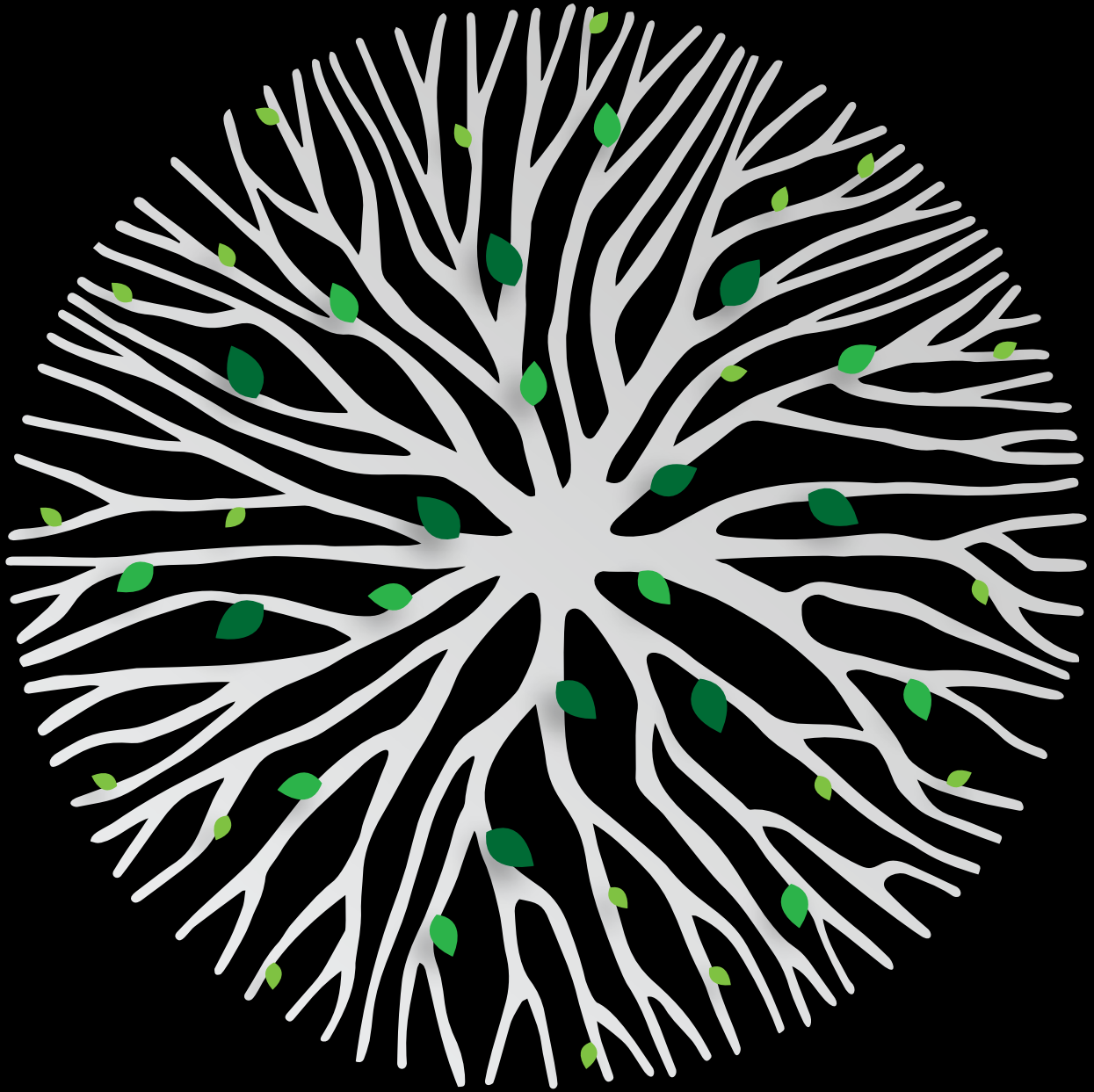


**Deloitte.**



**The next great economic  
opportunity for WA**

Transitioning to low-carbon mining

# 2020: Climate hits the Mid-Market

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Climate change is already impacting the mining and metals sector across companies of all sizes, regions and commodities. 2020 has seen this shift with climate change not only impacting global miners but also the mid-market.

