



*cutting through complexity*

KPMG GLOBAL MINING INSTITUTE

# Mining projects

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Growth Series

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# Introduction

In a tough economic environment, with many existing mines already exploited, companies are looking to invest in and develop projects that bring greater shareholder value.

Major projects are complex and time-consuming, and success or failure is often determined by the degree to which they are aligned with company operations and strategy.

In this paper, we consider the issues facing mining companies wishing to develop new mines or expand existing ones. If you would like to discuss any of these topics in greater detail, please contact one of our global specialists, or your local KPMG advisor, whose names are listed at the end of this document.

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# Project development: timing is everything

**With each day of development consuming vast amounts of expenditure, owners need to maintain a fast pace throughout the project and keep their human and physical resources fully productive. Changes to plans are unavoidable, but additional costs can be minimized through effective management decision-making and strong contract management.**

Few mining companies possess either the engineering strength or the will to build a mine completely independently. The 'engineer, procure, construct' (EPC) model is an increasingly popular approach to oil, gas and infrastructure development, with full responsibility passed to a single, large contractor, who charges a premium for assuming the risk. This approach is attractive to financiers, who are reassured that the development is in the hands of a large,

reputable organization. However, EPC gives the project owner less influence over standards, and with contractors struggling to find sufficient skilled people, engineering and construction quality can suffer.

An alternative is to use 'engineer, procure, construct and manage' (EPCM), which involves contractors designing and managing the project, while the owner chooses a range of



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other contractors (or in some cases in-house teams) to carry out various elements of the building work, thus retaining more control. 'Early contractor engagement' is a further option, with a number of contractors engaged to undertake design, and one eventually chosen for the build phase, although this can prove more costly as the contractor must be paid in the initial stages.

Regardless of the type of contractor arrangement, once the development begins, the clock is ticking – in some cases to the tune of millions of dollars a day – making delays the biggest enemy. Project managers have to cope with incredible levels of complexity and scale, with thousands of workers across multiple sites that may be hundreds of kilometers apart. Every detail must be attended to, including building power stations, water lines, transport connections and accommodation, clearing the ground and arranging

catering, as well as smaller yet important details such as TV quality and reliable broadband connections. Cultural sensitivities are also becoming more important; for example, in Australia, construction cannot start before a comprehensive survey of heritage sites, which can take a year or longer.

Even the best prepared projects will inevitably require changes along the way, due to engineering or environmental issues, or because contractors experience financial difficulties. The way in which these changes are handled can make an enormous difference to the bottom line. Fast decision-making is essential to keep construction on schedule. This calls for a swift flow of accurate information to management via reliable processes and systems. Despite the need for speed, owners must remain rational and not give way on every requested change, as this may push costs up to an unsustainable level.

“ Every detail must be attended to, including building power stations, water lines, transport connections and accommodation, clearing the ground and arranging catering, as well as smaller yet important details such as TV quality and reliable broadband connections. ”

## Managing commercial terms and cash flow

Where work deviates from the initial contract, the owner will be keen to avoid any slowdown while the contract is amended (this can take up to 6 months). You may have no choice but to pay the contractor based upon a rough estimate of the additional costs. If retrospective analysis shows that this compensation has been too high, the owner then has the hassle of trying to reclaim the overspend. The alternative is to hold back from paying until the new contract is ready; a risky tactic that could lead to a contractor threatening to walk off the project.

Most mining companies agree to some form of 'take and pay' arrangement with

their customers or major suppliers (e.g. for transportation and/or utilities), which activates as soon as the mine is considered operational. Having been paying out billions of dollars over the development period, owners will want to start earning revenue, so they must confirm that the site is in production. This is harder than it sounds and typically requires certification from government, regulators or bank inspectors, to meet performance guarantees over the level of output. Again, time is of the essence and holdups can eventually lead to cash flow shortages and, at worst, a default on loans.

## Helping you survive in the fast lane

Moving from feasibility to development involves a big change of pace in activity and considerably higher costs. Having worked on a wide range of projects around the world, KPMG's construction and engineering specialists help clients cope with the new pressures of construction. We can evaluate potential contractors by carrying out a form of

due diligence on their competence, capacity and financial stability. Our forensics experts also act as 'contract doctors,' to adapt to changes in scope and validate and enforce agreements, to avoid disruptions to progress and optimize payments to suppliers and from customers.





## Case study

# From nowhere to somewhere: Building a megaproject in the Gobi Desert

Deep in the Gobi Desert, Mongolia, one of the world's most remarkable mining plays is nearing completion. The project is remarkable not only because of its size – it is expected to account for 30 percent of Mongolia's gross domestic product (GDP) once completed – but because of its rapid development, with just 10 years between the discovery of the deposit and the commencement of work.

This project truly demonstrates the importance of project development expertise, including creating a specific strategy and plan; undertaking strong feasibility studies; identifying financing and infrastructure needs; making a strong project plan with timelines and responsibilities, as well as clear stakeholder engagement plans; and planning for tax and other compliance obligations.



