



# UNIVERSITY OF WYOMING

**CUSTODIAL MANAGEMENT ASSESSMENT REPORT**

**FOR THE BOARD OF TRUSTEES**

**BY**

**HUNTER CONSULTING & TRAINING**

**NOVEMBER 15, 2017**



# DISCUSSION TOPICS

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 **BACKGROUND**

## BACKGROUND

### CUSTODIAL SERVICES MANAGEMENT ASSESSMENT

- **Custodial Services Scope and Approach:**
  - University of Wyoming Operations Department (UW Operations) provides custodial services on a scheduled basis to 72 administrative and academic buildings totaling approximately 4.1 million Gross Square Feet (GSF) and approximately 2.9 million Cleanable Square Feet (CSF).
  - The services are delivered by the Custodial Services (CS) work unit.
  - Custodial services for housing and athletics are provided by others work units.
- **Hunter Consulting & Training conducted a custodial services management assessment in April and May 2017 including:**
  - Staffing and budget requirements based on **APPA<sup>1</sup> Guidelines**;
  - Organizational structure and service delivery approach;
  - Current level of cleanliness;
  - Performance indicators comparative analysis based on custodial performance indicators from 242 other institutions;
  - Customer satisfaction and approval rating;
  - Recommendations for improving service to an APPA service level reasonably acceptable and affordable to The University of Wyoming.

<sup>1</sup>APPA, the professional association for educational facilities officers ([www.appa.org](http://www.appa.org)) published guidelines that define cleanliness level 1 through 5 with 1 being the best and 5 being the worst.



## BACKGROUND

### THE CRITICAL BAKER'S DOZEN QUESTIONS FOR MANAGEMENT

1. How many **cleanable square feet (CSF)** of space are required to be cleaned?
2. How many **custodians**, and how much **money** are needed to **clean all buildings**?
3. How many **custodians**, and how much **money** are needed to **clean future buildings**?
4. When is it best to perform **routine work**, and to **schedule project work**?
5. What **cleaning level** can be **expected** with **current FTEs and budget**?
6. What **cleaning level** is **actually accomplished** with **current FTEs and budget**?
7. Are the days of the **week** **equally work loaded**?
8. Are the **custodians** **equally work loaded**?
9. What is the average **CSF and GSF per custodian**?
10. Are **industry-accepted standards** and **Best Practices** used in current operations?
11. How does the organization/operations **compare** to other **similar institutions**?
12. What can be done to **enhance service** and **cost effectiveness** of cleaning operations?
13. What is the **make-up** and **profile** of the **custodial workforce**?

**“We don’t know” is not an acceptable answer!**





## ASSESSMENT TECHNICAL FOUNDATION

## ASSESSMENT TECHNICAL FOUNDATION GUIDELINES, CONCEPTS, AND PROTOCOLS

- **Cleaning industry and higher education facilities management community accepted guidelines and protocols:**
  - APPA<sup>1</sup>, the association for higher education facilities professionals, published *Custodial Operational Guidelines for Educational Facilities (APPA Guidelines)*;
  - APPA Guidelines provides custodial services organizations with **standard concepts** and **protocols** for **staffing** and **managing** the cleaning function;
  - APPA Guidelines is in its **3rd edition (updated in 2011)**, and has been in the **public domain for many years**;
  - APPA Guidelines is accepted by the higher education and commercial cleaning industry as a **de facto standard for custodial operations and staffing**;
  - ISSA<sup>2</sup> *540 Cleaning Times* is the **industry accepted standard for estimating FTE and budget requirement** for cleaning operations;
- **This assessment relies heavily on the concepts and protocols contained in the *APPA Guidelines* and *ISSA 540 Cleaning Times* – click on the icons below to learn more.**

<sup>1</sup>*Custodial Operational Guidelines for Educational Facilities (APPA Guidelines)* – this is a publication of custodial staffing and management concepts and protocol that have been in the public domain for many years and has been accepted by the higher education and commercial cleaning community as a de facto standard for managing cleaning operations (see [www.APPA.org](http://www.APPA.org)).

<sup>2</sup>International trade association for the cleaning industry worldwide.



## ASSESSMENT TECHNICAL FOUNDATION APPA GUIDELINES KEY COMPONENTS

- Define cleanliness APPA Level-1 through APPA Level-5 (Level-1 is best and Level-5 is worst);
- Provide lists of cleaning tasks and the performance frequency for different categories of spaces to achieve the five cleanliness levels;
- Provide normalized “time to perform” guidelines for all tasks from *ISSA 540 Cleaning Times*<sup>1</sup>, adopted to higher education cleaning environment normalized to the average custodial organization found in educational institutions;
- Provide a protocol for determining the FTEs and budget needed to achieve the desired cleanliness level by average organizations;
- Provide an audit and inspection protocol for quality assurance, and for determining what cleanliness level is actually being achieved.

<sup>1</sup>ISSA 540 Cleaning Times – published by ISSA, The Worldwide Cleaning Industry Association, and is an industry accepted reference for estimating how much time it takes to perform cleaning tasks ([www.ISSA.com](http://www.ISSA.com)).





# ASSESSMENT TECHNICAL FOUNDATION

## APPA CUSTODIAL SERVICE LEVEL

**Level 1 - Orderly Spotlessness:** Level 1 establishes cleaning at the highest level. It was developed for the corporate suite, the donated building, or the historical focal point. This is show-quality cleaning for that prime facility.

- Floors and base moldings shine and/or are bright and clean; colors are fresh. There is no buildup in corners or along walls.
- All vertical and horizontal surfaces have a freshly cleaned or polished appearance, and have no accumulation of dust, dirt, marks, streaks, smudges, or fingerprints.
- Washroom and shower tile and fixtures gleam and are odor-free. Supplies are adequate.
- Trash containers and pencil sharpeners are empty, clean, and odor-free.

**Level 2 - Ordinary Tidiness:** Level 2 is the level at which APPA and the higher education housekeeping community has historically advocated as the level to aspire to. Lower levels for washrooms, changing/locker rooms, and similar type facilities are not acceptable.

- Floors and base moldings shine and/or are bright and clean. There is no buildup in corners or along walls, but there can be up to two days worth of dirt, dust, stains, or streaks.
- All vertical and horizontal surfaces are clean, but marks, dust, smudges, and fingerprints are noticeable with close observation.
- Washroom and shower tile and fixtures are clean and are odor-free. Supplies are adequate.
- Trash containers and pencil sharpeners are empty, clean, and odor-free.

**Level 3 - Casual Inattention:** Level 3 reflects the first budget cut, or some other staffing-related problem. It is a lowering of normal expectations. While not 100% desirable, it has yet to reach an unacceptable level of cleanliness.

- Floors are swept clean, but upon close observation dust, dirt, and stains, as well as a buildup of dirt, dust, and/or floor finish in corners and along walls, can be seen.
- There are dull spots and/or matted carpet in walking lanes, and streaks and splashes on base molding.
- All vertical and horizontal surfaces have obvious dust, dirt, marks, smudges, and fingerprints.
- Lamps all work and all fixtures are clean.
- Trash containers and odor-free.

**Level 4 - Moderate Dinginess:** Level 4 reflects the second budget cut, or some other significant staffing-related problem. Areas are becoming unacceptable. People are beginning to accept an environment lacking normal cleanliness. In fact, the facility begins to constantly look like it requires a good “spring cleaning.”

- Floors are swept clean, but are dull. Colors are dingy, and there is an obvious buildup of dust, dirt, and/or floor finish in corners and along walls. Molding is dull and contains streaks and splashes.
- All vertical and horizontal surfaces have conspicuous dust, dirt, smudges, fingerprints, and marks that will be difficult to remove. Less than 5% of lamps are burned out, and fixtures are dingy.
- Trash containers and pencil sharpeners have old trash and shavings. They are stained and marked. Trash cans smell sour.

**Level 5 - Unkempt Neglect:** Level 5 is the final and lowest level. The trucking industry would call this “just-in-time cleaning.” The facility is always dirty, with cleaning accomplished at an unacceptable level.

- Floors and carpets are dirty and have visible wear and/or pitting. Colors are faded and dingy, and there is a conspicuous buildup of dirt, dust, and/or floor finish in corners and along walls. Base molding is dirty, stained, and streaked. Gum, stains, dirt, dust balls, and trash are broadcast.
- All vertical and horizontal surfaces have major accumulations of dust, dirt, smudges, and fingerprints, as well as damage. It is evident that no maintenance or cleaning is done on these surfaces.
- More than 5% of lamps are burned out, and fixtures are dirty with dust balls and flies.
- Trash containers and pencil sharpeners overflow. They are stained and marked. Trash containers smell sour.



## ASSESSMENT TECHNICAL FOUNDATION

### EXAMPLE APPA STANDARD SPACE MATRIX FOR ESTIMATING

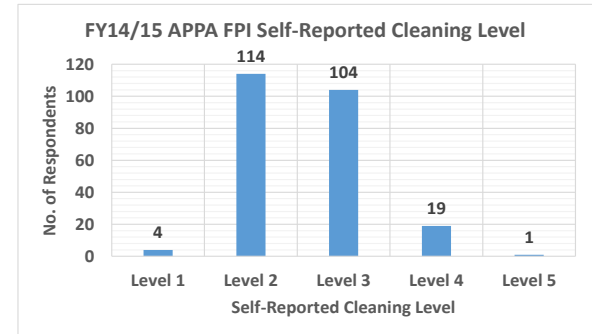
- Higher levels of cleanliness require more tasks to be performed more frequently;
- More tasks performed more frequently require more FTEs, more supplies, more equipment and more funding;
- Tasks and frequency based on empirical data collected by APPA from a large population of colleges and university when the protocol was developed;
- Think RSM means equivalent for cleaning services.

