

Visions and Pathways 2040

Transitions to Low-carbon and Resilient Futures in Australian Cities

Future Finance and Business

Potential for Disruptive Contributions to Urban
Decarbonisation and Resilience

Expert Consultation

Summary Notes

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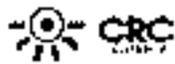
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The CRC for Low Carbon Living (CRCLCL) is a national research and innovation hub that seeks to enable a globally competitive low carbon built environment sector. With a focus on collaborative innovation, we bring together property, planning, engineering and policy organisations with leading Australian researchers. CRCLCL develops new social, technological and policy tools for facilitating the development of low carbon products and services to reduce greenhouse gas emissions in the built environment. The CRCLCL is supported by the Cooperative Research Centres (CRC) program, an Australian Government initiative. For more information go to www.lowcarbonliving.com.au



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Key messages

The “Expert Consultation for Future Business and Finance: Potential for Disruptive Contributions to Urban Decarbonisation and Resilience” was organised as part of the work program for the [Visions and Pathways 2040](#) (VP2040) research project led by the University of Melbourne’s Victorian Eco-Innovation Lab (VEIL) and funded by the CRC for Low Carbon Living (CRC LCL). Below are the key messages:

1. In Australia and around the world, promising examples of disruptive and game changing business models and finance mechanisms are emerging which may significantly assist the transition to decarbonised and resilient cities.

2. New business models that could support significant decarbonisation and resilience mentioned in the expert consultation include:

- B-corps, social enterprises and other ways of embedding decarbonisation, social equity and resilience priorities into business goals and plans.
- The revitalization of cooperatives.
- Collaborative and sharing economy initiatives.

3. New financing initiatives that could provide for new sources of capital to enable decarbonisation and resilience include:

- Socially responsible investment funds and banking, including initiatives to publicly disclose the carbon footprint of investment portfolios.
- Certified climate bonds and green bonds which can fund both large scale and, in aggregation, small scale green projects and initiatives.

- Solar-leasing, environmental upgrade agreements and other innovative financing instruments which reduce the upfront costs of installing clean technologies and retrofits.
- Crowdfunding and crowdsourcing as an alternative source of funds for innovations.

4. Key obstacles to the acceleration and scaling up of these initiatives include:

- Regulatory and legal barriers, including lack of B-corp legislation and national cooperatives law and restrictions on crowdfunding.
- Policy uncertainty, short termism and lack of leadership of the Australian government.
- Lack of collaboration and integration between different sectors and businesses
- Weak understanding, lack of trust and lack of motivation to try novel products and services by both businesses and customers.
- A dominant negative framing of the narratives of transitions which either creates tension between incumbents and niche innovators or infuses fear rather than pointing out opportunities.

5. Key policy and research priorities include:

Developing shared visions, showcasing Australian success stories and telling compelling, positive stories that provide direction, confidence and a shared language of sustainability transitions.

- Building forums and networks to foster greater interaction, collaboration and innovation across industry, government, universities and finance sector.

- Changing and clarifying inhibiting laws and regulations on innovative business models and financing mechanisms, including b-corps, co operatives and crowdfunding.
- Creating better transparency and standards of responsibility for investment funds and businesses, including developing accreditation standards for investment portfolio disclosure and embedding climate change risk into fiduciary duties.
- Incubating, showcasing and transplanting solutions across Australia.

1. Introduction

1.1 Background

The Expert Consultation for Future Business and Finance was organised as part of the work program for the Visions and Pathways 2040 (VP2040) research project led by the University of Melbourne's Victorian Eco-Innovation Lab and funded by the CRC for Low Carbon Living. VP2040 aims to define visions, scenarios and pathways for resilient Australian cities that have achieved an 80% reduction in their CO2 emissions by 2040. In setting the parameters for the transformation of Australian cities in the coming 25 years VP2040 is concerned that the 80% decarbonisation must occur in a way that is consistent with building resilience to changed climate conditions and extreme weather events. The project defines resilience as "the ability (of urban society) to absorb disturbances and to adapt or transform in order to maintain critical functions and identity in the face of shocks and stressors".

The expert consultation is part of a series of research and workshop activities of the project (see figure 1). One of the main aims of these activities has been to identify key disruptive forces relevant for contributing to the 2040 targets set by the project. The role of finance, capital and business initiatives was identified as one such disruptive force. This emerged from both foreground research undertaken on new and emerging business models (Gaziulusoy & Twomey, 2014) and in the outcomes of visioning workshops held during 2014 (see VP2040 First Year Report, Ryan, Twomey, Gaziulusoy & McGrail, 2015). Having identified such disruptive forces, they are now being further interrogated through expert consultations and other research.

