

FINANCING & COMMERCIAL IMPLICATIONS



Scope 3 Roadmap

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THE B TEAM ▶

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1. Scope 3 – Commercial & Financial Implications

- **Transitioning value chains to become carbon neutral will have significant commercial and financial implications.**
- **To make this change is going to require different business models, different commercial arrangements and different risk profiles. This has the potential for significant benefits if approached proactively.**
- **Investment will be required to enable this change and there are a variety of emerging financing mechanisms available that companies should consider.**
- **Commercial considerations that may be appropriate to specific companies and value chains include vertical integration, effective incentives, risk sharing initiatives, no-regrets decisions, whilst maintaining optionality and understanding the cost of inaction.**
- **Financing requirements for value chain transition vary significantly depending on the application of the funding. Understanding the type of funding required and emerging sources of that funding is critical to enabling a successful transition.**



The transition of value chains, whatever they might be for, to become fully carbon neutral creates many challenges. The ways of working for companies will change as they care not only for the delivery of their own products and services but also for carbon intensities of every activity along the value chain.

This paper builds on the work of the 'CLC Roadmap to 2030' published at COP26 in November 2021 and its consideration of the required targets and progress for the finance sector. The summary of that work is included at Attachment A.

Commercial

To make this change is going to require adaptation of business models, different commercial arrangements and new risks being profiled and mitigated. Some of these may be structures that the companies have never previously adopted, identifying risks that never previously had been considered or activities that have never formed part of their core services. Conversely, this may present material opportunities to disrupt historic relationships, new product offerings that include data on emissions for example that competitors cannot deliver and therefore create increased margins and market share. Where companies look for these opportunities from the inevitable disruption, it is possible to see significant benefits. Early mover advantages are expected to exist and yield best results.

Some commercial issues that companies should consider as they deliver on their Scope 3 strategies include the following:



Vertical integration

As the focus on the end product increases, there may be rational arguments to look to vertical integration along some or all of the value chain to ensure that the organisation can control the emissions intensity of the delivered product. This will impact companies both stepping outside of their historic core activities but also presents the opportunity to internalise margins.



Incentive structures

If companies do not vertically integrate all parts of their value chain, they are going to need to rely on their suppliers and customers to deliver on the contractual obligations to reduce emissions. For suppliers, this is relatively easy in terms of including emissions specifications into contracts, but it is harder to bind customers even though their activities are no less important to value chain integrity.

This could involve innovative commercial structures where pricing to customers is dependent on transparent emissions outcomes and data transparency. For instance, a discounted price could be offered to those customers that can provide evidence that their operations are carbon neutral. This change in contractual behaviours is likely to initially meet resistance but may over time become the norm along carbon neutral value chains.



Risk allocation

As the costs and benefits of carbon neutral value chains emerge, there will be initial uncertainty as to which party is best placed to manage the various risks. The risks may be new to all parties and so will be unable to be allocated on the basis of historical practice. This is likely to require a different negotiating framework and a more collaborative approach to risk sharing. This may also require different capabilities and skillsets in order to be successful.

Companies will be reliant on all parts of the value chain succeeding and a failure of one 'weakest link' will impact all parties. With this view, the risks can be more evenly distributed than might have been the case previously and all parties may seek to share in the successful decarbonisation of the full value chain.

Insurance is a significant and rising cost for business. Delivering on being ahead of emerging risks should help deliver lower insurance premiums as corporates move to make operations climate resilient, lower reputational risks and show a pathway to zero emissions.



Scenarios

The speed of market transition is uncertain as to when the final consumer will demand a carbon neutral product and their willingness, if any, to pay a premium for the product at that time. This introduces another level of commercial risk to decarbonising any specific value chain as moving too early has the potential to incur additional unrecoverable costs and moving too late risks losing market share. This challenge is particularly acute in value chains that include major capital expenditure decisions and long-lived assets.

