

Lean Management by a new partnering model for public projects

Prof. Dr.-Ing. Konrad Spang

Professor

Dipl.-Ing. Meltem Sözüer

Scientific Assistant

Chair of Project Management

University of Kassel



Introduction

Lean management and Partnering - Complementary areas?

Goals in Lean Construction

- Improve/built-in quality
 - Eliminate waste
 - Reduce time and cost
 - Reduce mistakes
 - Optimize the whole processes and increase process transparency
- Customer focus

Effects of Partnering

- Improve quality
 - Reduce administration
 - Reduce time and cost
 - Reduce risk exposure
 - Reduce engineering rework and increase transparency
- Customer and contractor focus
„Win – Win“



So, let's see how!



Situation on the construction and plant market (“we feel”)

- Dissatisfied clients
 - Distrust between client and contractor/s
 - Decrease of know-how (“lowest price”)
 - Increasing expenses for claim- and anti-claim-management
 - Growing number of disputes and litigations between client/contractor
 - Low rate of return and high risk of business failure
- **Dissatisfaction, distrust and disputes lead to adversarial relationship and waste for all participants!**



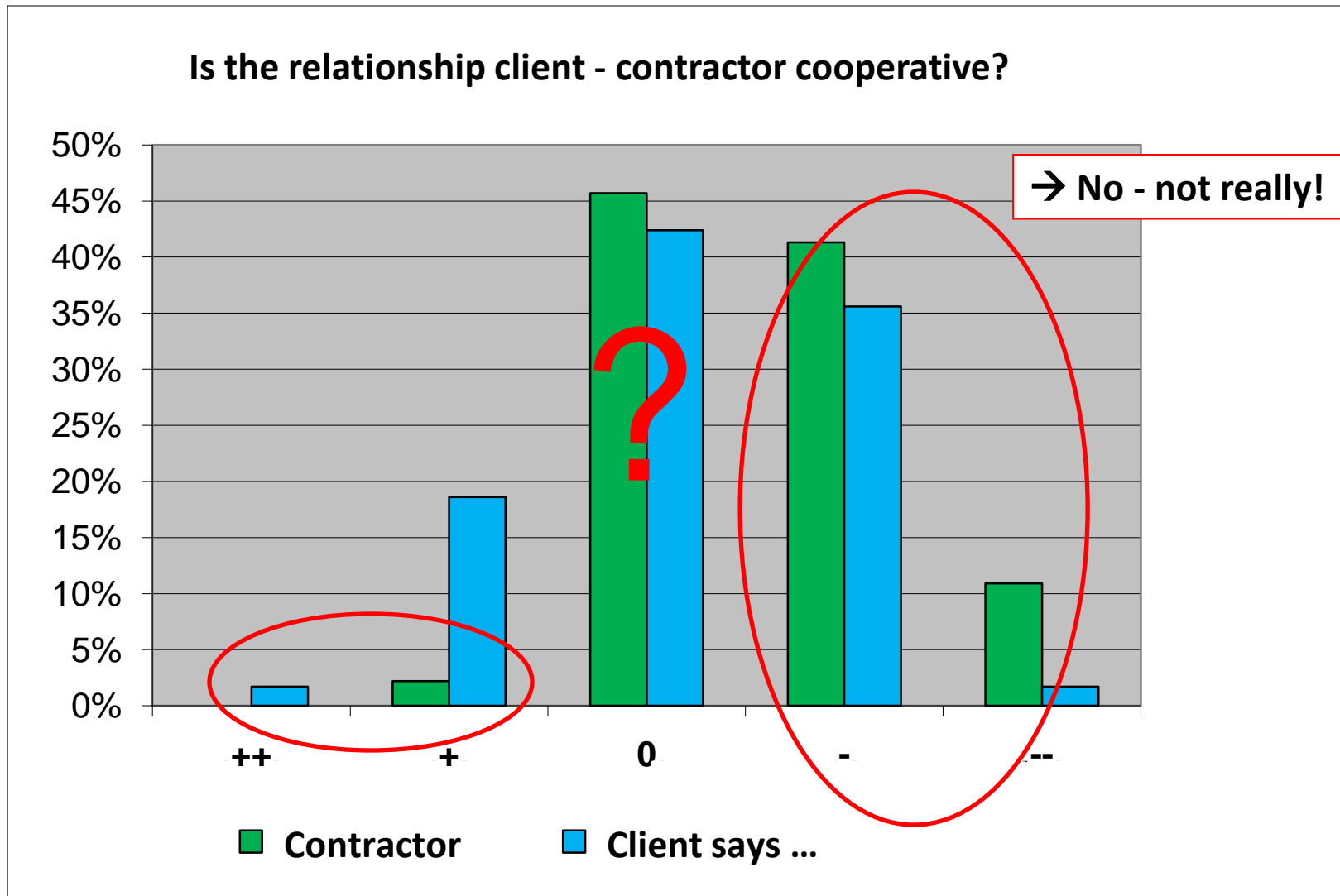
Facts about the present situation → Field study:

