



Audit & Compliance

December 2016

December 8, 2016

3:30 p.m. - 4:45 p.m.

West Committee Room, McNamara Alumni Center

AUD - DEC 2016

1. External Auditor Report

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2. Update on Remediation of Intercollegiate Athletics Audit Findings

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BOARD OF REGENTS DOCKET ITEM SUMMARY

Audit & Compliance

December 8, 2016

AGENDA ITEM: External Auditor Report

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Suzanne Paulson, Assistant Controller
Katie Knudtson, Partner, Deloitte & Touche LLP

PURPOSE & KEY POINTS

The purpose of this item is to present the audit results for the FY 2016 annual financial report. The item will include:

- The auditor's opinion on the University's financial statements.
- Significant accounting policies.
- Accounting estimates.
- Audit adjustments.
- Other required communications.

BACKGROUND INFORMATION

The Audit & Compliance Committee oversees external audit engagements on behalf of the Board of Regents. The FY 2016 annual financial report is included in the December 9, 2016 Board docket.

University of Minnesota

Presentation to the Audit & Compliance Committee of the Board of Regents



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Our professional standards require that we communicate with you concerning financial, accounting, and auditing matters that may be of interest to you in fulfilling your oversight fiduciary responsibilities. We have prepared the following comments to assist you in that regard.

Summary financial information

Consolidated Statements of Net Position (excluding component units)

(In thousands)

As of:	June 30, 2016	June 30, 2015	June 30, 2014
ASSETS			
Current assets	\$ 1,160,883	\$ 695,807	\$ 589,977
Other noncurrent assets	1,855,782	2,264,034	2,231,939
Capital assets, net	<u>3,027,802</u>	<u>2,957,133</u>	<u>2,900,494</u>
Total assets	<u>\$ 6,044,467</u>	<u>\$ 5,916,974</u>	<u>\$ 5,722,410</u>
Deferred outflows of resources	<u>\$ 25,303</u>	<u>\$ 25,100</u>	<u>\$ -</u>
Total assets and deferred outflows of resources	<u>\$ 6,069,770</u>	<u>\$ 5,942,074</u>	<u>\$ 5,722,410</u>
LIABILITIES			
Current liabilities	\$ 503,612	\$ 473,587	\$ 444,319
Other noncurrent liabilities	483,016	502,318	208,518
Long-term debt	<u>1,500,632</u>	<u>1,421,428</u>	<u>1,282,507</u>
Total liabilities	<u>\$ 2,487,260</u>	<u>\$ 2,397,333</u>	<u>\$ 1,935,344</u>
Deferred inflows of resources	<u>\$ 298,892</u>	<u>\$ 368,220</u>	<u>\$ -</u>
NET POSITION			
Unrestricted	\$ 457,506	\$ 275,097	\$ 812,356
Restricted-expendable	889,332	927,436	1,004,191
Restricted-nonexpendable	304,669	297,469	289,366
Invested in capital assets, net of related debt	<u>1,632,111</u>	<u>1,676,519</u>	<u>1,681,153</u>
Total net position	<u>\$ 3,283,618</u>	<u>\$ 3,176,521</u>	<u>\$ 3,787,066</u>
Total liabilities, deferred inflows of resources, and net position	<u>\$ 6,069,770</u>	<u>\$ 5,942,074</u>	<u>\$ 5,722,410</u>

Consolidated Statements of Revenues, Expenses and Changes in Net Position (excluding component units)

(In thousands)

For the Year Ended:	June 30, 2016	June 30, 2015	June 30, 2014
Operating revenues	\$ 2,224,387	\$ 2,155,654	\$ 2,093,360
Operating expenses	<u>3,327,383</u>	<u>3,258,976</u>	<u>3,260,294</u>
Operating loss	(1,102,996)	(1,103,322)	(1,166,934)
State and federal appropriations	684,072	660,261	633,863
Grants, gifts and other nonoperating	379,149	350,047	350,510
Investment income, net	19,175	85,215	234,407
Other revenues	127,697	94,298	117,438
INCREASE IN NET POSITION	\$ 107,097	\$ 86,499	\$ 169,284
Cumulative effect of change in accounting principle	_____	<u>(697,044)</u>	_____
Net change in net position	<u>\$ 107,097</u>	<u>\$ (610,545)</u>	<u>\$ 169,284</u>

Consolidated Statements of Cash Flows (excluding component units)

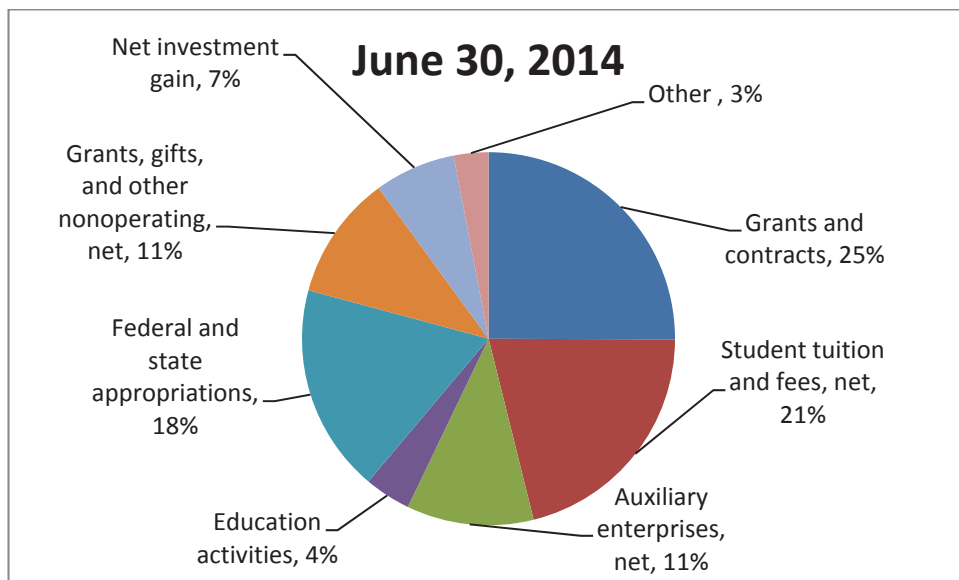
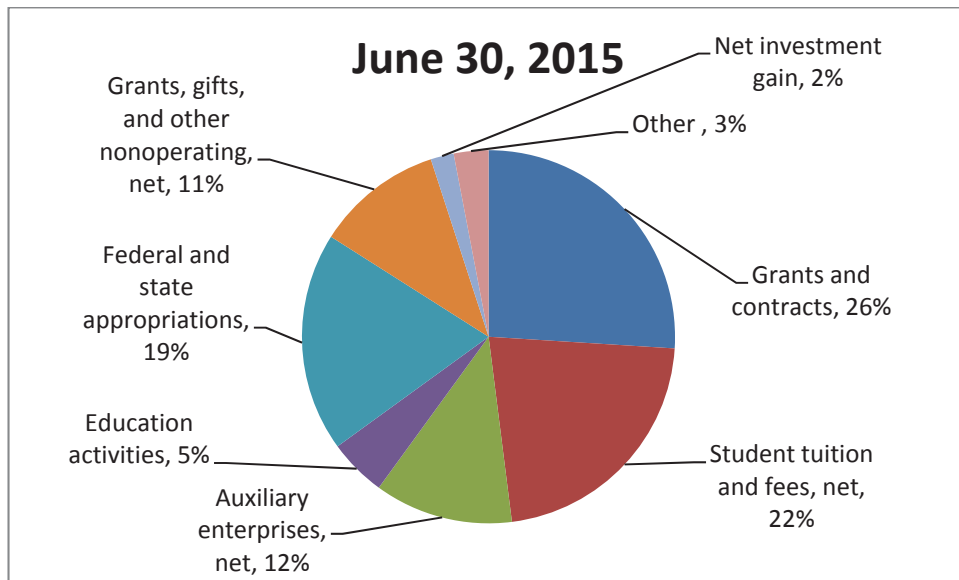
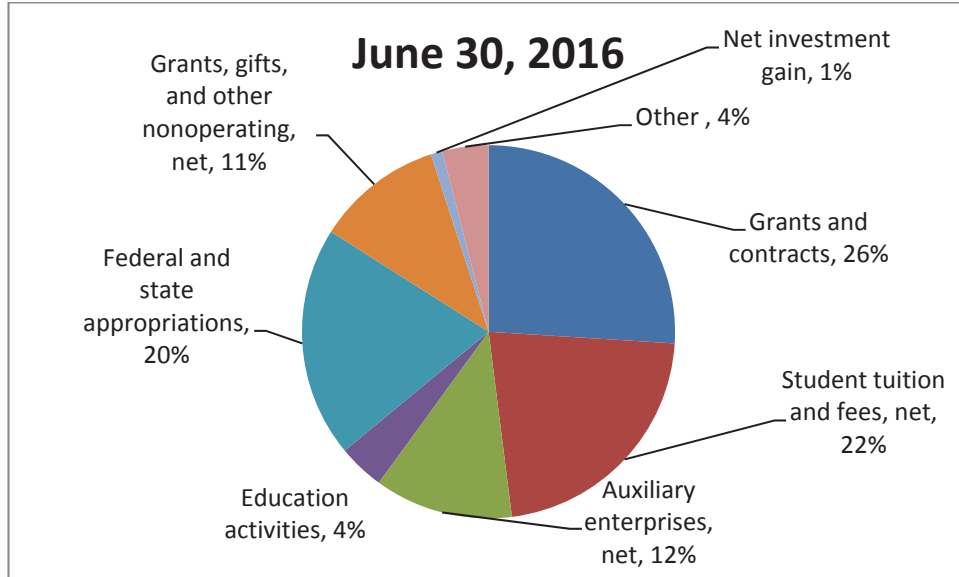
(In thousands)

For the Year Ended:	June 30, 2016	June 30, 2015	June 30, 2014
Net cash used by operating activities	\$ (973,743)	\$ (895,580)	\$ (924,284)
Net cash provided by non-capital financing activities	1,109,585	1,079,210	1,038,968
Net cash used by capital and related financing activities	(149,195)	(93,844)	(204,533)
Net cash provided (used) by investing activities	<u>139,433</u>	<u>(67,996)</u>	<u>118,775</u>
Net increase in cash	126,080	21,790	28,926
CASH—beginning of the year	<u>331,727</u>	<u>309,937</u>	<u>281,011</u>
CASH—end of the year	<u>\$ 457,807</u>	<u>\$ 331,727</u>	<u>\$ 309,937</u>

Enrollment Statistics

As of:	June 30, 2016	June 30, 2015	June 30, 2014
Approximate student enrollment	<u>67,000</u>	<u>68,000</u>	<u>68,000</u>

Total revenues



Strengths, challenges and accomplishments of the University

Strengths of the University

- Ability and commitment to respond to changes, including new accounting pronouncements, such as GASB No. 72, *Fair Value Measurement and Application* in the current year and GASB No. 68, *Accounting and Financial Reporting for Pensions* in the prior year
- Strong accounting and finance functions
- Strong internal audit function with experienced professionals
- Research spending of \$499 million benefits the entire state of Minnesota
- Diverse revenue base from tuition, state appropriations, federal grants, private gifts, grants, and contracts
- Strong net asset position
- Continued strong bond ratings (ability to generate additional funding)
 - Aa1 rating (Moody's—March 2016)
 - Strong market position for student and research and market conditions and ample financial resources and liquidity. Although state operating support has been modest in recent years, the University receives good capital support in the form of debt service on \$328 million of its debt (Moody's—March 2016)
- Short and long term planning
- Long range capital planning
- Quality—ability to raise tuition and still have enrollment growth
- Strong endowment gains
- Focus on technology

Challenges faced by the University

- Rising student expectations: academic quality, facilities, and employment opportunities
- Attracting and retaining the best academic talent
- Succession planning for key leadership positions
- Need for continued recruitment and retention of high-quality individuals within the finance and accounting departments
- Erosion of public funding, particularly state appropriations, while costs continue to rise

- Decentralization in an environment of shared services business models

Accomplishments of the University

- Ability to respond to state funding shortfall while increasing graduation rates, increasing retention rates and increased first year student ACT scores
- Limited litigation exposure
- Minimal unrecorded audit adjustments
- Accounting Services met all significant audit deadlines and appears to have a strong desire to do what is right
- Successful bonding activity, solid bond ratings in the very strong category
- Risk Tolerance working group with formal presentations of risk heat maps to the Audit & Compliance Committee

Required communications with the Audit & Compliance Committee

Our Responsibility under Generally Accepted Auditing Standards and Government Auditing Standards

Our engagement letter dated April 29, 2016, described our responsibility under generally accepted auditing standards (GAAS) and *Government Auditing Standards* (GAS) including:

- To report whether, in our opinion, the consolidated financial statements are fairly stated in accordance with accounting principles generally accepted in the United States of America (GAAP) in all material respects
- To consider internal controls and assess control risk to the extent necessary to plan and perform audit procedures rather than to provide assurance on internal controls
- Our procedures are not designed specifically to detect fraud

We have completed our audit of the consolidated financial statements of the University of Minnesota (the "University") as of and for the year ended June 30, 2016. We have issued an unmodified opinion on the consolidated financial statements of the University.

We believe our audit fulfilled the objectives set forth in our engagement letter.

Internal controls

As described in our engagement letter, GAAS requires, among other things, that we obtain a sufficient understanding of the University's internal controls to enable us to properly plan our audit and to determine the nature, timing, and extent of our audit procedures to be performed. No observations or recommendations represent significant deficiencies or material weaknesses in internal controls for fiscal year 2016.

Significant accounting policies

The University's significant accounting policies are set forth in Note 1 to the 2016 consolidated financial statements.

The University adopted Governmental Accounting Standards Board Statement (GASB) No. 72, *Fair Value Measurement and Application*, as of and for the year ended June 30, 2016. The adoption resulted in a cumulative effect of a change in accounting principle reflected as a decrease in net position of \$14.5 million. This impact is reflected in the 2015 financial statements as they are the earliest period presented as required by GASB No. 72.

During the year ended June 30, 2016, there were no other significant changes in previously adopted accounting policies or their application.

Accounting estimates and key audit risks

Accounting estimates are an integral part of the consolidated financial statements prepared by management and are based on management's judgments. Those judgments are ordinarily based on knowledge and experience about past and current events and assumptions about future events.

Our conclusions as to the reasonableness of estimates, as expressed in our independent auditors' report, are based upon the testing of management's estimates and/or the development of an independent expectation of the estimates to corroborate management's estimates.

During the year ended June 30, 2016, we are not aware of any significant changes in accounting estimates or in management's judgments relating to such estimates.

Significant accounting estimates and key audit risks reflected in the 2016 consolidated financial statements include the following areas:

Summary of Accounting Estimates and Key Risks

- Valuation of investments and cash and cash equivalents
 - Long-term debt
 - Recognition of revenue in the appropriate period
 - Management override of controls
 - Information management and communication
-

Financial Statement Account and 2016 \$'s	Audit Procedures	Management's Assertions
<p>Valuation of investments (significant risk) and cash and cash equivalents (Investments of \$2.587 billion (\$1.670 billion considered alternative investments) and cash and cash equivalents of \$350 million) (further breakout of investments included below)</p>	<ul style="list-style-type: none"> • Read the valuations provided by external investment managers and management's year-end analysis to evaluate how positions are marked to market for a selected sample. Assessed the underlying assumptions used to determine fair value for alternative investment vehicles. • Updated our understanding of the University's investment portfolio and considered investment strategies or products that pose control or financial reporting risks. • Understood and documented the oversight and monitoring procedures performed by management when investing in new funds, quarterly and annually. • Obtained an understanding of the internal controls over the monitoring of and reporting on on-going invested funds. • Reviewed transactions at or near the balance sheet date which support the valuation of the investment for a selected sample. • Independently tested pricing of readily marketable investments for a selected sample. • Confirmed directly with external investment managers and requested related audited financial statements as required by American Institute of Certified Public Accountants guidance to verify underlying value of alternative investments for a selected sample. Performed rollforward procedures from audited financial statement date to June 30, 2016 for a selected sample. • Compared investment fund returns to standard industry benchmark for a selected sample. 	<p>Management has represented that the assumptions used are reflective of management's intent and ability to carry out specific courses of action and are consistent with the University's plan and past experiences. Also, these assumptions and methods used result in a fair value measure appropriate for financial statement disclosure purposes in accordance with GAAP.</p>
<p>Long-term debt (Long-term debt of \$1.5 billion)</p>	<ul style="list-style-type: none"> • Confirmed long-term debt. • Assessed the University's compliance with debt covenants. • Obtained an understanding of all interest rate swap agreements. • Reviewed management's analysis and conclusion on accounting for interest rate swap agreements. • Assessed the financial condition of the interest rate swap counterparties. 	<p>Management has represented they have properly accounted for interest rate swap agreements, and that there are no negative financial conditions with any of the interest rate swap counterparties. Further, management has represented that the University is in compliance with all debt covenants as of June 30, 2016.</p>

Financial Statement Account and 2016 \$'s	Audit Procedures	Management's Assertions
<p>Recognition of revenue in the appropriate period (Student tuition and fees revenue of \$751.4 million, net of allowance of \$265 million) (Grant and contract revenue of \$897.7 million) (Other operating revenue of \$575.3 million, net of allowance of \$10.1 million)</p>	<ul style="list-style-type: none"> • Reviewed student tuition and fees and other revenue recognition accounting policies and procedures through our testing of the design and implementation of internal controls. • Audited student tuition and fees and other revenues recorded through substantive analytical and detailed testing procedures as well as testing completed within the federal grant compliance audit. • Reconciled federal grant and contracts revenue with the federal grant compliance audit. 	<p>Management has represented that revenues have been recorded at the appropriate amounts and within the appropriate periods. Management has also represented that amounts recorded as federal grant and contracts revenue reconciles to revenues recorded within the federal grant compliance audit.</p>
<p>Management override of controls (significant risk)</p>	<ul style="list-style-type: none"> • Tested the design and implementation of relevant controls over account reconciliations, journal entries, and financial statements • Tested the appropriateness of a sample of journal entries recorded in the general ledger. • Tested critical management judgments and estimates for bias. • Held fraud discussions with certain members of senior management, internal audit, the audit committee and others. • Performed analytical procedures on the financial statements to identify unusual trends in account balances and ratios 	<p>Management has represented that controls are appropriately designed and implemented to mitigate override of controls and that there were no instances of override of controls during the year ended June 30, 2016.</p>
<p>Information management and communication</p>	<ul style="list-style-type: none"> • Utilized internal IT specialists to test and evaluate the design and implementation of computer-related controls within the business cycles, including revenue, expenditures, and payroll and personnel. • Performed design and implementation internal control procedures around the University's ability to accumulate accurate and reliable information. 	<p>Management has represented that they have appropriate IT controls in place to produce accurate and reliable information to generate the consolidated financial statements.</p>

Long-term investments detail

(In thousands)

	Temporary Investment Pool	Consolidated Endowment Fund	Group Income Pool	Separately Invested Funds	RUMINCO	Total
Fixed income	\$ 342,484	\$ 245,817	\$ 58,084		\$ 15,488	\$ 661,873
Public equity		370,356			24,833	395,189
Private capital		352,740		\$ 3,704		356,444
Inflation hedges		126,903				126,903
Other		<u>128,519</u>		<u>1,003</u>		<u>129,522</u>
Total long-term investments	<u>\$ 342,484</u>	<u>\$ 1,224,335</u>	<u>\$ 58,084</u>	<u>\$ 4,707</u>	<u>\$ 40,321</u>	<u>\$ 1,669,931</u>

Audit adjustments

Our audit was designed to obtain reasonable, rather than absolute, assurance about whether the consolidated financial statements are free of material misstatement, whether caused by error or fraud. In addition, we are obligated by GAAS to inform you of any adjustments arising from the audit that could, in our judgment, either individually or in the aggregate, have a significant effect on the University's financial reporting process. There were no uncorrected misstatements, material corrected misstatements, or disclosure items passed that were identified during our audit.

