



# Boston Public Schools Operational Review

April 2015

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**This report was done as part of a review at the request of the Mayor's office in collaboration with the district. Findings are preliminary and indicate potential options for leadership consideration**

### What this work IS



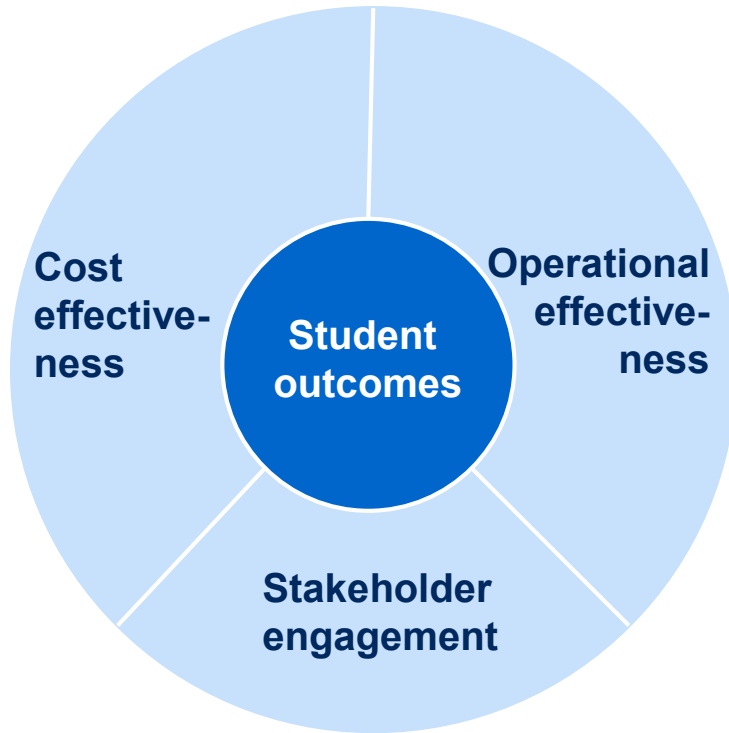
- Exploration of potential options to improve student achievement, lower district costs and drive operational efficiency
- Estimates of ranges of cost reductions to identify magnitude of potential reinvestments made available through various options
- Collaborative idea generation and discussion with district to bring insights to light

### What this work IS NOT



- These are not recommendations
  - Further analysis is required to identify specific opportunities and to implement
  - Public conversations about tradeoffs required for many options
  - Strategic process to weigh costs and benefits of options would be needed to transform to recommendations
- Exact analysis to predict how much money the district will have to reinvest to support students

The core focus of this review is on student outcomes in pursuing improved operational effectiveness and reduced costs, all while engaging and considering the needs of a broad range of stakeholders



### Multiple considerations are essential

- Ultimately, **improved student outcomes is the goal** of any effort to reduce cost and inefficiency and **reallocate those funds where they can do more** for students
- Beyond students, considering the **impact on teachers, parents, and other stakeholders is critical** to identifying the most beneficial and feasible improvements

Opportunities for BPS have been prioritized while keeping all of these factors in mind



# Glossary of terms

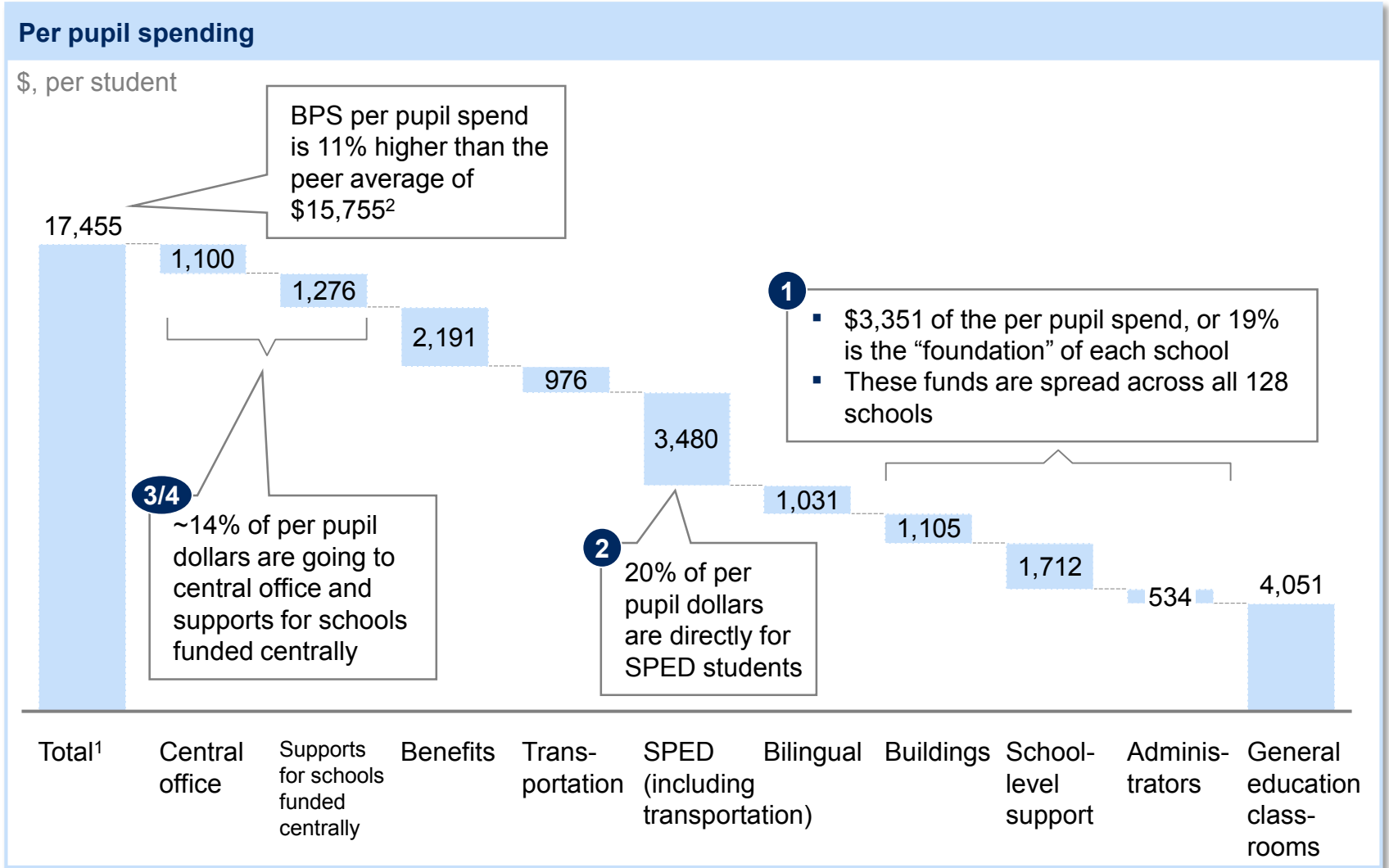
Term	Definition
English Language Learner (ELL)	Students whose native tongue is not English and have not achieved fluency in English appropriate with their grade level
Students with Disabilities (SWD)	Students who have been formally evaluated by BPS and have been found to have a disability that requires additional resources to meet the student need, beyond a traditional general education setting
Inclusion	Inclusion classrooms are classrooms that support a mix of the general education and special education populations and is research proven to be a better approach to special education for the entire student population
Individualized Education Plan (IEP)	When a student is classified as needing Special Education, an IEP is designed by the school team to meet that student's needs
Occupational Therapy / Physical Therapy (OTPT)	OT is individualized support for students to help them acquire basic skills for daily living (e.g., self-grooming, self-feeding, self-dressing); PT is individualized support for developing motor skills (e.g., walking, jumping, lifting)
Food and Nutrition Services (FNS)	FNS is the department responsible for delivering food to all BPS students
Office of Instructional and Information Technology (OIIT)	OIIT is the BPS department responsible for delivering the technological services and hardware to the employees and the students of the district
Pull-out vs. push-in	Current special education practices in BPS require the "pulling out" of students from general education settings to receive additional resources; a "push in" method leaves the student in the general education classroom, while ensuring that the resources meet her/him where they are

