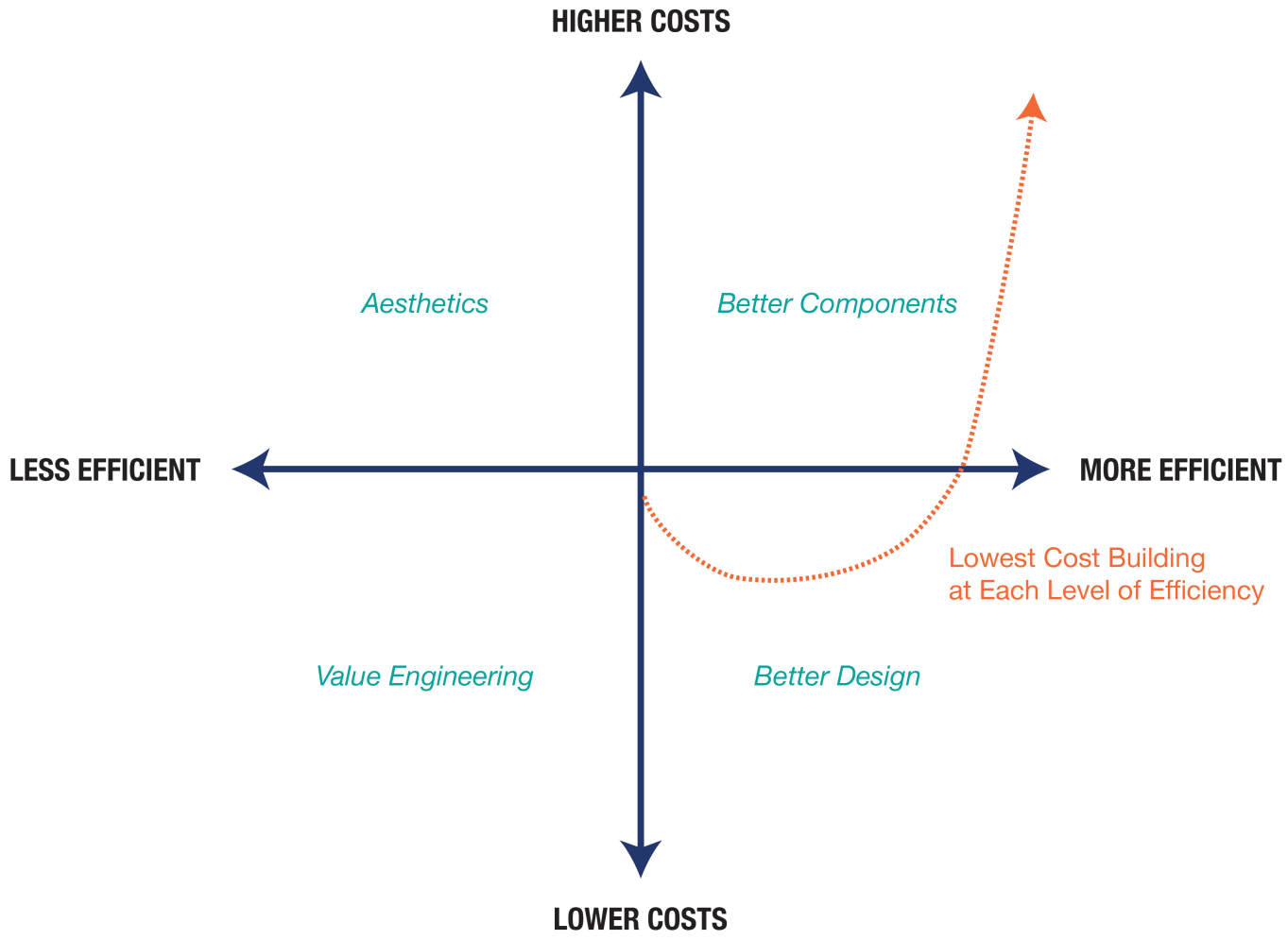


Speaking in Three Dimensions

Convincing Decision Makers to Go Net Zero

Mike Rovito
Senior Consultant, ERS

The Lowest-Cost Curve



Negative-Cost Measures



Glass Curtain Wall

- ❑ More expensive
- ❑ Less efficient
- ❑ Pretty?

vs.

