

## EARLY CONTRACTOR INVOLVEMENT REVISITED

### 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. Often clients and consultants make design decisions with insufficient information and knowhow as to the available technology, equipment and potential innovative solutions. The contractors may be challenged because of insufficient knowledge of the physical conditions at the project site.

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 relationship able to deal with project risks should increase transparency and therefore reduce risks, increase shared responsibilities and limit the reasons for disputes.

### HOW DO TRADITIONAL PROCUREMENT METHODS WORK?

With traditional procurement a client/owner must make many decisions before accurate information has been collected. The experiential knowledge of contractors is rarely requested in the planning stages and is therefore seldom used. This ultimately leads to inaccurate conclusions, which may have an adverse effect on the project outcome in terms of price, time and quality.

Project designers – who do not necessarily know how to scope and cost – come on board first. Thereafter contractors brought in. Getting involved when a design has already been determined forces contractors to be re-active instead of

pro-active. By telling the contractor what to do, by taking the lowest price and negotiating it downwards, project risks increase. Rather than negotiating the price downwards, prices and the risk of poor performance rise.

Frequently when project performance on an infrastructure project is less than optimal, the reputation of the construction industry in general is harmed: The public's perception (and the client's) may be that time schedules are not trustworthy, budgets will run wild, technical solutions are failing and the government, the authority and the industry seem to have difficulty getting it right.

### IS ECI ALWAYS A BETTER CHOICE THAN TRADITIONAL PROCUREMENT SYSTEMS?

No, ECI is not always the most optimal 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 regularly, 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 client, do not usually require 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. Contractors are skilled in such projects and when brought in early can offer technical knowhow and innovative ideas and can fast track the procurement process. The contractor's knowledge can help develop more realistic and reliable operating schedules, also in terms of environment, safety and cost estimates.

*Pictured above: Dredging in a sensitive environment requires extensive technical expertise.*

## WHAT ARE THE CLIENT'S NEEDS WHEN CONSIDERING A PROJECT?

Before a project starts, the owner/client will have multiple questions that need to be answered: Is the construction operation feasible? Is the necessary equipment available? Or do we need special equipment? Are standard techniques sufficient? What production rates can be achieved? Are there unforeseen risks and if so, who bears the cost of them? 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 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 turbidity can be anticipated, what the environmental consequences may be and what kinds of control measures, including monitoring, will be initiated. For this reason, clients often recruit consultants for advice. But consultants working on their own are missing a key ingredient. Contractors and consultants working together can offer a greater depth of knowledge to answer these questions.

## HOW CAN CONSULTANTS AND CONTRACTORS CO-OPERATE?

Consultants can benefit from ECI because the contractors can offer support in answering some of the tough questions mentioned above: For instance, contractors can contribute to preparing a better-defined EIA. They can help interpret site investigations and foreseeable and unforeseeable risks. They know best which equipment is most appropriate for a specific job, and what types of impacts they may have. By working together, the project team can better predict which impacts may occur and therefore which environmental investigations are necessary – and which are not. This can result in cost savings from the start. In general, by conducting adequate site investigations and defining the environmental situation more clearly early on, fewer surprises will occur later. And fewer surprises mean fewer risks and less unexpected costs.

One option that the client may want to consider is to arrange for trial excavations as part of the owner's geotechnical campaign or to provide for an "Early Works Contract" to be carried out separately ahead of the primary contract. This would enable the sub-surface conditions to be exposed and any potential adverse physical conditions to be identified before the primary contract is signed. Such a procedure would minimise the risks for all parties. And tenderers for the primary contract would be better informed of sub-surface conditions.

## 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 the basic "bread-and-butter" business. Involving the contractor early on means that the client will have the contractor's state-of-the-art

knowledge about equipment, hydraulic fill techniques and surveying 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. ECI can mean that instead of being compelled to compromise on essential decisions, the parties together can go beyond often "mediocre" compromises and, with input from all, create unique added-value solutions.

## DOES ECI VIOLATE THE LEGAL (NATIONAL AND SUPRANATIONAL) 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".

## SHOULD KEY PERFORMANCE INDICATORS (KPIs) BE INCLUDED IN THE TENDERING DOCUMENTS?

One way of guaranteeing transparency and avoiding the criticisms of favoritism when implementing ECI is to use "Key Performance Indicators" (KPIs). KPIs are generally used for defining and measuring performance, 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 project 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. KPIs are selected at the discretion of the contracting authority (the client) and can include technical knowhow (how to draft conceptual designs); the strength of the project management; the willingness to co-operate and minimise risks; the ability to take responsibility for third party involvement; health and safety standards; 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 DO CONTRACTORS WANT EARLY INVOLVEMENT IN A PROJECT?

