APPENDIX
UW-Madison Space Utilization and Demand Study

Universities of Wisconsin
Request for Qualifications (RFQ)
Project No. A-24-001_ 9950-2344

This appendix provides example data and scope details to inform RFQ responses.

Contents

APPENDIX 1 – Office Space

Item 1.1 – Data Examples

Task #1.1 Scope Overview
- Collect office space assignments for all UW-Madison employees at owned and leased facilities on the main campus and owned and leased facilities within Dane County.
  - Approximately 25,000 employees and 17,000 office spaces
  - UW-Madison will supply:
    - A list of employees including division and department information
    - Building and space records including departmental space assignments
  - The selected consultant will organize and maintain this data for the purposes of the study
  - All collected data and drawing and data updates discovered during the study will be shared back to UW-Madison for entry into their administrative systems outside of the study scope

Task #1.1 Scope Details

Data Management
- The selected consultant will be responsible for the data collection tools and methodology as well as data storage and organization throughout the study
- The full dataset will be provided to the University as a deliverable of the study
- Drawing and data updates discovered during the study shall be shared with the University as they are identified

Employee Data from UW-Madison

The University will provide a full staff list to the selected consultant. The list below is an example of the data fields that will be provided with sample values for reference.

FIELD	SAMPLE VALUES
Business Unit	UW Madison
Name	DOE, JANE
First Name	JANE
Emplid	00238920
Empl Rcd	0
Posn Nbr	02325841
Ben Rcd Nbr	0
FLSA Status	Exempt
Empl Status	Active
Deptid	A710530
Sub Department	FP&M/AVC/BOP
Empl Class Code	AS
Empl Classification	Academic Staff
Job Start Date	10/9/2022
Job End Date	
Exp End Date	
JobCode	AD007
Job Title	Administrative Supervisor
Working Title	Financial Specialist Supvr
Years in Job	0.92
FTE	1.00000
Orig Inst Svc Date	9/21/2020
ACS Date	9/21/2020
ACS Years	2.97
Continuity Code	03
Busn Email	jdoe@wisc.edu
HR Status	Active
Contract Exp End Date	
Job Sec Code	
Sesnl Status Cd	01
Sesnl Status Cd Descr	N/A
Job Fact - Eff Date	6/18/2023
Action Reason	Encumbrance Date Updates
Action	Data Change

Position of Trust	N
Posn Trust Date	10/09/2022

Facility and Space Data from UW-Madison

The University will provide a full list of owned and leased buildings and spaces on the main campus and within Dane County. The list below is an example of the data fields that will be provided with sample values for reference.

FACILITY-LEVEL DATA

FIELD	SAMPLE VALUES
Facility	0155
Facility Name	Comp Sci
Legal Name	Computer Sciences
Site	Main
Text10	1210 W Dayton St Madison WI 53706-1613
Classification	Academic
Construction Date	01/01/1965
Public	Y
Assignable Area	132776.39
Nonassignable	74425.92
Net Usable	207202.31
Gross Area Reported	244092
Funding Source	GPR
Central-Chilled	Y
Central-Steam	Y
Central-Utility	Y
Condition-Functional	C
Condition-Physical	ii
Ownership	Owned
Campus Sector	Main-SW
Acqu. Date	
Life Cycle	In Use
Active	Y
Affiliation	MSN
Entered By	OPS$INSITESYS
Entered Date	12/07/2011 13:32
Funding Srce Desc	Gen Purp Revenue
Occupancy Date	01/01/1966
Program Use	Inst
Type	Building
Updated By	DLGERBER
Updated Date	10/05/2023 16:22

Latitude	43.07
Longitude	-89.41
Height	119
Map URL	www.map.wisc.edu/?initObj=0155
Include in Statistics	Y
Memo	
PP-Zone	2rep
Region	MSN

SPACE-LEVEL DATA

FIELD	SAMPLE VALUES
Facility	1078
Facility Name	Park St N 21
Floor	06
Room	6130
Room Area	190.15
Division ID	A71 (100%)
Dept ID	A710050 (100%)
Department Name	FP&M Assoc Vice Chanc (100%)
Use - Subuse	Office - Enclosed Ofc (100%)
Occupants	TORSTVEIT, CINDY
Occupant Count	1
Use Code	310 (100%)
Use	Office (100%)
Use/Subuse Code	310 - 3100 (100%)
Major Use Code	300 (100%)
Major Use	Office (100%)
Last Inventoried	04/25/2022
Inventory Method	Spc Srvy

Facility drawings from UW-Madison

Space drawings will be provided to the selected consultant. The Space Management Office can review drawing samples as needed during the AE selection process.

Space drawings are maintained in CAD with polylines x-reffed to base plans.

Providing Drawing Updates to UW-Madison

The consultant will report drawing discrepancies to UW-Madison as they are identified. The following discrepancies must be reported:

- Wall, windows, door, and/or systems furniture changes
- Drawing and posted room number mismatch

The updates shall be delivered via a marked-up PDF.

