



knowledge changing life

# Space Management Program Overview

*November 17, 2022*

Planning, Design and Construction Office



# ULTIMATE GOAL

$$\frac{\$}{SF}$$

It seems so simple...

- At an institutional level, it may be
- Real benefit comes at organizational level
- Needs to be repeatable and transparent
- The denominator is what we control

# CHALLENGES



Core Concepts are around...

- Measuring allocated or assigned space when we are trying to share more
- Nuances with each researcher (PI) can create headwinds, but as a whole an extremely useful metric at high levels for management
- Dry vs. wet (and hybrid) research trends

The reality is space will continue to be assigned to PI labs/efforts and shared space still can be incorporated and valued.

...so we press on...

# ABOUT MCW

# Academic Medical Center Partners

**Medical College of Wisconsin**

*Top 1/3 of all US medical schools in NIH research support*

- **Faculty: >1,949 Full Time**
- **Staff: >3,756 Full Time**
- **Learners: ~1,540**
- **Residents: 700**
- **Fellows: 200**
- **Volunteer Faculty: 2,500**
- **School of Medicine**
- **School of Graduate Studies**
- **School of Pharmacy**



# Medical College of Wisconsin

\$318M invested in research, teaching, training, and related purposes in FY21

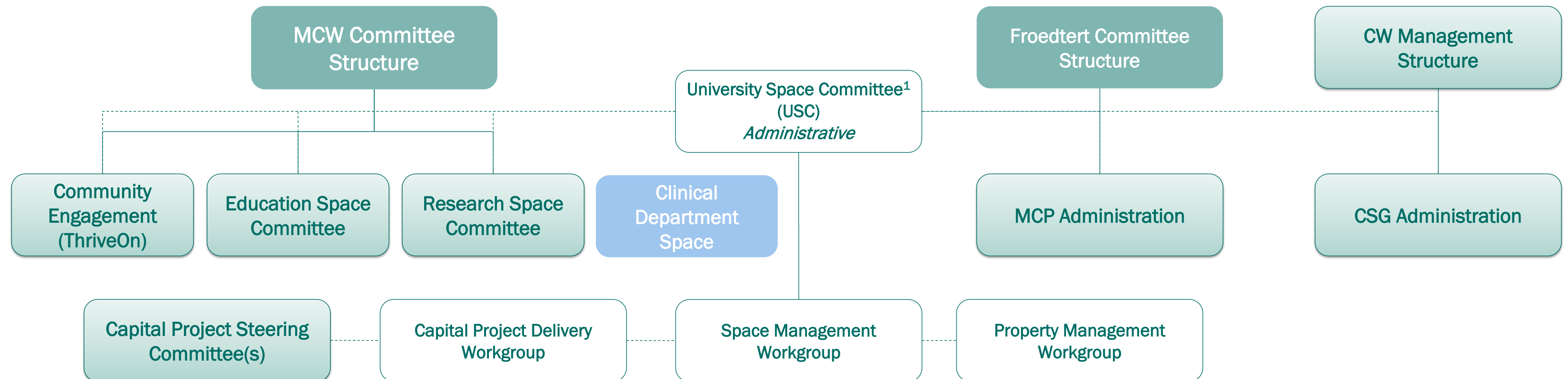
3,225 research studies including clinical trials, conducted in MCW's FY21

## Wet Lab Research Space

- Current: 350k+ SF
- Near Future: >400k SF
- Over 200 Wet Lab Investigators



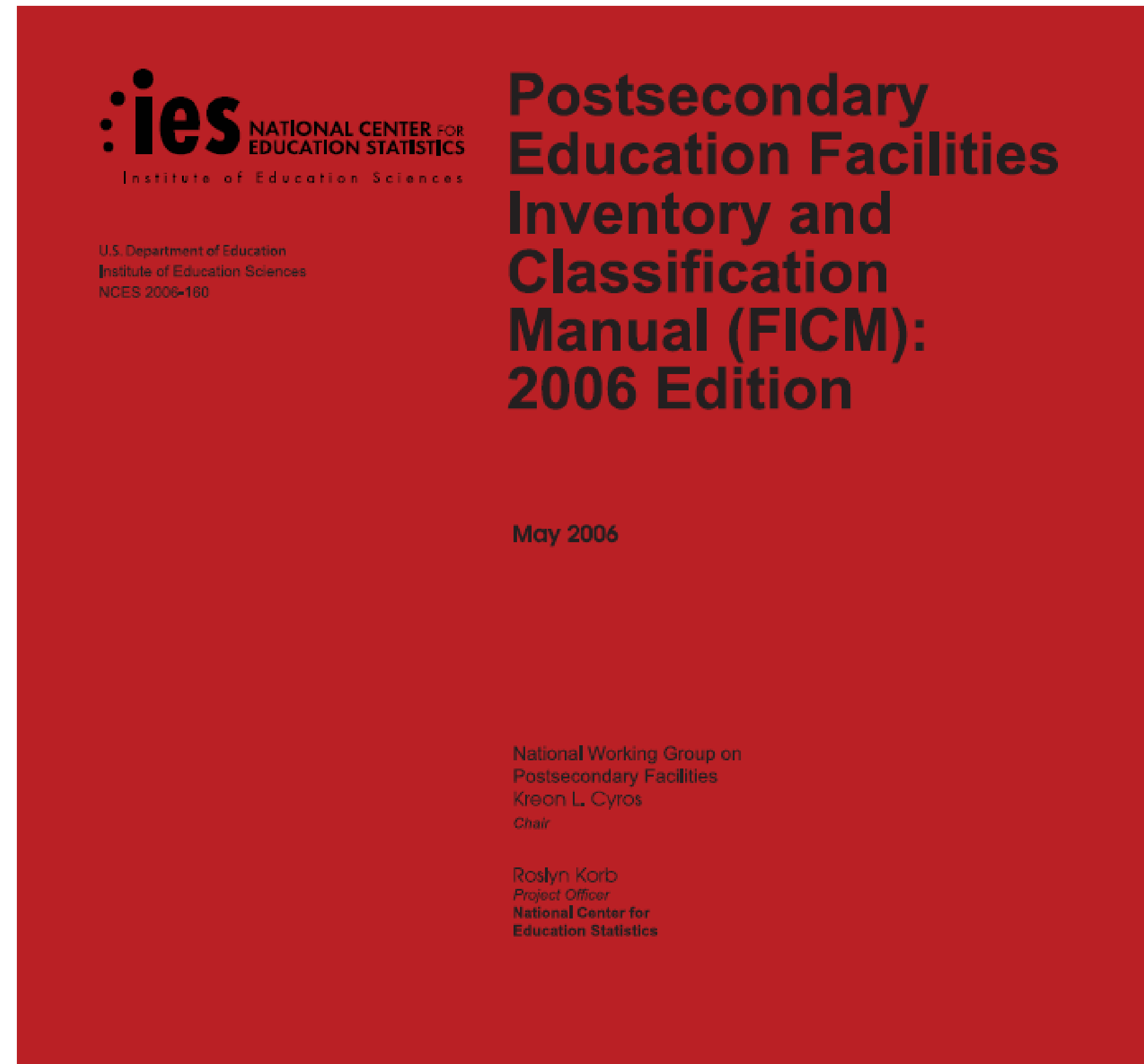
# FRAMEWORK



# THE SPACE MANAGEMENT FOUNDATION



# GUIDING DOCUMENTS



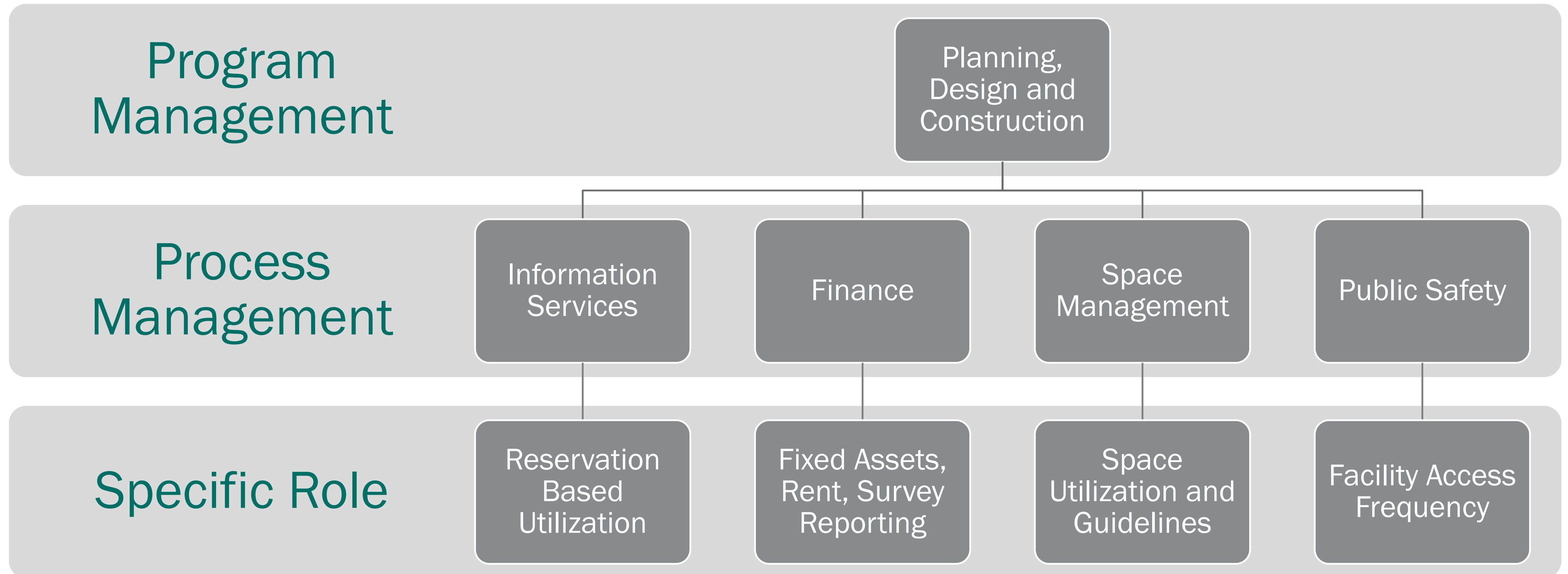
- U.S. DoE Postsecondary Education Facilities
- Fixed Asset Policy
- Office Space Guidelines
- Space Information System Handbook
- Process & Procedures Manual

