
Wednesday, April 17, 2019

11:00 a.m.–1:00 p.m.

Registration and Badge Pick-Up

CENTENNIAL PREFUNCTION, THIRD FLOOR

1:00–1:30 p.m.

GENERAL SESSION

Welcome

CENTENNIAL B, THIRD FLOOR

Robinson S. Neidhardt, Strategy Director of Technology, AIR; **Betsy Tippens Reinitz**, Director of Enterprise IT Programs, EDUCAUSE; **Lindsay Wayt**, Director, Analytics, NACUBO

1:30–2:30 p.m.

GENERAL SESSION

Using Data Mining to Drive Student Success, Completion, Transfer, and Revenue Generation

CENTENNIAL B, THIRD FLOOR

Reagan Romali, President, Long Beach City College

Data tell us interesting stories that can help us design strategies to benefit student success. Mining data in new and interesting ways allows educational leaders to better understand the challenges and opportunities that face students and institutions today. In this session, you will learn a variety of ways you can pull and analyze data pertaining to course success, retention and stop-outs, credit accumulation, and performance in general education or barrier coursework and evaluate it for opportunities to reshape strategy toward a student success and completion focus. You'll learn a myriad of opportunities available for how to evaluate data to drive success, retention, completion, and operational revenues. You'll see real-life examples of how to use this data to reframe your strategies to better offer supports for students as well.

Outcomes: Learn how to analyze data and shape relevant strategies • Explore data support frameworks that you can replicate at your institution • Understand predictive analytics in student success data • Understand how data about success can drive revenue opportunities

2:30–3:00 p.m.

 **Refreshment Break**

CENTENNIAL PREFUNCTION, THIRD FLOOR

3:00–3:35 p.m.

GENERAL SESSION

Student Success Is Everyone's Responsibility

CENTENNIAL B, THIRD FLOOR

D. Christopher Brooks, Director of Research, EDUCAUSE

In 2017, NASPA, AIR, and EDUCAUSE entered into a partnership to evaluate the current landscape of the use of data and analytics to support student success initiatives in higher education. These organizations surveyed 970 student affairs, institutional research, and IT professionals to better understand the types of student success data projects under way in higher education, the structures institutions have in place to support these efforts, the level of coordination that exists across stakeholder units and the programs, interventions, and outcomes supported by these initiatives. The results, published in the 2018 report *Institutions' Use of Data and Analytics for Student Success: Results from a National Landscape Analysis*, presents the most comprehensive picture of student success analytics in higher education to date. Moreover, the report, as well as the research effort that produced this work, demonstrates clearly the need for continued collaboration across institutional units to support student success. This presentation will discuss the origins of this project, highlight key findings, and advocate for the cultivation of cross-organizational collaboration in the space of student success analytics.

Outcomes: Understand the level of adoption of student success analytics at US institutions and the outcomes from those efforts • Articulate the roles and responsibilities of various campus stakeholders in student success analytics • Explore the student populations most studied and the interventions conducted

3:45–5:00 p.m.

GENERAL SESSION

Analytics as a Team Sport: the AIR-EDUCAUSE-NACUBO Analytics Statement

CENTENNIAL B, THIRD FLOOR

Susan Whealler Johnston, President and CEO, NACUBO; **Christine M. Keller**, Executive Director and CEO, AIR; **John O'Brien**, President and CEO, EDUCAUSE

This interactive session will unveil the first draft of a new analytics statement developed collaboratively by AIR, EDUCAUSE, and NACUBO. This statement underscores the crucial importance of analytics in higher education and the urgent need for progress, along with sharing set of principles and recommendations for action. Presidents from each association will share their insights on this work and the implications for higher education. Through planned interactive activities, attendees will have the opportunity to engage with the information and participate in the development of final recommendations.

5:00–6:30 p.m.

Welcome Reception

CENTENNIAL A/TERRACE, THIRD FLOOR

Thursday, April 18, 2019

7:00–8:00 a.m.

Networking Breakfast

CENTENNIAL A, THIRD FLOOR

8:00–9:00 a.m.