# Executive summary

- **BPS is a highly diverse public school system**, with demographics much different from the City of Boston and SWD and ELL populations that outpace state and national averages
- While BPS pushes 55% of its funds to the schools, only 36% reaches all students in the classroom<sup>1</sup>; **BPS has a significant number of underutilized buildings and classrooms**, spreading funds thin across the system and lessening the impact of resources on a per pupil basis
- After a broad scan, the Steering Committee focused the work against four potential areas of opportunity
  - 1) To concentrate resources more effectively for students, BPS can find ways to **right-size the district** to reflect current and projected BPS enrollment
  - 2) Over a quarter of the BPS budget goes towards Special Education, meaning that **small potential changes in student classification can translate to large funds for reinvestment and better learning environments** for students. A **move towards inclusion, currently underway, has a 12-year horizon** that – if executed well – will improve special education student outcomes and could potentially lead to more funds available for reinvestment
  - 3) As BPS transitions to a new superintendent and potentially addresses overextension issues, the BPS **central office will have an opportunity to address some of the misaligned parts** of the organization, driving performance and...
  - 4) ...potentially capturing operational **efficiencies in other areas like transportation, food services and maintenance**

<sup>1</sup> BPS FY15 General funds

# BPS' per pupil spend is higher than peer averages - 36% of that spend gets to all students in the classroom



1 This excludes out of district tuition dollars, as those students are being educated outside of district, and grants

2 Boston is more in-line when Cost of Living adjustments are made, or only compared to Northeastern cities, but still trends high



# BPS Potential Opportunities

## Key facts

1

### Opportunity to consolidate schools

~\$1.7 – 2.2m/yr  
 plus ~\$4m one-time per school

- BPS enrollment down 17% over last 20 years and 50% since 1970s
- BPS currently has ~93K total physical seats with only ~54K seats filled
- The system is overextended with declining dollars stretched over same number of buildings and declining student count
- Consolidating schools could reduce annual spend by ~\$1.7-2.2M per school consolidated (~\$700K from non-teaching changes)
- Building sales could bring additional one-time ~\$4M per school consolidated, while avoiding additional, unneeded CapEx or could generate substantial ongoing income from leasing redundant properties
- Right-sized system would concentrate more dollars in fewer schools, improving quality and breadth of student resources

2

### Opportunity to revisit and potentially accelerate SPED reforms

~\$17-21M in FY16<sup>1</sup>  
 and ~\$40-50M  
 longer-term annually

- Moving Boston in-line with state and national averages can help improve student outcomes and translates to ~\$5M saved for every % point decline
- Shifting provision of paras and specialists<sup>2</sup> can yield reductions of \$15-\$20M, but requires discussions with stakeholders
- The financial implications of the move to inclusion, already underway, are not well understood and need to be analyzed more deeply given the potential range of impact
- Revisiting the current model in light of a deeper financial understanding and considering other models that other systems have found beneficial for their students could result in cost reductions of \$40-50m on an ongoing basis versus today's costs

3

### Opportunity to reorganize central office and non-teaching staff

~\$25-30M ongoing reduction

- Non-teaching staff to student ratios across the system are higher than peers and historic BPS levels, ~\$25-30M may be possible if staff levels realigned
- In early 2015, Superintendent had 13 direct reports, making system goal-setting, alignment and focus difficult. System goals were not tracked systematically, with a deep need for performance management systems to align central metrics that matter (e.g., number of students eating lunch, buses on time) with student outcomes and manage staff and system performance better. Incoming administration actively working to improve in these areas.

4

### Opportunities to improve operations

~\$10-25m/yr

- Indicators of transport savings: BPS bus riders average a 0.16 mile walk to their bus stop, 59% of students walk less than a 0.25 mile, spend is ~10% of BPS budget, 20% of routes serve just 3% of students
- Moving to district-wide maintenance contract would align incentives with contractor and could save ~\$5M in annual maintenance costs<sup>2</sup>
- BPS is currently spending more per pupil on contracted meals, which student taste tests view as lower quality, and can improve participation, changes in delivery and participation could capture ~\$2-8M

▪ **These funds provide a tremendous opportunity to reinvest in ways that improve outcomes for all students**

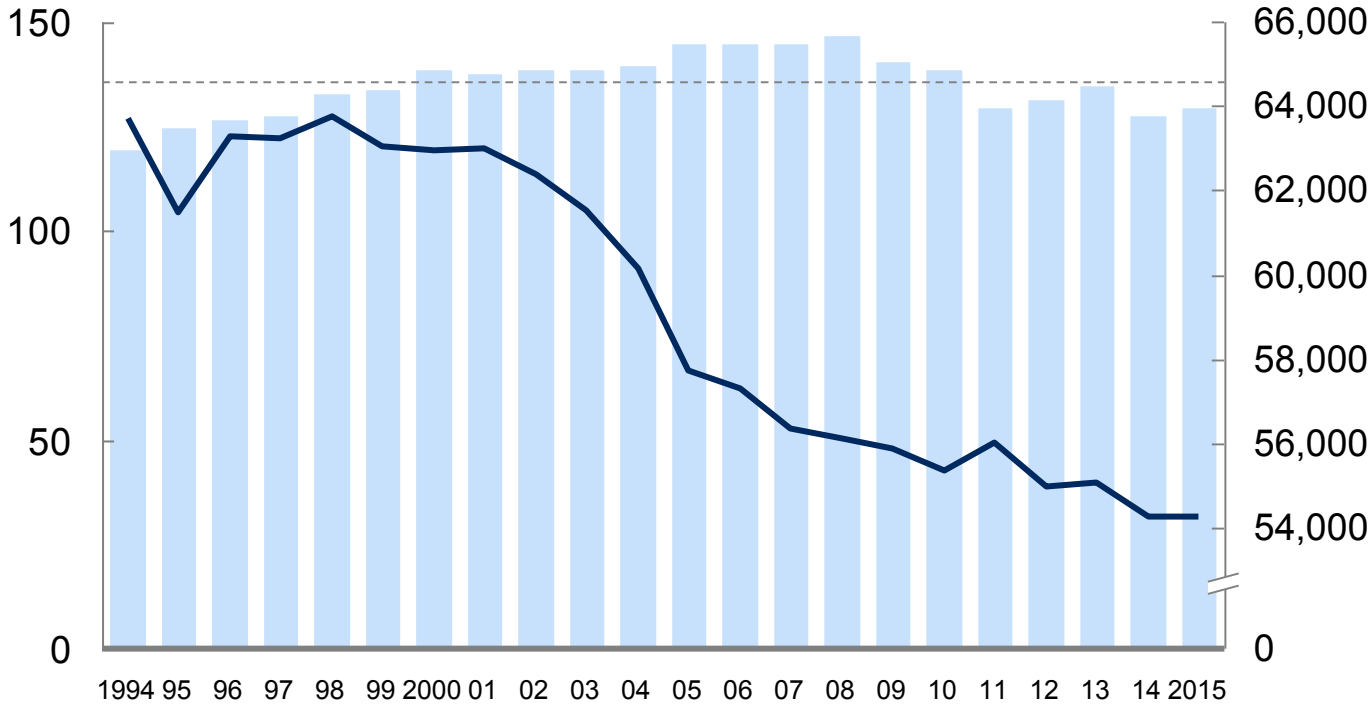
<sup>1</sup> While FY16 budget has been approved, some FY16 opportunities could still be pursued

<sup>2</sup> Switching providers of services would be subject to the consideration of any agreements currently in place and the associated decision-making processes

# 1 Since 1994, BPS student population has declined 17%, but the number of schools has remained relatively constant

## Schools vs. student population

# of school programs, # BPS students



- **BPS may be able to reduce its footprint** based on the large difference between its enrollment and its capacity
- Projections suggest **no additional space will be needed** in the future

