

Metrics of Success from San Diego Community College District

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Wouldn't It Be Nice If You Could...

Average Savings of \$900,000 on each of 15 projects

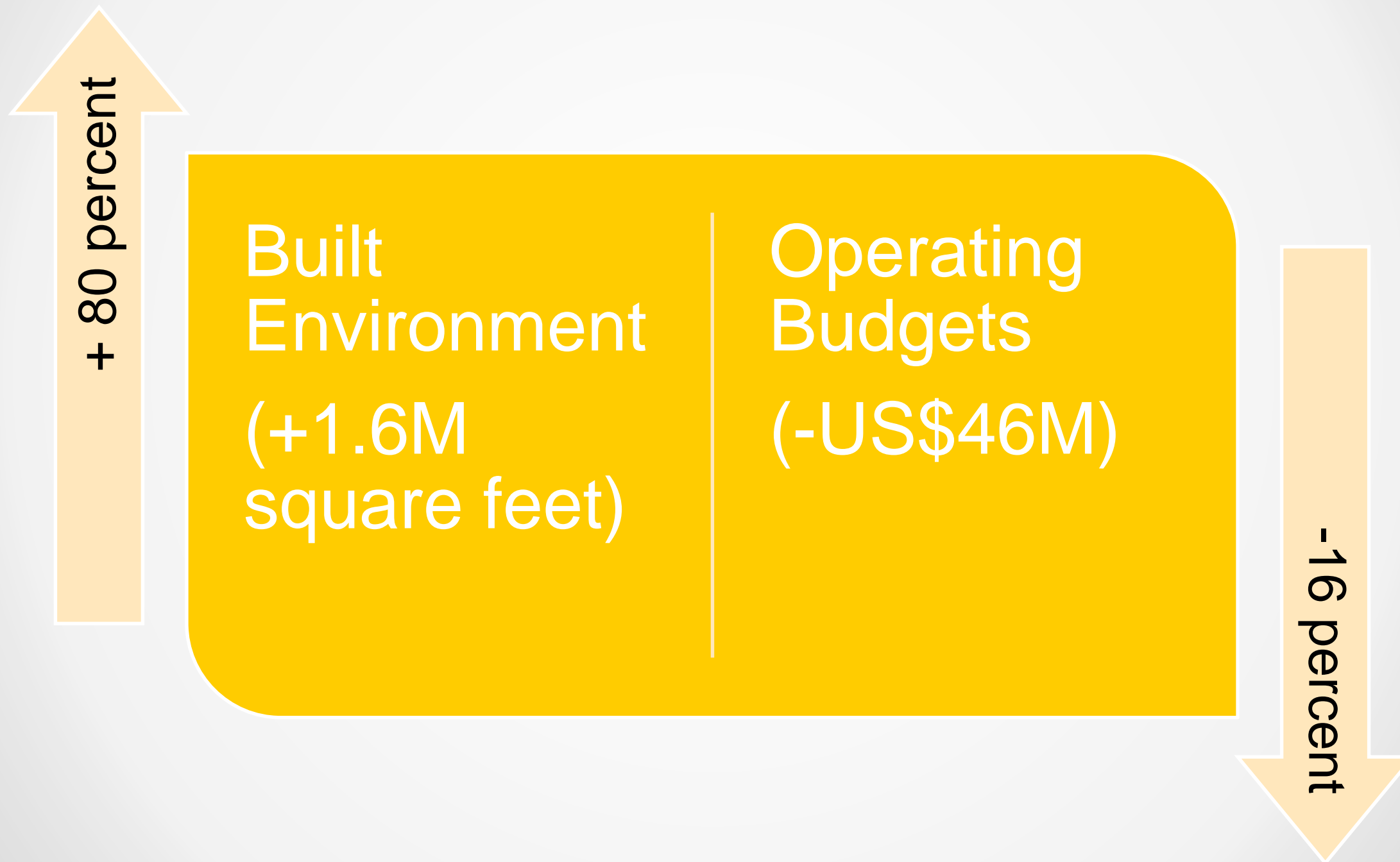
Reduce Average Schedule Delay by 56 days

Enhance Sustainability Objectives by 44%

Reduce Facilities Maintenance Costs by 53%

In the Beginning...

Why Did San Diego CCD Migrate to Lean?



What our team heard?



Let's Think!!!

