Construction Management Research in Transitions:

From representation to co-designing actions

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Source: http://www.bouwpututrecht.nl/metamorfose-030/singel/

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Source: http://www.bouwpututrecht.nl/metamorfose-030/singel/

Source: BBC News, Tractor Protests in the Netherlands, 1 October 2019.

See van den Ende, L. and van Marrewijk, A. (2019) Teargas, taboo and transformation: A neo-institutional study of community resistance and the struggle to legitimize subway projects in Amsterdam 1960–2018, *International Journal of Project Management*, **37**(2), 331-346. Image: https://revivethis.org/nieuwmarkt.

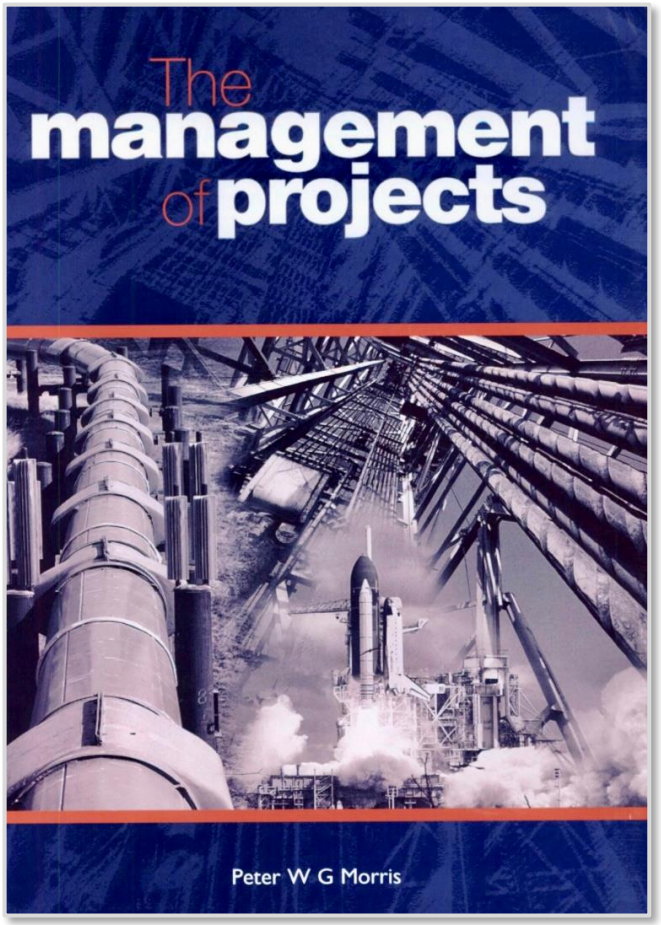
Personal Profile

- Professor of Design and Construction Management
- How people cope with social, organisational and technological change
- Past Editor-in-Chief, *Construction Management and Economics*
- Rethinking the 'project' in (construction) project management
  - Projects as a field of creativity and innovation
  - Projects as a portal of innovation within multi-level transitions
  - Projectification of society and taking a multi-scalar view beyond the single project

Context

- Multiple societal and sustainability transitions: food, energy, water, mobility, (affordable) housing, digitalisation
- In the Netherlands (and elsewhere)
  - More stringent environmental performance, aimed at taking a whole-life total cost of ownership approach
  - Growing emphasis on public (social) values
  - New Environment and Planning Act (Omgevingswet) coming into force in 2024
  - Need for transdisciplinary approaches recognised by the Dutch Research Council (NWO) to drive behaviour change in sustainability transitions

Back to the Basics: The Management of Projects



Despite its long development, the concepts and techniques of project management now available to the general practitioner, however advanced and specific they may be, are often inadequate to the overall task of managing projects successfully. [….] **Design and technology management, the management of political forces (governmental and non-governmental, and political with a small p'- business, labour and community), cost – benefit management and the raising and management of the project's finance, the management of the timing or phasing of the project [...] and even contract strategy and administration**: all these are frequently ignored in the professional and academic writing and teachings of today's project management.

(Morris, 1994: 2-3)

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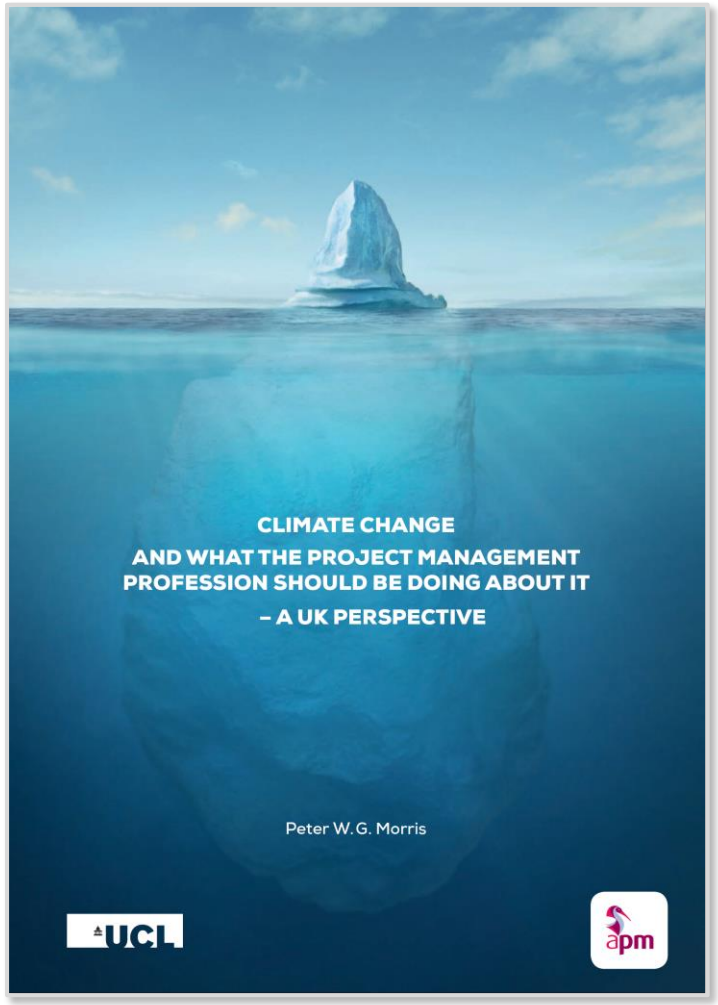
Climate Change and the Project Profession



For us, thinking about climate change […] the project manager, and his or her teams, working at the project front-end particularly, could have a decisive role to play in shaping and directing the project or program.

Front-end decision-making plays an important part in adaptation, particularly in avoiding 'lock-in' on decisions with long lifetimes, such as the unwelcome emissions in the siting of key infrastructure or design of new habitats. Unfortunately, the management arrangements driving such decision-making are too often weak.