Wall

- ❑ Less expensive
- ❑ More efficient
- ❑ Good for hanging things

No-Cost Measures

- Alberici
Headquarters
 - 34 kBtu/sf/yr
- Measures:
 - Orientation
 - Footprint
 - Window shape



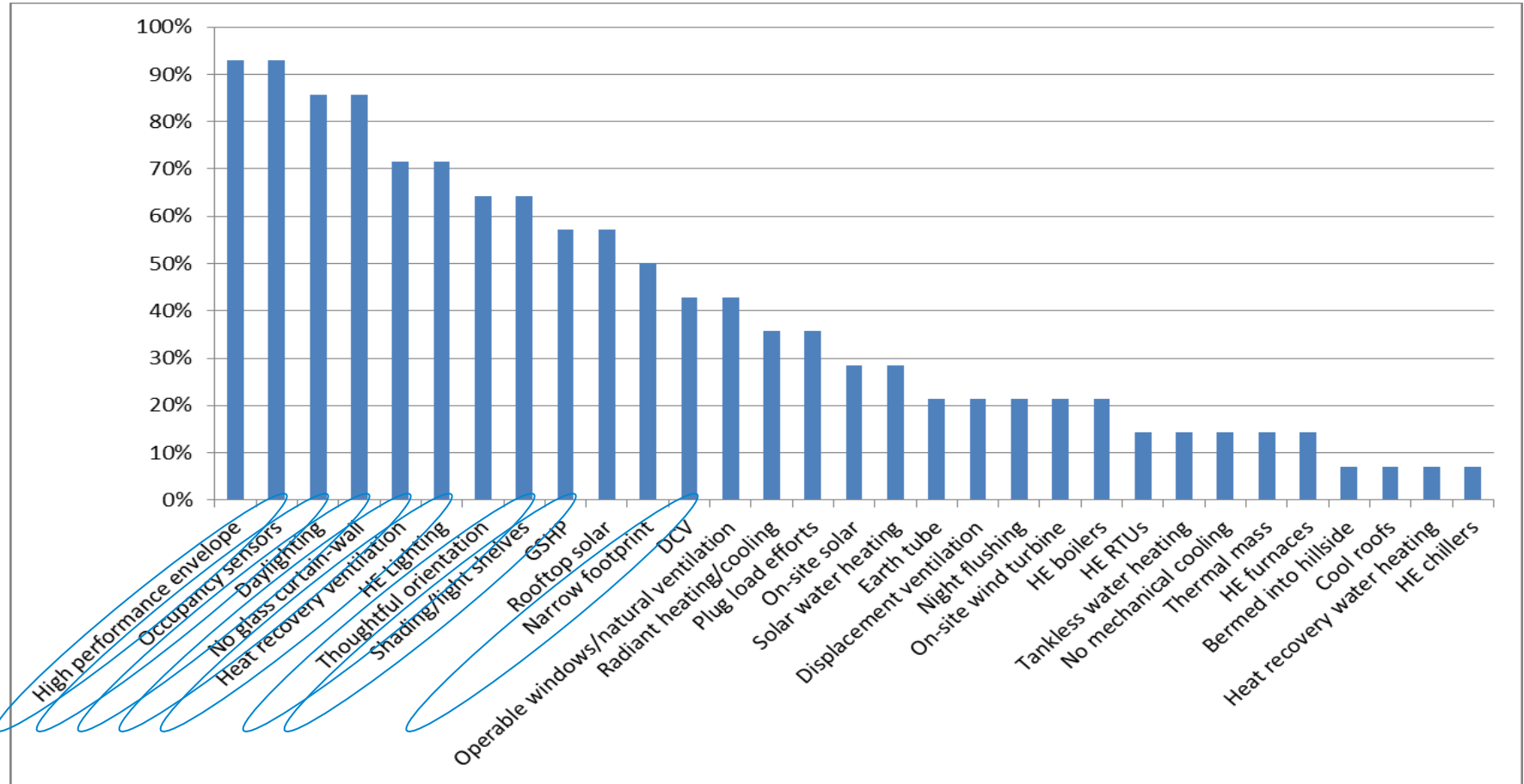
Investment Measures

- ❑ Invested to reduce load
 - DCV, windows, controls, daylighting
- ❑ Downsized chiller load
 - Shrunk 1,600 tons
 - Saved \$17.3 million on chiller upgrade



