



# STEPS

THE **S**UPPORT **T**OOL FOR **E**FFECTIVE **P**ROCUREMENT **S**TRATEGIES  
INFORMING THE PROCUREMENT STRATEGY OF LARGE  
INFRASTRUCTURE AND OTHER BESPOKE PROJECTS

April 2022

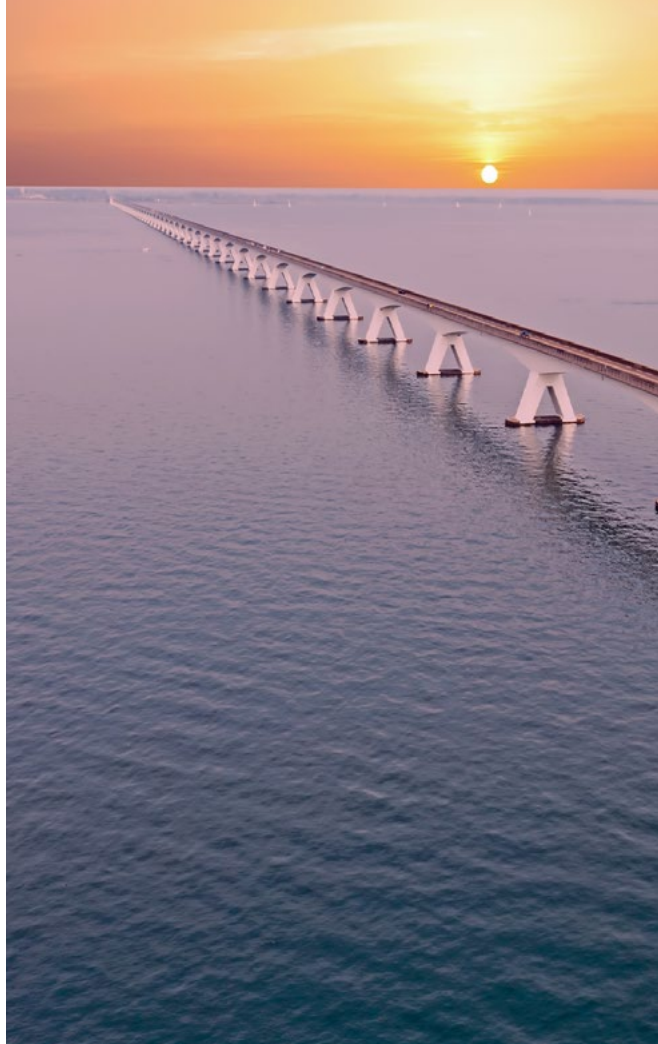
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## **STEPS BRIDGES A MAJOR CAPABILITY GAP FOR PUBLIC AND PRIVATE SECTOR PROCUREMENT OF INFRASTRUCTURE AND OTHER BESPOKE PROJECTS**

### **APPLYING STEPS TO THE PROCUREMENT OF INFRASTRUCTURE AND OTHER BESPOKE PRODUCTS AND SERVICES RESULTS IN:**

- ✓ Reduced costs and delays.
- ✓ Reduced conflict and litigation.
- ✓ No loss of innovation potential.

Infrastructure projects are often plagued by cost overruns, delays, conflict, and litigation among others, caused by poor stakeholder management, failures in risk assessment and others. But even if you, as project owner, could do everything perfectly right up to the point of procurement, the project could still fail if you pursue an inadequate procurement strategy.





Procurement choices have major consequences. Two among them are:

- **A low number of bidders:** The breaking down of the project into contracts (the packaging problem) and the risk allocation in them, co-determine the competitive response. Having two bidders instead of 6 may imply a 20% difference in the project cost.
- **The wrong choice of the delivery model** (i.e. Design-Bid-Build, Design&Build, collaborative models...) **can in itself lead to an exorbitantly more expensive infrastructure.** The current state of the art promotes a one-size-fits-all logic, ignoring the fact that activities in major projects are not homogenous in terms of risk or uncertainty.

