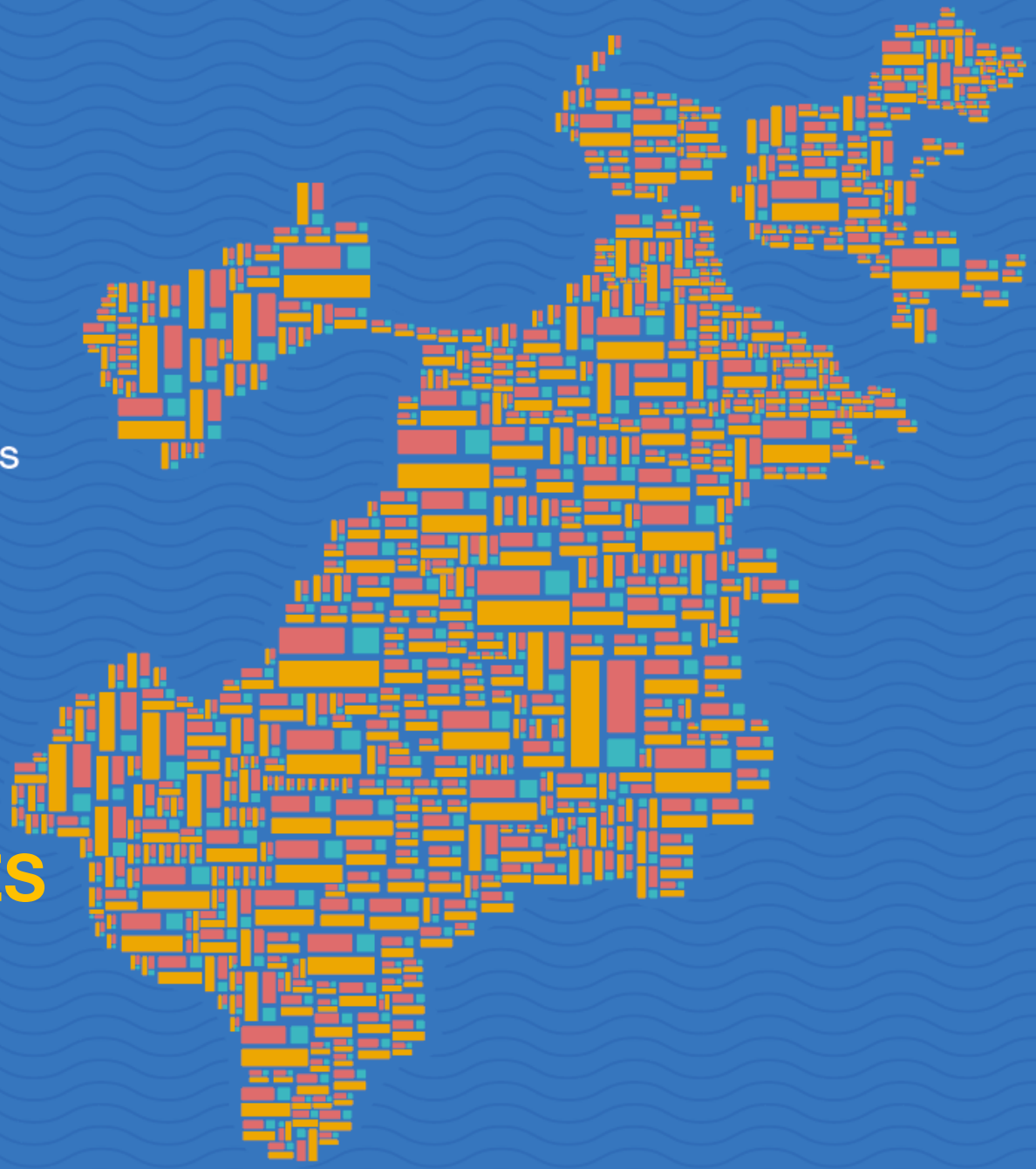
Build BPS

10-Year

Educational and Facilities Master Plan



A4LE LearningSCAPES 2017

SMMA

Introduction

Q: The single most important element needed?

A: An Actionable Framework

Clear educational goals and guiding principles —

Certainty from Pre-K to grade 12 that informs priorities for action

134 School Buildings
127 Schools
56,000 Students

SMMA MGT OF AMERICA, INC. Mass Insight EDUCATION newvista PARSONS BRINCKERHOFF

MGT Mass Insight New Vista SMMA	*National Leader & Large Urban Districts* *Local Insight – 40+ Years of BPS Knowledge* *Visioning & 21st Century Leadership* *Most MA Master Plans Over Last 5 Years*	Educational Planning
PARSONS BRINKERHOFF	*Facility Assessment* *Funding Options*	Engineering & Funding
SMMA	*60 Years Young* *180 Person Integrated Design Firm* *Most MA School Experience in last 20 years*	Prime Consultant

BPS Masterplan: Five Components

- Educational Planning
- Demographics
- Educational & Facilities Assessment
- Community Engagement
- Financial Planning

City of Boston

What should the master plan be?

BPS Organizational Diagram

BOSTON Public Schools
Focus on Children

MAYOR MARTIN J. WALSH

SCHOOL COMMITTEE

MAYOR'S LEADERSHIP TEAM
Aligns FMP development with the Mayor's agenda for BPS and the City

Rahn Dorsey, Chief of Education
Pat Brophy, COO
Dave Sweeney, CFO
John Barros, Economic Development
Austin Blackmon, Environment & Energy

SUPERINTENDENT TEAM
Guides and facilitates the development of the 10 Year Educational and Facilities Master Plan (FMP).

Tommy Chang, Superintendent

Makeeba McCreary, BPS Chief of Staff
Donna Muncey, BPS Dep. Supt. Strategy
Ross Wilson, BPS Dep. Supt. Innovation
John Hanlon, BPS COO
Karla Estrada, BPS Dep. Supt. Stud. Svcs.
Eleanor Laurans, BPS Finance
Nate Kuder, BPS Finance
Carleton Jones, BPS Facilities
Monica Roberts, BPS Engagement
Richard Weir, BPS Communications

SCHOOL COMMITTEE TEAM
Ensures that the project fulfills the goals of the School Committee's Strategic Vision

Michael Loconto

DEMOGRAPHICS
Analyzes current trends among BPS students and families, and forecasts future demography of Boston

Alvaro Lima, Lead Convener
Rahn Dorsey, Chief of Education
Katie Hammer, OMB
Ben Vainer, Mayor's Office
Phillip Granberry, BRA Research
Nate Kuder, BPS Finance
Barry Kaufman, BPS Operations
James Racanelli, BPS Operations
Carleton Jones, BPS Facilities
Victor Castro, CPC

Meets as Needed
Oct. 2015 - Jan. 2017

MANAGEMENT TEAM
Meets weekly to process information and consult between BPS, City and consultants

Rahn Dorsey, Chief of Education
Ben Vainer, Mayor's Office
John Hanlon, BPS COO
Makeeba McCreary, BPS Communications
Carleton Jones, BPS Facilities
Tricia Lyons, PCMD
Brian McLaughlin, PCMD
Katie Hammer, OMB
Margaret Wood, OPM, Pinck & Co.

BPS ADMINISTRATORS OF OPERATIONS

EDUCATIONAL PLANNING
Works with the Superintendent's leadership team to align educational vision with BPS priorities for modernizing school facilities

Ross Wilson, Lead Convener
Donna Muncey, BPS Dep. Supt. Strategy
Rahn Dorsey, Chief of Education
Ben Vainer, Mayor's Office
Karla Estrada, BPS Dep. Supt. Stud. Svcs.
Mary Driscoll, BPS Principal Leader
Caren Walker Gregory, BPS Headmaster, EMK Academy of Health Sciences
Ayla Gavins, Principal, Mission Hill K-8
Erin Borthwick, BPS Principal, Mozart K-5
Carleton Jones, BPS Facilities
Khadijah Brown, BPS Facilities
Mary McCoy, OMB
Brian McLaughlin, PCMD
Heshan Berents-Weeramuni, CPC
Harneen Chernow, CPC
Paul Tritter, BTU
Jessica Tang, BTU
BSAC

Meets as Needed
Jan. 2016 - Jan. 2017

FACILITIES ASSESSMENT
Develops process and protocol for access to facilities and stakeholders to inform educational and capital decisions

John Hanlon, Lead Convener
Al Taylor, BPS Admin. Operations
Carleton Jones, BPS Facilities
Khadijah Brown, BPS Facilities
Brian Chambers, BPS Facilities
Mary Driscoll, BPS Principal Leader
Ben Vainer, Mayor's Office
Austin Blackmon, Environment & Energy
Joe LaRusso, Environment & Energy
Brian McLaughlin, PCMD
Mary McCoy, OMB
Nick Kraman, CPC
Joel Thompson, CPC
Richard Stutman, BTU

Meets as Needed
Sep. 2015 - Jan. 2017

FINANCE
Frames options for financing the capital and operational needs of implementing the FMP

Dave Sweeney, Lead Convener
Jack Hanlon, OMB
Katie Hammer, OMB
Mary McCoy, OMB
Ben Vainer, Mayor's Office
Rahn Dorsey, Chief of Education
John Hanlon, BPS COO
Donna Muncey, BPS Dep. Supt. Strategy
Eleanor Laurans, BPS Finance
Nate Kuder, BPS Finance
Carleton Jones, BPS Facilities
Michael Christopher, BRA
Austin Blackmon, Environment & Energy
Brian McLaughlin, PCMD

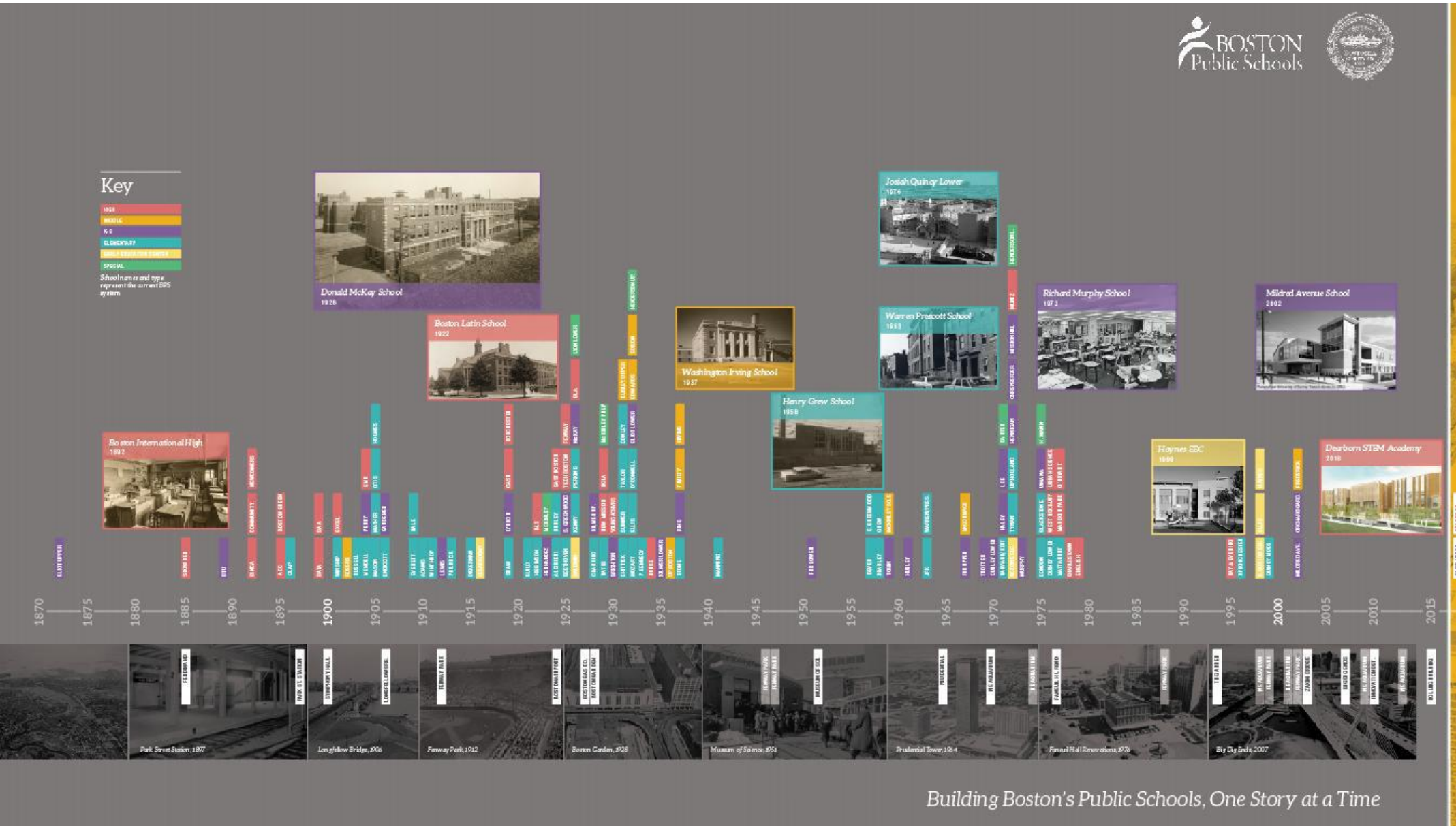
Meets as Needed
Apr. 2016 - Jan. 2017

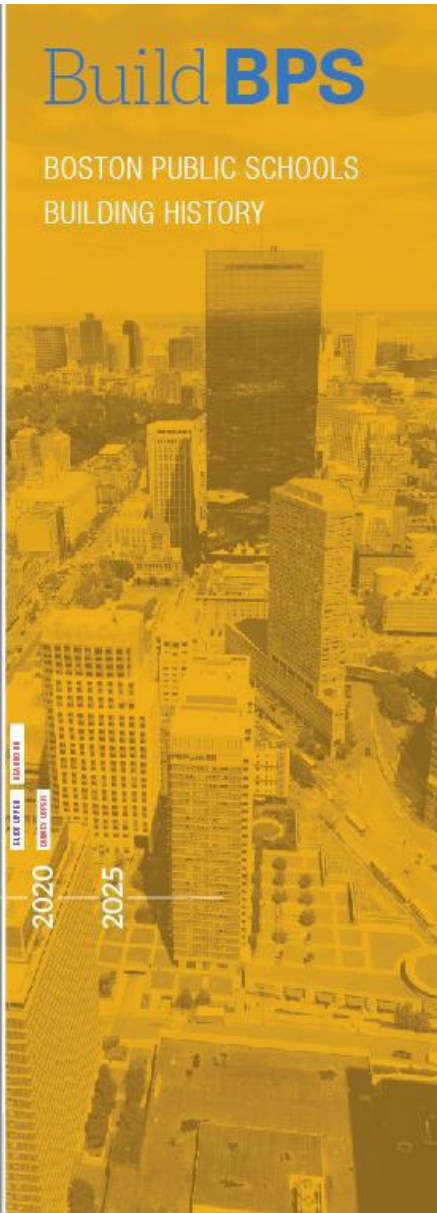
COMMUNITY ENGAGEMENT
Engages the community on the FMP process and solicits feedback to help align the educational vision for modern educational facilities with input from Boston residents

Monica Roberts, Lead Convener
Rahn Dorsey, Chief of Education
Ben Vainer, Mayor's Office
Mary McCoy, OMB
Mary Ann Crayton, BPS Engagement
Carleton Jones, BPS Facilities
Christopher English, IGR
Lara Merida, BRA
Lisa Connor, SPEDPAC
Dianne Lescinskas, SPEDPAC
Gloria West, CPC
Latoya Gayle, CPC
Andre Dorsainvil, CPC
Jessica Tang, BTU
Darlene Lombos, At-Large
BSAC

Meets as Needed
Jan. 2016 - Jan. 2017

BPS Timeline



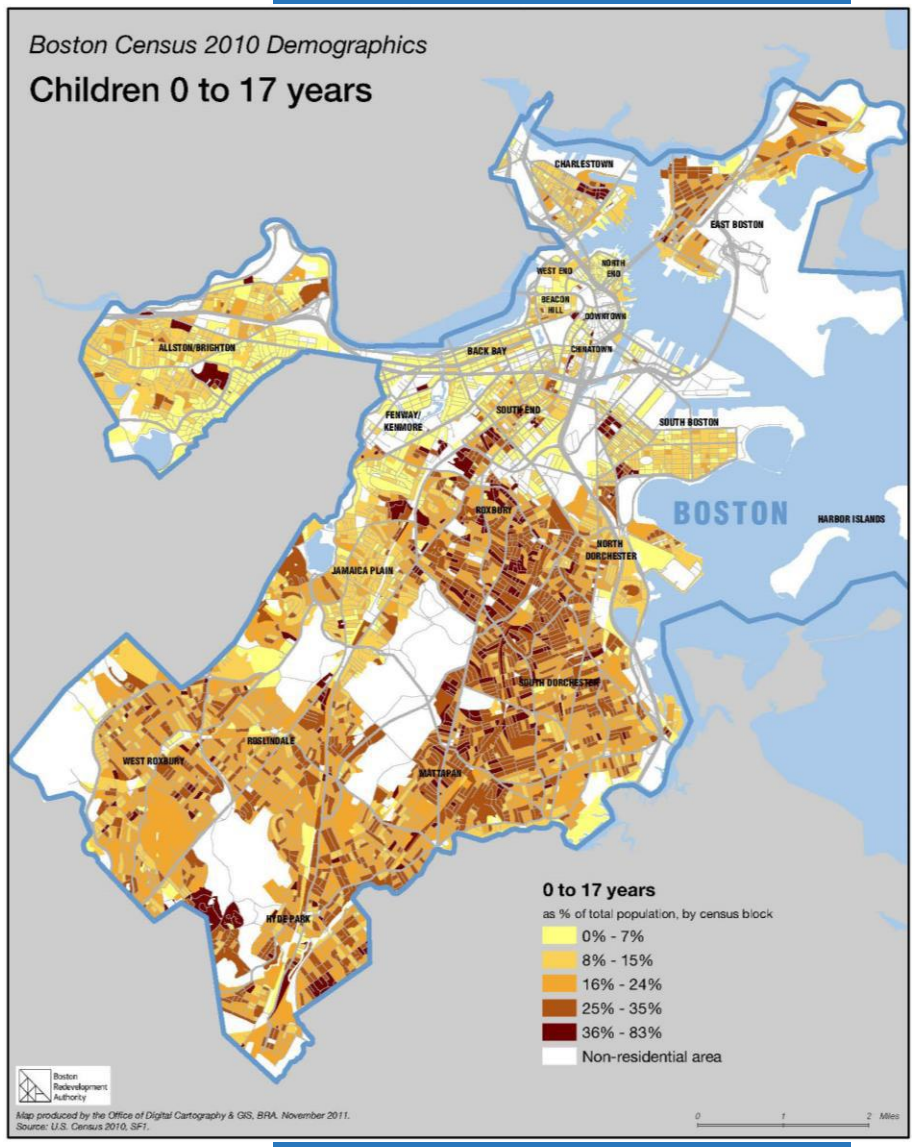


Demographics

Boston Historical Population Trends

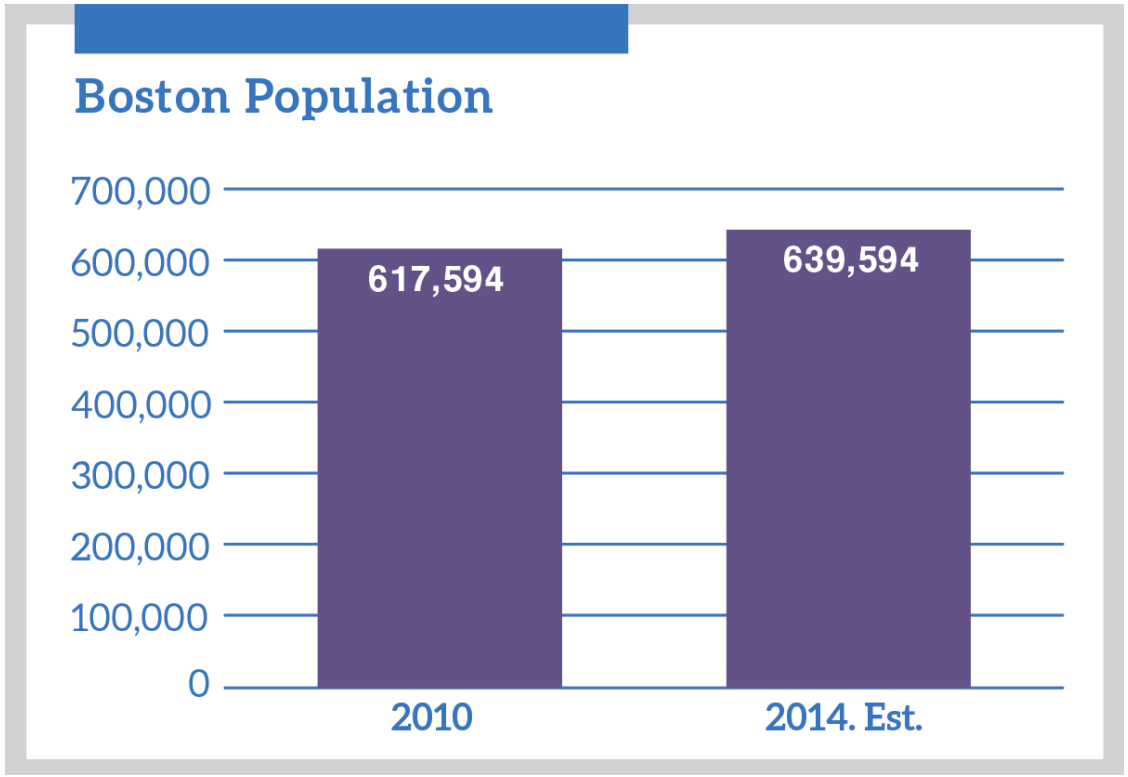
In order to estimate projected BPS enrollment, we first needed to understand Boston's historical population trends.

1. **The population of Boston is growing.**
2. **However, growth is occurring among older segments of the population, not among younger segments.**
3. **Additionally, fewer children are being born in Boston.**



Findings: Overall Population

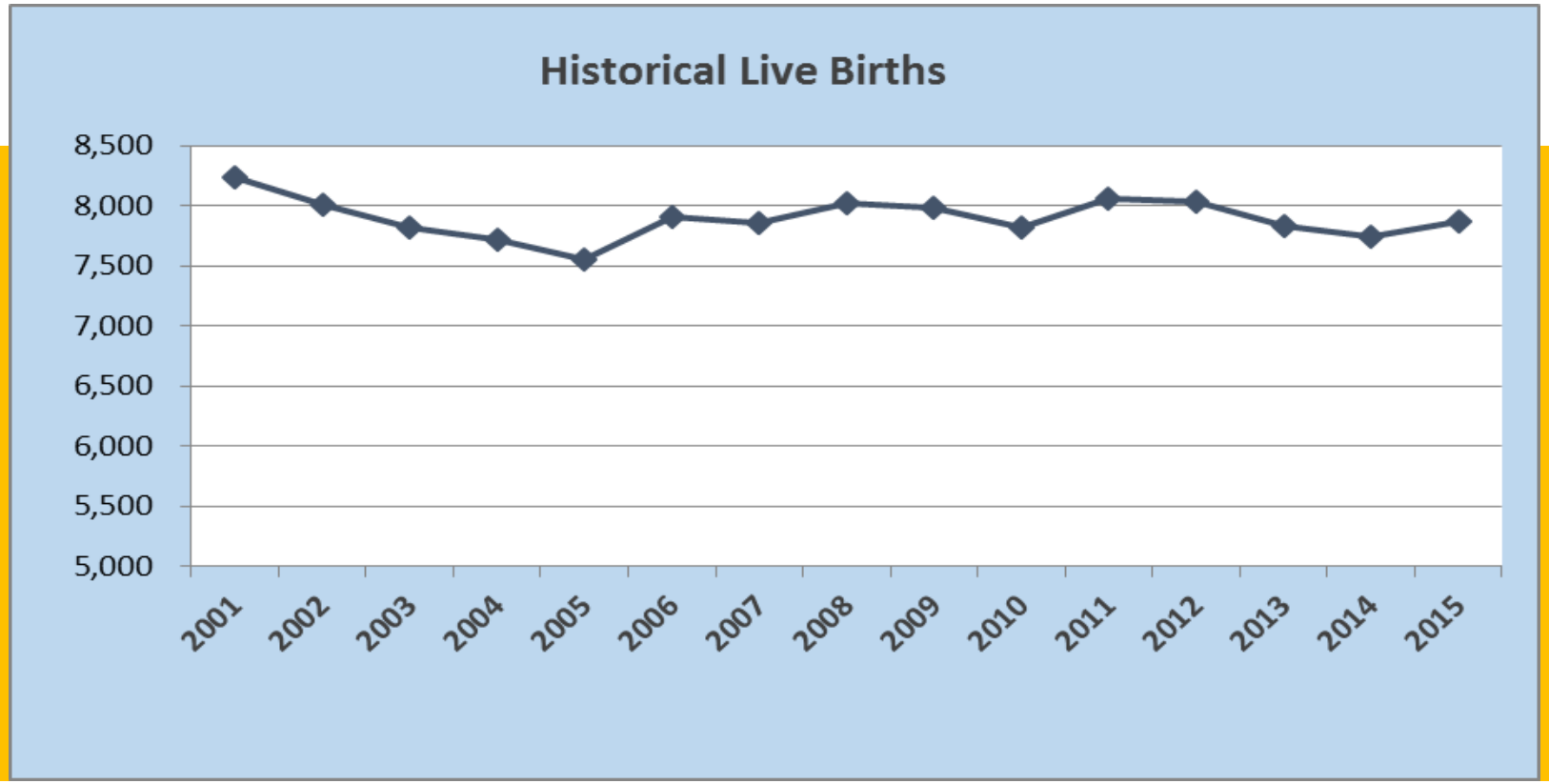
1. **Boston's population is growing but…**



Source: U.S. Census Bureau.

Findings: Birth Rate and Kindergarten Enrollment

3. **Fewer children are being born.**



BPS Historical Enrollment Trends

Understanding BPS's historical enrollment trends:

1. **The proportion of K-12 students enrolled in BPS has been declining over time because:**
    a. **Boston is growing older and fewer children are being born**
    b. **Charter growth is impacting BPS' capture rate**
2. **The number of Pre-K students in BPS has increased over time because BPS has gained Pre-K market share.**
3. **However, BPS is historically losing students between grades 5 and 8 with some restoration of enrollment in grade 9.**
4. **Demand for schools and enrollment varies by neighborhood.**

Recommendation

Maximize MSBA funding potential

The City of Boston is not getting an equitable return from the MSBA

Metric	Number	Unit	Source
Boston State Overall Tax Contribution	**20%**	% of total MA overall tax receipts	Boston Redevelopment Authority
Boston State Sales Tax Contribution	**10%**	% of total MA sales tax receipts	Boston Redevelopment Authority
Boston K-12 Schools	**7%**	% of total MA K-12 schools	MA Dept of Education & Secondary Education
Boston Student Enrollment	**6%**	% of total MA enrollment	MA Dept of Education & Secondary Education
Boston portion of FY15 MSBA funding	**1.2%**	% of projected FY15 MSBA Grant allocations	FY15 MSBA Budget Presentation ($611M in FY15 grants); FY14 City of Boston CAFR (Avg. of $7M in MSBA receipts from FY15-19)
Equitable FY15 MSBA funding share for Boston	**$37M**	2015 Dollars; millions	6% of $611M in FY15 MSBA grants

Recommendation

Alternative delivery should be a key component of BPS' financial plan

P3s and joint development can:

- Accelerate project delivery
- Decrease costs, and
- Leverage strategic opportunities to increase revenue potential

Concept	Description
Public-Private Partnership	• Procure one or several new facilities using a design-build-maintain (DBM) or design-build-finance-maintain (DBFM) structure • Influx of private funds can accelerate delivery • Transfer delivery and maintenance risk to private sector • Significant lifecycle efficiencies
Joint Development	• Optimize strategic opportunities for use of real estate assets • Land Lease/Sale: lease/sell land or development rights to a developer • In return for any up front fees from a sale, or recurring fees from a lease, the developer will typically help with construction costs of a new facility • **This holds significant potential given increased developer interest surrounding the Olympic bid**

WSP/PB has helped clients identify new funding sources

Client/ Project	Details
Sound Transit (Seattle) Long-Range Financial Plan Development and Ballot Measure	• PB led consultant team for $18B financial plan • 2007: State legislature issued directive to develop joint regional roads and transit package • 2008: PB & Sound Transit crafted package leading to adoption of 15-year, $18B plan
Massachusetts DOT Service Plaza Study	• PB currently helping MassDOT maximize revenue from highway rest area real estate assets • Preliminary recommendations include use of sponsorships, advertising, and P3

Boston and BPS's new reality

Mayor Walsh elected to office in 2013.

Superintendent Chang hired in Spring 2015.

IMAGINE BOSTON 2030

Imagine Boston 2030 Master Plan launched in Summer 2015.

Metro Boston: Top 5 highest real estate and construction costs in nation.