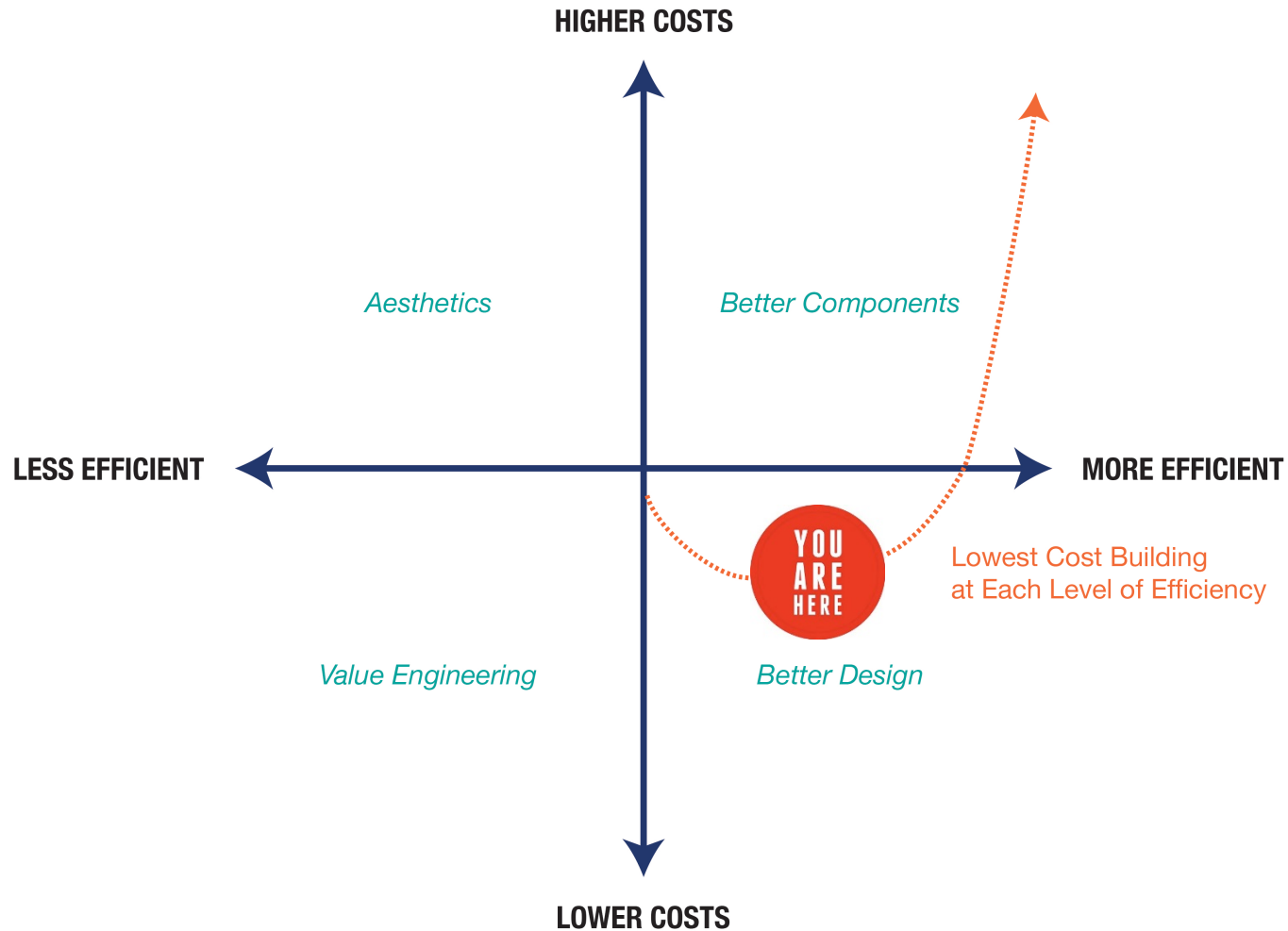
Load Reducing Design

Inventory of Measures in NY's HPBs by Frequency of Appearance