(Morris, 2017: 9; 23)

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Matters of Concern: From the Field of Construction

1. The construction industry as a loosely coupled system: implications for productivity and innovation, by Dubois and Gadde (2002)
2. **Critical success factors for PPP/PFI projects in the UK construction industry, by Li, Akintoye, Edwards, and Hardcastle (2005)**
3. Partnering in construction: a critical review of issues, problems and dilemmas, by Bresnen and Marshall (2000)
4. **Factors influencing construction time and cost overruns on high-rise projects in Indonesia, by Kaming, Olomolaiye, Holt, and Harris (1997)**
5. **Analysis of factors influencing project cost estimating practice, by Akintoye (2000)**
6. Sustainable construction: principles and a framework for attainment, by Hill and Bowen (1997)
7. Construction safety training using immersive virtual reality, by Sacks, Perlman, and Barak (2013)
8. **Significant factors causing delay in the UAE construction industry, by Faridi and El-Sayegh (2006)**
9. Stakeholder impact analysis in construction project management, by Olander (2007)
10. Sustainable construction aspects of using prefabrication in dense urban environment: a Hong Kong case study, by Jaillon and Poon (2008)

Source: *Construction Management and Economics* most-cited papers of all time (as of 28 January 2023).

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Homo Projecticus: Temporal and Scope Bracketing

International Journal of Project Management 40 (2022) 315–319

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journal homepage: www.elsevier.com/locate/ijproman

Essay

An Essay on 'Homo Projecticus': Ontological Assumptions in the Projectified Society

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ABSTRACT

This essay argues that as a consequence of the projectified society there is a need to consider the individual as inherently different from what rational and administrative decision-making ontologies suggest. '*Homo Projecticus*' is introduced as a new set of ontological assumptions, and *the aim of this essay is to outline its characteristics and discuss its implications*. In contrast to previous assumptions, we argue that the projectified society produces action seeking individuals who are guided by the notion that life is organized within multiple temporal contexts that both follow each other and exist in parallel. Thus, a key concern is how to create boundaries, or limits, in ways that enable action. Two key mechanisms are used: 'time bracketing' to define time limits, and 'scope bracketing' to define issues or tasks. Consequently, with an aim of completing tasks through appropriate actions, the rationality guiding decision-making and actions is 'bounded by brackets', which means that, in contrast to previous ontologies, the limits for rationality are created by the decision-makers themselves. Through bracketing, sensible segments are created, which enables action to be reached.

1. Introduction

In today's society it is hard to imagine a business organization that never engages in projects. In a way, projects have become the *modus operandi* of contemporary businesses and, in recent decades, an increasingly common way to organize within the public sector. Lundin et al. (2015) described the present state in terms of a "project society" that has emerged due to a vast number of interrelated "push" and "pull" factors, where the intrinsic attractiveness of projects as a vehicle for action and change is presumably the most prevalent pull factor.

As part of this development, projects have become an intrinsic way of thinking and acting that have penetrated all the way into people's private lives. It is no exaggeration, therefore, to say that projects today constitute a key vehicle for economic and social action and that we today live in a projectified society where projects have become a "*human condition*", to use the vocabulary of Jensen et al. (2016:21).

In this projectified society, projects lead to new projects that lead to other projects that lead to other projects; and at the center of all these projects is the individual who makes decisions for the future. With a mindset that has been shaped by the projectified society, people make global large-scale decisions that, for example, impact the future of our children, cutting across every aspect of the 17 UN goals, as well as small personal decisions that could be focused on decluttering, following the advice given by Gretchen Rubin (2009) in her book "The happiness project". Large or small, global or local, it is clear that projects and the decisions they involve play a key role at multiple levels in today's society. Given the impact and omnipresence of projects, it is not far-fetched to ask which ontological consequences this "new" projectified have led to.

In this essay, we propose that to capture modern conceptions about organizing and decision-making in the projectified society, there is a need to reconsider previous ontological assumptions about the nature of human rationality. The new assumptions will be discussed under the label '*Homo projecticus*'[1], and *the aim of this essay is to outline its characteristics and discuss its implications*.

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[1] "Homo projecticus" alludes to the ontological concept "Homo economicus" which has been used in neoclassical economics to describe a model for human rationality.

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0263-7863/

[…] an important strength of *homo projecticus* is the capacity to create projects (or issues). That involves being able to define meaningful time brackets and scope brackets, segments that subsequently trigger action and make coordinated action both possible and required, wherever needed. This is not always easily done, but an important outcome of bracketing ability is the reduction of organizational complexity. A world that is overly complex and difficult to understand is turned into several manageable, understandable, and defined areas where action can be designed and decisions made in relation to an outcome or goal.

Source: Jacobsson, M. and Söderholm, A. (2022: 318) An Essay on 'Homo Projecticus': Ontological Assumptions in the Projectified Society, *International Journal of Project Management*, **40**(4), 315-319.

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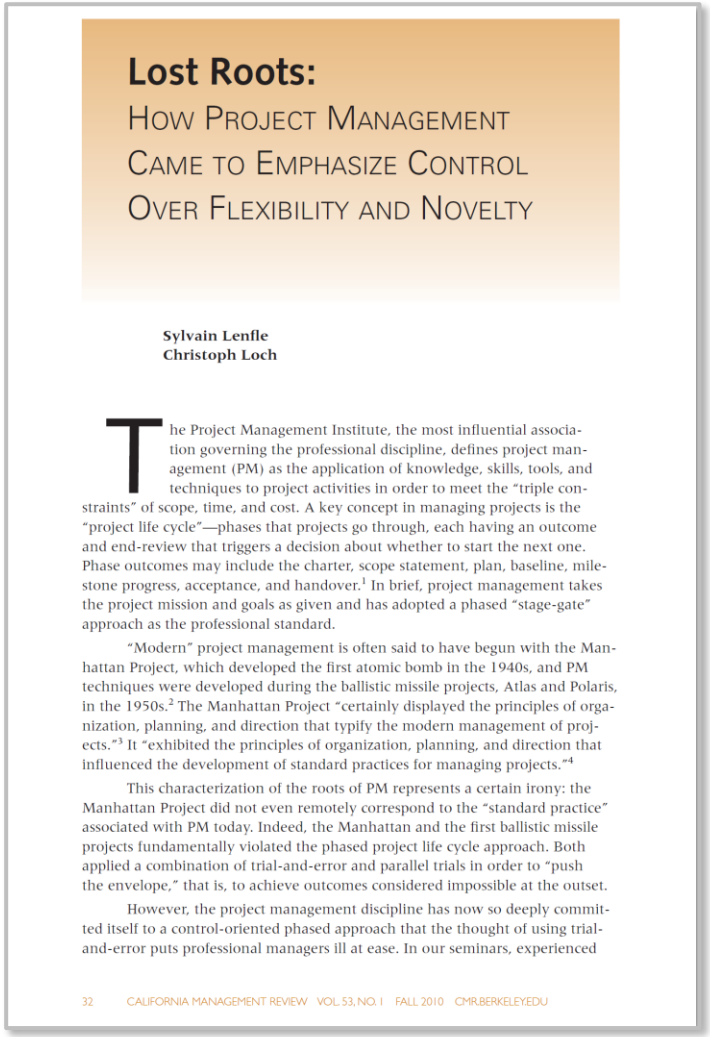
Projects as a Field of Creativity and Imagination



