Principles for Shared Use of Mining Infrastructure: Tapping into Win-Win Solutions for Mining Companies, Governments, and Communities

Initial Brainstorm Session:
SUMMARY OF DISCUSSIONS

Cape Town, South Africa
February 10, 2016

Overview

On February 10, 2016, at the Investing in African Mining Indaba conference in Cape Town, South Africa, the Milken Institute Center for Financial Markets held a roundtable to launch a yearlong effort toward establishing a set of principles for shared use of mining infrastructure. The roundtable brought together 35 representatives from mining companies, international law firms, infrastructure engineers and project practitioners, infrastructure investors, development finance institutions (DFIs), civil society organizations (CSOs), mining ministries, and academia. The roundtable focused on investigating:

- The prospects for shared-use infrastructure in the mining and natural resource sectors
- The potential for developing a widely accepted set of principles governing that shared use
- Initial ideas of what those principles might entail

The Milken Institute plans to carry this work forward through a series of international workshops and other convenings, supported by substantive research and stakeholder inputs. What follows is a summary of the discussions.

Background and Motivation

Shared use of mining infrastructure is not a new topic. Today 60 to 80 percent of the costs of new mining projects relate to infrastructure, an expense increasingly difficult to justify given that mineral and metal prices are experiencing a downturn in the commodities cycle. For these reasons, the business case for sharing essential infrastructure has become apparent to both governments and industry players.

Shared use also makes sense for mining companies from a corporate social responsibility (CSR) perspective. The companies' traditional CSR approaches, such as building schools or hospitals in the surrounding community, are laudable but not as obviously core to their business models. Infrastructure, by contrast, is an important component in every mining company's production function. By finding ways to share that infrastructure, mining companies can contribute to local economic and community development while focusing on what they do best: getting the minerals out of the ground and to port.

From the perspective of the host-country government, the benefits are just as clear. When first-mover mining companies have monopoly control over essential infrastructure, other companies are deterred from entering the market. As a result, natural resource exploration and exploitation remain at suboptimal levels, and the state fails to tap the full potential of the nation's resource wealth. Broader economic and environmental benefits are also in the balance. As Paul Collier, who leads the University of Oxford's research in this field, has noted, "the extra costs to governments of converting single-use, single-purpose infrastructure to multiuse, multipurpose infrastructure are tiny when compared to the benefits to society."

Yet in negotiations over concession agreements—which can take years—the rules around mining and extraction are spelled out in detail, while rules for engagement with respect to the collateral infrastructure tend to be left to later negotiation. The problem is that dealing with infrastructure access in such an ad hoc manner is difficult and time-consuming for all parties. The mining company is already firmly entrenched, putting governments and prospective market entrants at a disadvantage for negotiation; contractual, financial and even engineering structures may have to be modified in an adverse context of strong vested interests and high transaction costs; and ex post regulatory changes increase investor uncertainty and can further deter new entrants in the sector.

Laying out the "rules of the game" in advance—rules that have been endorsed by the mining companies, governments, DFIs, and all other players in the field—can go a long way toward avoiding these complications. Such efforts have gained real traction in other areas (notably environmental and social best practices in project financing with the Equator Principles), and there is tremendous promise for developing the same kind of principles-based framework for shared use of mining infrastructure.

Roundtable Summary

This Milken Institute roundtable sought to move the discussion beyond the "whether" and "why" of shared-use infrastructure (where it still was a year or two ago) to focus on the more urgent questions of "how" and "when." As several participants pointed out, shared use of mining infrastructure (both greenfield and brownfield) will not become the global default automatically. The many vested interests at stake mean that deliberate efforts are required from governments and regulators as well as from mining companies, local communities, infrastructure investors, project financiers, and DFIs. As Collier reminded participants when he opened the roundtable, shared use of infrastructure will "cost a little more and be a bit less convenient," particularly for companies used to dedicated, single-use infrastructure, but the social and economic benefits "outweigh the costs to governments and companies by a large margin."

Out of the ideas presented during the session, four dominant themes emerged:

1. **The mind-set change needed in relationships between mining companies, governments, and civil society**
2. **The case for regulatory and operational independence**
3. **The need for mitigating risk and uncertainty**
4. **The benefits of contractual and legal standardization**

Several participants emphasized that once the rules of the game in these areas are collectively identified, it will become far more straightforward to wrap processes of infrastructure contract negotiation and operation around them, without "reinventing the wheel every time." The following sections highlight key points raised under the four thematic areas, for reactions and comments by participants. These reactions and comments can be addressed to Carole Biau at cbiau@milkeninstitute.org.

