



UNDERSTAND | ADAPT | TRANSITION

Queensland Climate Adaptation Strategy

# Small and medium enterprise sector adaptation plan



This sector adaptation plan was developed in partnership with the small and medium enterprise sector, supported by the Queensland Government. Sector adaptation plans are important components of the Queensland Climate Adaptation Strategy, facilitating industry-led responses to the challenges presented by climate change.

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### Acknowledgements

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**Cover photos** from top left, clockwise: Process Systems at Tingalpa, Brisbane (see case study in section 4); Food Connect at Brisbane—an ethical food business established by a dairy farmer who, after losing his farm, decided to work towards a fairer food system for farmers and buyers. Food Connect played a role in Brisbane during the 2010–2011 Queensland floods as a food donation depot and meal preparation centre; (inner square) Green Island Resort in Far North Queensland (see case study in section 4); Carmel Murdoch as Mary Poppins and Cecile Espigole, Owner–Operator, The Eco Queenslander Holiday Home at Maryborough—the Mary Poppins Festival is an annual local event (see case study in section 4); Espresso Train Café and Catering—run by Nundah Community Enterprises Cooperative, which creates sustainable employment and training opportunities for people with cognitive and/or psycho-social disabilities. NCEC were named Australia's best social enterprise in 2015.

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# CONTENTS

CONTENTS .....	3
Message from Queensland's Small Business Champion .....	5
1. Executive summary .....	6
1.1 How the sector understands climate adaptation .....	6
1.2 How the Plan was developed .....	7
1.3 The Plan's actions and action areas .....	7
1.5 Next steps for the sector .....	10
2. Introduction .....	10
2.1 Background .....	10
2.2 Scope and objectives .....	11
2.3 Development of the Plan .....	12
2.3.1 Data analysis .....	13
2.3.2 Workshops .....	14
2.3.3 Case studies .....	15
3. The sector and climate change .....	15
3.1 Overview of the sector .....	15
3.2 Climate risks facing business .....	19
3.2.1 Climate change impacts .....	19
3.2.2 What does climate risks mean for business? .....	24
4. The state of climate adaptation of the sector .....	25
4.1 Existing policy framework .....	25
4.1.1 International and national .....	26
4.1.2 State .....	26
4.1.3 Local government .....	27
4.2 Programs, tools and opportunities .....	28
4.2.1 Existing programs and tools .....	28
4.2.2 Future programs, tools and opportunities .....	29
4.3 The Queensland sectoral perspective .....	30
4.3.1 Beliefs and attitudes .....	30
4.3.2 Eagerness to engage and take steps to adapt and manage climate risk .....	32
4.3.3 Opportunities for engagement on climate risk .....	32
4.4 Adaptation strategies of businesses .....	33
4.4.1 Case study: The Green Island Resort .....	34
4.4.2 Case study: Eco Queenslander Holiday Home .....	35
4.4.3 Case study: Process Systems .....	36
4.5 Key challenges and gaps to adaptation in the sector .....	36
4.5.1 Knowledge gaps .....	37
4.5.2 Resource gaps .....	38

4.6 Barriers and enablers.....	38
4.6.1 Barriers.....	38
4.6.2 Enablers.....	39
5. The Plan .....	40
5.1 Proposed actions .....	40
5.1.1 Action area one: Workplace Health and Safety.....	41
5.1.2 Action area two: Insurability.....	42
5.1.3 Action area three: Supporting businesses to support each other.....	43
5.1.4 Action area four: Document management systems.....	43
5.1.5 Action area five: Using Queensland’s future climate projections.....	44
5.1.6 Action area six: One-on-one business support.....	45
5.1.7 Action area seven: Business development .....	45
5. Glossary of terms.....	47
6. Appendix 1 .....	48
7. Appendix 2 .....	51
8. References .....	54



## Message from Queensland's Small Business Champion

As Queensland's inaugural Small Business Champion, I give a voice to the challenges and needs of the state's small businesses and ensure they are brought to the forefront of government policy and decision-making.

