Comments on the sustainability assessment

- Earlier comments 2005
- Additional comments 2007

Lars Lundqvist
Division of Transport and Location Analysis
Department of Transport and Economics
School of Architecture and the Built Environment
KTH – Royal Institute of Technology
Comments 2005 with regard to sustainability appraisal: approach

- The general approach can easily be supported: best practice in SEA-SA analyses and checking the applicability of SEA-SA stages to SOLUTIONS

- Principles:
  » Intergenerational equity not mentioned explicitly (weak or strong sustainability?)
  » SEA-SA practice outside the UK?
  » The earlier aim for assessment of overall sustainability has been omitted?
  » No explicit discussion of handling of uncertainties

- Framework:
  » Suggests LT→E approach rather than integrated LTE modelling of spatial designs!
Comments 2005 with regard to sustainability appraisal: criteria

- Criteria based on survey of indicators suggested in UK planning guidance and comparisons with PROPOLIS. Why not a broader survey of criteria for sustainable development?

- Transportation bias in criteria selection? This is a common feature of many international proposals for sustainability indicators. Did you search for comprehensive sets of sustainability indicators?

- A comparison of the PROPOLIS, PROSPECTS and SOLUTIONS (2004, 2005) indicator lists shows a growing similarity between PROPOLIS and SOLUTIONS (cf. transportation bias above), although there are still some added features in SOLUTIONS pointing in the direction of SEA-SA guidance.

- Are equity and health indicators (e.g. noise and exposure to poor air) best viewed as strategic scale indicators (cf. PROPOLIS)?
Comments 2005 with regard to sustainability appraisal: overall sustainability performance

**My opinion:**
- The performance matrix is not enough
- The ambition should be to say something on the overall sustainability performance by either:
  - partial aggregation (cf. PROPOLIS) combined with graphical techniques and qualitative judgement
  - developing a combination of sustainability objectives and constraints (cf. PROSPECTS)
  - using MCA techniques with stakeholder involvement
- A major issue is how to handle intergenerational equity (cf. PROSPECTS)
Comments on later work:
Post-processing for criteria evaluation

- Clear explanation of post-processing methods
- Strong focus on resource criteria (new construction, energy, land-take) and other criteria building on these (impermeability, biodiversity, CO$_2$). Why?
- Lack of dynamics in choice of heating technologies and vehicle technologies?
- Emissions from production and consumption activities (other than space heating and land transport)?
Comments on later work: Integrative assessment

- Basically, I have no problem with the proposed approach.
- Good summary of integration options.
- Ambitious: all options represented in the framework.
- MCA not necessarily aiming for selection of one preferred alternative (cf. PROPOLIS/Dortmund plot based on partial aggregation or efficiency frontier analysis).
MCA of aggregate sustainability dimension indicators in PROPOLIS/Dortmund
Other concerns raised in 2005

- Handling of intergenerational equity (building construction seen as resource use rather than increase of the long term man-made capital stock – weak sustainability!)
- Robustness: Handling of internal model uncertainties (very little room for sensitivity analysis!)
- Robustness: Handling of uncertain influences from global developments in view of the few scenario options (social, economic, technological, energy and environmental systems: oil prices, climate change, vehicle technology, energy technology). It is likely that the sustainability of the scenario options will be strongly affected by such developments.