Classroom with Hard Floor Standard Space Matrix						
Routine Activities	Level 1	Level 2	Level 3	Level 4	Level 5	Base Time
Spot clean walls and doors	D	W	M	S/A		3.12
Relamp	D/A	D/A	D/A	D/A	D/A	3.46
Clean chalkboards and trays	D	D	D	A/D	A/D	3.15
Dust flat surfaces	D	W	W	M		1.16
Empty waste containers	D	D	D	A/D	A/D	0.46
Empty pencil sharpeners	D	D	D	A/D		0.40
Sweep, dust-mop floors	D	D	A/D	A/D	A/D	16.40
Clean erasers	D	D	D	A/D	A/D	0.60
<b>Total Base Time</b>						<b>28.75</b>
Project Activities	Level 1	Level 2	Level 3	Level 4	Level 5	Base Time
Dust blinds	M	A	A			4.95
Project-clean furniture and seating	Q	A	A			73.73
Clean trash containers	W	S/A	S/A	A	A	1.01
Dust vents	M	Q	S/A	S/A		1.50
Perform interim floor care	Q	Q				87.76
Strip/refinish floors	A	A	A	A		166.64
Clean windows	S/A	A	A			14.23
Project-clean light fixtures	A	A	A			101.24
Spray-buff/burnish floors	W	M	Q	S/A		14.96
Damp-mop floors	D	M	M	S/A		16.61
<b>Total Base Time</b>						<b>482.63</b>
<b>Base Square Feet: 1,200 SF</b>						<b>Base Time in Minutes</b>
(D = Daily, A/D = Alternate Days, W = Weekly, M = Monthly, Q = Quarterly, A = Annual, S/A = Semiannual, D/A = Special notation for relamping based on expected lamp life cycle. )						

## ASSESSMENT TECHNICAL FOUNDATION

### ADOPTED CLEANLINESS LEVEL – NATIONAL TRENDS

- APPA and the higher educational facilities management community **have traditionally advocated APPA Level-2;**
- However, due to **limited resources and constrained budgets**, many colleges and universities have **targeted APPA Level-3**, or somewhere **between APPA Level-3 and APPA Level-2;**
- Data from **FY14/15 APPA Facilities Performance Indicators (FPI) Survey<sup>1</sup>;**
- **104 (43%)** of 242 institutions reported **APPA Level 3;**
- **Average level** reported was **2.58;**
- This has been the **trend** in the APPA reports;



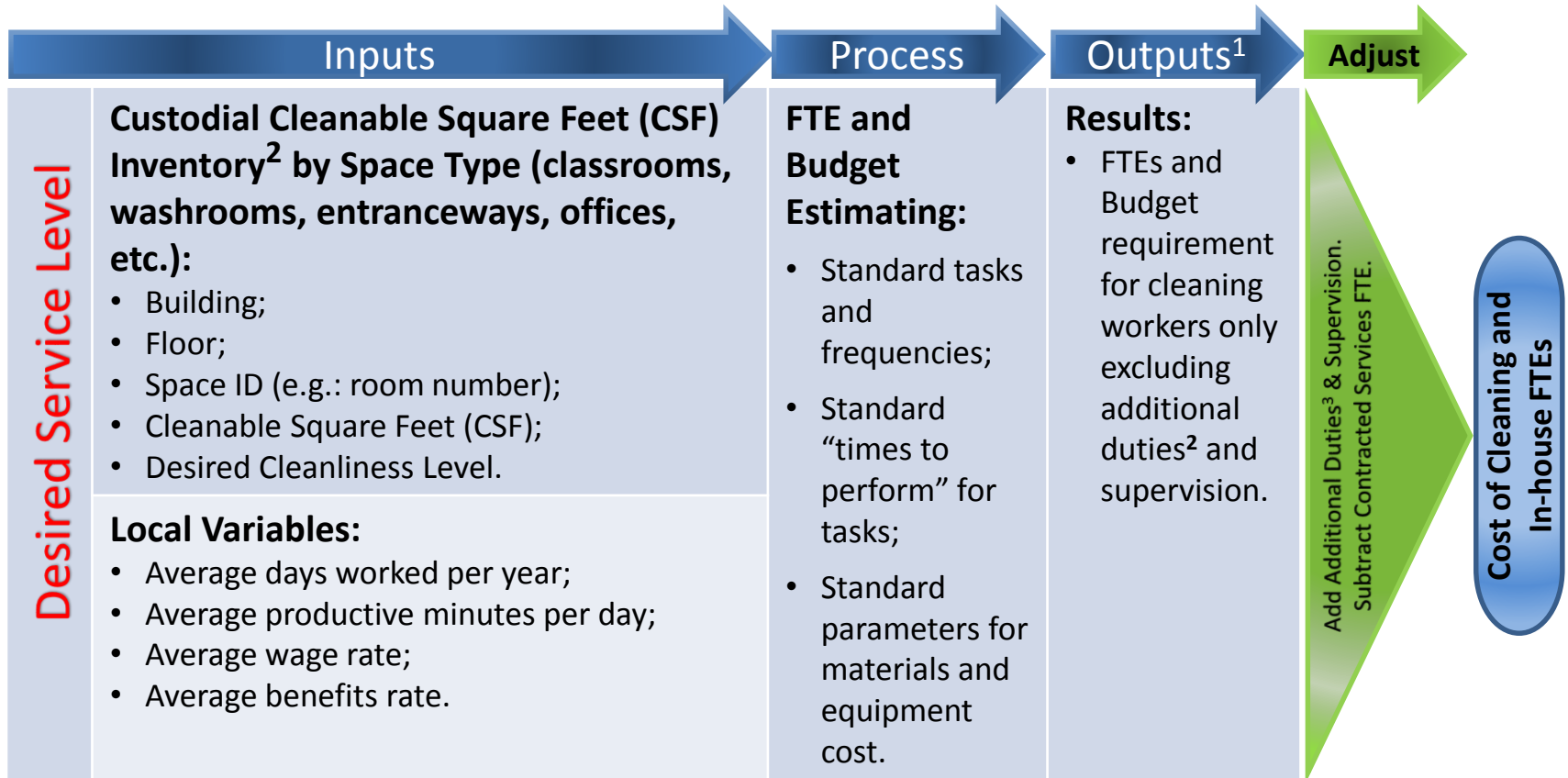
Cleaning Level	No. of Respondents	Percent
Level 1	4	1.7%
Level 2	114	47.1%
Level 3	104	43.0%
Level 4	19	7.9%
Level 5	1	0.4%
Total	242	100.0%

**Because of budget constraints, The University of Wyoming will likely have to adopt APPA Level-3, or somewhere between APPA Level-3 and APPA Level-2 (as close to APPA Level-2 as possible).**

<sup>1</sup> The APPA Facilities Performance Indicators (FPI) survey is conducted annually by APPA to collect comparative analysis facilities management benchmark data from institutions through the U.S.A. and Canada (<http://www.appa.org/Research/fpi.cfm>).

# ASSESSMENT TECHNICAL FOUNDATION

## APPA WORKLOADING AND BUDGET ESTIMATING PROCESS



1. FTEs and budget for supervision and additional duties assigned to the personnel responsible for the core function must be added to the estimating protocol output to derive the total requirement.
2. Estimates are based on CSF data developed by the consultant from space inventory data files provided by UW staff. The custodial staff should subject the data to field validation to transform it into a validated Cleanable Square Feet Inventory data set in order to derive full benefits from the information.
3. Examples of additional duties are (i) custodians performing special event support; (ii) custodians performing snow removal; (iii) custodians hanging pictures or moving furniture; and (iv) custodians preparing dorm room after change of occupant.



 **DEPARTMENTAL STRENGTHS**

## DEPARTMENTAL STRENGTHS

- Custodial worker **personnel turnover rate** and **vacancy rate** are **relatively low**;
- **Fringe benefits** for custodial employees are **considered good** by the CS employees;
- CS custodial **workers recognize** and **appreciate** the **value of working** at the **University of Wyoming**;
- CS custodial **workers** are **highly respected** and **appreciated** by the **campus community**;
- CS custodial **workers** are **aware** that **they are appreciated** by the **campus community** and are **proud** of this fact;
- CS **management recognizes** the value of **benchmarking** with Cohorts;
- **Cleanliness based on standards (APPA)** is **recognized as important**, and there is an attempt to **conduct inspections** based on **locally derived standards**;
- CS has access to good space inventory data used to develop a suitable “**space-by-space**” **Cleanable Square Feet Inventory** – a **key and essential element** of a successful high-performing cleaning organization.





## CURRENT CLEANING PERFORMANCE

## CURRENT CLEANING PERFORMANCE

- **Organization**
  - CS remains an **old-style** custodial organization, operating primarily in an **informal ad hoc mode** with **few documented standard processes** and **procedures**;
  - Worker to **supervisory-leadership ratio** needs to be reviewed;
  - **Job titles** for custodial workers are **peculiar**, and could possibly **impact recruitment** and **professional development**.
- **Training program and professional development Program**
  - No formal professional **cleaning skills training program** for workers;
  - **Limited** management/leadership **professional development** for supervisors;
  - **Limited** exposure to other **cleaning professionals peers** or cleaning **professional organizations**.
- **Inadequate equipment program**
- **Recent budget cuts** will require CS to **transform as an organization** in order to continue to meet campus cleanliness needs, and to **reverse the trend toward an unsustainable state**.





