



Promoting a Data-Informed Culture

Staff Leads Program
School of Public Health

June 5, 2019

Blue Team Members

- Jill Anderson, EpiCH, Administration
- Kevin Loecke, Biostat, Finance
- Andy Nguyen, Dean's Office, IT
- Karen Omlung, HPM, ResDAC

Project Advisors

- Joe Weisenburger
- Susan Rafferty

Project Description/Questions

All levels of the school (leadership, faculty, staff, current and prospective students) require quick and reliable data in order to make informed decisions in all areas of operations (finance, human resources, information technology, student services, communications, advancement/alumni, etc.) Through the Staff Leads program, the blue team was tasked with the following questions:

- ☆ *What top metrics should be available to school leaders regarding advancement, communications, finance, human resources, information technology, and students?*
- ☆ *How do we best support school leaders and all faculty and staff to use data in decision making for effective and efficient school operations?*

Before the team could address these questions, it was necessary to:

- Identify a variety of key stakeholders to identify data needs
- Gather information about the School (i.e., where are data housed, what data is available, what data do various areas and people need to access)

Stakeholders interviewed for this project

Advancement/Alumni

- Louis Clark
- Heidi Mastrud
- Sara Pennebaker

Communications

- Sarah Bjorkman

Administration

- Kate Brekke, Biostats
- Colleen Flattum, EpiCH
- Stephanie Hagel, HPM
- Liz Hinske, EpiCH
- Sally Olander, Biostats
- Tamara Hink, Dean's Office
- Sarah Trachet, HPM

School/Division Leadership

- Dean John Finnegan
- Senior Associate Dean Beth Virnig
- Associate Dean Kristin Anderson
- Dianne Neumark-Sztainer, EpiCH Division Head
- Tim Beebe, HPM Division Head
- Joe Weisenburger, CFO/CAO
- Susan Rafferty, Chief of Staff/HR Director

University contacts:

- Brian Krupski – OIT Application Development
- Eduardo Chavez Herrera – Developer OIT Application Development
- CJ Loosbrock – OIT End User Support Services

Faculty

- Cavan Reilly, Biostats
- Joe Gaugler, HPM
- Rebecca Wurtz, HPM

Student Services/Career Services

- Carol Francis
- Mercedes Taneja
- Tim Kamenar
- Vic Massaglia
- Darren Kaltved

E-Learning

- Sara Hurley

Data gathering

It was essential for the team to better understand the data that are available, how the data are being used, and what is still needed.

In order to do that we asked stakeholders the following questions:

- *What data do you need to make more informed decisions?*
- *How do you want to use data in new ways? What information do you wish you had?*
- *Which current metrics in your unit could translate to other SPH units?*
- *What metrics are prospective students, faculty and staff looking for? What metrics ought to be available publicly to prospective students, faculty and staff and internally to the organization?*
- *Who/what is not being represented in the current metrics? What data is missing?*

Sample comments from stakeholders

I wish I had better metrics to understand more broadly what people are doing and what motivates them to do more of it.

I think students want to see data on jobs and salaries after graduation and five years later.

I'm not so sure there is much that is missing rather than what we have is not being communicated, shared, and utilized optimally.

I wish I didn't have to go to so many different sources. The data systems are all so different and displayed in many different ways.

What are data collecting methods that don't work and could be improved. We have access to qualtrics it's an easy to use tool. It's how the questions are asked and analyzed that's the problem.

Two challenges are one, that we have mostly data that counts things or time rather than level of quality and two, that our data is kept in silos, such as HR data, student data, research data, etc., rather than combining data from the different silos for a more practical picture, such as amount of teaching effort compared to number of students taking classes for a semester or academic year.

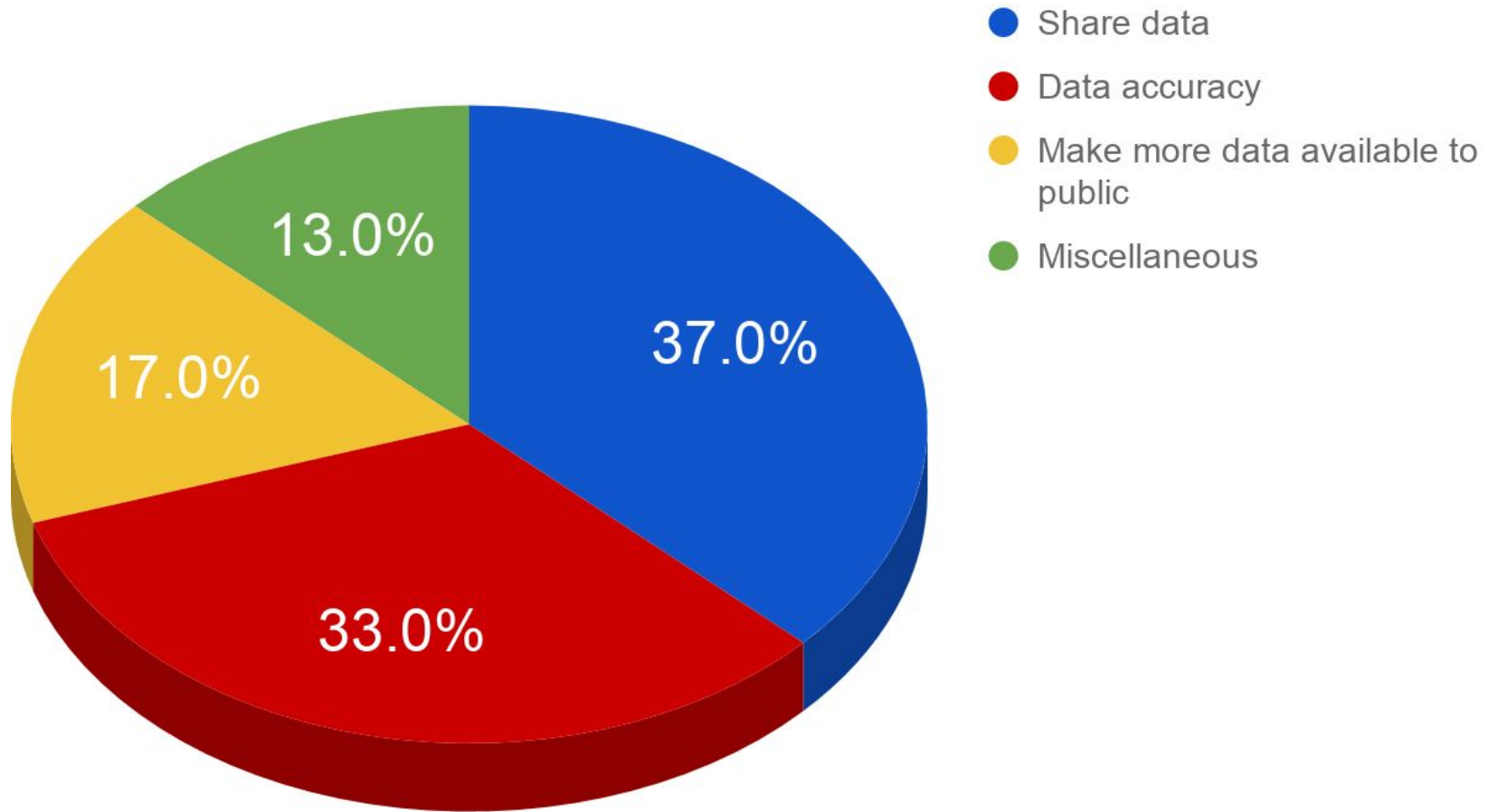
Research and students are the main financial drivers of the school so focus on that