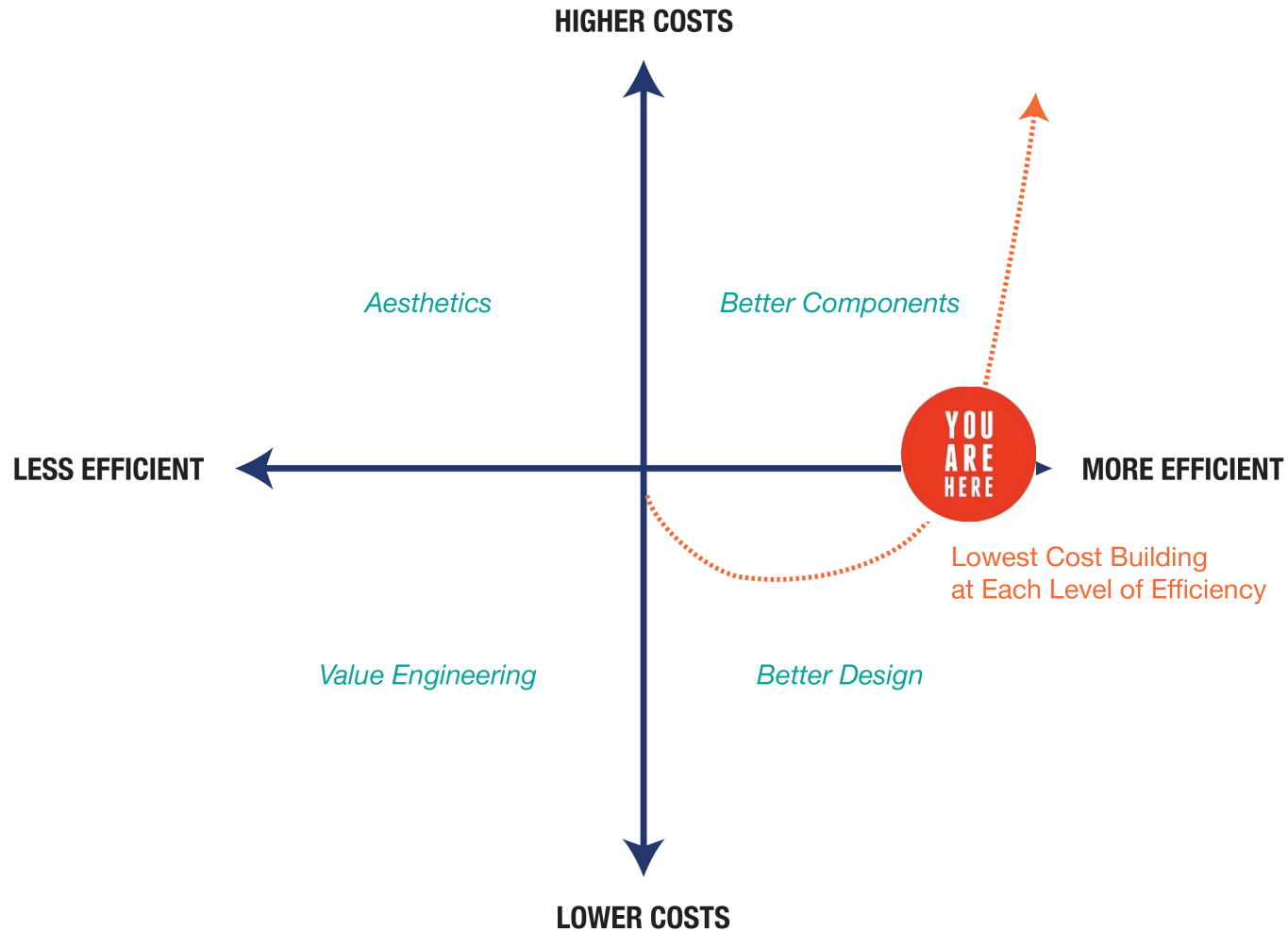


Load-reducing design features dominate high-performance construction.

