

# Sustainability and Diversity

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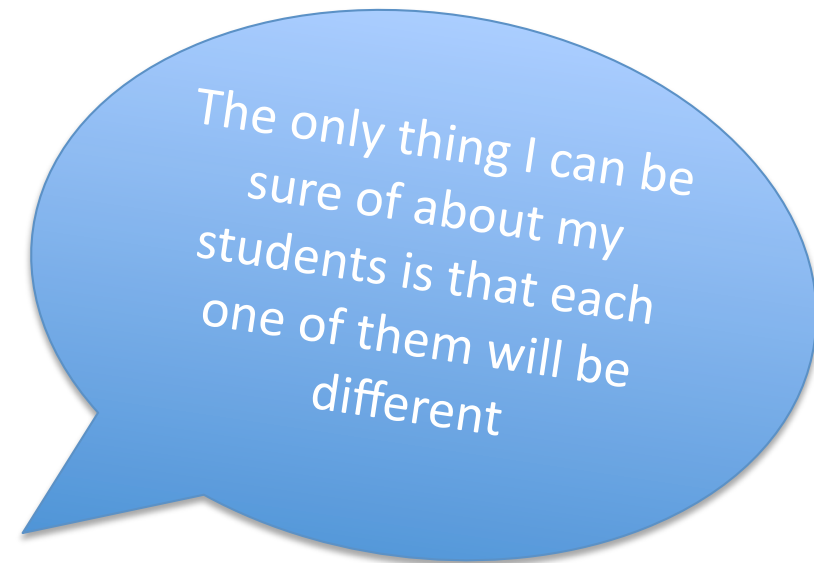
# Diversity

- topic of this week's scheduled lecture has been posted as sustainability and diversity
- Note
  - Already discussed and experienced diversity
    - various times in previous lectures
    - CVs comparing skills
    - Team working