Queensland's small and medium enterprise (SME) sector is the state's largest employer and more than 438,000 small businesses contribute around \$113 billion per year to our gross state product (2016-17). SMEs play a significant role within Queensland's socioeconomic systems: they generate revenue for the state via the taxes they pay, they provide employment and the goods and services we need, and are deeply woven into the social fabric of the communities and regions they serve. SMEs play a vital role in the cultural identity of, and placemaking for, the state's communities.

As someone with personal experience starting and operating a small business, I am proud to advocate for the vibrant Queensland small business community to ensure it has the best chance to start, grow and employ.

To that end, I am pleased to commend this Small and Medium Enterprise Sector Adaptation Plan (the plan) for Queensland.

The goal of this plan is to support SMEs to better manage climate risk as well as to understand related opportunities.

Climate change is already resulting in adverse business outcomes for Queensland's SMEs including business interruptions, increased investment and insurance costs, and declines in financial indicators such as measures of value, return and growth. After natural disasters, SMEs face greater short-term losses than larger enterprises, and may have less capacity to adapt and survive for various reasons.

Fortunately, despite the trend of record-breaking climatic conditions and devastating climatic events in Queensland, the state's small business sector is continuing to thrive after recently recording a fifth year of trend growth according to the latest Australian Bureau of Statistics data (2017-18). Small businesses now make up 97.7 per cent of the state's businesses.

It is vital that the SME sector be supported in continuing to go from strength to strength well into the future. The plan is designed to do just that.

Its development was led by the Chamber of Commerce and Industry Queensland with financial support from the Queensland Government's Department of Environment and Science to prioritise climate risk in industry discussion.

Through its collaborative development process, the plan aims to bring the diverse SME sector a step closer to better managing climate risk.

Ideally, the plan will allow SMEs to take advantage of business opportunities at a state, national and international level, as we adapt to inevitable climate change while transitioning to a zero-net emissions economy.

Maree Adshead  
**Queensland Small Business Champion**

## 1. Executive summary

Queensland's business community is increasingly analysing the risks, opportunities and financial implications of climate change and integrating them into long-term business plans.

Recently, the financial repercussions of trends towards more frequent and intense extreme weather have significantly impacted the Queensland economy by affecting both the supply and demand for the products and services of most industries.

After the catastrophic bushfires and floods of the summer of 2018–2019, the Queensland Government reported an estimated impact to the state budget of at least \$1.5 billion.

During that summer, Australia endured its hottest temperatures on record. Queensland's rainfall was record high in some areas of the state while others had their driest summer. Extremely heavy rainfall and flooding were experienced in northern Queensland while more than 140 bushfires burned across eastern Queensland, in an area spanning more than one million hectares.

The *Small and Medium Enterprise Sector Adaptation Plan* (the Plan) seeks to lay the foundations for collaborative problem solving and action across Queensland's SME sector to reduce negative impacts, and capture opportunities for the sector to thrive, under climate change.

The Plan was developed under the *Queensland Climate Adaptation Strategy* (Q-CAS). Q-CAS, together with the *Queensland Climate Transition Strategy* (QCTS), provides a framework to support the vision of an innovative and resilient Queensland that manages the risks and harnesses the opportunities of a changing climate.

Under Q-CAS, eight sectors have worked or are working with the Queensland Government to develop sector adaptation plans (SAPs) that describe both pathways to improved resilience for their sector and priority activities for them to better manage risks and harness opportunities under a changing climate.

CCIQ led the development of the Plan, in collaboration with the sector. The Plan will be the seventh sector adaptation plan launched in Queensland.

### 1.1 How the sector understands climate adaptation

Many SMEs across Queensland already suffer cash flow problems due to weather events and conditions whose overall impacts on Queenslanders are expected to worsen under climate change. And for Queensland entrepreneurs planning to start a new business, projections for future climate might well be a key consideration for them as they begin their planning.

SMEs can also play key roles in the resilience activities of their neighbourhoods and local communities. Indeed, many SMEs are focal points for their localities through the strength of their relationships with their local customer base and suppliers. For some SMEs, providing products or services that directly or indirectly support the resilience of their stakeholders—their customers, employees and/or suppliers—forms a core part of their business, at least in practice.

