

# Mining project delivery

A guide

Private and confidential | Norton Rose Fulbright LLP – June 2024



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# Summary

**This guide provides a description of project delivery risks and key issues that should be considered by sponsors looking to develop and finance their mining projects. It discusses the structuring options for project delivery, the key bankability considerations and risks that sponsors should bear in mind when structuring their projects and negotiating their material project documents. It concludes by discussing the importance of sponsors proactively managing their supply chain throughout the implementation of their projects.**

# The context

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**Cost overruns and delays** have become the norm on mining projects with a McKinsey report noting that as many as 4 out of 5 mining projects are completed late and over budget by an average of 43%. Recent anecdotal evidence suggests that overrun percentages have worsened considerably, particularly for critical minerals and metals projects. There are many contributing factors to these figures principally among them sponsors underestimating construction and project development risks inherent in delivering projects and the persisting impact on global supply chains of the instability caused by the coronavirus pandemic and conflict in Ukraine and the Middle East. The **lack of capital available** to junior mining companies has also constrained sponsors in the development of their assets, forcing sponsors to focus on driving down costs rather than on achieving a robust risk allocation with their supply chain.

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With the ever-increasing demand for the critical minerals and metals that are required to deliver the energy transition, mining companies are faced with an even greater demand to bring their projects online as soon as possible. Sponsors are also faced with **supply chains with significant bargaining power** given the record order book levels attributable to the global demand for their equipment and expertise. For example, suppliers are increasingly unwilling to price certain risks (e.g. logistics and transport arrangements or to provide fixed prices for certain raw material inputs). This **change in risk appetite** has made achieving the time and cost certain risk allocation typically sought by sponsors and their financiers particularly challenging.

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Sponsors must therefore balance the need to agree terms with their supply chain as quickly as possible with the likely financier demands for robust owner-friendly supply chain terms. Importantly, while some sponsors may look to hide behind their financiers when negotiating terms with their supply chain (by requiring that only the "bankability" requirements raised by lenders in their due diligence process be included in the terms concluded with their supply chain) in our experience it is **incumbent on sponsors** to ensure that in the first instance the terms negotiated represent an **appropriate risk allocation** between the company and the supplier rather than seeking to rely on lender due diligence to identify and raise particular bankability concerns with their supply chain terms.

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From a sponsor's point of view, **less robust terms will end up having a real impact** on the company's ability to deliver their project on time, on budget and to the required technical specification, and ultimately whether the sponsors are able to meet the completion requirements imposed on them by their financiers regardless of whether the financiers have picked up deficiencies in the risk allocation as part of their due diligence of the material project documents.

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While in the past the degree of financier scrutiny of supply chain terms has typically depended on the type of financing being sought by mining companies, recent experience suggests that, given the extent of cost overruns across the sector, **financiers of all kinds are beginning to take a more hands-on approach** to reviewing how sponsors are proactively addressing the construction and project delivery risks on their projects.

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Sponsors should therefore anticipate this scrutiny and look to present their projects in a way which clearly demonstrates how they have diligenced and actively sought to mitigate these concerns. While doing so is clearly beneficial from a financing perspective, sponsors should be mindful of the importance from their own perspective of having a **robust project execution strategy and supply chain terms** which adequately protect them and their own investment in the project.

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# Construction risk and the golden triangle – time, cost, and quality

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When negotiating supply chain terms and conditions, sponsors will need to bear in mind the “golden triangle” of time, cost, and quality. It is critical to consider the balance of how the risks inherent in delivering a project **on time, on budget and to the required technical specification** have been allocated between the company and its supply chain and if, following completion of the works, the works will continue to meet the performance requirements for the agreed warranty periods.

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Unless construction risks are allocated to a financially robust contractor (or contractors) in full and are appropriately secured, they will rest with the company and its financiers. Supply chain terms and conditions therefore need to be strong enough to ensure that suppliers are **appropriately incentivized to deliver their scope of work** without delay, for the agreed price, and to the required performance or technical specification. If the contractor or supplier is delayed or if performance failures arise, the terms should provide the company with **appropriate recourse against the supplier** and, where necessary, its parent company.