We needed to put the pieces of the puzzle together!



	Student Service Ctr	Communications	Advancement/ Alumni	HR	Payroll/Finance	E-Learning	Research
<p>What data do you need?</p> <p>Adequate data</p>	Better format, more engaging, friendly.	Share data between the units	Data accuracy, inadequate Available Data	Share data between units	Share Data between Units	Inadequate Available Data	Communication, Share Data
<p>How do you want to use data in new ways?</p> <p>What information do you wish you had?</p>	Share Data Between Units	Share Data, Available Data	Data Accuracy, Inadequate Available Data	Share Data Between Units	Share Data Between Units		Share Data Between Units
<p>Which current metrics in your unit could translate to other SPH Units?</p> <p>All Data Should Be Shared Between Units</p>	Too many databases, Time consuming to Pull Data. Inadequate Data.	Not All Databases should be Centralized Due to Tables and Fields are Differences			Timing Consuming to Pull data From Different Places	Standardize Tracking Model	Standardize Data And Share Between Units
<p>What metrics are prospective students, faculty and staff looking for? What metrics ought to be available publicly to prospective students, faculty and staff and internally to the organization?</p>	Better Advertising, More Appealing, More Engaging and Attractive Programs (What Do Students Get Out of The Programs? Jobs, Salary, Locations, etc.)		Community Involvement, Partnerships with Local, National Businesses, Alumni Data Available to Public to Attract More Students and Faculty	Available Grants, Better Advertising, More Appealing, More Engaging and Attractive Programs		Faculty needs to be educated about How Online courses work and how they structured.	Redundant Work, Standardize and share data.
<p>Who/what is not being represented in the current metrics? What data is missing?</p> <p>Share Data, Method, Technique between Units</p>	Too Many databases, Time consuming to Pull Data. Inadequate Data. Need to Unify and Centralize Databases	Adequate Data Available to Public Would Attract more Students And faculty	Put Endowments Money to Good Use.	Inadequate Data, Lack of Communication, Lack of Data Sharing and Proper Use.		Inadequate Data, Lack of Communication, Lack of Data Sharing and Proper Use. When Busy, Communication and Attention break Down.	Inadequate Data, Lack of Communication, Lack of Data Sharing and Proper Use. When Busy, Communication and Attention break Down.

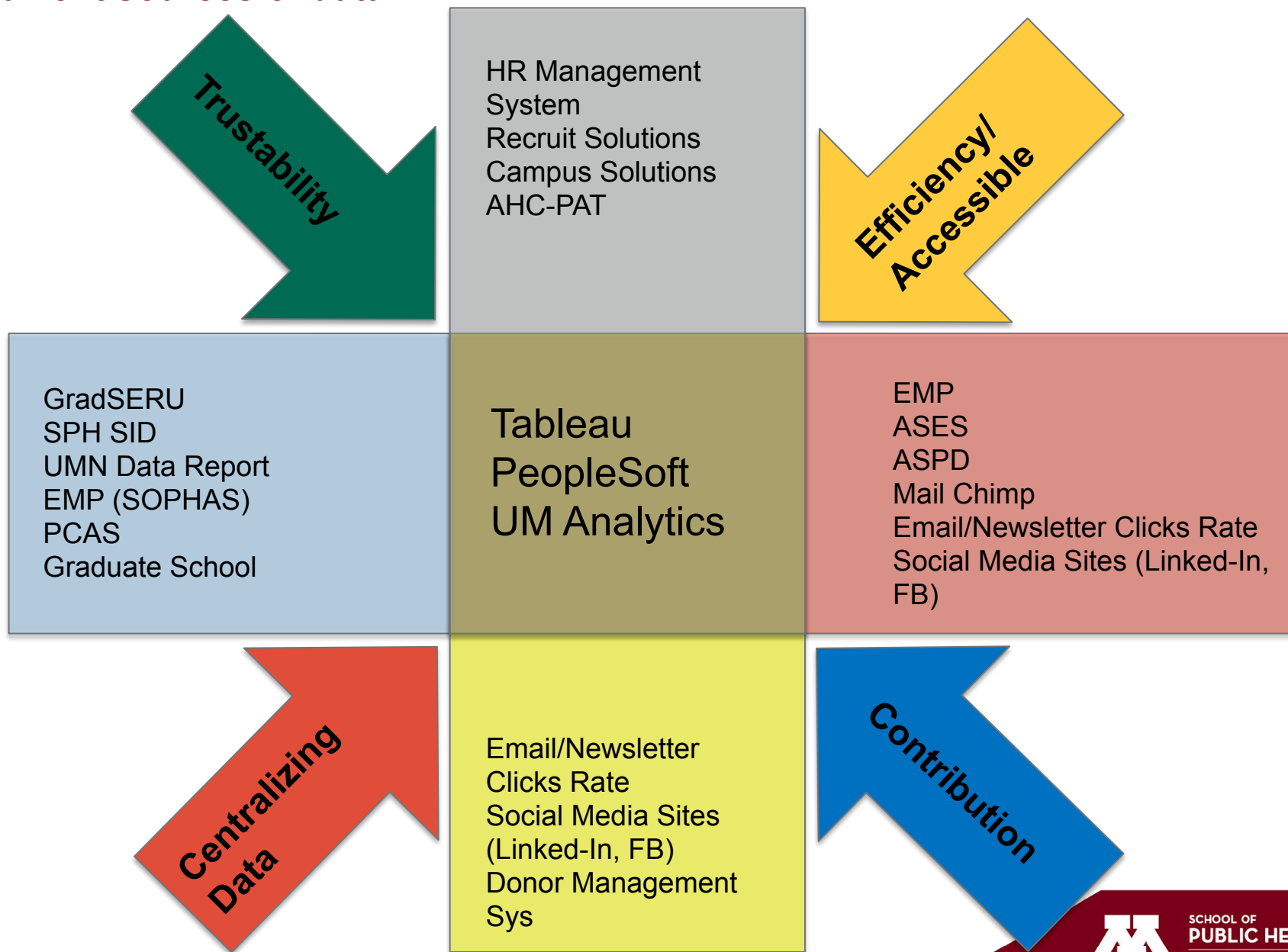
What do stakeholders want?