Disagreements with management

We have not had any disagreements with management related to matters that are material to the University's 2016 consolidated financial statements.

Our views about significant matters that were the subject of consultation with other accountants

We are not aware of any consultations that management may have had with other accountants about auditing and accounting matters during 2016.

Significant findings or issues discussed, or subject of correspondence, with management prior to our retention

Throughout the year, routine discussions were held, or were the subject of correspondence, with management regarding the application of accounting principles or auditing standards in connection with transactions that have occurred, transactions that are contemplated, or reassessment of current circumstances. In our judgment, such discussions or correspondence were not held in connection with our retention as auditors.

Significant difficulties encountered in performing the audit

In our judgment, we received the full cooperation of the University's management and staff and had unrestricted access to the University's senior management in the performance of our audit.

Management representations

We have made specific inquiries of the University's management about the representations embodied in the consolidated financial statements. Management provided to us the written representations the University is required to provide to its independent auditors under generally accepted auditing standards.

Other matters paragraph

Our opinion on the consolidated financial statements includes an other matters paragraph specific to the required supplementary information, management's discussion and analysis and the Schedule of Funding Progress for Supplemental Benefits Plan and Other Postemployment Benefits, which are included in the consolidated financial statements. Our opinion was not modified with respect to these matters.

Other findings or issues

There are no other findings or issues arising from the 2016 audit that are, in our professional judgment, significant and relevant to those charged with governance, regarding their oversight of the financial reporting process.

Communication of peer review results

Peer Review

Deloitte participates in the American Institute of Certified Public Accountants (AICPA) Peer Review Program. The AICPA Peer Review Program requires independent evaluation every three years of those portions of a firm's accounting and auditing practice that are not subject to PCAOB permanent inspection so firms can meet their state licensing, federal regulatory, and AICPA membership requirements.

In 2014, Grant Thornton LLP (GT) completed the most-recent triennial peer review of D&T's system of quality control for our accounting and auditing practice applicable to engagements not subject to PCAOB permanent inspection for the year ended March 31, 2014. GT issued a report with a peer review rating of pass. A peer review report with a rating of pass means that D&T's system of quality control for the accounting and auditing practice applicable to engagements not subject to PCAOB permanent inspection has been suitably designed and complied with to provide D&T with reasonable assurance of performing and reporting in conformity with applicable professional standards in all material respects.

The peer review report can be found online at

<https://peerreview.aicpa.org/publicfile/Popup.aspx?f=10016352&r=359572&t=R&EV&s=1&e=.pdf>.

Information technology control procedures

- We deployed information technology controls specialists as part of our financial statement audit procedures to test the design and implementation of general information technology controls related to the following relevant financial reporting systems:
 - PeopleSoft Campus Solutions
 - PeopleSoft Human Resource Management System
 - PeopleSoft Enterprise Financial Systems
- We performed procedures to gain a detailed understanding of Information Technology (IT) controls related to core areas considered part of the financial audit framework of controls over financial reporting. The areas reviewed were Information Security, Data Center Operations, and System Change Control.

Summary of other 2016 audit services

Single Audit

- Testing is focused on Research and Development and Student Financial Assistance, two of the major federal programs at the University.
- Two additional programs were tested as major programs for the year ended June 30, 2016
 - Centers for Medicare and Medicaid Services (Department of Health and Human Services)
 - USAID Foreign Assistance for Programs Overseas
- Report to be issued in December 2016.
 - No findings noted.
- Federal expenditures for the year ended June 30, 2016 (in thousands):

Research and Development programs	\$ 499,400
Student Financial Assistance programs	434,900
Other programs	<u>90,500</u>
Total Federal Expenditures	<u>\$ 1,024,800</u>

Minnesota Office of Higher Education Financial Aid Programs examination

In connection with our procedures around the student financial assistance programs within the federal compliance audit, we performed procedures around the examination of the University's compliance with the Minnesota Office of Higher Education Financial Aid Programs requirements.

We expect to issue our report in December 2016.

Student fees agreed-upon procedures

Agreed-upon procedures for 35 student organizations, as outlined by the Fees Committee and Office of Student Affairs, to assist in review of financial affairs and accounting records of student organizations. We anticipate issuance of agreed-upon procedures reports for each student organization in January 2017.

NCAA agreed-upon procedures

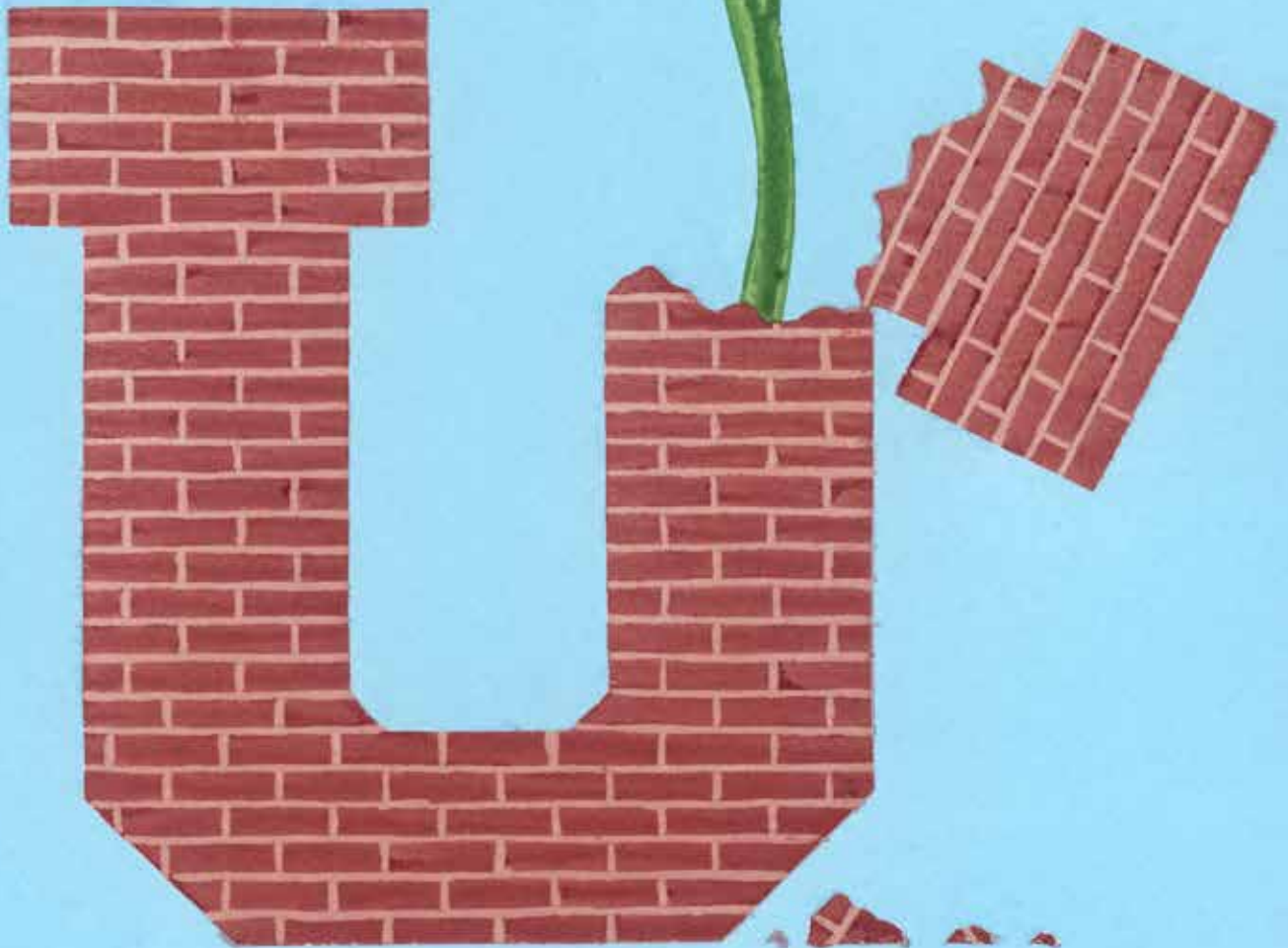
Agreed-upon procedures of the accounting records of the University of Minnesota Athletic Department in accordance with the NCAA Constitution. Procedures were performed in November 2016, with anticipated issuance of the agreed-upon procedures report in December 2016.

Other material written communications

- Written communications that we believe constitute other material written communications between management and us related to the audit for the year ended June 30, 2016, include:
 - Audit engagement letter—previously provided
 - Management representation letter (available upon request)

Reimagining higher education

How colleges, universities, businesses,
and governments can prepare for
a new age of lifelong learning



About the authors

Linsey Sledge

Linsey Sledge is a GovLab fellow and consultant in the Federal Strategy and Operations practice of Deloitte Consulting LLP. Within GovLab, her research focuses on the future landscape of higher education and what it means for higher education institutions, businesses, and governments. Additionally, she is researching the potential of federal innovation grants and the interactions of federal agencies with local regions. Her experience at Deloitte includes strategy development, business and operating model redesigns, advanced facilitation design and delivery, and virtual collaboration. You can reach her by email at lisledge@deloitte.com or Twitter at [@linseyasledge](https://twitter.com/linseyasledge).

Tiffany Dovey Fishman

Tiffany Dovey Fishman is a manager with Deloitte Services LP where she is responsible for research and thought leadership for Deloitte's public sector industry practice. Her research focuses on how emerging issues in technology, business, and society will impact organizations. She has written extensively on a wide range of public policy and management issues and her work has appeared in a number of publications, including *Public CIO*, *Governing*, and *EducationWeek*. Fishman also manages GovLab, a think tank in Deloitte's Federal practice that focuses on developing innovative yet practical ways that governments can transform the way they deliver their services and prepare for the challenges ahead. She can be reached by email at tfishman@deloitte.com or on Twitter at [@tdoveyfishman](https://twitter.com/tdoveyfishman).

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Introduction

AS Laura arrived at her parents' house, she found them lighting the grill and setting out chairs for the afternoon's festivities. Soon, guests would arrive for a party in honor of Laura's new job, an entry-level position with a large architectural firm.

Once, she might have had a graduation party. But it's 2025, and unlike her parents, Laura hadn't walked across a stage to mark the end of her formal education. Instead, she earned a series of credentials by mastering skills that qualified her for her chosen career.

If Laura's transition from student to employed professional was different from her parents', so were many other aspects of her academic experience. In high school, she didn't pore over college websites, check rankings, tour campuses, and consider various majors before compiling a list of schools and looking into financial aid. Instead, she researched careers that would make good use of her math skills and her strong sense of design. Once she decided on architecture, her guidance counselor led her to digital tools that helped her explore various educational pathways she could take to land the job she wanted.

In two years, Laura developed foundational skills in critical thinking, communications, and ethics, among other areas, and sharpened her quantitative skills, earning her a competency-based degree. She then studied independently through massive open online courses (MOOCs), participated in a 12-week immersive boot camp, completed a university architectural certificate, and worked as an intern for a design firm. She did all this while attending frequent networking meet-ups to explore and pursue full-time job opportunities and spending most of her free time in a design studio where she interacted with peers and mentors.

Her "courses" carried no credit hours; instead, she advanced at her own pace, allowing her to balance her studies with her need to earn a living. When she applied for a job, the recruiter checked her credentials against an online scoring system that allowed him to compare a broad range of educational programs on content and rigor. With this tool, he could see how her credentials stacked up against those of other candidates who had followed different educational pathways.

She didn't incur massive debt; instead, she took each step in her education as she could afford to. And there was no formal commencement ceremony to mark her departure from academia because lifelong learning has become a permanent fixture of professional life. Laura will continue her studies as she advances in her career.

An industry in disruption

Laura's scenario, and others like it, may arrive in response to the current crisis in American higher education. The cost of tuition continues to skyrocket, putting the dream of higher education out of the reach of many and saddling others with decades of debt, even as the connection between the subjects that schools teach and the competencies that employers need grows ever less certain. Colleges and universities face two large, related challenges—how to make an education more affordable and how to increase the returns students realize on their investment. No one wants to watch another generation struggle to pay off tens of thousands of dollars in college loans on barista-level wages.

Just as iTunes®, Netflix, the Kindle, and other innovations have disrupted the music and media industries, new developments are

shaking higher education to its core. In much the same way these technologies and business models changed the way we interact with and consume everything from books and television to movies and other media, so, too, with education.

Science and technology have spawned new models for teaching and learning that will fundamentally alter the student experience in the years ahead. Education innovators are using technology and analytics to transform every facet of the college experience, from helping students make more informed educational investments to reducing the geographic and financial barriers to learning. Take Georgia Institute of Technology's online master's degree in computer science, for example. With a price tag of less than \$7,000, students have the flexibility to set their own pace and engage with personal coaches and project peers as they progress through the program.¹

Moreover, the exponential rate at which new knowledge is created today is drawing a new breed of alternative education providers into higher education. These providers are developing lower-cost, lightweight, on-demand learning solutions to help close the growing gap between the skills employers seek and the skills students possess upon graduation.² HackReactor, one such provider, specializes in providing students with computer science skills in just three months. Another, General Assembly, offers both in-person and online courses in everything from business fundamentals to web development.

The question facing colleges and universities is how to marry the best of a liberal arts

education with advances in technology and new models of learning to effectively adapt higher education for the digital age we live in. In today's hypercompetitive world, accelerating learning is the new dominant driver of success.³

According to John Seely Brown, co-author of *A New Culture of Learning: Cultivating the Imagination for a World of Constant Change*, the business of universities in an era of exponential change must shift from simply transferring knowledge to students to providing them with access to the latest knowledge via digital platforms, developing their skill sets through mentorship, and then immersing them in situations that encourage them to probe and push the boundaries of current knowledge and practice.⁴

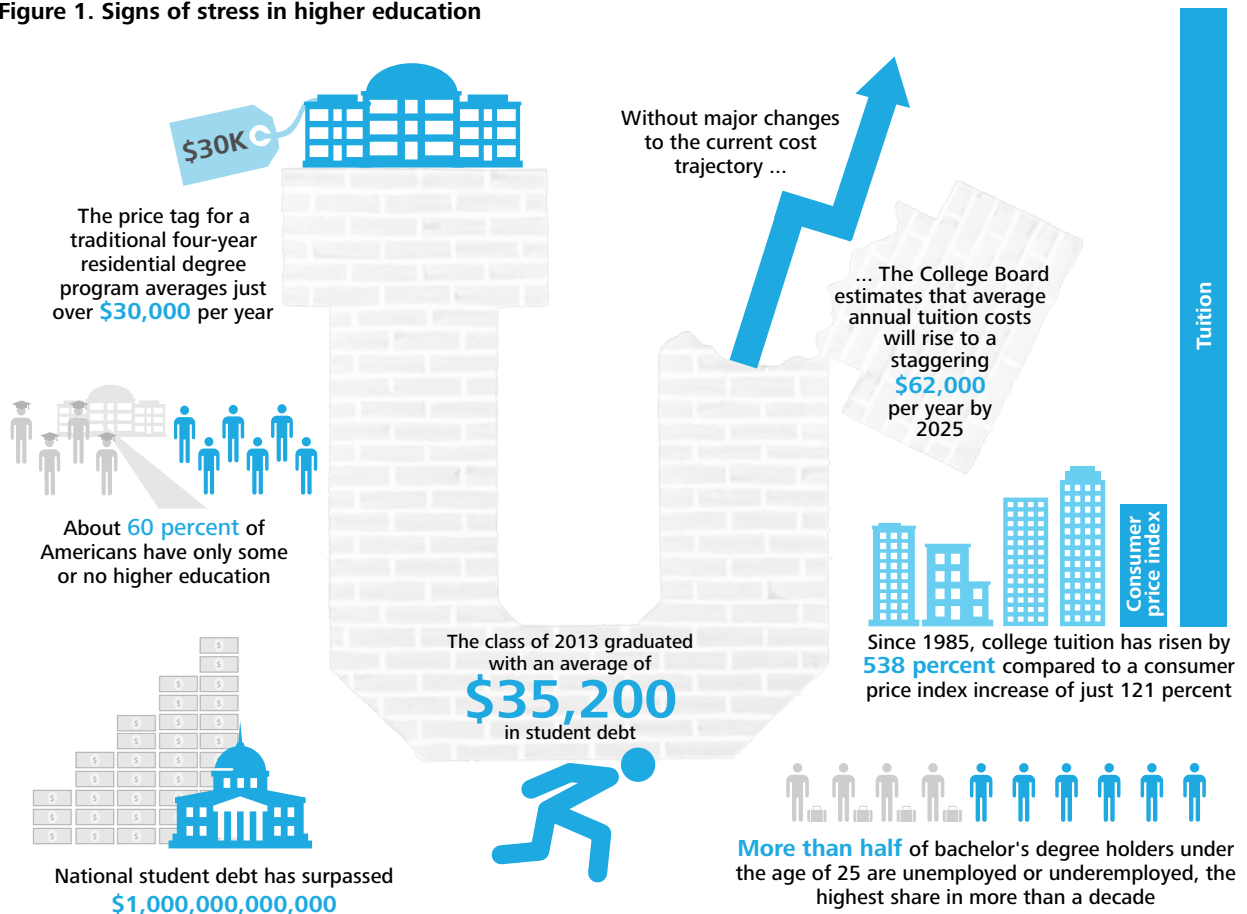
Wide-ranging and thought-provoking conversations with higher education industry experts, educational technology startups, alternative education providers, college, university, and business leaders, and education policymakers led to intriguing insights on what all of these innovations could mean for the future of higher education. Collectively, these insights provide a glimpse into the changing landscape of higher education in America, which is detailed in the first part of this report. The second half of this report examines how colleges, universities, businesses, and governments can adapt to this changing landscape and the broader shift underway to a new era of lifelong learning. Making sense of this fast-changing landscape is essential; we all have a stake in making higher education more accessible, affordable, and relevant.

