



# A Tale of Two Universities: Decision Making in a Pandemic

Temple University & The University of South Carolina  
December 2, 2020

# Agenda

- **Temple University:**
  - Presenter Introduction & Background
  - Current State & Approach
  - Goals & Results
  - Conclusions & What's Next
- **University of South Carolina**
  - Presenter Introduction & Background
  - Challenges & Approach
  - Impact of Pandemic
  - Lessons Learned & What's Next
- **Q&A**

Temple University



## Introduction to Presenter

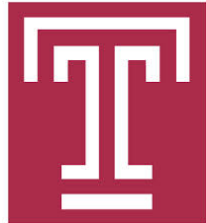


### **Ken Kaiser**

Vice President, CFO and Treasurer  
Temple University



# Temple University Background



- Founded 1884
- Public state-related
- 7 campus in and around Philadelphia and two international campuses
- Enrollment of 37,000+ with 5th largest professional school enrollment
- 18 Division I sports competing in the American Athletic Conference

- #103 USNWR National Universities
- #46 USNWR Public Universities
- Carnegie RI Designation for highest research activity.
- #35 - all expenditures
- #56 - federal funding public universities

- Academic Medical Center with 1,000 beds and 4 hospitals
- 11 urgent care and multispecialty centers throughout the Greater Philadelphia Region
- Professional health education with schools of Medicine, Dentistry, Pharmacy, Public Health and Podiatry

- 12,000+ full-time employees (TU/TUHS)
- 3,900+ full and part-time faculty
- 15,000-17,000 students living on or near campus
- 349,000+ total alumni

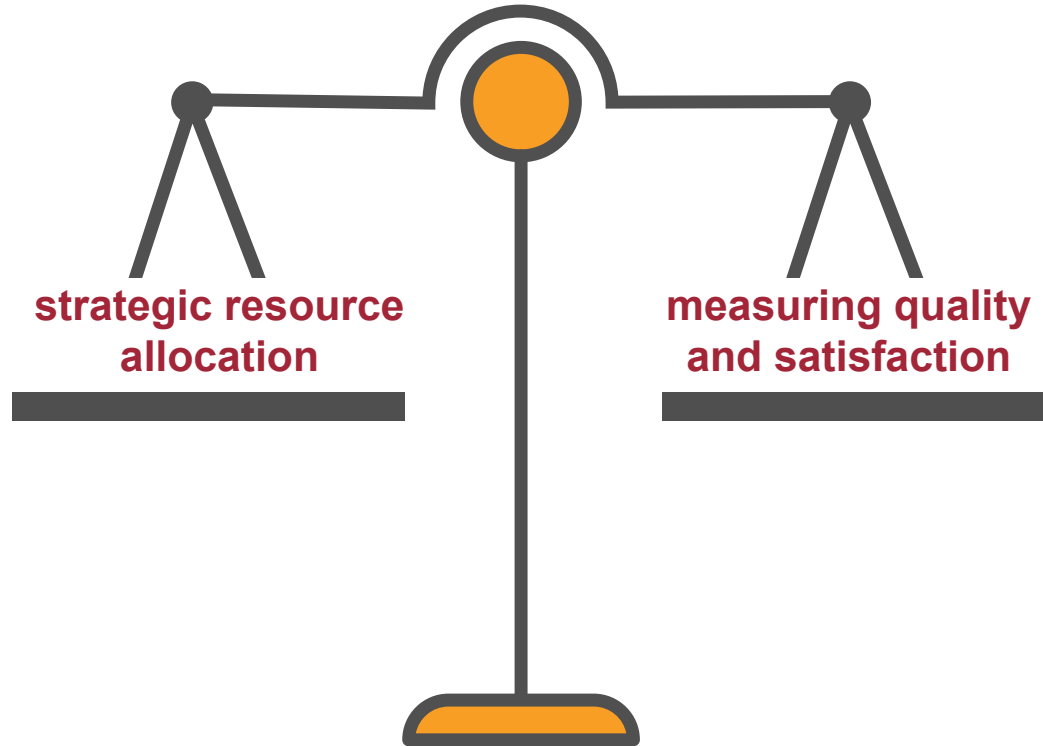
- 87% first year to sophomore retention rate
- 61% Four-year graduation rate
- 75% Six-year graduation rate
- 10,800+ Degrees conferred
- 17 schools and college offering over 600+ academic programs

- \$5.4B in assets (TU/TUHS)
- \$3.4B in operating budget (TU/TUHS)
- \$1.1B in long-term debt (TU/TUHS)
- \$650M endowment
- Moody's - Aa3/Stable
- S&P - A+/Stable

