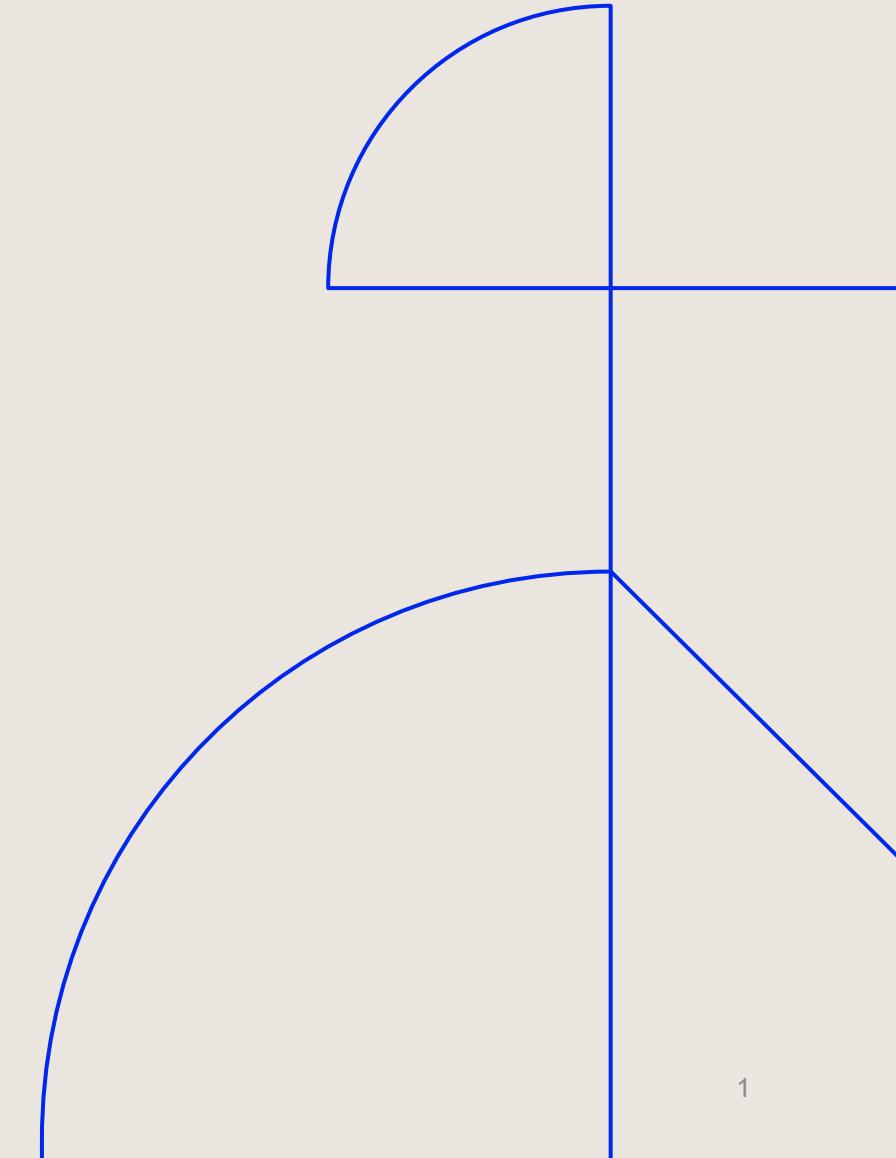


# Seminar on alliances in Germany and Sweden

Introduction

**KTH 6 November 2025**

Anna Kadefors, KTH and Per Erik Eriksson, LTU



## Agenda today:

- 13.30-14.00 Presentations and introduction
- 14.00-15.00 Implementation of Alliancing in Germany. Sören Sommerfeld, TU Berlin. Discussion.
- 15.00-15.15 Fika
- 15.15-15.45 Alliance contracts in the Swedish Transport Administration. Andreas Eklund and Jörgen Simu. Trafikverket
- 15.45-16.00 Discussion



# National research platform ProcSIBE

Procurement for Sustainable Innovation in the Built Environment

Upphandling för ett hållbart och innovativt samhällsbyggande

2014-2021

25+ projects, including extensive collaboration with Trafikverket

Continues as researcher network: [www.procsibe.se](http://www.procsibe.se)



# Swedish research projects on collaborative contracting

- Numerous case studies on public and private two-phase collaborative contracts from 2000 and onwards, also strategic partnering.

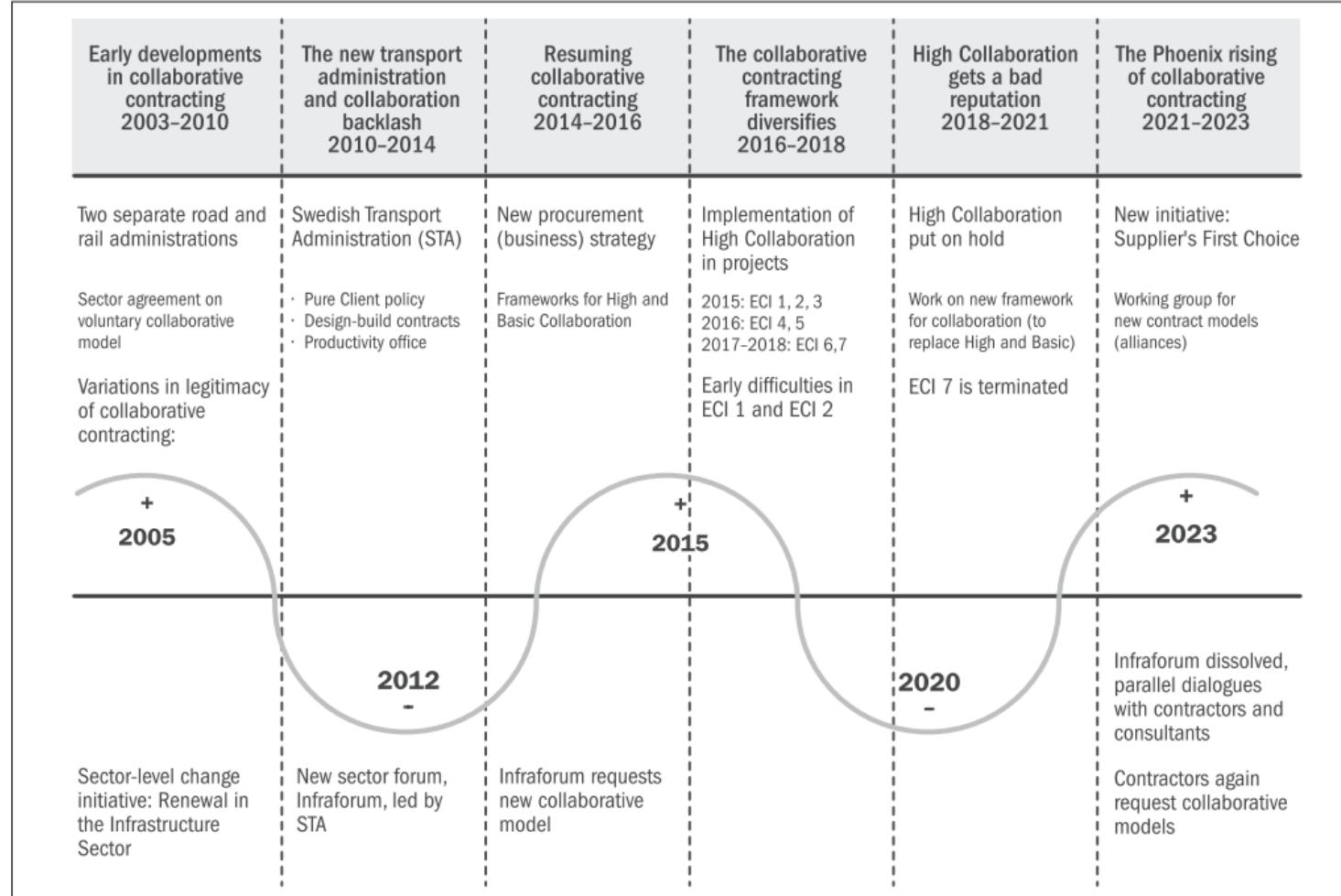
## More recently, mainly ProcSIBE

- Benchmarking study railway (SWE, NL, UK, Germany, NO) (2015-2017)
- "Innovation pilots" in O&M road contracts in Trafikverket, LTU (2018-2022)
- Implementation/test of collaborative two-phase contracts in Trafikverket (Samverkan Hög/TEM)
  - Investment projects, 7 contracts, KTH (2017-2024)
  - O&M contracts, (4 > 2 contracts), KTH/LTU (2021- ongoing)
- Collaboration in the design phase of two-phase contracts, Chalmers. (Ongoing)
- Implementation of collaborative two-phase contracts in four hospital projects, KTH (2020-2025)
- Comparison of relational contracting in four Nordic countries over 25 years, led by KTH (paper in 2024)
- Planned project with Svenska kraftnät. KTH

