

MODERN SLAVERY: THE TRUE COST OF COBALT MINING

Take Note, November 2017

Thousands of artisanal miners dig by hand in the Democratic Republic of Congo (DRC). Children, too. They have no industrial tools, no protective clothing, no hard hats, not even facemasks to shield toxic dust or shoes. They are searching for cobalt, the rare-earth metal powering the mobile revolution.

Cobalt: The numbers

Global sales of electronic devices for 2016



Smartphone	1,500,000,000
Laptop	156,800,000
Electric car	2,000,000

Average amount of cobalt in electronic devices



Smartphone
7.5 grams



Laptop
1 ounce



Electric car
15 pounds

Total amount of cobalt used in the three devices in 2016 was:



And that's the equivalent of:



Cobalt is an essential component of rechargeable lithium-ion batteries. The end product may be in your pocket, on your desk, in your garage, or even in your investment portfolio. It powers most electronic gadgets, including smartphones and laptops, and electric vehicles.

Cobalt-rich batteries are seen as a greener alternative to traditional lead-acid batteries. They are smaller, lighter and hold more energy. Favoured by tech giants, including Apple and Samsung, the innovative power packs allow consumers to reap the benefits of truly mobile technology.

The price of innovation

As innovation pushes for ever-more-slimline devices and governments look to phase out petrol and diesel cars in favour of their electric counterparts¹, cobalt is becoming a highly sought-after metal. In fact, some studies are predicting a 30-fold increase in demand by 2030².

This figure may seem high, but it is not unrealistic. Tesla plans to produce 500,000 electric vehicles a year by 2018, and will reportedly require 7,800 tons of cobalt to do so³. The company has even built its own super-sized lithium-ion battery plant, named Gigafactory 1⁴, to help it achieve this goal.

For investors in companies linked to cobalt mining, the most prolific of which is Glencore⁵, this predicted surge in demand – coupled with the naturally short supply of the rare metal – means that the price of cobalt is likely to continue to rise for the foreseeable future. The flipside of cobalt's stellar financial performance, however, is tainted by a hidden human toll.

Mobile power, human toll

More than half of the world's cobalt is mined in the DRC, and the country's government estimates that 20% of all cobalt production in the country comes from so-called artisanal mines that rely on human muscle (they would be better described as manual mines). In the DRC, there are at least 100,000 artisanal cobalt miners, and according to UNICEF, approximately 40,000 of those miners are children⁶. But despite being a naturally resource-rich country, DRC is also the second poorest economy in the world⁷. Life expectancy there is just 47 years for men, and 51 years for women⁸. That compares to 81.2 years for the average UK citizen⁹.

¹ "Britain to ban sale of diesel and petrol cars and vans from 2040," published by The Guardian as at July 2017.

² "Race is on to mine metal powering electric vehicles," published by Bloomberg as at June 2016.

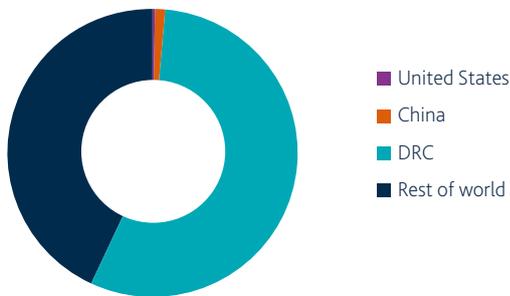
³ "No cobalt, no Tesla?" published by Tech Crunch as at January 2017.

⁴ "Tesla Gigafactory," published by Tesla as at February 2014.

⁵ "Carmakers' electric dreams depend on supplies of rare materials," published by The Guardian as at July 2017.

While some observers suggest that the expected surge in cobalt demand provides a much-needed source of income for people in the DRC, in reality artisanal miners are barely being paid enough to survive. Recent research by Amnesty International found that children as young as seven are working in cobalt mines, often for less than \$2 a day¹⁰.

Figure 1: Estimated global production of cobalt for 2017



Source: CRU, estimated production for 2017 and Visual Capitalist as at January 2017

To make matters worse, miners, including children, face constant risk and are ripe for exploitation. They work in wretched conditions that are extremely dangerous to their health - often with no safety equipment or protective clothing, as aforementioned. They are exposed to a near-invisible poison, cobalt dust, which can cause fatal hard metal lung disease. Work hours are long, and miners labour in tunnels that are not properly supported. Rainfall can cause large areas of cobalt mines to suddenly collapse. At least 80 artisanal miners died underground in the DRC between September 2014 and December 2015 alone, and the bodies of children and adults alike are often left buried in the rubble¹¹.