# Current State & Approach



## Current State: Initial Challenges



# Goals & Results





# Approach: Benchmarking & Satisfaction Survey



**Implemented  
RCM Budget  
Model**



**ABC  
Insights for  
Benchmarking**

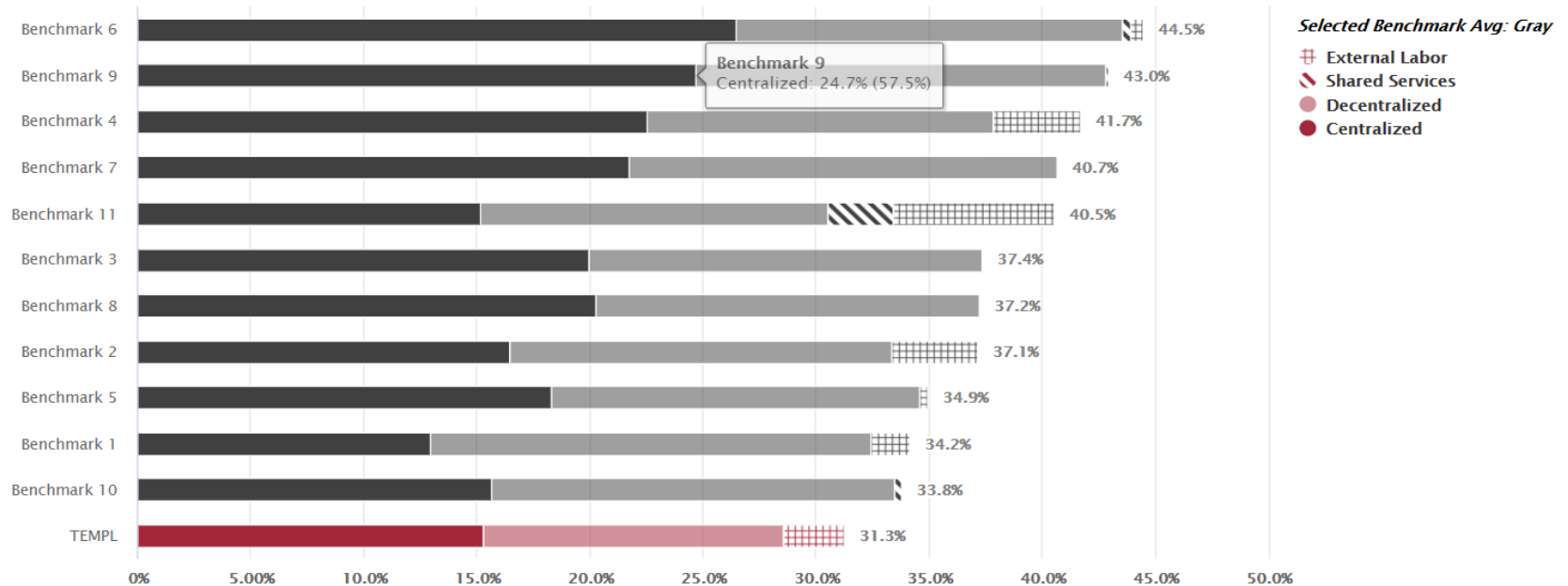


**Committee  
Convened**



**Quality/  
Effectiveness  
Survey  
Administered**

# Temple has the lowest Administrative Intensity Measure (AIM) of the benchmarks (31.3%)



# Goal: We set out to improve administrative operational efficiency and effectiveness

## 1 Survey Creation

- ABC drafted survey with questions aimed at assessing levels of customer satisfaction across SAM activities
- Both quantitative and qualitative questions were incorporated
- ABC and Temple Staff tested the survey for clarity and instrument utility

## 2 Data Collection

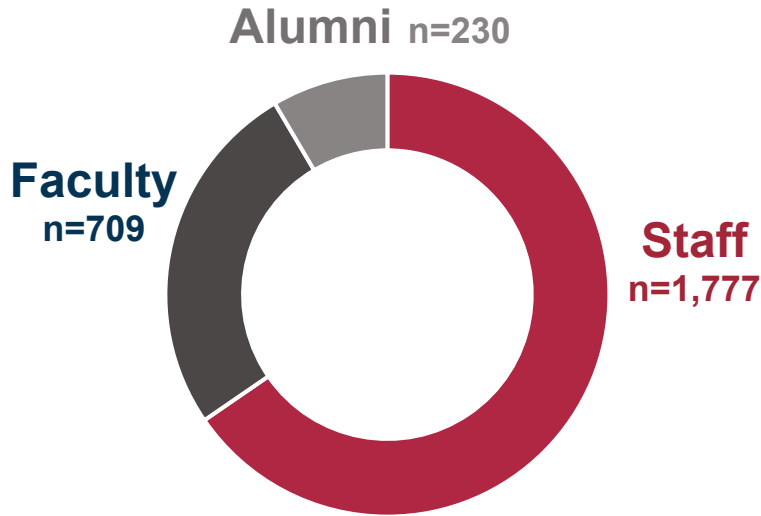
- Temple emailed the survey to a sample size of alumni and all full-time faculty and staff
- Using Qualtrics as the instrument, 2,700 survey responses were captured over a two-week period
- Data was then exported from Qualtrics for analysis

## 3 Content Coding

- Quantitative data was averaged to assess numerical ranking of satisfaction
- Qualitative comments were individually analyzed, with key insights ascertained from the first hundred responses
- Key insights were then assigned to subsequent comments and summed to capture the frequency

# The survey yielded 2,716 quality responses

## Respondents by Type



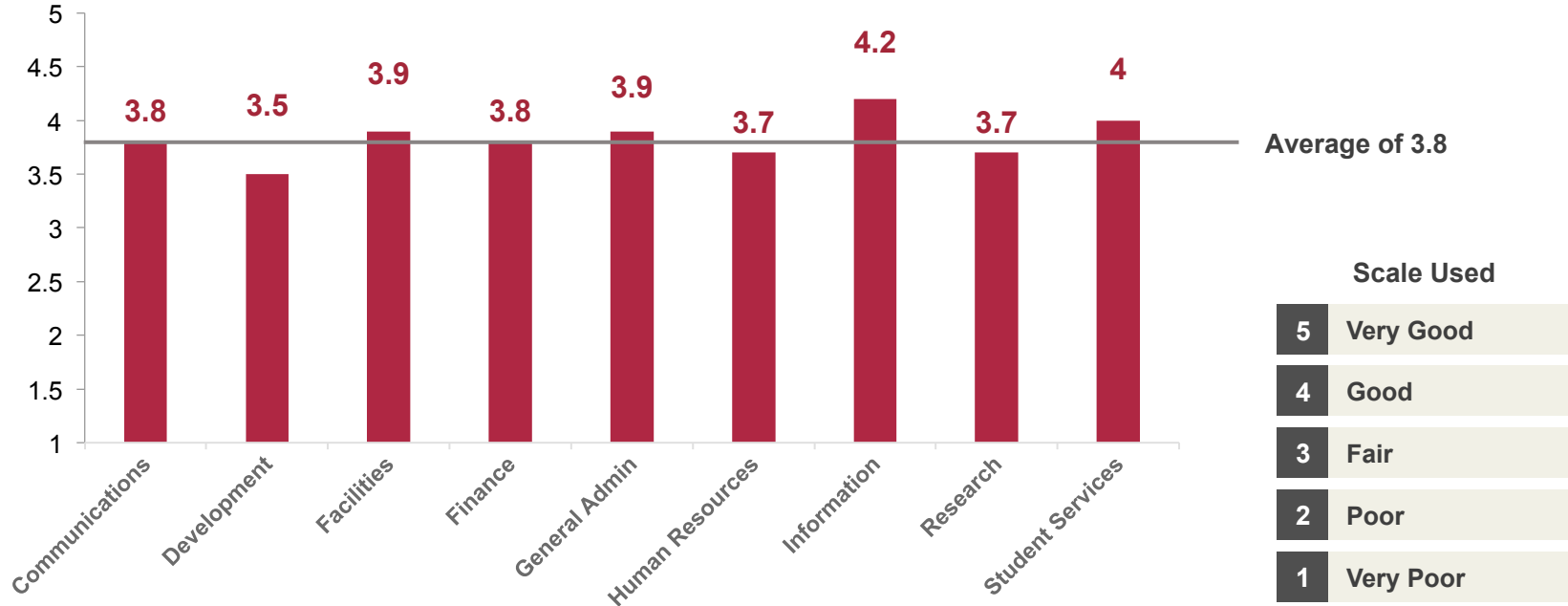
*58% of respondents chose to identify school or unit*

