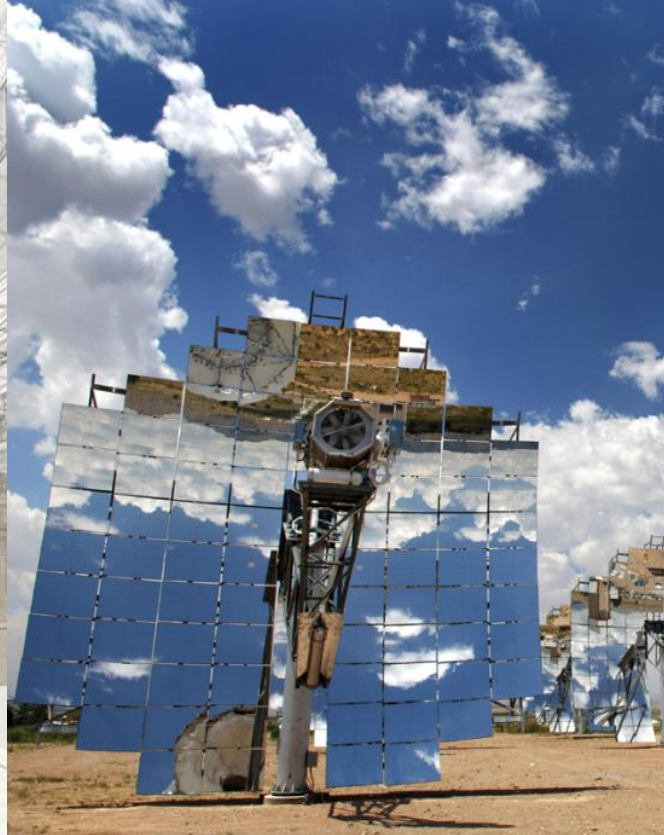




What makes a product green?

Alberta Innovates – Technology Futures: 24 November 2011



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Sustainable Design Coordinator
Past Chair, Alberta Chapter of the CaGBC

Think global. Act local. Stay hopeful.

Buildings

In Canada, buildings are responsible for:

- **33% of all energy used**
- **50% of natural resources consumed**
- **12% of non-industrial water used**
- **25% of landfill waste generated**
- **10% of airborne particulates produced**
- **35% of greenhouse gases emitted**

Source: Commission for Environmental Cooperation, 2008

Standards

LEED[®] (Leadership in Energy and Environmental Design)
(Canada & US) New Construction (ND), Existing Buildings:
Operations & Maintenance (EBOM), Neighborhood
Development (ND), Homes.....

BREEAM (Building Research Establishment
Environmental Assessment Method)

Green Globes (Green Building Initiative in US)
(BOMA Best in Canada)

Challenge 2030 (Architecture 2030 AIA)

Living Building Challenge (International
Living Building Institute)