# Feasibility studies: digging deeper



**By Augusto Patmore**

Partner, Global Infrastructure Advisory  
KPMG in Canada


**As demand for resources intensifies, a feasibility study has to show that the owners can create the right conditions for a successful project. This calls for a much wider range of skills and an unprecedented depth of analysis that covers the full financial, operational, legal, regulatory and logistical aspects of the project.**

Feasibility studies have traditionally focused on geology and engineering, to determine the volume, nature and quality of the mineral, the best way to extract it and the appropriate equipment needed. It was generally assumed that there would be an accessible supply of people and machinery, and that transport, energy and permits would be readily available.

However, with fierce competition for every type of resource, those asked to fund a project are demanding far more information about the entire operations of the mine and the capability of the owner to deliver the project. They want to know how a project can attract and retain labor and talent ahead of

competitors, and require assurance that both the owners' and suppliers' employees will be recruited, transported and accommodated. Financiers will also ask how equipment is to be sourced (including alignment to any financing arrangement such as tied export credit agency deals), procured and maintained, and how the project will secure a delivery slot in, sometimes, crowded production queues.

Regulatory approval has become a major issue, and more than one high-profile project has failed to get off the ground due to delayed or denied permits, in some cases costing the owners hundreds of millions of dollars.



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Mining companies are also competing for scarce infrastructure for supply of energy, water and transportation of materials; lack of any of these factors could threaten a project's viability.

With the vast majority of operating costs effectively locked in within the first 5-10 percent of the life cycle, picking the right project in the right location is vital. In the past, an executive leading a feasibility study might have asked for input from a geologist, a mining engineer, a metallurgist and a construction specialist. Today, the project executive is also expected to possess a sound knowledge of finance and debt structuring, commerce, logistics, local and national laws, as well as the political and regulatory environment.

To satisfy the scrutiny of the financiers, feasibility studies have become incredibly complex, including design and construction, technical analysis and due diligence, with contingency planning for delays caused by scope changes, logistics failures or industrial disputes. Cost estimates, financial modeling and projected cash flows have to be robust and credible, which calls for an

understanding of risk and the potential for cost escalations.

The plan needs to detail the financial structuring of the project (which often involves dealing with multiple financiers), as well as the steps required to achieve regulatory approval and a 'social' license to operate from the local community. It must also contain a commercial and legal framework (such as a 'take-or-pay' arrangement) for those infrastructure components that will add value and secure income.

In tight financial times, infrastructure cannot be simply bought and then discarded, so the feasibility study should consider its post-construction uses. Considerable cost savings are possible if the equipment can be made available to multiple users, leased out, or sold and leased back, so the study should detail potential lessees or buyers and the prices they may pay.

Finally, external stakeholders are scrutinizing the capability of the project owners, and are particularly concerned about their ability to manage internal organizational development and growth, to successfully deliver the project and transition into the operational phase.

## Thinking smarter not bigger

With much of the easier pickings already mined, the grade of ore is declining worldwide. Whereas a decade ago a ton of gold ore would give 7 grams of gold, today the figure is closer to five. All this calls for bigger mills to crush the rock, more trucks to move it, more water, more electricity and more workers – with a resulting rise in costs.

The emergence of techniques such as CRC ORE's Grade Engineering™ offers a way to cut project capital costs, by

combining more sophisticated analysis of the rock mechanics, specialist blasting techniques and rigorous operations management to improve the average grade of material mined. However, all new methods carry a greater risk, so the feasibility study should weigh up the pros and cons and assess predicted cost-benefits, as well as confirm whether the company can maintain operational discipline and access sufficient people with appropriate technical knowledge.

## Government engagement

Large mining projects often require significant mine and infrastructure investment to support the development, with government approvals playing a critical role. The way in which a company engages with and involves the government can have a big influence on the success of the project. When developing investment plans, it is vital to work directly with the government to ensure expectations are managed and aligned, to demonstrate that domestic considerations are properly addressed.

## Going head-to-head with the competition

With a multidisciplinary network of specialists, KPMG member firms have the breadth of skills to address all the challenges within today's demanding feasibility studies. We also have the experience of working on multi-billion dollar projects and can help with overall strategy, financials, licensing, and resource and logistics planning. Our teams can show member firm clients how their study matches up to the competition, to increase the chances of gaining the appropriate funding, resources and approvals for major mining projects.

# Project financing: right time, right investor



**The choice and range of equity and debt instruments can make or break a mining project, so owners should be aware of the risks related to each type of financing structure. To compete for funding in a global marketplace, mining companies need to attract the most appropriate partners for each stage of their corporate and project development.**

In a volatile commodity market, where prices can change significantly over a relatively short period, investors are seeking some assurance that a project will remain profitable. A comprehensive, in-depth feasibility study can go a long way to meeting such demands, showing sufficient levels of drilling, sound geotechnical reports, a strong infrastructure solution, access to resources and accurate financial models.

The quality of the management team is another crucial factor in attracting interest – demonstrating a track record of having brought mining projects into production as per the announced timetable and under budget is key for a successful fund raising.

