



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) ⁽¹⁾

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 support and service expectations to collectively empower our students to succeed in tomorrow's world.

Strategic Imperatives

Improve Data Integrity

Align Budget &
Expenditures

Enhance Cross-
department Planning &
Coordination

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

- Involves input from internal analysis and external benchmarking
- Summarizes major risks and issues that may impede improvement efforts
- Identifies the components of sustainable, continuous improvement
- Focuses on core areas necessary to successfully realign a business:
 - People
 - Processes
 - Tools & Systems

Roadmap (Proposed)

- Methodology involves a phased approach to build out the roadmap
- Captures the dependencies required to implement a multi-year plan
- Identifies critical success factors (CSF's) by area of focus
- Priorities developed in collaboration with leadership team with input from key stakeholders
- Sequence driven by prioritization and dependencies

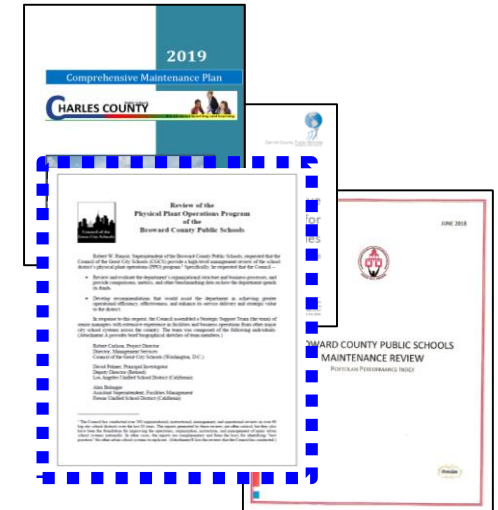
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- **Assessment Summary**
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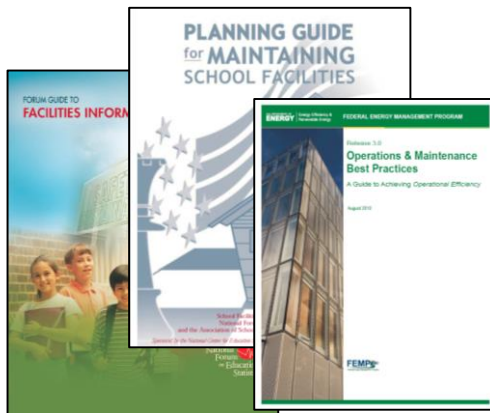
HIGHLIGHT: Deep Dive Assessment Involved Input from Internal Analysis and External Benchmarking

K-12 Best Practice and Plan Reviews

Individual and Group Interviews

[illegible]

National Guides and Best Practices



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

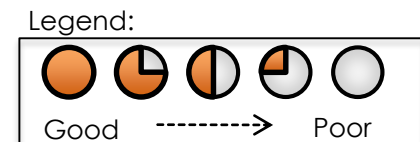
Root Cause to Address

- ❑ Unavailability of consistent and reliable data
- ❑ Limited budget planning and alignment
- ❑ Cross-departmental planning and coordination

