

VE as a Tool for Sustainability

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Topic Overview

- *VE tools are ideal for evaluating sustainability*
- *What is Sustainability? (competing interests)*
- *Evaluate and rank alternatives*
- How can VE help
- Strategies and Scorecards



What is Sustainability?



Jobs Created
 Skills Enhancement
 Local Economic Impacts
 Social Investments
 Business Ethics
 Taxes/Royalties

Resource Efficiency
 Product Stewardship
 Life-Cycle Analysis



Safety & Health
 Local Environmental Impact
 Global Climate Change
 Resource Management



More Competing interests...

Location:

- NOT on fragile landscapes
- NOT contributing to urban sprawl
- Close to mass transportation

Site:

- Focus on surface water reduction
- Xeriscape landscaping (no irrigation)
- Lower impact on local ecology
- Increased green space parking)

Building Exterior

- Window Canopies or light shelves
- Alternative energy systems (solar or wind)
- Green roofs
- Efficient, targeted exterior lighting

Building Interior

- Minimal materials
- Flexible layouts
- Occupant controls of heat and light
- Abundant natural light and views
- Good air quality
- reduced water usage characteristics
- “green” Operational practices

Hidden Attributes

- Highly efficient building envelopes
- Materials low VOC's)
- High efficiency mechanical systems
- Efficient lighting systems
- No ozone depleting substances
- maintenance materials meet goals
- optimization of system performance

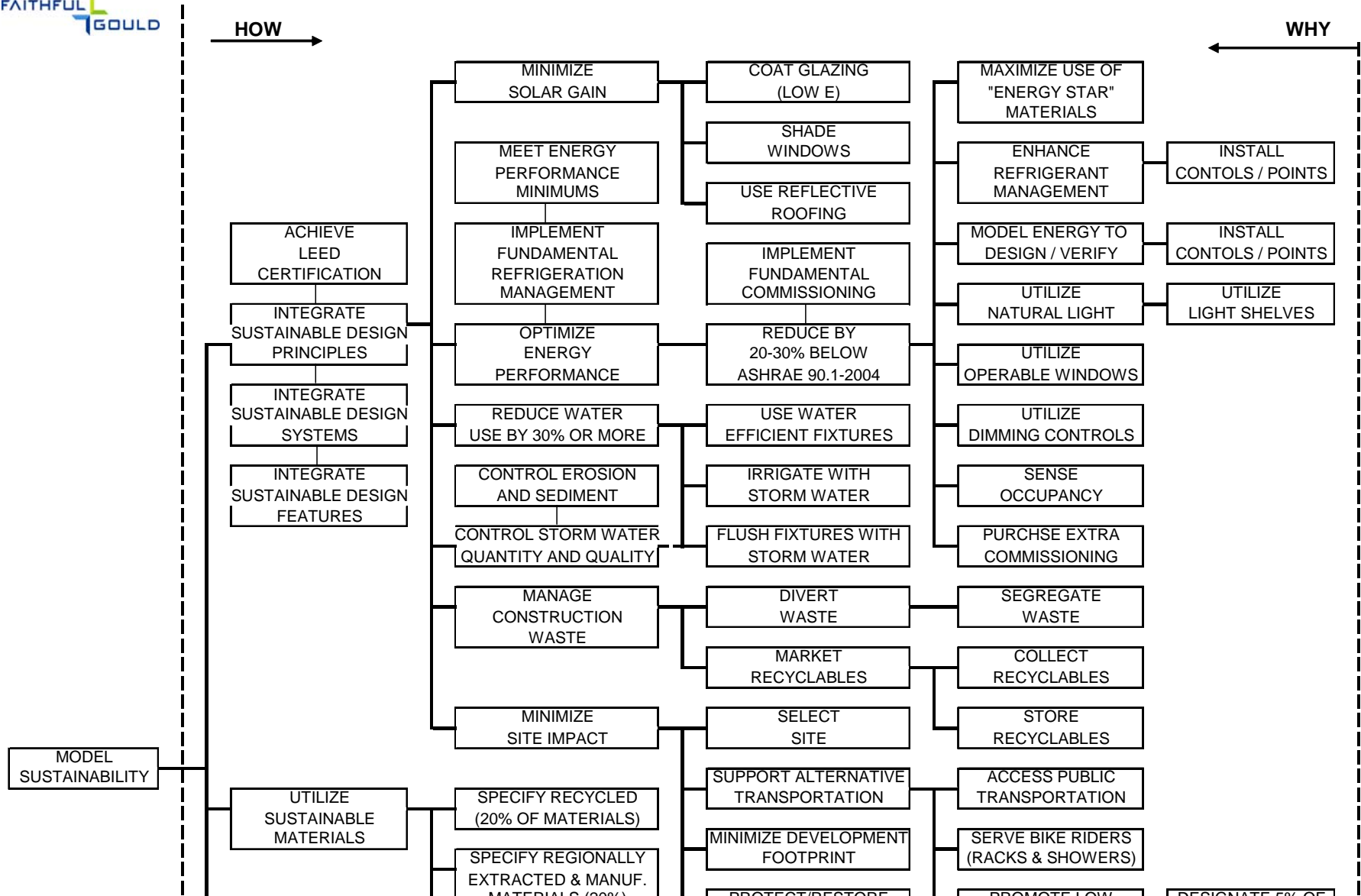
VE as a decision toolkit

- FAST Diagramming
- Life Cycle Assessment
- Life Cycle Cost
- Weighted decision trees
- Ways to quantify “value”

Decision Support



FAST DIAGRAM MEDICAL INSTITUTE HEADQUARTERS EXPANSION SUSTAINABILITY



Scorecards



Code for Sustainable Homes



Questions

For Further Information:

<http://www.usgbc.org>

<http://www.cagbc.org>

<http://www.architecture2030.org/home.html>

<http://www.sustainability-index.com/>

<http://www.value-eng.org/>

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