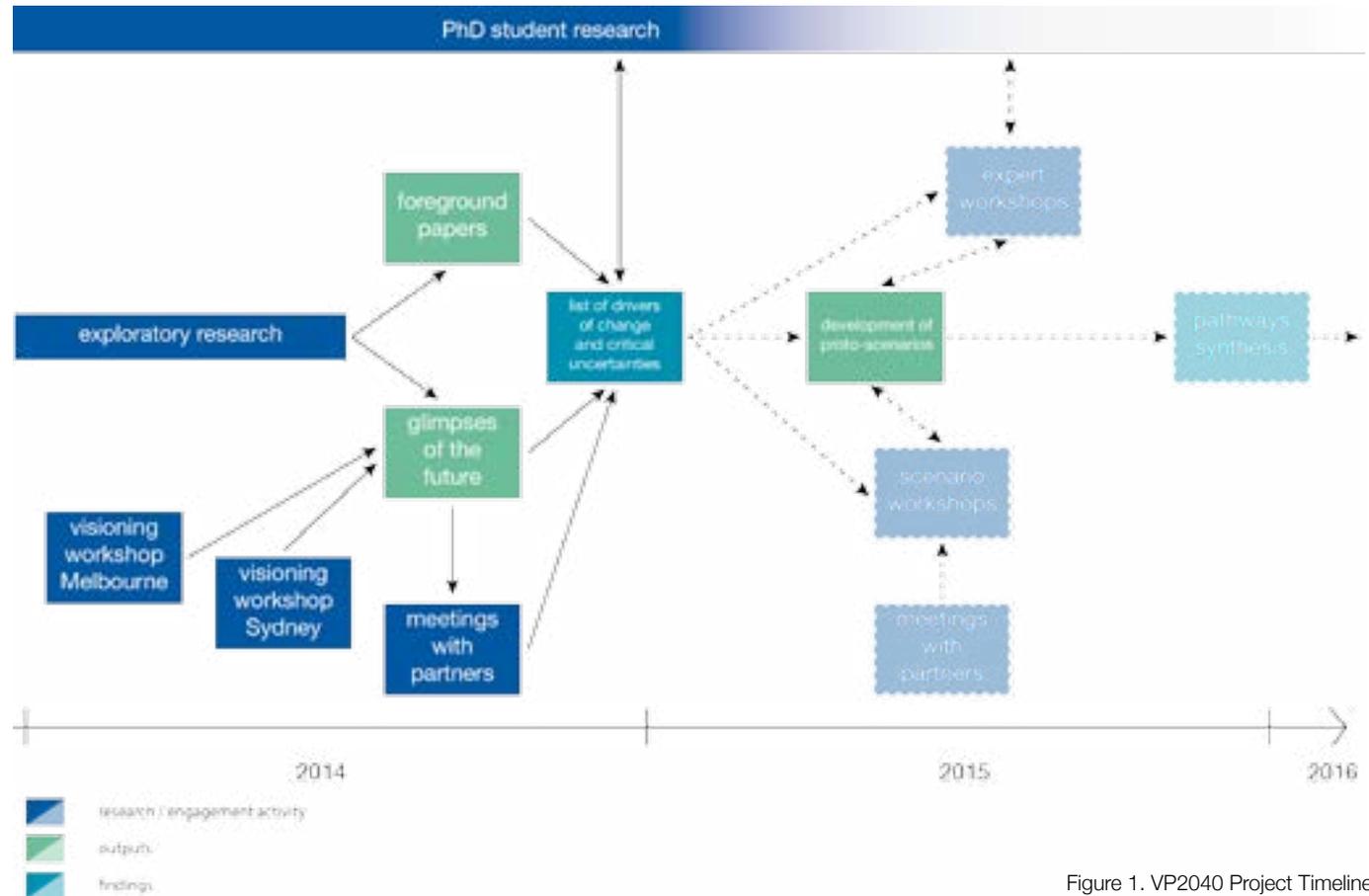


Figure 1. VP2040 Project Timeline

1.2 The objectives and process

The expert consultation on future finance and business was undertaken during June-July 2015. It involved a total of 27 people with expertise in the development of innovative financing and business models with a particular focus on the implications of these developments for triggering and driving rapid decarbonisation in urban settings. The expertise covered by the participants included: Banking, co-operatives, carbon markets, ethical investment, impact investment, philanthropic investment, climate/green bonds, social entrepreneurship, B-corps, solar financing, and sharing and collaborative economy.