A 21st century paradox

The reality of daily life for Congolese cobalt miners is clearly a long way from the lifestyles of the users of the latest tech devices. Furthermore, it seems that technological innovation is in fact fuelling the exploitation of the poor and vulnerable.

So, why are the world’s largest consumer brands willing to buy cobalt under such circumstances?

A large part of the problem is a lack of traceability along the supply chain – and the involvement of unscrupulous third parties. A significant proportion of cobalt from the DRC is sold to Chinese traders and smelters, who are often more concerned with price than with ethics.

The region’s largest cobalt purchaser is Congo Dongfang International, an ancillary of Zhejiang Huayou Cobalt¹², which supplies cobalt to the majority of battery manufacturers around the globe. These batteries then make it ‘downstream’ into the supply chains of the consumer electronics firms, but the provenance of the cobalt used in them is often several layers removed from the corporate buyer. The use of subcontractors across the global supply chain only makes matters worse. In this way, it is difficult to determine whether cobalt from artisanal mines entered this complex supply chain.

So, even though many big brand companies claim to have a zero-tolerance policy towards child labour, cobalt somehow seems to be the exception to the rule.

A lack of adequate regulation

At present, there is no regulation directly covering the global cobalt market – let alone local practices in the DRC. For example, cobalt does not fall under existing conflict minerals rules in the USA, which cover gold, tantalum, tin and tungsten mined in DRC. Activists are, however, calling for cobalt to be added to the list of conflict minerals. Without laws requiring companies to check and publicly disclose the origin of source minerals and those used by suppliers, activists believe corporates will continue to profit from human rights abuses.

Thanks to the efforts of several non-governmental organisations (NGOs) governments across the globe are starting to get the message that more needs to be done to improve the transparency of supply chains, and to stamp out all forms of modern slavery, not least child labour. For example, the 2015 UK Modern Slavery Act applies to all companies conducting any part of their business in the UK that have annual gross worldwide revenues of £36 million or more. Under this regulation, companies must now publish an annual slavery and human trafficking statement which verifies the different stages in their supply chain. Companies must also confirm that none of their corporate’s suppliers are involved in slavery. This includes identifying where and how cobalt in their products was mined.

International involvement

Interestingly, the statutory guidance of the Modern Slavery Act references the OECD’s Guidelines for Multinational Enterprises, which “provide principles and standards for responsible business conduct in areas such as employment and industrial relations and human rights which may help organisations when seeking to respond to or prevent modern slavery.”¹³

While the OECD Guidelines are merely recommendations, they are backed by 46 adhering governments. It has also developed a Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, which are seen as the global standard for mineral supply chain responsibility¹⁴.

Although the guidance is voluntary, the OECD has actively encouraged its adoption. For example, in May 2016, the OECD met with the Chamber of Commerce of Metals, Minerals and Chemicals Importers and Exporters (CCCME), a unit of China’s Ministry of Commerce, for the first time to discuss the application of the OECD’s due diligence guidance in a Chinese context¹⁵.

External pressure

Ensuring ethical sourcing of cobalt from the DRC requires much more than action by policy-makers, however. Industries and investors must also make a stand if the scourge of child labour and horrendous working conditions are to be exposed and eradicated.

Amnesty International and African Resources Watch have lead the charge about human rights abuses in the DRC, particularly in cobalt, and mounted pressure on corporations to do the right thing. In a report published last year, both organisations called on multinational companies who use lithium-ion batteries in their products to “conduct human rights due diligence, investigate whether the cobalt is extracted under hazardous conditions or with child labour, and be more transparent about their suppliers.”¹⁶

⁶ “Exposed: child labour behind smart phone and electric car batteries,” published by Amnesty International as at January 2016.

⁷ “The Poorest Countries in the World,” published by Global Finance Magazine as at February 2017.

⁸ “DRC country profile,” published by BBC News as at July 2017

⁹ “Life expectancy at birth,” published by World Health Organisation as at January 2016.