What do clients and contractors mean about their relationship?

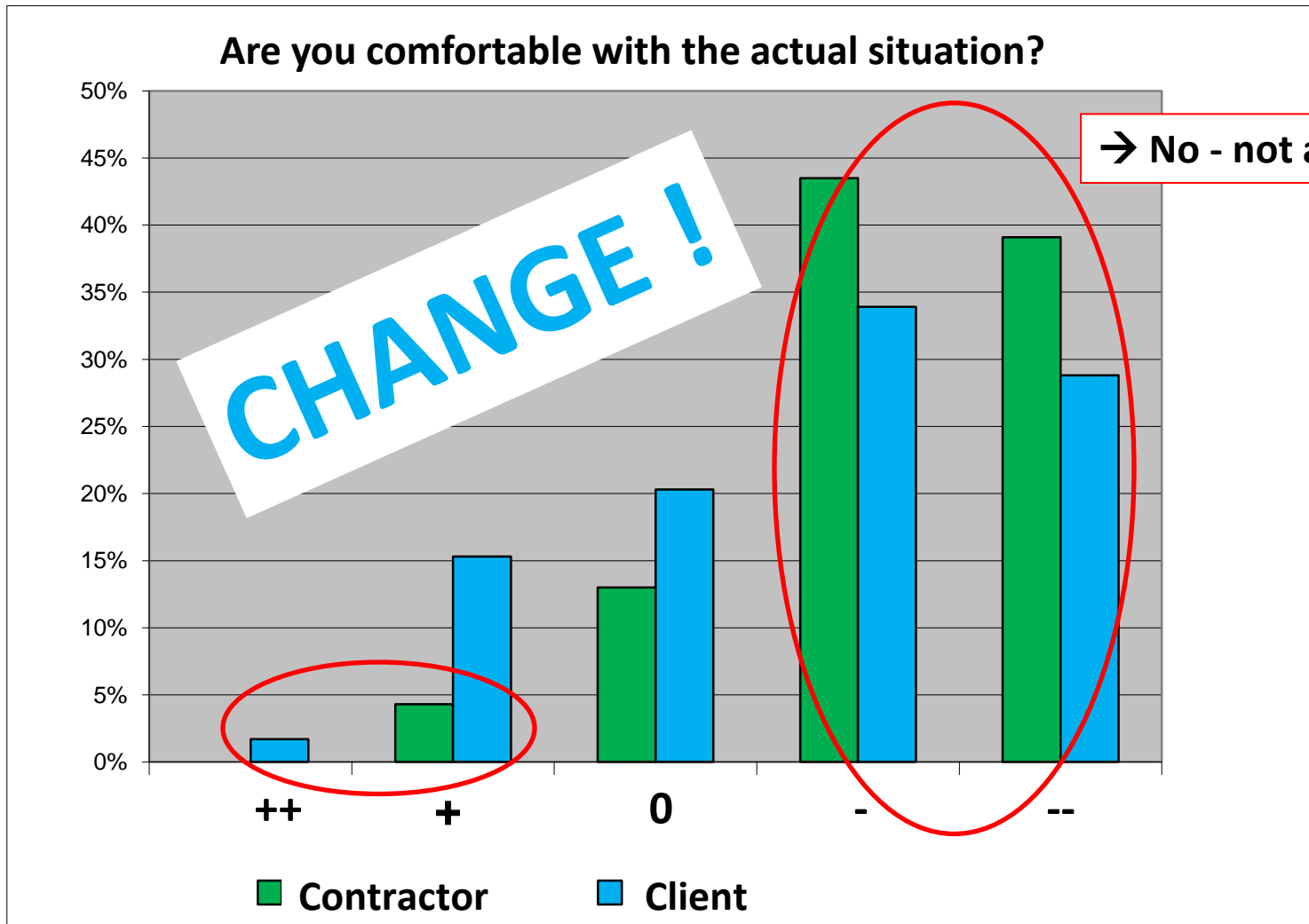
- Construction companies (contractors) and public authorities (clients)
- Civil engineering and infrastructure projects (roads, railways)
- 130 participants – 42% contractors, 45% clients, 13% consultants
- Germany, spring 2007