Issues identified by stakeholders

- **Decisions are being made with less than ideal data.**
- **Data are scattered** over many different systems. It can be time consuming to combine the data from different sources and manipulate report formats.
- **More communication** around data is needed, from leadership and across school units.
- Data systems take **time and resources**, both of which are in short supply.
- More **collaboration and trust** between divisions and groups is needed to prevent **redundant data pulls** and to **increase accuracy** of data.
- Public view **data for prospective students** about programs, RA positions, prospective jobs, industry salaries, student satisfaction, etc. are not available.
- **Grant proposals and course evaluations** are managed by each division and need to be centralized and shared between divisions.

Current sources of data



Results Directly from Stakeholders: Administrative - How We Better Support Leaders, Faculty and Staff

- **Grant applications and contracts** submitted by funder with total dollar amount vs what gets awarded by division and made public to prospective faculty and staff
- **Sponsored income, tuition income (both by source) by year**
- **Market salaries for compensation decisions**
- **Student satisfaction data**
- **Publications and media mentions** by faculty, alum and students each year

Results Directly from Stakeholders: Administrative - How We Better Support School Leaders, Faculty and Staff (continued)

- **Number of students taught by faculty**
- **Available balances for fixed price and endowment funds**
- **Effort levels by study PI.** Resource with project end dates. Data on staff support on sponsored projects
- **HIPAA and Good Clinical Practice** centralized reports
- **Student enrollment number by program by year including proportion of matriculants vs applicants**

Results from Stakeholders: Top Missing Metrics - Innovative, Forward Thinking

- **Historical admissions data**, for example, the undergraduate institutions that students came from
- **What factors predict success** among students (i.e. GRE scores)?
- **Alumni data**: salaries, job placement data, fields, locations, SPH employment trends
- **Use data to tell stories about:**
 - how we fight disease locally and abroad,
 - knowledge generated by sponsored projects,
 - how we improve access to health care,
 - how we improve lives,
 - alumni work stories,
 - how an initial gift makes an impact 10 years down the road.

Results from Stakeholders: Top Missing Metrics - Innovative, Forward Thinking (continued)

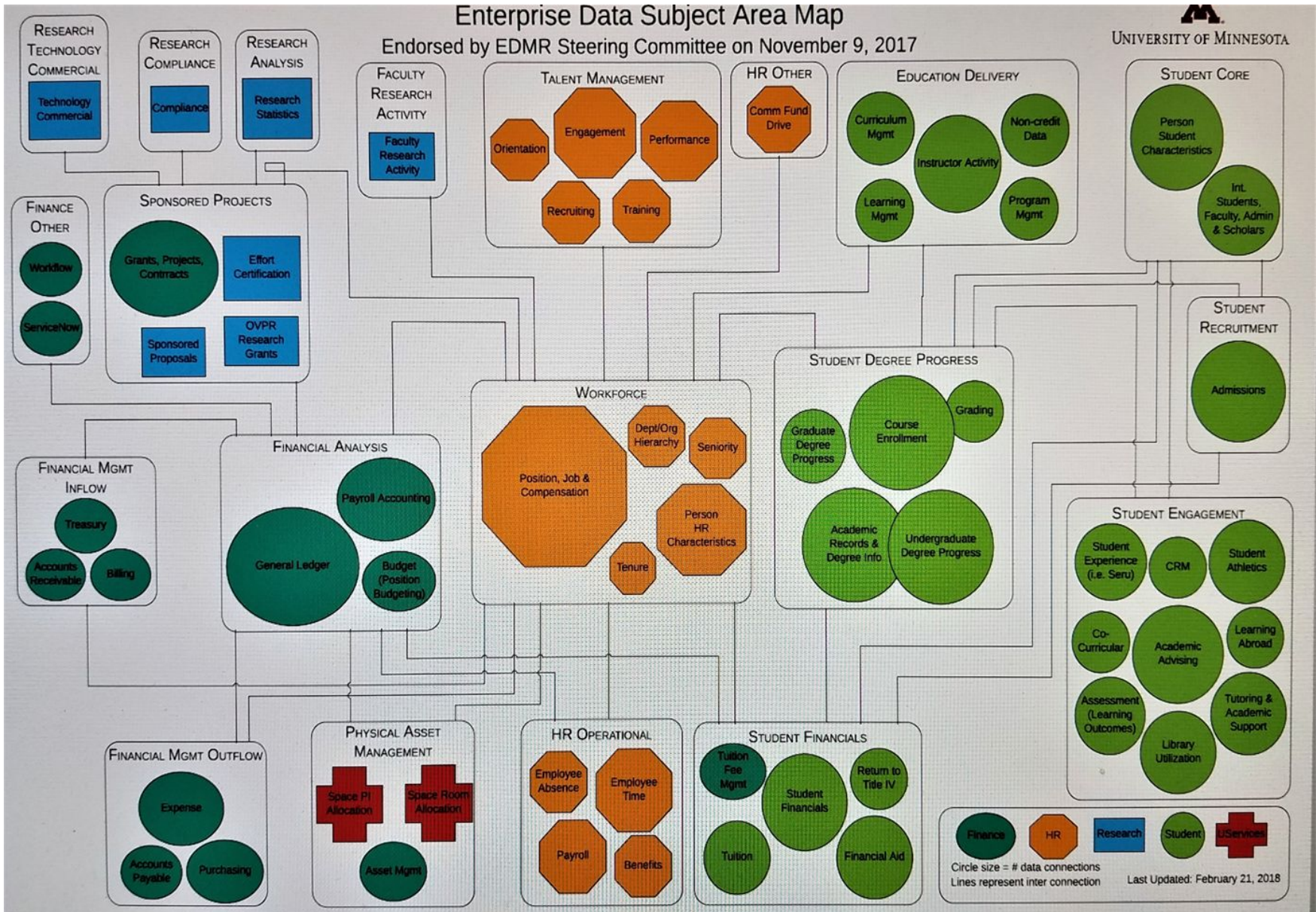
- **Trend data. Predictive statistics.** (Enrollment, grant proposal tracking, tuition earnings (by course, by faculty), budget vs. actual spending, grant hit rates, faculty salary support, division personnel FTE cost, division overhead cost, etc.)
- **Healthy culture indicators** for SPH & affirmative action goals
- **Qualitative job data**, i.e., engagement data, what are the barriers, motivators and experiences of employees?
- **Applicant pool diversity composition**
- **Supervisor performance metrics**
- Track and disseminate info about **TA and RA positions**
- **Training options** available to students

