regular content audit is a best practice, but they are not conducted. “Creating the web page is seen as a completed job,” said one respondent. Approval bottlenecks occur through lack of participation in important processes; one practitioner reported that only 20 out of 78 colleges attended a meeting to sign off on course pages, which are among the university’s most important content.

Technology solutions for enabling website governance are available commercially. But as one respondent said, “The problem isn’t the technology. It’s with the governance and different agendas.” Tools and systems can only support, automate, and integrate an organization’s governance policies, standards, and practices. These key elements of a governance framework are woefully lacking in higher education; little exists beyond what is required to comply with government mandates. Governance benefits (other than fine avoidance) are rarely priorities due to a number of factors, including a lack of resources, no clear ownership, and inexperience with building effective business cases.
The Current State of Content Management in Academia

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**Business strategy**

Challenges related to business cases came up in multiple conversations – not only in the context of governance, but also in regards to investments in technology, staff expansion, training, and capabilities improvement. This tells us that the lack of business strategy is an underlying cause, with weak business cases as the symptom. The issue is not just a particular investment; it is the ability to make and present that case within the context of a larger strategy for web operations. This is partly an environmental issue, as mentioned above – institutions of higher education operate differently from commercial businesses.

The ability to make an effective business case and to communicate it to top leadership is perceived by many practitioners and solution providers as a significant barrier to securing funding and support for content management and digital initiatives. This is not a problem unique to higher education. Developing and selling a business case is a combination of art and science; most people have no formal training, nor do they do it regularly enough to develop experience and confidence. Several factors compound the challenge in higher education:

- The data required to support a business case for an investment can be difficult to find or does not exist at all.
- Identifying key stakeholders across decentralized units can be difficult, and bringing them to the table to reach agreement on solutions and value even more so.
- Institutions do not operate as business corporations and therefore have a unique decision-making dynamic, as discussed earlier in this report. Even if a leader could make a business case, it is not always clear who the audience is.
- The ultimate owners of an asset or service may not be the same as the organization that has to prove the need for it with a business case. For a CMS or digital marketing platform, for example, lead practitioners within the web or marketing teams need to sell the investment, but IT may own it in the end. This requires coordination and negotiation throughout business case development, which can slow down the process significantly. And if concessions are made to appease other stakeholders, the result may be a weaker proposal that is less likely to get approval.

__A business case is a formal, written argument intended to convince a decision maker to approve some kind of action.9 It attempts to demonstrate a project’s value to the institution. Components include problem statements, situation analysis, options, solutions description, costs and cost/benefit analysis, accountability, controls, and recommendations.__

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Making a business case requires data inputs on current costs, projected costs, before-and-after operational impacts, and so on. As content management extends to digital marketing, analytics related to marketing performance of web properties are also essential inputs. Leaders and practitioners in higher education are often at a loss for solid data and analytics to support business cases, which is another reason why developing and pitching them is challenging.

**Analytics**

Our research shows that the use of analytics tools within higher education is at a very early stage. If analytics are used at all, it is only at the most basic level. If tools are available at the departmental level, they are not used due to lack of skills or time to make effective use of them. If analytical insights are provided from outside the department, they can be meaningless and outdated; the attitude of specialization that characterizes higher education creates skepticism about the value of analytics developed by anyone other than a person who understands the unique characteristics of his or her audiences. One technology vendor we interviewed said that the platforms with more sophisticated analytics capabilities will now put analytics directly into the hands of the marketing professional on a web team, but that person may not have the knowledge and skills to leverage that data to improve engagement. Providing guidance on making effective use of this data is an opportunity for vendors and service providers.