The objectives of the expert consultation were:

- Identifying the most promising examples of disruptive and game changing business and finance innovations needed to drive urban decarbonisation and resilience;
- Identifying the key obstacles preventing the rapid acceleration and scaling up of disruptive business and finance initiatives capable of driving urban decarbonisation and resilience;
- Identifying the actions needed to overcome these obstacles;
- Identifying the implications of this discussion for future business, research and policy priorities.

A three-staged process was followed:

1. Pre-workshop survey: A short online survey designed to collect preliminary information from the experts to inform the workshop content and structure.
2. Focus group workshop: A four-hour long workshop bringing together the practitioner experts for a facilitated and structured discussion about new and emerging business models and finance mechanisms
3. Follow-up interviews: 30-minute long interviews with a set of selected expert practitioners to further inquire about specific topics or points that were conducted after the workshop.

The findings from the expert consultation have been grouped under three topics:

1. New and emerging business models and finance mechanisms;
2. Existing barriers for their effective implementation in Australia; and
3. Research and policy priorities to enable these initiatives to become effective.

These are covered in the next three sections.

2. New and Emerging Business Models and Finance Mechanisms

Participants were asked to identify the most promising examples of new or emerging business models and finance mechanisms that could drive transitions to low carbon and resilient futures in urban settings. A business model can be described as the logic and architecture of economic and societal value creation and value capture that allows a firm to attain a competitive advantage and/or to create a new market (Rohrbeck, Konnertz & Knab, 2013). Acquiring and managing finance is one of the pillars of business models (Osterwalder, Pigneur & Tucci, 2005). Therefore, business models and finance mechanisms are closely related and are key in enabling social and technological innovations that can assist in low carbon transitions. The findings of the expert consultation are summarized below.

2.1 B-corps

A B-corp (or Benefit corporation) is a company committed to meet rigorous standards of social and environmental performance, accountability, and transparency (B-Lab, 2015). The aim is to provide a framework and certification for companies wishing to benefit society as well as their shareholders. There are two parts to becoming a B-corp: certification via third party endorsement and changing articles of association/constitution to reflect the company concern to benefit a wider range of stakeholders than just the shareholders.

A number of workshop attendees indicated that B-corps are a viable business model for sustainability transitions. They also noted that B-corps are perceived as attractive by millennials who desire to work for businesses that are more aligned with their values. They therefore facilitate employee attraction and retention. Research undertaken by the US B-Lab team has also shown that during the 2008 financial crisis, B-corps were more likely to survive than other types of SMEs (Honeyman, 2014).

The certification warrants of B-corp were also seen as an important signal of integrity for impact investors and other types of green funds (see more on this below). More generally, some participants pointed towards the usefulness of the B-Corp concept in starting conversations and raising awareness of the need to change the understanding of the role of business in society. Indeed, two workshop contributors argued that the B-corp model should be seen as just a stage towards all businesses having social and environmental agendas as part of their goals as the start of a transformation of the role of business/corporations in society.

“The other thing about B-corps too is the mission alignment and the integrity. If we’re going to have organisations that want to attract investment on the basis of mission or impact, wherever that sits on the spectrum in terms of cities and resilience and social good, then there has to be some way of having faith in the mission, and the integrity of the mission, as the ownership comes and goes. B-corps are the first foray into that and people are starting to experiment with how we can preserve that.”

Mention was made of work in Australia aimed at encouraging environmental B-corps, particularly in areas of renewable energy and green buildings, by setting up focused investor groups. The examples mentioned by participants with relevance to low-carbon transitions in cities were Energy for the People, which crowdsources solar panels for institutional buildings, and, EcoVantage which retrofits light globes in old buildings.

2.2. Co-operatives

Some participants pointed to the relevance of a much older organisational form as relevant for low carbon transitions: co-operatives. A co-operative is a democratic organisation that is owned and controlled by its members for a common benefit (Consumer Affairs Victoria, 2015). Participants pointed to a global re-emergence of the co-operative model in order to meet common economic, social and cultural needs.

Co-operatives can take many forms and could operate in many areas relevant to the focus of this investigation, including food, housing and banking. One of the most famous and successful business run by the co-operative model is Mondragon Corporation in Basque region of Spain which has around 75000 employees and 257 companies and organisations under its umbrella and has been in operation for more than half a century (est. 1956).

“There is a re-emergence of the cooperative model occurring in Australia.”

Three Australian examples of co-operatives in Australia were mentioned by participants during the workshop. Bank Australia (formerly Bank MECU) is Australia’s first 100% customer owned bank and is following a fossil-free investment strategy. Earthworker in Victoria aims to respond to the challenges of climate change and need for local job creation by facilitating the establishment of worker-owned co-operatives throughout Australia in sustainability-focused industries. Hepburn Wind is a community owned renewable energy initiative operating in Victoria. As these examples show, co-operative ownership can take a number of forms.

