

BENCHMARK MINERAL INTELLIGENCE

CRITICAL MINERALS & METALS

DISRUPTIVE TECHNOLOGY

EMERGING MARKETS

COBALT

SPECIAL

The Democratic Republic of Congo produces over half of the world's cobalt. Some of the world's biggest mining companies operate in a country that experiences continuing conflict. Only relatively small volumes of cobalt are produced by illegal operations using child labour, but this cobalt is making its way into our batteries, smartphones and laptops.

Does the cobalt industry have a growing systemic problem? Or are major producers being blamed for the transgressions of a few?

Three of the cobalt's most influential organisations speak to Benchmark Mineral Intelligence and offer their perspective.

**p2 | Cobalt, conflict minerals and the 'unjustified stigmatisation' of producers
by David Weight, CDI**

**p4 | Human rights abuses and the cobalt supply chain
by Mark Dummett, Amnesty International**

**p9 | The need for leaders in supply chain ownership
by Michael Gibbs, Global Witness**

Cobalt, conflict minerals and the 'unjustified stigmatisation' of producers

By David Weight, President, Cobalt Development Institute (CDI)

The need for responsible mining practices is not new and has for many years been at the top of the agenda for many large scale mining companies.

This issue has been collectively addressed by the large scale mining industry since the late 1990s in order to help improve public awareness, address concern for the environment, introduce the broader concept of sustainability and maintaining high ethical standards

Cobalt is essentially a by-product of copper and nickel mining and one of the major objectives of the CDI is to promote the responsible production and use of cobalt in all forms and its members abide by the 7-guiding principles of the Institute.

The CDI members sign up to a code of conduct which exemplifies the very best standards in protecting human health, the environment and upholding human rights.

Downstream companies purchasing cobalt products from a CDI member company have the assurance that these products are produced with the highest ethical standards. Company policies and codes of conduct stress a zero tolerance policy for child, forced or compulsory labour.

The CDI and its members are therefore very concerned about what has been reported on illegal artisanal mining in the Democratic Republic of Congo (DRC).

There is a risk of unjustified stigmatisation of all cobalt producers, including those in the CDI and International Council for Mining and Metals (ICMM), who for many years have followed strict corporate policies against the use of child labour and in the respecting of



Credit: Glencore

human rights.

Not only could this stigmatise the use of cobalt generally, to the detriment of the wider industry as a whole, but also those operations where the cobalt is mined and processed legitimately in full compliance with local regulations for health and safety and the protection of the environment.

It is also important to avoid the effects of unnecessary stigmatisation of the responsible bona-fide large scale producers that offer income, safe working conditions and protection of human rights, who may eventually decide to re-consider operating in that country.

Poverty, a lack of proper employment opportunity, the cost of education, and other capacity gaps are the main issues and should be addressed through partnerships and multi-stakeholder initiatives to help eradicate the use of child labour in places such as the DRC.

Ultimately, this is the responsibility of the DRC government so it is imperative that companies are encouraged to invest sustainably in the country in order to contribute to the economy and well-being of its people.

Any solution to this problem must include foreign governmental and international support and assistance to the DRC government in a manner that avoids unintended consequences.

At the same time, international pressure must also be applied on those non-compliant companies purchasing illegally mined cobalt, to address their own practices.

The mining industry provides the resources necessary for creating and



Employees in the Kamoto Underground Mine

Credit: Katanga

developing modern materials and enabling technological progress and it has, as a responsible industry, also provided substantial benefits, particularly in developing countries. These include:

- Economic
- Environmental stewardship
- Health and safety
- Social welfare
- Infrastructural
- Education and Training
- Alternative livelihoods
- Awareness on human rights

To achieve these benefits, the larger producers already operate within a spectrum of mandatory guidelines and voluntary initiatives that ensure they have responsible and sustainable working practices (e.g. the Universal Declaration of Human Rights; UN and OECD Guidelines; the Extractive Industry Transparency Initiative; the Global Reporting Initiative; ICMM Principles and many more)

“The importance of responsible resourcing is growing as organisations increasingly take evaluation of environmental and social performance beyond their own operations and integrate it into supply chain purchasing decisions”, the ICMM writes in “A Guide to Responsible Sourcing”.

This is vitally important to ensure the sustainable credentials of the industry.

