Research highlights & work in progress

• OMEGA 1 VREF ‘Smaller Project’: Study of treatment of risk, uncertainty & complexity in decision-making in disciplines, professions and sectors where these concepts have long-time been at the milieu of their planning exercises – lessons for mega transport project planning:
  – Commissioned working papers
    • Experiences & lessons from disciplines, professions and sectors outside of transportation & territorial planning
    • Experiences & lessons from disciplines, professions and sectors within transportation & territorial planning
    • Lessons for MUTP planning
  – Synthesis of findings
  – Dissemination of findings
  – Inputs to CoE project (OMEGA 2 Project).
• **OMEGA 2 Project:** International Comparative Study of Mega Urban Transport Projects in the Developing World: What constitutes a ‘successful project’ in the 21st century?

  – **Knowledge gathering and sense-making:**

    • Working paper Partner contributions on national policy, planning & funding backgrounds to MUTP delivery in ten countries since Second World War

    • Working paper Partner contributions of sustainable development challenges to MUTP planning & delivery world-wide

    • Public domain case study material of project characteristics and timelines employing common template

    • Story-telling and narrative pattern analysis employing pre-hypothesis questionnaire case study investigations

    • Examination of generic and context-specific case study hypotheses and issues employing hypothesis-led research case study investigations

    • Development & application of mixed analytical framework for pre-hypothesis and hypothesis-led investigations for MUTP lesson learning & sharing
– Initial findings of UK Pilot Case Study

– OMEGA PhD Research Network
  • UCL PhDs
  • Partner university PhDs

– Dissemination methods and proposed publications

– Future activities post-study Intentions

– Prospects for collaboration with other VREF CoEs
OMEGA Project 1 Highlights: Working Papers Series # 1&2
Contemporary treatment of uncertainty, risk & uncertainty in selected disciplines, professions & sectors

- Introduction: Defining risk, uncertainty & complexity (Prof. Harry Dimitriou & Richard Oades)
- Earthquake engineering and seismic risk (Dr. Tiziana Rossetto, UCL)
- Military Strategy and planning (Dr. J. Stone, Kings College London)
- Agriculture Pests (Prof. J. Mumford, Imperial College London)
- Public Health planning (Dr. Carlos Dora, WHO, Dr Katherine Walker, IRGC)
- Perspectives of the actuary in the insurance sector (Dr. Lis Gibson, Deloitte)
- Project Finance - A banker’s perspective (Mark Lemmon, HSBC)
- The complexity of organizational trust (Prof. Steve Currall, UCL)
- A new kind of competence - On avoiding mistakes in large organizations (Dr. Oliver Sparrow, The Challenge Network)
- Naturalising knowledge management (David Snowden, Cognitive Edge)
- Synthesis & conclusions (Prof. Harry Dimitriou & Richard Oades)
OMEGA Project 1: Working Paper Series #3 & 4
Treatment of risk, uncertainty & complexity in transport & territorial planning

- **Introduction** (Prof. Harry Dimitriou & Richard Oades, UCL)
- **Great planning disasters re-visited** (Prof. Sir Peter Hall, UCL)
- **The property sector approach to major project risks** (Keith Perry, Asset Factor Ltd)
- **Risk and uncertainty in construction management** (John Kelsey, UCL)
- **Managing risk in a hyper-mobile world** (Prof. John Adams, UCL)
- **Complexity in city systems: Understanding, evolution, and design** (Prof. Mike Batty, UCL)
- **Strategic thought and regional planning: The importance of context** (Prof. Harry Dimitriou & Prof. Robin Thompson, UCL)
- **Synthesis and conclusions** (Prof. Harry Dimitriou & Richard Oades, UCL)
## Treatment of Risk in Working Papers

### Generic Risk Management

<table>
<thead>
<tr>
<th>Generic Attitudinal Risk</th>
<th>Avoid</th>
<th>Reduce</th>
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Implications for MUTP planning

• recognition of importance of *strategic thought*;

• treatment of risk, uncertainty & complexity needs to be *explicit*;