# Collaborative contracting in Sweden and beyond

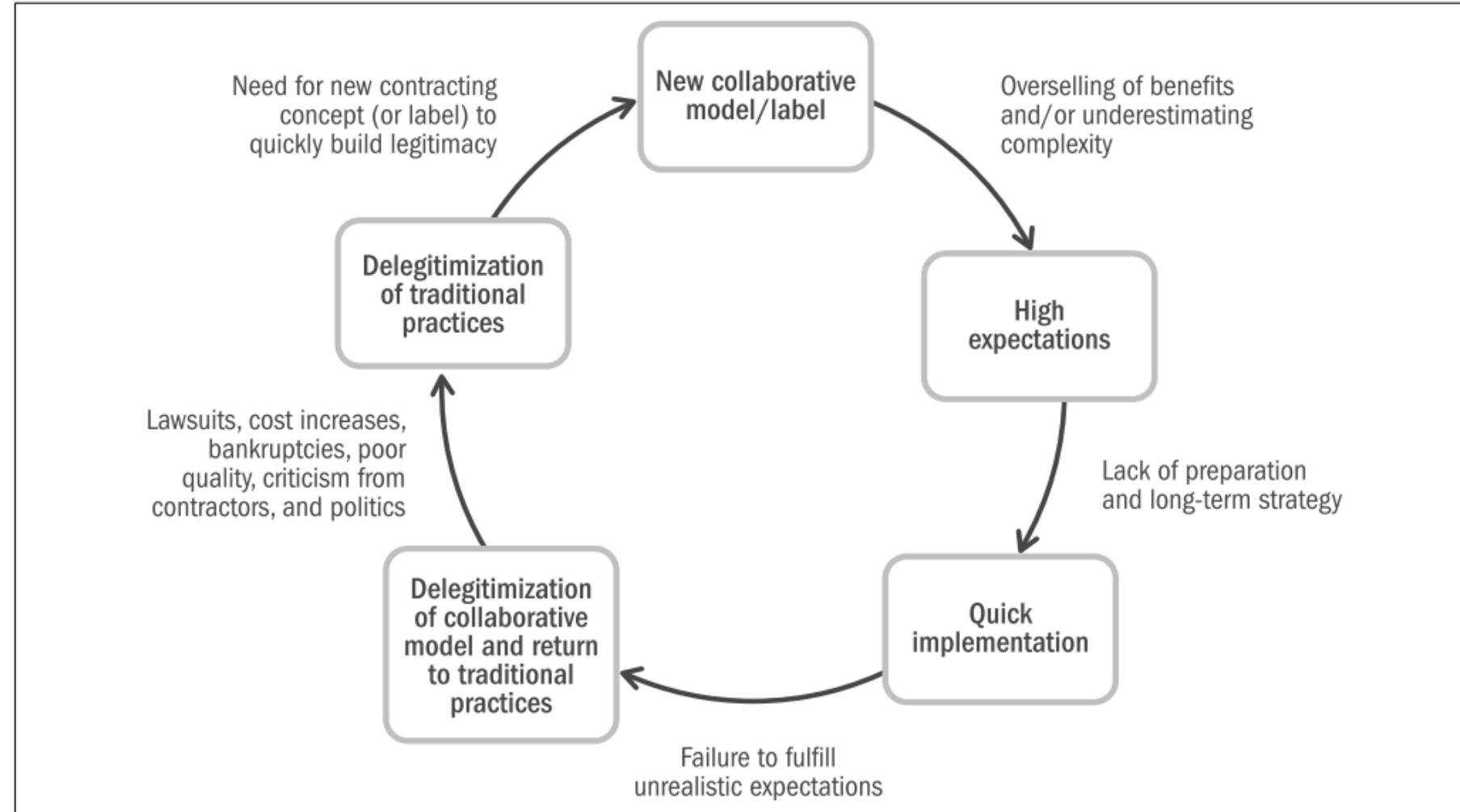
- The **building sector**
  - Collaboration based on two-phase contracts since early 2000s – the Swedish Construction Clients has a model (John Hane)
  - Today substantial volumes, in some markets around 50%
  - Also strategic partnering with several projects in one contract
- **Other infrastructure/industry clients**
  - High share of two-phase contracts in public construction contracts. Ex water, defense, energy. Strategic partnering by Svenska kraftnät
- **Trafikverket**
  - Non-contractual collaboration based on FIA model in early 2000s
  - Some contract-based collaborative projects in late 2000s
  - 2010 – focus on design-build fixed price contracts (Renodlad beställarroll)
  - New business strategy including option for two-phase contracts in 2016, discontinued in 2021
  - New non-contractual collaboration strategy, plus pilot projects for alliance contracts, 2021 –
- **Internationally**
  - Many initiatives 1990s-2000s, in recent years interest in a wider range of countries, also in Fidic

# Developments in collaborative contracting in Swedish infrastructure construction 2003-2023



Rosander, L., Kadefors, A & Eriksson P.-E (2025):  
[Never-Ending Cycles of Collaborative Contracting Initiatives: Dynamics of Legitimacy in a Public Client Organization](#) *Project Management Journal* ¶

# How can we avoid vicious circles and enable long-term learning?



Rosander et al, 2025, but also Kadefors, A., Aaltonen, K., Gottlieb, S. C., Klakegg, O. J., Lahdenperä, P., Olsson, N. O., Rosander, L. & Thuesen, C. (2024). Relational contracting in Nordic construction—a comparative longitudinal account of institutional field developments. *International Journal of Managing Projects in Business*, 17(8), 22-46. <https://doi.org/10.1108/IJMPB-01-2024-0014>

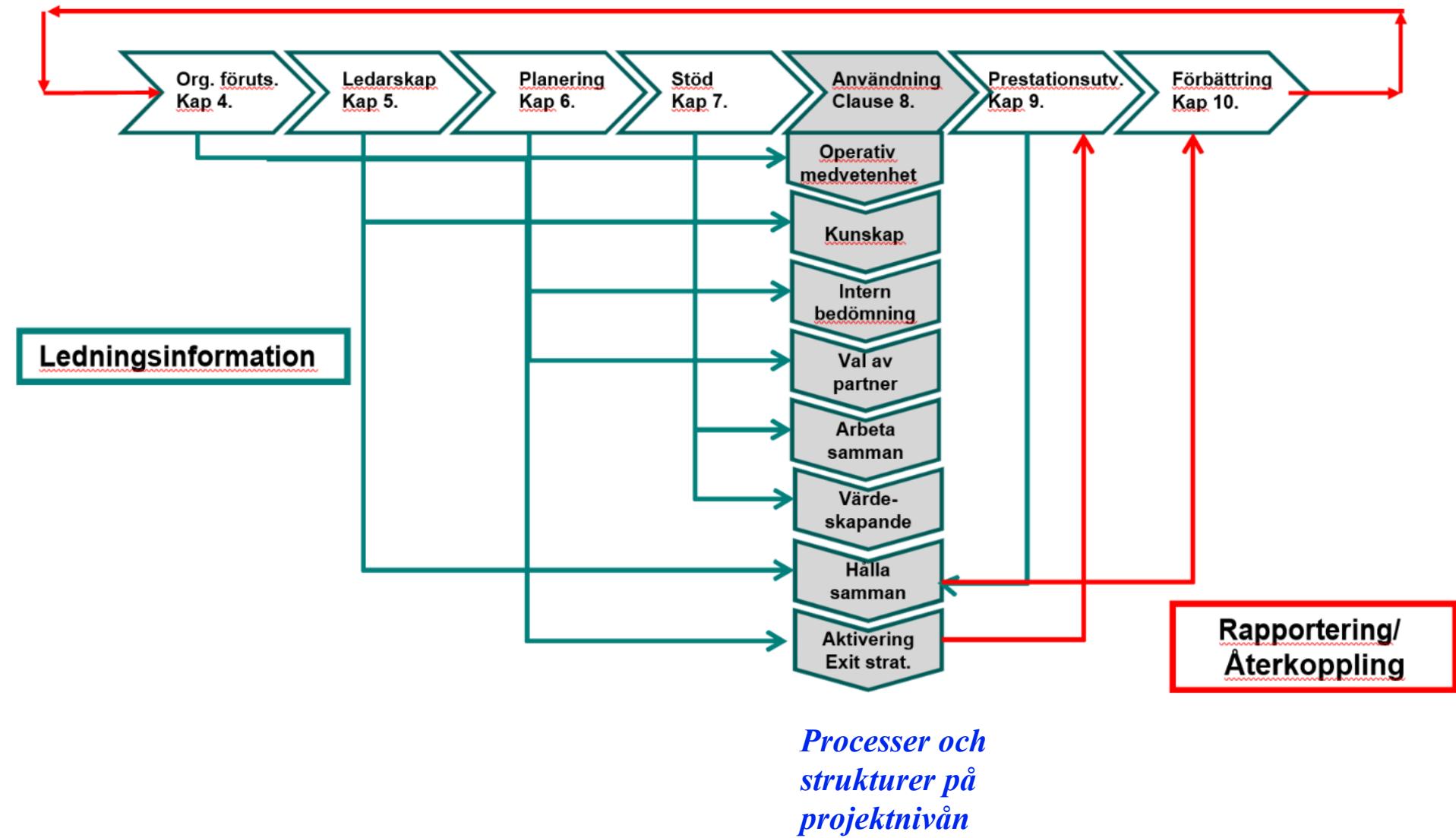
One option to increase predictability and engage the organizational/top management level



**ISO 44001  
Ledningssystem för  
Affärsrelationer i samverkan –  
Krav och ramverk**

# ISO 44001 Ledningssystem för affärsrelationer i samverkan

*Övergripande  
organisationsnivå  
(policy, ansvar, stöd,  
utbildning, bemanning,  
uppföljning, utveckling)*



# European benchmarking study railway procurement 2017

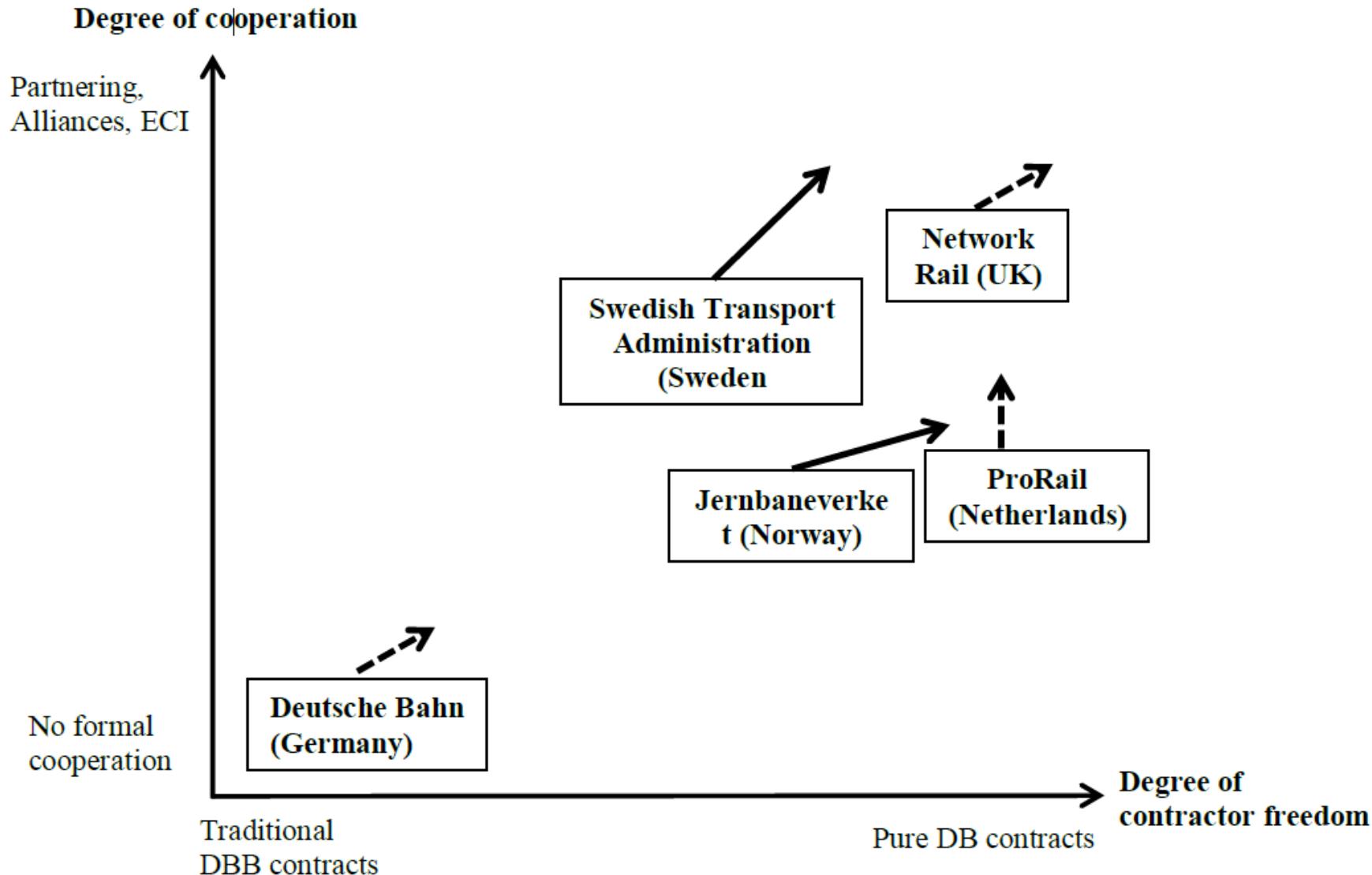


Figure 2. Change processes in the five countries

# Implementation of Alliancing in Germany

**Sören Sommerfeld, M.Sc.**

Technische Universität Berlin, Department of Construction Engineering and Management  
06.11.2025