# Why an Effective Space Management System is Critical

- Respond to Data Queries
- Augment audits or submissions leaving MCW
- Keep master architectural digital files vs. hard copy as-builts
- Central transparent repository of who has been allocated space and where
- Day to day planning and management
- **Using data to make informed decisions**

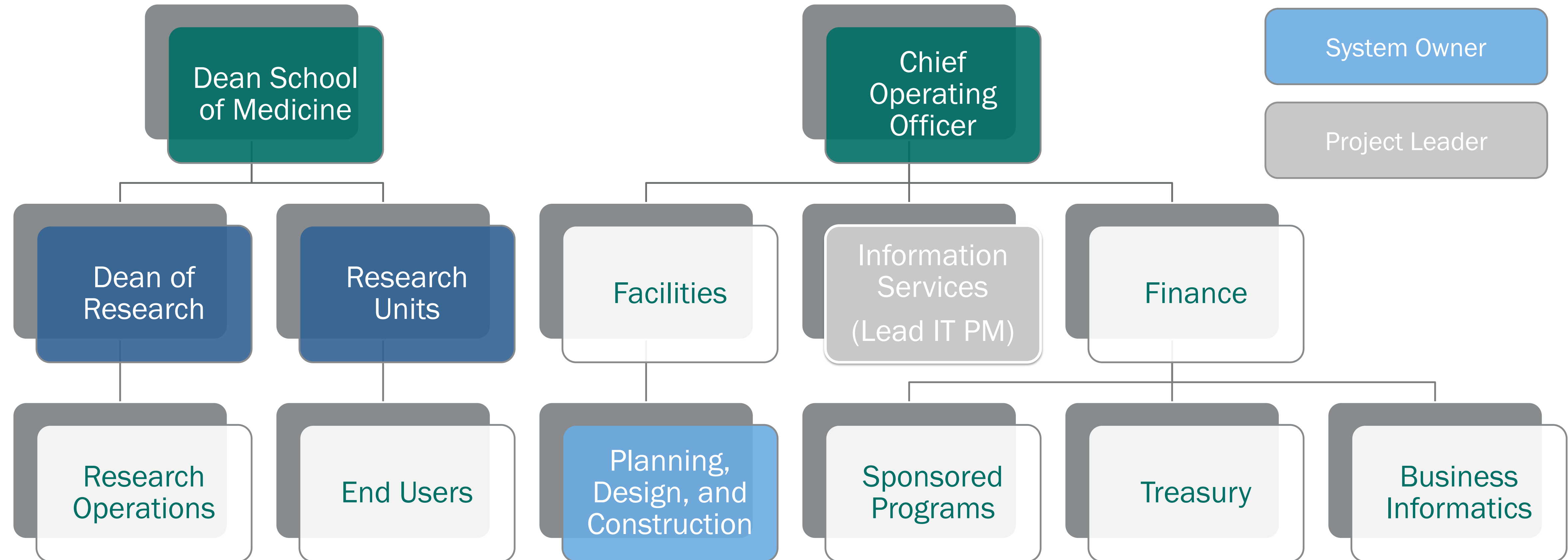


# SPACE MANAGEMENT RESOURCES

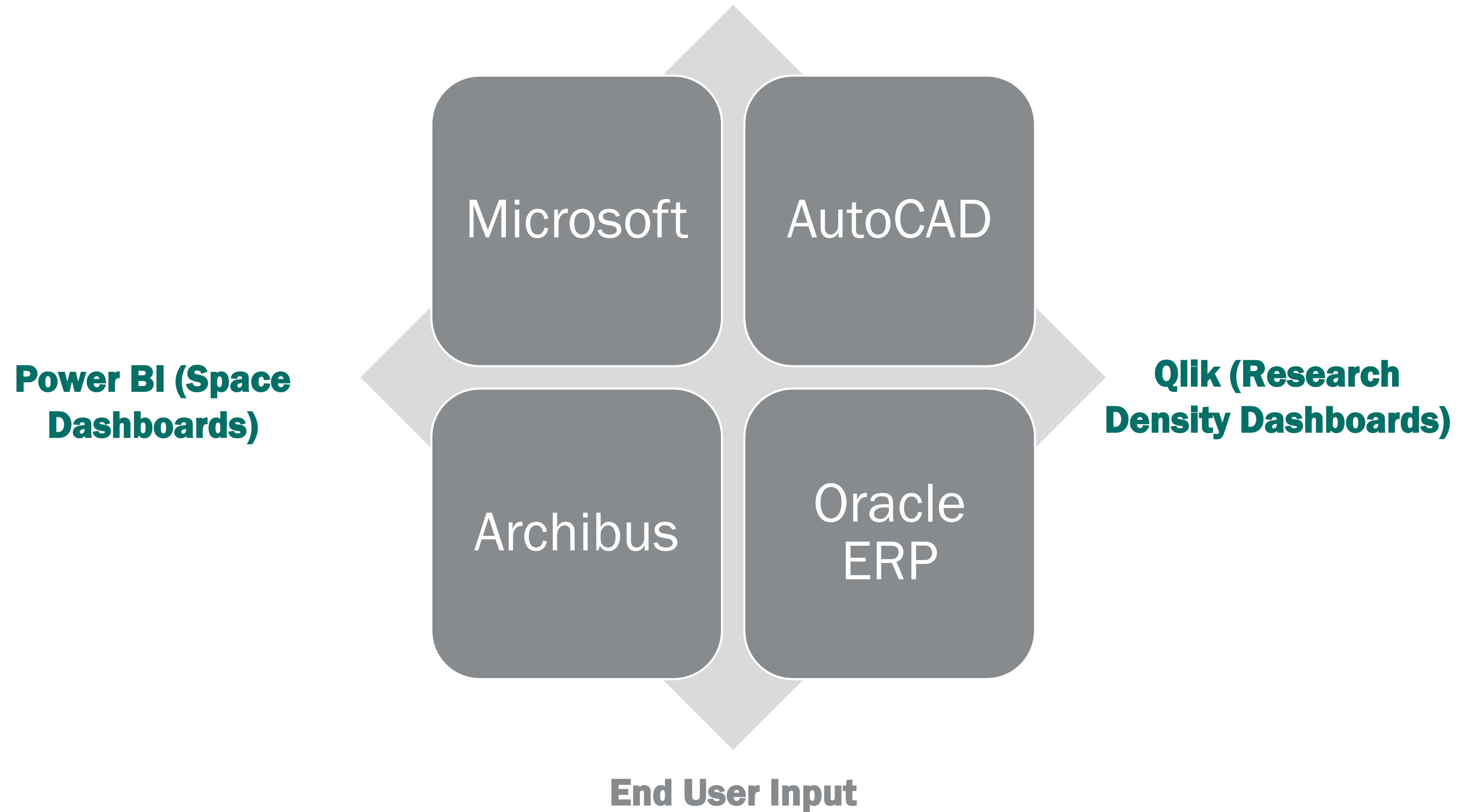




# RESEARCH SPACE PERSEPECTIVE



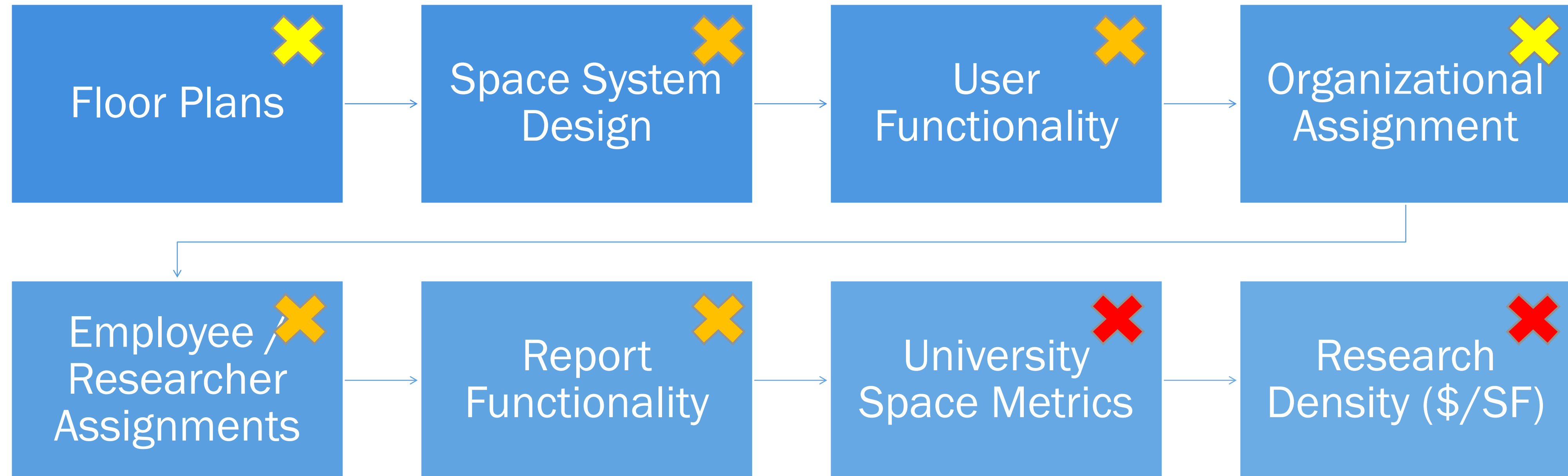
# SYSTEMS INVOLVED



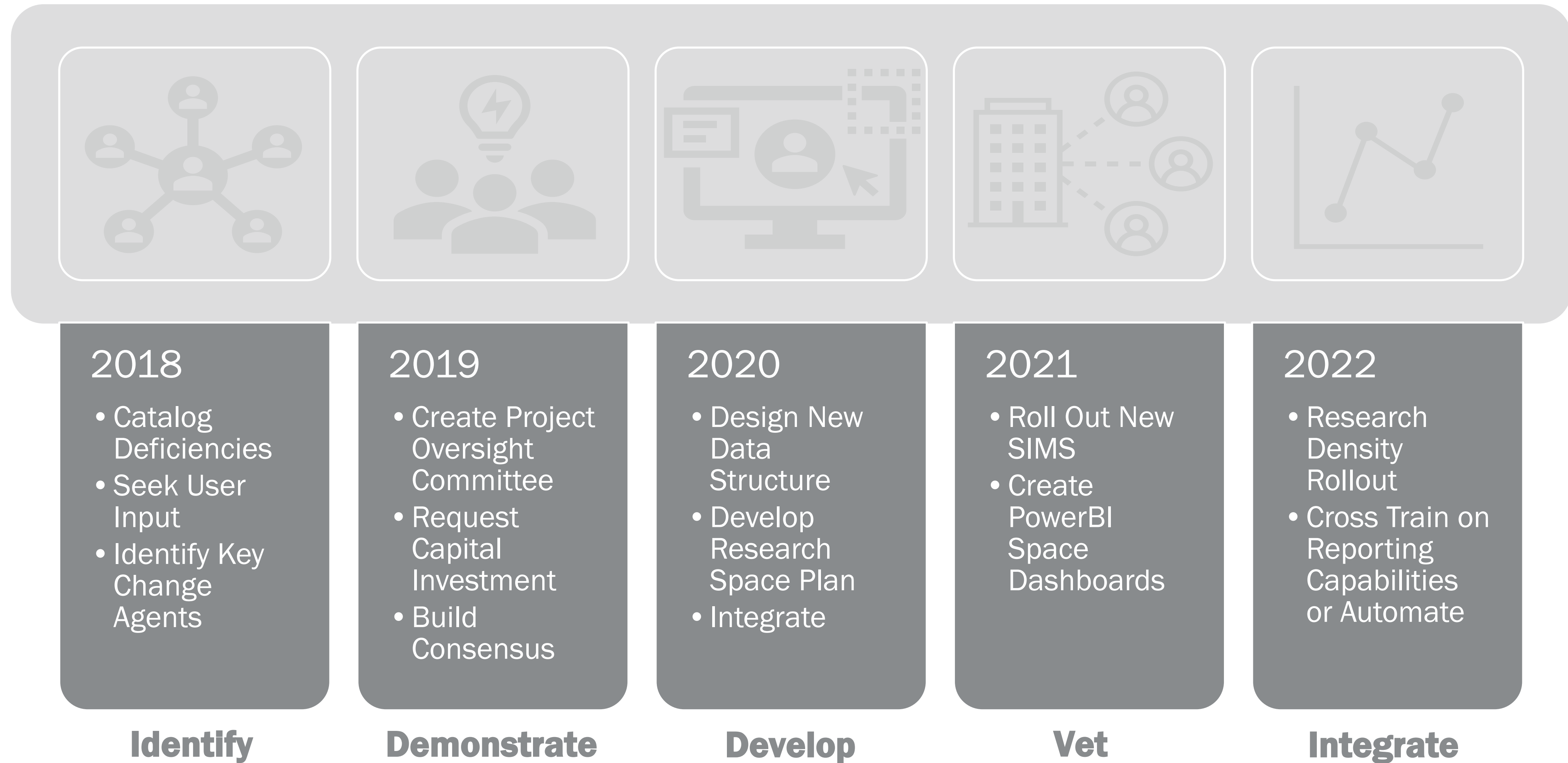
# FIXING THE DENOMINATOR



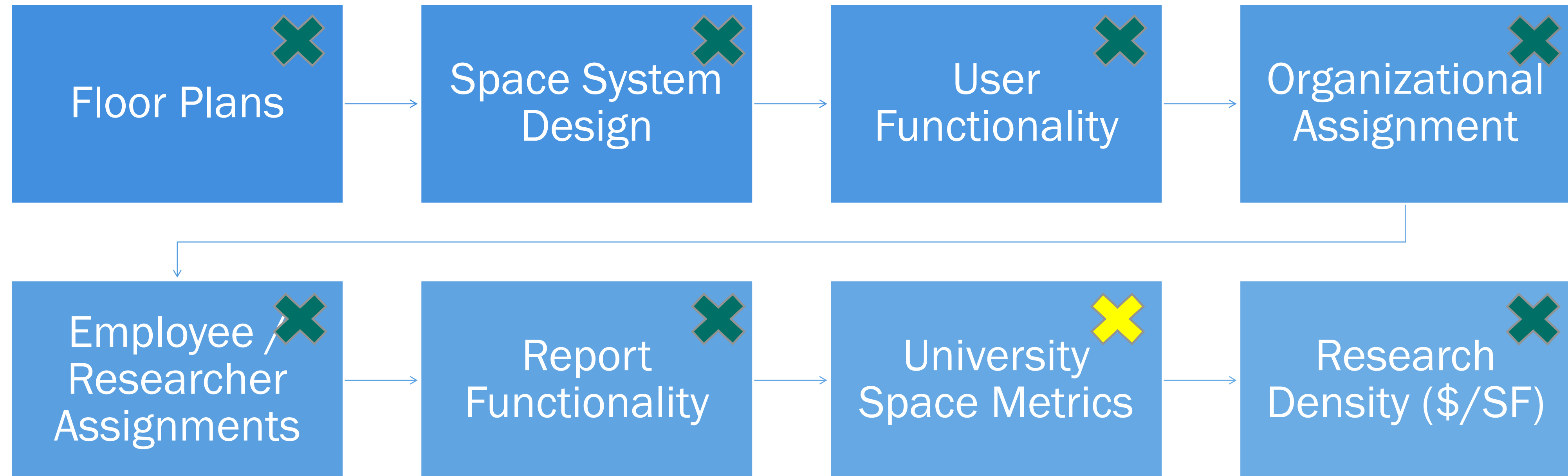
# PATHWAY TO SUCCESS - 2018



# PROGRAM PLAN



# PATHWAY TO SUCCESS - 2022





# STANDARD QUERY

ARCHIBUS

Home

Search

Favorites

Space Inventory

Occupancy

System

Home

Queries and Reports

Exception Reports

Favorites

Room Query

Occupiable Space

Employee

Locate Employee

Contact List

Non-Active Employees Assigned to Space

PI Exceptions

Cost Center Exceptions

Rent Pool Exceptions

Oracle Employee Exceptions

Space Console

Locate Employee

MCW Occupancy

Define Enumerated List Highlights

Allocation and Benchmarks

Show Departmental Stack Plan

Update Employee Capacity from Room Type

Update Area Totals

Show Departmental Analysis Chart

Employees

ARCHIBUS

Home

Search

Favorites

Space Inventory

Occupancy

System

Room Query

Filter

Show

Building Code

Controlling Department

Controlling Division

Floor Code

Occupying Department

Occupying Division

Room Number

Primary Mission

PI

Room Details

XLS

# UPLOADING SPACE DATA

The image shows a screenshot of a Microsoft Teams channel named 'University Space Planning' under the 'Medical College of Wisconsin' team. The channel's 'Files' tab is active, displaying a list of files and folders. The files include 'Archive', 'Room Queries', 'Space Data.pbix', and 'Space Data.xlsx'. The 'Space Data.xlsx' file