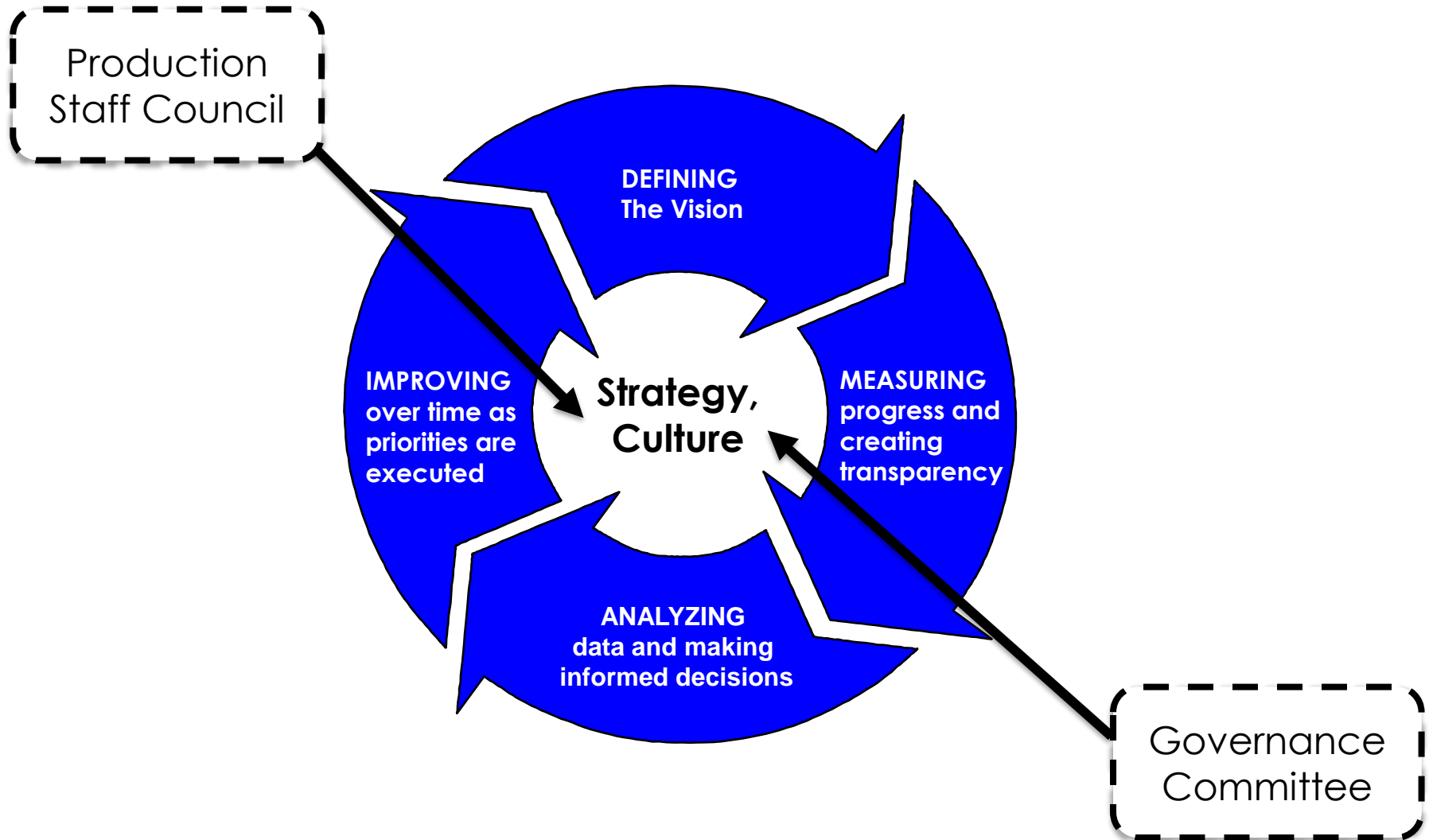
Core Area Capability Assessment Highlights

Foundation to Leverage and Areas to Strengthen

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



Leveraging Existing Foundation—A Continuous Improvement Approach Will Strengthen Gaps

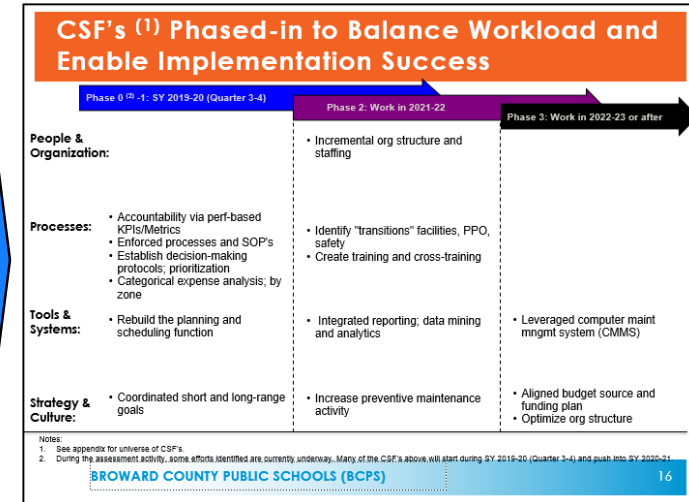


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Building Momentum Through Immediate Efforts as Multi-Year Roadmap is Developed