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Companies failing to take action are already starting to suffer the consequences. This is no longer about being one of the good guys, this is about immediate financial impacts. Mid-market players face higher debt costs, reduced investor options and falling valuations.

Banks are already charging more for debt provided to companies that have the potential to go against their own shareholder demands. Many equity investors can no longer touch high emissions stocks, leaving companies with less demand for their stock. Investors need to ensure they avoid being behind the market in terms of valuation and investment. The write-offs of 2020 have made the reality of stranded assets an accepted risk for investors.

Conversely, companies taking action to set a strategy for the next 10 years are being rewarded with concessional loans and increasing valuations. As the transition to a low carbon future accelerates, financiers are moving away from twentieth century business models, technologies and infrastructure<sup>1</sup>, towards increased investment in clean energy, transport and smart infrastructure – and the commodities that will underpin them.

Companies and their executives that assume the markets have not changed on this issue – or even have backed-off due to COVID pressures – will be found wanting.

Understanding this topic now and setting your company up for future fund-raising success is critical for the mid-market.

<sup>1</sup> IRENA 2017, Renewables: How the Energy Transition Affects the Value of Energy Reserves, Buildings and Capital Stock







# Key drivers



## Investor pressure

Investors are challenging companies to rethink their portfolios and future capital investments and increase the robustness and depth of their sustainability performance.

At the September 2019 Climate Week event in New York, it was reported the number of institutional investors committed to cutting fossil fuel stocks from their portfolios rose from 180 in 2014 to more than 1,100 in 2019, representing more than US\$11 trillion in total assets<sup>2</sup>.

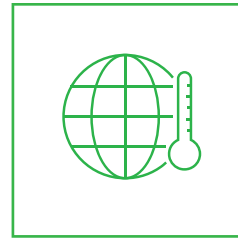
Some financiers and insurers have also begun to 'green' their portfolios by adopting clean lending targets, in some cases, divesting from more carbon-intensive industries.

In January 2020, Blackrock, the world's largest money manager, announced it will make sustainability and climate risks key tenets of its investing strategy, a move Larry Fink, its chief executive, said should push financial institutions to prioritise climate change issues<sup>3</sup>.

In March 2020, the US\$1 trillion Norwegian Sovereign Wealth Fund, which owns a staggering 1.5 percent of the world's listed shares, announced it was stepping back from emissions-intensive stocks.

Closer to home, Australian Super is one of the founding members of Climate Action 100+, one of the most active investor groups on this issue.

The coverage and attention these announcements have generated in the past 12 months has flowed through every global financial institution. It has changed global financial markets permanently.



## Understanding climate risk

A catalyst for the increased awareness of climate risk for investors was the release of the Financial Stability Board's Task Force on Climate-Related Financial Disclosures (TCFD) framework in 2017<sup>4</sup>.

The TCFD framework explains how companies can inform investors of potential climate change impacts on their investments by considering both transitional risks and physical risks.

Transitional risks are those that come from the global economy changing to approach zero carbon: how markets could change, how carbon pricing might impact earnings and the risk of assets becoming stranded.

Physical risks are how a company's operations could be impacted by increased extreme weather events, hotter summers, longer droughts or any of the other forecast climate change impacts disrupting critical feedstocks, operations or transportation<sup>5</sup>.