is highlighted. Below the Teams interface, a Power BI ribbon is shown with the 'Refresh' and 'Publish' buttons circled in green. The 'Refresh' button is in the 'Queries' group, and the 'Publish' button is in the 'Share' group. At the bottom of the image, there is a footer for the Medical College of Wisconsin Space Management Dashboards, dated November 2022, with contact information for Jeremy Theis.

Medical College of Wisconsin  
Space Management Dashboards  
November 2022 Space Data  
Questions: Contact Jeremy Theis at [jtheis@mcw.edu](mailto:jtheis@mcw.edu)

- Paste in Room Query to Teams File
- Hit Refresh on PowerBI
- Publish PowerBI to Teams SharePoint Site
- Takes a total of 3 min to upload to Dashboard vs. integration that would need consistent maintenance and cost

# REPORTING



# POWERBI START PAGE

- Needs to be useful to all types of scenarios
- Slicers function around
  - Organizations and Groups of Orgs
  - Campus and Building
  - Owned vs. Leased
  - Primary Mission
  - Research Type (Wet/Dry/Admin)
  - Research Assignment
    - PI Assigned, Shared, Core
  - PI Assignment
    - PI Assigned, Reserved, Unassigned, Non-MCW PI Assigned

The screenshot displays the 'Medical College of Wisconsin' PowerBI dashboard. At the top, the college's logo is on the left, and the title 'Medical College of Wisconsin' is centered, followed by 'Space Management Dashboards' and 'November 2022 Space Data'. Below the title, a contact email 'Questions: Contact Jeremy Theis at jtheis@mcw.edu' is provided. The main area contains several slicers for filtering data: 'Allocated Organization Slicer', 'Assigned Organization Slicer', 'Building and Campus Slicer', 'Property Manager Slicer', 'Primary Mission Slicer', 'Research Type Slicer', 'Research Assignment Slicer', and 'PI Assignment Type Slicer'. Each slicer has a list of categories with checkboxes. A 'Directions' box in the top right corner provides instructions on how to use the slicers.

