

# Societal Benefits of Managing Facility Cost of Ownership

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# AGENDA

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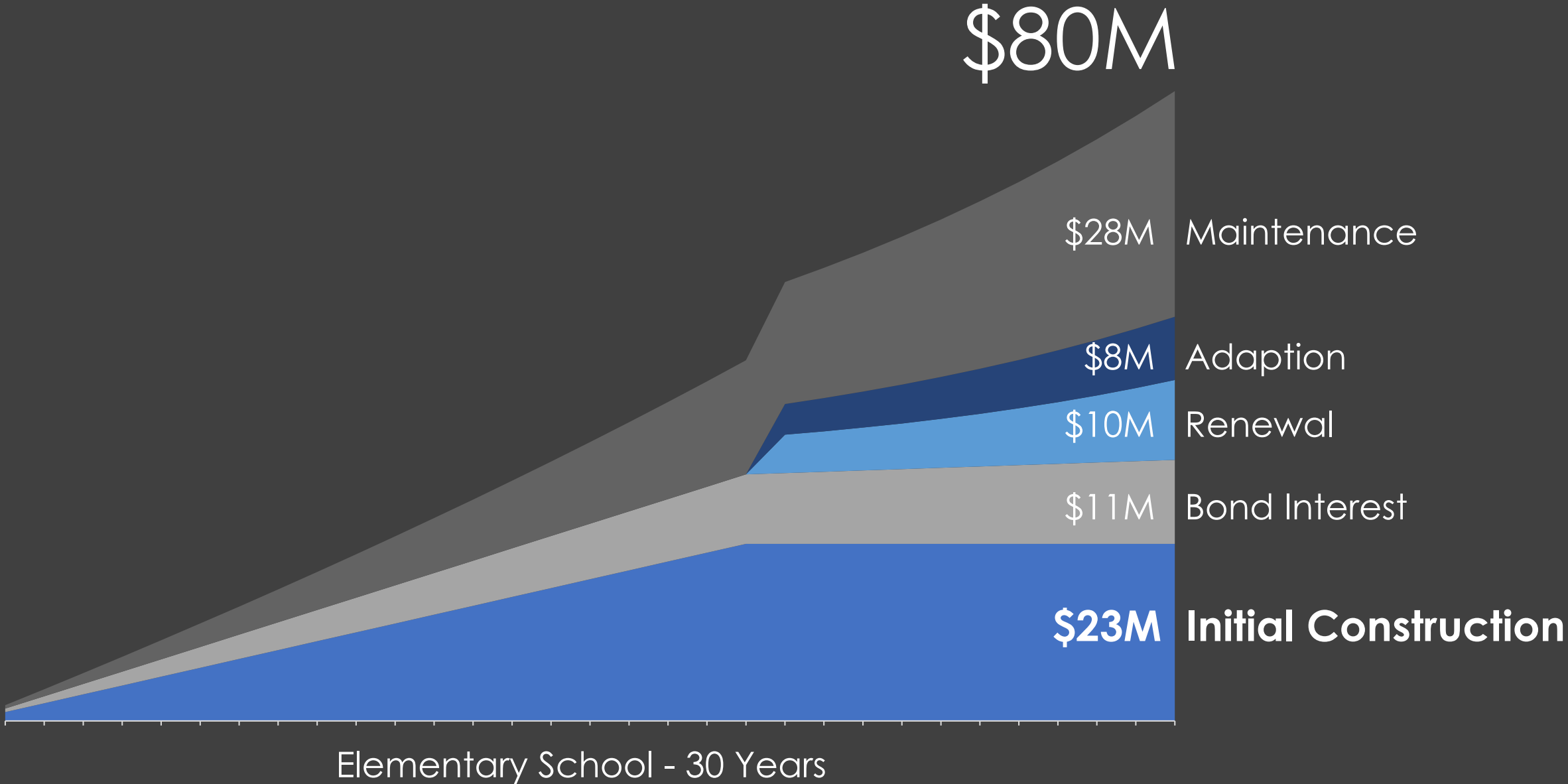
- TCO Background
- What Impacts TCO
- Case Studies
- Modeling Tool

# TCO TOTAL COST OF OWNERSHIP

10-20%  
Initial Construction

80-90%  
Ongoing Cost

CATEGORIES







Societal Benefits?