Lost Roots:
HOW PROJECT MANAGEMENT CAME TO EMPHASIZE CONTROL OVER FLEXIBILITY AND NOVELTY

Sylvain Lenfle
Christoph Loch

The Project Management Institute, the most influential association governing the professional discipline, defines project management (PM) as the application of knowledge, skills, tools, and techniques to project activities in order to meet the "triple constraints" of scope, time, and cost. A key concept in managing projects is the "project life cycle"—phases that projects go through, each having an outcome and end-review that triggers a decision about whether to start the next one. Phase outcomes may include the charter, scope statement, plan, baseline, milestone progress, acceptance, and handover.[1] In brief, project management takes the project mission and goals as given and has adopted a phased "stage-gate" approach as the professional standard.

"Modern" project management is often said to have begun with the Manhattan Project, which developed the first atomic bomb in the 1940s, and PM techniques were developed during the ballistic missile projects, Atlas and Polaris, in the 1950s.[2] The Manhattan Project "certainly displayed the principles of organization, planning, and direction that typify the modern management of projects."[3] It "exhibited the principles of organization, planning, and direction that influenced the development of standard practices for managing projects."[4]

This characterization of the roots of PM represents a certain irony: the Manhattan Project did not even remotely correspond to the "standard practice" associated with PM today. Indeed, the Manhattan and the first ballistic missile projects fundamentally violated the phased project life cycle approach. Both applied a combination of trial-and-error and parallel trials in order to "push the envelope," that is, to achieve outcomes considered impossible at the outset.

However, the project management discipline has now so deeply committed itself to a control-oriented phased approach that the thought of using trial-and-error puts professional managers ill at ease. In our seminars, experienced

- Projects as a vehicle for (organisational) change
- Early formation of the project discipline valued **exploration and experimentation**
- Projects in the defence industry (e.g. the Manhattan Project and ballistic missile development) built in redundancies and parallel strategies
- Refocus away from innovation with managerialism and optimisation

Source: Lenfle, S. and Loch, C. (2010) Lost roots: How project management came to emphasize control over flexibility and novelty, *California Management Review*, **53**(1), 32-55.

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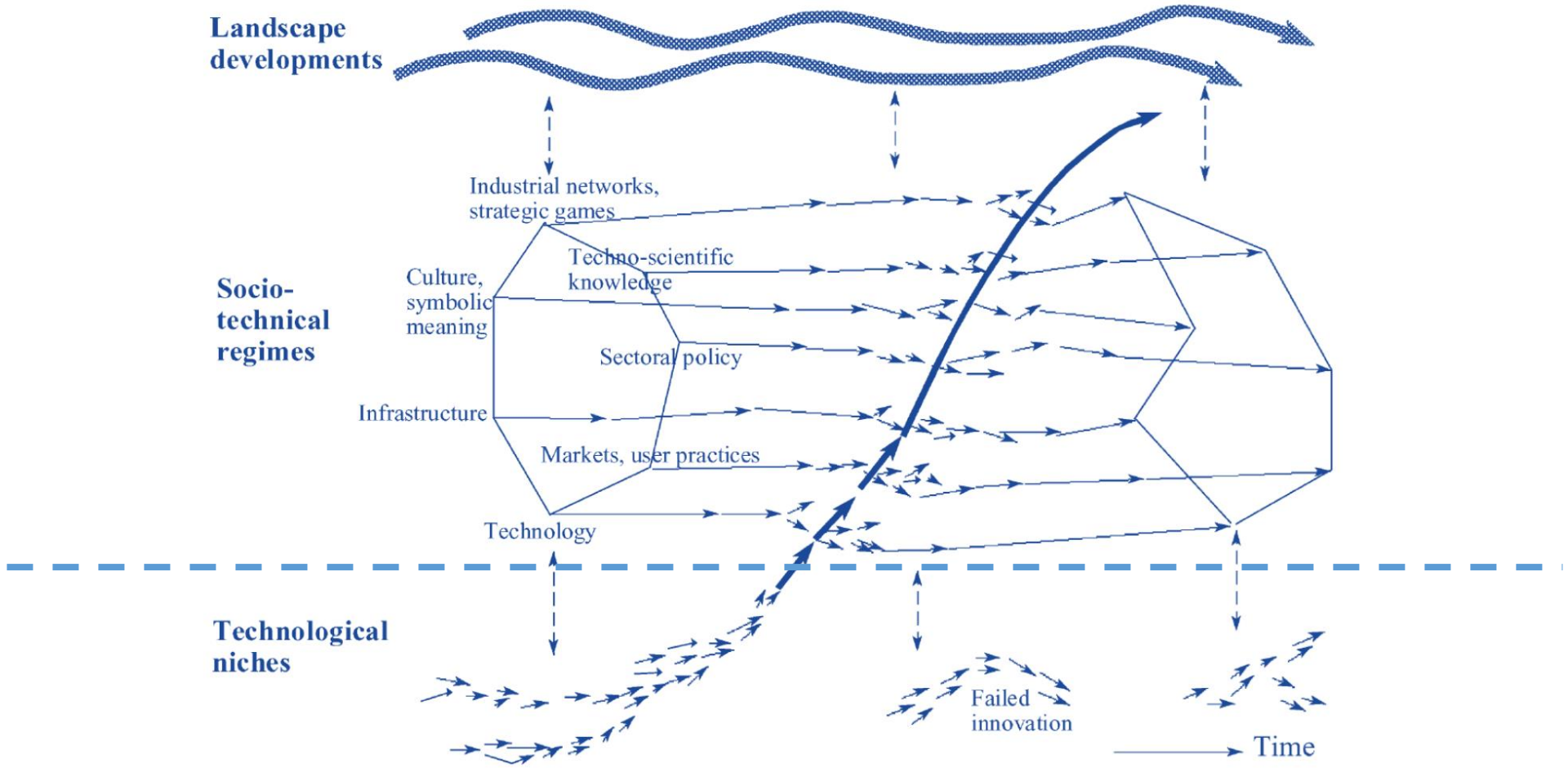
Projects as a Portal of Innovation in Transitions



Adapted: Geels, F. W. (2002: 1263) Technological transitions as evolutionary reconfiguration processes: A multi-level perspective and a case-study, *Research Policy*, **31**(8-9), 1257-1274.