The weaknesses in analytics, business strategy, and governance partially stem from a lack of digital leadership, which is a major gap in higher education. This is not to say that today’s content and web operations leaders are not working hard and driving their teams as best they can. Many leaders today are challenged with managing the state of controlled chaos that characterizes web operations and on keeping up with business as usual. Reshaping leadership roles to drive digital transformation will be essential to engaging education customers. It should be a top priority for every institution that expects to thrive or remain relevant in the age of the empowered customer.
Leaders and content practitioners are aware that digital transformation is essential, and many know that awareness alone will not close the gap. They recognize that action is required. According to our research, the institutions that are most aware of the need to evolve quickly are motivated by

- A desire to have their online reputation match their schools’ perceived reputation.
- The ability to recruit new students, as new options for higher education continue to emerge.
- The ability to recruit the most desirable students to remain competitive.
- A desire to attract top international students who typically rely solely on digital information to make their decisions, as campus visits and open days can be cost-prohibitive.
- The need to reach education customers beyond their websites and through multiple online channels and apps.

At the same time, education customers are becoming smarter, empowered, and more careful shoppers. The size of their investment and the related debt can affect their lives for decades.

Tuition and fees for private universities in the US average $32,599 for the 2015-2016 school year, based on data collected from 711 ranked private schools by US News and World Report. Assuming four years of schooling to obtain a degree, the investment totals $130,396 – more than the cost of starter homes across much of the United States. Yearly fees in the United Kingdom are roughly the same, at £24,000 ($35,710) per year. Partly in response to the cost and debt, 74% of students considered alternatives to a college education in 2014.¹⁰

In addition to outright cost, the perceived value of investment is a significant concern for education customers. The ability to demonstrate digital capabilities is becoming a competitive advantage. Eighty-five percent of high school seniors, 81% of higher education students, and 72% of higher education graduates say that how well a higher education institution embraces innovation is an important factor in deciding which institution to attend.¹¹

As customers’ digital expectations rise rapidly, so does institutions’ need to step up the pace of transformation – or get started if the response has been lagging. The tipping point – the time at which a change or an effect cannot be stopped¹² – will occur when a higher education institution’s inability to meet the digital expectations of today’s education customers affects the quantity and quality of students enrolling in their programs. Once this happens, universities will be playing catch-up with leaders who have been willing to make bold investments in

1. Digital experience strategies and projects
2. Contemporary technologies for CMS and digital marketing
3. Partnerships with vendors and service providers that can bring skills that are essential to experience management but not widely honed within higher education today.
Leaders, practitioners, administrators, vendors, and service providers bring complementary capabilities to digital efforts to remain attractive and relevant to education customers. Each constituent group within the CEM ecosystem contributes to digital transformation (see Figure 1).

Leaders and practitioners in higher education can advance digital transformation by

- Taking steps to address today’s content management gaps and shortcomings that directly affect the ability to deliver great experiences, including governance, analytics, and business strategy.
- Establishing team projects around rethinking web presence as supporting the education customer’s experience, rather than publishing information.
- Instituting a regular program of user research aimed at understanding the needs and desires of education customers, which will deliver insight for creating great experiences and help leaders prioritize tasks and investments.
- Identifying new capabilities and competencies for CEM and finding ways to bring them into content management and marketing practices.

Technology vendors advance digital transformation by

- Delivering technical capabilities that address the most pressing content management challenges.

Service providers advance digital transformation by

- Positioning their services as the glue between technologies, web teams, and education customers.
Moving Towards Experience Management

- Demonstrating their unique expertise – beyond the ability to serve as extended staff – in areas such as analytics, SEO, user research, and experience design.
- Honing their change management capabilities so that they can effectively guide their institutional clients from current to future state.

Developing digital muscle for remaining competitive in the age of the empowered consumer can be accomplished by actively working the entire ecosystem. Institutions have many opportunities to improve their existing content management practices, as outlined in this report. Investments in digital infrastructure (people, processes, and technologies) will be essential to keep pace with expectations of today’s education customers. Going beyond the institution’s own efforts and embracing the capabilities of vendors and service providers as true partners can lead to initial and sustainable success with digital transformation.