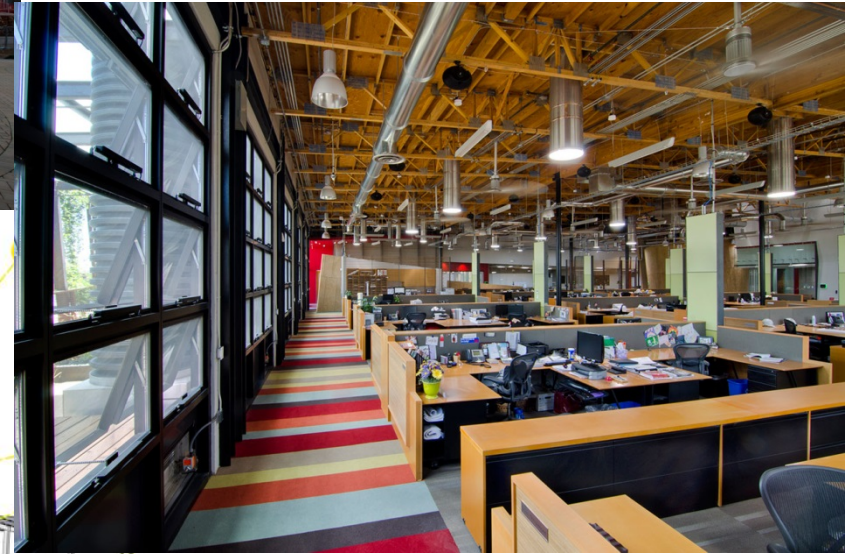
We're Halfway There...



Destination High Performance



Free Lunch?



Non-Energy Tradeoffs

□ Aesthetics

- Untraditional exterior...



□ Functionality

- Open layouts...

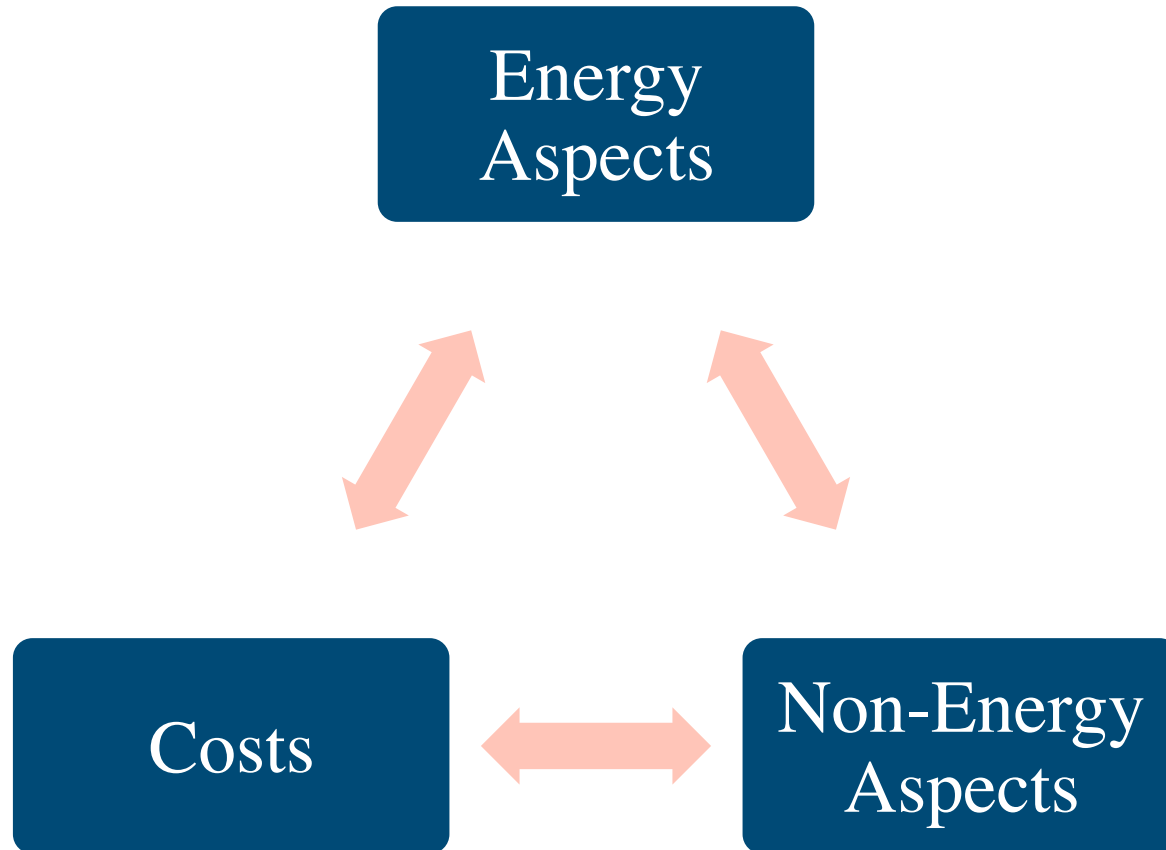


□ Comfort

- Natural ventilation...



