

Executive Summary

# Life Cycle Assessment (LCA) & Sustainable Product Standards Training©



Accredited, Nonprofit Approved Training for  
Purchasers, Specifiers & Manufacturers

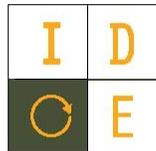


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# Pilots & Accreditation

Thanks for the Pilots!



The Training is Accredited



American Institute of Architects



Interior Design Continuing Education Council



Construction Specifications  
Institute



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# *Value of LCA & Sustainable Product Standards*

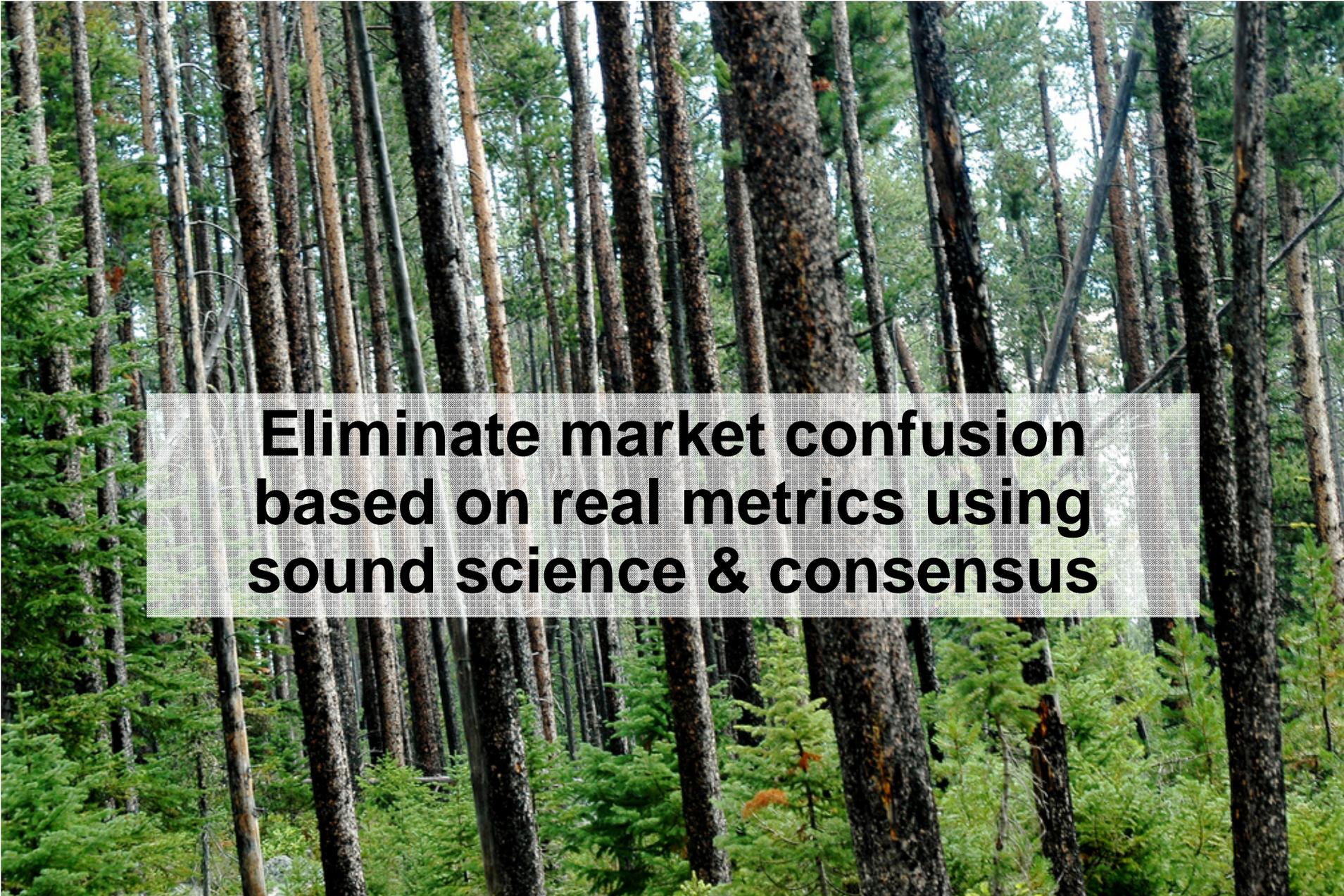




**Stop irreversible dangerous  
climate change**

**Before it's too late**





**Eliminate market confusion  
based on real metrics using  
sound science & consensus**



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**Facilitate design &  
process innovation**



**Conserve natural resources &  
reduce waste**



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**Improve quality of life**



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**Advance *Triple Bottom Line*:  
Environment, Economy & Social Equity**



## Improve stakeholder value





**Reduce cost & liability**



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**Improve manufacturer share value &  
good will**



# Consumers want sustainable products

Growth in the organic products: 20% / year for the last 15 years.

Growth in the sustainable buildings: 100% / year for the last 5 years