• more emphasis needed on the *strategic planning process, function and time* rather than product, form and space;

• more *realism* in expectations & outcomes required in face of uncertainty;

• more emphasis needs to be placed on *robustness, resilience and adaptability* to cope with changing contexts;

• more attention needs to be paid to *intermediate payoffs* so that different phases deliver different benefits in event original long-term strategy becomes obsolete; and

• consider *reversibility* of projects in event that strategic direction is abandoned.
Implications for MUTP planning (Cont.):

• More recognition needs to be given to importance & impact of (temporal, spatial, cultural, ideological, political and economic contexts) ‘context’ on risk-related decision-making.

• These contexts determine:

  – **organisational capacity** - the capability of key actors in the risk governance process to fulfil their roles;

  – **political cultures** - the governmental and regulatory ‘styles’ that define particular institutions are important in determining the treatment of risk;

  – **risk culture**, which impacts on the level of risk tolerance (or risk aversion); and

  – the degree of **trust** in the institutions responsible for risk management.
Implications for MUTP planning (Cont.):

- When judging the ‘success’ of MUTPs one needs to seriously take into account:
  - ‘emergent order’ (as opposed to imposed ‘mechanical order’) as the project and its environment interact in complex and evolving ways;
  - ‘winners’ and ‘losers’ and how these relate to ‘ambiguity’ and ‘rhetoric’;
  - the need to for holistic thinking and the employment of criteria that measure this, and
  - the fact that context will change over time, and the implications of this.

- MUTPs are much more than infrastructure projects as a consequence of their intended or unintended multi-dimensional impacts and consequences
OMEGA Project 2 Highlights:

Reminder of overall research questions:

- What constitutes a ‘successful’ mega urban transport project (MUTP)?

- How well has risk, uncertainty and complexity been treated in the planning, appraisal and evaluation of such projects?

- How important is context in making judgements regarding the above questions?
Issues to be addressed

• Some tests of ‘success’

  – Test 1: Extent that MUTPs successfully meets its initially planned objectives;

  – Test 2: Extent to which MUTPs contribute to sustainable development visions and challenges of 21st century;

  – Test 3: Robustness/flexibility to cope with change – opportunities for retrofitting MUTPs to meet 21st century sustainable development visions and challenges;

  – Test 4: Insights into how well the treatment of risk, uncertainty and complexity in planning, appraisal & evaluation of MUTPs has been undertaken
Sense-making from Case Study public domain data

• **MUTP case study data:**
  - Project characteristics & background
  - Project timeline
  - Project funding/financing
  - Project operations data

• **Public domain access to MUTP data:**
  - Shared web-based data base with geographical & temporal case study comparative parameters
  - Allows the interrogation and comparison of project characteristics
  - Permits incorporation of data from pre-hypothesis & hypothesis-led research investigations & mixed scan

• **Progress to date:**
  - All 1st case studies (pilot country studies) data collection scheduled for completion in early August 2008,
  - All pilot country studies data templates to be hosted on OMEGA Centre website by 1st September 2008; and
  - All 2nd and 3rd case studies to be complete by end of 2009
Pre-hypothesis research

• Narrative capture (stories) about stakeholder experiences of the planning, delivery and operation of projects - built on learning/techniques from knowledge management, cognitive science, narrative, complexity, anthropology

• An innovative alternative to more traditional forms of data collection which can be gamed or gifted, and influenced by the facilitator

• Intention - drive-out contextually rich experiences
Pre-hypothesis research (Cont.)

• Comprises:
  
  – Open discovery using narrative (anecdotes, illustrations, video – Sense Making Items (SMIs)) to discover ‘patterns of knowledge’;
  
  – Sees projects from multiple perspectives - consult a diverse range of stakeholders (no stratified sample, looking for the extremes – the supporters, the objectors, the believers, the cynics, key decision makers, those impacted…..);
  
  – Focuses on genuine experiences (rather than statements/ opinions);
  
  – Hypotheses are not formed and tested up-front but are created after analysis of the narrative data;
  
• Based on fundamental principles of how humans share knowledge – through storytelling
Pre-hypothesis research (Cont.)