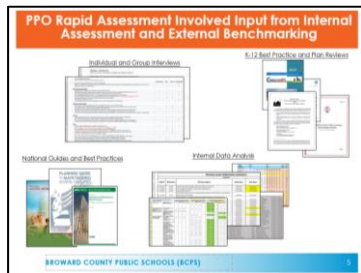
| School Year 2019/20 Work-in-Progress | Status |
|---|-------------|
| Monitor ongoing customer satisfaction | Not Started |
| Manage and partner with unions | In Progress |
| Relationships with production staff/council | In Progress |
| Align PPO and District vision/strategies | In Progress |
| Service 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 |



Methodology: Phased Work to Build Multi-Year Roadmap

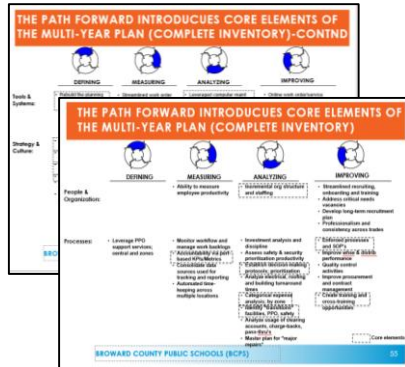
1

Build and synthesize the fact base



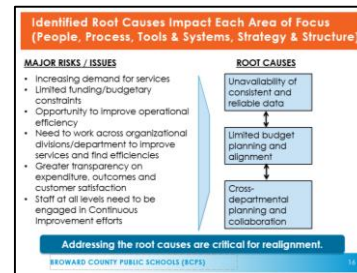
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Define the components of Continuous Improvement by core Area of Focus



3

Identify major risks/ issues that may impede realignment efforts



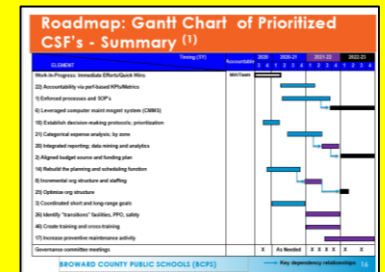
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Prioritize CSF's by impact

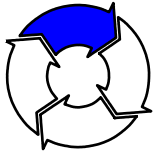


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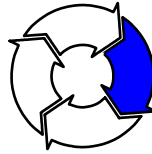
Lay out the roadmap



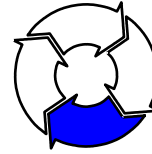
Prioritized Core CSF's ⁽¹⁾ Facilitates Creation of the Multi-Year Roadmap



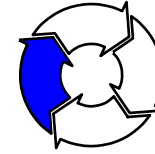
DEFINING



MEASURING



ANALYZING



IMPROVING

People & Organization:

- Incremental organizational structure and staffing
- Integrated reporting; data mining and analytics

Processes:

- Accountability via performance-based KPIs/Metrics
- Establish decision-making protocols; prioritization
- Categorical expense analysis; by zone
- Identify "transitions" facilities, PPO, safety
- Enforced processes and Standard Operating Procedures (SOP's)
- Create training and cross-training

Tools & Systems:

- Rebuild the planning and scheduling function
- Leveraged Computer Maintenance Management System (CMMS)

Strategy & Culture:

- Aligned budget source and funding plan
- Coordinated short- and long-range goals
- Increase preventive maintenance activity
- Optimize organizational structure

CSF's ⁽¹⁾ Phased-in to Balance Workload and Enable Implementation Success

Phase 0 ⁽²⁾ -1: School Year 2019/20 (Quarter 3-4)

