

January 27, 2020

## PHYSICAL PLANT OPERATIONS Assessment & Roadmap

#### **Discussion Guide**

Facilitated by:

- Maurice L. Woods, Chief Strategy & Operations Officer
- Governance Committee (Core): Chief Information Officer; Chief Financial
   Officer; and Executive Director, Capital Programs
- Physical Plant Operations Management Team



## Agenda

Executive Summary

Assessment Summary

Proposed Roadmap

• Appendix

## Broward County Public Schools Physical Plant Operations



**~35 million** Sq. Ft. of Space



~2,098 Total Buildings



~236 Number of Schools



We support Broward County Public Schools (BCPS) with < 550 Facilities Employees (FDOE Guidelines = 945) <sup>(1)</sup>

1) Source: FDOE Maintenance and Operations Administrative Guidelines for School Districts and Community Colleges. Section 6, page 94.

## **Case for Change!**

Deferred maintenance and aging resources are impacting District's ability to effectively and efficiently balance maintenance and emergency responses.

## Vision

Continuously exceed <u>support and service</u> expectations to <u>collectively</u> empower our students to succeed in tomorrow's world.

#### Strategic Imperatives

Improve Data Integrity	I Expenditures I	Enhance Cross- department Planning & Coordination
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## **Executive Summary**

#### **Objectives**

- Thoroughly assess and understand the Physical Plant Operations (PPO) Department in order to address the business opportunities and challenges
- Develop and propose a coordinated roadmap to continuously improve and realign the department over time

	Assessment		Roadmap (Proposed)
	Involves input from internal analysis and external benchmarking	•	Methodology involves a phased approach to build out the roadmap
•	Summarizes major risks and issues that may impede improvement efforts	•	Captures the dependencies required to implement a multi-year plan
•	Identifies the components of sustainable, continuous improvement	•	Identifies critical success factors (CSF's) by area of focus
•	Focuses on core areas necessary to successfully realign a business:	•	Priorities developed in collaboration with leadership team with input from key stakeholders
	People		
	Processes	•	Sequence driven by prioritization and dependencies
	Tools & Systems		

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• Executive Summary

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Proposed Roadmap

• Appendix

#### HIGHLIGHT: Deep Dive Assessment Involved Input from Internal Analysis and External Benchmarking

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#### K-12 Best Practice and Plan Reviews



#### Internal Data Analysis

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## Core Area Assessment Identified Root Causes; Facilitates Prioritization

#### **People and Organization**

- Large number of staff with varying trades/skills expertise
- Large volume of outdated job descriptions; in some instances require minor modification others need refinement
- High, recurring turnover in trades positions; minimal cross-training, development opportunities
- Difficulty recruiting quality personnel
- Outdated zone and trade resource allocation strategy

#### **Process**

- Well-documented standard operating procedures; little evidence that process being followed with fidelity
- Need to work across multiple divisions/ departments to improve services and find efficiencies
- Current warehousing and distribution model impeding efficient services; availability, tracking, etc.
- Limited synergies in leveraging cross-zone best practices, resources (i.e., budget, payroll, office clerks, etc.)

#### **Tools and Systems**

- Inability to accurately forecast expenditures; to track and monitor staffing effectiveness
- Minimal transparency of performance at zone and trade levels
- Work Order tracking and monitoring still a manual process; SAP integration challenges
- Complexity: draws from multiple funds and transfer accounts
- Financial reconciliation challenges between PPO and Budget Office; requires frequent interpretations
- Inability to accurately forecast resource needs and expenditures

#### **Strategy and Culture**

- Linkages between department/employee work priorities and strategies are unclear
- Relationship-driven service model results in inconsistencies; leaves customers as winners/losers
- Ongoing feedback and recent organizational comments about performance resulting in employee moral instability
- Tension between old and new employees

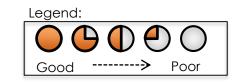
#### **Root Cause to Address**

- Unavailability of consistent and reliable data
- Limited budget planning and alignment
- Crossdepartmental planning and coordination