Providing Space Data Updates to UW-Madison
The consultant will report space data discrepancies to UW-Madison as they are identified. The following discrepancies must be reported:
- Use and/or Subuse change
- Departmental assignment changes

The updates shall be delivered via Excel file with the following columns:
- Facility number
- Facility name
- Floor
- Room
- Existing Use-Subuse
- Updated Use-Subuse
- Existing Dept ID (aka UDDS)
- Existing Dept Name
- Updated Dept ID
- Updated Dept Name

Providing Office Space Assignments to UW-Madison
The consultant will need to provide staff office assignment data to UW-Madison via Excel file with the following columns:
- Facility number
- Facility name
- Floor
- Room
- Employee name
- Employee ID (aka Empl ID)

Item 1.2 – Prelim Walk List and Rating Information

Task #1.2 Scope Overview
- Visit a representative subset of UW's office portfolio to understand current typologies, general condition and quality, and to identify potential challenges and opportunities related to utilization.
  - The subset will be defined collaboratively by the UW and the consultant.
  - The subset should represent a mix of facilities, departments, and disciplines.
  - The consultant should identify condition and/or functional issues discovered during their work that may be impacting utilization but is not expected to do full condition or functional rating assessments.

Task #1.2 Scope Details
UW and the consultant will define the site visit list together.

Item 1.3 – Sample Remote Work Data

Task #1.3 Scope Overview
- Collect and analyze remote work agreements
  - UW-Madison will supply remote work documentation and data
  - Identify current amount of remote and onsite work
- Map remote work data to standard UW-Madison position descriptions

Task #1.3 Scope Details

Sample Remote Work Data
The University will provide remote work agreement data to the selected consultant. The list below is an example of the data fields that will be provided with sample values for reference.

FIELD	SAMPLE VALUES
EMPLID	238920
NAME	SMITH, JOHN
EMPL_RCD	0
UW_EMPL_CLASS_DESCR	Academic Staff
UW_JOBCODE_DESCR	Outreach Program Manager
FTE_ADJ	1
DIVISION	A34 VC for Rsrch & Grad Education
DEPARTMENT	A3403 Graduate School
UW_LOCATION_DESCR	BASCOM HALL
ACTIVE_AGREEMENT_IND	Yes
ACTIVE_FULL_REMOTE_IND	No
ACTIVE_REMOTE_PCT	0.4
REMOTE_STATUS_ALT_2	Executed

Standard UW-Madison Titles and Standard Job Descriptions
The University will provide a full list of titles and standard job descriptions. Consultants can review the public facing job library for reference: https://hr.wisc.edu/standard-job-descriptions/

Item 1.4 – Employee Location and Transportation Information

Task #1.4 Scope Overview
- Collect and analyze employee home locations (by zip code)
  - UW-Madison will supply employee zip codes
  - UW-Madison will supply biennial transportation modes survey history
- Identify and document employee distance from and possible routes to assigned office space
- Conduct employee survey targeted at select employees or employee groups based on current office

location and/or home location to:
  - o Understand existing and preferred transportation method, frequency, and duration
  - o Assess potential transportation methods for possible satellite hybrid office locations
- Analyze and identify the current and projected transportation and environmental impacts of hybrid and remote work
- Engage with UW-Madison Transportation Services to understand current operational and business models
  - o Identify high-level operational and financial model impacts of possible hybrid office locations

Task #1.4 Scope Details

Sample Employee Home Location Data
The University will provide employee home locations by zip code to the selected consultant. The list below is an example of the data fields that will be provided with sample values for reference.

FIELD	SAMPLE VALUES
EMPLID	238920
NAME	RUBBLE, BARNEY
ZIP	53714

UW-Madison Biennial Transportation Modes Survey History
Transportation Services conducts a survey every two years on employee transportation. The reports are published online: https://transportation.wisc.edu/about/#surveysreports

Transportation Servies can provide information to the selected consultant as needed.

The office space study should use these reports to inform the study. Transportation data collection and surveys for the offices space study should be specific to the study goals and avoid duplicating existing data points from the biennial surveys.

Item 1.5 – Onsite Utilization Data Collection

Task #1.5 Scope Overview
- Collect office space utilization data via onsite monitoring (electronic and/or in person) in select buildings
- Compare and analyze collected utilization data and employee office space assignments and remote work data

Task #1.5 Scope Details

Utilization Monitoring Method
The University would prefer electronic methods via de-identified wifi, Bluetooth, and/or similar signal monitoring. The initial proposed scope is below. The University is seeking a square foot unit cost for additional scope that may be added later.

The consultant will be responsible for abiding by all applicable cybersecurity and information technology regulations and requirements. UW-Madison's Division of Information Technology will review proposed solution with the selected consultant.

Monitoring of any area should be done for a minimum of three months and must include at least 2 months of a fall or spring semester.

Desired information
The University is interested in utilization data points including but not limited to:
- Person density and duration in a building, floor, and/or area throughout each 24 hour day and 7 day week
- Person flow and traffic patterns within a building and between buildings
- Identification of gathering points and low traffic areas

Utilization Monitoring Building List
UW and the consultant will define the utilization monitoring locations together.