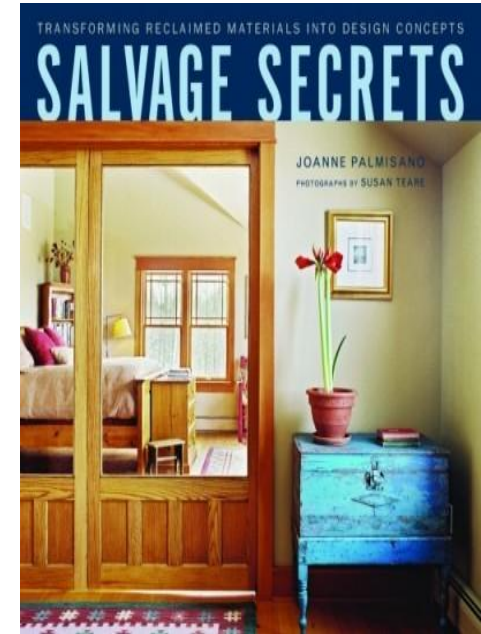
Green Products





Use of materials

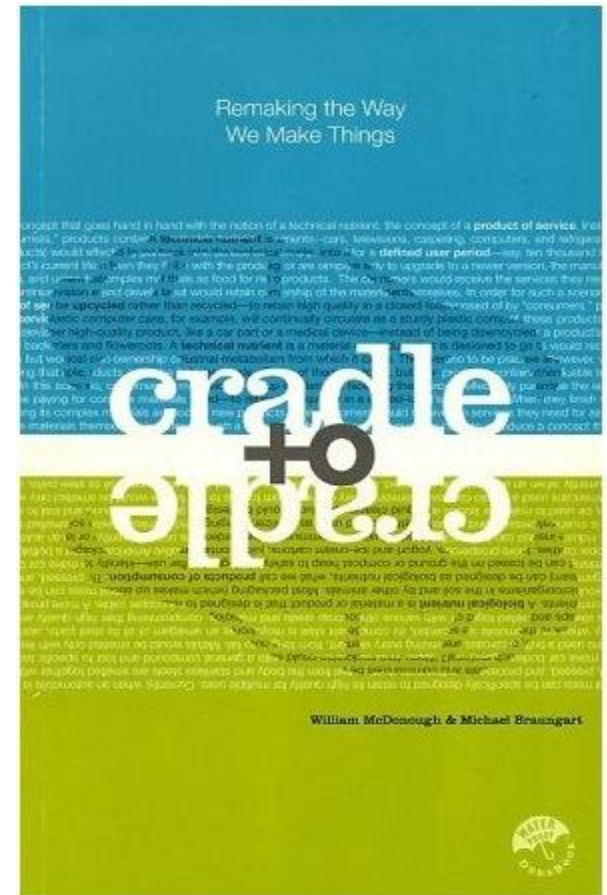
- Salvaged products
- Products with post-consumer recycled content
- Products with pre-consumer recycled content
- Products made with agricultural waste materials





Products that conserve natural resources

- Reduce material use
- Exceptional durability or low maintenance requirements
- Certified products
- Rapidly renewable materials (10 years)





Products that avoid toxic or other emissions

- Natural or minimally processed
- Alternatives to ozone depleting substances
- Alternatives to hazardous materials
- Reduce or eliminate pesticides
- Reduce stormwater pollution
- Reduce impacts from construction or demolition activities
- Reduce pollution or waste





Products that save energy or water

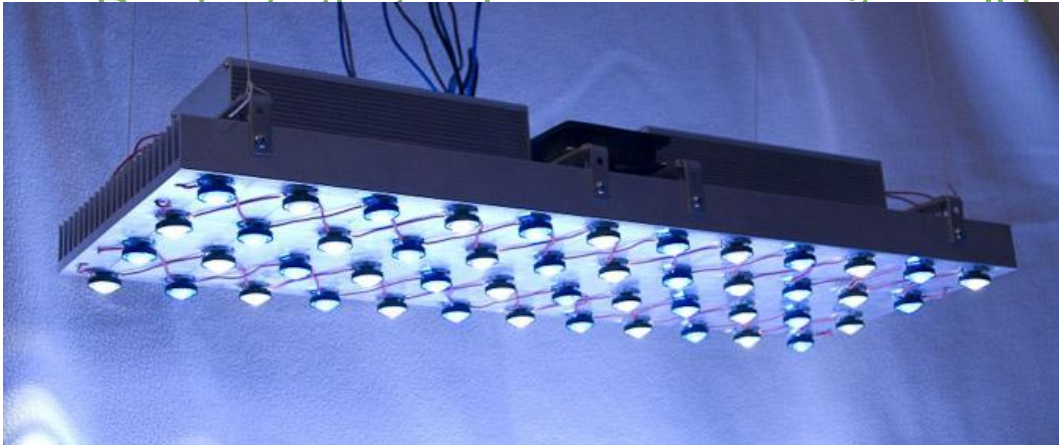
- Building components that reduce heating and cooling loads
- Equipment that conserves energy and manages loads
- Renewable energy & storage
- Fixtures and equipment that conserve water





