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How the Current Crisis Could Redefine the Business Model for Industrial Infrastructure Contracting

The current crisis related to commodity prices, if it lasts, might lead the contracting industry to review its industrial model, such as what happened in the 1980s' and 90s' during the previous counter-shock. Of course it is always difficult to predict the future, still in this paper we explore what are probable trends, based on the analysis of some precursors and of trends already existing in other industries.

When the last commodity price crisis stroke in the 1980s' and 90s', most Owners moved away from directly managing projects and coordinating a large number of specialized Contractors, effectively fostering the development of general EPC Contractors that took responsibility for project performance under lump sum contracts. Owners' team became much leaner and focused on managing a very limited number of large EPC contracts for each project, and coordinating the interfaces between these few contracts if needed.

Following history and trends in other industries, we can expect the following trends to develop in the next few years in the contracting industry:

- Increased vertical integration of Contractors to cover the entire infrastructure development cycle and remove interface management from the Owner's scope,
- Contractors taking a financing and operating role in the infrastructure, effectively financing it, owning it and leasing it back to the Owner, even possibly operating it – with the effect of changing significantly the Owner's cash flow and financing requirements.

This would result in the Owners further concentrating on their core businesses (ownership of concessions and operating model, stakeholder management, sales of products).

Increased Vertical Integration of Contractors

There is still ample room for further Contractors integration in a number of projects. Owners still have to take the risk and manage interfaces between main Contractors, and this sometimes costs them dire – it is possibly the single most important cause of major projects' delays and cost overruns. Owners will certainly try to push that risk further away.

For example in oil field developments, interfaces still exist generally between drilling contractors, plant construction contractors and field-to-plant piping construction contractors. In nuclear developments, interfaces still exist between the nuclear part and the conventional turbine parts of the plant. In mining developments, interfaces still exist between the mining excavation/ geology contractors and the plant construction contractors. Those interfaces have very significant impact on the final

performance of the facility in addition to possibly creating issues during project execution due to the simultaneous works.

Hence, apart from some very specialized niche areas (such as for example, geophysics, soil characterization and mechanics), we can expect Owners to push for further integration of Contractors so as ideally to have a single Contractor that will bear the interface risks for a full infrastructure development.

The questions and challenges that this trend will create include:

- For the Owners, managing to keep control on projects with a situation where they will move even further from the intricacies of actual execution, dealing with the stakeholders in an effective way, and making sure the future operating teams are fully involved (although that might be alleviated if the facility is also operated by the Contractor),
- For the integrated Contractors:
 - Managing effectively the risk of additional interfaces and larger, more complex projects (we can expect there to be some trial and error such as in the late 1990s' in the previous structural change) in a more effective way than the Owners did previously, through an enhanced risk management process and leveraging on synergies to optimize project execution,
 - Being more involved, together with the Owner, in the management of stakeholders in particular for projects with significant regulatory or governmental oversight,
 - Developing program directors and team members that have the capability to deal with the size and complexity of these integrated projects, in a situation where it is already difficult to find project directors that can effectively deal with the current size of projects executed by current EPC Contractors.

In any case, this trend will require the emergence, through vertical consolidation, of a limited number of large Contractors that will need to have a much larger financial basis than Contractors typically have currently to be able to tackle a number of large integrated infrastructure projects simultaneously and still survive a project gone awry. Typically where EPC Contractors currently might have a size of around ~5-10B\$ in

New contracting, financing and accounting approaches will have to be developed and implemented

revenue to tackle a limited number of ~2-5B\$ multi-year EPC projects, future integrated contractors probably need to be four times the size. At the same time, Owners will still require to have competition in the market, hence we can expect a few of these mega-contractors to emerge in the next few years.

Contractors Taking a Financing and Operating role

In a number of asset-driven industries we observe the trend of separating ownership of the infrastructure from the actual operation, with different entities focusing on each activity. The infrastructure owner leases the asset to the operating entity and bears the financing. It is now typically the case in the airline industry, shipping industry, hospitality industry, highway construction, public-private partnerships, etc. and has been a significant trend in the last decade (in particular, under the 'sell and lease-back' setup, but also with the emergence of large independent leasing companies).

In addition to the better focus on value-addition, one advantage of this setup is that the infrastructure-owning company can be floated on the market with a higher price-earning-ratio to create financing leverage, thereby increasing the overall value of the total organization. It also allows the Owner to better focus on its core business.

Currently most Owners of major infrastructures such as oil field developments, power plants, mining sites and plants, do own the infrastructure. This creates significant financing and cash flow strains when building it, and sometimes high levels of debt. In an era where increased financial performance is expected, and where access to financing is much easier than two decades ago, we can expect a trend towards separated ownership and operation to develop similar to other industries. An example of successful precursor is the FPSO (floating oil- and gas-processing facilities) business where a widespread business model since the 1990s' is for the Contractor to build and lease the facility to the Owner, with the Contractor financing partially or fully the infrastructure.

If properly implemented in terms of risk management, this model has the advantage for the Contractor on the long term to provide a permanent operating cash flow basis even if the market for contracting activities is weak; and a possible leverage for future additional corporate

value. The Owner on his side benefits from synergy in operations from the Contractor's infrastructure portfolio, guarantees as to availability, cost to operate and performance of the infrastructure during operations, and less strain regarding financing and cash flow management during construction.

Obviously this change will come with significant challenges for the Contractors:

- Developing a financing capability, and getting an adhesion from the main financing bodies on the scheme,
- Taking upon themselves, and costing the risk of performance of the plant during operation, including in particular, maintenance costs that need to be integrated in a comprehensive lifecycle cost perspective.

One of the main challenges from this trend will be to devise contractual setups that will protect the Contractors during the entire life of the facility and set clear rules as to who should bear the costs of upgrades, changes, refurbishments etc.

The accounting treatment of such long term setups must also be standardized and made robust so as to avoid substantial surprises in terms of financial performance of the entities involved, and consistency throughout the market: on long durations such as 15 to 30 years, different accounting treatments for asset values can create very different financial results.

Conclusion

We can expect significant changes to come up in the field of Contracting for large industrial infrastructures in the next few years, in particular if the crisis in the price of commodities continues. A substantial vertical consolidation is to be expected together with a substantial development of infrastructure build and lease arrangements. These changes if they happen will alter substantially the contracting landscape and require the development of innovative and sound contracting, financing and accounting approaches. There will certainly be some trial and error, still those that will move in that direction and experiment earlier will certainly be those that will prevail at the end. Proactive experiments of these new approaches, if possible on infrastructures of limited size and ambition, would be required in the next few months and years to establish this new model.

Significant restructuring and vertical consolidation of the contracting ecosystem can be expected



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