**Medical College of Wisconsin**  
Space Management Dashboards  
November 2022 Space Data  
Questions: Contact Jeremy Theis at jtheis@mcw.edu

**Directions:**  
Use Slicers to update reports to datasets you desire.  
Hold Cntrl to select multiple elements.  
Default is set to MCW Owned and Leased Space

**Allocated Organization Slicer**

- ☐ Administration
- ☐ Administrative Support
- ☐ Basic Sciences
- ☐ Centers & Institutes
- ☐ CSG Organizations
- ☐ Finance & Admin
- ☐ MCP Organizations
- ☐ Other

**Assigned Organization Slicer**

- ☐ (Blank)
- ☐ Academic Affairs
- ☐ Academic Outreach
- ☐ Advancing a Healthier Wisconsin Endo...
- ☐ Anesthesiology
- ☐ Biochemistry
- ☐ Biomedical Engineering
- ☐ Biophysics
- ☐ Biotechnology and Bioengineering Ce...
- ☐ Cancer Center
- ☐ Cardiovascular Center
- ☐ Cell Biology, Neurobiology and Anato...
- ☐ Center for Advancing Population Scien...

**Building and Campus Slicer**

- ☐ Center for Aids Intervention Research
- ☐ Children's Hosp Facilities
- ☐ Community Clinics
- ☐ Curative Care Network
- ☐ Froedtert Hospital
- ☐ Milwaukee Campus
- ☐ Regional Campuses
- ☐ Research Park
- ☐ Thrive On King
- ☐ VA Grounds

**Property Manager Slicer**

- ☐ (Blank)
- ☐ CHW Lessee
- ☐ CHW Own
- ☐ FMLH Lessee
- ☒ MCW Lessee (direct)
- ☒ MCW Lessee (pool)
- ☒ MCW Own
- ☒ MCW/CHW Own

**Primary Mission Slicer**

- ☐ Clinical
- ☐ Community Engagement
- ☐ Education
- ☐ Institutional
- ☐ Research

**Research Type Slicer**

- ☐ Dry Research
- ☐ Not Applicable
- ☐ Research Administration
- ☐ Wet Research

**Research Assignment Slicer**

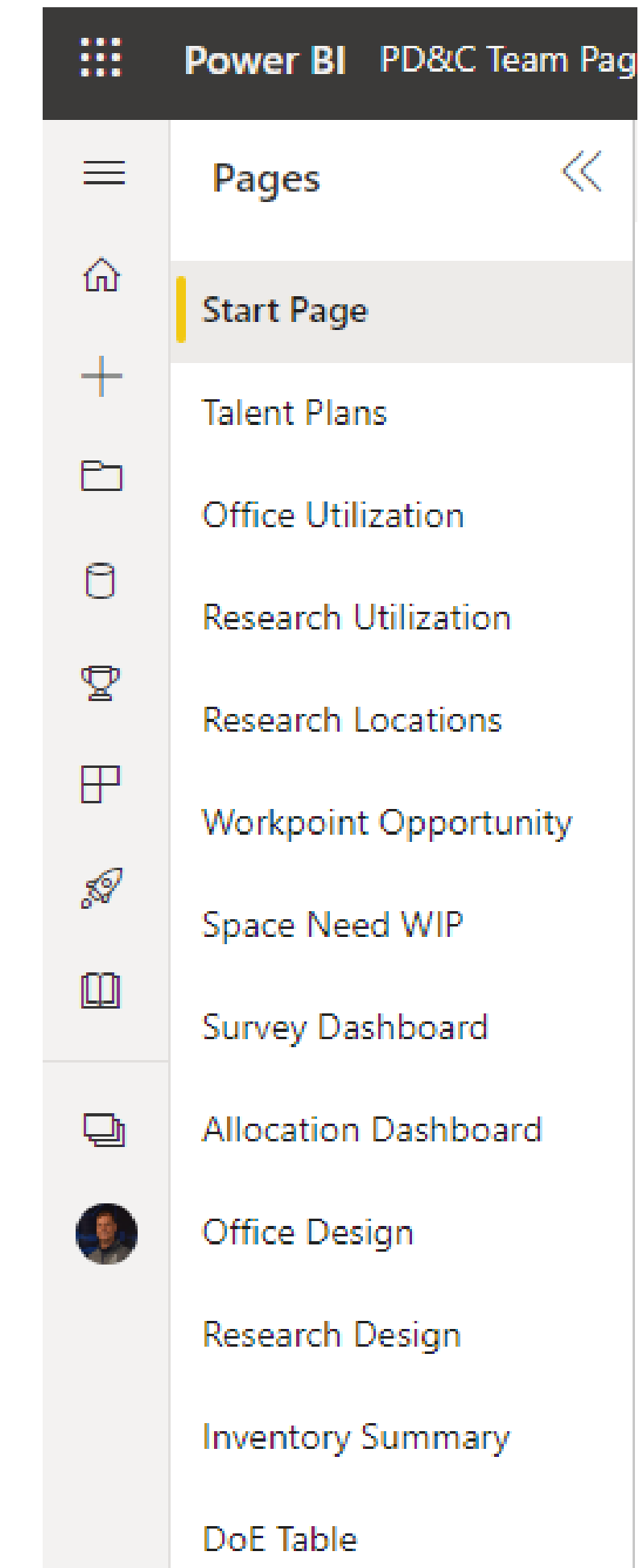
- ☐ Not Assignable
- ☐ PI Assignable
- ☐ Research Core
- ☐ Shared

**PI Assignment Type Slicer**

- ☐ MCW PI Assigned
- ☐ Non-MCW PI Assigned
- ☐ Not Applicable
- ☐ Reserved
- ☐ Unassigned

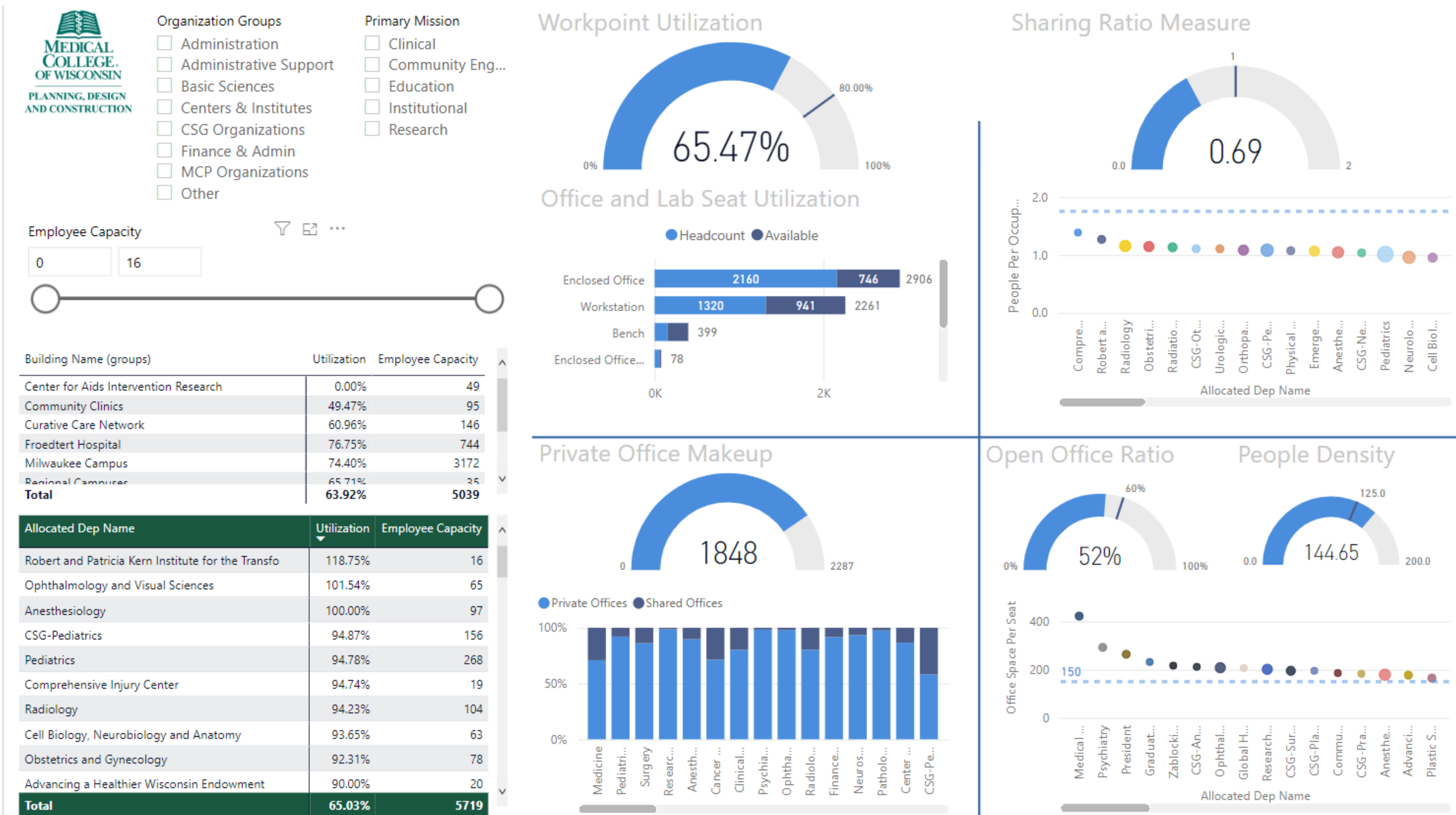
# POWERBI DASHBOARDS

- Personnel Virtual/Remote Work Plans
- Office Space Utilization
- Research Utilization
- Research Location
- Space Survey Completion Rate
- Office Design Standards
- Research Design Standards
- Inventory Composition
- DoE Table



