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การส่งเสริมการผลิตและการบริโภคอย่างยั่งยืน ด้านนโยบายสนับสนุน – ประเทศไทย  
Sustainable Consumption and Production: Policy Support Component – Thailand

# Eco-Product Trend: ตลาดและโอกาสของผลิตภัณฑ์เชิงนิเวศน์

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# ตลาดและโอกาสของวัสดุก่อสร้าง ที่เป็นมิตรต่อสิ่งแวดล้อม

หน่วยงานดำเนินการ:



คณะที่ปรึกษา:

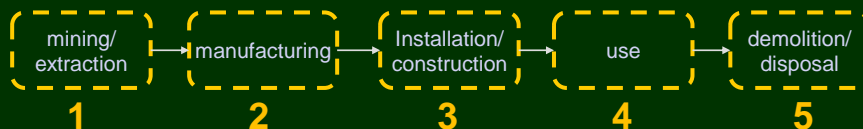


## Reality:

- > **50%** of material *resources* taken from nature is building-related (huge mass flow)
- > **over 50%** of national *waste* production comes from the building sector
- > **Green materials** are evaluated based on LCA, but environmental profiles of each materials take time (& still incomplete for the building industry)

<http://www-cenerg.ensmp.fr/ease/sustain/pdf/sa0102.pdf>

## 5 Stages of Building Material Life Cycle



\*major environmental impacts occur during the first 2 stages

as waste-disposal problems increase, impacts associated with the demolition stage is heighten

## 14 parameters for assessing green materials:

Cradle to Gate	1-	Damage to the environment during mining or harvesting of the basic materials
	2-	Sort of damage or disturbance in relation to the quantity of materials
	3-	Source, size or renewability of material content
	4-	Recycle content
	5-	Waste residue, solid or liquid, in production
	6-	Air pollution/toxic emission from manufacturing and production
Stage 1 & 2	7-	Embodied energy
	8-	Energy consumed during transportation to site of usage
Stage 3 & 4	9-	Energy consumed on-site for erection or assembling
	10-	On-site waste and packaging
	11-	Maintenance required during the life-cycle.
Stage 5	12-	Environmental impact during use (i.e, toxic emissions).
	13-	Energy and effects associated with demolition/disposal at the end of the life-cycle
	14-	Recyclability of the demolished/dissembled materials

จะเน้นการพัฒนา  
**green material manufacturing**  
ถือเป็นการแก้ไขปัญหาสิ่งแวดล้อมที่  
**ถูกจุด!**

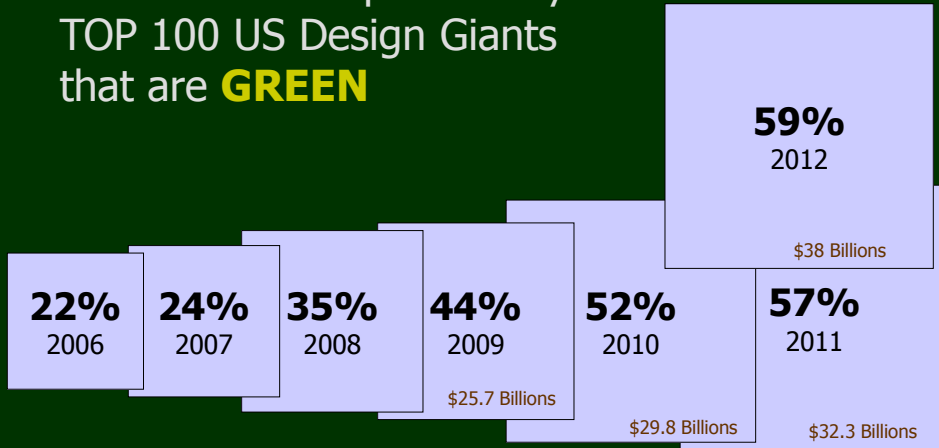
**Today everybody is talking about**  
**ECO-PRODUCTS**