---

1.	<b>Introduction to alliancing</b>	definition and purpose, shortcomings of traditional project delivery
2.	History and status of alliancing in Germany	developments since the 2000s, overview of projects, reflection on experiences and need for further developments
3.	Alliancing according to the 'Rail Partnership Model'	need for client-specific model, modules and combinations
4.	Reflection of experiences with alliancing in Germany	observations and need for further developments

# Introduction

## Alliancing: definition and purpose

The „owner [...] enters into a legal/commercial arrangement with one or more service providers (designers, contractors or suppliers [...]) for the delivery and/or operation/maintenance of a project/asset.“ (Ross 2009, p. 2)

Relies on combination of:

- “hard” contractual elements, such as early involvement of contractors, shared risks and quality-based selection and
- “soft” elements, primarily joint governance processes for building relationships and managing risks and opportunities (Kadefors et al. 2024, p. 23)

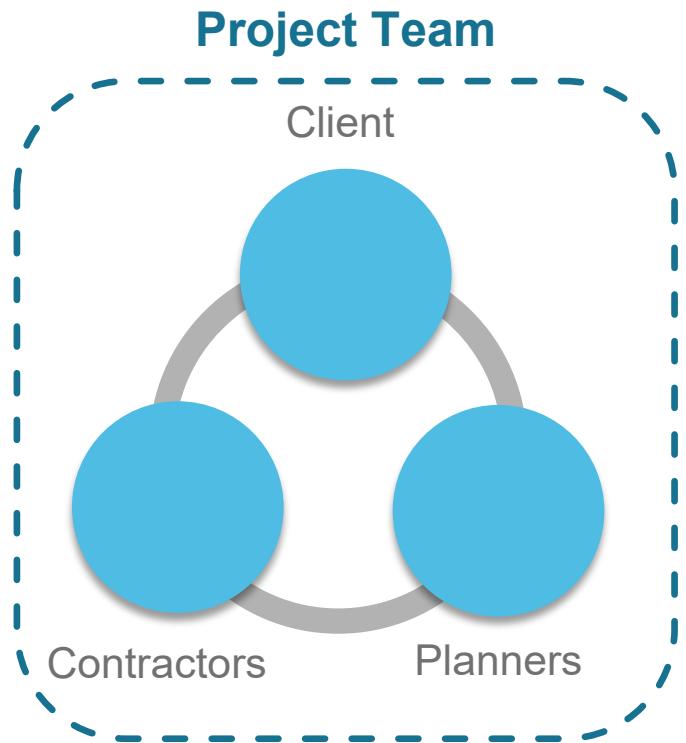
Core elements include:

- **key players** enter **joint agreement**
- collective development of **design** and target outturn **cost** (TOC)
- joint governance **processes** and project **controlling** under open-book financial transparency,
- defined mechanisms for equitably sharing cost overruns (pain-share) and savings (gain-share). (Sundermeier et al. 2023, p. 6)

This model is especially suitable for complex, high-risk projects that require innovative solutions and where risks are uncertain and best managed collectively (Austroads & APCC 2014, p. 31)

# Introduction

## Alliancing: fundamental principles according to the 'Rail Partnership Model'



### Fundamental Principles

- integrated project organization
- early involvement of **key suppliers as team partners**
- key criterion: performance capability and competence
- holistic project management
- **collaborative project controlling, cost and risk management**
- joint decision-making management
- internal project problem-solving
- project goals as a **shared benchmark for decisions and success**

- other model definitions, e.g. with high emphasis on lean-management-principles exist and are also common
- The Rail Partnership Model ('Partnerschaftsmodell Schiene') is a client-specific framework for project delivery models (for Deutsche Bahn), that is based on international experiences and best practices from Alliancing and IPD

image: own illustration based on (DB FZI GmbH 2023, p. 3 ff.; Sundermeier et al. 2023, p. 6 ff.)

# Introduction

## Alliancing: background and purpose

shortcomings of traditional project delivery (Kadefors et al. 2024, p. 23)

- separation of design and construction → few chances for innovation
- long-term incomplete contracts
- bid-low-claim-high strategy → poor collaboration and distrust

that lead to (Sundermeier et al. 2020, p. 24 ff.)

- disturbances in construction sequences → high chance that project forecasts experience cost and schedule overruns
- claim-high strategy → inefficient project delivery through negotiating claims (client and suppliers) and laborious contract management
- therefore individual/particular interest are often contrary to project goals; Construction sector increasingly unappealing for (young) professionals

- before 2018: no relational contracting at all at Deutsche Bahn (Eriksson et al. 2016, p. 53)
- design-bid-build (DBB) is the standard model in the industry

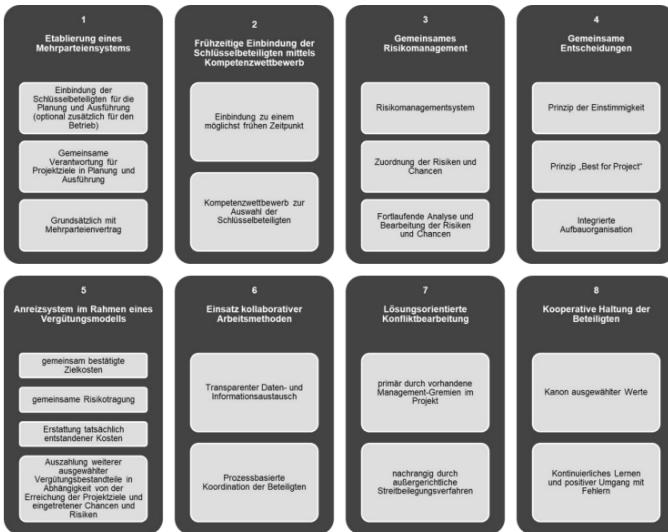
In Germany, DBB is usually executed through a trade-specific contracting method known as “Fachlosvergabe”, where the client awards separate contracts to multiple specialized contractors (single-trade contractors). Each contractor carries out only the specific scope of work defined in their respective trade package, such as concrete works, electrical, and HVAC. This differs from the version of DBB often described in international literature, where construction is usually performed by a single general contractor, using subcontractors. (Hatami Rad 2025)

- for private clients, design-build (DB) is also common
- PPP (DBFM) has been gaining popularity since the 2000s (esp. highway- and public building construction) and has been accompanied by broad-ranging public debate
- large construction suppliers developed initiatives for collaboration within DB-models (for private clients) (Breyer 2023, p. 40)
  - Züblin Teamkonzept (1994)
  - Walter Bau Bauteammodell (1997)
  - Bilfinger i.volution (2000)
  - Hochtief PreFair (2002)

# Alliancing in Germany

# History

- relational contracting and alliancing has been gaining interest since the mid 2000s:
  - first in science (dissertations, journals)
  - then in industry (journals and conferences, client organizations, industry associations)
  - public clients noticed a need for change in project delivery (in megaprojects)
- 2016: “IPA-Zentrum” (its predecessor) was founded
  - Founded on basis of observation that traditional project delivery models (with their contractual frameworks and price-based procurement processes) are unsuitable to promote collaboration in large complex projects and thus systematically hinder achieving project goals. Aim: development of innovative model and best practices
- 2017 the first (private) alliance project was initiated

