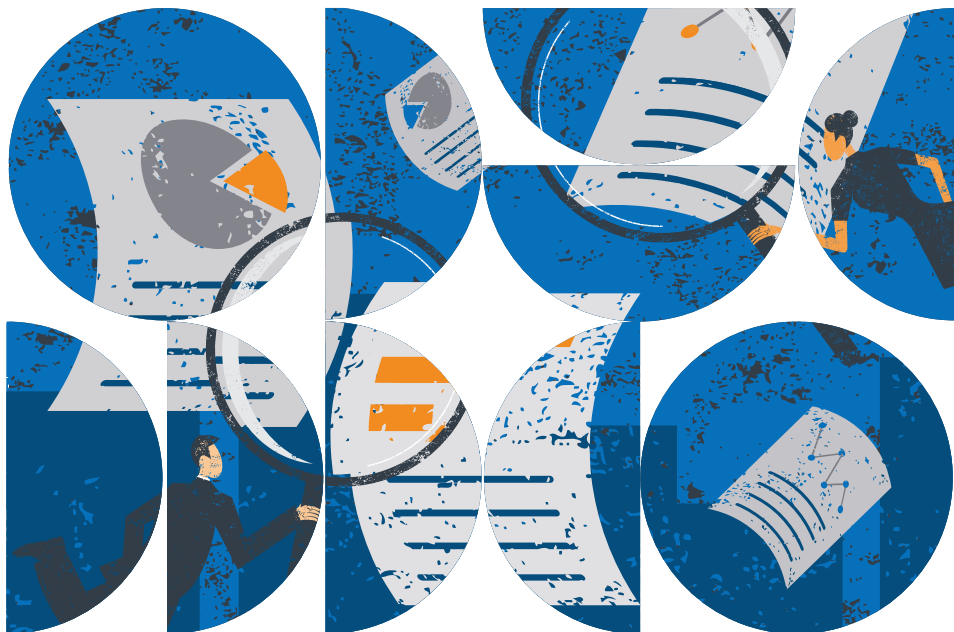




Impactful Financial Dashboards

Improving Board-Level Communication to Enhance
Strategic Planning and Win Stakeholder Buy-In

Business Affairs
Forum





EAB

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Strategic Planning and Win Stakeholder Buy-In

Business Affairs Forum

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Supporting Members in Data-Driven Decision Making

Resources Available Within Your Membership

This publication represents only one of our many resources to support members in making data-driven decisions. Detail about additional resources is provided below.

For additional information about any of these services—or for an electronic version of this publication—please visit our website (eab.com/baf), email your institution's dedicated advisor, or email research@eab.com.

Developing a Data-Driven University

Strategies and Best Practices for Increasing Reporting and Analytical Capacity to Improve Institutional Effectiveness

This study profiles the dashboards, key performance indicators, and business intelligence capabilities emerging as the new gold standard for university decision support as a growing number of institutions invest in data and analytics as critical change-management tools.

Selecting Core Performance Metrics

Filtering Process to Identify Administrative Unit Measures and Strategies for Triggering Action

This study explores six considerations business leaders can use as a filtering process to identify unit performance gaps and set principled action triggers.

On-Demand Webconferences

Register for upcoming sessions to hear our latest findings or access archives of past presentations. Many members convene campus leaders and task forces to attend and share ideas on practices and implementation.

Unlimited Access to Experts

Business Affairs Forum members may contact EAB researchers at any time to discuss our findings, request networking conversations, or review related resources and practices.



All Business Affairs Forum resources are available to members in unlimited quantity.

To order additional copies of this book, or to learn about our other services, please visit us at eab.com or contact us at 202-266-6400.

Executive Summary

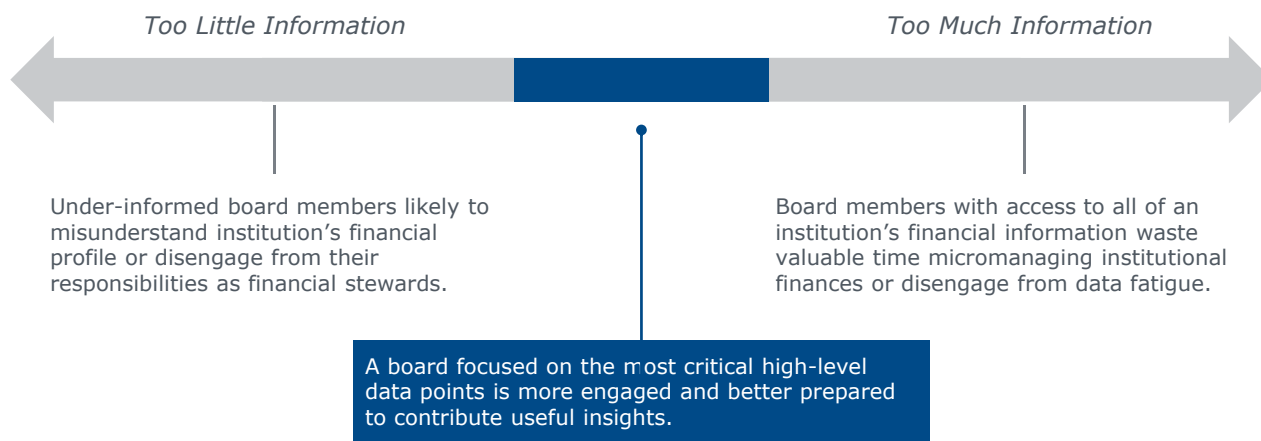
College and University Boards Increasingly Concerned About Institutional Finances

While college and university governing boards have long maintained fiduciary responsibility over institutional resources, the tough budgetary climate has heightened boards' interest in institutional financial health. In 2014, a majority of board members at both public and private institutions identified fiscal sustainability and affordability as their top two priorities, and board support staff report a related increase in financial reporting requests from board members.

Struggling to Determine the Right Financial Information to Share with Boards

Communicating meaningful financial information to boards, however, is a tricky balancing act. Communicating too little information can cause board members to misinterpret the institution's true financial position or distrust administrative leaders, while communicating too much financial information can cause board members to focus on less significant details or disengage because of data fatigue. Moreover, as many board members lack backgrounds in higher education, even when they have the right amount of financial information, they do not always understand it.

The Effect of Information Quantity on Board Engagement



Resources to Help Leaders Communicate Financial Information with Boards

Fortunately, financial dashboards offer an established and accessible solution to higher education's financial communication challenges. To help business leaders communicate financial information with their boards, the Business Affairs Forum details a three-step process in this publication to design and deploy impactful financial dashboards that achieve the following benefits:

- Visualize and contextualize a limited selection of critical metrics
- Support board members with supplementary resources and regular updates
- Meet the information needs of other campus stakeholders through minimal but important modifications

Source: Business Affairs Forum interviews and analysis.



A Difficult Conversation

Recognizing Barriers to Effective Financial Data Communication
in Higher Education

INTRODUCTION

Boards Increasingly Focused on Financial Data

Present Challenges Make Effective Communication More Important

While college and university governing boards have long maintained fiduciary responsibility over institutional resources, the tough budgetary climate has heightened boards' interest in their institutions' financial health. In 2014, 59% of board members at public institutions and 76% at private institutions identified fiscal sustainability and affordability as their top two priorities. In particular, this increased attention to institutional finance has led to a greater demand for data, as 65% of support staff indicate that boards are requesting data reports more frequently post-recession.

Percentage of Trustees Who Identify Fiscal Sustainability and Affordability as a Top Priority



59%

Public college and university trustees



76%

Private college and university trustees

Percentage of Support Staff Who Indicate an Increase in Reporting Requests from the Board



65%

Board support staff



"Board members are worried, and when you're worried you tend to be a little more detail-oriented."

*President
Small Liberal Arts College*

At a minimum, finance leaders need to find a more efficient and effective way to address rising board demands for financial information. However, simply distributing financial reports is not enough. Senior leaders must engage board members as strategic partners who not only ask good questions about finances but also help those leaders develop innovative solutions to their institution's most pressing financial challenges.

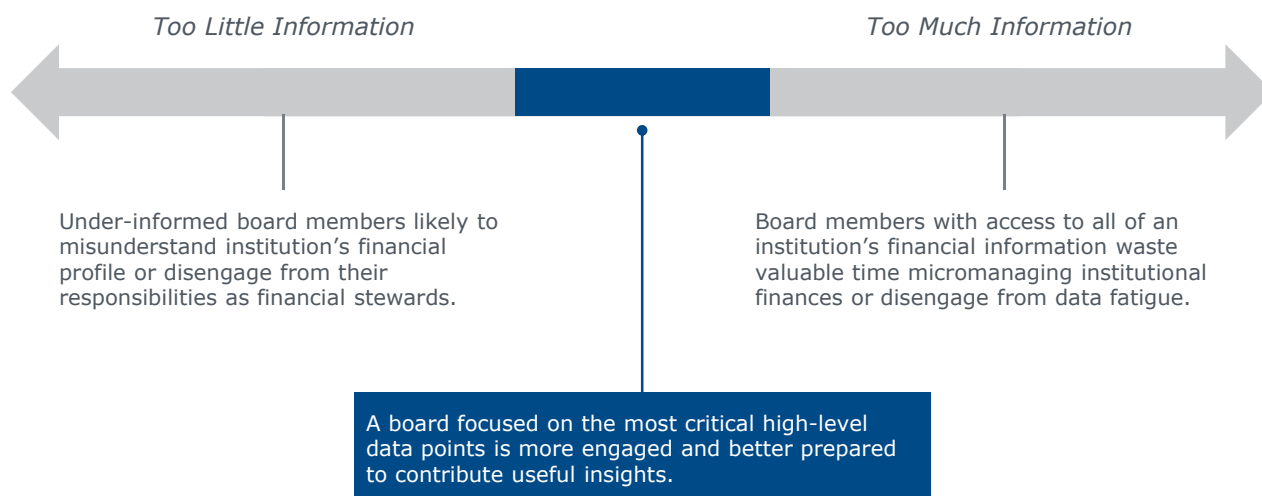
Source: Association of Governing Boards of Universities and Colleges, "The Trustee Voice about the Future of Higher Education Governance," available at: <http://agb.org/trusteeship/2014/novemberdecember/the-trustee-voice-about-the-future-of-higher-education-governance>, accessed February 2016; Association of Governing Boards of Universities and Colleges, "Survey of Board Professionals: Who They Are, What They Do, and Their Important Role in Governance," 2015; Kiley, K, "What's Up With Boards These Days?" *Inside Higher Ed*, July 2, 2016; Public Agenda, "A Difficult Balance," December 2015; Business Affairs Forum interviews and analysis.

A Delicate Balance

Difficult to Determine Right Amount of Information to Share with Boards

However, there are two key challenges in communicating meaningful financial information to boards. First, determining how much financial information to share can be a tricky balancing act. Communicating too little information can cause board members to misinterpret the institution's true financial position or question if administrative leaders are "hiding the ball." On the other hand, communicating too much financial information can cause board members to focus undue attention on less significant details (e.g., employee travel spend). Worse still, communicating too much financial information can contribute to data fatigue, where board members are overwhelmed by the volume of data and disengage completely.