It is important for producers to have an intimate understanding of their supply chain provenance, going beyond mere face value of documentation. So it is questionable whether the addition of mandated audits of the chain of material custody in addition to current guidelines would have any added value, particularly where the stream of raw material is from a company’s own mine.

For third-party material, a bi-lateral approach on sustainable sourcing between supplier and customer would be recommended in order to enhance the relationships within the supply chain and thus improve transparency.

This enables companies to carefully select their suppliers and eliminate those that do not provide the necessary sourcing assurances. In these circumstances self-certification or voluntary reporting systems are the preferred method as they bring the required discipline and flexibility to address issues of compliance.

We at the CDI believe it is far better to consolidate and rationalise existing guidelines and initiatives, which are all well considered, rather than imposing mandated requirements across such a broad based industry operating at differing levels across the world.

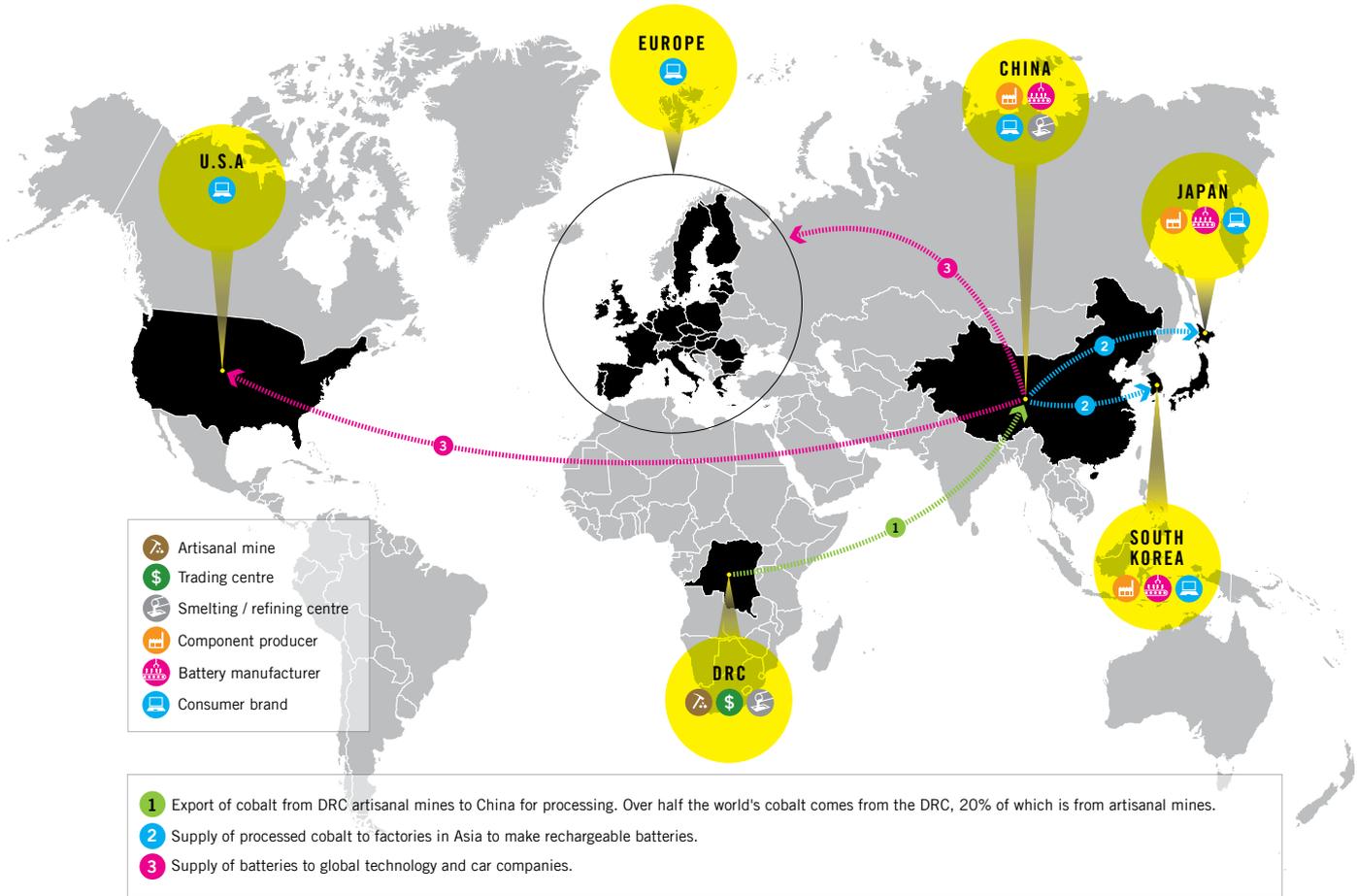


■ For more information, visit the CDI at: www.thecdi.com

Human rights abuses and the cobalt supply chain

In January 2016, Amnesty International released a report on artisanal cobalt mining and alleged human rights abuses in the DRC. Here, Mark Dummett, co-author of 'This is what we die for', explains the findings of the report, the subsequent global reaction and outlines the changes needed in corporate due diligence to prevent such abuses from continuing

MOVEMENT OF COBALT FROM ARTISANAL MINES IN THE DRC TO THE GLOBAL MARKET



Cobalt might end up in high-tech products, such as smartphones and electric vehicles, but much of it is mined using basic tools that have not changed in centuries.

In the Democratic Republic of the Congo (DRC), tens of thousands of miners use nothing more sophisticated than mallets and long metal spikes to chisel out the ore. They work in tunnels deep underground that they have dug by hand, which are prone to collapse. The valuable mineral is also mined by children as young as seven. They scavenge in the discarded by-products of industrial mines, washing and sorting the ore before it is sold.