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The extent to which the supply chain accepts responsibility for wrapping construction risk will depend on the project delivery strategy adopted by the company. Sponsors will typically look to the EPC, EPCM or owner-managed contracting models or a combination of the same to deliver their projects. Each model entails a **different degree of construction and delivery risk** either being retained by the company or otherwise being transferred to its supply chain or to third-party consultants.

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# Project delivery strategies – EPC, EPCM, owner-managed and hybrid models

## EPC – Engineering, Procurement and Construction

Under an EPC contracting strategy the company would appoint a single contractor to deliver the required works (for example the process plant and supporting infrastructure required to deliver the project) by a scheduled date, for a lump sum price.

Under such an approach the contractor will be responsible for performing the engineering, procurement and construction of the works by a specified time for completion, for an agreed price – the time and cost risks associated with delivering this bargain sit with the contractor save for very limited exceptions which have been expressly allocated to the company.

It is often said that the contractor under the EPC model has “**single point responsibility**” for delivering the works on time, on budget and to the required technical specification. It is also important to note that, given the degree of risk transfer to the contractor, this approach is typically **considerably more expensive** than the other models as the contractor will include in their price, the risk of issues arising on the project that impact on its ability to meet the scheduled date for completion for the agreed price.

For this reason and given the considerable capital cost of delivering greenfield mining projects, we do not often see a single EPC contract being used to deliver all the required infrastructure to deliver a mining project.

We have however seen **innovative funding solutions** involving Chinese contractors who have been willing to fund delivering a project on EPC terms by accepting **deferred payment terms** (in some cases for up to 24 months). Such an approach is attractive to sponsors where the cost of capital is otherwise prohibitive and allows the company to pay the contractor out of project revenue once the project has been completed, with the contractor bearing the cash flow risk in the interim. This solution has also provided a real incentive for the contractor to complete on time.

## EPCM – Engineering, Procurement and Construction Management

The EPCM contracting model on the other hand entails the appointment by the company of a professional engineering consultant to assist the company to deliver the project on time and on budget. The EPCM contractor is typically responsible for the engineering required on the project (including any process design) and for managing the procurement and construction of the works on behalf of the owner.

It does not entail the performance of any “blue collar” construction work. The relevant works packages would typically be entered into directly by the company but would be managed by the EPCM contractor on the company’s behalf.

While the EPCM contractor does not wrap the cost or time risk for delivering the project, which will ultimately sit with the company and its financiers, under this model the contract would typically include a regime to **incentivize the contractor** to ensure that it performs its services so that the project is delivered on time and on budget.

For example, the contractor could earn a bonus if the project is delivered before the scheduled date for completion and/or if the project is delivered for an outturn cost which is below the target cost for the project.

## Owner-managed

Under an owner-managed model the company itself (usually through an experienced owner's team) is responsible for managing all aspects of the works required to deliver a project, including all third-party design consultants, equipment suppliers, and construction contractors performing works or providing services to the project.

Under such a model, the **owner retains ultimate responsibility** for ensuring that the project is delivered on time and on budget and that the project interfaces are properly managed and integrated with each other. As with the other procurement strategies it is also important to manage the budget closely in accordance with the original financial planning and deal with budget deficits (cost and time overruns) *as they arise* and not later when the cashflow becomes strained.

For example, the owner is responsible for ensuring that the design is appropriate and meets the project requirements, that the equipment supplied by the equipment suppliers meets the process design requirements, and that the construction works on site are built to specification and that each of these component parts work together such that the project meets its overall performance requirements.

## Hybrid approach

We have also seen hybrid approaches adopted where EPC terms have been agreed with a contractor for a portion of the work (for example the necessary supporting infrastructure) but the project is otherwise carried out under an EPCM or owner-managed model or where an owner's team is supported by professional consultants who have been employed to assist the owner to deliver specific aspects of the project only (for example design review, construction management or commissioning support) but which are not otherwise on typical EPCM terms.

The use of EPC for any portion of the works whilst probably increasing the initial overall cost, mitigates the risk of cost overruns because the risk allocation to an EPC contractor is generally more preferential from an owner's perspective. It also potentially limits the number of interfaces as the EPC works will generally encompass multiple packages of work that would otherwise be allocated separately to contractors or suppliers.

