EAB

Hallmarks of Higher Education's Most Strategic Finance Functions

4 Ways to Use This Report

- Redesign financial processes, systems, and reporting to improve efficiencies and create staff capacity for strategic analysis
- Improve reliability and accessibility of campus data to enhance decision support
- Create new financial planning roles and restructure budget planning teams
- Increase analytical support for academic budget planning

Business Affairs Forum

Business Affairs Forum

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Executive Summary

Finance Critical to Navigating Future Uncertainties

Higher education institutions are confronting a host of external pressures, including changing demographics, heightening competition, and increasing student concerns about affordability and value. These pressures are compelling finance teams to perform more—and more complex—financial activities. Three examples of ways in which finance teams' responsibilities are evolving are illustrated below. First, finance teams are beginning to expand the focus of cost and efficiency initiatives beyond administrative units to academic programs. Second, finance teams are starting to more closely analyze the financial implications of strategic investments before committing funding to new initiatives. Finally, some finance leaders are sharing more detailed, longer-range forecasts to satisfy demands from boards, banks, and accrediting bodies.

Traditional Finance Responsibilities Evolving to Meet New Demands

Finance Responsibility	Find Meaningful Cost Savings	Fund New Strategic Investments	Monitor and Report Financial Performance
Historical Approach	Seek opportunities to improve efficiencies and curb cost growth in administrative units	Allocate new funding based on qualitative evaluation of requests and rough cost estimates	Share annual consolidated reports with boards, banks, and ratings agencies
Change in Operating Environment	Administrative savings near exhausted; revenue growth slowed	Funding for new investments shrinking; urgency to invest to compete growing	Ratings agencies downgrade industry outlook as revenue prospects soften
Emerging Approach	Evaluate efficacy of academic investments to identify reallocation opportunities	Model the total costs and expected returns of new investments to assess tradeoffs and ensure funding in highest priority areas	Present long-range forecasts to demonstrate financial viability and maintain access to capital to fund necessary strategic investments

However, many finance units are struggling to perform these expanded responsibilities because they are often staffed and organized to support only reactive, transactional activities (such as processing payroll and purchase orders). **To meet the needs of the modern university, finance leaders must build strategic finance functions that operate in parallel with operational processes.**

Source: EAB interviews and analysis.

Five Hallmarks of Effective Strategic Finance Functions

Unfortunately, many finance leaders struggle to build strategic, forward-looking functions, largely because it is impossible to anticipate exactly what technology, staff, and organizational structures those functions will need in the years ahead. Specifically, it is hard to predict exactly when and how emerging technologies (such as artificial intelligence, digital currency, and automation) will affect operations. But leaders can predict what *pressures* their institutions will face and what characteristics strategic finance functions will need to bear to address them. Finance leaders should start working to achieve these characteristics now to effectively respond to external pressures across the next decade.

Specifically, EAB has identified **five characteristics—or hallmarks—of effective strategic finance functions**, listed below. They describe finance units with optimal data infrastructures, staff profiles, and organizational structures to support strategic planning and analysis.

1   **Central Data Infrastructure Supports Strategic Decision Making**

2   **New Technology and Organizational Models Maximize Operating Efficiency**

3   **Long-Range Financial Plans Consider Future Revenue Threats**

4   **Professionalized Staff Support Ongoing Academic Resource Planning**

5   **Central Finance Provides Just-in-Time Consultation on Unit Planning and Strategy**

How to Use This Brief to Achieve the Hallmarks of Effective Strategic Finance Functions

This report introduces **twelve trends** finance leaders are pursuing to transform their functions to achieve these five hallmarks. Each section includes a description of the trends, examples of leaders applying the trends on their campuses, and benchmarking data on the current adoption rate for each trend across the industry. Business leaders should use this information in two ways: First, they should evaluate their own adoption of the trends to identify areas of underinvestment in financial planning. Second, they should use the sample application profiles included with each trend to inform strategic staffing, organizational structure, and process redesign decisions in their units.

Source: EAB interviews and analysis.

Summary of Trends

The table below summarizes the **twelve trends** that institutions are pursuing to achieve the five hallmarks of an effective future finance function.

Trend	Trend Description	Page Number
Hallmark 1: Central Data Infrastructure Supports Strategic Decision-Making		
Trend 1: Executive Level Data Governance Oversight	Committees of select senior leaders and campus stakeholders create and enforce policies and processes that drive consistent, complete, and accurate data use across campus. Senior leaders own data governance vision setting and hold unit directors accountable for executing data priorities.	10
Trend 2: Data Refinement for Academic Program Analysis	Financial data systems are configured to generate academic cost data at a sufficiently granular level to understand program-level costs. Academic and finance leaders then use academic cost data to analyze program margins—either direct margins or fully loaded margins with agreed-upon indirect cost allocations.	12
Trend 3: Business Intelligence Teams	Senior leaders dedicate central staff to business intelligence (i.e., collecting, reporting, and analyzing data to make business decisions). Business intelligence staff may report through the CBO, CIO, or provost. Business intelligence staff generate reports and analyses to support strategy conversations, and leaders deploy them to support high-priority unit-level decisions.	14
Trend 4: Academic Financial Dashboards	Central finance teams generate regular reports for academic unit leaders to monitor and analyze key unit financial performance indicators, such as faculty salaries by type (e.g., full-time, contract, fees, summer pay). Central finance may create reports manually (e.g., in PowerPoint or PDF) or work with business intelligence teams to develop self-service reporting capabilities.	16
Hallmark 2: New Technology and Organizational Models Maximize Operating Efficiency		
Trend 5: Technology-Driven Planning Process Redesign	Budget and planning teams use Enterprise Performance Management (EPM) and other solutions to automate data consolidation and workflows, enhance reporting, and expedite planning processes.	20
Trend 6: Scaled Budget and Planning Services	Finance leaders reorganize staff and/or reallocate process responsibilities to achieve scale in transactional work. By minimizing analytical staff's routine transactional responsibilities, leaders maximize their capacity for financial analysis and planning.	22

TREND MATURITY ••

The trend maturity boxes in this report display data collected from 84 finance leaders at 75 unique institutions across the United States and Canada. Leaders were asked to self-assess their institutions' adoption of each trend on a 5-point scale: not adopted, considering adoption, adoption in progress, partially adopted, and fully adopted. EAB collected this data in 2018 and 2019. All data collected is included in the Appendix of this publication, beginning on page 42.

Source: EAB interviews and analysis.

Trend	Trend Description	Page Number
Hallmark 3: Long-Range Financial Plans Consider Future Revenue Threats		
Trend 7: Long-Range Financial Modeling and Scenario Planning	Central finance teams build financial models to demonstrate the impact of both planned strategic investments and potential future revenue risks. Models use research-backed assumptions—not straight-line forecasts—to project multiple potential future states. Finance leaders use scenario models and planning exercises to generate consensus around response plans for future operating risks.	**26**
Trend 8: Functional Redesign to Expand Budget and Planning Scope	Finance leaders revamp budget and planning functions to optimize strategic resource planning. Depending on institutional context, leaders reorganize teams to better integrate short- and long-term planning, add or elevate planning staff profiles to increase capacity for modeling and analysis, and elevate functional leadership to signal importance of planning to long-term strategy and financial sustainability.	**28**
Hallmark 4: Professionalized Staff Support Ongoing Academic Resource Planning		
Trend 9: Embedded Analytical Support in Academic Units	Dedicated professional finance staff analyze academic budgets and help academic leaders use data in resource planning. Financial analysts may sit centrally or in academic units, depending on degree of centrality of resource planning.	**32**
Trend 10: Financial Upskilling Programs for Academic Stakeholders	Finance leaders create formal training programs for academic stakeholders to improve financial acumen and drive better resource allocation decisions. Leaders create one or more training programs to address the skills needs of different audiences—in particular, academic budget staff and academic leaders (i.e., deans and department chairs).	**34**
Hallmark 5: Central Finance Provides Just-in-Time Consultation on Unit Planning and Strategy		
Trend 11: Metric-Driven Intervention in Unit Performance Issues	Finance and academic leaders define thresholds for satisfactory financial performance for each major operating unit. Leaders use dashboards or other reports to regularly monitor unit performance metrics. When unit performance falls below predefined thresholds, leaders promptly intervene to help unit leaders strategize cost-cutting or revenue growth opportunities.	**38**
Trend 12: Internal Financial Consulting Teams	Central finance leaders oversee internal teams that provide technical financial and project management support for unit initiatives. Leaders may hire new teams of dedicated full-time staff to support initiatives or may convene on-demand project teams of existing staff as initiatives arise.	**40**

Source: EAB interviews and analysis.

eab.com

Central Data Infrastructure Supports Strategic Decision Making

Hallmark Description

Institutions possess mature data infrastructures that support strategic decision making and employ data-savvy staff that drive better planning decisions. Finance is the institutional hub for financial data, dashboards, and reporting.

Trends Profiled in This Section

Trend 1: Executive Level Data Governance Oversight

- Bicameral Data Governance Committees
- Chief Data Officers

Trend 2: Data Refinement for Academic Program Analysis

- Chart of Accounts Redesigns
- Activity-Based Costing

Trend 3: Business Intelligence Teams

- Centralized BI Teams

Trend 4: Academic Financial Dashboards

- Manual Dashboards
- Self-Service BI Dashboards

Source: EAB interviews and analysis.

Executive Level Data Governance Oversight

TREND IN BRIEF ....

Committees of select senior leaders and campus stakeholders create and enforce policies and processes that drive consistent, complete, and accurate data use across campus. Senior leaders own data governance vision setting and hold unit directors accountable for executing data priorities.

SAMPLE APPLICATION: BICAMERAL DATA GOVERNANCE COMMITTEES..

Data governance, the process of creating standards for data elements (e.g., data definitions, potential values, security levels), is a fundamental prerequisite to making data-informed decisions. It promotes consistency that enables reliable data comparison across units. Many institutions, however, suffer from low accountability for data governance responsibilities and poor campus engagement in related discussions.

To correct for this, institutions with effective data governance practices divide responsibilities across two committees. An executive-level strategy committee sets data governance priorities and vision, while an implementation committee executes on the priorities set by the strategy committee. This division of labor has a few benefits. One, executive involvement signals the importance of the work and ensures the implementation committee focuses on the institution's top data priorities. Two, the executive committee holds the implementation committee accountable for executing on critical—but time-intensive—policy work.

The table below includes more information on the composition and responsibilities of each committee.

Bicameral Data Governance Committee Characteristics

	Strategy Committee	Implementation Committee
Role	Direction-setting, signal value	Execution
Composition	VP- to AVP-level staff from IT, Provost's office, CBO's office, Registrar's office	AVP- to director-level staff from IT, Business Intelligence, and cross-functional data stewards
Size	5-10 leaders	12-20 staff
Time Commitment	Minimal (i.e., one hour per quarter or semester)	High (i.e., at least one hour per week or month)
Agenda	Vision: What areas of the university may benefit most from better data?	Data Definitions: What should the definition and security level for these terms be?
	Progress: What has the data governance committee done since the last meeting, and what should it focus on until our next meeting?	Term Requirements: What standard terms do we not have that are causing problems?
		Data Stewardship: Are the right people in data stewardship roles across campus?

▶ Download the Guide to Selecting Data Governance Committee Members at **eab.com/strategicfinance** for a suggested list of strategy and implementation committee members from 13 campus departments.

Source: EAB interviews and analysis.