## CURRENT CLEANING PERFORMANCE

- The campus is generally clean and healthy and does not have a cleaning crisis, however, overall campus interior appearance, general cleanliness, and conditions of interior surfaces are **trending toward an unsustainable state**;
- Consultant estimates CS is performing at **APPA Level 4.0**<sup>1</sup> based on buildings tours conducted during the site visit;
  - Some **carpeted floors** have **stains** and **soil penetrations**;
  - Some **hard floors** have **scuff marks** and **build-up** in **corners** and along **baseboards**;
  - **Grout lines** in some restrooms floors are **discolored** due to **dirt build-up**;
  - CS does **not have standard task and frequency lists** for each specific building;
  - Except for an informal priority concept, much is left to the discretion of the individual custodial worker to perform on “**As we can**” or “**As required**” basis;
  - CS **does not have a systematic “Projects Program”** and therefore is not scheduling and performing recurring interim and restorative floor care tasks;
  - **Floor care tasks are deferred** to semester and summer break periods and often performed on an “**As we can**” or “**As required**” basis.

<sup>1</sup>**Note:** The APPA guidelines are designed to make the inspection as objective as possible, but there is still an element of subjectivity. Since floor care is most time consuming, and most critical to life cycle of facility, it is heavily weighed in the score.

## CURRENT CLEANING PERFORMANCE OBSERVATIONS

### HUNTER'S LAW OF CLEANING TASKS AND FREQUENCIES

**“When We Can” and/or “As Required” = “Probably Doesn’t Get Done”**



## CUSTOMER AND STAFF PERCEPTIONS

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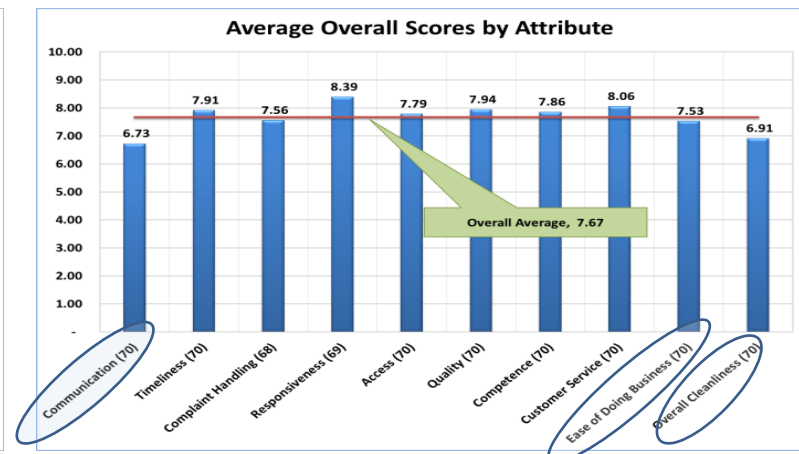
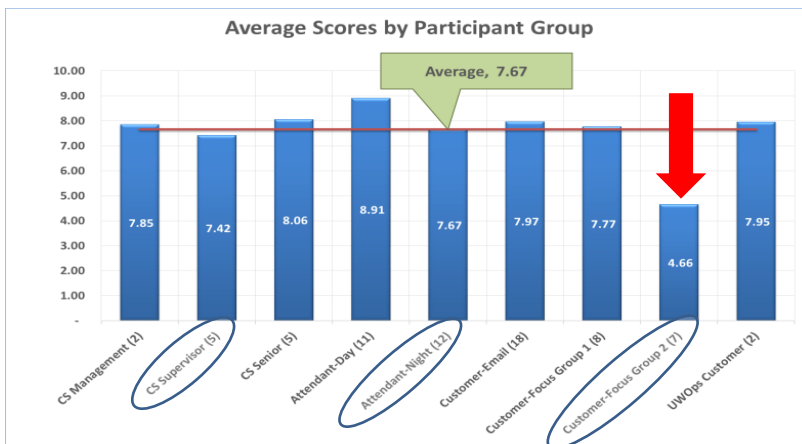
- Consultant conducted individual interviews and held focus groups discussions with University of Wyoming Operations staff and customers to gather information on staff and customer perceptions regarding the University of Wyoming custodial services.

Customer & Staff Perceptions	Staff Interviews
➤ Communication	➤ Training
➤ Timeliness	➤ Processed
➤ Responsiveness	➤ Procedures
➤ Complaint Handling	➤ Cleaning Tasks
➤ Access	➤ Frequencies and Schedules
➤ Quality	➤ Routine vs. Project Concept
➤ Competence	➤ Supplies
➤ Customer Service	➤ Equipment
➤ Ease of Doing Business	➤ Audit/Inspection Program
➤ Overall Cleanliness	➤ Vacant Positions and Hiring Process
	➤ Attendance

# CUSTOMER AND STAFF PERCEPTIONS – INFORMAL SURVEY RATINGS

Scale of 1 to 10  
1 = Very bad  
10 = Very good

Customer And Staff Perceptions									
Participant Group	Communication (70)	Timeliness (70)	Complaint Handling (68)	Responsiveness (69)	Access (70)	Quality (70)	Competence (70)	Customer Service (70)	Ease of Doing Business (70)
CS Management	6.50	9.00	8.50	8.00	7.00	8.50	8.00	6.50	9.00
CS Supervisor	7.00	5.60	8.40	7.80	8.60	8.40	8.40	7.40	5.80
CS Senior	8.00	7.40	8.20	8.80	8.80	6.80	7.40	9.00	8.60
Attendant-Day	7.55	9.36	8.45	9.64	10.00	7.91	9.73	8.55	10.00
Attendant-Night	5.75	7.92	6.08	8.58	8.08	8.83	8.50	8.25	7.75
Customer-Email	7.83	8.50	8.28	8.17	7.00	7.83	8.11	8.61	8.11
Customer-Focus Group 1	5.13	8.38	9.17	9.14	7.75	8.38	8.75	8.75	6.75
Customer-Focus Group 2	4.71	5.57	4.29	6.00	4.71	6.43	2.14	4.86	2.43
UWOps Customer	8.00	7.00	7.00	9.00	8.00	8.50	7.50	8.50	8.50
<b>Weighted Average</b>	<b>6.73</b>	<b>7.91</b>	<b>7.56</b>	<b>8.39</b>	<b>7.79</b>	<b>7.94</b>	<b>7.86</b>	<b>8.06</b>	<b>7.53</b>
<b>Customer</b>	<b>6.59</b>	<b>7.85</b>	<b>7.50</b>	<b>8.00</b>	<b>6.79</b>	<b>7.68</b>	<b>7.12</b>	<b>7.94</b>	<b>6.76</b>
<b>CS Staff</b>	<b>6.86</b>	<b>7.97</b>	<b>7.61</b>	<b>8.75</b>	<b>8.72</b>	<b>8.19</b>	<b>8.56</b>	<b>8.17</b>	<b>8.25</b>
<b>Perception Gap</b>	<b>0.27</b>	<b>0.12</b>	<b>0.11</b>	<b>0.75</b>	<b>1.93</b>	<b>0.52</b>	<b>1.44</b>	<b>0.23</b>	<b>1.49</b>

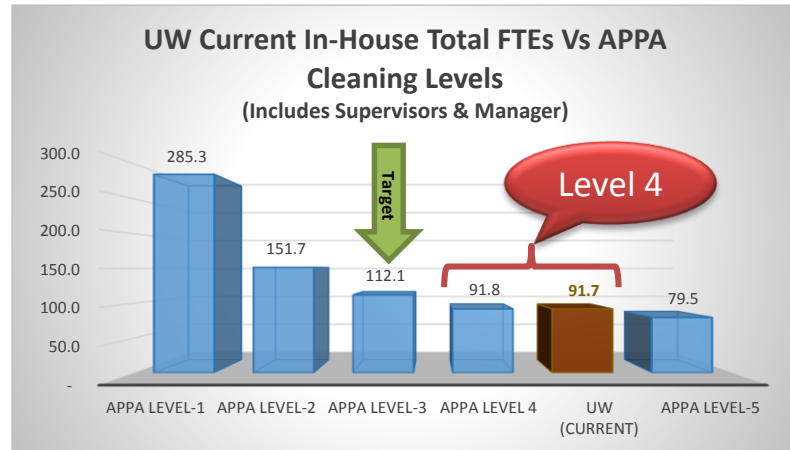




## COST AND STAFFING ANALYSIS

# TOTAL IN-HOUSE FTE REQUIREMENT

UW Current In-House Total FTEs Vs APPA Cleaning Levels (Including Supervisors & Manager)	
Cleaning Level	FTEs
APPA Level-1	285.3
APPA Level-2	151.7
APPA Level-3	112.1
APPA Level 4	91.8
<b>UW (current)</b>	<b>91.7</b>
APPA Level-5	79.5



- Based on 2.9 million cleanable square feet of space;
- Auxiliaries, Housing, and Athletics spaces are cleaned by others;
- Total FTE requirement includes 6.0 positions for management and supervision;
- Management and supervisor based on current staffing not part of the APPA protocol;
- Further review is required to determine if management and supervisor staffing approach are adequate – addressed in final report;
- University of Wyoming workers FTEs are enough to achieve APPA Level-4.

