Transport trends & implications for student lifestyles

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Student Urban Villages: A Teach-in Seminar
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Trends and assumptions

• Waves of development
• Climate change and peak oil
• Patterns of travel
• Signs of change
• Summary and Conclusions
• Question?

Economic waves
The next era of innovation...the Green Economy

History of innovation and business models....

Next era of city building is REDUCED CARBON – green economy.

History of innovation and cities....

Transport shapes
Each era changes the city form. Cities keep the best of that era and move on.
Next era of city building....
CLIMATE CHANGE AND PEAK OIL

**CO₂ levels...the inexorable climb**

*Atmospheric CO₂ at Mauna Loa Observatory*

- Scripps Institution of Oceanography
- NOAA Earth System Research Laboratory

**Arctic sea ice extent 1978-2007**

- in millions of km²

(National Snow and Ice Data Center)

**Global Temperatures**

- Annual Average
- Five Year Average

**Peak oil has happened...?**

*Admission of Peak Oil*

- Unconventional oil
- Natural gas liquids
- Crude oil fields not to be found
- Crude oil fields yet to be developed
- Crude oil currently producing fields

*Source: EIA World Energy Outlook 2010*  

**Climate policy: Oil's tipping point has passed**


26 January 2012
PATTERNS OF TRAVEL

Figure 11: Population Density by Mode Split to Public Transport

Public Transport Use Increases as Population Density Increases

Figure 2: World Passenger Car Fleet, 1950–2004

Private Transport Energy Use Decreases as Density Increases

y = 403914x - 0.8377
R^2 = 0.8483

Source: Worldwatch Institute, 2006


**SIGNS OF CHANGE**

**UK Energy demand trends**

**Peak car**


http://howestreet.com/2012/02/the-daily-reckoning-february-28th/
Peak Car Use - US cities...

Decline in car use – 4.3% in past year, plateau over the past 5 years.

Increasing transit use – 6.5% in past year.

SYDNEY: Sustainable modes are growing, car use is plateauing....

Table 2: Weekday Trips in Sydney, 2004/7 to 2010/11 by mode

<table>
<thead>
<tr>
<th>Mode</th>
<th>2004/07</th>
<th>2010/11</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car Driver</td>
<td>7,992</td>
<td>8,032</td>
<td>1%</td>
</tr>
<tr>
<td>Car Passenger</td>
<td>3,550</td>
<td>3,693</td>
<td>4%</td>
</tr>
<tr>
<td>Car (Total)</td>
<td>11,542</td>
<td>11,725</td>
<td>1%</td>
</tr>
<tr>
<td>Train</td>
<td>815</td>
<td>905</td>
<td>13%</td>
</tr>
<tr>
<td>Bus</td>
<td>923</td>
<td>1,007</td>
<td>9%</td>
</tr>
<tr>
<td>Walk Only</td>
<td>2,964</td>
<td>3,313</td>
<td>6%</td>
</tr>
<tr>
<td>Other Modes</td>
<td>384</td>
<td>467</td>
<td>6%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>16,638</td>
<td>17,202</td>
<td>3%</td>
</tr>
</tbody>
</table>
**Context**

So what is happening?

- Is this real or an artifact?
- If real, why are people moving away from cars?

**Reasons**

- Rising travel costs (fuel, parking, insurance)
- Improved alternatives
  - Public Transport
  - Bike
- Growth e-shopping/working
- Cultural shifts among young

**Peak car and age**

Annual vehicle miles per driver by age, USA, 1995, 2001, 2009
Young people are connected without cars...

‘Cars are so yesterday: young and rich leave guzzlers behind’

From 2001 to 2009, car use by 16 to 34 year olds decreased from 10,300 miles to 7900 miles per capita – a drop of 23 per cent.

And increased:  
Public transit 100%  
Biking 122%, and  
Walking by 37%

In Central London, traffic fell by 19 per cent between 2000 and 2009.  
The Times Nov 6, 2012

‘Supporters of “Peak-Car” theory see a future in which the inner cities are given over to pedestrians, cyclists and public transport, and café culture replaces car culture ....’

Peak car and age

Conclusions

• Decline in motor vehicle use especially among youth
Buzz Question

- Can we create Student Urban Villages without the need for student parking?
  - Designed for walking, bikes and PT
  - Integrated car share schemes