• **Methodological use of:**
  - ‘Naïve’ interviews (pure and hybrid models);
  - Web capture – enables outreach to wider audience;
  - Sense-making item collection (speeches, articles etc.); and
  - Anecdotes are indexed by the interviewee.

• **Lenses’ through which data can be seen and explored** to search for patterns of knowledge (known as ‘indexes’) can take a number of forms:
  - Filters (values, archetypal characters, themes, archetypal situations);
  - Questions about anecdote - time of event, location, roles, emotional intensity, intent, origin;
  - Themes (once the story’s been told, the teller is asked to identify particular themes; and exposure to risk, uncertainty and complexity); and
  - Sticky questions - demographic data about the teller, role, involvement with the project.
Were there any particular events or decisions that really shaped the project?

“At first the timetable was very short, we were going to produce a hybrid bill within a year and the director said ‘we are going to do it’. It was done in such a hurry and it was such a rushed job they aborted it two weeks before deposit. And that was a very good decision, in fact it would have been a disaster if they hadn't aborted it. Coming on to the next question of the terminus, there was a memorable occasion one day when we were all called in by one of the middle management engineers who was very clever and he said ‘gentlemen, we've got a problem, the tracks don't connect………’”
Pre-hypothesis research (Cont.)

Indexed Responses

- Emotional intensity – elated……angry
- When it took place
- Roles represented in story
- Relevance to project outcome
- Themes represented in story
- Treatment of risk uncertainty, complexity and context
- Key words
- Story title
Hypothesis-led questionnaire research

• **Section 1: Overall research programme questions**
  - MUTP definition, appraisal and evaluation criteria
  - Sustainable development framework/visions
  - Importance of context
  - Power versus rationality of technocrats
  - Relationship with mega-events
  - Impact on social cohesion/exclusion

• **Section 2: Channel Tunnel Rail Link hypotheses & questions**
  - ‘economic rationalism’ hypothesis
  - ‘new regionalism’ hypothesis
  - ‘muddling through’ hypothesis
  - ‘smoked-filled room’ bargaining hypothesis
  - ‘context is everything’ hypothesis
Hypothesis-led questionnaire research (Cont.)

• **Section 3: Questions derived from VREF Smaller Project**
  
  - Emerging order versus imposed order;
  - Risk, trust and rhetoric; and
  - Rhetoric and reality

• **Section 4: Concluding questions regarding generic lessons that can be extracted from CTRL experiences**
  
  - Appraisal, evaluation and monitoring;
  - Engagement, consultation and participation;
  - Relationship between mega events and MUTPs; and
  - Planning frameworks for MUTPs
Chapter tunnel rail link (CTRL) - selected initial findings

- Thatcher wanted the rail link to Europe, but did not want to pay for it: private sector funding thus emerged as an early 'given' – the PPP/PFI approach soon became the 'only game in town' (risk transfer).

- Regeneration and strategic growth management dimensions were not part of the original thinking – but was added relatively late in the day. This 'big idea' required political faith and strong advocacy skills at a high level in Government.

- Mechanisms for calculating regeneration and other spin-off benefits of investment in railways are very under-developed in the UK. Property price uplift and travel time savings can be calculated relatively easily but not other less tangible items. Initially the Treasury wanted not to include calculations of regeneration benefits.
Channel tunnel rail link (CTRL) emerging findings (Cont.)

• The CTRL project ‘evolved' over time in response to changing circumstances, requirements and events. Chief amongst these was the emergence of changing stakeholder agendas, particularly during the CTRL 'planning' period from mid-1980s to mid-1990s.

• The planning environment for CTRL was thus vulnerable to change, the advent of new ideas and ad hoc decision making. This prolonged the CTRL planning period – though issues of competence (BR) also played a part.