## TOTAL IN-HOUSE FTE REQUIREMENT

- CS has historically operated with no official university administration designation of the desired level of cleanliness CS is required to achieve;

CS will need to **add 20.4 FTEs** to achieve **APPA Level-3** (CS would need 112.1 total FTEs compared to the 91.7 *Authorized FTEs*);

Due to vacancies, CS has historically operated with an average 86.32 *Available FTEs*;

Investment

- While CS is understaffed based on FTE requirements for an average organization, staffing is not the only variable impacting the level of service the organization is capable of achieving;
- Required FTEs are based on average organizations – high performing organizations are able to deliver a higher level of service with the same resources as an average organization;
- Even with staffing below desired levels, CS could achieve better results by adopting *Best Practices*, better equipping the staff, and providing better training and professional development to its staff;

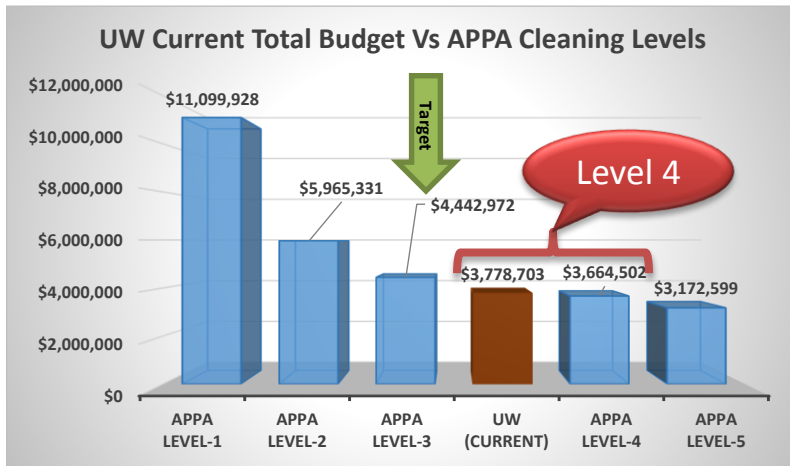
Implement Best Practices

- For this assessment, estimated required FTEs for *APPA Levels* are based on *Cleanable Square Feet* data collected with the assistance of the Consultant specifically for this assessment project.



## ESTIMATED BUDGET TO FUND FTE REQUIREMENT

UW Current Total Budget Vs APPA Cleaning Levels	
Cleaning Level	Budget
APPA Level-1	\$11,099,928
APPA Level-2	\$5,965,331
APPA Level-3	\$4,442,972
<b>UW (current)</b>	<b>\$3,778,703</b>
APPA Level-4	\$3,664,502
APPA Level-5	\$3,172,599



- Above table and graph reflect budget requirement including management and supervision;
- Assuming that the cost of supplies would be equal to 10% of the labor cost, and the cost of equipment will be 5% of the labor cost;
- Does not include uniforms, vehicles, utility carts, office supplies or other expenses in the custodial organization budget not directly connected to the cleaning function;
- CS (current) budget is based on FY 16 actual expenditures;
- CS currently spends less than 7.5% for supplies and 1.7% for equipment.
- In FY16 CS was funded slightly better than required to achieve APPA Level-4.

## SUMMARY OF ROOT CAUSES

### Factors contributing to current level of cleanliness being achieved:

- Budget and staffing constraints;
- Inadequate equipment program – the annual equipment expenditure is well below expected. Age and condition of equipment are problematic;
- Historical Available FTEs are less than Authorized FTEs due to vacancies and unnecessarily slow hiring process;

Investment

- Standardization, training, and *Best Practices* are not fully functioning throughout all levels in the custodial organization - the workforce is working in an informal mode;
- No formal program/plan for performing *Project Tasks* - interim and restorative floor care (project work) is not scheduled or performed consistently – deferred to summer break;
- Historical hiring process and hiring freeze have hindered timely replacement of workers;
- Lack of use of technology to assist in workloading, staff assignment, and scheduling.

Best Practices



## RESOURCES – BOTTOM LINE

### Estimated FTE and budget requirements for average performing organizations:

- 151.7 FTEs/\$5.96M to clean all spaces at APPA Level-2
- 112.1 FTEs/\$4.44M to clean all spaces at APPA Level-3
- 91.8 FTEs/\$3.66M to clean all spaces at APPA Level-4

### FTEs in Current Organization Chart and FY 16 Final Budget Expenditures:

- 91.7 FTEs/\$3.78M to clean the campus, including management and supervision;
- Based on its existing staff operating in its current mode of operations, CS is staffed and funded to achieve APPA Level-4.

### FTEs & Budget Gap to achieve APPA Level-3:

- 20.4 FTEs/\$0.66M to clean the campus, including wages/salary, fringe benefits, supplies, equipment replacement, management and supervision.

<sup>1</sup> APPA, the professional association for educational facilities officers ([www.appa.org](http://www.appa.org)) published guidelines that define cleanliness level 1 through 5 with 1 being the best and 5 being the worst.



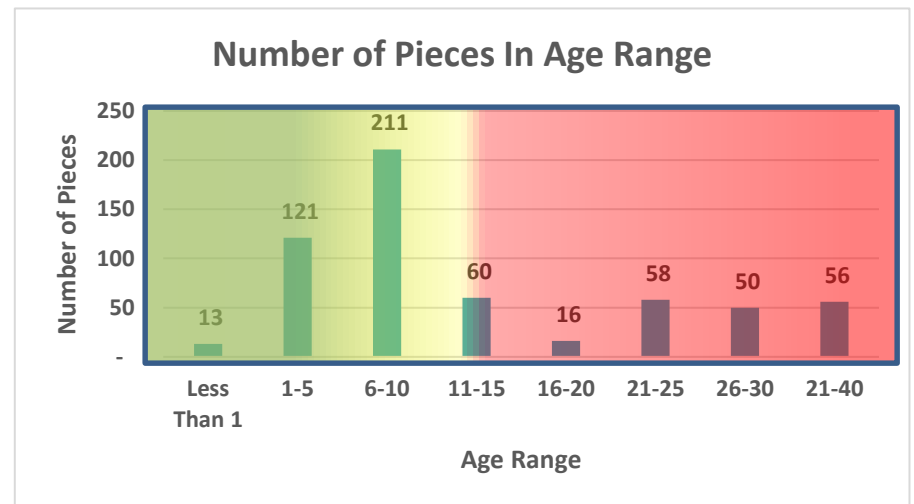
## EQUIPMENT AND CONSUMABLES ANALYSIS

## CUSTODIAL EQUIPMENT AGE PROFILE

- CS has an equipment inventory data set, but some key data elements are not available;
- Of the 949 pieces of equipment in the data set, 585 pieces have known purchase dates;
- 364 pieces with no known purchase dates and are likely over 20 years old;
- The Equipment Age Profile table to the right reflects the age of the equipment with known purchase dates;
- 164 pieces with known purchase date are over 20 years old;
- The average age of the 585 pieces with known purchase dates is 13.23 years;
- There is a large number of pieces in the 1-5 and 6-10 age bracket.

Equipment Purchase Date Profile		
	Number of Pieces	Average Age
With Unknown Purchase Date	364	
With Known Purchase Date	585	13.23
<b>Total</b>	<b>949</b>	

Equipment Age Profile	
Age Range	Number of Pieces In Age Range
Less Than 1	13
1-5	121
6-10	211
11-15	60
16-20	16
21-25	58
26-30	50
21-40	56
<b>Total</b>	<b>585</b>



## EQUIPMENT AND CONSUMABLES COST PERCENTAGE RATIOS

- Labor to non-labor ratio typically 85/15 to 80/20 compared to UW 91/9;
- Cost for consumables is typically 10%-15% of labor cost compared to UW 7.5%;
- Cost to ensure the workforce is properly equipped is typically 5%-7% of labor cost compared to UW 1.72%;
- The above observations support the conclusion that UW does not have an adequately funded equipment program;
- The above observations also indicate that further review is needed regarding the labor cost to non-labor cost ratio as it relates to consumables.

UW FY16 Custodial Cost Profile		As % of Total Cost
Total Labor Cost	\$3,435,781	90.9%
Non-Labor Cost	\$342,922	9.1%
<b>Total Cost</b>	<b>\$3,778,703</b>	<b>100%</b>

Non-Labor Cost Component	Cost	As % of In-Hse Labor Cost	Rule of Thumb
Consumables	\$256,344	7.5%	10% - 15%
Equipment	\$58,961	1.72%	5%-7%
Other Non-Labor	\$27,617	0.80%	
<b>Non-Labor Cost</b>	<b>\$342,922</b>		

**NOTE: Custodial workers are not using dilution dispensers and are manually mixing chemicals.**



## COMPARATIVE ANALYSIS – FY 14-15 APPA FPI

## COMPARATIVE ANALYSIS – FY 14-15 APPA FPI UW COHORTS PROFILE FOR COMPARATIVE ANALYSIS

- 13 institutions were selected from the APPA 2014-2015 FPI report as cohorts;
- Cohorts were selected based on similar GSF, Carnegie Class, and student enrollment;
- Five of the cohorts are also on UW’s Academic peer list;
- The purpose is to get a sense of how CS compares with other similar institutions;
- Comparisons provide indications of where additional research is warranted;
- Firm and definitive conclusions should only be drawn after further research.