2.3. Sharing economy

The idea of sharing as a (re)emerging economic model has recently been popularised by Botsman and Rogers (2010). Sharing blurs the boundary of possession and includes voluntary lending, pooling and allocation of resources and authorised use of public and private property.

Contributors recognized that businesses operating on sharing economy principles could assist in dematerialisation, resource efficiency and shifting socio-cultural practices, such as moving away from dependence on individual car ownership.

“Sharing rides and accommodation has been around for decades. But there’s something in the shift of technology - trust and ease has made it a disruptive force.”

However, there was contestation among the workshop attendees as to what the sharing economy actually means. Some participants regarded Uber and AirBnB as exemplar embodiments of the sharing economy while some others argued that these did not represent the real essence of the sharing economy. There was agreement that these companies were disruptive within their respective sectors from a business model point of view. However, these companies did operate as traditional profit driven model and were not informed by an underlying mission to decarbonise the sectors they were operating in and were not focusing on community building and community resilience (which may be more likely as the mission of small, local sharing platforms).

2.4. Socially responsible investing and banking

The growth of socially responsible investment (SRI) funds (or closely related impact investment or ethical funds) and SRI-filtered superannuation funds were seen by participants as extremely important in shifting capital towards low-carbon transitions. Many funds in Australia now have SRI mandates. According to Responsible Investment Benchmark Report Australia, the total responsible investment industry accounted for \$629.5b in assets under management, which accounts for 50% of Australian total assets under management (RIAA, 2015)

This development is expected to continue and will be aided by initiatives such as the Montreal Carbon Pledge, which encourages institutional investors to measure and publicly disclose the carbon footprint of their investment portfolios. Furthermore, the divestment movement, which is a global grassroots campaign encouraging institutional and public investors to pull out of investment in fossil-based energy companies, is also beginning to have an effect. Participants noted that mainstream consumer awareness of SRI options is increasing and managers are seeing increased inquiries by customers as to where their superannuation funds are being invested. Participants also mentioned that from an institutional level, the fiduciary responsibilities of fund managers and insurance companies are also receiving increased attention. It is very possible that climate- and carbon-related losses in institutional investment funds will lead to court cases and scrutiny of the trustees as to their management of climate- and carbon-related investment risks. Under challenge will be the quality of information gathering processes that were employed, the time given to consideration of the material risks to assets and the framework that was implemented for the prudent governance of investments (Liddell, 2015).

In addition to the institutional investment market, the development of socially responsible or ethical banking could also be an important source of financing green transitions (Australian Ethical, 2015). While in its infancy, workshop attendees pointed out that, as with institutional funds, the divestment movement has been a driver for shifting capital into banks which have commitments to invest in renewable energy sector or not to invest in fossil-based energy sector. It was suggested that the movement of loans by major banks away from the fossil-based energy sector might signal a significant shift towards a decarbonised society.

2.5. Climate Bonds / Green Bonds

Climate bonds are a fixed-income financial instrument used to finance or refinance projects aiming to address climate change. Green bonds have a similar purpose and are employed for a wider scope of environmental projects (Climate Bonds Initiative, 2015). As one participant noted, there is nothing financially innovative about bonds per se, however, the growing appetite for certified green investment products by SRI funds and other impact investors, has meant that the climate and green bond market has grown very rapidly globally over the past year. In Australia, however, there has been a limited supply of green bonds partly due to policy uncertainty impacting on renewable projects and institutional difficulties in aggregating small-scale projects into bonds.

“The feedback we get is that there’s not a lack of appetite, just a lack of projects available for investment out there. This is the impact of things like the renewable energy target uncertainty.”

2.6. Solar Financing

Participants also discussed new mechanisms of financing small-scale solar projects as an important pathway to achieving low-carbon urban transitions. A major barrier to adopting solar energy solutions for homeowners, as well as businesses, is the associated high upfront cost of solar panels. One means of addressing this problem is to develop business models based around leasing solar panels which distributes the upfront cost across many years through long-term service contracts (Gaziulusoy & Twomey, 2014).

A related example given in the workshop is the Positive Charge initiative of the Moreland Energy Foundation, a not-for-profit organisation aiming to tackle climate change challenges within the boundaries of Moreland City Council in Victoria. Positive Charge is a social enterprise committed to providing solar power to 22000 households across 14 municipalities in Victoria through solar bulk buys. Positive Charge has developed an innovative business model which provides tailored advice and discounted prices for households to switch to solar energy. Another smaller-scale project undertaken by Moreland Energy Foundation was to develop a mechanism to enable 300 low-income households to put solar panels on their roofs which is being paid-back over ten years through council rates.