Some of the greatest stumbling blocks in a mega project are unforeseen – and unforeseeable – risks, such as “adverse physical conditions”. These can result in significant extra costs and disputes about the allocation of responsibility and potential liabilities. Through early involvement, contractors have an opportunity to enter a partnership with the client at a stage where all aspects of the operation can be discovered together and a detailed risk register can be jointly prepared. As contract partners the client and contractor are in the project together, using an open framework to deal with project risks which is best for all.

This leads to contractual agreements which build a transparent relationship: A relationship where all parties feel ownership in the project and 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.

### WHAT ARE ADVERSE PHYSICAL CONDITIONS?

The assessment of a project’s soil conditions is the most important factor in determining dredgeability, suitable equipment, production rates and ultimately the associated costs for the dredging works. The basic principle of “adverse physical conditions” is whether or not risks are foreseeable. Secondly, the question arises of whether a contract clause is in place that gives the contractor the right to claim for additional time and money in case unforeseeable physical conditions occur, that is, risks which were not reasonably foreseeable by “an experienced contractor,” the term commonly used by FIDIC. Variations in soil or rock conditions contribute the greatest risk and cost uncertainty involved in dredging projects.



*Good communication and training help establish transparency which creates trust.*

### CAN ECI MITIGATE CONFLICTS IN THE CASE OF ADVERSE PHYSICAL CONDITIONS?

With ECI, both the client and the tenderer when analysing the site data can be assured that the data has been collected and prepared by a competent soil investigation company in accordance with relevant international standards such as British Standards (BS) and American Society for Testing and Materials (ASTM) or others. Clients, consultants and contractors should be transparent concerning their assessment of the available site investigation data whilst negotiating and entering into a contract.

Potential geotechnical-related risks should be jointly investigated and openly discussed before the award of the contract. This may increase the possibility that additional payments have to be made upfront; however, these payments will be significantly less and the effort involved can be considerably reduced by avoiding the need to resort to dispute resolution to resolve any disagreements.

Also, rather than relying on a standard adverse physical conditions clause in the case of significant capital works involving excavation of varying subsoil, weathered or solid rock, early communication between contracting parties could establish limiting reference conditions in the contract beyond which the contractor is entitled to claim for additional compensation. Of the contracts available for use on dredging contracts only the FIDIC 1999 Red Book and the United Kingdom’s NEC 3 Engineering and Construction Contract deal with the broad concept of reference conditions.

### WHAT ARE THE CORE REQUIREMENTS TO IMPLEMENT ECI?

One core requirement to implement ECI is a commitment to the concept 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 organisations, from the top echelons to the hands-on operational staff. It 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, can also be decisive. The selection of an appropriate project is another success factor – not every project lends itself to ECI. An integrated team and openness of communication remain the cornerstones of the ECI framework. In addition, excellent performance including an incident-free safety record and the demonstration of significant value savings during ECI should be recognised.

### CAN ECI BE USED FOR “BEST VALUE PROCUREMENT”?

ECI can be instrumental in achieving “best value procurement” (BVP), because certain information needed to make a decision about a project can often only be supplied by the contractors involved in the operational work. Rather than considering price alone, BVP allows a client to select the contractor whose proposal offers the greatest economic value – not just the lowest bid – but a proposal that supports performance outcomes realised by using the most efficient and effective methods and equipment. 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.

### WHY IS BEST VALUE PROCUREMENT A BETTER PROCUREMENT METHOD?

Using BVP, cost is not the only factor to be considered. 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. The choice is thus made 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 more complex, proposals from contractors may vary more widely and a technical valuation will be used. For complex projects, where more risk factors and the delegation of responsibility are crucial issues, a contractor’s experience – and thus ECI – increases in importance.

### WHY IS TRANSPARENCY MORE IMPORTANT THAN TRUST?

Although many parties in contract negotiations tend to talk about the need for “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 co-operation with colleagues and transparent approaches to challenges, to safety and to problem-solving, then everyone will know what is expected of them. Transparency is inherent to ECI and will allow real trust and teamwork, grounded in concrete contractual agreements, to develop. Transparent contracts, communication and thorough preparation and training of all personnel are the foundation for successfully implementing ECI.

### DO ALL PARTIES BENEFIT FROM ECI?

Practical experience at various infrastructure projects shows that during complex technical, legal or financial ventures all parties benefit from early partner selection: It improves initial data collection and encourages innovation. It often leads to successful project completion within budget and within time frame. And most of all, it results in a no-claim, no-blame culture.

### WHAT ARE THE SPECIFIC ADVANTAGES OF ECI?

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 disclaimers of liability and other legal complications. ECI is predicated on a drive for efficiency, rather than merely conforming to annual spends.

The goal of ECI is to create the possibility for forecasting project results with more certainty. It should prepare all parties to understand the risks and shared responsibilities, to proceed from the premise that all parties are accountable, to jointly solve problems, to address unknowns in difficult environments and to resolve or avoid conflicts more effectively.

### FOR FURTHER READING AND INFORMATION

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