UW Laramie	Public	Research High	RMA	5,000-11,999	Exc		4,137,459	\$3,778,703	91.7	51%
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### Cohorts Similar GSF, Carnegie Class and Student Enrollment

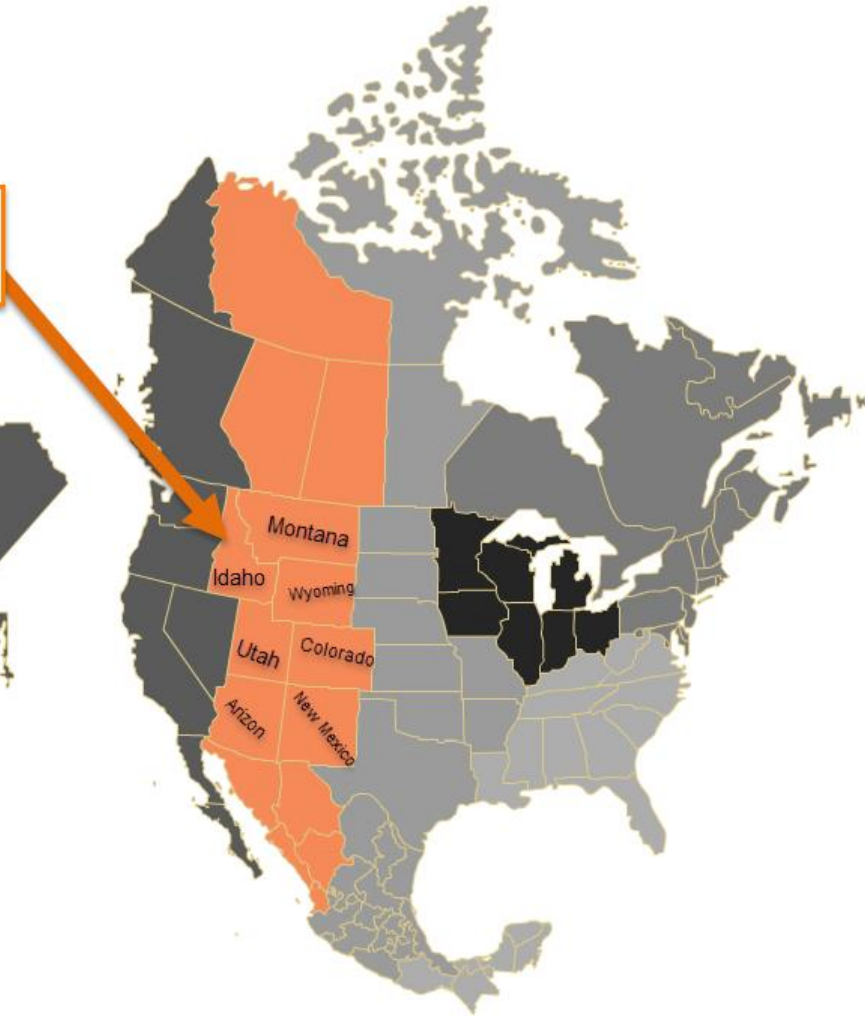
Seq	Institution	Funding	Carnegie Class	APPA Region	Enrollment Range	Aux Svcs	Bldg. Age Range	Custodial Total GSF	Custod Total Expnds	Cust In-House FTE	Custod Benfts %	On Client's Peer List (Yes or No)
1	Cleveland State Univ	Public	Research High	MAPPA	12,000-19,999	Exc	20-29	4,200,120	\$3,871,223	87.0	35%	No
2	Kent St Univ	Public	Research High	MAPPA	20,000+	Exc	30-39	3,282,703	\$5,023,660	99.0	35%	No
3	<b>New Mexico St Univ</b>	<b>Public</b>	<b>Research High</b>	<b>RMA</b>	<b>12,000-19,999</b>	<b>Inc</b>	<b>30-39</b>	<b>3,220,411</b>	<b>\$3,606,733</b>	<b>102.2</b>	<b>34%</b>	<b>Yes</b>
4	Northern Arizona Univ	Public	Research High	RMA	20,000+	Inc	40-49	4,925,268	\$3,929,704	108.4	60%	No
5	<b>So Dakota St Univ</b>	<b>Public</b>	<b>Research High</b>	<b>CAPPA</b>	<b>12,000-19,999</b>	<b>Exc</b>	<b>40-49</b>	<b>2,158,231</b>	<b>\$3,771,202</b>	<b>74.0</b>	<b>37%</b>	<b>Yes</b>
6	Univ Colorado/Boulder	Public	Research Very High	RMA	20,000+	Exc	40-49	4,907,736	\$4,702,821	125.5	36%	No
7	<b>Univ Idaho</b>	<b>Public</b>	<b>Research High</b>	<b>RMA</b>	<b>5,000-11,999</b>	<b>Exc</b>	<b>40-49</b>	<b>2,830,777</b>	<b>\$2,749,326</b>	<b>60.0</b>	<b>54%</b>	<b>Yes</b>
8	<b>Univ Nebraska/Lincoln</b>	<b>Public</b>	<b>Research Very High</b>	<b>CAPPA</b>	<b>20,000+</b>	<b>Exc</b>	<b>30-39</b>	<b>5,654,413</b>	<b>\$8,078,830</b>	<b>198.0</b>	<b>36%</b>	<b>Yes</b>
9	Univ No Carolina/Charlotte	Public	Research High	SRAPPA	20,000+	Exc	20-29	3,511,151	\$6,210,557	156.0	40%	No
10	Univ No Dakota	Public	Research High	CAPPA	12,000-19,999	Exc	40-49	3,625,200	\$4,912,079	96.7	62%	No
11	Univ Oregon	Public	Research Very High	PCAPPA	20,000+	Exc	30-39	3,857,650	\$4,839,509	100.0	35%	No
12	Univ So Alabama	Public	Research High	SRAPPA	12,000-19,999	Exc	40-49	2,662,397	\$3,271,677	90.0	30%	NO
13	<b>Univ Utah</b>	<b>Public</b>	<b>Research Very High</b>	<b>RMA</b>	<b>20,000+</b>	<b>Exc</b>	<b>30-39</b>	<b>6,444,599</b>	<b>\$4,979,967</b>	<b>212.56</b>	<b>22%</b>	<b>Yes</b>
<b>Average--&gt;</b>								<b>3,944,666</b>	<b>\$4,611,330</b>	<b>116</b>	<b>40%</b>	



# COMPARATIVE ANALYSIS – FY 14-15 APPA FPI

## APPA ROCKY MOUNTAIN REGION

RMA



### RMA's Website

The Rocky Mountain region of APPA serves the states of Arizona, Colorado, Idaho, Montana, New Mexico, Utah, and Wyoming; the Canadian provinces of Alberta and Saskatchewan; and the Mexican states of Chihuahua, Durango, Nayarit, Sinaloa, and Sonora.

## COMPARATIVE ANALYSIS – FY 14-15 APPA FPI

### UW COMPARISON TO COHORTS AND SUMMARY BENCHMARKS

Institution	Students	Custodial GSF Cleaned	Custodial Cost	Custodial Cost/ GSF	Custodial Cost/ Student	Custodial Staffing Density (GSF/FTE)	Custodial Reported Service Level
<b>UW Laramie</b>	<b>10,344</b>	<b>4,137,459</b>	<b>\$3,778,703</b>	<b>\$0.91</b>	<b>\$365</b>	<b>45,890</b>	<b>4.00</b>
All APPA	13,106	3,500,525	\$4,788,591	\$1.41	\$404	34,899	2.59
All RMA	16,727	3,785,388	\$4,399,208	\$1.29	\$330	36,501	2.61
All Research High	16,136	3,755,406	\$4,773,796	\$1.27	\$338	34,351	2.60
All Public	15,003	3,910,630	\$5,171,174	\$1.41	\$311	35,246	2.67
All 5,000-11,999	8,174	2,091,915	\$2,879,769	\$1.42	\$355	34,795	2.55
Cleveland State Univ	12,513	4,200,120	\$3,871,223	\$0.92	\$309	44,446	2.00
Kent St Univ	24,197	3,282,703	\$5,023,660	\$1.53	\$208	33,159	3.00
New Mexico St Univ	12,902	3,220,411	\$3,606,733	\$1.12	\$280	31,511	2.00
Northern Arizona Univ	20,573	4,925,268	\$3,929,704	\$0.80	\$191	45,419	4.00
So Dakota St Univ	12,557	2,158,231	\$3,771,202	\$1.75	\$300	29,165	3.00
Univ Colorado/Boulder	28,399	4,907,736	\$4,702,821	\$0.96	\$166	39,109	4.00
Univ Idaho	8,834	2,830,777	\$2,749,326	\$0.97	\$311	47,180	3.00
Univ Nebraska/Lincoln	22,727	5,654,413	\$8,078,830	\$1.43	\$355	28,558	3.00
Univ No Carolina/Charlotte	24,716	3,511,151	\$6,210,557	\$1.77	\$251	22,507	2.00
Univ No Dakota	12,420	3,625,200	\$4,912,079	\$1.35	\$396	37,478	3.00
Univ Oregon	22,832	3,857,650	\$4,839,509	\$1.25	\$212	38,577	2.00
Univ So Alabama	16,462	2,662,397	\$3,271,677	\$1.23	\$199	29,582	2.00
Univ Utah	30,257	6,444,599	\$4,979,967	\$0.77	\$165	30,319	2.00
<b>Cohort Average</b>	<b>19,184</b>	<b>3,944,666</b>	<b>\$4,611,330</b>	<b>\$1.22</b>	<b>\$257</b>	<b>35,155</b>	<b>2.69</b>



## COMPARATIVE ANALYSIS – FY 14-15 APPA FPI UW COMPARISON TO SUMMARY BENCHMARKS (COST PER GSF)

Institution	Custodial Cost/GSF
<b>UW Laramie</b>	<b>\$0.91</b>
All Research High	\$1.27
All RMA	\$1.29
All All APPA	\$1.41
All Public	\$1.41
All 5,000-11,999	\$1.54