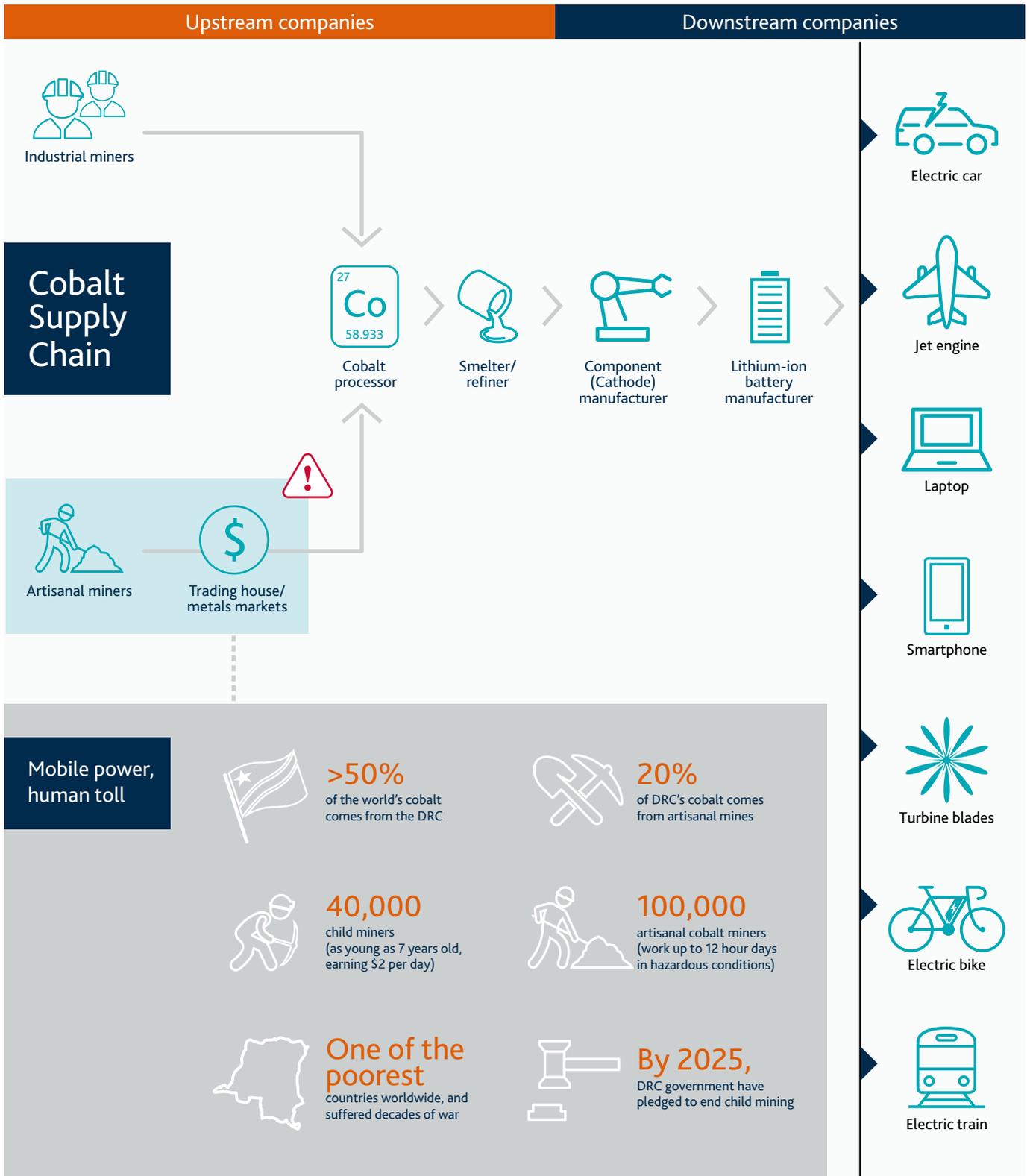
¹⁰ “This is what we die for,” published by Amnesty International as at January 2016.

¹¹ “Exposed: child labour behind smart phone and electric car batteries,” published by Amnesty International as at January 2016.

¹² “Exposed: child labour behind smart phone and electric car batteries,” published by Amnesty International as at January 2016.

¹³ “Tackling modern slavery in global supply chains,” published by OECD as at March 2016.

Controversy in the cobalt supply chain



Source: UNICEF, Amnesty International, and Visual Capitalist as at September 2017.