**Staff: \*7.6 minutes average completion;  
44% did not finish the survey**

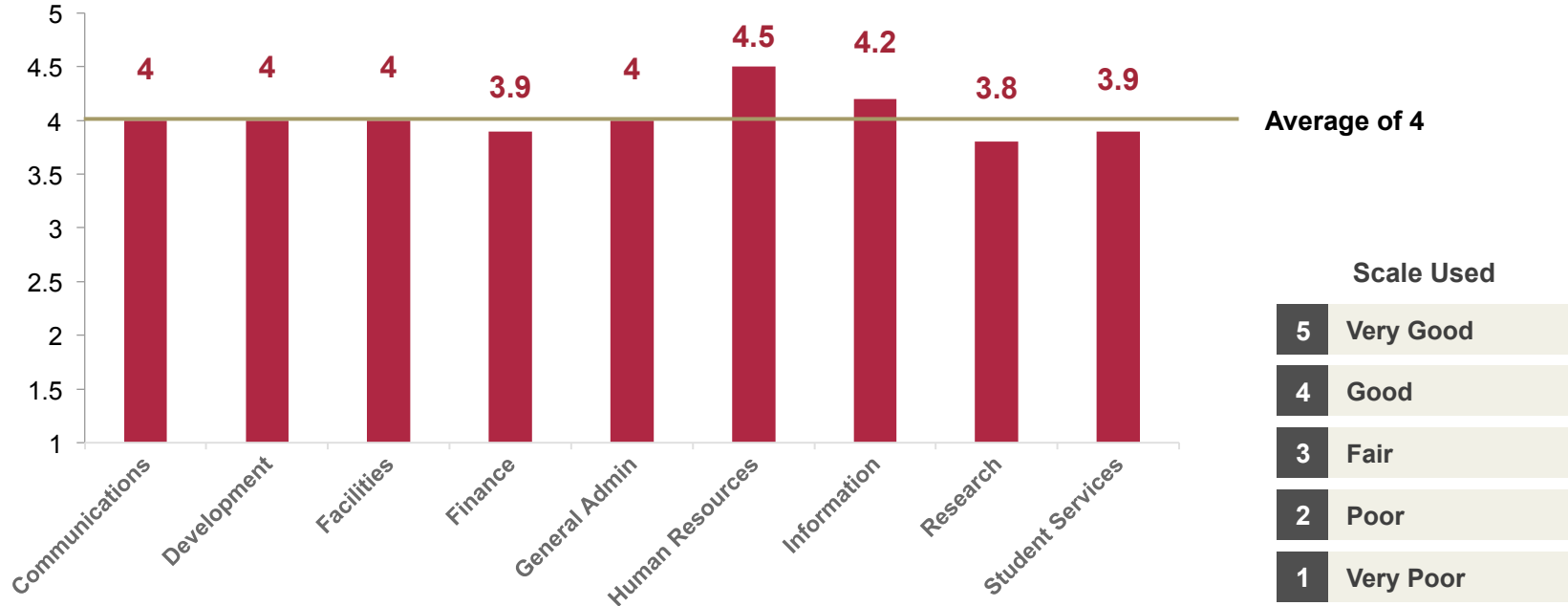
**Faculty: \*7 minutes average completion;  
32% did not finish the survey**

**Alumni: \*2.4 minutes average completion;  
78% did not finish the survey**

# Overall responses across decentral categories are positive



# Overall responses across central categories are even higher



# We derived actionable feedback for improvements

1

Respondents want an increase in two-way communication with leadership & other units

2

Many respondents felt that though increasing training and development of staff would benefit the university overall

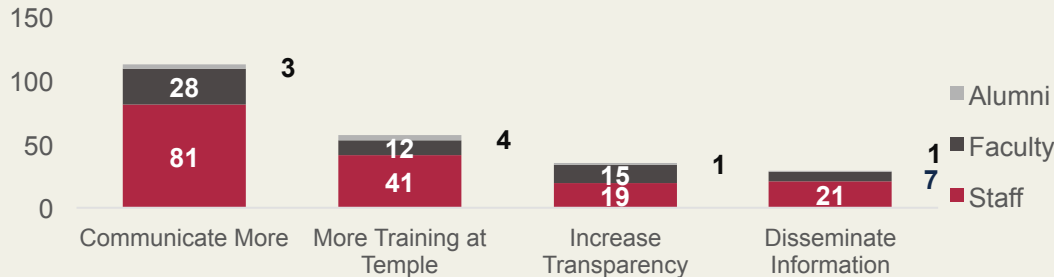
3

Increasing transparency surrounding policies at Temple, recruitment of new employees and issues that arise, was advised

4

Some respondents felt that they were currently lacking in sufficient information about Temple processes and practices

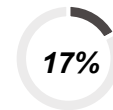
Top Survey Responses



*“Cleared communication, instruction or how to advance, within wage ranges and grades.”*