*GENERAL SESSION***The Future of the Higher Education Analytics Workforce**

CENTENNIAL B, THIRD FLOOR

Gina Johnson, Assistant Executive Director for Partnerships and Membership, AIR; **Keith McIntosh**, Chief Information Officer, University of Richmond; **Sherri L. Newcomb**, Senior Vice President and Chief Operating Officer, Queensborough Community College/CUNY; **Ellen Peters**, Director of Institutional Research and Retention, University of Puget Sound

As colleges and universities increasingly expand their capacity to utilize more sophisticated analytics in decision-making, professionals in technology, budget and finance, and institutional research need to grow and develop new sets of skills. This session will include an introduction to the report *Investing in America's Data Science and Analytics Talent*. Leaders from the three professions will consider the supply and demand of employees with the necessary data science and analytics skills and how colleges and universities can train and hire for current and future needs.

9:15–10:00 a.m.

BREAKOUT SESSIONS

The Future of the Analytics Workforce and Organizational Structure

University Data Commons: Collaborating for Data-Informed Budgeting at Virginia Tech

BARCELONA/CASABLANCA, THIRD FLOOR

Jeffrey Earley, Associate Vice Provost for Finance, **Abhay Joshi**, Director, Decision Support Services, **Thulasi Kumar Raghuraman**, Associate Vice Provost, and **Ken Smith**, Vice Provost, Academic Resource Management, Virginia Tech

In response to the changing funding environment for public higher education, Virginia Tech has adopted a data-informed approach to academic budgeting that is supported by a shared data commons built using a data lake approach to data warehousing. This presentation will discuss why we chose a performance budget and data lake approach to support better decision-making and how we implemented it. Representatives from the IT, IR, and finance organizations will discuss lessons learned as well as transformations in decision-making and expectations for advanced analytics that have resulted from the transparent connection of financial incentives and data.

Outcomes: Learn about performance budgeting and associated analytics adopted within a research university • Learn about the role of analytics to address daily and strategic decision-support needs • Hear how campus-wide collaboration made this possible

The Future of Governance and Communications

Analytics Driving Outcomes: Data as Strategic Catalyst

CENTENNIAL C, THIRD FLOOR

Christopher Gill, Chief Information Technology Officer, and **Kevin Saunders**, Director of Institutional Research and Assessment, Drake University

The true power of information comes from its ability to inform strategic decisions and help align strategy with outcomes. While analytics by itself cannot define an institution's strategy, when designed and used effectively it can provide objective and relevant insights that decision makers can use to make the right choices for their organizations. We will highlight some ways that data and analytics are being used to empower decision makers and catalyze change in a higher education environment.

Outcomes: Learn about strategies for launching/sustaining successful decision-support initiatives • Consider methods to develop strong partnerships with key stakeholders • See actual decision-support tools in action and correlate tools with outcomes

Future Use Cases

Leveraging Machine Learning to Forecast Student Success for Academic Advisors

CENTENNIAL D, THIRD FLOOR

David Benjamin Hellar, Research and Development Engineer, **Barton Pursel**, Assistant Director, Education Technology Services, and **Francis Wham**, Data Scientist, The Pennsylvania State University

The Data Empowered Learning Team at Penn State has developed LIFT, a user interface prototype that leverages machine learning to predict student success outcomes in a course. LIFT is undergoing research trials to examine how academic advisors react to predictive warnings of student performance and how that knowledge impacts their decision-making and ethical considerations. We will provide a live demonstration of the LIFT prototype, present early research findings, and discuss the potential use cases for leveraging machine learning for predictive models of student success.

Outcomes: Learn how predictive models of student success work • Engage in discussion about the ethical use of predictive models in academic advising • Discover potential use cases for predictive models

10:00–10:30 a.m.

Refreshment Break

CENTENNIAL PREFUNCTION, THIRD FLOOR

10:30 a.m.–12:00 p.m.

GENERAL SESSION**PowerTalks: Best Practices in Collaboration**

CENTENNIAL B, THIRD FLOOR

Collaboration across institutional silos is becoming increasingly critical for the success of analytics initiatives. This section of the summit includes three short presentations about best practices with collaborative analytics efforts.