The optimal timing to decarbonise will be influenced by a wide range of factors including perceived or actual carbon pricing locally or along the value chain (e.g. the Carbon Border Adjustment Mechanism for value chains linked to Europe) or community or other stakeholder pressure. To manage this uncertainty requires the use of scenarios that will enable companies to make no-regrets decisions whilst retaining optionality on the speed of change required.



Counterfactual

Above all, companies need to work through the counterfactual of not having a plan, or commencing, to decarbonise their value chains. For some companies there may be minimal impacts or action can be swiftly enacted when required, but for others the impacts could be material or even existential.

The cost of not acting or not knowing the lead time to deliver the change that may be demanded could be significant and may provide the justification to mitigate this risk by ensuring that the company has a plan in place and understands the trigger points to activate that plan.

Financing

To make the wholesale changes required to redesign most, if not all, value chains will require significant investment. For different value chains, this funding will require different types of funding with different risk-return profiles. For instance, early-stage venture funding may be needed to commercialise the required technologies; grant or subordinated debt funding from government can enable the scaling of solutions; corporate incubator funding can provide a channel to market; project finance can facilitate major capital projects; or debt facilities can cover the working capital changes for transitioning business models. As projects enter operations, the potential to then pass ownership through to long term yield-focussed asset managers funded by superannuation funds can enable project developers to realise their returns.

For some investment types there is some industry uncertainty as to whether they will be deemed to fall within the eligible criteria for sustainable financing and how this might change over time. As the definitions and requirements continue to evolve as the implications of the required speed of transition are understood, it leaves some companies with projects that might be seen as less acceptable over time with unresolved financing risks. This can best be managed through considering a range of scenarios of how this might unfold and the optimal financing mix under each of those scenarios.

Figure 1 below shows the different types of finance and how they stretch across the project maturity and lifecycle. This provides guidance on where to look for opportunities to finance various aspects of the value chain transition.

Figure 2 provides some specific examples of finance types that can be accessed, how they are being used and some of the example types of projects and issuers.