A company's position in the mining life cycle frequently determines which type of investor is likely to be involved. In the early

stages, the founder typically funds much of the activity to acquire an exploration license and carry out geological studies. As the project progresses, specialist mining funds and investors start to show an interest in an equity investment for the company to complete pre-feasibility and feasibility studies. As the owner approaches mine construction, a much broader range of financial institutions will get involved with more equity financing as well as loans, once they have seen evidence of a robust potential forecasted cash flow in the near future.

Understandably, risks are higher during the earlier phases of the project, with investors expecting a more generous compensation structure, given that millions of dollars spent on exploration and drilling could potentially reveal nothing of substance on the site.

Political, regulatory, environmental and fraud risks differ. Depending on the jurisdiction, along with access to human and physical resources as well as adequate infrastructure; some countries also have tough environmental planning laws. All these factors will impact future cash flows and would be reflected in the valuation of the project, and will subsequently dictate the terms that investors will demand for providing the funding.

Since the financial crisis, debt financing has become more challenging for more junior mining companies – banks have become more conservative and are demanding more equity for projects, requiring debt/equity ratios of 50:50 or more, forcing owners to work harder to bring in additional equity investors.



## Stepping through the minefield

With their substantial infrastructure requirements, larger projects for materials such as coking coal and iron ore require a huge investment, and owners may look for an equity partnership or joint venture to spread the risk. Strategic equity partners could include steel companies vertically integrating into raw materials, or trading houses looking for greater ownership of assets. ‘Offtake’ agreements are common, where a proportion of the product is delivered to the equity partner at a pre-determined pricing formula. These arrangements give more security of supply to the buyer and greater certainty of sales and cash flow to the mine owner, which makes them more attractive to banks and other investors.

All the parties in such a strategic equity partnership have an interest in both ownership and offtake, so are more likely to persevere with

the project in the long term – this mutual win-win transaction structure can also bring more stability to the life of mine and its projected cash flows, thus facilitating the project financing.

The timing of debt financing is critical. If the owner gets burdened with substantial debt too early, then any delay in the development of the mine could cause cash shortages that hinder the ability to repay a fixed cost. Some banks that eventually agree to provide funding at an earlier stage in the life cycle may also impose tougher terms such as higher interest rates or hedging of commodity prices. For example, if an owner agrees to a fixed commodity price in advance, then it could lose out if those prices rise significantly, or conversely, if the prices fall below their cash costs, the company may not meet its hedging or debt obligations.

## Connecting globally

Mining has become a truly global industry, and a competent corporate finance advisor can connect the owner of the mining project(s) to the right investor(s) at the right time – anywhere in the world. KPMG has a very strong network of member firms in every continent, with excellent relationships with potential investors. We can help member firm

clients position themselves effectively, to attract interest through creating and managing a competitive and formal transactions process. Most importantly, we remain independent partners throughout the entire mining life cycle, offering tailored advice that includes the most appropriate funding solution, to help our firms’ clients achieve their short- and long-term goals.

# Tax structuring: optimizing mining projects





**Whether a mining project is large or small, early tax planning can optimize tax benefits, increase certainty over the tax burden, and create a flexible framework for developing the legal ownership structure, contractual arrangements and funding.**



**By Rod Henderson**  
Global Mining  
Leader – Taxation  
KPMG in Australia

As mining companies adopt increasingly sophisticated structures spanning countries and regions, they are viewing project structuring across the entire

supply chain. The associated tax structuring should therefore be an integral part of the planning process throughout the mining project life cycle.

## Up front assurance over key tax inputs

Right at the start, before any development work commences, project owners should be aware of the key tax rates and methodologies that will apply over the life of the mine. When combined with knowledge of global and in-country

tax policy, such understanding will ensure a realistic forecast and ultimately support the decision to mine.

Tax and resource royalty rates, as well as other tax rules, may change





substantially over the project lifetime as governments come and go and new taxes are developed. Such variations may impact the overall return on investment, and in extreme cases create an element of uncertainty at the project planning and feasibility stage.

One way to hedge against such uncertainty is to negotiate with the authorities to agree to a fiscal stability agreement (FSA) that locks in a fixed royalty rate. A well-drafted FSA will also achieve greater assurance over income tax rates, debt/equity safe harbor levels, tax depreciation rates and new taxes.

Certain countries may also have bilateral investment treaties (BIT) that protect investments against expropriation or

unfair treatment and create a level playing field. For mining investors from relevant treaty countries, a BIT offers access to international arbitration – a neutral forum for resolving disputes between foreign investors and the state.

By considering all these issues, owners can more reliably include important tax assumptions in the project feasibility financial model. Of the many factors that impact the forecasted after-tax project returns, the crucial tax inputs are the royalty rate and methodology (e.g. royalty or resource rent tax), the corporate income tax rate and the depreciation write-off rates. In some countries it is useful to confirm the recoverability of tax credits such as VAT.