Growth in sustainable products: 20% / year for the last 2 years





## And... consumers will pay more for products that can prove themselves to be sustainable

According to market research conducted by the Natural Marketing Institute, “Green Consumers” will choose sustainable products first, but they (and purchasers) will also do more homework to determine what is the best choice.





# The market is responding

Home Depot, Lowes, and other retailers carry FSC Certified wood

Thousands of retail outlets carry Certified Organic Products

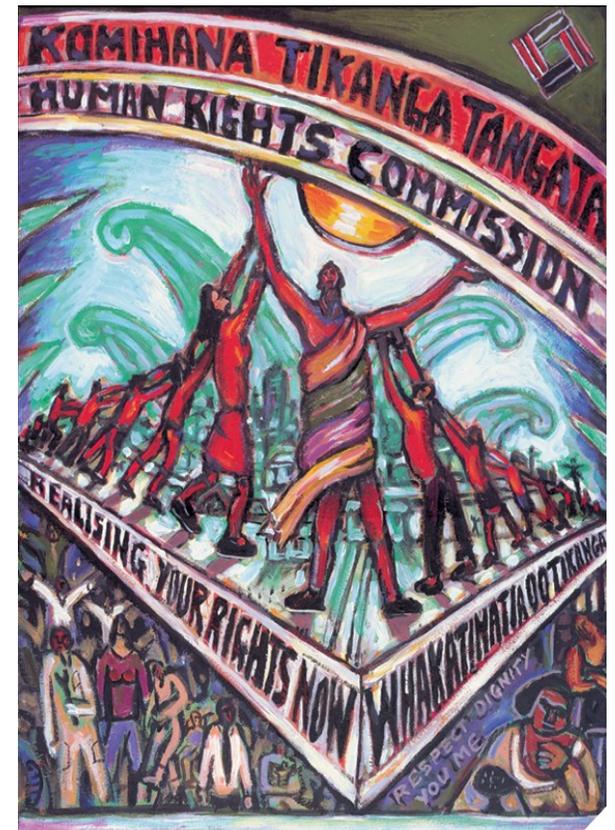


# *Sustainable product standards' requirements*



# Social Equity Performance Criteria

Human rights  
Worker conditions  
Child labor  
Community





# Environmental Performance Criteria

Acid Rain  
Smog  
Climate change  
Habitat alteration  
Ozone depletion  
Fossil fuel depletion  
Criteria and indoor air pollutants  
Water pollutants water intake  
Solid and hazardous waste  
Human and ecological health





## Sustainable products have great potential as well as some challenges:

**Market awareness** – many consumers are still unaware of the availability and benefits of sustainable products

**Market confusion** – consumers unsure of terminology and what makes a product ‘sustainable’

**Consumer distrust** – some consumers are wary of products called ‘sustainable’ and ‘green’ due to misuse and exploitation of the terms

**Consumer misperceptions** – many consumers think of “green” or “sustainable” products as low-tech, non-contemporary, or rustic.