5 Central Units/Pillars at the University

1. Academic Support Resources
2. Office of Human Resources
3. Office of VP for Research
4. University Finance
5. University Services

Enterprise Data Subject Area Map

Endorsed by EDMR Steering Committee on November 9, 2017



What Has SPH Been Doing?

Data Council: dedicated project team began Fall 2016 (work began in 2009)

- Consists of staff from the Dean's Office Unit and staff from AHC-IS.
- Creation of “data flow” charts that can serve as a starting point for identifying SPH's current data sources
- Launched a **Tableau dashboard** for student data
- Future Efforts: CEPH accreditation, curriculum reform, educational outcomes, alumni data and career data

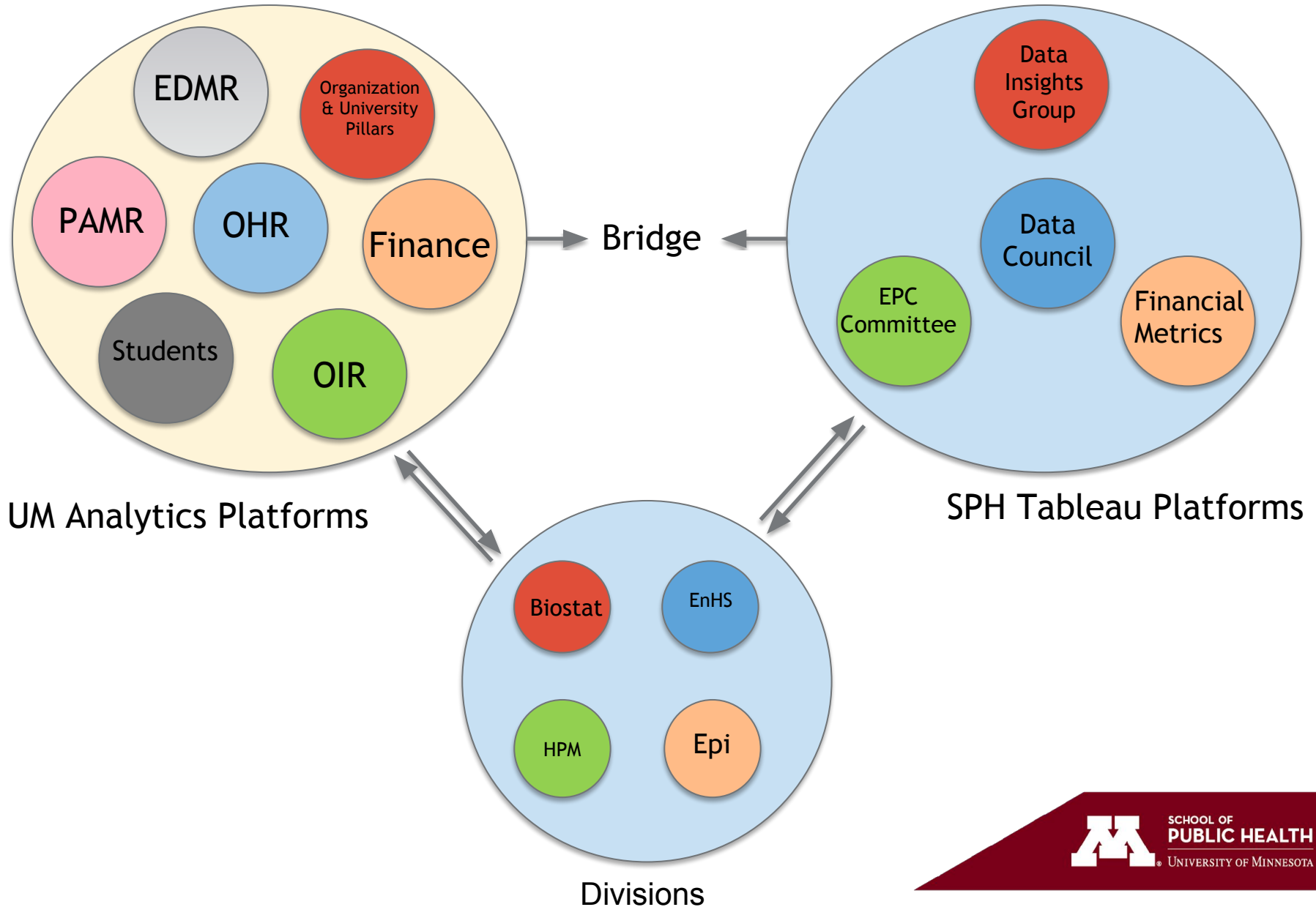
Data Insights Group: Began October 2018

- Consists of staff from across the school
- Monthly meetings as a forum to provide ongoing training and share reporting insights
- The school is continually working on financial metrics regarding tuition, ICR, and grants. Comparisons from year-to-year, instate or outstate status, revenue by class, division, degrees, and major.
- Student Services Center is working on making course evaluation data available for program directors.
- The school has thoroughly identified and documented the problems, needs and ideas for future projects and next steps.