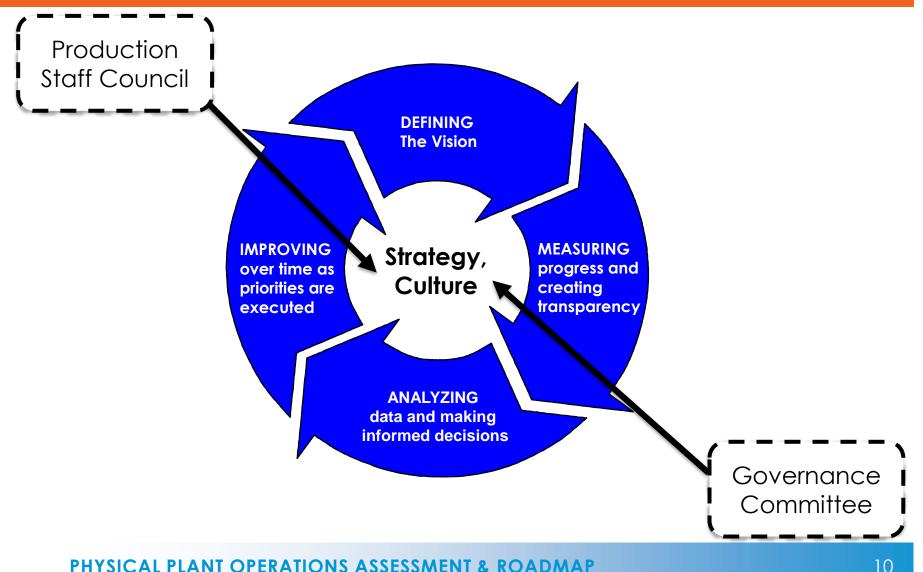
### Core Area Capability Assessment Highlights Foundation to Leverage and Areas to Strengthen

Areas of Focus	Status
<b>People &amp; Organization</b> : What knowledge, skills, and behaviors does staff exhibit	
<b>Processes</b> : How staff and cross-departmental teams are working	
<b>Tools &amp; Systems</b> : What supports enhance further productivity and efficiency	
<b>Strategy &amp; Culture</b> : Departments' overall capabilities to achieve strategy	





## Leveraging Existing Foundation—A Continuous Improvement Approach Will Strengthen Gaps



## Agenda

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### Building Momentum Through Immediate Efforts as Multi-Year Roadmap is Developed

School Year 2019/20 Work-in-Progress	Status
Monitor ongoing customer satisfaction	Not Started
Manage and partner with unions	In Progress
Relationships with production staff/council	In Progress
Align PPO and District vision/strategies	In Progress
Service directory; call list for stakeholders	Not Started
Analyze and expedite current work order backlog; forecast resource requirements	In Progress
Address Maximo implementation	In Progress
Formal, recurring facilities & PPO meetings	Revising
Recurring PPO & finance meetings	In Progress
Enterprise Risk Management planning; update security protocols	Not started
Develop simple dashboard	Not started
Cross-divisional Governance Committee; Cabinet level	In Progress

#### CSF's <sup>(1)</sup> Phased-in to Balance Workload and Enable Implementation Success

Ph	ase 0 <sup>(2)</sup> -1: SY 2019-20 (Quarter 3-4)	Phase 2: Work in 2021-22	Phase 3: Work in 2022-23 or after				
People & Organizatio	n:	<ul> <li>Incremental org structure and staffing</li> </ul>					
Processes:	Accountability via perf-based KPIs/Metrics     Enforced processes and SOP's     Estabilish decision-making protocols, prioritization     Categorical expense analysis; by zone	Identify "transitions" facilities, PPO, safety     Create training and cross-training					
Tools & Systems:	Rebuild the planning and scheduling function	<ul> <li>Integrated reporting; data mining and analytics</li> </ul>	Leveraged computer maint mngmt system (CMMS)				
Strategy & Culture:	<ul> <li>Coordinated short and long-range goals</li> </ul>	<ul> <li>Increase preventive maintenance activity</li> </ul>	<ul> <li>Aligned budget source and funding plan</li> <li>Optimize org structure</li> </ul>				
Notes: 1. See appends for universe of CSFs. 2. During the assessment active, some shorts identified are currently underway. Marcy of the CSF a Bove, will gard during 5Y 2016-20 (Durine 3-4) and puels here 5Y 2020-21 BROWARD COUNTY PUBLIC SCHOOLS (BCPS) 16							

## Methodology: Phased Work to Build Multi-Year Roadmap

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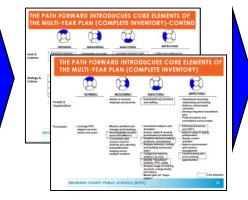
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Build and synthesize the fact base