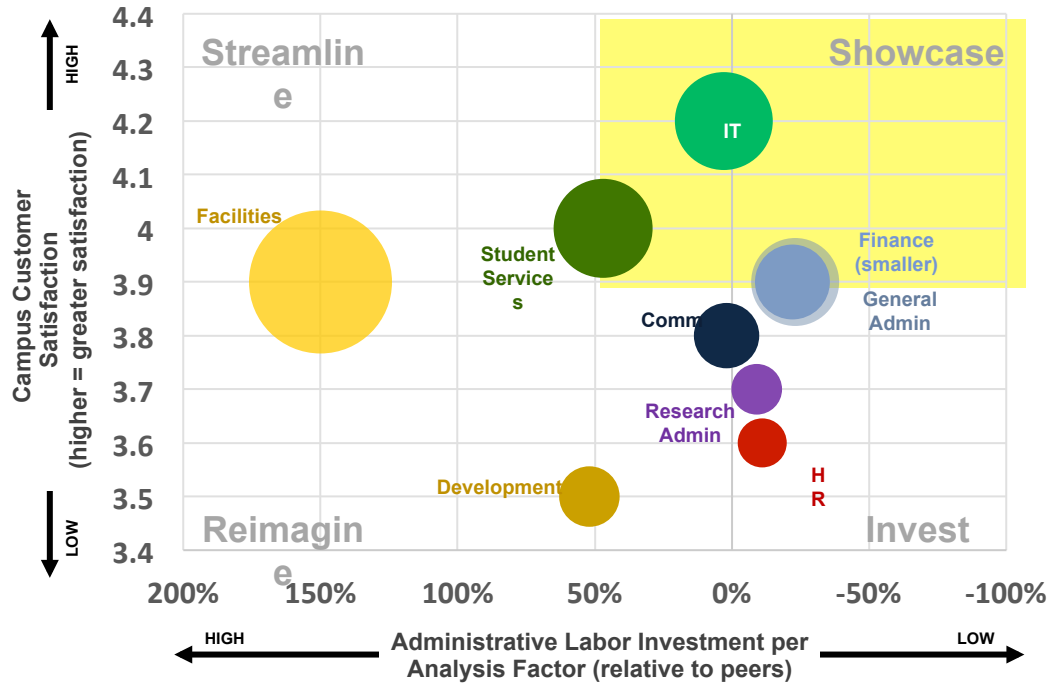
*“Better communication between groups. Work as One Temple, not individual units.”*

*“There needs to be an intensive customer service training with special attention to how to talk to people and what an appropriate response time is. I experience none of these issues with Payroll and HR functions.”*



Of all respondents emphasized increasing communication as a key to improvement

# ABC Human Capital Matrix (Narrow Band)



**Bubble size**  
Total Administrative Labor Investment (cash compensation only)

- Analysis Factor**
- Communication: Total Headcount
  - Development: Funds Raised
  - Facilities: Square Feet Cleaned
  - Finance: Total Employee Headcount
  - General Admin: Total Headcount
  - HR: Total Employee Headcount
  - Information Technology: Total Headcount
  - Research Admin: Total Research Awards
  - Student Services: Total Student FTE



# Conclusions & What's Next



# Summary Observations for Strategic Resource Allocation



Start with and continually evaluate spend against benchmarks to discover efficiency opportunities.



Equally important is to find a way to measure effectiveness of administrative services from the perspective of faculty and staff



All part of an effort to strike the optimal balance of efficiency and effectiveness/satisfaction and for continuous improvement with both central and decentral administrative services

## What's Next?

- 1 Socializing the cost and effectiveness data across campus, including deep dives into specific schools
- 2 As additional challenges come forward related to decreasing resources; such data will be used to inform those decisions, especially in response to COVID-19
- 3 Additional benefit of ABC Insights is the ability to track investment longitudinally to monitor changes and results over time
- 4 Review non-administrative spend to identify opportunities to further optimize expenses/spend

The University of South Carolina



## Introduction to Presenter



**Mike Kelly, Ph.D., PMP**

Chief Data Officer

University of South Carolina



**South Carolina**

# University of South Carolina Background



# Challenges & Approach



# Organizational Context

In 2018, UofSC's long-time president announced pending retirement.

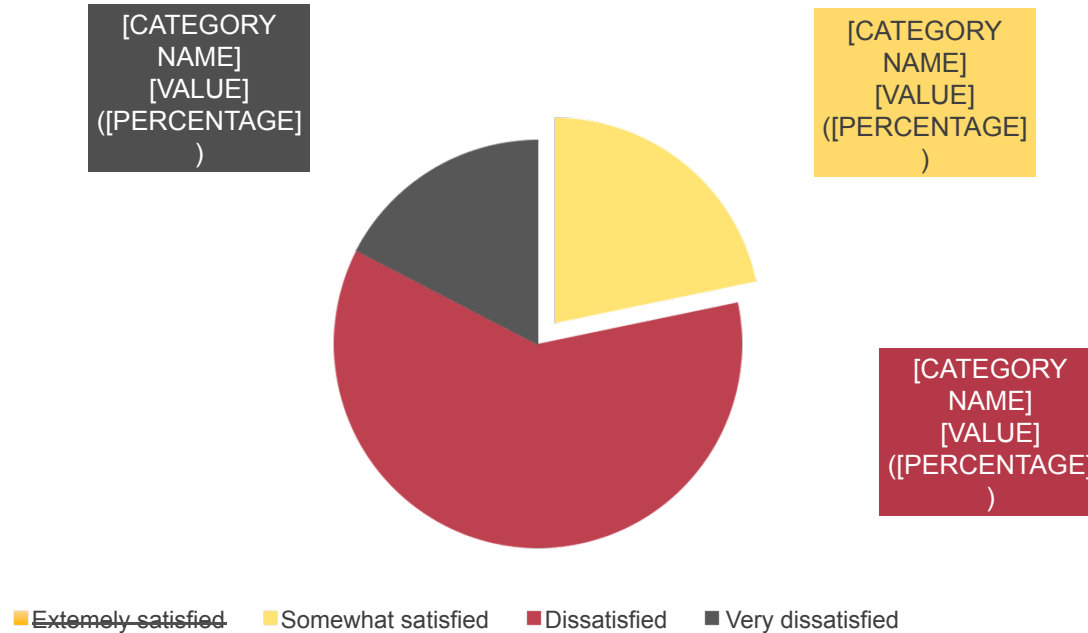
IT Leadership anticipated new generation of leadership would:

- Expect to be 'data informed'
- Be dissatisfied with the state of data, reporting, business intelligence & analytics capabilities
- Launch new strategic planning
- Modernize & standardize workforce skills & tools
- Need highly reliable, accurate data





# Level of satisfaction with UofSC's data capabilities – January 2019



# State of Data – January 2019

- Scattered possession & location
- Data sources not connected
- Limited resources – technical + functional
- Confusing roles & responsibilities
- Overwhelming number of requests – OIRAA & Enrollment Management
- Tedious, iterative clarification of requests
- Findings & reports that dispute each other

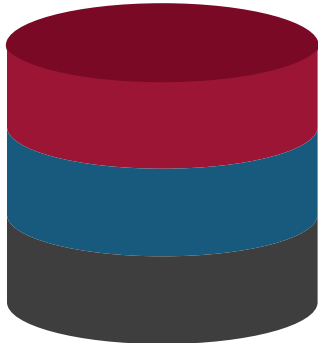
## Greatest liabilities

- Security
- Privacy
- *Errant analysis & findings based on wrongful, assumed meaning of data*