There is a multitude of other consequences of poor procurement strategies and STEPS can guide you pass them.

**STEPS is at present the only evidence-based tool available to inform the procurement strategy of major projects.**

STEPS has been developed by the Queensland University of Technology (QUT) and the Organization for Economic Cooperation and Development (OECD), which is supported by its 38 member countries.

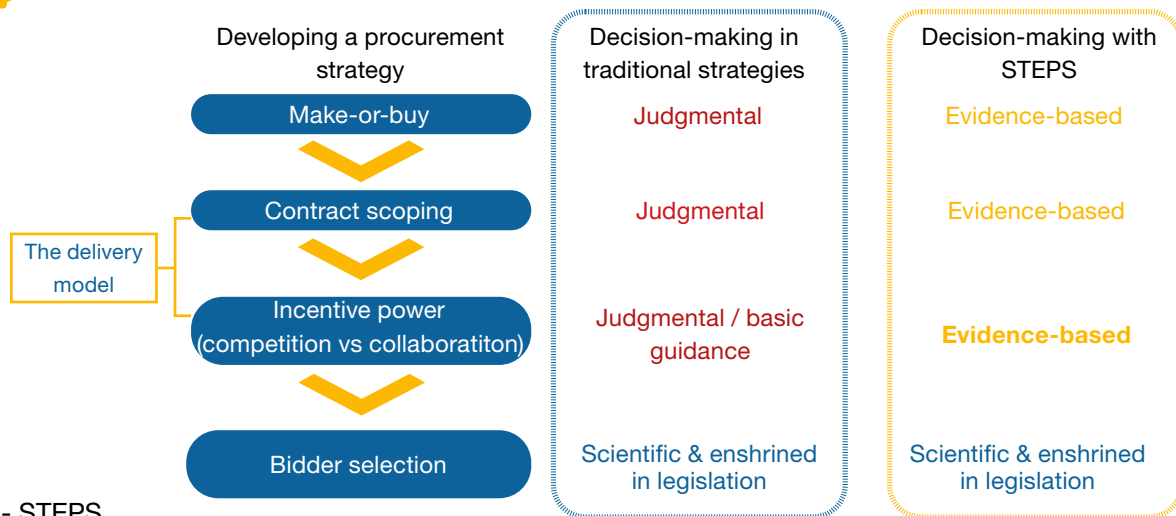
## INFORMING THE PROCUREMENT STRATEGY

A procurement strategy is far more than deciding which delivery model is best for you. It is a set of steps from the formal decision to build a project (after the project appraisal phase is completed) to the signature of the contracts for the project. Failure to address any single step appropriately embeds problems in subsequent steps and guarantees procurement failures.

Public (or private) buyers do not have the tools to approach the sequence of these decisions in an evidence-based manner, apart from the bidder selection.



**STEPS, on the other hand, approaches the entire procurement strategy in an evidence-based manner.**





## HOW DOES STEPS WORK?

*STEPS is built on decades of insights of empirically proven economic theory*

Economic theories related to procurement have won several Nobel prizes but they were never combined in a structured analytical process.

**STEPS seeks to prevent three key pre- and post-contract procurement failures.**

### PRE-CONTRACT FAILURES



**Competition failure**  
(too few bidders)

### CONTRACT SIGNATURE

### POST-CONTRACT (DURING EXECUTION) FAILURES



- **Hold-up**  
(events, in which the supplier bargaining power leads to high cost premia)
- **Inadequate risk allocation**  
(e.g. one size fits all commercial arrangements)



*The **STEPS** methodology can be broken down into the following two phases:*

# 1

## PREPARING INPUTS

### A. Breaking down a project into activities

In the context of STEPS, “activities” are discrete pieces of the project. These may be integral parts of the functional elements or the functional elements of the project themselves.

Activities are defined by:

- > identifying the highest specialisation of the firms on the market,
- > determining technological boundaries between them (e.g. plumbing involves a different set of skills than electrical works),
- > and ensuring they are not financially trivial.