## Case study

# Resource nationalism sweeping the world

'Resource nationalism' is a creeping phenomenon as cash-strapped governments seek to maximize revenues from their natural resources, with royalties sometimes stretching to a double-digit percentage of sales income. These royalty rates are susceptible to sudden increases – particularly in less stable economies, or following national elections. Even developed countries such as Australia have raised resource royalties, as governments seek to offset lower tax revenues in the global downturn. In the most extreme cases, the entire assets of a mine have been seized with little or no prior warning. By keeping an up-to-date barometer of the political climate, mining companies can stay informed of any changes well in advance. By staying actively involved in the development of resource tax policy, companies can help shape resource regimes which strike a fair balance.

## Get the right structures in place

Today's mining projects are so immense that even the largest companies may not have the capital, resources and expertise to go it alone. A popular holding structure for mining projects is an unincorporated joint venture (UJV), which enables two or more parties to directly hold a defined stake in the venture.

Part of the attractiveness of UJVs is the flexibility for participating companies to bring their own capital and resources, receive their own share of the mined ore independently and separately account for taxation. For example, in the early years, each party can independently utilize any start-up losses immediately against other tax positive projects, thus optimizing the tax burden.

Many mining companies bring their own capital to the project, so the UJV may require relatively little additional project finance. A UJV enables each party to easily repatriate cash and service its own financing obligations.

With an increased focus on supply chain efficiencies, more sophisticated structures are being developed to hold and operate large scale mining projects – from pit to port, and ultimately to the customer. These structures can span multiple countries, involve varying equity parties at different stages of the chain, and combine UJVs and traditional company structures.

Various tax planning issues will arise when shaping such structures – notably pricing. As the commodity moves through the supply chain, the appropriate pricing mechanism must be determined, because global transfer pricing rules require borders. Transfer pricing may help determine the appropriate value of the ore at the taxing point, to calculate resource royalty taxes based on the commodity value. Advanced pricing agreements provide additional certainty, by enabling the mining company to negotiate transfer pricing rates and methodologies with revenue authorities.

## Tax incentives add value to a project

Tax concessions and incentives are often used to attract investment and encourage the development of mining projects.

Incentives may be agreed up front at the early planning stages, to help support the project economics and the final decision to mine. Incentives are also commonly confirmed at a later stage to sweeten the project outcomes.

Key tax incentives include:

- resource royalty holidays or lower rates of corporate income tax; for example, as a reward for locating project components in special zones or regions
- research and development (R&D) concessions to provide additional tax deductions or cash grants, to encourage reward and innovation in the development or operation of elements of the project
- investment allowances that provide additional deductions for capital expenditure
- generous accelerated tax depreciation write-off rates (available in some countries); for example, over a 10-year period for a project life of 30 years or more, for the express purpose of attracting investment to large-scale resources projects
- exemption from customs duty (for some categories of imported equipment) for major projects
- global trader program incentives offering lower rates of tax, to encourage mining companies to locate a project's commodity marketing and trading activities in another country.

As favorable tax incentives can enhance project returns and accelerate cash flow, it is worth starting early to identify opportunities.



## Covering every angle

KPMG member firms' tax specialists step inside our clients' shoes to address the commercial issues of a global mining operation. We are far more than just tax technicians and can get involved with every aspect of the project process, from feasibility studies, financial modeling and legal agreements, through to managing ongoing tax depreciation, tax incentives and royalty rates. We will even help you in your dialogue with governments and tax authorities, in order to keep abreast of emerging tax developments, agree upon taxation treatments and obtain greater certainty through advance pricing agreements. With extensive experience in energy and natural resources, our people understand the big issues facing mining companies and work with their clients globally over the full project life cycle.

## Case study

### Projects – Managing a global workforce

Large mining projects need a large work force, generally with specialized capabilities, which may need to be sourced from overseas. In bringing overseas employees to a project the visa, migration and employee/ employer tax implications should be carefully considered. Accurate assignment cost projections should be performed to budget appropriately. Project cost centers may need to be left open following completion of the project as tax-related costs for assignees may lag completion of the project. Global mobility policies and processes may need to be implemented to ensure employees are treated consistently and fairly in accordance with company policies and local regulations.



# Project execution: staying in full control

**Successful project execution calls for appropriate planning to ensure that the right controls, monitoring and oversight are in place, along with an experienced and skilled team. Effective project controls are an essential part of good project management, yet they only work when the right information is reported systematically. A strong monitoring and early warning system, coupled with good contingency plans, and fast, decisive, decision-making, will help avoid delays and rising costs, and build a reputation for executing on time and on schedule.**

**By Richard Powell**  
Partner,  
Major Projects  
Advisory  
KPMG in the UK



The sheer scale of many mining projects means that any problems or delays have an enormous financial impact, leading to rising implementation costs and lost revenue streams from delays in completion. Only through excellent program and project management and strong, effective controls, can project owners manage the execution of the many activities involved in a mine creation or expansion program, to ensure timely execution within agreed budgets and timescales. In expanding or developing a mine, owners need to oversee a complex program of interdependent projects, including process plants, transport infrastructure, port construction and direct, mine-related infrastructure. Even securing utilities in remote locations may demand complex engineering feats.