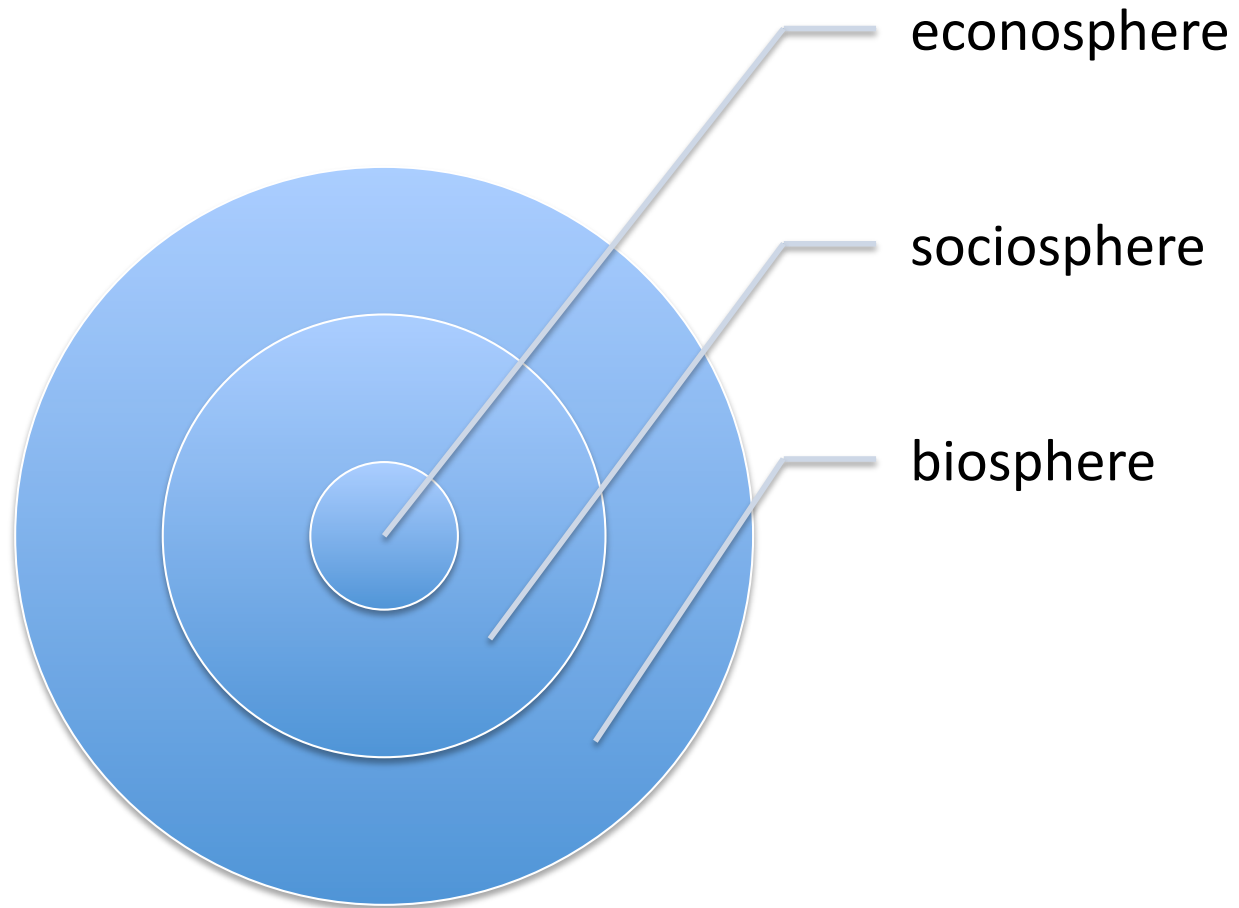
# Diversity is pervasive

- Think about it
  - How are people different?
  - How does difference make us stronger?
  - How do businesses benefit from diversity?
- First week



How can you make yourself aware of diversity?  
Will you work for an international company?  
Do you have different needs/ambitions?

# Sustainability



# Aspirations



easybeinggreen

## Dell Aims to Go Carbon Neutral

It's portraying itself as at the head of the pack among computer makers with a big initiative to help the environment. How good is the plan?

by [Arik Hesseldahl](#)

Dell ([DELL](#)) is embarking on a broad environmental initiative under which it plans to consume less energy and use more power from renewable sources in a bid to make its operations carbon neutral by the end of 2008.

The announcement came in a speech Sept. 26 by CEO [Michael Dell](#) at the Center for Strategic & International Studies in Washington. "Never before in the history of business have we seen such a critical need to build a worldwide community dedicated to improving the environment," Dell said.

### CARBON SCORECARD

With a statement like that, one might think Dell is aiming to turn his sprawling \$55 billion company on a dime into an oasis of eco-friendly industrial practices. But given the details disclosed so far, the move looks more like a baby step for a business of this size.

Dell executives say the effort will focus mostly on power

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# Tools

## Blue Pushes Green With Carbon Offset Modeler



By Keith Regan  
E-Commerce Times  
Part of the ECT News Network  
05/22/08 2:47 PM PT

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**IBM's Carbon Tradeoff Modeler follows by a few weeks the release of the results of its Global CEO Study, which this year found a keen interest among chief executives of top global companies in going green.**

▼ advertisement

### **IT HelpDesk & Customer Support Software**

Internal IT HelpDesk Software with Asset Mgmt. Customer Support Software with Account & Contact Mgmt

Seeking to capitalize on the rapidly growing interest in sustainability and green business practices, [IBM](#) (NYSE: IBM) has launched a software tool that will help companies analyze the impact of their supply chains on the environment.

IBM's Carbon Tradeoff Modeler will enable companies to manage their carbon footprint by giving them insight into how different decisions along their supply chains affect the environment, the company said.

With the tool, businesses can weigh various options based on how much carbon dioxide emissions will result, as well as factors such as delivery times, quality and cost, Big Blue added.

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**Land Rover  
Sustainability**

One Of The Most  
Comprehensive CO2



### **Taking Action**

The amount of carbon dioxide, or CO<sub>2</sub>, created in both manufacturing and distribution can be calculated and tracked with the tool, which was codeveloped by IBM Research and the



[Business consulting](#)

## Mastering carbon management: Balancing trade-offs to optimize supply chain efficiencies

Taking into account traditional concerns about quality, service and cost, a comprehensive carbon-management strategy can build a base for sustaining growth – enabling companies to maintain competitive differentiation, strengthen their brand image and be better positioned to enter new markets.

### How can IBM help?

**Carbon Management - IBM Energy And Environment Framework:** The Energy and Environment Framework helps organizations visualize the issues of the entire enterprise by creating a strategic platform for addressing the impact on the environment.

**Carbon Trade-Off Modeler:** The Carbon Trade-Off modeler allows for the development and analysis of alternative supply chain policies, options, and network configurations based on trade-offs between carbon emissions, cost, quality and service level.

**Component Business Modeling (CBM) tools:** Component Business Modeling (CBM) allows organizations to identify opportunities for improvement and innovation by regrouping activities into modular and reusable components.

FIGURE 1.

A trade-off model takes into account various options and performance factors.



Source: IBM Research and the IBM Institute for Business Value.

# legislation

The Climate Change Act directs that emissions are to be reduced 80 per cent against 1990 levels by 2050 and at least 26 per cent by 2020



# 2008 Climate Change Act

## ▼ Climate change

### ▼ Climate Change Act 2008

- ▶ How will the Act help adaptation?
- ▶ The reporting power
- ▶ Statutory guidance
- ▶ Adaptation Sub-Committee

## Implementing the Climate Change Act 2008

The Climate Change Act 2008 makes the UK the first country in the world to have a legally binding long-term framework to cut carbon emissions. It also creates a framework for building the UK's ability to adapt to climate change.