2.7. Philanthropic prizes

A famous example of philanthropic prizes aiming to support and incentivise innovation to address environmental and social challenges is XPrize which had \$US59.3M active in prize purses in 2014 (XPrize, 2014). The use of philanthropic prizes was mentioned by participants as an interesting way of funding promising innovative projects to assist in low-carbon transitions. Those at the workshop noted that the market for philanthropic finance is growing. They also noted that interest is moving away from supporting single ideas and towards creating ecosystems of ideas that can have a significant impact. An example mentioned by the participants was the Lord Mayor's Charitable Fund in Melbourne which aims to invest in innovation capacity.

2.8. Crowdfunding

Crowdfunding (also known as crowd financing and crowd investing) is a process of requesting and acquiring financial or other resources from many individuals, usually online, with the purpose of realising a specific project (Gaziulusoy & Twomey, 2014). Some contributors acknowledged crowdfunding as a good option for market-testing new ideas and securing initial investment for businesses with an innovative idea but using a non-typical business model. There are some small city-infrastructure projects in European cities that have been crowdfunded, such as the Luchtsingel bridge in the Netherlands, however, some participants did not believe that crowdfunding would ever be able to operate on a scale as to be able to finance major investments and infrastructural changes.

2.9. Other

In addition to the above mechanisms, workshop attendees mentioned a few other initiatives as potentially interesting. For example, crypto-currencies were mentioned for their potential of assisting in decentralisation and development of distributed systems of provision. Similarly, local currencies were mentioned to be important in strengthening local economies and therefore increasing resilience at community level. Carbon offset credit cards, use of paying for offsetting as the default option (particularly for offsetting air travel), and creation of 'impact ecosystems' via green rewards systems which reward ethical consumption habits were mentioned by one participant as important mechanisms at the consumer end.

3. Existing Barriers for Effective Implementation

Contributors were also asked to identify key obstacles to the effective implementation and scaling up the above models and initiatives. The key findings are summarised below.

3.1. Market, regulatory and legal barriers

Participants point to various market, regulatory and legal barriers that are inhibiting the rollout of the sustainability related products and services. Some particular issues mentioned included:

- **Legal uncertainties for new business models.** A barrier for many new business models is a lack of clarity as to the applicability of various laws and regulations for such enterprises. For example, one contributor mentioned the unclear health and safety liabilities for businesses operating in a sharing economy framework. A participant referred to a sharing platform business that facilitates exchange of excess food from backyard production. If the business model involves someone coming into a private property to pick up the produce and that person is injured while doing so, it is currently an open question as to whether the property owner is liable or not for “workplace safety” under the current legal structure.
- **Cost of dealing with regulatory barriers.** Attendees noted that while some market barriers can be managed through legal advice, this is also often very costly and in an environment where funding is already challenging. Other barriers often cannot be managed so easily and therefore new businesses may adapt to the existing regulatory and legal structure by dropping certain aspects of their business model, which may result in giving up on certain innovative aspects which address social and environmental challenges.
- **Lack of B-corp legislation.** While B-corp certification has been taken up by some companies in Australia, there still exists the problem that corporate legislation does not currently allow business’s article of association or constitution to explicitly

disavow shareholder primacy in favour of equal treatment of all stakeholders. In the United States, a new legal company form has been created in some states to allow for this change. In Australia, however, under corporate law a director still has to act solely in the best interest of the company’s shareholders. Nevertheless, this is somewhat open for interpretation. The Parliamentary Joint Committee on Corporations and Financial Services concluded that, although there are a number of interpretations regarding the duties of directors in the current legislative framework, there was no need to change the existing legal framework, because it is sufficiently open to allow companies to consider and act upon the legitimate interests of stakeholders other than shareholders, to the extent that these interests are relevant to the corporation (Commonwealth of Australia, 2006).

- **Lack of national co-operatives law.** Similarly, participants pointed out that there is a fragmentation of co-operatives law across states in Australia. However, there is a Co-operatives National Law, which currently applies only in Victoria and NSW, and application is expected to commence in other states in 2016.
- **Lack of established international carbon portfolio standards.** In the institutional funds market, it was noted that the lack of internationally recognised sustainability standards for superannuation schemes is a barrier for developing trust and reducing risk perception and misconceptions of green investing. This adds to consumer misconception that ethical and/or lower-carbon investments such as climate/green bonds in ethical superannuation funds might underperform.
- **Crowdfunding restrictions.** Contributors also noted that crowdfunding in Australia has had only a limited impact because the corporations law does not sufficiently support it. For small companies, there are limits to fundraising. Large companies, for which those limits do not exist, have to comply

with several onerous regulatory requirements. An inquiry into amending the Corporations Act to support crowdfunding is in progress (at the time of writing) and may recommend related reforms.