Triangle of Tradeoffs

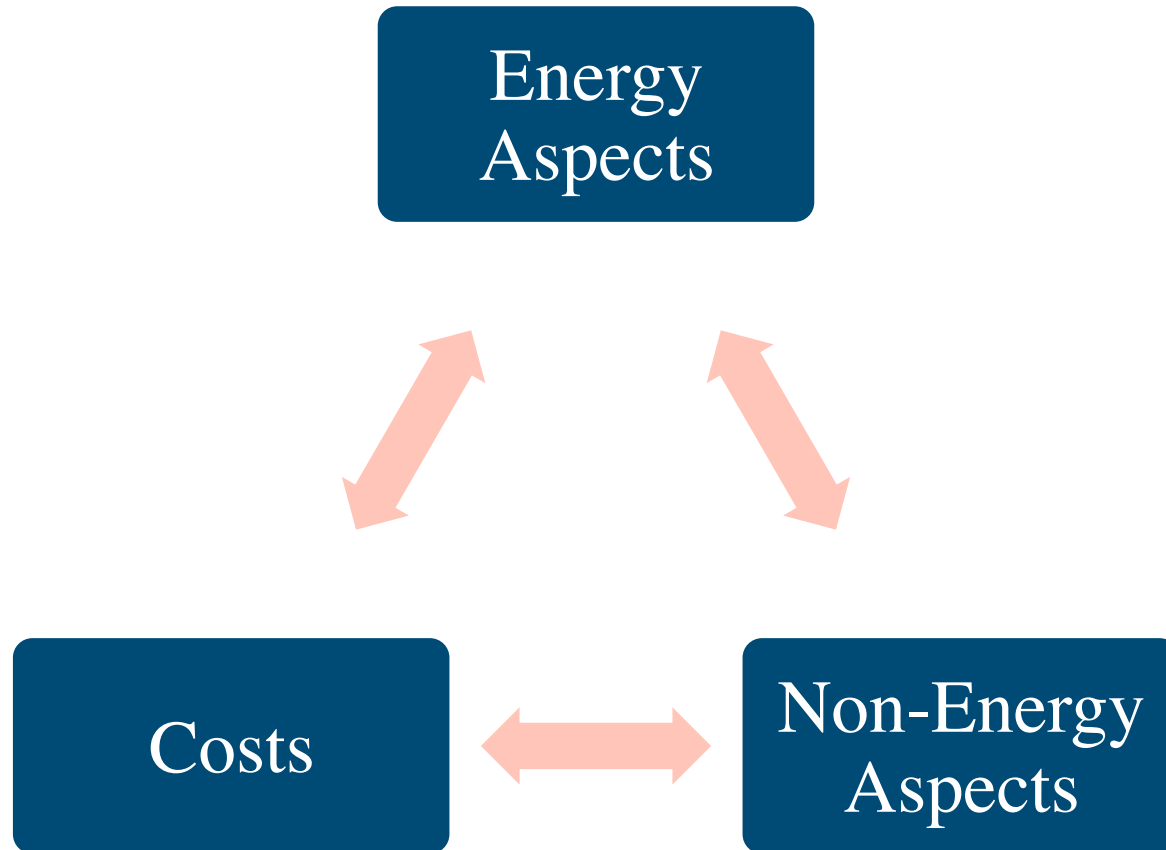


Making the Tradeoffs

- ❑ Environmental Organizations
 - Santa Monica office of NRDC
- ❑ Progressive A&E Firms
 - Johnson Braund Design Group in Seattle
- ❑ Public Facilities
 - U.S. Navy Building at Port Hueneme
- ❑ Corporations with Sustainability Goals
 - Exelon headquarters in Chicago



Triangle of Tradeoffs



Non-Energy: Can Be Sold



SUMMER SUN



Unique façade that screams sustainability!

Bullpen style layout to encourage collaboration!

Fresh air and sunlight!

Conclusions

- ❑ Load-reducing design saves money
- ❑ Not a free lunch: non-energy tradeoffs
 - Perception = worse
 - Reality = different
- ❑ Program goal: prove that different is not worse and may actually be better

Thank You Questions?

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