The Effect of Information Quantity on Board Engagement

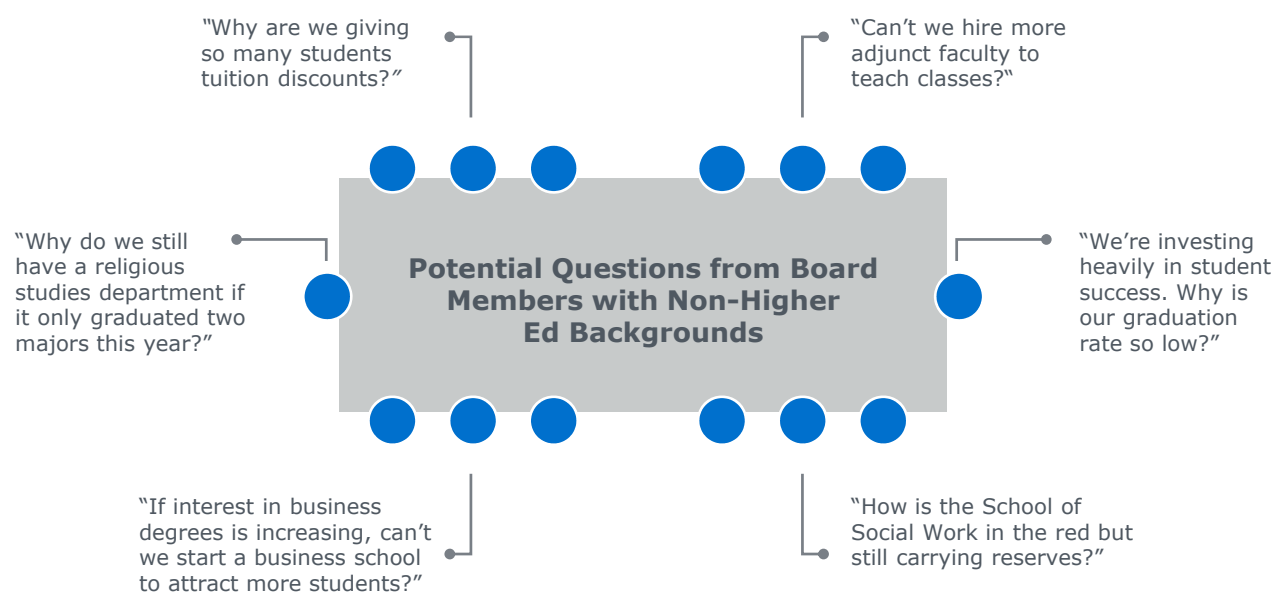


Ultimately, senior leaders should aim to communicate just enough information to generate trust and leverage boards' financial expertise but not enough to generate unwanted scrutiny or data fatigue among board members.

Not an Apples-to-Apples Conversation

Boards Don't Always Realize Differences Between Higher Ed and Private Sector

Even when board members have the right amount of financial information, they do not always understand it. The second challenge in communicating meaningful financial information is conveying the distinctions between higher education and private sector finance. Notably, 75% of board members at private institutions and 50% at public institutions have backgrounds in private-sector finance or accounting—experience that undoubtedly prepares them to fulfill their responsibilities as financial stewards. However, private-sector finance expertise can also render board members quick to underestimate important differences between higher education and the private sector. This sometimes leads board members to incorrectly believe they can directly apply private-sector solutions to higher education challenges.



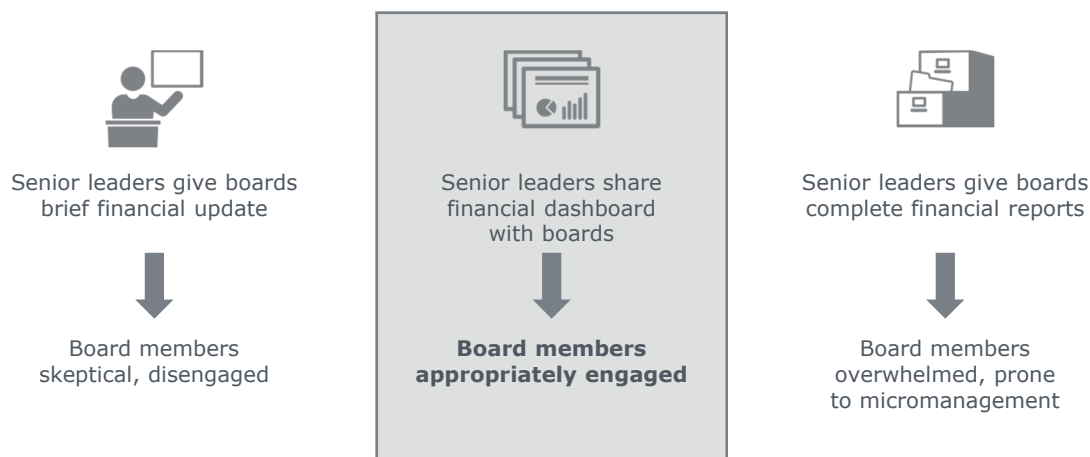
Importantly, even if some board members recognize their struggle to understand higher education finance, few are willing to acknowledge their confusion—particularly under the watchful eyes of reporters and other stakeholders during formal board meetings. Therefore, it is even more important for finance and administrative leaders to convey information that proactively addresses the particulars of the higher education industry.

A Balanced Approach

Dashboards Isolate and Convey Most Important Metrics in User-Friendly Format

Fortunately, financial dashboards offer an established and accessible solution to higher education's financial communication challenges. Dashboards, properly deployed, identify a limited subset of the most important institution-level financial metrics and communicate them in an intelligible manner. Limiting the information communicated by the dashboard ensures that board members focus on the most important metrics and strategic imperatives. More importantly, boards that are engaged and focused on critical financial metrics can more effectively partner with institutional leadership to generate progressive and industry-appropriate solutions to their institutions' most pressing challenges.

Impact of Reporting Format on Board Engagement



Study in Brief: Developing a Data-Driven University

Of course, to create effective dashboards, institutions also need strong data governance processes to ensure the underlying data is reliable. For best practices on data governance and increasing analytic capabilities, please refer to the Business Affairs Forum's study *Developing a Data-Driven University*. Electronic and hard copies can be accessed at eab.com/baf.

Executive Framework

Three Steps to Successfully Design, Build, and Deploy Dashboards

To help finance leaders better communicate financial information, this publication details a three-step process to design and deploy impactful board-facing dashboards. In the first step, business executives design and build dashboards that visualize and contextualize a limited selection of critical metrics. Next, executives support dashboard users with supplementary resources and regular updates to continually ensure the dashboard’s effectiveness. Finally, business executives redeploy board-facing dashboards to meet the information needs of other campus stakeholders through minimal but important modifications.

Step 1

Design and Build a Board-Facing Financial Dashboard

- Consideration 1: Selecting key performance metrics
- Consideration 2: Visualizing and displaying metrics
- Consideration 3: Contextualizing data
- Consideration 4: Integrating principled discussion triggers
- Compendium of Sample Dashboards

Step 2

Continually Support Dashboard Users

- Consideration 5: Constructing a narrative around dashboard data
- Consideration 6: Providing supplementary information
- Consideration 7: Updating dashboard metrics

Step 3

Adapt the Dashboard to Different Audiences

- Consideration 8: Engaging academic leaders with dashboard data

Leveraging Private-Sector Tactics (Where Appropriate)

Having effectively used dashboards to communicate with governing boards for decades, the private sector has much to teach higher education about building and deploying impactful financial dashboards. At the same time, the differences between private sector and higher education finance render some corporate practices irrelevant and call for education-specific approaches. Across the three steps and eight considerations listed above, this publication will identify areas both where higher education can and should emulate established private-sector best practice and where unique solutions are needed.

Source: Business Affairs Forum interviews and analysis.



Design and Build a Board-Facing Financial Dashboard

STEP

1

- Consideration 1: Selecting key performance metrics
- Consideration 2: Visualizing and displaying metrics
- Consideration 3: Contextualizing data
- Consideration 4: Integrating principled discussion triggers
- Compendium of Sample Dashboards

No Need to Reinvent the Wheel

Most Senior Leaders Share Similar Set of Dashboard Metrics with Boards

The first consideration when building a board-facing financial dashboard is choosing the right metrics to display. Selecting key performance indicators and financial metrics can initially seem overwhelming, as the possibilities are extensive. For example, a recent AGB¹ survey on higher education performance indicators identified more than 200 different ratios and indices that colleges and universities are utilizing to measure operating and financial performance.

Association for Institutional Research Board-Level Dashboard Survey

n=66

KPI Category	Frequency of Display
Advancement	72.7%
Alumni Gifts	13.6%
Alumni Giving Rate	57.6%
Financial Aid	63.6%
Total Gifts	39.4%
Tuition Discount/Tuition Reliance	31.8%
Endowment and Expenses	80.3%
Endowment Market Value	51.5%
Endowment per FTE Student	24.2%
Endowment Return	18.2%
Expenditures/Total Research Support	34.8%
General Enrollment Data	77.3%
Graduation Rates	72.7%
Retention Rates	71.2%
Undergraduate Enrollment	66.7%
Physical Plant	37.9%
Plant Reinvestment Rate	6.1%
Seat/Station Utilization	6.1%
Space Utilization	4.5%
Student faculty ratio	54.5%
Tuition and Fees	47%
Net Tuition per Student	9.1%
Tuition and Fees Revenue	24.2%

However, despite the wealth of options, most institutions largely agree on the most important metrics to share. The survey of board dashboards above shows a small set of core metrics are widely used across the industry. While the exact list of metrics will of course vary by institution, finance leaders should not reinvent the wheel. The above metrics provide a proven starting point for metric selection.

Many finance executives also use financial indicator ratios to monitor financial health. Financial indicator ratios can communicate complex financial information to boards without the time and expertise typically required to analyze raw financial data. For a menu of commonly used higher education financial indicator ratios, please see the appendix of this publication.

1) Association of Governing Boards of Universities and Colleges

Source: Association for Institutional Research, "Institutional Dashboards: Navigational Tool for Colleges and Universities," 2012; Business Affairs Forum interviews and analysis.