3.2. Political and policy barriers

“When we get good policy, it seems to disappear soon afterwards.”

The current government policy settings and political leadership provided another set of issues discussed in the workshop.

- **Policy uncertainty in the renewable energy sector.** Participants noted that there is not a lack of finance per se for renewable energy projects in Australia but that policy uncertainty and the associated risk perceptions are creating a challenge for developers of projects. Despite a growing global demand for climate and green bonds, those at the workshop noted that the major issue in Australia to date has not been the demand but rather the limited supply of climate / green bonds being issued, much of this due to the crash in large scale renewable investment over the last two years. Furthermore, releases to date have been only for institutional investors and, if greater supply does emerge, it is not clear if and how to roll out such bonds for retail investors.
- **Single-term governments and lack of long-term planning.** Participants were concerned that the increasing prevalence of single-term governments in Australia may increase the short sightedness of policy and negatively impacting on long-term business planning.

3.3. Industry capacity and coordination barriers

Lack of capacity at the organisational and industry level was also raised during the workshop.

- **Lack of expertise in SME's.** In attempting to introduce innovative financial arrangements such as environmental upgrade agreements (EUAs), one attendee noted how dealing with the decision making process of SMEs (as compared to larger businesses) is often complicated by the lack of experience and expertise of SMEs. Convincing SMEs of the advantages of these types of financial arrangement requires more than just presenting the simple financial logics of the offering.
- **Lack of clean technology fund management expertise.** Another barrier to emerge from the workshop was that compared to the United States, there is a lack of specialisation in fund management, so that Australia doesn't have the same level of expertise for investment in clean technologies.
- **Insufficient industry and academic capacity and advisory support.** It was also pointed out that there is a lack of knowledge across business and law schools in Australia about cooperatives. For example, there is no centre for the development of cooperatives, government funded or otherwise. This limits the advice and expertise available for entrepreneurs starting a business.

Others noted similar lack of sustainability portfolio expertise in Australia as compared to the specialists available in the United States.

3.4. Framing, narratives and cultural barriers

“There's a lack of sophistication in the domestic debate at the moment.”

Participants also pointed to a wider set of framing, narrative and cultural barriers that are inhibiting the effective implementation of business and financial innovation.

- **Negative narratives and stories of fear.** Some workshop attendees pointed out that the negative framing of climate change - and the changes it requires for industry - can hinder buy-in of some stakeholders by increasing the tension between incumbents and niche innovators. One example mentioned was the divestment movement. Although the movement has facilitated a significant amount of ethical consumers to switch their investment options, either by changing banks or superannuation schemes they subscribe to, the “for and against” rhetoric it uses is seen as “creating enemies” (i.e. fossil fuel companies).
- **Cultural barriers.** Participants stated that it can sometimes be challenging trying to convince consumers who have entrenched, traditional ideas associated with particular cultural practices such as preferring gas cooking over electric stoves which has implications on adoption of solar-based power options.

4. Research and Policy Priorities

During the workshop, several priorities for research and policy were also discussed. Below is a summary of this discussion.

4.1. Creating eco-systems of innovation

Contributors emphasised the importance of creating environments that support eco-systems of innovation in which disruptive new business models can flourish. The example participants pointed towards was Silicon Valley where public and private research and development, market capital, entrepreneurs and big-end buyers all interact together to create real, sustainable value. It is also a place where governments and businesses have been attempting to align interests to create a thriving environment for clean technology businesses. These businesses find support from the state which has ambitious greenhouse gas reduction regulations, subsidies and market-based mechanisms providing systemic support for businesses who want to deliver emission reduction innovations.

4.2. Creating networks and nurturing a culture of collaboration

As part of creating this eco-system of aligned interests, the importance of creating networks and forums to regularly bring together various stakeholders was referred to a number of times during the workshop. Such networks should actively seek to engage with investor groups to bring projects and finance together and facilitate the creation of a shared vision to give greater confidence for new innovations.

More generally, participants reiterated that low-carbon transitions require orchestration of systemic interventions including development of new knowledge, public education about problems and potential solutions, development of technology,

creation of markets and available finance. Therefore, one key requirement is nurturing a culture of collaboration between research, government and industry.