Some institutions are taking executive involvement in data governance a step further by creating cabinet-level roles to steward efforts. Although these roles go by different names, Chief Data Officer (CDO) is the most common. CDOs oversee data governance efforts and drive data adoption across campus. While these roles are growing in popularity, by EAB's count, only about 15 higher education institutions currently employ CDOs.

Notably, some business leaders question the need for CDOs in higher education. Institutions may not have a single staff member that possesses a CDO's total attributes and skillsets, but many institutions likely have a group of staff who collectively do. Some leaders argue that they can bring those staff together on their data governance committees to achieve many of the benefits of investing in a CDO role. Leaders who have introduced CDOs, however, insist that data governance is simply too important to leave solely to committees.

Summary of the Chief Data Officer Role

Core Duties

- Leads data definition creation
- Coordinates data governance meetings
- Oversees data quality processes
- Develops data management policies
- Oversees the design of the data warehouse or data lake and data integration
- Encourages use of BI for decision-making and strategic planning

Desired Attributes and Skillsets

- Experience with data architecture, data management, and development of data governance
- Strong communication skills for both executive-level and technical implementation discussions

Estimated Salary (USD)

- $125K-165K

CDO Role Growing Quickly Across Sectors

15+ Chief Data Officers in higher education in 2018

UNIVERSITY of ROCHESTER   WISCONSIN UNIVERSITY OF WISCONSIN-MADISON

WSU WICHITA STATE UNIVERSITY   UNIVERSITY OF SOUTH CAROLINA

~250 Chief Data Officers working globally in 2014

▶ Download sample CDO position descriptions at **eab.com/strategicfinance**

TREND MATURITY ....

All Institutions: 20%, 19%, 25%, 29%, 7%
Public Institutions: 14%, 17%, 29%, 31%, 8%
Private Institutions: 24%, 24%, 21%, 24%, 7%

■ Not adopted   ■ Considering adoption   ■ Adoption in progress
■ Partial adoption   ■ Full adoption

Data Refinement for Academic Program Analysis

TREND IN BRIEF ···

Financial data systems are configured to generate academic cost data at a sufficiently granular level to understand program-level costs. Academic and finance leaders then use academic cost data to analyze program margins—either direct margins or fully loaded margins with agreed-upon indirect cost allocations.

SAMPLE APPLICATION: CHART OF ACCOUNTS REDESIGNS ···························

Most financial systems were not initially configured to record expenses at the level of granularity needed to analyze academic program costs (i.e., at the activity or program level). In response, some finance leaders are redesigning their institutional chart of accounts (COA) to collect more granular academic cost data. As illustrated below, COA redesigns provide the granular cost data needed to analyze academic program margins. They also reduce audit risk and make data governance more manageable, since users cannot accidentally record transactions to obsolete fields. However, full COA overhauls are time- and resource-intensive, and most universities need to hire consultants to manage the process.

Importantly, finance leaders do not need to take an "all-or-nothing" approach to improving their COA. Other institutions are targeting sections of their charts for refinement. While targeted refinements don't provide all the benefits of full COA redesigns, they enable more refined cost data for academic margin analysis on an abbreviated timeline. The **University of Oregon**, for example, used this approach to update its financial system to differentiate between tenure-track and contract salaries.

Two Approaches to Updating Chart of Accounts (COA)

Approach	Benefits			Sample Institution
	Refined Cost Data	Reduced Audit Risk	Improved Data Governance	
1 **Full Overhauls** Review and upgrade of entire COA, including elimination of obsolete fields and addition of new fields	✓	✓	✓	**RUTGERS** THE STATE UNIVERSITY OF NEW JERSEY 2-year process to create COA that records transactions at department, location, and activity level
2 **Targeted Refinements** Selective addition of fields to track certain metrics at more granular level (e.g., faculty payroll data by program type and tenure status)	✓			**O** UNIVERSITY OF OREGON 1.5-month process to add fields for payroll data for tenure- and non-tenure-track faculty

Source: Rutgers University, New Brunswick, NJ; University of Oregon, Eugene, OR; EAB interviews and analysis.

eab.com

COA redesigns are foundational to obtaining more granular program-level cost data, but they may not fully track all academic costs at the activity level. Specifically, even the most refined charts cannot record faculty costs at the activity level (i.e., across research, teaching, and service activities). In response, some institutions are turning to activity-based costing (ABC) to more rigorously estimate these costs. ABC is a private sector cost accounting practice that identifies and assigns direct and overhead costs to production activities, and then assigns those costs to outputs.

In 2016, the **University of California, Riverside (UCR)** developed and applied an ABC methodology in the College of Arts, Humanities, and Social Sciences. With ABC, UCR business and academic leaders have more visibility into upper-and lower-level course costs, and they are using these insights to inform course offerings and enrollment caps. However, their ABC implementation was time- and resource-intensive. It took more than a year to implement the model in just one of seven academic units, and they needed to engage three different consultants to develop and execute the methodology. So while many institutions remain curious about ABC, given the effort, few institutions have actually pursued it to-date.

UC RIVERSIDE Activity-Based Costing Model

Successful ABC Implementation in One Academic Unit...

Integrates data from 6 data systems

Calculates course-level cost data through 6 faculty activity categories and 5 indirect cost pools

Provides course-level margin transparency for curriculum planning

Yields program-level margins for growth planning

...But Implementation Requires Significant Investment in Technology and External Support

1.25 Years to implement for College of Arts, Humanities, and Social Sciences (1 of 7 units)

$1.4M External fees to Grant Thornton, Pilbara Group, and Deloitte

Other UCs Reconsider

"…[It] would not be possible to deploy the actual system at the department level. Rather**, a Central Office would need to be staffed and trained** to respond to department data requests by manually extracting the requested data…"

UC Office of the President's Report on Activity-Based Costing Pilots

TREND MATURITY ....

All Institutions
- 14%
- 18%
- 38%
- 29%
- 1%

Public Institutions
- 15%
- 13%
- 50%
- 21%
- 0%

Private Institutions
- 10%
- 21%
- 21%
- 45%
- 3%

- ■ Not adopted
- ■ Considering adoption
- ■ Adoption in progress
- ■ Partial adoption
- ■ Full adoption

Business Intelligence Teams

TREND IN BRIEF

Senior leaders dedicate central staff to business intelligence (i.e., collecting, reporting, and analyzing data to make business decisions). Business intelligence staff may report through the CBO, CIO, or provost. Business intelligence staff generate reports and analyses to support strategy conversations, and leaders deploy them to support high-priority unit-level decisions.

SAMPLE APPLICATION: CENTRALIZED BI TEAM

Institutions cannot fully realize the benefits of data investments without staff who can access data, analyze it, and communicate trends to leaders. This need is contributing to the emergence of a new role, the business intelligence (BI) analyst. Unfortunately, many business and academic leaders are struggling to hire new BI staff, since BI analysts are in demand across industries (and commanding commensurately high salaries). In response, institutions are creating central BI teams that consolidate BI resources and scale their skill sets across campus.

For example, the **University at Buffalo** centralized existing analytical staff to create a new Office of Institutional Analytics. Senior leaders wanted to expand data analytics in academic affairs. Through planning conversations, they identified two academic administrators with sophisticated data skills, plus an Enrollment Management staff member spending a small portion of his time on BI activities. They hired these staff into new roles and formed a central BI team. BI staff now spend the majority of their time on analytics, and leaders can deploy their in-demand skill sets to the highest-priority projects.

University at Buffalo — Creation of Office of Institutional Analytics

College of Arts and Sciences

Enrollment Management

→ **Institutional Analytics**
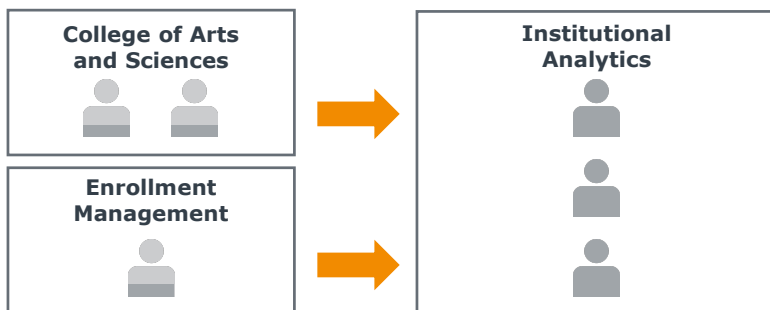
❌ Limited applicability of BI skills in daily tasks

❌ Only select units benefit from staff's BI capabilities

✔ Nearly all staff time dedicated to BI projects

✔ Scales BI resources across all units

✔ Senior leaders can deploy analytical resources to most strategically significant initiatives

■ Time spent on BI activities   ■ Time spent on non-BI activities

Central BI Team's Early Impact

- Providing analytic support for key academic and administrative initiatives

- Creating 20+ dashboards for financial decision-makers, spanning space, HR, student, and financial metrics

- Producing data visualizations in Tableau (e.g., student enrollment by program) to enhance decision support

- Training academic and administrative leaders on BI tools to drive data adoption

Source: University at Buffalo, Buffalo, NY; EAB interviews and analysis.

CONSIDERATIONS FOR POSITIONING BI TEAMS ....

As more institutions build central BI capabilities, many leaders question the most appropriate reporting structure for these teams. EAB research has surfaced a variety of reporting relationships and has found that no one reporting structure works best for all campuses. Instead, the right structure depends on an institution's leadership team, strategic goals, and existing IT capabilities.

The chart below lists the three most common reporting structures, plus considerations for evaluating the appropriateness of each structure on campus. IT is a likely candidate, but it is not an ideal positioning if campus views IT as a commodity. For stakeholders to optimally utilize BI teams, they must view them as strategic resources (i.e., not as tech support). BI can also report to the CBO. This structure is a good fit if BI goals span financial strategy, or if IT already reports to the CBO. Finally, BI teams can report to the provost. This structure works well when BI goals are focused on student success, teaching and learning, or research.

Considerations for BI Reporting to CIO, CBO, or Provost

Office	Indicates Promising Placement	Indicates Consideration of Other Placement
CIO	• IT has strong campus brand • IT leaders have analytical backgrounds • Nascent warehousing efforts	• IT seen as a commodity • BI strategy focused in one area • Analytics infrastructure is self-sustaining
CBO	• BI strategy focused on administrative operations and strategy • CBO and Provost closely aligned on BI strategy • Finance and administrative staff possess analytical skillsets • IT and/or IR report to the CBO	• Finance and administrative leaders lack analytical backgrounds • IT and IR siloed in other administrative divisions, collaboration unlikely
Provost	• BI strategy focused on student success, teaching and learning, and/or research • Strong analytical resources and leadership in existing IR office	• Academic and/or IR leaders lack analytical backgrounds • Academic resistance to sharing analytical resources with administrative units

EAB RESOURCE TO JUMP-START BI INITIATIVES ....

When thinking about how to prioritize BI's efforts, leaders should let institution-specific strategy lead. However, EAB's "Ten No-Regrets Analyses" can serve as a helpful starting point for academic analytics. This infographic outlines 10 foundational analyses that isolate key academic cost drivers and savings opportunities, such as measuring faculty workload and collapsing excess sections.