Figure 1 - Sample Life Cycle and Financing Timeline

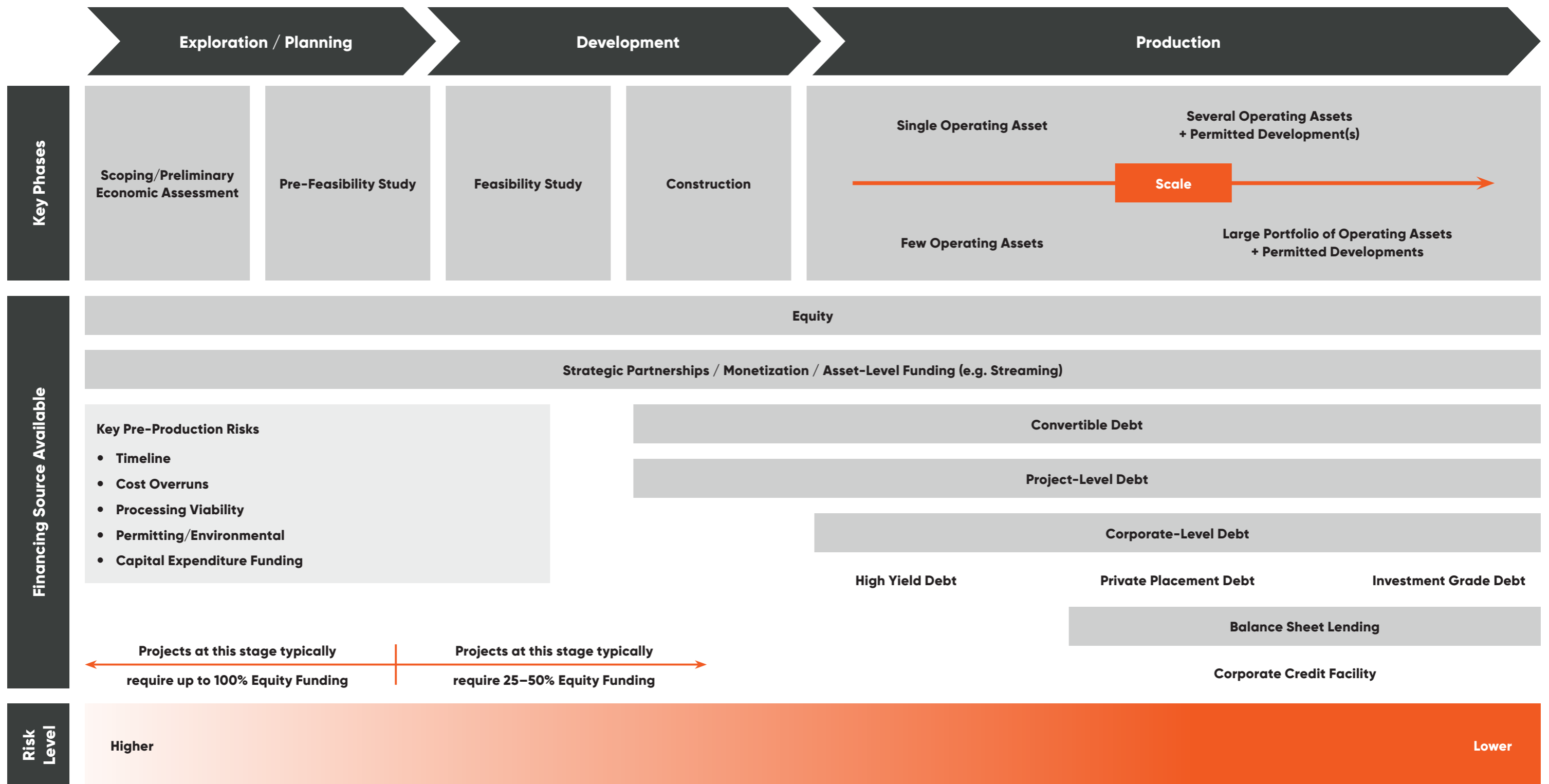




Figure 2 – Navigating Bond Labels in the Sustainable Bond Market

Over 16% of 2022 global offerings are structured with a sustainable label¹. While use of proceeds green, social, and sustainability bonds dominate, accounting for over 90% of activity, interest is growing in the sustainability-linked format.

	Green	Social	Sustainability	Transition	Sustainability-Linked
Type	Use of Proceeds Instrument	Use of Proceeds Instrument	Use of Proceeds Instrument	Use of Proceeds Instrument	General Corporate Purposes Instrument
Issuer's Commitment	Allocate an amount equivalent to net proceeds to projects with environmental benefit	Allocate an amount equivalent to net proceeds to projects with social benefit	Allocate an amount equivalent to net proceeds to projects with environmental benefit and/or social benefit	Allocate an amount equivalent to net proceeds to projects that assist with decarbonizing to achieve targets such as the Paris Agreement	Meet one or more ambitious and material key performance indicators and where bond characteristics (e.g. coupon) are linked to achieving these targets
Alignment with External Guidance	ICMA Green Bond Principles EU Green Bond Standard LMA Green Loan Principles	ICMA Social Bond Principles LMA Social Loan Principles	ICMA Sustainability Bond Guidelines	ICMA Climate Transition Finance Handbook	ICMA Sustainability-Linked Bond Principles ICMA Climate Transition Finance Handbook LMA Sustainability-linked Loan Principles
FY21 Notable Projects & Key Performance Indicators	<ul style="list-style-type: none"> Renewable Energy Green Buildings Sustainable Transportation Energy Efficiency Pollution Prevention & Control 	<ul style="list-style-type: none"> Access to Essential Services Employment Generation Socioeconomic Advancement Affordable Housing COVID-19 Response 	Thematic transactions mapped to certain of the United Nations Sustainable Development Goals	Investors supportive of Aviation, Cement, Gas, Metals, Shipping, Steel transactions with projects representing best-available technology in each sector	<ol style="list-style-type: none"> Carbon Emissions Renewable Installed Capacity Recycled Material Used Sustainable Sourcing Water Use & Intensity
Strong Themes for Near-Term Execution	<ul style="list-style-type: none"> Biodiversity & Conservation Blue Economy Circular Economy Climate Resilience Forrest Cover & Land Use 	<ul style="list-style-type: none"> Gender Equality & Diversity Food Security Healthcare Just Transition Responsible Sourcing 	Continued strong demand for holistic offerings as market participants intensify issuer engagement across both environmental and social themes	Sustainability-linked solutions expected to feature more prominently for issuers in 'transition' sectors as the Sustainability Linked Bonds market deepens	Focus on decarbonisation and resource efficiency in alignment with the Paris Agreement, complemented with support of a Just Transition
2021 Activity USD977.4 bn	52.2% USD510.0 bn	19.2% USD188.0 bn	18.7% USD182.8 bn	0.5% USD4.6 bn	9.4% USD92.0 bn
2022 Activity USD597.8 bn	58.6% USD350.3 bn	13.0% USD77.9 bn	19.8% USD118.1 bn	0.0% USD2.5 bn	8.2% USD49.0 bn