The starting point for effecting digital transformation is always the alignment of the broader business strategy with the development of digital capabilities required to drive the strategy. Once the plan is in place, an assessment of who brings which skills, capabilities, and competencies to the table can help the institution get started.

The starting point for effecting digital transformation is always the alignment of the broader business strategy with the development of digital capabilities required to drive the strategy.
Ten core competencies for customer experience management

DCG has identified 10 core competencies that every organization needs to deliver to provide holistic CEM (see Figure 2). Drawn from several years of research and hands-on consulting experience, these competencies have emerged as the keys to success or failure with customer experience initiatives. Note that only one of the core competencies relates specifically to technology, emphasizing DCG’s worldview that people and processes are as important to delivering great customer experience – if not more so.13

Higher education leaders and practitioners can use the 10 core competencies as a framework for establishing a roadmap for building out their digital capabilities for today and tomorrow. The competencies framework serves as a guide for identifying the skills and capabilities they have and those needed to complement them. In this way, the framework is a powerful tool for helping an institution assess its state of readiness for digital transformation. It can be used to structure conversations with institutional stakeholders about getting started or advancing initiatives that are underway. Once missing competencies are identified, an institution ideally opens the door to new and different relationships with vendors and service provider partners that can fill the gaps.

The competencies cover a wide range of expertise and skills, many of which are in short supply, newly emerging, or beyond the scope of a single organization. Plus, it might not make sense to bring all resources to bear on 100% of projects. Within the CEM ecosystem, a diverse pool of service specialists is available to help address the challenges. Service providers with specific niche expertise, vendors’ professional services teams, digital agencies, and systems integrators are all viable options. Choosing a partner with the right expertise and capabilities is more important than the type of firm it is. The right service provider(s) can be the difference between an implementation’s success and failure, or the difference between getting the project done quickly and having it drag on unnecessarily. Making better use of service providers is, in fact, a key recommendation emerging from our research.
Leveraging service provider expertise

We uncovered a significant opportunity for institutions to take greater advantage of the skills and capabilities offered by the service providers with expertise in higher education. If relationships with partners are already in place, many institutions can start learning from them today, looking at options for adding new capabilities to an existing system or inviting outside-the-box thinking about an upcoming project.

The agencies and integrators we interviewed for this research believe they are underused and undervalued. They can and should be supporting more digitally sophisticated projects, and they long to do so. In addition to their technology fluency in CMS and related tools, many firms have solid digital skills and proven expertise that could effectively support their clients’ transformation from web publishing to customer experience. Because they do the work that their clients need done, however, their role today primarily focuses on core content management challenges related to web content creation, management, and publishing. Service providers interviewed for this research reported higher education projects such as

- Implementations of new or existing systems
- Integration of CMS with other tools, including social media management and CRM systems
- Content strategies and audits
- User interface design and development
- Tablet and mobile application development
- Specialized products such as online magazines, brochures, and pamphlets

But they also have expertise in a number of core competencies that would deliver real value for transformative initiatives, including user research, experience design, customer data/intelligence, and the design and development of experiences that blend physical and digital.

Most service providers are brought in by a department or school administrator responsible for a particular operational function. Rarely are they engaged by a centralized IT organization, and rarely is the mandate innovative or complex. As a result, their role and contributions are delivered departmentally and in a decentralized fashion – and therefore the services tend to be perceived as tactical. Working within this context, they have limited views across the institution, limited exposure, and therefore limited impact. And few are engaged in transformative initiatives around digital experience, even though they are often highly qualified and do that type of work for clients in other vertical markets.
Addressing the digital leadership gap

Developing digital leadership is the top priority success factor for digital transformation within higher education.