BPS's prior "Master Planning" efforts

- 1993 Wallace Floyd Report (Inventory + Condition Analysis)
- 1995/96 Community Learning Centers:
  Blue Ribbon Commission's School Buildings Capital Master Plan
- 2012 MSBA Core Projects – 3 New High Schools
- 2013 BPS Revised Assignment Policy (MIT)
- 2014 Boston Foundation + BPS
  - The Path Forward: School autonomy and its implications for the future of Boston's Public Schools
- 2014/15 McKinsey Report: City of Boston, (BPS)

BPS's Environment

- Top urban district nationally
- Part of Great Cities Consortium ("who we measure ourselves against")
- National model for Pre-K education (K1 + K2)

BPS Approach

Scope & Budget Challenges

Pilot Study

- Test methodologies
- What matters?
- Team building
- Data discovery

BPS Approach : Pilot Study

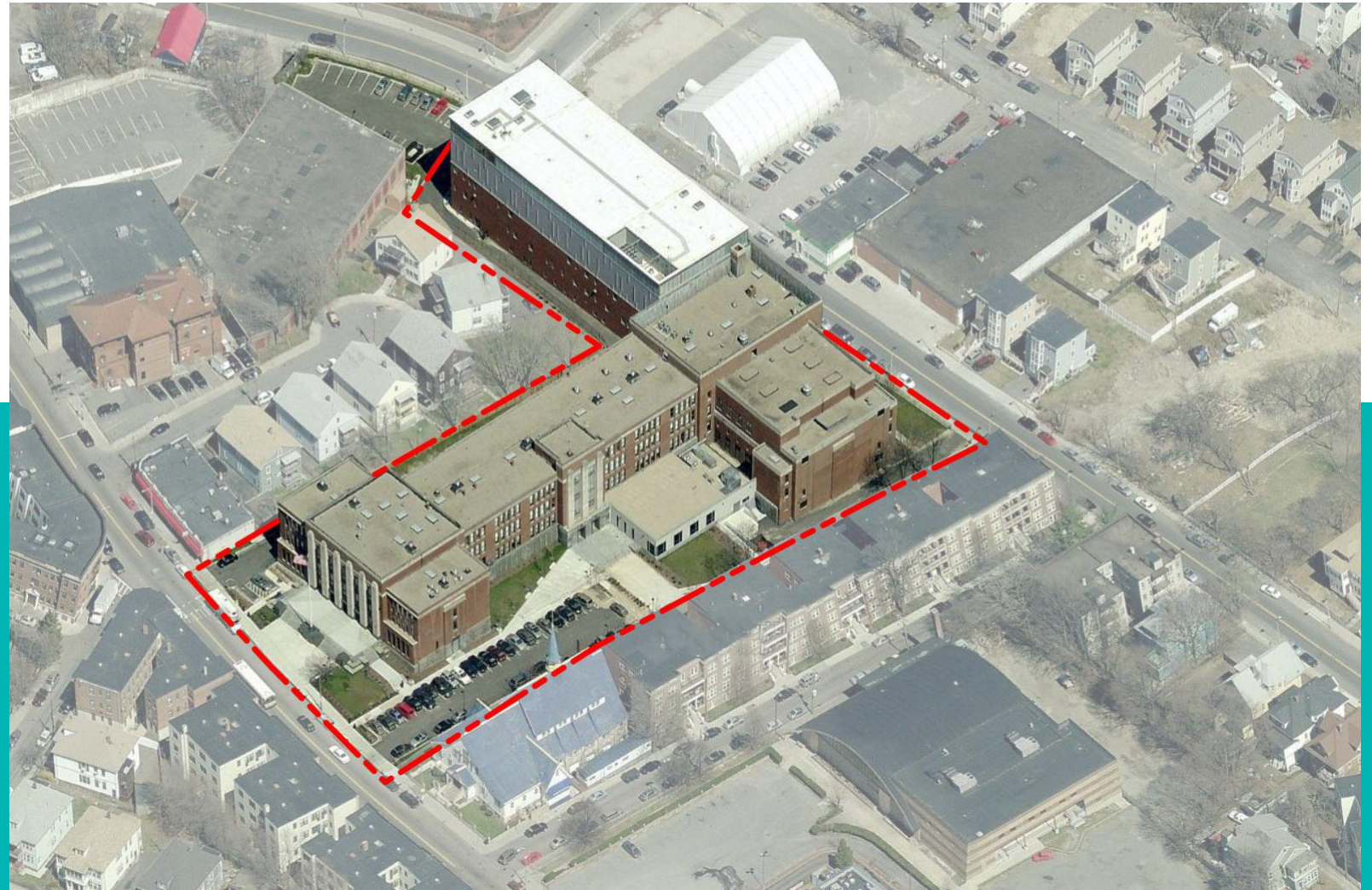
Looked at very different types of schools

1. **Historic building with a 2009 addition & community us space – (Boston Public Library branch)**
2. **Split campus inclusion school (K-12)**
3. **1970's open plan building**

- **Designed as a technical high school (never used)**
- **Open plan junior high**
- **Recent elementary school**
- **K-8 school with community use space – (public pool)**

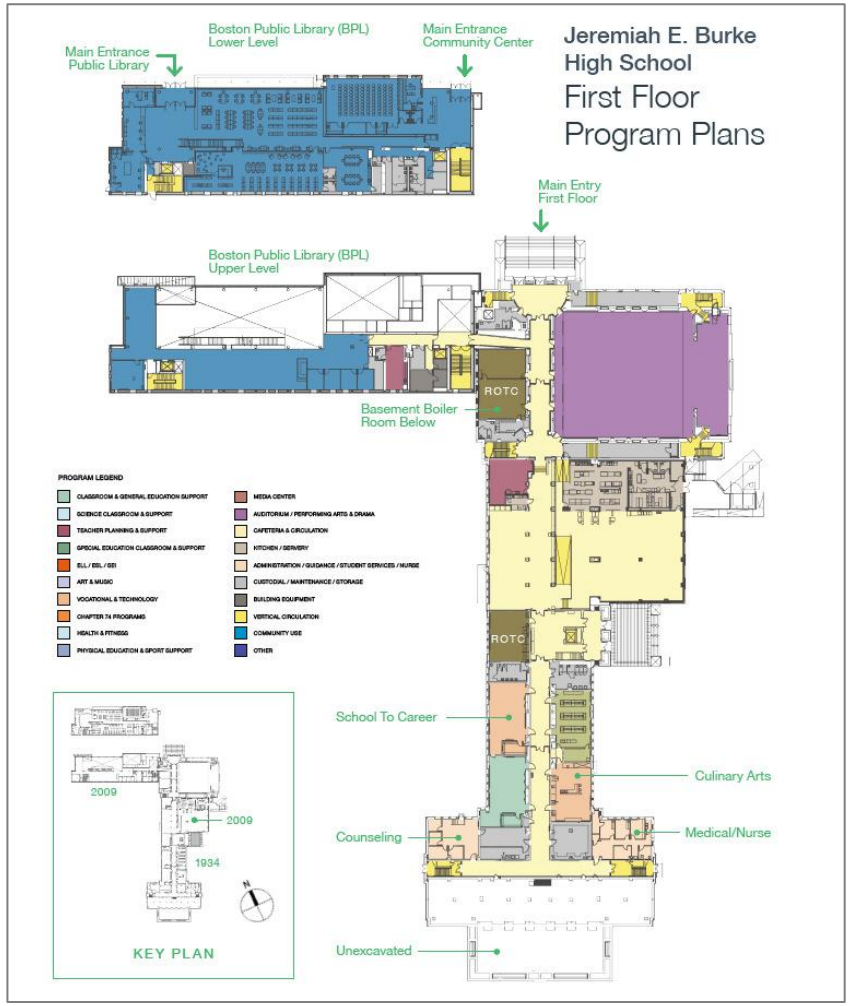
BPS Approach : Pilot Study

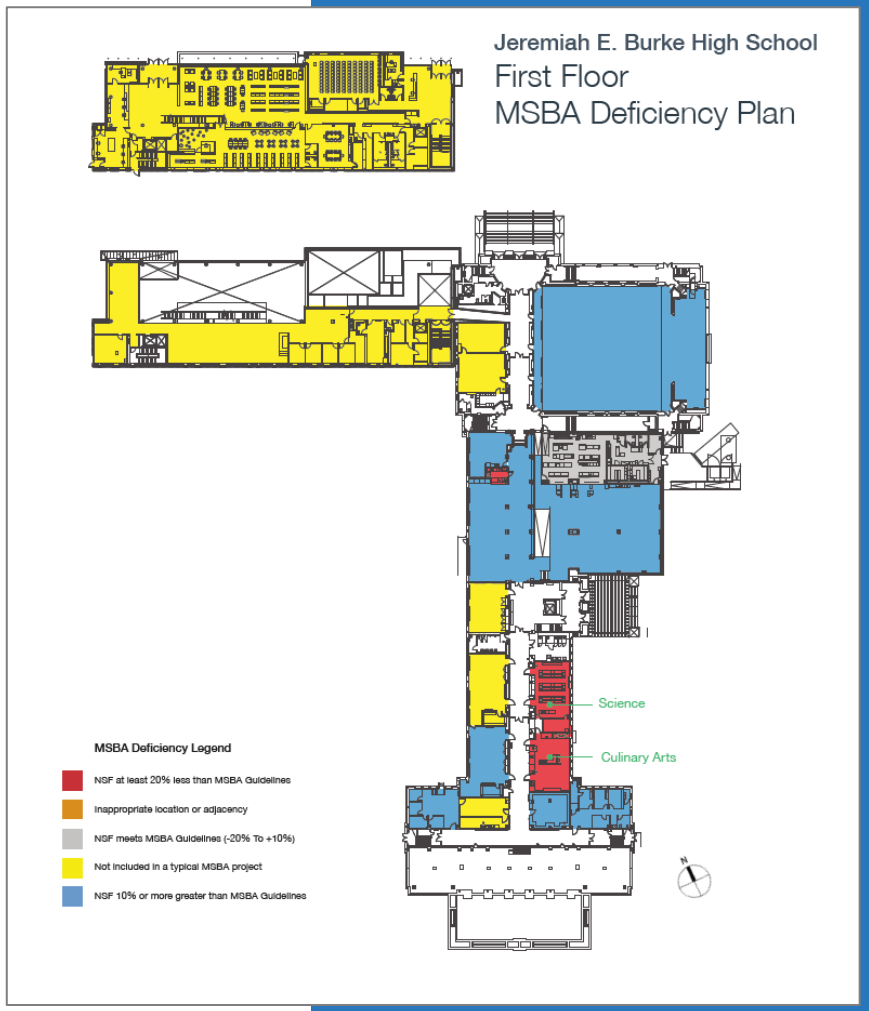
Burke High School



BPS Approach : Pilot Study

Burke High School





BPS Approach : Pilot Study

Burke High School

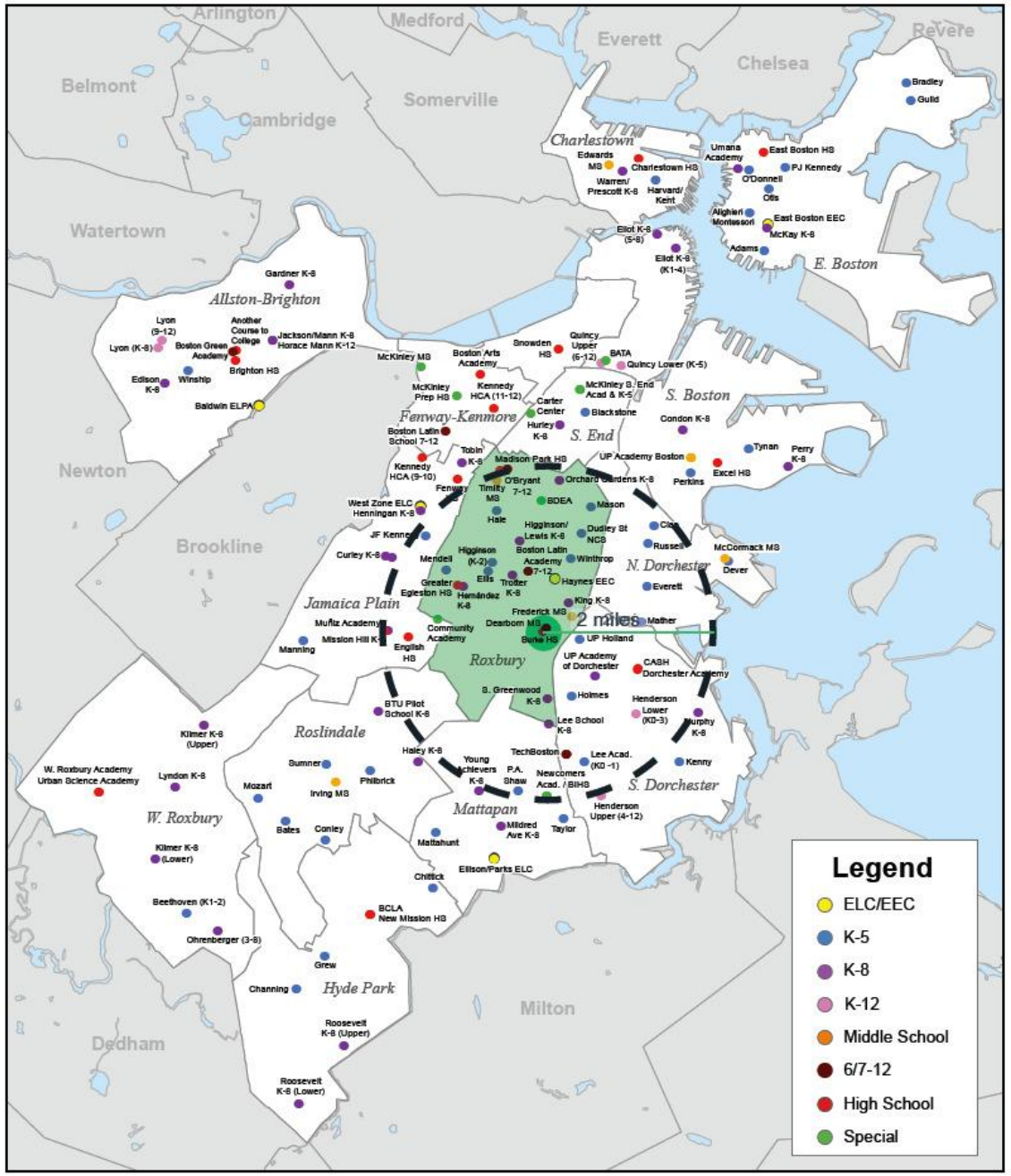
MSBA Space Summary - High Schools

Burke High School	Existing Conditions			Percent Difference between Existing and MSBA standard values	MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)			
ROOM TYPE	ROOM NFA[1]	# OF RMS	area totals		ROOM NFA[1]	# OF RMS	area totals	Comments
DINING & FOOD SERVICE			10,130	37%			7,384	
Cafeteria / Student Lounge / Break-out	7,150	1	7,150	83%	3,910	1	3,910	3 seatings - 15SF per seat
Chair / Table Storage			0	-100%	346	1	346	
OTHER			3,165				0	
Family Center	633	1	633					
Student Activities	365	1	365					
ROTC Office	145	1	145					
ROTC Classroom	Varies	3	2,022					
Public Library / Community Center			21,275					
Note: Public Library Space NOT included in NSF or GSF values below								
Total Building Net Floor Area (NFA)			110,757				108,016	
Proposed Student Capacity / Enrollment							782	207
Total Building Gross Floor Area (GFA)[2]			215,205					
Total School Gross Floor Area (GFA)[2]			189,855				161,874	
Grossing factor (GFA/NFA)			1.71				1.50	

Indicated deficiency cumulatively

Pilot Study

Locus Plan



BPS Approach : Pilot Study

Lessons Learned

- **Far more complicated than we first imagin**
- **Some exciting things happening across the system educationally**
- **State of facilities was alarming**
- **Hard to see any logical patterns**
- **Needed to do an intermediate phase to test methodology**
- **High level of frustration evident within the system**

Community Engagement

Branding
Assets
Outreach

Data & Display
Querying & analysis

Build BPS

Boston Public Schools
10-Year Educational and Facility Master Plan

General Overview

The Facility Master Plan (FMP) will provide a strategic framework for institutional reforms and capital investments for Boston Public Schools facilities. The focus of the FMP will be to illustrate capital planning opportunities based on several points of new data and existing information to be analyzed throughout the master planning process.

Aspirations & Objectives

Optimize Facility Operations
Expand Access to Learning
Ensure Anytime and Anywhere Learning
Create Career Pathways
Build for Flexibility
Embrace Environmental Stewardship
Incorporate the "New Learning Toolbox"
Invigorate Community Pride and Ownership

At-a-Glance

SCOPE

The Facility Master Plan will encompass 128 school buildings and comprise more than 11 million gross square feet.

SCHEDULE

The initial recommendations and strategic framework of the plan will occur within 18 months. Final recommendations will be submitted by November/December of 2016.

COMPONENTS

The Facility Master Plan is made up of five major components:

- Facility Educational Adequacy Assessments
- Demographics, Capacity and Utilization Analysis
- Facility Conditions Assessments
- Financial Planning
- Community Input

SMMA

BOSTON Public Schools

Boston Public Schools

10-Year Educational and Facility Master Plan

1885 2015 2025

FALL 2015

General Overview

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Aspirations nd Objectives

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Invigorate Community Pride and Ownership

We want to hear from you.

Extensive participation from a broad range of BPS

About BuildBPS

Launched in September 2015, BuildBPS is designed to guide capital investment over the next 10 years in an equitable way, based on the district's educational vision for the schools, as well as several sets of new and existing data.

To bring data and vision together, the master planning process examines the following variables:

- **Educational:** the district's plans and priorities for teaching and learning in the years ahead, and the resulting facility and space needs for most effective instruction
- **Facilities:** the existing condition and uses of all BPS buildings, as well as their capacity to house various educational programs
- **Demographics:** current and projected school-aged populations in the City of Boston by neighborhood, program, and other factors
- **Finances:** analysis of long-term costs for building maintenance and modernization, as well as the development of new schools
- **Community Input:** perspectives from parents, students, staff, and other stakeholders about the present and future of Boston's educational facilities

The project is guided by five advisory committees that include educators and representatives of parent and community partner organizations.

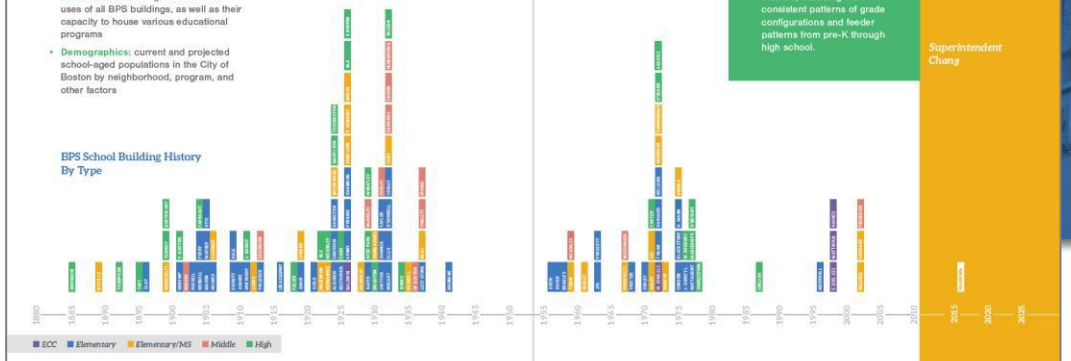
BPS Superintendent Tommy Chang has identified three core values to guide the planning process:

- **Equity** – ensuring equitable access to high-quality schools and programs in every neighborhood;
- **Innovation** – taking creative approaches to the use of time and space; and
- **Coherence** – promoting a more unified system of schools, including more consistent patterns of grade configurations and feeder patterns from pre-K through high school.

"This is not just about reimagining what facilities will look like, but ultimately what education will look like over the next 10 years and beyond."

Superintendent Chang

BPS School Building History
By Type



Build BPS

CATIONAL AND FACILITIES MASTER PLAN, WILL PROVIDE EWORK FOR CONSTRUCTION AND RENOVATION PROJECTS CHOOLS (BPS) OVER THE NEXT TEN YEARS.

BPS is comprised of **128 buildings, totaling more than 11 million square feet.** Nearly two-thirds of the school buildings were constructed before World War II. The facility needs for modernization and repair exceed the resources available to address them, so the City and the school district must make difficult decisions every year about how to prioritize competing capital needs.


EXIT
PLEASE


Weighted Student Funding
VOLUNTEER
How our Spaces Will Support our Educational Future
Educational Vision and Experience
4th grade busing investigation


Educational Vision and Experience
Our City as a Classroom
SHOP BIKE
OPEN

Educational Assessments

Elements of the Educational Planning

- Visioning
- Educational assessments of all schools
  - Establishing criteria
- Grade configurations
- Portfolio
- Comparisons to other communities
- Identifying criteria for an Educational Plan

BPS Approach: Phase 2

- 19 Schools reviewed, less in depth than Phase 1
- Building and educational criteria set
- Multiple person teams for all schools (SMMA & MGT)
- Projects selected to span typologies and grade structure
- Traditional assessment process

Date	Time	Name	Type	Address	BPS Historic Name	District Region	Built	Reno date	Gross Area	Pop.
1/19/16	8:00 AM	Team will meet at main office to interview custodial staff and Principal and briefly tour building together								
	8:30 AM	East Boston High School	High	86 White St East Boston, MA 02128	East Boston High	East Boston	1924	2000	242505	1373
	11:00 AM	Team will reconvene to discuss findings and meet with staff for any follow-up questions								
	11:30	Lunch								
	12:00 PM	Team will meet at main office to interview custodial staff and Principal and briefly tour building together								
	12:30 PM	Manahassah E. Bradley School	Elementary	110 Beachview Rd East Boston, MA 02128	Bradley	East Boston	1958		33128	296
	3:00 PM	Team will reconvene to discuss findings and meet with staff for any follow-up questions								
1/20/16	8:00 AM	Team will meet at main office to interview custodial staff and Principal and briefly tour building together								
	8:30 AM	William McKinley South End Academy	Special	90 Warren Ave Boston, MA 02116	McKinley Elementary	South End	1959		78258	92
	11:00 AM	Team will reconvene to discuss findings and meet with staff for any follow-up questions								
	11:30	Lunch								
	12:00 PM	Team will meet at main office to interview custodial staff and Principal and briefly tour building together								
	12:30 PM	Warren / Prescott	K-8	50 School St Charlestown, MA02129	Warren / Prescott	Charlestown	1963		59330	542
	3:00 PM	Team will reconvene to discuss findings and meet with staff for any follow-up questions								

Visioning

Charge: Work with the superintendent's leadership team to align priorities for modernizing school facilities with BPS's educational vision

- (8) 2-3 hour Visioning session
- Superintendents Guiding Values
  - Equity
  - Coherence
  - Innovation

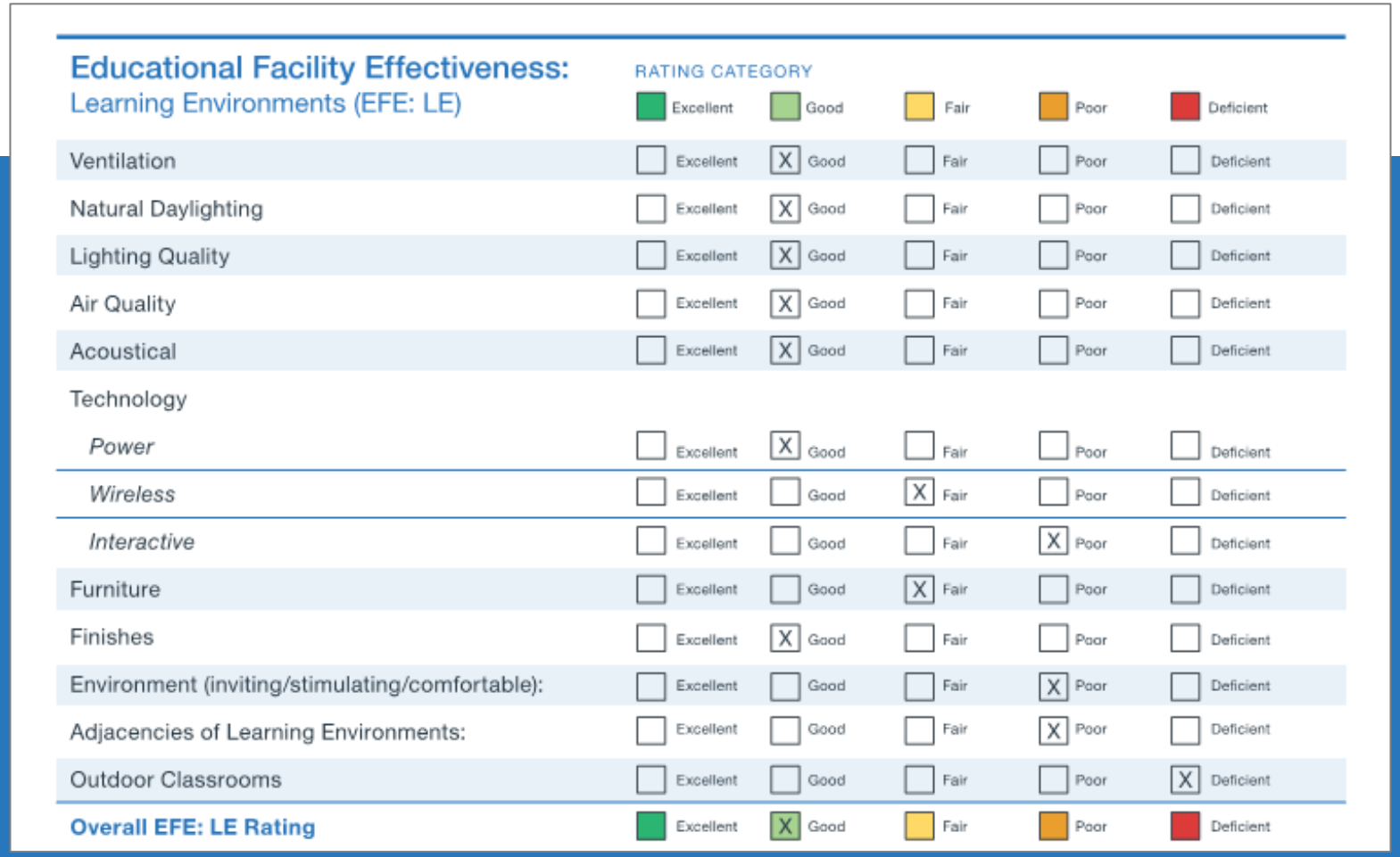
BPS Approach: Phase 3

- 107 Schools / 114 building reviewed, less in-depth than Phase 2
- Building and educational criteria tweaked
- Break-neck schedule, 3-5 schools reviewed per day, late April – mid June
- SMMA & MGT split educational assessments
- Same team for building assessments
- Survey Monkey used for recording