# SPACE DASHBOARD EXAMPLES

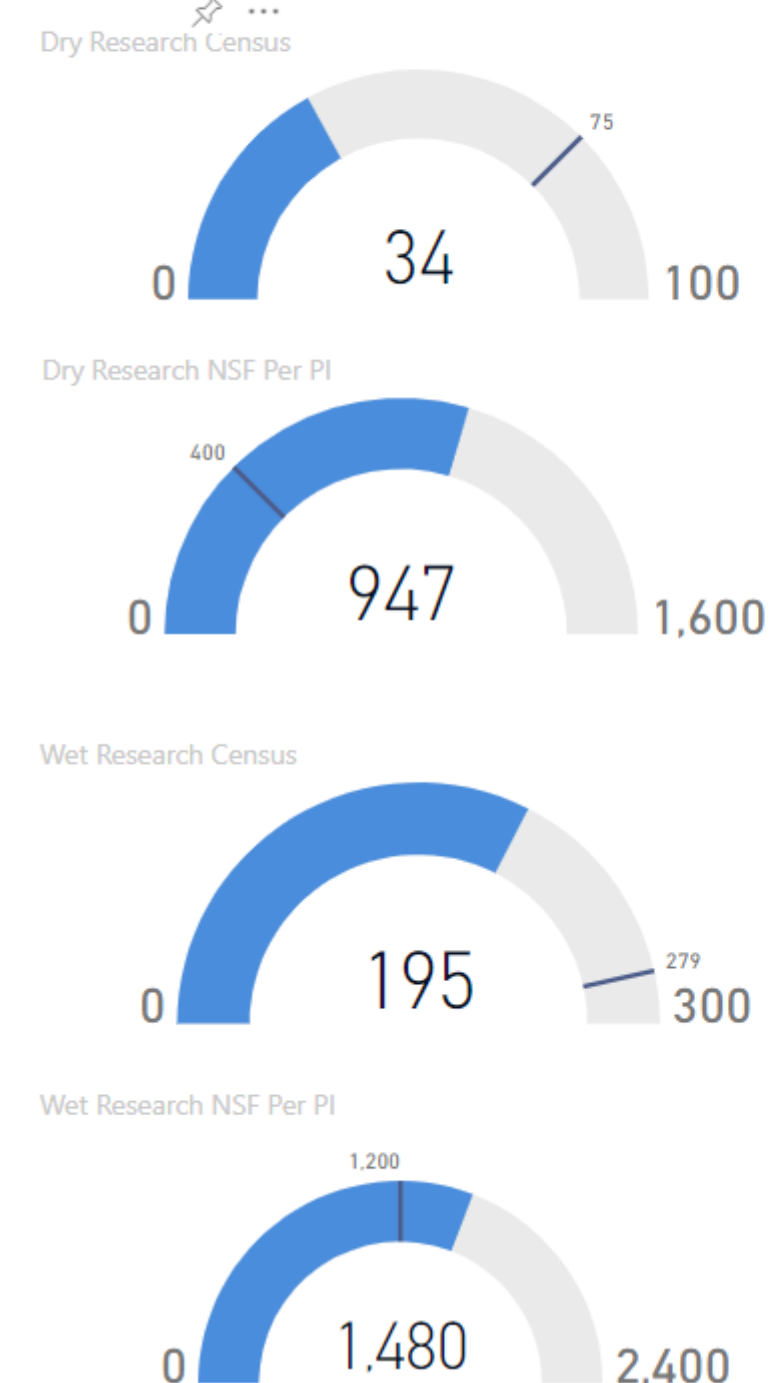
- Utilization Rates
- Capacity
- Headcounts
- Sharing Ratio
- Private Office Ratio
- Open Office Ratio
- People Density





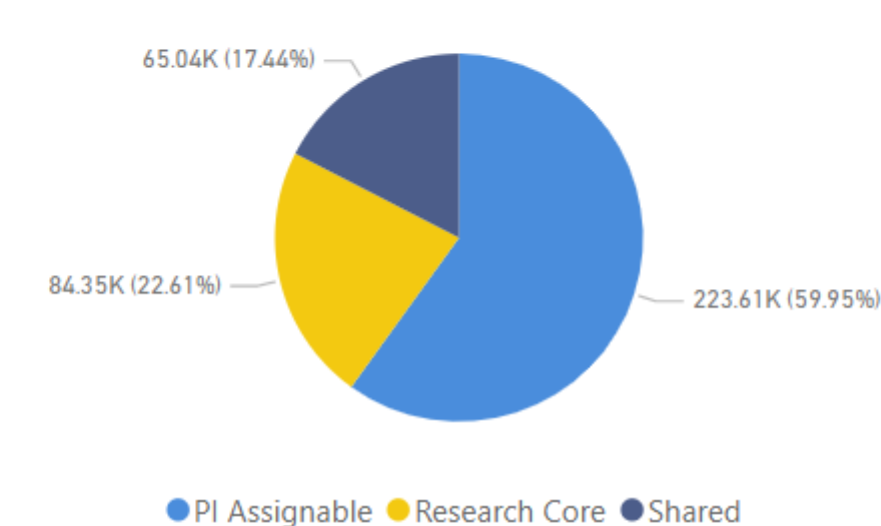
# RESEARCH SPACE DASHBOARD

- Dry Research Census
- Dry Research SF Per PI
- Wet Research Census
- Wet Research SF Per PI
- Wet Research Assignment Summary
- Wet Research PI Utilization
- Researcher Locations
- Research Space Per Org