Our research shows that digital leadership is a huge hole today, particularly in terms of vision. Higher education lags significantly in establishing senior and executive roles that denote ownership of customer engagement and digital initiatives in other industries, such as senior vice president of digital strategies and communications; director of digital customer acquisitions; and vice president of digital experiences.14

Today’s operational leaders can be equipped to configure technology to manage pages – but that is not a go-forward strategy for competitive advantage. Digital transformation requires that web publishing evolve from pages to engaging stories and experiences. Respondents indicated that the lack of digital leadership that can drive change at this level is frustrating. One practitioner at a large American university said that executives “want the website to be great,” but they do not understand the complexity or appreciate the resources required to achieve better web presence: “They say okay, and then send us to the front desk secretary to manage online content. It’s a challenge.”

Addressing weak digital leadership is time-sensitive, as institutions face a potential tipping point – when desirable students in noticeable numbers choose other schools on the basis of their digital experience prowess. Most institutions will be best served today by bringing in digital leaders who have experience in other industries and come with fresh, consumer-focused perspectives that are often not prevalent in academia. Once on board and empowered, they can address the primary organizational weaknesses that inhibit digital transformation.

They can effect change by

- Putting the views, needs, and aspirations of the institution’s education customers at the center of all its activities.
- Managing the mix of business strategy and education customer experience.
- Leveraging broader industry knowledge to accelerate the development of digital capabilities within web teams, helping them broaden their skill sets beyond publishing.
- Driving an organizational mind shift from web publishing to education customer engagement, not just within web teams but also across the institution.
- Instituting an ongoing user research program to gauge how current and prospective students feel about the digital experience the institution delivers, ensuring that digital teams are not overwhelmed by and out of sync with student and parent expectations.
- Incentivizing interaction and collaboration across departments and functions, including communications, administration, marketing, operations, and IT.
The leadership challenges identified in our research are not unique to higher education. In McKinsey’s 2015 global survey on digital initiatives, the lack of internal leadership or talent (both functional and technical) for digital projects was ranked as the top challenge to meeting priorities for digital programs by 987 executives in financial, healthcare/pharma, high tech/telecom, and manufacturing sectors. But what is different in higher education is that expectations on the part of institutional leaders at the top levels are not as high as they need to be to drive change.

Most institutions will be best served today by bringing in digital leaders who have experience in other industries and come with fresh, consumer-focused perspectives that are often not prevalent in academia. Once on board and empowered, they can address the primary organizational weaknesses that inhibit digital transformation.
Digital transformation is occurring at different rates across different dimensions of higher education. Today, the shift to digital is profoundly affecting areas such as courseware development, learning delivery, and learning accessibility for individuals who might never have had an opportunity to take college-level courses or earn a degree. The transformation of content management into experience management is on the less rapid end of the spectrum. Change will be a gradual process – evolutionary, rather than fast and with a big bang – but transformative nonetheless, and worthy of strategy and action today for institutions that want to lead rather than follow.

Managing the customer’s experience as a business practice is hard, complicated, and new. Developing new capabilities for digital content, technologies, and practices is arduous and challenging. And the truth is that few organizations have made real progress. Global surveys by Capgemini, Accenture, and Forrester Research say that customer experience has actually gotten worse, not better. Forrester’s latest Customer Experience (CX) Index report, covering 299 brands in the United States and 203 brands in Europe, indicates that only 1% of US firms and 0% of firms in Germany, France, and the United Kingdom achieved an “excellent” score.

Even as leaders in higher education acknowledge the risk of moving slowly, they are unsure as to how to proceed or they are stymied by myriad factors that slow progress, many of which are beyond their control (such as uncertain funding). Practitioners are managing a balancing act. They have one foot in web publishing, while dipping the toes on the other foot into delivering better digitally-enabled experiences. Many of the people we interviewed yearn for new digital capabilities, but they perceive that progress towards experience management is out of reach. “Business as usual” is challenging enough, but this is not reason to stand still. If this year’s education customers are digitally savvy, next year’s will be even more so.