- **Observations:**

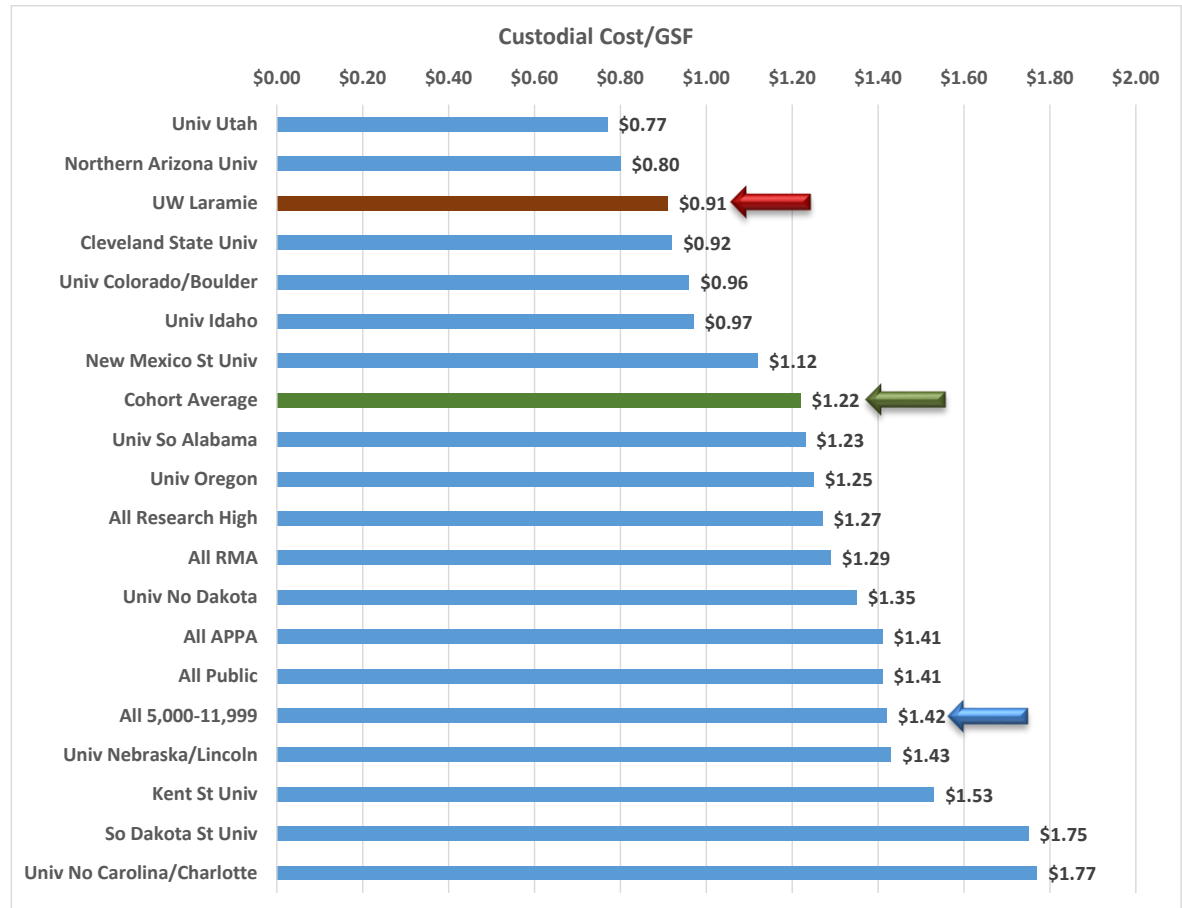
- UW cost per GSF is **less** than all **summary benchmarks**:
  - Low **wage wages** is most significant factor;
  - **Authorized positions below** the number commensurate with the desired cleaning level;
  - Personnel position **vacancies** is a factor.

# COMPARATIVE ANALYSIS – FY 14-15 APPA FPI

## UW COMPARISON TO COHORTS AND SUMMARY BENCHMARKS (COST PER GSF)

### Observations:

- Cost/GSF is **lower** than the cohort average;
- Cost/GSF is **lower** than all summary benchmarks;
- Cost/GSF is **lower** than all except two cohorts;
- Low Cost/GSF **driven** by **lower wage rate and under-staffing.**

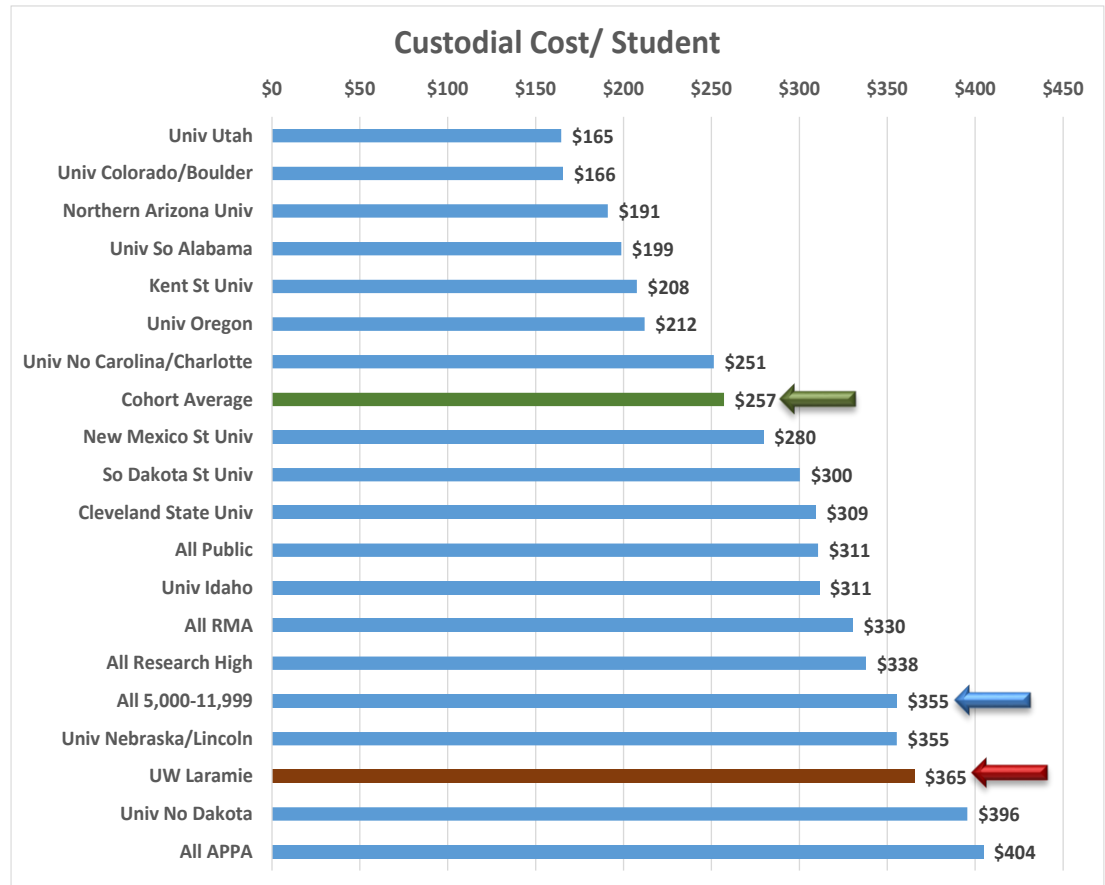


# COMPARATIVE ANALYSIS – FY 14-15 APPA FPI

## UW COMPARISON TO COHORTS AND SUMMARY BENCHMARKS (COST PER STUDENT)

### Observations:

- Cost/Student is **higher** than the cohort average;
- Cost/Student is **higher** than all summary benchmarks except one;
- Cost/Student is **higher** than all except one cohorts;
- Low Cost/Student driven by **lower student population** relative to cohorts and institutions in benchmarks;
- Cost/Student **comparable** to other institution in the **5,000-11,999 student population** range.