Products that contribute to safety and health

- Products that do not release significant pollutants into the building
- Products that block the introduction, development or spread of contaminants
- Products that remove indoor pollutants
- Products that improve light quality
- Products that improve acoustics





Manufacturing Process



Measurement

Follow the value and waste



Water

Conserve, grey, reuse



Facilities

Air, heating, tolerances



Lighting

Switch off, sensors, removal



Machines

Maintenance, hibernation



People

Involvement, behaviours

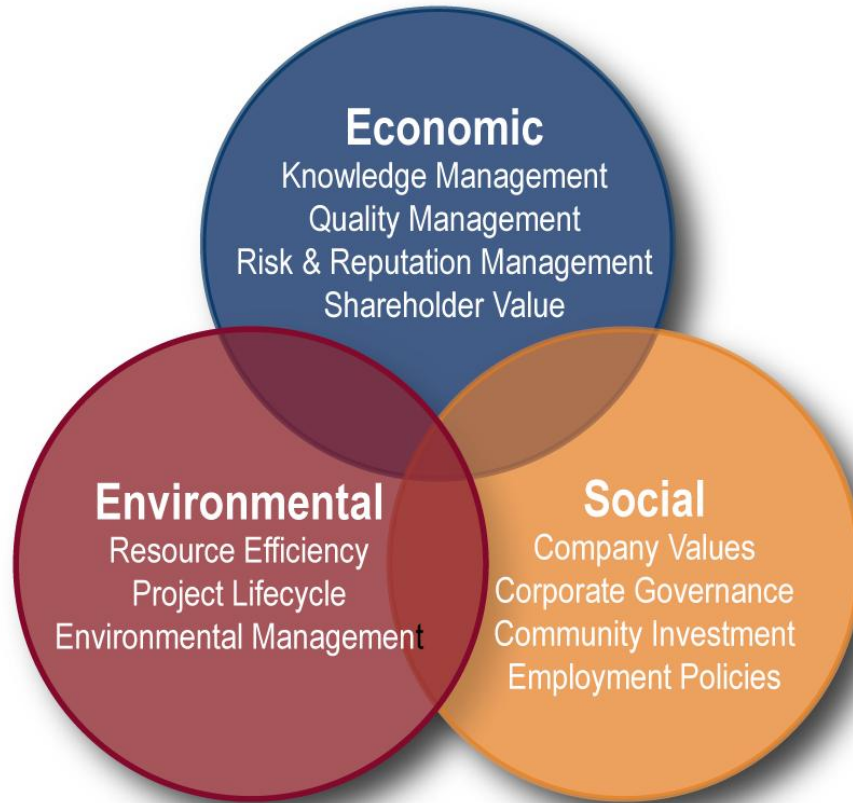


Waste

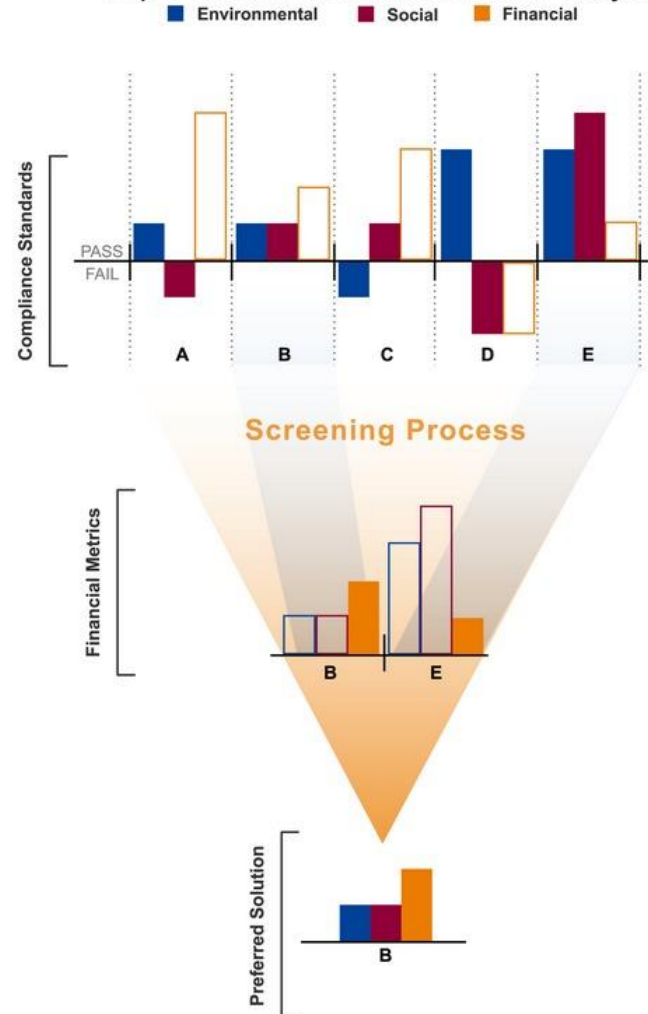
Separation, purity, seeing it!



Making decisions



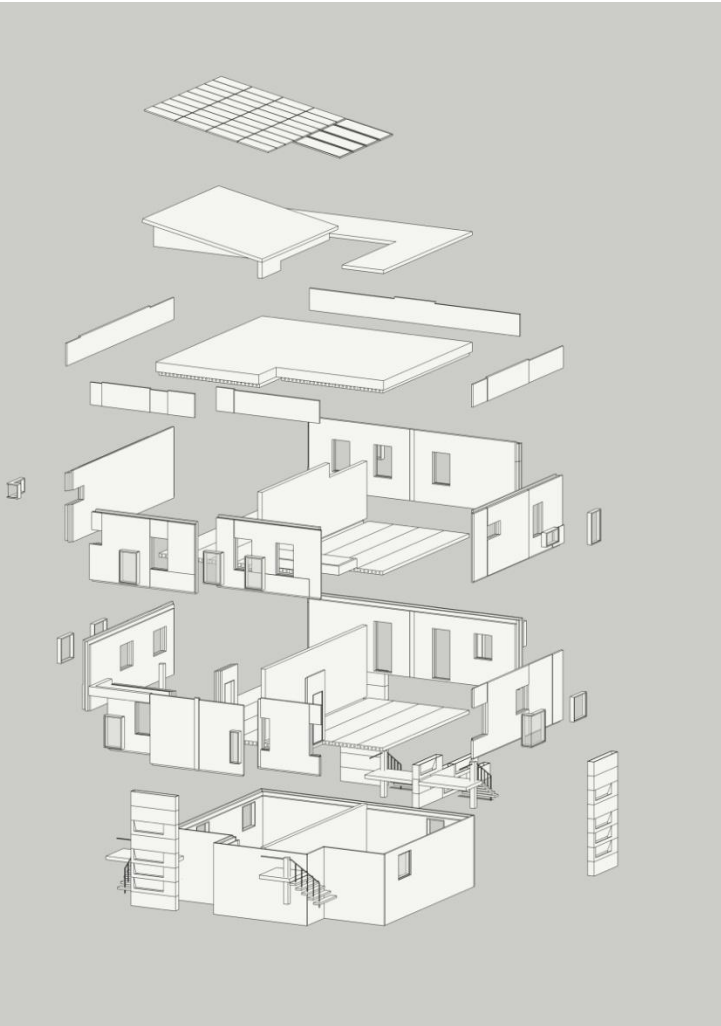
Triple Bottom Line Investment Analysis





Green BIM

HABITAT NET-ZERO PROTOTYPE



- Prefabrication
- Adding Intelligence

www.albertaBIM.ca



Thank You!



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