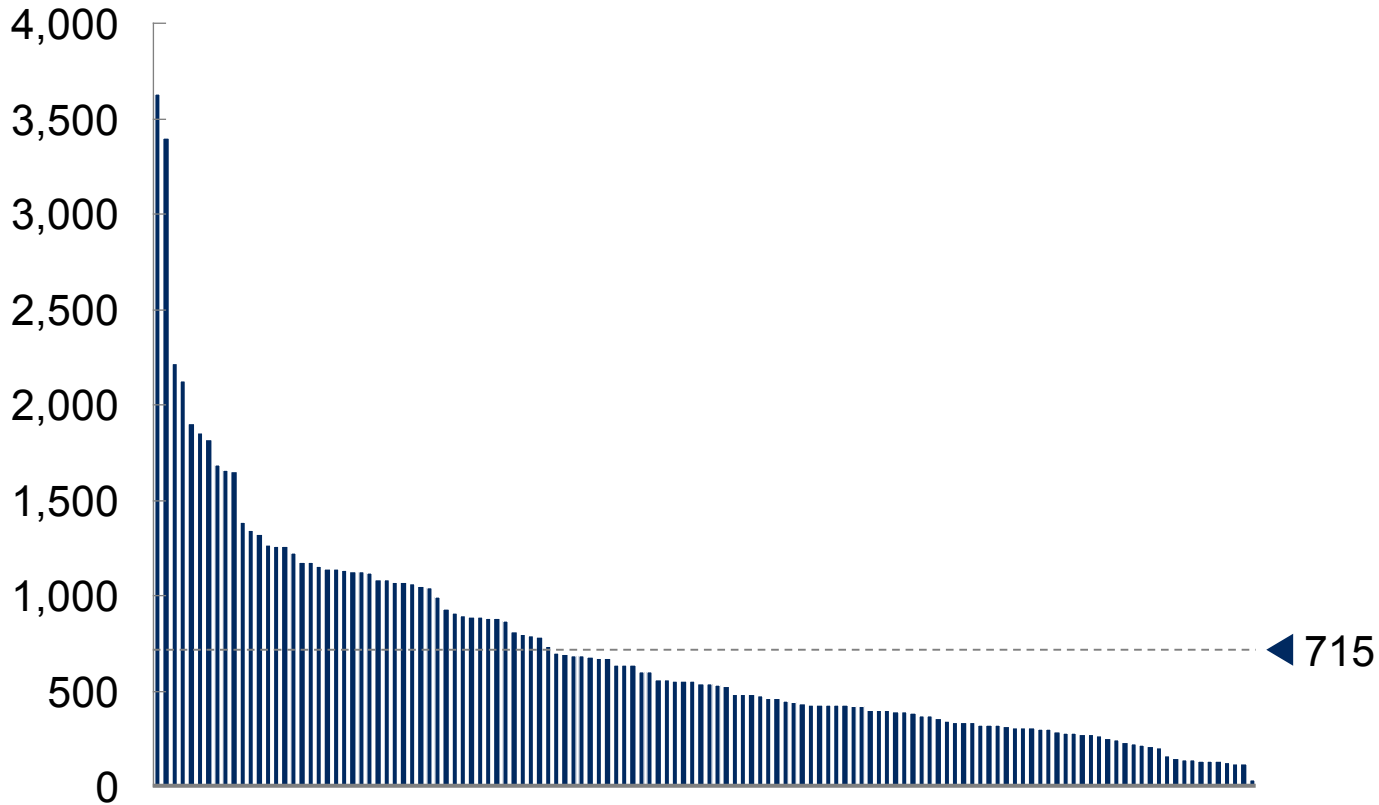
**With students decreasing, the funding for each student must continue to cover the system’s “fixed costs” including the buildings but also the principals and school staff which are present at each location**



**1 The current 128 schools have enough physical seats to hold over 90,000 students, though BPS decisions on class size limits reduce the usable capacity below this figure**

### School capacities

Number of physical “seats”



- This includes the total count of classroom seats, without counting resource rooms
- The average school has 715 seats
- The total capacity is 92,950

NOTE: This reflects all schools, including BPS charters

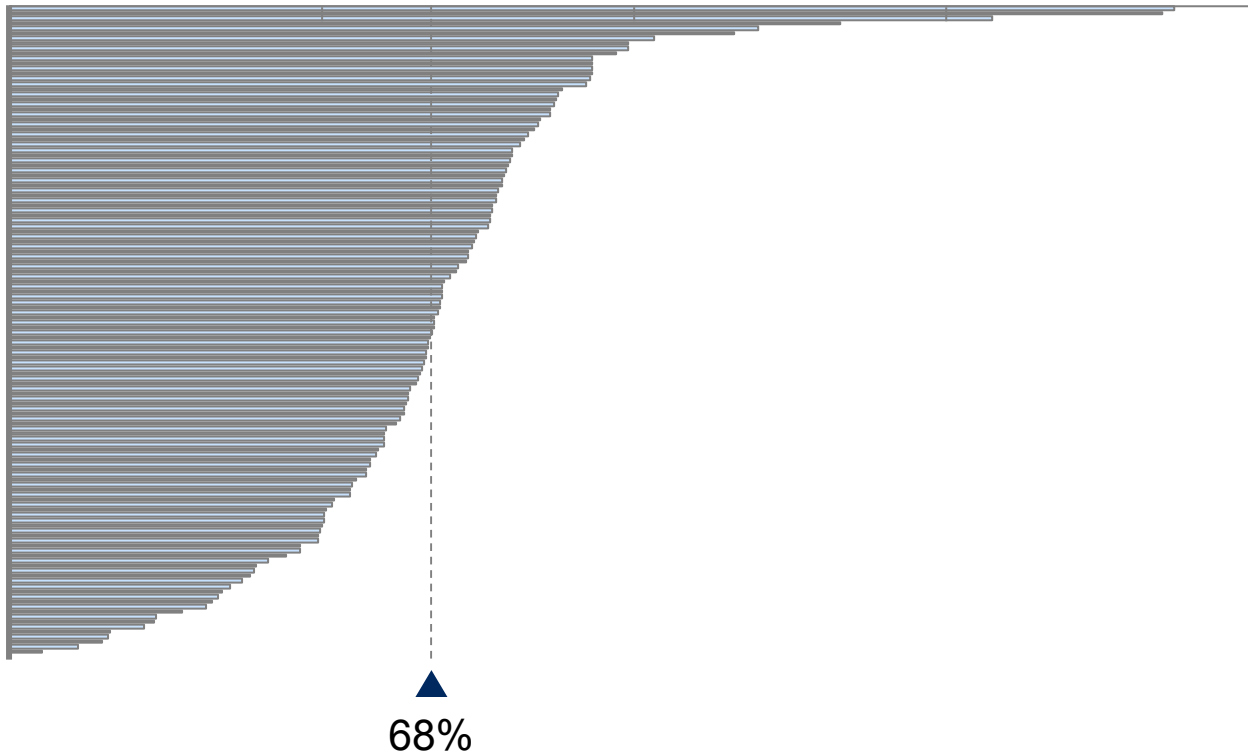
METHODOLOGY: Rooms and expected student capacities per room were counted by the facilities team.

# 1 The extra seats are mostly well distributed across the district with an average of 68% utilization

## School facility capacity utilization<sup>1</sup>

Percent of "seats" filled

0%                      50%                      100%                      150%                      200%



