



Total Cost of Ownership

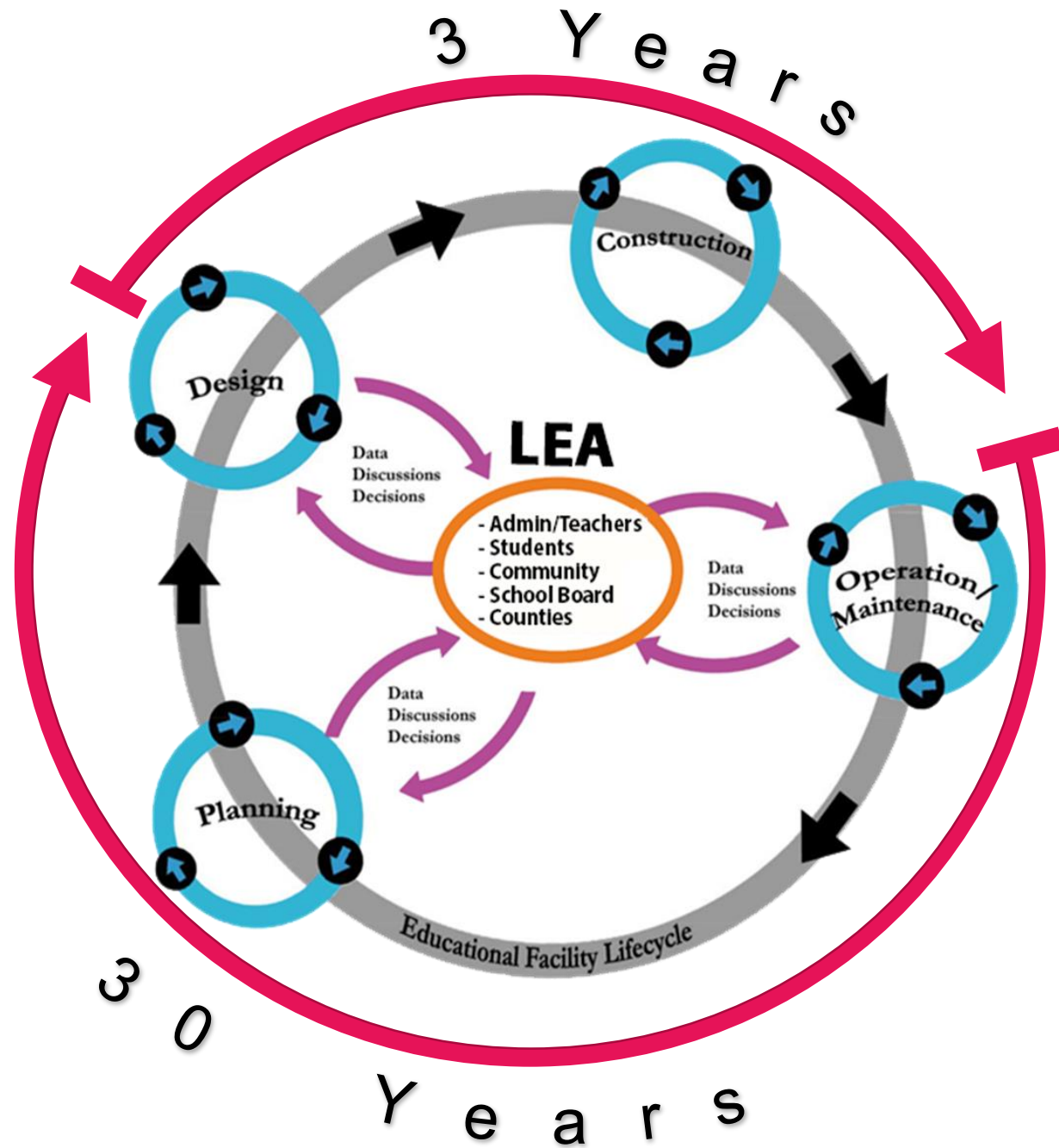


In preparation for the
Workgroup on
Assessment & Funding
of School Facilities