Utilization, Office Assignment, and Remote Work Data Analysis
The University is interested in understanding the following items including but not limited to:
- How office space assignments compare to remote work data at the division, department, and employee levels
- How office space assignments and remote work data compare to onsite utilization data at the division, department, and room/area levels
- Any findings, takeaways, and/or trends related to the items above
- Identification of under and/or over utilized office space and opportunities to reassign and/or repurpose space to balance needs and utilization

APPENDIX 2 - Classrooms

Item 2.1 – Data Examples and Walk Through Information

Task #2.1
- Document existing classroom quantities, typologies, locations, and operational support models by school, college, division
  - UW-Madison will supply existing building and space records for all classrooms
- Visit a representative subset of UW's classroom portfolio to understand current typologies, general condition and quality, and to identify potential challenges and opportunities related to utilization.
  - The subset will be defined collaboratively by the UW and the consultant.
  - The subset should represent a mix of facilities, departments, and disciplines.
  - The consultant should identify condition and/or functional issues discovered during their work that may be impacting utilization but is not expected to do full condition or functional rating assessments.

Task #2.1 Scope Details

UW and the consultant will define the site visit list together.

Item 2.2 – Classroom Utilization Data and Calculation

Task #2.2
- Document current classroom utilization and trends over the past 6 fall and spring semesters using Universities of Wisconsin measures and KPIs and recommended best practices for the classrooms provided in Task #1
  - UW-Madison will provide all for-credit course section schedule and enrollment information
  - The consultant will be responsible for collecting all non-credit classroom reservation information from the managing departments and their scheduling software and/or systems
  - Utilization measures must include duration of use and number of seats used compared to capacity by hour, day, week, month, and academic term
- Utilization must be calculated according to Universities of Wisconsin standards using weekly room periods as the base unit of time
- Recommend and provide other utilization measures based on best practices beyond the Universities of Wisconsin standards
- Provide comparisons of for-credit utilization and non-credit utilization at the room level and aggregated to the building level and to the divisional level

Task #2.2 Scope Details

For-credit Course Data from UW-Madison
The University will provide full course lists for the fall/spring terms in scope to the selected consultant.
The list below is an example of the data fields that will be provided with sample values for reference.

FIELD	SAMPLE VALUES
Day	Monday
Building Name	AGR HALL
Room Number	10
Room Seating Capacity	42
Class (Section)	LSC 100 (003)
Enroll ment	15
Instructor Name	Austin, Joachim
Begin Time	08:50 AM
End Date	12/13/2023
End Time	09:40 AM
Session Code	A1
Meets On	MWF
Start Date	9/6/2023
Component Type	Lecture

Universities of Wisconsin Classroom Utilization Calculation Method
The selected consultant must calculate classroom utilization according to the Universities of Wisconsin Instructional Space Utilization Report standards found online: https://www.wisconsin.edu/capital-planning/planning/planning-resources/

This is the method used to measure Universities of Wisconsin KPIs using weekly room periods (WRPs) as the base unit of time.

A weekly room period = (total course minutes / 50 minutes) * number of weekly occurrences.

Other utilization measures:
- Contact Hours = section enrollment * WRPs
- % of seats occupied = room capacity/enrollment

Item 2.3 – Onsite Utilization Data Collection

Task #2.3 Scope Overview
- Collect classroom utilization data via onsite monitoring (electronic and/or in person) in select buildings
- Compare and analyze collected utilization data and credit and non-credit classroom reservation data and classroom physical and functional conditions

Task #2.3 Scope Details

Utilization Monitoring Method
The University would prefer electronic methods via de-identified wifi, Bluetooth, and/or similar signal monitoring. The initial proposed scope is below. The University is seeking a square foot unit cost for additional scope that may be added later.

The consultant will be responsible for abiding by all applicable cybersecurity and information technology regulations and requirements. UW-Madison's Division of Information Technology will review the proposed solution with the selected consultant.

Monitoring of any area should be done for a minimum of three months and must include at least 2 full months of a fall or spring semester.

Desired information
The University is interested in utilization data points including but not limited to:
- Person density and duration in a building, floor, and/or area throughout each 24 hour day and 7 day week
- Classroom occupancy compared to enrollment caps and actual enrollment
- Person flow and traffic patterns within a building and between buildings
- Identification of gathering points and low traffic areas

Utilization Monitoring Building List
UW and the consultant will define the utilization monitoring locations together.

APPENDIX 3 – Class Labs

Item 3.1 - Data Examples and Walk Through Information

Task #3.1
- Document existing class lab quantities, typologies, locations, and operational support models by school, college, division
  - UW-Madison will supply existing building and space records for all class lab space
- Visit a representative subset of UW's class lab portfolio to understand current typologies, general condition and quality, and to identify potential challenges and opportunities related to utilization.
  - The subset will be defined collaboratively by the UW and the consultant.
  - The subset should represent a mix of facilities, departments, and disciplines.
  - The consultant should identify condition and/or functional issues discovered during their work that may be impacting utilization but is not expected to do full condition or functional rating assessments.
- The selected consultant will organize and maintain this data for the purposes of the study
- All collected data and drawing and data updates discovered during the study will be shared back to UW-Madison for entry into their administrative systems outside of the study scope

Task #3.1 Scope Details

Walk-Through List
UW and the consultant will define the site visit list together.