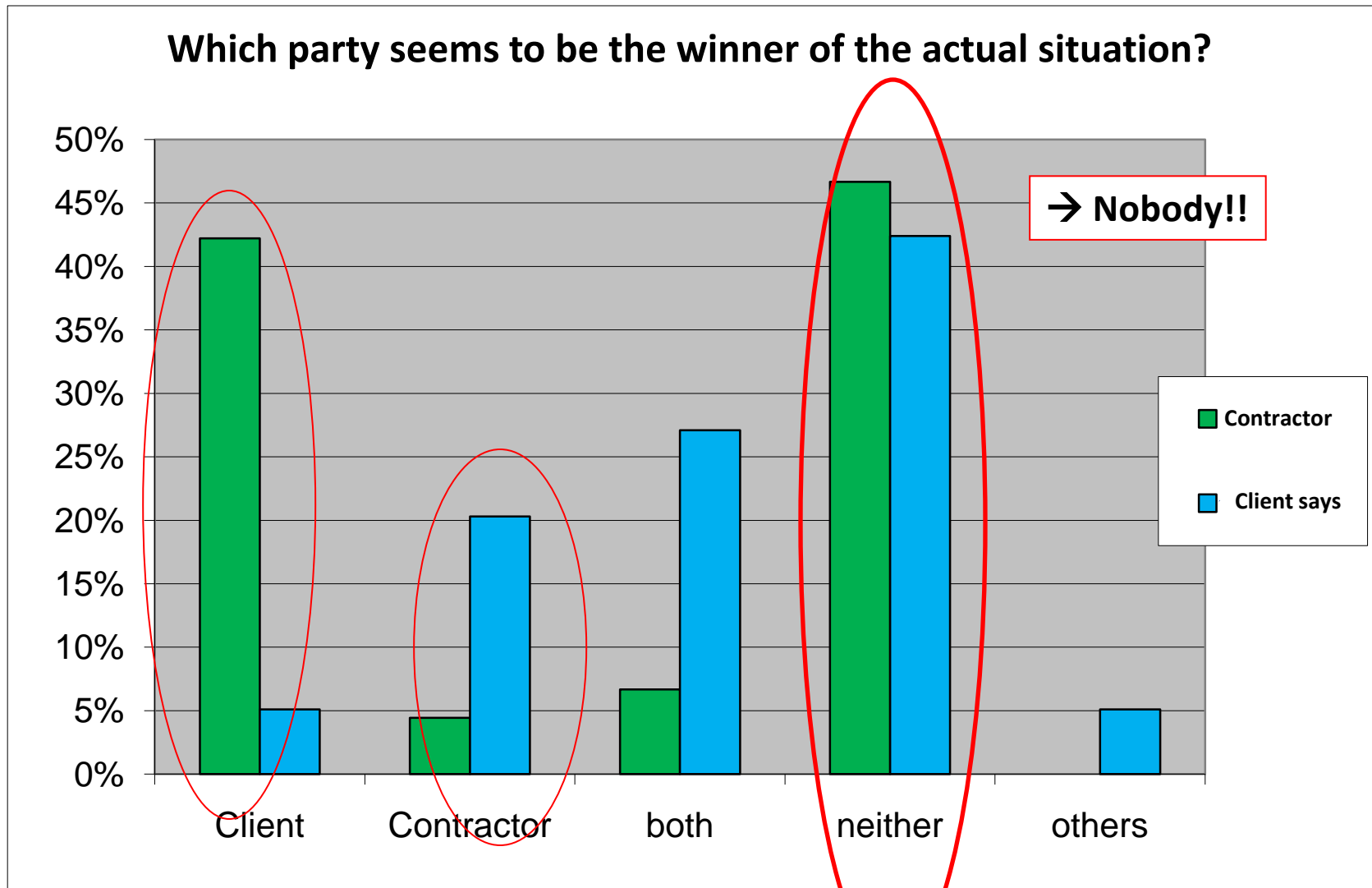
Field study question 1:



Field study question 2:



Field study question 3:



Field study: Principal results

1. Tendering documents and technical specifications are often not clear
2. Claims contribute strongly to the increase of disputes
3. Risks are mostly not fairly distributed between client and contractor
4. Poor data quality mostly contributes to an increase of disputes
5. Responsibility and the speed of decision making are success factors
6. Alternative dispute solutions (ADS) contribute to partnership
7. Incentives for project optimization by the contractor contribute to partnership!



And now? – Conclusions

Research

- Literature investigation about infrastructure (IS) projects
- Own research (partnering models for IS projects, best practice in IS projects)
- Participation in EU-Research (best practice in large IS projects in Europe)



Success factors and failure factors identified!



Deductions for a successful client – contractor relationship

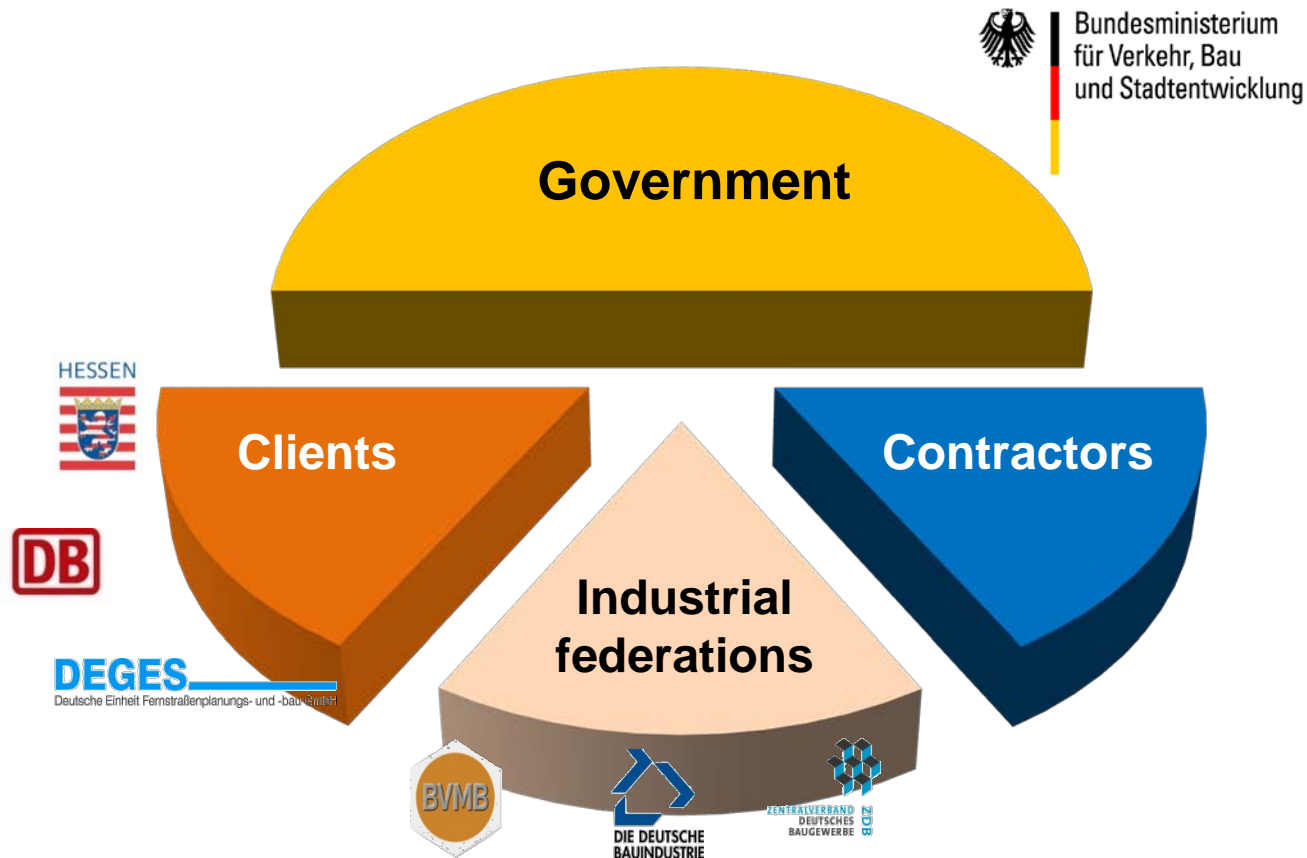


Elements for a partnership between client and contractor!