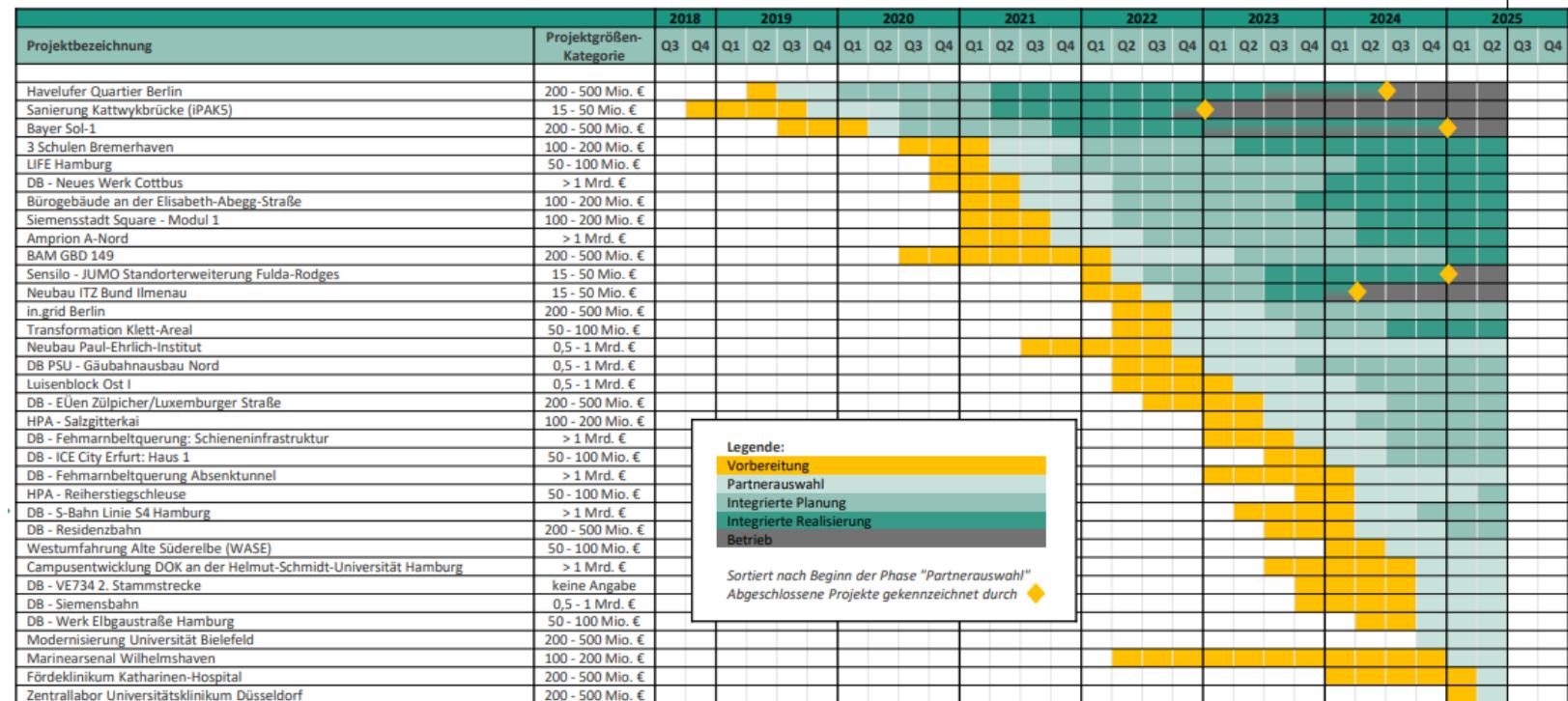


 **Bundesministerium  
für Umwelt und  
Nukleare Sicherheit**

images: (BMV 2018; IPA-Zentrum 2022)

# Alliancing in Germany

Status today: >30 Projects, mostly > 200 M €

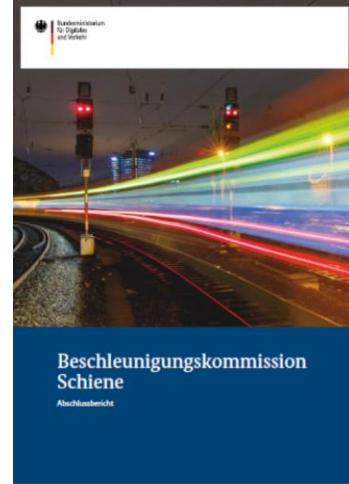


(IPA-Zentrum 2025)

# Alliancing in Germany

## Drivers of development

- most alliance projects are being delivered by public clients (Deutsche Bahn, WSV, public building clients)
- clients are main-drivers, however seldom with a clear strategy
- consultants (project management, legal consultants) play major role in sharing knowledge and advertising advantages of alliancing
- most influential alliancing-project management consultancies
  - Yukon Projects (KIT)
  - ISG and GWT (TU Berlin)**
  - RiskConsult (Uni BW München)
  - Lumico
  - Schlabach Consulting
  - Refine (HFT Stuttgart)
  - many project management consultants open up alliance-departments (e.g. Väth&Schmidt, Schiffers Bauconsult, Drees&Sommer, Schüßler-Plan)
- most influential legal consultants developing alliance agreements
  - Antje Boldt
  - Kapellmann
  - Breyer
  - Ebner Stolz
  - Graf von Westfalen
  - Heid & Partner (Austria)



Regionalbereich	Projekt	PIA	Lph
1 Ost	Siemensbahn	Gesamtprojekt	2
2 Ost	Spandau-Nauen	vorrangig Bf. Spandau	2
3 Ost	Berlin S 25 Süd,	vorrangig Abschnitt Teltow Stadt-Stahnsdorf	2
4 Ost	Lübbenau-Cottbus	1+2	3/4
5 Nord	Neubau der S-Bahn Linie S4 (Ost)	2+3	4
6 Nord	Hannover Bielefeld	Abschnitt „Wunstorfer Ohr“	2
7 Nord	Hannover Bielefeld	Abschnitt „Schaumburger Land“	2
8 NN	HLK		2/3
9 DB Projekt Stuttgart-Ulm GmbH	ABS Stuttgart – Singen – Grenze D/CH, Abschnitt Nord (inkl. Pfaffensteigtunnel)	3	
10 DB Projekt Stuttgart-Ulm GmbH	P-Option, Baustufe 2 und 3	0	

- some consultancies were founded by professors and are closely linked to universities
  - alliancing is often regarded as an innovative academic approach to project delivery
- only a few lawyers are involved in designing the first multi-party agreements. Some of them regularly cooperate with the same alliancing-consultancies.
- consultants (and clients) often link alliancing to the implementation of lean methods

own research and interpretation; Image: BMV 2022

# Alliancing in Germany

‘Rail Partnership Model’: a research project at TU Berlin

## Partnerschaftsmodell Schiene – Rail Partnership Model



**DB** NETZE  
DB Netz AG

**BAU** INDUSTRIE

Technische  
Universität  
Berlin

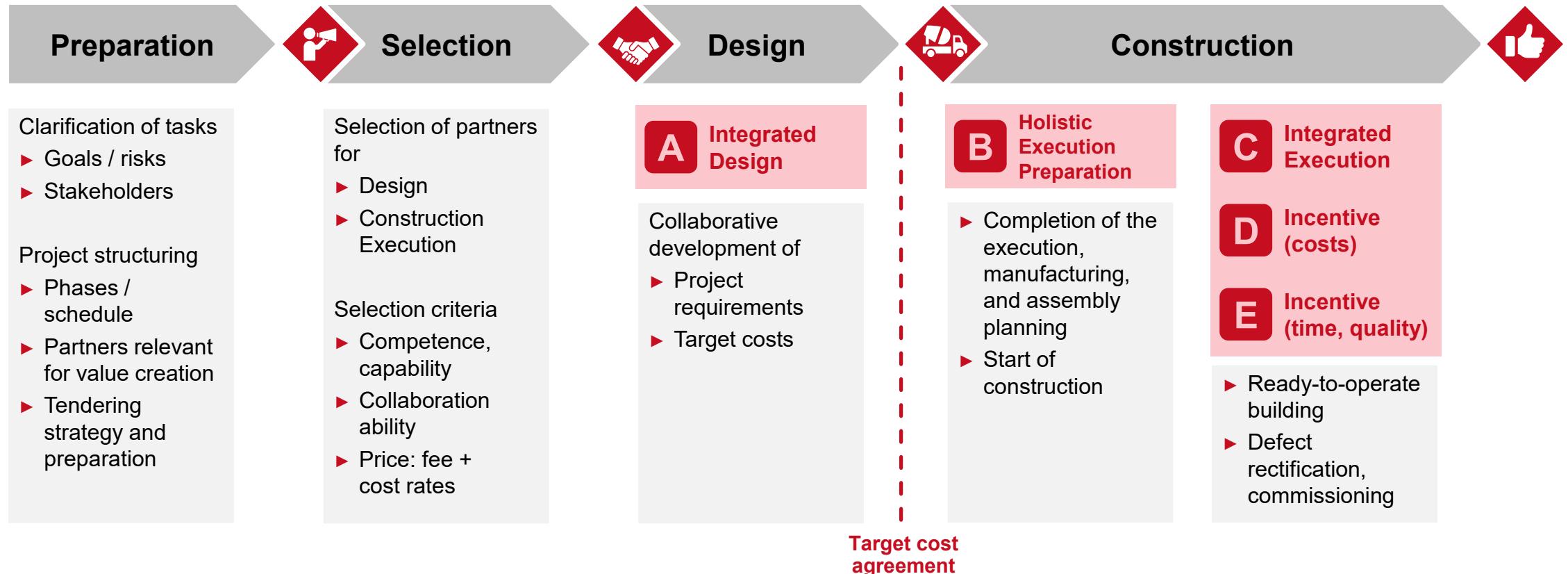
Fachgebiet Bauwirtschaft und Baubetrieb



image sources: Pixabay (right column); DB Netz AG (bottom row)

# Rail Partnership Model

## Phases, modules, content



 Start of procurement process

 Conclusion of alliance contract

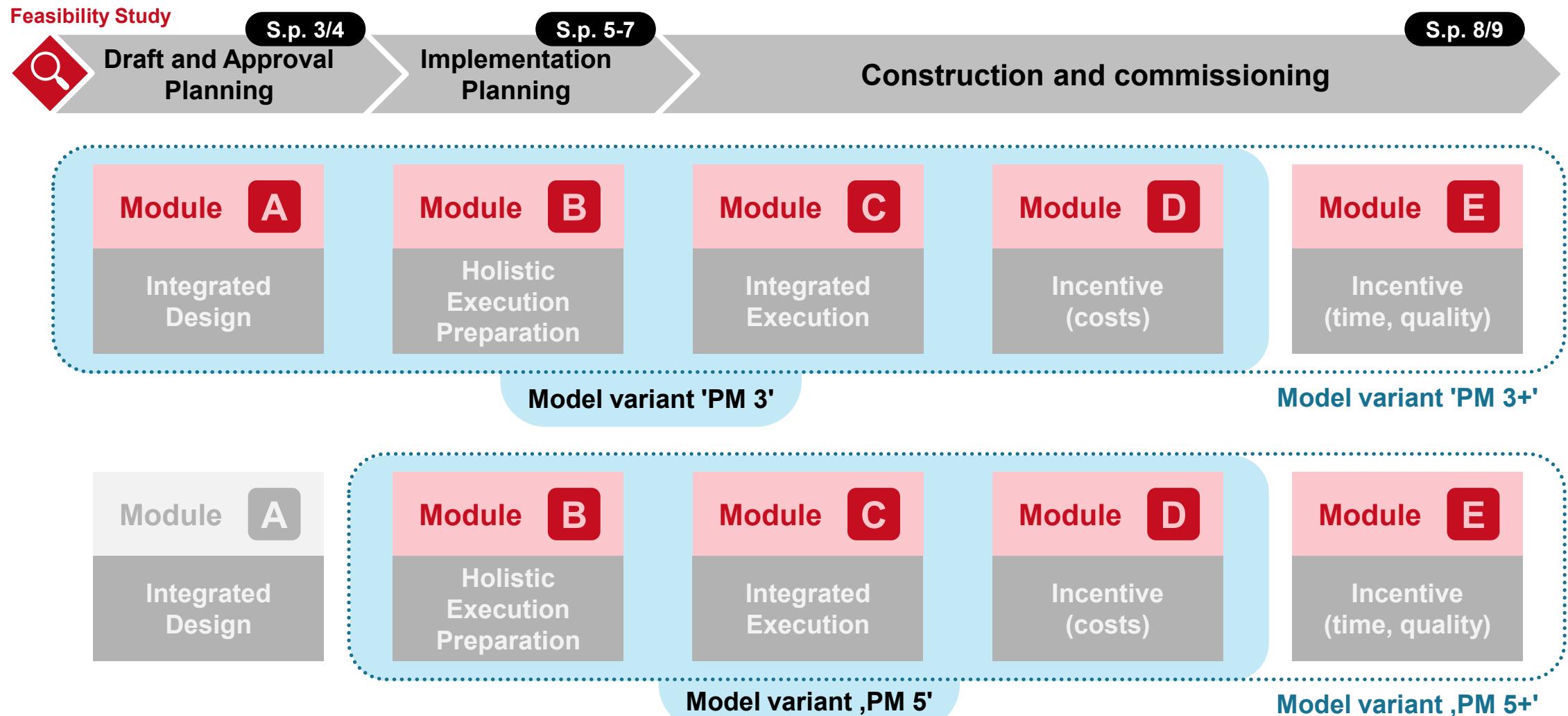
 Building approval

 Commissioning

**A** A - E: Modules of 'Rail Partnership Model'

# Rail Partnership Model

## Phases, modules, content



# Rail Partnership Model

## Ongoing pilot projects

### Buildings: Maintenance facilities

- **Neues Werk Cottbus - ICE-Instandhaltungswerk (DB FZI)**
- **DB Werk Elbgastraße, Hamburg (DB)**

