



Concept Symposium 2018

Governing Megaprojects – Why, What and How

How to avoid Scandalous Cost Growth?

Why do the investment costs for some of the large projects rise far beyond the expected between the concept selection and project sanctioning? Are the concept decisions made based on unrealistic or false premises, or are perverse economic incentives driving the project scope to change completely? How do we recognize the projects most likely to experience scandalous cost growth?

Can project governance be improved such that scandalous cost growth may realistically be reduced or eliminated? How can realistic premises be established early? How can the necessary commitment be established? How can adverse incentives be neutralized? How can realistic cost estimates be established early?

These are questions raised by many frustrated project owners over the years. Some answers may be proposed during the presentation and the following discussions, based on experiences from selected Norwegian projects and the Norwegian major projects governance system.



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The Concept Symposia on Project Governance

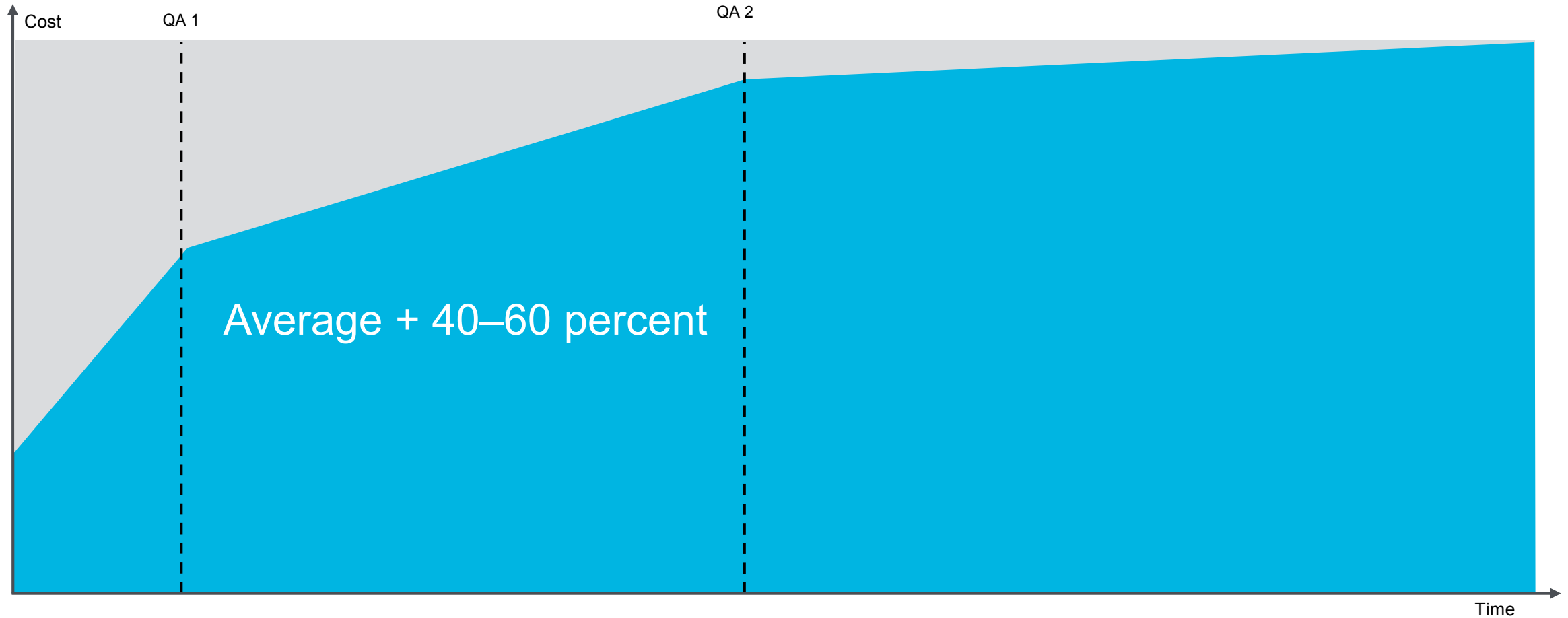
The Norwegian Ministry of Finance and the Concept Research Program hosts every second year a symposium on project Governance. Project governance, in brief, is concerned about investments and their outcome and long-term effects. In view of the problem at hand, the aim is to ensure that the best conceptual solution is chosen, that resources are used efficiently and anticipated effects realized. Resource persons from ministries, governmental agencies, academia, international organizations, and industry are invited. In order to facilitate professional exchange and direct communication between participants, the number of individuals is restricted. The aim is to initiate further international cooperation and research on important issues related to project governance.



