

# PARTNERING AS A STEPPING STONE IN THE TRANSITION TO PSS FOR THE CONSTRUCTION INDUSTRY

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# Partnering can be described as

*“a long-term commitment between two or more organizations for the purpose of achieving specific business objectives by maximizing the effectiveness of each participant’s resources.”*

Construction Industry Institute, 1991

# Aim of paper

The paper aims to explain and analyze

- *how the construction industry can benefit from PSS, and*
- *how collaborative approaches such as partnering can be a stepping stone in this transition.*



# Approach

- Unique project for Sweden
  - Outspoken aim in contract agreement to collaborate
- Project documentation and interviews with actors
  - Buyer, contractor and design consultant



# Introduction to the case study

- Design-Build project for road infrastructure
- One of the first major road projects in Sweden using partnering
- Scale and scope
  - Budget 43 million €
  - 20 km of highway and 11 bridges
- Result
  - 2,1 million € below the estimation
  - Finished 2.5 months ahead of schedule



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<b>Respondent</b>	<b>Role in the project</b>	<b>Party</b>
A	Project leader, owner of project	Buyer
B	Deputy project leader	Buyer
C	Project leader	Contractor
D	Quality, Environment and Work environment (QEW)	Buyer
E	Construction manager, road	Contractor
F	Paving expert	Buyer, Consultant
G	Paving expert	Contractor
H	Head of design	Design Consultant

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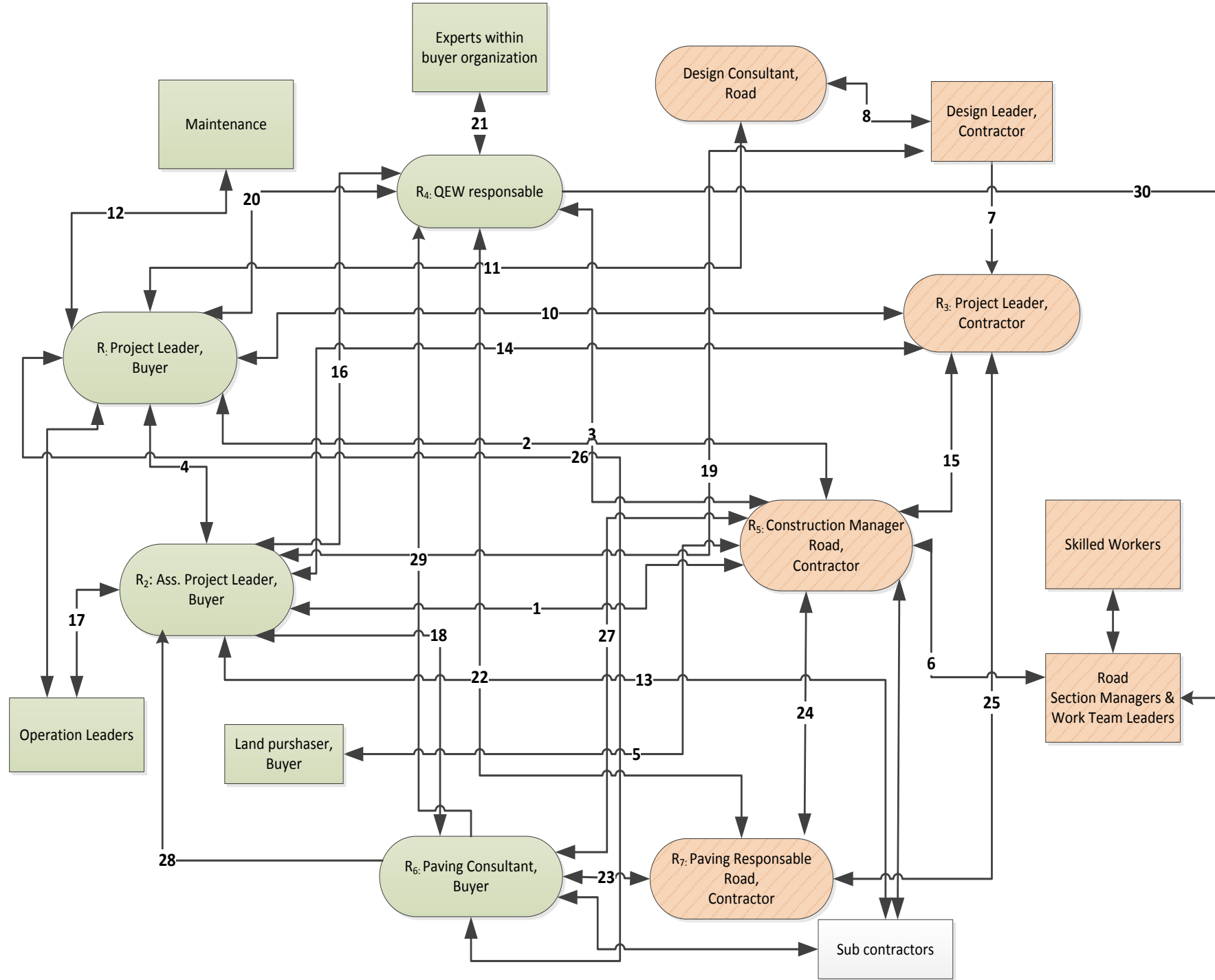
# Responsibility and risk allocation

- The buyer carried the risks for the technical solutions and the contractors the risks for the execution.
- Difficult to define exactly who was responsible for what parts since they worked together
- Since the buyer carried 60% of the profit/loss, this actor also had responsibility for the technical solutions selected for the project.

# Project organization

- Shared goals
- Co-located
  - Informal communication
  - Team building
  - Reduced lead time for decisions
- Active participation of the buyer
- Collaboration i design phase





# Design in collaboration

- Buyer, contractor and design consultant co-located during design phase.
- Informal forum for discussing technical solutions – brainstorming
  - solutions were questioned and motivated
- Shortened the lead times
- Active design: design not fully completed when construction began
  - Room for site adjustments
- Not enough time for innovations – instead incremental development



# Life-cycle perspective for technical solutions

- The maintenance perspective was not within the scope of the project
- Maintenance representatives invited but no active participation
- A clearer environmental focus needed → more environmental friendly solutions but more expensive (contractor)
  - Initially more expensive
- Economic incentives related to environmental thinking → drive innovation in the industry (contractor)



# Why collaboration?



- Potential productivity improvements – collaboration is one way
- Case study: close collaboration → reduced cost, environmental impact and time
- Increased level of trust improved information sharing
  - Find the best solutions together
  - Knowledge base of the project larger than individual knowledge
  - Iterative feedback loop from building site to design
  - Foresee consequences in design and modify accordingly
  - Changes made during the project indicates that not all design decisions should be taken before the construction phase.
    - Only possible if a more result-based contract with degrees of freedom is procured

# The way forward?

- Including maintenance questions in a more direct way → choice of material and quality (respondents)
- Co-creation of value seems to be a starting point for resource efficiency.
- The buyer has to have a life-cycle perspective which is reflected in the requirements set for the contracts
  - Requirements incorporated into the projects without the project itself having a long-term perspective.
- Public authorities leverage on the market



**THANK YOU FOR YOUR ATTENTION!**

**QUESTIONS?**