The emerging higher education landscape

FRACTURE lines can be seen everywhere in America's higher education system, from skyrocketing tuition costs and mounting student debt to a significant mismatch between the skills employers seek and those students possess upon graduation (see figure 1).⁵ These pressures, coupled with the recognition that the status quo is unsustainable, are, in turn, fueling innovation across the higher education ecosystem. While it's still early days, we're beginning to see the emerging outlines of a new landscape for higher education.

The emerging higher education landscape is one that is befitting of the digital era and of today's tech-savvy students. It's one that uses the cloud, social networks, mobile computing, and big data to create digital learning ecosystems that serve entrepreneurial learners, allowing them to design their own educational path based on the goals they want to achieve. It may or may not involve four years of study. Rather, students set their own pace, progressing not through semesters but as they master various competencies. And similar to electronic health

Figure 1. Signs of stress in higher education



Graphic: Deloitte University Press | DUPress.com

records, the credentials they earn follow them throughout their professional lives, reflecting the total sum of their education, from traditional degrees earned to alternative badges and corporate training completed.

In this section, we examine the ways in which the landscape for higher education is beginning to evolve.

Rethinking the college decision-making process

Up to now, college rankings, campus visits, marketing materials, and advice from family, friends, and guidance counselors have served as the main sources of information to guide students' college search. Now, thanks to technology, it's possible for students to employ a more data-driven approach to the college decision-making process.

The role of big data in the college search

As Jeffrey Selingo, author of *College Unbound: The Future of Higher Education and What It Means for Students*, notes, "Until recently, data science was largely absent from the high-stakes decisions made in higher education. Think about it: We have used this technology for years to help us with mundane choices like picking our next movie from Netflix, but not to help a student select the right college."⁶

Today, because of organizations such as LinkedIn, which provides free access to its members' aggregated education and career data, we can map the career pathways of hundreds of millions of professionals—data that students can use to make more informed college decisions.⁷ Students can see the varied paths today's professionals took to succeed in their chosen fields. For example, students can see that engineering graduates from Carnegie Mellon University most commonly work at Google, IBM, and Microsoft.⁸ They are also able to explore the less linear paths students take today, like the musical theater major who

Today the nontraditional student is the new norm. At last count, they accounted for nearly 70 percent of all US undergraduates.

used his skills in developing compelling narratives to land a job as a game designer at Zynga.

Moreover, MOOCs and other shorter-term immersive programs provide a medium through which students can begin exploring possible areas of interest before committing to an educational pathway. With a growing number of low- or no-cost options available, students no longer need to delay career exploration until college.

Others like Admitted.ly, an online counseling service, allow students to do more sophisticated matching based on their natural aptitudes, lifestyle preferences, financial situation, areas of interest, and career aspirations to find the school that best fits their needs.

Grounding investment decisions in financial reality

Students should be able to make informed decisions about educational finances—what they can afford, the debt they could be shouldering, and above all, the returns they can expect from their investment.

But, as Adam Phillabaum, an educational technology innovator, observes, "Too often, students are making education decisions in a financial vacuum."⁹ And it's often hard for students to connect their choices with the financial implications down the road.

This problem has spurred entrepreneurs to develop tools, using open government data and analytics, which can help students better understand everything from the amount of aid they can obtain to their likely financial circumstances after graduation.

“The way we learn should be our most personalized experience because no two people process information the same way.”

– George Siemens, associate director of the Technology Enhanced Knowledge Research Institute

College Abacus, for example, helps students assess financial aid packages across more than 4,000 schools.¹⁰ Using College Abacus’s net price calculator, students create a cost estimate based on their unique academic and financial information, allowing them to select schools within their budgets.

Other companies are applying crowd-sourcing approaches to student aid offers, to help students negotiate stronger aid packages. One such tool, How’s My Offer, allows students to anonymously share and compare their college offer letters, akin to platforms such as GlassDoor that allow employees to gauge whether their compensation packages are competitive.¹¹ Another, FindTomorrow, uses government and private sector data on salary and careers to shed new light on the link between educational choices and career outcomes.¹² This type of information helps students make dollars-and-cents connections between the decisions they face (school, major, loans) and future outcomes (such as monthly student loan payments, earnings over time, and job satisfaction).

Yet another firm, PayScale, uses salary data from alumni and the total cost of attendance to develop its college return on investment (ROI) report which ranks colleges and universities based on their net return to students over a 20-year period.¹³

These innovations are only beginning, but already huge strides have been made in analyzing, visualizing, and disseminating data in ways that allow students to make much smarter decisions about their higher education investments. Social networks, big data,

and analytics are shedding new light on factors such as graduation rates, student debt, and post-graduation salaries, enabling students to analyze the costs and benefits of different educational paths far more effectively.

A new model of “just right” education

Anyone plucked from a century ago and set down in a typical lecture hall today would immediately know they were on a college campus. Students might be taking notes on laptops rather than paper, and the blackboard may have been replaced by a whiteboard or a digital “smartboard,” but they’d have no doubt they were in a classroom.

This lecture-based model for learning has characterized higher education since its inception. But, with better technology and a much deeper understanding of how students learn, educators are beginning to make strides in personalizing learning by combining the best of traditional teaching with digital technology, using analytics to track student success, and focusing on competencies rather than credit hours. According to George Siemens, associate director of the Technology Enhanced Knowledge Research Institute, “The way we learn should be our most personalized experience because no two people process information the same way.”¹⁴

“Made for me” education

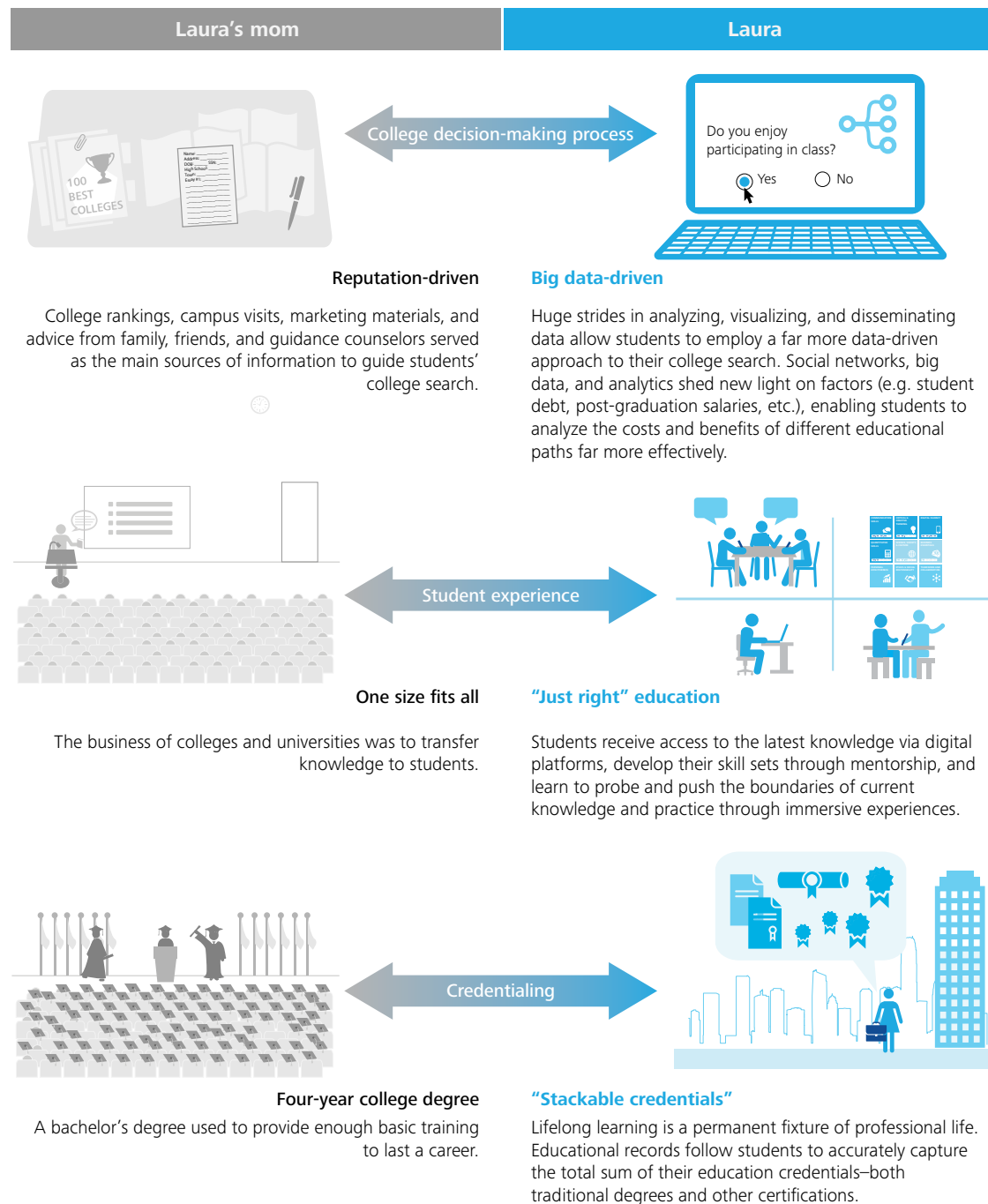
The Center for Digital Education reports that blended education models improve comprehension and test scores for 84 percent

of students.¹⁵ These models blend elements of “brick-and-mortar” in-person instruction with asynchronous, self-paced online learning.

Stanford University, for instance, in partnership with the online learning platform Khan Academy, piloted a blended learning “flipped classroom” biochemistry course. Students watch video lectures online at home

and then spend class time solving problems, maximizing the time students spend with professors.¹⁶ This partnership has extended into the medical school, allowing Stanford medical students to watch core curriculum videos online, and freeing up class time for students to practice that curriculum alongside their peers

Figure 2. Higher education in the 20th century vs. the 21st century



Graphic: Deloitte University Press | DUPress.com

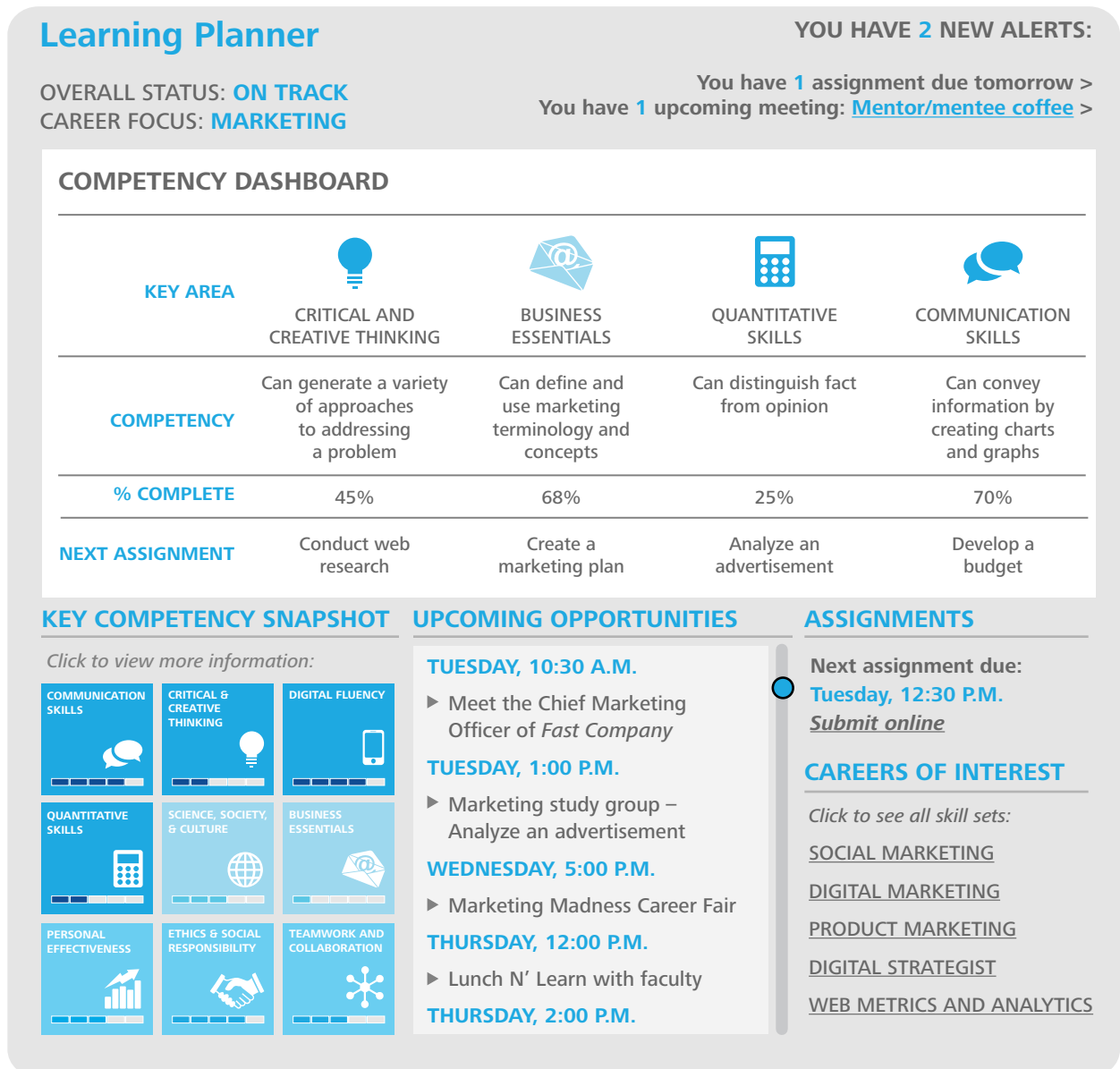
and professors and to explore their passion areas early in their schooling.¹⁷

Predictive analytics—commonly used in the private sector to inform decisions about consumer behavior—offers higher education institutions a more effective way to calculate and track student progress. Software platforms such as Course Signals, for example, can serve as an early warning system for both students and faculty. Students receive notifications about how they are performing in a course as they progress through it. By providing this

performance data to faculty, they are able to identify students who need additional assistance to succeed and can target interventions to ensure at-risk students stay on track.¹⁸ At Purdue University, students enrolled in Course Signals classes have a 21 percent higher graduation rate than those enrolled in courses that don't use the software.¹⁹

The Department of Education has found the traditional lecture hall to be less effective than personalized learning models.²⁰ Yet today, only 12 percent of higher education courses

Figure 3. Illustrative learning planner dashboard



Source: Adapted from College for America's competency-based curriculum.

Graphic: Deloitte University Press | DUPress.com

take advantage of blended learning, and even fewer take advantage of predictive analytics.²¹ Even so, personalized options are gaining momentum and, given their proven benefits, are certain to become increasingly common on college campuses.

Serving the nontraditional majority

In the recent past, the traditional college experience involved a four-year degree, earned while attending classes full-time, and living on campus, complete with student activities. And it's still a reality for some, of course.

Today, however, the nontraditional student is the new norm. At last count, they accounted for nearly 70 percent of all US undergraduates.²² They come from a variety of backgrounds and situations that do not lend themselves to the old model of higher education; they have varying levels of education and experience, likely cannot afford four years to complete a degree, need to work part- or full-time, and often must juggle family and other responsibilities while completing their studies.

For these students, competency-based models are emerging as an attractive alternative to the traditional credit hour model. Rather than using “butts in seats” as the yardstick for measuring success (How many credit

hours did you complete?), competency-based degree programs focus on whether students are actually mastering the material. Selingo points out that the idea behind this is simple, “[D]egrees should be based on how much students know, not how much time they spend in a classroom.”²³

Competency-based degrees reward prior experience and measure learning through demonstrated proficiency—therefore students are able to progress through “courses” at their own pace, shortening or lengthening the time necessary to complete a degree. College for America, University of Wisconsin, and Western Governors University (WGU) are using technology to scale competency-based education to more students.

College for America students, for instance, can earn an associate’s degree in as little as 100 days for \$2,500 or a bachelor’s degree in just two years for \$10,000.²⁴ Students complete a customized academic plan aligned to skills defined by employers. The University of Wisconsin, the first major public university offering a competency-based program, allows working adults with some college experience to finish their degrees through online courses and competency testing for \$2,250 per three-month term.²⁵

Figure 4. The emerging world of alternative education

The exponential rate at which new knowledge is created today is drawing a new breed of alternative education providers into higher education. These providers are developing lower-cost, lightweight, on-demand learning solutions to help close the growing skills gap. These alternative education providers fall into two broad categories: MOOCs and immersives.

MOOCs

Known for providing open access to online learning, MOOCs come in many different forms.

Some, like [edX](#) and [Coursera](#), seek to provide the online equivalent of a university experience with everything from expert-curated lectures and quizzes to peer-reviewed assessments. [Udemy](#) offers a similar model, but anyone is welcome to curate content, not just university professors.

Others, like [Khan Academy](#) and [Lynda.com](#), provide access to hundreds of short video courses for on-the-go learning. All MOOCs provide an opportunity for anyone to engage in online learning that’s available at low- or no-cost.



Immersives

Immersives are characterized by short, intensive learning experiences that allow students to quickly acquire in-demand skills.

[HackReactor](#), [HackBright](#), [DevBootcamp](#), and [General Assembly](#), collectively referred to as coding bootcamps, provide in-person lectures, peer learning, hands-on projects, and networking opportunities in anywhere between three weeks to three months. Many have partnered with businesses who recruit students post “graduation.”

General Assembly is expanding this learning model far beyond coding by providing a range of learning opportunities that students can complete in-person, online, part-time, or full-time on everything from business fundamentals and product design to mobile development and digital marketing.