HOW TO AVOID SCANDALOUS COST GROWTH?

Concept Symposium 2018 – Sola Strand Hotel

SIGNIFICANT COST GROWTH BETWEEN QA 1 AND QA 2



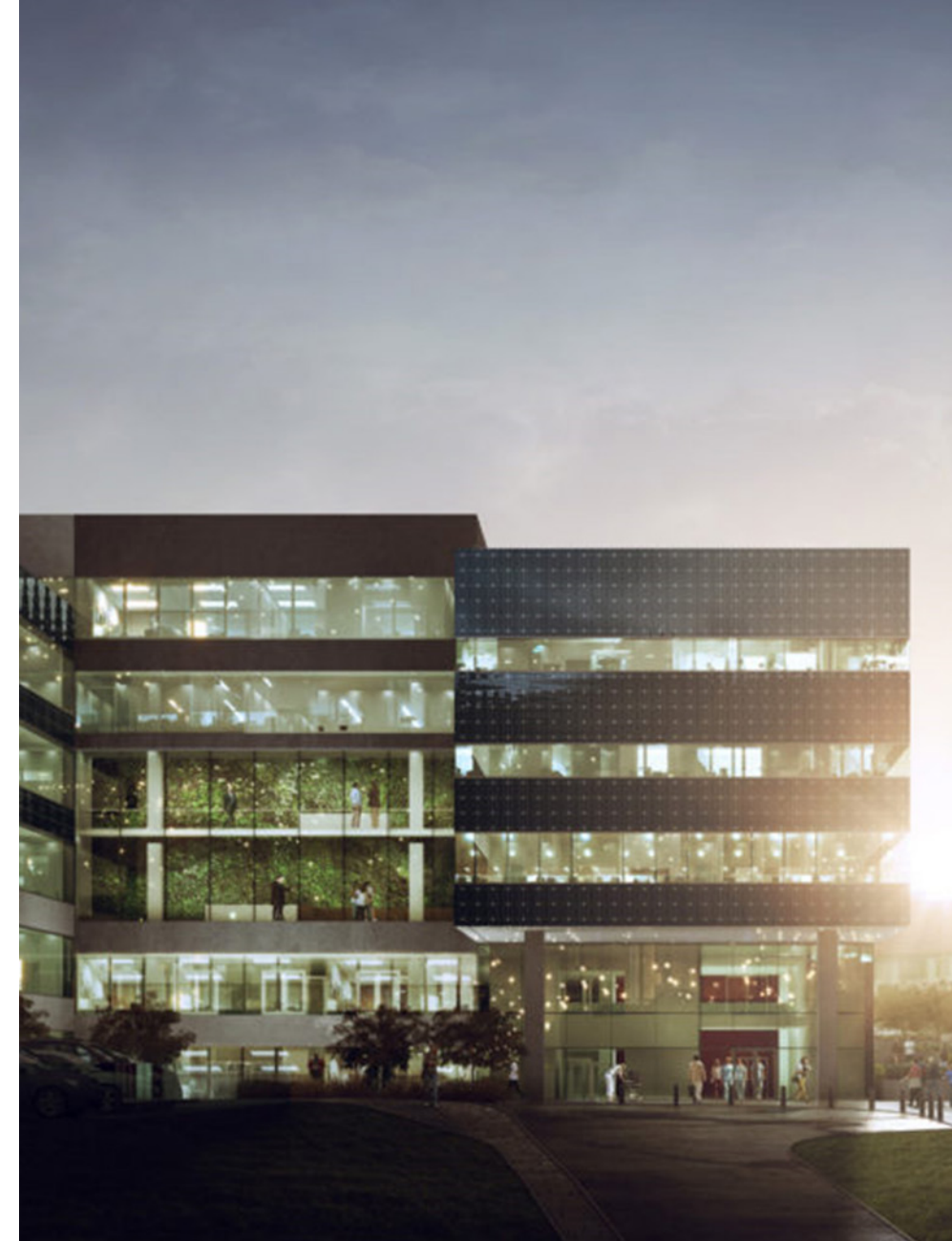


Project Examples
Project Governance
Project Premises
Stakeholder Incentives
Estimating Methods

MEDICAL INSTITUTE + 30 %

MNOK	Concept	Growth	Sanction
Building	2 770	+ 680	3 450
Equipment	320	+ 260	580
Project	3 090	+ 940	4 030