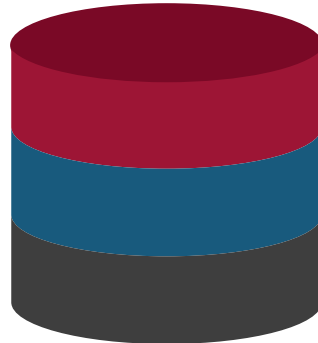


# Data Warehouse

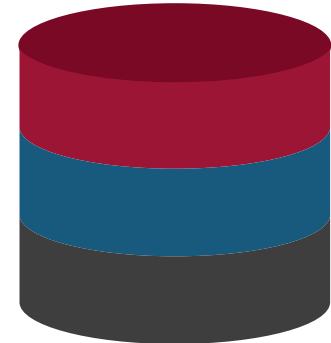
Human  
Resources



Student



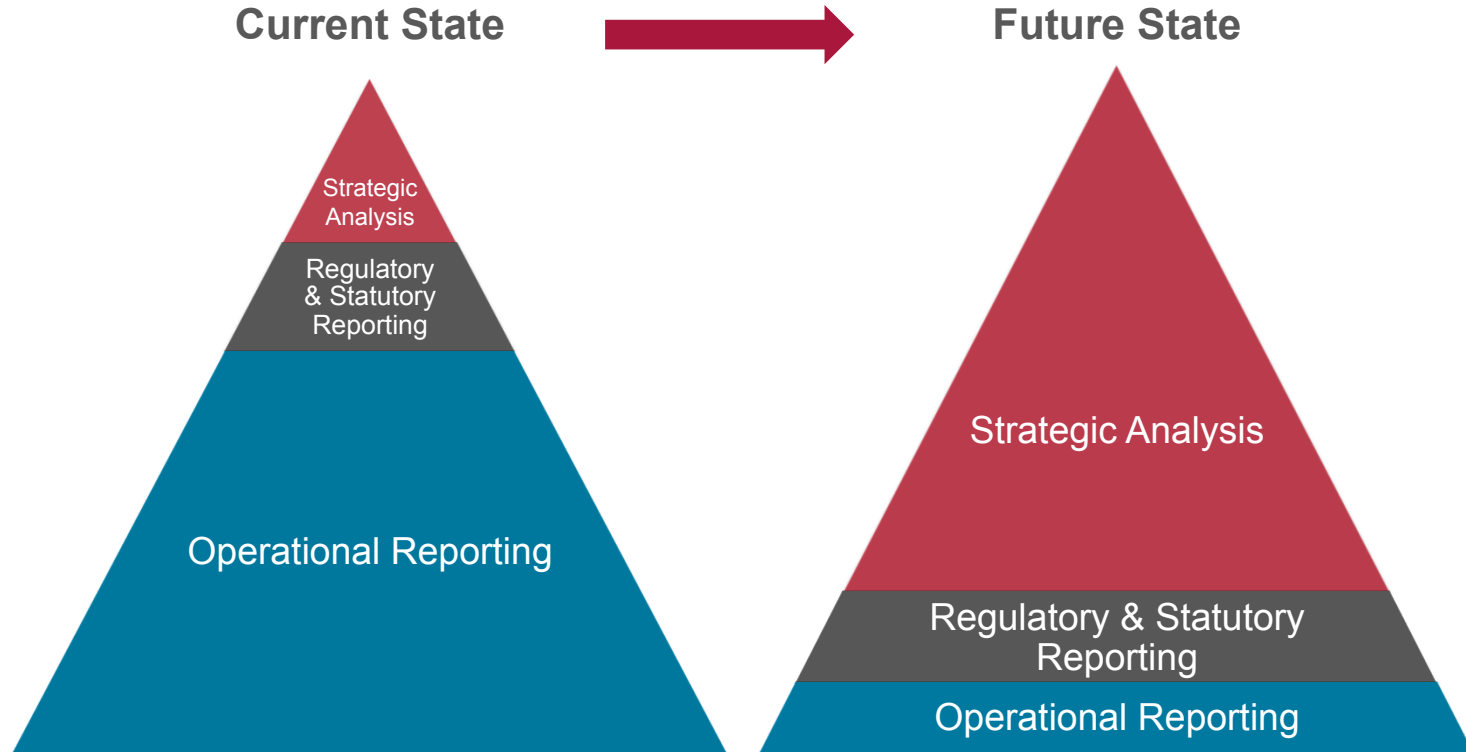
Admin & Finance



# Transformation of Data Capabilities

Reporting	Business Intelligence	Analytics
“What happened?”	“Why did it happen?” “How can we improve?”	“What will happen?” “What should we do about it?”
<ul style="list-style-type: none"> <li>Operational</li> <li>Institutional</li> </ul>	<ul style="list-style-type: none"> <li>Situational awareness &amp; performance analysis</li> </ul>	<ul style="list-style-type: none"> <li>Projection, forecast</li> <li>Predetermined response</li> </ul>
Data limited by domains	Combinations of various data	Mashups of highly varied data
<i>Fixed reporting formats</i> <ul style="list-style-type: none"> <li>Print &amp; PDF</li> <li>Tables</li> <li>Charts</li> </ul>	<i>Varied formats</i> <ul style="list-style-type: none"> <li>Analysis</li> <li>Dashboards</li> <li>Recommendations</li> </ul>	<i>Innovative formats</i> <ul style="list-style-type: none"> <li>Dashboards</li> <li>Iterative model refinement with data science</li> </ul>
<i>Performance Reflection</i> <ul style="list-style-type: none"> <li>Calendar-driven</li> <li>Distribute/submit</li> </ul>	<i>Performance Enhanced</i> <ul style="list-style-type: none"> <li>Timeliness of findings</li> <li>Decision → Action</li> </ul>	<i>Performance Optimized</i> <ul style="list-style-type: none"> <li>Programmatic interventions</li> <li>Re-casting</li> </ul>