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Ecological vs (and?) Economic Performance

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Source: VVKH Architecten, Town Hall Leiderdorp

Addressing Uncertainties in Transitions

	Additional Identified Uncertainties to sustainability requirements management in TSO
1	Cost over sustainability
2	Transparency
3	Lack of experience
4	Different views of parties involved
5	Too much responsibility for one person
6	EU procurement law has impact on implementation of SR
7	SR management gets lost in the top-down process
8	Need of clear and strict requirement from management in tenders
9	Lack of tools to measure sustainability in tender
10	Not knowing what the market has to offer
11	Uncertainty on the contractor side
12	Very few pilot projects
13	Mindset

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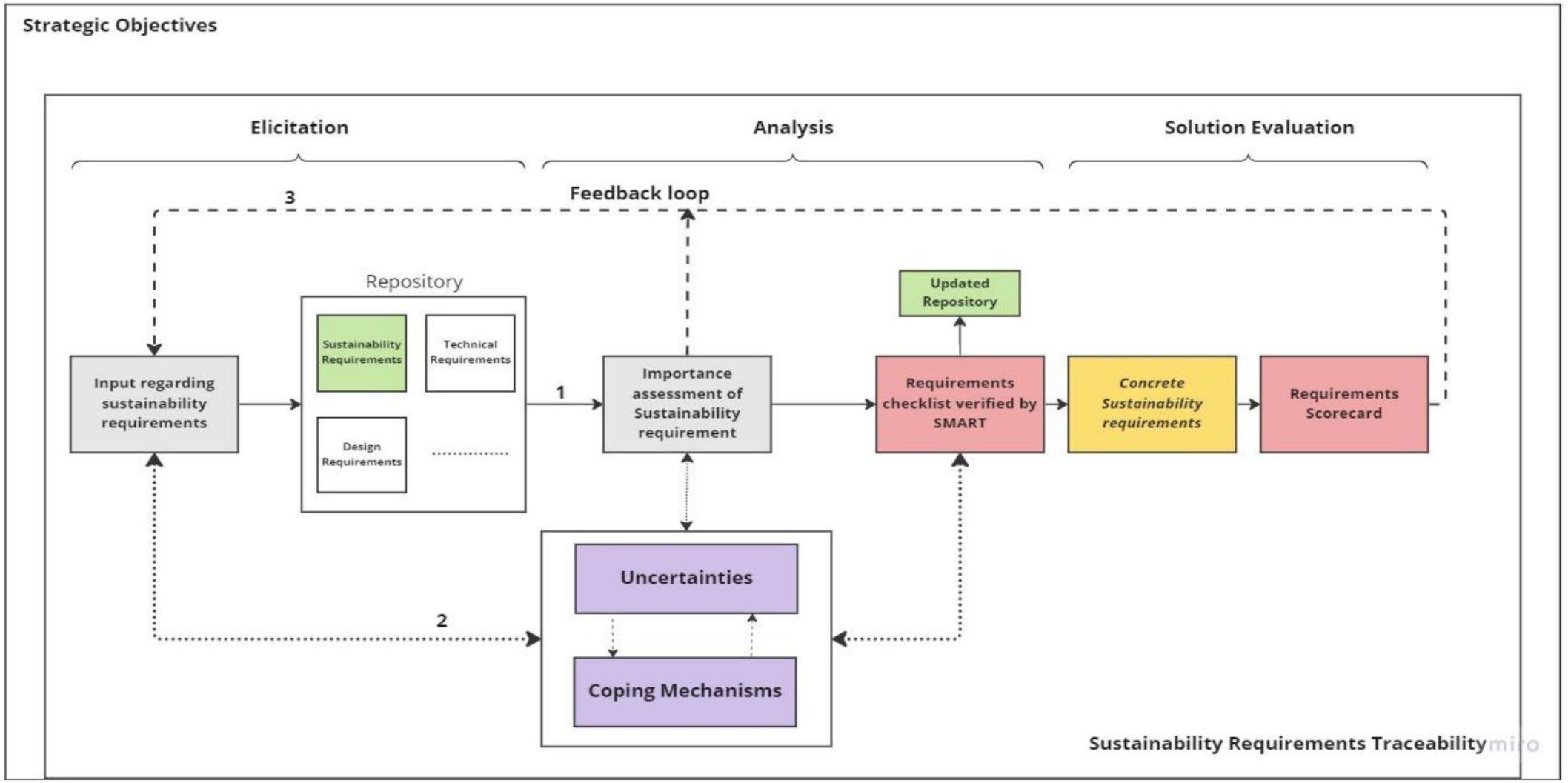
Addressing Uncertainties in Transitions



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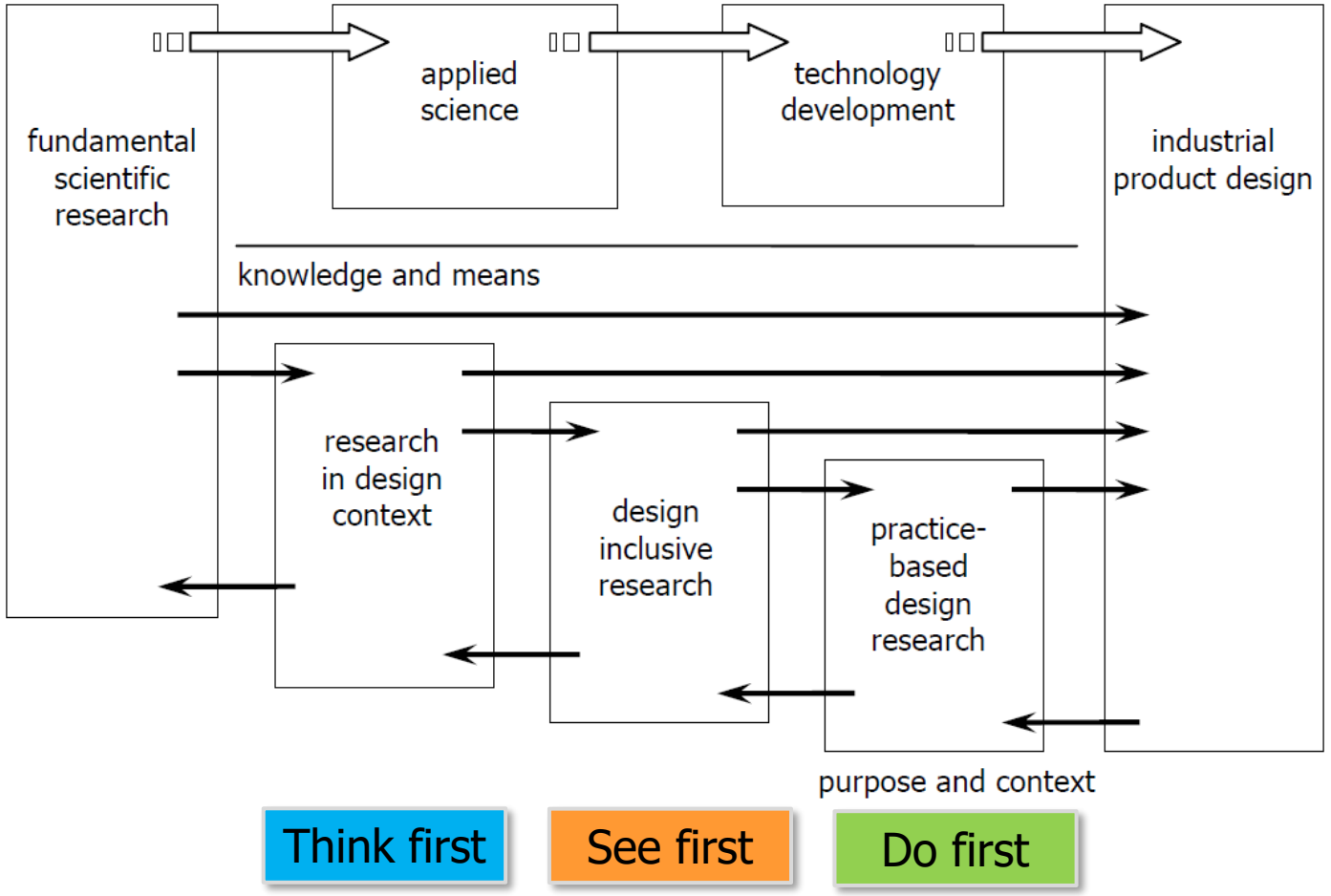
Inspiration from Design Research