Participants noted that this networking and collaboration could be particularly useful in bringing in large, incumbent businesses that, if not obstructing change, have been indifferent to or absent from the political discussion about transitions. The time might be ripe for involving incumbents in the conversation to understand their perspective on the risks and opportunities associated with transitions and to collaborate with those who might be willing to consider options for their businesses to adapt. It was also seen as critical to involve incumbents to help influence a change in government's position in relation to policy-making.

4.3. Incubating and showcasing Australian solutions

It was pointed out that, at a governmental level, there has been a lot of emphasis on showcasing international best practice. However, participants stated that there are good Australian examples and showcasing local solutions and best practice could in fact increase relatability and relevance.

Positive Charge, the community energy advice service set up by Moreland Energy, was presented as incubator style case study of successful outcomes, originally targeting a specific council district, that is now being taken up by other municipalities in Victoria.

4.4. Developing and communicating a shared vision

“Worse than a lack of vision, we have a hundred different visions”

Because new business models often do not fit within the current economic and legal framework, participants emphasised the importance of developing a shared vision about the direction and purpose for new business models and communicating this effectively with policy makers and investors in order to build trust and manage perception of risk. A shared vision among innovators can also facilitate scaling-up by creating a framework and incentives for aggregating smaller projects therefore enabling more projects to become available for investment.

4.5. Targeted governmental support, facilitation and leadership

The role of the government in fostering transitions was a source of interesting discussion during the workshop. Some contributors, pointing out the volatility of the policy environment in Australia, noted the importance of “government-proofing” any project so as not to be dependent on the political environment being favourable. The importance of long term contracts for large-scale energy projects, rather than relying solely on short term government subsidies, was given as an example.

Some participants said that businesses are in fact moving ahead of the domestic policy settings and, in some sense, have been motivated by the frustration of the obvious lack of federal government leadership and were seeking out strategic partnerships and creating opportunities that are not dependent on government assistance or guidance.

However, while those at the workshop acknowledged that governments have increasingly shrinking funds to provide financial assistance for the systems of innovation, they also highlighted several useful roles that governments could play:

- Assist with building trust within systems of innovation and facilitate networks of innovators/investors;
- Change the structure of financing arrangements so that capital can be freed-up and channelled;
- Develop and implement targeted policy and financing mechanisms to support the systems of innovation top-down;
- Undertake targeted reform on laws around alternative finance mechanisms (like crowdfunding and peer-to-peer lending);
- Communicate with the incumbents about the transition and encourage them to strategise towards transforming their businesses;
- Create demand for innovations at the consumer end in a revenue neutral way through tax rebates and other incentives;
- Increase awareness of consumers by assisting with information flow and communication;
- Act as a rule-setting partner in managing niche innovations strategically, backing them up to a point where they start to penetrate in private markets.

4.6. Accreditation and standards for disclosure

Participants emphasised the importance of developing and implementing various accreditation schemes for new business models and services, financial products and financial mechanisms as a means of building trust and faith in the mission of these new businesses and products. Similarly, disclosure standards are important for institutional investors to report on how they are taking climate change risks into account in managing their assets on a consistent, comparable basis. For example, there are disclosure laws in California for insurance companies and similar laws have been introduced recently in France. Contributors stated that if regulations are not being put in place by the government due to lack of leadership, the industry could introduce voluntary standards and schemes for accreditation and disclosure themselves.

4.7. Embedding climate change risk into fiduciary duties and KPIs

Similarly, participants noted that embedding climate change risks into fiduciary duties and key performance indicators of individuals bearing high responsibility in businesses could significantly change the way climate change is considered at a strategic level in organisations.

4.8. Common language and compelling stories

The importance of language and communication strategies was also raised during the workshop. The language used to communicate about problems and solutions should be strategic, indicating what needs to happen but also how that can happen. Workshop attendees emphasised the importance of framing this strategic language positively. An example given is the language used by the divestment movement in which the conversation is about where to pull funds from rather than where to invest funds in. The participants suggested use of terms like “shifting capital” so that the message is clear that the aim is not to destroy the economy but assist its transition from a fossil-heavy space to a fossil-free space. Turning the conversation around to put emphasis on where investments can be made (from where it shouldn’t be made) can assist with managing perception of risk.

“It’s moving people from their individual point of reference to a common language.”

Participants also stated that compelling examples should be delivered to the public through compelling and empowering storytelling. They emphasised the importance of storytelling in building and strengthening cultures throughout history and that Australians in fact have a desire to act and create a prosperous future for the nation.