# MEASURABLE SOCIETAL BENEFITS

- Preserving funds
- Generational commitment
- Energy conservation
- Carbon footprint
- Financial sustainability
- Facility equity



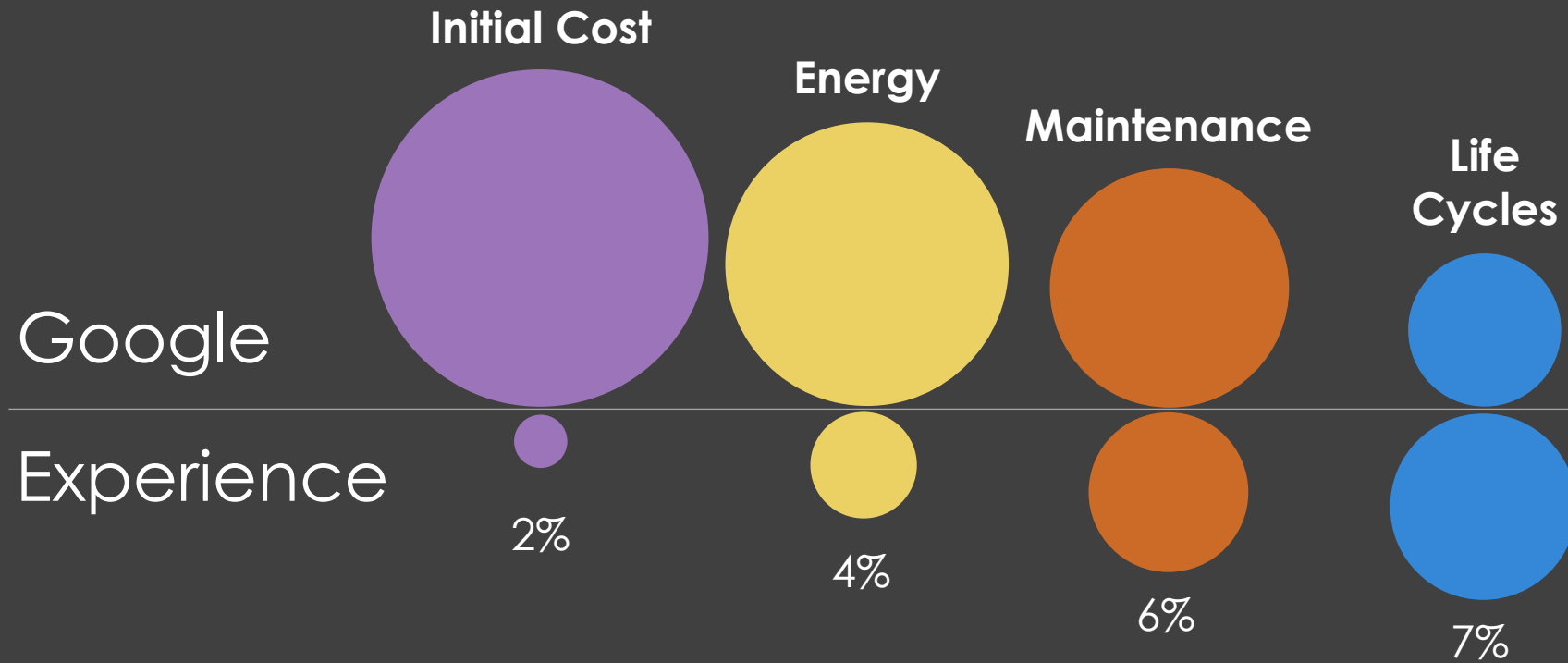
# MOST IMPACT ON TCO?

- Energy
- Initial cost
- Life cycles
- Maintenance
- Space efficiency
- Strategic renewal

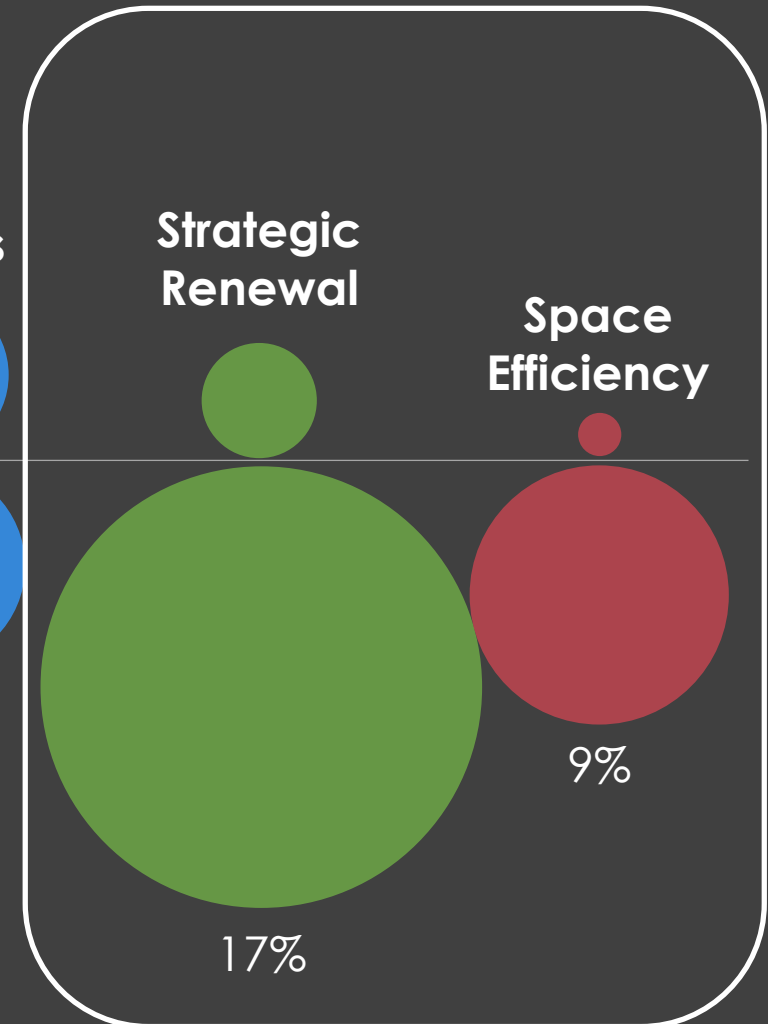
The background of the slide features a stack of overlapping white papers with large, colorful polka dots in shades of blue, red, orange, green, and purple. The papers are slightly offset, creating a layered effect.