Presentation #1: Data Governance as a Foundation for Analytics**Sandra Cannon**, Associate Vice Provost for Data Governance and Chief Data Officer, University of Rochester

Understanding the basic tenets of data governance is key for anyone who works with data. IT leaders are often called upon to use technology solutions for data governance problems: setting security controls for access to a database is a critical technology function but who makes the decision about granting access? Reporting staff often struggle finding data, or finding the “right” data, to produce the relevant outputs. If there are no standard definitions for key concepts, how can there be a consistent analysis or report for those concepts? And for business areas, it is imperative that people understand what analytics can accomplish and how to draw the line between what is possible and what is permissible. No part of a university should figure this out alone. Data governance at the University of Rochester works with and across business lines to ensure that data are securely accessible, trusted, and understood in order to produce consistent, responsible, and meaningful analytics.

Presentation #2: An Integrated Approach to Analytics: An IR and IT Partnership**Joseph Contreras**, Institutional Research Specialist in Data Analysis, **Elisa Hertz**, Director of the Center for College Effectiveness, and **John Stroud**, Chief Information Officer, CUNY Stella and Charles Guttman Community College

What organizational structures effectively support demands for data-driven decision-making? Learn how two offices—institutional research and information systems—combined their respective strengths in analysis and programming to turn a data and technology challenge into a successful partnership. To deal with high data demands, they created a data warehouse and data dashboards that automated the flow of data from extraction to dissemination and increased access to information for planning, assessment, and decision-making. Presenters will discuss benefits of IR/IT partnerships, briefly describe the data warehouse and development cycle, demo Tableau dashboards, describe best practices in visualization, and explain uses of the dashboards.

Presentation #3: What If We Acted as One?**Charlie Moran**, Senior Partner and CEO, Moran Technology Consulting

As we look across higher education for the most successful results of business analytics, we continually find a high correlation between great outcomes and tightly integrated IT data warehouse/BI and Institutional Research teams. The IT team brings strong knowledge of gathering and cleansing planning data. The IR team brings strong statistical data-analysis skills. Working together, these integrated teams seem to achieve results that other schools don't. We will look at a few schools where the outcomes justified the challenges of collaboration.

12:00–1:00 p.m.

Networking Lunch

CENTENNIAL A, THIRD FLOOR

1:00–1:45 p.m.

BREAKOUT SESSIONS**Data Governance Beyond Silos: Collaboration with IR and IT Creates Success**

CENTENNIAL C, THIRD FLOOR

Rama Dhuwaraha, Associate Vice Chancellor and CIO, and **Jason Simon**, Assistant Vice President—Data, Analytics, and Institutional Research, University of North Texas

Higher education institutions increase the likelihood of successfully evolving their data landscapes by utilizing strengths across functional units and reducing areas for friction. This session explores how the University of North Texas went from being data rich and information poor to an enterprise where a successful data analytics, data governance, and data modeling program fundamentally altered the data-informed decision-making process. Hear perspectives from both information technology and institutional research to uncover secrets for collaboration and mutual impact. In just over a year, the UNT Insights Program has grown from a concept to an initiative with over 450 trained campus users and 1000+ terms in our data governance program and has garnered more than \$1,000,000 in savings for the institution.

Outcomes: Learn foundational elements required to successfully build a close IR and IT collaboration around data warehousing and analytics • Gain key strategies to alter a campus trajectory with data management and data governance based on successful practices implemented at UNT • Learn new approaches and tactics to implement a large-scale data warehouse and analytics program at an institution grappling with data maturity

Establishing Effective Relationships with Vendors: What Questions to Ask?

CENTENNIAL B, THIRD FLOOR

Brad Hough, Vice President for Information Technology and CIO, Logan University; **Nicole Melander**, Vice President of Strategic Initiatives, Campus Labs

When managing your campus's data and technology infrastructure, you'll inevitably find yourself working with a number of vendors to address your institutional needs. With so many options in the industry, it's critical to choose partners who understand their role within the complex vendor ecosystem on your campus. We will provide both a campus CIO and technology provider perspective on what questions to ask potential vendors before entering into a partnership, detail lessons learned in managing multiple data collection and analysis systems, and examine how to effectively manage cross-campus relationships over several years.