Graphic: Deloitte University Press | DUPress.com

To date, one of the most successful examples of competency-based education is WGU, which spent the better part of the last decade refining its competency-based program.²⁶ The 100 percent online, accredited institution surpasses national averages for one-year retention rates (79 percent at WGU, 73 percent nationally), graduate satisfaction (80 percent at WGU, 67 percent nationally), and post-graduation employment (89 percent at WGU, 84 percent nationally).²⁷ At a price tag of under \$6,000 a year, the university has grown to serve over 40,000 students and has been recognized by *Fast Company* as one of the world's most innovative companies.²⁸

The emergence of alternative education providers

Today, alternative education providers primarily serve college degree holders—both recent graduates seeking a bridge to employment and those further along in their careers looking to gain new skills without the commitment of going back to school (see figure 4). But, as alternative education options proliferate and gain status, they could become a first stop for students seeking to further explore their interests and to test different career options before committing to a six-figure college education, serving as a new gap-year option. For others, they may become an increasingly

attractive substitute for a traditional four-year degree.

MOOC provider edX, for instance, has created the xSeries, a MOOC curriculum comprised of multiple courses that, taken together, are equivalent to traditional “brick-and-mortar” courses. The series, which costs approximately \$100 per course, will provide students with a certificate for each individual course and a separate certificate for completing the entire series. According to Chris Terman, a senior lecturer in electrical engineering and computer science at MIT, the courses for the computer science series can give students a solid foundation in fundamentals, which gives them a strong jump start on future studies or prepare them for a summer internship.²⁹

Other online learning platforms such as Lynda.com organize their video libraries into “tangible skill buckets.” Lynda.com’s self-paced video lessons are available via subscription 24/7 on computers, tablets, or mobile devices, and provide a range of skills from graphic design and web development to business analytics and 3D printing.

Furthermore, a wave of new in-person, non-accredited educational options have increased tenfold in the past year to meet the increasing demand for certain skills.³⁰ While the market for these immersive programs is still in its infancy, it is expected to bring in \$59

THE RISE OF THE ENTREPRENEURIAL LEARNER

Returning to the case of Laura. Laura represents a new breed of students who have made the most of the changing landscape for higher education. Before pursuing higher education, she worked out that math and design were her strongest skills, which helped narrow her focus to certain career paths which she further explored before ultimately landing on architecture as her chosen profession. She collapsed the time to acquire core skills by completing a self-paced competency-based degree program before investing in a three-month immersive course to rapidly develop hard skills. At the same time she began to grow a network of peers, mentors, and employers. The university certificate provided an opportunity for her to further develop specific areas of expertise, while continuing to grow her network. All the while, she participated in internships and other hands-on opportunities to further refine her skills and gain professional experience before landing her first job. Laura’s is just one of many possible scenarios in which entrepreneurial students make higher education work for them by pursuing educational paths custom-tailored to their career interests and objectives, schedule, and budget. This by no means spells the end of higher education institutions, but rather takes into account a dynamic and burgeoning higher education marketplace that will, in effect, enable entrepreneurial students like Laura to design their own education.

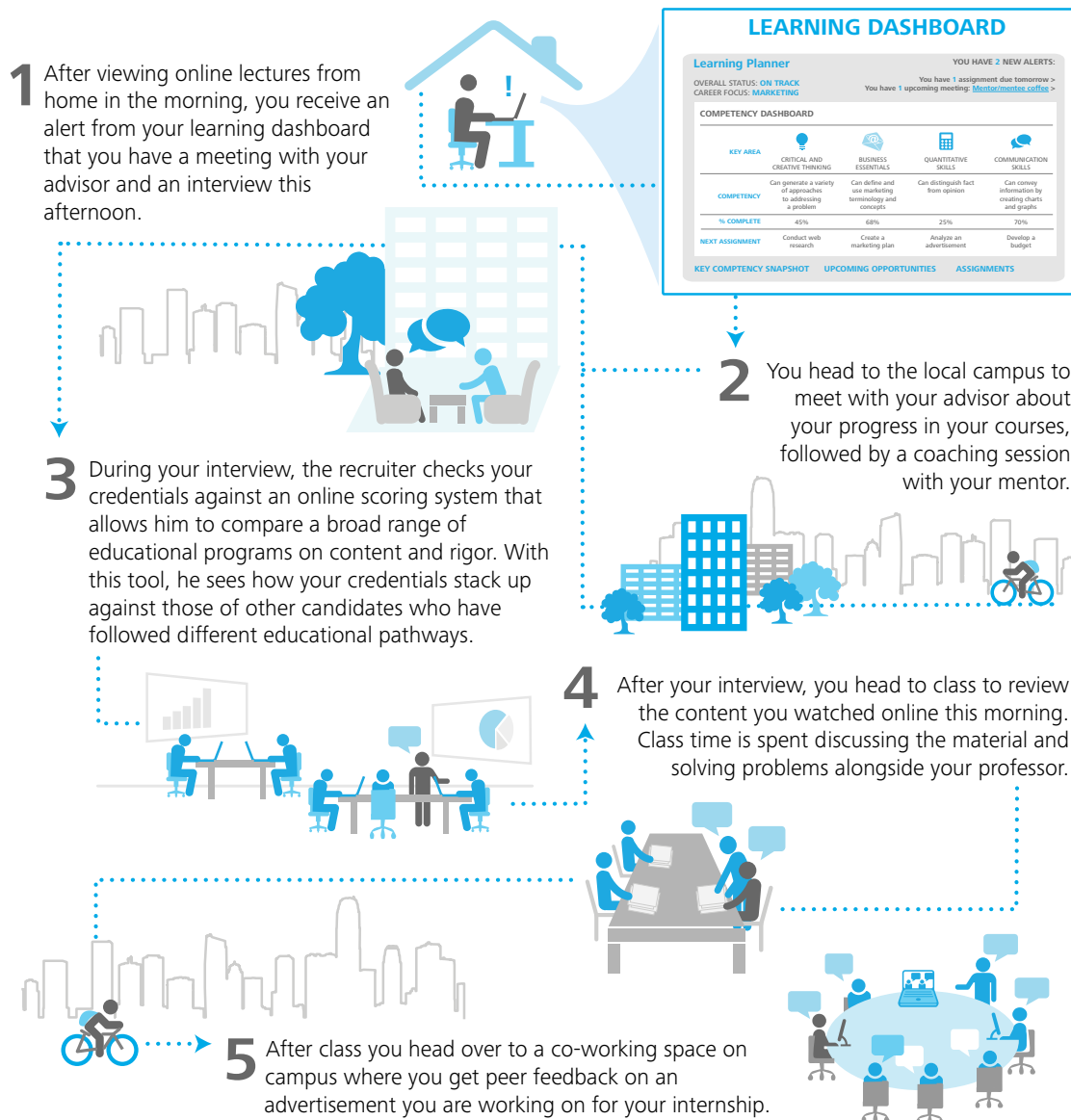
million in tuition fees and “graduate” nearly 6,000 students in the United States this year.³¹

One example, HackReactor, focuses on computer programming, placing a dozen students at a time in an immersive training environment for three months. Located in San Francisco, HackReactor boasts a 99 percent job placement rating, with “graduates” going to companies such as Google and Facebook with average salaries of \$105,000.³² General Assembly, another alternative education provider, teaches immersive programming courses similar to HackReactor’s, but also provides

part-time in-person and autonomous online courses on everything from data analysis to user experience design, making them useful for employees seeking to refresh their skills and advance their careers.³³ General Assembly has campuses in nine cities globally and plans on “graduating” 40,000 students by 2015.³⁴

While MOOCs and immersives are still in their infancy and are undergoing optimization for a new delivery channel and to keep pace with continuously evolving content, they represent early attempts to tackle both the financial and geographic barriers to learning.

Figure 5. A day in the life of the entrepreneurial learner



Lifelong learning with “stackable” credentials

App developers, data scientists, and user-experience designers represent just a few of the now essential professions that didn't exist a short time ago. Given the pace of change, the emergence of entirely new categories of jobs will likely become more common. To keep pace with the ever-quicker cycle of creative destruction, lifelong learning will become a permanent part of our professional lives. This, in turn, is prompting innovators to develop new credentialing infrastructure to support lifelong learning.

The rise of on-demand learning

Given the dynamism of the higher education market, it can be difficult to navigate the evolving landscape and determine which options best meet a potential employer's needs. As alternative models proliferate, businesses will need ways to compare the relative merits of various credentials. How do the skills acquired from a two-year technical program really stack up against those provided by a bachelor's degree from a state university? How do you compare a certificate from an edX computer science MOOC with a 12-week immersive program from General Assembly?

New services such as Balloon, Degreed, and Parchment are all trying to fill this void by making clear connections between skills, courses, and jobs for students and employers.

Acting as an online marketplace of alternative education options, Balloon, from Apollo

Education Group, is an online career skills and learning platform that connects students to nearly 15,000 courses provided by leading technology companies and education providers.³⁵ By helping students identify clear career paths and the knowledge and skills required by employers along different paths, students can enroll in the right courses to better position themselves for job opportunities.

Another firm, Degreed, assigns scores to the full range of educational opportunities available, from MOOCs and immersives to college degrees and corporate training.³⁶ Degreed scores and validates both traditional and alternative education options to provide a credit score-like assessment of everything a student's ever learned. This score, in turn, allows employers to make quick apples-to-apples comparisons of educational achievement across different domains.

Parchment is overhauling the outdated process of requesting and mailing transcripts by creating an online exchange that connects students and employers with transcript information.³⁷

These and other emerging educational technology (ed tech) solutions provide new ways for businesses to easily assess the rigor of a candidate's educational track record, no longer relying on the four-year degree as the sole standard of quality. In the same way that electronic medical records can follow us, regardless of where we receive treatment, our educational records should follow us to accurately capture the total sum of our credentials.

Retrofitting colleges and universities for the digital age

SINCE 1985, the cost of college tuition has risen by 538 percent. The consumer price index, by contrast, increased just 121 percent over the same time period.³⁸ The price tag for a traditional four-year residential degree program now averages just over \$30,000 per year and, barring major changes to the current cost trajectory, could rise to a staggering \$62,000 a year by 2025.³⁹

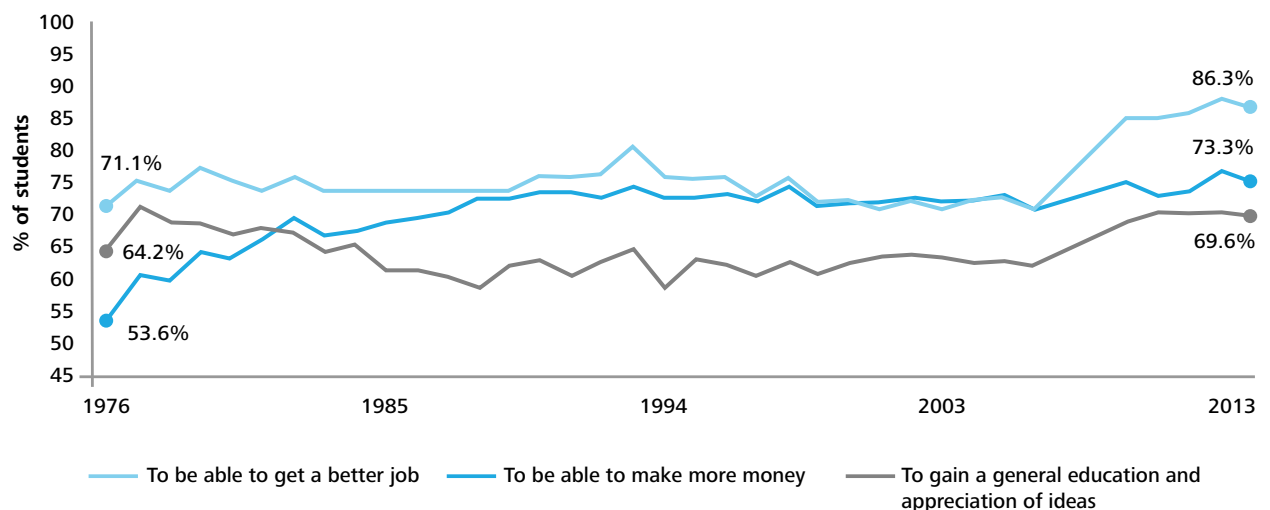
The rising cost of college is, in turn, putting downward pressure on enrollments. Across the country, college enrollments have dropped from 20.2 million in 2012 to 19.9 million in 2013.⁴⁰ Higher costs are not only placing higher education out of the reach of more Americans, they also play a major role in determining where college-bound students ultimately enroll. According to the 2013 American Freshman Survey, 76 percent of students were admitted to their first-choice

college, but only 57 percent actually enrolled in their top-choice school, primarily due to cost.⁴¹

The federal government, too, has increased its focus on college affordability. With the recent introduction of the College Scorecard, a ratings system that evaluates affordability, access, and student outcomes, colleges and universities are subject to greater transparency. These ratings may eventually be linked to federal student aid, providing an incentive for colleges and universities to address the challenges of cost and to improve outcomes.

Moreover, today's students place a premium on job-related reasons to go to college, more so than previous generations. Eighty-six percent of incoming freshmen say that getting a better job is a very important motivator in their decision to go to college.⁴² Seventy-three percent cite making more money as another very important factor.⁴³ While the basic task of

Figure 6. Trends of reasons in deciding to go to college, 1976–2013 (% indicating “very important”)



Source: 2013 CIRP Freshman Survey.

Graphic: Deloitte University Press | DUPress.com

“Already traditional universities are showing the strains of a broken business model, reflecting demand and pricing pressures previously unheard of in higher education.”

– Clayton Christensen, Harvard Business School

higher education is far broader than just career preparation, it's notable that student values have changed over time (see figure 6).

As Harvard Business School professor Clayton Christensen, the father of disruptive innovation, observes, “Already traditional universities are showing the strains of a broken business model, reflecting demand and pricing pressures previously unheard of in higher education.”⁴⁴

America has more than 4,500 colleges and universities.⁴⁵ According to Selingo, a few hundred of these colleges, “[H]ave the status and money to remain resistant to the forces bearing down on higher education right now, but the colleges and universities that the vast majority of Americans attend will need to change if they want to survive and thrive.”⁴⁶

As Lisa Davis, Georgetown University's CIO, puts it, “Higher education is ground zero for disruption.”⁴⁷

This doesn't mean abandoning the liberal arts. But, as more studies show that a significant percentage of students are failing to learn how to think critically and reason analytically, among other higher-level skills students are supposed to acquire through a liberal arts education, improving learning outcomes and connecting these higher-level competencies back to real-world applications will be critical. According to a Collegiate Learning Assessment, 36 percent of students do not demonstrate any significant improvement in learning over four years of college, primarily due to limited academic rigor.⁴⁸

For colleges to succeed in this new era, they will have to find ways to connect their students with the people and institutions on the front lines of new knowledge and to instill in students an ability to learn how to learn, unlearn, and relearn. With many courses now widely available through low- or no-cost online platforms, the unique value proposition universities can offer students in the digital age will consist of entrée into a dynamic ecosystem providing access to the latest knowledge and fostering relationships with other students, faculty, and employers, as well as other players that could include venture capitalists, nonprofits and foundations, and R&D organizations.

There are strong arguments that universities need to become more focused in what they offer, more connected to a broader ecosystem, and more open to experimenting with new models of learning that improve student learning outcomes.

Finding a niche in the provider marketplace

Rather than trying to be all things to all people, some universities are beginning to carve out unique niches in the market for higher education, shedding unnecessary costs and better differentiating themselves from their peers.⁴⁹

By focusing on tackling some of today's most challenging environmental issues, for instance, The Energy and Resources Institute (TERI) University has won the acclaim of both

industry executives and academics. Its curriculum allows students to apply classroom knowledge to real-world settings through partnerships with leading research institutions and other universities.⁵⁰

Georgia Institute of Technology, by contrast, has focused on providing the lowest-cost options in fields undergoing a rapid growth in demand. MOOC provider Udacity, in collaboration with AT&T, is powering Georgia Tech's first accredited online master's program in computer science with a price tag of \$7,000.⁵¹

Finding a niche doesn't necessarily entail deserting the liberal arts or cutting dozens of programs. Instead, it allows universities to clearly articulate their unique value proposition for students. For example, a university could define itself as an international policy school. It could still provide all the essentials of a liberal arts education, with degrees in everything from journalism to business. Its differentiator would be an international policy emphasis in all courses and services, giving it a central role within the broader international affairs community that allows it to connect students with employers and other leading institutions.

In a globally competitive industry—one adding new alternatives on a daily basis—a niche focus allows students to better understand the unique value of their education that sets them apart from their peers and gives them access to the relevant knowledge flows in their chosen field. Once a niche is identified, colleges and universities can work backward

to redesign their business models to align with the particular market they are serving.

Cultivating a broader educational ecosystem

Eighty percent of all Americans believe that the typical college education is not worth its cost.⁵² This belief stems in part from the growing disconnect between the courses offered by higher education institutions and the skills students need to succeed in the labor market. As Dennis Yang, president and chief operating officer of Udemy, points out, "Universities weren't designed to change curricula and introduce new classes at the pace required by changing industry requirements."⁵³ Moreover, he notes, "[T]he fact that we now live in a world in which half of today's jobs didn't exist 25 years ago" makes it clear that universities, by themselves, simply cannot fully prepare students for jobs that don't yet exist.⁵⁴

To close the skills gap, higher education institutions will need to work more closely with industry to promote job-skill alignment, combining labor market data with industry input to define the skills likely to be needed for tomorrow's jobs.⁵⁵

Take the Pacific Gas & Electric (PG&E) PowerPathways initiative, for example, which is part of the Aspen Institute's Skills for America's Future initiative. PowerPathway is a public-private partnership of PG&E, California community colleges and universities, local workforce investment boards, community

“Universities weren't designed to change curricula and introduce new classes at the pace required by changing industry requirements.”

– Dennis Yang, president and chief operating officer of Udemy

training organizations, military installations, unions, and industry employers that develops industry-informed career pathways, training, and curriculum for jobs in California's energy and utilities industries.⁵⁶

The Clemson University International Center for Automotive Research (CU-ICAR) in Greenville, South Carolina, is another initiative to help bridge the gap between academia and industry. The center is home to the country's only graduate department of automotive engineering, where students and university researchers are connected with work performed by automotive companies. Over 90 percent of CU-ICAR graduates are employed in the automotive industry.⁵⁷

New models for learning

Next Generation Learning Challenges (NGLC), in partnership with philanthropies such as The Bill and Melinda Gates Foundation and education associations such as EDUCAUSE, is promoting more flexible and personalized learning models. The grants it provides reward colleges and universities for testing these models. NGLC has tested a range of models and found that no one is best, but rather that multiple models allow students to self-select the one that best meets their needs. Southern New Hampshire University, for instance, used this grant funding to create the aforementioned College for America, which offers an online competency-based degree at a low cost that can be completed in as little as a year.