In scheduling such programs, the timing and interdependencies within each stage are critical. Mines are often in distant, inaccessible places, so the transport infrastructure has to be ready before construction can begin, which may require environmental or other licenses from local or national government. In some countries, mining companies have to deploy a minimum quota of domestic labor and locally sourced materials. This can create difficulties if the local workers lack skills and experience or are not living close to the site. If the appropriate human and physical resources are not available to a sufficient degree locally, then the project owner will need to seek permission to source from further afield and have a clear plan for such a contingency. A resource schedule should outline the key steps, along with their sequence, interdependence and expected duration. In evaluating the risks of resource shortfalls and excessive costs, the program manager should be aware of the relative 'maturity' of the plans and the consequences of any problems.

With commodity prices falling, cost control is a particularly high priority. Baseline budgets need to demonstrate a sound understanding of each stage of the execution, and as the project evolves, all expenditure should be overseen, with close measurement and monitoring of progress against schedule. Even the best-planned projects will encounter changes, and change management process can quickly identify any variation and the subsequent impact on schedule, cost and overall risk level. Armed with this information, the owners can agree on any necessary changes.

Project managers also need to provide an adequate process for identifying key risks, with steps to address any problems, and responsibilities allocated. Risk should be continually monitored, to enable adequate (but not excessive) financial provision within the budget. With an effective risk management process, everyone involved is aware of all the potentially significant issues/problems, can assess the probability of such risks occurring, and has a pre-prepared (and budgeted) plan of action should the worst happen; this could involve vital transport or environmental permits being denied, delays in long-lead time plant or currency fluctuations affecting critical financial assumptions.

Fraud, bribery and corruption risks are a particular concern in some regions, and mining companies should address such risks, and ensure that all staff, contractors, agents and suppliers fully understand and adhere to appropriate standards of behavior. Any deviation from policy further up the supply chain can have a devastating impact upon the corporate reputation.

“ Mines are often in distant, inaccessible places, so the transport infrastructure has to be ready before construction can begin, which may require environmental or other licenses from local or national government. ”

## Knowledge is power

Executives responsible for executing major projects – as well as their boards and audit committees – require assurance that implementation is in line with defined governance structures and processes or, in the absence of such controls, at least in accordance with good practice. Effective controls and monitoring tools will provide an ‘early warning’ of a significant issue such as a project going off schedule or over

budget. Boards and audit committees want to hear at the earliest possible stage about any significant problems, in order to decide upon appropriate intervention, while project managers need early visibility, in order to respond swiftly to more routine issues, by deploying well-prepared contingency plans. In practice, however, relatively few mining companies have such safeguards in place.

A strong project reporting system depends upon good lines of communication, as well as reliable, up-to-date data. Such information needs to flow from the project on a timely basis, to enable monitoring and early warning systems to operate effectively. This should help avoid the chance of being caught off guard and suffering expensive and damaging delays.





## Mastering complexity

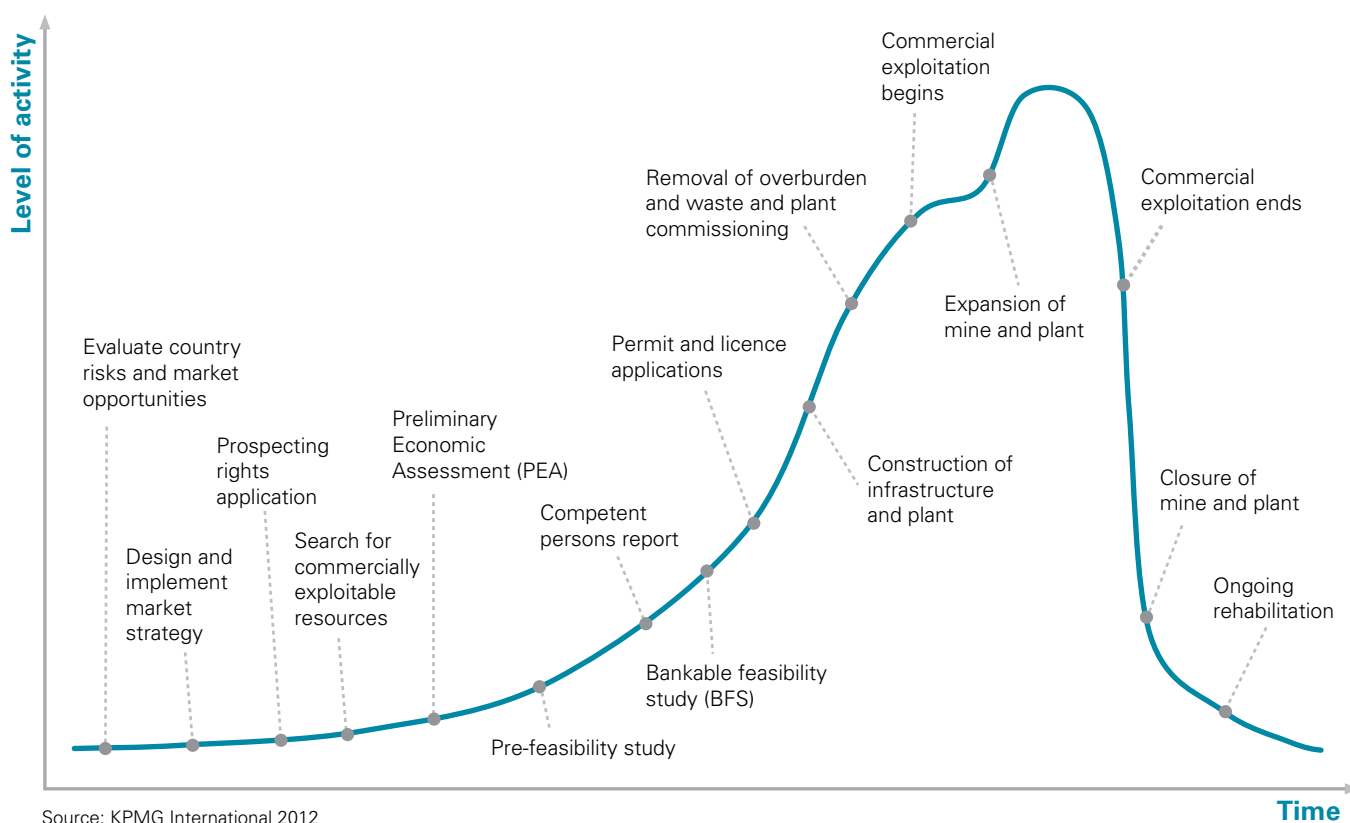
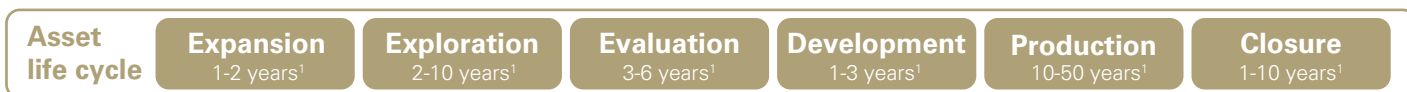
KPMG's program and project management and assurance professionals work with some of the world's biggest names in global mining, as well as in other parts of the energy and natural resources sector. We have learned what works – and what does not – and can scrutinize clients' internal processes and controls, and help create a culture where everyone recognizes