Outcomes: Learn how to evaluate partnerships with external technology and data vendors • Identify strategies to start strong with new vendors and deepen relationships over time • Understand how to assess data needs across campus, ensuring a holistic data infrastructure

Growing the Analytics Platform Across the UNC System

BARCELONA/CASABLANCA, THIRD FLOOR

Laura Bageant, Associate Vice President of Data and Analytics, University of North Carolina System Office

The University of North Carolina System Office provides an analytics platform with capabilities to meet 17 institutions' distinct use of data in decision-making. Through this approach, the System Office provides valuable infrastructure and services while fostering a spirit of collaboration with our universities.

Outcomes: Hear about the UNC System's journey to a successful analytics platform that aligns key stakeholder demands for systemwide data with individual university needs for meaningful, timely, actionable information • Learn from our process and see how this service-oriented model engages universities in a scalable core technology platform that expands analytic capacity across the system

Measuring and Forecasting Student Success Initiatives

TOKYO/VANCOUVER, THIRD FLOOR

Jacob Chandler, Senior Product Manager, Ellucian

How can higher education leaders looking to retain students and increase the number of graduates improve student success? Where should they focus, and how will they know if what they are doing is working? Many institutions are adopting and investing in initiatives, such as Guided Pathways, to help them achieve these goals but are challenged to quantify the results of their investments. Learn how you can use industry-accepted metrics to design analytics that let you monitor and proactively ensure student success.

Outcomes: Understand how your institution can implement early-warning indicators to improve student outcomes • Gain tips for breaking down silos and integrating data • Learn how this approach supports Guided Pathways and other student success initiatives

2:00–2:45 p.m.

BREAKOUT SESSIONS

The Future of the Analytics Workforce and Organizational Structure

Rethinking Enterprise Analytics in the Age of Big Data

BARCELONA/CASABLANCA, THIRD FLOOR

Robert E. Carpenter, Deputy CIO and Associate Provost for Analytics, **Constance Anne Pierson**, Associate Vice Provost, and **John J. Suess**, Vice President of IT and CIO, University of Maryland, Baltimore County

At UMBC, we want to evolve our current analytical environment to support our strategic goals of improving student success, supporting pedagogical innovation, and supporting faculty to advance research. To do this, we are rethinking all aspects of how we approach analytics, including our organizational structure, how we present data and support executives, and how to establish a flexible technical infrastructure that can scale to support big data. This effort is being led by leaders in institutional research, IT, and the Provost's Office, which will present our current efforts under way and the larger context for developing our analytics roadmap.

Outcomes: Learn about the organizational structures we considered and why we chose the approach we did • Learn how to leverage academic talent in new analytic projects Learn how to create a robust analytical infrastructure in AWS

The Future of Governance and Communications

3 Reasons Why Analytics Is Everybody's Problem

CENTENNIAL C, THIRD FLOOR

David Burgess, Associate Director, **Alison Nimura**, BI Team Manager, **Michael Smith**, Senior Research Analyst, and **Diane Xiong**, Fiscal and Planning Officer, Portland State University

In a culture where access to data is democratized and analytics becomes decentralized, how should organizations demarcate responsibility for decision support? Portland State University has adopted a collaborative approach to laying the foundation for institutional analytics, with contributions from IR, IT, and business analysts. We will discuss how the skills and perspectives from these domains can complement each other in higher ed analytics initiatives and how to foster collaborative relationships in your institution.

Outcomes: Learn the techniques to build collaborative relationships at your institution • Learn methods to overcome cross-functional collaboration challenges • Recognize opportunities to turn data into analytics

Future Use Cases

Forecasting and Predictive Analytics: Combining Techniques for Better Projections

CENTENNIAL D, THIRD FLOOR

Rebecca Barber, Senior Director, Management Analysis, Arizona State University

Accurate enrollment projections are fundamental to the efficient management of an institution, but there is more than one way to make them. Finance organizations have long used spreadsheet-based forecasting to estimate future revenues and expenses. Institutional research and enrollment management have been using predictive analytics to estimate student retention and, by extension, future enrollment. Yet the two rarely confer and even more rarely cooperate.