	Dat	Sta	School t			Ar	School Name	Historical Name	Address
12	18-May	2:00	7:30-1:30	III	SZ	MAvH	Adams, Samuel Elementary	Adams	165 Webster St East
3	27-Apr	*12:00*	*8:00-2:30*	IV	JC	MAvH	Another Course to College	Taft	20 Warren St Brighto
1	25-Apr	2:00	7:30-4:35	III	JC	MAvH	Baldwin Early Learning Pilot Academy	Baldwin ELC	121 Corey Rd Brighto
25	8-Jun	10:00	9:30-2:30	II	PJP	MAvH	Bates, Phineas Elementary	Bates	426 Beech St Roslind
24	7-Jun	12:00	8:30-2:30	II	PJP	MAvH	Beethoven, Ludwig Van Elementary	Beethoven	5125 Washington St
29	15-Jun	8:00	8:30-3:00	I	PJP	MAvH	Blackstone, William Elementary	Blackstone	380 Shawmut Ave Bo
30	16-Jun	2:30	9:00-3:30	IV	PJP	MAvH	Boston Adult Technical Academy	Boston Adult	20 Church Street Bos
15	23-May	11:00	8:00-4:00	IV	PJP	MAvH	Boston Arts Academy	Boston Arts Academy	174 Ipswich St Bosto
17	25-May	7:45	7:45-2:30	IV	PJP	MAvH	Boston Community Leadership Academy	Hyde Park High Complex	655 Metropolitan Ave
10	16-May	2:30	9:00-5:30	IV	SZ	MAvH	Boston Day & Evening Academy	Wheatley	20 Kearsarge Avenu
9	13-May	11:30	8:00-2:30	IV	SZ	MAvH	Boston International High	Thompson	100 Maxwell St Dorch
28	14-Jun	7:30	7.30-2.15	IV	PJP	MAvH	Boston Latin Academy	Boston Latin Academy	205 Townsend St Do
18	26-May	2:00	8:30-3:00	II	PJP	MAvH	Boston Teachers Union K-8 School	BTU K-8	25 Walk Hill St Jamaic
3	27-Apr	*7:30*	*7:30-1:50*	IV	JC	MAvH	Brighton High	Brighton High	25 Warren St Brighto
13	19-May	12:00	8:30-3:10	I	SZ	MAvH	Carter Development Center	Carter School	396 Northampton St E
16	24-May	10:00	8:30-3:00	II	PJP	MAvH	Channing, William E. Elementary	Channing Elementary	35 Sunnyside St Hyd
4	28-Apr	*7:30*	*7:30-1:50*	IV	JC	MAvH	Charlestown High	Charlestown High	240 Medford St Charl
27	10-Jun	9:30	8:30-3:10	II	PJP	MAvH	Chittick, James J. Elementary	Chittick Elementary	154 Ruskindale Rd Ma
18	26-May	8:00	8:00-2:30	IV	PJP	MAvH	Community Academy	Fuller	25 Glen Road, Jamaic
14	20-May	12:00	8:00-2:20	IV	SZ	MAvH	Community Academy of Science & Health	Cleveland	11 Charles St Dorche
13	19-May	8:00	8:30-2:30	I	SZ	MAvH	Condon, James F. Elementary	Condon Elementary	200 D St South Bosto
25	7-Jun	11:30	8:30-2:30	II	PJP	MAvH	Conley, George H. Elementary	Conley Elementary School	450 Poplar St Roslind
19	31-May	12:30	8:30-2:30	III	JC	MAvH	Curley K-8 (Lower School)	Curley Elementary School	40 Pershing Rd Jamai
19	31-May	8:00	8:30-2:30	III	JC	MAvH	Curley K-8 (Upper School)	Curley Middle School	493 Centre Street, Ja
12	18-May	10:00	7:30-1:30	III	SZ	MAvH	Dante Alighieri Montessori School	Alighieri	37 Gove Street East B
5	29-Apr	7:30	7:30-3:30	I	JC	MAvH	Dever, Paul A. Elementary	Dever Elementary	325 Mt Vernon St Dor
14	20-May	2:30	9:30-3:30	IV	SZ	MAvH	Dorchester Academy	Cleveland	11 Charles St. Dorche
22	3-Jun	3:30	8:30-4:30	I	JC	MAvH	Dudley Street Neighborhood School	Emerson Elementary	6 Shirley St Roxbury,
11	17-May	11:30	7.30-4.35	III	SZ	MAvH	East Boston Early Education Center	East Boston EEC	135 Gove St East Bos
2	26-Apr	*8:00*	*8:30-2:30*	III	JC	MAvH	Edison, Thomas A. K-8	Edison Middle	60 Glenmont Rd Brigh
4	28-Apr	3:00	7:20-4:15	III	-	MAvH	Edwards, Clarence R. Middle	Edwards Middle	28 Walker St Charlest
9	13-May	8:00	7:20-4:15	III	SZ	-	Edwards, Clarence R. Middle	Edwards Middle	28 Walker St Charlest
28	14-Jun	1:00	8:30-3:00	III	PJP	MAvH	Eliot, John K-8 Lower School	Eliot Elementary	16 Charter St Boston,
28	14-Jun	1:00	8.20-3.00	III	PJP	MAvH	Eliot, John K-8 Uper School	W Bennet St. School	585 Commercial Stree
27	10-Jun	7:30	7:30-4:30	II	PJP	MAvH	Ellison/Parks Early Education School	Mattapan EEC	108 Babson St Mattap
5	29-Apr	11:00	9:30-3:30	I	JC	MAvH	Everett, Edwards Elementary	Everett Elementary	71 Pleasant St Dorch
15	23-May	12:30	8;30-3:30	IV	PJP	MAvH	Fenway High	Fenway High School	67 Alleghany Street E
31	17-Jun	2:00	9:30-3:40	I	PJP	MAvH	Frederick, Lilla G. Middle	Lilla Frederick Middle	270 Columbia Rd Dor
1	25-Apr	*12:00*	*8:20-2:30*	III	JC	MAvH	Gardner Pilot Academy K-8	Gardner Elementary	30 Athol St Allston, M

Criteria for an Educational Assessment

Learning Environments



Educational Facility Effectiveness: Learning Environments (EFE: LE)	RATING CATEGORY				
	Excellent	Good	Fair	Poor	Deficient
Ventilation	☐	☒	☐	☐	☐
Natural Daylighting	☐	☒	☐	☐	☐
Lighting Quality	☐	☒	☐	☐	☐
Air Quality	☐	☒	☐	☐	☐
Acoustical	☐	☒	☐	☐	☐
Technology					
Power	☐	☒	☐	☐	☐
Wireless	☐	☐	☒	☐	☐
Interactive	☐	☐	☐	☒	☐
Furniture	☐	☐	☒	☐	☐
Finishes	☐	☒	☐	☐	☐
Environment (inviting/stimulating/comfortable):	☐	☐	☐	☒	☐
Adjacencies of Learning Environments:	☐	☐	☐	☒	☐
Outdoor Classrooms	☐	☐	☐	☐	☒
Overall EFE: LE Rating	☐	☒	☐	☐	☐

Criteria for an Educational Assessment

Space

Educational Facility Effectiveness:
Spaces (EFE)

RATING CATEGORY: Excellent | Good | Fair | Poor | Deficient

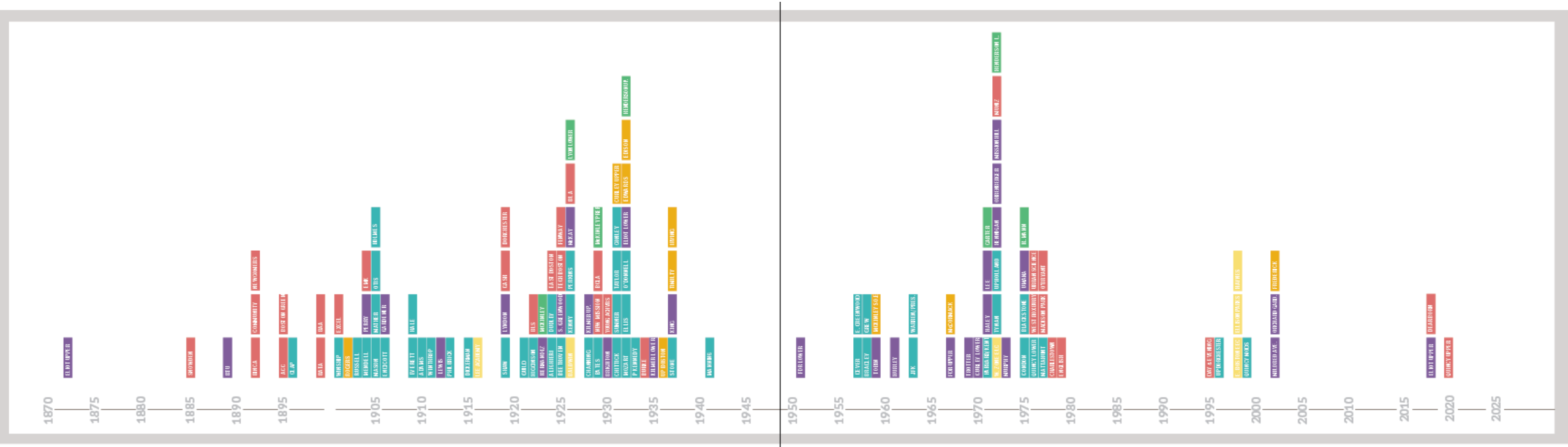
Room Type	Quantity	MSBA Area	Actual Area	Adequacy
Pre-K (K0/K1)	3	1200	860/970	Poor
Kindergarten (K2)	0	1200	0	Poor
Classroom (General Education) Gr. 1-5	17	950	450/790/1010	Fair
Classroom (General Education) Gr. 6-8	20	950	790/830	Fair
Science	5	1200	780/880/1020	Poor
Special Education:				
Self Contained	2	950	760/820	Fair
Resource of Small Group	2	500	200	
Art Classroom Gr. 1-5	1	1200	960	Fair
Art Classroom Gr. 6-8	0	1500	0	Deficient
Music Classroom	1	1200/1500	1070	Fair
Vocations and Technology	0	1200/1200	0	Deficient
Gymnasium	1	6000	4790	Poor
Media Center	1	2680	1310	Poor
Cafeteria	1	1973	4850	Excellent
Stage	1	1000	640	Poor
Medical	varies	TOTAL: 510	TOTAL: 0	Deficient
Administration & Guidance	varies	TOTAL: 2700	TOTAL: 2830	Good
AC Tech Network Room	0	200	0	
Other:				
Auditorium	1		4250	Good
Dance	1		870	Poor
Parent Center	1		210	Poor

Criteria for an Educational Assessment

- Engaged learning
- Differentiated learning
- Cognitively demanding tasks
- Equitable access to rigorous curriculum
- Vision of 21st century digital learning

The Portfolio

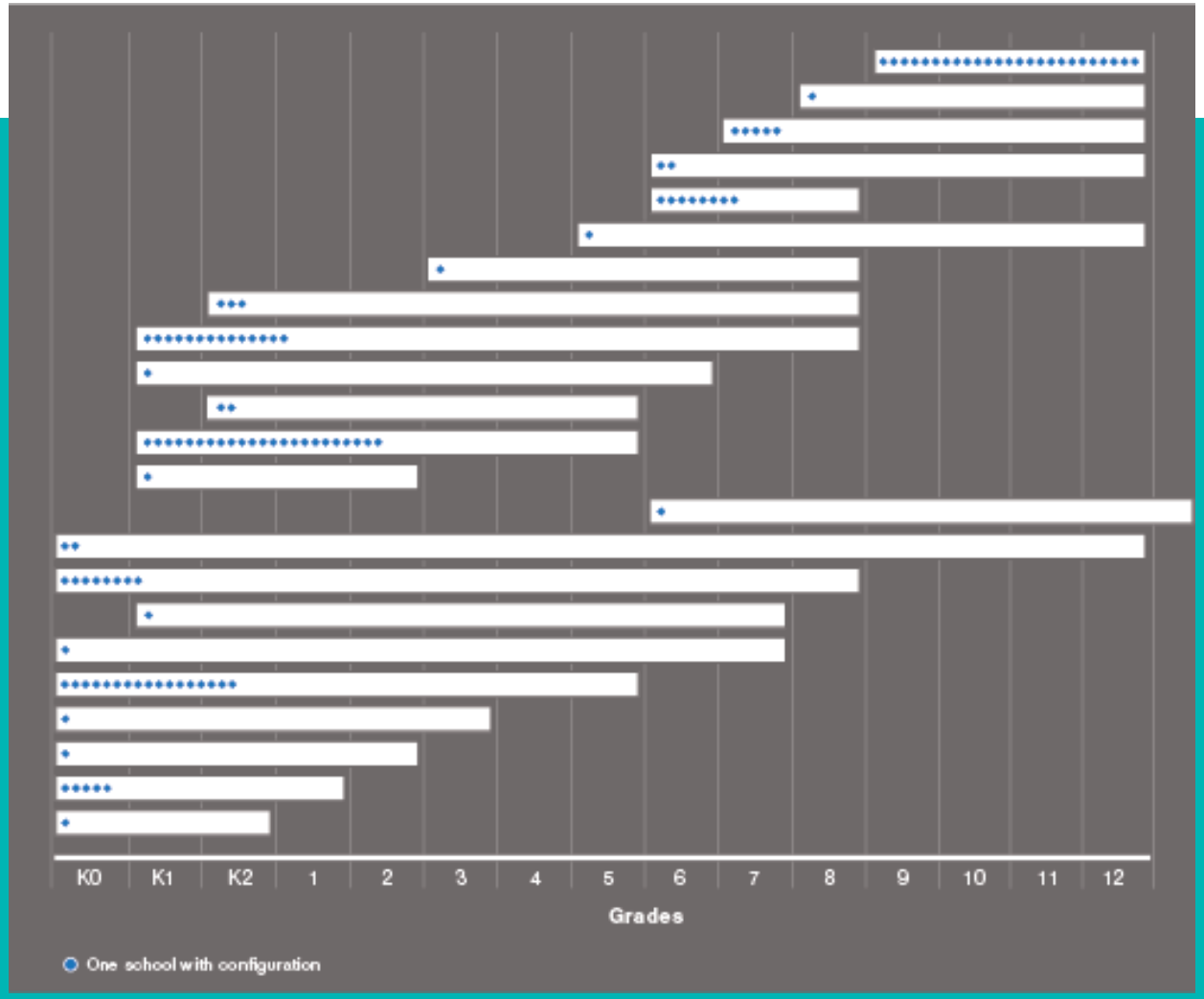
- 1885 - Current
- 83 schools built prior to WW II, 65%
- Late 60's- 70's Building Boom – Open Plan
- 11 schools, 21%



Small Schools

- Small size of buildings
- Single strand
- No art, music, library, cafeteria, gym, proper Special Ed., other in some combination
- Student toilets only in basement
- Using basement space for T&L

Grade Configurations - Current



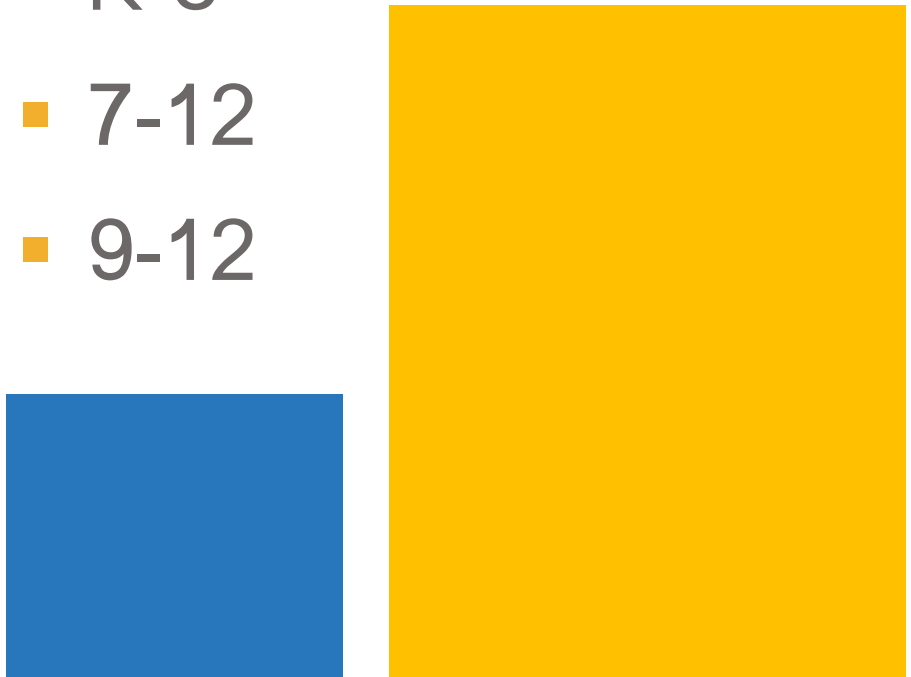
Challenges:

- 23 grade configurations
- Consistency of curriculum and educational delivery
- Student movement – jockeying for a better school
- Academic opportunity gaps- accelerated programs
  - Advanced Work Class, grades 4 - 6
  - Exam schools 7-12
- Lack of Pathways from K - 12

Grade Configurations - Future

Going from 23 to 5

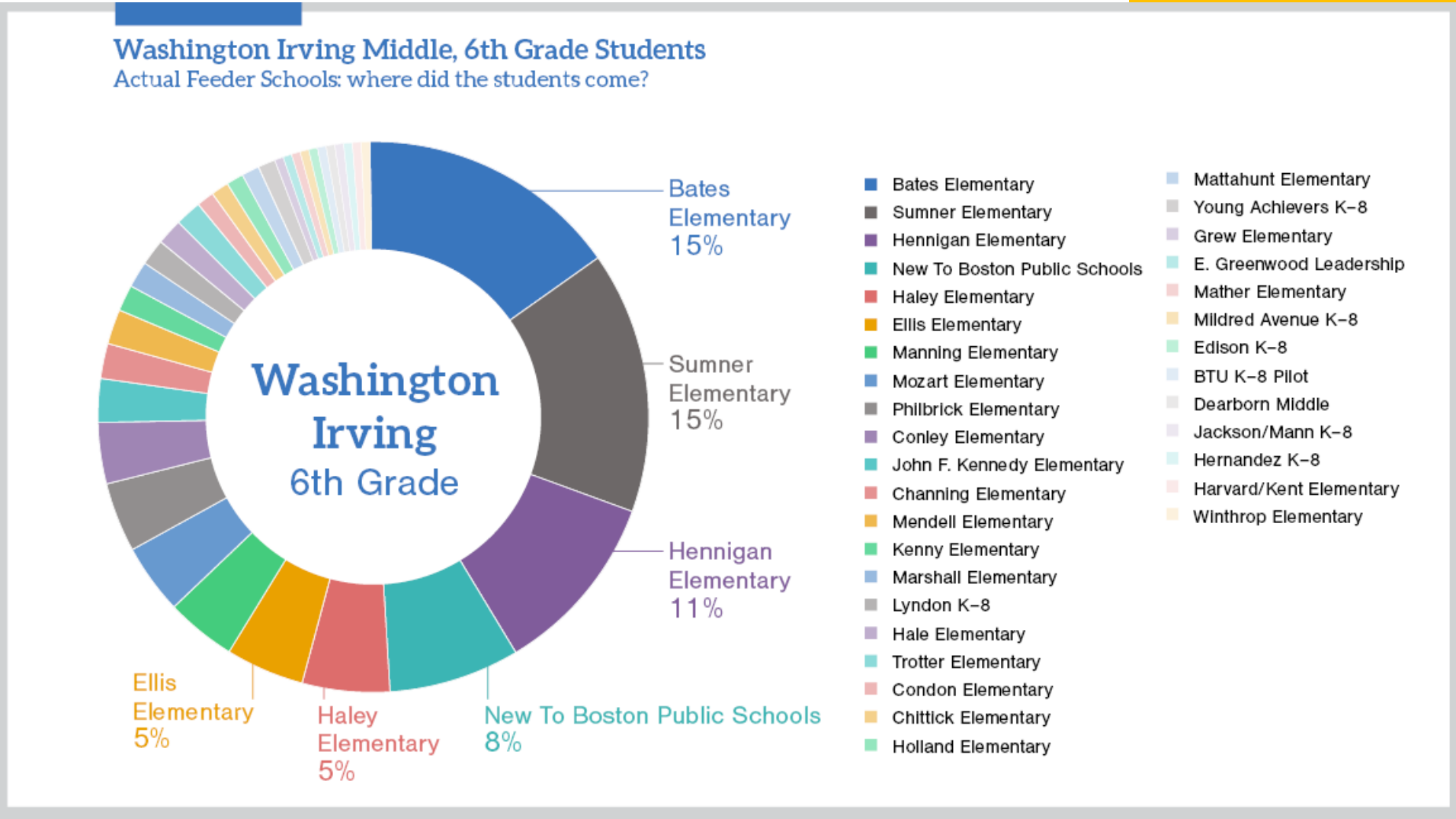
- ECC and ELC
- K1-6
- K-8
- 7-12
- 9-12



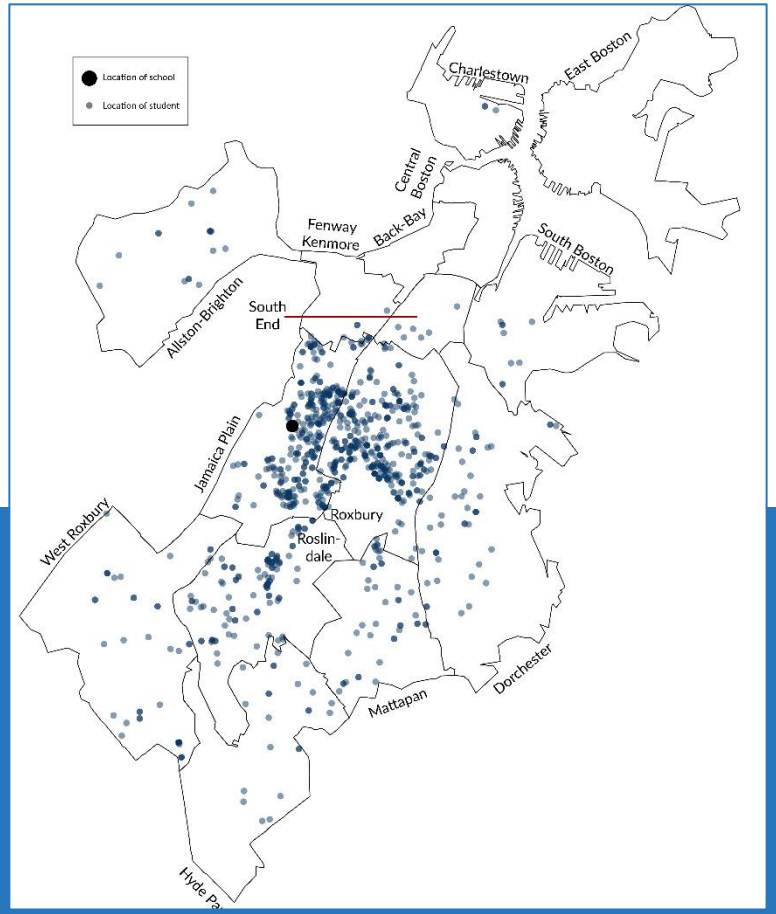
Challenges:

- Expand ECC and ELC schools
- Where does Pre-K go? Where do they belong?
- Do paired K-8's remain?
- Add grades 7 & 8 to already small high schools
- All new schools to fit within new configurations

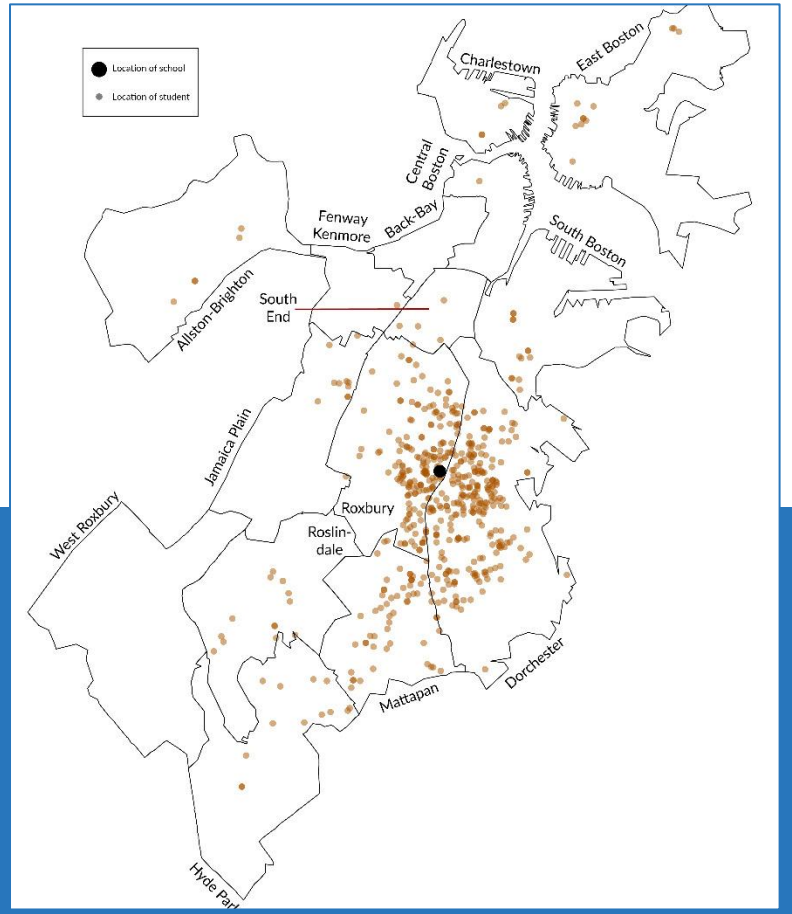
School Choice vs. Assignment



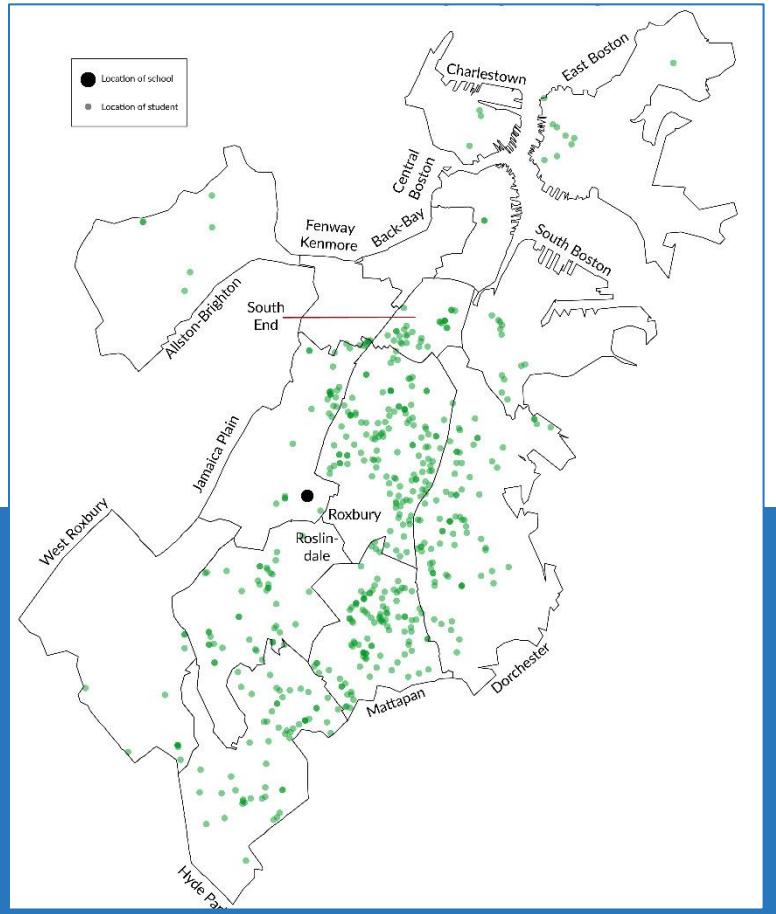
Choice and Assignment



Curley K-8



Lilla G. Frederick Pilot Middle School



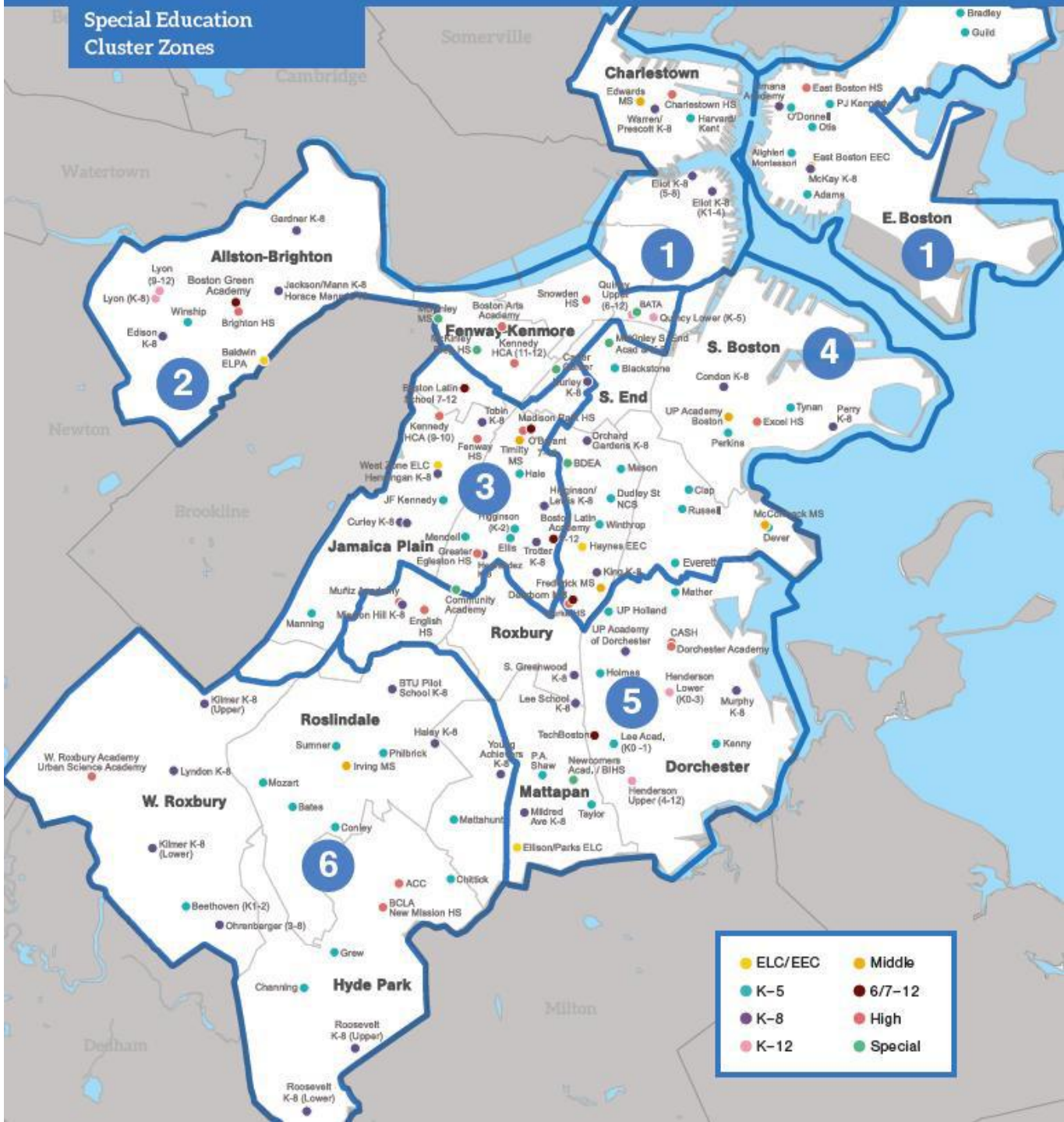
English High School

Pathways


Arlington
Medford
Everett
Revere
Chelsea
Belmont
Somerville
Cambridge
Watertown
Newton
Brookline
Dedham
Milton
Quincy
Braintree
Charlestown
Bradley
Guild
Umana Academy
PJ Kennedy
Edwards MS
O'Donnell
Warren/ Prescott K-8
Harvard/ Kent
Otis
Alighieri Montessori
McKay K-8
Eliot K-8 (5-8)
Eliot K-8 (K1-4)
Adams
E. Boston
Gardner K-8
Allston-Brighton
Lyon (9-12)
Jackson/Mann K-8
Horace Mann K-12
Lyon (K-8)
Winship
Edison K-8
Baldwin ELPA
Quincy Upper (6-12)
Quincy Lower (K-5)
S. End
S. Boston
Fenway-Kenmore
Hurley K-8
Blackstone
Condon K-8
Tynan
Perry K-8
UP Academy Boston
Perkins
Tobin K-8
Timilty MS
Orchard Gardens K-8
Dearborn MS
Hennigan K-8
Hale
Mason
Clap
Dudley St. NCS
JF Kennedy
Curley K-8 (Lower)
Higginson (K-2)
Higginson/ Winthrop
Russell
McCormack MS
Curley K-8 (Upper)
Mendell
Ellis
Lewis K-8 (2-8)
Trotter K-8
Dever
Hernández K-8
King K-8
Everett
Jamaica Plain
Frederick MS
Mather
Manning
Mission Hill K-8
Holland
Roxbury
UP Academy of Dorchester
S. Greenwood K-8
Holmes
Henderson K-12 (K0-4)
BTU Pilot School K-8
Lee School K-8
Murphy K-8
Kilmer K-8 (Upper)
Roslindale
Tech Boston
Dorchester
W. Roxbury
Haley K-8
Mattapan
Sumner
Philbrick
Kenny
Lyndon K-8
Mozart
Irving MS
Young Achievers K-8
Lee Academy (K0 - 3)
P.A. Shaw
Henderson K-12 (5-12)
Bates
Taylor
Conley
Mattahunt
Mildred Ave K-8
Kilmer K-8 (Lower)
Ellison/Parks ELC
Chittick
Beethoven (K1-2)
Ohrenberger (3-8)
Grew
Hyde Park
Channing
Roosevelt K-8 (Upper)
Roosevelt K-8 (Lower)