<sup>2</sup> <https://www.ft.com/content/4dec2ce0-d0fc-11e9-99a4-b5ded7a7fe3f>

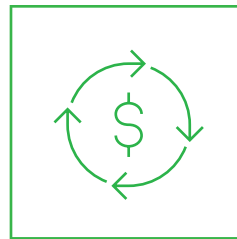
<sup>3</sup> Blackrock. 2020. <https://www.blackrock.com/corporate/investor-relations/blackrock-client-letter>

<sup>4</sup> TCFD, 2020. <https://www.fsb-tcfd.org/tcfd-supporters/>

<sup>5</sup> Collins M., et al., 2019: Extremes, Abrupt Changes and Managing Risk. In: IPCC Special Report on the Ocean and Cryosphere in a Changing Climate [H.-O. Pörtner, D.C. Roberts, V. Masson-Delmotte, P. Zhai, M. Tignor, E. Poloczanska, K. Mintenbeck, A. Alegría, M. Nicolai, A. Okem, J. Petzold, B. Rama, N.M. Weyer (eds.)]. In press.



### Investor demands



### Supply chain demands

Starting with the bigger mining companies, this is now becoming an expected part of the due diligence process for any level of financing in the mid-market.

The extent of the focus currently varies regionally, with European institutional investors exerting the greatest level of climate-related pressure<sup>6,7</sup>. Anecdotally, this is followed in order by those exposed to the Australian, Japanese, North American and other Asian financial markets.

This has moved sustainability from an exercise to maintain social licence to one of critical financial importance. This is no longer a 'nice-to-have' but has become a core part of overall strategic planning for companies. Responsibility sits squarely with CFOs, CEOs and boards.

Customers of mining companies are also starting to exert pressure. As the investor pressure exerts itself across industrial companies globally, they are starting to make enquiries about low or zero carbon commodities that can be incorporated into end products.

For instance, customers seeking to develop carbon-neutral products for their end-customers are starting to demand "green" nickel for batteries or carbon-neutral copper for electrification<sup>8</sup>. Demand for green steel in the automotive space and other "clean" commodities, including green chemicals, might not be far behind. In time this will spread to all commodities across all markets.

Companies that can meet this demand may be able to access a short-term premium in price and ultimately will earn a 'ticket to play' that will become necessary in the future supply chain.

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Our **Taking Action** section details how managing these rapidly changing levels of expectation from the finance community requires changes to the way companies assess risks and implement adaptive strategies. Understanding both transitional and physical risks is a starting point but investors are also looking for tangible emissions reduction targets and strategic delivery plans. Companies should consider how this can be tilted in their favour, for example how this creates a competitive advantage to allow for improved margins or growing markets to achieve the boost of positive assessments.

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<sup>7</sup> Mark Carney, BBC, 2019 <https://www.bbc.com/news/av/science-environment-50939986/bank-of-england-chief-issues-climate-change-warning>

<sup>8</sup> EU Climate Law, 2020 <https://epthinktank.eu/2020/04/21/european-climate-law-eu-legislation-in-progress/>

<sup>9</sup> Australian Mining, 2020. <https://www.australianmining.com.au/features/nickel-back-on-track-for-a-green-mining-future/>

# An economic opportunity for WA

WA has generated incredible wealth for Australia, being ahead of the trends and ready to scale up as markets come to fruition. This capability to follow the money and scale the right products at the right time presents an incredible opportunity for the state as every economy transforms to low carbon over the next thirty years.

Demand patterns are going to change irrevocably. The favoured solutions such as electrified transport, energy storage or industrial decarbonisation are going to see demand for enabling commodities skyrocket over time.

WA is in pole position in terms of the commodities needed to enable the world to transition. As these changes occur, old ways of manufacturing will decline and new methods with different materials will emerge. This presents an even larger value-add opportunity for the state. Adding value not just from an extraction and export perspective but also broadening activity through the value-chain such as manufacturing, reclamation and repurposing.

Not only can we supply the world with the commodities it needs but we can build new industries to utilise these commodities and ship high value solutions directly into markets.



This is a once-in-a-century opportunity and could propel the state into a position of even greater global prominence.

