

Atle Engebø and Ola Lædre

Challenges in collaboration-oriented projects

Concept report no. 74

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English summary

This study examines collaborative project delivery methods, which represent a distinct class of delivery methods. In theory, the collaborative project delivery methods should get organisations to collaborate on achieving the project's goals as a whole while achieving their own goals. In Norway, collaborative project delivery methods have gained a foothold in the construction sector. The elements included in the collaborative project delivery methods vary, but most are based on design and build contracts with early contractor involvement.

While ample literature is available on the benefits of implementing collaborative project delivery methods, there is limited research on the associated challenges. Therefore, this study addresses the following research questions:

1. What challenges can be linked with collaborative project delivery methods?
2. What recommendations can be made to enhance future practices based on the identified challenges?

The methodology is a meta-study of previous case studies conducted for state, municipal, and private clients. The dataset comprises information from 105 collaboration-oriented projects from 34 different sources. Notable case projects include E6 Jaktøyen-Sentervegen, the Bispevika development, the Tønsberg project, Oslo storbylegevakt, E6 Kvål-Melhus, and E6 Helgeland-Sør.

The analysis has taken a 'bottom-up' approach, resulting in the identification of 11 categories of challenges from the raw data: *entry into collaboration, contract-related issues, supplier involvement timing, target price development, organisational concerns, co-location practices, soft elements, project team dynamics, the collaboration phase, continuity, and the delivery phase*. The literature suggests that collaborative project delivery methods are suitable for projects with a relatively high degree of uncertainty and complexity, as this provides opportunities for influence that can be collaboratively utilised by the actors involved. The challenges identified suggest that the way these collaborative methods are implemented is not fully

utilised, and sometimes they are chosen uncritically. Preconditions such as uncertainty and complexity should be in place, and the owner organisation must be sufficiently attuned to these strategies. Collaboration requires investments in time and resources, including expertise and staffing. A lot of literature is available on the benefits of implementing collaborative project delivery methods, while the literature on challenges is more limited. This study, therefore, looks at the following research questions:

- The entrance to the collaboration must be harmonised with the delivery method, especially with regard to staffing and resource allocation. Collaboration requires the client to be more involved than in traditional design-build contracts, and some actors highlight a lack of management and a poorly involved client as a challenge.
- The contracts do not necessarily incentivise the parties to work together towards common goals. When it is impossible to formulate a complete contract, the parties must at least agree on what it clarifies. Here is one of the strengths of a collaboration phase: the parties go through the basis of the project together and can clarify uncertainties. At the same time, it can be a disadvantage that both parties – after investing resources in the collaboration phase - may be willing to overlook ambiguities to partially get started with the delivery.
- The point of contractor's involvement is difficult, as there are challenges associated with both very early and very late involvement. If they arrive too late, the biggest decisions have already been made. Then there is nothing to “collaborate” about. If the contractor comes in too early, properly governing the project will be more difficult.
- Target price development often involves a form of “design-to-cost,” where the client and contractor strive to balance cost and functionality. The challenges associated with target price developments often become apparent when the parties are on the verge of signing a contract for the project execution. If the owner has not been sufficiently involved in the target price development, the target price may have escalated past the owner’s maximum price. The reasons for it may have arisen long before.
- Collaboration requires organisational adaption. Gradual introduction and learning over several projects can be easier for the actors. Collaborative projects encounter challenges precisely because they demand a distinct organisational approach compared to traditional projects. Although both the client and the contractor are outlined in

the contracts, adherence to these roles does not always occur as anticipated.

- Co-location means that the project team meets physically to develop the project. Co-location is intended to facilitate faster communication and decision-making. Still, the benefits will be reduced if people with the necessary decision-making authority and professional expertise are absent. They may be absent even though the contract requires them to be present.
- Soft elements such as project ownership, shared goals and trust can be overlooked in the implementation of collaborative projects. Elements such as trust could be reduced to just hollow phrases used by the project participants.
- The project team must feel that there is a progress in meetings and workshops and that decision-makers make decisions. The meetings cannot only be about the exchange of information. From a principal-agent perspective, the project team will also play a central role in ensuring that the project aligns with shared goals. Lack of commitment can lead to low agreement on project goals, problematic communication behaviour, and poor decision quality. In short, participants must have the impression that participation in the team makes them more productive than they would otherwise have been.
- The collaboration phase lasts from the contractor's involvement until construction begins. The parties often enter this phase with different interests, so there must be room for a manoeuvre that benefits both. To ensure that participants gain more, solutions must be flexible, and the client must be willing to leverage this flexibility. If the project is highly detailed before collaboration begins, the room for manoeuvre will be limited.
- Continuity within the project team makes it easier to sustain collaboration. When participants are replaced, the new members must build new trust and invest time familiarising themselves with the team and the project's history. Consequently, replacements could also be employed strategically by the parties if there are commitments or similar obligations they wish to discontinue. Hence, the strength of collaboration could also be its most significant weakness, as an opportunistic actor could easily exploit it.
- Many collaboration-oriented projects are characterised by collaboration in the development phase, while in the delivery phase, there may be less collaboration than appropriate. Although

collaboration often holds the most potential during the initial phases when opportunities to influence still exist, it is typically in the delivery phase that the potential benefits, such as reduced conflicts, fewer changes, and less opportunistic behaviour, become evident. Therefore, it can be challenging if collaboration during the delivery phase does not receive adequate attention.

The report's main contribution is mapping challenges in collaboration-oriented projects. These challenges can serve as a 'warning signal' for collaboration heading in the wrong direction, making them valuable for project participants in collaboration projects.

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Forskningsprogrammet Concept skal utvikle kunnskap som sikrer bedre ressursutnytting og effekt av store, statlige investeringer. Programmet driver følgeforskning knyttet til de største statlige investeringsprosjektene over en rekke år. En skal trekke erfaringer fra disse som kan bedre utformingen og kvalitetssikringen av nye investeringsprosjekter før de settes i gang.

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