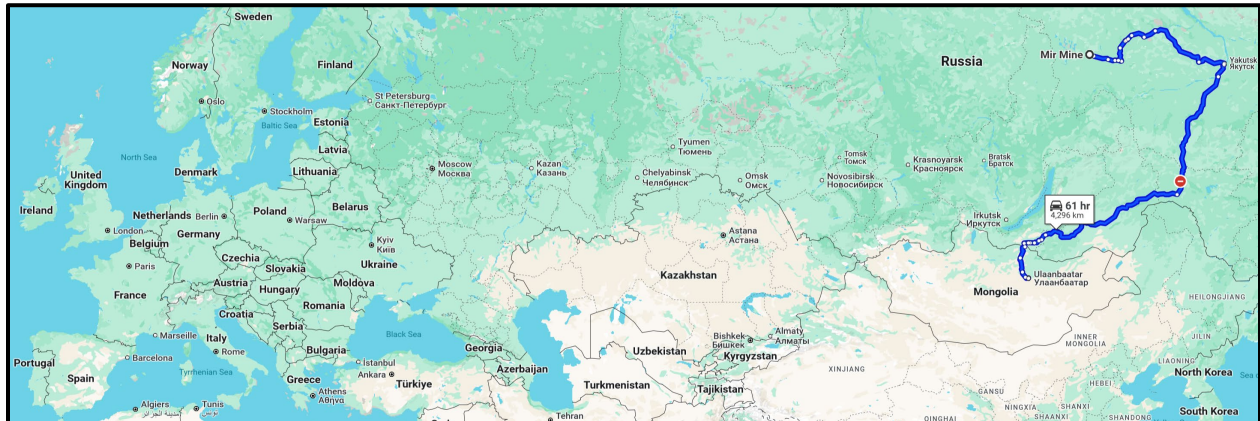


## Why does tail spend matter to mines?

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### Access to supply = proximity to cities or transportation hubs

Most industries are close to their sources for materials, services, and labor. Even when a supplier's factory is distant, supplier representatives establish distribution hubs near their customers. Think of banking, manufacturing, retail. Typically, the major facilities within these industries are co-located with cities

Of course, other factors play a role, such as access to a port, rail or highway hub, or an airport. But if a company wants to tap intravenously into an artery of the supply chain, that company will find it most convenient to be close to a large city where other industries are buying the same stuff from the same suppliers. The scope and scale of demand attracts suppliers and provides access to a vibrant supply market.

### Access to supply chains is a challenge for remote mines

Industries that extract raw materials (mining, oil and gas) are developing operations at sites that are increasingly remote. The obvious and easy-to-access reserves have already been discovered and exploited. Resource extraction companies have to look farther afield. Further, these remote sites are "projects" in the sense that they will exist only as long as there are reserves to extract. They are unlikely to provide stable, long term employment. Cities may not grow around them and they will not attract a vibrant supply market.

In Figure 1, below, provides a summary of the top ten largest mines in the world and the distance by road from those mines to the nearest cities with populations of over 100,000 and 1 million. It is uncommon for large mines to be located closer than a few hundred kilometers from a major metropolitan center.

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Rank <sup>(1)</sup>	Owner	Mine	Location	Nearest city of >100,000	Population	Road distance <sup>(2)</sup> , km	Nearest city of >1million	Population	Road distance <sup>(2)</sup> , km
1	Rio Tinto	Bingham Canyon Mine	US	Salt Lake City	210,000	50	Phoenix	1,650,070	1064
2	RWE Power	Garzweiler Mine	Germany	Duesseldorf	631,217	39	Cologne	1,073,096	67
3	Codelco	Chuquicamata Mine	Chile	Antofagasta	444,276	238	Cochabamba	1,431,000	984
4	LKAB	Kiruna Mine	Sweden	Oulu	207,327	499	Helsinki	1,584,038	1104
5	PT Indonesia Papua Metal & Mineral; Freeport-McMoRan	Grasberg Mine	Indonesia	<i>(none within driving distance)</i>		<i>(none within driving distance)</i>			
6	Mirny GOK	Mirny Mine	Russia	Yakutsk	355,433	1173	Ulaanbaatar	1,713,000	4296
7	Codelco	El Teniente	Chile	Rancagua	274,407	46	Santiago	7,000,000	136
8	Rio Tinto	Oyu Tolgoi	Mongolia	Ulaanbaatar	1,713,000	748	Ulaanbaatar	1,713,000	748
9	Vale	Carajás Mine	Brazil	Parauapebas	268,000	51	Belem	1,303,000	876
10	Barrick	Gold Strike Mine	Nevada, US	Reno	490,000	437	Salt Lake City	1,258,000	442
						median:	238	median:	876
						average:	365	average:	1080