# Shift Time & Energy



# Barriers to BI & Analytics



**Requires sophisticated data modeling**



**Record & identity matching**



**Costly human resources – esp. data science**



**Prioritization of projects**



**Joining data from disparate systems & data formats**

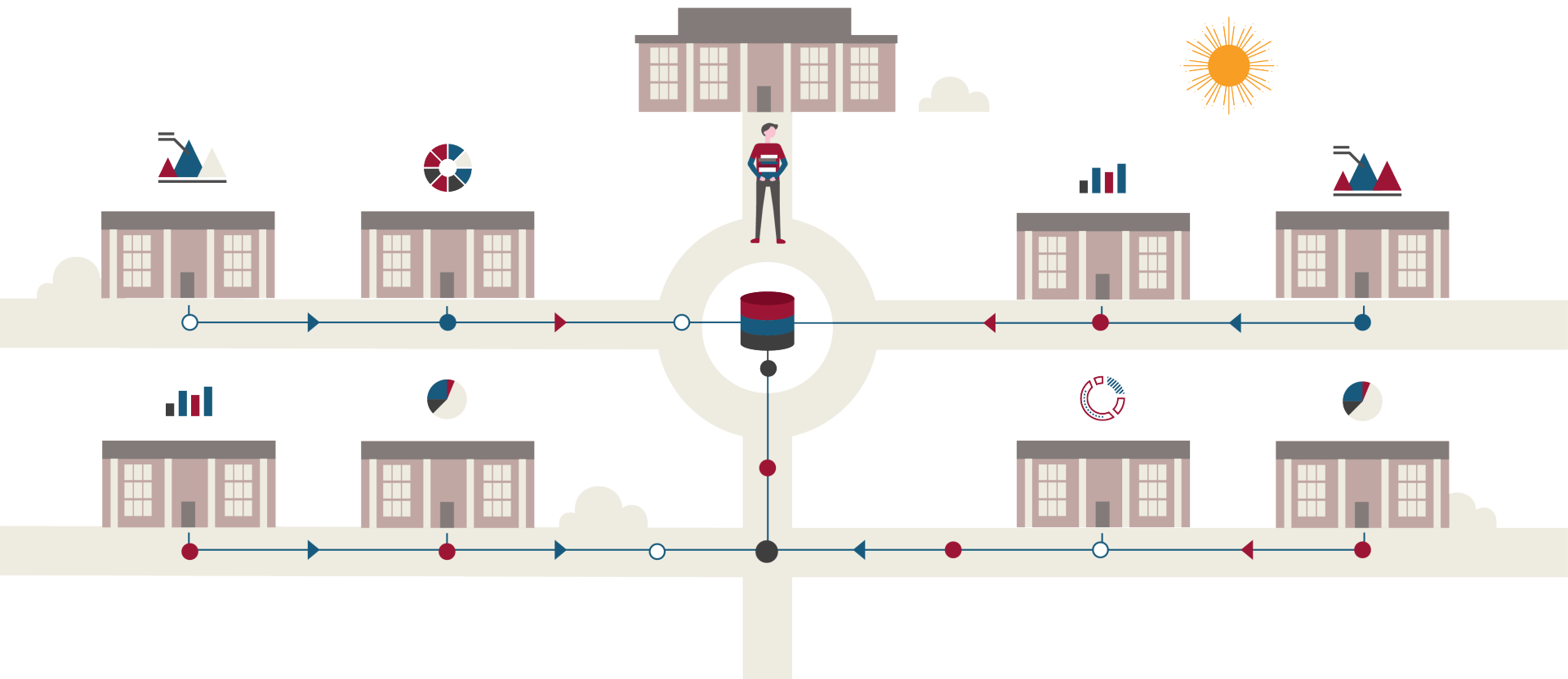


**Technical architecture & infrastructure**



**Functional data expertise**

# Vision



# Strategic Data Capabilities & Future Leadership

## Gain meaningful insights & opportunities

- Efficiency
- Effectiveness
- Discovery of Unknowns

## Data-informed culture

- Expectation of inquiry & curiosity: *what does the data tells us?*
- Daily situational awareness: dashboards for KPIs

## Inform impactful decisions & respond to inquiries

- Reliably, accurately, and immediately
- Every major decision should include data

## Maintain mandatory & operational reporting

- Routinize effort & minimize sunk costs





# UofSC's Desired Data Capabilities



**Join data across  
3 core domains:  
Student,  
Financials, HR**



**Combine auxiliary  
and external data  
sources with core  
data**



**Enable self-  
service access  
to reliable data**



**Standardize  
the tools and  
skills of data  
workforce**



**Secure buy-in  
and validation  
from functional  
Data Stewards**



**Governance  
of analytics  
priorities**



**Access to data  
architects & data  
scientists**



**Rapid  
improvement of  
capabilities**

# Needed in a Partner: HelioCampus

**1** Exclusive to higher education

**2** Packaged solution

- Tech stack
- Extant data models for systems we use
- Expert human resources, including Data Scientists

**3** Logical core data models for Banner & PeopleSoft

- Student
- Human Resources
- Financials



**4** Join records across data domains

**5** Rigorous sense-making of data with the client institution

**6** Expert, disciplined processes, inquiry, and findings

# HelioCampus Working Paradigm



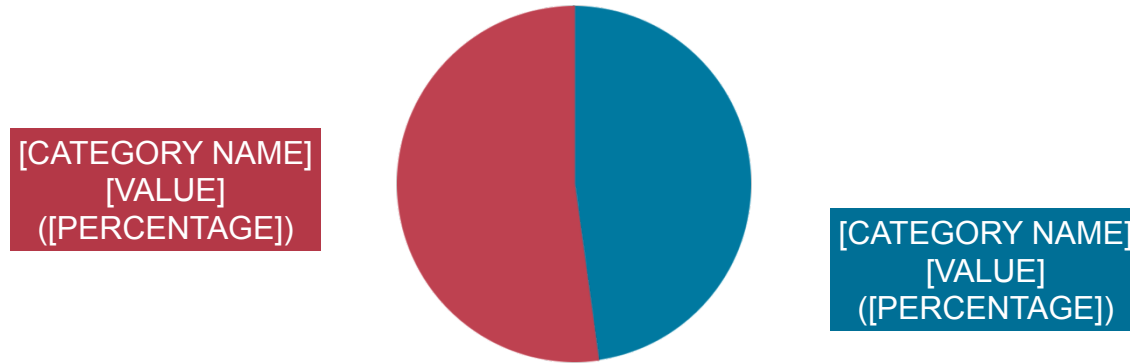
- Data from Banner + PeopleSoft + Auxiliary Systems
- Data validation & functional expertise
- Analytics Agenda
- UofSC sets our priorities for execution
- Governance
- \$ investment
- End users



- Infrastructure & Architecture
- Extant data models for Banner & PeopleSoft – higher ed specific – including linking records across domains & source systems
- Tableau
- Dashboards
- Data Science & Scientist(s)
- Customization to match UofSC systems

# Campus Feedback – January 2019

Does HelioCampus present a potential improvement to UofSC's data capabilities?