Item 3.2 – Class Lab Utilization Data and Calculation

Task #3.2
- Document current class lab utilization and trends over the past 6 fall and spring semesters using Universities of Wisconsin measures and KPIs and recommended best practices for the class labs provided in Task #1
  - UW-Madison will provide all for-credit course section schedule and enrollment information
  - The consultant will be responsible for collecting all non-credit class lab reservation information from the managing departments and their scheduling software and/or systems
  - Utilization measures must include duration of use and number of seats used compared to capacity by hour, day, week, month, and academic term
- Utilization must be calculated according to Universities of Wisconsin standards using weekly room periods as the base unit of time
- Recommend and provide other utilization measures based on best practices beyond the Universities of Wisconsin standards
- Provide comparisons of for-credit utilization and non-credit utilization at the room level and aggregated to the building level and to the divisional level

Task #3.2 Scope Details

For-credit Course Data from UW-Madison

The University will provide full course lists for the fall/spring terms in scope to the selected consultant. The list below is an example of the data fields that will be provided with sample values for reference.

FIELD	SAMPLE VALUES
Day	Monday
Building Name	AGR HALL
Room Number	10
Room Seating Capacity	42
Class (Section)	LSC 100 (003)
Enroll ment	15
Instructor Name	Austin, Joachim
Begin Time	08:50 AM
End Date	12/13/2023
End Time	09:40 AM
Session Code	A1
Meets On	MWF
Start Date	9/6/2023
Component Type	Lab

Universities of Wisconsin Class Lab Utilization Calculation Method

The selected consultant must calculate class lab utilization according to the Universities of Wisconsin Instructional Space Utilization Report standards found online: https://www.wisconsin.edu/capital-planning/planning/planning-resources/

This is the method used to measure Universities of Wisconsin KPIs using weekly room periods (WRPs) as the base unit of time.

A weekly room period = (total course minutes / 50 minutes) * number of weekly occurrences.

Other utilization measures:
- Contact Hours = section enrollment * WRPs
- % of seats occupied = room capacity/enrollment

Item 3.3 – Onsite Utilization Data Collection

Task #3.3 Scope Overview
- Collect class lab utilization data via onsite monitoring (electronic and/or in person) in select buildings
- Compare and analyze collected utilization data and credit and non-credit class lab reservation

data and class lab physical and functional conditions

Task #3.3 Scope Details

Utilization Monitoring Method
The University would prefer electronic methods via de-identified wifi, Bluetooth, and/or similar signal monitoring. The initial proposed scope is below. The University is seeking a square foot unit cost for additional scope that may be added later.

The consultant will be responsible for abiding by all applicable cybersecurity and information technology regulations and requirements. UW-Madison's Division of Information Technology will review proposed solution with the selected consultant.

Monitoring of any area should be done for a minimum of three months and must include at least 2 full months of a fall or spring semester.

Desired information
The University is interested in utilization data points including but not limited to:
- Person density and duration in a building, floor, and/or area throughout each 24 hour day and 7 day week
- Class lab occupancy compared to enrollment caps and actual enrollment
- Person flow and traffic patterns within a building and between buildings
- Identification of gathering points and low traffic areas

Utilization Monitoring Building List
UW and the consultant will define the utilization monitoring locations together.

APPENDIX 4 – Research Labs

Item 4.1 - Data Examples

Task #4.1 Scope Overview

- Collect research lab space assignments for all UW-Madison principal investigators and research lab staff at owned and leased facilities on the main campus and owned and leased facilities within Dane County.
  - Approximately 1,900 PIs and 8,100 lab spaces totaling +/- 2.2 million square feet.
  - UW-Madison will supply:
    - A list of employees including division and department information and principal investigator status
    - Building and space records including departmental space assignments
  - The selected consultant will organize and maintain this data for the purposes of the study
  - All collected data and drawing and data updates discovered during the study will be shared back to UW-Madison for entry into their administrative systems outside of the study scope

Task #4.1 Scope Details

Data Management

- The selected consultant will be responsible for the data collection tools and methodology as well as data storage and organization throughout the study
- The full dataset will be provided to the University as a deliverable of the study
- Drawing and data updates discovered during the study shall be shared with the University as they are identified

Employee Data from UW-Madison

The University will provide a full staff list to the selected consultant. The list below is an example of the data fields that will be provided with sample values for reference.