Source: Dealogic as of Sep 15, 2022. 2021 and 2022 Activity levels refer to global volumes for instruments aligned with the ICMA Principles and are shown in USD equiv. terms.

Note: (1) Syndicated transactions, all currencies. Labels refer to "green", "social", "sustainability", "transition", and "sustainability-linked". FY19 – 5%. FY20 – 8%. FY21 – 15%.

2. CLC Value Chain Examples

The full CLC Scope 3 Roadmap has taken five example value chains of which CLC members participate to explore the practicalities of transitioning them to being carbon neutral. These value chains are highly specific but also represent a wider range of similar types of value chains and so serve as templates for many other companies.

Some of the many commercial and financial issues that have been reviewed for two out of the five of the value chains in question are provided in the table below. These two examples are quite similar as they require large capital expenditure commitments ahead of there being sufficient and firm market demand for

the product. This is not unusual as the combination of long-lead projects is combined with a rapidly changing market and it introduces a risk profile that is different to the historical practices of most of the value chain participants.

The list of both commercial issues and potential financing mechanisms are not comprehensive but provide some guidance as to issues that should be considered by companies when seeking to decarbonise their own value chains. Importantly, the optimal solutions to a commercial challenge comes from business model innovation as much as it does from sourcing financing solutions.

Value Chain & CLC Example	Example Commercial Issues
Industrials & Infrastructure Gas Pipeline Decarbonisation	<ul style="list-style-type: none"> • Low carbon gas sources currently have a cost premium to natural gas – how will this additional cost be borne across the value chain? • What is the customer willingness to pay? • Will customers be more willing to pay if ‘green gas’ is verified and reduces their emissions profile? • Can ACCUs be created to provide an additional revenue source? • Distributed bioenergy resources increase credit risk and collection costs of feedstock.
Future Fuels Sustainable Aviation Fuels (SAF)	<ul style="list-style-type: none"> • Many technologies are very early stage and seed capital can be hard to access. • Significant current premium for SAF whether produced from bio-feedstocks or from hydrogen using power-to-liquid (PtL) technology – how is this cost allocated along the value chain? • What is the customer willingness to pay? • Will customers be more willing to pay if ‘SAF’ is verified and reduces their emissions profile? • Can ACCUs be created to provide an additional revenue source? • Distributed bioenergy resources increase credit risk and collection costs of feedstock. • Integrated supply chain formation with non-traditional partners and potentially collaboratively co-fund the plant upgrades. There are examples of this from the offshore wind sector and from the early days of the solar sector. • Potential for SAF import from regions with strong regulatory support reducing security of supply but delivering improved economics.