After: Horváth, I. (2007: 3) Comparison of three methodological approaches of design research, *International Conference on Engineering Design*, ICED'07, 28-31 August 2007.

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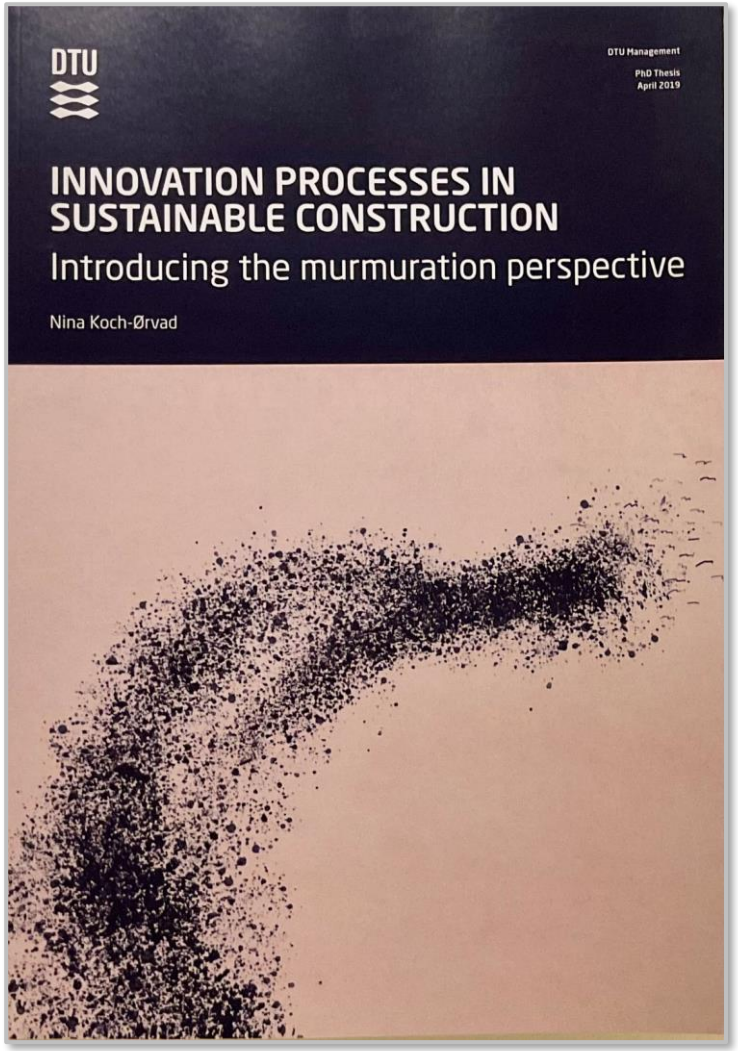
Beyond the Single 'Project'



- Traces how a Danish firm, Gamle Mursten, started a journey as a platform for driving circular construction
- Relationship between the 'building' project and other projects in the parent organisation to:
  - Obtain access to reused bricks (supply)
  - Improving documentation and certification to stimulate demand

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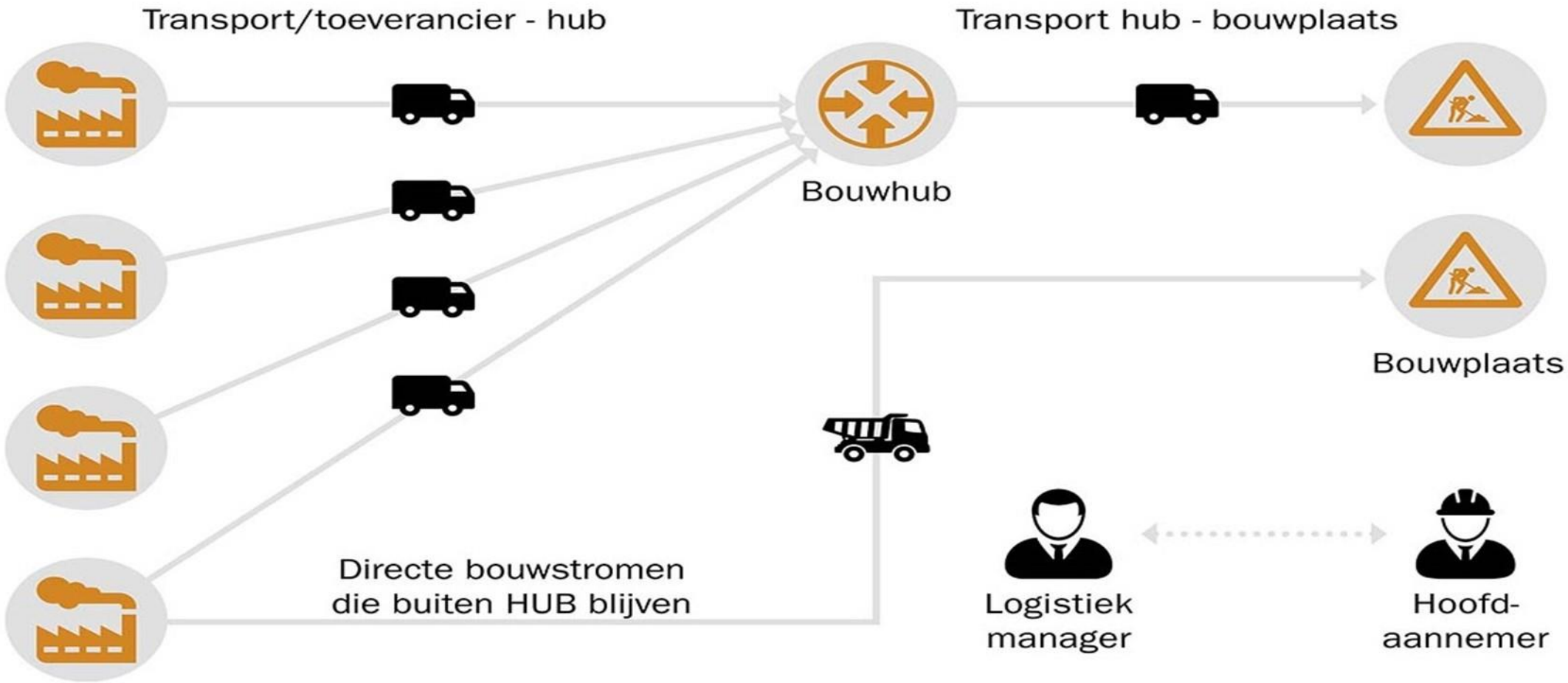
Cross-Chain Control Center (4C) in Building Logistics



