You Have Dashboards... Now Optimize Their Delivery

Krisztina Filep, University of Massachusetts Amherst
Jeff Nass, Lehigh University
About Us

Krisztina Filep
Director of Operational Analytics
University of Massachusetts Amherst
4-year public university in MA
32,000 students
6,500 faculty and staff
12 schools/colleges, 60+ departments

Jeff Nass
Senior Analyst
Lehigh University
4-year private university in PA
7,600 students
1,900 faculty and staff
5 colleges and 35+ departments
Outline

- The Issue
- Why it Needs a Solution
- Things to Consider
- The Lehigh Story
- The UMass Amherst Story
A Brief History of Reporting

Caveman

Typewriter

Excel

BRIO

Access
In the past...

- Organization
  - Admissions
    - Applications, Acceptances and Enrollment
      - By Entering Status (Fall 2010-2011)
      - By School or College
        - First-Year and Transfer Students
        - Graduate Students: Fall 2019
      - By Sex (AY 2019-20)
      - First-Year Students by School or College Fall 2019
      - By Race/Ethnicity, Sex and Level (Graduate Students)
      - In-State Undergraduate Students
      - First-Time First-Year Students by Sex
      - Entering Students by Level and by Race/Ethnicity
    - SAT Scores and High School GPA for Elected Senators
    - Academic Indicators of Entering First-Year Students 2019
    - First Time First-Year Entering Students

- Enrollment
Also in the past...

- BRIO (Hyperion) database connection to create queries and pivot tables
- Output to Excel for further formatting and data
- MS Access for more complex automated reports
- Term by term file
- Difficult to recreate past reports with new data and/or change fields in the report
Let’s agree, the visuals of the past were not so sleek.
New Tools

Tableau

Power BI

SAS

R

Shiny
Beautiful solution to all our problems
Proliferation
Decision points

Data available

Permissions ↔ Licensing

Tools
The Lehigh Story

Us to build Table of Contents in Tableau I would like.

* Not an actual photo of anyone in the Office of Institutional Research and Strategic Analytics.
The Lehigh Story

• Why create a Table of Contents?
• More and more workbooks, increased complexity of folder structure, view permission groups and update irregularities.
• Increased difficulty for users to find what they are looking for
  • You don’t know what you don’t know
  • Do not want to search through folders to see what is available
  • Users not aware how to set subscriptions, default views, favorites, etc.
• Difficult to communicate to users when workbooks get updated
  • Not a clear line between user access and groups email/communication lists
• Now what?
Humble Beginnings

Our first Table of Contents (many years ago) was basically a Word document with a list of hyperlinks to assist with financial workbooks.

Then…

Presentations
Demos
Connections
Inspiration

https://analytics.appstate.edu/

Analytics Dashboard & Data Toolkit
Select an Area, Topic or level of Security from the options below or search by keyword to filter the toolkit.

Need Access? Internal dashboards are intended for specific campus users only. For access, submit a request at analytics.appstate.edu/access.
Licensing and Permissions

- **Limited number of licenses on Tableau Server:**
  - Creator/Developer
  - Explorer
  - Viewer

- **Decided on an internal TOC as opposed to a public version since we have license limitations**
  - Among our server-licensed users, all can see everything in the TOC regardless of their view access (will be prompted to request access)

- **Decision on how to track dashboards that are being published:**
  - Future plan - access to the Tableau Server database
  - Currently, self-reliant on our own documentation
The Process

Replicate inspiration
• Conversations
• Trial and error

Develop “LU” versions
• Different styles
• Visualizations

Internal feedback
• Pros and cons
• Fine tuning
• Less is less!

Final product
• Soft launch
• External feedback
The "Back End" Solution
The Design Process
# Institutional Data Portal - Table of Contents

*All filters can be used separately or together to narrow down the list of available dashboards. You can also use the search box to find a workbook by using keywords. When searching for keywords, separate the words with a comma followed by a space. It is also possible to search for a phrase such as “Completion by.”

