

PhD Proposal

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Dynamic Asset Management for Networks



Alternative Asset Management Model

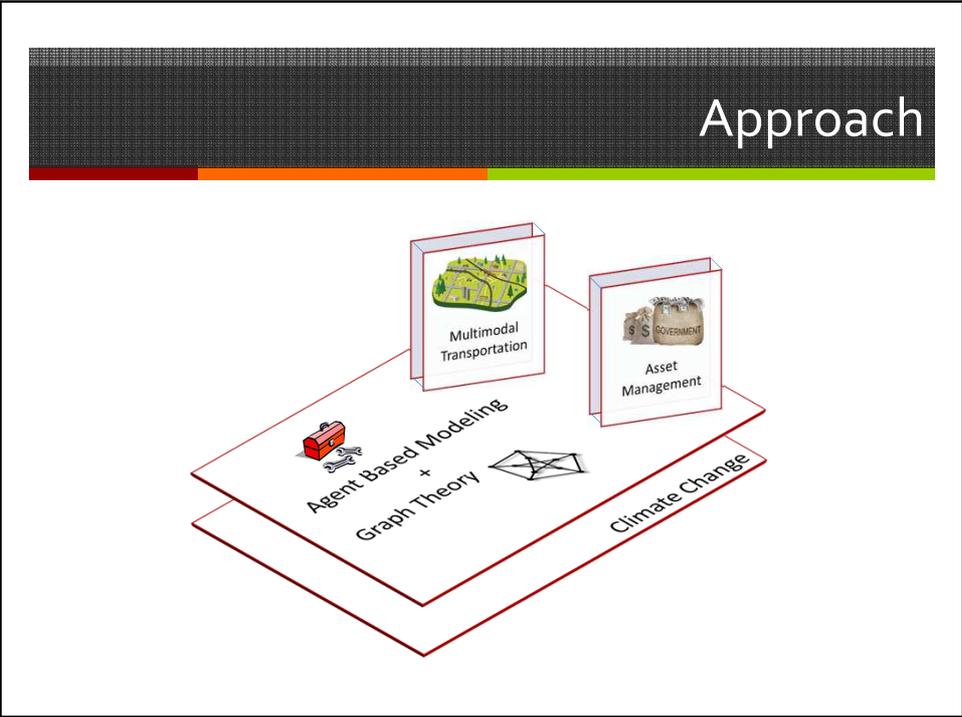
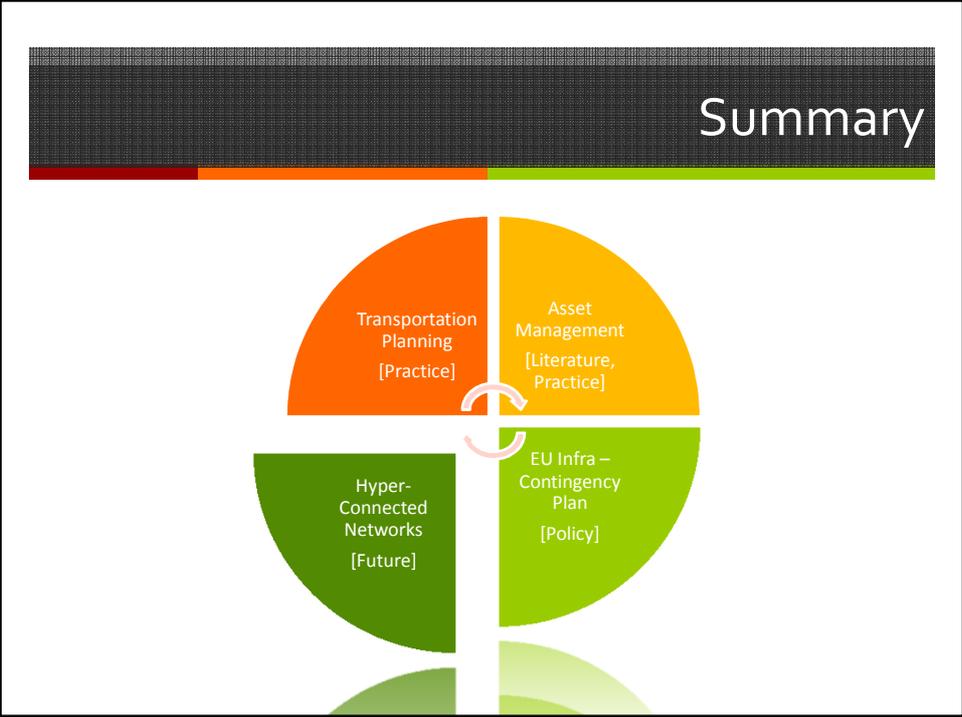
10th December 2012

with
Prof. Paulien Herder
& Dr. Telli van der Lei

资产管理可以借鉴中国

The collage features three news articles:

- THE HUFFINGTON POST**: "Earthquake Prompts Chinese Officials To Clarify One Child Policy".
- NOS OP3**: "Einde aan éénkindpolitiek in China?".
- The Telegraph**: "China to drop one-child policy for earthquake parents".



Asset management

- Life Cycle Costing
- LCC focused on 'acquiring' infrastructure
- Rijkswaterstaat : focused on 'maintaining' infrastructure
- TNO: Performance based asset management

My interest

- Infrastructure mostly built in Europe
- Needs more maintenance

Asset Management
[Literature, Practice]

Transportation

- Rotterdam: Atypical delta region
- Rotterdam Municipality: Focus on climate change and critical links
- INCAH WP : Maaiké Snelder
- Modalities : Uni, Multi, Inter, Synchro

My interest

- Solutions looked at are still uni-modal
- (Unfortunately) focus on cars

Transportation Planning
[Practice]

EU Infra – Contingency Plan [Policy]

EU Policy

- EU2050: Reduce cars
- EU 2012: critical infrastructure plan (Climate + Terrorism)
- EU 2020: move from road to rail/ inland water (freight)

My interest

- Contingency Plans
- Importance of alternative routes/ modes

Hyper-connectivity

Hyper-Connected Networks [Future]

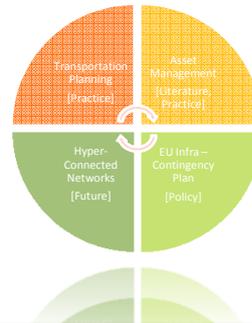
- EU: Seamless Connectivity
- EU Freight: Synchro-modality
- EU Passenger : OV-Chip Card (NL)

My interest

- Inter-modality - Choice to connected networks
- Challenge to asset management

Problem Statement

- Asset Management: Hyper-connected Networks, Dynamic choices
- Asset Management: More maintenance than new acquisitions
- Asset Management: Invest not just in critical links but also alternatives
- Asset Management: Performance based



Conceptual Diagram