▶ Download the infographic at **eab.com/strategicfinance**

TREND MATURITY ....
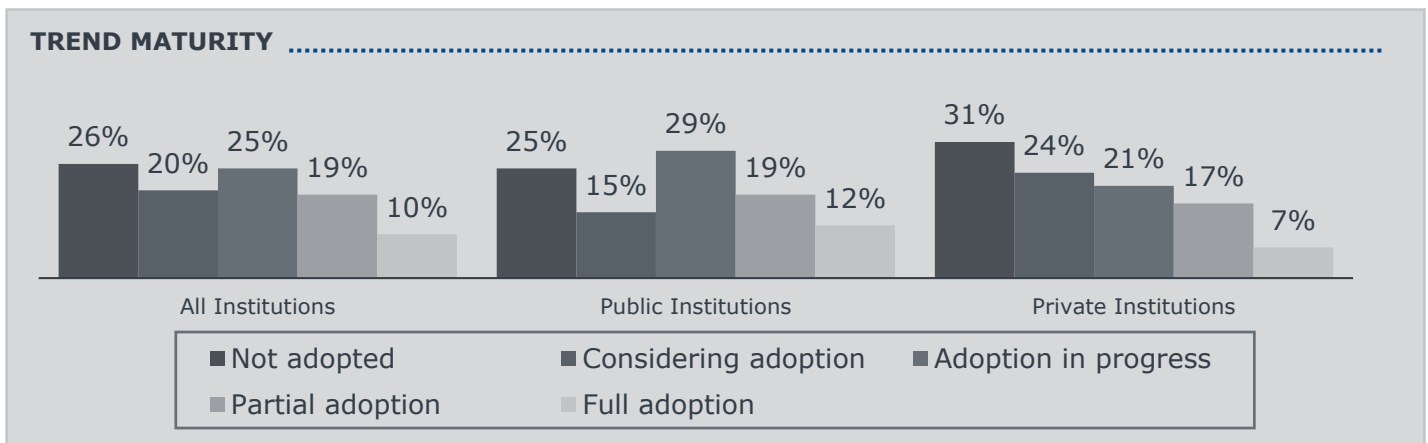
Source: University of Kentucky, Lexington, KY; EAB interviews and analysis.

Academic Financial Dashboards

TREND IN BRIEF ....

Central finance teams generate regular reports for academic unit leaders to monitor and analyze key unit financial performance indicators, such as faculty salaries by type (e.g., full-time, contract, fees, summer pay). Central finance may create reports manually (e.g., in PowerPoint or PDF) or work with business intelligence teams to develop self-service reporting capabilities.

SAMPLE APPLICATION: MANUAL DASHBOARDS ....

To maximize investments in data tools and BI teams, finance leaders need to ensure that their academic colleagues are accessing financial data and considering it in resource planning decisions. To that end, central finance teams are increasingly sharing unit-level financial dashboards with academic leaders. Most finance leaders currently create manual dashboards (i.e., created as PowerPoint presentations or PDFs) in coordination with BI talent and academic decision-makers. While automated, self-service dashboards are the end goal, many institutions will need several more years to build the BI teams and invest in the data tools to support self-service dashboarding. In the meantime, manual dashboards can serve as powerful tools to drive academic leaders' data fluency and adoption.

Spectrum of BI Maturity Across Higher Education

Most Institutions

Analytical Wild West	Coordinated Effort	Self-Service BI
Minimal, ad hoc report creation and analysis; limited investments in data staff or tools	Decision-makers coordinate with BI staff to access data and build custom reports	Distributed staff pull real-time, on-demand data reports from self-service portals
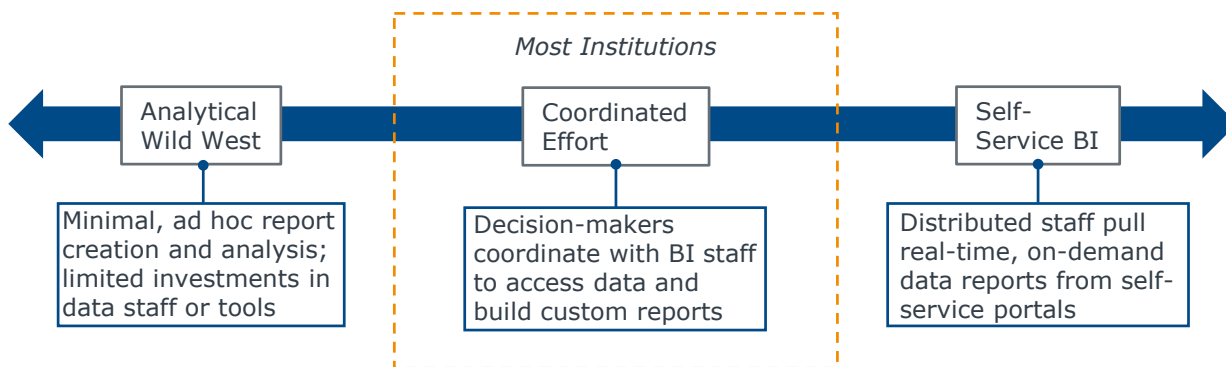
Stevens Institute of Technology and **Carnegie Mellon University** have both developed manual dashboards for academic stakeholders. Their dashboards are built in PowerPoint and Excel4apps, respectively, and share data on year-to-date expenditures and projected revenues. Manual dashboards like these are most impactful when CBOs regularly review them with academic leaders to ensure they are engaging with the data. Accordingly, Stevens' CBO reviews the dashboards in person with deans in quarterly meetings, while CMU's CBO discusses the dashboards live with deans twice per year. At these meetings, academic leaders clarify how to interpret different metrics, and central finance advises unit leaders on how to incorporate this data into their decision-making.

▶ Download sample manual dashboards from Carnegie Mellon University and Stevens Institute of Technology at **eab.com/strategicfinance**

Source: Carnegie Mellon University, Pittsburgh, PA; Stevens Institute of Technology, Hoboken, NJ; EAB interviews and analysis.

 eab.com

The **University of California, Berkeley** has moved beyond manual dashboards to provide academic stakeholders with Cal Answers, a self-service BI platform. Cal Answers pulls seven years of historical data from nine different data sources. Using this data, the system automates campus stakeholders' most frequently requested reports in user-friendly formats with clear data visualizations.

Cal Answers has generated numerous benefits for UC Berkeley. Because reporting is much faster, deans now use course and workload data more frequently in planning. Deans also have access to new reports (e.g., student course demand) that they are using to improve course planning (e.g., to reduce course bottlenecks and anticipate needs for additional sections). Further, because academic leaders and unit-based staff can access Cal Answers on-demand to answer their own questions, the central finance team now reportedly fields fewer low-value inquiries.

Berkeley
UNIVERSITY OF CALIFORNIA

University of California, Berkeley's Self-Service Business Intelligence Platform, "Cal Answers"

Features

- Self-service analytical tool accessible to staff, faculty, and students
- Centralizes all university data in one location (under the motto "One Question, One Answer")
- Contains premade reports and data visualizations to support common tasks and answer one-off inquiries

Cal Answers Data Sources

9 data sources provide 7 years of historical data:

- ERP
- Student Information System
- HR
- Finance
- Advancement
- Procurement
- Enrollment Management
- Financial Aid
- Accounts Receivable

5.5 Years to build initial system in phases   **~$2M** Annual costs for staff salaries to maintain system

▶ Access Cal Answers at https://calanswers.berkeley.edu/home

TREND MATURITY ┈┈┈

	All Institutions		Public Institutions		Private Institutions
Not adopted	14%		12%		21%
Considering adoption	24%		27%		14%
Adoption in progress	31%		31%		31%
Partial adoption	29%		27%		34%
Full adoption	2%		4%		0%

Legend: ■ Not adopted ■ Considering adoption ■ Adoption in progress ■ Partial adoption ■ Full adoption
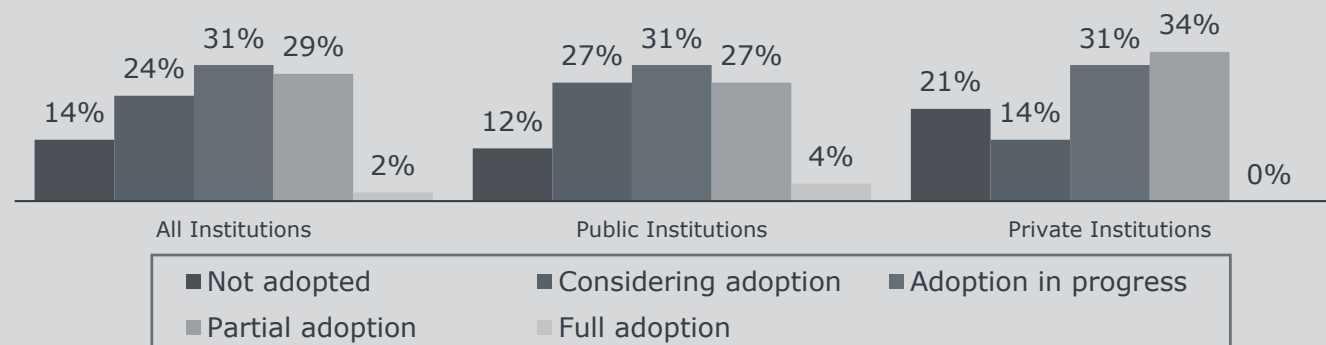
Source: University of California, Berkeley, Berkeley, CA; EAB interviews and analysis.

New Technology and Organizational Models Maximize Operating Efficiency

Hallmark Description

Finance functions leverage technology and innovative organizational models to operate as efficiently as possible. Through automation, process improvement, shared services, and other administrative efficiency initiatives, financial staff perform minimal manual transactions.

Trends Profiled in This Section

Trend 5: Technology-Driven Planning Process Redesign

- Automation Technologies
- Robotic Process Automation

Trend 6: Scaled Budget and Planning Services

- Electronic Finance Help Desk
- Finance Shared Services

Source: EAB interviews and analysis.

Technology-Driven Planning Process Redesign

TREND IN BRIEF ....

Budget and planning teams use Enterprise Performance Management (EPM) and other technology solutions to automate data consolidation and workflows, enhance reporting, and expedite planning processes.

SAMPLE APPLICATION: AUTOMATION TECHNOLOGIES ....

Finance teams must meet expanding compliance and reporting demands without increasing staffing levels. Accordingly, leaders need to reduce staff's time spent on lower-value transactional activities (e.g., data entry) to create staff capacity for more strategic work. To that end, many institutions are embracing automation solutions to decrease processing times for a variety of manual financial processes and workflows.

As the graphic below illustrates, business leaders are introducing solutions across financial units—the controller's office, accounts payable, procurement, and budget and planning, among others. While these solutions automate different processes to varying extents, the applications share a common benefit of decreasing staff time spent on transactional activities to create capacity for more strategic work.

In particular, many leaders are prioritizing automation solutions within budget and planning to shift staff capacity to strategic activities like financial analysis. These solutions digitize and automate manual components of the budget process, improving the quality of insights and accuracy of reporting.

Results of Select Institutions' Investments in Automation Technologies

	TEMPLE UNIVERSITY	LIPSCOMB UNIVERSITY	OLD DOMINION UNIVERSITY	The University of Texas Rio Grande Valley	University of Kentucky
Finance Function	Controller	Controller	Accounts Payable	Procurement	Budget and Planning
Vendor Product	Wdesk (Workiva)	Rapid Insight	Chrome River	Jaggaer	Axiom (Kaufman Hall)
Process Automated	Populating footnotes in quarterly financial reports	Year-end revenue reconciliations	Submission, processing, and management of travel payments	Submission and processing of procurement receipts	Generation of financial reports, budgets, and plans
Results	Decreased report errors and version control issues; faster report creation speed (30+ hours saved)	Reallocation of staff time from report creation to data analysis	Faster reimbursements, fewer faculty complaints	Reallocated FTEs to strategic roles; payment processing reduced from a month to less than a week	90% reduction in time to produce select reports (e.g., daily tuition models)

eab.com

Looking beyond traditional automation solutions, robotic process automation (RPA) is a method of programming artificial intelligence or software "bots" to mimic human behavior, allowing them to perform high-volume, repeatable tasks. RPA can be used to automate nonstandard repeatable processes, such as identifying data points across nonstandard forms and transferring data across systems with different logins. RPA can automate processes that are difficult to code or script into systems and therefore cannot be automated with traditional technologies.