the responsibility to monitor and report accurate information on time, to enable prompt and appropriate decision-making. Our clients gain a better understanding of the risks facing their projects and the subsequent impact upon timeline and costs, and can create strong plans for dealing with incidents, to minimize delays and keep within budget.



# Mining asset life

# cycle



Source: KPMG International 2012

Note: 1. Estimated duration of stage in the mining asset life cycle

# KPMG mining project services across the mining asset life cycle



Projects mining asset life cycle						
	Expansion 1-2 years	Exploration 2-10 years	Evaluation 3-6 years	Development 1-3 years	Production 10-50 years	Closure 1-10 years
PROJECT DEVELOPMENT	<ul style="list-style-type: none"> <li>Assessment of economic and political risk</li> <li>Local knowledge and contacts – Executive ‘meet and greet’ service</li> <li>Stakeholder and network development</li> <li>Engineering and environmental assessments</li> <li>Approvals by government, regulators and other industry bodies</li> </ul>	<ul style="list-style-type: none"> <li>Search for commercially exploitable resources</li> <li>Preliminary economic assessment (PEA)</li> </ul>	<ul style="list-style-type: none"> <li>Operational model, including EPCM or other contractor arrangements</li> <li>Cultural sensitivities</li> <li>Payment and compensation arrangements</li> </ul>	<ul style="list-style-type: none"> <li>Life of mine plan</li> <li>Capital cost management</li> </ul>	<ul style="list-style-type: none"> <li>Cost and margin optimization</li> </ul>	<ul style="list-style-type: none"> <li>Decommissioning and rehabilitation processes and procedures</li> <li>Sustainability review and evaluations of plans</li> </ul>
FEASIBILITIES	<ul style="list-style-type: none"> <li>Geological assessments</li> <li>Regulatory approvals</li> <li>Assess expertise and technical needs</li> <li>Identify the machinery and equipment needed</li> <li>Financial structuring and funding, debt and equity</li> <li>Supply chain and infrastructure assessments and identification</li> </ul>	<ul style="list-style-type: none"> <li>Financial modeling</li> <li>Energy, water and carbon intensity</li> <li>Infrastructure requirement evaluation</li> <li>Valuation of resources</li> </ul>	<ul style="list-style-type: none"> <li>Feasibility study completion and review</li> <li>Infrastructure requirements and investment identification</li> </ul>			
FINANCING	<ul style="list-style-type: none"> <li>Project structure, e.g. partnership, joint venture</li> <li>Marketing and sales structure, contracts and forecasts</li> </ul>		<ul style="list-style-type: none"> <li>Availability of financing, including debt and equity financing advice</li> </ul>	<ul style="list-style-type: none"> <li>Negotiate with investors, off-take and strategic partners</li> </ul>		<ul style="list-style-type: none"> <li>Due diligence of disposal/salvage values</li> </ul>
TAX STRUCTURING	<ul style="list-style-type: none"> <li>Market entry tax study</li> <li>Tax policy engagement with government</li> </ul>	<ul style="list-style-type: none"> <li>Tax planning and modeling</li> <li>Tax incentives</li> </ul>	<ul style="list-style-type: none"> <li>Tax structuring and advice</li> <li>Financial stability agreements or similar</li> <li>Bilateral investment treaties (BIT)</li> </ul>	<ul style="list-style-type: none"> <li>Contract reviews</li> <li>Employee taxes</li> <li>Tax asset register</li> </ul>	<ul style="list-style-type: none"> <li>Tax optimization</li> <li>Repatriation tax advice</li> <li>Royalty compliance</li> </ul>	<ul style="list-style-type: none"> <li>Tax implications of asset closure/sale</li> </ul>
PROJECT EXECUTION	<ul style="list-style-type: none"> <li>Project monitoring and assessments, including expenditure</li> <li>Procurement strategy</li> <li>Risk management, including fraud and corruption</li> </ul>	<ul style="list-style-type: none"> <li>Strategic and operational fit</li> </ul>	<ul style="list-style-type: none"> <li>Corporate integration strategy</li> <li>People and change                             <ul style="list-style-type: none"> <li>Shared services</li> <li>Outsourcing</li> <li>Change management</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Establish project controls</li> <li>Sustainable development, including energy, water and carbon</li> <li>Review of transition from development to operating</li> </ul>	<ul style="list-style-type: none"> <li>Performance improvement review and management                             <ul style="list-style-type: none"> <li>Controls</li> <li>Sustainability</li> <li>Health and safety</li> </ul> </li> <li>People and change                             <ul style="list-style-type: none"> <li>Shared services</li> <li>Outsourcing</li> <li>Change management</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Managing reputational risks</li> <li>Compliance obligations</li> </ul>