1. Public-private relationships: A change in mind-set

Collier launched the discussion by noting that the mining industry was characterized by long-term contracts combined with strong short-term shocks and that, as a result, relationships between governments and mining companies "keep getting stressed," amid continual concern for which party is winning or losing. In this context, it would seem sensible to move beyond this adversarial stance and to "look for mutual gains." Roundtable participants highlighted several areas where public-private relationships could be improved to make shared-use infrastructure solutions feasible:

- More regular dialogue between governments and the mining industry
- Stronger leadership from governments in this process and during project negotiation
- Better balancing of capital gains with regulatory compliance costs
- Less contingent and complex contracts, negotiated in better faith

While the rationale for shared-use infrastructure may seem straightforward, roundtable participants stressed that the relevant players still needed to be brought to the table for a change in mind-set to occur. Several speakers—from a DFI to an infrastructure engineering and project management firm—noted that the level of public-private dialogue remains much higher in the oil sector than in mining, and that mining companies could usefully follow oil companies' lead by playing a more active and constructive role vis-à-vis host-country governments. These participants warned that today's mining industry "does not yet see shared-use infrastructure as a mutually beneficial outcome" and that the "first instinct" for mining companies is to develop dedicated-use infrastructure that they can treat as a regular part of their operations. The DFIs present argued that changing this mind-set "would already be a huge push in the right direction."

Participants nevertheless stressed that governments, too, are responsible for the fragmented nature of the public-private dialogue. One participant stressed that governments "need guts, and not just a business case" to make projects move ahead. Several examples were provided of governments "dragging their feet" in infrastructure contracting, in part due to insufficient legal and regulatory capacity, even when feasibility studies were solidly in place. Mining company representatives noted that lack of government leadership was a significant stumbling block with many projects, especially at the regional level. An infrastructure engineering firm thus attributed part of the chronic delays experienced by the Simandou integrated mining and infrastructure development project to insufficient government engagement.

Several participants said dialogue needed to be more frequent at the project-specific level as well, to ensure a genuine, even-footed negotiation among all parties. Niger was cited as a "major success story" for negotiating a new mining concession with Areva in 2014 and avoiding a potential investment dispute.

Thanks to active government leadership, Niger secured increased royalties as well as involvement in the management of mining subsidiaries, and Areva agreed to increase investment in local infrastructure. Participants involved in that negotiation noted that government leadership in itself had created an "expectation of positive delivery." Meanwhile, Biau referred to the case of Australia's Hunter Valley Access Undertaking (HVAU) as an interesting example of coal companies negotiating with the state-owned rail service provider on a regular basis. The Milken Institute is partnering with the rail-access team of the Australian Competition and Consumer Commission (ACCC) to analyze the most recent developments of the HVAU.

There was broad agreement that as part of the required change in mind-set, both public and private actors would have to address the question of regulatory overload and proportionality. On the public side, regulators and policymakers must balance the economic gains from shared use of infrastructure against the operational efficiency costs, as well as regulatory compliance costs, that might fall on mining companies. Participants were wary of governments merely adding another "layer" to the existing legal and regulatory landscape, which already comprises a variety of federal, local, and sector-specific legislation. Australia's ACCC has compiled data on the cost of regulatory compliance with its National Access Regime; this sort of quantification could help assess and benchmark where to draw the line on "light touch" regulation of shared-use infrastructure.

At the same time, participants noted that mining companies had an obligation to seek contractual simplicity and to negotiate in good faith. Mining company representatives acknowledged the tendency to structure excessively legalistic, binding, and complex project agreements that seek to cover every contingency—which can hamstring governments and complicate contract standardization efforts. Moreover, such vast contracts take a very long time to be approved by both parties.

As Collier summarized, public and private interests for highly contingent regulation and contract negotiation "need to be tempered by the realization that if negotiation fails, everybody fails." He urged governments and mining companies to "stop looking for transfers from one to the other, but for solutions that make both better off." This requires a mutual "reconceptualization" of infrastructure. Otherwise, participants concurred, both regulatory overreach on the public side and contractual overreach on the private side risk drawing out preparation and derailing projects, without necessarily improving the final outcome.

2. Independence

Another recurrent theme of the discussions was the concept of independence of shared-use solutions, both from the mining company and the host-country government, specifically:

- Independent operation of mining infrastructure and related services
- Independent third-party facilitation of contract renegotiations
- Independent regulation of infrastructure access, operation, and pricing

Equity investors and legal firms seemed to express a preference for the model of independent operation (and, in some cases, ownership) of infrastructure services. They noted that a specialized independent rail service operator could, for instance, be more efficient than a mining company or state-owned enterprise providing those same services, as well as being less vulnerable to influence by either of these parties. Moreover, a project financier warned, when infrastructure special-purpose vehicles (SPVs) are partially owned and operated by the state or by state-owned enterprises, these assets are subject to attachment in a dispute with the sovereign (e.g., by vulture funds). For these reasons, it may be optimal in certain circumstances to establish an entity that is "neither the state nor the mining company."