## Financier view

From a financier's perspective, the **EPC model is seen as most desirable** where it presents good value for money and where the scope can realistically be completed by a single contractor. While the EPCM model is well established in the mining sector, we are increasingly seeing sponsors looking to adopt an owner-managed or hybrid approach given the cost of capital and challenging debt markets.

It is important to note that whichever approach is adopted the structuring of a project's procurement and project execution strategies will be key to demonstrating to financiers how the risks inherent in delivering a project under the adopted model have been identified and are being actively managed by the sponsors.

Sponsors should be able to show to their financiers that they have considered the key project delivery risks inherent in their project and the steps they have taken to address these concerns. **Structuring papers alongside well developed project execution plans** have proved essential to providing financiers with the necessary detail and comfort on how project specific risks have been allocated between project participants and where they are retained by the company, have been appropriately mitigated. These considerations are key for financiers when deciding on the size of the cost overrun facility required on a project. As mentioned above, good management and accurate reporting of time and cost budget overruns as they arise are the key to the success (or failure) of mining projects.

# Material project documents and key bankability considerations for supply chain terms

## Materiality of project documents

As noted above, sponsors should ensure that appropriate terms are agreed with their supply chain to ensure that they are able to deliver their project by the deadlines for completion agreed with their financiers.

It is usual for financiers to pay particular attention to the supply chain contracts which are more material in nature. What will be considered “material” in each case will depend on the delivery model adopted but would typically include your EPC or EPCM contract, the key equipment and works packages required to deliver the process plant and required supporting infrastructure, and any offtake agreements.

For project documents, materiality is often (but not always as mentioned below) considered within the context of a **monetary threshold** for the contract price of an equipment or works package above which additional controls and restrictions will be included in the finance documents limiting what the company can and cannot do in relation to the same and requiring financier approval over the form of contract (or any amendment thereto) prior to its execution. Financiers will also typically require a **direct agreement** with the counterparty to any material project document which would limit the counterparty’s ability to suspend or terminate the same without prior notice to the financiers.

Financiers may also require that certain contracts below this threshold be designated as material project documents where there is **no liquid market for the equipment or works package** or where other factors relating to the package mean that any delay or performance issues in relation to the same will have a **critical path impact** or otherwise prevent the sponsors from meeting the completion requirements set out in the finance documents.

From a sponsor’s perspective it is preferable to limit the number of packages that are designated as material as it is **administratively burdensome** to have to repeatedly revert to financiers and their technical advisers in relation to day-to-day matters including minor variations or amendments.

Where an owner-managed or hybrid model is adopted, it is also advisable, where possible, to consolidate the number of works packages to reduce the interfaces between suppliers and/or the volume of packages to be managed by the company.

Sponsors should also proactively consider the **interface risks** involved in their adopted model and, where necessary, demonstrate to their financiers how the number of these interfaces have been reduced or the risks associated with the same have been mitigated.

A good way of doing so is to group equipment packages within the process plant into *process islands* and appointing a single supplier to provide all the equipment within that process island as this reduces the technical interface risks for the company in relation to the delivery of certain aspects of the process plant works.

While financiers may only require approval rights over a limited basket of project documents, from a sponsor’s perspective it is recommended that **consistent supply chain terms and conditions** are adopted across the project. This is preferable to agreeing to use the standard supplier general conditions for the provision of non-material equipment packages.

Having the same terms and conditions across the project is important as it ensures that the risk allocation between the company and its suppliers is consistent and allows the company to include **certain additional protections** in all its supply chain terms (for example including obligations requiring cooperation and coordination with other supply chain participants – including any consultants providing services to the company, including project finance acknowledgements and undertakings, and including related disputes drafting which would allow the company to consolidate or join disputes across multiple contracts where disputes have arisen relating to or concerning multiple contractors arising from the same events or circumstances).

Our recommendation is to prepare a **robust set of owner-friendly standard terms and conditions** (amended to include typical bankability requirements) which are then issued to the supply chain and which dovetail appropriately with the project delivery model adopted on the project. For example, the equipment supply chain terms and conditions should acknowledge the interface with the EPCM contractor where appropriate (including setting out the limits on the EPCM contractor's authority to bind the company in relation to certain matters).