The DRC is the source of more than half of the world's cobalt, and the government there estimates that some 20 per cent is mined by hand. Industry analysts suggest the real figure might be even higher, with

thousands of artisanal miners digging for cobalt in new areas in 2015.

Most artisanal miners do not even have the most basic safety equipment, such as boots or helmets. Chronic exposure to dust containing cobalt can result in the potentially fatal "hard metal lung disease", but artisanal miners have nothing to protect them.

Miners told us that hand-dug mines can extend for fifty metres underground, often without any support to hold them up, and are poorly ventilated. There is no official data available on the number of fatalities that occur, but miners said accidents are common, as unsupported tunnels collapse frequently. Between September 2014 and December 2015 alone, the DRC's UN-run radio station, Radio Okapi, carried reports of fatal accidents involving more than 80 artisanal miners in the province then known as Katanga (last summer Katanga was

► divided into three). However, the true figure is likely to be far higher as many accidents go unrecorded and bodies are left buried underground.

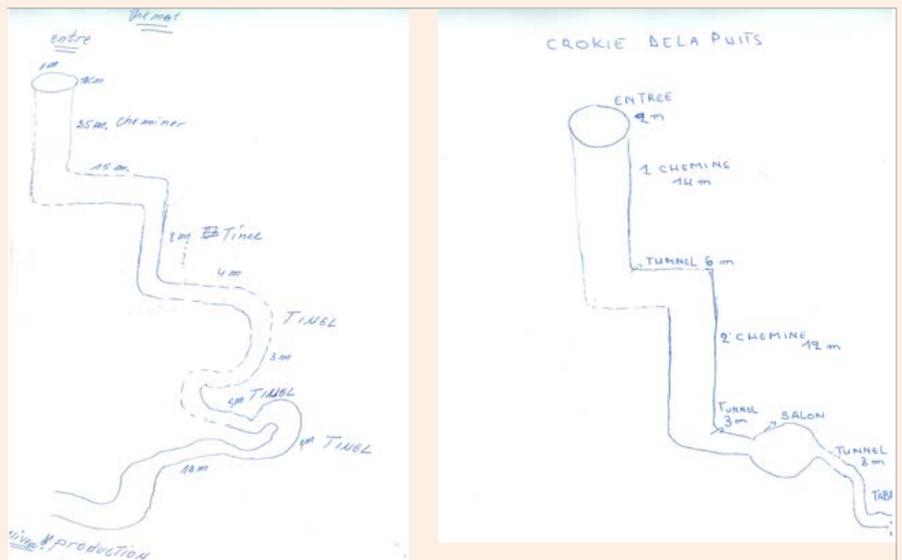
It is DRC government policy to support the formalisation of artisanal mining and it has created authorized zones where mining activities can be regulated and made safer. But the reality is that this policy has not been well implemented: there are very few authorized zones and most artisanal mining continues to take place in unofficial and unregulated areas. The government agencies charged with regulating artisanal mining and inspecting work sites for child labour are woefully understaffed and lack the capacity to perform their tasks. Artisanal miners complain that the government officials who are meant to help them are more likely to demand illegal payments from them.