Outcomes: Understand the difference between a forecast and a predictive model • Understand the unique features of each model type • Learn about a project to combine data from the two

2:45–3:15 p.m.

Refreshment Break

CENTENNIAL PREFUNCTION, THIRD FLOOR

3:15–4:45 p.m.

GENERAL SESSION**PowerTalks: Best Practices in Student Success**

CENTENNIAL B, THIRD FLOOR

Higher education is increasingly turning to analytics to drive decision-making around student success initiatives. This section of the summit includes three short presentations about best practices with analytics efforts geared toward student success.

Presentation #1: Using US Census Bureau Data to Tell a More Comprehensive Story about Student Success

Stephanie Huie, Vice Chancellor, Office of Strategic Initiatives, and **David R. Troutman**, Associate Vice Chancellor for Institutional Research and Advanced Analytics, University of Texas System

It is no longer business as usual: policymakers, media, and the public are questioning student success outcomes. Consequently, there has been a strong consumer advocacy movement asking, Is higher education really worth the cost? Recognizing the importance of explaining the value of a degree and return on investment, the University of Texas System developed a partnership with the US Census Bureau to merge UT System student data with national unemployment insurance (UI) earnings data that is maintained by the Longitudinal Employer-Household Dynamics (LEHD) program. The matching of earnings data allows UT System to create a national-level earnings metric (annual earnings) for any graduate who has UI earnings records from across the nation. The metric was integrated into the UT System seekUT tool, a free online tool that provides students and parents with information on earnings and student debt by major. This session will describe the journey UT System took to develop an agreement with the Census Bureau, demonstrate the seekUT tool and, based on UI earnings data, share student-level and institutional-level earnings metrics.

Presentation #2: Small College, Big Data

Gordon Hewitt, Associate Dean of Faculty for institutional Research and Assessment, **Joe Shelley**, VP for Libraries and IT, and **Michael Sprague**, Director, Business Intelligence and Web Services, Hamilton College

It's now possible for small colleges to better respond to increasing demand for data and business intelligence. As college executives, board members, and prominent alumni come to expect data to play an integral role in decision-making, we will discuss the importance of institutional strategy around data governance, as well as how to take advantage of changing technology that has a lower cost of entry. The new BI efforts at Hamilton College are a result of changing roles and intense collaboration among IT and IR. This session is a joint presentation from Hamilton's director of IR, CIO, and BI director.

Presentation #3: Analytics for the Changing Enrollment Landscape

Peter Fritz, Senior Manager, Higher Education Practice, Deloitte; **John Ambrose**, Interim Executive Director of Admissions and Recruitment, Michigan State University

In the next 10 years, 35 states are projected to experience a decline in high school graduates. The impact of these changing demographics requires institutions to rethink the tools used to inform enrollment management. One such tool—enrollment dashboards powered by analytics—provides insights quickly and intuitively to recruiters, enrollment executives, and administrators. By amalgamating historical enrollment data with future recruitment targets, enrollment dashboards use analytics to present real-time data on recruitment and admissions targets, while informing CRM software. Learn how Michigan State University built enrollment dashboards and incorporated them into its enrollment management strategy to better position the institution to address changing demographics and fulfill future enrollment needs.

5:00–6:15 p.m.

RECEPTIONS**Happy Hour Meet-Up Reception hosted by Jenzabar, Platinum Partner**

TOKYO/VANCOUVER, THIRD FLOOR

Jenzabar Analytics provides answers on demand. We're providing drinks and hors d'oeuvres on demand for those who'd like to join us at our Happy Hour Meet-Up. Come sip, snack, and socialize while you learn more about how Jenzabar Analytics can help you find the right answers to your toughest questions.

Happy Hour Meet-Up Reception hosted by WTC Consulting

BARCELONA/CASABLANCA, THIRD FLOOR

WTC Consulting invites you for drinks, snacks, and conversation about our work with your colleagues centered on our leadership in activity-based costing and rate development in the complex areas of IT, facilities management, and shared services. Join members of our team to discuss the benefits of a typical engagement.