While RPA is an emerging automation application in higher education, private sector adopters have seen promising results—including reducing staff time spent on data entry and journal entry processing. Higher education finance leaders are beginning to pursue similar results in their operations. For example, finance leaders at **Carnegie Mellon University**, an early higher education adopter, are implementing RPA to extract information from nonstandard invoices and import this information into their financial management system.

RPAs Show Promise from Private Sector Successes

95%

reduction in human hours needed to process mortgage loans after Johnson Financial Group implemented RPA to upload and manage data

50%

increase in journal entry processing speed at a Fortune 500 company that used RPA to train a bot to log in, manipulate, and transfer information within an accounting system

Carnegie Mellon Making Early Investments in RPA

- Utilizing enterprise content management software functionality to route, import, and extract data from AP invoices automatically
- Implementation planned for April 2019

Other Institutions Exploring RPA Applications

UNIVERSITY OF NOTRE DAME • NYU • UT DALLAS

TREND MATURITY ....

All Institutions
24% — 27% — 30% — 17% — 2%

Public Institutions
15% — 33% — 38% — 12% — 2%

Private Institutions
43% — 18% — 11% — 25% — 4%

■ Not adopted ■ Considering adoption ■ Adoption in progress
■ Partial adoption ■ Full adoption
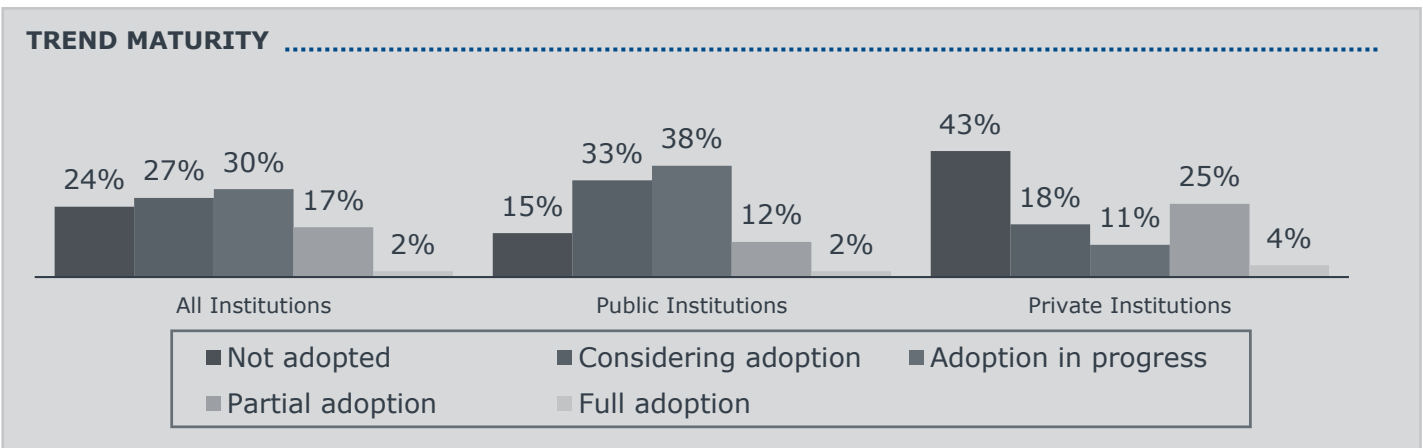
Source: Carnegie Mellon University, Pittsburgh, PA; EnableSoft, Inc., https://www.enablesoft.com/resources/case-studies/johnson-financial-case; KPMG, https://assets.kpmg.com/content/dam/kpmg/us/pdf/2017/10/kpmg-powered-solutions-for-tech-companies-issue-three.pdf; New York University, New York, NY; University of Notre Dame, Notre Dame, IN; University of Texas at Dallas, Dallas, TX; EAB interviews and analysis.

Trend 6
Scaled Budget and Planning Services

TREND IN BRIEF ....

Finance leaders reorganize staff and/or reallocate process responsibilities to achieve scale in transactional work. By minimizing analytical staff's routine transactional responsibilities, leaders maximize their capacity for financial analysis and planning.

SAMPLE APPLICATION: ELECTRONIC FINANCE HELP DESK ....

Many budget and planning staff do not have capacity to perform strategic financial activities because they're overwhelmed by lower-value transactional tasks (e.g., collecting and aggregating unit data, submitting time cards, fielding basic finance questions from their colleagues). To expand finance teams' impact on campus, finance leaders are reorganizing staff and reallocating process responsibilities to create capacity for more strategic work.

Leaders can pursue two types of reorganizations to create capacity among existing staff. The first strategy is to centralize high-volume transactional tasks. Many campuses are considering shared services migrations to achieve this goal. Of course, while such initiatives can create the most significant capacity gains, they are often politically fraught and time- and resource-intensive. Fortunately, leaders can still achieve meaningful gains through less disruptive initiatives. **New York University (NYU)**, for example, created its online Finance Service Desk platform to centralize responses to staff's most frequently asked financial questions. Central staff support the platform by fielding questions users cannot find online. NYU estimates that the web help desk answers more than 80 percent of inbound staff inquiries, leaving only the remaining 20 percent to be triaged to finance professionals. Sparing analytical staff from routine inquiries allows staff to focus their energies on higher value tasks.

NEW YORK UNIVERSITY

"When are proposed budgets due?"

"How do I file an insurance claim?"

"When will my purchase be reimbursed?"

"How do I access the journal entry management system?"

NYU's Central Finance Service Desk

Online platform of financial resources called "FinanceLink"

Support staff for platform available via email and phone during standard business hours

Website divided into topical sections, with specific portal for unit fiscal officers

▶ Access FinanceLink at https://www.nyu.edu/employees/resources-and-services/financelink.html

The second strategy to create capacity for strategic work is to consolidate all analytical staff into a central function. This is the inverse of the traditional shared services model, which consolidates transactional staff in a central delivery center. **Tufts University** created a central budget center in 2015 by consolidating 30 central and unit-level budget planning staff. In Tufts' model, each academic unit is assigned a dedicated central budget center team instead of employing its own budget staff. Central teams are led by a director and supported by one to two analysts, depending on the size of the unit. Budget center teams perform all transactional budget planning work on behalf of the units. Moreover, budget center staff also have capacity to perform more rigorous analysis of unit performance because they are fully dedicated to budget planning work.

Of course, Tufts' deans and program managers are still accountable for unit financial health. Academic leaders determine financial priorities and have final authorization over all centrally developed budget proposals. To ensure central teams understand unit priorities, they join regular meetings with their assigned units and also host office hours in units to answer ad hoc questions and deepen relationships with unit leadership.

Tufts
UNIVERSITY

Tufts University Budget Shared Services Center

- Shifted ~30 central and unit-level finance staff into shared service center
- Planned and implemented across 10-month period
- FTE-neutral transition, but positions rewritten to include more analytical work
- All academic units assigned a central budget director and 1-2 dedicated financial analysts
- Directors and financial analysts sit in shared administrative space but host office hours in their designated colleges

Representative Budget Center Team

Director *Analyst* *Analyst*

- Develop operating and capital budgets
- Review unit budgets to identify and resolve variances and deficits
- Provide reports on available balances for all accounts and fund types
- Perform budget variance analyses
- Measure performance and report performance indicators to unit leaders

Representative Unit Staff with Budget Responsibility

Dean *Exec. Assoc. Dean* *Program Manager*

- Set unit strategy and budgetary priorities
- Provide strategic input to Budget Center team during budget and forecast development
- Approve budgets created by Budget Center team
- Review and approve department budget requests
- Liaise with the Budget Center team to resolve fiscal or budgetary issues

TREND MATURITY

All Institutions: 16%, 34%, 23%, 20%, 7%
Public Institutions: 20%, 35%, 18%, 24%, 4%
Private Institutions: 11%, 32%, 9%, 14%, 14%

- Not adopted
- Considering adoption
- Adoption in progress
- Partial adoption
- Full adoption
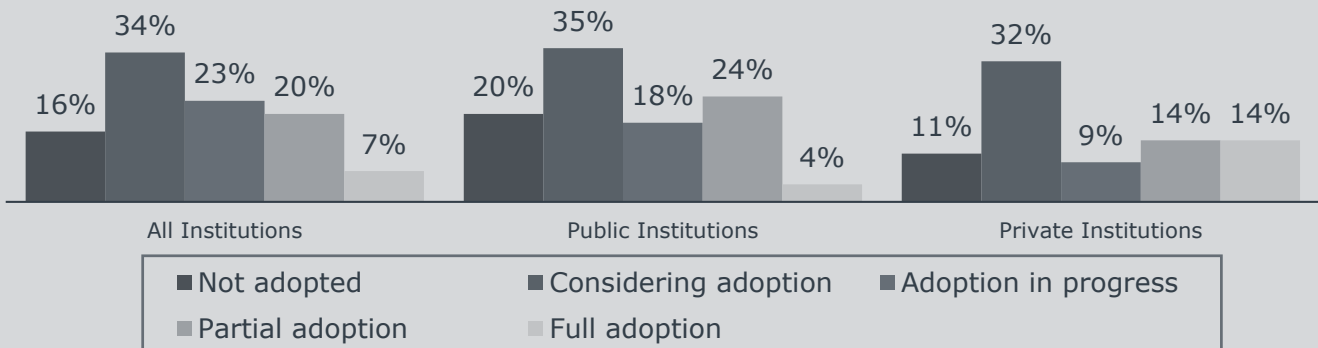
Source: Tufts University, Medford, MA; EAB interviews and analysis.

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Long-Range Financial Plans Consider Future Revenue Threats

Hallmark Description

Finance functions conduct long-range financial planning and scenario modeling to project the impact of investments and to anticipate revenue threats. Leaders reorganize central budget, planning, and financial analysis teams to coordinate budget planning, modeling, and analysis.

Trends Profiled in This Section

Trend 7: Long-Range Financial Modeling and Scenario Planning

- Revenue Risk Modeling Exercises
- Scenario Planning Workshops

Trend 8: Functional Redesign to Expand Budget and Planning Scope

- Integrated Budget and Planning Teams
- Budget and Planning Functional Reorganization

Source: EAB interviews and analysis.

Long-Range Financial Modeling and Scenario Planning

TREND IN BRIEF •••

Central finance teams build financial models to demonstrate the financial impact of both planned strategic investments and potential future revenue risks. Models use research-backed assumptions—not straight-line forecasts—to project multiple potential future states. Finance leaders use scenario models and planning exercises to generate consensus around response plans for future operating risks.

SAMPLE APPLICATION: REVENUE RISK MODELING EXCERCISES ••••••••••••••••••••••••••••••••••

Historically, higher education institutions have not regularly built multi-year financial plans, but today's operating pressures are prompting more institutions to project resource availability and plan for financial commitments across a longer time horizon. Finance leaders are also creating more robust financial models to evaluate and plan for the impact of future revenue risks.