## Standards counteract the challenges by...

**Building consumer awareness** by providing facts and figures that support marketing initiatives

**Building consumer trust** by providing open, verifiable criteria by which to judge a company and product

**Decreasing market confusion** by defining terminology and explaining processes

**Shifting market perceptions** by inspiring a wider use of sustainable products and processes in contemporary, high-tech designs and projects



Sustainable Product Standards are approved, published & precise criteria addressing environmental, social & economic aspects of a given product type.

The critical elements are :

1. **Consensus and transparency**
2. **Life cycle assessment (LCA)**
3. **Credible certification use**
4. **Renewable energy and conventional energy reduction are specified**
5. **Environmental, social and economic performance criteria are defined and quantified**



## A good standard serves many purposes and people

1. It has **industry input for implementation**. Doing so ensures that their due process rights aren't violated and buy in since sustainable product certifications regulate every aspect of manufacturing.
2. It ensures that products are environmentally **sustainable**. Low CO2 is just one of many requirements.
3. **It substantially reduces climate change**. Companies must quantify their current levels of emissions, know where their efforts will provide the most results, and make reductions.
4. It make standards & certifications **publicly available & transparent**. The CERES Investment group recently blacklisted companies from their list which didn't disclose climate pollution.



## A good standard serves many purposes and people

5. It conducts a **life cycle assessment**. That's the only way to know the full range of environmental impacts over the product's life.
6. It has **consensus**. This goes beyond just manufacturers; do all vested parties agree that this is a good standard including governments & other purchasers?
7. **It's been approved**. Those who in consensus were willing to sign off on it.
8. **It covers social equity** including human rights, child labor, worker conditions & community for companies and suppliers.

# SMART© Standards meet ALL criteria...

	<b>1</b> Meets Federal Trade Commission Environ. Marketing Requirements	<b>2</b> Rules Preventing Industry Trade Association Dominance	<b>3</b> Sustainable	<b>4</b> Transparent & Independent Certification	<b>5</b> <i>Life Cycle Assessment (LCA)</i>	<b>6</b> Consensus: ANSI Accredited	<b>7</b> Climate Change Pollution Reductions	<b>8</b> Approved Standard
<b>SMART©</b> <i>The Standard for Sustainable Living</i> , including SMART© Building Product Standard	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Why are these criteria Important?</b>	Prevent unlawful greenwash & misleading marketing	Move substantially beyond status quo	Cover environment economy & social equity over global supply chain	Ensure accuracy & public accountability	Ensure pollution reductions over entire product life	Reduce risk & uncertainty so large purchasers & capital markets adopt	Help stop dangerous irreversible climate change preventing global collapse	Ensure buy in & consensus

... for environmental, social and economic needs



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## Example of Certified Sustainable Product

### **FSC Certified Wood**

### **Plus the following additional requirements**

SMART© or equivalent requirements for:

- Reuse/reclamation requirements
- Pollutant reductions at manufacturing facility
- Energy requirements
- Facility requirements
- LCA if combined with other materials
- Legally binding manufacturer certification





# Sustainable product standards around the world

Standards are the common “language” for product and process expectations that cross market sectors and international borders.

They are adopted by Governments, Companies, Buyers/Specifiers and Capital Markets.