OECD guidance: responsibilities of upstream and downstream companies

Upstream companies	Downstream companies
 <ul style="list-style-type: none"> ■ Trace source back to the point of extraction; ■ Map circumstances of extraction, trade, handling and export; ■ Establish on the ground assessment teams; ■ Teams must generate and share verifiable, up-to-date information on circumstances of extraction, trade, handling and export; ■ Provide assessment results to downstream customers; ■ Smelters/refiners due diligence should be audited by independent third parties; ■ Take steps to identify, assess and manage human rights abuses in their supply chain. 	 <ul style="list-style-type: none"> ■ Identify and review due diligence processes of smelters/refiners in supply chain; ■ Assess whether due diligence measures of smelters/refiners adhere to OECD Guidance; ■ Take steps to mitigate any identified risks in supply chain; ■ Establish internal controls over immediate suppliers; ■ Co-ordinate efforts through industry-wide initiatives to build leverage over sub-suppliers;
All companies in the supply chain	
 <ul style="list-style-type: none"> ■ Mitigate and take corrective measures for victims if human rights abuses occurred at any point during their operations; ■ Do more than simply discontinue a trading relationship with suppliers when human rights abuses have been identified; ■ Co-operate and engage with relevant bodies, such as NGOs, governments, downstream and upstream companies. 	

Source: "OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from conflict-affected and high-risk areas," published by the OECD as at 2012

The report also urged China to put pressure on extractive companies with overseas operations, by investigating their supply chains for unethical practices. It asked them to address any human rights violations within their operations. Huayou Cobalt was identified in the report as a key actor. Both Amnesty International and African Resources believe the firm should confirm the source (who and where) of its cobalt, and ensure child labourers are not involved in the mining process¹⁷.

Positive steps

The good news is that pressure from NGOs, together with the growing reputational risk faced by companies in the cobalt supply chain, is starting to have an impact.

In late 2016, several companies have formed a body called the Responsible Cobalt Initiative (RCI) to help the industry conduct due diligence in line with the OCED Guidance, and eradicate child labour in the DRC. Apple, HP, Huawei, Song, Samsung SDI and Huayou Cobalt are among the members. However, no carmakers feature in the group.

At the same time, the Electronic Industry Citizenship Coalition (EICC) launched the Responsible Raw Materials Initiative (RRMI). Founding members include Apple, Cisco, Dell, Ford Motor, Google, HP, Intel, Lenovo, LG Electronics, Microsoft, Sony and Samsung. This industry-backed initiative aims to not only make a difference to the conditions in which materials such as cobalt are mined, but also commits to meeting current and future market expectations – including mounting pressure from socially-conscious consumers and investors for ethical supply chains.

Furthermore, in late August, the DRC government made a commitment to eliminate child labour in the mining sector by 2025¹⁸. But notably, previous government promises on tackling child labour have amounted to nothing.

In fact, in the age of social media, investors wield significant power in driving companies to embrace more ethical sourcing practices. Apple is a case in point. After receiving complaints about child labour in its supply chain, the company has vowed to treat cobalt as a conflict mineral. This means tracking the mineral right through from source to iPhone.

Digging deeper

As well as demanding greater transparency from companies in relation to their mineral supply chains, investors are increasingly realising the need for more holistic action to address human rights abuses. Simply refusing to purchase unethical cobalt will not solve the problem. There will always be other buyers.

Meaningful change means all stakeholders must come together to take action -identifying and addressing the challenges in cobalt mining, and helping the communities adversely impacted by the activity. At Hermes, we believe that audit and tracking processes around cobalt must improve. Mine-level information must be provided around metrics, including child labour. Investors can play their part too by demanding more granular detail from companies on their supply chain activities.

¹⁴ "Tackling modern slavery in global supply chains," published by OECD as at March 2016.