* After entering the search criteria click the tab or enter key. When done, delete the keywords and click the tab or enter key.

* Clicking the button on the right will reset all 3 filters and the Keyword Search box.

## Area
<table>
<thead>
<tr>
<th>Topic</th>
<th>Workbook Name</th>
<th>Access Level</th>
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</thead>
<tbody>
<tr>
<td>Admissions</td>
<td>Externally Default Data Portal</td>
<td>Restricted</td>
</tr>
<tr>
<td></td>
<td>Graduate Admissions</td>
<td>Restricted</td>
</tr>
<tr>
<td></td>
<td>Undergraduate Admissions</td>
<td>Restricted</td>
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<tr>
<td></td>
<td>Admissions Summary</td>
<td>General</td>
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<tr>
<td></td>
<td>Admissions Summary - International Student View</td>
<td>Restricted</td>
</tr>
<tr>
<td></td>
<td>Admissions Exit-Loss Analysis</td>
<td>General</td>
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<tr>
<td></td>
<td>All Majors View</td>
<td>General</td>
</tr>
<tr>
<td></td>
<td>All Minors View</td>
<td>General</td>
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<td></td>
<td>Census Revision for College of Education</td>
<td>Restricted</td>
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<td></td>
<td>Enrollment by Declared Major &amp; Degree</td>
<td>Restricted</td>
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<tr>
<td></td>
<td>Enrollment by Degree Programs</td>
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<td></td>
<td>Enrollment by Majors</td>
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<td>FTES Headcount</td>
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<td></td>
<td>Geographic Distribution of Domestic Students</td>
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<tr>
<td></td>
<td>Geographic Distribution of International Students</td>
<td>General</td>
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<tr>
<td></td>
<td>Selected Demographics</td>
<td>General</td>
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<tr>
<td></td>
<td>Course Level Details by Student Enrollment &amp; Curriculum</td>
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<tr>
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<td>Course Level Details for CAS Interdisciplinary Programs</td>
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<td>Course Level Details for Credit Hours and Student Enrollment</td>
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<td>Undergraduate Enrollment</td>
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<td>Instructional Credit Hours</td>
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<td>Course Level Details for Credit Hours and Student Enrollment</td>
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<td>Instructional Credit Hours by OER Programs</td>
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<td>Student Access and Success</td>
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<td>Faculty FT by Bank and Seminarn</td>
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<td>University Profile - Employees</td>
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<tr>
<td></td>
<td>New Enrolment - Employee</td>
<td>Restricted</td>
</tr>
</tbody>
</table>

## Office of Institutional Data

27 Memorial Drive West  
Bethlehem, PA 18015  
610-758-3890  
data@lehigh.edu
Licensing & Permissions

- Permission are:
  - Largely automated
  - Based on roles defined in our student information system
  - Articulated by data stewards
  - Follow university policy

- Mandatory training for more than basic enrollment/completions data

- Custom reports for leadership, deans, department chairs, specific users
Using the Permissions Data

• Sitting on top of data extract of permissions – one row per view per user/group who has access
  • Data source includes URL of view and workbook
• Requires categorizing the workbooks/views
• Using the permissions as filters:
  ```
  if (ISMEMBEROF("Trained") and [user name] = 'Trained') or
  USERNAME()=[user name] then 'Show'
  else NULL
  end
  ```
• Using permissions to display different tooltips
User input 1

For training, questions, comments, suggestions, please contact UAIR at air@olrp.umass.edu
User Feedback

- **Internal use: adopted and well-received within group**
- **Campus use:**
  - Minimal feedback and all positive
  - Virtually no questions on where to find specific dashboards
  - Observe people navigating to content easily
  - Users asking for content to be added
    - (but… proliferation?)
  - Proliferation = rapid multiplication of parts or the increase in the number of something.
QUESTIONS?

Thank you!