### Railway Network

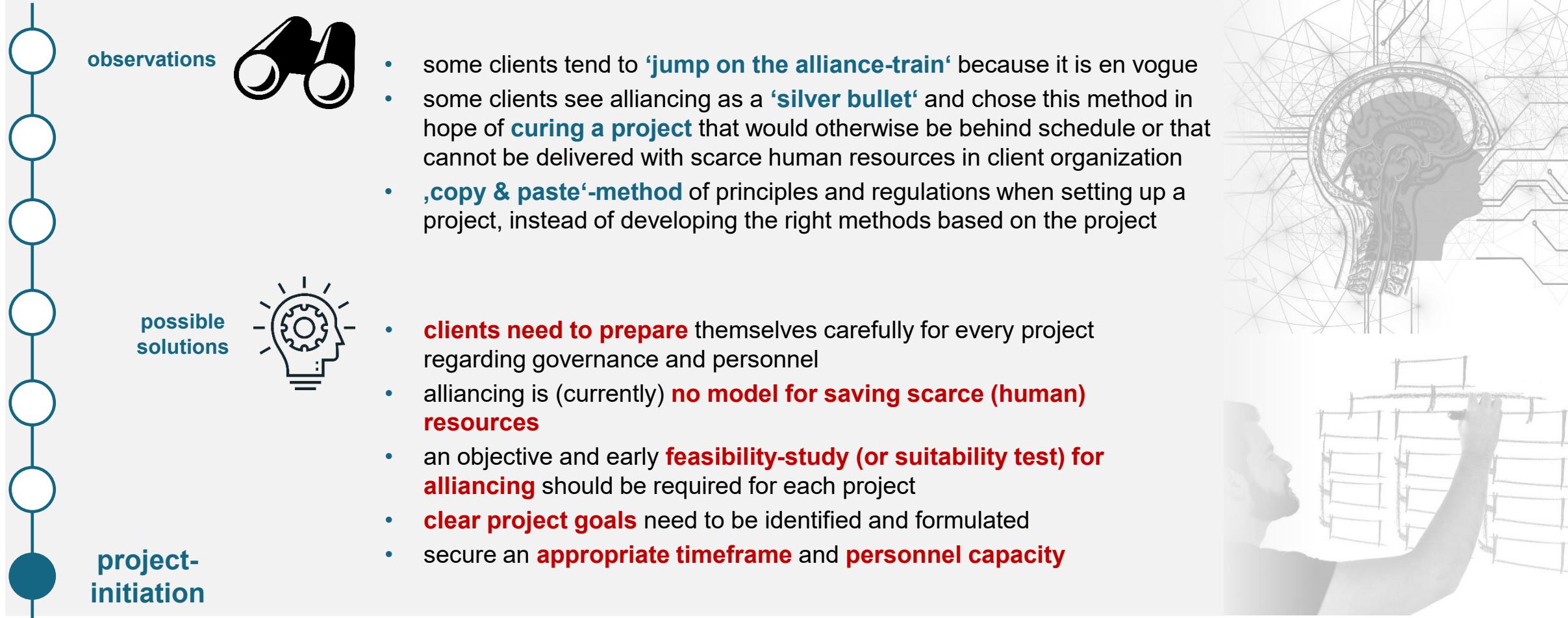
- **PSU Gäubahnausbau Nord, Stuttgart (DB PSU)**
- **Fehmarnsundquerung (DB InfraGO)**
- **S4, Hamburg (DB)**
- **Residenzbahn, DB**
- **Ersatzneubau EÜen, Köln (DB InfraGO)**
- **Fehmarnsundquerung Absenk tunnel (DB)**
- **2. Stammstrecke Ost, München (DB)**
- **Siemensbahn, Berlin (DB InfraGO)**



image sources.: DB Neues Werk Cottbus, s4 geht los!, DB, Deutsche Bahn

# Alliancing in Germany

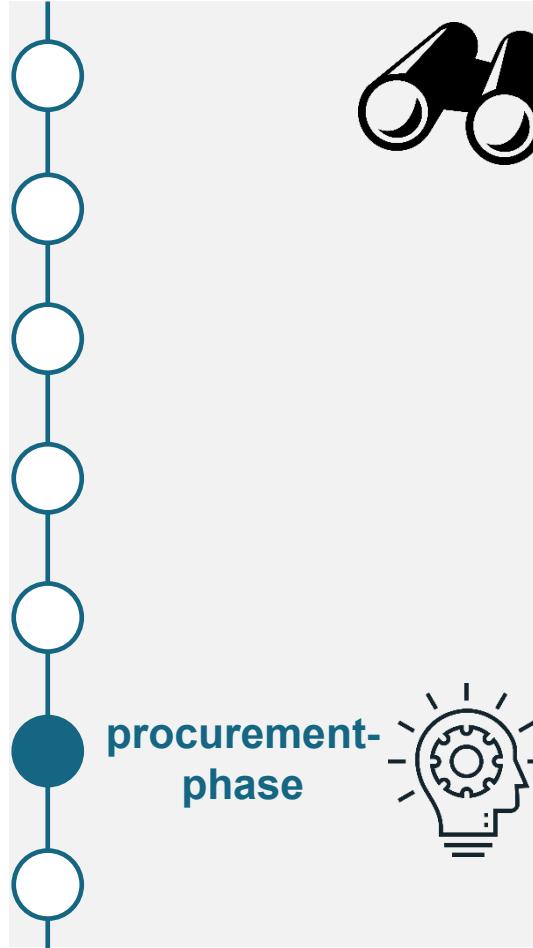
## Observations and Experiences



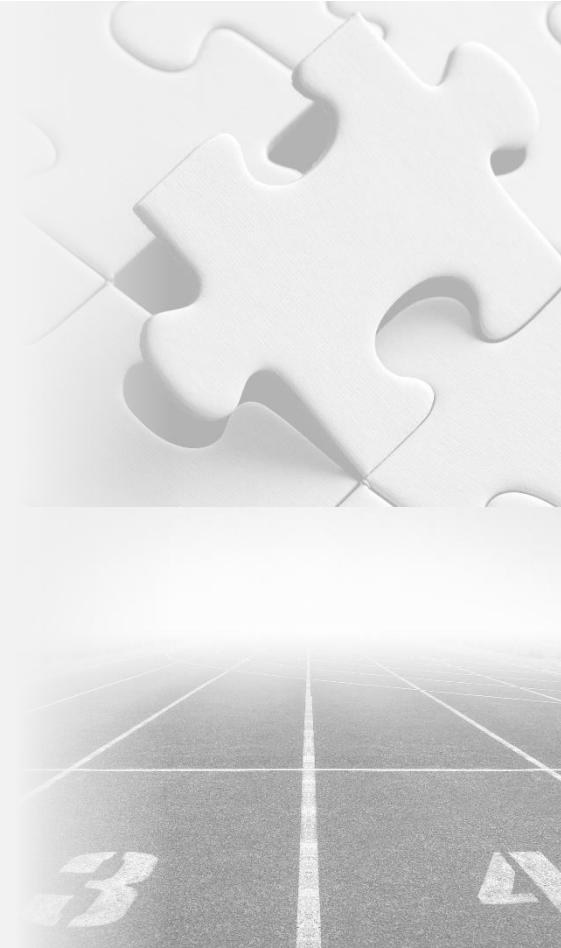
Images: pixabay.com

# Alliancing in Germany

## Observations and Experiences



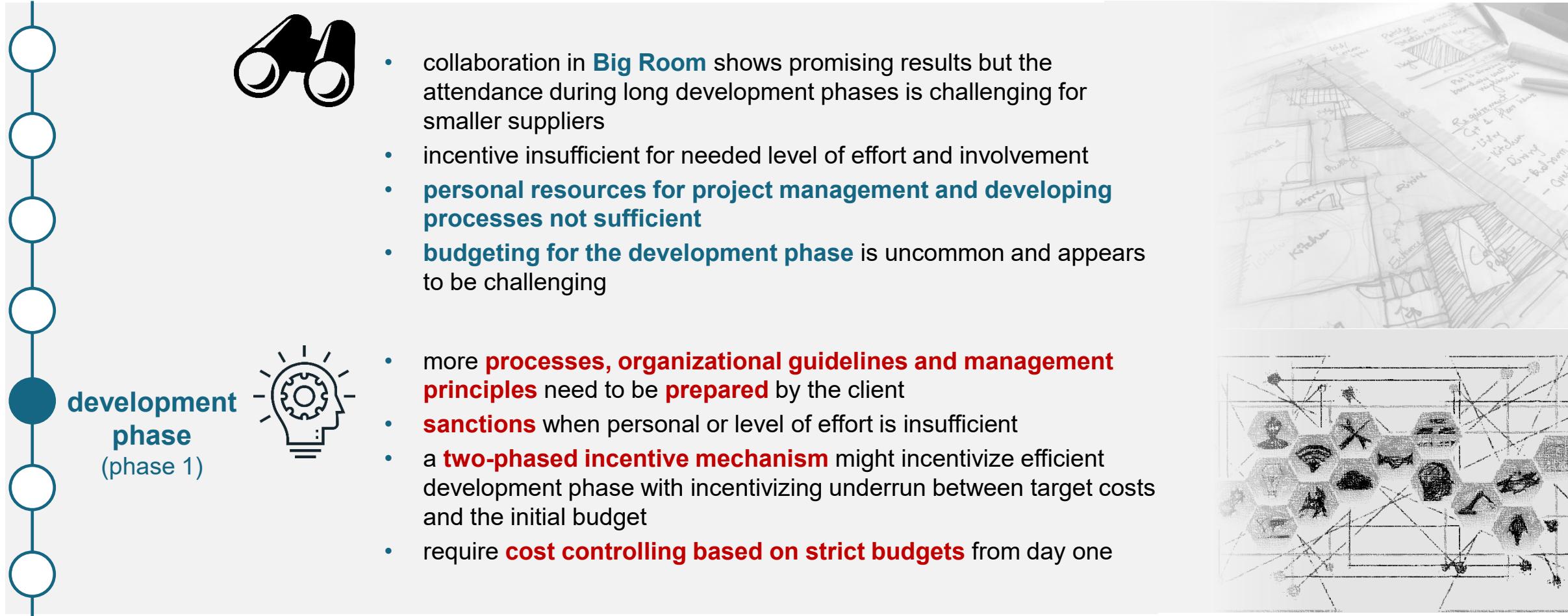
- wide range of tenderers, where there is a strong market (both architecture/engineering and construction)
- usually, procurement is organized in partial lots according to market structure, instead of a single call for tenders
- project-specific behavioural assessments show individual collaborative working capabilities, but clients mostly do not deduce any actions
- price-bids (fees, cost rates for machinery) are mostly at market level
- suppliers face similar transaction costs for preparing tenders compared to similar traditional projects but using different skills and personnel
- individual alliance competence needs to be secured – actions need to be derived from evaluation (e.g. extra training, exchange personnel, exclude bid)