Phase 2: Work in 2021/22

Phase 3: Work in 2022/23 or after

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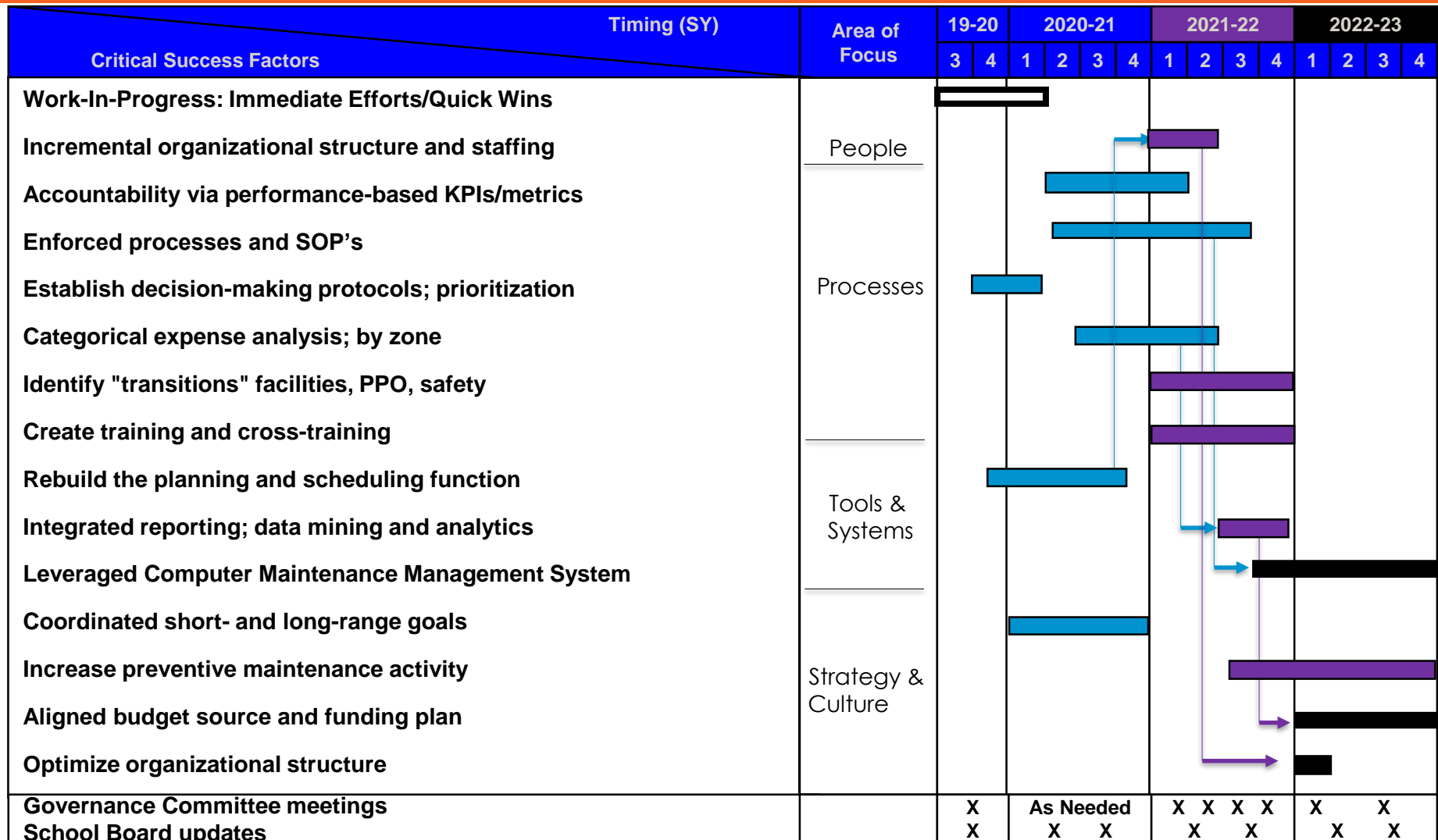
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- Optimize organizational structure

Notes:

1. See appendix for universe of CSF's.
2. 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 (1)



HIGHLIGHT: Preliminary Immediate and Short-Term Resource Requirements

| | | SY 2019/20 | SY 2020/21 | | | |
|--------------------------------------|---|------------|------------------|----|--------------|----|
| | | Q4 | Q1 | Q2 | Q3 | Q4 |
| Planning & Scheduling ⁽¹⁾ | | | | | | |
| Benefits | <ul style="list-style-type: none"> • Improved productivity via staff scheduling and dispatching • Repurpose management resources to higher value tasks; improve effectiveness in other roles • Improve zone-by-zone and production categorical work-order monitoring and reporting • Initiate career path; cross training opportunities | | | | | |
| | | | | | | |
| Est. Cost/ Resources | | | (\$'s) | | FTE's | |
| | Staffing (annual, recurring) ⁽¹⁾ | | \$480,000 | | 6 | |
| | 3 months - Temporary Services (one time) – Q4, SY 2019/20 ⁽²⁾ | | \$50,000 | | 4-6 | |
| | Other | | | | | |
| | Total ⁽³⁾ | | \$530,000 | | 10-12 | |

Note:

1. Planning & scheduling staffing estimates reflects minimal headcount required to 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.