## KPMG's Global Mining

# practice

## KPMG Global Mining Centers

KPMG member firms offer global connectivity through our 14 dedicated Mining Centers in key locations around the world. By working together seamlessly, we help member firm clients adapt and respond to a rapidly-evolving mining environment.

Our centers are located in or near areas with high levels of mining activity: Beijing, Brisbane, Denver, Johannesburg, London, Melbourne, Moscow, Mumbai, Perth, Rio de Janeiro, Santiago, Singapore, Toronto, and Vancouver.

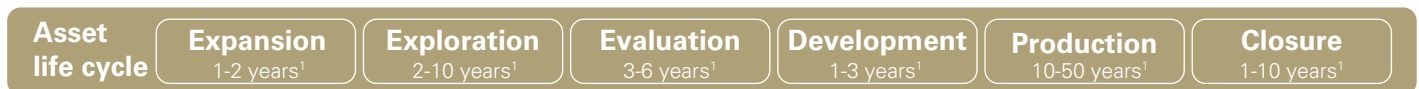
Each center is composed of professionals with extensive practical experience in the mining industry who work together to share information, thought leadership, training, and support. As a client, you will get access to the latest industry thinking, skills, resources, and technical development from a team that has local knowledge, backed up by in-depth global expertise. Our firms are continually building our understanding of global trends and developments by sharing observations and insights with you.

For more information, visit [kpmg.com/mining](http://kpmg.com/mining)