5. Conclusions

The “Expert Consultation for Future Business and Finance: Potential for Disruptive Contributions to Urban Decarbonisation and Resilience” was organised in June 2015 as part of the work program for the Visions and Pathways 2040 (VP2040) research project which aims to develop visions, scenarios and pathways for transitions to low-carbon resilient futures in Australian cities. The consultation engaged a total of 27 experts who are involved in development and utilisation of new business models and finance mechanisms which are relevant to low-carbon transitions.

The new business models and finance mechanisms identified as relevant to low-carbon transitions included: B-corps, social enterprises, co-operatives, collaborative and sharing economy initiatives, climate bonds and green bonds, impact investment, philanthropic investment, solar-leasing, environmental upgrade agreements, crowdfunding and crowdsourcing, crypto-currencies, local currencies, carbon off-set credit credit cards, and green rewards systems.

The main obstacles and barriers which hinder effective implementation of these were identified as legal and regulatory uncertainties and gaps, cost of dealing with regulatory barriers particularly affecting start-ups and niche innovations, lack of established international carbon portfolio standards, policy uncertainty in regards to renewable energy, lack of relevant expertise and insufficient capacity and advisory support, fear-laden narratives and negative framing of issues, cultural and behavioural barriers and lack of a uniting, big-picture vision which binds entrepreneurs, innovators and investors.

Overcoming these barriers requires consideration of accreditation and standards for disclosure, embedding climate risk into fiduciary duties and KPIs, creating innovation eco-systems, facilitating establishment of stakeholder networks and collaboration, communicating inspiring examples from Australia, and developing a shared vision within the innovation and investment community to enable scaling-up and aggregating smaller projects for attracting investment. The ideal role for

government was stated as one providing targeted support, facilitation and leadership.

The expert consultation has provided many specific insights on the potential disruptive contributions of finance and business for urban decarbonisation and resilience. In alignment with the core objectives of the VP2040 project, this consultation highlighted the importance of having shared visions and stories of how a low carbon economy and society could operate and prosper. Similarly, the consultation re-emphasised the tension between those who saw mainstream financial actors and institutions as the only realistic basis for financing transitions and those who thought community and other non-traditional financing mechanisms can play a major role in transitions.

The findings of these expert consultation will inform the scenario and pathway development process of VP2040 project.

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Appendix I - List of Participants

Participant	Organisation
Alicia Darvall	B Lab Australia & New Zealand
Adam Bumpus	School of Geography, University of Melbourne
Ben Neville	Faculty of Business & Economics, University of Melbourne
Dan Musil	Earthworker
Daniel Simons	Transitions Film Festival
Danny Almagor	Small Giants
Darren Sharp	Livewell Yarra / Shareable
David Hood	Doing Something Good
Frank Suits	IBM
Katherine Lake	Ashurst / Sustainability Business Clinic
Marian Schoen	European Union Centre on Shared Complex Challenges, University of Melbourne
Matthew Beattie	Sustainability Victoria
Michael Lamden	Sustainable Melbourne Fund
Paul Murfitt	Moreland Energy Foundation Limited
Peter Castellas	Carbon Markets Institute
Rebecca Mikula-Wright	Investor Group on Climate Change
Rosemary Addis	Impact Investment Group
Rosemary Bissett	NAB
Scott Ferraro	Climate Works
Stefan Preuss	Sustainability Victoria
Steven Lynch	Bank Australia
Tim Richards	Carbon Markets Institute
Tom Quinn	Future Business Council

Appendix II - Workshop Agenda

1pm-5pm Tuesday June 16 2015	
1:00 – 1:20	Arrival and light lunch
1:20 – 1:40	Welcome and introductions
1:40 – 2:40	<p>What are the most promising examples of disruptive and game changing business and finance innovations driving urban de-carbonisation and resilience?</p> <p>Please come with at least one specific example in mind, which you find illustrative or inspiring.</p> <p>We will build on the responses to the pre-workshops questions by identifying specific, tangible examples with strong relevance to urban settings.</p>
2:40 – 3:30	<p>What are the key obstacles preventing the development of disruptive business and finance initiatives capable of driving urban de-carbonisation and resilience?</p> <p>What actions are needed to overcome these obstacles?</p> <p>We will build on the responses to the pre-workshops questions to sharpen our understanding of ways in which specific policy, legislative, regulatory, organizational or entrepreneurial initiatives could help overcome obstacles.</p>
3:30 – 3:45	Afternoon tea
3:45 – 5:00	<p>Next steps: What are the implications of this discussion for future business, research and policy priorities?</p> <p>What steps could be taken to assist in the dissemination, uptake and implementation of suggestions and recommendations from this workshop?</p>

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