Webinar 2 of 4
August 7, 2019

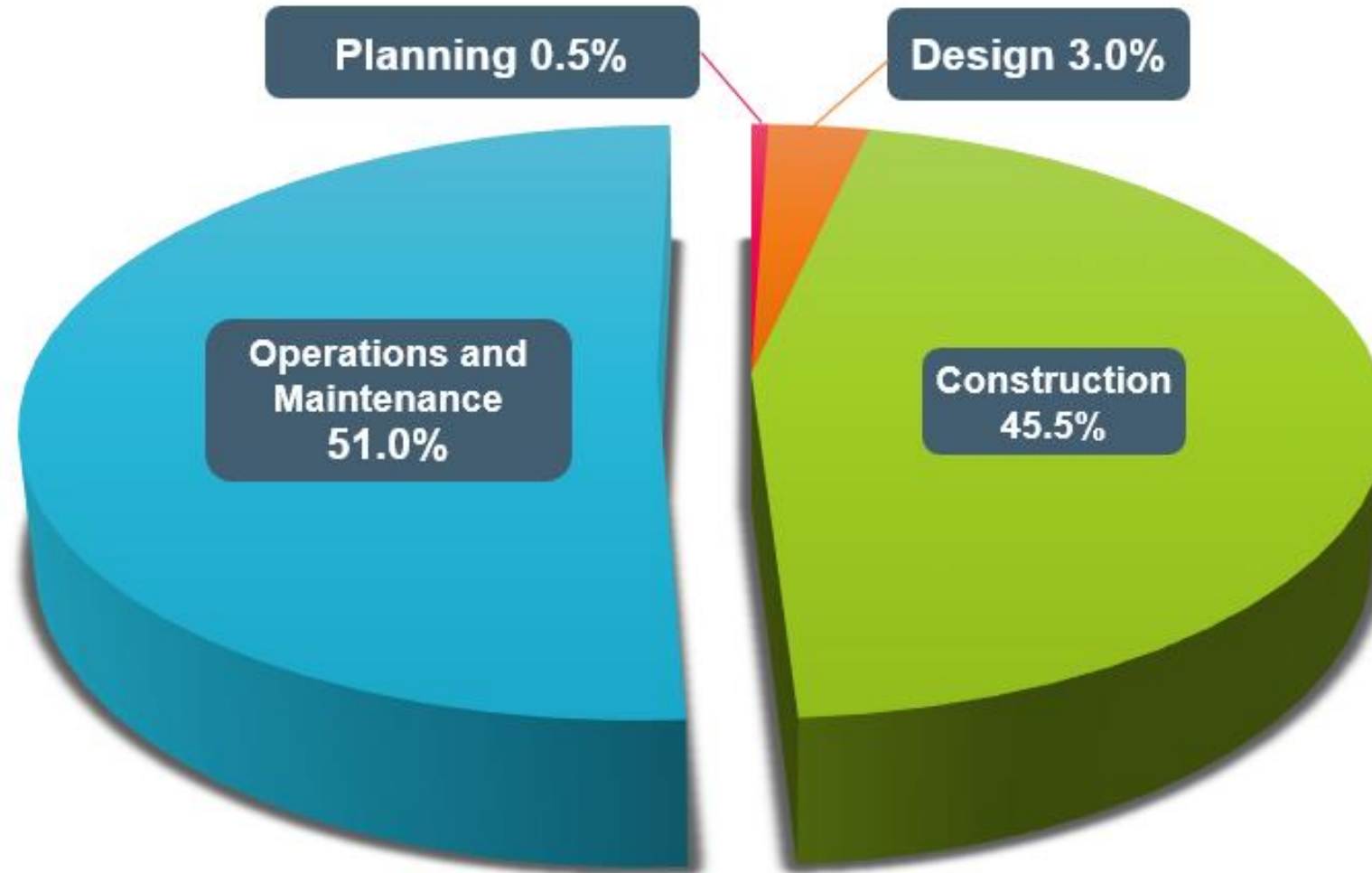
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Ownership
and
Cycle
of
Life



