

# Early Contractor Involvement in infrastructure projects

A new concept that aims to better inform the procurement process

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## What is Early Contractor Involvement?

The preparatory work for large infrastructure projects often consumes an extraordinary amount of time, money and human resources and is not particularly cost-effective. Some of this inefficiency is caused by traditional procurement methods which bring contractors into the process after many key decisions have been made. The clients and consultants are asked to make design decisions with insufficient information and know-how as to the available technology, equipment and potential innovative solutions.

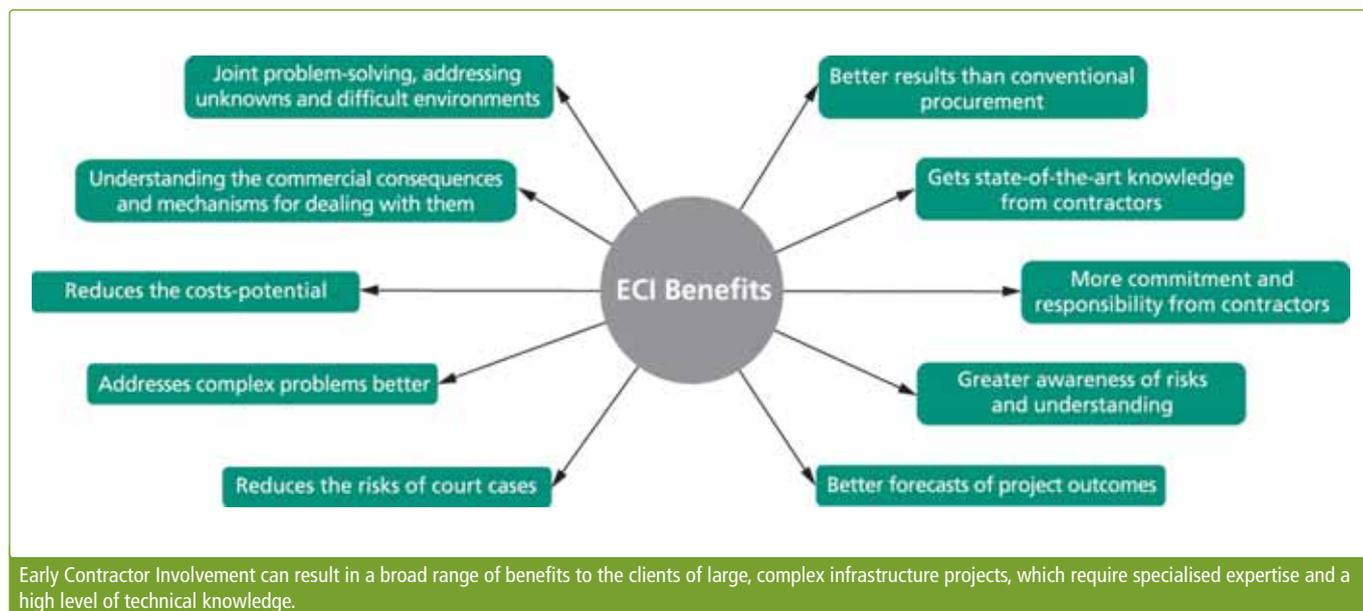
Early Contractor Involvement (ECI) provides an efficient means of designing and planning infrastructure projects in a cost-effective, more efficient and less adversarial structure. Using ECI with a properly executed contract that reflects a partnering relationship should increase transparency and therefore reduce risk, increase shared responsibility and limit the reasons for litigation.

## How do traditional procurement methods work?

With traditional procurement a client/owner must make many decisions before accurate information has been collected, especially from the contractors – who will ultimately be responsible for executing the work. The experiential knowledge of contractors is rarely requested in the planning stages and is therefore seldom used. This ultimately leads to inaccurate conclusions, which reflect badly on the clients, consultants and contractors. Project designers – who often do not know how to scope and cost – come on board first. Secondly, the contractors, who are the experts, are brought in. Getting involved when a design has already been determined forces contractors to be *reactive* instead of *pro-active*. By telling the contractor what to do, by taking the lowest price and negotiating it downwards, the



Delfland Sand Engine on June 14, 2011 showing the progress of construction of the peninsula which will extend about 1 km into the North Sea.



situation worsens. Rather than negotiating the price downwards, prices rise and performance decreases.

In fact, often when project performance on a major infrastructure project is less than optimal, the reputation of the construction industry in general is harmed: The public's perception (and the clients') may be that time schedules are not trustworthy, budgets are running wild, technical solutions are failing more often than not and the government, the authority and the industry just seem to have difficulty getting it right.

### Is ECI always a better choice than traditional procurement systems?

No, ECI is not always the best choice. For instance, for repetitive work such as routine maintenance dredging, ECI does not offer a specific advantage. These types of projects – which are done more often, where data is fully available, where environmental assessments have been conducted in the past and where the contractor has a long-term agreement with the port or authority – do not require unusual or extensive operational planning.