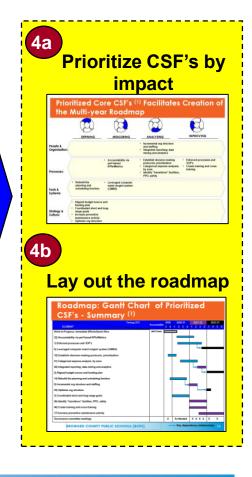
Define the components of Continuous Improvement by core Area of Focus

2



Identify major risks/ issues that may impede realignment efforts





## Prioritized Core CSF's <sup>(1)</sup> Facilitates Creation of the Multi-Year Roadmap

	DEFINING	MEASURING	ANALYZING	IMPROVING	
People & Organizatio	n:		<ul> <li>Incremental organizational structure and staffing</li> <li>Integrated reporting; data mining and analytics</li> </ul>		
Processes:		<ul> <li>Accountability via performance-based KPIs/Metrics</li> </ul>	<ul> <li>Establish decision-making protocols; prioritization</li> <li>Categorical expense analysis; by zone</li> <li>Identify "transitions" facilities, PPO, safety</li> </ul>	<ul> <li>Enforced processes and Standard Operating Procedures (SOP's)</li> <li>Create training and cross- training</li> </ul>	
Tools & Systems:	Rebuild the planning and scheduling function	<ul> <li>Leveraged Computer Maintenance Management System (CMMS)</li> </ul>			
Strategy & Culture:	<ul> <li>Aligned budget source funding plan</li> <li>Coordinated short- and range goals</li> <li>Increase preventive ma activity</li> <li>Optimize organizationa</li> </ul>	long- intenance			

Note: 1) CSF's ranked on a scale of 1-4. Core CSF's received scores of 3-4. See appendix for universe of CSF's.

# CSF's <sup>(1)</sup> Phased-in to Balance Workload and Enable Implementation Success

Phase 0	) <sup>(2)</sup> -1: School Year 2019/20 (Quarter 3-4)	Phase 2: Work in 2021/22	
People & Organizatio	n:	<ul> <li>Incremental organizational structure and staffing</li> </ul>	Phase 3: Work in 2022/23 or after
Processes:	<ul> <li>Accountability via performance- based KPIs/Metrics</li> <li>Enforced processes and SOP's</li> <li>Establish decision-making protocols; prioritization</li> <li>Categorical expense analysis; by zone</li> </ul>	<ul> <li>Identify "transitions" facilities, PPO, safety</li> <li>Create training and cross-training</li> </ul>	
Tools & Systems:	<ul> <li>Rebuild the planning and scheduling function</li> </ul>	<ul> <li>Integrated reporting; data mining and analytics</li> </ul>	<ul> <li>Leveraged Computer Maintenance Management System (CMMS)</li> </ul>
Strategy & Culture:	<ul> <li>Coordinated short- and long-range goals</li> </ul>	<ul> <li>Increase preventive maintenance activity</li> </ul>	<ul> <li>Aligned budget source and funding plan</li> <li>Optimize organizational structure</li> </ul>

Notes:

1. See appendix for universe of CSF's.

During the assessment activity, some efforts identified are currently underway. Many of the CSF's above will start during School Year (SY) 2019/20 (Quarter 3-4) and push into SY 2020/21.

## HIGHLIGHT: Roadmap of Prioritized CSF's - Summary <sup>(1)</sup>

Timing (SY)	Area of	19-20	2020-21	2021-22	2022-23
Critical Success Factors	Focus	3 4	1 2 3 4	1 2 3 4	1 2 3 4
Work-In-Progress: Immediate Efforts/Quick Wins					
Incremental organizational structure and staffing	People				
Accountability via performance-based KPIs/metrics					
Enforced processes and SOP's					
Establish decision-making protocols; prioritization	Processes				
Categorical expense analysis; by zone					
Identify "transitions" facilities, PPO, safety					
Create training and cross-training					
Rebuild the planning and scheduling function	Tools &				
Integrated reporting; data mining and analytics	Systems				
Leveraged Computer Maintenance Management System					
Coordinated short- and long-range goals					
Increase preventive maintenance activity	Strategy &				
Aligned budget source and funding plan	Culture				
Optimize organizational structure					
Governance Committee meetings School Board updates		X X	As Needed X X	X X X X X X	X X X X

#### PHYSICAL PLANT OPERATIONS ASSESSMENT & ROADMAP

Key dependency relationships 16

Note: 1) Final Roadmap may incorporate additional details.