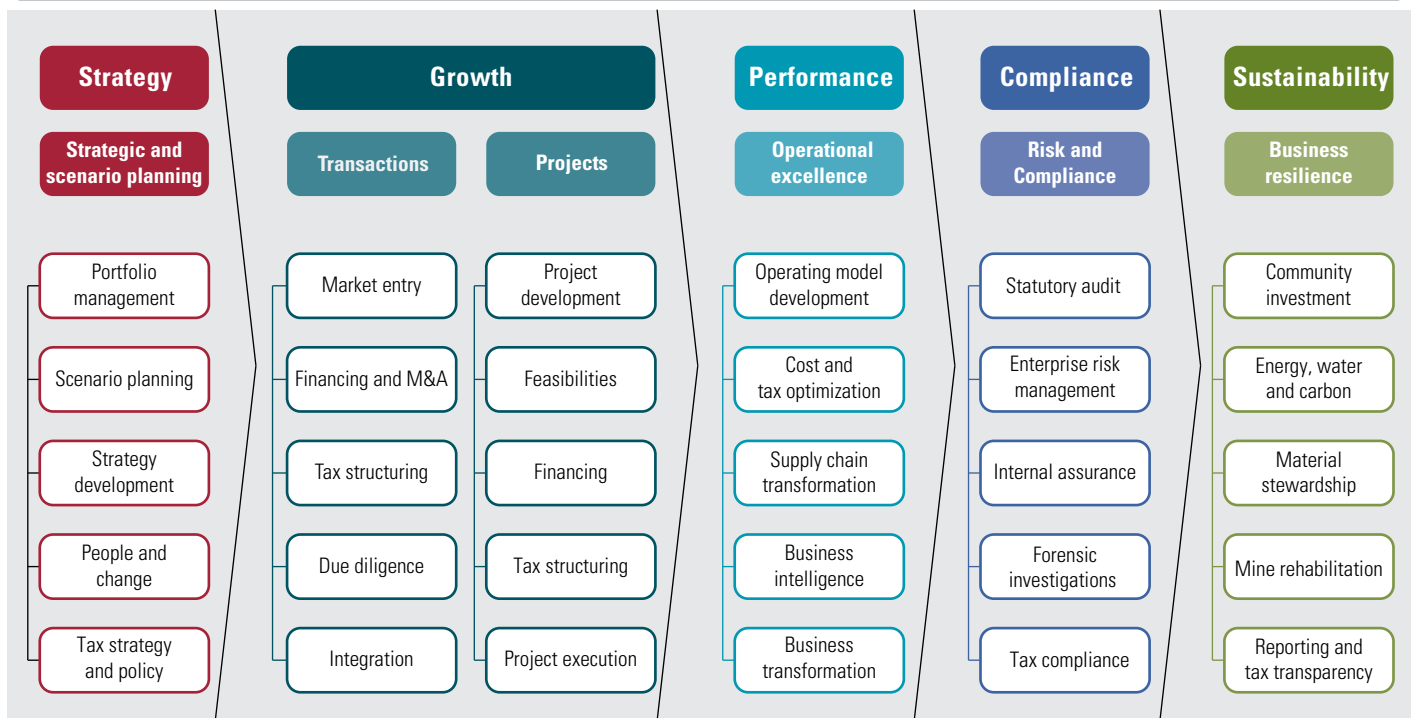


KPMG's mining growth service

# offerings



## Your asset life cycle – How KPMG firms can help



Source: KPMG International 2012

<sup>1</sup>Estimated duration of stage in the mining asset life cycle

# Leading the field with industry insight

KPMG member firms offer a diverse range of audit, tax and advisory services to the world's leading mining companies; however, being the leader means more than just having a strong client base.

We invest in thought leadership and spearhead industry debates to help keep our clients at the forefront of progressive thinking. Our KPMG events and forums, as well as our support and participation in well regarded industry events, enables us to discuss industry issues with leading participants.

The KPMG Mining Institute features thought leadership and webcasts that provide insights into current issues and emerging trends.

Being at the forefront also allows us to give our people the skills and knowledge to provide the quality and customized services that our clients require.

For more industry insight, please visit our Global Mining Institute [kpmg.com/mining](http://kpmg.com/mining)



## Strategy Series

### Country mining guides

This series of country guides provides an overview of the mining industry from a geographical, economic and legislative context. These country guides are invaluable for those already operating or considering an investment in a particular country.



## Growth Series

### Growth in a time of scarcity: Managing transactions in the mining sector

This guide is the first in a series that discusses how mining companies can best navigate the asset life cycle and covers the five key elements of the transaction phase: geographic expansion, financing and mergers and acquisitions, tax structuring, due diligence and integration.



## Mining projects: Seeking greater value

Major projects are complex and time-consuming and success or failure is often determined by the degree to which they are aligned with company operations and strategy.

This publication considers the issues facing mining companies across the mining project life cycle, especially those who wish to develop new mines or expand existing ones.



## Compliance Series

### Mining risk and assurance: A survival strategy

Faced with falling commodity demand and prices and a continued escalation of input costs, mining companies are experiencing declining margins. A series of major project failures has also put risk management under the microscope.

Based on interviews with several partners from KPMG member firms, this paper identifies eight key drivers of value – from strategy to sustainability and reputation to taxation – and examines the risks inherent in each of these areas. In order to survive and prosper, organizations should adopt a holistic, integrated risk and assurance strategy that enables them to become masters of risk, rather than victims.



## Performance Series

### From volume to value: Cost optimization in the mining sector

This report looks at nine different levers that mining companies need to consider when implementing cost optimization programs to sustain profitability in today's more challenging economic environment.



### KPMG's Mining Operational Excellence Framework

KPMG member firms have developed their own operational excellence framework following several years of association with leading mining companies. It starts off with an organization on a journey of efficiency and then, over time, embeds characteristics in its organization that makes the change sustainable over business cycles. This puts together all the capabilities necessary to assure the CEO of that 'operation' will be able to adapt to support their hunt for the next opportunity, whatever its nature.



## Sustainability Series

### Capitalizing on sustainability in mining

This publication examines how mining companies can leverage sustainable development to tackle resource constraints and sociopolitical challenges in remote areas in the world.



## Commodity Insights Bulletins

A series of bulletins focusing on key mining commodities. Each bulletin is aimed to provide insight into trends and changes within commodity sectors. Our key mining commodities include: Gold, Copper, Diamond, Iron Ore, Metallurgical Coal, Nickel, Platinum, Thermal Coal, Uranium and Zinc.



## INSIGHT: Population

This edition of Insight explores some of the biggest infrastructure challenges related to population growth. It also features a Special Report on Asia Pacific, a region at the center of the demographic shift now underway.



## Infrastructure 100: World Cities Edition

Released at the World Cities Summit in Singapore, by KPMG's Global Infrastructure practice, the Infrastructure 100: World Cities Edition provides insight into the infrastructure projects that make great cities, with a particular focus on the innovations that make them 'Cities of the Future' – places where people want to live and do business.

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