It is important to stress that STEPS will not only look at the tier one contractors but rather focus on subcontractors behind them.

### B. Determining the economic attributes of the activities

Through empirical research, economists have determined specific economic attributes that help predicting when procurement failures are likely to occur. In this phase, each activity is scrutinized to determine those attributes.

vi - STEPS



## 2

## BUILDING THE PROCUREMENT STRATEGY

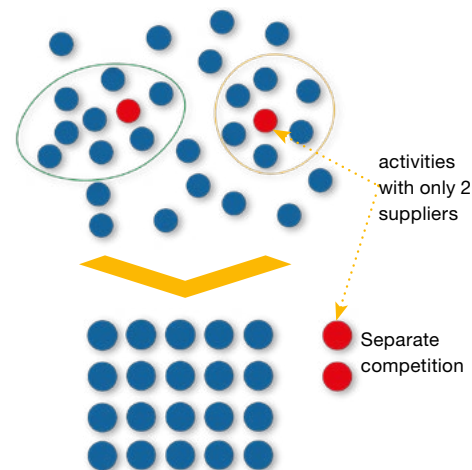
Once we understand the economic attributes, which help us identify potential procurement failures, a strategy to manage these must be devised. The two examples below present some of the common failures in procurement and how STEPS can help identify and provide tactics to avoid them:

### A. Contract scoping issues (the packaging problem)

During the STEPS activity analysis, we detected that two activities had only two suppliers, while the others had many. Tendering this project as a single competitively bid contract would have been a competition failure because other suppliers would have organized around these two suppliers, leading to two consortia bidding. We would have been effectively forfeiting the competition benefits for all other activities, which have many suppliers.

One solution in this case was for the procuring authority to hold a direct negotiation or a separate competition with the suppliers for the two activities to agree on a price separately. The two became nominated suppliers to deliver services at the pre-agreed price in the competition for the remaining activities.

The problem of having two activities with two suppliers only cannot be resolved. However, the competition incentives for the remaining activities with many suppliers can be maximized.



## B. Supplier bargaining power issue (Hold up):

In the STEPS analysis we discovered that for one of the activities on the critical path, any contract would have had to be re-negotiated due to inherent uncertainty. Because the project owner needed to deliver the project on-time or suffer international embarrassment, the supplier had the upper hand in any renegotiation. If we had left this activity in the same contract scope as the others, the bargaining power of all included suppliers would have been elevated.

Here, one tactic is to opt for a nominated supplier. But to better handle persistent uncertainty, another option is to procure this particular activity through a separate contract, on a collaborative basis for example.