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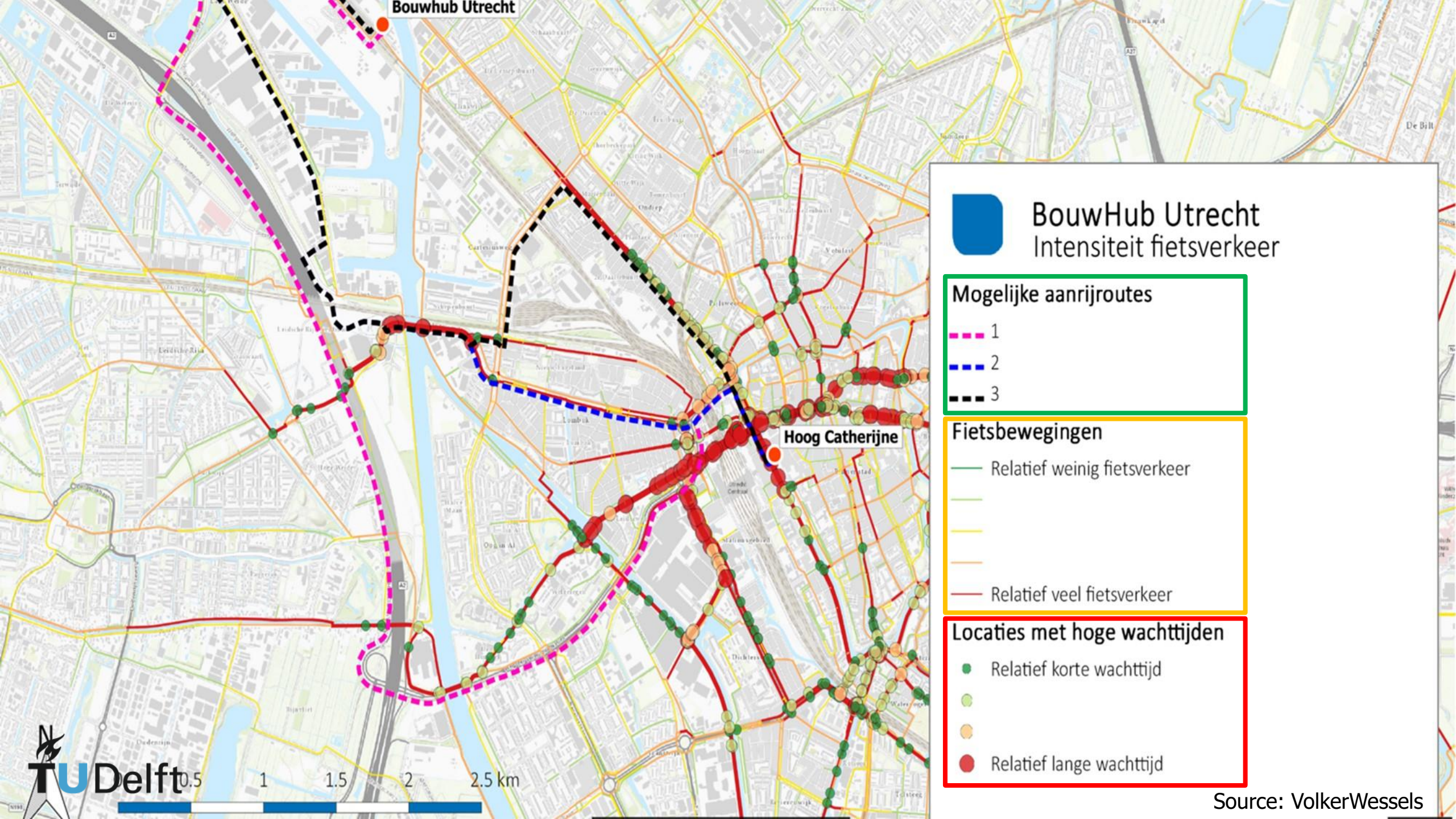
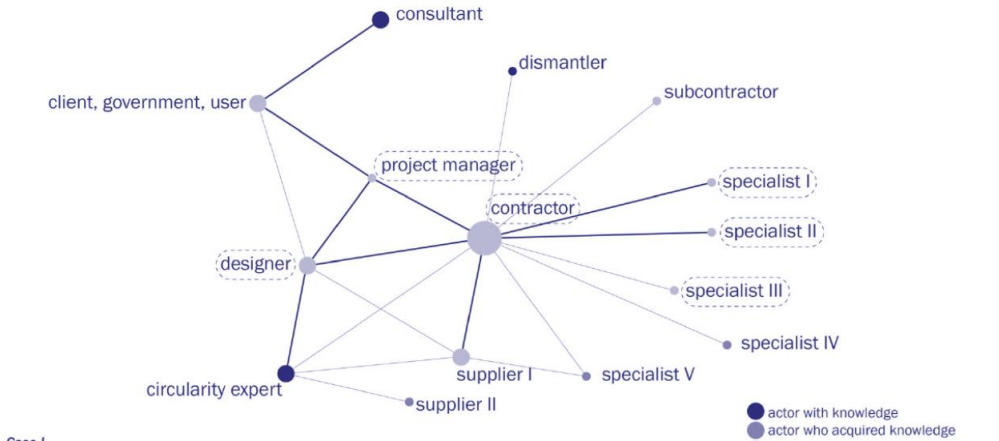
Source: TNO