For example, **Stevens Institute of Technology** models the financial impact of changes to its graduate enrollment mix. Graduate students account for more than half of Stevens' total enrollment, and the majority of these students are international students from India and China. When political events elevated the revenue risk of saturated international enrollment to the board's attention, Steven's Financial Planning, Budgeting, and Analysis team built a model to help the board understand this risk and develop a mitigation plan. The model used what-if scenarios and sensitivity analyses to demonstrate the impact of one or both international markets faltering. Ultimately, the models projected that for every one lost international enrollment, Stevens would need to enroll 1.5 new undergraduate students. While stakeholders already acknowledged this risk existed, quantifying it helped them realize its financial magnitude, and prompted leaders to develop a response plan.

International Recruitment Shortfall Modeling Exercise

Board Raises Concerns About International Market Saturation

*"Most of our graduate population is international, predominantly from India and China. **What will we do if these markets disappeared?**"*

Finance Builds Model to Project Impact and Inform Response

Select Inputs (Current State and Future Assumptions)

• Undergraduate enrollments
• Undergraduate tuition rate
• Undergraduate discount rate
• Undergraduate instructional costs
• Graduate program enrollments
• Graduate program tuition rates

CBO and Board Develop Response Plan

1.5 Projected new undergraduate students needed to compensate for every one lost international student

✓ Finance, academic, enrollment leaders share common understanding of revenue risk

✓ Board satisfied with risk mitigation strategy

Source: Stevens Institute of Technology, Hoboken, NJ; EAB interviews and analysis.

Select finance leaders are also facilitating scenario planning workshops to prepare their colleagues to respond to potential revenue risks. In these workshops, academic and administrative leaders discuss a handful of potential future scenarios that would affect institutional sustainability. Workshops help stakeholders better understand the potential financial implications of market forces and build consensus around response plans.

The graphic below illustrates a scenario planning workshop held at a private research institution in the Midwest. Here, the CBO, President, and VP of Enrollment Management brought together 38 leaders and board members to discuss four hypothetical scenarios related to pricing, financial aid, and local competition. Stakeholders first worked through the scenarios in small groups, and then shared their ideas with attendees more broadly.

In addition to improving long-term planning, finance leaders who have executed similar workshops say they can also spur more immediate action. The "doomsday" nature of the discussion often helps stakeholders realize some changes to institutional policy and processes are simply good ideas, and must be executed now in order to make the institution more resilient to external threats.

Eagleton[1] University's Scenario Planning Workshop

Midsize Private Research University in Midwest

- 38 attendees, including cabinet, deans, associate provosts, select administrative directors, and the board of trustees chair

- Attendees broken into four cross-silo groups to discuss different scenarios

- Each group received binder with institution-specific data to inform discussion

- President, CBO, and VP of Enrollment Management circulated room to answer questions

- Groups shared discussion highlights with broader participants at conclusion of exercise

Scenarios Discussed

- Student debt has tripled. Both political parties agree to make two- and four-year public education free
- Federal government ties Pell Grant funding to graduation rates
- Nearby competitor launches lower-cost degree program in one of our flagship disciplines
- Public institution introduces articulation agreement and financial aid program targeting students at top feeder school

"

"Even if these scenarios don't come true, we'll pursue some of the ideas we discussed. They're creative ways to better meet student needs."

President
Eagleton University
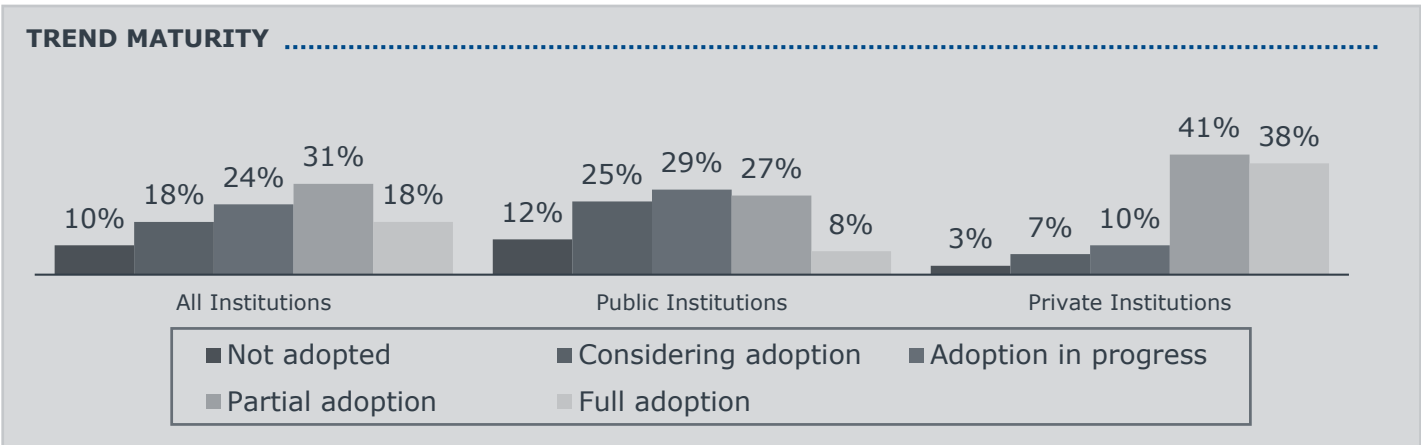
TREND MATURITY ···

	Not adopted	Considering adoption	Adoption in progress	Partial adoption	Full adoption
All Institutions	10%	18%	24%	31%	18%
Public Institutions	12%	25%	29%	27%	8%
Private Institutions	3%	7%	10%	41%	38%

Source: EAB interviews and analysis.
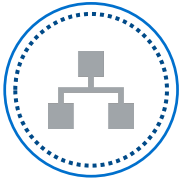
Functional Redesign to Expand Budget and Planning Scope

TREND IN BRIEF ....

Finance leaders revamp budget and planning functions to optimize strategic resource planning. Depending on institutional context, leaders reorganize teams to better integrate short- and long-term planning, add or elevate planning staff profiles to increase capacity for modeling and analysis, and elevate functional leadership to signal importance of planning in long-term strategy and financial sustainability.

SAMPLE APPLICATION: DEDICATED FINANCIAL PLANNING AND ANALYSIS ROLES ....

Despite efforts to create capacity for existing staff, finance leaders often need to add roles or hire staff with new skillsets to perform more long-range financial planning and analysis. Specifically, many finance leaders are creating dedicated financial analyst roles for the first time, or hiring new financial analysts to create more capacity for necessary financial planning activities. While the scope and reporting structure of these roles vary across institutions, the skills sought in financial analyst candidates are largely consistent. These skills are reflected in the **University of Virginia** position description excerpted below. Primarily, financial analysts need sophisticated finance and data skills to perform more advanced analyses. Candidates also need strong communication skills to effectively explain complex financial information to nonfinancial audiences.

Finance leaders are creating financial analyst roles in three ways. First, many leaders are adding financial analysts over time by reallocating salary lines from obsolete roles as attrition allows. Second, leaders are rescoping existing position responsibilities so that staff spend more time on financial analysis, particularly as automation technology reduces staff members' transactional workloads. Finally, some finance leaders have effectively convinced their executive colleagues that expanding financial analysis is a critical business need warranting new staff lines.

Senior Financial Analyst
UNIVERSITY of VIRGINIA

Required Skills and Experience:

- At least five years of experience in **financial modeling, data analysis**, and budgeting is required.

- Demonstrated ability to **collect, analyze, and interpret information** for senior leaders is required.

- The ability to **clearly communicate with diverse employees** at differing levels in the organization **who have varying levels of financial knowledge** is also required.

- Advanced knowledge of Microsoft Excel and **proficiency with financial modeling and statistical software** are required.

Industry Hiring Themes

> More sophisticated finance skills

> Data analysis skills

> Ability to explain complex financial information to stakeholders outside of finance

> Proficiency with general and technical software

Tactics for Creating New Roles

1 Reallocate funding from obsolete roles through attrition

2 Re-scope existing position responsibilities

3 Allocate new strategic funds

Source: University of Virginia, Charlottesville, VA; EAB interviews and analysis.

A more expansive strategy to expand the scope of budget and planning is to completely overhaul existing functions. **Dartmouth College**, for example, grew its budget and planning team, expanded its responsibilities, and elevated its status on campus. Dartmouth's budget office was historically staffed by one director and one analyst. These staff members mainly supported unit budget proposals and created the annual operating budget. When Dartmouth's board started asking tougher financial questions that this team was not equipped to answer, leaders realized they were underinvested in long-range financial planning and analysis. In response, they added two new analyst positions with higher financial skill sets to expand the budget office's capabilities. They also rebranded the team as the Financial Planning and Budget Office to signal its new strategic role, and raised its leadership from director level to AVP to increase the team's involvement in strategy conversations. The new team has improved the frequency and scope of financial planning and provides more robust, on-demand data and analyses to senior decision makers.

Dartmouth College's Financial Planning and Budget Office Transformation

BEFORE | AFTER | Dartmouth

Budget Office

1 **Augment Staffing**
Added two analyst positions requiring professional finance skill sets and offering commensurate salaries

- *Staff*: Two FTE (budget director and analyst)

- *Services*:

  – Unit budget preparation assistance

  – Institutional budget preparation

2 **Rebrand Function**
Changed name to signal expanded scope to campus stakeholders

- *Tools*: Most work performed using Excel

3 **Elevate Leadership**
Raised director to assistant vice president role to reflect expanded scope and enhance influence

Financial Planning and Budget Office

- *Staff*: Four FTE (two analysts, assistant director, and AVP)

- *New Services*:

  – Unit financial consultation and budget evaluations

  – Quarterly reporting and analysis

  – Long-range planning

- *Tools*: Work performed in Hyperion Planning

Impact of Transformation

✔ More frequent and robust initiative and scenario modeling

✔ Enhanced financial decision support for senior leaders and unit decision-makers

✔ Improved credibility among unit stakeholders and ratings agencies

TREND MATURITY ....

All Institutions: 13% | 26% | 26% | 21% | 13%

Public Institutions: 12% | 35% | 21% | 19% | 13%

Private Institutions: 17% | 14% | 31% | 24% | 14%

- ■ Not adopted
- ■ Considering adoption
- ■ Adoption in progress
- ■ Partial adoption
- ■ Full adoption
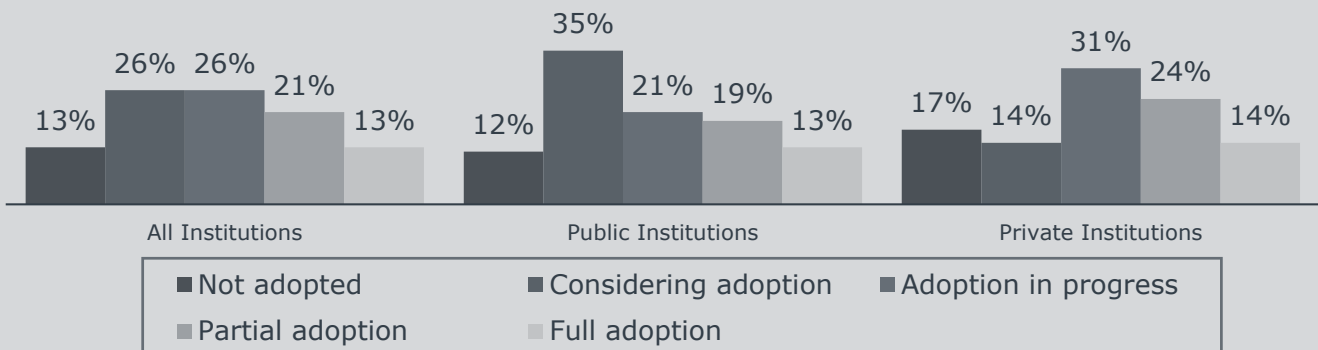
Source: Dartmouth College, Hanover, NH; EAB interviews and analysis.