Harnessing this potential will however require a concerted effort. Working the way we have to date will not secure the best outcomes. We need to build the ecosystems that can support and deliver the new initiatives; we need to support and expand innovation incubators; we need to think carefully about collaborations along value chains and across sectors, to effectively reduce both operational emissions (Scope 1 and Scope 2) and also value chain emissions (Scope 3). (See Jargon Buster on page 12 for an explanation of Scope 1, 2 & 3 emissions).

Fossil fuel producers can no longer focus on reducing their direct emissions and electricity emissions (Scope 1 and Scope 2) but the demand on companies is to address Scope 3 emissions, from a company's entire supply chain, presenting a roadmap to reduce to net zero emissions when customers burn their coal, oil or gas.

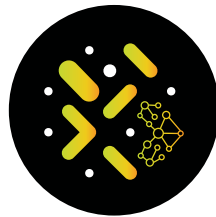
Scope 3 emissions constitute the biggest source of emissions for the coal, iron ore and gas sectors.

To help kickstart this level of thinking and unlock WA's potential, in 2019 Deloitte launched an initiative called 'A new WAY' that recognises nine collaborative clusters of opportunity. Delivering on this potential, we can inject billions into the WA economy and create more than 75,000 jobs of the future by 2029. Amongst these collaborative clusters are four distinct opportunities that play hand-in-hand with decarbonisation. These include:



**Battery supply chain**

A new WAY for WA to capture more value in the growing supply chain for lithium batteries.



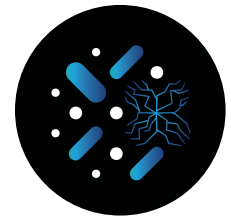
**Powered by hydrogen**

A new WAY to decarbonise the world's industrial, transport and energy sectors.



**Digital operations**

A new WAY to capitalise on the technological legacy of the resources boom through application to other sectors.



**Integrated energy solutions**

A new WAY to deliver bespoke energy solutions, matching local energy sources with community needs.

In 2020, we have seen demand for these collaboration clusters continue to grow and the opportunity for the State to invest and scale up is ever-present.

# Taking action: Starting simple

The risks and opportunities outlined are being felt now by the mid-market and the impacts will only increase over the short term. Companies standing still will suffer. Now is the time to take action.

The subject of decarbonisation is full of acronyms and detailed science and, for those without decades of experience, it can be a daunting prospect to start from scratch. The extent of the potential work can also feel as though it is going to be expensive.

There are initial steps that can be taken to understand the challenge ahead and to communicate progress to stakeholders to help them understand that action has started.

## **1. Understanding the abatement challenge** –

The starting point is simply to understand the current and forecast emissions profile of your operations and your products and to compare them to accepted emissions reduction scenarios. This allows boards to understand the options for setting public targets and the emissions abatement challenge that might be set.

**2. Costing the abatement challenge** – with the options clear, an initial view of the least-cost actions required to meet the targets can be taken. Many of these early actions are the 'low hanging fruit' that comes with financial benefits, as well as emissions reductions. This can all be done without any detailed project assessment.

**3. Setting abatement targets** – once an understanding of the options and associated costs is understood, then it is possible to set public targets.

These three steps form a relatively straightforward desktop exercise that can set the company on a pathway that will be seen by the market as genuine and beneficial.

The actual decarbonisation projects need to follow, but that can be delivered piecemeal as the opportunities arise and markets demand.

Embedding rational and strategic thinking into the decision-making processes of capital allocation and operating maintenance frameworks is critical, and the sooner this is done, the better. Making capital expenditure decisions in 2020 that lock in high emissions operating procedures will be seen as ignorant at best in just a few years. Ensuring every decision considers the lens of reducing long term emissions and increasing optionality will conversely be seen as highly strategic and advantageous.

Any new or expanded mining operation being planned in 2020 should look to start its operations fully enabled to become a net zero mine.



## METS Sector Opportunities

The opportunities and risks are not only present for the miners but also for all the METS sector companies. Thinking through how the above pressures and solutions are going to change the needs of miners over time is critical.

Identifying and presenting the low emissions solutions to companies as start to consider their options will be received highly and can create new markets that see rapid growth.