### Sources:

(1) <https://miningdigital.com/top10/top-10-largest-mines-world>

(2) Google maps

**Figure 1: Distance to large cities for the ten largest mines in the world.**

## Remote sites end up with thin local supply markets

Remote industrial operations, such as mines, attract a home-grown cottage industry of local distributors and service providers. The mine site is the only game in town, so the limited scope and volume of procurement does not attract competition. As relationships with trusted suppliers mature, procurement may concentrate on a limited pool of long-term incumbent suppliers who are specialized in their own way. Because the spend on non-critical materials and services with local suppliers is not high compared to strategic categories, mine procurement may not be concerned with optimizing pricing to be consistent with major supply markets. For a variety of reasons, procurement with local suppliers may remain effectively on a spot-buy basis.

However, while procurement may be ad hoc and inconsistent from one week to the next, year over year spending with the same group of suppliers can be significant. This persistent spending becomes highly meaningful over the long term when it is consistently awarded to the same pool of incumbent suppliers.

Because of the cyclical nature of natural resource prices, mines swing from periods focused on output and expanding capacity to periods focused on improving costs and efficiencies. When commodities are priced high, mines care about availability, consistency, response time, and quality. When commodity prices fall, cost reduction becomes a priority.

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### Tapping value in tail spend requires a systematic and scalable approach

The down cycle provides the opening for mines to restructure relationships in their tail spend, specifically with the local supply market. Such restructuring includes determining whether pricing is fair and whether the suppliers are as capable as they should be. It also includes negotiating rates for frequently purchased items and services, and putting contracts into place once and for all.

Because tail spends appear to be low and inconsistent over short periods, tackling tail spend is daunting. It appears to be complex and not worth the effort. But there is high value in getting this right: direct cost reduction, process cost reduction, freeing up internal resources, greater transparency and control over spending. This requires a low cost, repeatable method not widely available today.

### The good news...

Fortunately, automation is coming to procurement. The benefits of technology in procurement, such as automation and GenAI, are not only that they cut costs, but they free up scarce resources to focus on strategic buying, and these solutions scale as the mine expands.

### About the author

Peter Benda is a 30 year veteran management consultant. His client work includes strategic sourcing and supply chain management, workforce effectiveness, front line productivity improvement, governance design, and data analysis. He has worked with clients in mining, utilities, manufacturing, financial services, transportation, defense, and federal and state agencies. Please reach out if you'd like to know more about procurement automation.

Ironically, this article was written without the use of GenAI.

### Summary:

Mines in remote locations have restricted access to competitive supply markets. This can result in unmanaged, concentrated, and entrenched supplier relationships for local procurement. Automation with GenAI is an emerging solution to give mines more control over tail spend with local suppliers.

### Keywords

mining; procurement; tail spend; automation; generative AI; genAI; supply chain; Rio Tinto; RWE Power; Codelco; LKAB; PT Indonesia Papua Metal & Mineral; Freeport-McMoRan; Mirny GOK; Vale; Barrick ; Bingham Canyon Mine; Garzweiler Mine ; Chuquicamata Mine ; Kiruna Mine ; Grasberg Mine ; Mirny Mine ; El Teniente; Oyu Tolgoi; Carajás Mine; Gold Strike MineAxtom