The Climate Change Bill finished its passage through parliament on 18th November 2008, and was enacted by Royal Assent on 26th November 2008.

[Read the Climate Change Act](#) (Office of Public Sector Information website)

### In this section...

- [What will the Climate Change Act do to help adaptation?](#)
- [Government Statutory Guidance on adaptation](#)
- [The Adaptation Sub-Committee](#)
- [Adaptation Reporting Power - ensuring our progress in key sectors](#)

### Further information

- [More information about the Climate Change Act 2008](#) (DECC)

### You may also be interested in...

- ▶ [Maps of the latest UK Climate Projections](#)
- ▶ [UK Low carbon transition plan](#) (DECC website)
- ▶ [Departmental carbon budgets](#) (DECC)

**ACT ON CO<sub>2</sub>** Use our ACT ON CO<sub>2</sub> calculator to find out your carbon footprint and ways to reduce it.  
[www.direct.gov.uk/actonco2](http://www.direct.gov.uk/actonco2)

### Documents and downloads

- ▶ [UK Climate Projections](#) (PDF Download: 3 MB)

<http://www.defra.gov.uk/environment/climate/legislation/>

# Legislation



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[Energy Bill 2010 - 2011](#)

[Energy Act 2010](#)

[Energy Act 2008](#)

[Climate Change Act 2008](#)

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## Legislation

DECC works to ensure that the right legislative framework is in place to let us meet our policy objectives: reducing greenhouse gas emissions in the UK, confirming global commitments to tackle climate change, and ensuring secure, affordable energy supplies.

We have successfully taken three Bills through Parliament, which are now the [Energy Act 2008](#), the [Climate Change Act 2008](#) and the [Energy Act 2010](#). The Climate Change Act 2008: Impact Assessment was updated in March 2009 to reflect the Act's final contents.

A new [Energy Bill 2010-2011](#) was announced in the Queen's Speech on 25 May 2010.

On 8 April 2010, the Energy Act 2010 received Royal Assent. It implements some of the key measures required to deliver DECC's low carbon agenda. It includes provisions on delivering a new financial incentive for carbon capture and storage, implementing mandatory social price support, and introducing a package of measures aimed at ensuring that the energy markets are working fairly for consumers and delivering secure and sustainable energy supplies.

In November 2008, the Planning Act 2008 was introduced which is of considerable importance for energy infrastructure projects (see the [Communities and Local Government: Planning Act 2008](#)  web pages).

Also in November 2008, the [Planning and Energy Act 2008](#) , a Private Member's Act, was introduced.

Further legislative developments will be added to this page in due course.

You can see and search for all relevant legislation on the [Office of Public Sector Information \(OPSI\): UK Statute Law Database](#)  website.



<http://www.decc.gov.uk/en/content/cms/legislation/legislation.aspx>

# Sustainability closer to home

ICT in UK higher and further education has a large carbon footprint. It is estimated that in the sector there are one and a half million computers, 250,000 printers and 240,000 servers which collectively produce 500,000 tonnes of CO<sub>2</sub> a year and in 2009 cost the sector around £116m in ICT related electricity bills. The environmental impacts of ICT are not just in their energy use while in service. The whole lifecycle of ICT procurement and use consumes energy and resources both in manufacture and transportation to end users, and more in disposal – which itself can leave a legacy of waste, some of it toxic.

Environmental sustainability and climate change are considered urgent problems by governments worldwide and there are legislative and regulatory drivers for change. In his annual grant letter to HEFCE in 2008 the Secretary of State indicated that capital funding for institutions should be linked to performance in reducing carbon emissions. The Climate Change Act directs that emissions are to be reduced 80 per cent against 1990 levels by 2050 and at least 26 per cent by 2020.

# Class Activity

- Consider a carbon audit
  - In the Labs
  - Across the University computer rooms
- In pairs...
- Using the handout
- One or two of you will be asked to present your analysis – which will be entered live into the student wiki

# In ECS labs/uni computing rooms

- Identify items/activities which contribute to the carbon footprint
- Discuss/analyse them according to the example
- What technology tools could be used/devised to reduce our carbon footprint?
- How could you quantify the value of the carbon footprint?
- Can you think of activities/campaigns which might also be implemented?

# Cloud farms

- discussion

# links

- This slide set and supporting resources
  - <http://www.edshare.soton.ac.uk/6556/>
  - JISC links
    - <http://www.jisc.ac.uk/news/stories/2009/08/footprinttool.aspx>
    - <http://www.jisc.ac.uk/supportingyourinstitution/cribsheets/greeningict.aspx>