# *LCA: The Critical Component of Sustainable Product Standards*



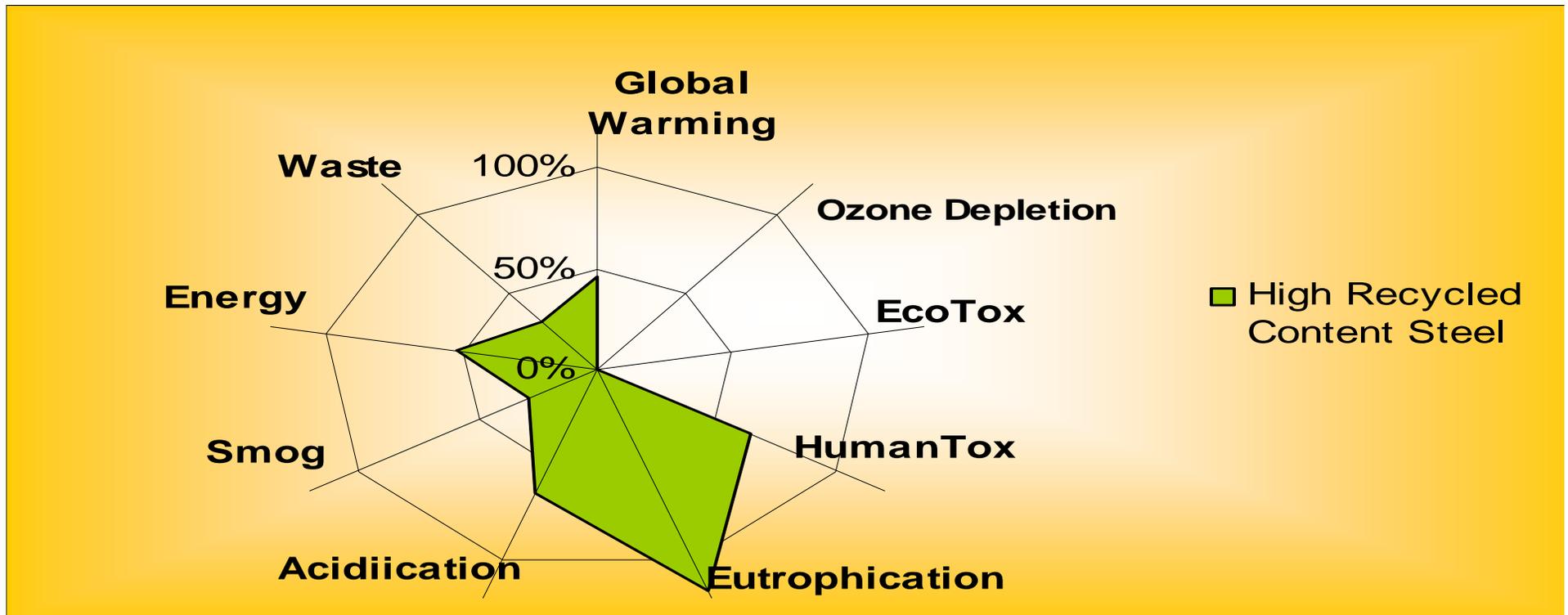
## Life Cycle Assessment

LCA is the scientifically based measurement of a product's environmental impacts throughout its life cycle – from raw materials extraction through manufacture, shipping, use or reuse.



## LCA Example: Environmental Performance for HRC Steel

This sample eLCie System Spidergram™ chart, produced as part of a life cycle analysis, summarizes a product's environmental impact in a number of key areas, compared to an industry average.



## LCA of Lamps helps us make SMART decisions

Using LCA, the greatest environmental impact by far, is the energy efficiency of the lamp, which supplants coal fired power (largest source of climate change pollution).

### *CONCLUSION*

*The best environmental choice is the lowest mercury, most efficient, & longest life lamp.*



# LCA in design

With an LCA analysis, Design and Product Engineers have clear requirements on how to select sustainable raw materials, processes and to build in recyclability.