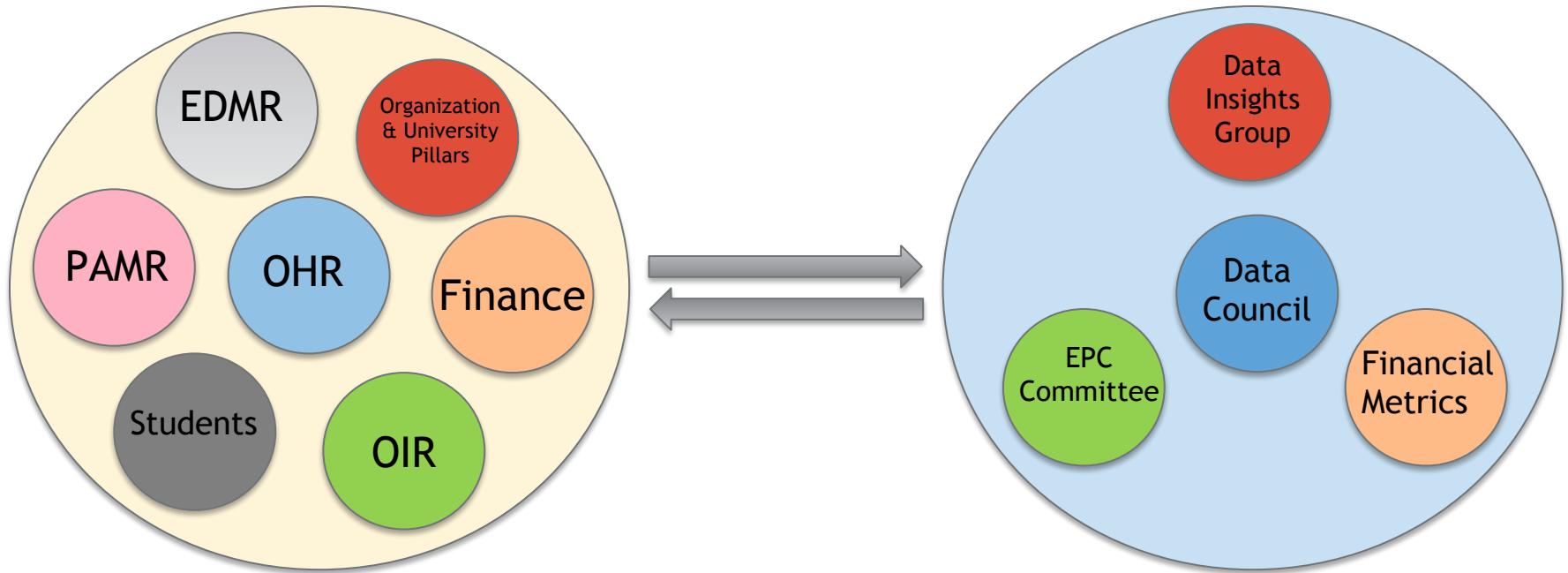
How SPH Divisions Currently Handle Databases

- **Biostatistics** utilizes data available through the various reporting systems. When system reports do not offer the needed flexibility, or when data needs to be combined from different sources, data is downloaded to Excel and custom spreadsheets are used. These spreadsheets are often created on an as-needed basis.
- **EnHS** has fairly comprehensive data systems for tracking grants that are stored on the OIT server. Teaching and advising assignments are in separate files, also stored on OIT. Faculty evaluations are kept with the Division Head and the Division Assistant.
- **EpiCH** created databases for grants, faculty, teaching, and advising activities. This data is used for reporting purposes and data in the databases are used to prepopulate faculty evaluations.
- **HPM** maintains faculty metrics that are provided annually to faculty for their review. This information includes their grants funding, teaching, advising, and course evaluation information. The faculty members also annually augment this information with their own reports of past year activities and updated CVs. We also maintain a database of faculty, affiliates, and lecturers appointed on a semester basis.