Total Cost of Facility

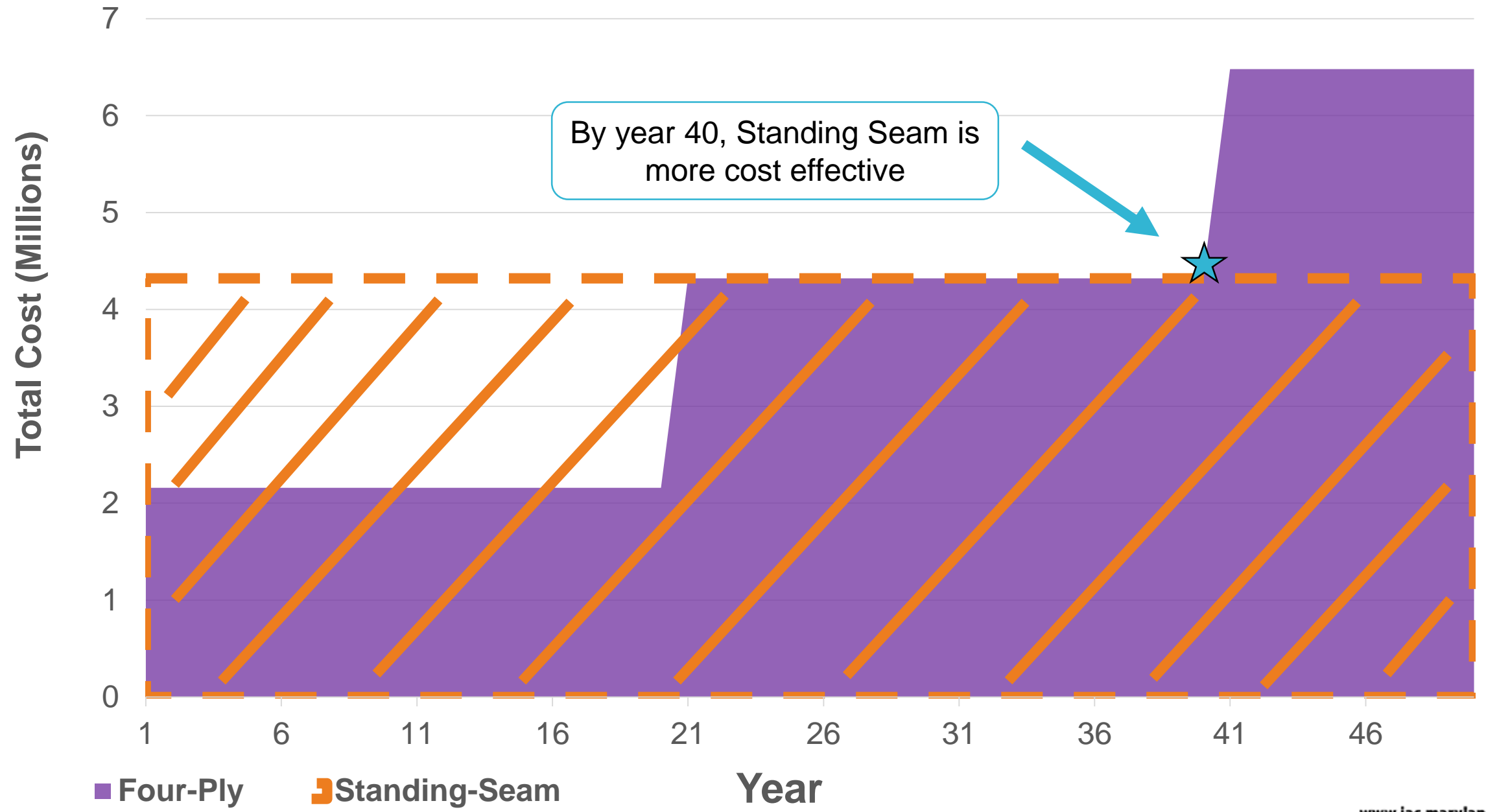
Average Percentage Over 30 Years



Total Cost of Ownership Within a Portfolio



Roofing Options and Total Cost of Ownership



The Power of Early Decisions

30-Year Cost

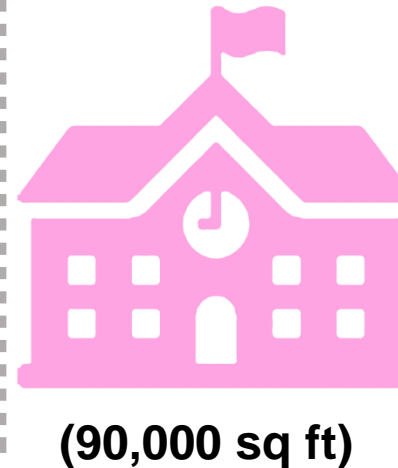
\$395 per square foot = Construction cost (including soft costs)
\$395.00

\$329 per square foot x 2% per year = Operations & Routine Maintenance Costs
\$197.40

\$329 per square foot x 2% per year = Capital Maintenance (System-Replacement) Costs
\$197.40



$$\begin{aligned} & (70,000 \times \$395) \\ & + (70,000 \times \$329 \times .02 \times 30) \\ & + (70,000 \times \$329 \times .02 \times 30) \\ & = \mathbf{\$55,286,000 \text{ Total Cost}} \\ & \quad \$27,650,000 \text{ up front} \\ & \quad + \$921,200 \text{ per year} \end{aligned}$$



$$\begin{aligned} & (90,000 \times \$395) \\ & + (90,000 \times \$329 \times .02 \times 30) \\ & + (90,000 \times \$329 \times .02 \times 30) \\ & = \mathbf{\$71,082,000 \text{ Total Cost}} \\ & \quad \$35,550,000 \text{ up front} \\ & \quad + \$1,184,400 \text{ per year} \end{aligned}$$



The Power of the punchline

20,000 extra square feet = \$526,533 more per year over 30 years

30-Year Cost

\$395 per square foot = Construction cost (including soft costs)
\$395.00

\$329 per square foot x 2% per year = Operations & Routine Maintenance Costs
\$197.40

\$329 per square foot x 2% per year = Capital Maintenance (System-Replacement) Costs
\$197.40

\$27,650,000

\$27,636,000

\$35,550,000

\$35,532,000



(70,000 sq ft)