Last year, a team of researchers from Amnesty International and Afrewatch, a Congolese human rights organisation, travelled to southern DRC to investigate the plight of the men, women and children working in artisanal cobalt mines. As well as documenting the dangerous and abusive conditions in the mines, we also traced the routes along which the mineral is then traded internationally.

Researchers followed vehicles of miners and traders as they carried cobalt ore from artisanal mines in Kolwezi to a market where minerals are traded. Independent traders buy the ore, without questioning where it has come from or how it has been mined. In turn, these traders sell the ore on to larger companies in the DRC that process and export it. One of the largest companies at the centre of this trade is Congo Dongfang Mining International (CDM). CDM is a 100% owned subsidiary of China-based Zhejiang Huayou Cobalt Company Ltd (Huayou Cobalt), one of the world's largest manufacturers of cobalt products. Huayou Cobalt sells the processed cobalt to battery component manufacturers in China and South Korea, who in turn sell to battery manufacturers, including market leaders Samsung SDI, LG Chem and ATL.

Following this supply chain, we were able to identify that cobalt mined by children and adults in these dangerous and abusive conditions could be entering the supply chains of many of the world's leading

ARTISANAL MINERS' SKETCH OF MINE LAYOUT AND DEPTH



Diagrams drawn by artisanal miners to show the layout and depth of their mine. The miners dig the tunnels using hand tools, following the seam of cobalt ore as it winds and descends down through the earth. The tunnels often go beyond the maximum depth of 30 metres stipulated by the DRC's Mining Code

Source: Amnesty International

technology brands. These include Apple, Dell, Samsung, Sony, Microsoft and LG, as well as the Chinese electric vehicle company BYD, and automobile giants Daimler and Volkswagen. In seeking to understand how this international supply chain works, as well as to ask questions about each company's due diligence policy, Amnesty International wrote to Huayou Cobalt and 24 other companies in China, Germany, Japan, South Korea, Taiwan, UK, and the USA. Their replies are available on Amnesty International's website.

Our findings received massive global news coverage, with over 170 different links for news and other online coverage within two days of the report's publication. Here in the UK, our research was carried by all of the leading newspapers, including the Financial Times. Even future consumers heard about the link between smartphones and child labour in the DRC: our research was headline news on a famous BBC TV children's programme that is shown in classrooms across the country.

The interest was global, with the report picked up in key markets including China. Amnesty's campaigning on this issue has only just begun, and we will continue to watch how companies and governments

THE MOVING BORDERS OF THE DRC

Provinces in the Democratic Republic of the Congo pre-2015



New provinces created in 2015 from the former Katanga Province



Source: Amnesty International

respond to our findings.

So what then should companies do? Those that have been buying cobalt, or products containing cobalt, from artisanal mines may be tempted to address the risk of negative publicity by discontinuing a trading relationship with a supplier or embargoing DRC cobalt. However, the fact is that many companies have been sourcing cobalt from these mines for many years without even checking or addressing the dangerous conditions in which adults and children mine cobalt, and so this would absolutely be the wrong thing to do. Companies have a responsibility to undertake remedial action if human rights abuses have occurred at any point in an existing or past supply chain and cannot simply walk away from the adults and children who have suffered human rights abuses for years.

International guidance, such as the UN Guiding Principles on Business and Human Rights and the Organisation for Economic Co-operation and Development (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas (OECD Guidance), set out the responsibility of upstream and downstream companies to manage, mitigate and remediate adverse impacts. Upstream

and downstream companies should take remedial action on the harms suffered by adult and child artisanal miners.

UNICEF estimated in 2014 that approximately 40,000 boys and girls work in artisanal mines across southern DRC, many of them involved in cobalt mining. It is widely recognised internationally that the involvement of children in mining constitutes one of the worst forms of child labour, which governments are required to prohibit and eliminate.

Our research showed that the nature of the work children do in artisanal cobalt mining in the DRC is hazardous, and likely to harm their health and safety. Companies must, in cooperation with national authorities, international agencies and civil society, develop and implement a plan to remove children from the worst forms of child labour, support children's reintegration into the school system and address children's health, physical, educational, economic and psychological needs. Similarly, there is a need to put in place health monitoring and treatment services for artisanal miners to assess and treat occupational diseases.