Some businesses opt to actively enhance community resilience by relaying preparedness information to their stakeholders, on top of their core business role. This also acts to cement their place in the communities in which they operate. For other SMEs, climate change is an

opportunity to maximise business revenue at the same time as enhancing benefits for their wider communities and the environment.

Despite these examples of the relevance of climate change for SMEs, grasping how Queensland's almost half a million diverse businesses in this sector understand climate change proved challenging when developing the Plan.

However, when the matter of climate change was presented in a contextualised way to businesses in a face-to-face setting, most SMEs consulted quite easily identified examples of both risks and opportunities that climate change presents for their business.

Many of these businesses, however, were less clear as to what climate adaptation action, and profitable climate change action more broadly, might look like for them. One challenge identified then was to understand how Queensland's SMEs could best take action to both defend their business bottom line and ideally improve it under a changing climate.

The Plan focuses on the ways in which SMEs can incorporate climate change adaptation and planning into the core planning that they already undertake for their current or new business.

## **1.2 How the Plan was developed**

The Queensland Government's Department of Environment and Science (DES) contracted CCIQ to engage Queensland's SME sector in Queensland to develop a sector adaptation plan for SMEs. The Plan is the result of that development process.

The Plan reflects input from the SMEs—through their participation in the engagement activities conducted by CCIQ. At the Plan's inception, CCIQ established a steering committee with DES; the Department of Employment, Small Business and Training; and CCIQ's ecoBiz program delivery team.

Cross-sectoral input to the Plan, as for the other seven SAPs, was provided by the Queensland Council of Social Service (QCOS) and Natural Resource Management Regions Queensland (NRMQR), ensuring the issues of social vulnerability and environmental sustainability were recognised in the Plan.

Stakeholder engagement included the following activities designed and conducted by CCIQ:

- A survey on climate-related risk management in CCIQ Suncorp Pulse Survey of Business Conditions, June quarter of 2018 (the largest survey of Queensland's SMEs which provides a quarterly snapshot of business sentiment).
- A workshop in Cairns on 13 November 2018 with local SMEs.
- A workshop in Brisbane on 14 November 2018 with local SMEs.
- A pre-workshop survey for SMEs who registered for the above two workshops.

## **1.3 The Plan's actions and action areas**

The Plan proposes 18 actions across seven action areas.

### **1. Action area 1: Workplace Health and Safety**

SMEs account for more than 97.7 per cent of all Queensland businesses and at June 2017 were responsible for the health and safety of around 1.42 million workers. Many SMEs report lacking a clear sense of their Workplace Health and Safety (WHS) obligations with respect to extreme weather events. With climate risk growing under Queensland's changing climate conditions, employers and employees are eager for support to manage climate-related WHS issues, especially those related to heat stress. Due to the varying levels of climate exposure applying to different business operations and the varying levels of climate sensitivity and adaptive capacity applying to employees, some workers are more vulnerable to climate-related impacts at work than others. Workplace laws are very unclear on the issue of heat stress, and there is not a code of practice in Queensland to deal with the specific issue.

Actions under this action area are:

**Action 1.** Clarify, and support the SME sector's understanding of, climate-related WHS roles and responsibilities of employers and employees, especially in relation to heat stress.

**Action 2.** Support the SME sector to comply with climate-related WHS roles and responsibilities, and to reduce the vulnerability of SME workers to climate-related WHS impacts.

## **2. Action area 2: Insurability**

The probability of extreme weather events is increasing due to climate change. In the absence of adaptation, it is inevitable that insurance premiums will rise. On top of this, not all hazards are covered by commercial insurance. Hazards such as bushfires, riverine flooding and storm damage are generally covered, but events such as coastal inundation, erosion, landslip and subsidence are all generally excluded, which means people and business are effectively self-insured against these hazards (or insured by the taxpayer). The issue of an insurability gap has become an urgent concern for SMEs, particularly for businesses in areas of Queensland highly prone to extreme weather conditions and events. Many businesses report struggling to become or remain insured due to rising premiums linked to worsening trends and projections for climate change.

Actions under this action area are:

**Action 3.** Seek to better understand existing and growing hot spots in terms of locations and industries in Queensland where SMEs are struggling or likely in the future to struggle to become or remain insured due to climate-related rises in insurance premiums.