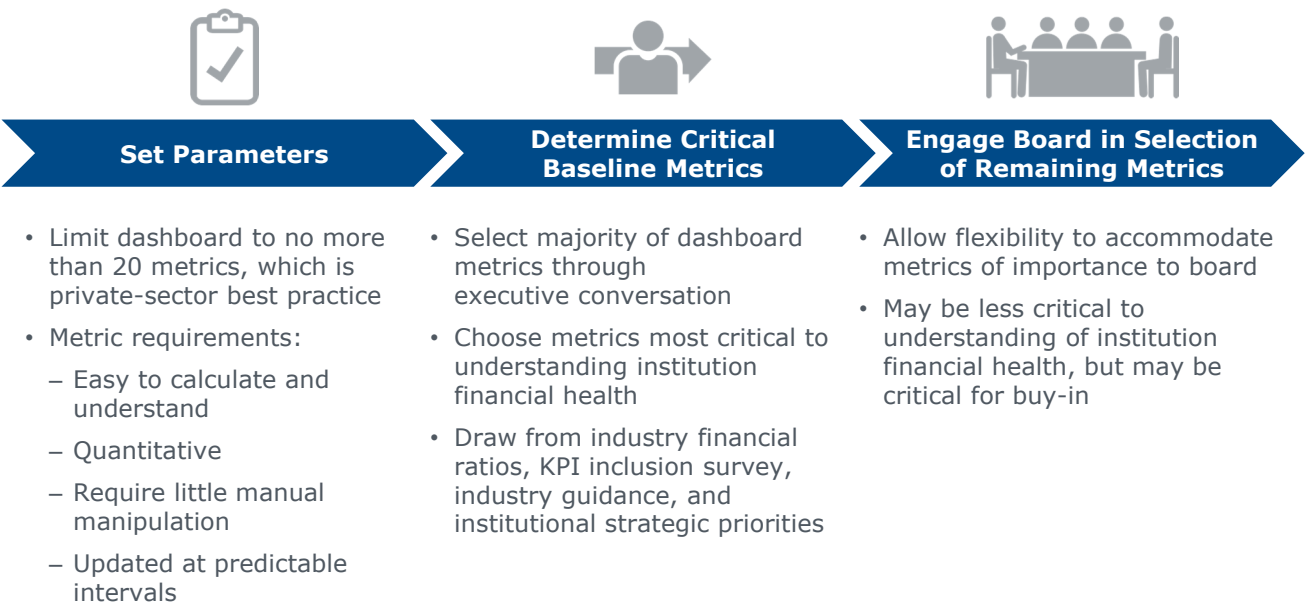
Analysis Paralysis

Isolate Metrics That Facilitate Understanding and Buy-In

Beyond those standard sets of metrics, all institutions should follow the three-step filtering process outlined below when selecting board-level metrics. Drawing on both private sector and higher education best practices, this process ensures metrics reflect both industry norms and institution-specific priorities.

The most impactful dashboards isolate a small subset of available metrics to share consistently. This serves two purposes. First, the dashboard is easier to skim and understand, increasing the likelihood that board members will engage with the information. Additionally, isolating a select few metrics emphasizes the importance of those metrics to the institution’s financial health.

Three-Step Process for Establishing Dashboard Metrics



After establishing parameters, senior leaders include the metrics most critical to understanding their institution’s financial health. Business executives should decide upon these metrics through discussion with multiple academic and administrative leaders to ensure the dashboard presents a comprehensive picture of the institution.

Finally, business executives engage board members in the selection of remaining metrics. In particular, leaders should consider including metrics that are less critical to understanding the institution’s financial picture but help secure board buy-in.

Source: Business Affairs Forum interviews and analysis.

Keep It Simple

Concise, Static Format and Clear Illustrations Help Users Engage with Dashboard

The second consideration when building a board-facing financial dashboard is determining how to visualize and display metrics. Some higher education administrators have hesitated to utilize dashboards because of the high standard set by many private-sector dashboards, mistakenly believing they must emulate the complex, cloud-based tools that update metrics in real-time. On the contrary, higher education's business model makes real-time dashboards unnecessary, as the majority of important financial data points change only a few times per year.

Three Tips for Designing Board-Facing Dashboards



Be Concise

- Limiting static dashboards to three pages or less enhances likelihood that board members will engage with content
- Private sector standard dashboard length is **1-3 pages**



Use Data Visualizations

- Adding data visualizations simplifies complex KPIs and allows more data to be shared in less space
- Most effective private sector data visualization elements are **bar charts and pie charts**



Reserve Space for Time-Sensitive Data

- Reserving a portion of dashboard for temporarily urgent data ensures important, time-specific information is front-of-mind for board members
- **Duke University's** dashboard features 10 total metrics, including 2-3 contextual metrics that change annually

Many institutions have successfully shared static dashboards, distributed electronically or in hard copy. Rather than expending resources to build automated, cloud-based reporting tools, higher education leaders maximize the utility of static dashboards by making their content and layout accessible and engaging. The three design tips above offer straightforward ways to increase the utility of static board-facing dashboards.

Putting Metrics in Context

Historical and Peer Data Help Users Understand Institutional and Industry Trends

The third consideration when building board-level dashboards is contextualizing metrics. While the design and layout of dashboard data is important, data depicted in isolation is only part of the story. The most effective dashboards display KPIs alongside contextual data—reference points which allow users to understand trends and make effective judgments about those trends. This is particularly important at colleges and universities, where board members might not have the background in higher education finance to fully understand the significance of some KPIs on their own.

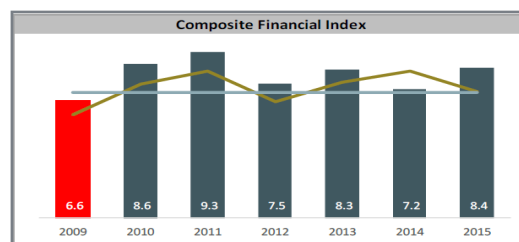
Historical Data

- Private-sector best practice is to display 5 years of historical data
- Three types of indicators illustrate historical trends:
 - Stoplight scheme colors (red, yellow, green)
 - Arrow indicators
 - Trend lines
- St. Norbert College's** financial dashboard (excerpted at right, full version on page 29) displays five years of historical data, with colors and trend lines illustrating how metrics are trending

	2-Yr Trend	Most Recent 5 Yrs (High/Low)	10/11	11/12	12/13	13/14	14/15	15/16
ENROLLMENT								
New Students Enrolled	●	↗	662	655	644	583	572	646
Undergraduate Headcount	●	↗	2,172	2,174	2,229	2,160	2,112	2,096
Acceptance Rate/Selectivity	●	↗	81.7%	80.6%	80.4%	80.8%	79.3%	78.0%
Yield	●	↗	34.5%	31.0%	31.4%	30.7%	30.7%	20.4%
Average ACT Score - Freshmen	●	↗	25	25	25	25	25	25
Average GPA - Freshmen	●	↗	3.47	3.46	3.48	3.46	3.49	3.52

Peer Data

- Two ways to display peer assessment data:
 - Peer group comparative data
 - Trend lines on institutional data indicating peer median or 75th percentile
- Trinity University's** financial dashboard (excerpted at right, full version on page 27) illustrates peer institution median metrics using a gold trend line



Best-in-class financial dashboards display two types of contextual data alongside KPIs. First, historical data helps users understand trends over time. While 78% of private sector financial dashboards display historical data, presently only 12% of higher education dashboards do the same.

Second, peer data helps board members understand where their institution's performance exceeds or lags peers. Currently, just 21% of financial dashboards in higher education contain peer assessment data. Admittedly, though, peer data in higher education is more difficult to obtain than in the private sector, and even when available, it does not always translate well across institutions. All institutions should seek to include peer data where possible, but recognize the limitations on availability and applicability.

Directing Attention to Potential Concern Areas

The fourth consideration when building a board-facing dashboard is integrating principled discussion triggers. Dashboards will likely include more financial metrics than the board can discuss each session. However, identifying which KPI trends truly warrant further discussion can be difficult, and allowing the board itself to decide in the moment can invite contentious (and time-consuming) debate.

Instead, to maximize a board's time together, business executives should set principled discussion triggers. Discussion triggers are quantitative values for each KPI that, if reached, signal the institution's ability to sustain its mission is at risk. Incorporating concrete triggers into the dashboard establishes a clear system to determine which metrics a board should—and should not—focus when convened. For example, a business executive might conclude that a tuition discount rate above 50% is unsustainable and requires board action. If the institution's discount rate crosses that threshold, it enters "alert" status and is automatically placed on the next board meeting's agenda for discussion.



Association of Governing Boards of Universities and Colleges' Warning Signs for Financial Assets

- Increasing cost of debt service
- Current expenditures outpacing current revenues
- Key revenue streams declining while expenditures increasing
- Student aid increasing as a proportion of tuition
- Reserves to operating expenses decreasing
- Tuition discount rate increasing
- Major secondary revenue streams decreasing
- Cost per FTE significantly outpacing peers

While there is no universal formula for determining discussion triggers, business leaders consider historical trends, peer benchmarks, and external literature on what constitutes a financially sound college or university when setting thresholds. In addition to considering what metric levels are reasonable for their institutions, business leaders should consider the Association of Governing Boards of Universities and Colleges' warning signs for financial assets, summarized above.

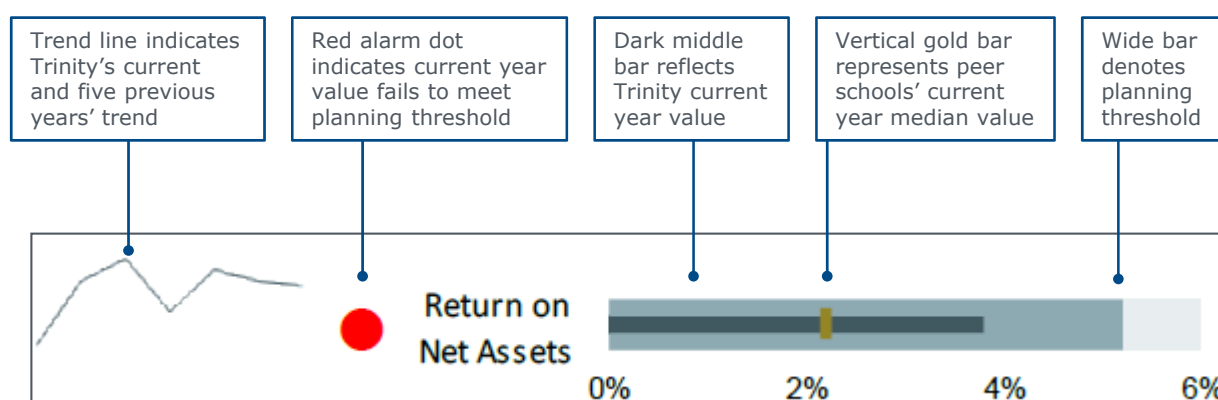
Business leaders should obtain board agreement on trigger values before potential issues arise, allowing executives to more effectively leverage boards as strategic partners, jointly engaged in creating and maintaining sustainable business models.

Principled Discussion Triggers in Practice

Trinity University's Planning Thresholds Alert Board to Unsatisfactory Metrics

Trinity University has included principled discussion triggers in its board-facing financial dashboard since 2013. When setting trigger levels, leadership considered seven years of historical data from Trinity and thirty-three peer institutions. Leadership also incorporated external guidance on what constitutes a financially healthy institution, most notably Prager & Co.'s *Strategic Financial Analysis in Higher Education*. Trinity's dashboard uses red dots to identify KPIs in "alert" status, as illustrated below.

Trinity University's Dashboard Discussion Threshold Example



Monitoring Financial Sustainability While Investing in Mission

"We set the thresholds with realistic ongoing operations in mind. We don't want to be so conservative on the budget that we're choking our mission to increase our numbers, but we also don't want to erode the financial sustainability of the institution."

Gary Logan
Vice President for Finance and Administration, Trinity University

Trinity's Chief Business Officer reports that its dashboard's discussion triggers have changed the board's attitude towards financial data. After working under the current dashboard format for a few years, board members now recognize the need to understand the factors causing metrics to enter "alert" status and work towards improving metrics on "alert" over the long-term.