Participants further flagged the importance of independence in facilitating contract renegotiation (often necessary even in carefully structured projects given the boom-bust nature of the mining industry). Several noted that both DFIs and regulators could have a role in facilitating these renegotiations. One speaker suggested, for example, that a donor-coordinated platform could provide a useful third party to advance large-scale projects such as Simandou in Guinea.

Several participants also pushed for the establishment of independent infrastructure and-or mining-sector regulators, arguing that they would be less vulnerable to state or private capture in their access-granting, licensing, and tariff-setting decisions. Among the benefits discussed, participants noted that independent regulators could give companies greater confidence in the investment environment, avoid strategic upstream market control by first-mover mining companies, and facilitate the management of complex scenarios such as multipurpose use of mining infrastructure. Representatives of mining companies also cited the need for independent regulation—as well as independent appeals boards and processes—at the supranational level to reduce political risk in cross-border or regional infrastructure projects.

InfraShare Partners' Glen Ireland warned that countries may, however, face a "chicken-or-egg problem" in terms of establishing a sufficiently competent and independent regulator. Developing countries in particular may find it challenging to move toward regulatory independence without compromising sovereignty, fiscal sustainability, or project bankability. Where such a regulator should be placed, whether its purview should be cross-sectoral or specific to mining, rail or energy, and how it should be funded were seen as open questions. Ireland suggested that partnering or mentoring relationships with established regulators could be a first step in answering these questions.

3. Risk mitigation

Collier noted that huge short-term volatility combined with long lock-in periods makes the mining industry "one of the riskiest in the world." This risk can naturally affect the infrastructure that is ancillary to mining activities (demand risk, particularly if the mine is the main or sole infrastructure user). The asset immovability of mining infrastructure, combined with public sensitivities related to infrastructure as a basic service, also raises various political risks. These risks, in turn, can affect companies' chances of securing funds from financiers and capital markets for their projects. Participants discussed several ideas to minimize these risks in a shared-use context, including:

- Minimizing regulatory risk in shared-use infrastructure projects, including through government-led efforts
- Diffusing political risk through open-access infrastructure regimes

- Diffusing demand risk to enhance bankability of shared-use infrastructure projects

One business law and litigation firm noted that the mining industry is in many ways more vulnerable to political risk than is the oil and gas sector, in part due to the relative size of the industry participants. Whereas the oil sector has many large and well-financed companies whose size often exceeds the GDPs of many states, the participant remarked, the mining sector has only a handful of such companies. Moreover, to a greater extent than the oil sector, the mining industry frequently is concerned with potential competition (and anything that might encourage additional production), particularly in relation to certain commodities—not gold or silver, but certainly niobium; tin; and large-scale zinc, iron ore, and copper. Due to these two characteristics, the law firm noted that: (a) the vast majority of mineral projects in Africa and elsewhere are being developed by relatively small and medium-sized companies, which are highly dependent on equity markets for access to capital, and (b) shared infrastructure may not always be so clearly in the interests of the state with no offsetting impacts on a miner or its access to finance.

The participant argued that, in relation to smaller companies, equity markets are therefore far more likely to be concerned about the inefficiencies, inexperience, and political volatility of government participants (including participants in essential infrastructure). The risk of "creeping" or indirect expropriation of economic benefits from such participation—for instance, through ad hoc changes in infrastructure tariffs or tax rates—would also be of higher concern. The law firm warned that where governments lacked the expertise to properly manage large-scale infrastructure (and where such "government interference" and related "regulatory risks" were more likely), this would substantially impact, if not preclude, smaller companies' chances of accessing finance from capital markets for such projects.

When participants were asked if they had any solutions in mind, the same firm indicated that there were opportunities for achieving win-win outcomes not just when government regulations permitted open access (on standardized terms), but when governments also brought something to the table to facilitate risk mitigation. Examples included: public-private partnership (PPP) structures to provide for professional management of the infrastructure, access to international arbitration, and government guarantees with respect to financing arrangements for the shared infrastructure. According to this participant, such approaches could demonstrate to project financiers and capital markets that the particular government was: (a) behind the project, (b) seeking to fairly and efficiently operate the infrastructure, (c) prepared to adhere to international standards of review, and (d) prepared to lend its own balance sheet to support its financial interest in securing open access of the infrastructure.