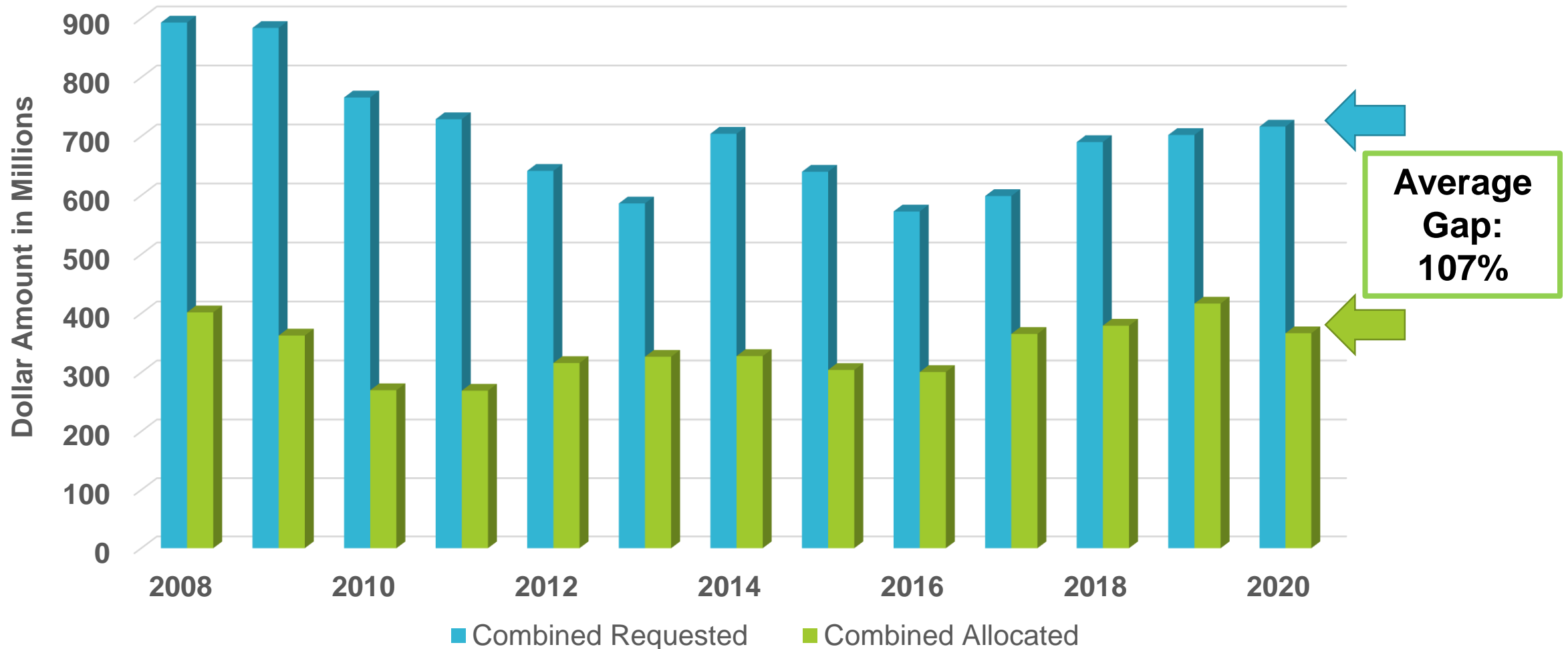


(90,000 sq ft)



The Cost of Upsizing

CIP Amount Requested vs. Amount Allocated



The IAC's Total-Cost-of-Ownership Tools for Planning



Educational Facilities Sufficiency Standards

Help identify high-priority deficiencies in existing facilities



Gross Area Baselines

Describe reasonable outer boundaries of facility size

Support LEA discretion in facility design



TCO Comparison Tool

Helps LEAs compare the estimated total costs of ownership of various design options



Life-cycle Cost Estimator (*planned*)

Helps LEAs project the cost of a building's systems using current age & condition



Estimated Required Annual Spending to Sustain Maryland's Portfolio



Capital Maintenance

2% of Construction Cost (with soft costs) per year

$$.02 \times \$395/\text{GSF} \times 140\text{M GSF} = \$1.106 \text{ Billion per year}$$

$$\$1.106 \text{ Billion} + \$1.106 \text{ Billion} = \$2.212 \text{ Billion per year}$$

Operations and Routine Maintenance

2% of Construction Cost (with soft costs) per year

$$.02 \times \$395/\text{GSF} \times 140\text{M GSF} = \$1.106 \text{ Billion per year}$$

Industry Standards For Investment



Educationally Effective + Fiscally Sustainable





... A healthy, safe, and educationally sufficient learning environment for every child in every seat in Maryland.



Questions?

iac.msde@maryland.gov



Up next...

Facility Maintenance and Maintenance Effectiveness



Webinar 3 of 4
August 12th, 2019
12:00 – 1:00 PM

Webinar 4 of 4
August 20th, 2019
12:00 – 1:00 PM

Workgroup Meeting
August 28th, 2019
9:00 – 1:00 PM

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