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DSCI 493/593

Sustainable Business Operations Week 9 – Green Supply Chain

Spring 2012

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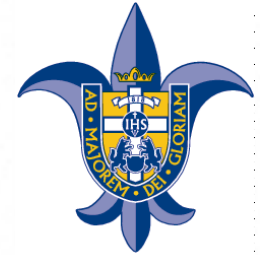
Topics



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- China and sustainability
- Green Supply Chain
- Discussion of International Actors
- China and sustainability
- Group update on Sustainable Social Media
- Group work on YouTube group project.

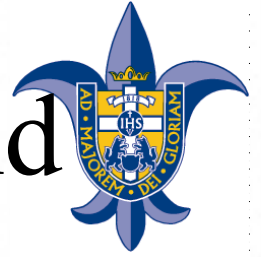
China's Rise



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- Understanding the rise of China TED – Martin Jacques
- <http://www.youtube.com/watch?v=imhUmLtlZpw>
- Asia's Rise – how and when TED – Hans Rosling
- http://www.ted.com/talks/hans_rosling_asia_s_rise_how_and_when.html

Discussion – Sustainability and the Implications of China's Rise



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- What does the rise of China mean for sustainability?
- How does her rise affect sustainability in the US?
- What can we learn going forward?

Pollution in China



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- The Guardian Sunday March 18, 2012 – China's challenges political change, pollution and protest
- <http://www.guardian.co.uk/world/2012/mar/18/china-challenges-next-generation>
- In the past, the Chinese public, government and businesses focused more on the economy and neglected the environment. Because China developed too fast after opening up, problems have accumulated over the past 20 years and more will appear more in the coming years despite the implementation of protection measures.
- Global warming poses a big challenge and is pushing the country to adopt a model which can ensure development but decrease energy consumption and greenhouse gas emissions. China is one of the few countries using coal as its primary form of energy. That will not fundamentally change for a fairly long time.
- Extreme weather has been widely observed: continuous droughts in the north and frequent floods in the south. China's agriculture has been affected and its food security threatened. In the coming decade or for even longer, China's environment will be in a difficult process of recovery.

Renewable Energy China



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- The Guardian Monday March 19, 2012 – The winds of change blow through as spending on renewable energy soars

- <http://www.guardian.co.uk/world/2012/mar/19/china-windfarms-renewable-energy>

- Wind turbines, which were almost unknown five years ago, stretch into the distance, competing only with far mountains and new pylons for space on the horizon. Jiuquan alone now has the capacity to generate 6GW of wind energy – roughly equivalent to that of the whole UK. The plan is to more than triple that by 2015, when this area could become the biggest windfarm in the world.
- This is the other side of China's development. Although it is the world's biggest CO₂ emitter and notorious for building the equivalent of a of a 400MW coal plant every three days it is also erecting 36 wind turbines a day and building a robust new energy grid to send this power thousands of miles from the desert of the west to the cities of the east.

Green Supply Chain



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Development of Green Supply Chain



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- In 1980s and 1990s TQM, JIT, BPR (Reeng.) from Japan
- Supply Chain – integrated sources, transportation, logistics, producers, to customers
- Sustainable Supply Chains
 - 1. Green product and process development
 - First mover advantage, sustainable product design
 - 2. Lean and Green Operations
 - Synergies between lean and green, improved tools, employee health/safety
 - 3. Remanufacturing and closed loop supply chains (CLSC)
 - Cradle to cradle
 - Companies increasingly take responsibility for entire lives of product

Green Supply Chain



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- What is Supply Chain Management
 - <http://www.youtube.com/watch?v=Ml1QBxVjZAw&feature=related>
- North Face Energy Emissions & Supply Chain
- <http://www.youtube.com/watch?v=4r6GmTzCNUs>
 - Walmart Greening of Supply Chain
 - http://www.youtube.com/watch?v=E_Frm1VG_Mw
 - Cradle to Cradle McDonough TED
 - <http://www.youtube.com/watch?v=VO-oO7uULcc>
 - Inside one of Amazon's busiest days
 - <http://www.youtube.com/watch?v=Z2Bs0nqVyqs&feature=related>

Green Supply Chain cont.



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- UPS
- http://www.youtube.com/watch?v=u4DsbkILizc&feature=BFa&list=PL40272FB44D4CB8C0&lf=results_video
- Lean manufacturing at GE
- http://www.youtube.com/watch?v=Rk_lQlbCIQk
- Six Sigma Jack Welch
- <http://www.youtube.com/watch?v=aNMULFcLuIM>

Green Supply Chain Focus



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- Reducing energy use and explore renewables
- Cutting water volumes and contamination
- Reducing GHG
- Minimizing the impact of waste disposal
- Ideally is a closed loop from farm to disposal.

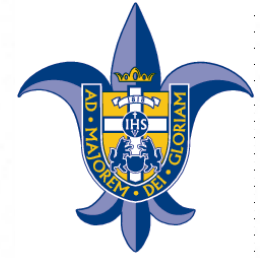
Eco-efficiencies



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- Process level – more efficient shipping strategies and retrofitting buildings for efficiency
- Materials level – type and amount of materials. Product redesign to reuse.
- Traditional supply chain ex. Coke was using 5 liter to make 1 gallon of coke, but sugar suppliers using 200 liters per 1 liter of product. Supply chain extends further back.
- Functionality level – develop alternative greener products
- Customer level – highest level of strategy with great opportunities to work with customers on green.

Homework Assignment



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- Read Lehrer (2011) and examine the EPA waste website. Write half a page.
- Write a one page summary about green supply chain.
- A half page summary of your progress on the YouTube Video Group Project. Include your marketing strategy. One per group
- Social Media group will give an update on progress of Facebook and Twitter.
- Work on your YouTube assignment.
- Continue searching for online articles and videos for your topic.