Still other ongoing experiments across the country test everything from dynamic tuition pricing to new paths for obtaining credentials.

In California, a new law allows Long Beach University to pilot dynamic pricing per credit, which increases the cost per credit for high-demand courses.⁵⁸ Dynamic pricing helps universities balance supply and demand for different courses, in effect giving them a means of increasing funding for popular degrees and, in turn, access to them.

The University System of Georgia, departing from all-or-nothing credentialing schemes, offers a Bachelor of Arts degree in communications with intermediary markers of achievement that is targeted for students who may not be able to complete a four-year degree. The program allows students to earn a certificate after one year, an associate's degree in two years, and a bachelor's degree upon completion. By staging credentials, students are encouraged to progress, but should they opt to pause their education, they have employer marketability and can easily return to complete their degree down the road.⁵⁹

A newcomer to higher education, Minerva is reinventing the college experience through its global immersion undergraduate degree program. According to its founder Ben Nelson, "[Minerva] want[s] to rethink everything, and bring together the world's best curriculum, the best students, the best professors, at the lowest possible price."⁶⁰ The for-profit startup, accredited through the Keck Graduate Institute, aims to provide students with a world-class global education experience for less than half the cost of an Ivy League education. Students complete introductory courses through MOOCs and more advanced coursework through live, online video seminars, with professors using advanced software that tracks student learning.⁶¹ Since online learning can take place anywhere, students are able to traverse the globe with their cohort of peers and immerse themselves in different cultural and business contexts over the course of their four years in the program.

Also emerging are partnerships that help students graduate with a clear career path. Thirteen universities have partnered with Koru, a startup focused on reinventing the internship experience by connecting universities with leading employers to provide students with immersive learning experiences that emphasize skills development, coaching, and mentorship.⁶²

How to get there

Define a value proposition

A first step for institutions of higher education is to go beyond accreditation criteria and do an honest assessment of the value they provide to students. Given today’s hyper-transparent marketplace, higher education institutions can be assured that if they don’t perform a candid assessment of the outcomes they provide, others will, as the *Atlantic* recently did in a review of the “least valuable” colleges and majors based on PayScale data for schools that returned a net loss to students over a 20-year period.⁶³

Institutions that do not clearly articulate and deliver value to students will likely, in time, be displaced by newcomers who do. For colleges and universities, there’s never been a

better time to redefine themselves and the way in which they do business. Given the changing landscape of higher education, successful colleges and universities will redevelop their business models based on what they can uniquely provide to students, and deliver that value in ways that decrease price premiums.⁶⁴ For institutions of higher education this means making strategic choices about who to serve, what to provide, how to provide it, who to partner with, and how much to charge (see figure 7). The outcome of these strategic choices will lead to greater recognition—from students and donors to employers—of the distinct value the college is able to provide.

Just as TERI University and others are creating successful niches focused on value to students—through career focus, low cost, and personalization—so too must others carve out their own spaces.

Figure 7. Strategic choices for colleges

To successfully adapt to the forces bearing down on the market for higher education, colleges and universities should make the following strategic choices which will inform how their business model needs to change.

Customer segment(s)	<i>Who do we want to serve?</i>	In the automotive world, some automakers are focused on providing a luxury good to a sub-segment of the market willing to pay a premium for an electric car. Others, on the other hand, provide a broad spectrum of options ranging from luxury vehicles to basic entry-level cars without all the bells and whistles, each of which caters to a different customer segment. Colleges and universities, too, may decide to continue to serve the mass market for a liberal arts education, or, as TERI University has done, focus on a particular niche of the market (in their case, sustainability).
Product(s) or service(s)	<i>What products and services do we provide to students?</i>	By clearly defining products and services provided to students, colleges can better articulate their unique value as competition across the higher education industry continues to increase.
Channel(s)	<i>How do we provide products and services to students?</i>	Colleges can tailor their products and services to provide customized learning models, integrating components of just-right education, for the targeted student segment. Education could be delivered in-person, online, or a hybrid of both.
Partnership(s)	<i>Who do we need to partner with to deliver products and services to students?</i>	With defined products and services, colleges can seek partnerships to support student success. These partnerships could be with employers, ed tech companies, or even alternative education providers.
Pricing	<i>How much are students willing to pay?</i>	In light of skyrocketing tuition, both revenue and cost considerations are important in determining the price points of products and services while maintaining healthy growth for the college.

Track student outcomes

Until recently, most yardsticks for measuring success in higher education have been output-focused—the number of credit hours completed, the percentage of students who graduate in four years, and so on. As open government data is combined with private sector career and salary data, the focus is shifting to student outcomes (student debt ratios, job placements, career preparedness, and satisfaction ratings).

While many colleges and universities have perfected the art and science of the admissions process, they have not applied the same analytical rigor to the business of educating students, or to tracking their success after graduation. Yet the benefits of effective student outcome tracking can be significant. By measuring learning on a day-to-day basis, professors can adapt their lessons in real time, to adjust to the pace at which students are actually progressing, rather than waiting for midterms to judge how they're doing. This is especially important for at-risk students who, without support, may flunk courses or drop out before completing their degree.

And monitoring student progress throughout college can help faculty and staff better position students for career success. If a student excels in economics but struggles in the biology courses needed for his or her major, for instance, it could be cause for a career discussion. If, with LinkedIn's higher education tool, university staff see that recent graduates are completing skills-focused certificate programs shortly after leaving college, the school could consider integrating similar courses into its curriculum, to ensure that future graduates are competitive. Such interventions will help to create a sense of shared accountability for outcomes on the part of both students and institutions.

An outcome focus will benefit colleges and universities over the long run. According to a recent Pew survey, the Millennial generation (defined by Pew as Americans aged 18 to 33) has higher levels of student loan debt, poverty, and unemployment, and lower levels of wealth

and personal income, than the two preceding generations had at the same age.⁶⁵ As recent graduate Emily Koss explained, "I am part of the first generation since the Depression to have higher levels of poverty and unemployment than the previous generation at the same age. More than a quarter of us still live with our parents, and only 30 percent think of our current jobs as careers. And yet, we are the best-educated generation in American history."⁶⁶ As a result, many recent graduates look back on their college days with frustration. Despite their newly minted degrees, nearly 40 percent of them are working in jobs that don't require a degree, while shouldering an average of \$35,200 in debt.⁶⁷

By shifting the focus from outputs to outcomes, and applying the analytical rigor of the admissions process to the entire student lifecycle—from the time students step foot on campus through their post-graduation careers—universities can better position students for success after college. One way to do this is by comparing traditional success measures (think number and quantity) with emerging success measures (think degree and quality)—many of which are also tracked by major, not just for the college as a whole (see figure 8).⁶⁸ This doesn't mean doing away with traditional success measures (like student-teacher ratios and attrition rates, for example), but rather supplementing them with additional measures such as the likelihood of students to recommend a course or university to others.

Experiment with new solutions

With a flurry of new educational technologies and models under development, colleges and universities are ideally positioned to experiment with and adopt solutions that facilitate better student-focused outcomes.

Georgetown University's Designing the Future(s) of the University initiative seeks to answer the question: What would a university with liberal arts education values at its center that's appropriate for the world of 2030 and beyond look like?⁶⁹ Through a "co-design" process, students, alumni, faculty members, and

Figure 8. Measures of student success

As greater emphasis is placed on quality metrics from both the Department of Education and the general public, colleges can consider these measures and others that align to their strategic choices.

Traditional success metrics	Additional success measures for the future
<ul style="list-style-type: none"> • Number of students enrolled • Average SAT/ACT scores • Number of advanced degrees granted • Ratio of undergraduates to graduate students 	<ul style="list-style-type: none"> • Number of graduates per year • Institutional cost per degree granted • Student cost per degree earned • Average time to graduation • Average debt load of graduates • Job placement rate • Average starting salary of degrees • Alumni satisfaction

Source: Adapted from *The Innovative University*.

university leaders are encouraged to participate in hackathons to come up with new ideas for retrofitting the university for the digital age. The most recent hackathon focused on reimagining the boundaries between the school's curriculum and the workforce to create more hands-on learning experiences. The hackathon resulted in the creation of the Georgetown Experimental Learning Lab, which creates immersive experiences for students to role play realistic business scenarios (like a client meeting, for example). This idea will be piloted at the university to test its merits.

To foster innovation, the Harvard Innovation Lab (i-lab) serves as a community space for bringing students and faculty together with the wider Boston community to explore new ideas. The i-lab applies a unique pedagogy which combines entrepreneurial coursework with hands-on experience, allowing students to develop critical thinking and problem solving skills that are desired by employers, but often lacking in recent graduates.⁷⁰

Another example of college experimentation can be seen at Southern New Hampshire University's Innovation Lab. The lab is an incubator, staffed by academic and technology experts, that works with students to develop and pilot new models of education that use competency-based approaches and leverage

technology, community support, social networking, and a strong assessment component.⁷¹ The aforementioned College for America is a product of the lab, and is quickly gaining recognition as one of the leading competency-based degree programs in America. College for America graduated its first class of students in December 2013, and the lab continues to learn from and build upon the college's success by testing and iterating on new learning models.

Creating opportunities for exploration, engagement, and experimentation allows a wide swath to have a say in the inevitable changes facing higher education and provides insights from the people most affected. To combat institutional inertia, these colleges and universities are adopting a lean startup mentality, quickly testing solutions on a small scale before making a decision on whether to drop, modify, or scale them for wider use. The lean startup mindset is also applied to test new technology solutions on a small scale before they're deployed more widely. DePaul University did exactly this when it began using CourseSignals, a predictive analytics software package, in a few classes to determine the impact analytics would have on student learning outcomes. Recognizing its success, the university subsequently rolled it out to additional courses the next semester.

Rethinking talent acquisition and development

ABOUT 10 million Americans are unemployed, while 4 million jobs go unfilled.⁷² Many employers report that they simply cannot find skilled workers to fill open jobs. According to a recent survey by ManpowerGrowth, 39 percent of US employers are in this position.⁷³ A third says that their inability to fill vacancies hurts their competitiveness and productivity.⁷⁴

To close the skills gap, businesses must shift their hiring practices to accept both traditional and alternative credentials in order to expand the pool of talent. They must also rethink corporate training in the wake of an accelerating cycle of obsolescence that depreciates the knowledge and skills acquired in school. The ability to rapidly retrain employees will provide an important competitive edge. According to a Deloitte survey of senior executives and talent managers at large companies across a range of industries, over a third of respondents said managing and delivering training programs is one of their organization's most pressing talent concerns.⁷⁵

Recognize alternative education options

Today, a bachelor's degree is usually a prerequisite for employers to even read a resume—and two-thirds of all employers refuse to waive their degree requirements. Many of these same employers, however, also decry the lack of qualified candidates, calling recent graduates “woefully underprepared.”⁷⁶

Given the dynamic evolution of the higher education marketplace, however, today's and tomorrow's students can increasingly be expected to pursue alternative options,

alongside—or in lieu of—traditional education. Recognizing the far shorter duration of many alternatives (often measured in weeks rather than years), and the nature of the in-demand skills they provide, an increasing number of employers are viewing them as a suitable prerequisite for entry-level jobs.

Businesses can reap the benefits of just-in-time learning by recognizing the badges and certificates awarded by alternative education options that provide students rapid acquisition of much needed web programming and design skills. In addition to acquiring specific hard skills, participants also gain essential “soft” skills through mentorship and networking organized by alternative education providers. Nearly 90 percent of Hackbright and DevBootcamp “graduates” are employed within three months at leading technology firms such as Facebook, Eventbrite, and Salesforce, many of them earning six-figure salaries.⁷⁷

Reconfigure talent-screening processes

As the number of educational providers proliferates, and with it the variety of possible certificates, badges, and other credentials, employers will need to revisit their talent acquisition processes. Simply put, digital-age resumes, which may include incredibly diverse portfolios of credentials, professional experience, and work-relevant projects, will call for an overhaul of traditional talent screening processes. One student may have specialized in data science at a prestigious four-year university, while another may present an online certificate in data science and a robust portfolio of work; yet another may have completed a

12-week immersive course in data science and have five years of work experience in statistical analysis. Which is best for the job?

To lower the transaction costs associated with hiring, employers can turn to services provided by organizations that measure the full range of academic, professional, and lifelong learning options available to students from both accredited and non-accredited sources, to allow for apples-to-apples assessments of candidates' educational track records. Tools such as Mozilla's Open Badges platform and Degreeed's credit score system can help employers gain a more holistic understanding of a prospective employee's educational background, which may include everything from a traditional degree to MOOCs.

While the average student pursuing alternative education paths today has already obtained a four-year degree, it is likely that alternatives will become a first stop for many students seeking career options in a shorter timeframe and with less of a financial commitment. As low- or no-cost educational alternatives become a viable option for just-in-time learning, employers will have greater access to a growing talent pool that possesses the skills they seek.

By clearly defining competencies and using normalized educational data to assess them, employers will be better positioned to fulfill their talent needs.

Adopt lifelong learning models

The days when student life ended with a college degree are all but gone. By 2020, the knowledge college students acquire will have an expected shelf life of less than five years.⁷⁸ Given the accelerating rate at which knowledge is being created, some students entering college today may graduate into jobs that did not exist when they enrolled. To keep up with this pace of change, lifelong learning will become a permanent fixture of professional life. As futurist Alvin Toffler observed, "The illiterate of the 21st century will not be those who cannot

read and write, but those who cannot learn, unlearn, and relearn."⁷⁹

The shift to lifelong learning in turn will prompt employers to rethink their training and professional development strategies, in order to allow their employees to upgrade their knowledge and skills continuously. Currently, fewer than 45 percent of businesses have a written plan for learning.⁸⁰ As such, businesses across a range of industries are looking to MOOCs and other experiential education providers to fill this role.

Companies such as Yahoo reimburse employees for the cost of verified course-completion certificates from Coursera.⁸¹ Online retailer 1-800-Flowers has announced plans to create an online education portal on the Udemy platform for its network of independent florists.⁸² Tenaris, a global steel manufacturer, has licensed edX's software platform and course materials for its employee learning program.⁸³ Carmen Scheidel, vice president of Learning and Development at Time Inc., encourages employees to use Lynda.com to gain basic skills in software such as Photoshop and JavaScript.⁸⁴

How to get there

Articulate desired competencies

Scan the job postings today and you'll find that all too many rely on generic qualifications such as "good communication skills" and "works well in a fast-paced environment." As the qualifications employers seek grow more specific and nuanced, competencies will need to be more clearly defined.

By defining the specific competencies they are looking for, employers will expand their talent pool since both alternative and traditional higher education providers will know what skills they need to provide while giving students more clearly defined pathways to the careers they want.

One way to do this could be to take advantage of MOOCs and define a "playlist" of skills-based courses students can complete to

demonstrate mastery of skills.⁸⁵ By making job requirements more transparent, students from a variety of educational backgrounds have the opportunity to prepare for jobs and demonstrate that they possess the skills employers are seeking.

Broaden recruiting strategies

From career fairs and mock interviews to networking events, many organizations rely on campus recruiting as their primary source for entry-level talent. As multiple alternative paths emerge, however, organizations can expand their recruiting strategies beyond college campuses to better reflect the changing marketplace for higher education and, in turn, to ensure a constant supply of the best talent.

By continually monitoring, assessing, and even sponsoring emerging education options, employers can develop customized recruiting plans to create the best pipeline for their particular needs. Instead of a four-year, \$100,000 degree in computer science, for instance, an organization may find that General Assembly's 12-week, \$11,000 course in web development provides all the skills they need for entry-level workers, providing them with opportunities to

attract a much larger pool of qualified candidates more quickly.

Furthermore, recruiting efforts could be targeted further upstream, to reach high school students just as they begin to consider career paths.

Foster partnerships with ed tech

Businesses can capitalize on the growing educational technology movement as a way of lowering the costs associated with talent acquisition and training. Partnerships with educational technology firms can take a variety of forms. Organizations can partner with professional social networking sites such as LinkedIn to better understand where they should recruit, startups like Koru to arrange for apprenticeships to ease the transition from college to the working world, MOOCs for access to training and online learning platforms, and with boot camps to provide just-in-time skills development.

Alternative education providers have already reached out to businesses, but we will see a cultural shift when businesses return the favor. Business-approved alternative education through some new type of accreditation could become the new norm.

Government's role in digital-age education

ACROSS America, the cost of pursuing a college degree has never been higher. As costs increase, more students are borrowing to pay for their education than previous generations. The class of 2013 graduated with an average of \$35,200 in student debt.⁸⁶ At the national level, student debt has surpassed \$1 trillion.⁸⁷ At the same time debt is growing, so too are defaults. The two-year student loan default rate climbed to 10 percent—the highest it's been in nearly two decades.⁸⁸ Today, 7 million student loans are in default.⁸⁹

Moreover, the number of students who don't make it to graduation is also on the rise. More Americans are enrolling in college and then dropping out part way through—when they've likely already incurred some level of debt without the benefit of better job prospects and higher lifetime earning potential that accrues to college degree holders. A study by Harvard's Graduate School of Education shows that just over half (56 percent) of college students actually complete a four-year degree within six years and fewer than a third (29 percent) of students who start two-year degrees finish them within three years.⁹⁰

While the percentage of degree holders in other developed countries continues to rise with each successive generation, the percentage of Americans with college degrees has plateaued (see figure 9). According to The Century Foundation, "After decades of leading the world in higher education, the United States now ranks ninth in the proportion of young adults enrolled in college, and has fallen to 16th in degree attainment—suggesting that while graduation rates are improving, the drop-out rate remains far too high."⁹¹

All said, about 60 percent of Americans have only some (meaning they've dropped out before completing their degree) or no higher education, primarily due to financial barriers and limited flexibility.⁹²

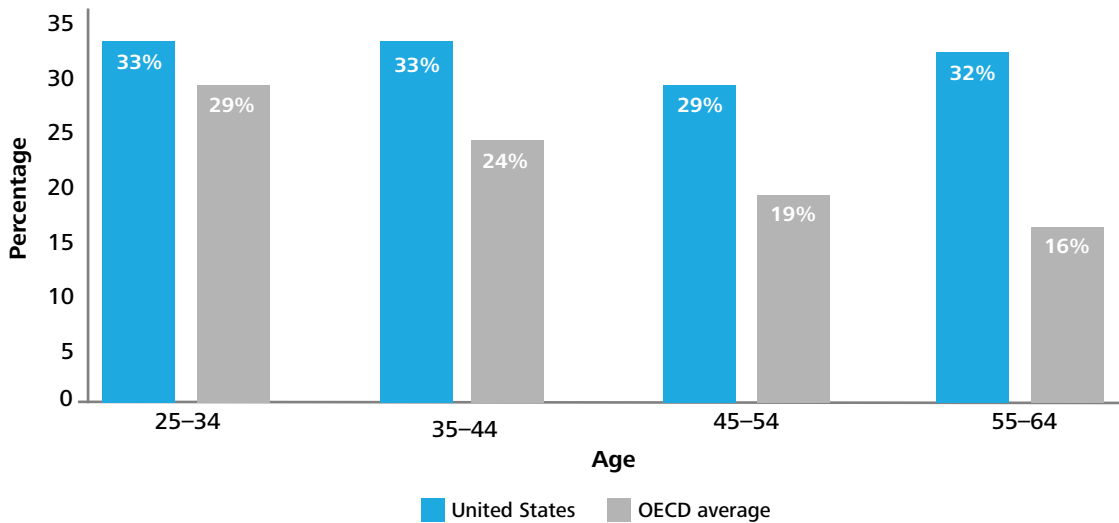
The question facing government officials and policymakers is how to make quality higher education more accessible and affordable for all Americans. This means increasing the return that students realize on their investment without further exacerbating crippling levels of debt that delay younger generations from attaining financial independence.