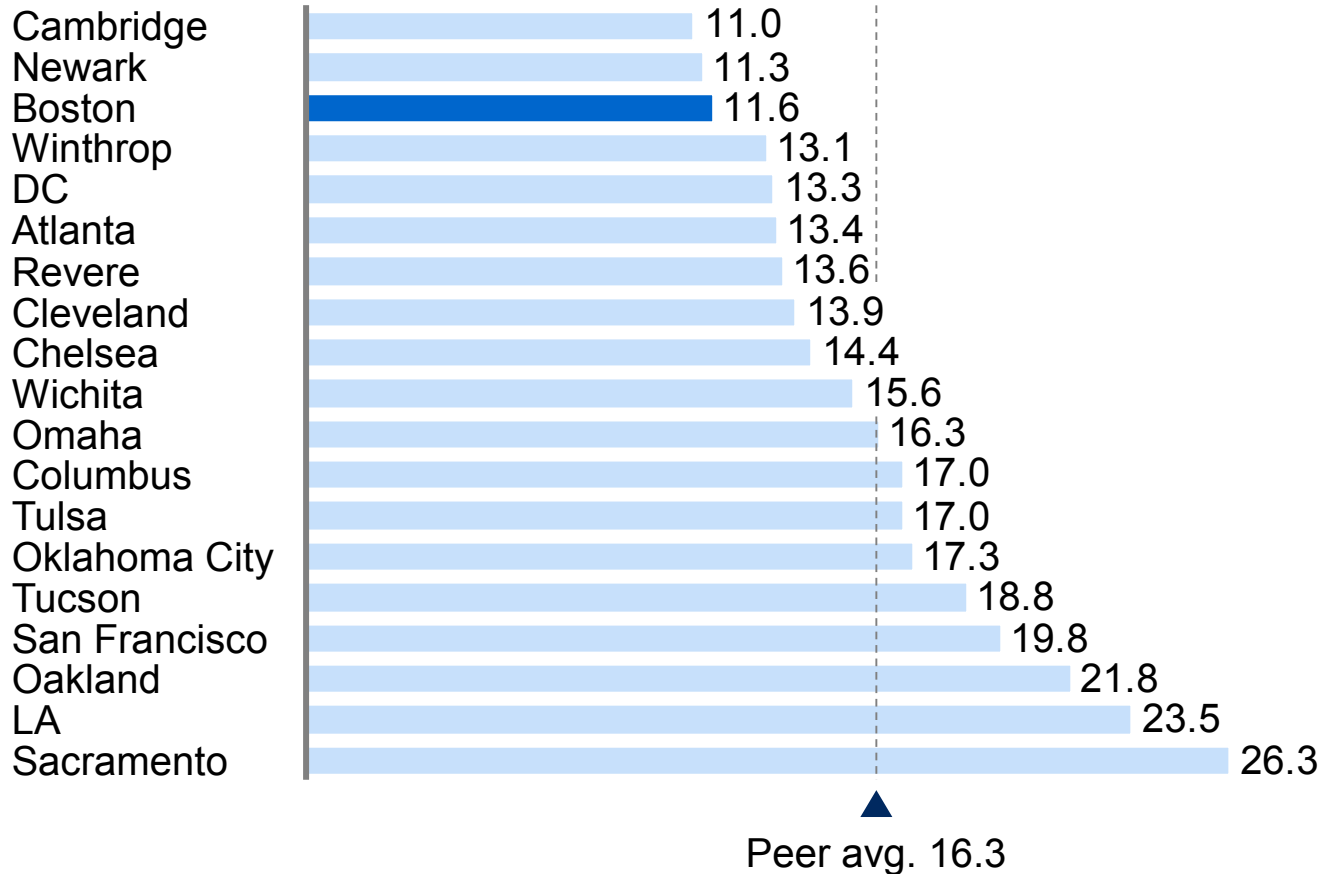
- Half of the schools are under 2/3rds utilized
- Some schools are being very overutilized based on Facilities' assessment of available seats

<sup>1</sup> Utilization calculated based on the number of students enrolled in a building vs. the theoretical capacity of the building which does not take into account BPS' approach to student teacher-ratio or the use of resource classrooms; this reflects all schools, including BPS charters

# 1 Declining enrollment coupled with a stable footprint drives a lower student-teacher ratio than peers

## Average student-teacher ratio<sup>1</sup>

Ratio of total students to total teachers



- BPS' average student-teacher ratio is ~12; most peer district ratios are higher
- If BPS were to meet peer average, they **would carry ~1,300 fewer teachers, allowing for potential reinvestment of ~\$90-110M**
- Any staffing changes **would need to be considered vis-à-vis student interests**

<sup>1</sup> These numbers include all students (e.g., SPED, ELL) across the peer set, so figures are comparable; BPS Facts At a Glance reports an average class size of 17.7 in general education, which is below state average of 18.8 and the contractually agreed to sizes ranging from 22 in PK-2 to 31 in grades 10-12

# 1 The non-teaching staff funds freed up would likely be consistent with what other systems have experienced

## Other districts

Four other school districts that consolidated schools saw an average cost reduction of **\$580K per school per year**

- Milwaukee: \$330K per school per year with 20 closures
- Washington D.C.: \$726K per school per year with 23 closures
- Pittsburgh: \$668K per school per year with 22 closures
- Detroit: \$593K per school per year with 59 closures

Pew's research into savings found, "How much money is saved by closing schools **depends in part on the degree to which closings are accompanied by job reductions...**"<sup>1</sup>

<sup>1</sup> Closing Public Schools in Philadelphia - Lessons from Six Urban Districts, the Philadelphia Research Initiative, PEW Charitable Trusts, October 19, 2011, page 6

# 1 Consolidation could allow BPS to redirect ~\$1.7M per school before property sales

	Description	Prior cost	Expected cost after consolidation	Potential reinvestment made available
<b>Consolidate classroom staff</b>	<ul style="list-style-type: none"> <li>With fewer classrooms, BPS could commensurately reduce teaching staff</li> <li>The average teacher – student ratio goes from 1:12 to 1:13 or 1:16</li> </ul>	\$3.8m	~\$2.3-2.8m	~\$1.0-1.5m
<b>“Foundation” for school staff</b>	<ul style="list-style-type: none"> <li>The “foundation” money<sup>2</sup> is no longer needed by the school</li> </ul>	\$200k	~\$0	~\$200k
<b>Average custodial support</b>	<ul style="list-style-type: none"> <li>Custodial support is no longer required at the building but may increase by 30%<sup>1</sup> at receiving schools</li> </ul>	\$166k	~\$50k	~\$116k
<b>Average building maintenance</b>	<ul style="list-style-type: none"> <li>Maintenance is no longer required but may increase by 30%<sup>1</sup> at receiving schools</li> </ul>	\$191k	~\$57k	~\$134k
<b>Average utilities</b>	<ul style="list-style-type: none"> <li>The closed buildings no longer needs to spend on utilities (including electric, gas, water, and telecom)</li> </ul>	\$260k	~\$0	~\$260k
<b>Total</b>				<b>~\$1.7- 2.2m</b>

<sup>1</sup> Assumed based on interviews

<sup>2</sup> "Foundation" money refers to the budget allocation that each school automatically receives for basic infrastructure/operation(e.g., to cover principal costs)

# 1 While the new funds will not be easy to unlock, they can help bring the promise of a better future for BPS

- Run-rate reductions garnered from consolidating schools

- One-time cash from property sales or alternative uses of consolidated schools

## Potential areas that could be funded

- Expanded before- and after-school programming for students in all schools

- Guaranteed set of electives or specials at all schools (e.g., Physical Education, Art)

- Greater portfolio of teacher supports and resources (e.g., instructional coaches, first-year mentors, counselors)

- Funds to build a state-of-the-art high school and state-of-the-art lower schools