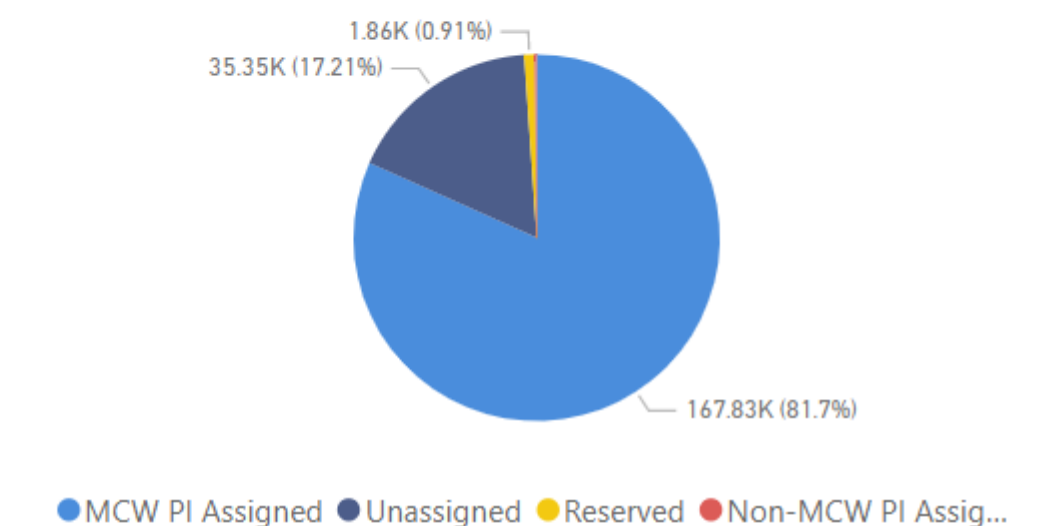


## Research Utilization Dashboard

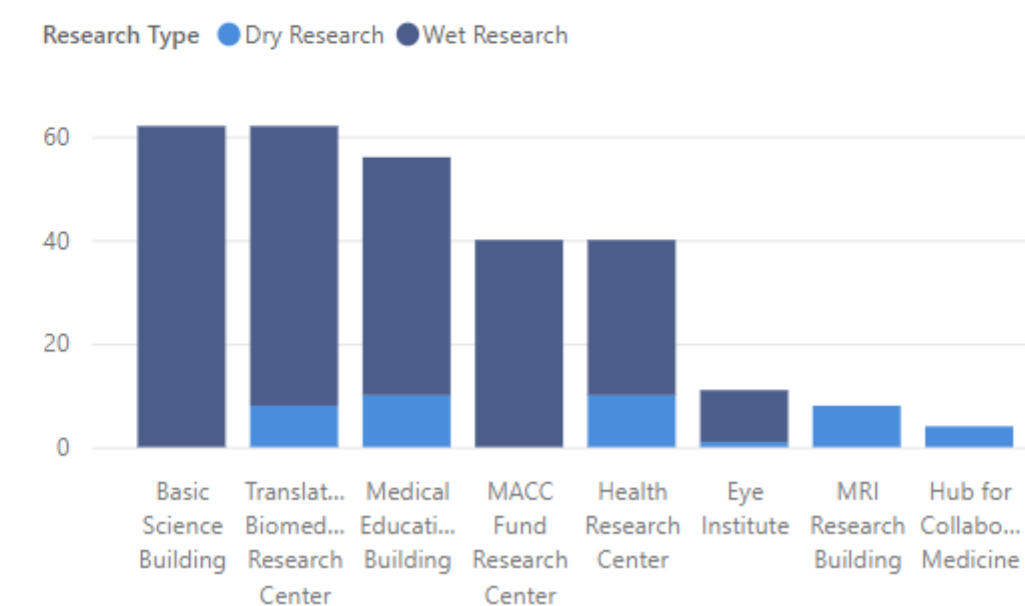
### Wet Research Assignment Summary



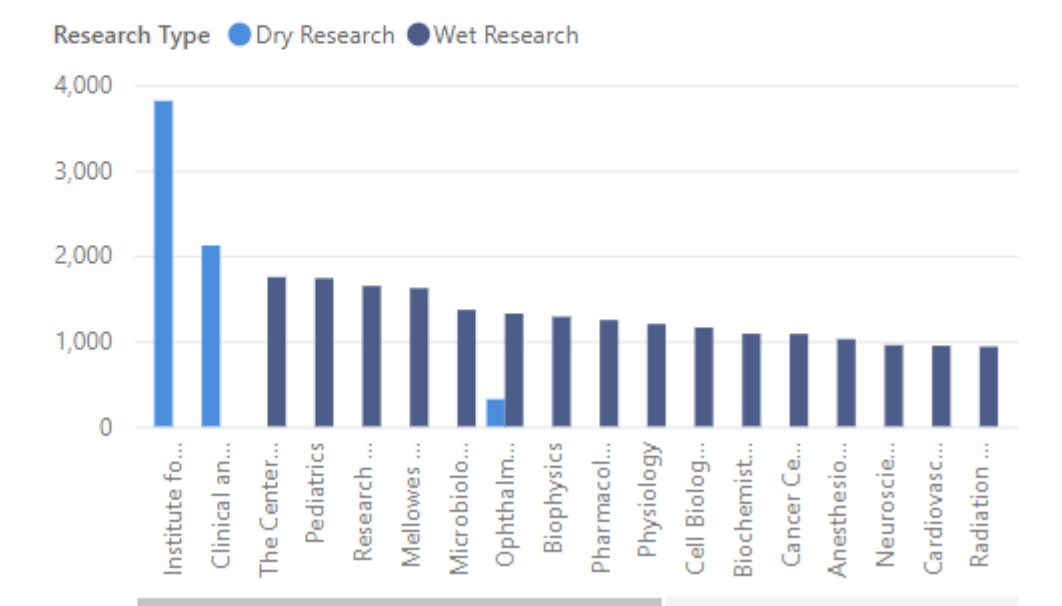
### Wet Research PI Utilization



### Researcher Locations

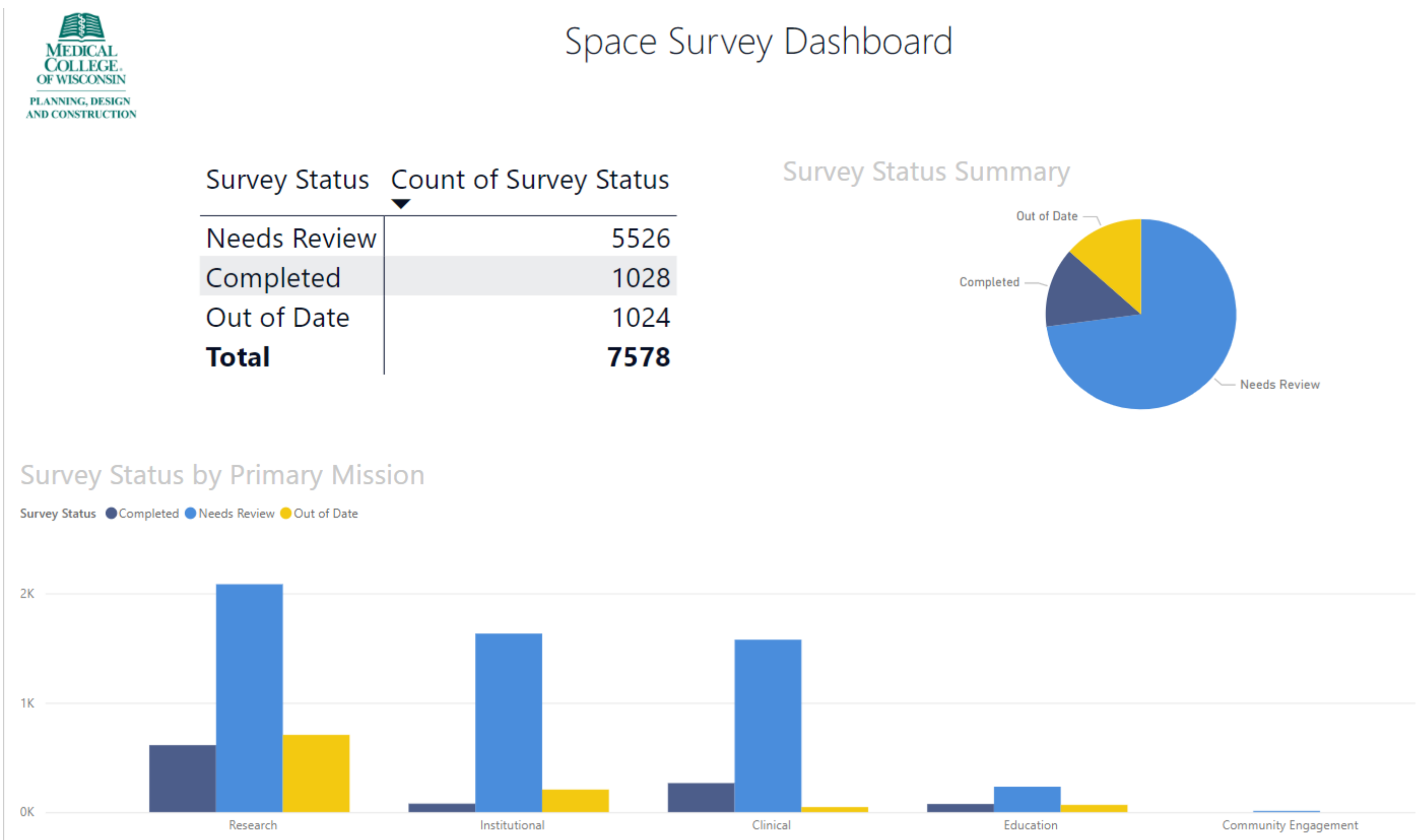


### Research Space Per Controlling Organ...



# SPACE SURVEY DASHBOARD

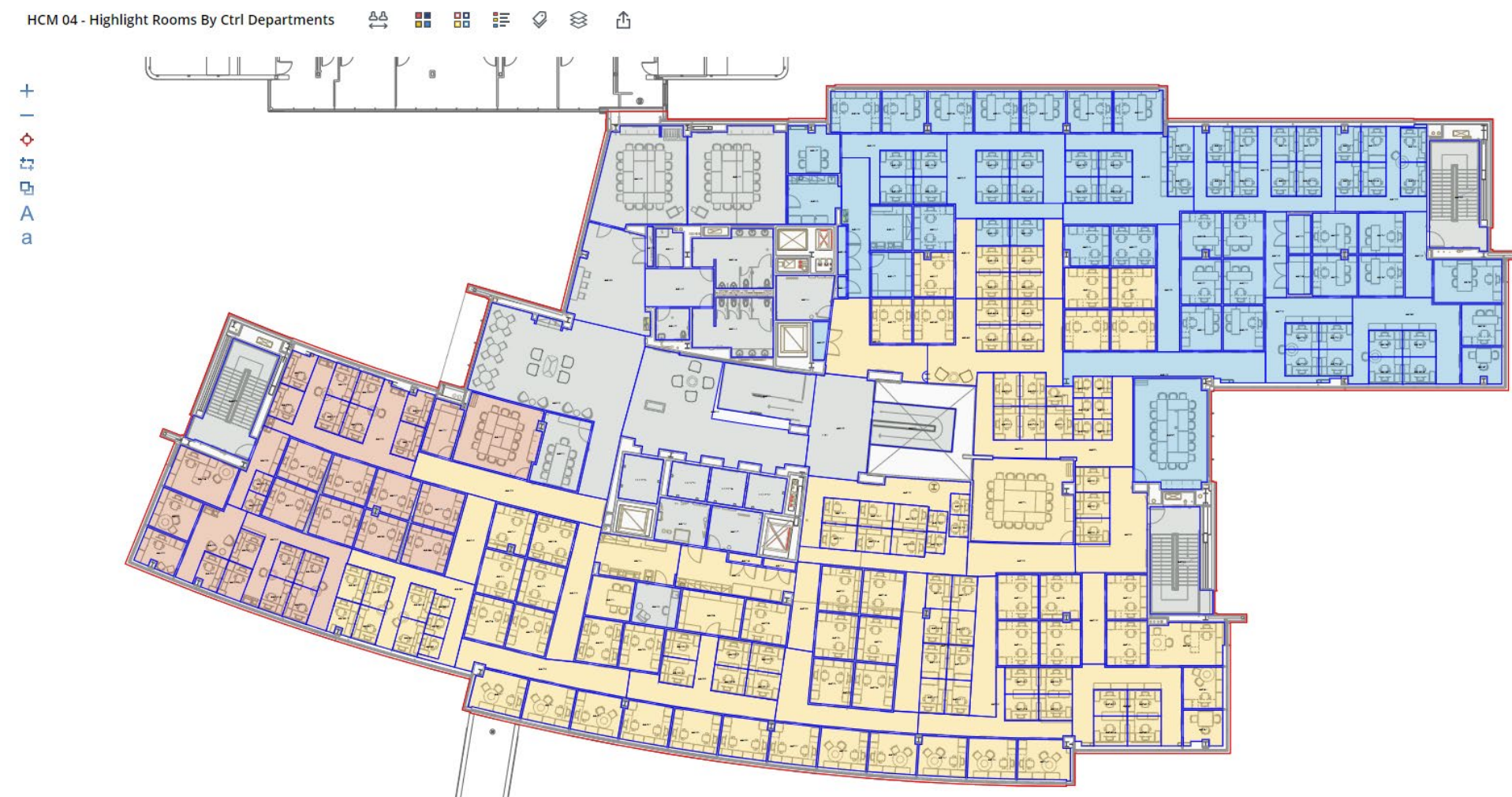
- Breakdowns by:
  - Primary Mission
  - Organization
  - Lists of Rooms to Be Surveyed