LAB AREA	BUILDING STANDARD	INCR BLD SIZE	LESS RE-USE EQ	OTHER
+ 450	+ 240	+ 60	+ 60	+ 130



FREIGHT TERMINAL + 200 %

MNOK	Concept	Growth	Sanction
Terminal	660	+ 1 810	2 470
Road	90	+ 440	530
Railroad	1 440	+ 2 250	3 690
Project	2 190	+ 4 500	6 690



GROWTH BREAKDOWN

MNOK	QTY	Unit Cost	Total
Terminal	1 040	770	1 810
Road	370	70	440
Railroad	0	2 250	2 250
Project	1 410	3 090	4 500

Changed Premises	Not approved by owner	Sloppy Work	Estimating Methods
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Project Examples

Project Governance

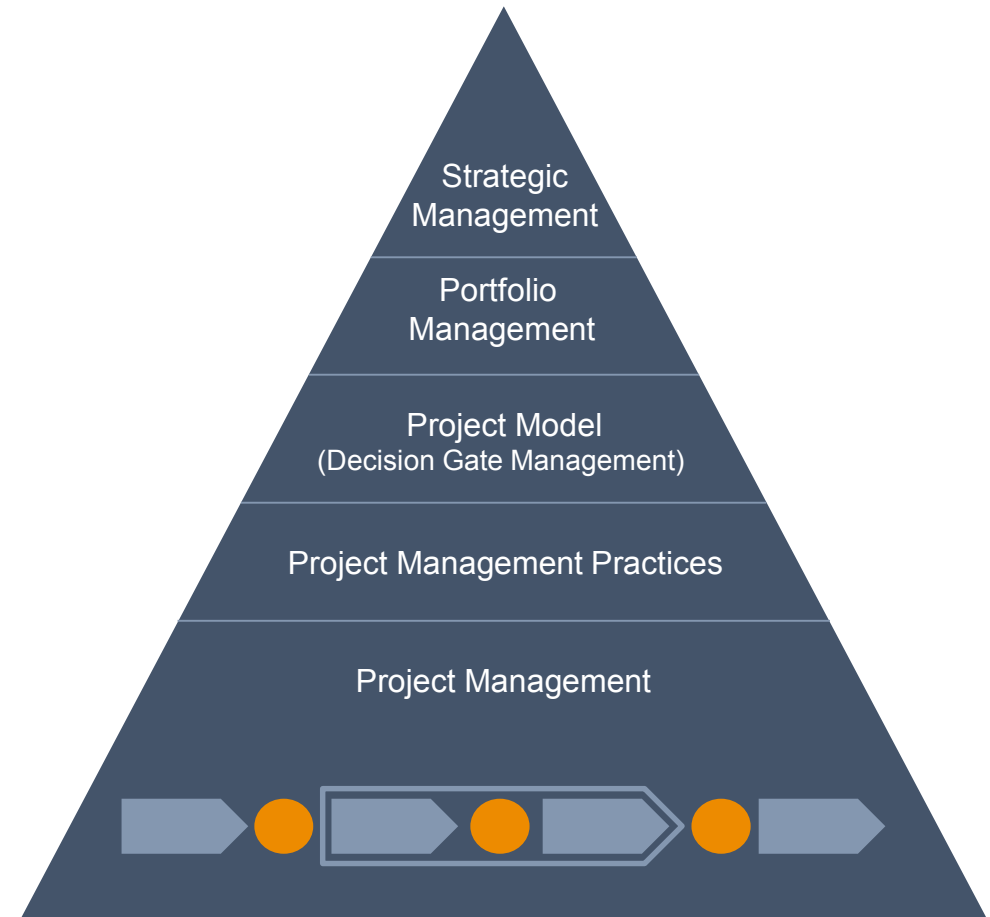
Project Premises

Stakeholders Incentives

Estimating Methods

PROFESSIONAL PROJECT GOVERNANCE

- Systematic maturing of projects through decision gate model
- Defined decisions at each gate
- Defined requirements for the content and quality of the decision support package
- Realistic cost and profitability estimates early
- Premises and goal priority established early
- Changes to premises decided by owners based on updated cost and profitability estimates





