Summit 2.0
The UMass Shared Analytics Program
Agenda

- Summit Overview
  - ‘Enterprise Data and Analytics’ team
  - Analytics Defined
  - What is Summit 2.0
- Data: Summit Enterprise Data Warehouse
- Tools: Summit OBIEE Demo
- Tools: Summit Tableau Demo
- Skills: Training
- Wrap-up and Next Steps
  - Contact Us / Survey

Shahr Panahi, Director of Enterprise Data and Analytics
Pam Theodore, Product Manager – Student
Bill Manteiga, Product Manager – A&F
Nick Jain, Manager – Analytics Platforms / Student
Analytics Defined

Analytics is used ... to analyze ... data points to gain insight and make informed decisions about complex issues.”

Educause

Descriptive
Diagnostic
Predictive
Prescriptive
Summit 2.0: Shared Analytics Platform for All of UMass
Summit 2.0:

Empowers People to Answer Complex Questions Using Data!

Questions → End-Users, Analysts, Community of Data Practitioners → Insights
Summit 2.0:
Tools Training for Analysts and Dashboard Training for End-Users

Skills
Summit 2.0: Data Driven Decisions

Access to the enterprise data warehouse and other sources
Summit 2.0:
Tools including OBIEE and Tableau Integrated together
Summit 2.0:
To empower discovery by end users, interactive dashboards are key

University of Massachusetts
Data Driven Decisions
Summit 2.0:
Shared Analytics Platform for All of UMass
What’s New?


- More Self Service
  - Empower those closest to the users’ needs to develop analytical content

- More / Better Tools
  - Oracle BI 12c
  - Tableau Program

- Better coordinated training, support, and maintenance

- Better performance – and tools to improve them in the future

- Provides Easier Access to More Data
More Self-Service

Summit 2.0 Adds More Support for Campus Self Service

**Campus Developers**
- Receive Toolset Training
- Build Dashboards / Visualizations
- Active User Community involvement
- Campus User Support
- Campus Training

**Summit Team**
- Campus Developer Support
  - Training Coordination
  - Visualizations
  - Data Extraction
  - Production Scheduling
- Build Interactive Dashboards
- Data Warehouse Support
- Tableau Extract Creation
- Coordinate User Community
- Tableau/OBI Server Administration

University of Massachusetts
Data Driven Decisions
Summit Data Warehouse

Massive Collection of UMass Data Optimized for Analysis

- More than 3.8 billion rows queried in 2018
  - over 13 million queries
- More data sources being added
Oracle Business Intelligence (OBIEE)

OBIEE 12c Highlights

• More Modern Look and Feel
• Faster
• Dashboards
• Self Service
  • Data Models
Oracle Business Intelligence (OBIEE)

Demo: Enrollment Trends over 10 Years

- Dean X ‘I need to know what programs are growing or declining so I can better plan for the next few years and beyond’

- Look at the past to plan for the future
  - Faculty Staffing
  - Class offerings
  - Marketing/recruitment
  - Facilities

- Enrollment trends over 10 years
Tableau Demo

Most popular programs, ranked

- Connect to the OBIEE Report Directly!
- Visualize the data
• Financial Analyst Y
  • 'Can we identify invoices at risk for late charges?'
  • ‘Are there opportunities to leverage high volume / bulk purchases to negotiate better terms with vendors?’

• A Dashboard, updated daily, can answer these questions and many other related questions

• In this hypothetical example:
  • We have many large, late invoices that should be taken paid immediately
  • We have several vendors with thousands of invoices and millions of dollars
### Tableau

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### OBIEE

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UMass Community of Data Practitioners

Coming soon: Launching a Platform to Bring us Together

• BI-Monthly gatherings (virtual or physical)
• Forum for sharing and exchanging knowledge
• “Tips and Tricks”
• “Summit Summit” Events
• Connection to the wider Tableau / OBIEE Communities

• Looking for volunteers and community leaders!

Write to us at: UITS.SUMMIT.HELP@UMASSP.EDU
How to Engage

Write to us at: UITS.SUMMIT.HELP@UMASSP.EDU

Ask Us

Join the Community

Attend Training – Tableau and/or OBIEE

Write to us at: UITS.SUMMIT.HELP@UMASSP.EDU
Summit 2.0: Data Driven Decisions

Service Offerings

- Access to more data
- Security
- Training
- Self-Service Support
- Tools
- Community
- Support
- Dashboards
- Automation
- Enterprise Server
- Security
- Alternate Webinar: Wednesday, January 30th 11:00 am – 12:00 pm

- These materials along with other resources will be sent out

Q & A

Write to us at: UITS.SUMMIT.HELP@UMASSP.EDU
Appendix
Top 10 Strategic Technologies *

1. Uses of APIs
2. Active learning classrooms
3. Incorporation of mobile devices in teaching and learning
4. Mobile apps for enterprise applications
5. Technologies for improving analysis of student data
6. Technologies for planning and mapping student educational plans
7. Blended data center (on premises and cloud based)
8. Predictive analytics for student success (institutional level)
9. Database encryption
10. (tie) IT asset management tools (e.g., CMDB) (tie) Student success planning systems

Most Influential Trends *

1. Complexity of security threats
2. Student success focus/imperatives
3. Data-driven decision-making
4. Contributions of IT to institutional operational excellence
5. Increasing complexity of technology, architecture, and data

UMass IT Strategy

1. Innovate Academic Technology
2. Support Success of Research Programs
3. Advance Data Strategy and Analytics
4. Drive IT Efficiency & Effectiveness
5. Accelerate Digital Transformation
6. Manage Risk

* Educause
Types of Analytics

Descriptive
- Use reports, interactive dashboards, and/or data visualization to describe ‘WHAT HAPPENED?’
- Example: How has the yield rate for admissions changed over time?

Predictive
- Use statistical models to predict ‘WHAT MAY HAPPEN’
- Example: Which applicants are likely not to enroll after being admitted?

Diagnostic
- Use Descriptive analytics and statistical inference to establish cause for ‘WHY DID IT HAPPEN?’
- Example: Why is the yield rate decreasing this year?

Prescriptive
- Use statistical models to predict ‘WHAT IS THE BEST RESPONSE’
- Example: What action(s) might increase the yield the most?
Summit Architecture

Access Layer:
- Reporting and Analytics tools
  - Optimized and integrated for best user experience

Marts Layer
- Content Vendors (e.g. HelioCampus)
- Analytics Engine
  - Artificial Intelligence
- Specific Data Marts
  - (Collection of Cleansed Data for Specific Subjects)
  - Future

Repository Layer
- Data Lake
  - Massive Repository of Raw Data
  - In All Formats
  - Future

Source Layer
- Data Integration
- Metadata
- Enterprise Data Warehouse
  - Highly Cleansed Transformed Data
  - Sources: All ERP, Cloud, On Premise, and External Data Sources

Hosted on Cloud

Other Web & Mobile Applications

Future
Campus Enrollment by Major – 10 year trend

For 2017, Biology was the #3 most popular major, with 1,886 students enrolled. This is a difference of 100 from the previous year.
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