- HelioCampus would be a radical improvement
- HelioCampus would likely be an improvement
- HelioCampus would not improve our capabilities
- HelioCampus would worsen our current state
- Insufficient information to rate

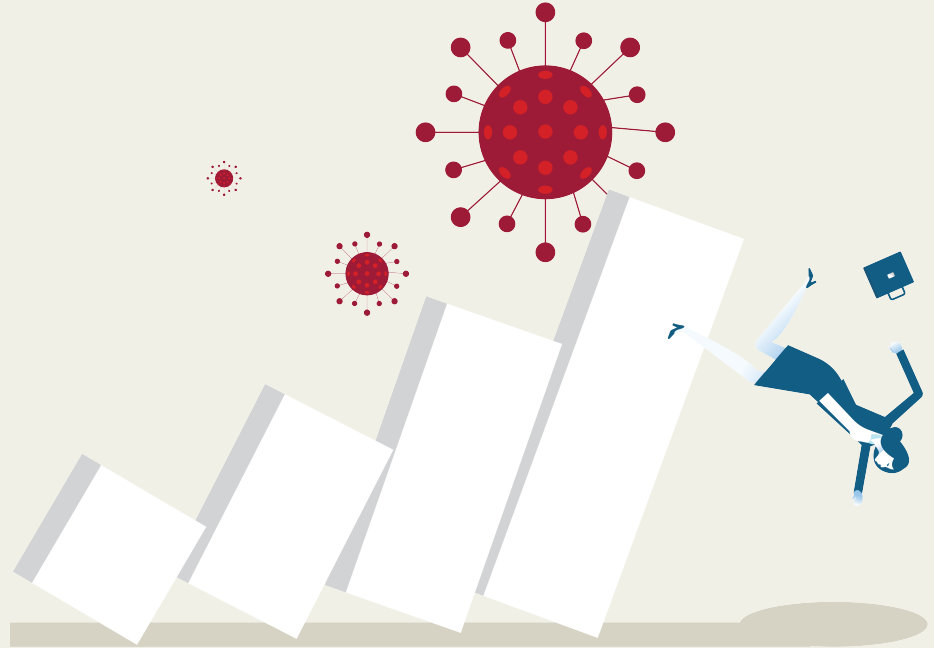
# Impact of Pandemic



# Impact of COVID-19

**Everything – *literally everything* – changed in a couple weeks.**

- Dawning realization
- Delayed return from Spring Break
- Remote workforce
- Skills overhaul – faculty and staff
- Teaching online like never before
- Near-zero prep time for transition
- No culture or adoption of standard tools and solutions
- No insight into faculty & students' technology readiness for remote instruction & learning
- No insight into student presence or engagement – why/why not
- Uncertainties...
- No clear end date



# Ability to Pivot: Identifying New Path

**Blackboard LMS was our relatively standard online course system.**

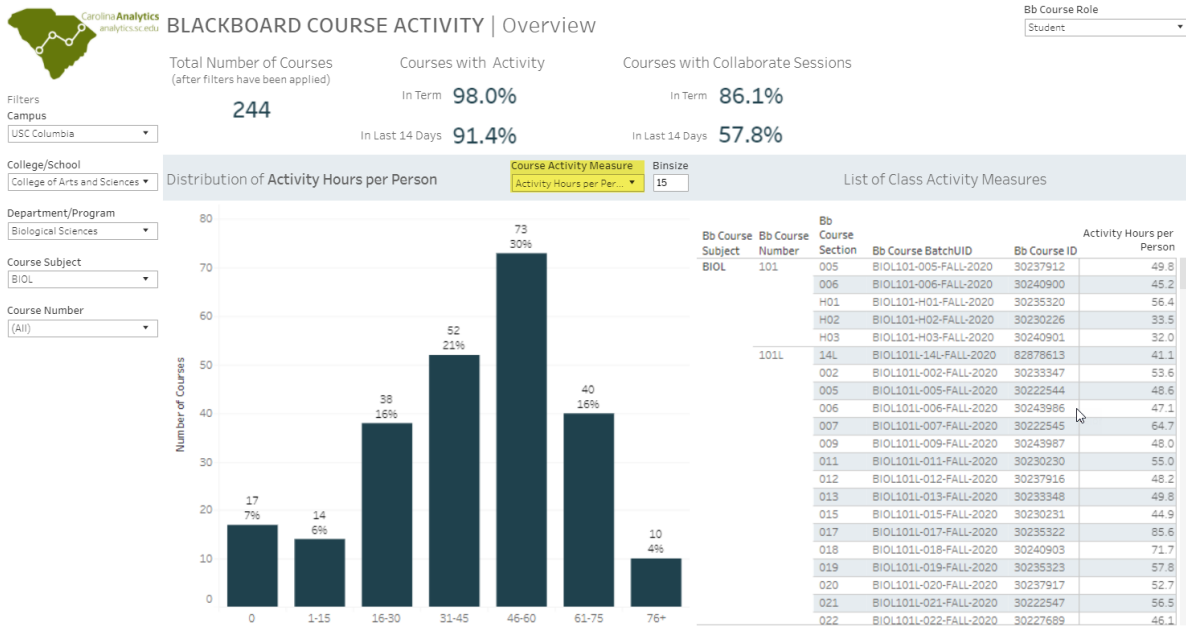
## Advantages

- Every faculty, student, staff can login
- Every course had a shell
- Many faculty familiar
- Just upgraded to SaaS model
- Collaborate Ultra video conferencing

## Questions & Uncertainties

- Faculty readiness
- Staff support while working remote
- System performance untested
- Users access to technology
- Insights about actual LMS use
- Reasons students didn't engage

# Teaching & Learning Insights: Course Use of Bb



## WHAT'S IMPORTANT?

- Drill-down to campus, college, department, subject
- Ability to examine based on multiple measures of activity