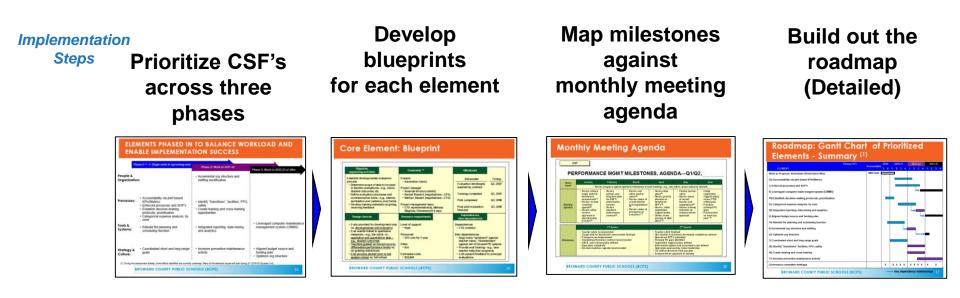
## HIGHLIGHT: Preliminary Immediate and Short-Term Resource Requirements

	S	Y 2019/20		SY 20	20/21				
		Q4	Q1	Q3	Q4				
			Planning	g & Scheo	duling <sup>(1)</sup>				
Benefits	<ul> <li>Improved productivity via staff scheduling and dispatching</li> <li>Repurpose management resources to higher value tasks; improve effectiveness in other roles</li> <li>Improve zone-by-zone and production categorical work-order monitoring and reporting</li> <li>Initiate career path; cross training opportunities</li> </ul>								
					(\$'s)	FTE's			
S -		Staffing (c	annual, recurri	ing) <sup>(1)</sup>	\$480,000	6			
Est. Cost/ Resources		3 months - Temporary Services (one time) – Q4, SY 2019/20 <sup>(2)</sup> \$50,0		\$50,000	4-6				
Est Res		Other							
		Total <sup>(3)</sup>			\$530,000	10-12			

#### Note:

- 1. Planning & scheduling staffing estimates reflects minimal headcount required redefine position, role, and responsibilities.
- 2. Temporary services reflect clerical staff augmentation to manage through existing work-order backlog (data entry) and phone coverage.
- 3. Funding source: Capital funds.

## Tools and Templates Utilized to Enhance Implementation



**Purpose** 

Key Deliverable of 90-day Assessment is a clear focus on implementing the proposed plan!

## **Next Steps**

- Solicit and incorporate School Board feedback
- Ongoing Governance Committee meetings
- Formalize Production Staff Council
- Initiate implementation activities for prioritized CSF's:
  - Blueprints for each prioritized CSF
  - Milestones to meet proposed timeline
  - Finalize roadmap (Gantt charts) based on blueprints; incorporate additional details

## Questions?

## THE SCHOOL BOARD OF BROWARD COUNTY, FLORIDA

Donna P. Korn, Chair Dr. Rosalind Osgood, Vice Chair Lori Alhadeff Robin Bartleman Heather P. Brinkworth Patricia Good Laurie Rich Levinson Ann Murray Nora Rupert

#### Robert W. Runcie, Superintendent of Schools

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Individuals with disabilities requesting accommodations under the Americans with Disabilities Act Amendments Act of 2008, (ADAAA) may call Equal Educational Opportunities/ADA Compliance Department at 754-321-2150 or Teletype Machine (TTY) 754-321-2158.