Special Education

- Autism (18 schools)
- Emotional impairment, including fragile (26 schools)
- Severe intellectual impairment (2 schools)
- Mild intellectual impairment (17 schools)
- Moderate intellectual impairment (11 schools)
- Multiple disabilities (5 schools)
- Physical impairment (3 schools)
- Sensory impairment – hearing (1 school)
- Sensory impairment – vision (1 school)
- Specific learning disability (27 schools)

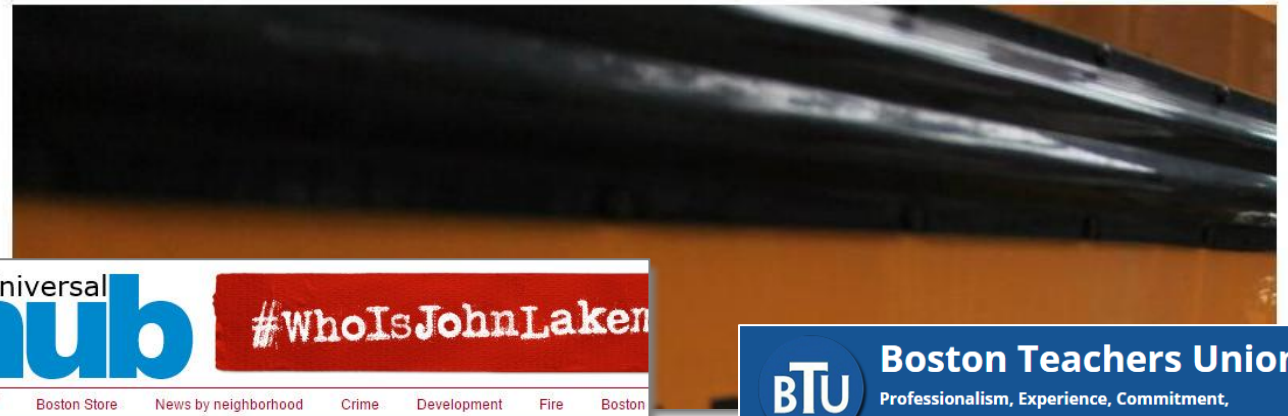


Educational Planning Issues – Ongoing

- Early childhood and universal Pre-K
- High school curriculum
- Special education
- ELL, English Learners – dual language, SEI, SLIFE
- Reduce student movement
- Good options, close to home

Capacity: Starting with McKinsey

BPS review suggested massive school closures



Universal hub

#WhoIsJohnLaken

The T | Boston Store | News by neighborhood | Crime | Development | Fire | Boston

Home / Boston

Consultant recommends BPS shut and sell up to 50 schools, slash central administration and increase student/teacher ratios

By adamg on *Fri, 04/29/2016 - 10:56am*

An outside audit of Boston Public Schools concludes the system needs to close and sell off between 30 and 50 of its 125 schools and make a wide range of staffing changes to balance its books and get BPS back on track towards bringing test scores up.

Public School Mama *Not a union member, just a parent fighting for her children's education*

I really want to meet the McKinsey auditors

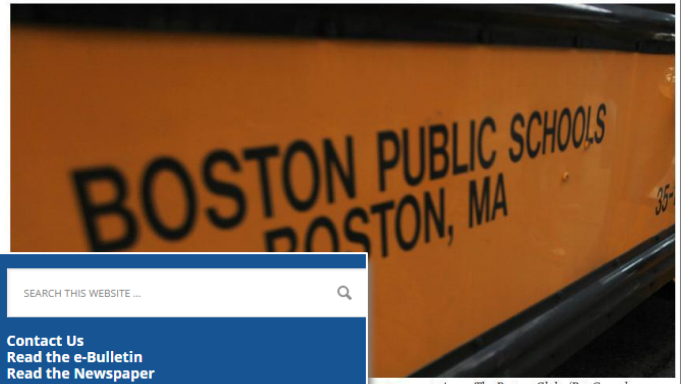
Posted on December 21, 2015 by marylewispierce

One of the reasons why I am interested in seeing the entire McKinsey report is because I would like to know who these jokers are.

boston.com

What is the McKinsey report and how does it fit into school closures?

The report has been referenced by the Mayor and in school committee meetings.



...as transportation. *–The Boston Globe/Pat Greenhouse*

...committee meeting. The words
...t who expressed her concerns during

Boston Teachers Union

Professionalism, Experience, Commitment, Teamwork Local 66, AFT Massachusetts, AFL-CIO

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MCKINSEY REPORT

MAY 24, 2016 BY BTU STAFF

City and School District Fail to Renounce Flawed Report

By now most have probably heard of the McKinsey Report, which claimed that Boston Public Schools has an excess seating capacity of 38,000 seats and called for the closing of 30 to 50 schools. Though discredited by many city councilors and school ... [Read more...]

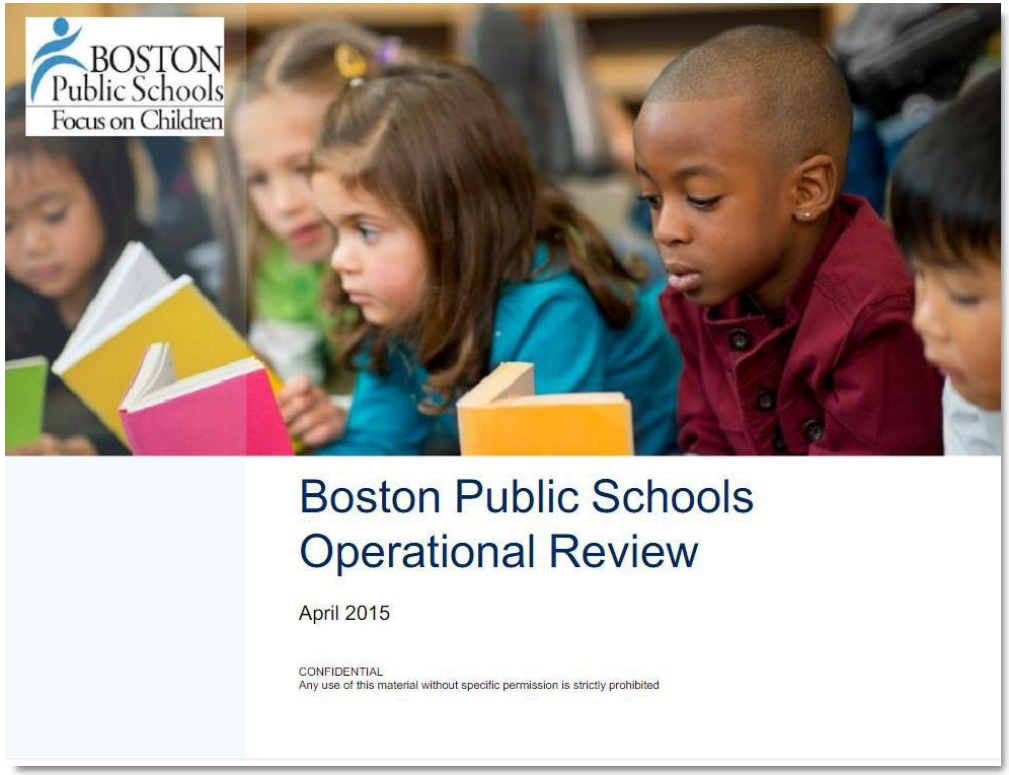
Filed Under: News · Tagged With: data, Flawed Report, McKinsey Report, Report, research, School District

Capacity: Starting with McKinsey

Timeline and Methodology

- March 2015: McKinsey report came out which developed a capacity of 92,950 students
- August 2015: SMMA and BPS execute contract

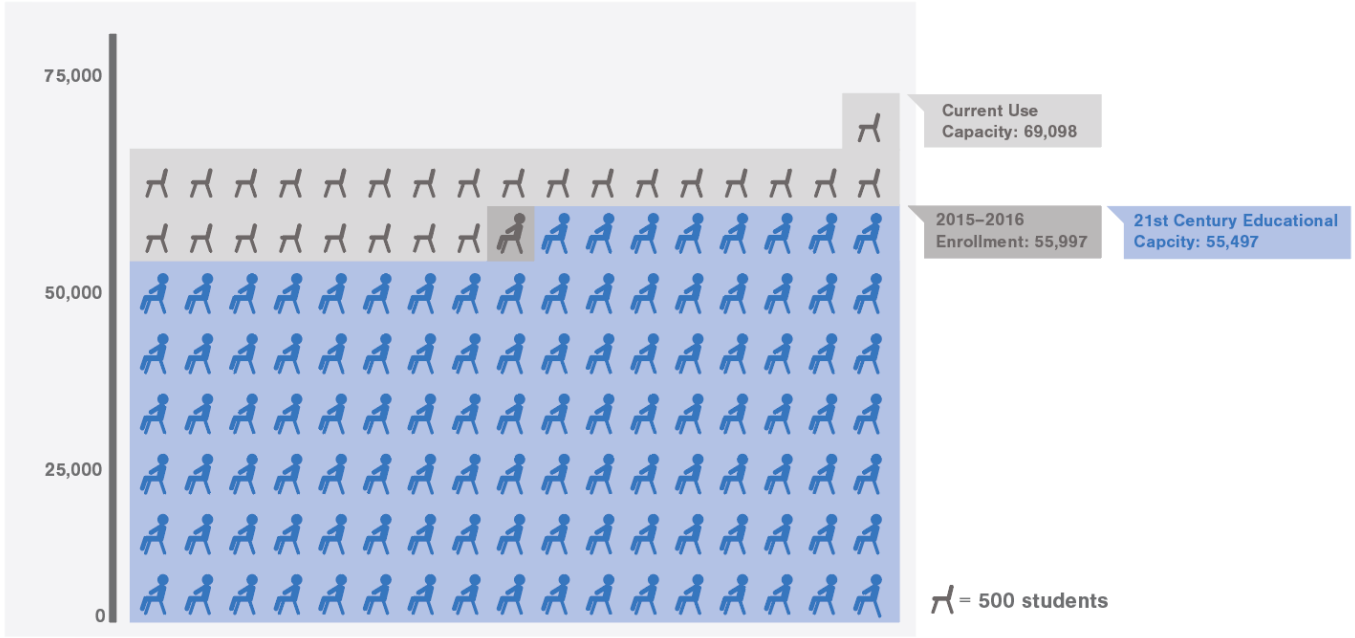
- Count every classroom (except resource rooms)
- "A" size classrooms: 21-30 students
- "B" size classrooms: 12 students
- Did not consider "missing" programs
- Did not consider special education "2nd seats"
- Did not consider educational vision target for students per classroom



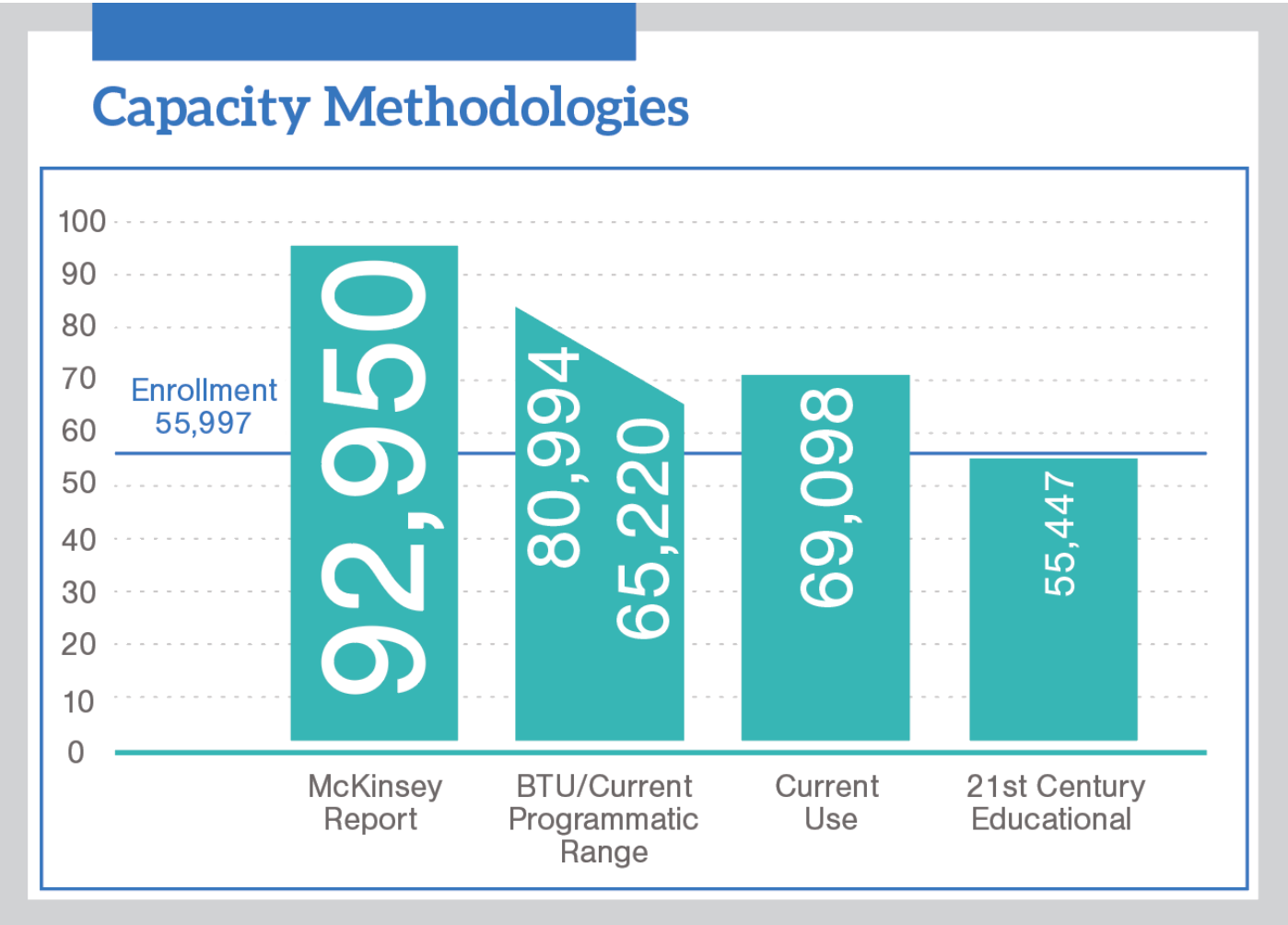
Capacity: Considerations

What is the right number of students in a facility

- "Seats" – Inclusion and 2nd seats
- Class size: target vs. allowable maximum by contract
- Support spaces (2nd seats)
- Utilization rates (differ by typology)
- Program offerings (educational vision vs. current)
- Grossing factors change based on construction date
- MSBA funding requirements
- Neighborhood school capacity vs. where students live



Capacity: 4 Different Methods



Capacity: BTU/Current Programmatic Range

Methodology

- Creates a range
  - MSBA standard target class sizes and BTU contract maximums
- 90% utilization factor added to MS, 85% for HS
- Does not consider missing program spaces for enrichment or educational Vision
- Does not take into account reduced student numbers for:
  academically talented or slow academic achievers, Structured English Immersion (SEI) classes, Bilingual Classes, and ESL classes with or without a paraprofessional
- Dedicated substantially – separate classrooms

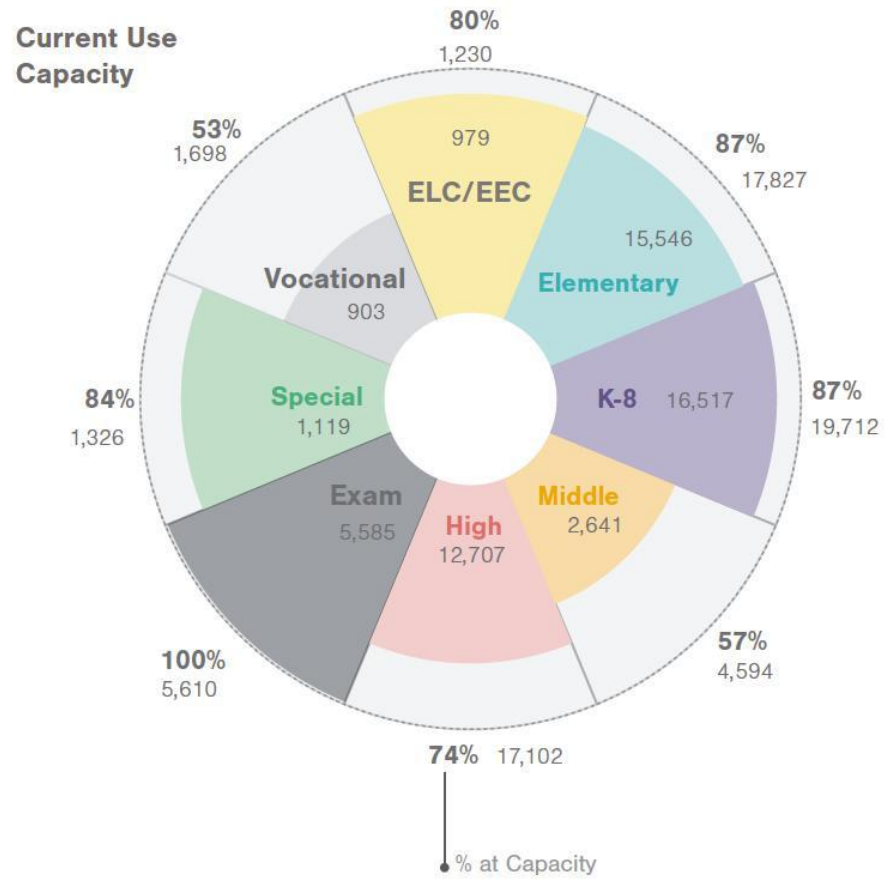
Students per Classroom Values for Current Programmatic Capacity

Grades	Range	
	LOW	HIGH
K0, K1 (Pre-K)	15	22
K2	18	22
Elementary: grades 1–5	23	24
K–8: grades 1–8	24	25
Middle: grades 6–8	24	28
High 6/7–12	24	30
High 9–12	24	31

Capacity: Current Use

Methodology

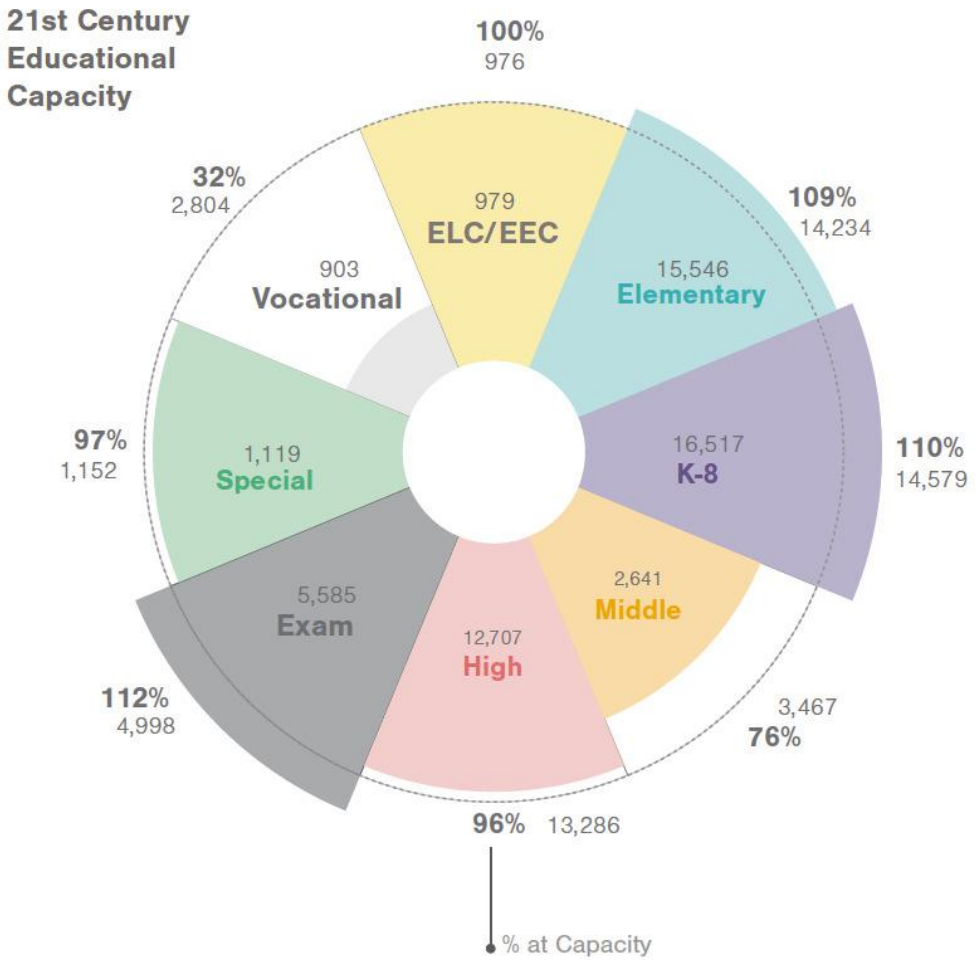
- Developed by City of Boston
- Classroom use based on statue quo
- 90% utilization factor added to middle school classrooms
  85% utilization factor added to high school classrooms
- Does not consider missing program for enrichment or educational Vision
- Considers classrooms size
- Dedicated substantially-separate classrooms are included in the classroom totals
- Considers special education and ELL – but not as 2nd seats
- GSF of building had no impact on overall capacity



Capacity: 21st Century Educational

Methodology

- Uses MSBA standards
- MSBA standards assume 8% student population is SPED (BPS is 19.5% but moving towards inclusion)
- Assumes 1.5 grossing factor
- Assumes incorporation of dedicated space for enrichment
- Allows schools to be compared equally based upon GSF
- Dedicated non-school spaces were removed from GSF (including natatoriums, community centers, unusable space)
- Meets standards required for state funded construction projects



Capacity: By Typology

Methodology

- Capacity must be viewed by typology in the short term

Enrollment by Typology

		21st Century Educational Capacity			Current Use Capacity		
	Enrollment SY15/16	# of Seats	+/-	% at Capacity	# of Seats	+/-	% at Capacity
Early Learning	979	976	-3	100%	1,230	251	80%
Elementary	15,546	14,234	-1,312	109%	17,827	2,281	87%
K-8	16,517	14,579	-1,938	113%	19,712	3,195	84%
Middle	2,641	3,467	826	76%	4,594	1,953	57%
High	12,707	13,286	579	96%	17,102	4,395	74%
Exam	5,585	4,998	-587	112%	5,610	25	100%
Special	1,119	1,152	33	97%	1,326	207	84%
Vocational	903	2,804	1,901	32%	1,698	795	53%
Total	**55,997**	**55,497**	**-500**	**101%**	**69,098**	**13,101**	**81%**

Capacity: By Neighborhood

Methodology

Dorchester Capacity

	Enrollment SY15/16	21st Century Educational Capacity			Current Use Capacity		
		# of Seats	+/-	% at Capacity	# of Seats	+/-	% at Capacity
Early Learning	196	158	-38	124%	255	59	77%
Elementary	3,583	3,266	-317	110%	4,042	459	89%
K-8	2,217	2,321	104	96%	2,454	237	90%
Middle	519	641	122	81%	921	402	56%
High	1,896	2,109	213	90%	2,743	846	69%
Exam	0	0	0	0%	0	0	0%
Special	0	0	0	0%	0	0	0%
Vocational	0	0	0	0%	0	0	0%
Total	8,411	8,484	83	99%	10,415	2,004	81%
Total Students Residing in Neighborhood	11,821						
Difference	-3,410						

Data Management

Assessments and Data Management

In the Beginning

1. RFP called for the data deliverable to be importable into an existing Maximo database
2. Indus was included in Interview to filter data for live input in the field
3. Project data was collected by SMMA staff in excel to serve as data backbone
4. Phase 1,2, and 3 data and deliverables were different
5. Team was still unsure about what the final deliverable was going to be

Status Quo

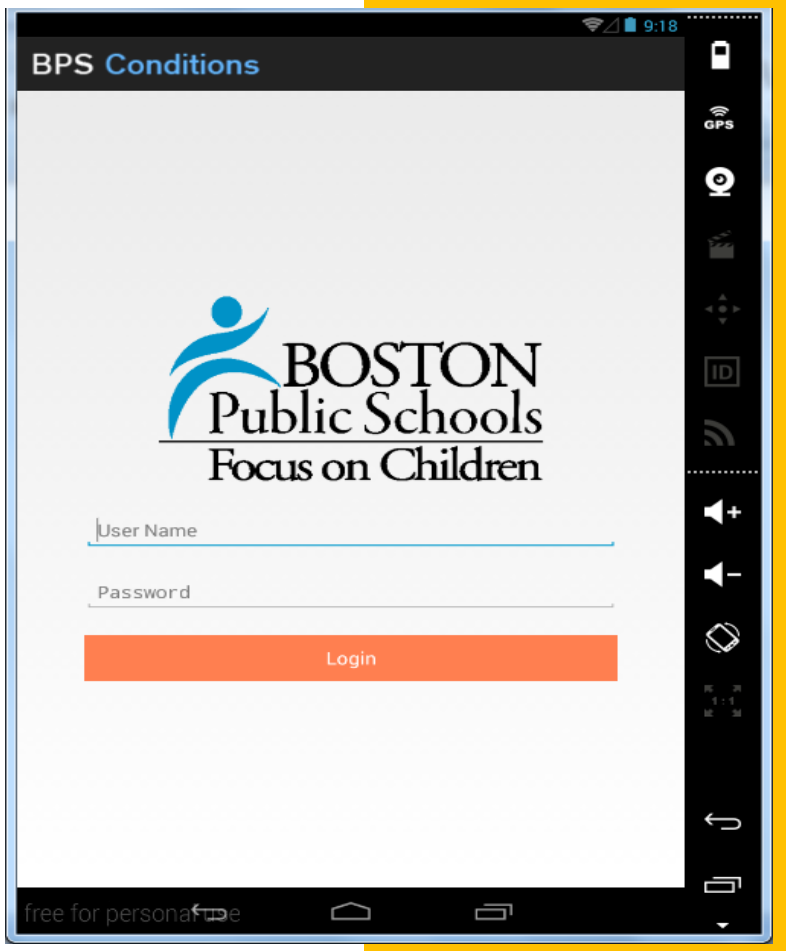
RFP and Interview

Indus Software (Collection Tool)

- Proprietary software
- Costs associated with data hosting
- Data could not be extrapolated from software
- Software did not coalesce with Maximo

Maximo (Database used by BPS)

- BPS has not maintained data
- Data requested in RFP did not coordinate with existing Maximo fields



IBM maximo®

Thinking Outside the Data Box

- Collected in Survey Monkey
- Free software, required Wi-Fi connections/hot spots but could also work offline
- Data entry performed in the field on a tablet
- Data can be exported into excel format
- BPS owns data and can manipulate it easily