ผลิตภัณฑ์ที่ลดผลกระทบต่อสิ่งแวดล้อม

ย่อมต้องมาจากผู้ผลิตที่มีหลักการ ระบบ &  
กระบวนการผลิตที่เป็นมิตรต่อสิ่งแวดล้อม

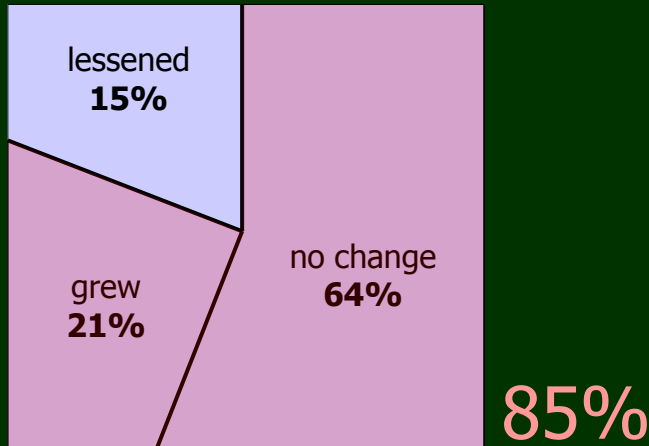
**Green Trend from**  
**Architecture/Engineering/Construction**  
**(AEC) Industry**

## % of Products Specified by TOP 100 US Design Giants that are **GREEN**



Interior Design magazine, August 2010: pg.48  
[http://www.interiordesign.net/article/541120-2011\\_Green\\_Giants.php](http://www.interiordesign.net/article/541120-2011_Green_Giants.php)  
<http://www.2luxury2.com/interior-design-industry-giants-2013-edition/>

## Effect of Recent Economic Downturn on **GREEN** Projects by TOP 100 US Giants



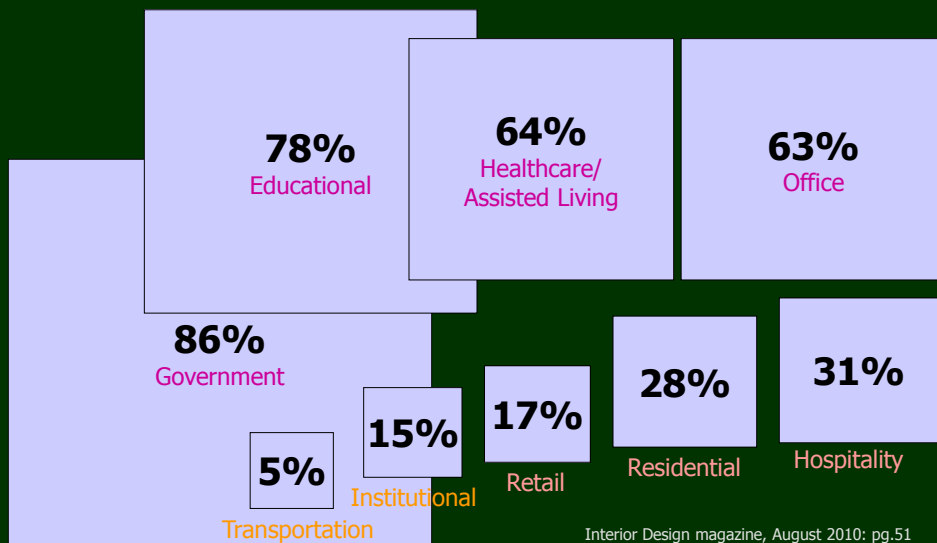
[http://www.interiordesign.net/article/535509-2011\\_Giants\\_The\\_Mix\\_Masters.php](http://www.interiordesign.net/article/535509-2011_Giants_The_Mix_Masters.php) (July 2011)

**2012 Average design fees received from green projects = 37%**

**2013 Average design fees received from green projects = 48%**

<http://www.2luxury2.com/interior-design-industry-giants-2013-edition/>

## Receptivity to **GREEN** Design by Client Sector



Interior Design magazine, August 2010: pg.51

> European Environment Agency (EEA) found in 2010 that the top customers' desire for **green** products are:

Food, Cloth, Electrical Appliances  
and Automotive

> Arthur D. Little survey (2011) of Italian confirmed EEA and found 2 additional sectors:

Cosmetics and  
Furniture & Home accessories

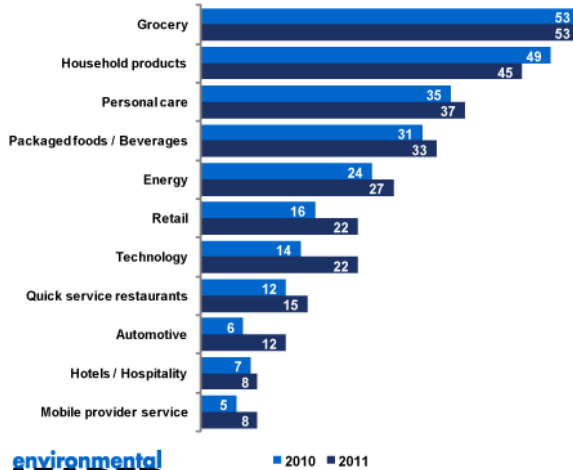
## **Global Perspectives (1)**

> In 2009: Each household spent 386 Euros on **GREEN** products, in 2015 it is expected to be 751 Euros (100% increase!)