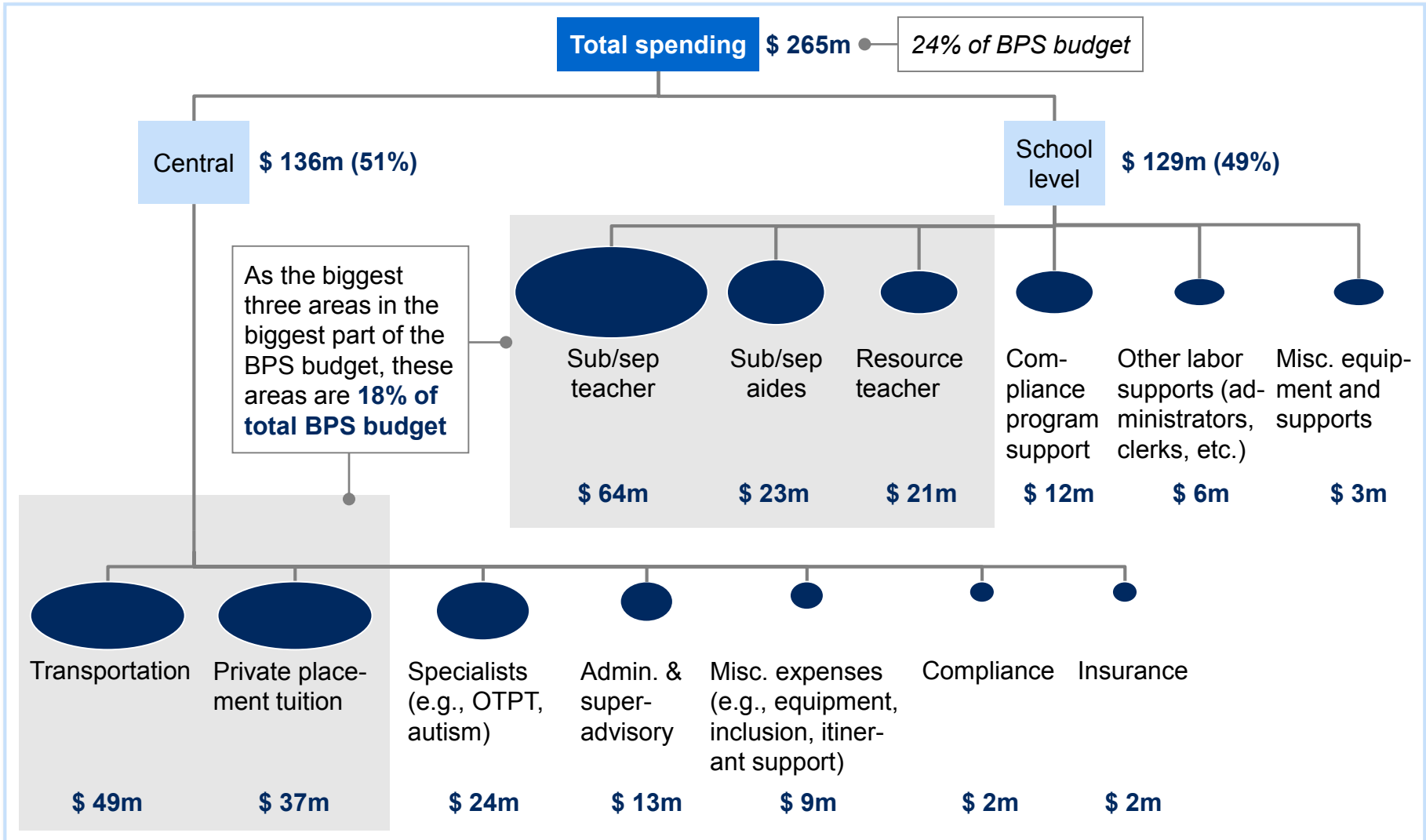
**This illustrates potential areas that could be funded through realized reductions. The actual use of any funds saved would be decided in the same manner in which budgets are developed and funds are allocated today.**



# 1 Additionally, BPS could recognize many other positive gains from consolidating schools

Potential gain	Description
True neighborhood schools	<ul style="list-style-type: none"> <li>Parents, as evidenced in focus groups, highly value students remaining with the same neighborhood-based class throughout years of schooling</li> </ul>
Consolidation of lowest-performing schools	<ul style="list-style-type: none"> <li>The district could move students from Level 4 and Level 5 to higher performing schools, improving the environment for those students and raising academic achievement in the district</li> </ul>
Better targeting for Central Office support	<ul style="list-style-type: none"> <li>By consolidating schools, the Central Office would have fewer schools to cover with various forms of support, helping to prevent its resources from being stretched too thin</li> </ul>
Increased instructional coherence across the system	<ul style="list-style-type: none"> <li>As part of the process of school consolidation, grade level configurations, programming, and feeder patterns could be made more consistent and coherent, improving system functioning for parents, students, and staff</li> </ul>
Reduction in transportation complexity	<ul style="list-style-type: none"> <li>If school consolidations follow the neighborhood scheme, it would further reduce the need for transportation services in the district</li> </ul>
Avoidance of building maintenance expenditures	<ul style="list-style-type: none"> <li>With up to \$600M in deferred maintenance on the books, consolidating schools could avoid this costly expenditure and also halt altogether potential investments that would be planned for existing buildings</li> </ul>
Revenues from property sales/leasing buildings	<ul style="list-style-type: none"> <li>Many closed school buildings could be repurposed to support the community, or be sold/leased to generate revenue to support students</li> </ul>

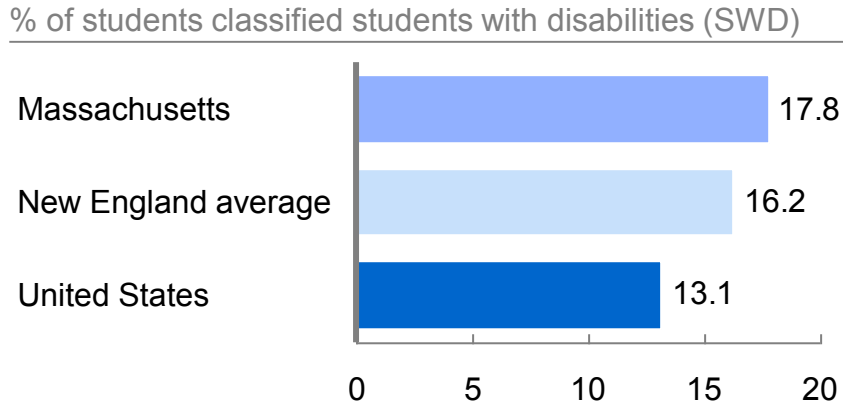
## 2 SPED is ~25% of the BPS spend and 73% of its costs are in 3 areas: classroom staff, transportation and private placements



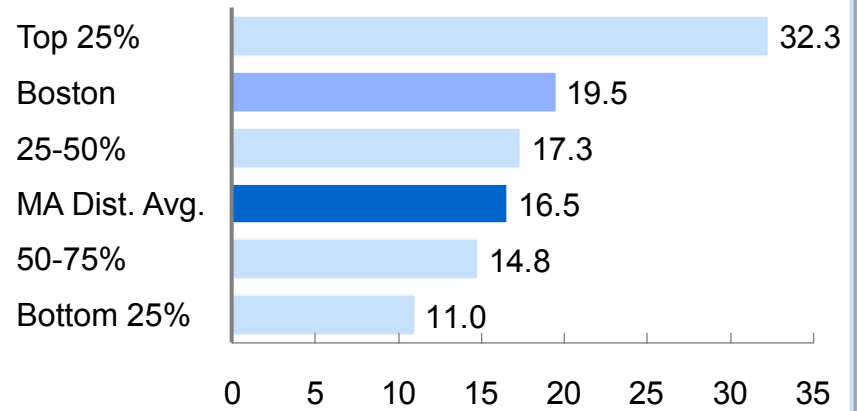


## 2 BPS SPED classification is above MA average, well above nation

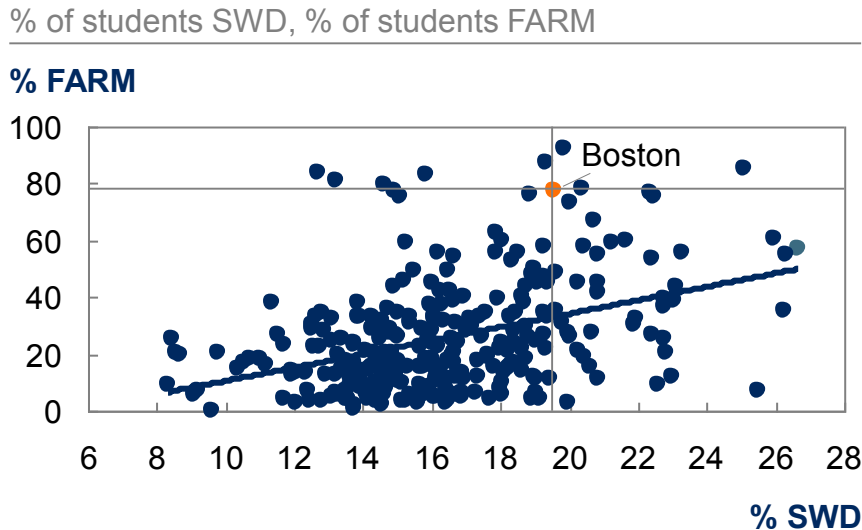
### State classification rates, 2011



### Massachusetts district classification rates, 2015



### SWD vs. Free and Reduced Meal (FARM) rates by Mass. District, 2015



### There are districts with similar challenges and lower SPED %

- Districts with equal or greater FARM, but lower SWD:
  - Revere
  - Everett
  - Brockton
  - Lynn
  - Chelsea
  - Springfield