**Action 4.** Support the collaborative development of solutions to address the insurability gap for SMEs, prioritising existing and growing hot spots across Queensland's SME sector.

**Action 5.** Support the SME sector, including new businesses, by providing clear and tailored information about the current and projected climate-related risks that businesses face and by supporting businesses to identify and take the best approach available to them to manage climate risk and take advantage of related opportunities.

## **3. Action area 3: Supporting businesses to support each other**

A core source of information for small businesses is simply talking with their peers. Sharing experiences and advice with other businesses often outweighs the use of online search engines or government websites. Queensland SMEs have indicated a strong desire for platforms that will support them to access and discuss industry-specific and expert knowledge, and to collaborate with other businesses on climate-related risks and opportunities.

Actions under this action area are:

**Action 6.** Identify existing knowledge-sharing and collaboration platforms, and explore the value of establishing new platforms, to support Queensland's SMEs in managing their climate risk and seeking out climate-related opportunities.

**Action 7.** Identify and support opportunities for peer-to-peer (e.g. mentoring) programs that support businesses to support each other in establishing and running SMEs that can and do thrive under climate change.

**Action 8.** Promote reform of how Queensland's SME community engages with the topic of climate change, so that its significance for them is understood and discussed.

## **4. Action area 4: Document management systems**

As extreme weather events—such as, flooding and bushfires—increase in frequency and severity, paper-based business document management systems represent an increasingly weak point in the climate resilience of a small business. Measures such as transitioning to digital document management systems can greatly improve a business's resilience to climate change. Many small businesses need guidance to use appropriate digital document management software.



Actions under this action area are:

**Action 9.** Take steps to understand the barriers preventing SMEs from digitising their paper-based business document management systems.

**Action 10.** Support SMEs to digitise their document management systems by addressing the precise barriers they face, including by supporting multi-format guidance materials, webinars and face-to-face support.

## **5. Action area 5: Using Queensland's regional climate projections**

The SME sector is largely unaware of what the latest science says about projected future climate for Queensland's regions, let alone the possible impacts of these changed climatic conditions on starting or operating their business. Some businesses consulted indicated feeling overwhelmed by climate science information, while others said they were put off by its complexity or lack of consistency. Overall, businesses felt ill-equipped to understand climate risk, and therefore, to take steps to effectively manage the climate risks facing their business. Businesses had similar feelings about how to profitably transition their business to reduce the carbon emissions that contribute to climate change.

Actions under this action area are:

**Action 11.** Collaboratively develop and deliver resources, education and training to equip SMEs—at all stages of the business lifecycle—with a knowledge and understanding of climate projections that helps them to identify and understand climate risk in their business planning and operations.

**Action 12.** Collaboratively develop and make accessible climate change risk management tools that are tailored to support the SME sector to identify and take steps to manage climate risk, including by helping businesses to visualise and manage risk across their supply chains.

**Action 13.** Facilitate the consideration and analysis by SMEs—at all stages of the business lifecycle—of new business opportunities that future climate projections might engender for them. This would ideally occur alongside a facilitated consideration by SMEs of how global megatrends (e.g. the zero net emissions transition, circular economy models, and the increasing focus on resilience) might be leveraged by SMEs as business opportunities (this is addressed at Action 17, whose focus is transition-related climate risk, and which is the counterpart to Action 13).

## **6. Action area 6: One-on-one business support**

Queensland's SMEs cite electricity costs as a primary concern, with this exacerbated by increasingly hot conditions under climate change. Responding to this, and other issues facing the SME sector, Queensland's ecoBiz program, run by CCIQ and funded by DES, is helping businesses make substantial savings across their energy, water and waste bills. These savings are then able to be reinvested by businesses to improve their productivity, resilience and sustainability. One-on-one coaching is a key feature of the ecoBiz program which supports businesses to develop, implement and review action plans to reduce their costs by improving their operational efficiencies in ways that also reduce their environmental impact. Alongside environmental efficiency improvements, ecoBiz improves the resilience of businesses and reduces their carbon emissions.