> There was a 400% market growth of **GREEN** products in EU from 2000-2010 (from 10.3 to 56 Billions Euros) and will be 114 Billions Euros in 2015 (104% growth)

## Consumer Intent to Buy Green Products 2010 vs. 2011

(% of U.S. respondents)



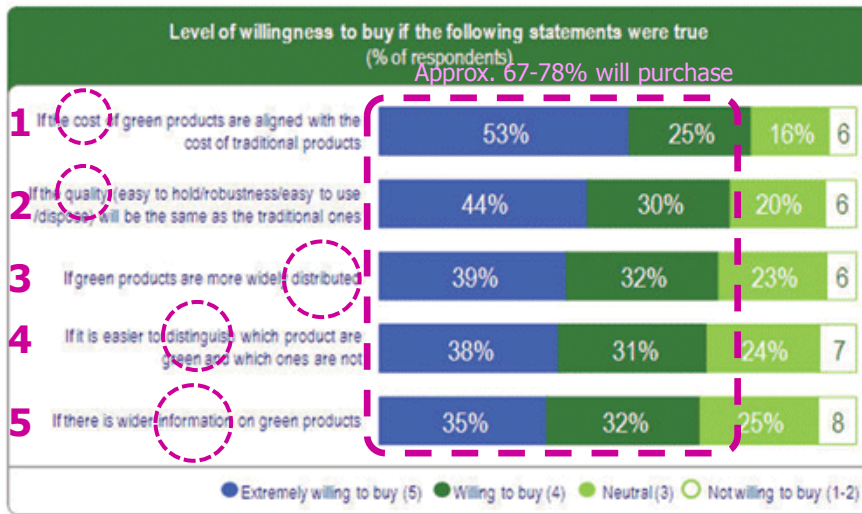
environmental  
**LEADER**  
www.environmentalleader.com

Source: Cohn & Wolfe, June 2011

<http://www.environmentalleader.com/2011/06/10/seventh-gen-whole-foods-top-green-brands-ranking/>

## Equal cost and quality of green products with traditional products would entice purchase

Brazil, China, France, Germany and USA



Tetra Pak's Environmental Research 2008-2011:

<http://www.manager.co.th/mgrweekly/ViewNews.aspx?NewsID=9540000127835>



## Global Perspectives (2)

> A survey (2010) by Sofia Riberiro (of Kiwano Marketing) found: 80% of respondents will spend more on green marketing

> Arthur D. Little survey (2011) of Italian customer: 84% of people are willing to spend more on green products

World Business Council for Sustainable Development

expects: **by 2040,**  
**ALL PRODUCTS**  
will be **GREEN**

## จะเริ่มอย่างไร: (1) Manufacturing-based

- > Identify **stages/processes/materials** that make the greatest impact on environment (Life Cycle Impact)
- > Highlight the “**hot spots**”
- > Draw up list of improvements for each “**hot spot**”
- > Conduct **feasibility** study from environmental, economic and technical standpoints

## จะเริ่มอย่างไร: (2) Management-based

- > **Green Procurement Policy**: purchasing materials with minimal environmental impact is key to supplying the market with products that have less environmental load on the planet
- > Implement **intensive training & education programs** for internal staff as well as suppliers’ human resources to strengthen the business
- > Launch “**Green Accreditation Standards**” (by the company) for recognizing **green suppliers**—to classify suppliers
- > Suppliers who do not meet the standards are invited to attend **lectures** on green procurement, where they can receive information & advice

## จะเริ่มอย่างไร: (3) Management-based

- > Cultivate personnel that support green operation
- > **Reduce inventories** by broadening just-in-time activities (lessen financial burdens)
- > Establish **recycling system/program** with recycling facilities in order to re-circulate materials into production
- > Promote green innovation through **stronger industry-government-academia**



**discussion**