## 2 BPS is increasing special education inclusion, a strong research-based decision designed to benefit students with disabilities

### Inclusion is good for both special education and general education students

- A 2014 state of Massachusetts report found that across the state, “students with disabilities who had **full inclusion placements appeared to outperform** similar students who were not included to the same extent in general education classrooms with their non-disabled peers.”<sup>1</sup>
- A 2013 BPS study found that general education students in inclusion classrooms performed 1.5x better on ELA MCAS and 1.6x better on Math MCAS<sup>2</sup>
- BPS had just 57% of SWD in inclusion classrooms in 2013

### BPS is expecting to move to full inclusion as a district by 2019

- BPS aspires to move up to 80% of SWD into inclusion classrooms, leaving just those with disabilities that make inclusion inappropriate in substantially separate classrooms, **movement of roughly 3,400 students**
- The BPS plan is to create more inclusion classrooms at the K-1 and K-2 levels, to grow inclusion from the bottom, while moving K-5 classrooms into inclusion a zone at a time, at the rate of **one zone a year, over five years**

<sup>1</sup> Review of Special Education in the Commonwealth of Massachusetts: A Synthesis Report," August 2014

<sup>2</sup> Office of Special Education City Council presentation, June 2014

## 2 The cost of migrating students from substantially separate classrooms into inclusion is highly dependent on two core assumptions

HIGHLY PRELIMINARY

### Change in costs for transitioning sub-separate students into inclusion sensitivity

USD millions

#### Average number of sub-separate students moving into each inclusion classroom<sup>2</sup>

		1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
New Gen Ed classrooms needed per 10 inclusion classrooms opened <sup>1</sup>	5	240	136	84	52	31	17	5	-3	-10
	4	206	113	67	39	20	7	-3	-11	-17
	3	173	91	50	25	9	-3	-11	-18	-24
	2	139	68	33	12	-2	-12	-20	-26	-30
	1	105	46	16	-1	-13	-22	-28	-33	-37

1 For example, 5 means that for every 10 new inclusion classrooms, 5 new General Education classrooms would need to be created to maintain compliance with the model

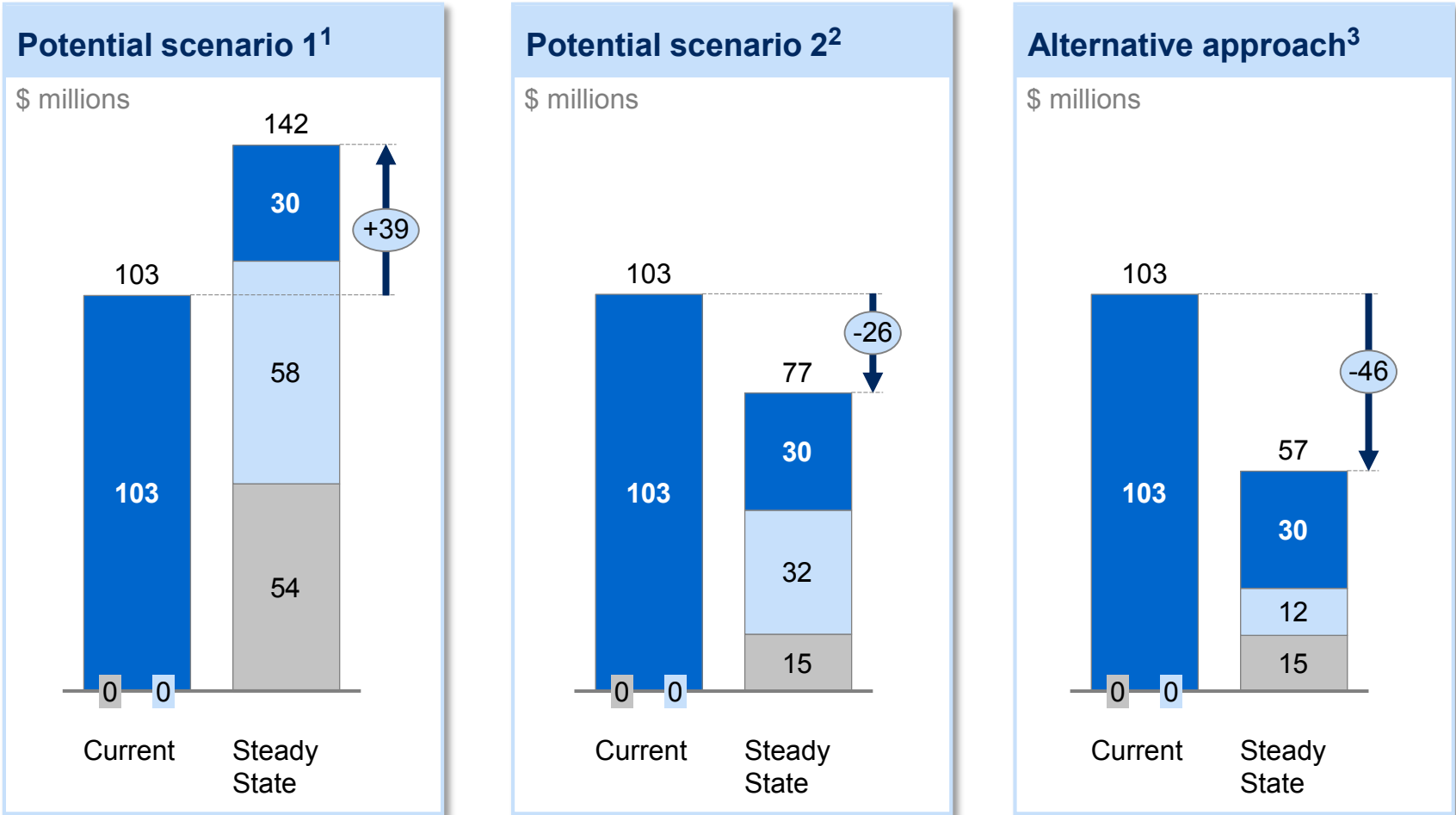
2 For example, 2.0 would mean that an inclusion classroom would typically be 18 General Education students and 2 Special Education students, whereas 4.0 would mean typically there would be 16 General Education students and 4 Special Education students in a classroom



## 2 Financial implications of supporting the transition of substantially separate students into inclusion vary significantly based on core assumptions and approach

- Sub/Separate Cost
- New Inclusion Cost
- New Gen Ed Cost

ESTIMATED



1 Assuming new General Education classrooms needed 40% of the time, and 2.5 students on average moving into an inclusion room

2 Assuming new General Education classrooms needed 20% of the time, and 4.5 students on average moving into an inclusion room

3 Assuming ~150 new General Education classrooms, using a small group “pull-out” model with “pull-out” teacher supporting 20-35 students

### 3 Values survey reveals there is a desire for more accountability and less bureaucracy in the Central Office

SURVEY CONDUCTED FEB. 2015

#### Most experienced values

1. Internal Politics (41)
2. Bureaucracy (25)
3. Accountability (15)
4. Lack of shared purpose (14);  
Customer focus (14)

#### Least experienced values

1. Efficiency (28)
2. Equity (27)
3. Accountability (25);  
Employee focus (25)
4. Fear (12);  
Trust (12)

#### Most desired values

1. Being collaborative (39)
2. Accountability (33)
3. Excellence (28)
4. Equity (21)

#### Least desired values

1. Inconsistent (40)
2. Bureaucracy (37)
3. Slow moving (31)
4. Silos (30);  
Internal Politics (30)

#### Therefore, BPS could consider

- Defining what accountability looks like for its Central Office
- Reducing the internal politics and bureaucracy currently experienced

### 3 In early 2015, goal alignment within departments was strong, but there was not strong consensus on what the District's goals were

“When we set our goals as a department, we make sure that we start with the district’s goals and then determine what ours should be.” – Cabinet Department leader

“I don’t even know what the district’s or superintendent’s goals are [...] it’s too unclear. Our only mission ... is to avoid lawsuits.” – Cabinet Department leader

#### Strengths

- The employees in every department seem very well aligned with their departmental goals
- A few departments ensure that their departmental goals tie directly to the district’s goals