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

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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

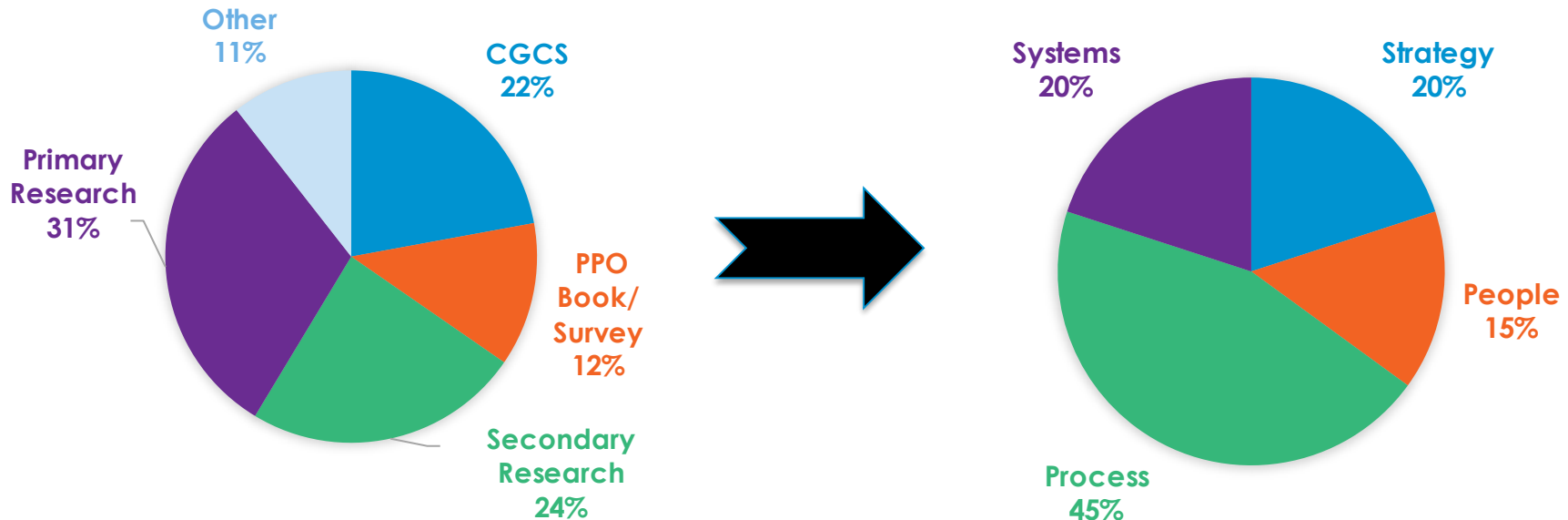
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Appendices: Roadmap CSF's

Critical Success Factors Analysis

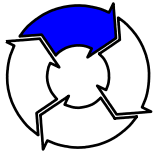
Review of multiple inputs provided a **balanced sources of information** to help identify best practices and drive prioritization efforts...

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

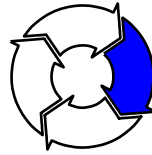


A total of thirty-nine (39) CSF's were identified. The prioritized CSF's were consistent findings across the majority of input sources.

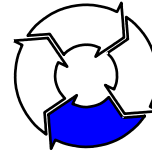
The Path Forward Introduces Core CSF's of the Multi-Year Plan(Complete Inventory)-



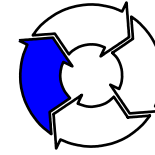
DEFINING



MEASURING



ANALYZING



IMPROVING

People & Organization:

- Ability to measure employee productivity

- Incremental organization structure and staffing

- Streamlined recruiting, onboarding and training
- Address critical needs vacancies
- Develop long-term recruitment plan
- Professionalism and consistency across trades

Processes:

- Leverage PPO support services; central and zones

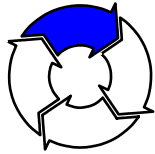
- Monitor workflow and manage work backlogs
- Accountability via performance-based KPIs/Metrics
- Consolidate data sources used for tracking and reporting
- Automated time-keeping across multiple locations

- Investment analysis and discipline
- Assess safety & security prioritization productivity
- Establish decision-making protocols; prioritization
- Analyze electrical, roofing and building turnaround times
- Categorical expense analysis; by zone
- Identify "transitions" facilities, PPO, safety
- Analyze usage of clearing accounts, charge-backs, pass-thru's
- Master plan for "major repairs"

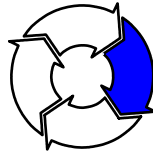
- Enforced processes and SOP's
- Improve warehouse & distribution performance
- Quality control activities
- Improve procurement and contract management
- Create training and cross-training opportunities

Core CSF's

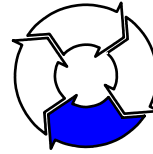
The Path Forward Introduces Core CSF's of the Multi-Year Plan(Complete Inventory)-continued



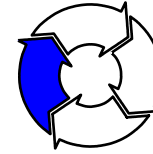
DEFINING



MEASURING



ANALYZING



IMPROVING

Tools & Systems:

- Rebuild the planning and scheduling function

- Streamlined work order process/system
- Automated, user-friendly maintenance reporting

- Leveraged computer maint mgmt system (CMMS)
- Integrated reporting; data mining and analytics
- Inventory of assets at all schools; database

- Online work order/service requests

Strategy & Culture:

- Aligned budget source and funding plan
- Coordinated short- and long-range goals
- Increase preventive maintenance activity
- Optimize org structure
- Goals: short-, medium- and long-term
- Assess large-scale Needs Assessment

- Benchmark of staffing models for other large K-12 districts

- Capital construction resource specialists

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 concentrated its efforts on technology upgrades without addressing underlying problems:
 - 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 orders. However, workflow not completely paperless. | Need to implement (Pilot) Maximo Anywhere mobile capability as well as re-train staff. |
| Finance | <p>User errors create repetitive error log entries as opposed to preferred proactive notification to the user or department.</p> <p>The purchasing system does work; however, the inability to encumber future anticipated expenses create overdraft errors.</p> | 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

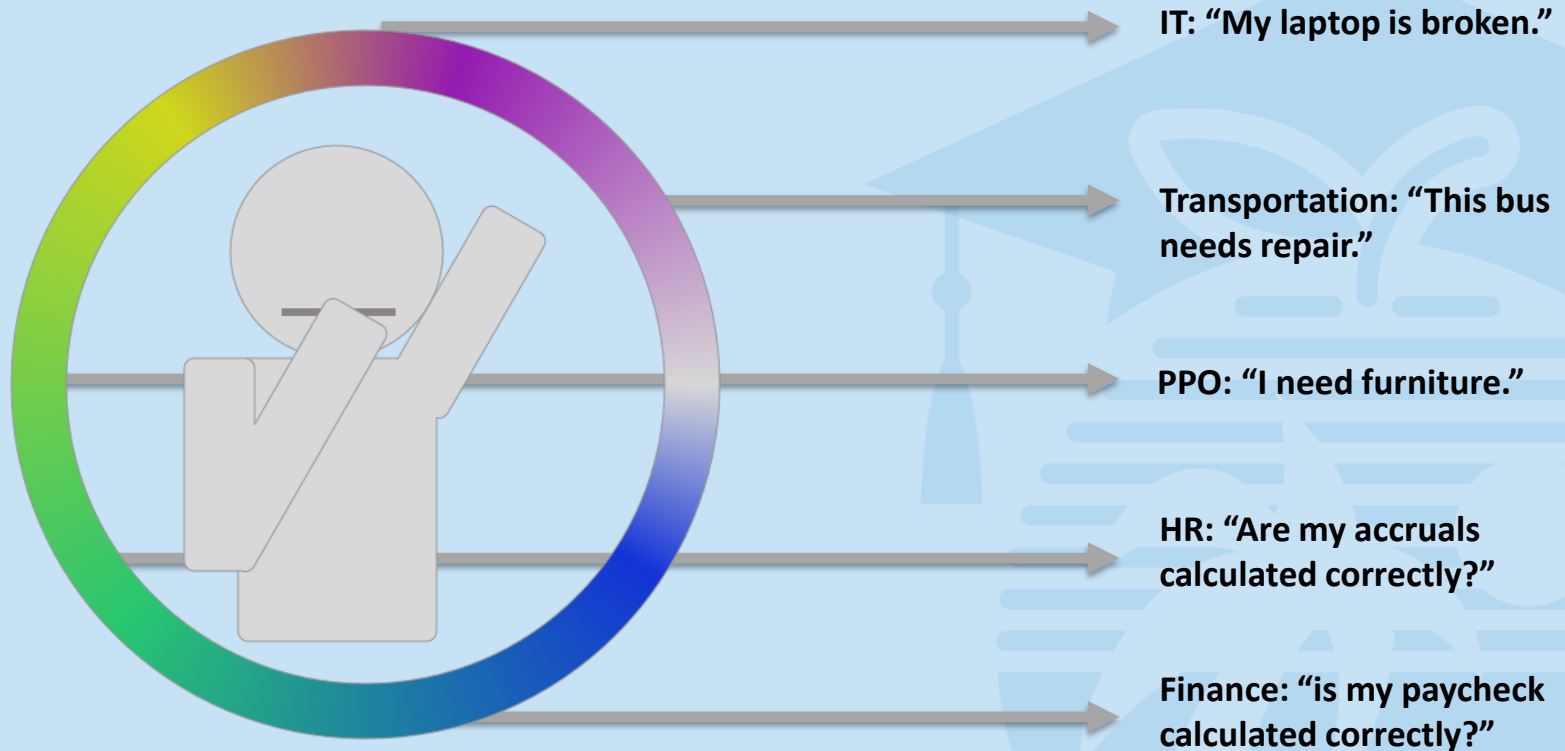
- Need clear business process documentation
- Better leverage external partners' knowledge of industry best practices
- Clearly define user acceptance testing (UAT) process