Project Examples

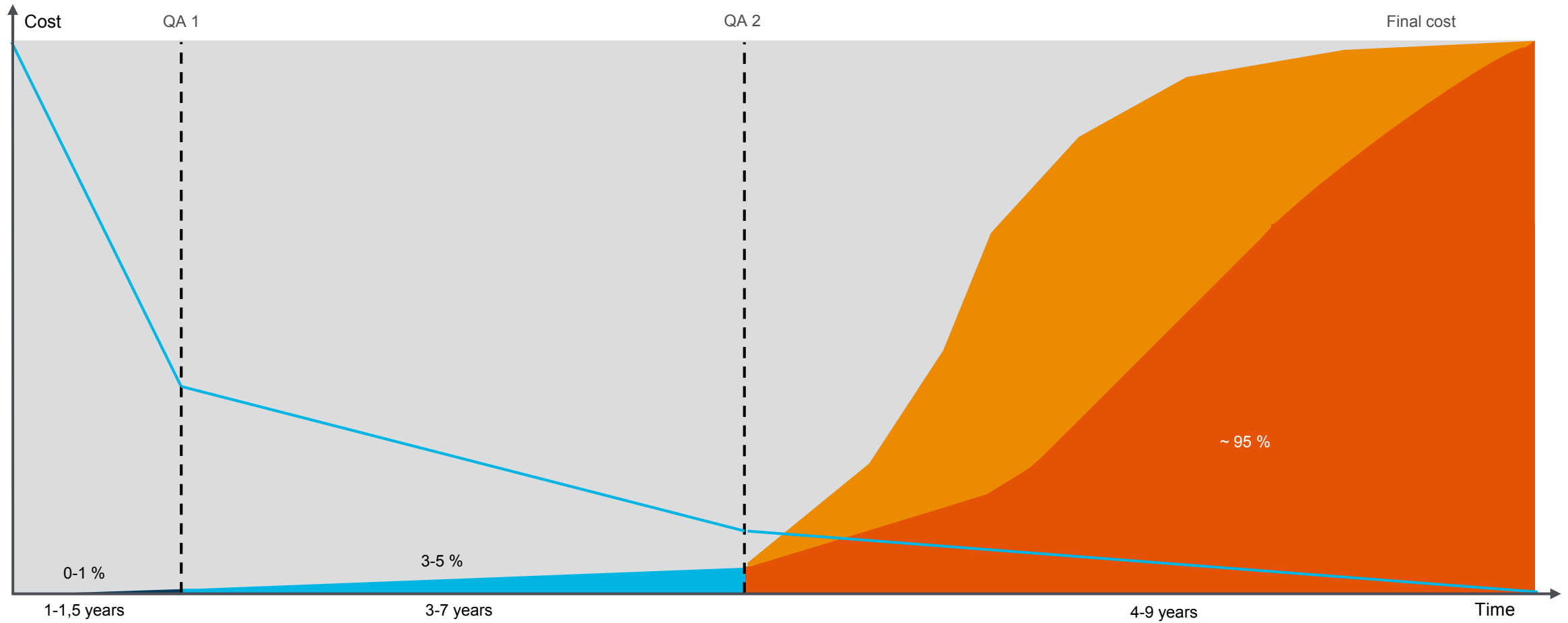
Project Governance

Project Premises

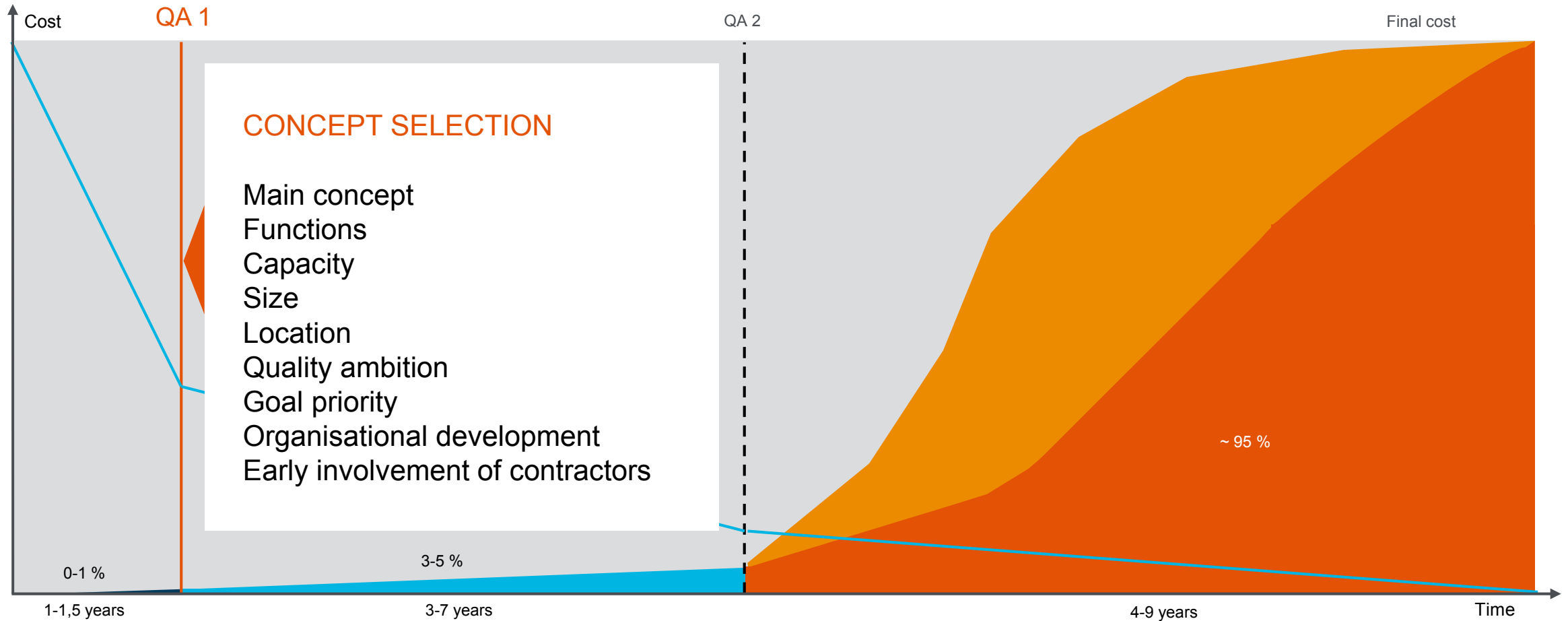
Stakeholders Incentives

Estimating Methods

CURRENT DECISION GATE MODEL



PREMISES TO BE DEFINED AT CONCEPT SELECTION



GOAL PRIORITY IS AN IMPORTANT PREMISE

Cost-driven projects

- Investment cost above budget not acceptable