SPH Current Data Access

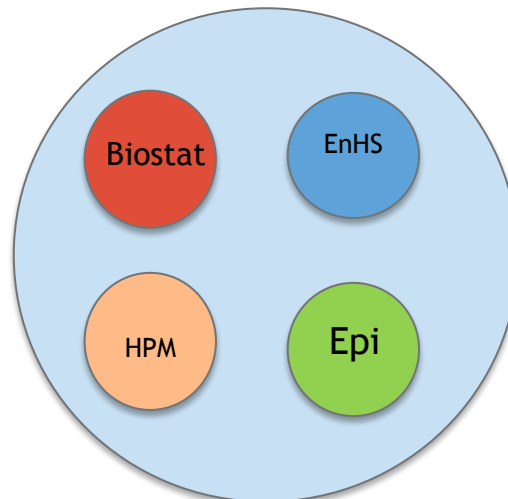


Complete Data Consolidation



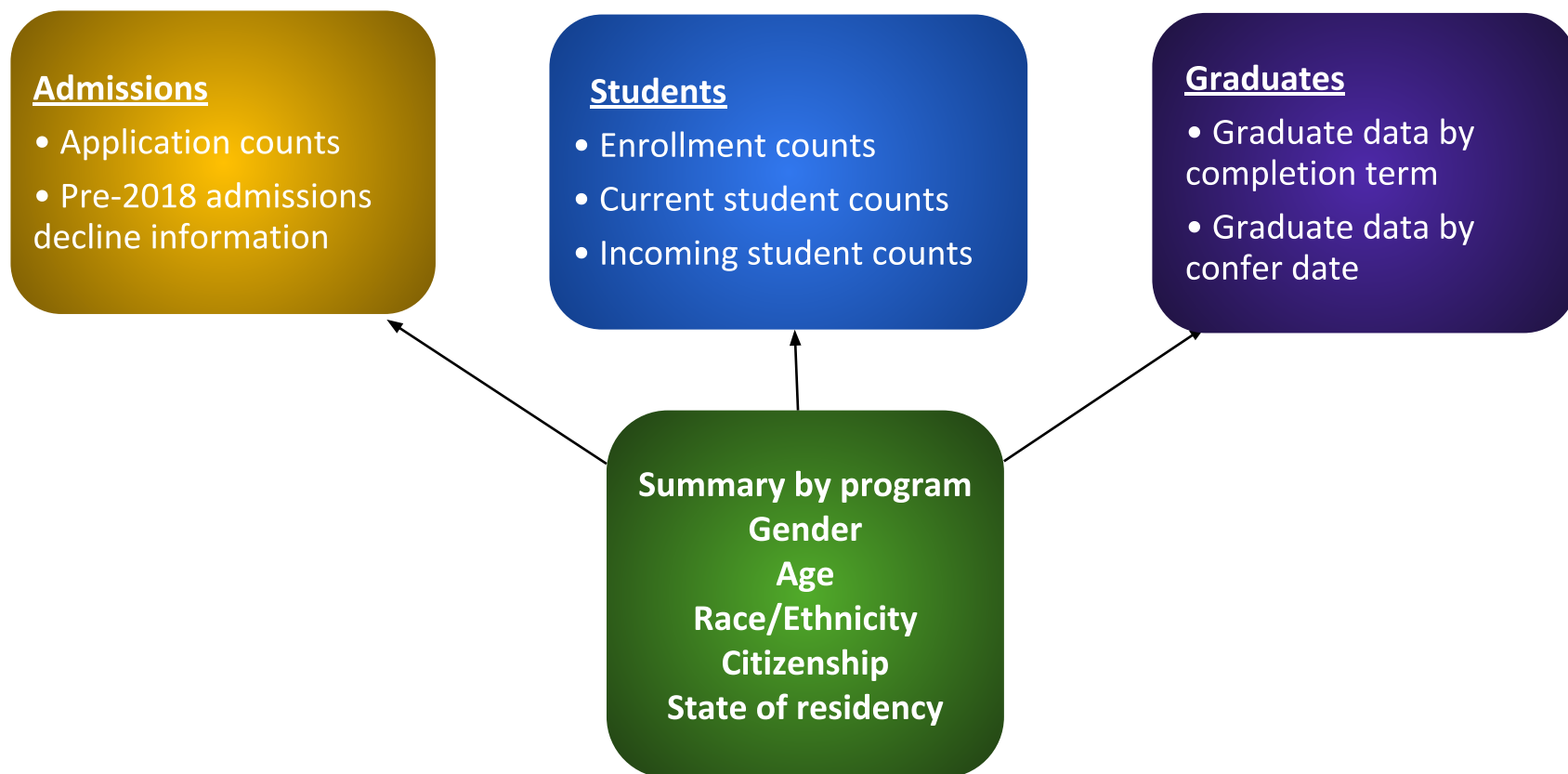
UM Analytics Platforms

SPH Tableau Platforms



Divisions

SPH Data and Reports Currently Available Through Tableau



← School At a Glance

Mission & Values

History

CEPH Re-Accreditation
2015-2022

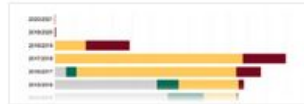
School Data

School Data

The reports below include student data for the University of Minnesota School of Public Health for the past 10 years.

Click on the thumbnails below to access* the reports.
For questions email sphdata@umn.edu.

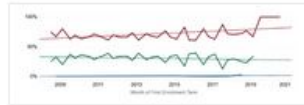
Students



View School of Public Health student status information for the past 10 years: age, gender, ethnicity, country of citizenship, and location of residence.

→ [Access the reports](#)

Graduates



View School of Public Health graduating / graduated student data for the past 10 years: status, age, gender, ethnicity, country of citizenship, and location of residence.

→ [Access the reports](#)

Admissions

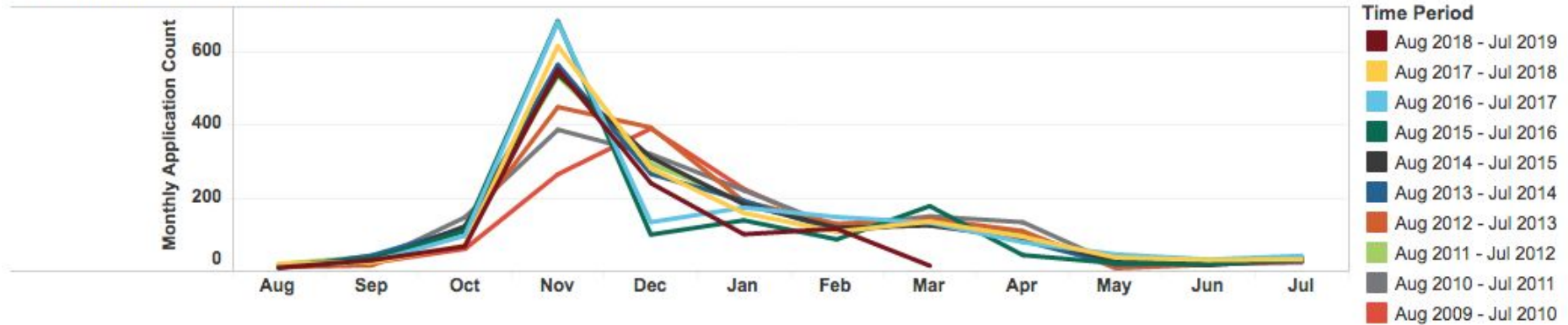


View School of Public Health applicant data for the past 10 years: status, age, gender, race/ethnicity, citizenship, state residency, and admissions decline information.