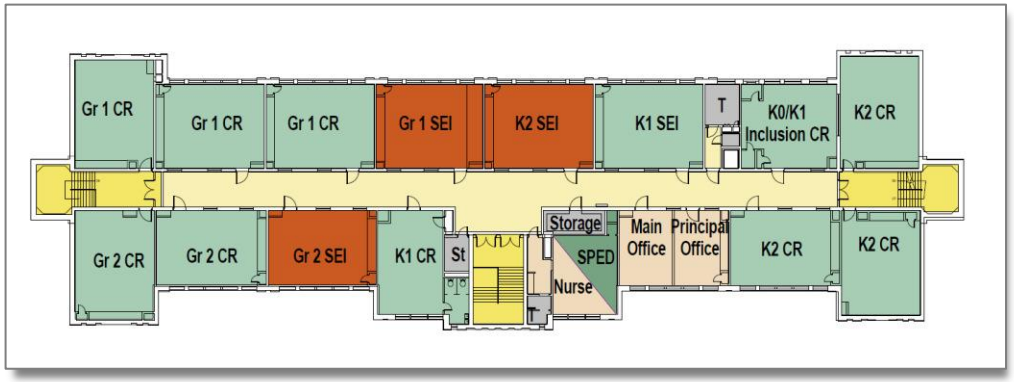
Assessments and Data Management

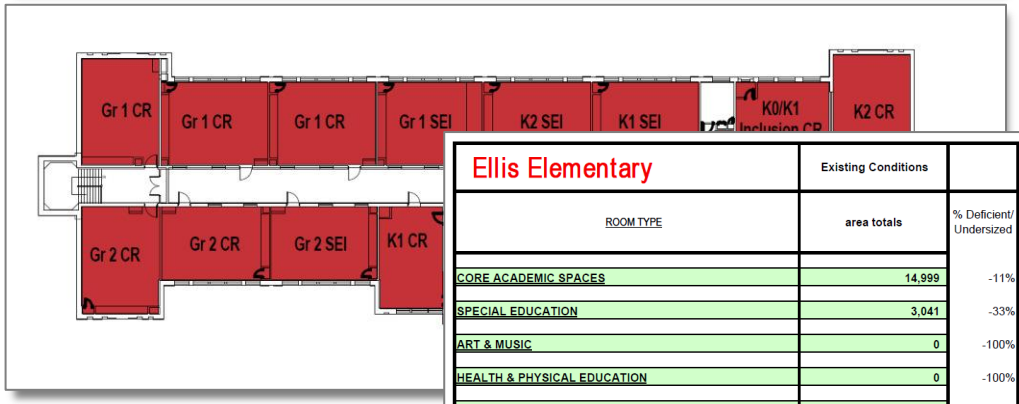
Phase 2:

- 19 Schools
- Data collected with Survey Monkey
- Space analysis, program current use plans and MSBA space comparison plans developed
- Small Reports
  - Facility Evaluation Criteria Sheets
  - School At-A-Gland
  - In-design merge fields
  - Short Text summary

Takeaways:

- Time consuming – less than Phase 1, but still too long
- Deliverable: Individual school summary reports and database
- Space analysis/current use plans – not within the fee

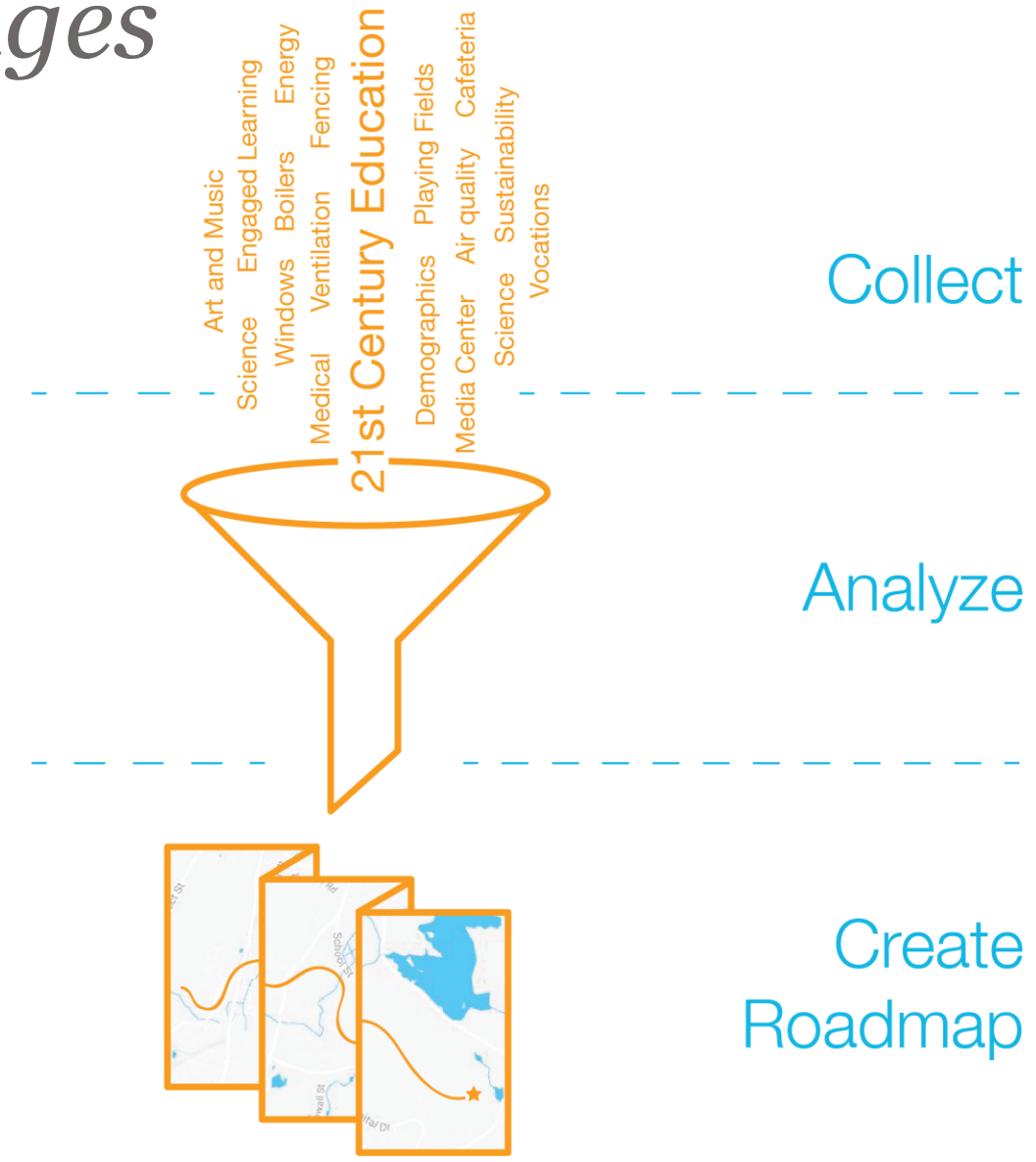




Ellis Elementary	Existing Conditions		MSBA Guidelines (refer to MSBA Educational Program & Space Standard Guidelines)	
ROOM TYPE	area totals	% Deficient/ Undersized	area totals	Comments
CORE ACADEMIC SPACES	14,999	-11%	16,900	
SPECIAL EDUCATION	3,041	-33%	4,530	
ART & MUSIC	0	-100%	2,575	
HEALTH & PHYSICAL EDUCATION	0	-100%	6,300	
MEDIA CENTER	955	-61%	2,452	
DINING & FOOD SERVICE	2,785	-55%	6,198	
MEDICAL	90	-82%	510	
ADMINISTRATION & GUIDANCE	1,859	-12%	2,111	
CUSTODIAL & MAINTENANCE	683	-66%	1,996	
OTHER	0		0	
Total Building Net Floor Area (NFA)	24,412	-44%	43,572	
Proposed Student Capacity / Enrollment	205	-48%	396 (2015/2016 Enrollment)	

Data Management Challenges

- 2 years as one point in time: August 2015 - March 2017
- Data from multiple source
- Could not verify all of the data
- School information changed over Sys
  - October 1st to December 1st – 500 students disappeared?
- Schools in 2 different buildings and 2 schools sharing a building
  - Unique identifier?
- Calibrating the team



The Validity of Data

Which data point is correct?

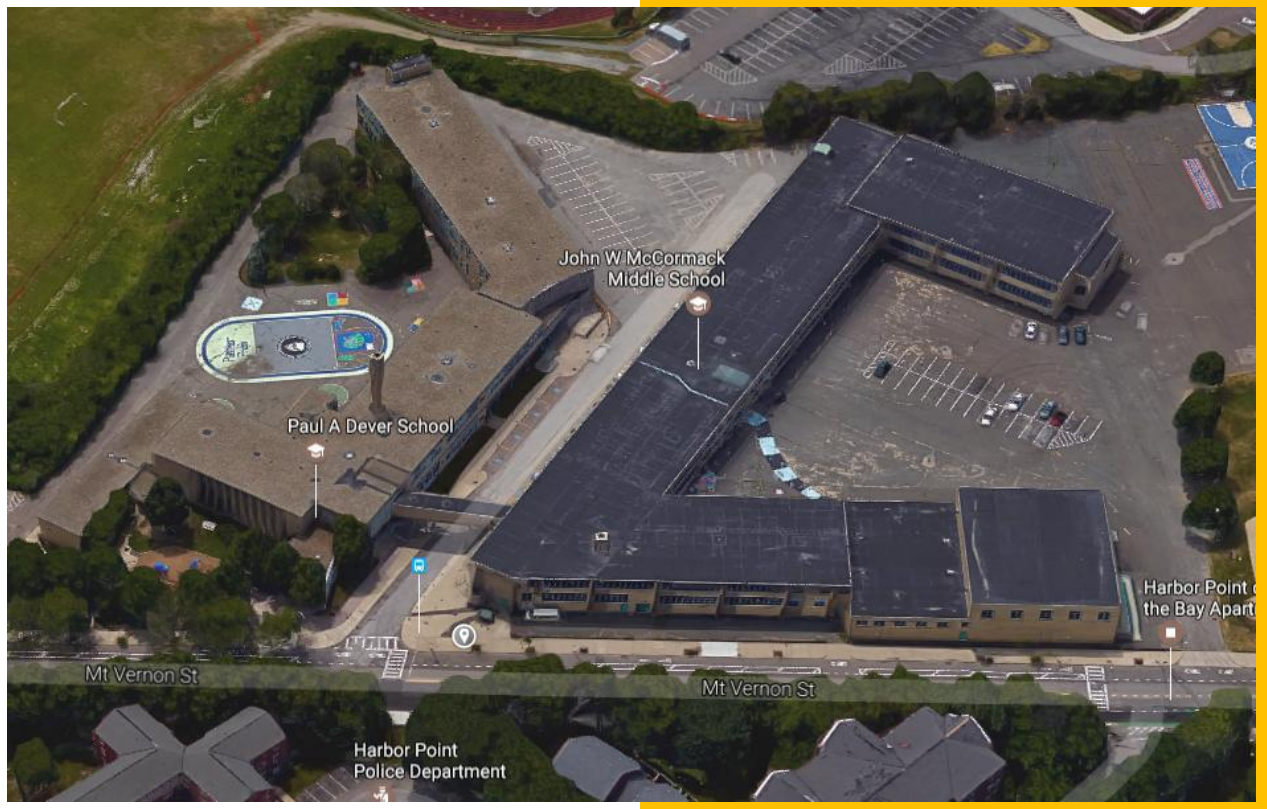
Example:

McCormack Middle School

- BPS Facilities: 234,000 GSF
- BPS provided to MSBA: 115,941 GSF
- Insurance Information: 234,625 GSF
- Tax Assessors Database: 168,445 GSF
- SMMA measured CADD files: 107,137

Dever Elementary School

- BPS Facilities: 130,036 GSF
- BPS provided to MSBA: 75,892 GSF
- Insurance Information: 168,445 GSF
- Tax Assessors Database: 75,892 GSF



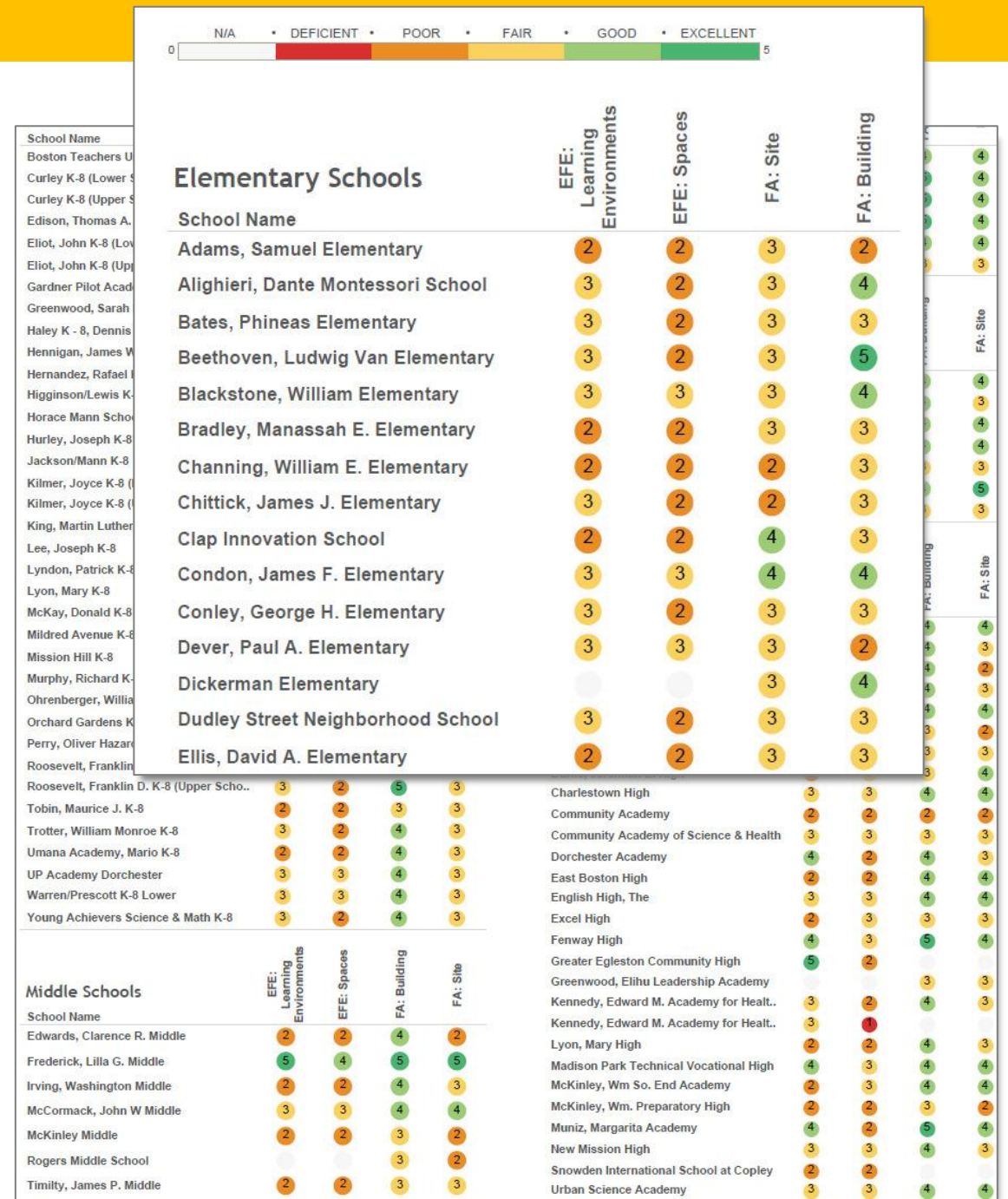
Owning the Data

Lessons Learned Along the Way

- Unexpected man-hours, role became full time position
- Trust the team members
- Who checks the data manager?
- How do we QC a database?
- Know the deliverable in advance

Data Doesn't Lie

- General Information, Facility Assessments and Educational Assessments yielded 34,363 cells of data in 626 different categories
- What is the data telling us?
- How do we use the data as a tool to tell the story?



N/A • DEFICIENT • POOR • FAIR • GOOD • EXCELLENT (0 – 5)

Elementary Schools

School Name	EFE: Learning Environments	EFE: Spaces	FA: Site	FA: Building
Adams, Samuel Elementary	2	2	3	2
Alighieri, Dante Montessori School	3	2	3	4
Bates, Phineas Elementary	3	2	3	3
Beethoven, Ludwig Van Elementary	3	2	3	5
Blackstone, William Elementary	3	3	3	4
Bradley, Manassah E. Elementary	2	2	3	3
Channing, William E. Elementary	2	2	2	3
Chittick, James J. Elementary	3	2	2	3
Clap Innovation School	2	2	4	3
Condon, James F. Elementary	3	3	4	4
Conley, George H. Elementary	3	2	3	3
Dever, Paul A. Elementary	3	3	3	2
Dickerman Elementary			3	4
Dudley Street Neighborhood School	3	2	3	3
Ellis, David A. Elementary	2	2	3	3

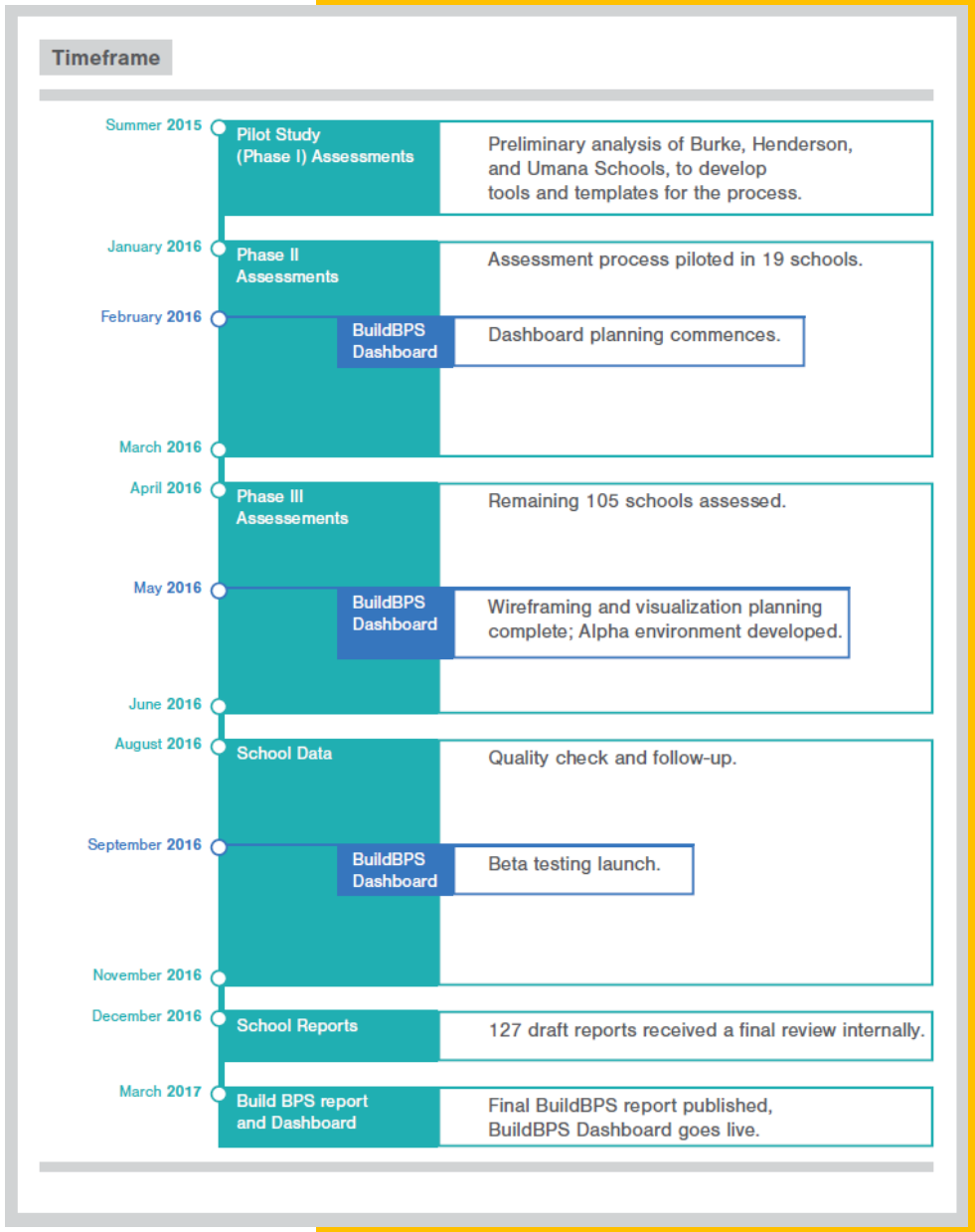
Middle Schools

School Name	EFE: Learning Environments	EFE: Spaces	FA: Building	FA: Site
Edwards, Clarence R. Middle	2	2	4	2
Frederick, Lilla G. Middle	5	4	5	5
Irving, Washington Middle	2	2	4	3
McCormack, John W Middle	3	3	4	4
McKinley Middle	2	2	3	2
Rogers Middle School			3	2
Timilty, James P. Middle	2	2	3	3

From Excel to Dashboard

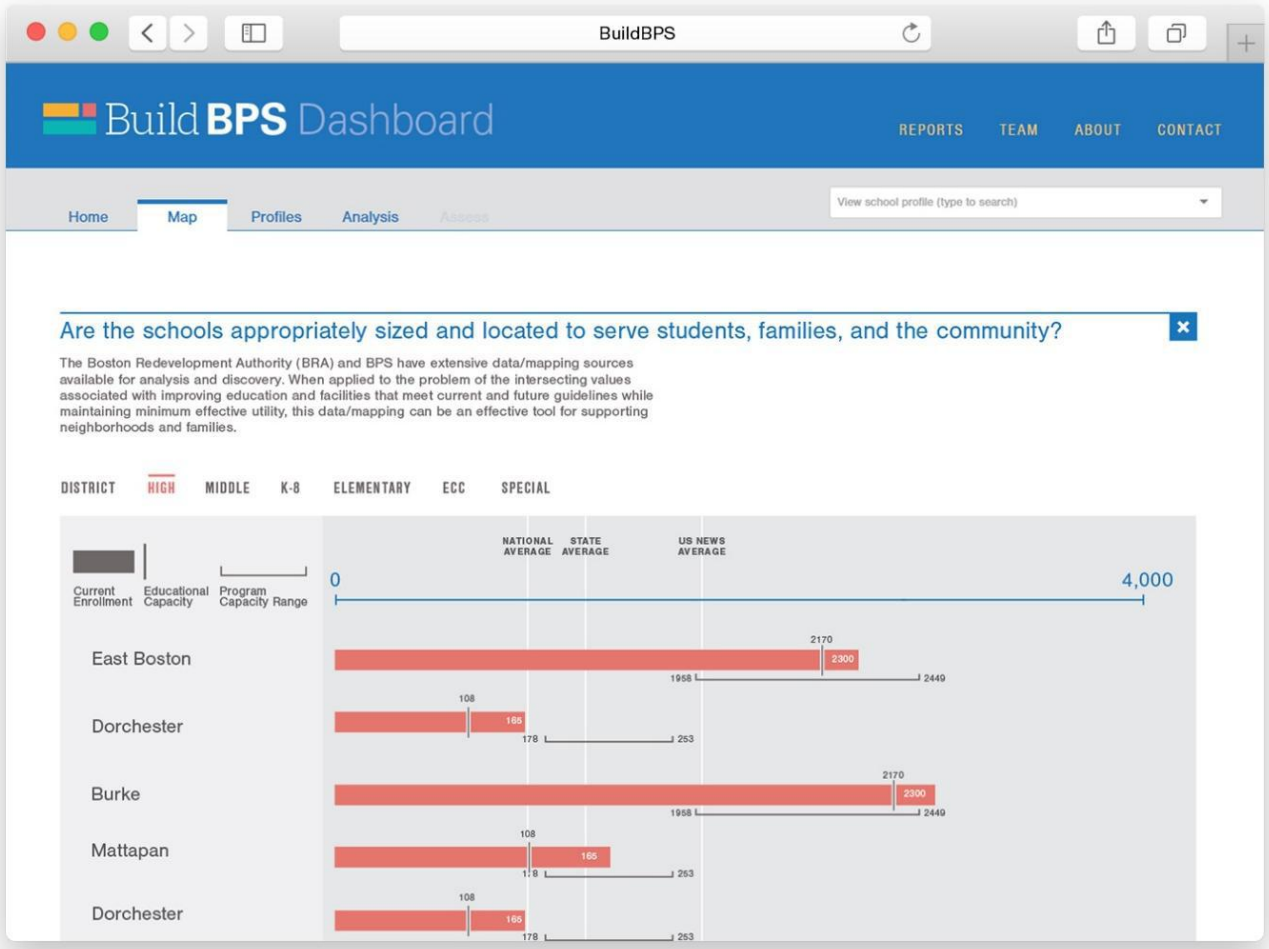
What did that mean for the data we had already collected?

- GeoJSON – new to SMMA
- Data formatting must work with coding language – reformatting
- Data visualizations were limited to the data that was collected
- Data must be paired with



The Dashboard: Visualizing Data

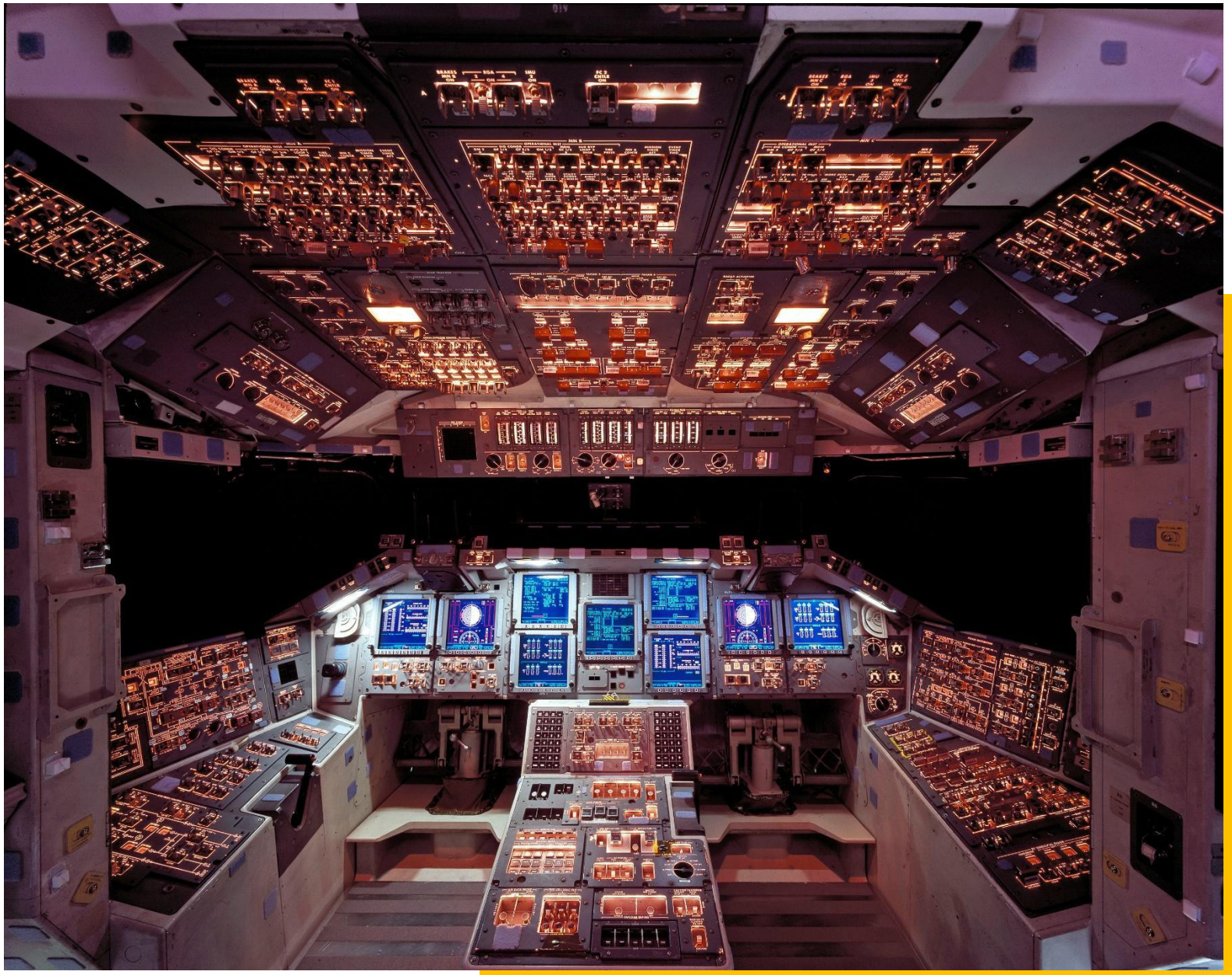
Capacity as a Visualization



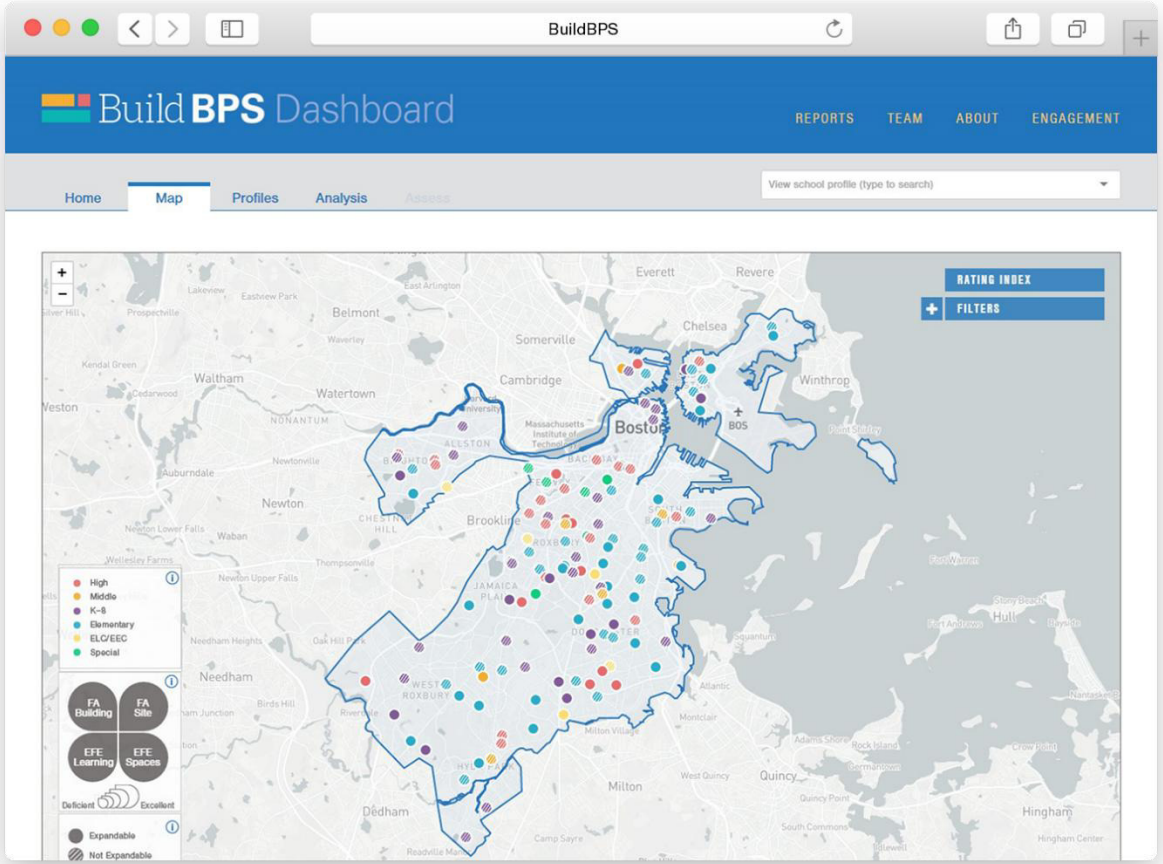
Dashboard?