### When does ECI offer benefits that traditional procurement systems do not?

For complex mega infrastructure projects such as large reclamation works, port expansion and new port development, ECI offers benefits that traditional procurement systems do not. Contractors are the experts and when brought in early can offer technical know-how and innovative ideas to the client. The contractor's knowledge will also help develop more realistic and reliable operating schedules and cost estimates for a project.

### What are the clients' needs when considering a project?

Before a project starts, the owner/client will have multiple questions such as:

- Is the construction operation feasible?
- Is the necessary equipment available?
- Is special equipment required or are standard techniques sufficient?
- What production rates can be achieved?
- How will the contract look, a separate contract – or several subcontracts?
- And of course, what are the estimated costs?

Often this type of information must be included in the owner/client's Environmental Impact Assessment (EIA) and permitting applications. In some cases the EIA application may require even more operational details, such as how a project will be executed; what the dredging periods (windows) will be, how much spill can be anticipated, what the environmental consequences may be and what kinds of control measures, including monitoring for instance, will be initiated. For this reason, clients often recruit consultants for advice, but consultants do not necessarily have the knowledge necessary to answer all of these questions adequately.

### How can ECI help consultants do their job?

Consultants can benefit from ECI because the contractors can offer support in answering some of the tough questions: For instance, with the contribution of the contractors, an EIA may be better defined. Contractors know best which equipment is most appropriate for a specific job, and what types of impacts they may have. By advising the consultant, the project team can better estimate which impacts may occur and thus which environmental investigations are necessary – and which are not. This may result in cost savings from the start. In general, by defining the environmental situation more clearly early on, fewer surprises will occur later when the project is underway. And fewer surprises mean fewer risks and less unexpected costs.

### What are the benefits of ECI for clients?

For a client, a particular mega project is probably a once-in-a-lifetime venture, but for a contractor it is business as usual. For a client, land reclamations for a port expansion or an airport platform are challenges, whilst it is the contractor's bread-and-butter business. Involving the contractor early on means that the client/owner will have the contractor's state-of-the-art knowledge available from the beginning of a project. This will create better awareness and understanding of risk profiles, which in turn will result in fewer changes during later stages. Also, the long-term commercial consequences of a project will be better understood at an earlier date so that finding mechanisms for dealing with consequences can also be foreseen. The added value of Early Contractor Involvement means that instead of compromising on essential decisions, the parties together can go beyond mediocre compromises and, with input from all, create unique added-value solutions.

## Does ECI violate the legal (national and supra-national) requirements for competition?

Keeping in mind that competition may not be precluded in any form, European Union regulations certainly allow for a client to seek professional advice at an early stage of a project's development as long as "the principles of transparency" and equal treatment are respected. According to Directive 2004/18/EC, Recital 31:

"Contracting authorities which carry out particularly complex projects may, without this being due to any fault on their part, find it objectively impossible to define the means of satisfying their needs or of assessing what the market can offer in the way of technical solutions and/or financial/legal solutions. This situation may arise in particular with the implementation of important integrated transport infrastructure projects (...)"

"To the extent that the use of open or restricted procedures does not allow the award of such contracts, a flexible procedure should be provided which preserves not only competition between the economic operators but also the need for contracting authorities to discuss all aspects of the contract with each candidate".

## What is meant by the "principle of transparency"?

The European Court of Justice ruling *Commission v Succhi di Frutta SpA C-496/99* (2004) stated that: "The principle of transparency (...) implies that all the conditions and detailed rules of the award procedure must be drawn up in a clear, precise and unequivocal manner in the notice or contract documents so that, first, all reasonably informed tenderers exercising ordinary care can understand their exact significance and interpret them in the same way and, secondly, the contracting authority is able to ascertain whether the tenders submitted satisfy the criteria applying to the relevant contract".

## Why must Key Performance Indicators (KPIs) be included in the tendering documents?

One way of guaranteeing transparency and avoiding the criticisms of favoritism when implementing Early Contractor Involvement is to use "Key Performance Indicators" (KPIs). KPIs are general business jargon for defining and measuring performance. They are often used to evaluate the success of an operation, or, in this case, to measure qualifications to be used during tendering. Choosing the correct KPIs is dependent on the client having an understanding of what is important when putting a job out to tender.

When using ECI to gain sound advice about a design plan, KPIs are an important tool for ensuring a level playing field for the tender. KPIs are selected at the discretion of the contracting authority and could include, for instance, technical know-how (how to draft conceptual designs); the strength of the proposed project management; the willingness to cooperate and minimize risks; the ability to take responsibility for third party involvement; creativity and innovation when designing the project; and good communication and training skills. Whatever KPIs are stipulated, their order of importance and the weighting of their importance should be transparent to all parties at tender notification.

## Why would a contractor want to be involved early on in a project?

Some of the greatest stumbling blocks in a mega project are unforeseen occurrences which can result in extra costs, debate about the allocation of responsibility, and potential liabilities. Through ECI contractors see an opportunity to enter a partnership with the client at a stage where all aspects of the operation can be discovered together.

As partners the client and contractor are in the project together and what is good for one partner is good for the other.