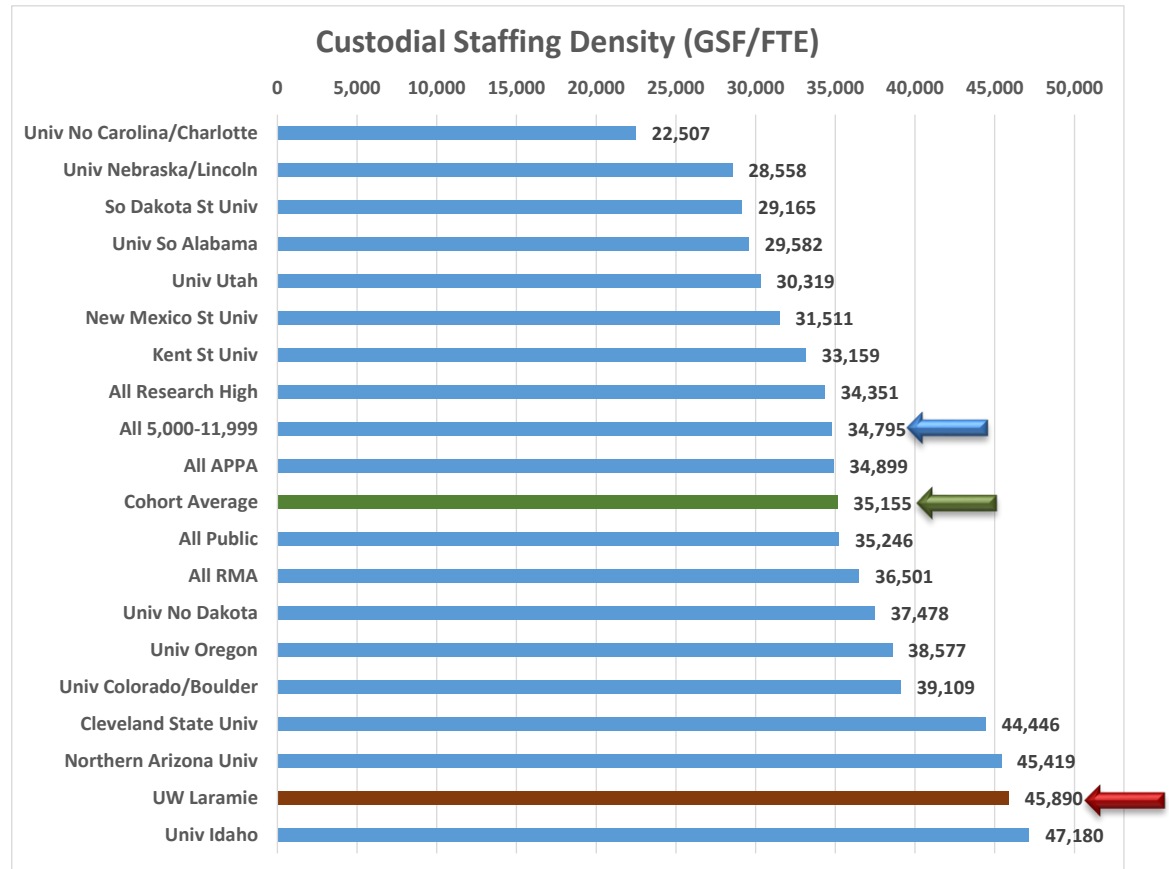


# COMPARATIVE ANALYSIS – FY 14-15 APPA FPI

## UW COMPARISON TO COHORTS AND SUMMARY BENCHMARKS (GSF/FTE)

### Observations:

- GSF/FTE is significantly higher than the cohort average;
- GSF/FTE is higher than all summary benchmarks;
- GSF/FTE is higher than all except one cohort;
- The above indicators mean that each UW custodial worker clean more square feet of space than custodial workers at most of the APPA FPI participating institutions;

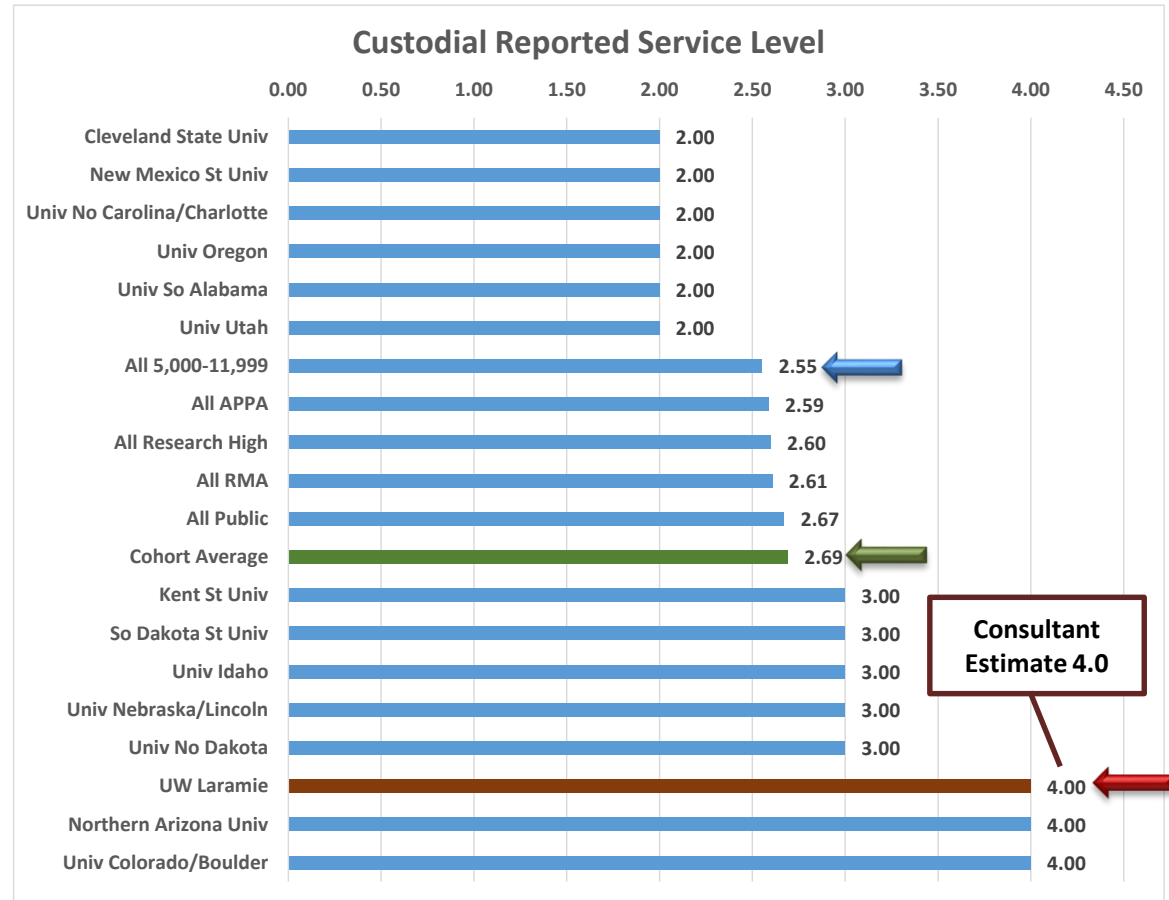


## SUPPORTING SLIDES

# UW COMPARISON TO COHORTS AND SUMMARY BENCHMARKS (SERVICE LEVEL)

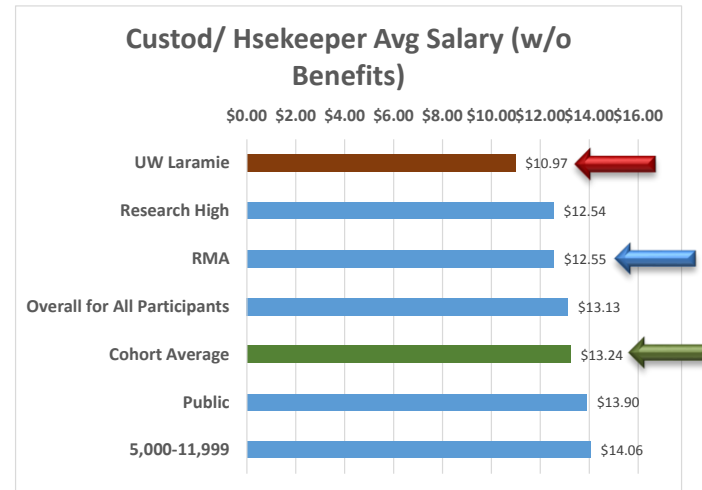
### Observations:

- Consultant estimates UW achieving APPA Level-4;
- Most cohorts reported Level-3 or Level-4;
- *Reported Service Levels* in the FPI survey are determined formally by **audit** for some participants and by professional **informal estimation** by others;
- The FPI survey will only accept whole numbers as input, so it should be interpreted as **general information** instead of precise numerically calculated data.



# FY 14-15 APPA FPI COMPARATIVE ANALYSIS WAGE RATE WITHOUT BENEFITS

Institution	Custod Supt/ Mgr Avg Salary	Custod Supvr/ Fore Avg Salary	Custod Crew/Team Ldr Avg Salary	Custod/ Hsekeeper Avg Salary (w/o Benefits)
<b>UW Laramie</b>	<b>\$28.74</b>	<b>\$15.90</b>	<b>\$12.75</b>	<b>\$10.97</b>
Research High	\$31.11	\$18.72	\$14.59	\$12.54
<b>RMA</b>	<b>\$30.11</b>	<b>\$18.96</b>	<b>\$14.93</b>	<b>\$12.55</b>
Overall for All Participants	\$33.18	\$20.77	\$16.13	\$13.13
<b>Cohort Average</b>	<b>\$32.27</b>	<b>\$20.07</b>	<b>\$20.95</b>	<b>\$13.24</b>
Public	\$34.38	\$20.93	\$42.97	\$13.90
5,000-11,999	\$32.58	\$20.97	\$16.12	\$14.06



- Observations:**

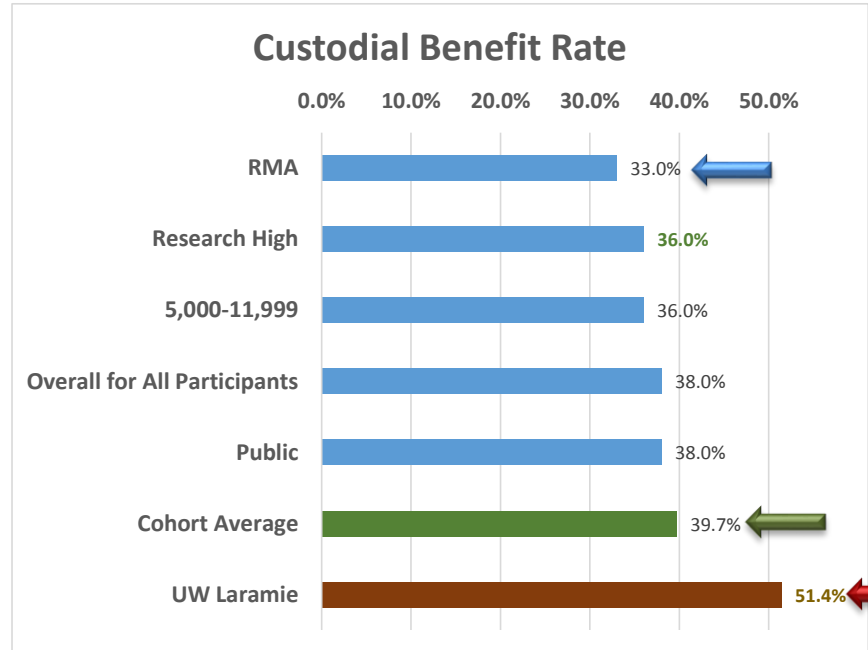
- UW worker average salary rate without benefits is **lower** than all **summary benchmarks**;
- UW worker average salary rate without benefits is **lower** than the **cohort average**;
- UW worker average salary rate without benefits is **lower** than the **Rocky Mountain APPA region**.