**Pick two**

# WHAT IMPACTS TCO?



## Case Studies



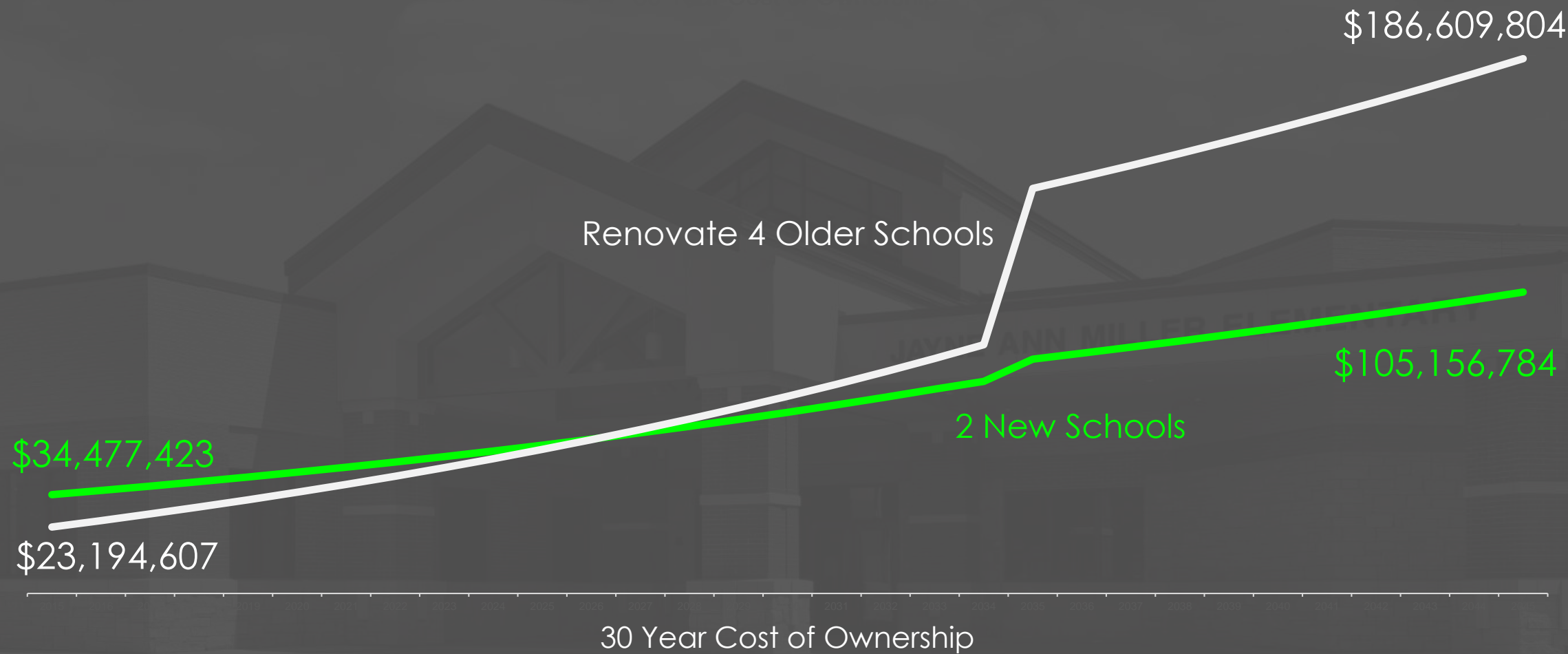




PAMPA HIGH SCHOOL

# Strategic Renewal

# CAMPUS RENEWAL





# SOCIETAL BENEFITS



\$81M



18

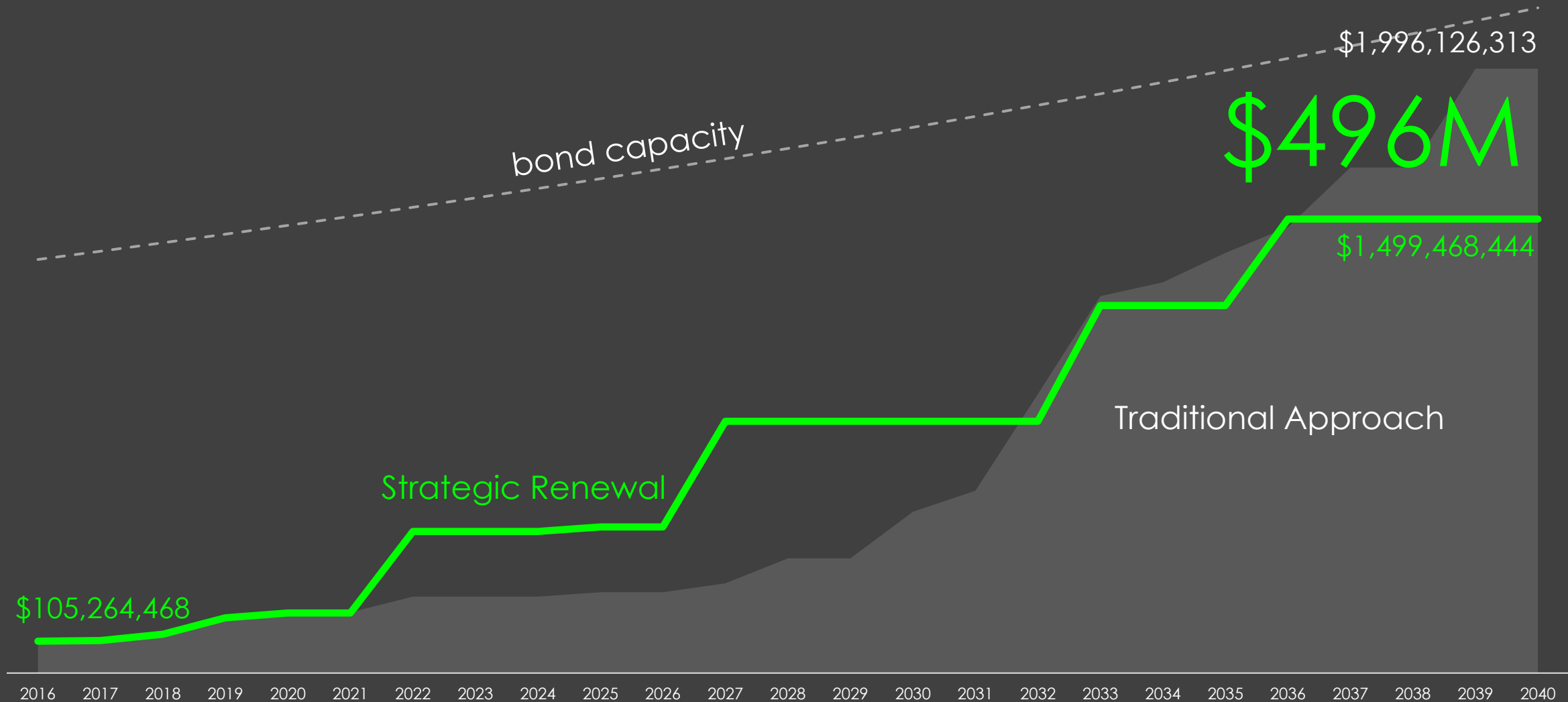


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# DISTRICT RENEWAL & FINANCIAL SUSTAINABILITY





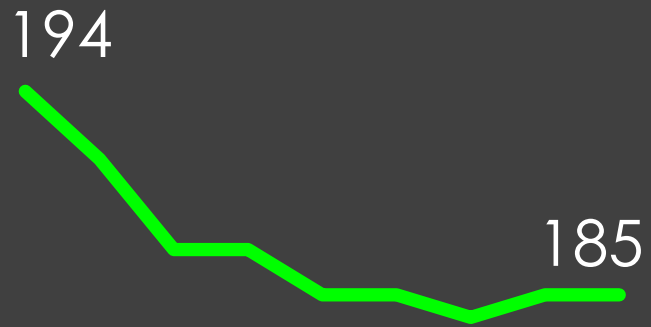


# Facility Space

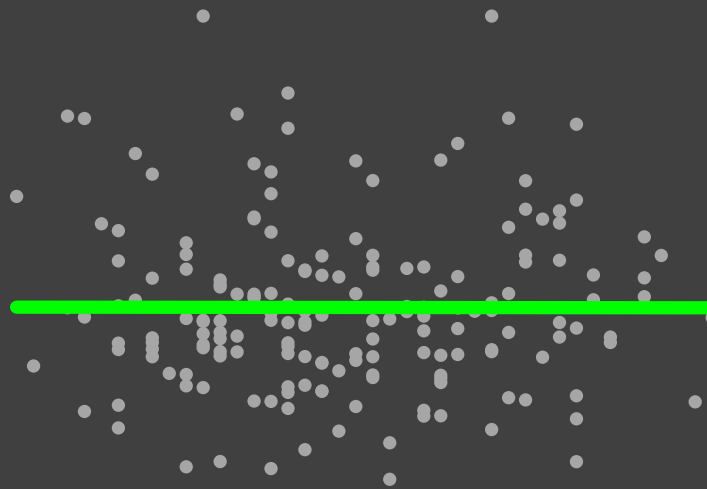