Conversely, sticking to traditional high emissions products and services runs the risk of seeing sales plummet over the next few years.

The trends are predictable, wise METS companies are already taking action to reposition their solutions to help enable all mining companies to create forward-looking woperations.



# Deloitte Decarbonisation Solutions™

To provide scaled solutions to meet mid-market needs, Deloitte Decarbonisation Solutions™ provides a step-by-step guide for companies to understand the challenge and take action.

Against this framework, companies can assess their progress towards a comprehensive decarbonisation strategy and plan out the next steps and future activities required.

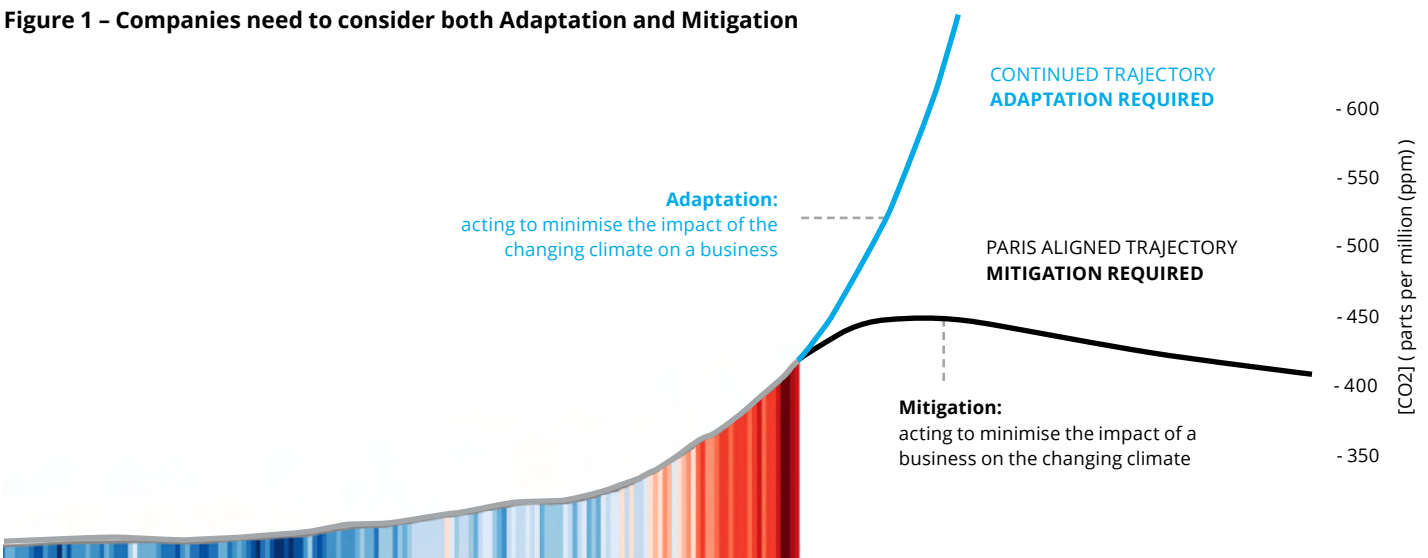
Many businesses are publicly committing to science-based emissions reductions targets or committing to renewables and net zero emissions. Understanding what is right for your business or your own context is critical.

These actions are not altruistic, but rather that forward-looking businesses are positioning themselves such that they will continue to have strong, resilient businesses as the world changes. Investors increasingly want to see reduced levels of climate risk, customers and communities are starting to demand lower carbon products, and governments are introducing regulatory regimes to accelerate transition.

Some businesses are also using the disruption of the COVID-19 pandemic as an opportunity to make a step-change in their future carbon intensity. This is being done by redesigning operations, business models and value chains with the goal of emerging with a business that is more resilient and future-focussed than it was at the start of 2020.

In its consideration of how to act, business needs to consider both adaptation and mitigation activities (Figure 1).