→ [Access the reports](#)

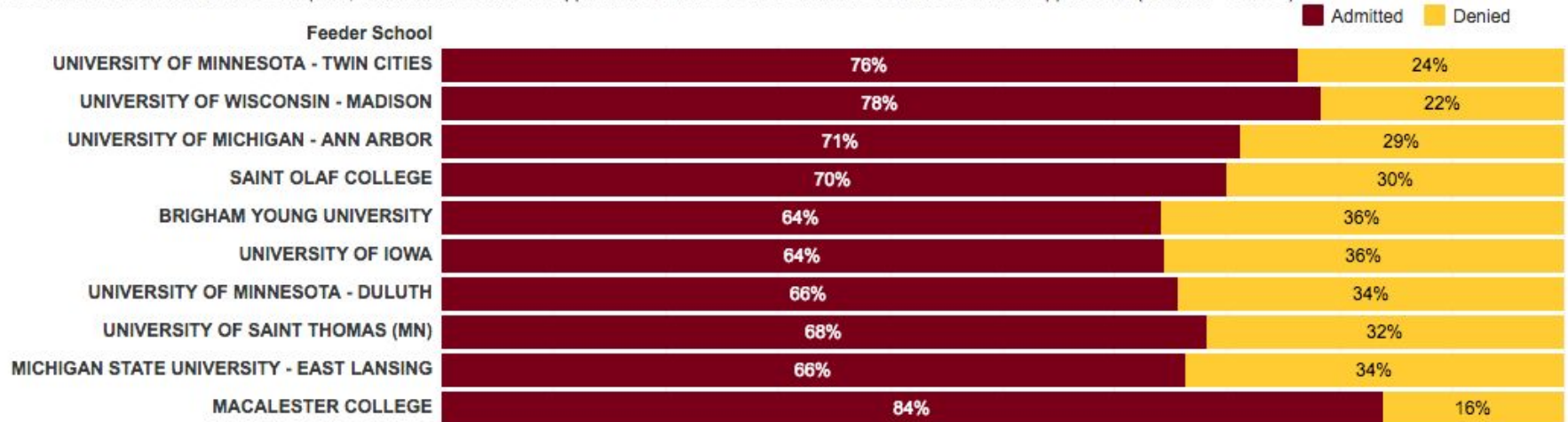
Applications Submitted by Month

Chart shows the number of complete applications received each month (excludes incomplete, withdrawn and deferred applications; data is pulled daily). Click the color legend to highlight one or more time periods.

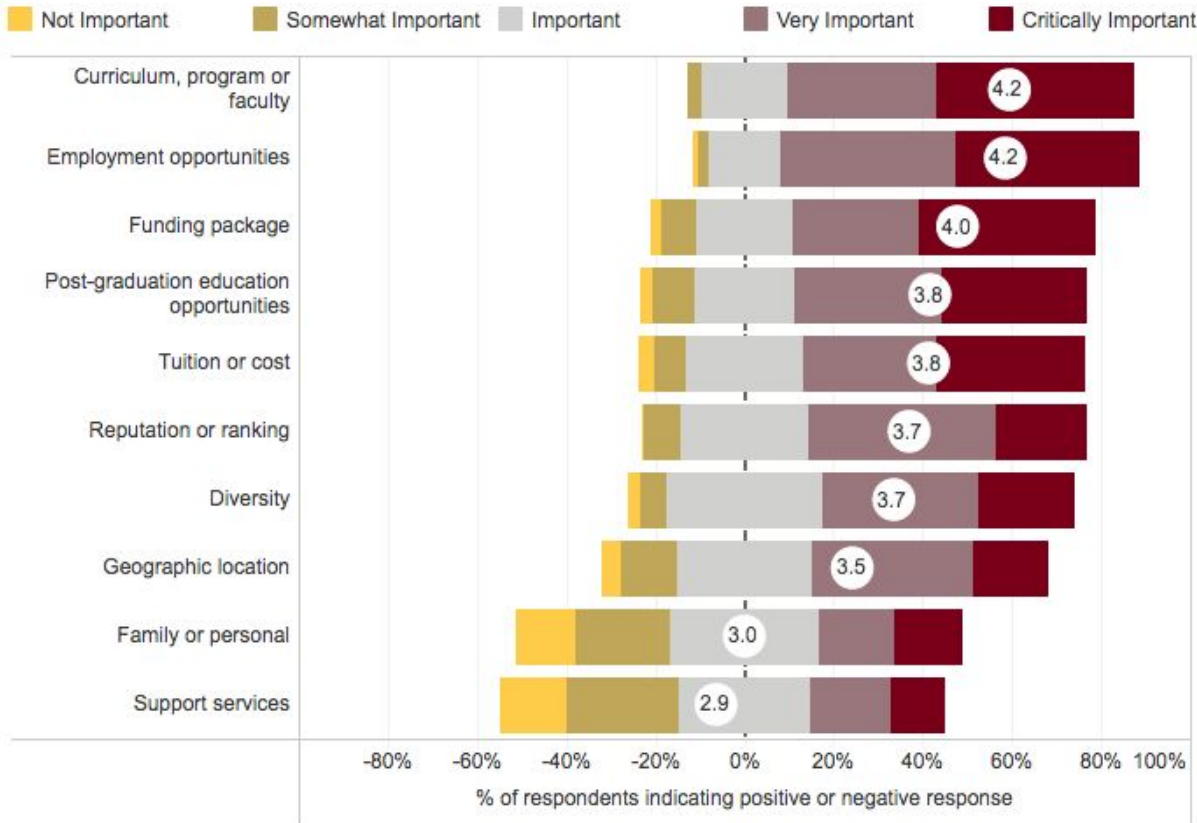


Feeder Schools (All US Applicants)

This chart shows the institutions most frequently listed on SPH SOPHAS applications for all US applicants, and the acceptance rate (aggregated across the selected time periods) among applicants from those schools. The view excludes incomplete, withdrawn and deferred applications and results are sorted based on the number of applications (admitted + denied)

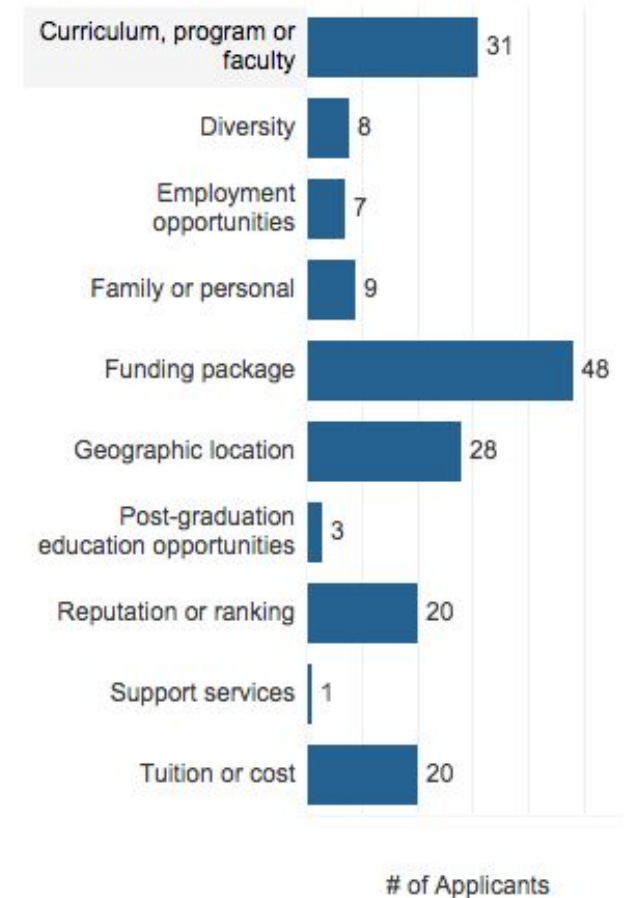


How important was each factor in deciding where to attend?