FIELD	SAMPLE VALUES
Business Unit	UW Madison
Name	DOE, JANE
First Name	JANE
Emplid	00238920
Empl Rcd	0
Posn Nbr	02325841
Ben Rcd Nbr	0
FLSA Status	Exempt
Empl Status	Active
Deptid	A710530
Sub Department	FP&M/AVC/BOP
Empl Class Code	AS
Empl Classification	Academic Staff

Job Start Date	10/9/2022
Job End Date	
Exp End Date	
JobCode	AD007
Job Title	Administrative Supervisor
Working Title	Financial Specialist Supvr
Years in Job	0.92
FTE	1.00000
Orig Inst Svc Date	9/21/2020
ACS Date	9/21/2020
ACS Years	2.97
Continuity Code	03
Busn Email	jdoe@wisc.edu
HR Status	Active
Contract Exp End Date	
Job Sec Code	
Sesnl Status Cd	01
Sesnl Status Cd Descr	N/A
Job Fact - Eff Date	6/18/2023
Action Reason	Encumbrance Date Updates
Action	Data Change
Position of Trust	N
Posn Trust Date	10/09/2022

Principal Investigator Data from UW-Madison

The University will provide a full principal investigator list to the selected consultant. The list below is an example of the data fields that will be provided with sample values for reference.

PI Division	PI Department	PI Name - EmplID
Business (12)	123200 - R&I*RISK & INSURANCE	MUKHERJEE,ANITA - 1937
		ROSENBERG,MARJORIE A - 8238
		SHI,PENG - 3685
		SYDNOR,JUSTIN R - 0581
	123800 - M&HR*MANAGEMENT & HUMAN RES	ECKHARDT,JONATHAN T - 1726
		GANCO,MARTIN - 1133
	124000 - OIM*OPERATIONS & INFO MGMT	SIEMSEN,ENNO - 1136
	125100 - SBDC*SML BUS DEV CNTR PROG OFC	SOMES-BOOHER,MICHELLE L - 0184
CALS (07)	070800 - INTL AG PRGS-ADM*INTL AG	GUNASEKARAN,SUNDARAM - 1813
		KUSHNER,JENNIFER LARA - 6114

	071200 - COOPTVS, U CTR*COOP,U CT	BERNER,COURTNEY - 2061
	071300 - DAIRY RESEARCH,C*DAIRY RESH	BOYKE,DEBRA A - 1110
	071500 - C I A S*C I A S	GRACE,JACOB J - 2001
		HENDRICKSON,JOHN A - 0725
		HERALD,VANESSA JEAN - 9166
		MILLER,MICHELLE M - 9061

Facility and Space Data from UW-Madison

The University will provide a full list of owned and leased buildings and spaces on the main campus and within Dane County. The list below is an example of the data fields that will be provided with sample values for reference.

FACILITY-LEVEL DATA

FIELD	SAMPLE VALUES
Facility	0155
Facility Name	Comp Sci
Legal Name	Computer Sciences
Site	Main
Text10	1210 W Dayton St Madison WI 53706-1613
Classification	Academic
Construction Date	01/01/1965
Public	Y
Assignable Area	132776.39
Nonassignable	74425.92
Net Usable	207202.31
Gross Area Reported	244092
Funding Source	GPR
Central-Chilled	Y
Central-Steam	Y
Central-Utility	Y
Condition-Functional	C
Condition-Physical	ii
Ownership	Owned
Campus Sector	Main-SW
Acqu. Date	
Life Cycle	In Use
Active	Y
Affiliation	MSN
Entered By	OPS$INSITESYS
Entered Date	12/07/2011 13:32

Funding Srce Desc	Gen Purp Revenue
Occupancy Date	01/01/1966
Program Use	Inst
Type	Building
Updated By	DLGERBER
Updated Date	10/05/2023 16:22
Latitude	43.07
Longitude	-89.41
Height	119
Map URL	www.map.wisc.edu/?initObj=0155
Include in Statistics	Y
Memo	
PP-Zone	2
Region	MSN

SPACE-LEVEL DATA

FIELD	SAMPLE VALUES
Facility	1078
Facility Name	Park St N 21
Floor	06
Room	6130
Room Area	190.15
Division ID	A71 (100%)
Dept ID	A710050 (100%)
Department Name	FP&M Assoc Vice Chanc (100%)
Use - Subuse	Office - Enclosed Ofc (100%)
Occupants	TORSTVEIT, CINDY
Occupant Count	1
Use Code	310 (100%)
Use	Office (100%)
Use/Subuse Code	310 - 3100 (100%)
Major Use Code	300 (100%)
Major Use	Office (100%)
Last Inventoried	04/25/2022
Inventory Method	Spc Srvy

Facility drawings from UW-Madison

Space drawings will be provided to the selected consultant. The Space Management Office can review drawing samples as needed during the AE selection process.

Space drawings are maintained in CAD with polylines x-reffed to base plans.

Providing Drawing Updates to UW-Madison

The consultant will report drawing discrepancies to UW-Madison as they are identified. The following discrepancies must be reported:
- Wall, windows, door, and/or systems furniture changes
- Drawing and posted room number mismatch

The updates shall be delivered via a marked up PDF.