Research „Partnerschaftliche Projektabwicklung“

University of Kassel, Chair of Project Management and research partners:



9 regulations for partnership

→ guidelines which contribute to lean thinking too

- 1. Trust, trust, trust**
- 2. Good and clear project specifications and works information**
- 3. Fair risk handling**
- 4. Open communication**
- 5. Clear and predefined processes and regulations for project changes**
- 6. Clear responsibility on the client's and on the contractor's side**
- 7. Common data systems for data concerning both parties**
- 8. Contractual incentive regulations**
- 9. Contractual alternative dispute solutions**



Regulation 1: Trust – how to build it up?

- Willing partnership → give a leap of faith → accept the win of the other!
 - Regular project meetings
 - Regular common project reviews and feedback meetings
 - General transparency and open communication
 - Clear and transparent regulations for responsibility and decision making
 - Joined data administration
 - Fair risk distribution
- Trust has to be build up all over the project!



Regulation 2:

Good and clear project specifications and works information

- High level of design quality
- The project owner has to clearly define the project specifications (what, how, how much, when, who?)
- The bidder has to assure a complete offer – questioning the client as far as necessary
- Site visit obligatory
- Clearing the specifications between tendering closure and contracting
- Knowledge transfer design / realization



Regulation 3: Fair risk handling

- Fair risk distribution:
 - a) risk to the party, which can manage it the best
 - b) each party must state the risks early, the other party has to carry
- Risk supplements or risk compensation to be paid
- Regulations to pay defined rates for defined disturbances
- **Regulations for handling (new) risks in the current project; risk committee (client + contractor) for deciding what, who and how**



Regulation 4: Open communication

- All information concerning the project, the participants and the stakeholders, who may influence the project, shall be transported in an open and fast way to the concerned persons in the project
- Regulations about the information system should be a part of the contract, of the project handbook or of the kick-off-documents
- Regulations shall be jointly defined by client and contractor
- Regular project meetings
- Regular joint project reviews
- Regular meetings of the steering committee
- Joint project website



Regulation 5: Predefined processes and regulations for project changes

- Project change processes as part of the contract
- Predefined processes (who, when, what)
- Predefined requirements for documents and justifications
- Predefined time schedules for the activities
- Contract change as far as possible before execution
- Proactive detection of necessary changes by client and contractor



Regulation 6:

Clear responsibility on the client and the contractor's side

→ Clear responsibility and organization and good information assures quick decisions

- Clear project organization on clients and contractors side
- Duties and responsibilities have to be transparent on both sides
- Steering committee with executives
- Linking client and contractor with an open information line
- Assuring decision making 24 h and 7 days/w if necessary



Regulation 7 : Common data systems for data concerning both parties

→ Common data = avoidance of parallel processes/work and waste of time
and less conflicts either

- Common data collection, treatment and documentation
- Static data (contract)
- Dynamic data (performance, time schedule, costs, workflow report)
- Defined access admissions



Regulation 8 : Contractual incentive regulations

- **Project optimization in the contract phase (engineering, quality, cost)**
- Motivation for project optimization to the clients benefit
- Bonus means additional earning for the contractor without dispute
- Win-win situation reduces disputes + improves trust
- Predefined incentive regulations for the contractor
- **Reducing costs for equivalent works: sharing the benefit**
- **Shortening of the completion time: bonus**
- **Quality higher than standard: bonus**



Regulation 9 : Alternative dispute solution

Escalation model:

One step after the other
→ gates to be opened
by the management



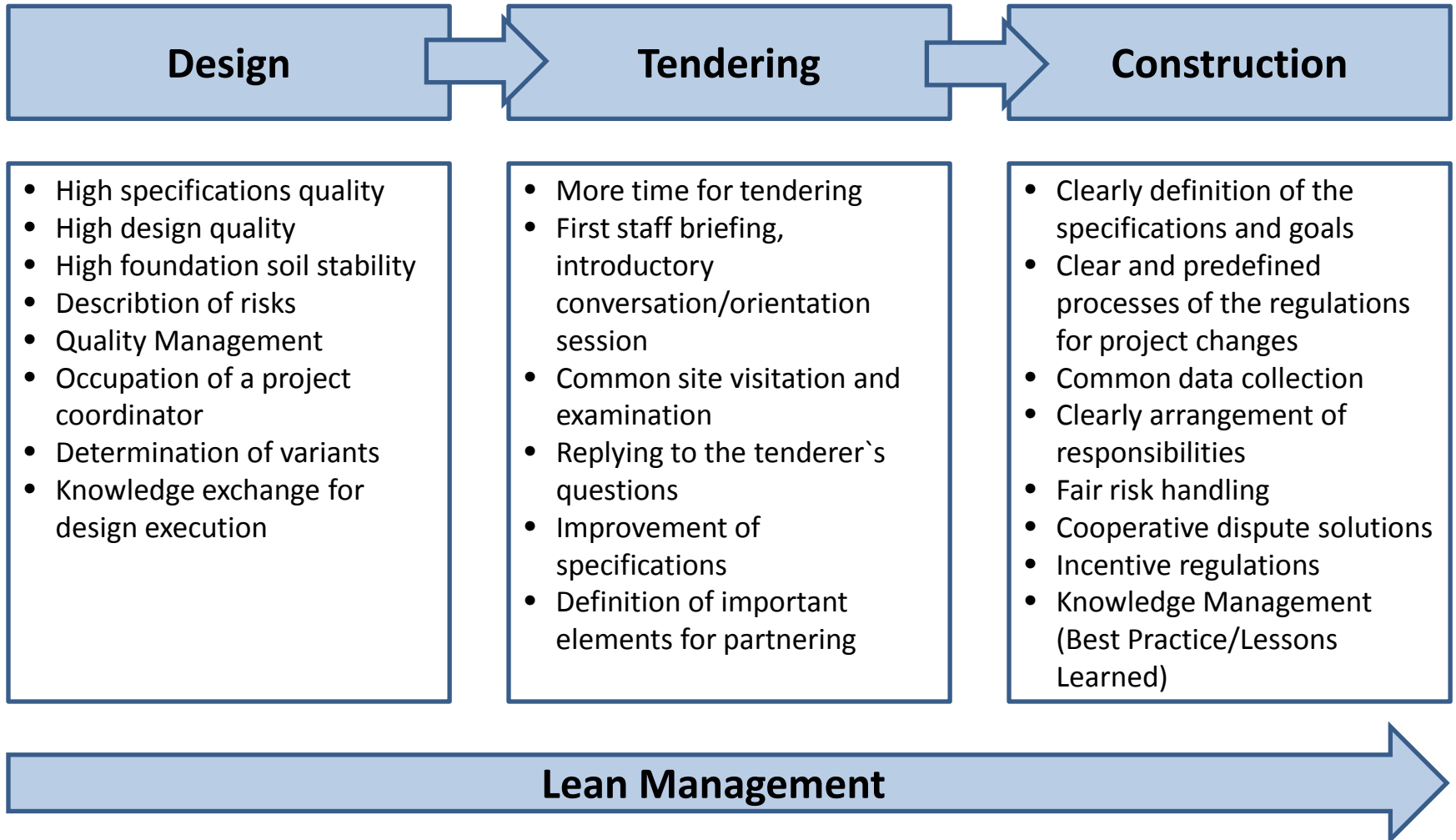
Arbitration agreement
in contract

Phase 1a

Operational Level

Project Manager

Partnering during the project realization



Present state:

- Application of the guidelines in a testphase
- 3 Pilot projects: national Highway, regional Highway, Railway
- 2009 – 2011
- Analysis + Evaluation
- Revision



Concluding remarks

- Changing from opponents to partners demands a system of elements to be changed
- Partnering models have to be tailored to the project type and to the singular project
- Willing partnership is a precondition for the participants
- Predefined regulations are obligatory to “help the good will to survive”
- Big clients may be the first to give a leap of faith – they are more powerful than the contractors
- Clients must offer partnering contracts to the bidders
- Contractors must carefully handle such chances and give back trust