# FY 14-15 APPA FPI COMPARATIVE ANALYSIS

## BENEFITS RATE

Seq	Institution	Custodial Benefit Rate
3	RMA	33.0%
2	Research High	36.0%
6	5,000-11,999	36.0%
4	Overall for All Participants	38.0%
5	Public	38.0%
7	Cohort Average	39.7%
1	UW Laramie	51.4%



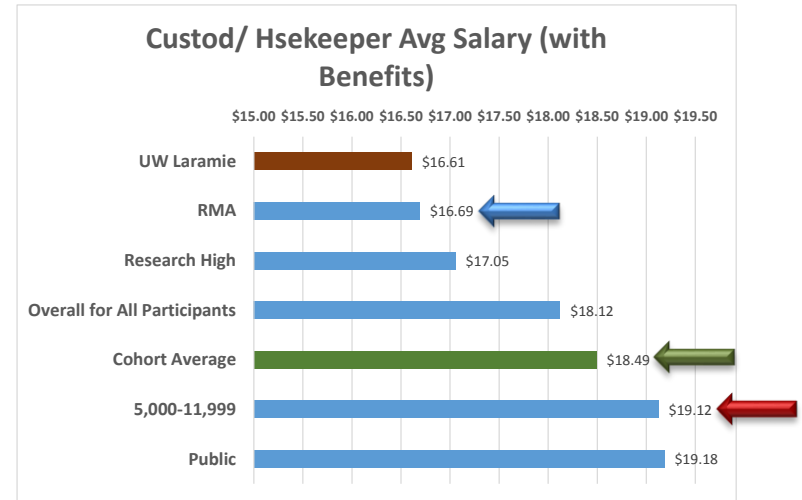
• **Observations:**

- UW fringe benefits is **greater** than all summary benchmarks;
- UW fringe benefits is **greater** than all the cohort average.

# FY 14-15 APPA FPI COMPARATIVE ANALYSIS WAGE RATE WITH BENEFITS



Institution	Custod Supt/ Mgr Avg Salary	Custod Supvr/ Fore Avg Salary	Custod Crew/Team Ldr Avg Salary	Custod/ Hsekeeper Avg Salary (with Benefits)
<b>UW Laramie</b>	<b>\$43.52</b>	<b>\$24.08</b>	<b>\$19.31</b>	<b>\$16.61</b>
Overall for All Participants	\$40.05	\$25.22	\$19.86	\$16.69
Research High	\$42.31	\$25.46	\$19.84	\$17.05
<b>RMA</b>	<b>\$45.79</b>	<b>\$28.66</b>	<b>\$22.26</b>	<b>\$18.12</b>
<b>Cohort Average</b>	<b>\$45.08</b>	<b>\$28.04</b>	<b>\$29.26</b>	<b>\$18.49</b>
5,000-11,999	\$44.31	\$28.52	\$21.92	\$19.12
Public	\$47.44	\$28.88	\$59.30	\$19.18



- Observations:**

- UW worker average salary rate with benefits is **lower** than all **summary benchmarks**;
- UW worker average salary rate with benefits is **lower** than the **cohort average**;
- UW worker average salary rate with benefits is **lower** than the **Rocky Mountain APPA region**.



## FINDINGS AND OPPORTUNITIES

## OPPORTUNITIES

**Opportunities exist for UW Operations Custodial Services to embark upon a systematic program of service enhancement by orderly and methodically implementing recommendations contained in this report.**

This assessment report includes *Findings and Recommendations* centered around the eleven areas below accompanied by multiple-action recommendations:

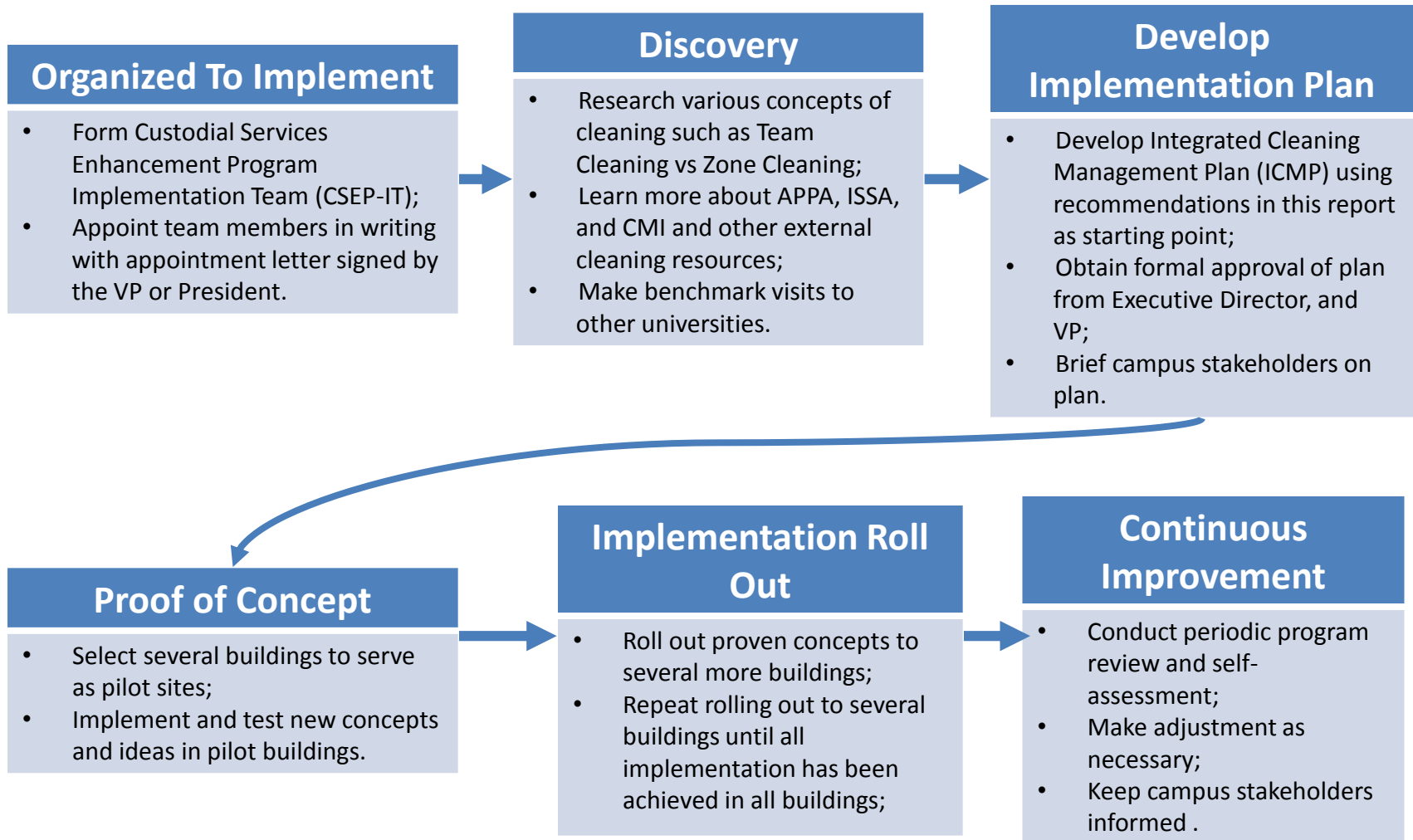
<ol style="list-style-type: none"><li>1. Number of front-line workers available to perform work;</li><li>2. Personnel development including custodial skills training and supervisory/leadership training and professional development;</li><li>3. Effective equipment program;</li></ol>	Investment
<ol style="list-style-type: none"><li>4. Effective recruitment and hiring to properly staff the custodial operation;</li><li>5. Standardization and Best Practices, including standard supplies and equipment;</li><li>6. Customer communications and outreach;</li><li>7. Formal written processes and procedures;</li><li>8. Administrative support to custodial services leadership;</li><li>9. Technology support for the custodial function;</li><li>10. Data and information analysis to support operational decisions;</li><li>11. Personnel evaluation, and reward and recognition program.</li></ol>	Adopt Best Practices

# LIST OF FINDINGS

No.	Finding
1	<i>Need to transform into a high-performing professional cleaning organization.</i>
2	<i>Revise leadership duties and consider different organizational structure.</i>
3	<i>Revise custodial workers job titles.</i>
4	<i>Need for an in-house managed formal training program and an in-house trainer.</i>
5	<i>Need for supervisory and crew leader training and professional development.</i>
6	<i>Filling vacant custodian positions takes too long. Not staffed to achieve desired APPA Level.</i>
7	<i>Properly align custodial manager position title with peer UW Operations positions.</i>
8	<i>Need to review the equipment inventory and equipment procurement program.</i>

No.	Finding
9	<i>Need to review and redevelop standardized processes and procedures</i>
10	<i>Need for a program to ensure project tasks are performed as prescribed.</i>
11	<i>Need for cleaner and more orderly janitor closets and carts.</i>
12	<i>Need to use technology to assist in workloading, staff assignment, and scheduling.</i>
13	<i>Need to make use of custodial performance indicators.</i>
14	<i>Need for a formal quality assurance program.</i>
15	<i>Need for a <u>Cleanable Square Feet Data Set</u>.</i>
16	<i>Need for enhanced customer communication.</i>

# IMPLEMENTATION APPROACH





THE END – QUESTIONS?????