- Initial scope planned to allow for adequate financial reserves
- Scope reduction acceptable
- Schedule adjustments acceptable

Schedule-driven projects

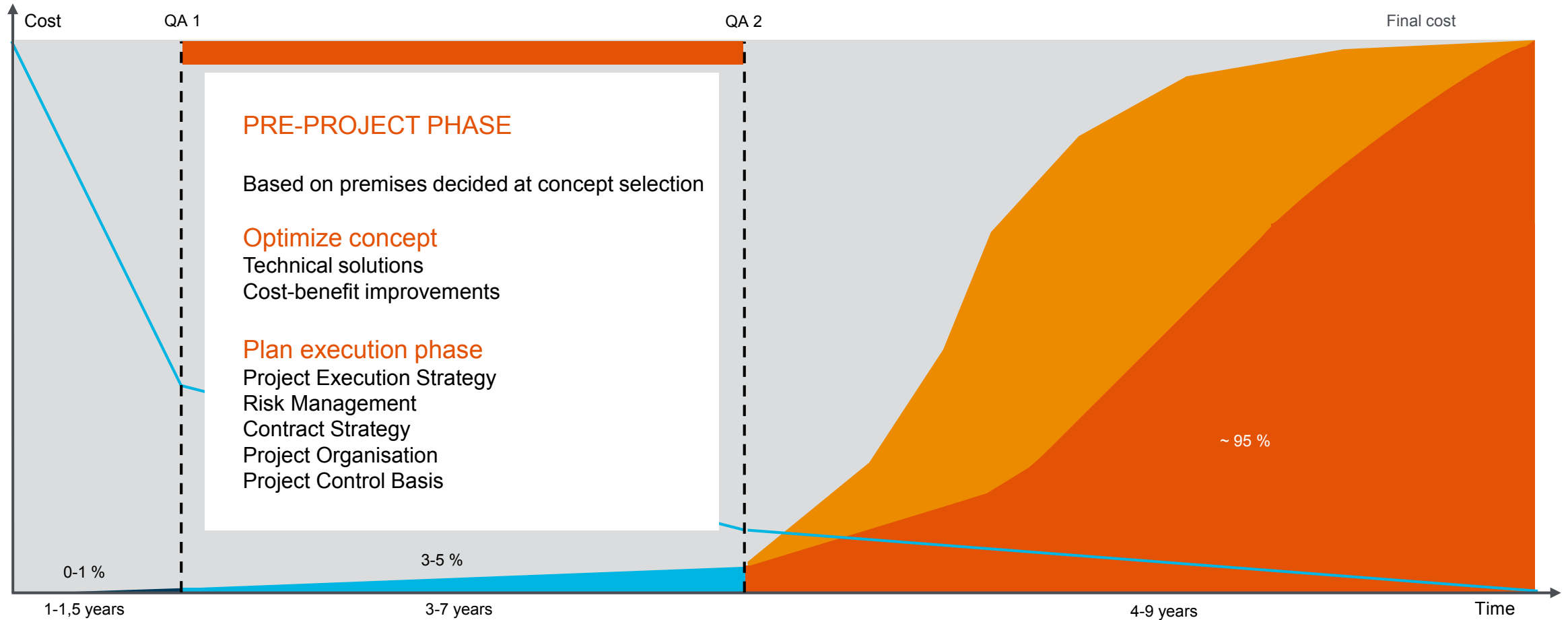
- Delivery later than deadline not acceptable
- Financial reserves required
- Scope reduction acceptable
- Cost above budget acceptable