Providing Space Data Updates to UW-Madison

The consultant will report space data discrepancies to UW-Madison as they are identified. The following discrepancies must be reported:
- Use and/or Subuse change
- Departmental assignment changes

The updates shall be delivered via Excel file with the following columns:
- Facility number
- Facility name
- Floor
- Room
- Existing Use-Subuse
- Updated Use-Subuse
- Existing Dept ID (aka UDDS)
- Existing Dept Name
- Updated Dept ID
- Updated Dept Name

Providing Office Space Assignments to UW-Madison

The consultant will need to provide staff office assignment data to UW-Madison via Excel file with the following columns:
- Facility number
- Facility name
- Floor
- Room
- Employee name
- Employee ID (aka Empl ID)

Item 4.2 – Prelim Walk List and Rating Information

Task #4.2
- Document existing research lab quantities, typologies, locations, and operational support models by school, college, division and by research discipline
  - UW-Madison will supply existing building and space records for all research

space
- Visit a representative subset of UW's research lab portfolio to understand current typologies, general condition and quality, and to identify potential challenges and opportunities related to utilization.
  - The subset will be defined collaboratively by the UW and the consultant.
  - The subset should represent a mix of facilities, departments, and disciplines.
  - The consultant should identify condition and/or functional issues discovered during their work that may be impacting utilization but is not expected to do full condition or functional rating assessments.

Task #4.2 Scope Details

Walk-Through List
UW and the consultant will define the site visit list together.

Item 4.3 – Research Financial Data Examples

Task #4.3 Scope Overview
- Collect and review research financial data for the past 5 years
  - UW-Madison will provide financial data
- Analyze the research financial data and research space assignments and utilization

Task #4.3 Scope Details

Research Financial Data from UW-Madison
The University will provide research financial data to the selected consultant. The lists below are examples of the data fields that will be provided with sample values for reference.

Net Research Expenditures by Fund

Fund	2019	2020	2021	2022	2023	5 year total	5 year avg
101	$ 38,433	$ 3,399	$ 49,982	$ 76,368	$ 280,596	$ 448,777	$ 89,755
131	$ -	$ -	$ 7,856	$ 16,623	$ 37,767	$ 62,246	$ 12,449
133	$ 352,804	$ 306,301	$ 44,678	$ 97,190	$ 154,987	$ 955,961	$ 191,192
135	$ 241,196	$ 195,981	$ 371,770	$ 315,959	$ 364,763	$ 1,489,669	$ 297,934
136	$ 19,422	$ 9,769	$ 16,575	$ 2,749	$ 21,759	$ 70,273	$ 14,055
144	$ 899,918	$ 994,735	$ 1,343,883	$ 1,174,412	$ 1,444,318	$ 5,857,265	$ 1,171,453
145	$ 3,718	$ 3,738	$ 3,238	$ 41	$ -	$ 10,734	$ 2,147
150	$ 22,000	$ 27,000	$ 22,000	$ 71,630	$ 47,649	$ 190,279	$ 38,056
161	$ 6,163	$ 9,482	$ 445	$ 7,000	$ -	$ 23,090	$ 4,618
233	$ 216,447	$ 458,078	$ 145,244	$ 298,481	$ 640,993	$ 1,759,243	$ 351,849
Total	**$ 1,800,101**	**$ 2,008,481**	**$ 2,005,671**	**$ 2,060,453**	**$ 2,992,831**	**$ 10,867,537**	**$ 2,173,507**