## Key bankability considerations for supply chain terms

When agreeing terms with their supply chain sponsors should take care to ensure that they include an appropriate apportionment of construction risk between the company and its suppliers. **Supplier standard terms** and conditions will almost certainly include a very contractor or supplier friendly risk allocation which would **undermine the time and cost certainty of the contracted bargain** and would require significant amendment to reflect a bankable risk allocation that would be expected by financiers.

General conditions should be bolstered to include **additional protections for the company** and the supplier should be required to provide appropriate performance security (whether through bonding or parent company support) to guarantee the due and proper performance of their obligations under the contract.

Other key considerations include:

- creditworthiness of counterparty and whether parent company support is required
- having an appropriate standard of care / performance / performance warranties from the supplier (including fitness for purpose warranties where appropriate)
- ensuring there are guaranteed times for completion of the works / delivery of the equipment
- including performance guarantees in relation to the equipment's ability to meet the technical specification
- limiting the supplier's entitlement to extensions of time, payment of additional cost and/or relief from performance failures
- including liquidated damages for delay and for any failure to achieve the performance guarantees
- allowing the company (where possible) to accelerate the works or supply at its own cost
- ensuring the intellectual property licence is sufficiently broad to enable use of the supplier's IP in the carrying out and completion of the project (including post termination)
- including a robust set of employer termination rights (and where possible the partial termination of a package with the company being entitled to procure alternative supply to maintain schedule)
- ensuring that on termination the consequences of the same are regulated and the company has appropriate recourse against the supplier (including for the costs of replacement)
- where possible limiting the supplier's ability to terminate (for example to non-payment or insolvency only) and/or to suspend performance
- acknowledging the interfaces with the company's other contractors on site
- acknowledging the company's financing requirements (including the requirement to enter into a direct agreement where appropriate)

- (where appropriate) including rejection rights or the ability to abate the contract price for failures to meet certain agreed minimum performance criteria
- including appropriate defects liability periods and defects rectification regime
- having a payment profile which incentivizes the contractor to perform (and is not front loaded)
- limiting the company's responsibility for company supplied information
- requiring consent rights over subcontracting by the supplier
- where limitations of liability or caps are included ensuring the same are in accordance with market practice and include appropriate carve-outs
- including related disputes drafting and having an appropriate governing law
- including any specific local law requirements applicable in the jurisdiction where the works or supply is being provided (for example subcontractor lien waivers)

As noted above, recent experience suggests that, given the extent of cost overruns across the sector, financiers of all kinds are beginning to take a more hands-on approach to reviewing how sponsors are proactively addressing the construction and project delivery risks on their projects.

Alternative financiers like **funds, export credit agencies and original equipment manufacturers** are likely to have their own requirements on top of typical bankability requirements that will need to be considered in material project documents and/or in supply chain selection. For example, we have recently seen OEMs prescribing the use of certain technology and requiring supply chain participants to meet certain enhanced ESG requirements to assist them to meet their own ESG commitments.

# Key non-contractual risks – technology, jurisdiction, geography and supporting infrastructure

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Other key elements of the bankability analysis for projects include the technology being employed, the complexity of the project (including the process design, the number of works packages and the consequent interface risks), the jurisdiction in which the project is being undertaken, the location of the project, and the supporting infrastructure required to deliver the project.

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A priority for financiers of projects is that the **technology is well-established**, settled technology and not “first-of-a-kind” or untested technology without a significant track record of successful delivery. Messaging of technology risk by sponsors is therefore key and having a project delivery team who are experienced in delivering projects of a similar size, nature, and complexity (and ideally in a similar location) is crucial.

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To the extent that a company does not have in-house expertise, consultancy appointments with appropriately experienced personnel should be considered by the sponsors. Having a **credible owner’s team** (supplemented where necessary by external professional support on appropriate terms) is crucial to generating financier confidence in a project and is vital to successful project delivery for novel technology.

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For projects in developing markets, **in-country experience** is invaluable in ensuring that the local supply chain is appropriately managed, and any jurisdiction-specific issues (including market practice, local law and labour considerations) can be anticipated and proactively dealt with on the ground.