Hallmark 4

Professionalized Staff Support Ongoing Academic Resource Planning

Hallmark Description

Finance is embedded in academic decision-making. Professionalized finance staff provide analysis to guide academic leaders' resource planning decisions. Academic decision-makers possess the financial acumen to make informed planning decisions.

Trends Profiled in This Section

Trend 9: Embedded Analytical Support in Academic Units

- Finance Liaisons
- Dedicated Academic Planners

Trend 10: Financial Upskilling Programs for Academic Stakeholders

- Financial Training Programs
- Department Chair Mini-MBA Training Program

eab.com

Embedded Analytical Support in Academic Units

TREND IN BRIEF ••

Dedicated professional finance staff analyze academic budgets and help academic leaders use financial data in resource planning. Financial analysts may sit centrally or in the academic units, depending on degree of centrality of resource planning.

SAMPLE APPLICATION: FINANCE LIAISONS •••

Despite the magnitude of academic budget decisions on institutional financial health, many academic leaders do not have access to professional finance staff to regularly consult on resource planning decisions. In response, institutions are introducing new roles and organizational models to expand and enhance unit-based analytical support.

Some finance leaders are creating liaison models to scale the analytical capabilities of existing staff. At **Creighton University**, professional analysts historically worked only in the three largest academic units, while faculty or administrative assistants managed budgets in other units. Finance leaders lacked the funds to create new roles in all units, so they proposed a liaison model in which some analysts would support multiple smaller units. The largest units with the most complex finances would retain dedicated analysts.

The CBO negotiated with deans in the large units to pull existing analysts centrally so that they could be redeployed. He also hired a few new analysts to support the model. Even with these new hires, the model was more cost-effective than creating new roles for every unit. Now all deans affirm that they feel better equipped to make resource allocation decisions with their finance liaisons' support.

Simplified Illustration of Creighton University's Budget and Planning Reorganization

Select units have professional financial budget managers reporting to deans	Other units' budgets managed by administrative assistants or faculty members

All units have dedicated or shared professional finance staff	Finance liaison assignments based on unit needs and staff expertise	Finance staff report centrally but sit in dean's suite

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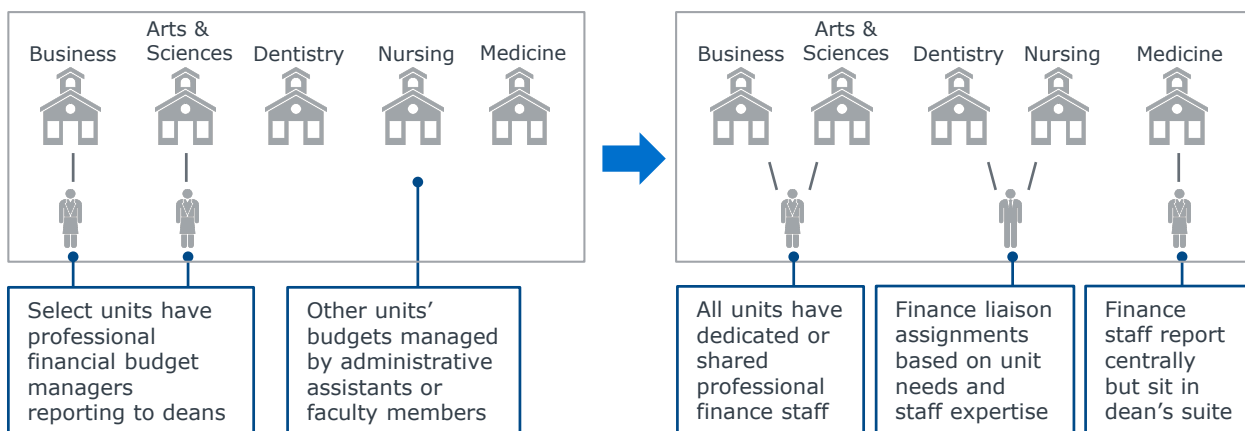
CBO's Steps to Reorganization:

1 Met with deans to identify academic units with desire for more central finance support

2 Negotiated with interested deans to move funding and responsibilities for unit financial management centrally

3 Created central staff liaisons to scale new central resources across units with financial demand

4 Used initial realignments as proof of concept to win buy-in for model in remaining units

Source: Creighton University, Omaha, NE; EAB interviews and analysis.

Like Creighton, leaders at **The University of Texas at Arlington (UTA)** realized they needed to provide academic units with professional financial planning support. However, UTA leaders chose a more expansive approach—adding an entirely new layer of analytical staff.

In 2016, UTA created a new AVP for Academic Resource Planning role, charged with overseeing financial planning across academic affairs. The new AVP convinced the president and provost that each of the eight colleges needed 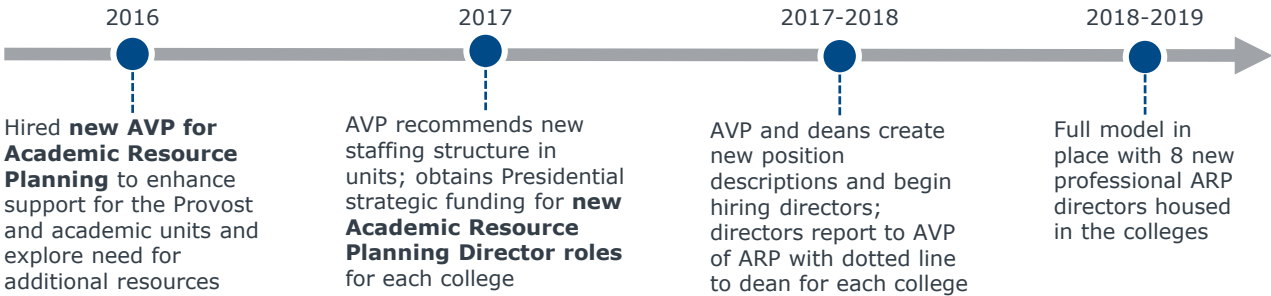its own dedicated financial planner, and the president agreed to fund the new roles as a strategic priority. These unit planners—called Directors of Academic Resource Planning (ARP)—build models and forecasts that support planning, resource allocation, and business process improvement in the units.

UTA already had budget managers working in academic units. Rather than eliminating those roles, UTA retained them and transitioned them to focus entirely on transactional work, supplementing the advanced financial analysis conducted by the Directors of ARP. Retaining these existing staff also helped finance leaders achieve buy-in for the new model.

The University of Texas at Arlington's Academic Resource Planning (ARP) Model Implementation

2016

Hired **new AVP for Academic Resource Planning** to enhance support for the Provost and academic units and explore need for additional resources

2017

AVP recommends new staffing structure in units; obtains Presidential strategic funding for **new Academic Resource Planning Director roles** for each college

2017-2018

AVP and deans create new position descriptions and begin hiring directors; directors report to AVP of ARP with dotted line to dean for each college

2018-2019

Full model in place with 8 new professional ARP directors housed in the colleges

Director, ARP Profile

- **Advanced degree** (e.g., MBA, PhD)
- **10+ years of relevant experience** in higher education or equivalent experience
- Knowledge and experience in business operations, **forecasting**, and **business modeling** in an academic environment

> "The model is still in its infancy, but we're proud of what we've accomplished so far. The directors are now fully embedded in the colleges. Deans are already asking why we didn't have these positions years ago. One dean even asked for his director's office to be moved next to his."
>
> Yaa-Yin Fong
> AVP For Academic Resource Planning, UT Arlington

TREND MATURITY

All Institutions
- Not adopted: 38%
- Considering adoption: 21%
- Adoption in progress: 15%
- Partial adoption: 17%
- Full adoption: 10%

Public Institutions
- Not adopted: 33%
- Considering adoption: 25%
- Adoption in progress: 20%
- Partial adoption: 10%
- Full adoption: 12%

Private Institutions
- Not adopted: 48%
- Considering adoption: 14%
- Adoption in progress: 3%
- Partial adoption: 28%
- Full adoption: 7%

Legend:
- Not adopted
- Considering adoption
- Adoption in progress
- Partial adoption
- Full adoption

Source: The University of Texas at Arlington, Arlington, TX; EAB interviews and analysis.

Financial Upskilling Programs for Academic Stakeholders

TREND IN BRIEF ....

Finance leaders create formal training programs for academic stakeholders to improve financial acumen and drive better resource allocation decisions. Leaders create one or more training programs to address the skills needs of different audiences—in particular, academic budget staff and academic leaders (i.e., deans and department chairs).

SAMPLE APPLICATION: FINANCIAL TRAINING PROGRAMS ....

Budget staff require advanced financial planning and analysis skills to perform new resource planning activities, but many current staff members lack these necessary skills. In response, institutions like the **Indiana University System** and the **University of California, Berkeley** have introduced financial training programs to address these skills gaps. These programs teach budget and planning staff how to more efficiently and effectively perform financial tasks and comply with institutional business processes.

The table below shares key characteristics of the IU System and UC Berkeley financial training programs. The programs' content and goals are similar, but the audiences differ. IU trains a hand-selected cohort of unit budget officers, while UC Berkeley's trainings target unit budget officers but are open to all faculty and staff. IU and Berkeley see a variety of training needs across their large staff pools, so they have created training programs with diverse and expansive curricula. Smaller institutions may not need to develop such robust training programs, but instead can use these curricula as starting points to pinpoint topics to reinforce with their staff, based on staff needs.

Financial Training Programs at Indiana University and UC Berkeley

	IU **Fiscal Officer Development Series**	Berkeley UNIVERSITY OF CALIFORNIA **Finance Literacy Training**
Goal	Provide financial strategies and tools to increase performance	Build the knowledge, skills, and abilities of campus finance professionals
Audience	Unit fiscal officers across IU System	Targets unit budget officers but open to all faculty and staff
Structure	Cohort of 25-30 participants attend 1- to 2-day sessions each month across the academic year	Monthly courses offered across one academic year
Instructor	Unit leaders and staff across campuses and divisions	Unit leaders across divisions
Sample Courses	• *Budget Development* • *Capital Asset Management* • *Treasury Management*	• *Revenue Generation Opportunities* • *GAAP and GASB* • *Understanding Financial Statements*

▶ The Business Affairs Forum's **Budget and Planning Talent Development Toolkit** provides the full IU System and UC Berkeley training curricula, as well as curricula from the University of Minnesota and University of Virginia. Download these training curricula at **eab.com/baf-budget-staff-toolkit** to recreate entire training programs or extract certain courses that target particular staff shortcomings.

Source: Indiana University System, Bloomington, IN; University of California, Berkeley, Berkeley, CA; EAB interviews and analysis.

Academic leaders (i.e., deans and department chairs) also need financial training to make prudent resource planning decisions and work productively with budget staff. However, academic leaders benefit most from training approaches that put financial concepts in the context of their daily decisions.