Research Expenditures by PI

PI	2019	2020	2021	2022	2023	5 year total	5 year avg
PI-1	$ 3,107	$ 34,378	$ 54,422	$ 22,560	$ 13,859	$ 128,326	$ 25,665
PI-2	$ 56,195	$ 62,914	$ 70,273	$ 68,729	$ 88,657	$ 346,767	$ 69,353
PI-3	$ 45,386		$ 45,733	$ 27,156	$ 86,537	$ 204,812	$ 51,203
PI-4	$ 225,887	$ 132,431	$ 354,551	$ 368,687	$ 608,629	$ 1,690,185	$ 338,037
PI-5	$ 20,591	$ 26,865	$ 23,465	$ 4,013	$ 5,191	$ 80,125	$ 16,025
PI-6		$ 1,040				$ 1,040	$ 1,040
PI-7	$ 67,892	$ 90,223	$ 73,070	$ 40,689	$ 77,892	$ 349,765	$ 69,953
PI-8			$ 16,865	$ 54,619	$ 29,619	$ 101,103	$ 33,701
PI-9			$ 5,693	$ 2,031		$ 7,723	$ 3,862
PI-10					$ 143,863	$ 143,863	$ 143,863
PI-11	$ 24,046	$ 28,566	$ 43,036	$ 10,686	$ 19,431	$ 125,765	$ 25,153
PI-12	$ 16,326	$ 53,618	$ 10,919	$ 61,153	$ 15,228	$ 157,245	$ 31,449
PI-13	$ 223,903	$ 347,259	$ 329,743	$ 205,531	$ 81,873	$ 1,188,309	$ 237,662
PI-14				$ 55,917	$ 52,270	$ 108,188	$ 54,094
PI-15	$ 43,874	$ 16,687	$ 4,565	$ 1,852	$ 1,354	$ 68,332	$ 13,666
PI-16	$ 9,548	$ 14,587	$ (1,116)	$ 13,506	$ 11,871	$ 48,397	$ 9,679
PI-17	$ 40,893	$ 11,495	$ 10,693	$ 2,256	$ 11,734	$ 77,072	$ 15,414
PI-18	$ 25,358	$ 21,379	$ 2,051	$ 1,974	$ 917	$ 51,679	$ 10,336
PI-19		$ 37,233	$ 123,952	$ 153,043	$ 87,502	$ 401,729	$ 100,432
PI-20	$ 2,497	$ 490	$ 75	$ 495	$ 525	$ 4,082	$ 816
PI-21	$ 5,376	$ 16,561	$ 18,498	$ 20,215	$ 9,111	$ 69,761	$ 13,952
PI-22	$ 37,725	$ 31,141		$ 7,673	$ 11,950	$ 88,488	$ 22,122
PI-23	$ (164)					$ (164)	$ (164)
PI-24	$ 200,356	$ 159,153	$ 49,104	$ 38,345	$ 1,269	$ 448,227	$ 89,645
PI-25		$ 3,162	$ 5,614			$ 8,775	$ 4,388
PI-26	$ 2,268	$ 2,326	$ 2,700	$ 4,000	$ 2,000	$ 13,294	$ 2,659
PI-27		$ 23,714	$ 29,046	$ 31,846	$ 33,562	$ 118,168	$ 29,542
PI-28	$ 78,885	$ 78,736	$ 121,638	$ 24,843	$ 48,840	$ 352,941	$ 70,588
PI-29					$ 21,987	$ 21,987	$ 21,987
PI-30	$ 39,892	$ 37,059	$ 9,597	$ 69,942	$ 33,958	$ 190,447	$ 38,089
PI-31					$ 2,295	$ 2,295	$ 2,295
PI-32			$ 200			$ 200	$ 200
PI-33				$ 1,000	$ 1,345	$ 2,345	$ 1,173
PI-34	$ 261,735	$ 252,352	$ 496,428	$ 499,233	$ 544,363	$ 2,054,112	$ 410,822
PI-35	$ 139,844	$ 129,422	$ (1,249)			$ 268,017	$ 89,339
PI-36				$ 5,893	$ 500	$ 6,393	$ 3,196
PI-37	$ 96,654	$ 82,353		$ 27,946	$ 93,977	$ 300,929	$ 75,232
PI-38				$ 20,416	$ 99,589	$ 120,005	$ 60,002
PI-39					$ 777	$ 777	$ 777
PI-40	$ 1,921	$ 193	$ 3,030	$ 6,068		$ 11,212	$ 2,803
Total	$ 1,669,995	$ 1,692,173	$ 1,900,143	$ 1,857,931	$ 2,242,473	$ 9,362,715	$ 1,872,543

Research Award Dollars

Fund	2019	2020	2021	2022	2023	5 year total	5 year average
133	$ 5,289	$ 219,264	$ 2,500	$ 200,455	$ -	$ 427,508	$ 85,502
144	$ 258,944	$ 2,070,756	$ 2,935,600	$ 892,775	$ 580,470	$ 6,738,545	$ 1,347,709
Total	$ 264,233	$ 2,290,020	$ 2,938,100	$ 1,093,230	$ 580,470	$ 7,166,053	$ 1,433,211

Research Award Dollars by PI

PI	2019	2020	2021	2022	2023	5 year Total	5 year avg
PI-1		$ 975,855	$1,929,374	$ 355,455	$ 388,138	$ 520,355	$ 912,206
PI-2	$ (658)	$ 2,000	$ 2,500			$ 1,589,601	$ 1,281
PI-3	$ 74,090	$ 74,200				$ 302,936	$ 74,145
PI-4			$ 34,613	$ 39,490	$ 37,260	$ 175,024	$ 37,121
PI-5	$ 24,872	$ 12,264				$ 1,167,195	$ 18,568
PI-6		$ 31,480	$ 185,290	$ 16,176	$ 75,072	$ 707,643	$ 77,004
PI-7	$ 1,500	$ 38,019				$ 594,287	$ 19,760
PI-8	$ 184,854	$ 315,145				$ 6,000	$ 250,000
PI-9	$ 40,000					$ 189,887	$ 40,000
PI-10	$ (60,425)	$ 841,057	$ 786,323	$ 682,109	$ 80,000	$ 685,841	$ 465,813
Total	**$ 264,233**	**$2,290,020**	**$2,938,100**	**$1,093,230**	**$ 580,470**	**$ 5,938,769**	**$1,433,211**