Colored bars show the percentage of survey respondents indicating each factor's importance level (on a scale of 1-5). White circles indicate the average value for all responses. Hover over marks for applicant counts.

Which single factor would make applicants choose UMN SPH?



RECOMMENDATIONS



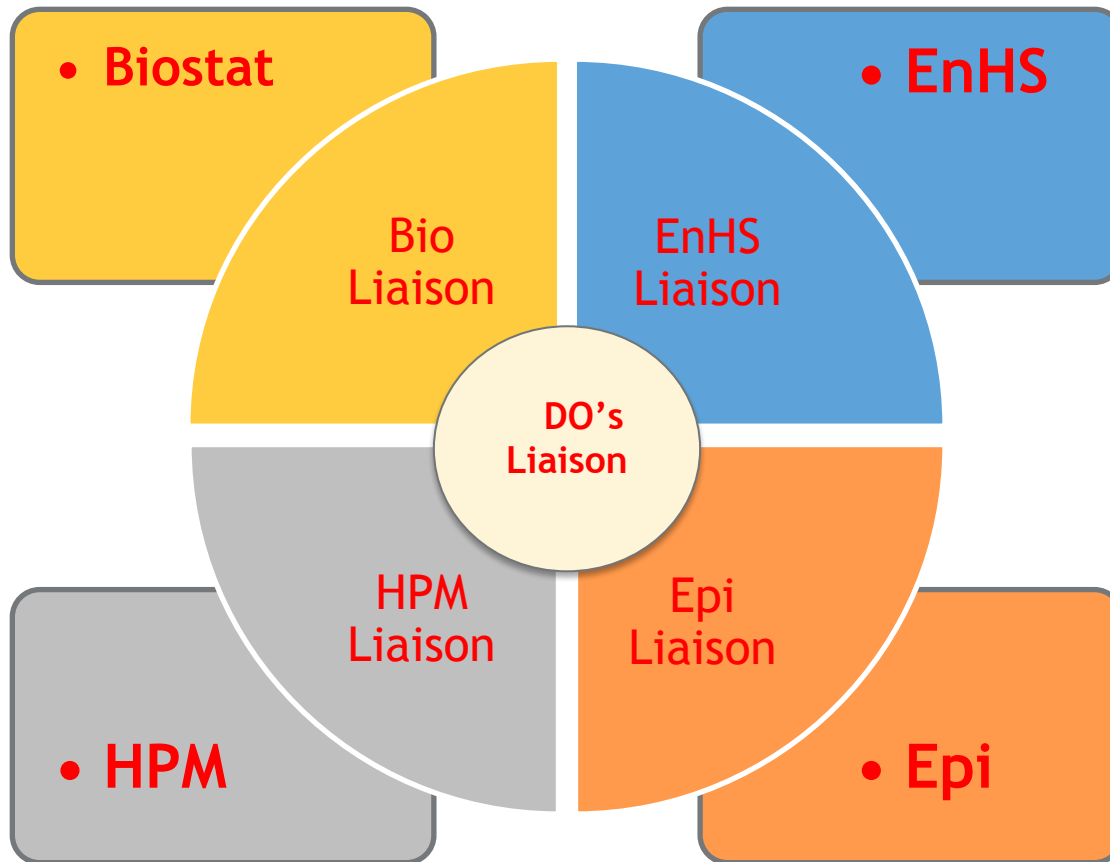
Stakeholder Recommendations

- Have **open discussions about data** and how to use it.
- **Track trends** from year to year in the areas of students, research and outreach.
- **Use metrics to work with communities:** high schools, grade schools, helping the public understand public health and make our school competitive with other schools
- **Create a standard report for student evaluations** so faculty don't need to create their own
- School-wide effort to track **accreditation data**
- **Metrics to track innovation**, such as tracking % effort for things other than teaching such as service projects and programs
- **Infographics** to show SPH engagement with students

Project Team Recommendations

We were only able to scratch the surface. Our goal is to provide some actionable and measurable recommendations that can begin now.

- Main recommendation - creation of **Data Liaisons at 5-10% effort** in each division.
 - **Identify, document and communicate** what data are available in the school and all current efforts.
 - **Partner with Data Council and Data Insights existing groups.**
 - **Answer questions, give contacts, provide resources** about what data/reporting tools are currently available.
 - **Partner with AHC-IS**, take trainings & participate in University-wide committees.
 - **Budgetary considerations.** Whose job is data/metrics? What type of individual can hold such a position? Identify current staff with skills, interest, and available effort to devote.



Project Team Recommendations

- **Getting feedback/insight on this recommendation** from key stakeholders would have been the next step, if we had more time & resources.
- **Identify where data/metrics falls within SPH priorities financially and strategically.**
- **Map out current data sources for each unit** to identify areas that could be standardized or become collaborations across units.
- **Expand the Data Council** to cast a wider net.
- **Communicate current efforts of the Data Council school-wide.**
- **Actively engage with divisions & build bridges** between divisions and Dean's Office.
- A recommended **long-term goal is to create a dashboard that could be customized to individual needs.** For example, people would create their own dashboard with information and data that they need on a regular basis. This goal may need to wait until the university creates a centralized data repository.

Questions & Discussion



The Blue Team would like to thank the following people:

Lovey Peissig

Amanda Wolford

Susan Rafferty

Joe Weisenburger

Everyone who responded to our questions!