## Agenda

• Executive Summary

Assessment Summary

Proposed Roadmap

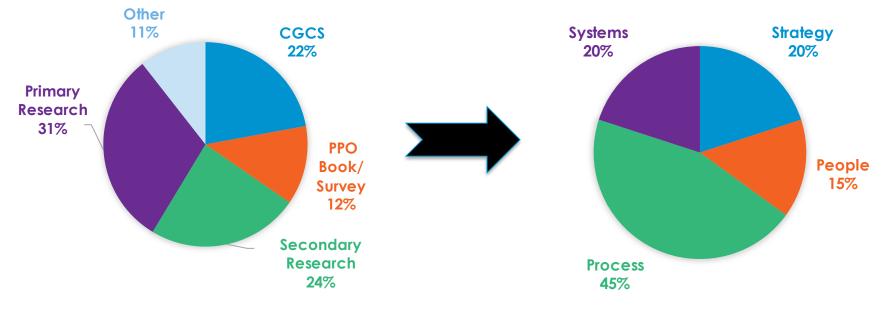
Appendices

## Appendices: Roadmap CSF's

## **Critical Success Factors Analysis**

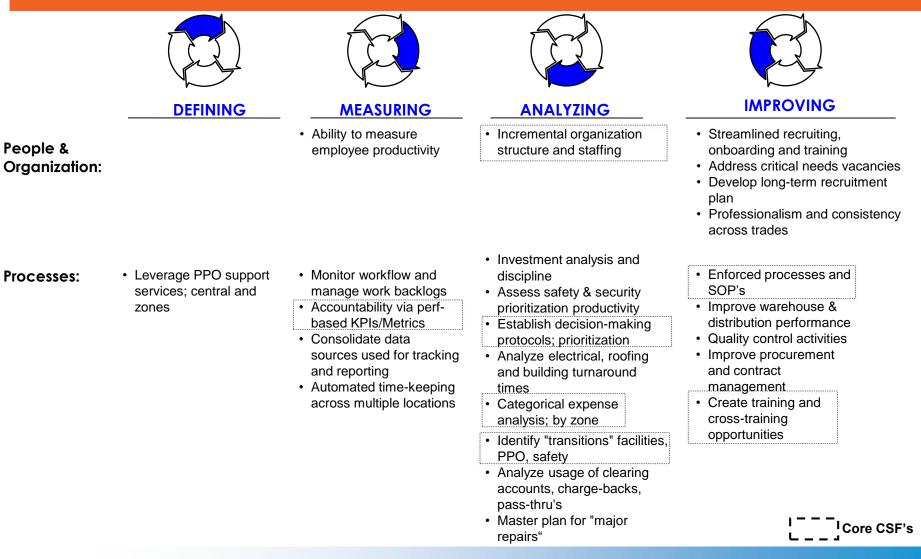
Review of multiple inputs provided a **balanced sources of information** to help identify best practices and drive prioritization efforts...

**Process improvements** involving implementation fidelity and adherence account for the majority of CSF's. Foundation for systems and strategy effectiveness...

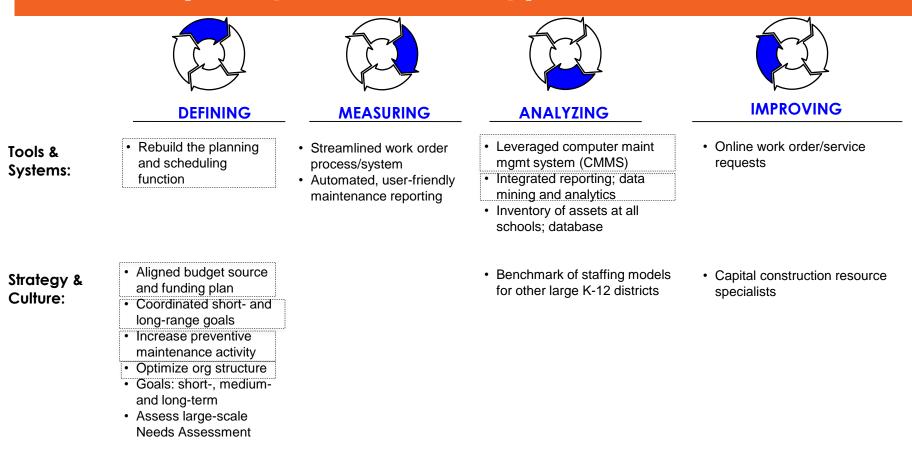


A total of thirty-nine (39) CSF's were identified. The prioritized CSF's were consistent findings across the majority of input sources.

#### The Path Forward Introduces Core CSF's of the Multi-Year Plan(Complete Inventory)-



#### The Path Forward Introduces Core CSF's of the Multi-Year Plan(Complete Inventory)-continued



Note: 1) CSF's ranked on a scale of 1-4 based on the number of times referenced across the multiple sources. Core CSF's received scores of 3-4.

Core CSF's

## **Critical Success Factors**

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(See separate PDF file)

## Appendices: Tools & Systems

#### Root Problems Consistent with Typical Enterprise Asset Management Software Implementations

- Seventy percent (70%) of large Enterprise Asset Management (EAM) initiatives fail in delivering expected benefits and full scope or even to complete the implementation at all
- When EAM programs fall short, it is often because the company has <u>concentrated its efforts on technology</u> <u>upgrades without addressing underlying problems</u>:
  - Processes and procedures
  - Data migration and integration; multiple systems and manual reports
  - Robust training employees well; post-implementation

Implementing change management of this magnitude is a multi-year effort...

Source: PwC - Fulfilling the promise of enterprise asset management.