Scope-driven projects

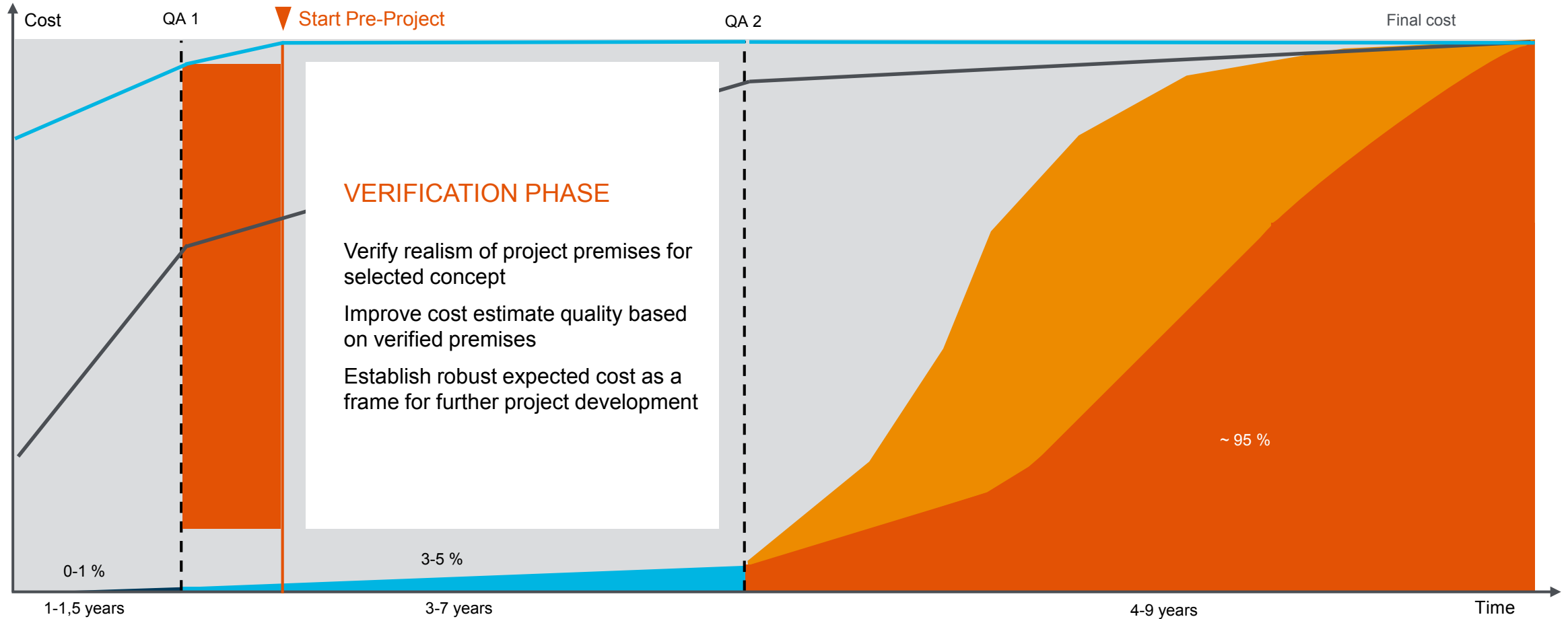
- Quality or capacity less than defined not acceptable
- Financial reserves required
- Cost above budget acceptable
- Delayed deliveries acceptable

- Many projects claims to be Cost-driven, but are in fact Scope-driven (!)