Compendium of Sample Dashboards

To further assist finance leaders in designing and building a board-level dashboard, pages 21-35 of this publication offer a compendium of high-functioning sample dashboards from both inside and outside higher education. These dashboards provide concrete examples of which metrics institutions have included and how they have displayed them. For each dashboard, the three design characteristics most worthy of emulation are highlighted, along with a brief description.

Higher Education Dashboards



Marquette University's Financial Performance Dashboard



Trinity University Financial Dashboard



St. Norbert College's Annual Dashboard



Southern Illinois University System's Dashboard



Texas State University's Productivity Dashboard

Out of Sector Dashboards



Municipal Government - The City of Edmonton's Citizen Dashboard






Health Care - Middlesex Health System's Dashboard

Source: Business Affairs Forum interviews and analysis.

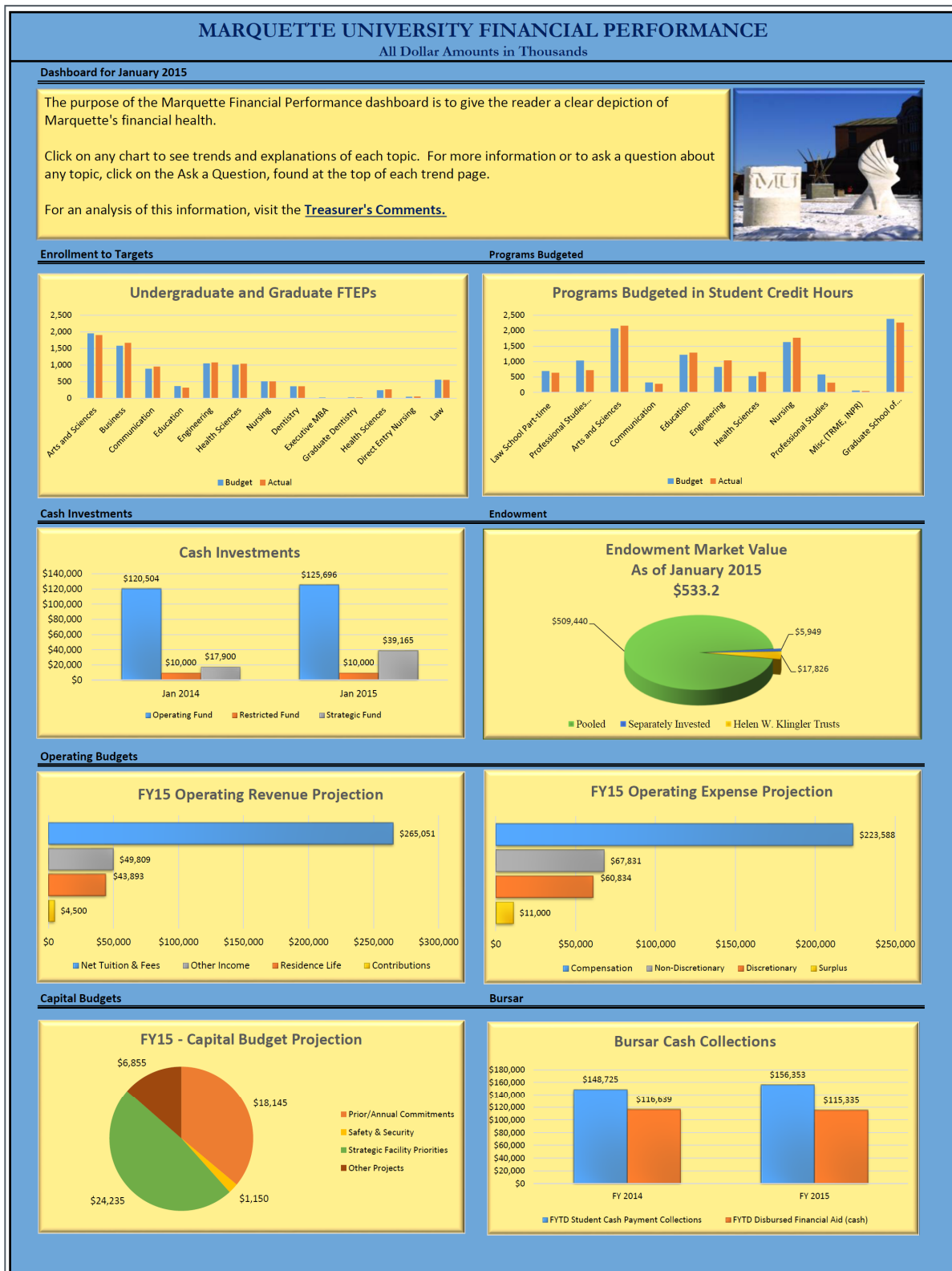
#1: Marquette University

Marquette University communicates financial information to institutional stakeholders through its Financial Performance Dashboard. The dashboard is constructed as a 9-page PDF document, although all dashboard KPIs are summarized on the first page. Marquette hosts its dashboard online and updates the document's metrics on a monthly basis.

Top Three Dashboard Design Takeaways

Design Element	Description
 Limited Metrics	Front page of dashboard isolates eight most critical KPIs
 Concise Format	Dashboard summarizes all KPIs on first page of nine-page document
 Data Visualizations	Communicates KPIs through accessible pie and bar charts

#1: Marquette University (cont.)






Source: Marquette University, available at: <http://www.marquette.edu/financeoffice/documents/2015-01Dashboard.pdf>, accessed February 2016; Business Affairs Forum interviews and analysis.

#2: Trinity University

Trinity University communicates financial data with a broad cross-section of institutional stakeholders using a 15-page financial dashboard. The dashboard concentrates KPIs on a single page, shown to the right. The remainder of the document includes a dashboard user guide and written narratives explaining the most important dashboard conclusions. A sample narrative is included in the appendix of this publication.

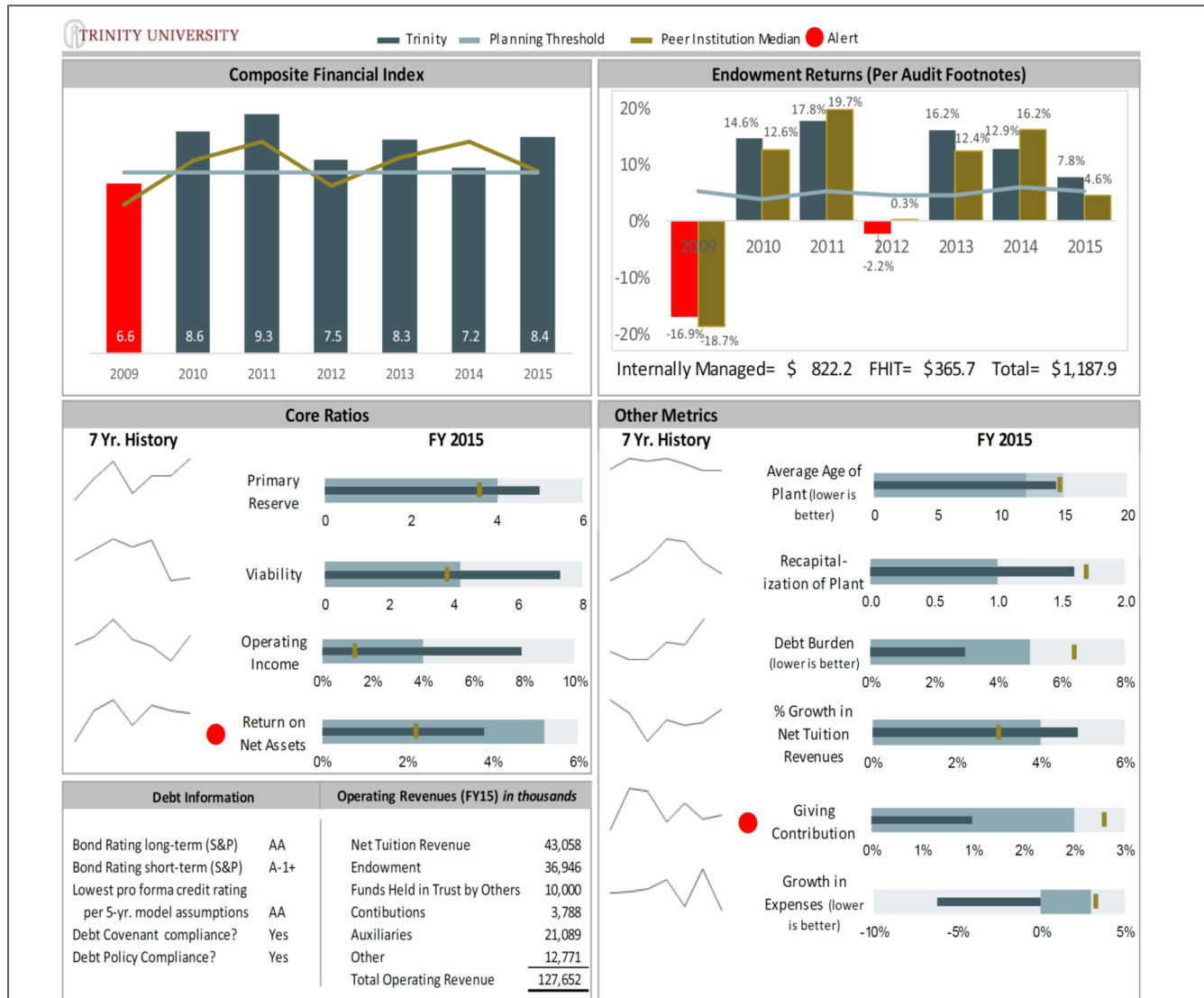
The dashboard is built as a PDF document and is updated annually.

Top Three Dashboard Design Takeaways

Design Element	Description
 Contextual Data	KPIs presented alongside seven-year trend data and peer averages
 Semi-Flexible Formatting	Bottom left section of dashboard reserved for temporarily urgent metrics, while remaining sections display same KPIs each period
 Principled Discussion Triggers	Each KPI has accompanying threshold or trigger, set to a value that if reached would impede Trinity's ability to sustain its mission; KPIs that cross thresholds enter "Alert" status and are placed on next board meeting's agenda for discussion; see pages 20-21 of this publication for additional detail

Source: Trinity University, San Antonio, TX; Business Affairs Forum interviews and analysis.

#2: Trinity University (cont.)






Source: Trinity University, San Antonio, TX; Business Affairs Forum interviews and analysis.

#3: St. Norbert College

St. Norbert College communicates financial data with its board using a single-page financial dashboard, constructed as a PDF. While the dashboard was initially shared only with the college’s board, the tool has been so well-received that it is now shared with a broader cross-section of institutional stakeholders. The dashboard KPIs are updated annually, although select KPIs are updated intermittently as needed.

Top Three Dashboard Design Takeaways

Design Element	Description
 Limited Metrics	Displays 12 financial KPIs and highlights the most important information for measuring the institution’s results in boldface
 Contextual Data	Includes five years of historical data in both chart and trend line form
 Trend Indicators	Allows users to quickly assess each KPI through both stoplight indicators and colored trend lines

Source: St. Norbert College, De Pere, WI; Business Affairs Forum interviews and analysis.