To that end, the **University of Toronto** offers a mini-MBA training for academic leaders. The one-day training first primes department chairs on the budget issues they are likely to face in their roles, and then gives them an opportunity to apply learnings in interactive exercises. A key feature of the mini-MBA training is an afternoon session in which chairs collaboratively work through four case studies. The case studies simulate some of the technical and financial decisions that they will routinely make in the course of their duties.

Overview of Mini-MBA Training Program

UNIVERSITY OF
TORONTO

Budget Primer (morning)

- Introduction to the university's budget situation at the institutional and college level
- Basic breakdown of unit revenue drivers and cost allocation policies (e.g., indirect cost charges)
- High-level review of program planning

Case Training (afternoon)

- Scenario-based training modeled on common strategic challenges (e.g., enrollment planning)
- Discussion in small groups to read cases and formulate a strategy
- Required quantitative or technical work mirrors work that will be expected of chairs

1 Managing Reserves and Carry-Forwards

3 Launching a New Professional Master's Program

2 Faculty Workload Planning

4 Research Stream Graduate Enrollment Planning
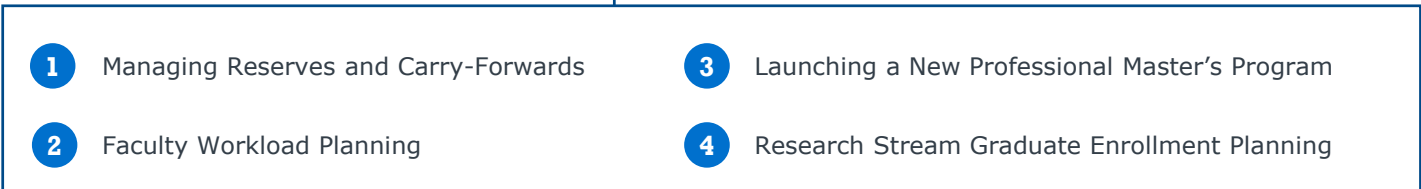
▶ The Business Affairs Forum's **Budget and Planning Talent Development Toolkit** reproduces all four case studies from the mini-MBA training program. Download the case studies at **eab.com/baf-budget-staff-toolkit** to recreate the mini-MBA training program or share the case studies with academic leaders at existing training days and meetings.

TREND MATURITY ....

| All Institutions | Public Institutions | Private Institutions |

- ■ Not adopted (37%, 29%, 52%)
- ■ Considering adoption (32%, 33%, 28%)
- ■ Adoption in progress (21%, 24%, 4%)
- ■ Partial adoption (7%, 10%, 3%)
- ■ Full adoption (4%, 4%, 3%)
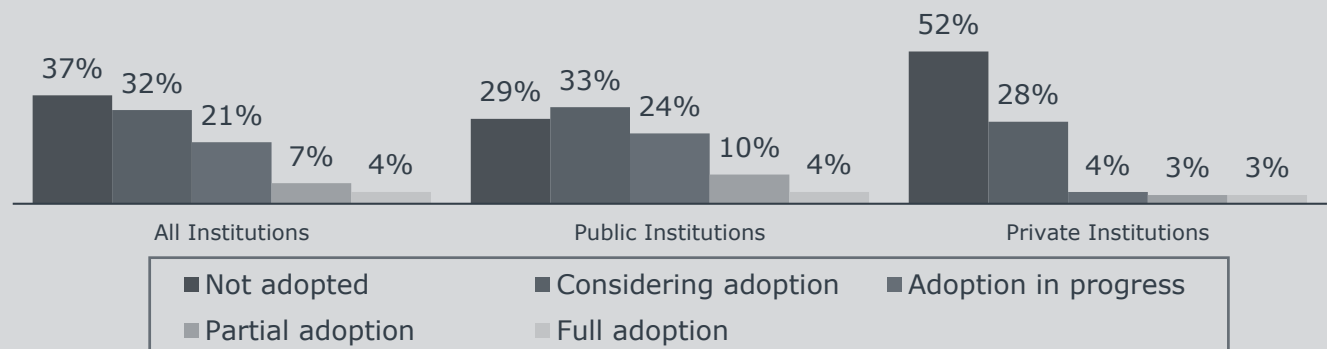
Source: University of Toronto, Toronto, ON; EAB interviews and analysis.

Central Finance Provides Just-in-Time Consultation on Unit Planning and Strategy

Hallmark Description

Finance functions provide more intense support for unit initiatives when needed. Finance intervenes if units' financial performance falters and offers financial and project management support to further units' strategic initiatives.

Trends Profiled in This Section

Trend 11: Metric-Driven Intervention in Unit Performance Issues

• Academic Unit Financial Scorecards

Trend 12: Internal Financial Consulting Teams

• Internal Consulting Teams
• Matrix Teams

Metric-Driven intervention in Unit Performance Issues

TREND IN BRIEF ···

Finance and academic leaders define thresholds for satisfactory financial performance for each major operating unit. Leaders use dashboards or other reports to regularly monitor unit performance metrics. When unit performance falls below predefined thresholds, leaders promptly intervene to help unit leaders strategize cost-cutting or revenue growth opportunities.

SAMPLE APPLICATION: ACADEMIC UNIT FINANCIAL SCORECARDS ························

Central finance leaders are increasing their focus on unit financial affairs, recognizing the importance of unit financial health to institutional sustainability. At many institutions, however, central leaders do not have capacity to provide intensive support to all operating units. In response, some leaders are using unit performance data to determine where to provide more support.

The central finance team at **The Ohio State University**, for example, creates a two-page scorecard for each academic unit every two months. Each scorecard contains performance targets for 18 different KPIs across teaching, earnings, research, and advancement. To make the process more manageable, the finance team uses the same 18 KPIs across all units. The scorecards signal performance on targets with red, yellow, and green color-coded arrows, which help central finance quickly spot trends needing their attention.

THE OHIO STATE UNIVERSITY

College Financial Scorecards

- Financial Planning and Analysis team generates two-page scorecard for each unit every two months

- Metrics and performance percentage thresholds standardized across all academic units to allow comparisons

- Each metric tracks five years of historical data with color-coded directional trend arrows to indicate progress on performance targets

- Central finance assigns overall unit health status by combining individual metrics with qualitative observations

- CBO uses scorecard to monitor performance, determine degree of intervention in unit financial affairs
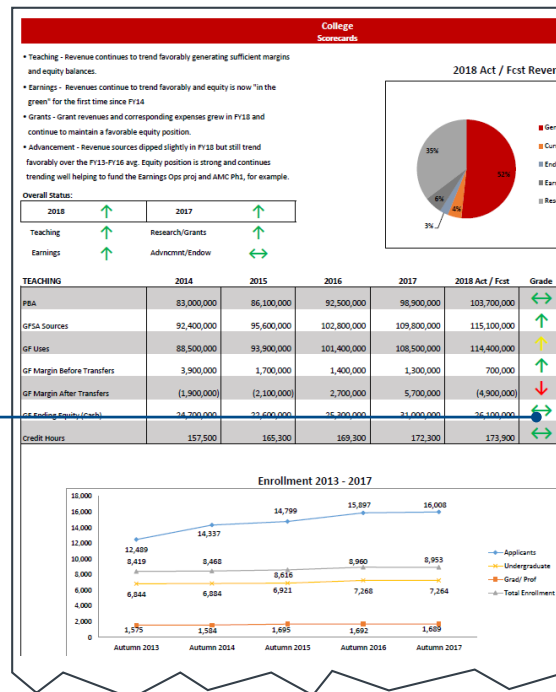
▶ Download Ohio State's full scorecard at **eab.com/strategicfinance**

Source: The Ohio State University, Columbus, OH; EAB interviews and analysis.

After generating the scorecards, Ohio State's central finance team takes the average of all 18 metric scores and assigns each unit an overall score using the same stoplight color schema. In addition to quantitative metrics, the finance team also considers qualitative factors when setting unit scores. For example, units with new deans automatically receive yellow scores.

The overall unit scores prescribe the CBO's involvement in unit affairs. The CBO meets with deans of red units monthly, yellow quarterly, and green annually. Because central finance updates the scorecards every two months, a unit's meeting frequency can change during the fiscal year. About 70% of units receive a green score, allowing the CBO to focus on the 30% of units needing more urgent support. For example, financial scorecards prompted central finance to intervene when the enrollment metric for the College of Arts and Sciences began to trend downward. Central finance helped the dean identify new revenue opportunities before enrollment declines became overly problematic.

OSU's Central Response to Overall Unit Performance Scores

	Overall Score	Representative Unit Characteristics	Frequency of CBO Performance Conversations	Typical Share of Units Receiving Score
	Red	• Unit not meeting performance targets • Unit has history of financial problems	Monthly	10%
	Yellow	• Unit performance metrics nearing problem zone • Unit leader planning major strategic initiative • New dean in seat	Quarterly	20%
	Green	• Unit meeting performance targets • Central confident in unit financial leaders	Annually	70%
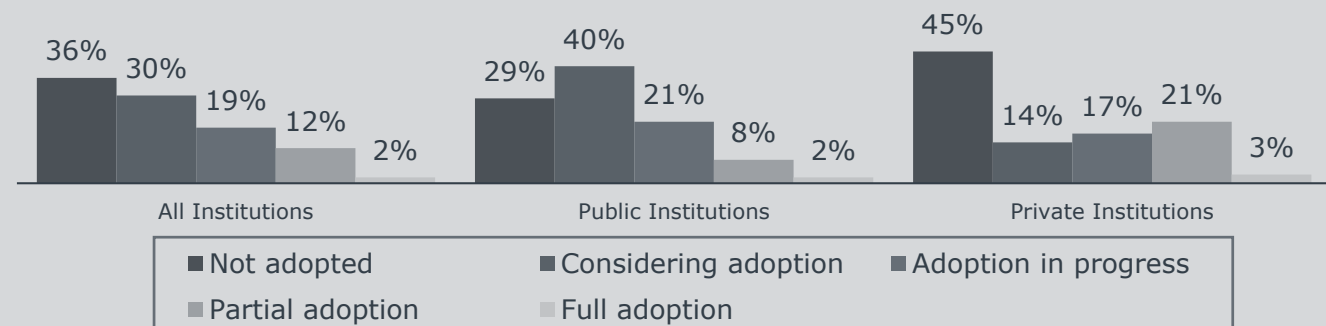
Source: The Ohio State University, Columbus, OH; EAB interviews and analysis.

Internal Financial Consulting Teams

TREND IN BRIEF ....

Central finance leaders oversee internal teams that provide technical financial and project management support for unit initiatives. Leaders may hire new teams of dedicated full-time staff to support initiatives or may convene on-demand project teams of existing staff as initiatives arise.

SAMPLE APPLICATION: INTERNAL CONSULTING TEAMS ....

Existing academic unit staff often lack the specialized skill sets required to execute strategic initiatives, like vendor evaluation, process redesign, and program launches. Many leaders instead would like to engage external consultants' to support these initiatives, but most do not have the financial resources to hire consultants for all projects. In response, some institutions have built in-house consulting teams to provide more cost-effective expertise on specialized projects.

For nearly two decades, **The George Washington University** has staffed an internal consulting team, the Business Management and Analysis Group (BMAG). BMAG provides four primary services to campus units: business process analysis, financial analysis for high-cost initiatives, project management for technology implementations, and position support for vacant roles. The graphic below includes examples of how campus units have used BMAG's services to support their strategic and operational initiatives.

While BMAG's annual operating costs are approximately $2.1 million,[1] the team's services replace an estimated $4.7 million in annual external consultant fees. BMAG also serves as an incubator of financial talent. Nine former BMAG staff now serve in director-level roles across the university, including as unit budget officers.