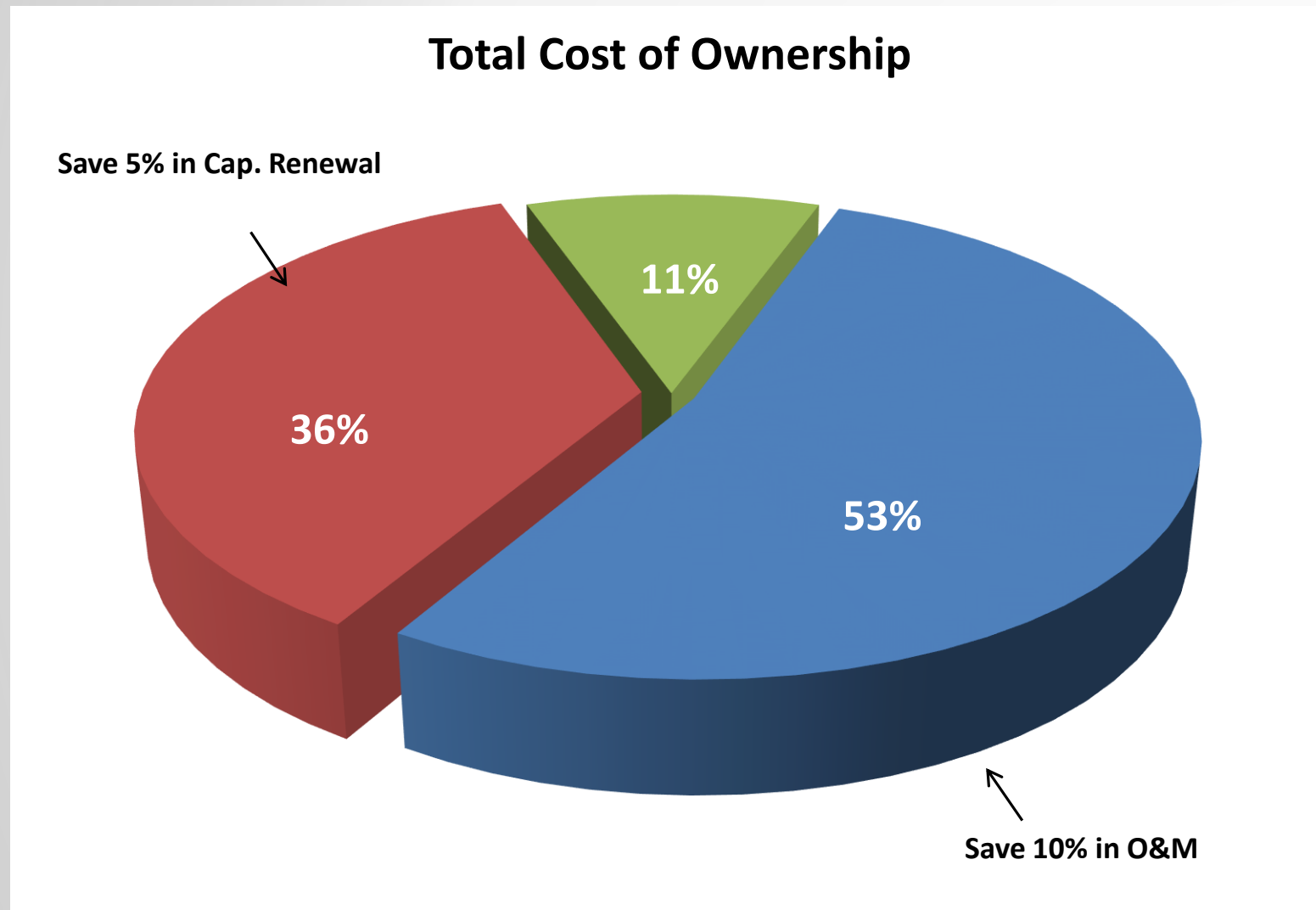


Total Cost of Ownership Example

- 50-year design life
- 100,000 square foot classroom building
- Design and construction cost - \$30 million
- Capital Renewal: 2% of current replacement value benchmark)
- O&M Budget \$5.69/square foot
- Inflation: 3%