Financing Challenge	Example Solutions Financing & Business Model Innovation
Funding new technology commercialisation	<ul style="list-style-type: none"> • Emerging ClimateTech venture funds and angel investment groups. • Corporate venture funds backed by large companies seeking solutions to both address their own emissions challenges and explore growth opportunities. This provides not only investment but also a foundation customer who can trial the solution in real-market conditions.
Bridging the price premium for low carbon product	<ul style="list-style-type: none"> • Seek to partner with alternate product or services, or define the product/service being supplied, to provide additional value or to solve more than one problem. • For instance, can SAF be sold as carbon-neutral airmiles or biomethane as part of the solution to a high-value carbon neutral end product?
Committing to large capital expenditure ahead of secured market demand	<ul style="list-style-type: none"> • Major capital expenditure could be funded through transition bonds from major institutions for the part of the market demand that can be secured with some certainty; subordinated debt from a green bank or similar can be used to manage the risk around the speed and scale of market growth. • Develop contingent buying arrangements where a corporate buying group or government agrees to make up the difference in any shortfall below predicted market growth.
Regulatory uncertainty creating increased risk profile	<ul style="list-style-type: none"> • The challenge of uncertain regulatory frameworks is an issue across all value chains and can be hard to mitigate when talking with financiers. Contractual mechanisms can be built into supply agreements to pass on the risk to customers but that is often a deterrent to executing offtake agreements. • Having government fully engaged and potentially included as an offtaker can provide some level of mitigation. • Structuring agreements along the value chain so that both the upside and downside of regulatory changes are shared across the participants can also effectively mitigate the full impacts from this uncertainty.

3. CLC Case Studies

Some practical examples of where this type of funding has been provided to enable the low carbon transition from early-stage demonstration funding through to corporate debt solutions.



Greener lease on life for Brisbane office building¹

A 25-year-old B-grade commercial office building in Brisbane's CBD will be refurbished to cut emissions by as much as 55 per cent, achieving higher energy standards than many new properties and demonstrating how sustainability can give older buildings a new, greener, second life.

The CEFC provided a \$33 million senior secured debt facility to finance energy performance improvements at Brisbane's 200 Creek Street commercial office building. The building will undergo equipment and building services upgrades, including a combination of energy efficiency, renewable energy and energy conservation technologies and practices. The work will lift the building to a NABERS 5.5 star rating, a performance achieved by just six per cent of commercial office buildings Australia-wide.

Project manager Forza Capital has already delivered energy efficient upgrades to existing office buildings in South Brisbane and Melbourne.



Science-led sustainable farming initiative³

A new farming initiative backed by the CEFC is targeting the regeneration of underperforming farms while lowering their carbon intensity and improving sequestration.

The Transforming Farming Platform is a science-led sustainable farming initiative managed by Gunn Agri Partners, an Australian-based specialist agricultural asset manager.

The CEFC made a \$50 million cornerstone investment in the Transforming Farming Platform, alongside leading Dutch asset manager Kempen SDG Farmland Fund.

The Transforming Farming Platform is focused on purchasing and improving the productivity and resilience of farms, using data-driven practices and expert advice from a team of leading agronomic and environmental advisers including the CSIRO.

As of June 2022, the platform had completed eight acquisitions covering more than 12,500 hectares of mixed farmland across northern New South Wales.

Tenacious Ventures backs green agtech²

Tenacious Ventures is Australia's first and only specialist agrifood tech venture capital firm. It supports early-stage start-ups with tech-enabled new business models that are helping agriculture transition to a carbon neutral and climate change resilient future.

The CEFC was a cornerstone investor in the Tenacious Ventures fund, committing \$8 million through the Clean Energy Innovation Fund, alongside private investment fund Grok Ventures. The CEFC investment was part of the Fund's initial successful capital raising of \$20 million.

Tenacious Ventures went on to raise \$35 million, attracting additional investment capital from tech and agribusiness executives, family offices, impact investors and active primary producers. The CEFC has subsequently committed a further \$2 million to the fund.

Tenacious invests in early-stage start-ups (seed and series A) all along the agrifood value chain, with 80 per cent of it to be deployed into Australian-domiciled start-ups at the time the fund invests. Tenacious looks for global potential and impact, including in traditionally challenging areas such as hardware and biology.