**Figure 1 – Companies need to consider both Adaptation and Mitigation**





Mitigation is acting to minimise the impact of a business on the changing climate. To stay well below the two-degree Celsius global warming target of the Paris Agreement, companies need to decouple economic growth from emissions. This means solving the challenge of meeting growing global demand for commodities while simultaneously reducing carbon emissions.

Adaptation is acting to minimise the impact of the changing climate on a business. As the climate changes, the likelihood of extreme weather events changes, and this can have material impacts on operations. Climate resilience for business means using forward looking tools, such as scenario analysis, to adapt its operations and business models before the crisis emerges. Measures that might be important include heatwaves, rainfall, droughts, cyclones and floods, and the likelihood of these occurring, under different emissions scenarios, can be examined using global climate models. Understanding what the future might look like is critical to effectively design ongoing and future operations.

Deloitte has delivered scaled solutions across the mining sector from the largest of the global miners to local mid-market companies. Additionally, working across complementary sectors such as manufacturing and oil and gas has enabled us to really see where we can bring best-in-class practices to the specific challenges of the mining sector. We understand the need to provide clear and practical guidance on what is really needed rather than what a sustainability consultant may want.

Companies that have not yet considered this issue run a material risk of near-term financial impacts and we strongly recommend the first steps are taken as soon as possible. This does not need to be a big or expensive project, but rather just enough to understand the challenge ahead and to start to map out how it can most effectively be addressed.





# Decarbonisation Jargon Buster

The jargon	Definition	Relevance
<b>Greenhouse Gas (GHG)</b>	GHGs absorb and emit infrared radiation in the wavelength range emitted by Earth. They include water vapor, carbon dioxide, methane, nitrous oxide, ozone, CFCs and HCFCs.	This is the starting point for any organisation – what is your contribution to the problem?
<b>Scope 1 Emissions</b>	Emissions released on site from combustion of fossil fuels, through processing or from leakage of GHGs.	These emissions are within your control and the direct result of your operations.
<b>Scope 2 Emissions</b>	Emissions released in the generation of any energy sources imported to your site – usually from electricity production.	These emissions are effectively bought so can be managed through contractual arrangements.
<b>Operational Emissions</b>	Scope 1 and Scope 2 Emissions combined.	The focus of many current emissions reduction targets.
<b>Scope 3 Emissions</b>	Value chain emissions emitted in the making or transport of products you buy and the transport and use of products you sell.	These emissions are mostly not within your control but require working with others to reduce them. Likely to become the focus of future targets in time.
<b>United Nations Framework Convention on Climate Change (UNFCCC)</b>	The UNFCCC is the main international treaty on climate change. The objective of the UNFCCC is to “stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic (human-induced) interference with the climate system”	This is the body that is guiding the global discussion and activity.
<b>Intergovernmental Panel on Climate Change (IPCC)</b>	Body established by the United Nations in 1988 to drive global action.	The IPCC produces reports that contribute to the work of the UNFCCC.
<b>Paris Climate Agreement</b>	The Paris Climate Agreement under the UNFCCC was negotiated by representatives of 196 state parties at the 21st Conference of the Parties in Paris in 2015.	This has set the standard against which your organisation will be judged – are you aiming to do your fair share of the reductions needed?

The jargon	Definition	Relevance
<p><b>Taskforce on Climate-related Financial Disclosures (TCFD) framework</b></p>	<p>In December 2015, the Financial Stability Board (FSB) established the industry-led Task Force on Climate-related Financial Disclosures (TCFD or Task Force) to develop climate-related disclosures that “could promote more informed investment, credit [or lending], and insurance underwriting decisions” and, in turn, “would enable stakeholders to understand better the concentrations of carbon-related assets in the financial sector and the financial system’s exposures to climate-related risks.”</p>	<p>This provides you with the global financial framework to report risks to your stakeholders.</p>
<p><b>Transition risk</b></p>	<p>Financial risks from issues such as policy constraints on emissions, imposition of carbon tax, water restrictions, land use restrictions or incentives, and market demand and supply shifts.</p>	<p>The risks from changes driven from governments and markets.</p>
<p><b>Physical risk</b></p>	<p>Financial risks from issues such as the disruption of operations or destruction of property.</p>	<p>The risks from the changes in the climate.</p>
<p><b>Climate-related opportunities</b></p>	<p>Financial opportunities such as access to new markets and new technologies.</p>	<p>These are how your organisation can build a strategic competitive advantage from the changes underway.</p>