This will require rethinking how the Department of Education uses the levers it has at its disposal in order to advance its goals of increasing affordability, access, and attainment. The Department of Education has already started down this path with recent initiatives aimed at increasing transparency for students and accountability for colleges and universities receiving Title IV funding through President Obama's plan to make college more affordable. The plan proposes initiatives which include paying for performance, promoting innovation and competition, and ensuring student debt remains affordable.⁹³

“Upon graduation, a college degree today is more likely to guarantee you debt than a well-paying job.”

– William Bennett, author of *Is College Worth It?*

Figure 9. Percentage of degree attainment in Organization for Economic Co-operation and Development (OECD) countries and the US by age group, 2010



Source: National Center for Education Statistics.

Graphic: Deloitte University Press | DUPress.com

But the department can and should go further by building on the success of recent open government data initiatives, evolving transparency of outcomes associated with colleges and universities, and rigorously evaluating promising alternative education options and funding what works.

Evolve open government data initiatives

The January 2014 “Education Datapalooza” marked a concerted federal effort to promote innovation in higher education.⁹⁴ As part of the president’s plan to make college more affordable, the event gathered more than 200 entrepreneurs to develop solutions that could increase the return students realize on their education investments. The initiative, which combined the efforts of the White House, the Department of Education, the Department of the Treasury, the General Services Administration, and hundreds of enlisted entrepreneurs who had earlier participated in a series of higher education-focused data jams, resulted in a range of new private sector tools and services underpinned by open government data.

To build upon the momentum generated by the Education Datapalooza, the Department of Education is exploring the use of application program interfaces (APIs) to make higher education data more widely available to the public.⁹⁵ Up to now, this data has been used to develop new tools and services aimed at improving the college decision-making process. The open government data strategy should evolve to include new tools and services that go beyond college decision-making to support student success throughout the entirety of the college experience and beyond, as well as to include the variety of alternative education options (such as MOOCs and immersives) that exist to support students who opt to pursue a nontraditional route. While the Department of Education can’t force alternative education providers that are ineligible for Title IV funds to make their data publically available, it could be solicited on a voluntary basis. For alternative education providers, making their student outcomes data available could serve as a means of promoting their offerings to a broader audience.

To support this evolution, a variety of stakeholders should be included in the process of identifying and releasing open data.

Tech-savvy students, administrators, faculty members, new alternative education providers, and parents—all have a stake in the Department of Education’s data. With a better understanding of what information is needed, the department can evolve its open government strategy to provide even more value to the higher education community.

A successful example of this is LearnDC, a website that hosts information and resources on all the public and charter K-12 schools in Washington DC. By providing side-by-side comparisons of schools and information on how DC schools compare to national standards, parents can make informed decisions on where to send their children to school. As a collaborative effort led by the Office of the State Superintendent of Education (OSSE), LearnDC is the product of partnerships with several local agencies and organizations dedicated to providing transparent and easily assessable information on education. Furthermore, all the data on LearnDC will be available in an API format for others to analyze, add to, and develop more advanced applications. From OSSE’s perspective, LearnDC has bolstered agency capabilities, driven new conversations with local leaders and community members, and demonstrated the value of public-private collaborations with open source data.⁹⁶

Increase transparency for students

Until recently, most college-bound students focused on getting accepted to a “good” college and maintaining a high GPA throughout their college career, seeing the diploma as their ticket to a good job. But, as the focus shifts from rankings to outcomes and the return students can reasonably expect from ever steeper investments in higher education, government can assume a role in promoting greater transparency for students seeking more insight into the outcomes associated with different educational pathways.

The Department of Education is already moving in this direction with the introduction

of the College Scorecard, which allows students to assess college value in terms of access, affordability, and outcomes, including average tuition costs, loan debt, graduation rates and graduate earnings.⁹⁷ If approved by Congress, the scorecard could eventually serve as a mechanism for moving to a performance-based funding system for higher education by tying federal student aid to college performance to guide students to the institutions that provide the best value.

Such rating systems serve as a useful starting point for beginning to unpack outcomes. But just what constitutes a meaningful outcome from higher education is the subject of much debate. As Selingo points out, “The ultimate question is: What constitutes quality higher education?”⁹⁸

The answer to that question will depend on who you ask and will necessarily reflect different consumer preferences and values. Just think about our car purchasing behavior. Some want a luxury sedan with all the attendant bells and whistles. For others, safety or environmental considerations drive purchasing decisions. Some want the best value, while others just want in at the lowest possible price point. Period. There is no single right answer to the question.

Just as Consumer Reports takes account of different consumer preferences in their rating system, so too must any kind of meaningful outcomes scorecard for higher education. As Andrew P. Kelly, director of the Center on Higher Education Reform at the American Enterprise Institute, points out, “Outcomes can’t just be defined in financial terms.”⁹⁹

“The ultimate question:
What is quality higher
education?”

– Jeffery Selingo, author of *College Unbound*

Moreover, government has yet to grapple with a wealth of alternative paths that, in terms of access, affordability, and outcomes, may prove superior to a traditional degree for some students. Currently, the federal focus lies primarily on traditional higher education degree programs, with federal aid available for just a few competency-based degree programs.

But, if higher education is to evolve to meet the needs of the growing nontraditional majority that will consume higher education in some form or another throughout their professional lives, then all options should be on the table and scrutinized in terms of the outcomes they generate for students. This scrutiny could be done by a Consumer Reports-like third party with the capacity for rigorous, independent evaluation.

By taking a more holistic perspective of the growing spectrum of education opportunities available, the Department of Education can begin to develop appropriate outcome measures that provide greater transparency for different customer segments.

Create room for experimentation

At the beginning of 2014, California's Bureau for Private Postsecondary Education stated that intensive boot camp programs, such as DevBootcamp, HackReactor, and Coding Dojo, were not properly licensed to offer educational services. The boot camps received cease-and-desist letters stating, "They run afoul of the state's education laws."¹⁰⁰

Most of the immersive programs agree that a certain level of regulation is beneficial to mitigate fraud and protect students, and are attempting to comply. But regulation treating these 8- to 12-week immersives as traditional degree programs may hinder their ability to adapt quickly to market demand. As Anthony Phillips, cofounder of HackReactor points out, "...what that [regulation] looks like and what makes sense for our schools is not necessarily going to fit the current regulations."¹⁰¹ Given

the rising demand for computer and programming skills, both the popularity of these programs and their friction with traditional regulation are likely to continue.

As Andrew McAfee, co-director of MIT Sloan School of Management's initiative on the digital economy, observes, "You should care about business innovation and disruption because they're a primary way that progress happens and that people become better off over time."¹⁰²

Given the clear economic need for innovation in the area of just-in-time learning to help close the skills gap and an accreditation system that has been slow to evolve, state and federal education authorities should identify ways to work with new providers to carve out space for experimentation with new models, while at the same time protecting consumers from potentially fraudulent actors.

How to get there

Convene the higher education community

Insights often come from the mash-up of open government data with private sector and other data, as with LinkedIn for Higher Education, College Abacus, FindTomorrow, and others featured at the Education Datapalooza.

The Department of Education could use its role as a convening body to prompt further exploration and development of new solutions undergirded by the mash-up of different data sources to better understand, for example, the increasingly specific skills needed for various jobs and promote new models or experimental sites geared at providing these skills. The mash-up of data sources could also help inform the development of new outcome-focused metrics. Convenings like the recent Datapalooza provide an opportunity for the department to enhance its collaboration with different stakeholder groups (including higher education institutions, businesses, alternative education

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providers, and, of course, students) through co-design efforts and regular communication.

Promote rigorous evaluation of new models

If we are to reap the full benefits of the revolution in higher education, policies concerning financial aid and accreditation will need to be reexamined. In the meantime, the Department of Education can focus on helping institutions adapt to the changing landscape by rigorously evaluating the relative effectiveness of new education models. According to Philip Regier, executive vice provost of Arizona State University Online, there is a need for more research on the many solutions attempting to improve retention, graduation rates, and student engagement.¹⁰³

Beyond building on the foundation of research that’s already been done by the department, foundations, and others on new education models (including online, bended, and competency-based learning), the department can expand its use of innovation funds and challenge prizes to promote new solutions with demonstrated outcomes.

Incentivize experimentation

The president’s plan for college affordability proposes significant incentives for experimentation, including a Race to the Top for Higher Education, seed innovation funding, and even experimental sites. The goal of these initiatives is to provide students with higher-value, lower-cost education through the increased use

of technology, data analysis, and assessment of competencies.

The Race to the Top for Higher Education, a proposed initiative aimed at promoting the adoption of higher education reforms through a competitive grant program for colleges and universities, requested \$1 billion to spur reforms focused on lowering costs and increasing adoption of competency-based learning.¹⁰⁴ To enhance this effort, the Department of Education could work with Next Generation Learning Challenges (NGLC) to assess its breakthrough model designs for higher education. With NGLC having already piloted more than a dozen different associate and bachelor degree models, the department can assess which are most effective in lowering costs and increasing student success, and encourage more schools to adopt them. Doing so would help prevent higher education institutions from making investments in models that have already proven unsuccessful in earlier pilots.

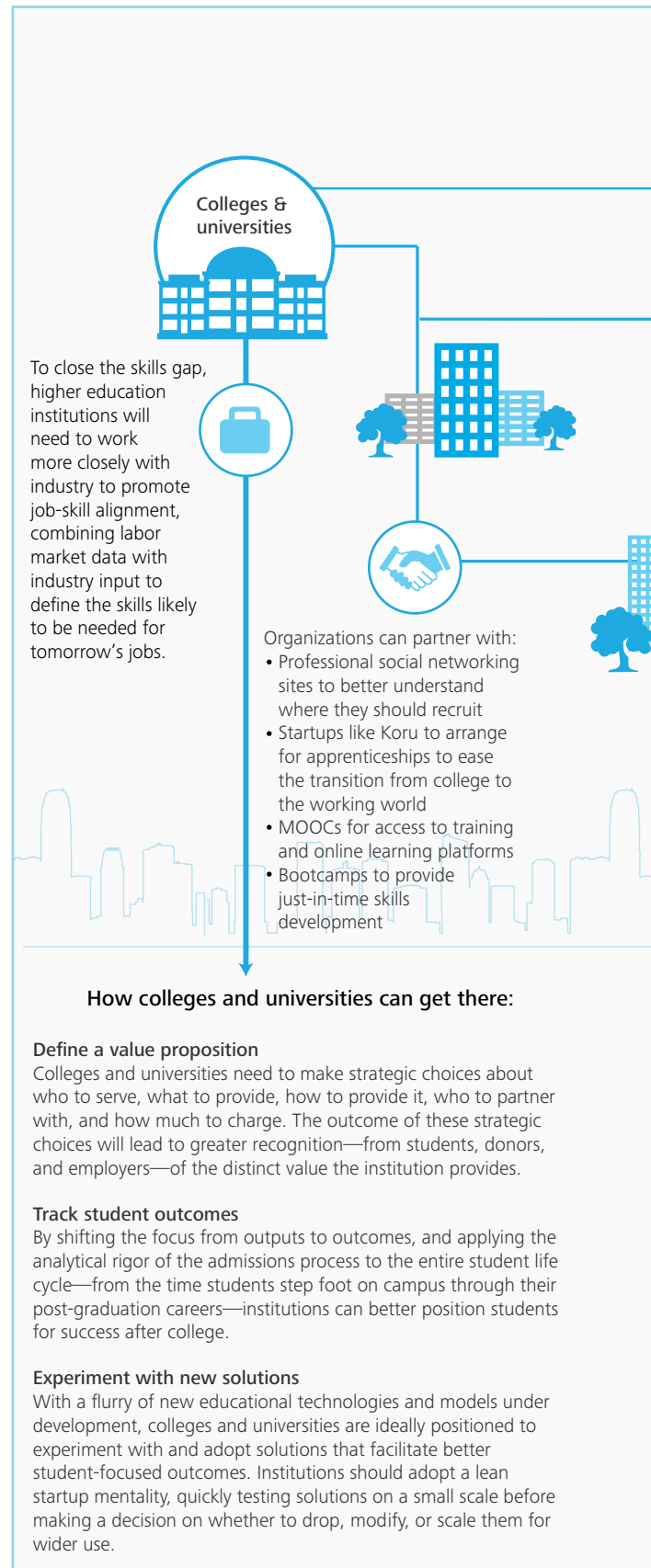
The president’s plan also proposes spending \$260 million from the Department of Education and \$500 million from the Department of Labor to identify and demonstrate effective new learning models.¹⁰⁵ Both agencies can work closely with private and nonprofit concerns such as NGLC that are already leading similar efforts. The funding could also be used to identify alternative education options that succeed in preparing students for the marketplace. The agencies could, for example, encourage higher education institutions to partner with alternative

education providers such as General Assembly to develop customized courses on programming, data science, and product management. Some courses lend themselves well to more nimble, alternative education providers because they require regular adaptation to keep pace with new knowledge creation and technological progress.

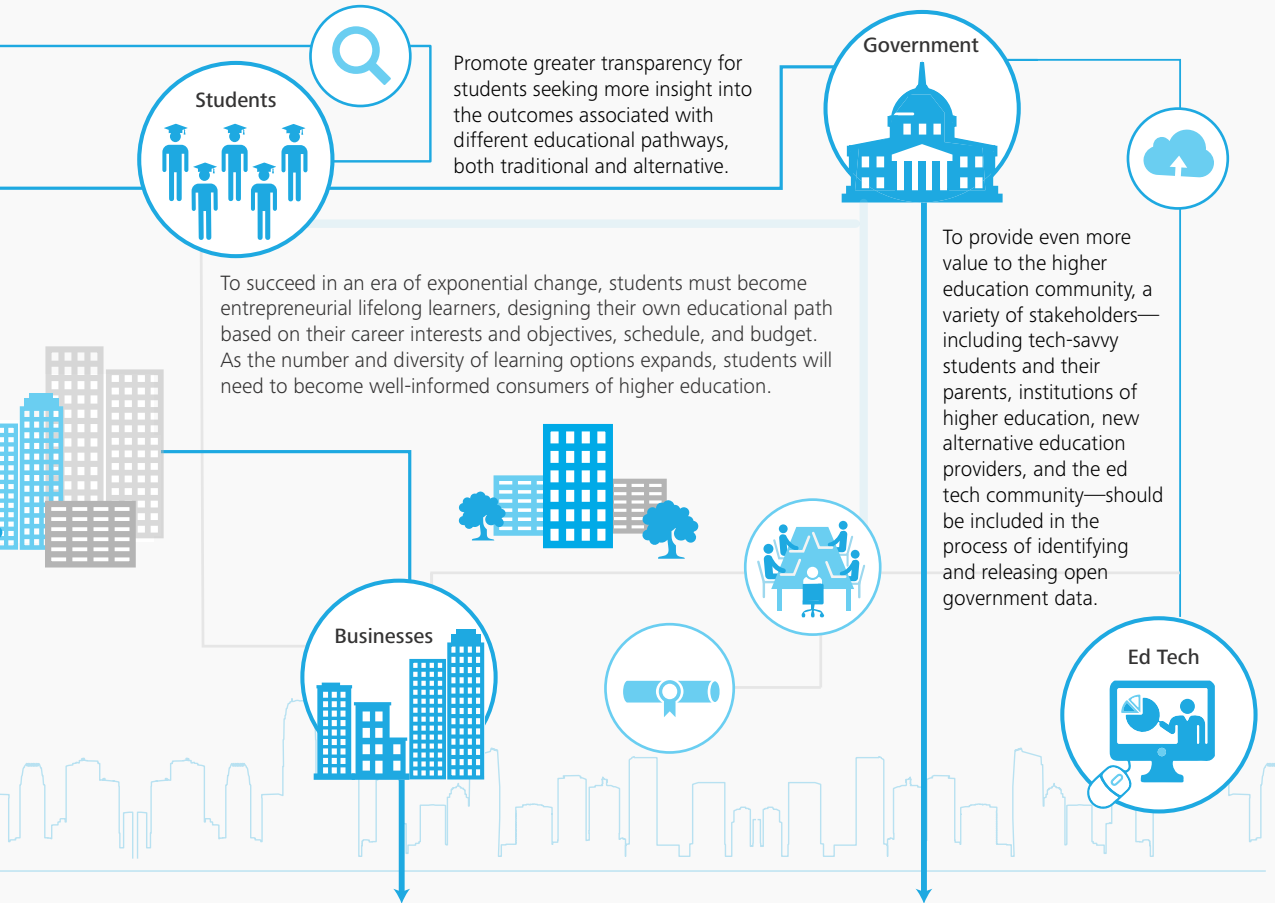
Finally, the call for experimentation sites which waive certain requirements on the provision of financial aid could be expanded. The current efforts are aimed at providing Pell grants to high school students taking college-level coursework and providing financial aid for competency-based courses and for students seeking credit for prior learning. But these experimentation sites could more fully embrace the wealth of alternative higher education options available. Many new education providers charge fees for workshops, immersive courses, and certificates, and allowing federal financial aid, perhaps in the form of micro-loans, for alternatives with a demonstrated track record of success would help them extend their reach.