#### **Current Status and Next Steps**

DEPARTMENT	STATUS/ISSUES	NEXT STEPS
Metrology	Maximo is used to purchase parts; however, due to internal process directions, Remedy is used to manage tickets.	Staff for both Maximo & Remedy working with Metrology to create an automated interaction between both systems.
PPO	Maximo in use for the entry of work ord we worknow not completely paperless.	Need to implement (Pilot) Maximo Anywhere mobile capability as well as re-train staff.
Finance	User errors create reprive error log pries as opposed to preferred proactive notification of a user or department. The purchang system acet works; however, the inability to encumber future anticipated perioses create overdraft errors.	Improve internal processes to result in less error log entries. Consider internal processes and/or system capabilities to notify the department when an entry may need funds held for future work.
Transportation	System in use. System not optimized to minimize user errors (e.g., need Transportation org unit defined separately from PPO). Current limitations with reports create additional work in creating custom reports.	Better internal processes and/or system capabilities, such as bar coding, to remove user error in entering work-order numbers.

## **Lessons Learned**

#### **Change Management**

- Innovators and Early Adopters should be identified
- Project should have phasing with defined milestones
- Need structure for sharing of best practices

#### **Project Management**

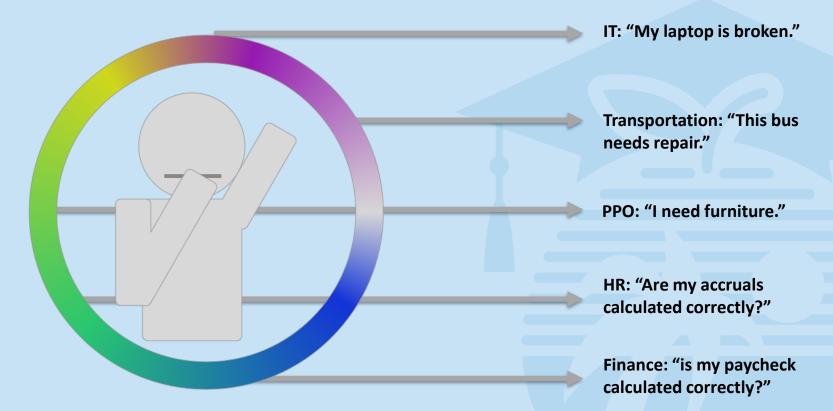
- Need clear business process documentation
- Better leverage external partners' knowledge of industry best practices
- Clearly define user acceptance testing (UAT) process

#### Governance

- Clearly identify accountable champion and responsible parties
- Clearly define advisory structures
- Define clear feedback and change order process

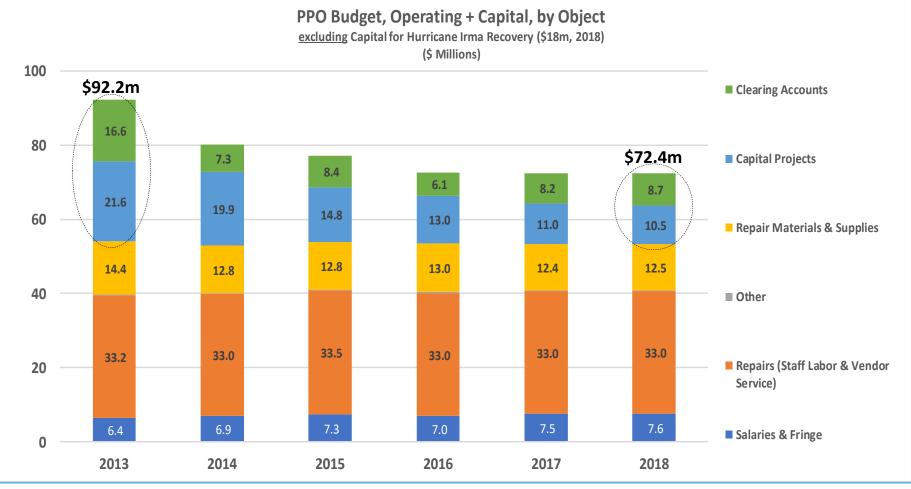
## Vision: Centralized BCPS Operations Support

Where do our Stakeholders go to get help?



How do our stakeholders feel, overall, about our ability to support them? How do we create ONE point of support for all BCPS stakeholders with ONE system of record?

## Historical Review of Budget by Object <u>Highlights Complexity</u>



Source: PPO Finance

## SPOTLIGHT: Recent Progress in "Right-Sizing" PPO Budget but Need to Address Documented Budget