IDEAL PRE-PROJECT



A CONCEPT VERIFICATION PHASE IS REQUIRED





Project Examples

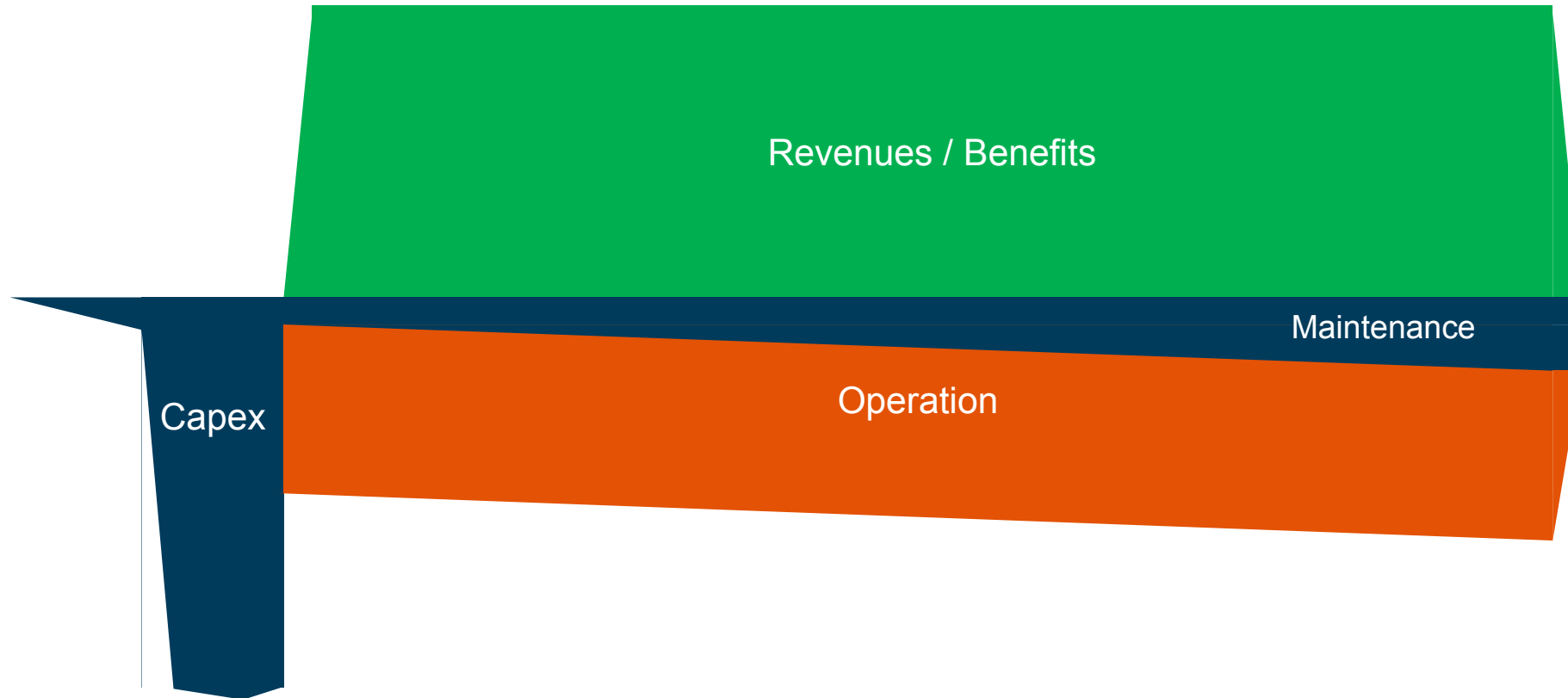
Project Governance

Project Premises

Stakeholders Incentives

Estimating Methods

BUSINESS CASE INCENTIVES IN PUBLIC SECTOR?



Business Case ownership gives the best incentives of success!