#### Areas for improvement

- There is no consensus across the departments about what the district’s goals actually are
- Some goals are shared by multiple departments (e.g., adjusting the liaison structure to better serve the schools) but there is little-to-no collaboration in accomplishing these goals leading to poor returns

#### Great examples in departments:

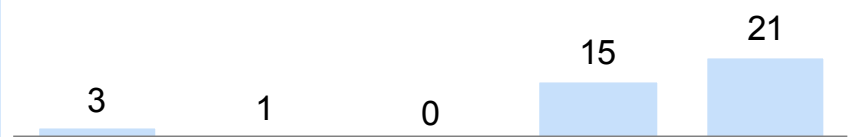
- Academics – Ensures that initiatives and goals directly tied to the district’s goals

#### Results from BPS Central Office Survey

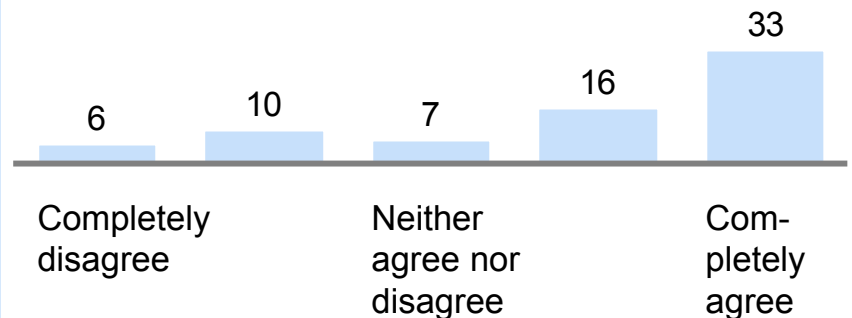
**Departmental goals align with district’s top goals and priorities**, number of respondents