### Final Words: Advice and Guidance

- Encourage top executives to engage, empower, and embrace digital leaders. They are keys to avoiding the tipping point – negative impact on the quantity and quality of students enrolling in the university – and to remaining a competitive force in education.

- Think holistically. Education customers still depend upon real-world experiences. Avoid the trap of equating digital engagement with great student experiences.

- Assess readiness. Understand the requirements for delivering great experiences, and start assessing the institution’s state of readiness. A useful model is DCG’s 10 core competencies for CEM.

- Think beyond today’s publishing needs when gathering requirements for new content management and digital marketing technology. Choices should also be about preparing leaders and practitioners to advance when they can.

- Rethink the role of service providers and the value that they can deliver. They can be true partners in digital transformation while addressing current tactical needs.

- Communicate needs to vendors. Their technologies can support a mostly seamless transition from web publishing to experience management, but only if institutions are willing to demand the right capabilities at affordable prices.
It helps to realize that digital transformation is not a program, an initiative, or a platform. It is a process that is driven by thoughtful, strategic introduction of digital technologies and practices. Like all processes, it can be deconstructed into steps and stages, each establishing a footing for the next.

And, in fact, our research indicates that success is coming in exactly this way – in small steps, some cautious and some bold. Many of these steps are being taken by forward-thinking team managers who see a small opportunity to take an action that may not effect major change today, but will enable their institutions to be ready when the opportunity emerges. The director of web initiatives at an independent college in the US Midwest looks for opportunities to bring fragmented but related experiences together for small wins. He is helping two groups identify common analytics needs as a means of building a data infrastructure that eventually will be leveraged across departments and functions. This tells us that, at some institutions, digital transformation is happening organically at the grassroots level, rather than being imposed from above. It is certainly true that new leadership will be essential to push digital transformation forward – but there is also evidence that transformative capabilities are being developed stealthily throughout institutions. Transformation may be middle-across, rather than top-down, and driven by passionate and empowered web managers who can operate across decentralized organizations and sites.

While there is much to be done to bring order to the controlled chaos that is content management today, the real opportunity and the key to long-term survival lies in making progress toward bridging the gap between content management and experience management. Institutions can start by taking stock of their capabilities and competencies, identifying and prioritizing those that are most important, and then engaging partners who can help. Action – any action – is essential.

“Higher education in this country is not in crisis. Instead, it is in motion, and it always has been. Higher education evolves as knowledge expands, societies change and new technologies are introduced. This does not mean that we should relax: There should be no comfort taken in maintaining the status quo.” – Janet Napolitano, President, University of California
Appendix: Methodology

The main input to the analysis presented in this report is original primary research conducted by DCG from September 2015 through February 2016. Using structured interview instruments to ensure consistency, we conducted 31 in-depth interviews that provided multiple perspectives on digital transformation:

- Stakeholders from higher education institutions, across functions including web operations, marketing, administration, and IT, totaling six in the United States and 10 in the United Kingdom
- Eight interviews with service providers
- Seven interviews with vendors

We conducted extensive secondary research on trends and the state of higher education to inform our reporting and analysis. We also drew on our firsthand experience working with DCG enterprise clients, with whom we work on CEM roadmap development and selections of best-fit technology vendors and service providers.
Appendix: Acknowledgements and Sponsors

We cannot thank study participants enough for their time and for their willingness to speak with us. We are grateful that they chose to share their stories with us and, more importantly, with our readers. They represent the pioneers who are eager to participate in digital transformation and act as champions for their institutions’ ability to remain relevant with contemporary approaches, technologies, and skills. We also sincerely thank our sponsors, without whom this research would not have been possible.

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Participating Sponsor

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Manifesto is a London-based creative technology agency that partners with exceptional organisations to change lives for the better. The team use their expertise in the charity, education, technology and health sectors to deliver first-rate consultancy, strategy, creative, technical, brand and content services. The agency takes a central role in BIMA’s Digital Day, a partnership with schools and colleges across the UK which raises awareness of the fantastic opportunities for young people in digital.