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Having **clear lines of communication** between the local team and the offshore shareholders is also key to ensuring that sponsor management is kept apprised of any issues as they arise and can take informed decisions on how to address the same. Local teams should not work in a vacuum and the culture within the sponsor organisation should encourage and allow issues to be appropriately escalated to ensure that they are dealt with as they arise.

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This is not to say that an overly bureaucratic approach should be adopted, which stymies the local team’s ability to make decisions and take accountability for the project delivery, but rather that management support for the local team is encouraged and sought at the appropriate times.

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Many mining projects are situated in challenging remote locations many miles from established transport networks and processing facilities. To the extent that **supporting infrastructure** is required to ensure the viability of the project, the sponsors will need to demonstrate that they have the appropriate **government support** (or access rights) to ensure that the project does not become land-locked once built. Access to utilities, roads, railways, and ports will be key to ensuring the feasibility of projects.

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With the push in developing markets to have primary and secondary processing of minerals and metals being undertaken in-country, ensuring access to the same (including by procuring appropriate in-country processing capacity from third parties where required) will become increasingly important for projects in these jurisdictions.

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# Contract administration

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Finally, sponsors need to ensure that they administer their contracts properly. Having robust contractual terms is of little use if a company fails to **enforce them and/or use them as leverage** to hold suppliers to account and ensure that they deliver the contracted bargain.

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Too often we see companies being reluctant to properly enforce their terms and conditions and/or failing to flag performance issues (meaning delays and cost overruns in parts of the works or procurement) up the chain to appropriate decision makers within their organisations (including at board level) and other project stakeholders. This often results in material delay or performance issues being flagged too late for the company to be able to actively manage or meaningfully mitigate the same.

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While day-to-day supply-chain relationships are important, sponsors should keep an active watching brief over their suppliers and at the very least use what mechanisms do exist in their terms and conditions to **hold poor performing suppliers to account** (including requiring increased reporting, clear evidence of the steps being taken by the contractor to improve performance, setting clear deadlines by which time marked improvement is required before the company seeks to enforce its terms, and in the worst case scenarios making claims for liquidated damages or calling on performance security).

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Putting suppliers on notice or starving them of cash may often not appear to be the answer to solving day-to-day performance issues (and therefore not be in the company's interest) but **withholding payment when entitled to do so** is often the company's only real means of incentivizing proper performance (outside of a more drastic termination scenario) and avoids the company throwing good money after bad. Putting the supplier on notice also focuses the supplier's mind and will lead to escalation within their organisation to appropriate management level which should lead to appropriate intervention by the supplier's management to address the issue. It is important to take legal advice in each case to ensure that the company itself does not breach the contract by pursuing this approach.

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To build a clear picture of the extent of performance issues on a project it is recommended to have **up to date minutes of meetings** which clearly sets out in plain (not overly technical) language what has been discussed and agreed with underperforming suppliers. This will again enable management to have a better idea of the issues and be able to make informed decisions regarding how to deal with time or cost overruns.

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Junior mining companies with significant mining sector stakeholders (including majors or established commodities trading houses) should also not be fearful of **leaning on their stakeholders' relationships** with the supply chain to (where appropriate) put extra-contractual pressure on recalcitrant suppliers.

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Finally, where an EPCM project delivery model has been adopted, **sponsors should not be overly reliant on the EPCM contractor** to deal with these issues as they arise. EPCM contractors are not incentivized in the same way as the sponsors to deliver a project on time and on budget and ultimately are paid on a fully reimbursable basis. Where the project suffers delay, and it becomes evident that the EPCM contractor will be unable to achieve its bonus it will be less incentivized to push the project to completion as they will continue to get paid their margin even where there is significant delay. The company should therefore ensure that it takes **more active oversight** where significant project issues arise or where no real steps are being taken by the EPCM contractor to address the issue.

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While each situation is clearly fact dependent and on the project delivery strategy being adopted by the company, sponsors should proactively manage their supply chain to ensure that performance issues are identified and dealt with when they arise. This will hopefully avoid minor issues ballooning and having an outsized impact on the project delivery timeline and overall project cost.

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## Contacts

*This guide does not give or constitute legal advice and is by its nature generic. It may not be relied on. For any specific advice or to discuss any of the topics raised in this guide please contact:*



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**Norton Rose Fulbright LLP – June 2024**



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