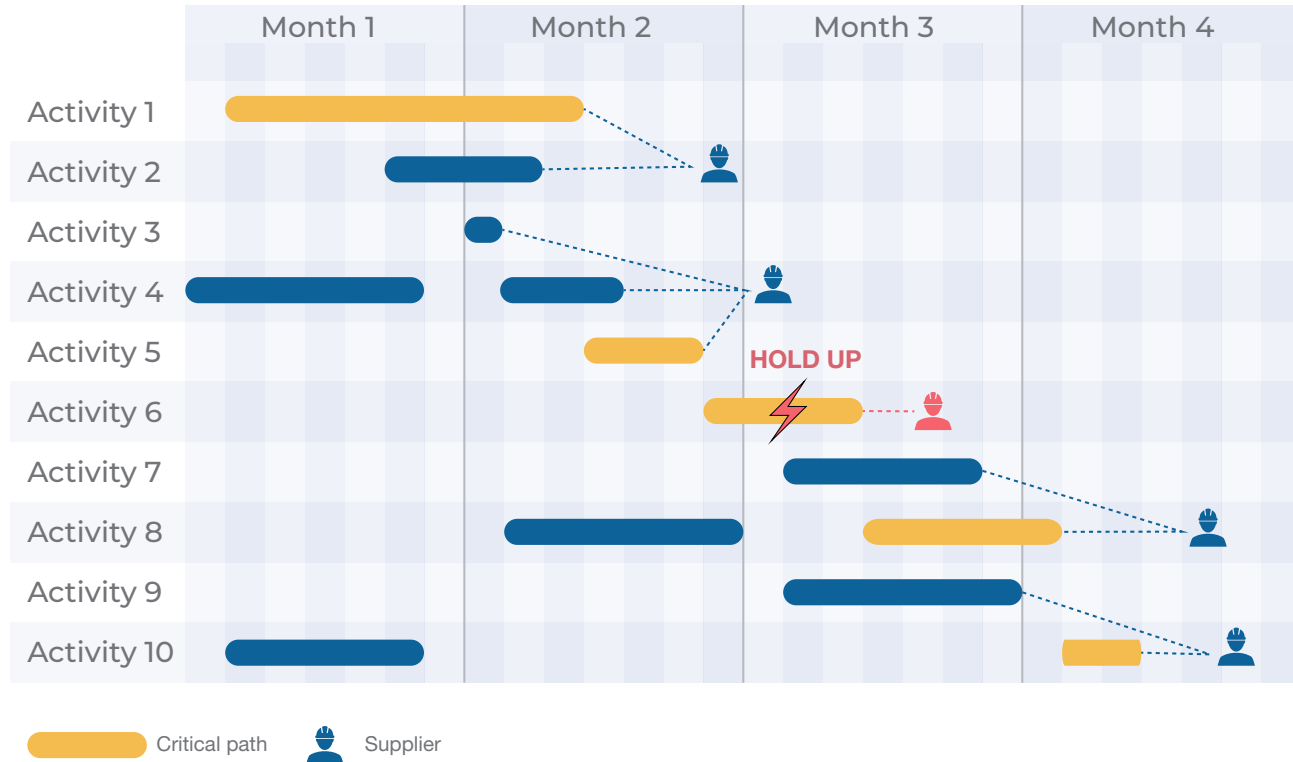
The two examples above are two of many other issues. *Using STEPS, you can avoid:*



- ✗ Activity bundles (contract scoping), which lead to very few bidders because of bad contract scoping.
- ✗ Risk of misallocation, where the buyer's organisational incompetence leads to high infrastructure cost, delays, and conflict (capability mismatch).
- ✗ Risk of misallocation that promotes hold-up, leading to increased cost, delays, and litigation.



**A case of hold-up: an activity likely to need renegotiation is on the critical path and delays are of critical importance to the project owner.**



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## THE OUTCOME OF THE STEPS ANALYSIS

### *A comprehensive procurement strategy*

A comprehensive procurement strategy helps you define, among others, the capabilities you need to retain in-house, the contract scoping of the project, and the commercial terms of those contracts.

The procurement strategy solution will also depend on the mission of your organisation: Are you procuring a one-off project within the medium term or is your mission to deliver a mega project or a portfolio of similar projects over the longer term? These aspects matter as they inform whether your organisation should build some capabilities in-house or continue buying them on the market.

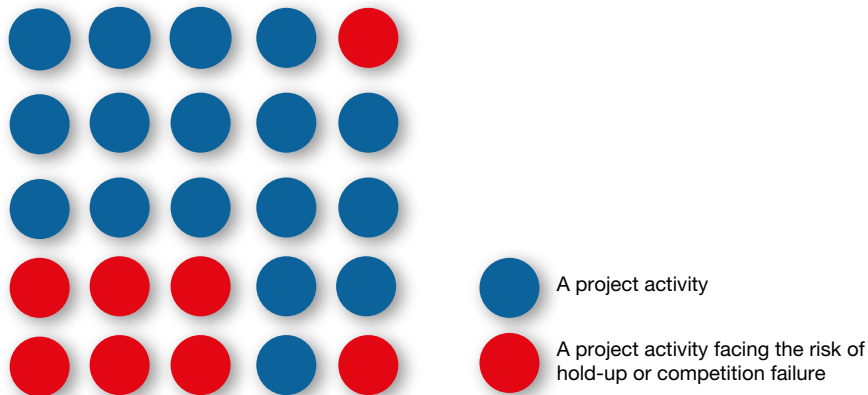


**STEPS can be used by public sector buyers as well as private sector buyers in industrial B2B applications.**



**An optimal procurement strategy for a major project rarely consists in a one-size-fits-all solution.**

Tendering the example below as a single contract with a single risk allocation approach, i.e. a single delivery model, would be a disaster. STEPS will help you manage the risks through careful contract scoping and targeted application of different delivery models.