Manifesto’s clients include Cancer Research UK, Queen Mary University of London, Marie Curie, The Children’s Society, Diabetes UK, The National Trust, Vodafone and Tata Steel.

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OmniUpdate is the leading provider of content management solutions designed to streamline content administration and solve the digital marketing and communication challenges of higher education. Its user-friendly platform and award-winning technology and support empower customers to be engaged and personalized in their communications, cost-effective and efficient in their channel management, and scalable and extensible in their development. With more 60,000 users worldwide, OmniUpdate customers experience long-term product value and satisfaction, resulting in unrivaled client retention. http://www.omniupdate.com.

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Endnotes


2 The definition and categories are identified in DCG's "Guide to Service Providers for Web Content Management and Customer Experience Management," published in 2014.

3 From a survey conducted by Harris Interactive in 2012 and commissions by RightNow, which was later acquired by Oracle. Selected findings are available at http://slidestory.com/RightNow/2011-customer-experience-impact-report.

4 Ibid.

5 DCG has written elsewhere about the widely accepted understanding that content management systems are at the core of the software ecosystem for customer experience management. See "Content Management: The Hub for Systems of Engagement," published by Digital Clarity Group in January 2016. Download it at http://digitalclaritygroup.com/content-management-the-hub-for-systems-of-engagement.


7 See analysis by Tiffany Elliot at http://www.digitalclaritygroup.com/do-you-suffer-from-service-provider-afterthought-system/.

8 See https://www.w3.org/TR/WCAG20/.


11 Ibid.

12 Definition in Cambridge English Dictionary.

13 A detailed discussion of Digital Clarity Group's 10 core competencies for holistic customer experience management is outside the scope of this research report. For descriptions of the competencies and the skills, employee profiles, and infrastructure each requires, download "Are You Ready for Customer Experience Management? The Ten Core Competencies That Every Organization Needs to Execute a CEM Strategy," at http://digitalclaritygroup.com/are-you-ready-for-customer-experience-management.

14 Delegates with these job titles attended US and European summit events hosted by GDS Publishing International in 2015. See http://www.gdsinternational.com/events/cmo/digital-us/ for an example of one such event.


Endnotes

17 Forrester surveyed 46,000 consumers in order to evaluate the CX performance of 299 US brands across 17 industries. In a change from previous CX Indexes, “excellence” was reserved for those brands that “design and deliver a CX that actually helps the business by creating and sustaining customer loyalty.” The Q1 2015 CX Index was published April 20, 2015; the Q3 report was published September 28, 2015. See Michael Gazala’s blog analysis of the declining scores at http://blogs.forrester.com/michael_gazala/15-10-06-forresters_customer_experience_index_q3_2015_its_hard_being_an_optimist. Joana van den Brink-Quintanilha’s October 5, 2015 blog post makes it clear that Forrester interprets an “OK” rating as “mediocre,” rather than as “not bad.” See http://blogs.forrester.com/joana_van_den_brink_quintanilha/15-09-28-which_french_german_and_uk_brands_create_the_most_loyalty_with_their_customer_expe.

Digital Clarity Group is a research-based advisory firm focused on the content, technologies, and practices that drive world-class customer experience. Global organizations depend on our insight, reports, and consulting services to help them turn digital disruption into digital advantage. As analysts, we cover the customer experience management (CEM) footprint – those organizational capabilities and competencies that impact the experience delivered to customers and prospects. In our view, the CEM footprint overlays content management, marketing automation, e-commerce, social media management, collaboration, customer relationship management, localization, and search. As consultants, we believe that education and advice leading to successful CEM is only possible by actively engaging with all participants in the CEM solutions ecosystem. In keeping with this philosophy, we work with enterprise adopters of CEM solutions, technology vendors that develop and market CEM systems and tools, and service providers who implement solutions, including systems integrators and digital agencies.

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