Tenacious was founded by agrifood tech experts Matthew Pryor, co-founder of agrifood tech startup Observant, and Sarah Nolet, founder of agrifood tech advisory firm AgThentic. As active ecosystem builders, helping create initiatives such as Farmers2Founders and the Australian Agritech Association, the co-founders saw the potential for Australian-originated agtech, but were frustrated by the lack of conviction in the investor community.



Fortescue Green Bond Issuance



Fortescue Metals Group (Ba1/BB+) is the third largest iron ore producer in Australia and the world's fourth largest exporter into the seaborne iron ore market. In April 2022, Fortescue issued \$800million of 10-year Green Senior Unsecured Notes to support green projects aligned with the company's Sustainability Financing Framework.

The Fortescue Green Bonds represented the first such issuance from a global mining company (being issued alongside \$700million of 8-year regular Senior Unsecured Notes). Citi acted as Joint Bookrunner and ESG Structuring Advisor, having previously acted as Joint Lead ESG Advisor on Fortescue's Sustainability Financing Framework published in November 2021.

Eligible projects under the Green Bonds cover areas such as renewable energy, energy efficiency, green hydrogen and ammonia, energy storage, clean transportation, pollution control and sustainable water management.

Fortescue will report annually and until full allocation (or on a timely basis upon material changes of projects) on the allocation of proceeds and on impact of the Green Bonds, which will be made publicly available and will cover impact reporting for each project category.

ISS ESG provided a Second Party Opinion stating that Fortescue's Sustainability Financing Framework was consistent with ICMA's Green Bond Principles, Social Bond Principles and Sustainability Bond Guidelines; as well as with LMA and APLMA's Green Loan Principles and Social Loan Principles.



North Queensland Airports – looking beyond climate to nature, and innovating on indigenous engagement

North Queensland Airports (NQA) operates the Cairns and Mackay airports. CBA recently helped arrange NQA's Sustainability-Linked Loan, the first in Australia to include a biodiversity target focused on species conservation.

While that broke new ground for the sustainable finance sector, it also combined the environmental and social aspects by engaging First Nations peoples to help meet and report on these targets.

This work honours the skills and knowledge of Aboriginal and Torres Strait Islander peoples and recognises that they are best placed to lead this important work as the traditional custodians of Australia.

NQA's other targets are also very innovative, in terms of the positive change they are trying to drive with indigenous employment across not just their own operations but that of their suppliers.



Viterra – looking beyond own operations to drive industry change

Viterra is a leading grain company. CBA supported them with a \$800million syndicated sustainability-linked facility for inventory financing (Syndicated Sustainability-Linked Borrowing Base Facility, which is a type of trade finance).

CBA took the leadership role of structuring the transaction on behalf of a syndicate of nine banks. It is sustainability-linked because Viterra's cost of capital is tied to its performance against agreed sustainability targets over a four-year period.

The targets focus on engaging growers on International Sustainability and Carbon Certification (ISCC), purchasing ISCC-certified grain and securing grains for import that are sourced from overseas farms that follow sustainable agriculture practices.

This deal was innovative because Viterra's sustainability targets were not just focused on their own operations, but extended to driving industry-wide change. Viterra set these targets to cement their commitment to a sustainable agriculture industry both here in Australia and internationally.

The "borrowing base" is tied to inventory, thereby helping to unlock the working capital Viterra has tied up in the grain it owns by using it as collateral for the financing. The facility helped Viterra purchase \$2.4bn worth of grain from Australian growers over the first three months, during a bumper crop for Australian farmers.

University of Tasmania (UTAS) – breaking new ground for embodied carbon



UTAS did a green bond in March 2022, the first Green University deal since 2019. The use of proceeds for the green label is towards Green Buildings.

Traditionally, a building gets its green criteria from operational performance measures such as better energy efficiency, reduced water use, smarter heating and cooling. Due to Tasmania's energy mix, UTAS decided to look at the buildings' embodied or whole-of-life carbon rather than just operational performance. This was the first time we saw a green bond in the Australian market with eligibility criteria focussed on embodied carbon rather than operational performance.