The OECD Guidance also suggests that one of the measures that upstream companies, individually or through

► joint assessment teams, should take to “minimise the risk of exposure of artisanal miners to abusive practices” is to support “host countries governments’ efforts for the progressive professionalization and formalisation of the artisanal sector”. Both upstream and downstream companies should consider ways in which they can support the DRC government’s policy of creating new areas where artisanal mining will be formalised and regulated.

All companies must put in place human rights due diligence systems, so that they can identify where the cobalt in their products comes from, and under what conditions it has been mined and traded. Companies must make this information public.

A practical guide for how such due diligence should be carried out for supply chains has been provided by the OECD Guidance, which reflects the current international standard and lays out a five step process for all companies involved in the mineral supply chain to follow.

Companies that purchase cobalt, or components containing the mineral, have no excuse for not conducting such due diligence steps. T

he DRC is by far the world’s largest source of cobalt and the poor conditions of its artisanal mines, and the presence of children working in them, has been reported publicly in the past.

Finally, other governments also need to act. Our research exposed a clear gap when it comes to home states (the countries where multinational companies are headquartered), such as China, the US, South Korea and many others, playing a meaningful role and requiring greater transparency around cobalt supply chain practices.

Currently, no country legally requires companies to publicly report on their cobalt supply chains. Under international human rights law, states have a duty to protect against human rights abuses by all actors, including businesses. A good way to fulfil this duty would be for governments to enact and enforce laws requiring corporate due diligence and public disclosure in relation to cobalt and other minerals.

For many of the tech companies that use cobalt, supply chain due diligence



Credit: The Enough Project

Goma: a city in the heart of the conflict

requirements for all minerals – as laid out by the OECD Guidance – are not new. Additionally, many of them are US-listed companies subject to reporting requirements under the Dodd-Frank Act, which requires them to check whether certain minerals in their products (tin, tantalum, tungsten and gold) are contributing to the funding of armed groups or fuelling human rights abuses in the DRC or surrounding countries.

Yet it is clear that some of these companies are currently failing to operationalise the international standard for mineral supply chains beyond whatever measures they have put in place for 3T and gold. One company that we wrote to explicitly admitted, and others implied, that this is because cobalt is not covered under US legislation.

This admission clearly underscores the value of law in influencing corporate behaviour.



The need for leaders in supply chain ownership

By Michael Gibbs, Global Witness

The best time to plant a tree is twenty years ago. Or so goes an old proverb. It is also the best time to start thinking seriously about sourcing minerals responsibly.

In recent years the links between conflict, human rights abuses and the minerals trade have been increasingly well documented and understood. While some conflicts are fought over control of mineral resources, others have deeper roots, but are still intensified and prolonged by the cash and economic incentives the trade can provide. And while some armed groups are willing to suffer the hardships needed to profit directly from mining, many prefer instead to prey on those who have little choice but to face these dangers on a daily basis.

Elsewhere, in countries like Zimbabwe, resource-linked corruption on a grander scale has freed oppressive regimes and violent security services from national budgets and the oversight and accountability these bring, eroding the social contract and pushing already fragile states towards further conflict and instability.

The extractives sector ranked top of a 2014 analysis of international bribery cases conducted by the Organisation for Economic Cooperation and Development (OECD).

And while the resource-rich countries of the Central African Republic (CAR), the Democratic Republic of Congo (DRC) and South Sudan are home to just over eight per cent of Africa's population, they account for almost forty per cent of the continent's displaced population.

If there was ever a time when these problems could be dismissed as the concern only of others, it has long since passed. We know that many of the supply chains that take these resources to market make their

way to Europe and North America, bringing with them a range of legal, financial and reputational risks to companies, investors and consumers. At the same time, they bring leverage and an opportunity to make a difference.

There is no single solution to conflicts and their links to the trade in minerals. But while no single piece is sufficient on its own, that does not mean individual pieces cannot each be necessary and essential.

The UN Guiding Principles on Business and Human Rights, operationalised in the minerals sector by the OECD's Due Diligence Guidance for Responsible Mineral Supply Chains, make it clear that individual corporate responsibility is one such critical piece. Like in other sectors – from textiles and food to financial services and waste disposal – companies are asked to take ownership of their supply chains and exercise appropriate due diligence when sourcing their minerals.