# TEXAS SCHOOL SPACE TRENDS

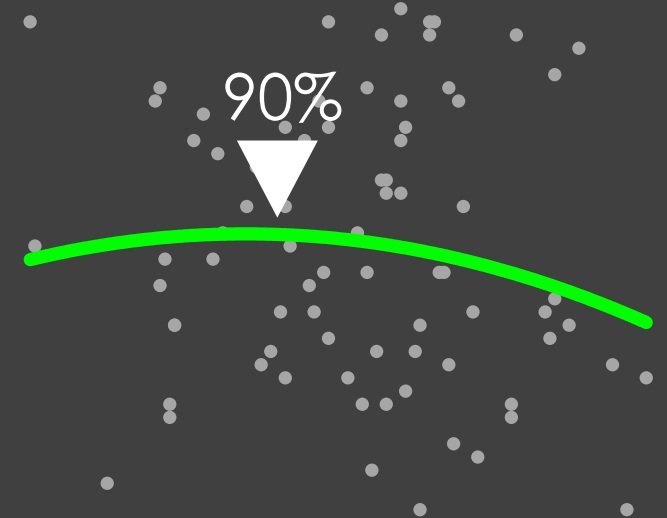
SF per Student



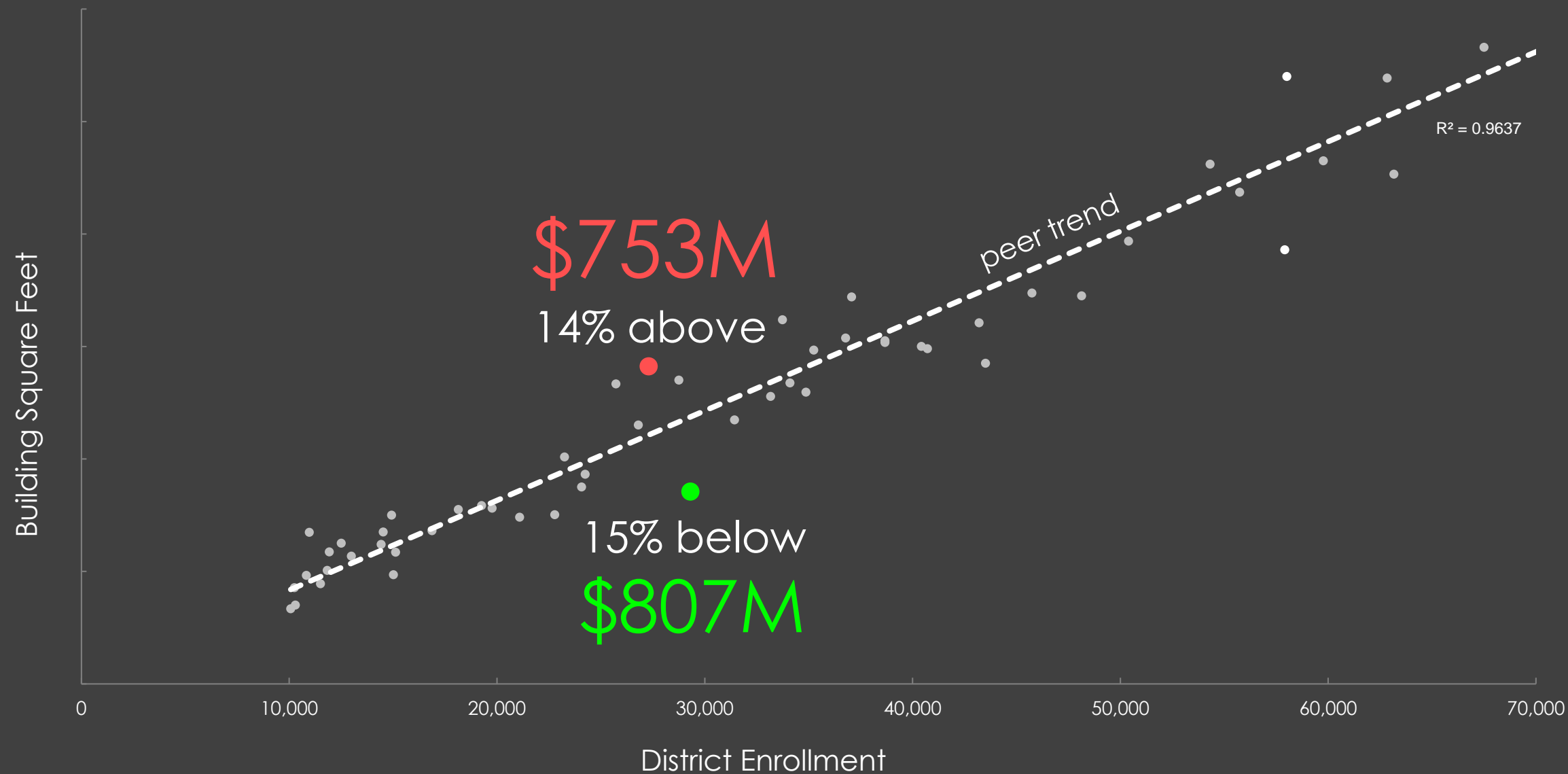
District SF vs Test Scores



Campus SF vs Test Scores



# DISTRICT SPACE



# SOCIETAL BENEFITS



\$807M



80

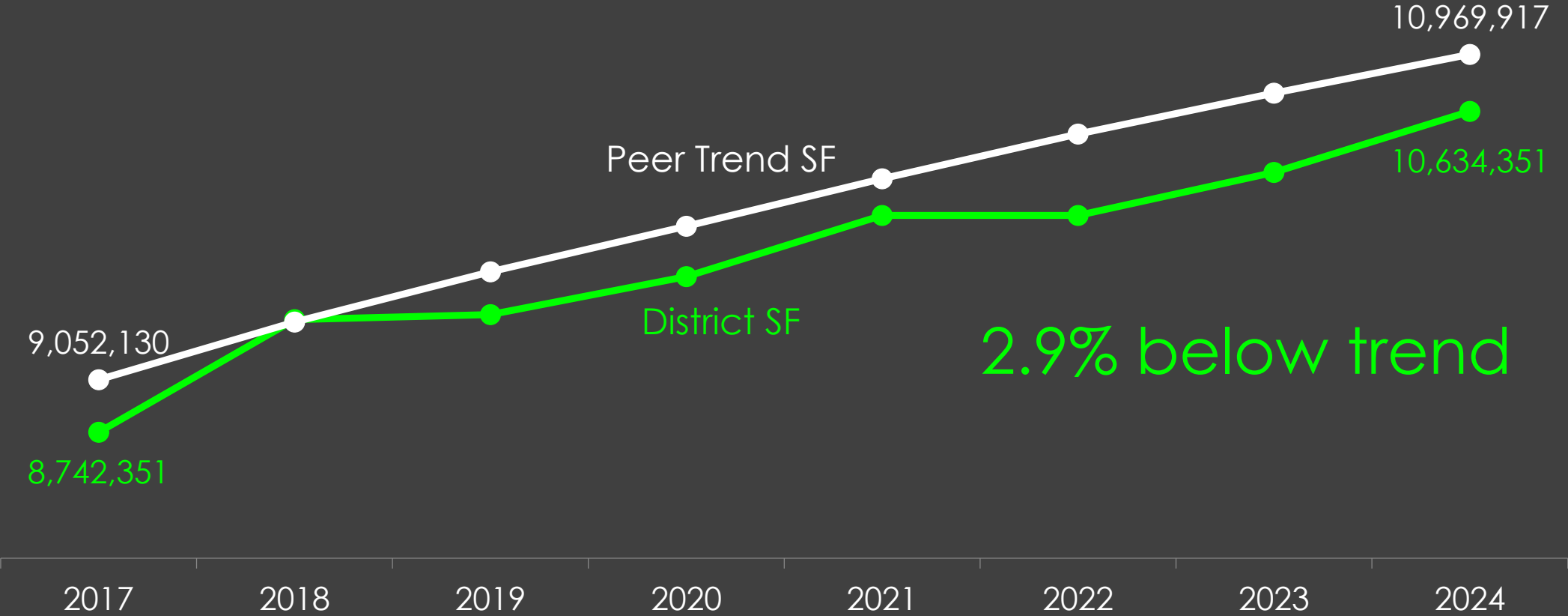


11



1,537

# DISTRICT SPACE



# SOCIETAL BENEFITS



\$233M



38



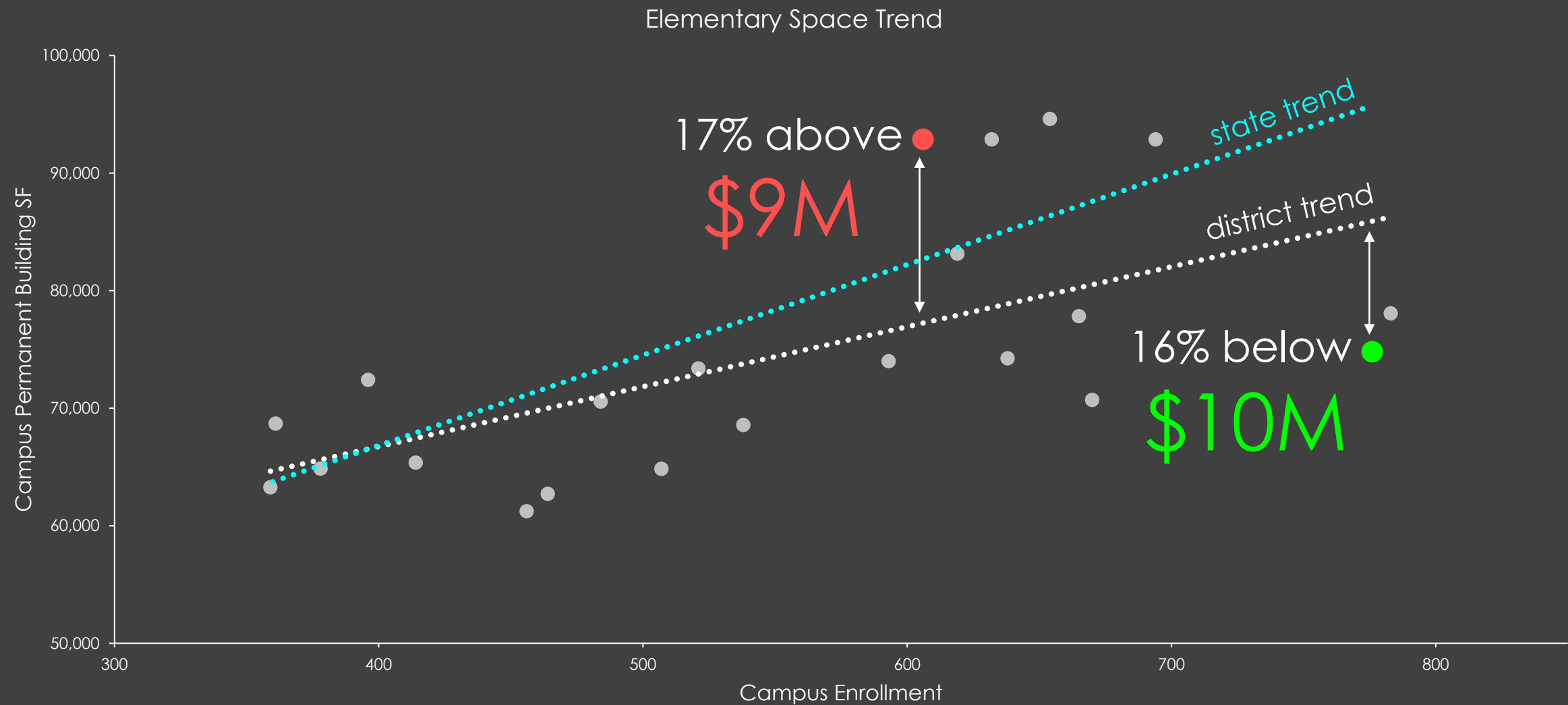