This new focus is significant as it shows a futuristic low carbon state, in that our primary concern is no longer on decarbonising the grid, rather the focus is shifted to the lifecycle carbon impacts of assets and the carbon that goes into the materials being used at the outset of such assets.

UTAS' criteria are more holistic and recognise the end-to-end additional approach to analysing a low carbon building, thinking about the broader supply chains and materials used that will drive low carbon outcomes.

Attachment A – Roadmap to 2030 – Finance

The below is an extract from the [CLC Roadmap to 2030](#) that was published in November 2021. The extract highlights the likely transition of the finance sector and links to the work discussed above for the financing of value chain transitions.

Current Status

- APRA has set expectations for banks in its Climate Vulnerability Assessments⁴ information paper of September 2021.
- The UNEP Finance Initiative⁵ is seeking commitment, setting standards and convening global alliances of asset owners, asset managers, insurers and the banks.
- Partnership for Carbon Accounting Financials (PCAF)⁶ has established the global standard for measuring and reporting of Financed Emissions across six assets classes.
- Investor Group on Climate Change (IGCC) called on companies to disclose a net zero transition plan.

What needs to be happening by 2025 to reach these goals?

- Clear guidelines established for how companies report their climate risk consistently to financiers, shareholders and community.
- APRA frameworks for financed emissions and asset stress testing fully implemented.
- Members have positioned themselves effectively to access increasing pools of capital available for decarbonisation and resilience.
- Natural capital valuation methodologies agreed.
- All major financiers issued and implementing interim and long-term net zero targets.
- Emissions intensity benchmarks established across peers and products to enable differentiated financing.

Where do we need to be in 2030?

- Cost of capital implications on climate and ESG will be fully transparent and reported.
- Major financial institutions will have reached 2030 emissions reduction targets for their portfolios.
- Alignment across the financial markets with bond, debt, insurance and equity participants aligned on financing measures and priorities.
- Non-financial reporting metrics fully integrated with financial systems to provide overall company ratings with respect to impacts on all stakeholders,
- Natural capital used as bankable assets, and aligned with regulatory stress tests.

What some individual members are already doing

- **Citi** is offering corporate clients globally, products such as sustainability-linked loans to develop broader market access and efficient capital from the bond markets.
- **CBA** is offering Green Loans to businesses and homeowners to install small scale renewable energy at rates as low as 0.99% p.a. secured fixed rate loan.
- **Worley** reviewed its project selection and concluded that both they and other project participants gain higher returns from projects with strong ESG.
- **Deloitte** has worked with the World Economic Forum on standards for Stakeholder Capitalism Metrics, and will continue this work with the International Sustainability Standards Board (ISSB).
- **Wesfarmers** has accessed a sustainability linked loan that has reduced its cost of capital for meetings its sustainability targets.

Key Questions for CEOs to ask:

1. Have you modelled how climate impacts will affect your costs and revenue under different scenarios of physical and transition risk?
2. How will the valuation of your assets and operations change as a result?
3. Have you looked at the cost of capital implications for your business under different emissions intensity pathways?
4. Have you explored ways to fund your organisation's transition with financiers?
5. Have you explored the opportunities emerging from the transition enabling you to benefit all of your stakeholders?

End notes

- ¹ CEFC (2022). Greener lease on life for Brisbane office building. [online] Available at: <https://www.cefc.com.au/where-we-invest/case-studies/greener-lease-on-life-for-brisbane-office-building/>
- ² CEFC (2022). Tenacious Ventures backs green agtech. [online] Available at: <https://www.cefc.com.au/where-we-invest/case-studies/tenacious-ventures-backs-green-agtech/>
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- ⁶ PCAF (n.d.). Enabling financial institutions to assess greenhouse gas emissions. [online] Available at: <https://carbonaccountingfinancials.com/>.