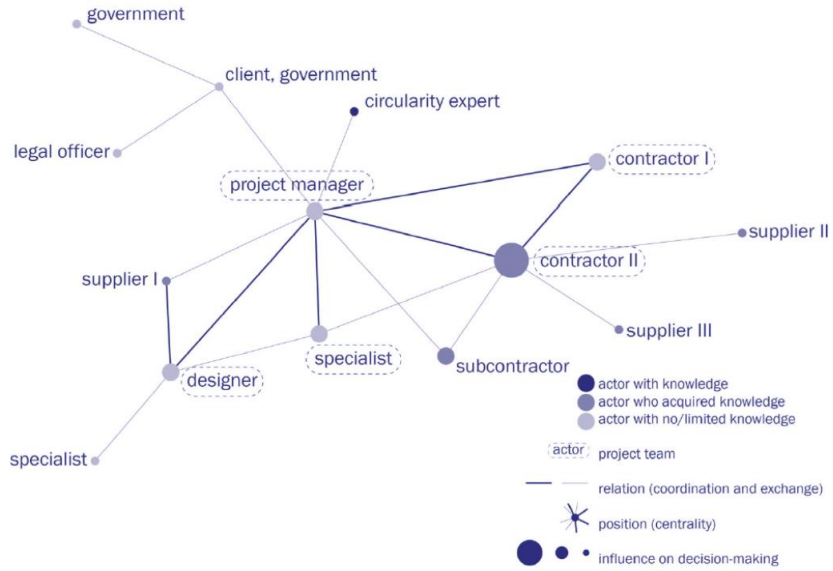


Source: VolkerWessels

Actor Networks and New Ways of Working



Case I



Case II

CONSTRUCTION MANAGEMENT AND ECONOMICS
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Routledge
Taylor & Francis Group

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Implementing circularity in the construction process: a case study examining the reorganization of multi-actor environment and the decision-making process

Ditte P. Gerding, Hans (J. W. F.) Wamelink and Els M. Leclercq

Faculty of Architecture and the Built Environment, Department of Management in the Built Environment, Delft University of Technology, Delft, the Netherlands

ABSTRACT
Circularity aims to make waste obsolete by both closing and narrowing resource loops and by extending the lifespan of materials and products. This fundamentally different approach to construction practices necessitates a completely different method of organising the construction process. The rounds of decision-making undertaken by different actors at particular moments in the construction process have a significant role to play in this regard. Consequently, this research aims to analyse current circular practices for both the multi-actor environment and the decision-making process. An analytical framework is developed based on the theoretically-informed assumption that actors are responsible for decision-making and that circular strategies are an effective means through which to integrate circularity within the construction process. This analytical framework is applied to three circular building cases in the Netherlands, by drawing upon stakeholder interviews and documentation. It can be concluded that: some conventional actors have acquired knowledge on circularity; and that there is an emergent group of expert actors specialising in circularity. Both types of actors are a prerequisite for implementing circular strategies at both the beginning and end-of-life phase of a building; and should be involved early on to influence decision-making on circularity, especially concerning the long-lived layers of a building.

ARTICLE HISTORY
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KEYWORDS
Actor analysis; circular construction; decision-making; network analysis; sustainable building practices

Implementing a new procurement strategy: the case of social housing associations

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Accepted 23 April 2019

Abstract
Purpose – The purpose of this paper is to address the barriers that Dutch housing associations encounter in implementing new procurement strategies.
Design/methodology/approach – Several aspects of purchasing, portfolio management, project delivery and supply management are discussed in relation to the changing role of housing associations as semi-public commissioning bodies in the Dutch construction industry, based on data derived from workshops with six Dutch housing associations.
Findings – Housing associations are adapting their procurement strategy towards a more integrative and performance-based approach to supply management. Due to the complexity of implementing this process, housing associations struggle especially with moving beyond pilot projects, increasing the maturity levels throughout the organisation and aligning new policies with daily practices at a tactical and an operational level.
Practical implications – Increased knowledge of change processes and seeing the potential of maturity models will be valuable for practitioners who are dealing with changes on the work floor.
Social implications – Client organisations are considered one of the key drivers of change in the construction industry. Insights into these particular organisational change processes contribute to the potential of industry reform.
Originality/value – Most studies on collaboration and integration in the supply chain focus on the inter-organisational level or on the supply side, rather than the internal organisation of the client.

Keywords Public procurement, Public sector, Front-end project management, Purchasing maturity, Project organizing, Capabilities
Paper type Research paper

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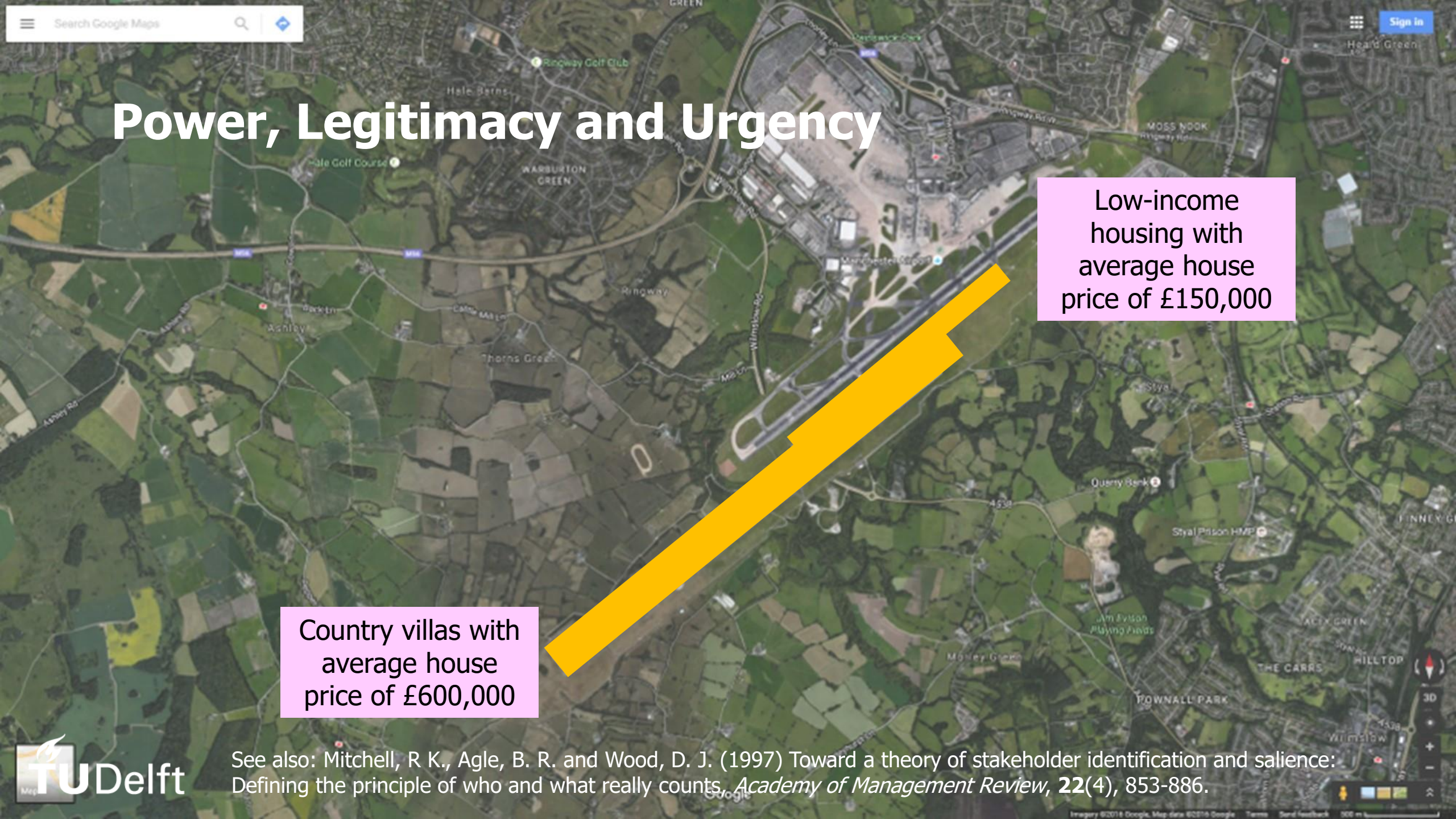
Power, Legitimacy and Urgency