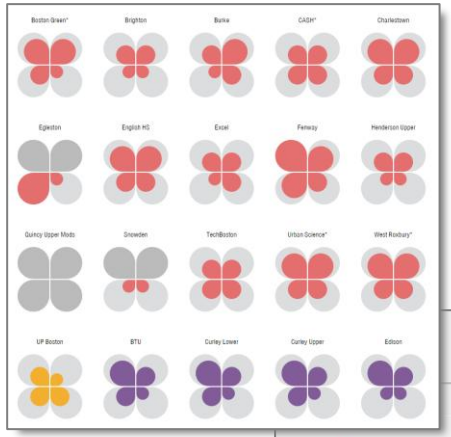
Dashboard?

Dashboard?

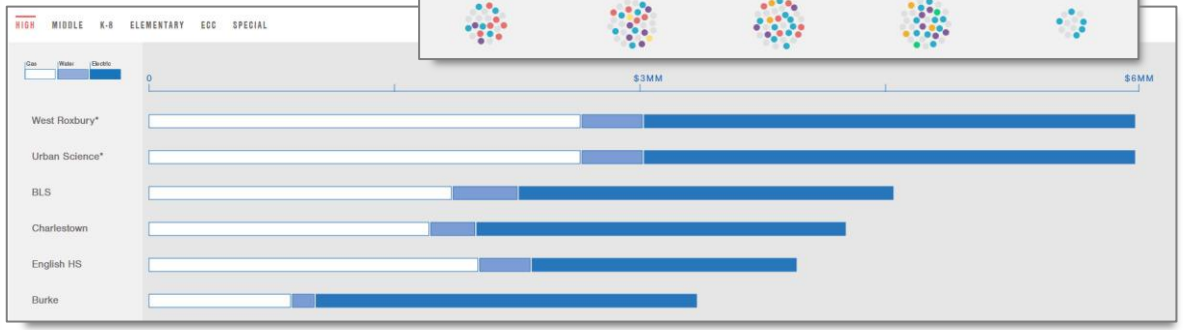


Dashboard


BuildBPS
Build BPS Dashboard
REPORTS
TEAM
ABOUT
ENGAGEMENT
Home
Map
Profiles
Analysis
View school profile (type to search)
RATING INDEX
FILTERS
High
Middle
K–8
Elementary
ELC/EEC
Special
FA Building
FA Site
EFE Learning
EFE Spaces
Deficient
Excellent
Expandable
Not Expandable

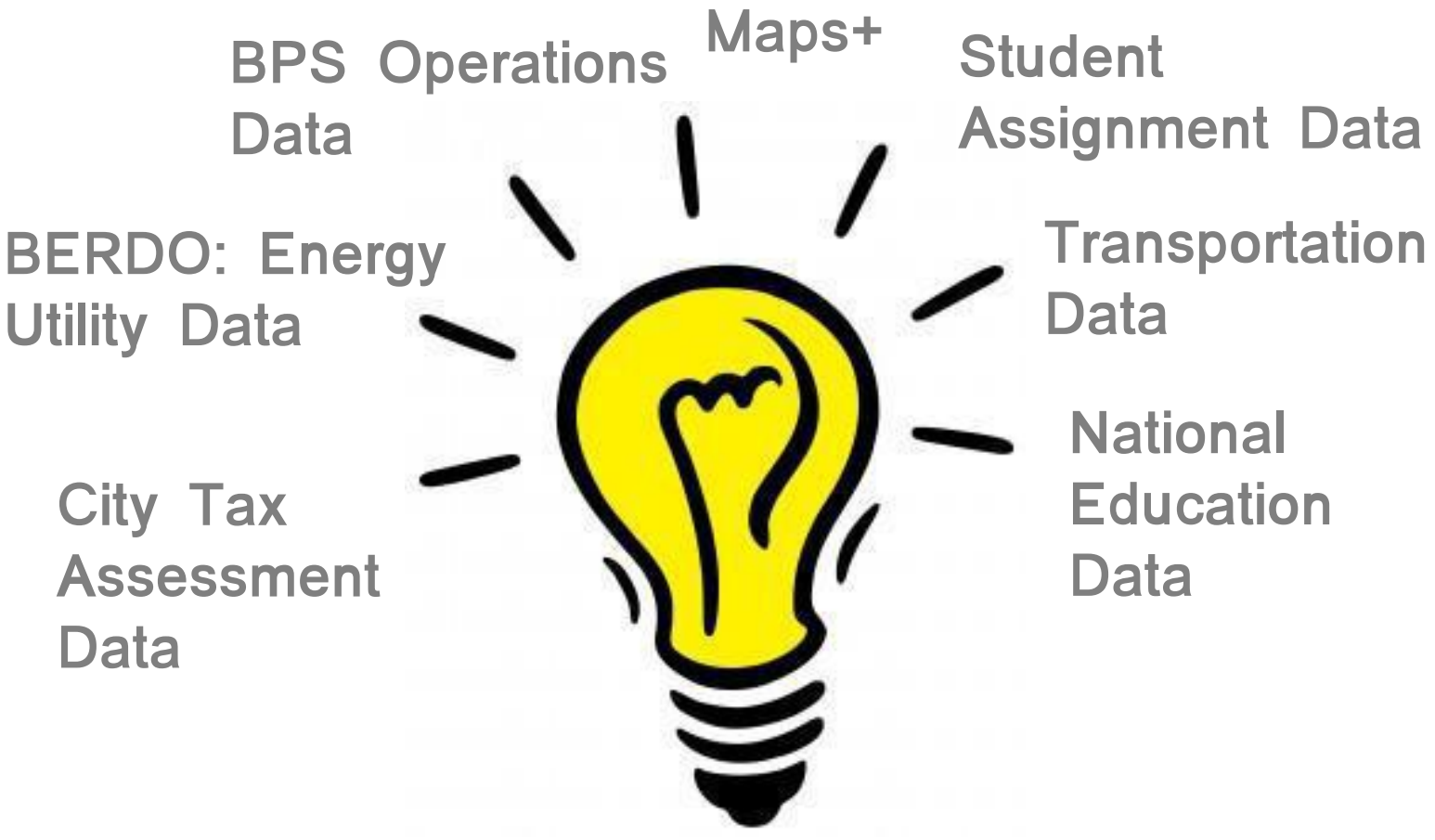



Highlight school (type to search)
FILTERS
1900-1939
MINOR
MODERATE
REPLACE

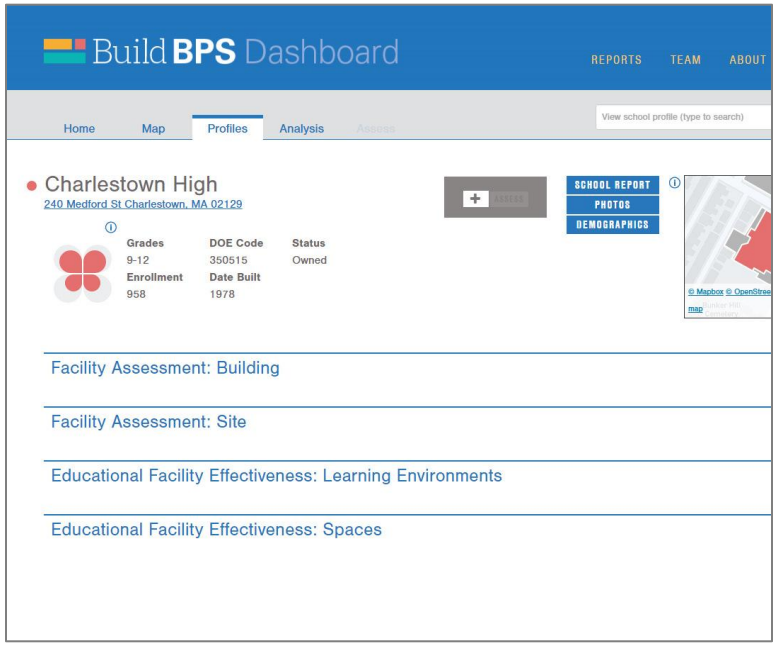

HIGH
MIDDLE
K-8
ELEMENTARY
ECC
SPECIAL
Gas
Water
Electric
0
$3MM
$6MM
West Roxbury*
Urban Science*
BLS
Charlestown
English HS
Burke

The Big Idea

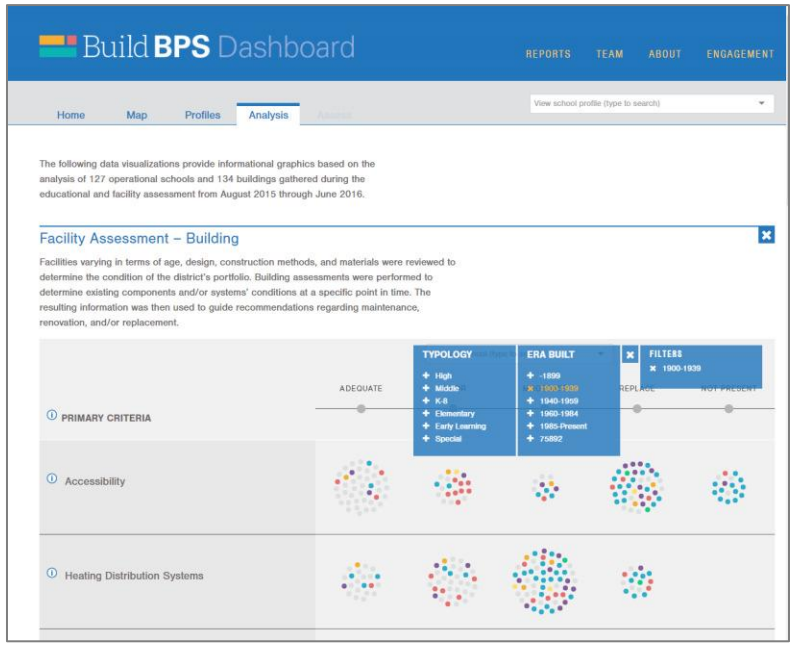
The Big Idea


BPS Operations Data
Maps+
Student Assignment Data
BERDO: Energy Utility Data
Transportation Data
City Tax Assessment Data
National Education Data

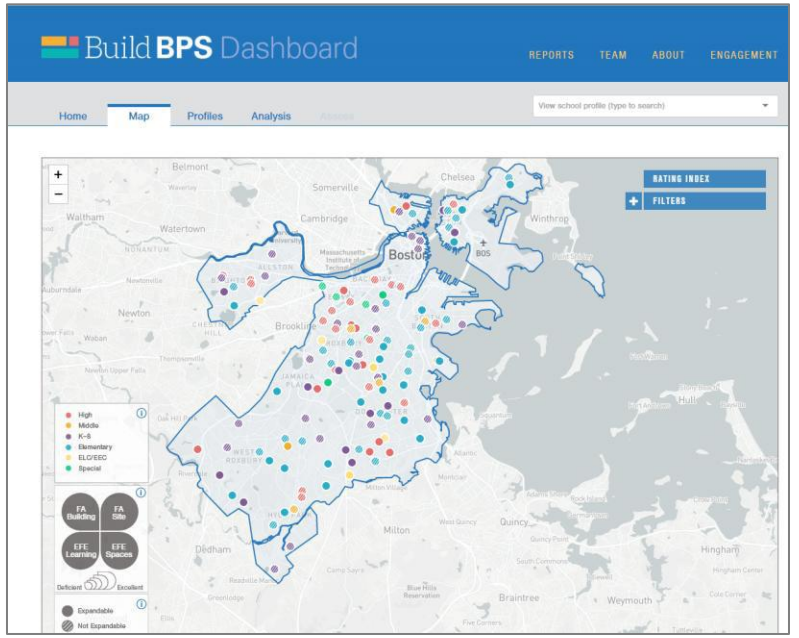
Goals



Organization and Asset Management



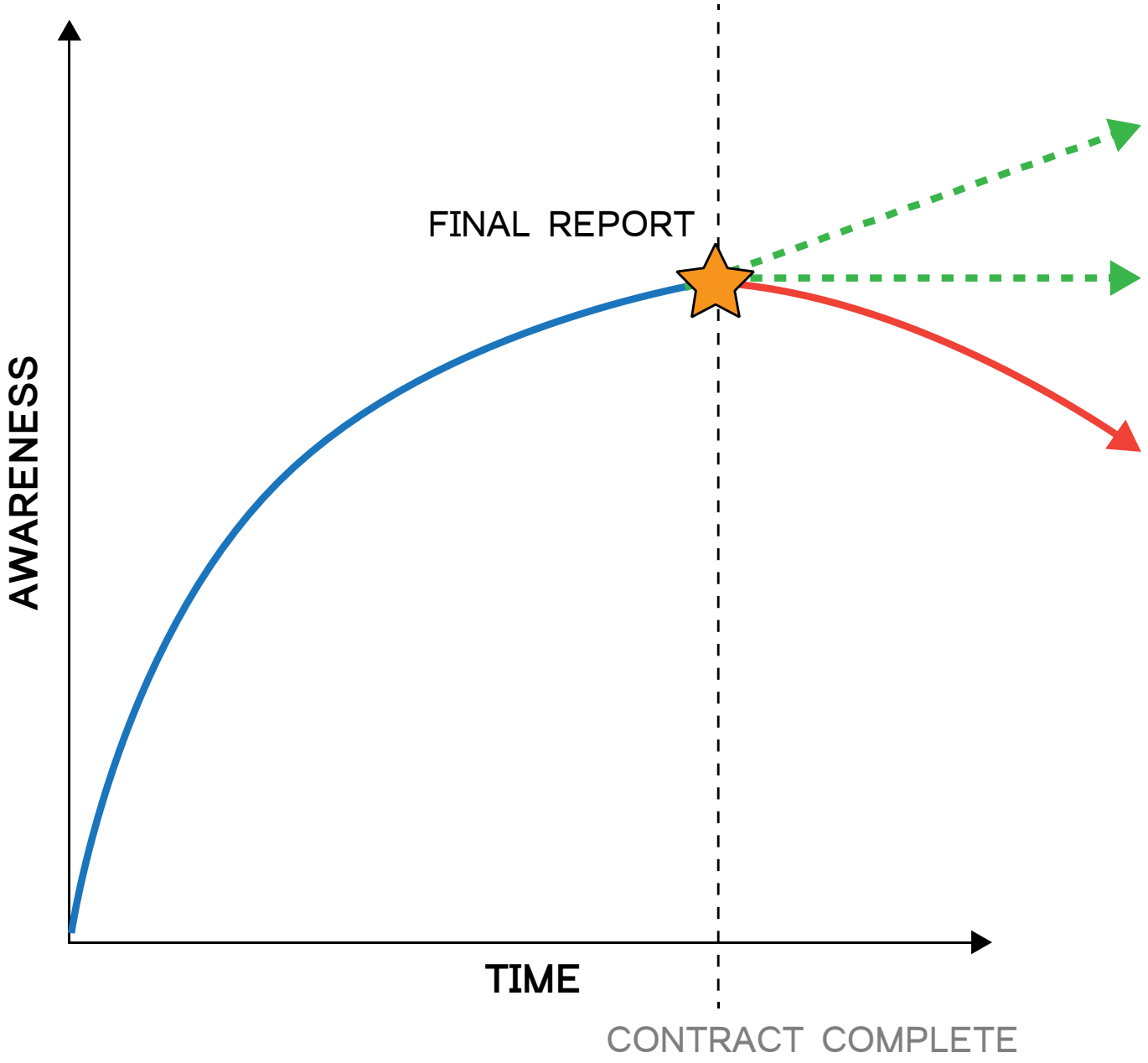
Data Visualization and Analysis Tools



Communications and Transparency

Arc of Awareness

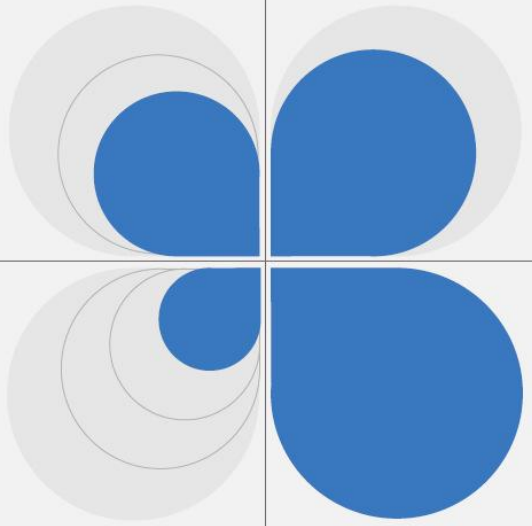
Redefining the Deliverable



The Clover

Facilities Assessment–Building:

This category of the assessment considered the physical condition of the buildings, in terms of age, design, construction methods, and materials. Building assessments also determined existing components and/or systems' conditions at a specific point in time.



Facilities Assessment–Site:

This category considered the quality, condition, and capacity of the various exterior spaces of the facilities. These spaces include landscaped, educational, recreational, vehicular, and pedestrian areas. The on-site evaluation was complemented by detailed study/research of the sites from web-based resources.

Educational Facility Effectiveness–Learning Environments:

This category considered the quality of the physical environment inside the buildings, both in terms of inherent building characteristics and introduced equipment (e.g., furniture and technology), as well as the physical appearance and condition of each.

Educational Facility Effectiveness–Spaces

This category compared the sizes of educational spaces to Massachusetts 963 CMR1 guidelines for 21st century teaching and learning in new capital projects. This quantitative analysis is important for establishing the level of adequacy of the existing spaces for educational delivery. It also indicates whether a facility is deficient in, or missing, dedicated educational spaces normally found in buildings of its grade level and typology.

Build BPS

Planning Principles & Taking Action

1

Leverage real-time facility assessment data to prompt and validate investment choices.

2

Create school environments that promote student and staff safety and well-being.

3

Align building capacity to enrollment and demographic trends citywide.

4

Improve the match between educational programs and their facilities.

Planning Principles & Taking Action

5

Maximize the energy efficiency of BPS facilities.

6

Focus new school construction primarily in high-growth neighborhoods with limited options for site expansion.

7

Focus initial school renovation and expansion projects primarily in neighborhoods where school building sites can be expanded and where swing space is available.

Planning Principles & Taking Action

8

Expand K1 seats in neighborhoods where the estimated supply of high-quality seats does not meet demand, in accordance with analysis from the universal PreK policy development process.

9

Develop program and building utilization plans in neighborhoods that are not projected for high-growth among youth populations and have excess building capacity.

10

Optimize the geographic distribution of BPS high schools.

Planning Principles

Principle #8: Expand K1 Seats

K0-K1 Classrooms

SY 2015-2016

142	184	189	175	196	93
Baldwin	E. Boston	Ellison/Parks	Haynes	Lee Academy at the Fifield	West Zone

CAPACITY

178 total classrooms - all buildings shown
(x16 students/classroom = 2,848 students capacity)

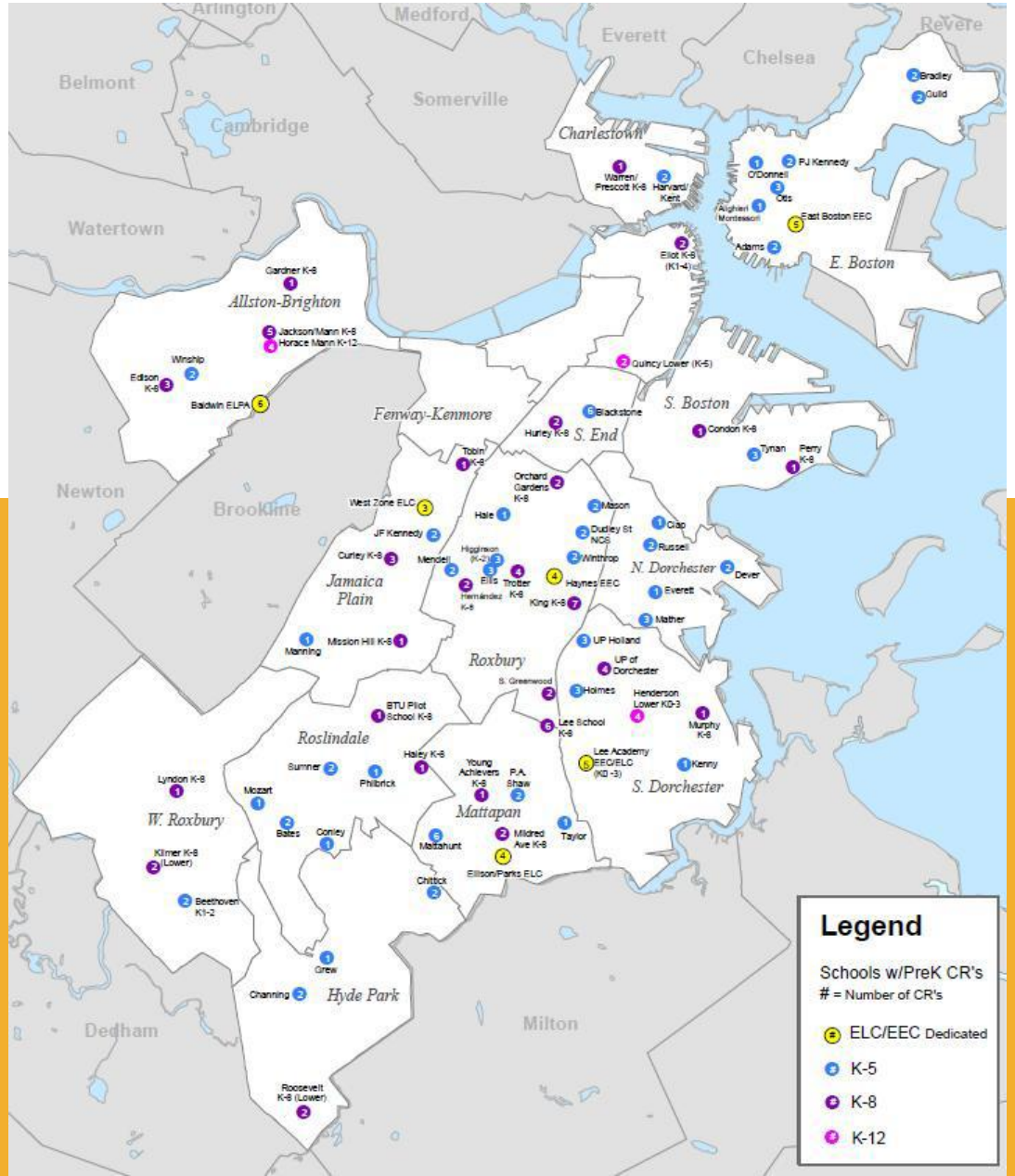
153 classrooms
(non-EEC, non-Horace Mann)
(x16 students/classroom = 2,448 students capacity)

EEC/ELC

307 students K0/K1 in 6 buildings
310 students K-2 in 6 buildings
295 students grade 1 in 6 buildings
36 students grade 2 in Ellison/Parks
31 students grade 3 in Ellison/Parks

Non-EEC/ELC Buildings

2,459 students K0/K1 in 69 buildings



Planning Principles

Principle #10: Optimize the Geographic Distribution of High Schools

- Improve utilization by centering in city
- Locate close to transit hubs
- Add capacity in the southern half of the city
- Leverage successful and in-demand programs

Planning Principles

High School and High School Redesign

Pilot

Exam

Charter

Academy

Inclusion

STEM

City-wide

CTE/Vocational

Innovation

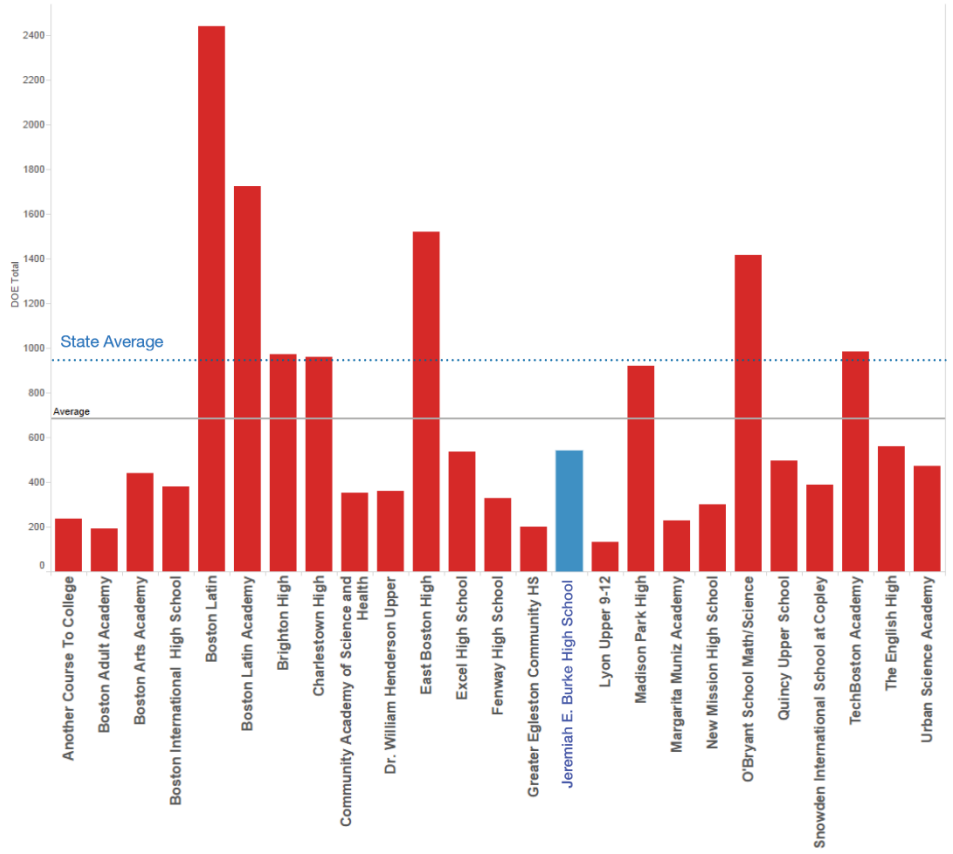
Magnet

Planning Principles

Principle #10: Optimize the Geographic Distribution of High Schools

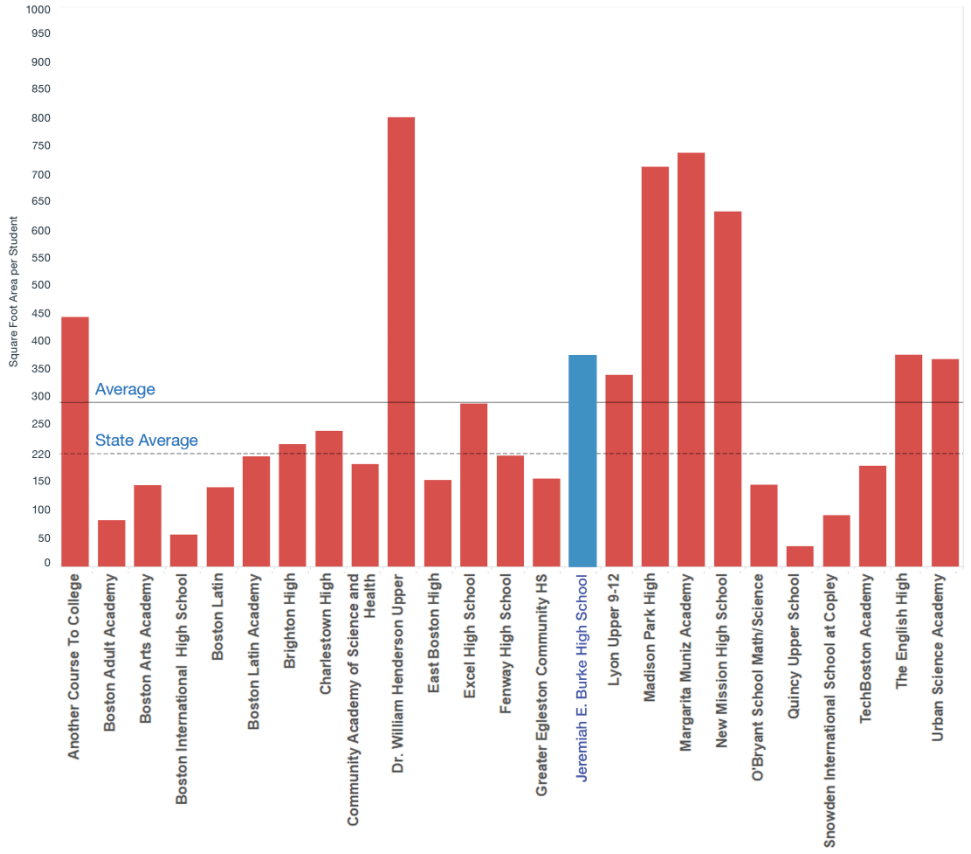
Typology and Relevancy

BPS High School Enrollment (2013-2014)