GW The George Washington University's Business Management & Analysis Group (BMAG)

- 14 FTEs with backgrounds in higher education, corporate consulting, project management, and financial analysis
- Complete 40+ projects per year
- 80% of projects proposed by units
- 20% of projects in support of central strategic initiatives (e.g., Presidential projects, ERP implementation)
- Overseen and funded by Finance Division
- $2.1 million annual operating cost[1]

Four Types of Services

Business Process Analysis

Example: Process mapping for research personnel hiring at Graduate School of Education

Financial Analysis

Example: Data analysis and negotiation support for online learning provider for School of Public Health

Project/Program Management

Example: Implementation of faculty workload solution within School of Nursing

Business Continuity/Position Support

Example: BMAG consultant served as interim Finance Director of Division of External Relations until permanent candidate hired

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1) 2017 operating cost.

Source: The George Washington University, Washington, DC; EAB interviews and analysis.

To support smaller unit projects as they arise, institutions can form one-time cross-functional teams, such as the **University of Florida's** matrix teams. Matrix teams pull together existing staff with different skills to help units execute projects like process evaluation and redesign.

The graphic below outlines how the University of Florida commissions matrix teams. After unit leaders submit requests for additional project support, the CBO assesses requests and can choose to convene a cross-functional team of existing staff to support them. Because staff complete work for their matrix teams on top of their full-time job responsibilities, team members devote only a few hours per month to projects. Still, the matrix teams bring a fresh perspective to unit projects and accelerate their completion.

Florida's model is cost-neutral, as staff do not receive additional pay for their work on matrix teams. Nevertheless, staff welcome participating in matrix teams, as they view them as opportunities to expand their skill sets.

University of Florida Matrix Team Formation and Deployment

UF | UNIVERSITY of FLORIDA

1 Unit leader requests central support for specific financial project

2 CBO assigns senior central leader to manage matrix team and liaise with unit

3 Matrix team manager gathers 3-4 FTEs from different financial departments, depending on the needs of the project

4 Matrix team spends fraction of work time implementing project; remaining time spent on regular role responsibilities

Representative Matrix Team

Project: Map and improve unit's vendor payment process

- Senior Associate Controller
- Business Process Analyst
- Assistant Director of Procurement
- IT Specialist

Past Matrix Projects

- Evaluated and improved Process Improvement Office's financial reporting
- Analyzed and updated accounting and reporting systems for Center for Performing Arts
- Wrote professionalized job descriptions and helped expedite the hiring of six unit financial positions

TREND MATURITY ....

	All Institutions	Public Institutions	Private Institutions
Not adopted	48%	44%	55%
Considering adoption	31%	42%	14%
Adoption in progress	6%	6%	7%
Partial adoption	14%	8%	24%
Full adoption	0%	0%	0%

- Not adopted
- Considering adoption
- Adoption in progress
- Partial adoption
- Full adoption
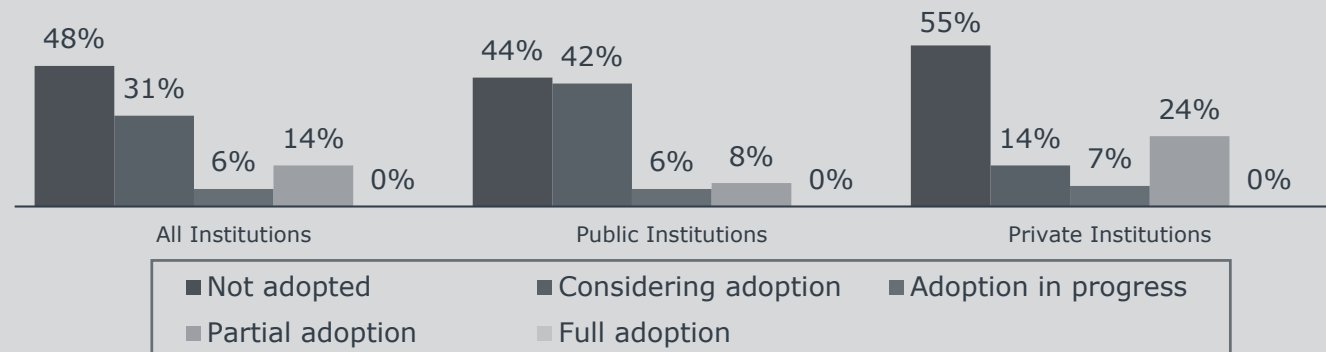
Source: University of Florida, Gainesville, FL; EAB interviews and analysis.

Appendix A: Trend Maturity Data Tables

All Institutions

n=86	Not adopted	Considering adoption	Adoption in progress	Partial adoption	Full adoption
Trend 1: Executive-Level Data Governance Oversight	20%	19%	25%	29%	7%
Trend 2: Data Refinement for Academic Program Analysis	14%	18%	38%	29%	1%
Trend 3: Business Intelligence Teams	26%	20%	25%	19%	10%
Trend 4: Academic Financial Dashboards	14%	24%	31%	29%	2%
Trend 5: Technology-Driven Planning Process Redesign	24%	27%	30%	17%	2%
Trend 6: Scaled Budget and Planning Services	16%	34%	23%	20%	7%
Trend 7: Long-Range Financial Modeling and Scenario Planning	10%	18%	24%	31%	18%
Trend 8: Functional Redesign to Expand Budget and Planning Scope	13%	26%	26%	21%	13%
Trend 9: Embedded Analytical Support in Academic Units	38%	21%	15%	17%	10%
Trend 10: Financial Upskilling Programs for Academic Stakeholders	37%	32%	21%	7%	4%
Trend 11: Metric-Driven Intervention in Unit Performance Issues	36%	30%	19%	12%	2%
Trend 12: Internal Financial Consulting Teams	47%	31%	6%	14%	2%

Data may not add to 100% due to rounding.

Appendix A: Trend Maturity Data Tables (cont.)

Public Institutions[1]

n=53	Not adopted	Considering adoption	Adoption in progress	Partially adopted	Fully adopted
Trend 1: Executive-Level Data Governance Oversight	15%	17%	29%	31%	8%
Trend 2: Data Refinement for Academic Program Analysis	15%	13%	50%	21%	0%
Trend 3: Business Intelligence Teams	25%	15%	29%	19%	12%
Trend 4: Academic Financial Dashboards	12%	27%	31%	27%	4%
Trend 5: Technology-Driven Planning Process Redesign	15%	33%	38%	12%	2%
Trend 6: Scaled Budget and Planning Services	20%	35%	18%	24%	4%
Trend 7: Long-Range Financial Modeling and Scenario Planning	12%	25%	29%	27%	8%
Trend 8: Functional Redesign to Expand Budget and Planning Scope	12%	35%	21%	19%	13%
Trend 9: Embedded Analytical Support in Academic Units	33%	25%	20%	10%	12%
Trend 10: Financial Upskilling Programs for Academic Stakeholders	29%	33%	24%	10%	4%
Trend 11: Metric-Driven Intervention in Unit Performance Issues	29%	40%	21%	8%	2%
Trend 12: Internal Financial Consulting Teams	43%	42%	6%	8%	2%

Data may not add to 100% due to rounding.

1) Includes Canadian institutions.

Appendix A: Trend Maturity Data Tables (cont.)

Private Institutions

n=30	Not adopted	Considering adoption	Adoption in progress	Partially adopted	Fully adopted
Trend 1: Executive-Level Data Governance Oversight	24%	24%	21%	24%	7%
Trend 2: Data Refinement for Academic Program Analysis	10%	21%	21%	45%	3%
Trend 3: Business Intelligence Teams	31%	24%	21%	17%	7%
Trend 4: Academic Financial Dashboards	21%	14%	31%	34%	0%
Trend 5: Technology-Driven Planning Process Redesign	43%	18%	11%	25%	4%
Trend 6: Scaled Budget and Planning Services	11%	32%	29%	14%	14%
Trend 7: Long-Range Financial Modeling and Scenario Planning	3%	7%	10%	41%	38%
Trend 8: Functional Redesign to Expand Budget and Planning Scope	17%	14%	31%	24%	14%
Trend 9: Embedded Analytical Support in Academic Units	48%	14%	3%	28%	7%
Trend 10: Financial Upskilling Programs for Academic Stakeholders	52%	28%	14%	3%	3%
Trend 11: Metric-Driven Intervention in Unit Performance Issues	45%	14%	17%	21%	3%
Trend 12: Internal Financial Consulting Teams	53%	13%	7%	23%	3%

Data may not add to 100% due to rounding.

Appendix A: Trend Maturity Data Tables (cont.)

Research Institutions[1]

n=43	Not adopted	Considering adoption	Adoption in progress	Partially adopted	Fully adopted
Trend 1: Executive-Level Data Governance Oversight	8%	10%	43%	28%	13%
Trend 2: Data Refinement for Academic Program Analysis	10%	8%	43%	40%	0%
Trend 3: Business Intelligence Teams	13%	15%	30%	25%	18%
Trend 4: Academic Financial Dashboards	8%	18%	33%	38%	5%
Trend 5: Technology-Driven Planning Process Redesign	10%	28%	38%	18%	5%
Trend 6: Scaled Budget and Planning Services	13%	30%	18%	28%	13%
Trend 7: Long-Range Financial Modeling and Scenario Planning	8%	23%	30%	28%	13%
Trend 8: Functional Redesign to Expand Budget and Planning Scope	8%	28%	23%	23%	20%
Trend 9: Embedded Analytical Support in Academic Units	26%	28%	13%	23%	10%
Trend 10: Financial Upskilling Programs for Academic Stakeholders	21%	38%	23%	10%	8%
Trend 11: Metric-Driven Intervention in Unit Performance Issues	28%	35%	18%	18%	3%
Trend 12: Internal Financial Consulting Teams	30%	40%	9%	16%	5%

Data may not add to 100% due to rounding.

1) "Research Institutions" refers to US institutions with Carnegie Classifications of "Doctoral Universities" or "Doctoral/Professional Universities" and Canadian institutions designated by Maclean's as "Medical/Doctoral" or "Comprehensive."

Appendix A: Trend Maturity Data Tables (cont.)

Teaching-Focused Institutions[1]

n=40	Not adopted	Considering adoption	Adoption in progress	Partially adopted	Fully adopted
Trend 1: Executive-Level Data Governance Oversight	30%	28%	10%	30%	3%
Trend 2: Data Refinement for Academic Program Analysis	18%	25%	35%	20%	3%
Trend 3: Business Intelligence Teams	45%	20%	20%	13%	3%
Trend 4: Academic Financial Dashboards	23%	28%	30%	20%	0%
Trend 5: Technology-Driven Planning Process Redesign	38%	28%	20%	15%	0%
Trend 6: Scaled Budget and Planning Services	21%	42%	24%	13%	0%
Trend 7: Long-Range Financial Modeling and Scenario Planning	10%	15%	15%	35%	25%
Trend 8: Functional Redesign to Expand Budget and Planning Scope	20%	25%	30%	18%	8%
Trend 9: Embedded Analytical Support in Academic Units	53%	15%	15%	8%	10%
Trend 10: Financial Upskilling Programs for Academic Stakeholders	55%	23%	18%	5%	0%
Trend 11: Metric-Driven Intervention in Unit Performance Issues	43%	28%	23%	5%	3%
Trend 12: Internal Financial Consulting Teams	65%	23%	3%	10%	0%

Data may not add to 100% due to rounding.