Sustainability: A perspective

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...before we can even start talking to people about sustainability, we need to be able to communicate what it is

Submission to the Inquiry into a sustainability charter conducted by the Environment and Heritage Committee of the Australian Parliament
Most frequently cited definition

...development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

from the 1987 report of the World Commission on Environment and Development, also known as the Brundtland Commission Report after its chair

• Commonly taken to refer to Ecologically Sustainable Development (ESD)
The three pillars of sustainability

Adapted from the 2002 University of Michigan Sustainability Assessment
The three pillars of sustainability

Adapted from the 2002 University of Michigan Sustainability Assessment
The three pillars of sustainability

- **Social-Environmental**
  - Environmental Justice
  - Natural Resources Stewardship
  - Locally & Globally

- **Environmental**
  - Natural Resource Use
  - Environmental Management
  - Pollution Prevention
  - (e.g., water, land, waste)

- **Environmental-Economic**
  - Energy Efficiency
  - Subsidies / Incentives for use of Natural Resources

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Adapted from the 2003 University of Michigan Sustainability Assessment
Are we there yet???

- Sustainability viewed by some as
  - A journey, not a destination
  - A destination
  - A journey and a destination
  (sustainability as the destination, sustainable development as the journey)
Are we there yet????

- Sustainability viewed by some as
  - A journey, not a destination
  - A destination
  - A journey and a destination
    (sustainability as the destination, sustainable development as the journey)

- Others express the view that
  - sustainable is like pregnant: it’s not possible to be a little bit pregnant, and a society is either sustainable or unsustainable
Unpacking the triple bottom line
Unpacking the triple bottom line

• Recognising different forms of ‘capital’
  – Industrial capital
    • The economic system
  – Natural capital
    • Renewable
    • Non-renewable
  – Human Capital
    • Health, knowledge, skills, personal capabilities
  – Social capital
    • Structures, institutions, network and relationships which maintain and enhance human capital
### The Sustainability Ladder or Spectrum

<table>
<thead>
<tr>
<th>Very strong or ‘ideal’ sustainability</th>
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<tbody>
<tr>
<td>Developing ideas: steady state economics, ecofeminism, deep ecology, environmental justice</td>
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<table>
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<tr>
<th>Strong Sustainability</th>
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<tr>
<td>Retention and growth of natural capital</td>
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<th>Weak sustainability</th>
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<tr>
<td>All forms of capital interchangeable, reduce rate of depletion or damage to natural capital</td>
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<th>Superficial sustainability</th>
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<td>Superficial or limited effect approach (Greenwash)</td>
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<th>Counter Sustainability</th>
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<td>Opposition to sustainable approaches</td>
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What outcomes might define a sustainable transport system?
**Sustainable transport: outcomes and measures**

Within a framework of strong sustainability, the transport sector would have a small number of interrelated strategic target outcomes, based on the principles of the Swedish Vision Zero approach, here called the VISION ZERO NETWORK.

<table>
<thead>
<tr>
<th>STRATEGIC OUTCOMES</th>
<th>OUTCOME MEASURE</th>
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<tbody>
<tr>
<td>Payment for service</td>
<td>% of transport costs directly met by users of each mode</td>
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<tr>
<td>Emissions to air</td>
<td>Volume of CO2e and other emissions to air emitted by each mode</td>
</tr>
<tr>
<td>Water quality</td>
<td>Volume of water runoff from each mode at drinking water standard</td>
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<tr>
<td>Renewable energy</td>
<td>% of transport activity by modes running on fully renewable energy sources</td>
</tr>
<tr>
<td>Noise</td>
<td>% of transport activity by modes exceeding 50dB(A)</td>
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<tr>
<td>Safety</td>
<td>Number of deaths and serious injuries by mode</td>
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