Other participants echoed this view, noting that because capital markets were highly sensitive to political and regulatory risk, mining companies (and especially junior miners) would have a strong prudential interest in the national regulation of shared use of mining infrastructure being designed according to set international standards. They also voiced concern that in the absence of common regulatory principles, more opaque legal and regulatory systems would be particularly permeable to discretionary policymaking—especially when more than one jurisdiction was involved.

Several participants further concurred that this need to diffuse political risk could give mines more of a long-term interest in engaging with local communities, even independent of reputational or altruistic motives. One law firm active in Nigeria drew an analogy between oil smuggling by communities in the vicinity of the country's pipelines and the public pressure that may arise with respect to dedicated-use, single-purpose infrastructure if open access is not facilitated. Providing services to the community can, for instance, help reduce the risk that the state renationalizes the infrastructure asset out of electoral motives.

In addition to political risk, participants discussed demand risk. In mining, it is very difficult for investors and governments to forecast the demand and use patterns for mining infrastructure projects. This, of course, can affect revenue flows and therefore project bankability. On the one hand, project financiers noted that shared use of mining infrastructure could enhance bankability and mitigate demand risk by allowing infrastructure service providers to diversify away from their reliance on a single "anchor client" (the first-mover mining company). On the other hand, one DFI representative stressed that it placed priority on "knowing where the project return would come from." Under shared-use arrangements, uncertainty around the number of additional future users may deter investors. Nevertheless, the DFI also highlighted the potential for take-or-pay or capacity-utilization agreements to mitigate such risks. Mining company representatives further suggested that this portfolio risk was somewhat eased when multiple off-takers were already present, citing as an example the vertically integrated freight operator Aurizon in Queensland, Australia.

4. Standardization

Standardization was the fourth recurrent theme of the session. In his closing remarks, Collier decried the "nightmare of ad hoc contract negotiations from scratch" as one of the largest inefficiencies in mining infrastructure arrangements. An investment advisory firm active in Africa pointed out that negotiations often started with a blank slate, with just "two guys and a PowerPoint," on a case-by-case basis rather than relying on an existing body of practice. Collier remarked that through learning-by-doing and the progressive evolution of codes and voluntary norms, contractual standards could realistically "crystallize into minimal legal standards" over time, following which negotiations would take place within a pre-established framework. Participants particularly emphasized the need for standardization in:

- Contract negotiation and design
- Upstream project preparation and methodology for feasibility analysis
- National and regional territorial development planning

Participants identified several standard best practices at the contract level, for greenfield as well as brownfield infrastructure. One law firm suggested using take-or-pay arrangements to mitigate demand risk, or encouraging third-party access through an established access arrangement, such as exists with the Wheatstone LNG Project in Western Australia. Ireland noted that further research was required in terms of standard mechanisms for compensating first-movers who face the demand risk in building shared infrastructure—for instance, through access holidays. An investment advisory firm pointed to the use of power purchasing agreements in the energy sector, which could provide useful examples of how to standardize and manage infrastructure tariffs and payments in shared-use cases. Meanwhile, Collier encouraged players to adapt contract negotiation standards and structure to market realities. He noted that current contracts have been designed to "work well in a commodity market on the upswing," but they contain very few provisions for a downturn such as the one the mining industry faces today.

One investment advisory firm suggested that a standard project-preparation system (relating not only to contract structure but to process and institutions) could also help shorten the prohibitively long development phase that many infrastructure projects encounter in Africa compared with the Middle East or Latin America. The participant emphasized that this preparation structure should be in place even before tendering begins. He cited a telling example of poor standards for project preparation in Mozambique, where four separate railways were built not because of lack of coordination among companies, but because no study had demonstrated that building all four of them was uneconomical. This example highlights the risk of poorly thought-through project-preparation processes, whereby project benefits that are less easily quantified and monetized (such as the social and environmental benefits of not duplicating the infrastructure) are too often overlooked in the interest of expediency and cutting costs.

Several participants called on DFIs such as the World Bank (with its Project Preparation Infrastructure Advisory Facility, PPIAF) or the African Development Bank to put funds together to facilitate the development of standard but rigorous project-preparation procedures. Some argued that this could be accompanied by national development plans, reinforcing the signal of strong government leadership while clearly outlining for investors the development prospects and shared-use objectives of different geographical zones.