Course Activity Measure | Binsize

Activity Hours per Person | 15

- Activity Hours
- Activity Hours per Person
- Collaborate Days Since Last Session
- Collaborate Session Count
- Collaborate Session Count per Person
- Collaborate User Attended Hours Total
- Collaborate User Attended Hours per Person
- Days Since Last Access
- Login Count
- Login Count per Person
- Total Interaction Count
- Total Interaction Count per Person
- Total Interaction Hours
- Total Interaction Hours per Person



# Teaching & Learning Insights: Demographics



## LMS PERSON ACTIVITY | Demographic Comparison

Person Level of Detail  
Person-Course (Enrollment)

Person Activity Measure: Activity Hours  
Demographic: Gender

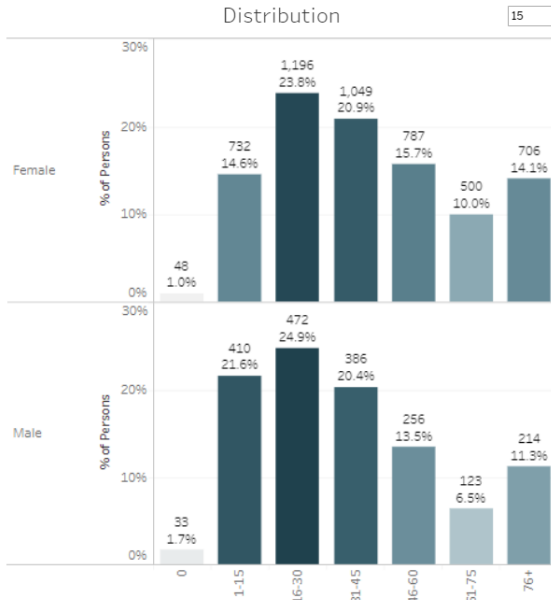
Total Number of Persons  
(after filters applied)

6,912

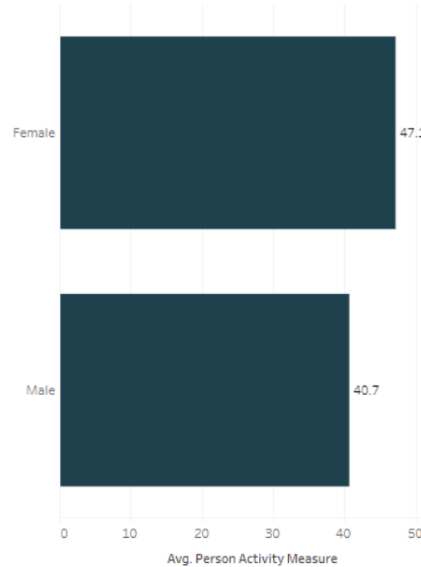
Binsize  
15

Filters

- Campus: USC Columbia
- College/School: College of Arts and Sciences
- Department/Program: Biological Sciences
- Course Subject: BIOL



Average



## WHAT'S IMPORTANT?

- Drill-down to campus, college, department, subject
- Examine multiple measures of Person Activity
- Examine multiple Demographics

# Teaching & Learning Insight: Mode of Delivery



## LMS ACTIVITY | Instruction Mode Comparison

Total Number of Courses  
(after filters applied)

2,313

Filters

Campus

USC Columbia

College/School

College of Arts and Sciences

Department/Program

(All)

Course Activity Measure  
Activity Hours per Person

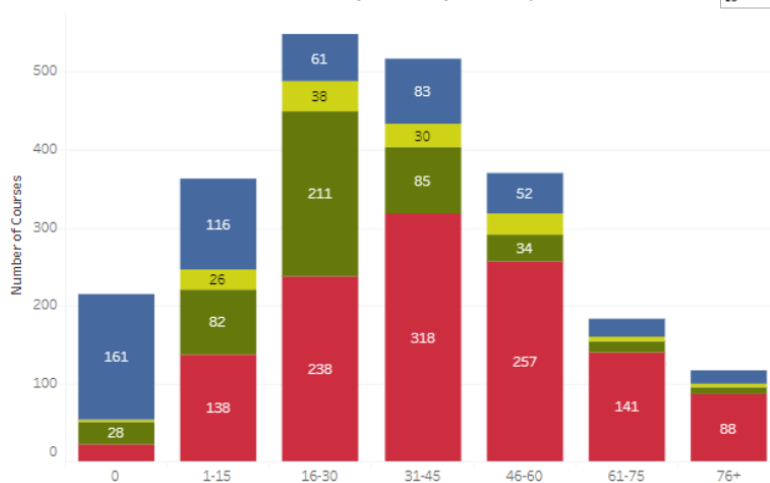
Total Number of Courses



Number of Courses by Activity Hours per Person

Binsize

15



## WHAT'S IMPORTANT?

- Examine LMS use by Instruction Mode
- Toggle each mode on/off
- Examine by multiple Course Activity Measures
- Visualize meaningful distributions

# Lessons Learned & What's Next



# Lessons Learned



Quickly  
get critical  
systems as  
reliable as they  
may ever need  
to be



Practice  
emergencies



Ask  
frequently:  
what *could*  
be important  
to know?



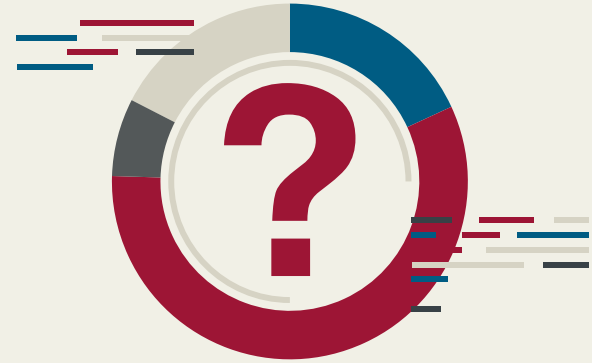
Subject  
Matters  
Experts are  
required



Get analytics  
capabilities  
ready!

## What's Next?

- 1 Governance of analysis capabilities
- 2 Interpretation & sense-making
- 3 Turning insights into impactful questions, decisions and actions
- 4 Access rights – who, what, why
- 5 Can we measure efficacy & impact of LMS use?
- 6 Ready for the big questions:



**What will the New Normal be?  
When will it get here? How  
will we know it's arrived?  
What technology and skills  
will it require? What insights  
will we need?**

**Q&A**