See also: Mitchell, R K., Agle, B. R. and Wood, D. J. (1997) Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts, *Academy of Management Review*, **22**(4), 853-886.

Stepping Out of our Comfort Zone

Learning event	Actors - networks
'Coupling Opportunities' Haven-Stad case study team	Municipality of Amsterdam, Waternet, Liander, TU Delft
Sounding Board Group Basisweg – Transformatorweg	Municipality of Amsterdam
Masterclass: System Innovation	Municipality of Amsterdam, UvA, TU Delft and consultant
Core Team 'Coupling Opportunities'	Municipality of Amsterdam, Waternet, Liander, UvA and TU Delft

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NWO

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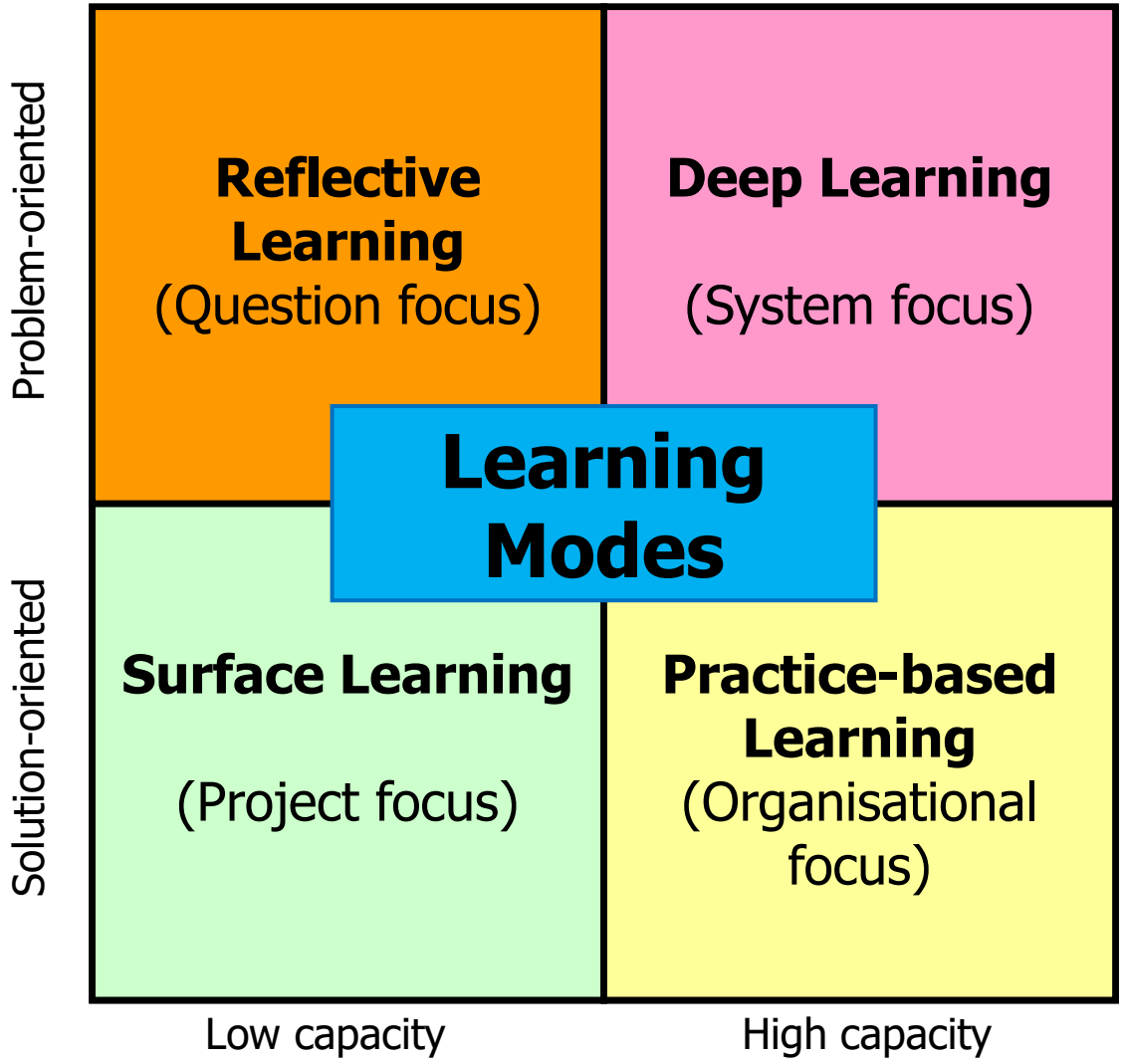
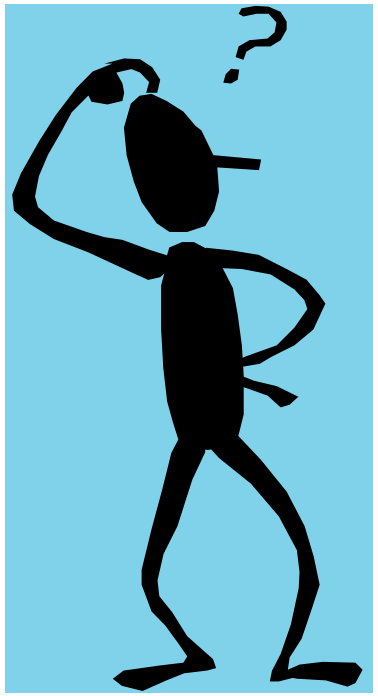
Learning Intent and Capacity to Change



Closing Thoughts and Questions for Reflection

- How do we find a balance? Between optimisation and adaptation; between control and creativity; between short-term and long-term; between exploration and exploitation?
- How do we co-design *problems* and *solutions* when managing projects in transitions?
- How do we drive deep learning so that we can transform business-as-usual in addressing societal and sustainability transitions?
- How will the relationship between academia, industry and society change as a result?



Q and A

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