Proposal Dollars by PI

PI	2019	2020	2021	2022	2023	5 year total	5 year avg
PI-1				$ 427,625	$ 427,625	$ 855,250	$ 427,625
PI-2	$1,070,716	$ 3,171,869	$ 374,040	$ 388,138	$ 4,659,192	$ 9,663,955	$ 1,932,791
PI-3	$ 941,781	$ 715,274	$ 2,820,082	$ 570,515	$ 199,807	$ 5,247,459	$ 1,049,492
PI-4		$ 256,771				$ 256,771	$ 256,771
PI-5		$ 785,778	$ 599,957			$ 1,385,735	$ 692,868
PI-6		$ 49,510		$ 1,246,735	$ 200,998	$ 1,497,243	$ 499,081
PI-7	$ 271,060		$ 55,000			$ 326,060	$ 163,030
PI-8				$ 779,008		$ 779,008	$ 779,008
PI-9		$ 464,546		$ 58,000	$ 10,000	$ 532,546	$ 177,515
PI-10			$ 414,305			$ 414,305	$ 414,305
PI-11	$ 5,000	$ 251,222				$ 256,222	$ 128,111
PI-12		$ 463,594	$ 90,010	$ 1,910,450	$ 4,888,718	$ 7,352,772	$ 1,838,193
PI-13	$3,804,286	$ 3,849,696	$ 150,000	$ 3,074,549	$ 3,887,490	$ 14,766,021	$ 2,953,204
Total	**$6,092,843**	**$10,008,260**	**$ 4,503,394**	**$ 8,455,020**	**$ 14,273,830**	**$ 43,333,347**	**$ 8,666,669**

Item 4.4 – Onsite Utilization Data Collection

Task #4.4 Scope Overview
- Collect research space utilization data via onsite monitoring (electronic and/or in person) in select buildings
- Compare and analyze collected utilization data and PI and research staff space assignments and research financial and space analysis

Task #4.4 Scope Details

Utilization Monitoring Method
The University would prefer electronic methods via de-identified wifi, Bluetooth, and/or similar signal monitoring. The initial proposed scope is below. The University is seeking a square foot unit cost for additional scope that may be added later.

The consultant will be responsible for abiding by all applicable cybersecurity and information technology regulations and requirements. UW-Madison's Division of Information Technology will review proposed solution with the selected consultant.

Monitoring of any area should be done for a minimum of three months and must include at least 2 months of a fall or spring semester.

Desired information
The University is interested in utilization data points including but not limited to:
- Person density and duration in a building, floor, and/or area throughout each 24 hour day and 7 day week
- Person flow and traffic patterns within a building and between buildings
- Identification of gathering points and low traffic areas

Utilization Monitoring Building List
UW and the consultant will define the utilization monitoring locations together.

APPENDIX 5 – Occupancy Technology Requirements and Qualifications

Existing Wireless Network

UW-Madison operates an on-premises Aruba wireless network with approximately 19,000 access points across two discrete configuration management environments. Typical concurrent endpoint connections are approximately 80,000-90,000 during peak usage.

Assumptions

1. The UW expects occupancy monitoring technology to use the wireless network system, through existing wireless access points (WAPs) and/or via standalone sensors that connect to the existing wireless network.

2. The UW will provide access to the wireless network to the extent needed to meet the functional requirements of the occupancy data collection and within the limits of UW security requirements and network infrastructure capacity.

3. The consultant will provide standalone sensors, if needed.

    3.1. The consultant will be responsible for installation, testing, and commissioning any new or relocated sensors unless otherwise agreed upon by UW.

4. The consultant will provide all data processing and analysis software and tools including but not limited to tabular data reports, dashboards, charts, graphs, and/or narrative summaries of the data from the occupancy data collection.

5. UW will supply drawings of floors that are in scope for occupancy monitoring.

6. UW will supply WAP location data already on record.

    6.1. The consultant is responsible for field verifying WAP locations as needed.

7. UW network services staff will facilitate the connection of the consultant's solution to the existing campus network infrastructure.

    7.1. They will not monitor, troubleshoot, configure, or maintain the consultant's occupancy technology software, tools, or reports.

8. UW reserves the right to disconnect the occupancy monitoring technology if it determines that it is negatively impacting network performance or functionality.

9. UW is continuously evaluating network solutions and configurations and may modify and/or replace the existing wireless network infrastructure, configuration, and/or architecture at any time.

Technical Requirements

1. The solution must be compatible with an on-premise Aruba wireless network with two or more

discreet management environments.

2. Any personally identifiable information must be removed from the occupancy data reports.

   2.1. Identifiable information may be used in data processing to assist with occupant deduplication only and cannot be stored for any other purpose and shall not be included in any occupancy data reported back to UW.

Occupancy Monitoring Consultant Qualifications

A well-qualified consultant will:

- Understand and comply with all Assumptions above.

- Meet all Technical Requirements above.

- Have a successful history of large deployments in higher education.

- Minimize or eliminate any reconfiguration and/or re-architecting of the existing wireless network.

- Prioritize solutions that passively consume data that is already being collected by sensors or existing WAPs and do not overconsume system capacity.

- Have the staffing capacity and technical resources to scale their solution up to potentially dozens of buildings and millions of square feet.

- Identify and maintain a robust installation, configuration, and ongoing operations team, including onsite work as needed, over the study's entire duration.

- Provide solutions that minimize or eliminate the rework needed to adapt to wireless network changes over time including but not limited to migration from an on-premises wireless network to cloud-based solutions.