4



712



# SPACE EQUITY





# TCO Modeling Tool



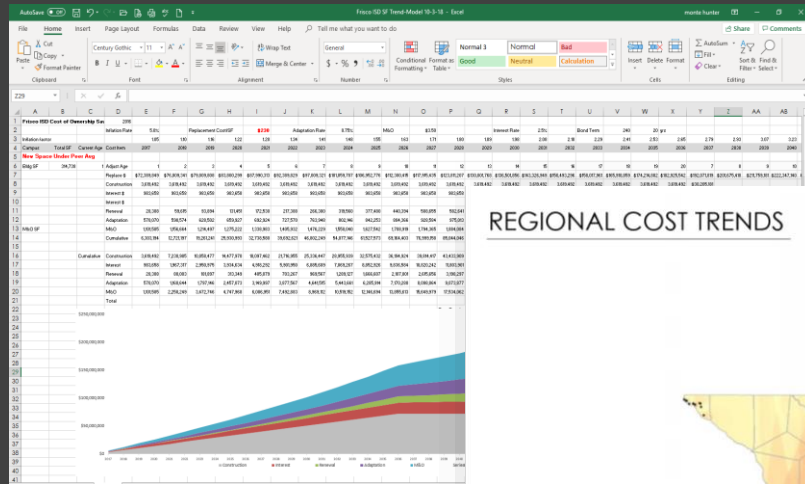
FROM 10,000 FEET



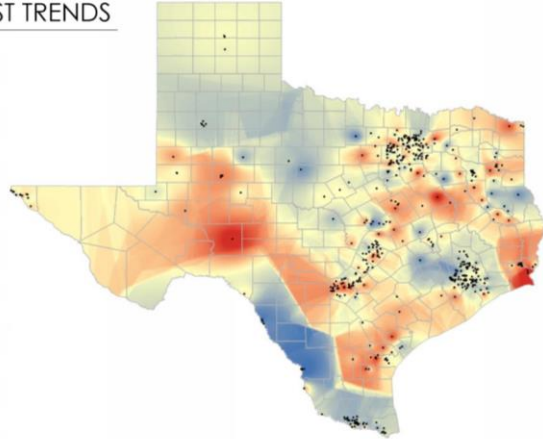
# TCO ANALYTICS

# VARIABLES

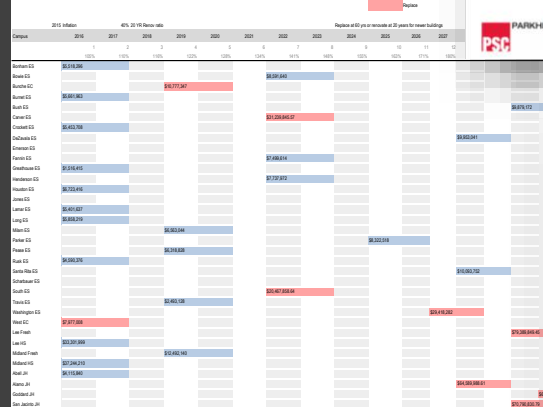
- Construction cost
- Inflation
- Bond terms
- Adaption rate
- Facility age
- Renewal ratio
- Maintenance cost
- SF per student



REGIONAL COST TRENDS

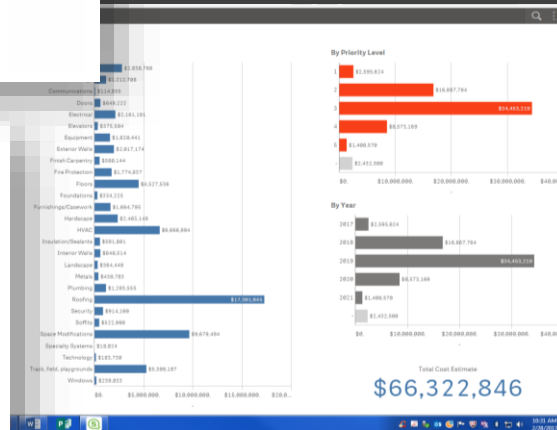