Typology and Relevancy

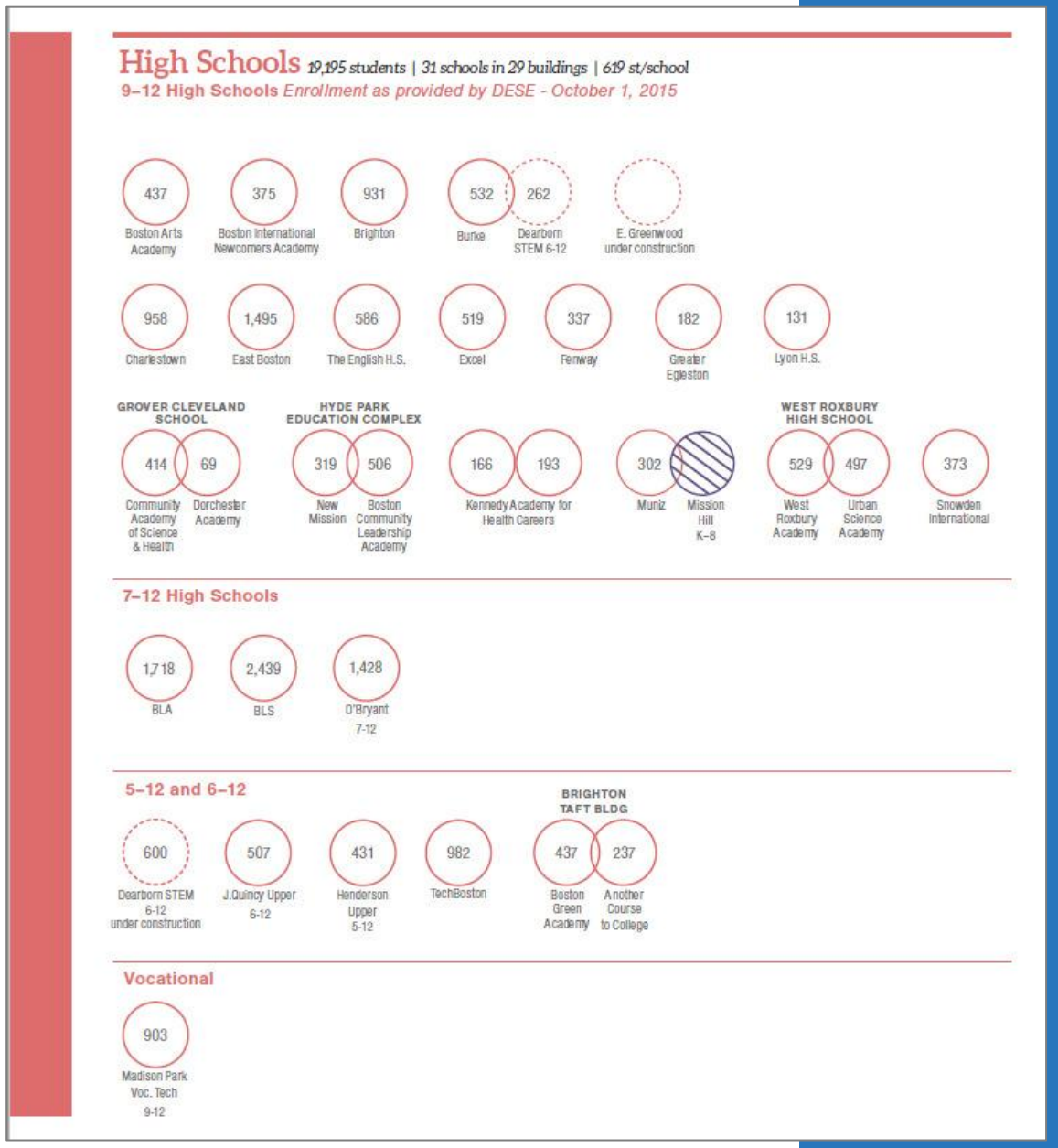
BPS High School Square Foot Per Student



Planning Principles

Principle #10 High Schools

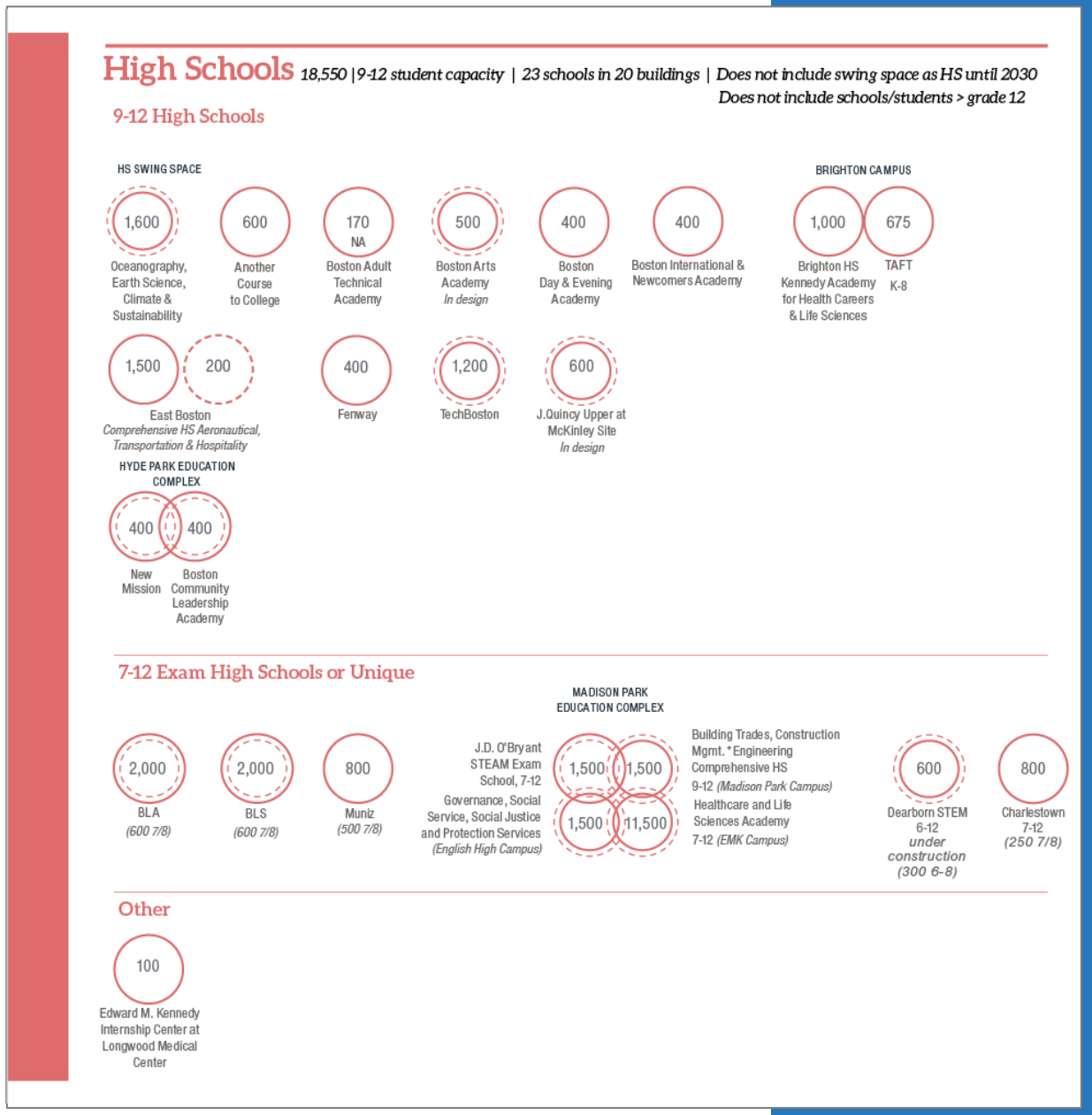
- 19,195 students
- 31 schools in 29 buildings
- 619 students per school



Planning Principles

Principle #10 High Schools

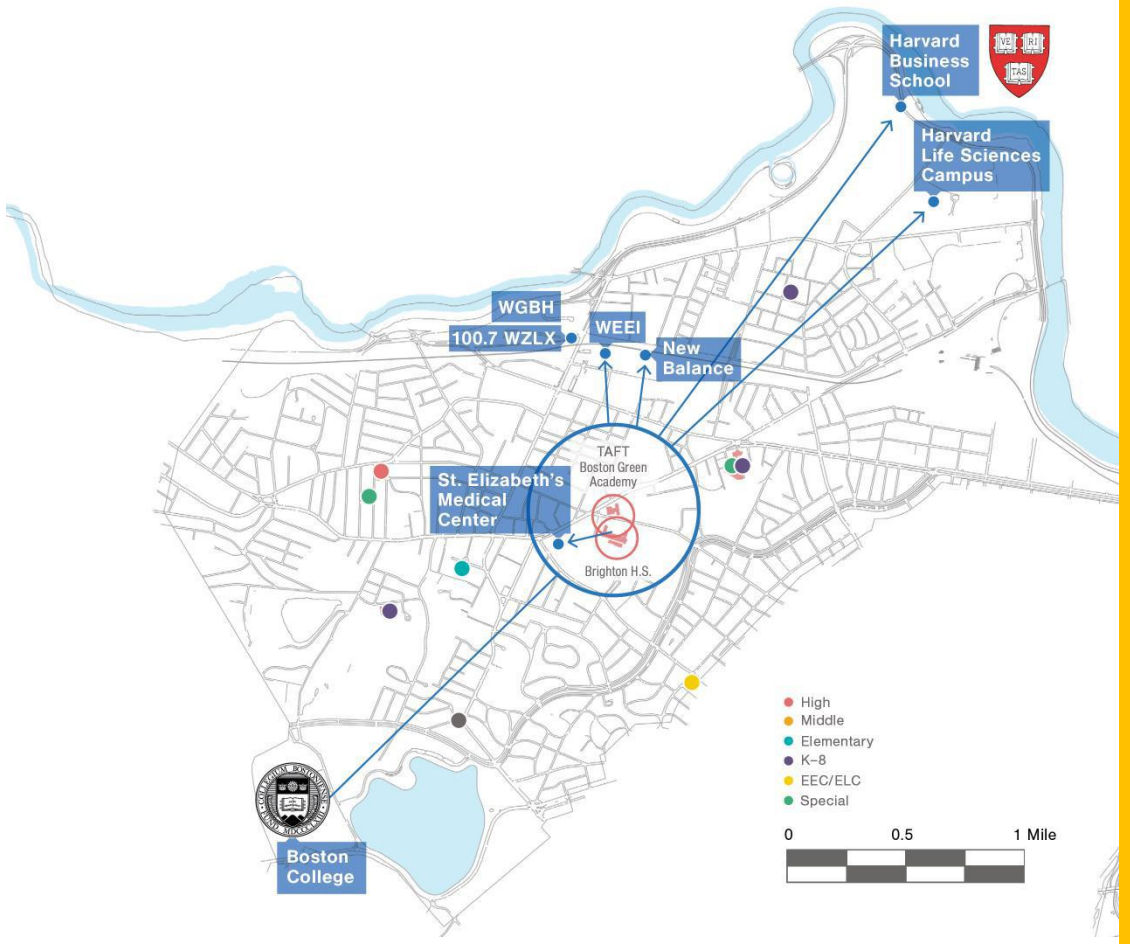
- 18,550 students grades 9-12
- 23 schools in 20 buildings



Planning Principles

Principle #10 Optimize the Geographic Distribution of High Schools

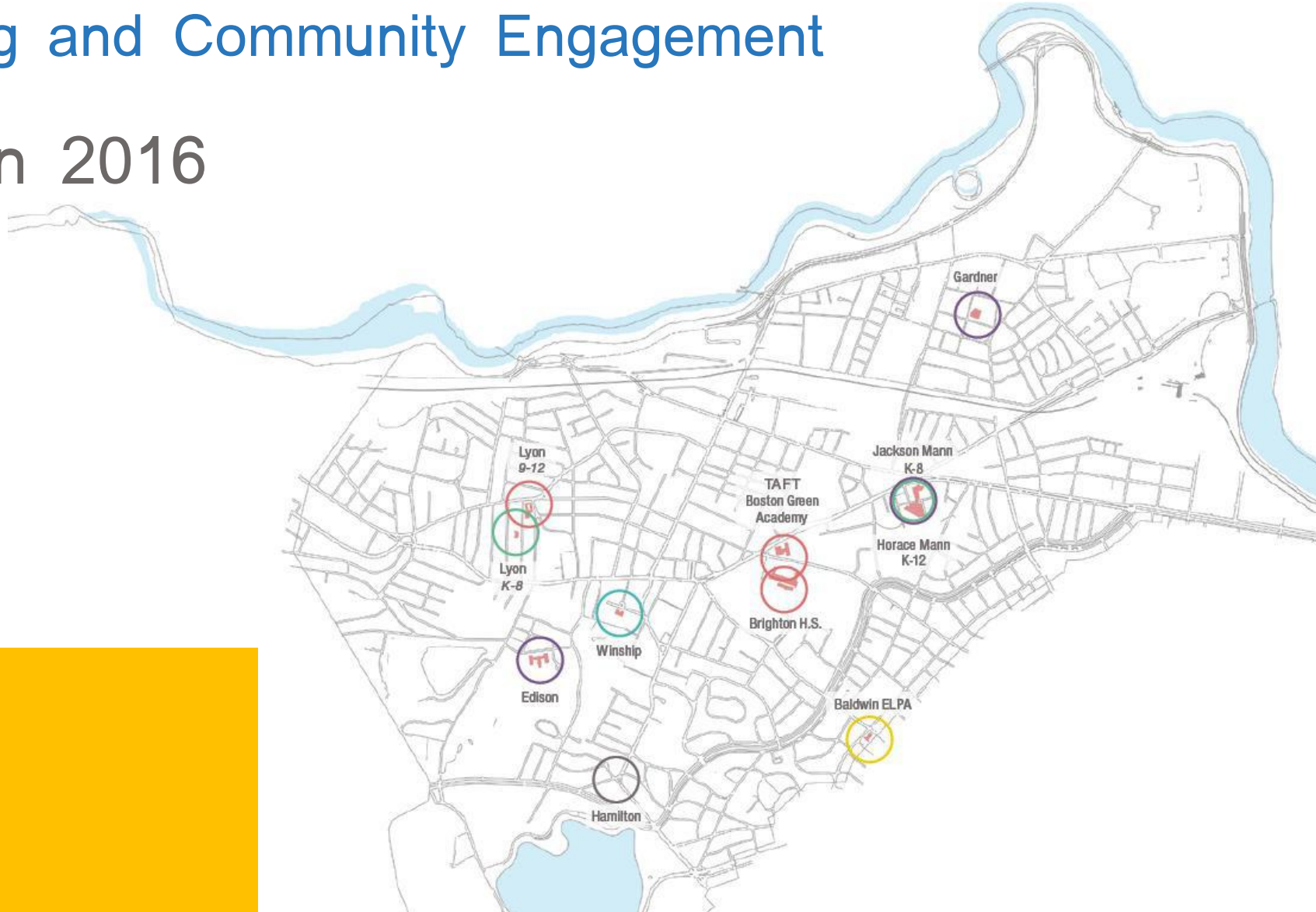
- Harvard Life Sciences & Boston College
- St. Elizabeth's Medical Center
- Harvard Business School & New Balance, WEEI, WGBH
- Why? Offers a multi-building campus opportunity



Taking Action

Action #5 Prototyping and Community Engagement

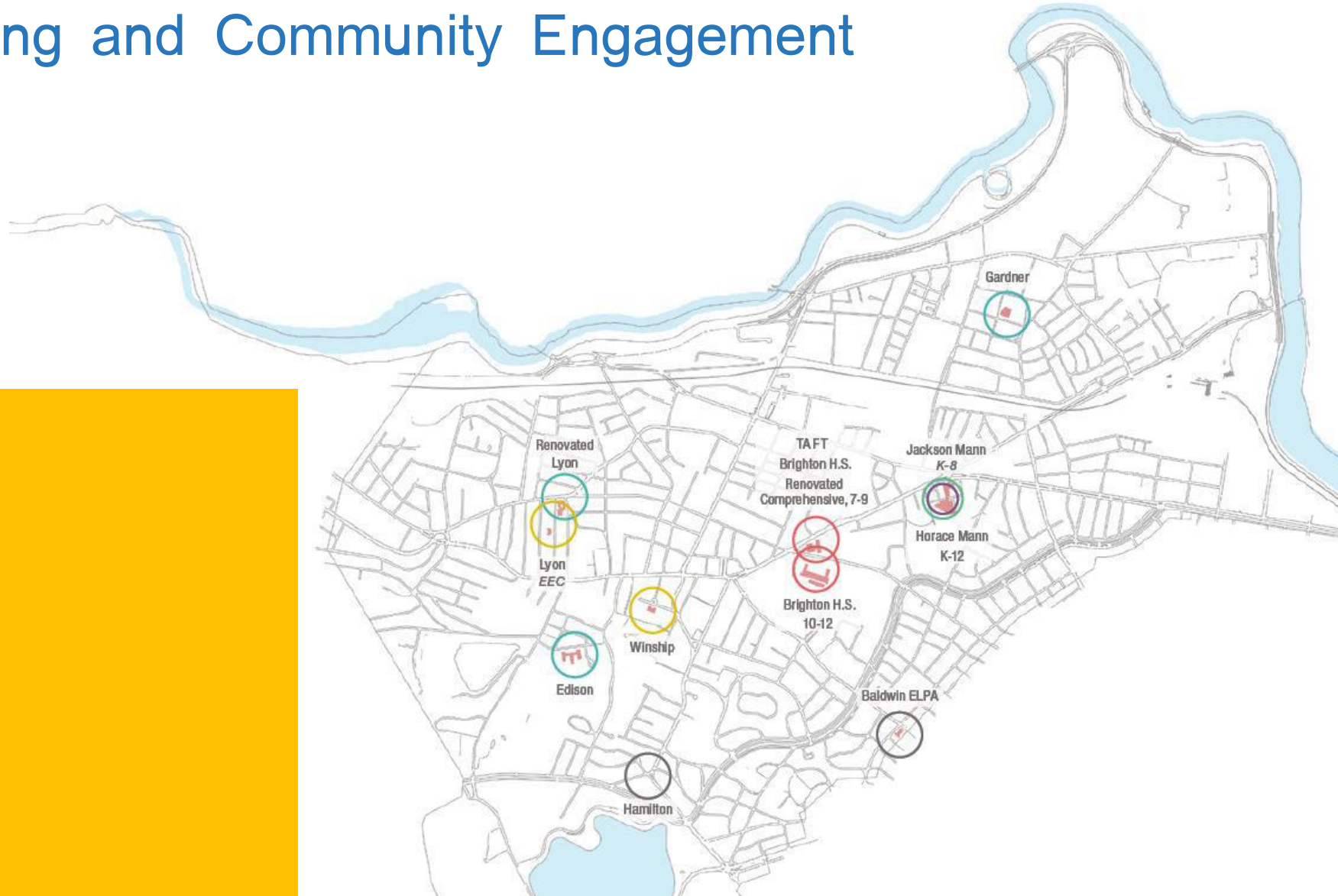
- Allston / Brighton 2016



Taking Action

Action #5 Prototyping and Community Engagement

- 2026 Map



Taking Action

1. Commit $1 billion to Boston's school buildings to catalyze long-term investment.

2. Establish an office dedicated to managing BuildBPS investments and projects.

3. Implement a robust community collaboration process to guide ongoing and long-term decision making

Taking Action

4

Invest in new school furniture and technology, to promote 21st century learning and teaching methodologies.

5

Undertake several "prototype" projects, to model standards from the BPS educational vision.

Taking Action

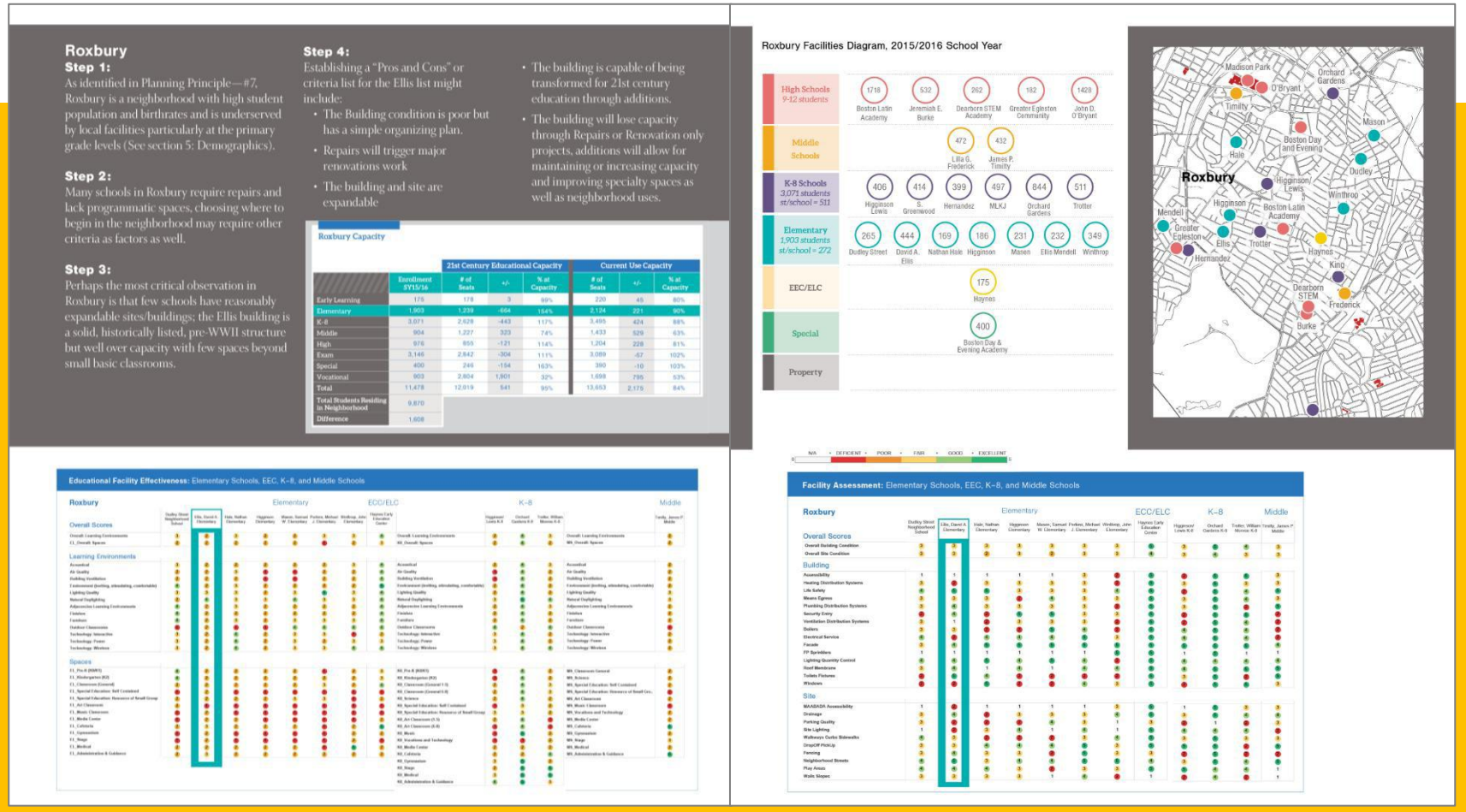
Action #4 Invest in new school furniture and technology

- Modernize all environments
- Portable reusable/relocatable
- Improve space utilization where possible
- Prepare for technology and 1:1

Taking Action

Action #5 Prototyping and Community Engagement

- Roxbury Case Study



Roxbury

Step 1:
As identified in Planning Principle—#7, Roxbury is a neighborhood with high student population and birthrates and is underserved by local facilities particularly at the primary grade levels (See section 5: Demographics).

Step 2:
Many schools in Roxbury require repairs and lack programmatic spaces, choosing where to begin in the neighborhood may require other criteria as factors as well.

Step 3:
Perhaps the most critical observation in Roxbury is that few schools have reasonably expandable sites/buildings; the Ellis building is a solid, historically listed, pre-WWII structure but well over capacity with few spaces beyond small basic classrooms.

Step 4:
Establishing a "Pros and Cons" or criteria list for the Ellis list might include:

- The Building condition is poor but has a simple organizing plan.
- Repairs will trigger major renovations work
- The building and site are expandable
- The building is capable of being transformed for 21st century education through additions.
- The building will lose capacity through Repairs or Renovation only projects, additions will allow for maintaining or increasing capacity and improving specialty spaces as well as neighborhood uses.