Contribution of Partnering to Lean Management

- Clear specifications → time gain, better quality
- Less claims → smaller managerial staff, less costs
- Risk avoidance, joint risk solutions → better quality, time + cost gain
- Data quality, common data → smaller managerial staff, cost + time gain
- Clear responsibility and speed decisions → time and cost gain
- Alternative dispute solution → less conflicts, faster solutions, time gain
better quality
- Incentives → added value, better quality, better products
- Partnership → more transparency for all processes

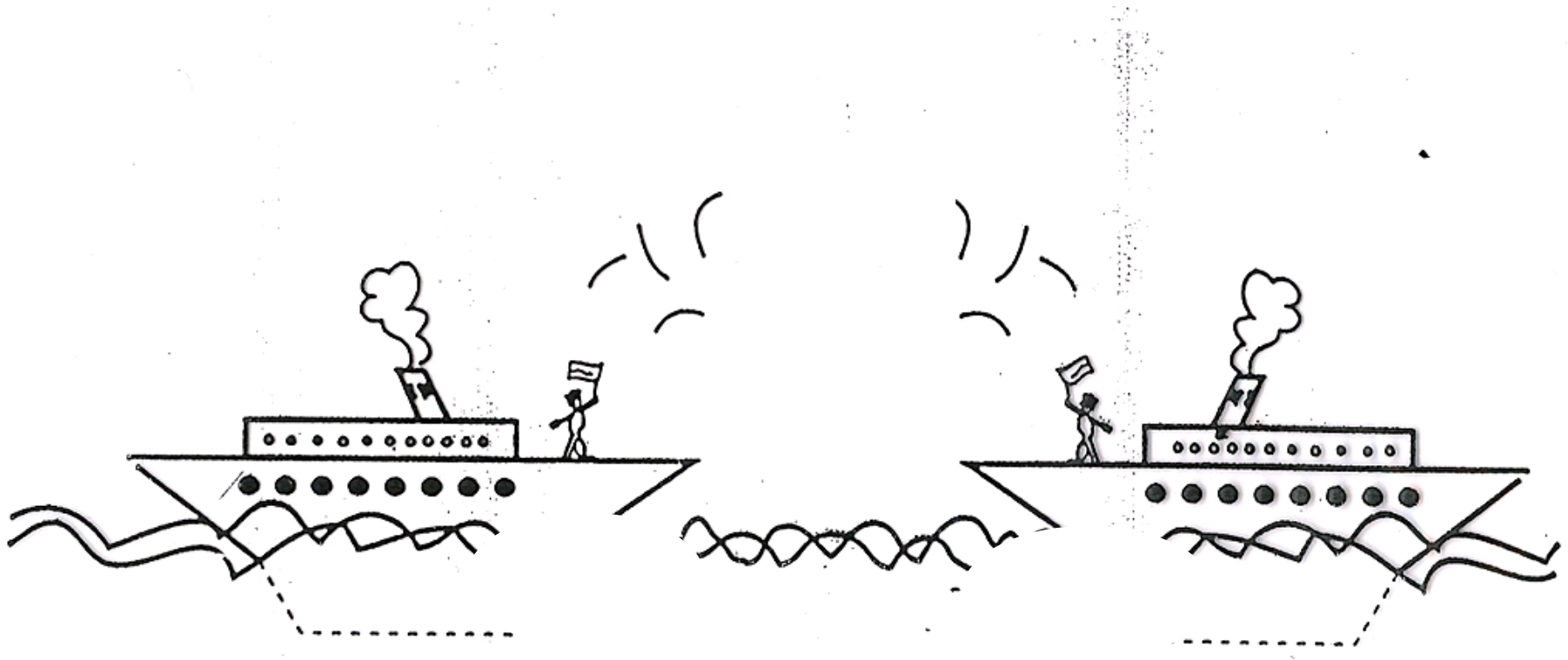


Contribution of Partnering to Lean Management

- Creation of a reliable base for communication, coordination and cooperation by openness, trust and a cooperative atmosphere
- Clear definition and mutually agreed objectives and goals
 - Conflict resolution on the site
 - Project completion on time schedule
 - Project completion within budget
 - Assure high quality
 - Project optimisation by added value



Partnership between contractor and client???



Thank you for your attention!