Images: pixabay.com

# Alliancing in Germany

## Observations and Experiences

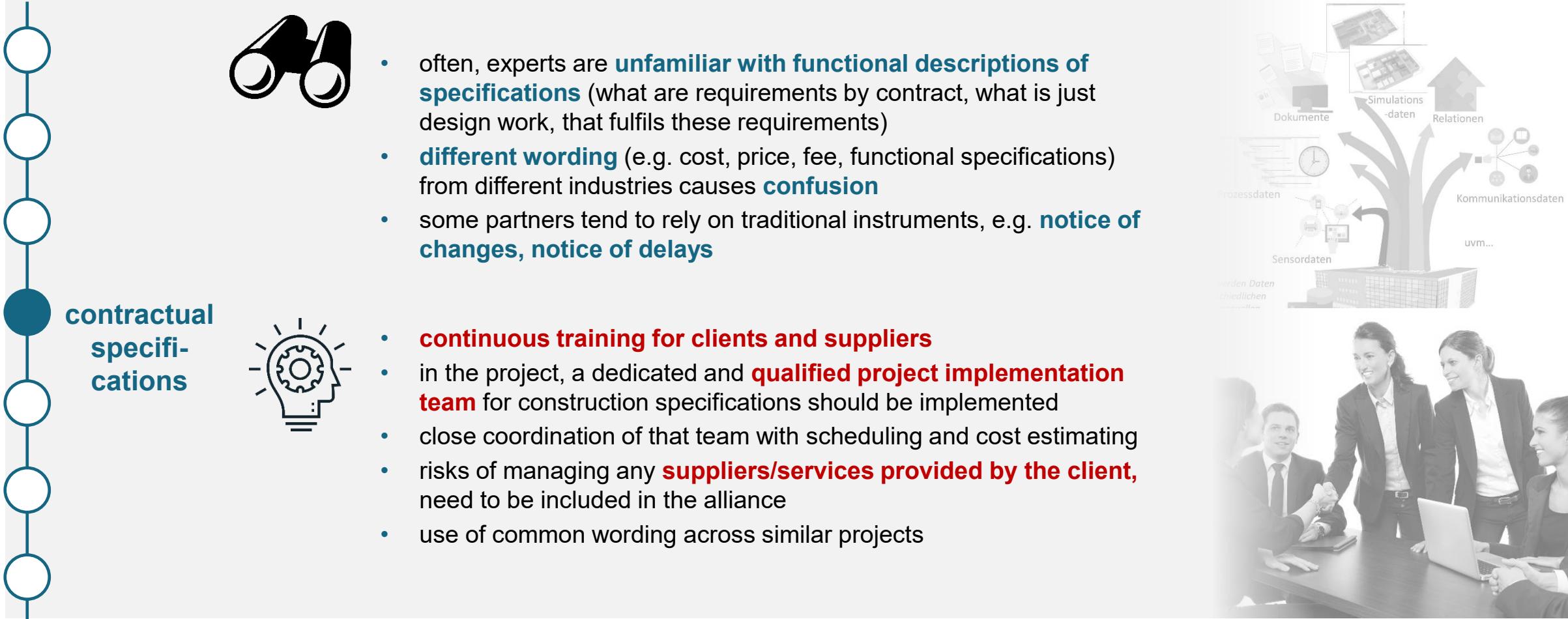


- collaboration in **Big Room** shows promising results but the attendance during long development phases is challenging for smaller suppliers
- incentive insufficient for needed level of effort and involvement
- **personal resources for project management and developing processes not sufficient**
- **budgeting for the development phase** is uncommon and appears to be challenging
  
- more **processes, organizational guidelines and management principles** need to be **prepared** by the client
- **sanctions** when personal or level of effort is insufficient
- a **two-phased incentive mechanism** might incentivize efficient development phase with incentivizing underrun between target costs and the initial budget
- require **cost controlling based on strict budgets** from day one

Images: pixabay.com

# Alliancing in Germany

## Observations and Experiences



The diagram features a vertical list of observations on the left, each preceded by a circular icon. To the right of the list is a background image depicting a group of business people in a meeting, with various data types represented by icons (documents, simulations, relations, etc.) and arrows indicating data flow between them.

- contractual specifications**
  - often, experts are **unfamiliar with functional descriptions of specifications** (what are requirements by contract, what is just design work, that fulfils these requirements)
  - different wording** (e.g. cost, price, fee, functional specifications) from different industries causes **confusion**
  - some partners tend to rely on traditional instruments, e.g. **notice of changes, notice of delays**
- continuous training for clients and suppliers**
  - in the project, a dedicated and **qualified project implementation team** for construction specifications should be implemented
  - close coordination of that team with scheduling and cost estimating
  - risks of managing any **suppliers/services provided by the client**, need to be included in the alliance
  - use of common wording across similar projects

Images: pixabay.com



- when alliancing is chosen for accelerating the project or to meet a political milestone, the **exit-option seems unrealistic**
- **until now TOC estimation starts (too) late and lacks a clear structure** – often lack of understanding pricing system and/or shortage of capacity
- (too) **early negotiation of additional regulations** (e.g. price indexing)



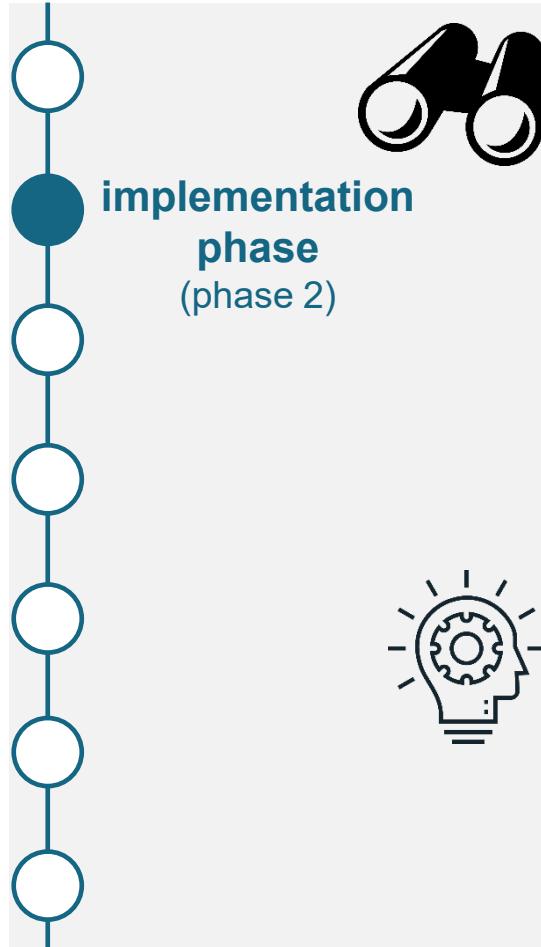
- **realistic exit-option** in project schedule is strictly necessary
- in the project, a dedicated and **qualified project implementation team** for target costing must be implemented
- **guidelines regarding the process and (minimal) capacity for estimating TOC** should be implemented in the contract and possibly combined with a sanction mechanism
- **competence in evaluating costs within client organization** (or with consultants) is a must



Images: pixabay.com

# Alliancing in Germany

## Observations and Experiences



- partially **tasks across the hierarchy of the project organization** are not separated clearly (e.g. PMT concerns themselves with detailed technical questions)
- occasional deficiencies in **managing processes** and **decisions**
- **project and construction clearly benefit from 'best for project' mentality**
- **staff fluctuation** heavily **disturbs project management** and daily tasks within the alliance

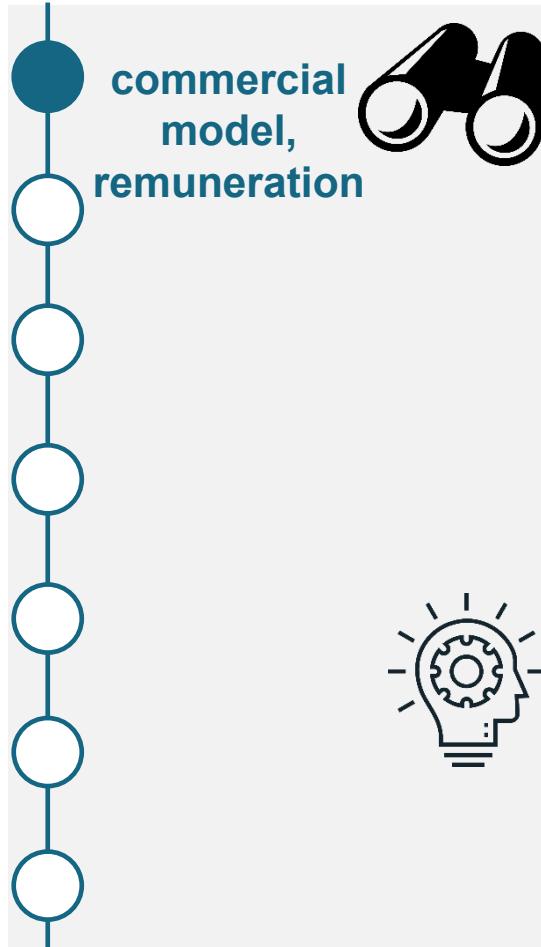
- **consistently implement project organization and adhere to specified roles** – possibly supported by alliance manager or alliance facilitators
- when managing joint decisions within project teams: **separate technical responsibility from management responsibility**
- **continuous 'onboarding'** for new staff