The OECD standard has now been established globally. It has been endorsed by all 34 OECD members, 19 non-members, and the UN Security Council. It is also increasingly reflected in domestic laws and guidelines, including section 1502 of the US Dodd-Frank Act, recently released industry guidelines for Chinese companies and legislative commitments made in the twelve states of the African Great Lakes region.

The EU is a surprising exception. It is lagging behind, with ongoing negotiations of its draft conflict minerals regulation threatening to undermine this standard and the consistency and level playing field it offers.

Despite this progress there is a great deal still to be done. Relatively few companies are doing due diligence to anything like the OECD standard, and fewer still are reporting

▶ on what they have done in any meaningful detail. The debate is also still hampered by persistent misunderstandings of the process and its aims.

Making mineral supply chains more transparent and resilient to risk may seem like a daunting challenge. When faced with such a challenge it can be tempting to reframe it in more manageable terms. But solving a more manageable problem serves no one if it leaves the real issue obscured and untouched.

The “conflict minerals” narrative is too often framed by geography – most frequently by the geography of the DRC. In some cases of semantic contortion, the meaning of ‘conflict’ has even been narrowed to be used synonymously with violence in eastern parts of Congo, as if armed confrontations and human rights abuses elsewhere in the world belong to a different category altogether.

The core concept of due diligence is not geography. It is risk. And risks are stateless and nomadic. They respect no borders and know no geography.

A flurry of recent reporting makes this clear. Child labour has been found in Congolese cobalt mines, but also in the gold mines of Ghana and Burkina Faso. Armed groups have profited from CAR’s abundant mineral wealth, landing one EU company on the UN’s sanctions list for trading in gold and diamonds linked to a conflict that has displaced one fifth of the country’s population and left one in two in need of humanitarian assistance.

Recent reports have documented similar problems in Colombia, Mexico, and in Myanmar’s secretive jade mines. The trade in resources linked to conflict and human rights abuses is a global problem that companies must play their part in confronting, whatever they source and wherever they source it from.

The responsible sourcing debate should focus on how companies do business, not where. As any successful company knows, risk is not necessarily a bad thing. Risks that are identified and well managed are called opportunities. The danger lies in unidentified and unmanaged risks.

No one, therefore, is asking companies to avoid risk entirely. Rather, companies are being asked to take ownership of their supply chains and to do something about



Supply chain tracking cobalt in the DRC

the risks that can link their activities to human rights abuses and conflict financing – especially when sourcing from producing, processing, or transit countries where these risks are especially high. Avoiding risk entirely is neither a requirement of the due diligence process, nor responsible. It may even be self-defeating, as it comes with risks of its own. Divesting from a country or area simply because some additional care and diligence is required risks seriously disrupting local livelihoods and betrays a business model premised on indifference and a ‘don’t ask, don’t tell’ policy that is no longer defensible.

The process of proactively identifying and mitigating risks in supply chains – and reporting publicly on efforts to do so – gives companies a practical means of honouring their responsibilities and a clear means of signalling their good standing to customers. If done well, this can double as a defence in cases where something goes wrong.

We are often told that due diligence on mineral supply chains is difficult. There is some truth to this, but not for the reasons most often cited.

The primary difficulty lies not in the technical or logistical challenges companies in the minerals sector have always made it their business to overcome, but in the conceptual shift needed to make real ongoing management of these risks part of doing business as usual.

This process will take time. More time than many of the trade’s victims have. Changing the way minerals are sourced by keeping this process on track and moving forward at pace will require leadership from progressive companies willing to show what is possible while others drag their feet and look for loopholes. These companies know the second half of the proverb. They know that the second best time to plant a tree is today. 

Credit: Sasha Lezhnev/Enough Project



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TO UNDERSTAND THE FUTURE, YOU NEED RELIABLE DATA ON THE PRESENT.

The speed at which people adopt new technology is increasing.

Low carbon industries such as lithium ion batteries are becoming mainstream. Yet the supply chains that serve them are slower to react.

Lithium, graphite and cobalt are core critical minerals that the Benchmark team travels the world to learn about.

To understand the future, you need reliable data. This is why we have tailored methodologies for each mineral we collect price data on.

And our dedication to learning every link in the supply chain for disruptive technology means our insight is unrivalled.

Learn more at: www.benchmarkminerals.com