Location Based Predictive Analytics in School Facility Planning
Case Study . . . The Challenge

Aging, underutilized school buildings

Urban gentrification . . . shifting enrollment

Principal request planning system

Limited operating funds
15-20%  
Initial Construction

80-85%  
Energy  
Interest  
Maintenance  
Renewal  
Alterations
Total Cost Components

- Building Square Feet
- Renewal & Alterations
- Maintenance & Energy
- Bond Interest

Flow:
- Compare to regional benchmarks using linear regression
- Visualize with GIS
- Compare scenarios
Predictive Analytics
Regional SF Comparison
Elementary Campus Space Metric

net = 336,400 SF above peers
6 for 9... 30 Year Cost of Ownership

- $123,886,071 in 2015
- $248,193,851 in 2020
- $329,203,022 in 2025
- $498,239,284 in 2030
- $646,772,984 in 2035

6 new schools
Renovate 9 schools & replace in 20 years

- $317M in 30 year cost savings in renewal, alterations, maintenance and bond interest
- 2 annual teacher salary equivalents in M&O savings
- Save energy to heat, cool and light two elementaries every year
Lessons Learned

1. Champion at the top
2. Peer based analysis overcomes most politics
3. Build on existing district planning
4. May not want PA/GIS until pressured
Thank You

Monte Hunter AIA
mhunter@team-psc.com
512.676.2100
Austin, TX

Michael Howard GISP
mhoward@team-psc.com
806.239.3310
Frisco, TX