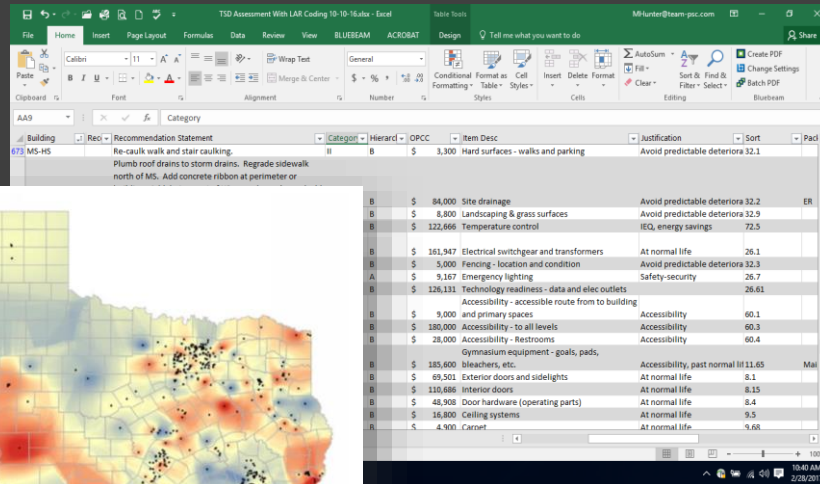
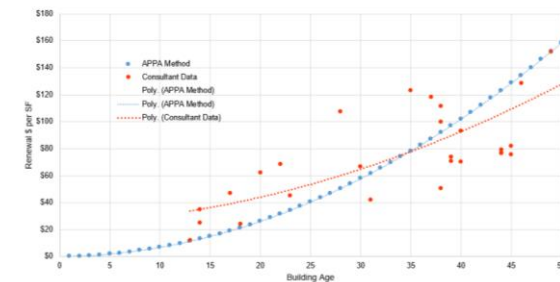


Renewal & Replacement Schedule



Renewal Cost Trends

The chart below compares two methods of modeling long term facility renewal costs. The blue represents a method by the Association of Physical Plant Administrators that is based on the facility age. The red represents a method and regionally acquired renewal assessments by 11 different consulting firms. Either method or an average of the two methods can be used to model long term renewal costs.



# EXCEL WORKSHEET

## Facility SF Peer Benchmark

District Enrollment	15,000
Peer Trend District SF	2,535,412

= 154 x enrollment + 225,412

## 30 Year TCO

Building SF	90,000
Facility Age	25
TCO per SF	\$903
30 year TCO	\$81,270,000

= 22 x facility age + 353

= TCO per SF x Building SF



# WORKSHEET QUALIFICATIONS

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## SPACE

- General district space guidance
- Districts > 2,000 enrollment
- All facility SF including portables
- Refine with subgroup trends

## TCO

- Mid-range conceptual model
- Buildings only, no site work
- Use adjusted building age
- Can vary 40% either way
- Refine with 9 variables



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