# Contact us

For further information, please contact:



**John O'Brien**

Partner – Financial Advisory

Ph: +61 419 826 372

Email: [johnobrien@deloitte.com.au](mailto:johnobrien@deloitte.com.au)

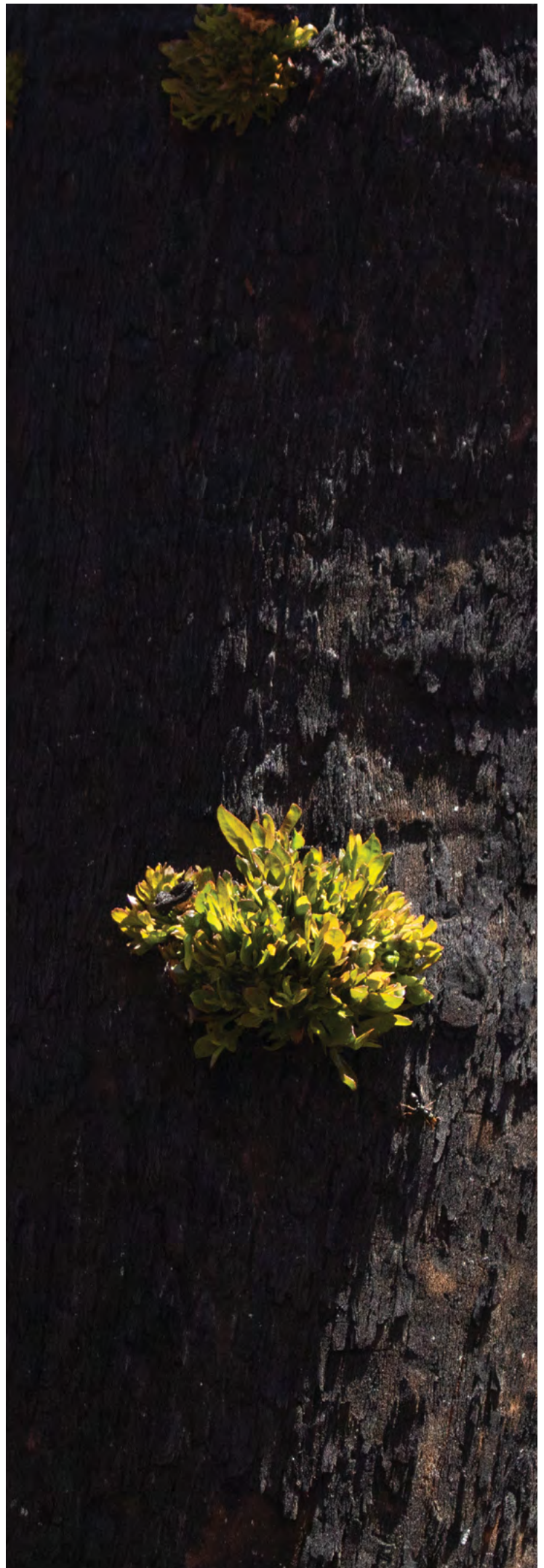


**Michael Wood**

Director – Risk Advisory

Ph: +61 417 919 916

Email: [michwood@deloitte.com.au](mailto:michwood@deloitte.com.au)





## **Contact us**

Deloitte  
Level 9, Brookfield Place, Tower 2  
123 St Georges Terrace  
Perth WA 6000  
Australia  
Tel: +61 8 9365 7000  
Fax: +61 8 9365 7001

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