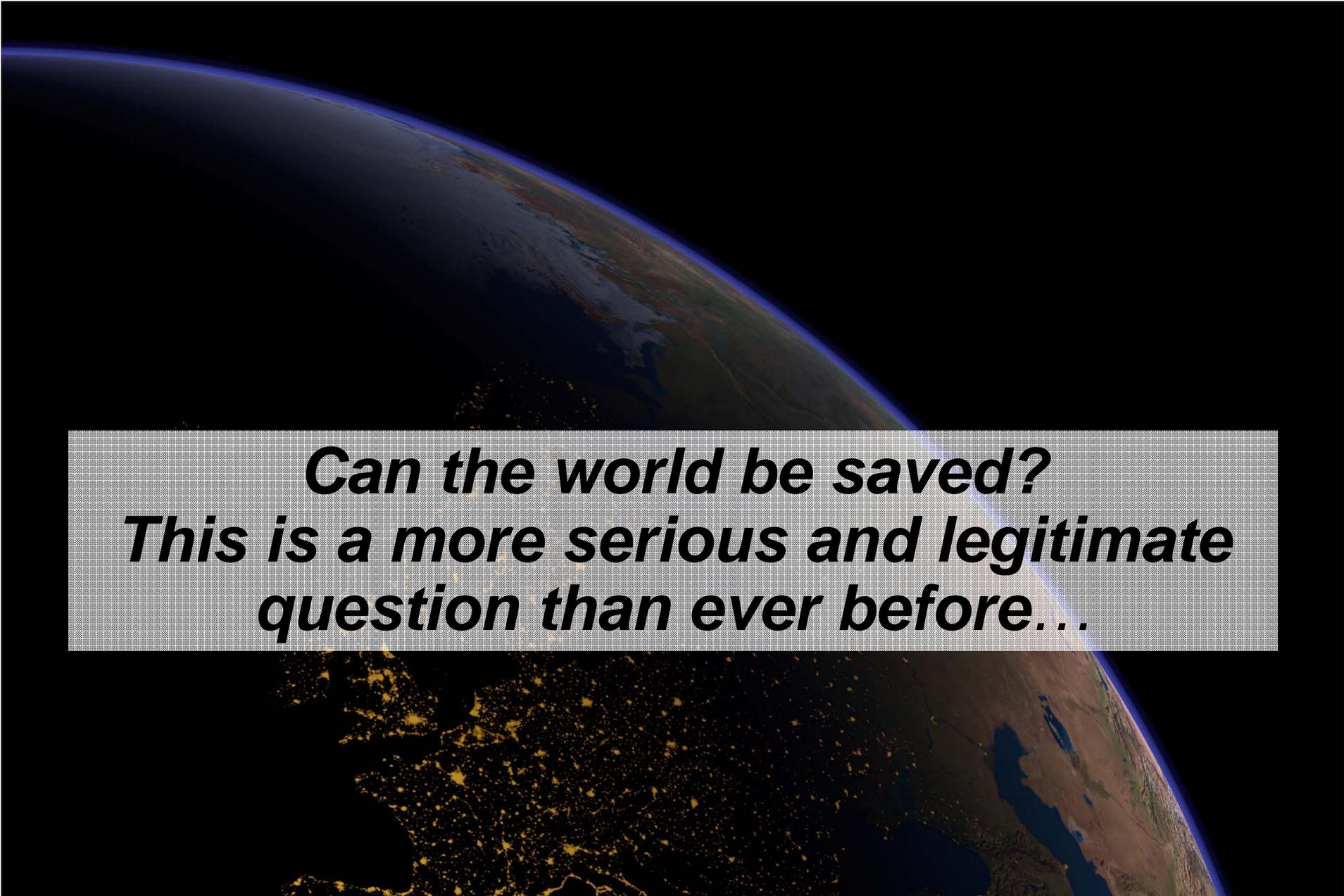


## LCA in the market

Clear requirements during the design stage provide clear market advantages later on during advertising.

Qualify for sustainable product standard certification which puts trust back into the buyer/seller relationship.





***Can the world be saved?  
This is a more serious and legitimate  
question than ever before...***



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Distributors or Recyclers to think  
and BE sustainable.



# Institute for Market Transformation to Sustainability



202-338-3131 p

202-338-2800 f

Email [MTS@sustainableproducts.com](mailto:MTS@sustainableproducts.com)

1511 Wisconsin Avenue, N.W. Washington, DC 20007



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