Friday, April 19, 2019

7:00–8:00 a.m.

Networking Breakfast

CENTENNIAL A, THIRD FLOOR

8:00–8:45 a.m.

BREAKOUT SESSIONS

The Future of the Analytics Workforce and Organizational Structure

Building Capacity for Analytics with Existing Staff and Agile Structures

BARCELONA/CASABLANCA, THIRD FLOOR

Christina M. Finneran, Vice President for Institutional Research, Analytics and Consulting, Bowdoin College

With the pressure to keep costs down, institutions are cautious about adding new staff lines, even with the immense promise of analytics. When is the right time to create an analytics position? When can existing staff be redirected to support analytics? Where is it best to locate analytics positions: in functional departments or a central analytics group? These questions will be discussed by sharing the skill sets needed for a successful analytics program and strategies to identify existing high-potential staff. Three organizational structures will be proposed (consultant, networked, and migratory), with examples from Bowdoin's experience building institutional capacity.

Outcomes: Understand that a successful analytics program requires skilled staff • Learn strategies to develop analytics talent within your institution • Apply 3 organizational structure models to your institution

The Future of Governance and Communications

Ethics in Predictive Analytics with a Data Governance Twist

CENTENNIAL C, THIRD FLOOR

Julie Alig, Executive Director, Strategic Analysis and Data Management, UMass Lowell; **Denise Nadasen**, Director of Research and Data Policy, APLU

Institutions use analytics to improve student success, but ethical concerns with the use of student data in predictive analytics are often overlooked. In this session, you'll be presented with ethical issues that institutions face and an ethical framework to engage institutional leaders. You'll be given opportunities to evaluate scenarios from an ethical perspective. A cross-functional, organic approach to protecting students and the institution will be introduced. You'll leave with (1) a greater understanding of how to identify bias in data and analysis, and (2) a framework that can be used to address ethical and data issues effectively.

Outcomes: Identify bias in the use of data in predictive analytics • Understand the ethical frameworks around predictive analytics • Develop an action plan to address ethical issues effectively

Future Use Cases

The AI-Driven University: Dream or Hallucination?

CENTENNIAL D, THIRD FLOOR

Brett Pollak, Director, Workplace Technology Services, and **Amin Qazi**, Architect, University of California San Diego

AI-supported business processes are changing how we do business, how we manage risk, how we communicate, and how we organize. An UC San Diego, we have started down the path of building the foundation to enable our organization to benefit from these innovations. In our talk, we will cover how the data and data warehouse of the future is changing; how we are capturing events in near-real time to manage risk; how we are planning to embed machine learning everywhere, including in data streams; and use cases that inform our thinking, design, and implementation.

Outcomes: Explore data governance in the AI-driven university • Discuss changing roles to empower employees in the AI-driven university • Learn how UC San Diego is preparing for a bold leap into the AI-driven world

9:00–10:00 a.m.

GENERAL SESSION

Building an Action Plan

CENTENNIAL B, THIRD FLOOR

Robinson S. Neidhardt, Strategy Director of Technology, AIR; **Betsy Tippens Reinitz**, Director of Enterprise IT Programs, EDUCAUSE; **Lindsay Wayt**, Director, Analytics, NACUBO

This session will help you build a plan of action for use when you return to your institution following the summit. Through facilitated group discussions and hands-on work, you'll develop plans for actions to take immediately on return, within the next month, and throughout the coming year.

10:00–10:30 a.m.

Refreshment Break

CENTENNIAL PREFUNCTION, THIRD FLOOR

10:30–11:30 a.m.

GENERAL SESSION

Tying It All Together

CENTENNIAL B, THIRD FLOOR

Robinson S. Neidhardt, Strategy Director of Technology, AIR; **Betsy Tippens Reinitz**, Director of Enterprise IT Programs, EDUCAUSE; **Lindsay Wayt**, Director, Analytics, NACUBO

In this fast-paced interactive session, attendees will summarize what they've learned, explore ideas with others, and share the action plans they have developed to take back to their campuses. The best ideas, determined via group polling, will be acknowledged with prizes.