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?

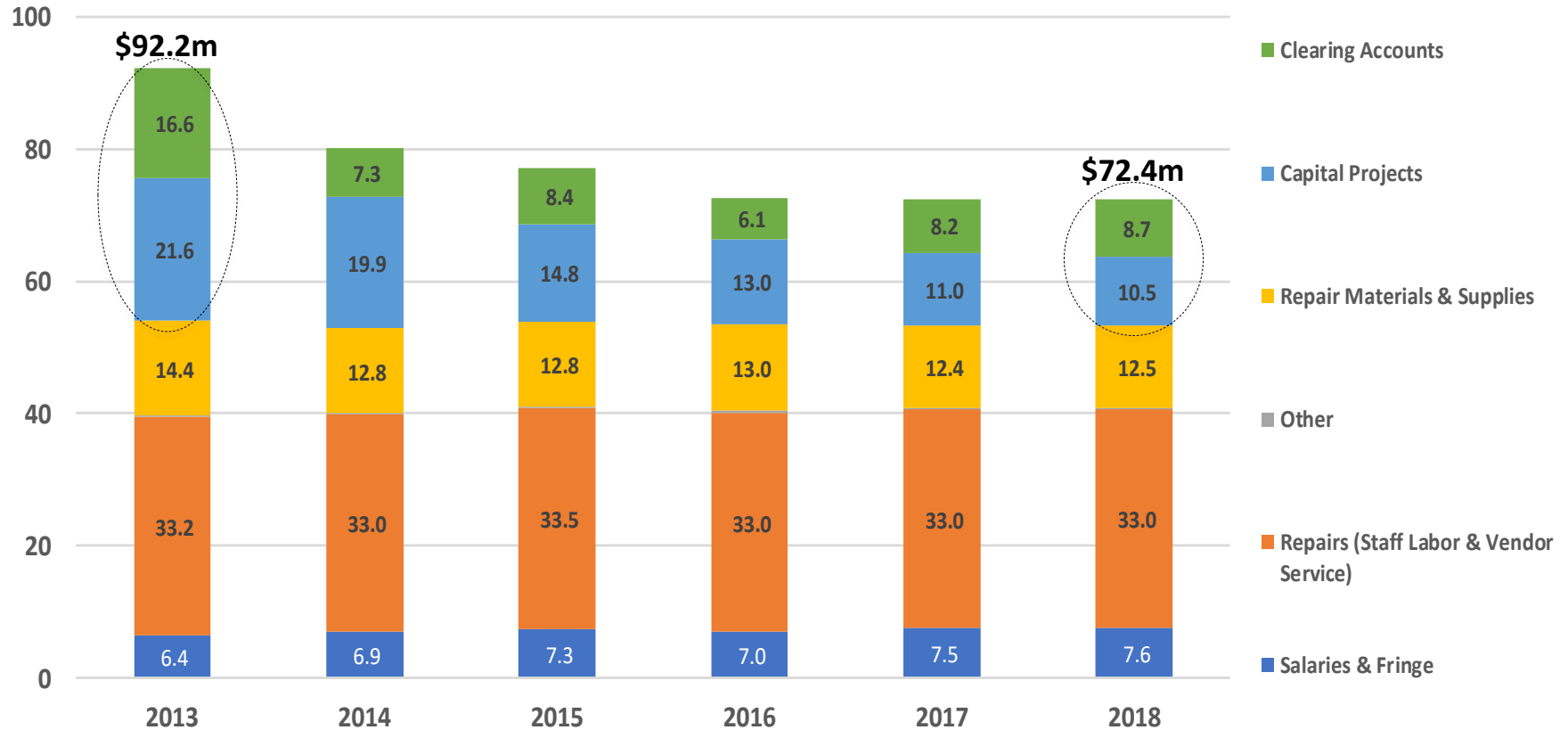


How do our stakeholders feel, overall, about our ability to support them? How do we create ONE point of support for all BCPS stakeholders with ONE system of record?

Historical Review of Budget by Object

Highlights Complexity

PPO Budget, Operating + Capital, by Object
excluding Capital for Hurricane Irma Recovery (\$18m, 2018)
(\$ Millions)

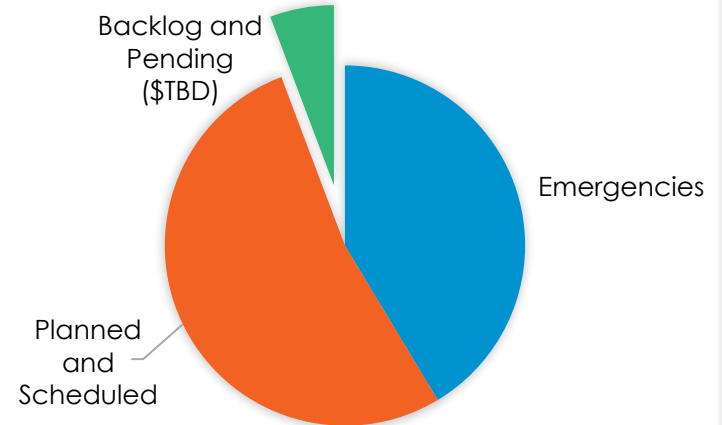
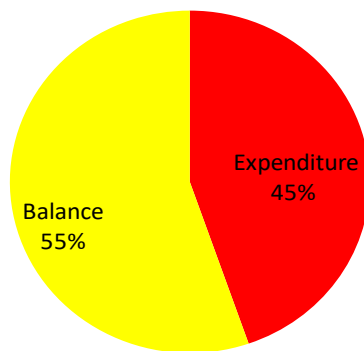


Source: PPO Finance

SPOTLIGHT: Recent Progress in “Right-Sizing” PPO Budget but Need to Address Documented Budget

| Category | General Fund Budget for FY 2020 As of 12/02/2019 | | | |
|--------------------------------------|--|-------------|-------------------|-------------------|
| | Appropriations | Commitments | Expenditures | Balance |
| General Fund Sub Total | 71,906,888 | - | 32,065,847 | 39,841,041 |
| Capital Fund Budget As Of 12/02/2019 | | | | |
| Category | Appropriations | Commitment | Expenditure | Balance |
| Capital Fund Salary Total | 2,464,220 | | 1,173,602 | 1,290,618 |
| Grand Total | 74,371,108 | - | 33,239,450 | 41,131,658 |

Total Budget for FY 2020



Source: Capital Budget Department. As-of 12/2/19.