# VISUALLY IN SIMS

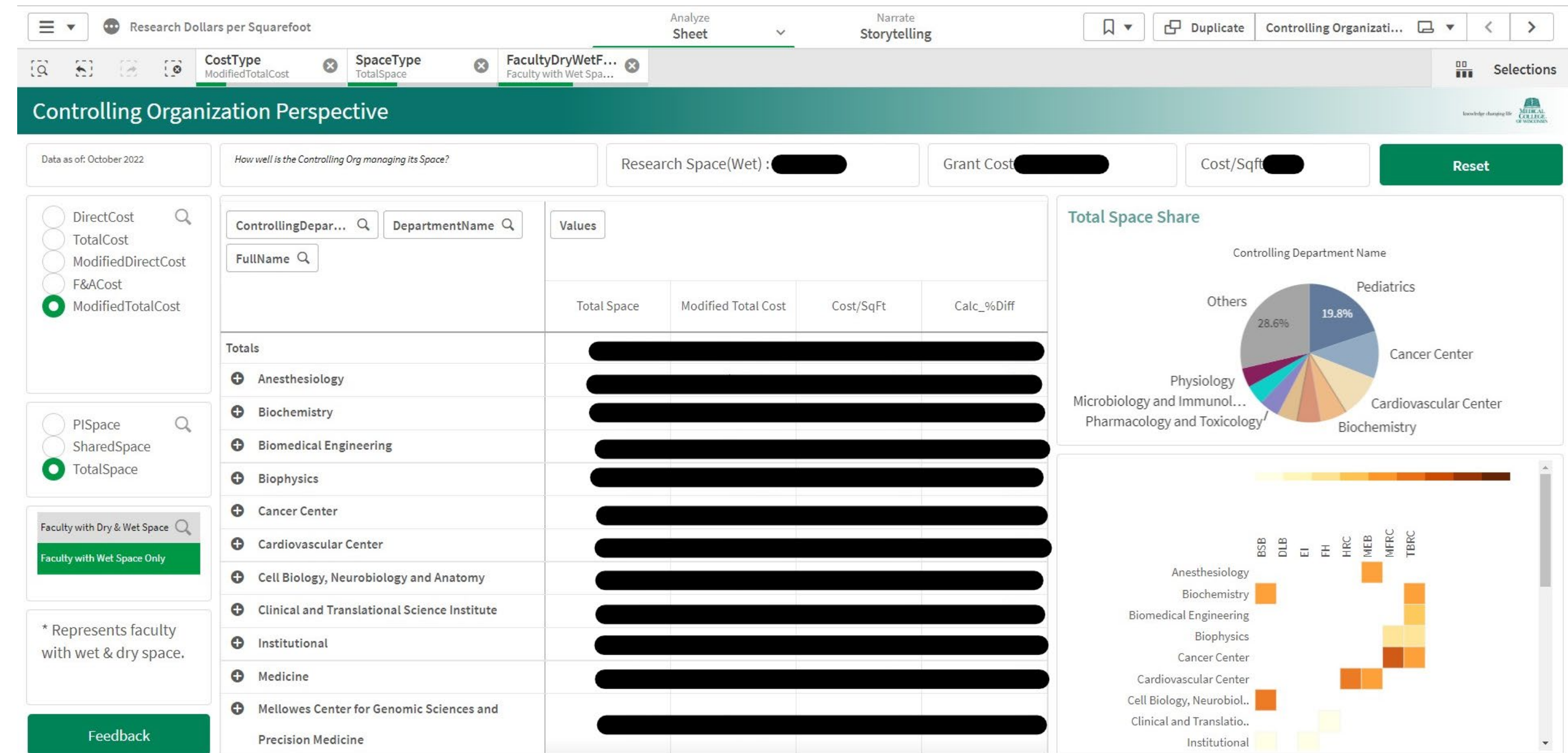
- Space Types
- Space Use
- Occupiable Space Utilization
- Research Data
- Employee Key Work Info
- Space Survey Completion
- Mass Data Input
- Furniture Plans





# RESEARCH DENSITY DASHBOARD

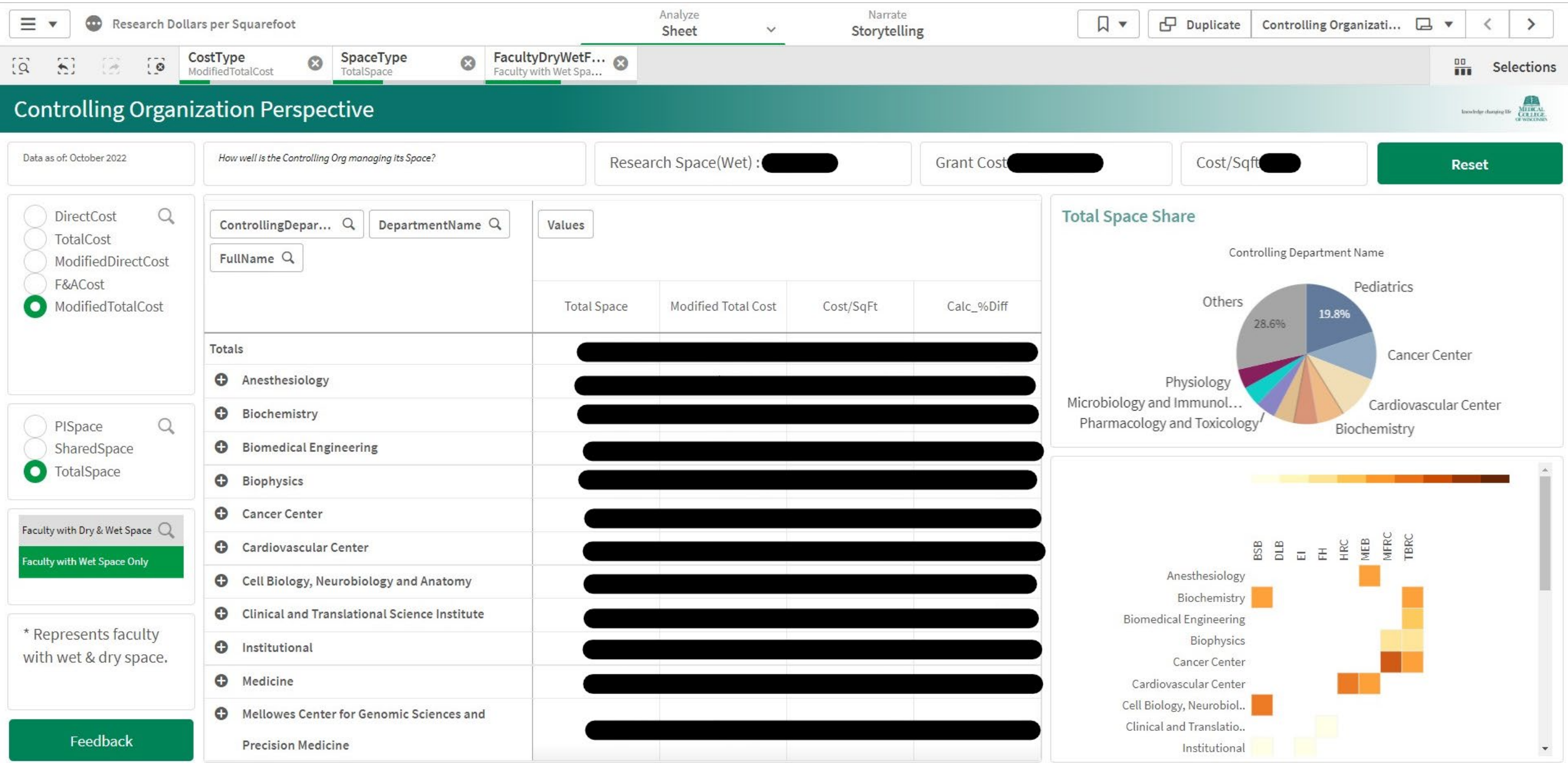
- The journey is complete.
- Research density for wet/dry information built up from PI/grant level.
- Typically used for organization or institutional reviews, but available to Chairs/Directors for PI data.





# RESEARCH DENSITY DASHBOARD

- Cost Options
- Space Options
- Research Type Options
- Build Up from PI Level to Organizations
- Space Distribution by Orgs
- Heat Map for Research Density by Org and Building



# RESEARCH DENSITY DASHBOARD

- Cost Options:
  - Direct Cost
  - Total Cost
  - Modified Direct Cost
  - F&A Cost
  - Modified Total Cost
- Space Options
  - PI Space
  - Shared Space
  - Total Space
- Research Type Options
- Dry & Wet
- Dry a Work in Progress

The screenshot shows three filter panels on the right side of the dashboard. The top panel is for 'Cost Options' and includes radio buttons for DirectCost, TotalCost, ModifiedDirectCost, F&ACost, and ModifiedTotalCost, with ModifiedTotalCost selected. The middle panel is for 'Space Options' and includes radio buttons for PISpace, SharedSpace, and TotalSpace, with TotalSpace selected. The bottom panel is for 'Research Type Options' and includes two buttons: 'Faculty with Dry & Wet Space' and 'Faculty with Wet Space Only', with the latter highlighted in green.

Cost Options:

- ☐ DirectCost
- ☐ TotalCost
- ☐ ModifiedDirectCost
- ☐ F&ACost
- ☒ ModifiedTotalCost

Space Options:

- ☐ PISpace
- ☐ SharedSpace
- ☒ TotalSpace

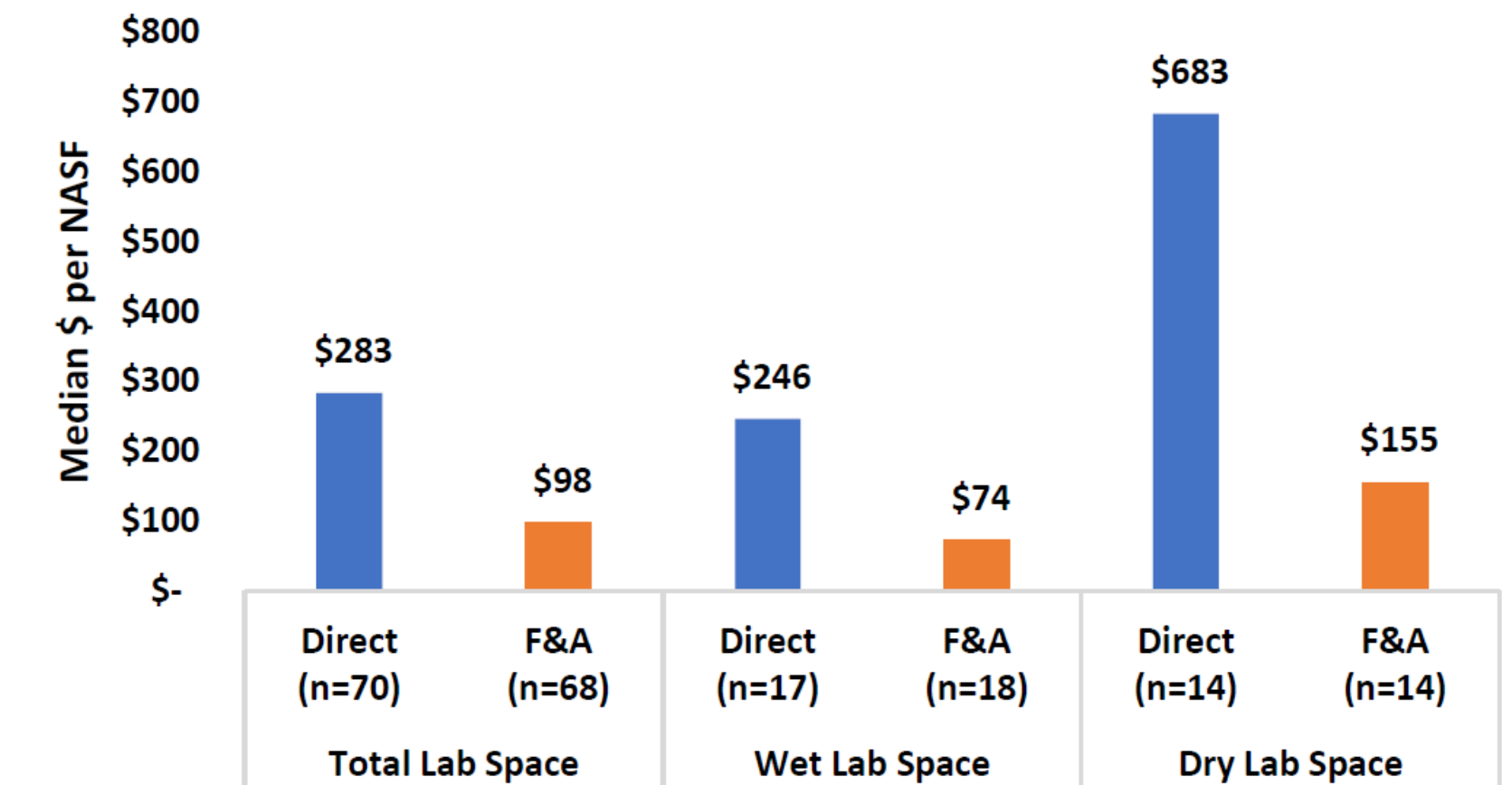
Research Type Options:

- Faculty with Dry & Wet Space
- Faculty with Wet Space Only

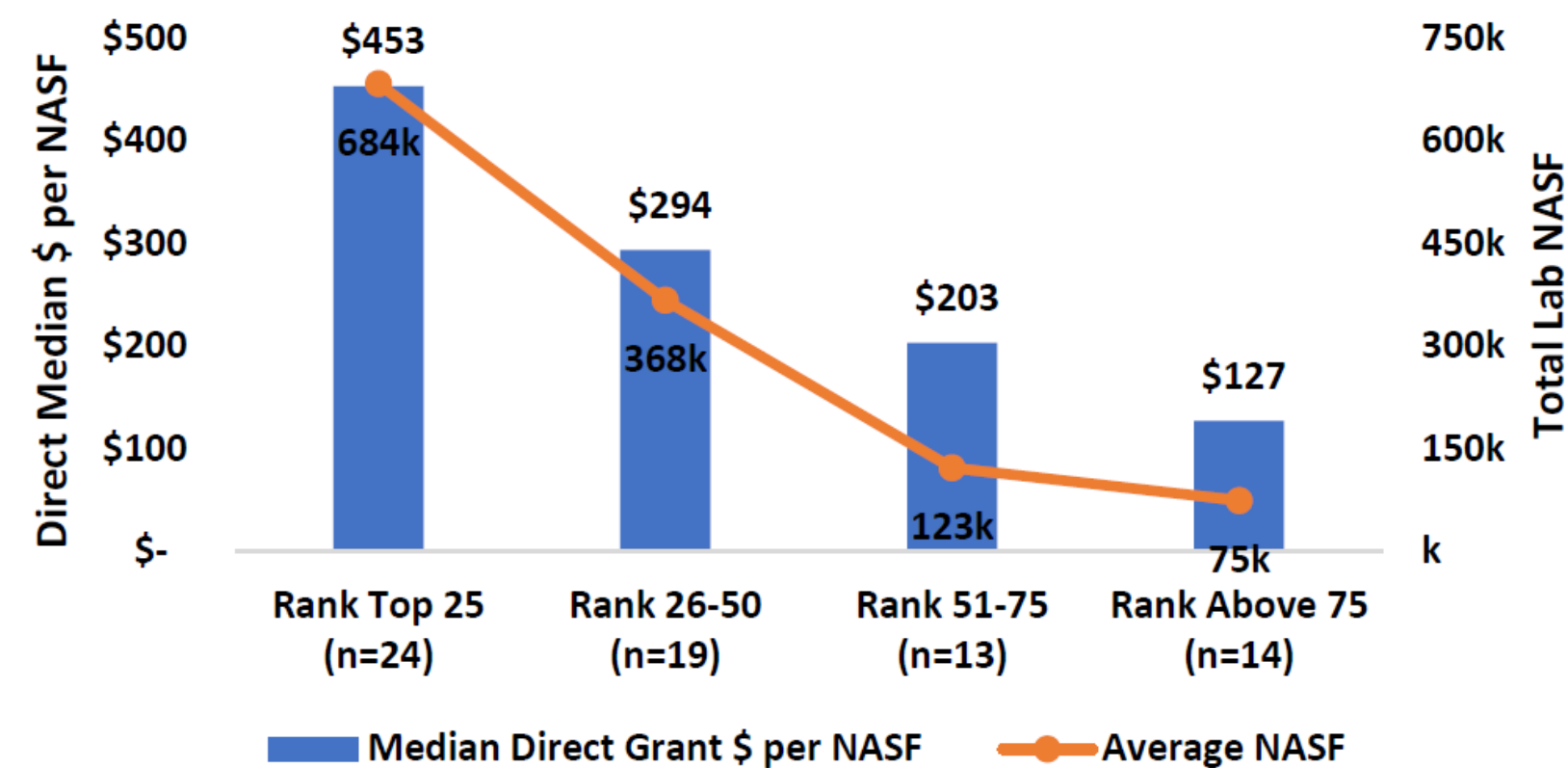
# COMPARATIVE TOOLS FROM AAMC

- AAMC Data Snapshot Comparisons for Faculty and Staff Awareness
- Easily plot our journey towards a more mature organization

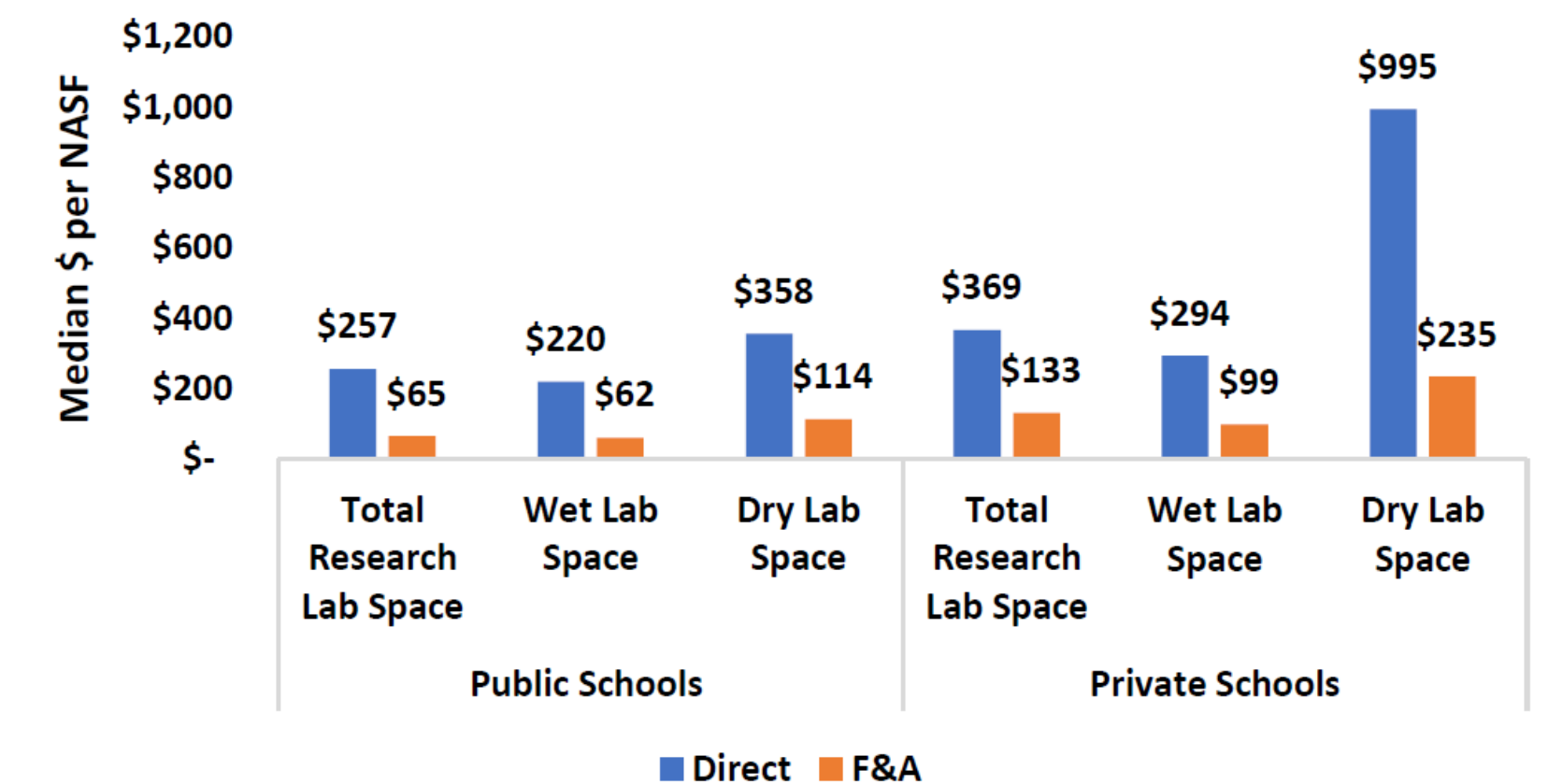
Research Lab Expenditures per NASF



Direct Expenditures per NASF by Research Ranking



Research Lab Expenditures per NASF by Ownership





Thank you!