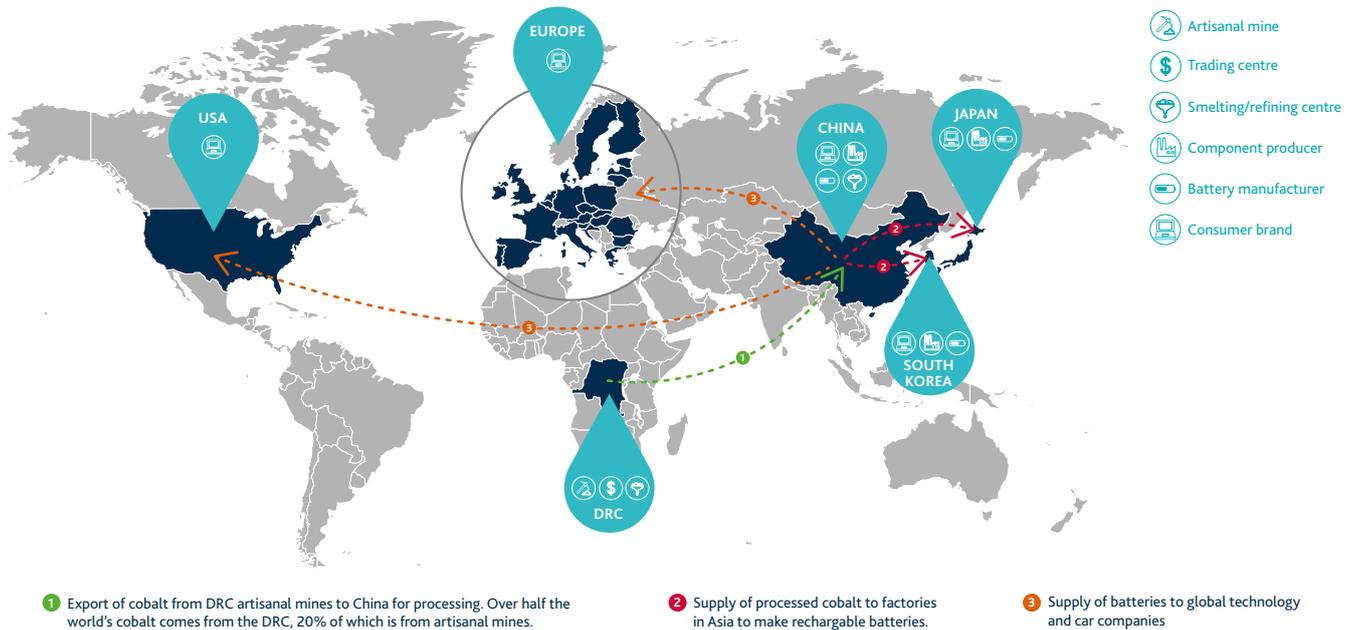
¹⁵ "Beyond tin, tungsten, tantalum and gold," published by Hermes EOS as at March 2017.

¹⁶ "This is what we die for," published by Amnesty International as at January 2016.

¹⁷ "Exposed: child labour behind smart phone and electric car batteries," published by Amnesty International as at January 2016.

¹⁸ "DRC: Government must deliver on pledge to end child mining labour by 2025," published by Amnesty International as at September 2017.

Movement of cobalt from artisanal mines in the DRC to the global market



Source: Amnesty International as at September 2017.

Hermes EOS is encouraging companies to keep moving towards supply chain transparency, and we have been actively engaging with automotive companies to facilitate their participation in the wider discussion around cobalt. This discussion includes how the local community will be impacted by blocking out child labour, and what support needs to be put in place for them – medical care, education and job training, for example. We see a need to ensure funding is allocated to community building activities aimed at tackling child and forced-labour issues. Companies must ensure that cobalt mining communities feel the benefit of their presence – and investors will no doubt be keen to see this becoming part of corporate sustainability programmes in the years ahead.

Apple, Samsung FDI and Huayou Cobalt are leading the way in taking this approach, and are actively encouraging other companies to join them, including an innovative manufacturer of electric vehicles. The support of brands such as Samsung FDI and Apple has done a lot to push the industry forward, but there is still a long way to go. Hermes EOS' position is that harnessing innovative technologies may provide an effective solution in the move towards increased transparency – for example, using distributed ledgers such as blockchain enables supply chains to be monitored from the bottom up, rather than the top down audit approach currently in place. We are keen to see companies following the example of Microsoft and IBM, which have invested in start-ups and incubators in order to continue driving progress.

Should companies fail to increase the transparency of their operations or continue breaking ground in the move towards an ethical supply chain, they will encounter increasing investor pressure, and may suffer considerable reputational harm.

Think differently

Investors are well-placed to lobby corporates about alternatives to continually sourcing new cobalt. There are, for example, ways for cobalt to be re-used within a circular economy model. Having already been through the human rights due diligence cycle, this approach

offers great potential to reduce waste and costs – while lowering the demand on already constrained natural resources.

As part of the wider dialogue taking place around better corporate reporting, investors also have the opportunity to encourage companies to think more carefully about the cost of child labour and its impact on their financial performance. As sustainability reports and integrated reports become more mainstream, these will also turn into vehicles for greater social and ethical accountability among big brands.

Of course, eradicating child labour and poor working conditions from cobalt mining will require co-ordinated action from consumers, governments, mining companies and NGOs. Nevertheless, investors undoubtedly have an important role to play in bringing an end to the 21st century paradox that is unethical cobalt mining.

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