• Politics & politicians played an important role in CTRL, in terms of:
  – inclusion of regional (UK) services to placate MPs from outside the SE;
  – lobbying for International Stations;
  – avoidance of route alignments that passed through politically sensitive areas;
  – pursuit of the ‘big idea’ (Thames Gateway/regeneration);
  – Government’s insistence that the project be privately funded; and
  – willingness of the new Labour Govt to rescue the project.
Channel tunnel rail link (CTRL) emerging findings (Cont.)

- Some stakeholders consider the length of time it took to plan the CTRL project (and the emergence of new agendas) was no bad thing because it received close scrutiny by a multiplicity of stakeholders and was consequently able to respond to new ideas and imperatives.

- The project had ‘time to breath’ and enabled issues such as regeneration/sustainability/growth management to be aired and accommodated.
OMEGA Centre - Planned future activities

• Develop comparative analytical and synthesis frameworks for the study of:
  
  – sustainability visions and challenges for MUTPs, including the cultural dimensions;

  – national and local MUTP planning and policy-making with emphasis on treatment of risk, uncertainty and complexity in decision-making derived from the case studies; and

  – identification of generic and context-specific lessons after having taking into account the above.

• Move focus of future MUTP studies (with same partner network) to major airport and seaport projects

• Move focus of future MUTP studies (in collaboration with other VREF CoEs) to Asia, Africa and Latin America - and possibly to the transition countries.
OMEGA Centre dissemination

- OMEGA Centre website www.omegacentre.bartlett.ucl.ac.uk and Partner websites of:
  - Case Study project databases and timeline
  - Working Papers on study findings

- OMEGA Working Papers and published versions of these in edited books in a Edward Elgar OMEGA Centre series of publications.

- OMEGA annual workshops to disseminate study findings to interested parties throughout the Study and beyond;

- Presentations by OMEGA Network members to conferences and meetings with non-academic organisations;

- Establishment of links with observer organisations and non-academic partners;

- 3-Day International Conference – academic and non-academic partners, urban and regional planning and development authorities, transport infrastructure agencies, MUTP investors, construction companies, NGOs and other stakeholders
Future prospects of OMEGA collaboration

• OMEGA 1 – access to Working Papers and synthesis of findings (happy to run workshops on this where requested)

• OMEGA 2 – access to data via OMEGA website

• Offer of collaboration with other CoEs with pre-hypothesis investigative approach where interest exists

• Request for inputs from other CoEs in areas related to comparative studies, especially focusing on cultural contexts.

• Request for inputs from other CoEs re: relationship of transport to sustainable development.

• Offer to interested CoEs of ‘observer status’ to access data, working papers, reports and attend workshops
Post OMEGA Study intentions

• Design new international MSc and MBA programmes at UCL in mega project planning, appraisal and evaluation in association with the Bartlett Graduate School and an internationally renowned Business School.

• These programmes are to incorporate modules which highlight the policy, planning, public administration, political and financing challenges of MUTPs, drawing from the research material derived from the work of the OMEGA Centre and its partnership.

• The programmes are to involve secondment periods in the public and private sector, in international development agencies and the NGO sector world-wide.
Thank You
PRE-HYPOTHESIS RESEARCH QUESTIONS

Opening Question (to be asked in all interviews) - Interviewees’ relationship to the project
“What is your relationship to the Jubilee Line Extension project. Please explain which aspect of the project you were responsible for, involved in or affected by.” Index their personal characteristics using the “About You” part of the index sheet.

Prompting Questions

QUESTION 1 (all interviews)
Looking back, what in your mind were the most pivotal events that shaped the (Case Study Project) project? (Turning points or triggers of significance, not necessarily project milestones). Please consider: Which of these were most surprising? Most predictable?; Which of these were planned? Which were unexpected?; The date the event happened, who was involved, where and why it took place.

QUESTION 2 - Tell me about a time when this project was rescued or sabotaged?

QUESTION 3 - When were the moments of stagnation or breakthrough? What happened?

QUESTION 4 - When have you or members of your community suffered or been inspired as a result of this project? What happened and why?

QUESTION 5 - Imagine this project, 10 years ahead, is perceived as:
• a total disaster or
• a resounding success

……..What stories would you share with others to convince or dissuade those who felt that way?