By recognizing the ongoing evolution of the entire college experience, understanding the potential of new solutions and alternative options, and providing students with greater transparency in terms of outcomes, the Department of Education will be well-positioned to make effective policy changes as needed.

Figure 10. The reimagined higher education landscape



As an integral part of the fabric of American society, everyone has a stake in the future of higher education. Colleges and universities must welcome new methods of instruction. Businesses must welcome new certifications of competencies. Governments must see to it that taxpayer dollars are tied to meaningful education outcomes. But ultimately it will be up to individual students as consumers to determine what a high quality education is for their unique circumstances.



How businesses can get there:

How government can get there:

Articulate desired competencies

As the qualifications employers seek grow more specific and nuanced, employers have an opportunity to clearly define the competencies they are looking for. In doing so, employers will expand their talent pool since both alternative and traditional higher education providers will know what skills they need to provide while giving students more clearly defined pathways to the careers they want.

Broaden recruiting strategies

As multiple alternative education paths emerge, organizations can expand their recruiting strategies beyond college campuses to better reflect the changing marketplace for higher education and, in turn, to ensure a constant supply of the best talent.

Foster partnerships with ed tech

Businesses can capitalize on the growing ed tech movement as a way of lowering the costs associated with talent acquisition and training.

Convene the higher education community

The Department of Education could use its role as a convening body to enhance its collaboration with different stakeholder groups and prompt further exploration and development of new solutions undergirded by the mash-up of different data sources.

Promote rigorous evaluation of new models

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The president's plan for college affordability proposes significant incentives for experimentation, but could be expanded to include emerging alternatives as a means to provide students with higher-value, lower-cost education through the increased use of technology, data analysis, and assessment of competencies.

Looking ahead

WHAT is most striking about the education world these days is not that people are being forced to change their behavior, but that the enticements to change are growing exponentially. New possibilities and opportunities are transforming the landscape for higher education. These range from the technological (the rise of online and blended learning) to the cultural (the growing willingness to engage in alternative educational pathways) to the entrepreneurial (the recognition that governments and traditional universities alone are unable to solve our education challenges).

There remains a lot of work to be done to retrofit the current system of higher education for a new era of lifelong learning. Financing and accreditation, models of learning (followed by unlearning and then relearning), hiring, and professional development practices will all need to evolve. As Dennis Yang, president and chief operating officer of Udemey, observes:

Education is no longer something that happens between the ages of 6 to 22, and then it's over. The line between the years we learn and the years we earn has blurred; to stay relevant, workers must train nonstop. Even if educational institutions evolve and ensure newly minted workers are ready for employment, workers must continue learning

throughout their lives to stay relevant. We're talking less about K-12 education and more about K-Gray education, kindergarten to retirement.¹⁰⁶

As an integral part of the fabric of American society, everyone has a stake in the future of higher education. Colleges and universities must welcome new methods of instruction. Organizations must welcome new certifications of competencies. Governments must see to it that taxpayer dollars are tied to meaningful education outcomes. But ultimately it will be up to individual students as consumers to determine what a high-quality education is for their unique circumstances.

To succeed in an era of exponential change, students must become adept lifelong learners. As the number and diversity of learning options expands, students will need to become well-informed consumers of higher education, as demand will ultimately dictate how the landscape for higher education evolves in the years ahead.

Yet what is most exciting about this particular moment is that the opportunities seem limitless for making higher education more affordable, accessible, and relevant. The challenge is to embrace the extraordinary innovation taking place. Finding our way in this new era will take work, but there's no question that we have crossed its brink.

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BOARD OF REGENTS DOCKET ITEM SUMMARY

Audit & Compliance

December 8, 2016

AGENDA ITEM: Update on Remediation of Intercollegiate Athletics Audit Findings

Review Review + Action Action Discussion

This is a report required by Board policy.

PRESENTERS: Michael Volna, Associate Vice President, Finance
Mark Coyle, Director, Intercollegiate Athletics

PURPOSE & KEY POINTS

The purpose of this item is to discuss progress related to the remediation of findings from internal audits of Intercollegiate Athletics (Athletics):

- Athletics Administration – December 2015
- Men’s and Women’s Basketball – May 2016
- Athletics Finance and Operations – June 2016

A financial oversight group has been working with Athletics to ensure that appropriate financial controls are in place; ensure that policies and procedures are understood and adhered to by department personnel; strengthen the culture of financial compliance through training and education; and strengthen processes and procedures related to the procurement of alcohol for events and related hospitality. These issues were raised in the three internal audits issued during FY 2016.

The work of the oversight group has been guided by a work plan developed in December 2015 and adjusted after completion of the May 2016 and June 2016 audits. The work plan has nine priority areas of focus:

1. Align Athletics policies with University financial policies.
2. Evaluate and address purchasing audit findings.
3. Evaluate and address purchasing card (P-card) audit findings.
4. Develop and deliver education and training to Athletics staff.
5. Address “pain points” in University financial policies.
6. Evaluate and address contract management audit findings.
7. Implement Elevation, a financial software tool, to better track and manage financial information.
8. Create administrative policy requiring annual financial certification.
9. Review other internal financial controls as appropriate.

In addition, the oversight group has developed an audit action plan scorecard that tracks progress on the specific “significant” and “essential” findings of the audits.

Regarding the status of the oversight group’s work plan:

- Five items are complete.
- Three are in progress with some portions completed.
- One has been started but no portion completed.

Regarding implementation of remediation activities on the essential audit findings:

- 15 have been resolved.
- 6 have been partially resolved.

The committee’s 2016-17 work plan calls for another update on remediation of Athletics audit findings in May 2017.

BACKGROUND INFORMATION

In December 2015, the Board of Regents received the results of an internal audit of financial management practices within Intercollegiate Athletics related to expenses incurred and/or authorized by senior department officials from 2012-2015.

In February 2016, the committee received an update on the implementation of recommendations related to the December 2015 internal audit and the external review.

In May 2016, the Office of Internal Audit issued a sport-specific audit of men’s and women’s basketball covering the 2014-15 school year.

In June 2016, the Office of Internal Audits issued an audit that included a review and assessment of current financial and operating controls and procedures within Athletics, primarily focused November 2014-October 2015.

In September 2016, the committee received an updated on the remediation of audit findings.

**ATHLETICS FINANCIAL OVERSIGHT COMMITTEE
WORKPLAN IMPLEMENTATION SCORECARD
DECEMBER, 2016**

	Oversight Committee Work Plan Items	Status	Lead	Comments
1.	Align Athletics' policies with University policies	✓	McFarland	Completed spring FY 2016
2.	Evaluate and address purchasing audit findings	✓	McFarland	Awaiting Internal Audit validation that recommendations have been addressed
3.	Evaluate and address purchasing card audit findings	✓	McFarland	Awaiting Internal Audit validation that recommendations have been addressed
4.	Develop and deliver education and training to Athletics' staff	✓	Athletics & Controller's Office	Completed September 2016
5.	Address "pain points" in University financial policies	○	Controller's Office	Pain points identified; policy changes being drafted.
6.	Evaluate and address contract management audit findings	○	McFarland	
7.	Implement "Elevation" financial software for use by Athletics	✓	Athletics & Controller's Office	Completed November 2016
8.	Create administrative policy requiring annual financial certification	∅	Volna	Surveyed other institutions for certifications implemented elsewhere
9.	Review other financial internal controls as appropriate	○	Athletics Oversight Committee	

Key:

- ✓ - Item has been completed. Remediation of Internal Audit findings have been submitted to Internal Audits for validation.
- - In process; some items have been completed.
- ∅ - In process; all items started but no items complete.

**ATHLETICS FINANCIAL OVERSIGHT COMMITTEE
STATUS OF ESSENTIAL INTERNAL AUDIT FINDINGS
DECEMBER, 2016**

Audit Report	# Essential Recommendations Implemented		# Essential Recommendations Partially Implemented		# Essential Recommendations Not Implemented	
	<i>Dec 16</i>	<i>Sept 16</i>	<i>Dec 16</i>	<i>Sept 16</i>	<i>Dec 16</i>	<i>Sept 16</i>
# 1606 - Athletics Administration (December 2015)	7	4	0	2	0	1
# 1610 – Operational and Compliance Audit, Basketball (May 2016)	5	5	2	1	0	1
# 1615 - Athletics Finance & Operations (June 2016)	3	1	4	4	0	2



BOARD OF REGENTS DOCKET ITEM SUMMARY

Audit & Compliance

December 8, 2016

AGENDA ITEM: Compliance Program Update

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Boyd Kumher, Chief Compliance Officer, Office of Institutional Compliance

PURPOSE & KEY POINTS

The purpose of this item is for the committee to hear a compliance program update from the new Chief Compliance Officer. The discussion will include:

- Elements of effective compliance programs.
- First impressions of the existing compliance program.
- Compliance program governance and oversight.

The Chief Compliance Officer's semi-annual written report is included in this docket as an information item.

BACKGROUND INFORMATION

This is the Chief Compliance Officer's first report to the committee. In the past, compliance matters were reported to the committee by the Director of Institutional Compliance.



BOARD OF REGENTS DOCKET ITEM SUMMARY

Audit & Compliance

December 8, 2016

AGENDA ITEM: Update on Compliance with State Statute Regarding Procurement from Small Business

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Tim Bray, Director, Purchasing Services
Darryl Peal, Executive Director, Business & Community Economic Development

PURPOSE & KEY POINTS

The purpose of this item is to discuss MN Statute 137.31, the current status, and an update on the action plan to achieve University compliance.

The statute requires the University to award 20 percent of purchasing contracts to small businesses that are located in the state when state-appropriated funds are used. In FY 2016, compliance was 12 percent. Compliance with this statute is complicated by the fact that the University has multiple funding sources, including federal funds, that prohibit the use of geographical preference in selecting vendors. The statute was enacted in 1979 and last updated in 1993.

BACKGROUND INFORMATION

The committee discussed this topic at its June 2016 meeting and charged the Chief Auditor to work with the Office of General Counsel and appropriate state offices in order to achieve full compliance or find an exception.

Update on Compliance with State Statute Regarding Procurement from Small Businesses

Tim Bray, Director, Purchasing Services

Darryl Peal, Executive Director, BCED



UNIVERSITY OF MINNESOTA

Driven to DiscoverSM

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MN Statute 137.31

- Originally enacted 1979, last amended 1993
- Regents shall designate and set aside for awarding to small businesses 20% of the procurement contracts resulting from state appropriations.
- Small businesses must be located in Minnesota.



Challenges with MN Statute 137.31

- Difficult to interpret and apply to the U's procurement practices (e.g., split funding)
- Small businesses are defined by the U.S. Small Business Administration and are specific to business category.
- Geographical preferences are prohibited when using any federal funding.
- We have one UMN process for all procurements



Current Results

- BCED data shows that in FY16 overall we had \$98 million in spend from small and targeted business.
- This was roughly 12% of addressable spend, and includes construction subcontracts.



Historical UMN Focus

- Historically we have not focused on the overall Small Business designation but devoted resources towards our targeted supplier spend.
- Goals for utilization of targeted suppliers are jointly set by BCED and Purchasing Services
- FY16 showed an \$11 million growth in this area.



Action Plan

- Establish goals in the small business program that will get us to a 20% overall utilization.
- Increased emphasis on the utilization of small and targeted business within BCED and Purchasing.
 - Identification of procurement categories of opportunity for small and targeted business and both internal and external promotion of these events to small business.
 - Benchmark and promote the small and targeted supplier program.
 - Flagging of small and targeted businesses that are located in U Market and other U Wide contracts.
 - Update PeopleSoft vendor file to obtain current small business designations from SBA.



State of Minnesota Collaboration Plans

- Purchasing met with the Chief Procurement Officer at the State of Minnesota.
 - *Discussed shared and individual challenges in meeting requirements.*
 - *Will form a collaboration to develop joint strategies to help meet respective goals.*





BOARD OF REGENTS DOCKET ITEM SUMMARY

Audit & Compliance

December 8, 2016

AGENDA ITEM: Information Items

Review

Review + Action

Action

Discussion

This is a report required by Board policy.

PRESENTERS: Gail Klatt, Chief Auditor

PURPOSE & KEY POINTS

To report engagements with external auditors, as required by Board policy, and to deliver the semi-annual Controller's Report and the semi-annual Chief Compliance Officer's Report.

Engagements Less Than \$100,000 Requiring After-the-Fact Reporting

- The University's Office of Student Affairs (Student Affairs) entered into an engagement with the audit firm of Deloitte & Touche, LLP (Deloitte) to perform agreed-upon procedures for certain student groups receiving allocations of student fees from the University. Deloitte will perform the agreed-upon procedures on 35 student groups selected by Student Affairs. The results of the procedures will evaluate the allocation of fees to student groups for FY 2016. The fees for this engagement are not to exceed \$75,000. This engagement does not impair the independence of Deloitte & Touche, LLP as it relates to the external audit of the University and was approved by the Controller's Office in conformance with Board Policy.
- The Tweed Museum of Art entered into an engagement with Bradley P. Mickelson, CPA to prepare a statement of financial activity as of June 30, 2016 to be used as financial support for grant applications. The fees for this engagement are not to exceed \$2,150. This engagement did not impair the independence of Bradley P. Mickelson, CPA as it relates to the University's external audit and was approved by the Controller's Office in conformance with Board policy.
- UMD Continuing Education entered into an engagement with Bradley P. Mickelson, CPA to conduct an audit of the Peace of Mind grant, as required by MJSP grants, for FY16. The fees for this engagement are not to exceed \$1,300. This engagement did not impair the independence of Bradley P. Mickelson, CPA as it relates to the University's external audit and was approved by the Controller's Office in conformance with Board policy.

- The University's Office of Compliance entered into an engagement with Baker Tilly Virchow Krause, LLP to assess the regulatory risk resulting from activities associated with the University's Institutional Animal Care and Use Committee (IACUC). The fees for this engagement are not to exceed \$71,000. This engagement did not impair the independence of Baker Tilly Virchow Krause, LLP as it relates to the University's external audit and was approved by the Controller's Office in conformance with Board policy.
- The University's Academic Health Center entered into an engagement with Deloitte & Touche, LLP (Deloitte), to perform certain agreed-upon procedures in connection with the State of Minnesota's evaluation of the University's compliance with award expenditures related to the Mayo Partnership in Regenerative Medicine for the period July 1, 2014 to June 30, 2016. The fees for this engagement are not to exceed \$17,500. This engagement does not impair the independence of Deloitte & Touche, LLP as it relates to the external audit of the University and was approved by the Controller's Office in conformance with Board policy.
- The University's Office of University Services entered into an engagement with Deloitte & Touche, LLP (Deloitte) to perform an examination on the financial forms the University's Parking & Transportation Services has submitted to the National Transit Database for the period from July 1, 2015 to June 30, 2016. The fees for this engagement are not to exceed \$10,000. This engagement does not impair the independence of Deloitte & Touche, LLP as it relates to the external audit of the University and was approved by the Controller's Office in conformance with Board policy.

Semi-Annual Controller's Report

The semi-annual Controller's Report provides information to the Board regarding recent activities in University financial operations that have strengthened financial reporting, enhanced internal controls, improved the management of financial risks, provided better services to the University community, and maximized the institution's financial resources. Highlights include:

- A discussion of new accounting and reporting standards issued by the Governmental Accounting Standards Board (GASB), which the University has not implemented at this time. Management is currently determining if these standards apply to the University, as well as the likely impacts on the University's accounting and reporting.
- A brief discussion of the impact of implementing GASB 72 – *Fair Value Measurement and Application*.
- An update on the new travel and expense system project.
- An overview on capital equipment inventory process savings.
- Updates related to Athletics Financial Oversight Committee.

Semi-Annual Chief Compliance Officer's Report

The semi-annual Chief Compliance Officer's report addresses the following: (I) Significant Matters; (II) Previously Reported Matters; (III) Regulatory Changes; (IV) Compliance-related Training/Education; (V) Monitoring Initiatives; and (VI) UReport Statistics for the Period July 2015 through June 2016.

BACKGROUND INFORMATION

Engagements with external audit firms are reported to the Audit & Compliance Committee in conformance with Board of Regents Policy: *Audit and Compliance Committee Charter*. The Controller's Report is prepared semi-annually and presented to the Audit & Compliance Committee in conformance with Board of Regents Policy: *Board Operations and Agenda Guidelines*.

**UNIVERSITY OF MINNESOTA
BOARD OF REGENTS AUDIT COMMITTEE
SEMI-ANNUAL CONTROLLER'S REPORT
DECEMBER, 2016**

This report presents a summary of activities completed by the Controller's Office in the last six months to assess and implement new accounting and reporting standards, enhance internal controls, better manage financial risks, improve services to the University community, and maximize the institution's financial resources and financial operations.

I. Accounting and Financial Reporting Matters

The Governmental Accounting Standards Board (GASB) has issued the following accounting and reporting standards, which the University has not implemented at this time. Management is in the process of determining if they apply to the University and if so, the impact this statement will have on the University's accounting and reporting. These standards and the related implementation dates are explained below.

- In June 2015, the GASB issued Statement No. 73 (GASB 73), *Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68 (GASB 68), and Amendments to Certain Provisions of GASB Statements 67 (GASB 67) and 68*, establishes requirements for defined benefit pensions that were not within the scope of GASB 68, as well as for the assets accumulated for purposes of providing those pensions. In addition, it establishes requirements for defined contribution pensions that are not within the scope of GASB 68. It also amends certain provisions of GASB 67 and GASB 68 for pensions plans and pensions that are within their respective scopes. The provisions of GASB 73 that address employers and governmental non-employer contributing entities for pensions that are not within the scope of GASB 68 are effective for fiscal year ending June 30, 2017. The remaining provisions were effective for fiscal ended June 30, 2016.

At this time, management is still determining the remaining impact this statement will have on the University. However, we are not anticipating any material impact, if any.

- In June 2015, the GASB issued Statement No. 75 (GASB 75), *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, which replaces the requirements of two existing standards (GASB 45 and 57). It establishes new accounting and financial reporting requirements for governments whose employees are provided with OPEB, as well as for certain nonemployer governments that have a legal obligation to provide financial support for OPEB provided to the employees of other entities. This statement is effective for the fiscal year ending June 30, 2018.
- In December 2015, the GASB issued Statement No. 78 (GASB 78), *Pensions Provided through Certain Multiple-Employer Defined Benefit Pension Plans*, which amends the scope and applicability of GASB Statement No. 68, *Accounting and Financial Reporting for Pensions—an amendment of GASB Statement No. 27*, to exclude pensions provided to employees of state or

local governmental employers through a cost-sharing multiple-employer defined benefit pension plan that meet three criteria: 1) not a state or local governmental pension plan; 2) used to provide such pensions to both employees of state or local governments and non-state or non-local governments; and 3) has no predominant state or local governmental employer (either individually or collectively with other state or local governmental employers that provide pensions through the pension plan). Due to this exception, GASB 78 establishes the requirements for recognition and measurement of pension expense, liabilities, note disclosures, and required supplementary information for these plans. This statement is effective for the fiscal year ending June 30, 2017.

