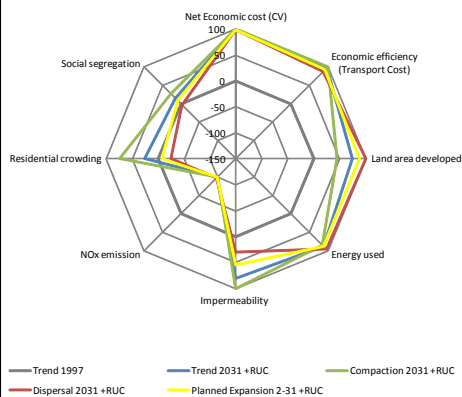


Sustainable Indicators in ReVISIONS

Matthew Chester
John Barton
Gordon Mitchell

Preamble: SOLUTIONS



EPSRC funded project SOLUTIONS

- Form offered marginal improvements to sustainability
- BAU Technology only

ReVISIONS:

Are there cross-sector benefits arising from particular mixes of future technologies?

Example: Waste Management

New build:

- Economic incentives for AD, Pyrolysis, Gasification
- Potential for micro-generation CHP
- Very different by-products
- Energy from LFG and sewage gas
- Economically discouraged
- Benefits of garbage disposal units(?)

Existing dwelling stock??

Future Technologies

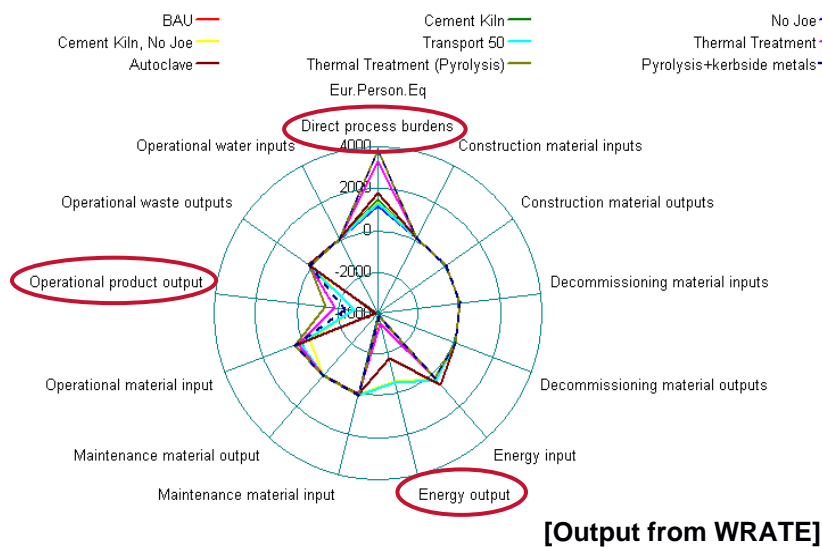
ReVISIONS has horizon of 30 yrs

- Electricity offsets can be adjusted with predictions of generation mix
- What about transport emissions if all vehicles are electric or hydrogen or powered or run on bio-fuel?
- How can the LCI data be reliable/dynamic?

Indicators

- ✓ Economic
 - Levelised cost analysis of each technology
 - ? Social
 - Health, Noise, Traffic
 - ? Environmental
 - GWP, Ozone
 - ? Ecological
 - Toxic releases to air, water, land
- How can consistent system boundaries be allocated?
- What are the trade-offs?

LCIA Example: GWP from Waste Management



Questions/Comments?