#3: St. Norbert College (cont.)




St. Norbert College Annual Dashboard							Updated 2/29/16	
	2-Yr Trend	Most Recent 5 Yrs (High/Low)	10/11	11/12	12/13	13/14	14/15	15/16
<u>ENROLLMENT</u>								
New Students Enrolled			662	655	644	583	572	646
Undergraduate Headcount			2,172	2,174	2,229	2,160	2,112	2,096
Acceptance Rate/Selectivity			81.7%	80.6%	80.4%	80.8%	79.3%	78.0%
Yield			34.5%	31.0%	31.4%	30.7%	30.7%	20.4%
Average ACT Score - Freshmen			25	25	25	25	25	25
Average GPA - Freshmen			3.47	3.46	3.48	3.46	3.49	3.52
<u>ACADEMIC</u>								
Student/Faculty Ratio			14.7	14.1	14.4	13.8	13.6	13.5
FT Faculty with Terminal Degree			88%	87%	87%	88%	89%	90%
Average Undergrad Class Size			21.9	21.3	21.4	20.8	20.4	20.2
First Year Retention Rate			84%	81%	84%	80%	84%	82%
6-Year Graduation Rate			70%	75%	74%	70%	73%	
<u>ADVANCEMENT</u>								
Campaign (% of Goal)			25.4%	55.7%	81.6%	101.3%	117.5%	
Total Gift Production (Mill \$)			17.1	27.5	22.4	17.1	14.0	
St. Norbert Annual Fund (Mill \$)			1.6	1.4	1.4	1.5	1.6	
Alumni Participation			19.4%	18.2%	18.3%	17.2%	16.7%	
<u>FINANCE</u>								
Composite Financial Index (CFI)			5.13	2.80	6.24	4.28	2.49	
Operating Cash (Mill \$)			17.9	20.7	23.2	8.7	7.1	
Investments & Trust Assets (Mill \$)			88.8	83.1	100.8	114.4	104.3	
Long-Term Debt (Mill \$)			31.6	30.1	29.8	33.4	17.9	
Changes in Net Assets (Mill \$)			23.7	6.8	34.3	23.1	5.5	
Endowment MV (Mill \$)			73.2	71.0	85.1	96.0	105.5	
Capital Fund MV (Mill \$)			16.8	16.0	17.5	18.9	4.3	
Investment Fund MV (Mill \$)			90.0	87.0	102.6	114.9	109.7	
Investment Fund Return			20.7%	-4.8%	17.8%	14.1%	4.8%	
Overall Tuition Discount			42.0%	41.9%	43.1%	43.3%	43.6%	
New Student Tuition Discount			51.0%	48.5%	48.8%	49.0%	49.1%	48.9%
Increase in Net Tuition Rev			1.8%	4.8%	4.9%	1.0%	0.4%	
<u>EXTERNAL RANKINGS</u>								
U.S. News Ranking - Liberal Arts Colleges			127	127	138	134	123	127
Key Performance Indicators (KPIs) in bold print are quantifiable measurements that reflect the critical success factors of an organization.								
* Projections are in italics.								

Source: St. Norbert College, De Pere, WI; Business Affairs Forum interviews and analysis.

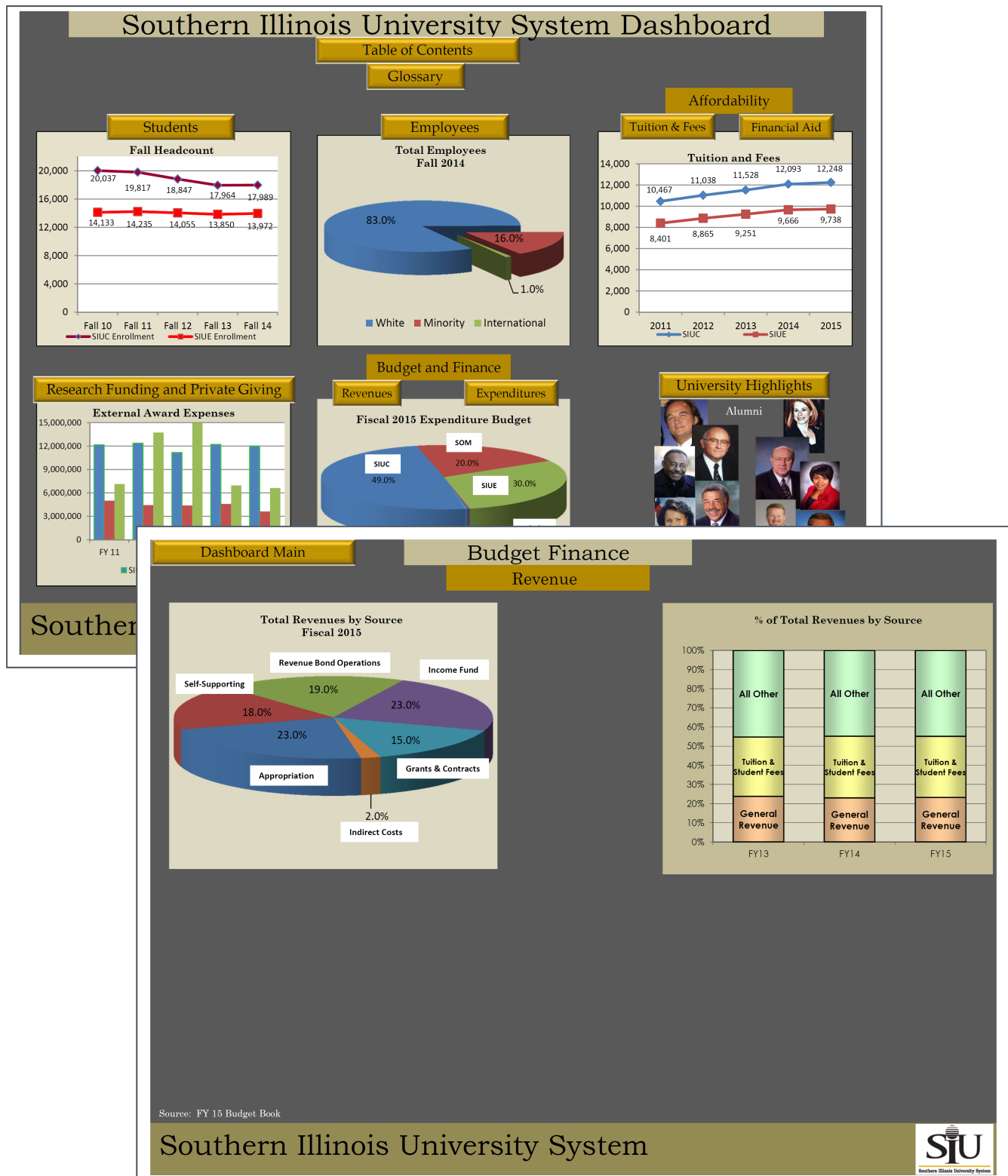
#4: Southern Illinois University System

The Southern Illinois University System communicates a broad set of multi-topic KPIs using its System-Wide Dashboard. The document is constructed as a multi-page PDF file, with linked section headings and graphics that make navigating the dashboard easier. The dashboard is used by the entire campus community and is accessible to the general public online.

Top Three Dashboard Design Takeaways

Design Element	Description
 Limited Metrics	Key metrics organized into five main categories on first page of dashboard
 Concise Format	Includes two tabs of financial KPIs
 Data Visualizations	Uses pie and bar charts to illustrate financial data

#4: Southern Illinois University System (cont.)






Source: Southern Illinois University System, available at: siusystem.edu/pdf/system-dashboard-website.pdf, accessed February 2016; Business Affairs Forum interviews and analysis.

#5: Texas State University System

The Texas State University System shares a set of multi-topic KPIs with campus stakeholders using a productivity dashboard. The dashboard is built in Tableau and hosted on the system's website for public access. The Tableau-based interface allows the dashboard to link an extensive amount of more detailed data for interested users.

Top Three Dashboard Design Takeaways

Design Element	Description
 Limited Metrics	Isolates critical KPIs on dashboard front page, with links to supporting data and related metrics
 Concise Format	Highlights 11 of 32 available metrics on the front page; each metric is accompanied by a large, bolded percentage change and brief description of its recent performance
 Data Visualizations	Drill-down tabs contain data visualizations designed to illustrate more detailed KPI information

#5: Texas State University System (cont.)

Productivity Dashboard

The Texas State University System does more with less - with better result - than any other university system in Texas. With a 53 percent increase in degree production over the last decade, TSUS institutions are responding to the demands of our growing state and producing graduates who contribute to Texas' economic vitality and quality of life. The Texas State University System's state appropriation per student is 25 percent lower than the state average, and our tuition and fees are among the lowest in the state. Our Productivity Dashboard provides data on these and other important performance measures.

20
PERCENT
LOWER

ADMINISTRATIVE COST PER STUDENT

The average administrative cost per TSUS student was 20% lower than the average administrative cost per student across the state. Since 2010, the state average had increased by 10% while the TSUS average has increased by less than one percent.

8
PERCENT
LOWER

TUITION AND FEES

TSUS tuition and fees have been consistently below the state average in every year over the past decade, 8% lower in the most recent year.

25
PERCENT
LESS

STATE APPROPRIATION PER STUDENT

In 2015, the average state appropriation per TSUS student was 25% less than the average state appropriation per student for all Texas public universities.

23
PERCENT
DECREASE

STATE SUPPORT

Since 2005, state support as a percent of total revenue has decreased 23%.

83
PERCENT

EMPLOYED AND/OR ENROLLED

Over the past decade, more than 80% of TSUS graduates have entered the workforce or a graduate program in Texas within one year of graduation.

53
PERCENT
INCREASE

DEGREES

Over the past decade, the number of degrees awarded by TSUS institutions has increased 53%, 23% higher than the state's rate of growth.

ENROLLMENT

- Enrollment
- Enrollment by Level
- Enrollment by Race/Ethnicity
- Transfer Student Enrollment
- Contact Hour Production
- Semester Credit Hour Production

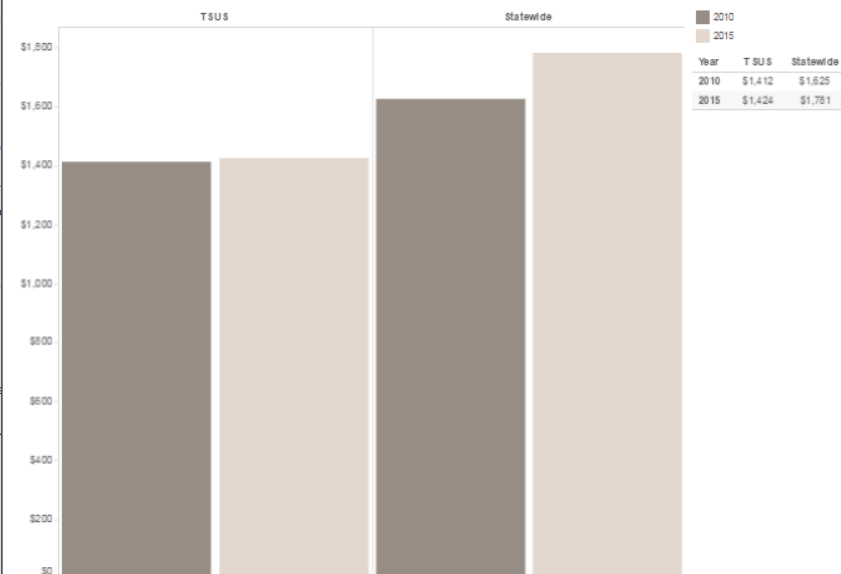
STUDENT SUCCESS

- Employed and/or Enrolled
- Degrees
- Degrees by Level
- Degrees by Race/Ethnicity
- Degrees to At-Risk-Students
- Transfer Student Degrees
- Transfer Student Graduation Rate
- One-Year Retention Rate
- One-Year Retention Rate by Race/Ethnicity
- Six-Year Graduation Rate
- Six-Year Graduation Rate by Race/Ethnicity

REVENUE, COSTS, & SPACE ALLOCATION

- State Support
- Tuition and Fees
- Administrative Cost per FTSE
- Total Revenue per FTSE

Administrative Cost per FTSE



• Since 2010 the state average has increased by 10% while the TSUS average has increased by less than one percent.
• The average 2015 administrative cost per TSUS student was 20% lower than the average administrative cost per student at all Texas public universities and state and technical colleges.