## PROJECT OWNER'S OBJECTIVES AND STEPS

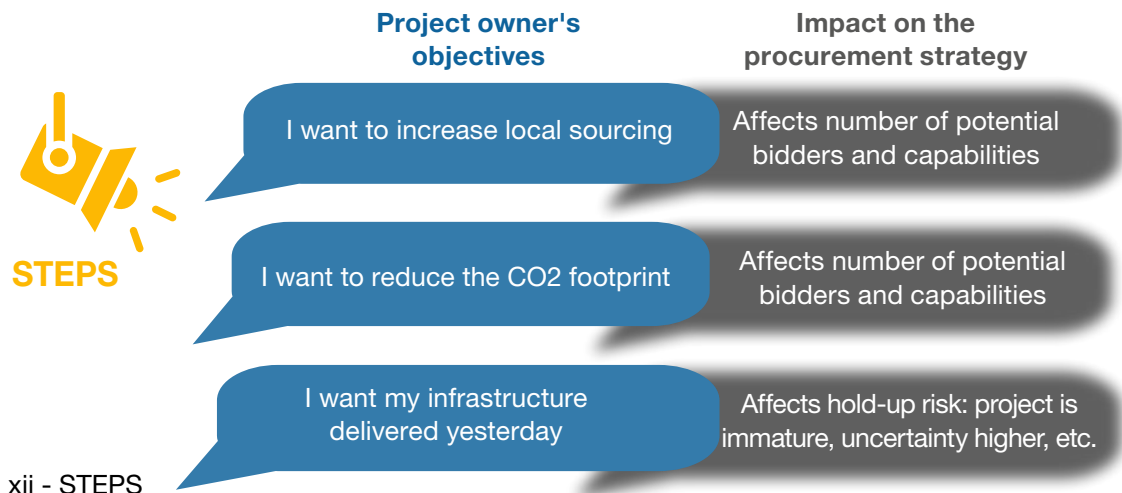
*STEPS sheds light on the options and trade-offs the project owner faces in achieving his/her objectives.*



**If the objectives themselves lead to procurement failures, STEPS will help reduce them.**

**STEPS can help you better understand the trade-offs between your objectives ahead of the procurement process.**

For example, increasing the local sourcing in the project may reduce the number of competent suppliers available for particular activities. STEPS helps you manage potential procurement failures. It helps devise a procurement strategy that will minimize potential adverse impacts on the cost or schedule of the project at a given quality. Conversely, by providing feedback on the consequences of a particular objective, STEPS can also help you as project owner to decide when the cost of this objective is too high and should be re-assessed.





## WHEN SHOULD YOU APPLY STEPS AND WHAT INPUTS DO YOU NEED?



The value of STEPS is highest when applied on larger projects, starting at about EUR50 million and going into billions. However, the market context matters. Depending on what/where you are procuring, in some local markets there may be a limited number of major national contractors, who can handle contracts for values below EUR50 million.



An outline design for your project must already be developed. That is something that a prudent procurement strategy approach will require anyway.



An initial detailed risk analysis should also be available (e.g. at RIBA<sup>1</sup> stage 0 – 1 , or the German HOAI <sup>2</sup>). That too is something that a prudent procurement strategy approach will require anyway.



Expect that some of your expert staff who know the market and the technological process of the project to be delivered will be involved in the analytical process through structured interviews and feedback.

<sup>1</sup> <https://www.architecture.com/knowledge-and-resources/resources-landing-page/riba-plan-of-work>

<sup>2</sup> HOAI - Honorarordnung für Architekten und Ingenieure/Honorarium regulations for architects and engineers

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