Images: pixabay.com

# Alliancing in Germany

## Observations and Experiences



- wide **misconception of cost-plus-fee-model**: not all occurred costs (until target costs) are eligible for remuneration
- **cost-controlling** appears to be **challenging due to supplier-specific accounting particularities** (e.g. certain positions need to be separated for balance sheets)
- some **commercial processes / systems** within client organizations need to be **adapted substantially to allow efficient project controlling in alliances** (e.g. asset accounting, ordering of works)
- little to no **control among suppliers** of **open-book** costs, invoices, works

- **diligent preparation of commercial processes** (also within client-organization) is critical for project success
- clients should **provide guidelines for IT-systems, structuring target costs and commercial requirements**
- **regulations for cost-plus remuneration** within the alliance contract are essential and need to be adhered to



Images: pixabay.com

# Alliancing in Germany

## Quo vadis? Recap and Prospects

**Alliancing has been well-established in Germany in the past 5 years. Best-practices and experiences are shared industry-wide, a 'hype' is observed**

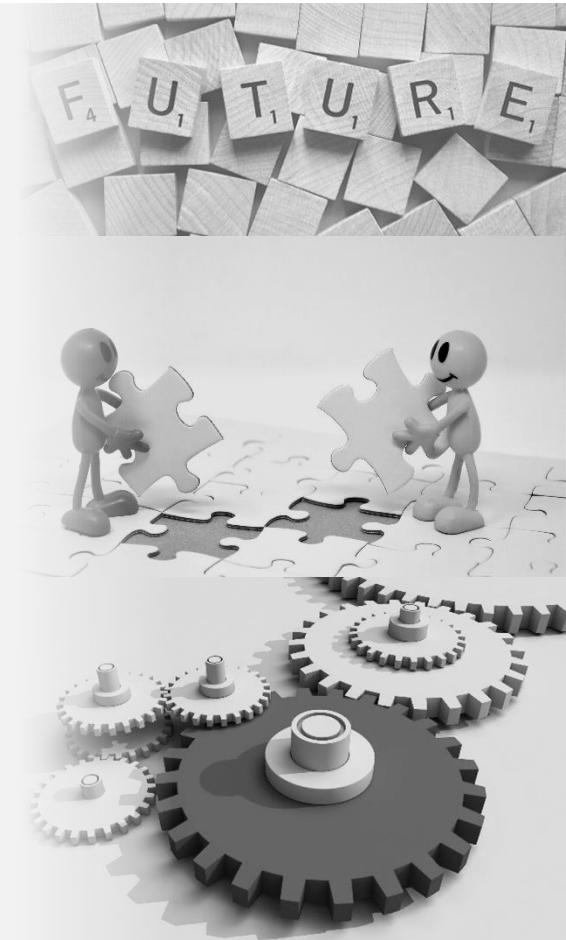
**Until now, only a small fraction of the potential for efficiency and innovation has been realized. Projects appear to be mostly successful, nonetheless.**

**Currently identified issues mostly resulted from insufficient preparation of processes and guidelines as well as lack of personnel expertise. Continuous development of this PDM\* is called upon.**

**We need to find the balance between overcomplicating contracts by micro-managing processes and simply relying on the 'mindset'**

**This PDM\* could accelerate the long-term transformation of the construction industry but will remain suitable only for a small share of projects across the industry.**

**The key success factor for widespread implementation of alliancing is the training and professional development of skilled personnel.**



Images: pixabay.com

\*PDM – project delivery model

- Ross, J. 2009 Alliance Contracting: lessons from the Australian experience, PCI Alliance Services, VDI-Bau
- Kadefors, A; Aaltonen, K.; Gottlieb, S. C.; Klakegg, O. J; Lahdenperä, P.; Olsson, N. O.E.; Rosander, L.; Thuesen, C. 2024 Relational contracting in Nordic construction – a comparative longitudinal account of institutional field developments, DOI [10.1108/IJMPB-01-2024-0014](https://doi.org/10.1108/IJMPB-01-2024-0014)
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- Breyer, W. 2023 Partnerschaftliche Projektabwicklungsmodelle auf Basis von Mehrparteienverträgen, [https://ipa-zentrum.de/wp-content/uploads/2023/07/Partnerschaftliche-Projektabwicklungsmodelle-auf-Basis-von-Mehrparteienverträgen\\_Breyer.pdf](https://ipa-zentrum.de/wp-content/uploads/2023/07/Partnerschaftliche-Projektabwicklungsmodelle-auf-Basis-von-Mehrparteienverträgen_Breyer.pdf)
- BMV 2018 Leitfaden Großprojekte (guideline mega projects), <https://www.bmv.de/SharedDocs/DE/Publikationen/G/leitfaden-grossprojekte.html>
- IPA-Zentrum 2022 Charakteristika und konstitutive Modellbestandteile, <https://ipa-zentrum.de/wp-content/uploads/2023/06/IPA-Charakteristika-und-konstitutive-Modellbestandteile-2022.pdf>
- IPA-Zentrum 2025 IPA-Report 2025, <https://ipa-zentrum.de/wp-content/uploads/2025/07/2025-IPA-Report.pdf>
- BMV 2022 Abschlussbericht Beschleunigungskommission Schiene
- DB FZI 2025 project website Neues Werk Cottbus, <https://www.db-neues-werk-cottbus.com/projekt/cooperationsmodell/c-ooperationspartner.html>

## side note

### Official Order of Fees for Services by Architects and Engineers – HOAI

HOAI defines nine *service phases* for architecture and engineering related works:

1. basic evaluation
2. preliminary planning
3. draft planning
4. approval planning
5. execution planning
6. award preparation
7. assisting with the awarding process
8. project monitoring – construction supervision and documentation
9. project supervision

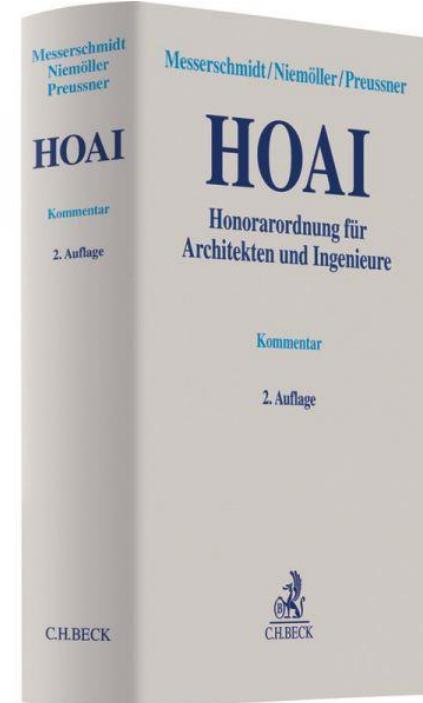
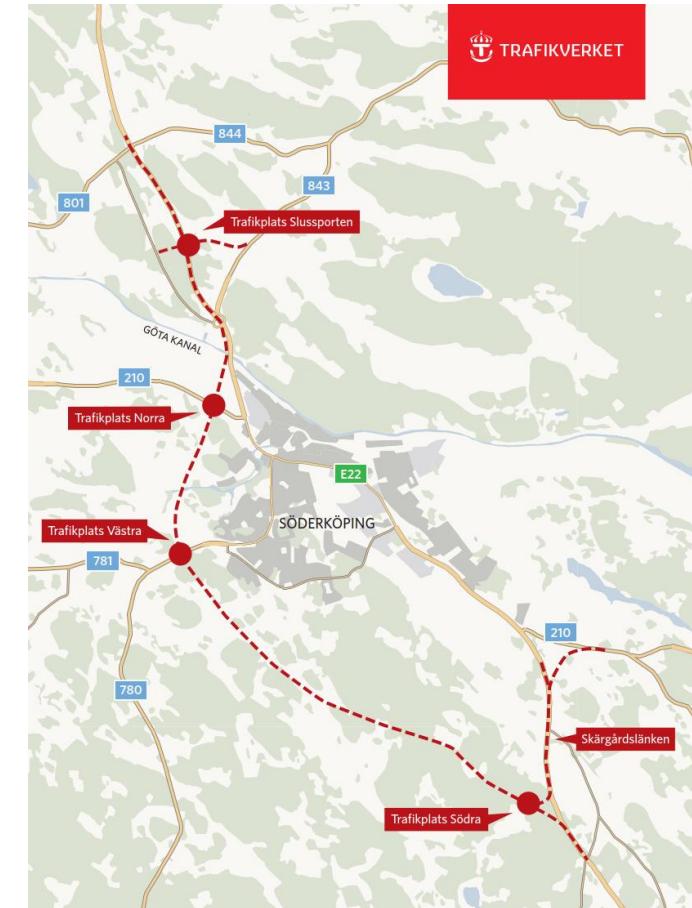


image: [beck-shop.de](http://beck-shop.de)

Springer Fachmedien Wiesbaden 2013, p. 173

# The Söderköping bypass in brief

<b>Length:</b>	just over 10 km
<b>Aqueduct:</b>	at passage of Gota canal
<b>No. of lanes:</b>	2+2 or 2+1
<b>Speed limit</b>	100 km/h
<b>Intersections:</b>	four
<b>ADT 2022:</b>	12,000-17,000 <i>(Average daily traffic)</i>
<b>Construction start:</b>	2026-2030 <i>(Planned)</i>
<b>Construction period:</b>	about 4 years
<b>Cost:</b>	SEK 2066 million, roughly EUR 183 million (2022 prices)