Total Cost of Ownership Over 50 Years

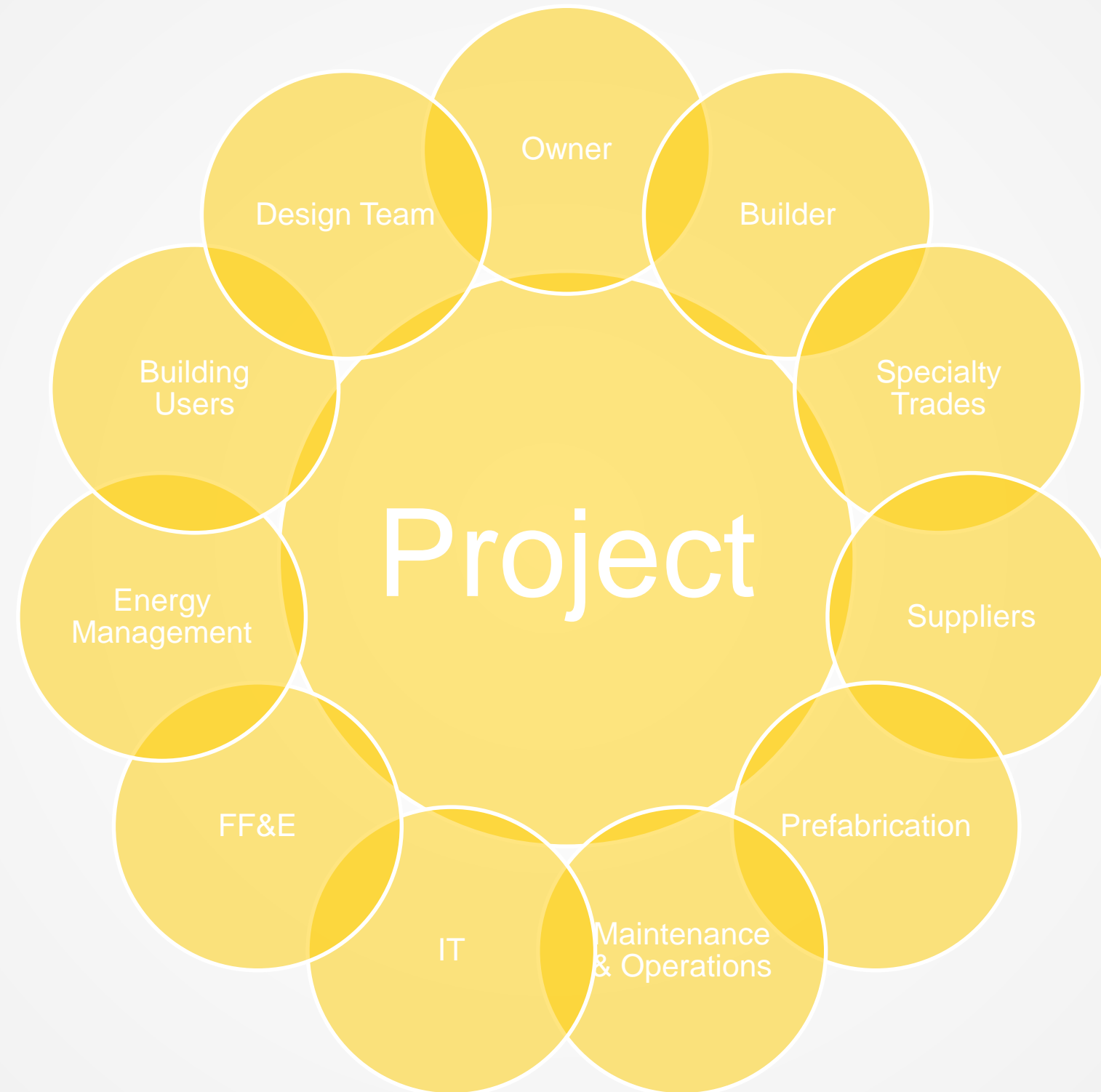


	Costs	Savings	
1st Cost	\$30M	<u>Total</u>	<u>NPV</u>
Cap. R.	\$101M	\$ 5M	\$1.1M
O&M:	\$149M	\$15M	\$3.4M
Total:	\$280M	\$20M	\$4.4M