Undo Redo Reset




tableau

Share Download

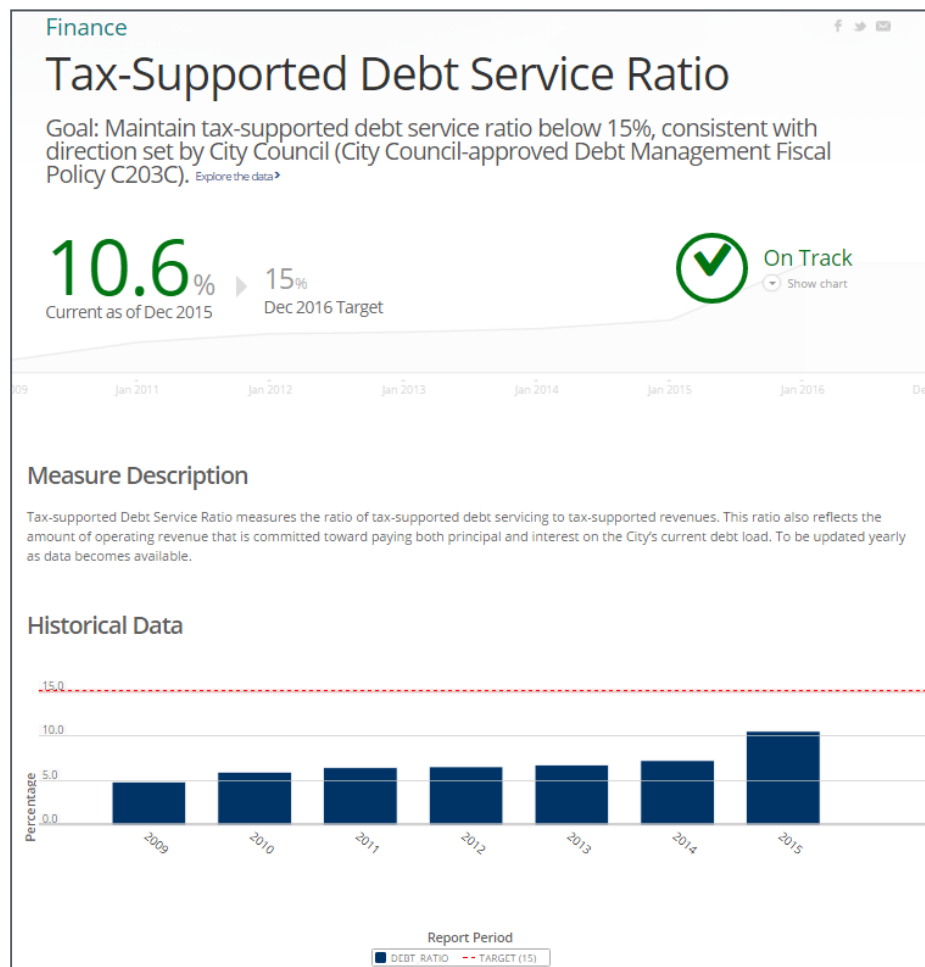
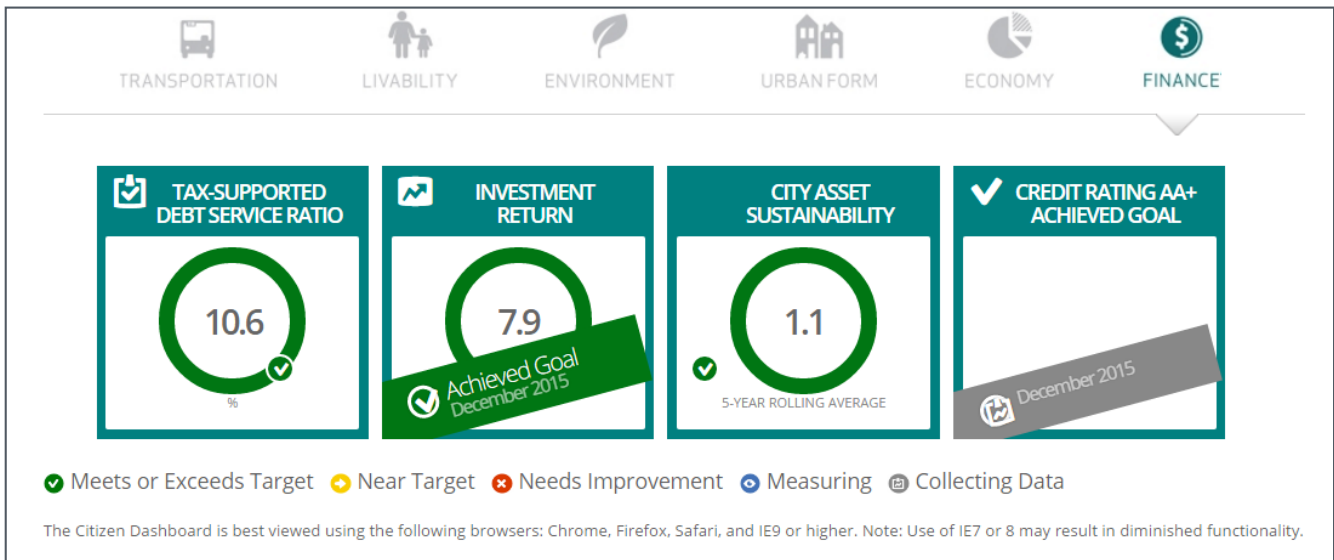
#6: City of Edmonton, Alberta

The City of Edmonton keeps its residents well-informed about a wide variety of issues using its web-based Citizen Dashboard, which the public can easily access. Despite sharing a variety of KPIs over multiple topics, its tabular interface and reliance on simple, consistent data visualizations keep the KPIs from becoming overwhelming for users.

Top Three Dashboard Design Takeaways

Design Element	Description
 Limited Metrics	Isolates four critical financial KPIs
 Contextual Data	Includes seven years of historical data in straightforward bar charts
 Trend Indicators	Uses stoplight color scheme indicators to illustrate whether metrics meet or exceed target, are nearing target, or need improvement

#6: City of Edmonton, Alberta (cont.)






Source: City of Edmonton, Alberta, Canada, available at: <https://dashboard.edmonton.ca/>, accessed February 2016; Business Affairs Forum interviews and analysis.

#7: Middlesex Health System

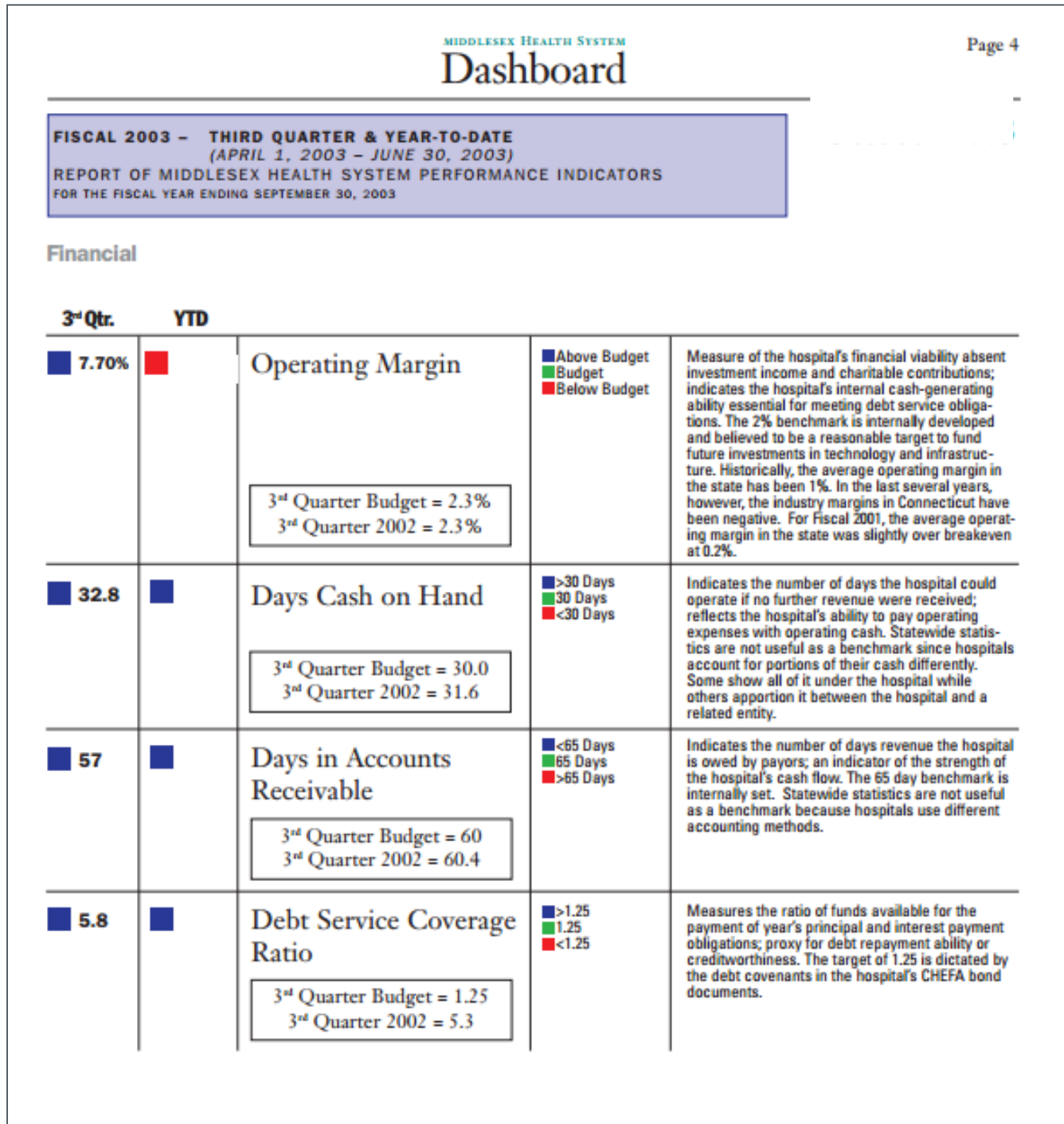
The Middlesex Health System board tracks productivity and financial health using a 15-page dashboard. The resource is shared as a PDF and is generated quarterly for board meetings. It uses trend indicators to help users understand both the short- and long-term trend directions as well as the trends' implications on overall financial health.