- In January 2016, the GASB issued Statement No. 80 (GASB 80), *Blending Requirements for Certain Component Units—an amendment of GASB Statement No. 14*, which amends the blending requirements for the financial statement presentation of component units established in GASB Statement No. 14, *The Financial Reporting Entity, as amended*. The additional criterion requires blending of a component unit incorporated as a not-for-profit corporation in which the University would be a sole corporate member. This statement is effective for the fiscal year ending June 30, 2017.
- In March 2016, the GASB issued Statement No. 81 (GASB 81), *Irrevocable Split-Interest Agreements*, requires that if the University receives resources from an irrevocable split-interest agreement (type of giving agreement used by donors to provide resources to two or more beneficiaries) to recognize assets, liabilities, and deferred inflows of resources at the inception of the agreement. The University would also be required to recognize assets representing beneficial interests in such agreements when administered by a third-party if the University controls the present service capacity of the beneficial interests. This statement is effective for the fiscal year ending June 30, 2018.
- In March 2016, the GASB issued Statement No. 82 (GASB 82), *Pension Issues—an amendment of GASB Statements No. 67, No. 68, and No. 73*, addresses issues related to three areas: 1) presentation of payroll-related measures in required supplementary information; 2) selection of assumptions and treatment of deviations from guidance in an Actuarial Standard of Practice for financial reporting purposes; and 3) classification of payments made by employers to satisfy employee (plan member) contributions requirements. The provisions related to areas #1 (payroll related measures) and #3 (classification of payments related to required contributions) are effective for fiscal year ending June 30, 2017, and area #2 (actuarial assumptions) are effective for the fiscal year ending June 30, 2018.

II. Adoption of GASB 72 for Fiscal Year 2016

GASB Statement No. 72 (GASB 72), *Fair Value Measurement and Application*, was issued to provide guidance for determining a fair value measurement for financial reporting. GASB 72 was implemented for fiscal year ended June 30, 2016. Previous GASB standards required University patents be classified as investments and amortized over a 20-year period. GASB 72 requires the patents to be accounted for as intangible assets. All of the University patents were under the threshold for an intangible asset and were therefore expensed. The statement required retroactive

adoption to fiscal year 2015, which resulted in a reduction of investments by \$14.5 million in fiscal year 2015.

Additionally, the joint venture with United Properties Investment, LLC, previously recorded as an investment, is now classified as other assets. These changes were made based on GASB 72's definition of an investment. The amount recorded to other assets related to United Properties Investment, LLC is \$1.7 million in fiscal year 2016.

GASB 72 required new footnote disclosures presenting the fair value hierarchy classification of investment balances into a Level 1, Level 2, and Level 3 categorization based on valuation inputs, as well as investments valued at net asset value per share (NAV), such as private equities and hedge funds, and their related unfunded commitments.

III. Activities to enhance internal controls, better manage financial risks, reduce costs, and improve services to the University community

Travel and Expense System Implementation

The University launched a project to implement a new travel and expense system. The U Travel project's primary goal is transformational change of the travel and expense reimbursement processes, driven by the community of travelers and their support staff. The team began work on October 31, 2016. The planned outcomes include:

- Comprehensive review and redesign of policy and procedures.
- Introduce new corporate liability travel card.
- Improve duty of care process for international travelers, removing perceived and real barriers to compliance.
- Introduce electronic expense reimbursement that can be completed easily by travelers.
- Obtain strong executive support for standardized business processes to ensure widespread adoption.

The project will not only bring the experience of the university travelers into the current technological environment with broader integration points, it will also significantly improve the travel reimbursement process and reduce costs by replacing a manual process with an electronic process.

This project was chartered as a result of the Administrative Services Benchmarking and Diagnostic Study completed in June 2013 and will finish its work by September 2017.

Capital Equipment Inventory Process Savings

Regulations related to the University's federal funding require the University to perform biennial physical inventories of all capitalized equipment. In the past 4 years the Controller's Office has made changes to capitalization and accounting practices, which has reduced the number of capital assets requiring inventory by approximately 33,000 items (48%). Recognizing that this reduction would have the potential for significant process improvements and cost reductions, the Controller's Office conducted an analysis of options and determined that it would be most cost-effective to contract with

a third party for future capital asset inventory services. Effective July 1, 2016, the University has entered into a 4 year contract with HCA to perform capital asset inventories. The expected cost savings from this new arrangement are estimated to be approximately \$201,000 for each two-year inventory cycle.

HCA arrived on campus on October 3, 2016 to begin the physical inventory process with an estimated completion date of December 31, 2016. The first year of the contract HCA will complete a full 2 year inventory cycle.

Athletics Financial Oversight

The University Controller is a member of the Athletics Financial Oversight Committee, which is providing oversight during the resolution of audit recommendations stemming from the December, 2015 internal audit report on Athletics finances. The Controller's Office has committed significant talent and resources to support those efforts. Some examples of the support being provided are:

- Purchasing staff have been deployed to assist in developing and delivering travel and hospitality training to Athletics staff. The planned training is complete. Discussion sessions on specific topics will continue through the end of the fiscal year.
- Controller's Office staff are assigned to revise travel and hospitality policies and procedures in ways that address gray areas or policy "pain points".
- Business analyst support has been provided to assist Athletics with some technology needs, which will address weaknesses in their financial reporting for NCAA and EADA purposes. The financial reports are in beta tests with testers from individual sports. The business analyst and Controller's Office staff are assisting with data or mapping gaps identified during the beta test.
- The University Controller is working with a group of finance professionals across the institution in the development of a certification process, to strengthen the dotted-line relationship between the University's CFO and chief financial managers across the institution.

**REPORT OF THE CHIEF COMPLIANCE OFFICER, OFFICE OF INSTITUTIONAL COMPLIANCE, FOR THE AUDIT COMMITTEE OF THE BOARD OF REGENTS ON THE UNIVERSITY COMPLIANCE PROGRAM
DECEMBER 8, 2016**

INTRODUCTION

This report addresses the following: (I) Significant Matters; (II) Previously Reported Matters; (III) Regulatory Changes, (IV) Compliance-related Training/Education (V) Monitoring Initiatives, and (VI) UReport Statistics for the Period July 2015 through June 2016. Additional information regarding the University's Office of Institutional Compliance is available on the Office's website. Links to relevant resources are also provided. <http://www.compliance.umn.edu/complianceHome.htm>.

I. SIGNIFICANT MATTERS

A. GOOGLE APPLICATIONS ACCESS FOR ALUMNI

Summary: The University currently provides free, lifetime access to Google email and applications to all alumni. This includes alumni who were students, or are retired faculty and staff, and also current students who have not graduated but have a break in enrollment for up to six semesters. The account provided is the same one used while the individual was an active student or employee and the email history is left intact. Alumni who were also employees retain access to business-related emails/documents in that history. Particularly for units such as Boynton Health Service, AHC, Records Management, HIPAA Office, and the Compliance Office, those documents could contain data that is legally protected by statute (e.g. HIPAA, MN Data Protection Act, and the Family Educational Rights and Privacy Act) which creates a risk exposure. Boynton Health Services is delaying their planned transition from Outlook to Google until this matter is resolved.

Action: The Office of Information Technology has convened a cross-functional work group including the Office of Institutional Compliance to discuss alternatives to our current practice to reduce this risk. Additionally, University Information Security is conducting a risk assessment for account management, including a risk assessment of Google account management. The target date for the risk assessment and for identifying options to reduce the risks identified is 12/31/16.

B. REPORT OF USING AND SELLING XANAX BY MEMBERS OF THE GOPHERS WRESTLING TEAM

Summary: On April 7, 2016, an anonymous Gopher wrestler reported, through the University's UReport system, that members on the wrestling team were using and selling pills on campus, and that Coach J Robinson knew of the situation. Upon receipt of the anonymous report, the University Police Department, in conjunction with the Hennepin County Attorney's Office, conducted an investigation. The Hennepin County Attorney's Office determined that, due to insufficient evidence, no criminal charges would be pursued against Robinson and the wrestlers in connection with this allegation. Following the criminal investigation, the University launched an internal investigation of the matter.

Action: The University completed its internal investigation and reported findings to the Athletics Director. J Robinson's position as head coach of wrestling was terminated by the Athletics Director on 9/7/16.

C. *ALCOHOL, DRUG, WEAPONS REFERRALS REPORTING*

Summary: The Clery Act requires reporting of arrests and referrals for discipline (alcohol, drug, weapons) that occur on University property. While collecting crime statistics for the 2015 calendar year, the Clery Compliance Coordinator determined that not all individuals who were documented on the original incident report generated by the Community Advisor on duty were included on the Housing and Residential Life (HRL) Conduct Officer's report. There were 60+ individuals documented for law violations on Security Monitor reports who were not included in the legally required annual reporting that year. The Department of Education can levy a fine of up to \$35,000 for each missing referral report.

Action: The Clery Compliance Coordinator and Housing and Residential Life leadership are clarifying what constitutes a referral for a law violation under the Clery Act and insuring that future reporting aligns with this clarification. Statistics will be collected from HRL by the Clery Compliance Coordinator on a quarterly basis in order to identify and remedy issues in a timely manner.

D. *LAWSUIT FILED BY THREE FORMER FEMALE COACHES AT UMD ALLEGES GENDER DISCRIMINATION*

Summary: In September 2015, three former athletics coaches at the University of Minnesota, Duluth filed suit in federal court alleging discrimination on the basis of sex, sexual orientation, national origin, and/or age.

Action: The University has filed an answer to the complaint where it denies any unlawful discrimination and the lawsuit is currently in the discovery phase. A related Title IX investigation is being conducted by the Office of Civil Rights, prompted by a complaint petitioned by the lawyer representing the three former athletics coaches at UMD.

E. *PCI/DSS*

Summary: The University's compliance with the Payment Card Industry Data Security Standards (PCI DSS) that address security issues in the context of credit card transactions has been reported in the past. These standards address the credit card process from the point of entry of credit card data into a system of records, to the processing of the data through the payment process.

Action: According to a recently completed internal audit, PCI Compliance Program staff in the Controller's Office and University Information Security have established effective governance and control processes to address PCI DSS compliance and other payment card risks. PCI Compliance Program staff have implemented robust oversight mechanisms and taken steps to limit scope and risk. Technical control strategies and oversight is similarly operating effectively. The external Qualified Security Assessor's 2016 report concluded the University is in full compliance with PCI DSS.

F. *EXTERNAL REVIEW OF MATTERS RELATED TO THE ATHLETICS DEPARTMENT THAT INCLUDED RECOMMENDATIONS FOR THE OFFICE OF EQUAL OPPORTUNITY AND AFFIRMATION ACTION*

Summary: In December 2015, a report created by attorneys from the Fredrickson & Byron P.A. identified areas in the Athletics Department on the Twin Cities campus that could be strengthened. The Director of

the Office of Equal Opportunity and Affirmative Action (EOAA) convened a committee to review those recommendations.

Action: A work plan was developed to address the recommendations for process or system improvements that were not already part of the existing infrastructure. Some key activities related to the work include implementing a new database management system for tracking reported issues and outcomes (in progress); making major revisions to the sexual misconduct policy; and adding a step to the EOAA process to verify with units that they have implemented the EOAA recommendations. Additionally, committee recommendations have been incorporated in to training being delivered to the Athletics Department.

G. HUMAN PARTICIPANT RESEARCH

Summary: The effort resulting from the recommendations of the Human Participant Research Implementation team is ongoing.

Action: The work remains on schedule, per Vice President Brian Herman’s update to the Board of Regents (BOR) on 9/8/16. The implementation teams have completed their reports and moved into the operationalization phase. Work areas remain engaged with key faculty stakeholders and work is consulted broadly to ensure engagement and adoption of the changes. Specific accomplishments can be viewed in the BOR [report](#) submitted by Vice President Herman.

II. PREVIOUSLY REPORTED MATTERS

A. New Clery Compliance Coordinator

Summary: In the May 2016 report to the Board of Regents Audit and Compliance Committee, the Clery Coordinator identified three opportunities for improvement to address high risk compliance concerns. These deliverables included identifying the “Clery Geography” on the Twin Cities campus, identifying all Campus Security Authorities (CSAs), and developing and delivering Campus Security Authority Training by fall 2016.

Update: All three deliverables have been met.

III. REGULATORY CHANGES

There are two notable regulatory changes during this period or anticipated for the next period.

1. CLERY ACT/VAWA

On June 23, 2016, the Department of Education published the 2016 Edition of “The Handbook for Campus Safety and Security Reporting”, which replaced the 2011 handbook. Under federal law, specific crimes committed in specific locations must be reported by the University. After reviewing the revised handbook, the Clery Program identified the following changes to our previous compliance efforts:

- Specific Crimes – there were changes to the hierarchy rule. Crimes are now separated into four different categories. If a particular incident includes crimes in multiple categories, the crime must be counted in each category.
- Clery Geography (specific locations) – If the University sponsors a trip for more than one night for U of M students (short stay trips), all locations used by the student during the trip, controlled by the University during the trip, and used to support educational purposes should be treated as non-campus property. The University is responsible for reporting any crime committed in space where the University has a written lease agreement with a third party for space.
- The University must report incidents that occur at any University-affiliated hospitals. Previous reports covered University-controlled portions of the Riverside Medical Campus. 2015 “on campus” statistics will now include crimes reported to have occurred anywhere on the Riverside Medical Center campus.

2. FAIR LABOR STANDARDS ACT – MINIMUM PAY AND OVERTIME PROTECTIONS

The Fair Labor Standards Act (FLSA), initially enacted in 1938, establishes minimum wage, overtime pay eligibility, recordkeeping, and child labor standards affecting full-time and part-time workers in the private sector and in federal, state, and local governments. ¹

On December 1, 2016, executive, administrative, and professional (EAP) employees who meet one of the criteria below, and are not included in an exclusions list, will continue to be exempt from the minimum wage and overtime pay protections of the Act.

- An annual salary of \$47,476 or greater for full-time salaried workers (an increase from the prior threshold of \$23,660) – salary level test
- Highly Compensated Employees whose total annual compensation is \$134,004 or greater annually (an increase from the prior threshold of \$100,000) - minimal duties test

Automatic updates to those thresholds will occur every three years, beginning on January 1, 2020. (These thresholds had not been updated since 2004.)

Approximately 1,900 employees are affected, per a recent presentation by the Office of Human Resources. Employees who make less than the new minimum must be moved to nonexempt (hourly) and hours worked beyond 40 hours must be paid overtime. All hours must be documented.

OHR has worked with other key units and the FLSA Postdoc Committee, to identify options, determine solutions, and then will continue to work to implement the selected solutions.

Update: On November 22, 2016 a federal judge in Texas concluded that the U.S. Department of Labor had exceeded its authority in issuing the rule and issued a nationwide injunction against rolling out the rule. The Labor Department is expected to appeal the ruling, although it is not yet clear how long such an appeal might take.

¹ Office of Financial Management; Fair Labor Standards act (FLSA).

IV. COMPLIANCE-RELATED TRAINING/EDUCATION

The University has conducted or developed the following trainings during this reporting period.

- **OGC Records Management** – conducted Data Practice Act trainings with the compliance partners, Office of Student Affairs, Board of Regents (BOR) staff[?], and Record Retention training for the Financial System User Network
- **Health Information Office** - New HIPAA training rolled out in April for new employees designated as needing HIPAA training. 10,000 more individuals were notified in June that they are required to take the training. Boynton Health Services will require that all staff take or retake the new training course.
- **Human Resources** – Equity and Diversity Certificate Program courses (Athletics); Implicit Bias in Search Process (AHC), Incorporating Equity & Diversity into Search Process (AHC); discipline termination in the public sector (AHC); disciplinary process at the U (AHC); respectful workplace (AHC); sexual harassment training (AHC); sexual harassment training (School of Nursing)
- **Information Security** – updated Public Jobs/Private Data training, which will be required for new faculty and staff.
- **Department of Public Safety** – Added new compliance training for staff in the areas of 1) Missing Person Policy; 2) Communication with Disabled Persons; 3) Brady Law Review; and 4) Patrol Online Course Certification

The Office of Institutional Compliance (OIC) is working with the Compliance Partners to update the current inventory list of compliance trainings/courses.

V. MONITORING INITIATIVES

In the Report of the Chief Compliance Officer to the Audit Committee of the Board of Regents on the University Compliance Program dated May 12, 2016 it was stated that some administrative units have robust monitoring programs in place while others are currently in the process of implementing a more formal approach. The current plan is to address this issue during the Legal Compliance reporting review process. In addition, the new Chief Compliance Officer will initiate a collaborative risk review process, working with Compliance Partners and other compliance stakeholders to systematically identify, review, and mitigate compliance risks in the University of Minnesota system.

VI. Ureport Statistics and Trends

I. UREPORT STATISTICS: JULY 1, 2015 THROUGH JUNE 30, 2016

UReport is the University's confidential web-based reporting service. This reporting service is provided by Navex Global, an independent company that provides similar services for hundreds of companies and universities. UReport is intended to be used to report violations of local, state and federal law as well as violations of University policy. This reporting system is not intended to be used for employment concerns that do not involve legal or policy violations or that involve purely student concerns, except with respect to Medical School students, or issues for which the University is not responsible. Reporters may submit reports either via

a hotline, the web, or anonymously. Those who submit reports are expected to report good faith concerns and to be truthful and cooperative in the University’s investigation of allegations.

During the period of July 1 2015 through June 30, 2016 156 reports were submitted; five of those are active investigations. Seventy three percent of the reports were anonymous. Over 88% of the reports involve claims regarding:

- Hiring, advancement, discipline or termination
- Discrimination, harassment and/or equal opportunity
- Abuses in wage, benefits, vacation, overtime, and leaves
- Health and safety concerns

	Running Total from Launch (August 2005)	July 1, 2015 to June 30, 2016
Total Reports	1500	151
Report Sources:		
Internet	89%	95%
Call Center	11%	4%
Other	<1%	<1%
% Anonymous	73%	73%
% Substantiated		24%