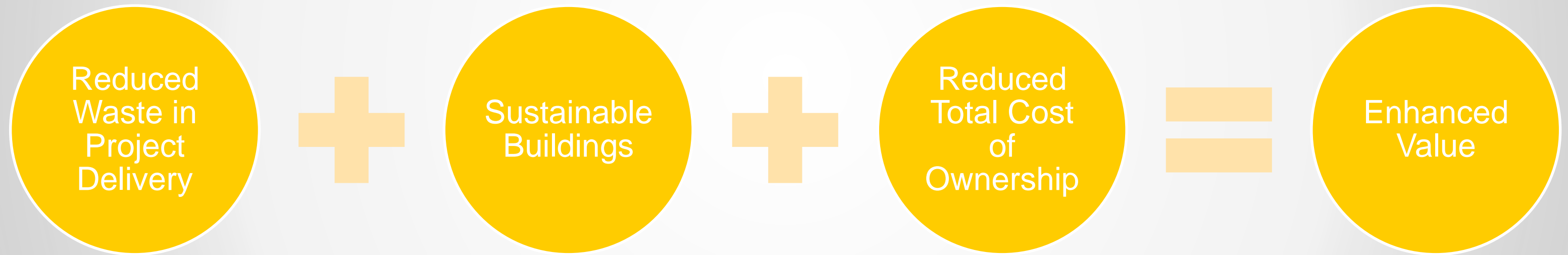
Current State



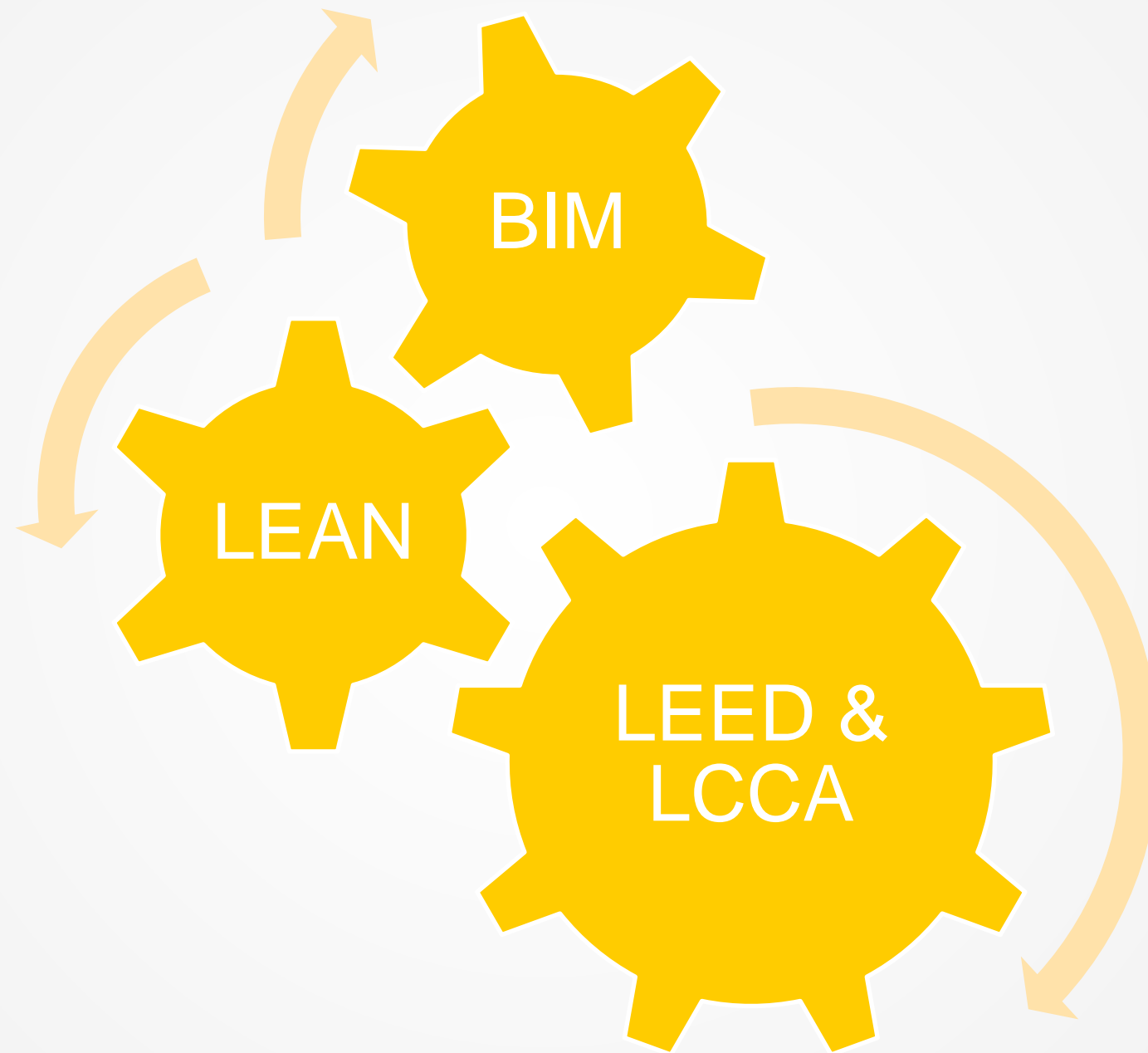
Desired State



Public Owner Benefits



How to Get a Better Project...



The Metrics

Change Order Analysis

Pre-Lean

- 7.73% Total COs
- 2.99% E&O COs

Post-Lean

- 4.43% Total COs
- 1.88% E&O COs

Who is on Time?

Pre-Lean
(w/o BIM)

• 1/19
(5%)

Post-Lean
(w/BIM)

• 3/15 (20%)

Days of Schedule Delay Improvement

Pre-Lean
(w/o BIM)

- Avg. 80 Days Late

Post-Lean
(w/BIM)

- Avg. 24 Days Late

Target Costing



11 Projects



Avg. Value:
US\$21.8M



83% Met Target Cost; Avg. 7%
Below Target Cost

Keys to Target Value



Sustainability as a Core Value

LEED Gold Projects

20%

Direct Contract with Architect

26%

Post-Lean

44%

Target Value Design

Value as Reduced Maintenance Costs



Pieces to the Puzzle



\$34.6 Million of Waste Eliminated