Top Three Dashboard Design Takeaways

Design Element	Description
 Limited Metrics	Isolates four critical financial KPIs, along with clear, jargon-free description of each
 Contextual Data	Compares each KPI's performance to the same quarter, prior year
 Trend Indicators	Displays spotlight indicators for each metric on both current quarter performance and YTD performance; qualifiers alongside indicators signify which KPIs fared above or below budget or target

Source: The American Hospital Association's Great Boards, available at: http://www.greatboards.org/pubs/sample_dashboard.pdf, accessed February 2016; Business Affairs Forum interviews and analysis.

#7: Middlesex Health System (cont.)



Source: The American Hospital Association's Great Boards, available at: http://www.greatboards.org/pubs/sample_dashboard.pdf, accessed February 2016; Business Affairs Forum interviews and analysis.



Continually Support Dashboard Users

STEP

- Consideration 5: Constructing a narrative around dashboard data
- Consideration 6: Providing supplementary information
- Consideration 7: Updating dashboard metrics



2

Connecting Finance to Mission

Narratives Help Users Understand How Data Advances Teaching and Research

The fifth consideration when building board-level dashboards is constructing a narrative around dashboard data. As a mission-driven industry, higher education institutions’ financial goals and KPIs must ultimately link to teaching, research, and student success outcomes. Displaying the right KPIs with effective visualizations and contextual data can accomplish this, but often a written or presented narrative is necessary to ensure board members are connecting the dots between financial data and mission goals. Narratives also ensure board members interpret dashboard metrics uniformly and accurately.

Financial dashboard narratives can be shared as written reports or oral presentations. Advantages and disadvantages of the two approaches are detailed below. Sample written narratives from Trinity University and Marquette University are available in the appendix of this publication.

Type of Narrative	Advantage	Disadvantage
 Written	Ensures users have access to narrative whenever they engage with dashboard—not just at semiannual meetings	Extends length of dashboard, reducing likelihood that board members read report
 Oral	Engages board members in discussion of important trends and metrics during meetings	Does not add value to dashboard outside formal board meetings

Source: Business Affairs Forum interviews and analysis.

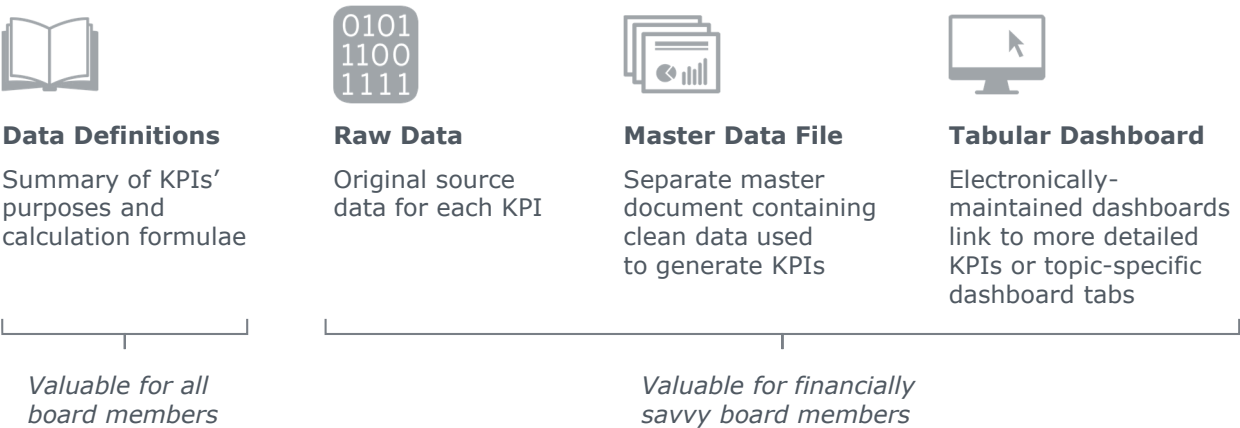
Going the Extra Mile

Four Types of Supplementary Resources Help Users Understand and Trust Data

The sixth consideration when building board-level financial dashboards is providing supplemental information. Even with a concise, visual format and clear narrative, some board members may want or need additional resources to better understand financial data.

The four most common types of supplemental information are detailed below. First, all board members may benefit from data definitions that detail a KPI’s purpose and formula for its calculation. This will help users better understand KPIs and build trust with the dashboard. Users will typically find data definitions easier to use if presented on or alongside the dashboard, though definitions can also be shared in separate documents.

Four Types of Supplementary Dashboard Data Resources



More financially savvy board members may request access to more detailed reporting and information. In these cases, financial leaders should consider providing three additional resources—raw data, master data files, or tabular dashboards. To avoid fatiguing board members with too much data, access to these resources should be granted only to those users that request it. However, to maintain trust in the data’s integrity and avoid distracting sidebars, dashboard administrators should have additional resources available on demand to quickly satisfy user questions and requests.

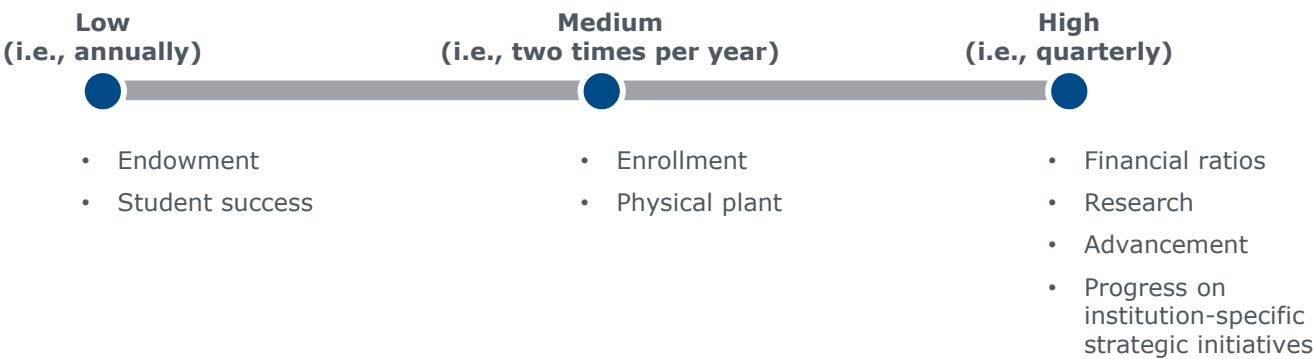
Source: Business Affairs Forum interviews and analysis.

Keeping the Dashboard Current

Different KPIs Require Updating at Various Times Throughout Academic Year

The seventh consideration when building board-level dashboards is updating data at regular intervals. While higher education dashboards do not need to update in real time to be effective, KPIs do change throughout the year. Periodically updating different indicators—at least prior to each board meeting—maximizes a board’s time together, as members are able to focus on the most timely metrics during each meeting. The graphic below depicts the relative updating frequency for common dashboard KPIs. However, board interest, data availability, and institution-specific strategic priorities should determine the exact updating frequency of dashboard metrics.

Standard Updating Frequency for Common Dashboard KPIs



“At each meeting, I focus on the indicators that have changed since the previous meeting. That allows us to concentrate on new information. Since different indicators change at different times, the board has a chance to discuss all the relevant categories over the course of the year.”

President
Private Research University

Source: Allen C, et al., "Making Metrics Matter: How to Use Indicators to Govern Effectively," available at: <http://aqb.org/trusteeship/2011/januaryfebruary/making-metrics-matter-how-to-use-indicators-to-govern-effectively>, accessed February 2016; Business Affairs Forum interviews and analysis.



Adapt the Dashboard to Different Audiences

STEP

- Consideration 8: Engaging academic leaders with dashboard data

3

Thinking Beyond the Board

Other Institutional Stakeholders Benefit from Dashboard Engagement






The eighth consideration when building financial dashboards is leveraging the existing dashboard to engage academic leaders in financial conversations. While the board should be the primary audience for a financial dashboard, other institutional stakeholders can also benefit from engaging with financial data. The most frequently identified secondary dashboard audience is academic leaders. The effects of engaging academic leaders, who often remain at one institution for decades, can be long lasting.

Academic leaders and board members, however, engage with financial data in different ways. Many business officers wonder if they should build a separate dashboard for academics, tailored to their unique needs. However, most institutions have found this approach is not worth the effort. Multiple dashboards are unnecessarily complex for administrators to maintain and can lead to distrust, as stakeholders perceive different dashboards as providing different accounts of financial health.

Fortunately, board-level dashboards can be converted for use by academic leaders with minimal adjustments to formatting and deployment. In fact, some business leaders deliberately share their unaltered board-facing dashboards with their academic leaders in order to demystify board proceedings and build toward a culture of trust and transparency. The following page details key lessons learned and mistakes to avoid when engaging academic leaders in institutional finances.

Deploying Financial Dashboards with Academics

Solutions to Common Challenges

Challenge	Solution	Example
If academic leaders don't understand financial data...	...provide financial data literacy training.	 Higher Education Finance Training Course The University of South Carolina's Academic Leadership Development Program (ALDP) identifies 4-5 associate professors each year as potential academic leaders and trains them on key university operations, including finance.
		 Academic Leader Internship Program The University of Nevada, Las Vegas' academic leader internship program pairs up-and-coming faculty members who have expressed interest in leadership positions with administrative leaders to learn about administrative operations and priorities.
If academic leaders don't trust financial data...	...involve academic leaders in the selection of dashboard KPIs.	 Faculty Focus Group The Vice President for Finance and Administration at Trinity University tested KPIs with a faculty focus group. The faculty not only helped develop accurate and equitable metrics but also gradually came to trust the KPIs.
		 Informal One-On-One The Executive Director of Institutional Planning and Analysis at one institution volunteered to meet one-on-one with any faculty leader to explain the list of KPIs to be included in the dashboard.
If academic leaders don't care about financial data...	...provide a narrative alongside financial KPIs.	 Connect financial data with faculty priorities Explaining how an institution-wide financial shift will influence the day-to-day operations of the institution will help faculty members understand the tradeoffs inherent in any financial decision.

Source: Trinity University, San Antonio, TX; University of Nevada, Las Vegas, Las Vegas, NV; University of South Carolina, Columbia, SC; Business Affairs Forum interviews and analysis.