STAKEHOLDERS AND NATURAL INCENTIVES

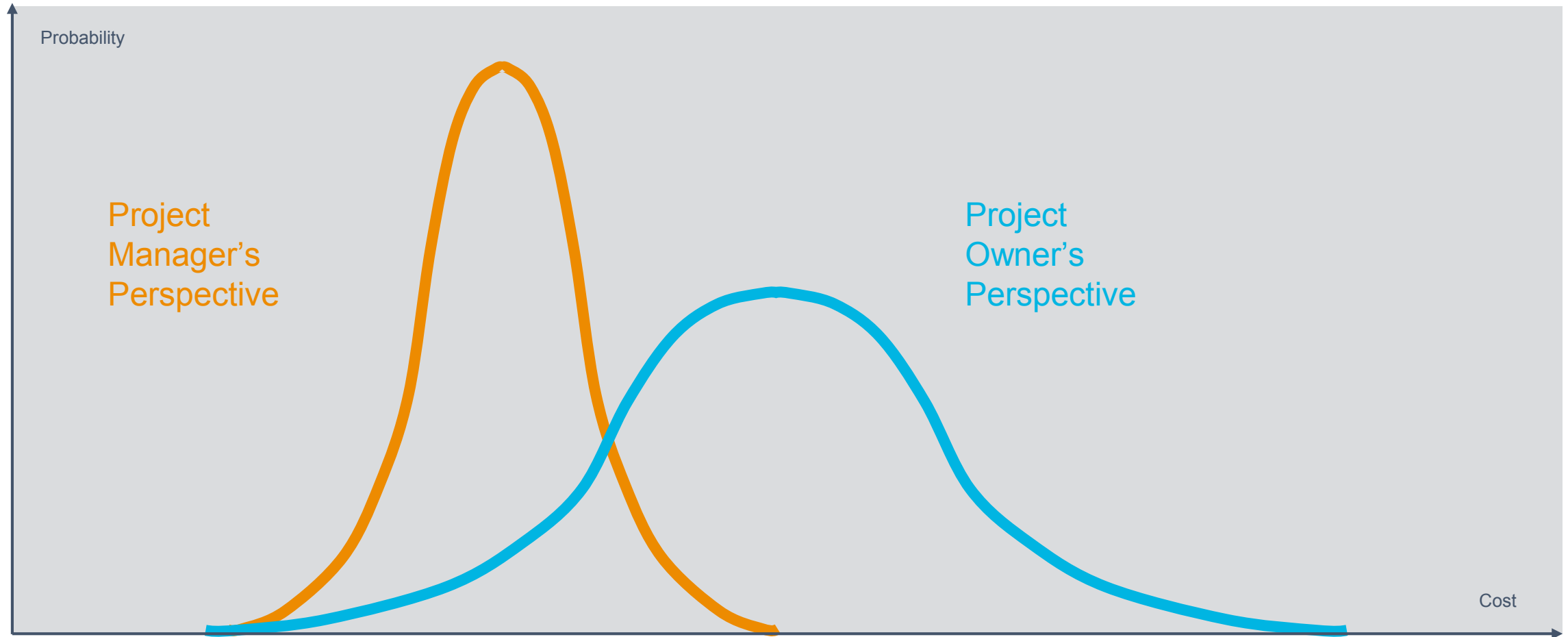
	Owner	Agent	User	External stakeholder
Scope	The right scope	As assigned	Best possible	Best possible
Cost	Realistic estimate	As assigned	Others are paying	Others are paying
Time	Realistic schedule	As assigned	Quickest possible	Quickest possible

- In private sector the owners, agents and users are usually within the same company
- In public sector it varies a lot: defence, health, transportation, education, culture



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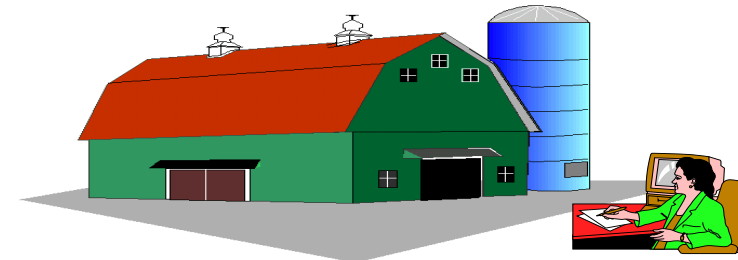
ALL RELEVANT RISK MUST BE INCLUDED



IMPROVED COST ESTIMATING IS REQUIRED

Top-down

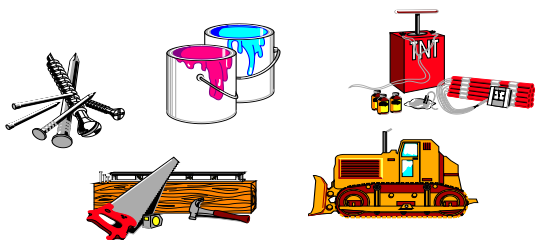
- As-built figures og reference data
 - Experience based judgement
- Function
 - Capacity
 - Physical dimensions



Few elements

Decision

Bottom-up



Many elements

Requires detailed and reliable knowledge about

- Site conditions
- Specific technical solutions
- Detailed quantities
- Execution schedule
- Specific complexity
- Operational plans

- High risk of omitting parts of the scope of work
- Addition of experience based allowances are required
- Sensitive to implicit assumptions by the project team

Control



How to avoid scandalous cost growth?

- Robust premises before pre-project
- Improved stakeholder management
- All relevant risk included in estimates
- Improved cost estimating methods



THANK YOU!

Stein Berntsen, Dovre Group Consulting