Early Contractor Involvement can result in a broad range of benefits to the clients of large, complex infrastructure projects, which require specialised expertise and a high level of technical knowledge.

This leads to contractual agreements which build a transparent relationship: A relationship where all parties feel ownership in the project, share decision-making responsibilities, where the risks of misunderstandings are reduced and a culture of blaming each other is avoided.

Finding solutions for challenges becomes the focus. Of course, a project must be attractive in terms of each of the parties' needs, where financial viability and profitability are present, but avoiding disputes is to everyone's benefit – and not in the least the contractors.

### What are the core requirements to implement ECI?

One core requirement to implement ECI is a commitment to ECI from the top management of both the client and the contractor for the entire project, including the boards of both parties. This will lead to transparency throughout both organizations, from the top echelons to the hands-on operational staff and is crucial to a successful project execution.

Since ECI is a new paradigm, a new way of approaching procurement, finding the right client, a "visionary", who is open to new contract forms and dares to take the lead, is also crucial. The selection of an appropriate project is also central to success – not every project lends itself to ECI, for instance, repetitive and routine maintenance dredging does not.

An integrated team and openness of communication remain the cornerstones of the ECI framework. In addition, excellent performance and the demonstration of significant value savings during ECI should be rewarded.

### How can ECI be used for "best value procurement"?

Early Contractor Involvement can be instrumental in achieving "best value procurement" (BVP), because certain information needed to make a decision about BVP can often only be supplied by the contractors involved in the operational work.

BVP is based upon the idea that a client may select the contractor whose proposal offers the greatest economic value, one which supports performance outcomes realized by using the most efficient and effective methods and equipment, rather than considering price alone. If the contractor is brought in from the beginning, the contractor's expertise becomes more quickly evident in the design and building of the project and BVP factors such as quality, options and incentives, ongoing maintenance and/or a longer project lifespan can be better evaluated.

Using BVP, a bid can be advantageous, even if the initial expenditure is higher, as the total value over the life of the procurement may result in a better long-term value and investment of funds. A contractor can be selected based on a cost/benefit analysis and a contract can be awarded based on whether higher prices are justified because of a cost/knowledge ratio, that is, the client is paying more but getting more expertise – and not solely on the lowest bid that is technically feasible. For a routine job like maintenance dredging, contractor services are easily compared and will probably be based on the lowest cost price. When the specifications are however more complex and functional, contractors' proposals may show a wide variation and a technical valuation will be used. This is almost always true

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for more complex projects, where more risk factors and the delegation of responsibility are crucial issues. Consequently, in these cases, a contractor's experience – and thus ECI – becomes more important.

## Why does ECI emphasize transparency rather than trust?

Although many parties in contract negotiations tend to talk about the urgency of trust in the working relationship amongst clients, consultants and contractors, trust can only be founded on transparency. Where transparency exists in the form of transparent contracts, transparent cooperation with colleagues on all organizational levels, transparent approaches to challenges, to safety and to problem-solving, then everyone will know where they stand – what their responsibilities are and what is expected of them.

Transparency is inherent to ECI and through it real trust and teamwork, grounded in concrete contractual agreements, will develop. Transparent communication and thorough preparation and training of all personnel are foundations for making a successful switch to ECI.

## What are the advantages of ECI for all parties?

Practical experience at various infrastructure projects shows that complex technical, legal or financial projects benefit from early partner selection because it results in a no-claim, no-blame culture; it improves initial data collection and encourages innovation, and more often than not leads to successful project completion within budget and within time frame.

The key to utilizing Early Contractor Involvement is in the words: “Early” means before the usual or expected time; not far on in the development phase. The “Contractor” is the party that undertakes a contract to provide materials and labor for a job, arranging for the work to be done, and “Involvement” means to encourage someone to experience or take part in something. ECI in this sense translates into optimizing construction efficiencies through contractual commitments. ECI will improve profitability, reduce operating costs and ensure more efficient delivery. It will make sure that the budget is spent on the construction works and not on unnecessary distractions such as liability conflicts, litigation and other legal complications. Further, it is predicated on a drive for efficiency, rather than merely conforming to annual spends.

In fact, through ECI all parties should understand each other's risks and shared responsibilities and all parties are accountable. The goal of ECI is to provide the possibility for forecasting project results with more certainty. It should prepare all parties to jointly solve problems, address unknowns in difficult environments and avoid or resolve conflicts more effectively.

### FURTHER READING AND INFORMATION

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### ACKNOWLEDGEMENT

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The **International Association of Dredging Companies** (IADC), headquartered in The Hague, is a trade organisation with more than 100 main and associated members in the private dredging sector, all of which operate sizeable fleets and are active in the world market. IADC companies have been involved with every major international dredging project of the last century. Their objectives are to advance fair trade practices and standard contracts to establish sound environmental practices, and to publish and encourage the publication of information about technological advances in the dredging industry. IADC works to attract worldwide recognition for the dredging industry in general and to increase the public's awareness of the significant contributions of dredging towards economic growth and prosperity.

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