Moving Toward a Set of Principles for Shared Use of Mining Infrastructure

Established principles can exert a powerful, positive influence. More than 80 financial institutions signed on to the Equator Principles, which seek to ensure that major projects follow environmental and social best practices. Together, these institutions account for over 70 percent of international project-finance debt in emerging markets. To take another example, the Organization for Economic Cooperation and Development's Guidelines for Multinational Enterprises hold all multinationals headquartered in the 46 signatory countries to voluntary standards of responsible conduct. These companies have $22.6 trillion invested around the world. The Cape Town roundtable was held with these positive examples in mind, to gather a diverse constituency behind a set of mutually acceptable and viable principles for shared use of mining infrastructure.

The diversity and deep sector-specific expertise of the stakeholders contributing to this initiative is intended to provide a multidisciplinary reality check on the viability and scope of a set of principles for shared use of mining infrastructure. While mutually acceptable solutions can feasibly be reached by mining companies, governments, and civil society alike, it is equally important to remain ambitious and avoid a lowest-common-denominator approach. With this objective in mind, the Milken Institute's Staci Warden suggested that initial work might focus on identifying the "red line" position boundaries—the limits of what each stakeholder in a negotiation would be willing to accept. As a next step of this project, roundtable participants as well as all other interested stakeholders are encouraged to consider the following questions. These questions pertain especially to the optimal scope and process to be followed, in order to move toward a truly effective set of principles for shared use of mining infrastructure.

Questions for feedback by participants:

- What **TYPE OF REGULATORY AND SERVICE MODEL** should these principles encompass? Should the project be agnostic of the model, or rather tailored to a specific model (vertically integrated mining operation, public infrastructure, independent private infrastructure, etc.)?

- Which **INFRASTRUCTURE SECTORS** can realistically be covered? For instance, energy and rail are difficult for different reasons, whereas the telecom industry provides multiple examples of shared use but presents entirely different economic considerations.

- What is feasible and desirable from an **ENGINEERING PERSPECTIVE**, and what are the limits in what shared use can achieve? (For instance: passenger safety standards in rail, capacity limits in the national energy grid, different business cases and solutions for different types of minerals, etc.)

- How can **OPERATIONS AND MAINTENANCE** of the infrastructure best be factored into these principles?

- Relatedly, can such principles realistically cover **BOTH GREENFIELD AND BROWNFIELD** infrastructure (including expansion and upgrading), or is a narrower scope warranted?

- What is the role for DFIs? Can instruments for **CREDIT AND ENHANCEMENT OR RISK MITIGATION** be effective in cases where the investments are a multiple of countries' GDPs?

- What role is there for local and international **CAPITAL MARKETS** (including listing standards) in endorsing and promoting principles for the shared use of mining infrastructure?

- Is it realistic to cover not just **SINGLE-PURPOSE BUT ALSO MULTIPURPOSE INFRASTRUCTURE?** While there is general consensus that the latter brings more social benefits and possible macroeconomic stability (less dependency on the mineral industry and its boom-bust cycle, financial sustainability beyond the depletion of mining quarries, etc.), are the additional risk and regulatory considerations prohibitive?

- The **PROCESS FOR DISSEMINATION** of the principles will be as important as their content. How can the relevant actors "set the tone," with successful examples such as the Equator Principles in mind?

- At a second stage, the intent is for this constituency of stakeholders to lead by example in a few **PILOT PROJECTS** where concerted action can significantly enhance the technical, commercial, and political feasibility of shared-use infrastructure solutions. Which countries or projects could be good pilot candidates?

Reactions and responses can be addressed to Carole Biau at cbiau@milkeninstitute.org.

Participating organizations list

The Milken Institute wishes to once again thank all participants who joined the February 10, 2016, session in Cape Town, South Africa, as well as all other partners who could not be present but who are keen to contribute to this yearlong endeavor.

- Acciona Infrastructures
- Accra Mining Network (AMN)
- African Development Bank, African Legal Support Facility (ALSF)
- Blavatnik School of Government, University of Oxford
- Emerging Africa Infrastructure Fund (EAIF)
- Fasken Martineau
- High Commission of Canada to South Africa
- Harith General Partners
- Hatch Goba (Pty) Ltd.
- Herbert Smith Freehills LLP
- International Council on Mining and Metals (ICMM)
- International Finance Corporation (IFC)
- IBS Group
- InfraShare Partners
- Japan International Cooperation Agency (JICA)
- K&L Gates
- Mining Dialogues 360^o
- Milken Institute
- Société Equatoriale des Mines (SEM)
- Standard Chartered
- Templars LLP
- Ubuntu Capital Group
- University of Nottingham Ningbo China

Note: This reflects in-person participants at the February 10, 2016, workshop.

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