Roxbury Capacity

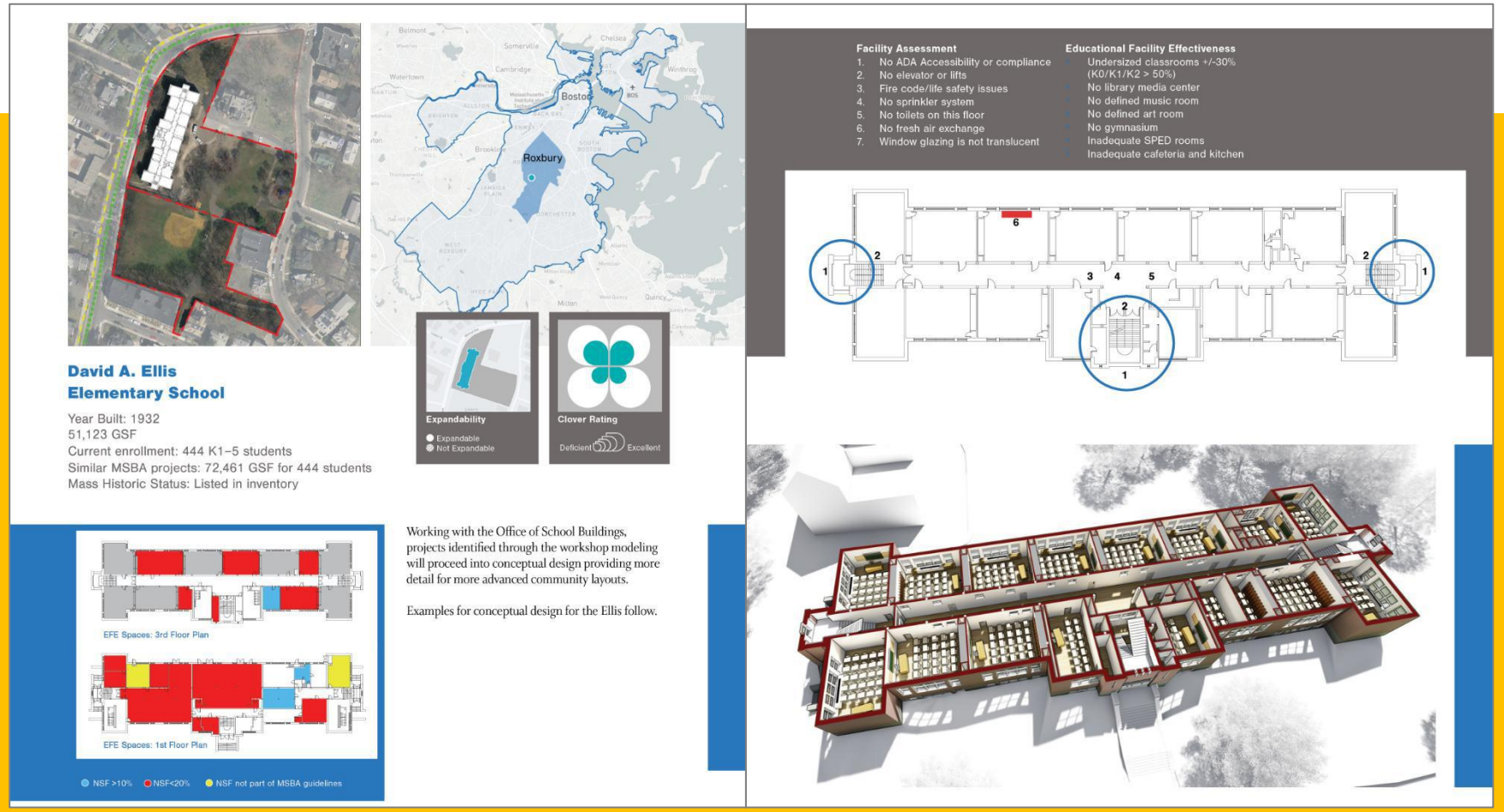
	Enrollment SY15/16	21st Century Educational Capacity # of Seats	+/-	21st Century Educational Capacity % at Capacity	Current Use Capacity # of Seats	+/-	Current Use Capacity % at Capacity
Early Learning	175	178	3	99%	220	45	80%
Elementary	1,903	1,239	-664	154%	2,124	221	90%
K-8	3,071	2,628	-443	117%	3,495	424	88%
Middle	904	1,227	323	74%	1,433	529	63%
High	976	855	-121	114%	1,204	228	81%
Exam	3,146	2,842	-304	111%	3,089	-57	102%
Special	400	246	-154	163%	390	-10	103%
Vocational	903	2,804	1,901	32%	1,698	795	53%
Total	11,478	12,019	541	95%	13,653	2,175	84%
Total Students Residing in Neighborhood	9,870						
Difference	1,608						

Roxbury Facilities Diagram, 2015/2016 School Year

Taking Action

Action #5 Prototyping and Community Engagement

- Roxbury Case Study



Taking Action

Action #5 Prototyping and Community Engagement

- Roxbury Case Study

David A. Ellis Elementary School

Current School Metrics

- 444 K1–5 students in 51,123 GSF

Discussion Points:

- Should Ellis remain a K–5
- Similar MSBA projects: 72,461 GSF
- Should Ellis expand capacity as a K2–6 model?
  672 students K–6 is a four strand school
  101,500 GSF +/- required
  51,123 existing
  50,377 SF new
- Should Ellis expand to a K–8 model?
  432 students K–5
  300 students 6–8 (assumes three science labs and team-teaching model)
  103,123 GSF total required
  51,123 SF existing
  52,000 SF new

Conceptual Design Priorities

- Welcoming and secure entrance
- Engaged classrooms and support spaces
- Teacher collaboration rooms
- Fully ADA accessible facility
- Toilets and lavatories on each floor
- Student coat, boot and storage areas
- Dispersed technology throughout school
- Appropriate lighting and acoustical treatments
- Multi-use spaces
- Sustainable, energy efficient
- Casual dining and socialization areas with soft seating
- Gym / Fitness Center with secure after hour use
- Community access and use

Facility renovations and additions that support

- Art Studios
- Music and performance rooms
- Cafeteria / multi use space with stage
- Library / media center
- Gymnasium and fitness areas
- Science labs
- Technology / maker spaces
- Special education spaces
- Kitchen with culinary lab

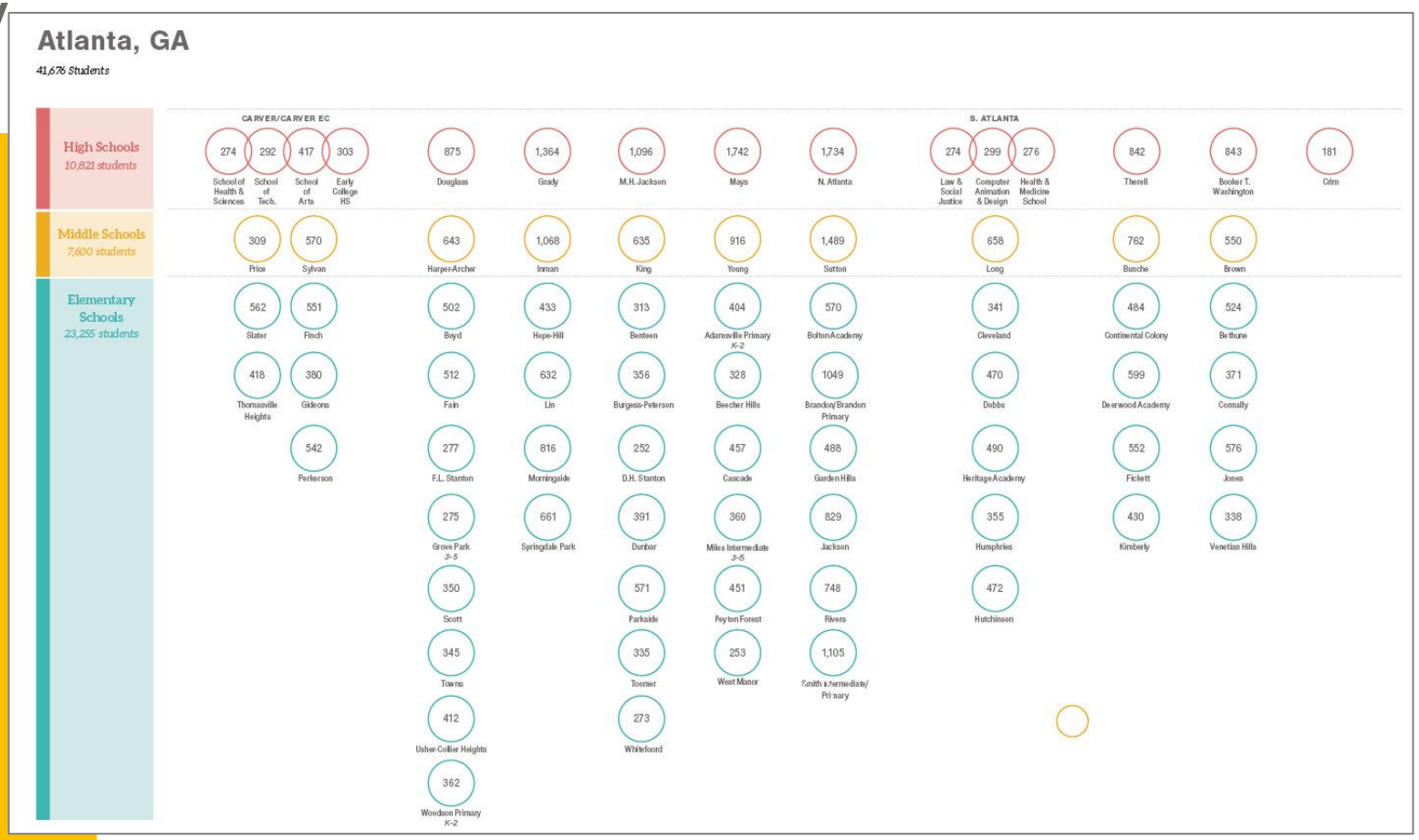
Classroom Environments for Universal Learning

- Flexibility in the learning environment
- Room size appropriate to class size
- Multiple teaching walls and surfaces
- Adjacent learning commons and small group spaces
- Full spectrum adjustable lighting
- Ubiquitous technology
- Natural ventilation
- Suitable acoustics
- Inclusive special education
- SPED centers and resources on each floor
- Visual connectivity in interior spaces
- Student displays throughout school
- Collaborative areas with soft seating

Taking Action

Precedent Examples: Community Engagement

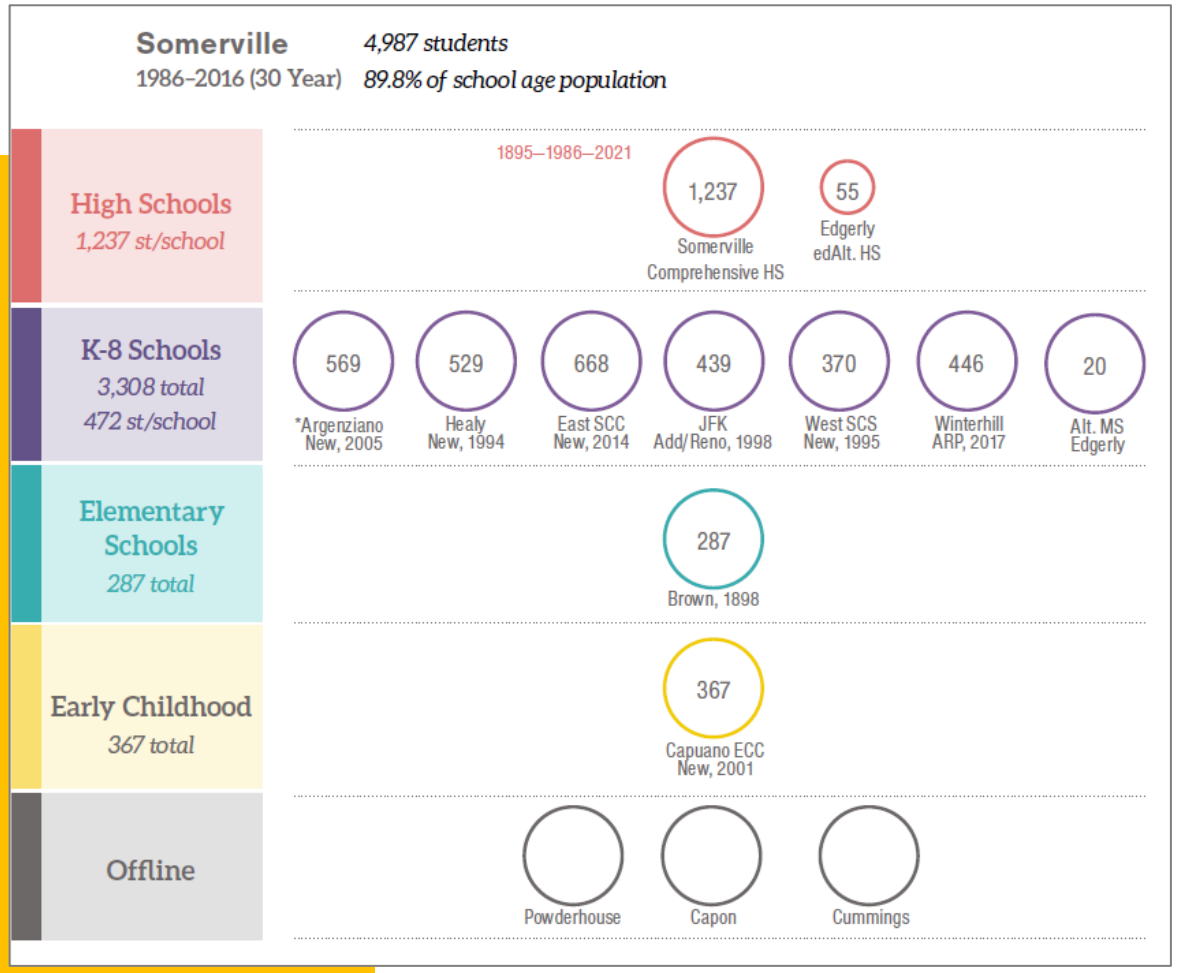
- Atlanta Case Study



Taking Action

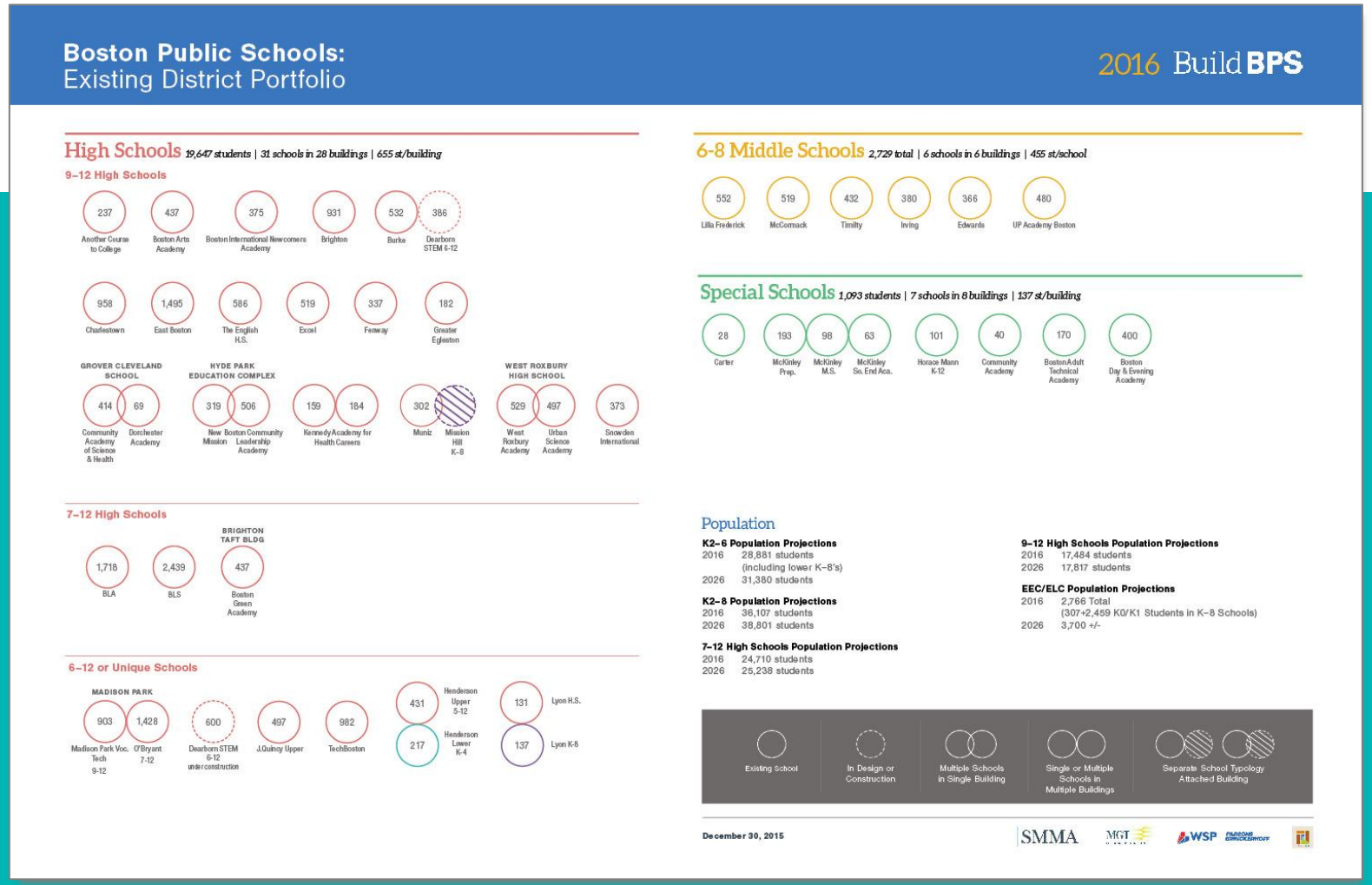
Precedent Examples: Community Engagement

- Somerville Case Study



Taking Action

Option Examples: Community Engagement



Boston Public Schools:
Existing District Portfolio

2016 Build BPS

High Schools *19,647 students | 31 schools in 28 buildings | 655 st/building*

9–12 High Schools

237 Another Course to College
437 Boston Arts Academy
375 Boston International Newcomers Academy
931 Brighton
532 Burke
386 Dearborn STEM 6-12
958 Charlestown
1,495 East Boston
586 The English H.S.
519 Excel
337 Fenway
182 Greater Egleston

GROVER CLEVELAND SCHOOL
414 Community Academy of Science & Health
69 Dorchester Academy

HYDE PARK EDUCATION COMPLEX
319 New Mission
506 Boston Community Leadership Academy

159 Kennedy Academy for Health Careers
184

302 Muniz
Mission Hill K-8

WEST ROXBURY HIGH SCHOOL
529 West Roxbury Academy
497 Urban Science Academy

373 Snowden International

7–12 High Schools

1,718 BLA
2,439 BLS

BRIGHTON TAFT BLDG
437 Boston Green Academy

6–12 or Unique Schools

MADISON PARK
903 Madison Park Voc. Tech 9-12
1,428 O'Bryant 7-12

600 Dearborn STEM 6-12 under construction
497 J.Quincy Upper
982 TechBoston

431 Henderson Upper 5-12
217 Henderson Lower K-8

131 Lyon H.S.
137 Lyon K-8

6-8 Middle Schools *2,729 total | 6 schools in 6 buildings | 455 st/school*

552 Lilla Frederick
519 McCormack
432 Timilty
380 Irving
366 Edwards
480 UP Academy Boston

Special Schools *1,093 students | 7 schools in 8 buildings | 137 st/building*

28 Carter
193 McKinley Prep.
98 McKinley M.S.
63 McKinley So. End Aca.
101 Horace Mann K-12
40 Community Academy
170 Boston Adult Technical Academy
400 Boston Day & Evening Academy

Population

K2–6 Population Projections
2016 28,881 students (including lower K–8's)
2026 31,380 students

K2–8 Population Projections
2016 36,107 students
2026 38,801 students

7–12 High Schools Population Projections
2016 24,710 students
2026 25,238 students

9–12 High Schools Population Projections
2016 17,484 students
2026 17,817 students

EEC/ELC Population Projections
2016 2,766 Total (307+2,459 K0/K1 Students in K–8 Schools)
2026 3,700 +/-

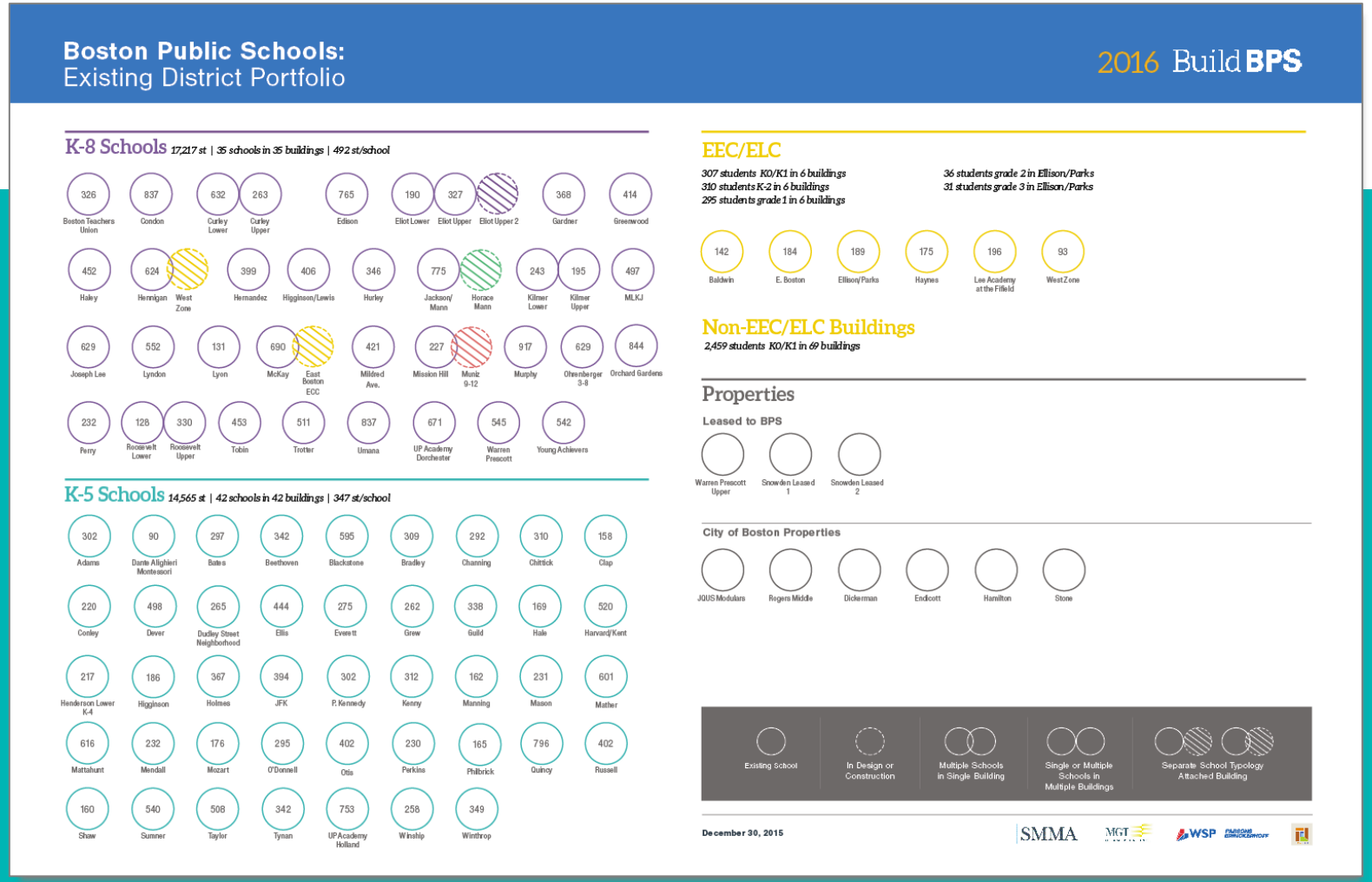
Existing School
In Design or Construction
Multiple Schools in Single Building
Single or Multiple Schools in Multiple Buildings
Separate School Typology Attached Building

December 30, 2015

SMMA MGT WSP FINEGOLD ALEXANDER

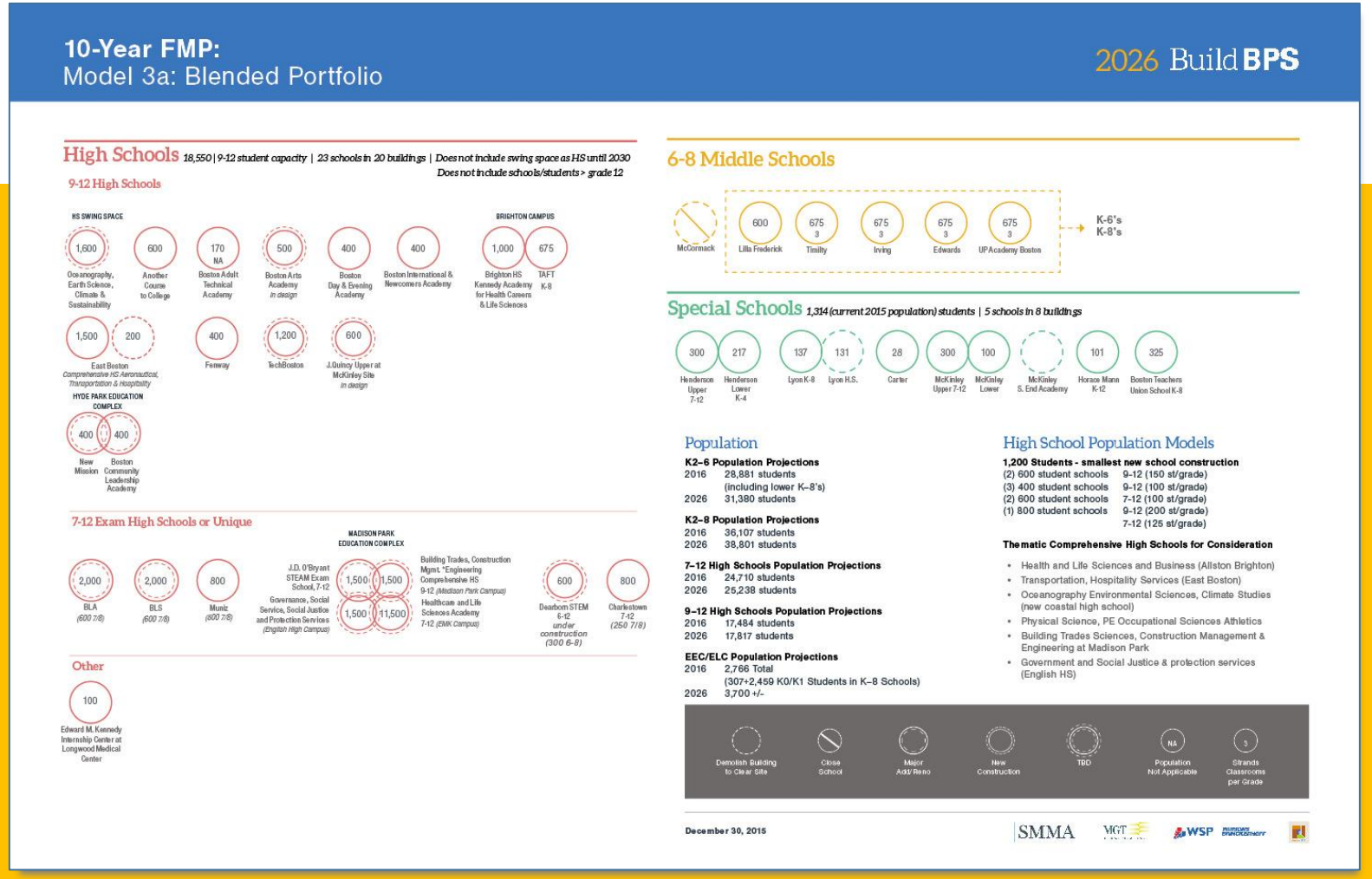
Taking Action

Option Examples: Community Engagement



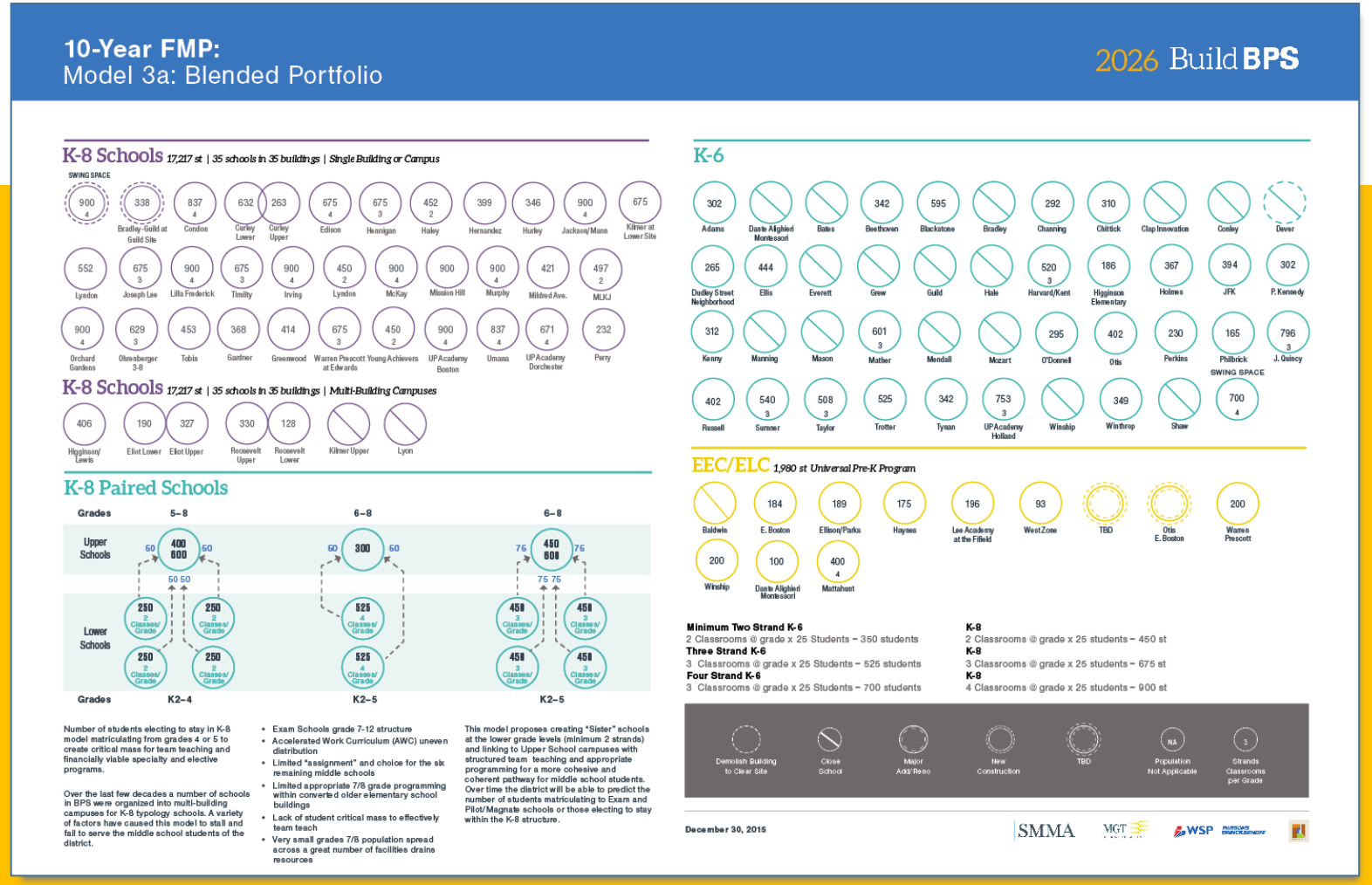
Taking Action

Option Examples: Community Engagement



Taking Action

Option Examples: Community Engagement



Thank You!

Build BPS

SMMA