**Direct-report employees well aligned with my top goals and priorities**, number of respondents

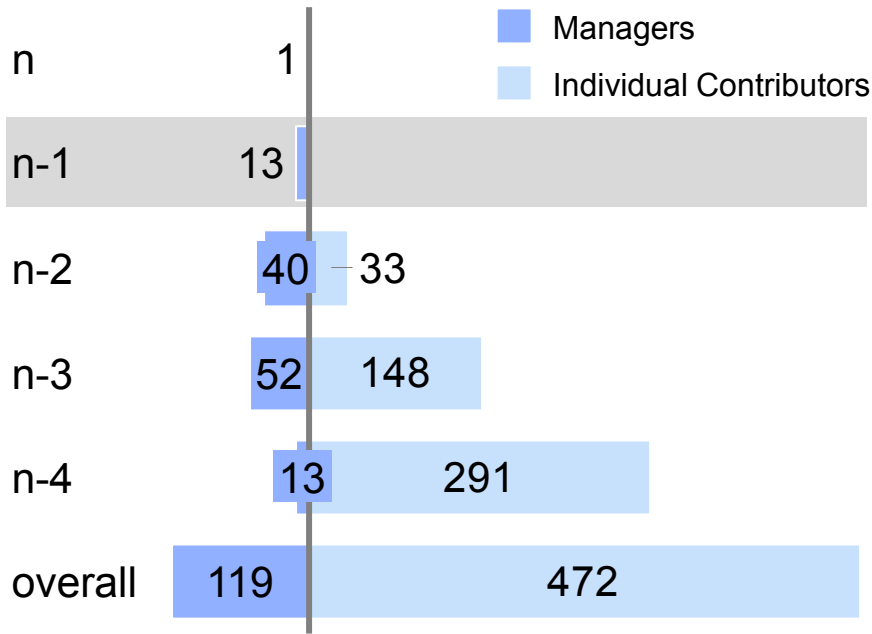


**Strong accountability for reaching individual goals**, number of respondents

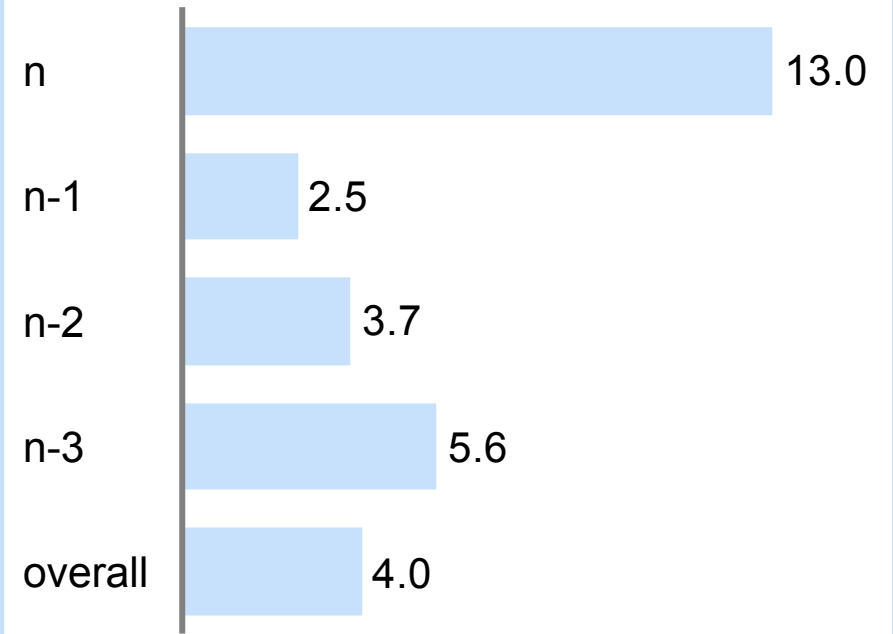


### 3 In early 2015, the Central Office organization pyramid was standard with some exceptions

**Total number of managers and individual contributors in each organizational layer**



**Average number of direct reports for managers in each organizational layer**



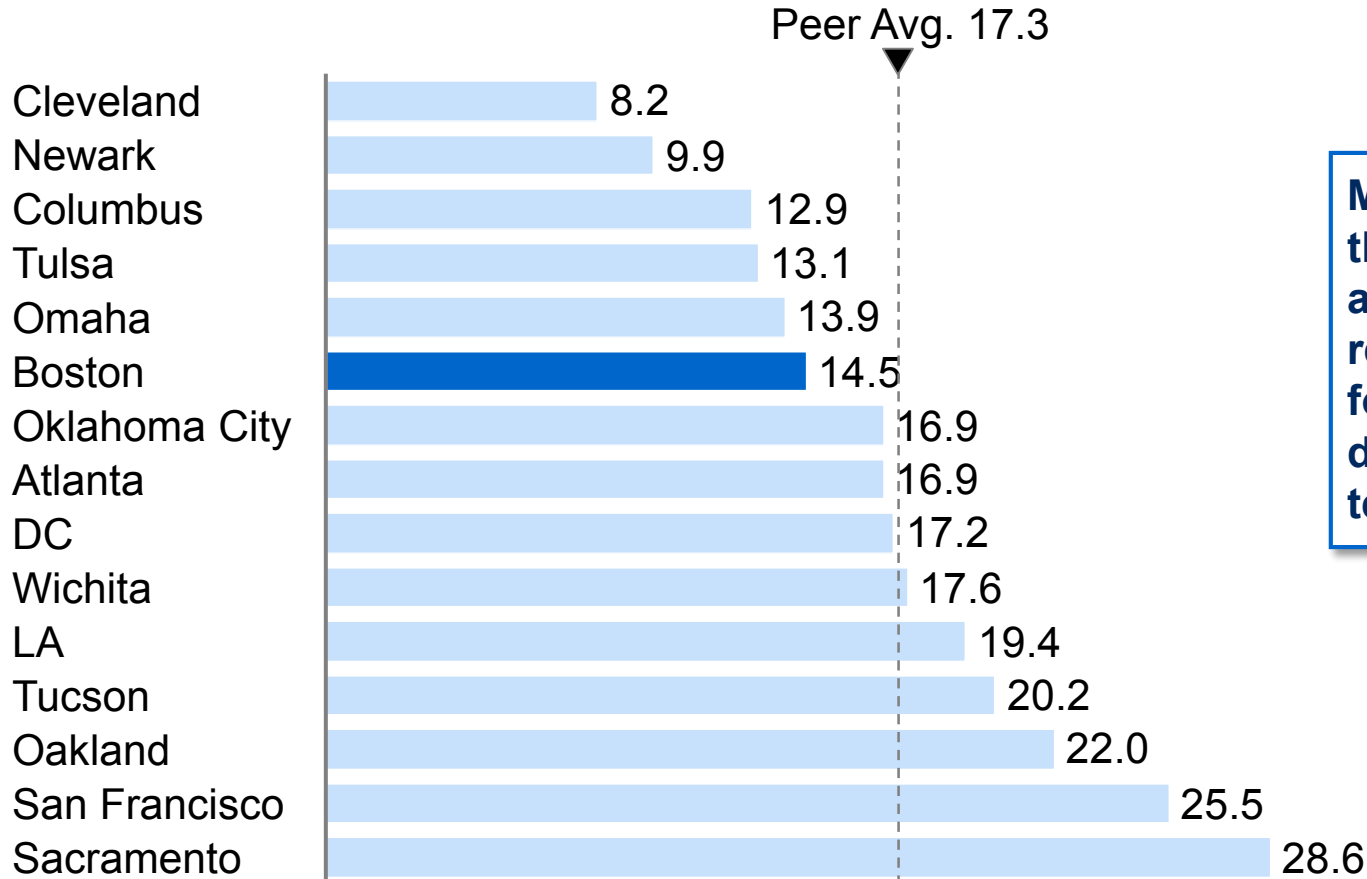
#### Observations

- BPS had an average of 4.0 direct reports per manager (2-15 across departments)
- Departments vary in how many Assistant Directors they have (0-9 per department)
- While the pyramid looks mostly standard, there were 13 direct-reports at the top level

### 3 BPS is within range of peers, but still supports a lower than average student to non-teaching staff ratio across the system

#### Average student-non-teaching staff ratio

Ratio of total students to total non-teaching staff, 2011



**Moving BPS to the peer set average could reduce the need for ~500 FTE of district non-teaching staff**

# Potential action items

## Decisions / actions

1

### Opportunity to consolidate schools

~\$1.7 – 2.2m/yr plus ~\$4m one-time per school

- Given calendar constraints, strategic decision to address district overextension and consolidate schools in next few years would need to happen immediately for planning to begin

2

### Opportunity to revisit and potentially accelerate SPED reforms

~\$17-21M in FY16<sup>1</sup> and ~\$20-40M longer-term annually

- Given the calendar and union restrictions, a decision on outsourcing paraprofessionals and specialists would need to be made immediately, with potential repercussions weighed
- Develop robust understanding of financial implications of approach to inclusion
- Reassess pace, approach, and transition plans for SPED inclusion strategy with the aim of shortening time to benefits for students
- Decisions to reassess SPED rates and classifications would require decision and cultural shifts

3

### Opportunity to reorganize central office and non-teaching staff

~\$25-30M ongoing reduction

- Decisions around central office and non-teaching staff alignment would need to happen as footprint considered to align support as befits new district
- Consider building capacity to execute and support near-term priorities while aligning staff around clear goals
- Review current non-teaching staff allocations and ratios to understand benefits to students and assess opportunities for reallocation

4

### Opportunities to improve operations

~\$10-25m/yr

- Dive deeper into specific levers to identify and realize transportation savings
- Outsourcing custodial and maintenance services can capture savings immediately, but may require a reduction in unionized employees
- Moving toward in-housing all food services needs to be researched and aligned with capital planning process



# Overview of BPS opportunities

	Activity	Potential opportunity	Near-term	1-2 years	3+ years	One-time
1 Opportunity to consolidate schools	Consolidate schools	~\$1.7m /yr per school consolidated (~\$700K non-teaching costs)			✓	
	Sell/repurpose school buildings	~\$4M one-time per school				✓
2 Opportunity to revisit and potentially accelerate SPED reforms	Revisit current approach to inclusion and consider alternatives	up to ~50M /yr after full phase-in (curr. FY26)			✓	
	Shift paraprofessional <sup>2</sup> provision	~\$9-11M /yr	✓	✓	✓	
	Shift provision of related services <sup>2</sup>	~\$8-10M /yr	✓	✓	✓	
3 Opportunity to reorganize central office and non-teaching staff	Align non-teaching staff across the system to be more in-line with peers	~\$25-30M /yr		✓	✓	
4 Opportunity to improve operations	Transport	Reduce current \$113M transport budget by 5-10%	✓	✓	✓	
		Food Services	Target meal participation to improve revenues	✓	✓	✓
	Centralize food preparation		~\$1-3M /yr		✓	✓
	Main-tenance		Reduce spend on night custodian workers <sup>2</sup>	up to ~\$3M /yr	✓	✓
		Contract all maintenance with a single contractor <sup>2</sup>	~\$1-3M /yr	✓	✓	✓

These funds provide a tremendous opportunity to reinvest in ways that improve outcomes for all students

# APPENDIX

# The approach to the operational review shifted from a broad scan to deep dives

## Data collection and interviews

### Activities

- Collect existing data and reports based on data request
- Identify internal and external stakeholders for interviews and focus groups
- Begin scheduling and conducting interviews and focus groups
- Start initial analysis and benchmarking

### Outcomes

- Synthesis of initial key themes and learning

## High-level diagnostic

- Conduct high-level quantitative and qualitative analysis across the 25 areas, including benchmarking
- Review previous reports, studies, reviews, etc.
- Analyze the BPS budget
- Collect input on priority operational areas from internal and external stakeholders through interviews, focus groups, and other forums

- Overview of BPS' fiscal and operational health across each of the 25 areas
- Identification of priority areas for deep-dives

## Deep-dive on priority areas

- For the prioritized areas, review diagnostic findings and identify gaps vs. best practice
- Conduct additional deep-dive analyses to assess efficiency and effectiveness opportunities
- Prioritize areas with greatest opportunity to explore further

- Interim workshops as requested by the City
- Detailed diagnostic of priority areas

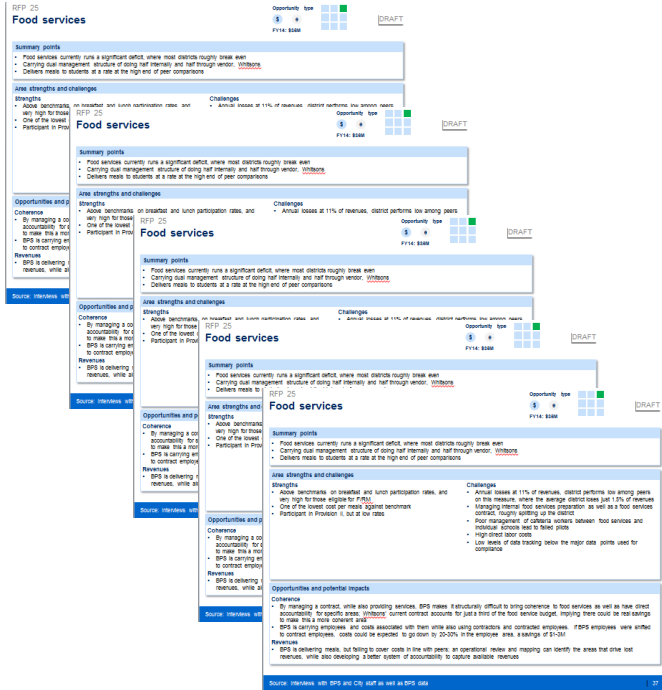
## Opportunity development

- Prioritize improvement opportunities based on impact toward BPS' mission and strategic goals
- Identify short term and long term actions for implementation
- For priority opportunities, provide rationale, estimates of costs and cost reductions, and practical implementation guidance

- Workshop to align on next steps for BPS in capturing opportunities

# A high-level scan informed the Steering Committee's prioritization of areas for deeper exploration

## High-level scan across 25 areas...



## ...informing Steering Committee prioritization...

- From data and interviews, the Steering Committee considered the size of the opportunity in terms of benefits to students, cost reductions, and efficiency
- From this approach, 11 areas emerged in two groups as potential Phase 2 targets

## ...leading to prioritized areas for deeper exploration

- District overextension
- Special Education
- Central Office/Organization
- Additional operational savings