Appendix

- Common Financial Indicator Ratios for Higher Education Institutions
- Marquette University's Financial Dashboard Narrative (excerpt)
- Trinity University's Financial Dashboard Narrative (excerpt)

Common Financial Indicator Ratios for Higher Ed

Ratio Category	Ratio	Calculation Method
Resource Sufficiency and Flexibility	Primary Reserve	Unrestricted and Expendable Net Assets / Total Expenses
	Secondary Reserve	Non-expendable Net Assets / Total Expenses
	Capitalization	Total Net Assets / Total Assets
	Current	Total Current Assets / Total Current Liabilities
Resource Management	Viability	Unrestricted and Expendable Net Assets / Long-term Debt (i.e., Bonds, Notes, Capital Leases)
	Debt Burden	Annual Principal and Interest Payments / [(Operating Expenses + Non-operating Expenses) – Depreciation Expense + Principal Payments on Capital Debt and Leases]
	Debt Coverage	[(Net Operating Income/(Loss)) + (Net Non-Operating Revenue/(Expenses)) + Depreciation Expense + Interest paid on Capital Debt] / Annual Principal and Interest Payments
Asset Performance and Management	Return on Total Net Assets	Change in Total Net Assets / Total Net Assets
	Return on Expendable Net Assets	Change in Expendable Net Assets / Expendable Net Assets
	Composition of Equity	Total Financial Assets / Total Physical Assets
	Financial Net Assets	(Total Net Assets – Invested in Capital Assets) / Total Net Assets
	Physical Net Assets	(Total Net Assets – Expendable, Non-expendable and Unrestricted Net Assets) / Total Net Assets
	Physical Asset Reinvestment	Purchased Cash Assets / Depreciation Expense
	Age of Facilities	Accumulated Depreciation / Depreciation Expense
Operating Performance	Net Operating Revenues	(Operating Income (loss) + Net Non-operating Revenues (expenses)) / (Operating + Non-operating Revenues)
	Operating Margin	Income (loss)* / (Total Operating + Non-operating Expenditures)
	Gross Tuition Contribution	Gross Tuition Revenue / (Operating + Non-operating Expenses)
	Gross Tuition Contribution per Student FTE	Gross Tuition Revenue / Student Full-time Equivalent
	State Appropriations Contribution	State Appropriations Revenue / (Operating + Non-operating Expenses)
	Gifts, Grants, and Contracts Contribution	Gifts, Grants, and Contracts Revenue / (Operating + Non-operating Expenses)

Source: Mezzina L, et al., *Strategic Financial Analysis for Higher Education: Identifying, Measuring, & Reporting Financial Risks*, 7th ed., NACUBO, 2005; Business Affairs Forum interviews and analysis.

Common Financial Indicator Ratios for Higher Ed (cont.)

Ratio Category	Ratio	Calculation Method
Operating Performance (cont.)	Auxiliary Enterprises Contribution	Auxiliary Enterprise Revenues / (Operating + Non-operating Expenses)
	Hospital Operations Contribution	Auxiliary Enterprise Revenues / (Operating + Non-operating Expenses)
	Salaries, Wage, and Fringe Benefits Demand	Salaries, Wages, and Fringe Benefit Expenses / (Operating + Non-operating Revenues)
	Payment to Suppliers Demand	(Contractual Service + Commodities Expenses) / (Operating + Non-operating Revenues)
	Instruction Demand	Instruction Expense / (Operating + Non-operating Revenues)
	Research Demand	Research Expense / (Operating + Non-operating Revenues)
	Public Service Demand	Public Service Expenses / (Operating + Non-operating Revenues)
	Institutional Support Demand	Institutional Support Expense / (Operating + Non-operating Revenues)
	Educational Support Demand	(Academic Support + Student Service Expenses) / (Operating + Non-operating Revenues)
	Operations and Maintenance Demand	Operations and Maintenance Expenses / (Operating + Non-operating Revenues)
	Student Aid Demand	Student Aid Expenses / (Operating + Non-operating Revenues)
	Auxiliary Enterprises Demand	Auxiliary Enterprise Expenses / (Operating + Non-operating Revenues)
	Hospital Operations Demand	Hospital Expenses / (Operating + Non-operating Revenues)
Overall Financial Health	Composite Financial Index ¹	$[(\text{Operating Margin}/.013)*.1]+[(\text{Primary Reserve}/.133)*.35]+[(\text{Return on Net Assets}/.02)*.2]+[(V/.417)*.35]$

1) Although there is no standard system for the calculation of the CFI, the National Association of College and University Business Officers (NACUBO) outlines the above strength and weight constants to encourage consistency between all institutions and system offices that choose to calculate it.

Source: Mezzina L, et al., *Strategic Financial Analysis for Higher Education: Identifying, Measuring, & Reporting Financial Risks*, 7th ed., NACUBO, 2005; Business Affairs Forum interviews and analysis.

Marquette University's Dashboard Narrative (excerpt)



Trinity University's Dashboard Narrative (excerpt)

Trinity University

Financial Dashboard

January 2016

Attached please find the Financial Dashboard for the year ended May 31, 2015. Thirty-five Fact Book institutions are included with FY15 data, up from thirty-three in the prior year. Some institutions do not share their financial statements and others were excluded because their Statement of Activities does not include a measure of operating net income.

Executive Summary

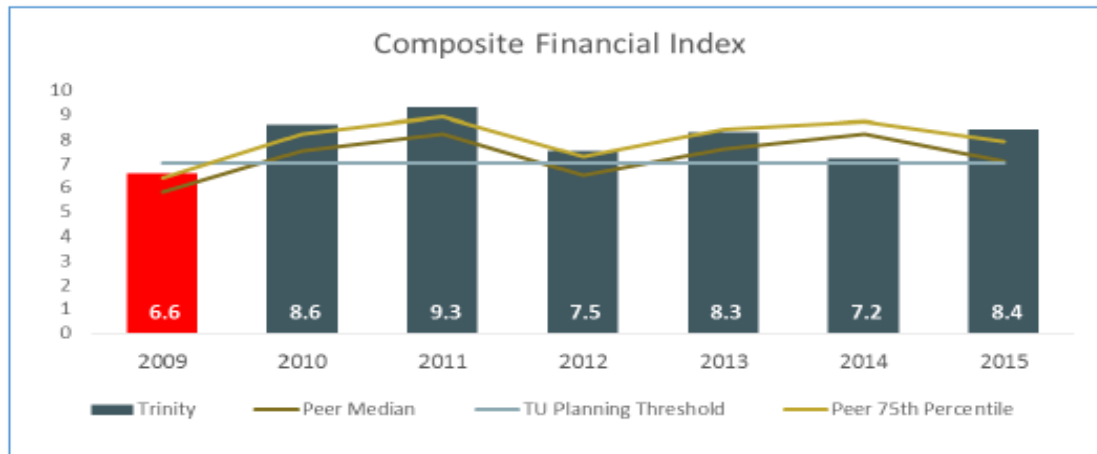
Fiscal 2015 marks Trinity's third year using the Financial Dashboard, based on audited financial statement information, to assess financial health and compare to peer institutions. The goals of the financial dashboard are to help ensure our strategic and operational objectives and actions maintain or strengthen the University's overall financial health over time and to communicate information in a concise and clear fashion. Key takeaways from the FY15 dashboard are:

1. Most dashboard measures strengthened in FY15, reflecting stronger financial position and results of operations.
2. The Composite Financial Index (CFI) increased to 8.4, up from 7.2 in the prior year, and well above our planning threshold of 7.0.
3. Net income from operating activities for FY15 was \$10.1M, or 7.9% of total revenues. This included \$5.1M operating budget surplus available for designations.
4. Only two dashboard metrics are in alert status in FY15: Return on Net Assets and Fundraising. The Return on Net Assets of 3.8%, while positive, was below the planning threshold.
5. Trinity maintained its strong Standard and Poors' AA long-term credit rating and A-1 short-term credit rating.

Trinity University's Dashboard Narrative (cont.)

Composite Financial Index

The following chart presents Trinity's CFI scores for the seven years ended May 31, 2015, along with our peer median, peer 75th percentile and planning threshold. Over this period Trinity's CFI has ranged from a low of 6.6 in FY09 to a high of 9.3 in FY11.



Highlights over the seven years include:

- FY09, with a CFI score of 6.6, was the only year in which Trinity's CFI score fell below the planning threshold, reflecting the effects of the global financial crisis at that time, and Trinity's -16.9% loss on endowments (all endowment returns in this report are GAAP-based financial statement returns unless otherwise noted).
- Financial markets healed in FY10 and FY11, with endowment returns of 14.6% and 17.8%. Also, the University received significant unrestricted oil and gas income from the Marrs McLean trust in FY11. The strong endowment return combined with unrestricted oil and gas income to produce the largest return on net assets of the seven years, at 12.6%, and boosted the CFI to its high watermark of 9.3 in FY11.
- In FY12 the CFI declined to 7.5 due to a loss of 2.2% on endowment investments combined with one-time expenses relating to the early retirement program for faculty and other one-time, non-capitalized expenditures related to facilities and technology.
- In FY13 the CFI rebounded to 8.3, led by a 16.2% return on endowment.
- In FY14 the CFI declined to 7.2 due to the large non-capitalized costs incurred at the completion of the Center for Sciences (\$10.2M), in spite of strong returns on the endowment of 12.9%.
- In FY15 the CFI increased to 8.4, reflecting strong net income from operations of 7.9% and endowment returns of 7.8%. Income from operations included \$2.5M of net income from grants, \$2.5M of Marrs McLean Trust funds designated for building renewal, and \$5.1M operating budget surplus available for designations. The \$5.1M operating budget surplus available for designation exceeded the \$4.3M budgeted revenue contingency by \$800k, reflecting growth in net student revenues and sound internal controls over expense budgets.



Advisors to Our Work

The Business Affairs Forum is grateful to the individuals and organizations that shared their insights, analysis, and time with us. We would especially like to recognize the following individuals for being particularly generous with their time and expertise.

Eric Algoe

Texas State University
San Marcos, TX

Duane Anderson

Mount Royal University
Calgary, AB

Rick Anderson

Washburn University
Topeka, KS

Kathy Attebury

Montana State University
Bozeman, MT

Deborah Bednarz

Minnesota State Colleges and
Universities System
St. Paul, MN

Lynsay Belshe

The George Washington
University
Washington, DC

Deb Berkan

Brandon University
Brandon, MB

Matt Bierman

Western Illinois University
Macomb, IL

Bruce Bollinger

North Dakota State University
Fargo, ND

Gerry Bomotti

University of Nevada, Las Vegas
Las Vegas, NV

William Bowes

University of Arkansas for
Medical Sciences
Little Rock, AR

Corey Bradford

Prairie View A&M University
Prairie View, TC

Linda Brown

Concordia College
Moorhead, MN

Leslie Brunelli

University of South Carolina
Columbia, SC

Dan Burkey

Creighton University
Omaha, NE

Dave Carson

Flagler College
St. Augustine, FL

Christopher Clement

University of New Hampshire
Durham, NH

Michael Coyne

Susquehanna University
Selinsgrove, PA

Sidney Evans

Morgan State University
Baltimore, MD

Alan Finn

Lewis & Clark College
Portland, OR

John Gordon

Howard University
Washington, DC

Stephen Graham

Seton Hall University
South Orange, NJ

Elizabeth Hardin

University of North Carolina at
Charlotte, NC

Jackie Hogan

University of the Fraser Valley
Abbotsford, BC

Jason Hornberger

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Lawrence, KS

Bob Huth

Stetson University
DeLand, FL

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Robert Morris University
Moon Township, PA

The best
practices are
the ones that
work for **you.**SM

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