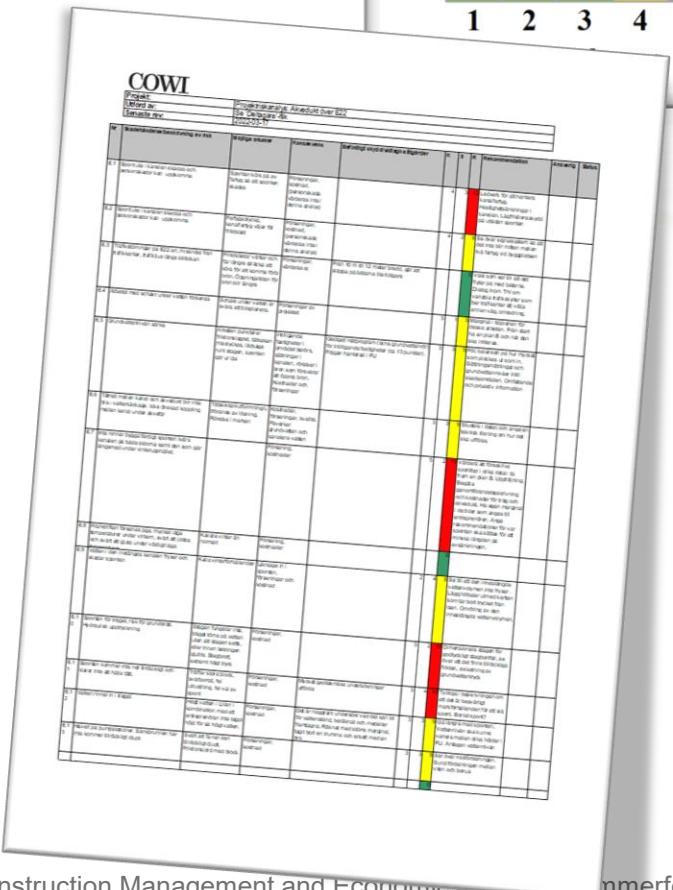
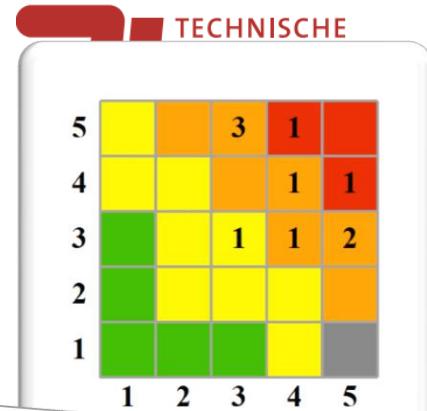
# Challenges and risks

## Ordinary construction

- Traffic during construction (both road and water)
- Will be handled according to standard practice

## Passage of Gota canal

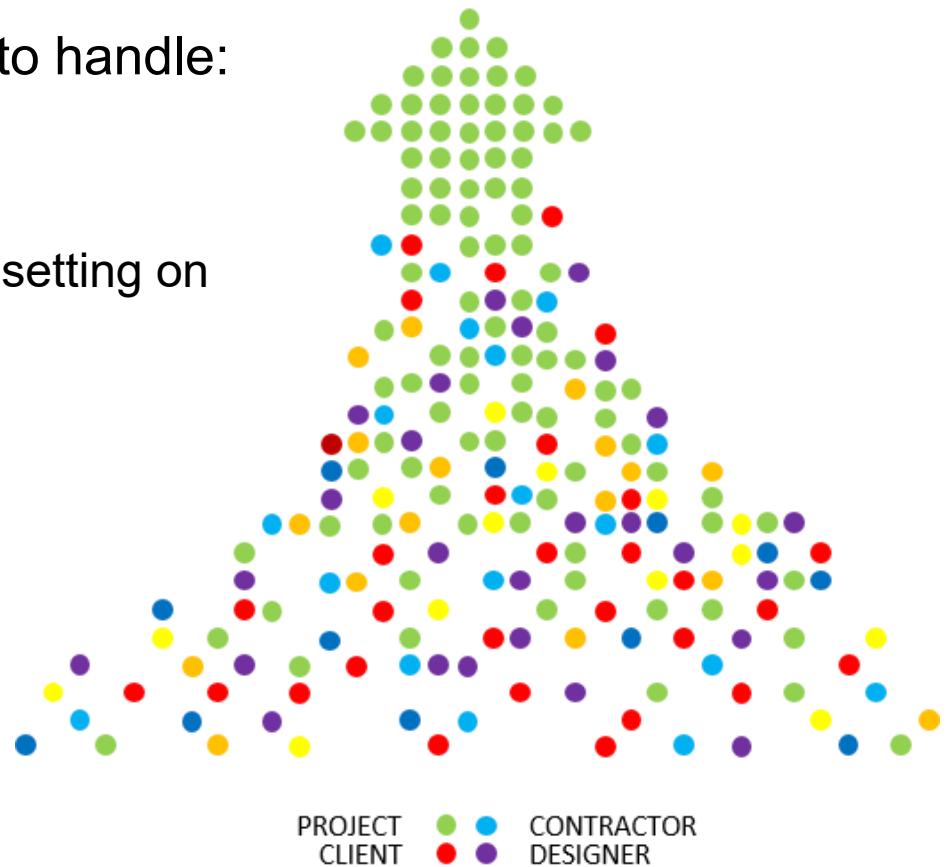
- Complicated geotechnical conditions
  - Landslide in canal, loose clay and blocky moraine, groundwater
- Existing infrastructure (both road and water)
- Main tap water source for Söderköping citizens



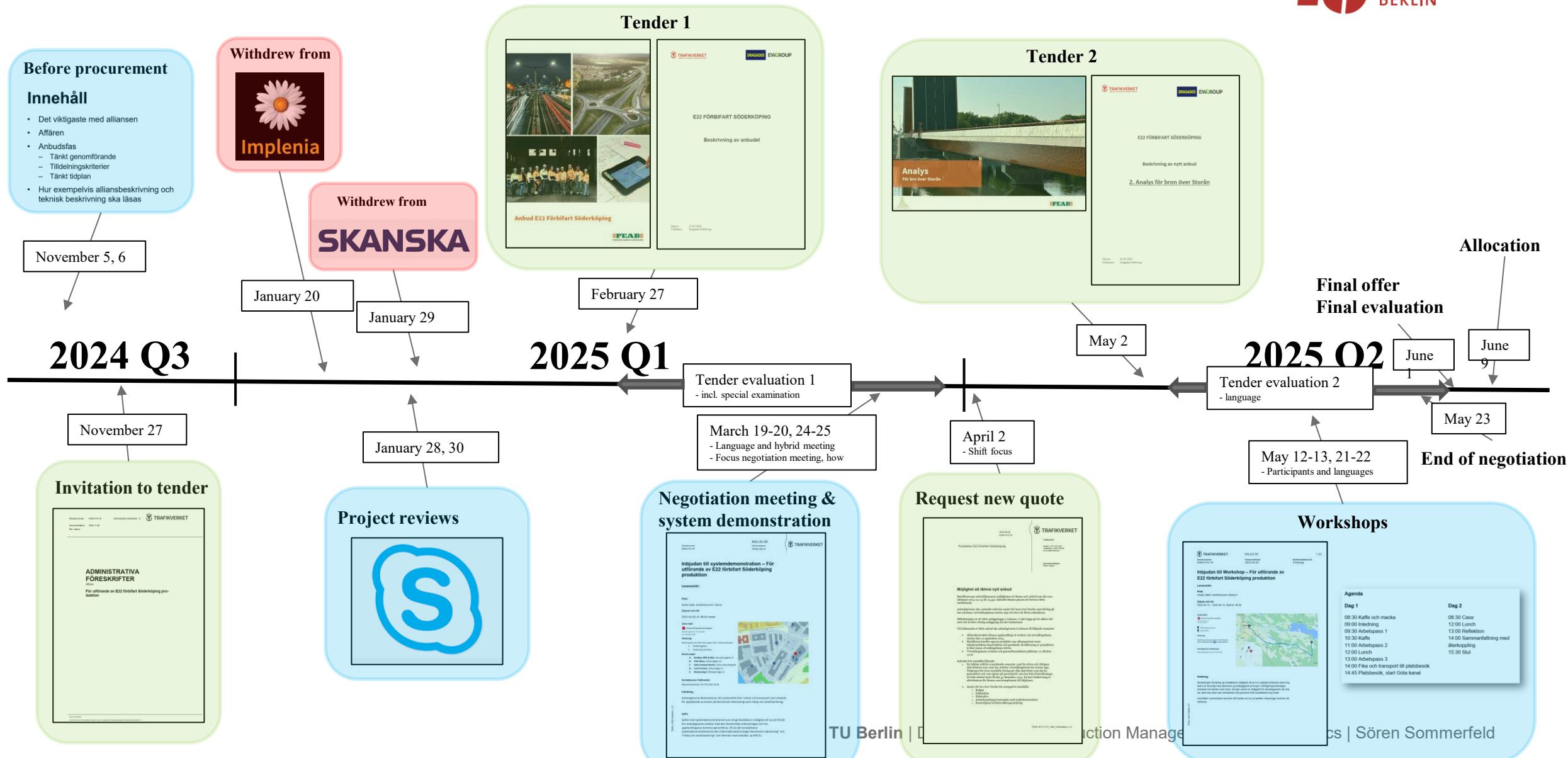
# Expectations on contract relationship

- Work together with mindset "The best for the project"
  - Client, designer and contractor work as one part
- Proactive and foreseeing planning/design/construction, to handle:
  - Landslide in Gota canal
  - The drawbridge gets stuck in half-open position
  - Massive leakage of groundwater which can cause serious setting on surrounding ground and buildings

## Goal of Alliance



# 1. The process here



# The Alliance Model

-in Swedish

KTH 2025-11-06

## Relational Contracts

### We knew this:

- Great support from TRV and suppliers
- Compensation and compensation models are difficult
- There needs to be trust in collaboration as a working method
- A structured approach is needed to develop the method
- Are resources needed to implement and follow up

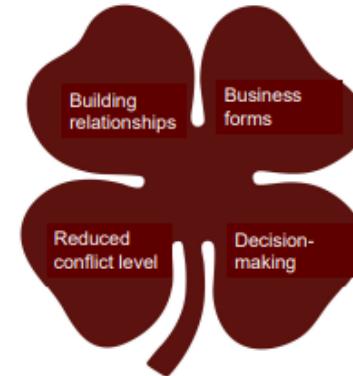
### To succeed, we need:

- clear and common goals
- clear expectations of each other
- open and regular communication
- clear division of responsibilities
- respect and trust for each other
- flexibility for the unexpected
- the right quality and performance of our deliveries

## Supplier's first choice

### Business-friendly procurement

- New business models will be tested, e.g. Alliance



### The Finnish Transport Agency tells us about the Alliance Model

#### Supplier's first choice

Dialogue on  
Alliance Contract,  
IV Business  
Council

First meeting on  
starting pilots for  
the Alliance Model

June 2022

Info about Allians  
at the Swedish  
Transport  
Administration's  
supplier day

WS Finnish  
Transport Agency

Sept 2023

High-level meeting  
with suppliers

Project supplier  
meetings

WS with Finnish  
Transport Agency  
and Ramboll Finland

Suppliers  
contracted

Pilots and working groups are started up

June 2025



## Alliance contract

- A new multi-party agreement is created between the client and the alliance partner.
- We will use a template contract developed by our legal experts.



Nu har vi kastat loss, nu kör vi!

## Diskussionsfrågor

- Ska vi arbeta mer med bilaterala tvåfaskontrakt och/eller allianser framöver?
- Hur kan vi främja kunskapsutbyte och lärande kring kontraktsmodeller?
- (Vilken forskning behövs?)