Actions under this action area are:

**Action 14.** Continue to promote the ecoBiz program across the SME sector as an effective way for businesses to both reduce their costs and achieve gains in their ecological sustainability.

**Action 15.** Explore the merit of expanding the ecoBiz program to include tailored support for businesses to specifically improve their climate resilience—by identifying, understanding and managing physical climate risk, and ideally also transition-related climate risk.

**Action 16.** Consider how best to support new SMEs to include climate-related risk and opportunity considerations at the earliest stage of their business lifecycle to optimise outcomes.

## 7. Action area 7: Business development

Several businesses across the SME sector have identified green or ethical branding as a business opportunity linked to climate change action. They identified business opportunities arising from growing public concern about pollution levels, decreasing community resilience, and environmental degradation. The global responses to these concerns include actions such as working towards zero net emissions and developing circular economy models, and building the resilience of local communities and environments. The circular economy model refers to a circular way of thinking in respect to managing waste, resources and materials. Instead of an approach characterized as 'take, make and dispose', a circular economy reuses and recycles waste, resources and materials. Through the circular approach, new business opportunities can arise for SMEs alongside opportunities to re-brand themselves. Businesses that align with such trends will be increasingly better positioned to harness new opportunities and manage the risks of a changing climate.

Actions under this action area are:

**Action 17.** Support SMEs to identify, understand and leverage business opportunities available to them that support the reduction of the transition-related climate risk of their customers. This might include support for SMEs to harness opportunities related to growing global focuses on circular economy models, zero net emissions, and resilient communities (Action 13, whose focus is physical climate risk, is the counterpart to Action 17).

**Action 18.** Support SMEs to understand the social enterprise model of business and the related business opportunities, and where appropriate to apply this model to their own operations whether directly or indirectly through support for social enterprises in their supply chains.

## 1.5 Next steps for the sector

On a practical level, the next steps for the Plan are to address the 18 actions. The actions are further explained in Section 5 of the Plan, along with guidance for their implementation and notes relating to stakeholders and economic sectors.

DES has been working with the members of the Steering Committee that was set up to develop this Plan, and with the National Climate Change Adaptation Research Facility (NCCARF), to produce a tool to support SMEs to better manage their climate-related risk. This represents an immediate response to Action 12 of the Plan. Further work to understand how to best assist SMEs to put the tool to use is progressing as a matter of priority.

Work to make the 'Queensland Future Climate Dashboard' state-of-the-art, dynamically-downscaled projections of Queensland's climate (in 2030, 2050, 2070 and 2090) more accessible and user friendly for Queensland's diverse SMEs is another priority action under this Plan (Action 11).

Action area 6 (one-on-one business support) is also considered by the SME sector as a high priority for action, particularly Action 15 in terms of support for businesses to improve their climate resilience by using the ecoBiz program's star-rating system.

More broadly, this Plan sees the continued dialogue and collaboration across the sector which will flow from this Plan's release as a key means by which the sector's priorities under the Plan, should be set out and then successfully acted on.

Development and publication of this Plan is simply the first step.

## 2. Introduction

### 2.1 Background

In 2017, DES launched the Queensland Climate Change Response. The response outlines the Queensland Government's commitments to transition the state to a low carbon, clean

growth economy and adapt it to the impacts of a changing climate<sup>1</sup>. The response is based on two key strategies, the Queensland Climate Transition Strategy (QCTS) and the Queensland Climate Adaptation Strategy (Q-CAS).

The QCTS outlines how Queensland will prepare for the transition to a low carbon economy and features three key climate change commitments:

- powering Queensland with 50 per cent renewable energy by 2030
- reducing emissions by at least 30 per cent below 2005 levels by 2030
- achieving zero net emissions by 2050.

The vision of both the QCTS and Q-CAS is: an innovative and resilient Queensland that manages the risks and harnesses the opportunities of a changing climate. Important for achieving the vision are eight sector adaptation plans. The sector adaptation plans span across Queensland's major economic sectors, define the pathways to stronger resilience against climate change impacts and identify priority activities for each sector.

From 2017 to 2018, six sector adaptation plans were launched for human health and wellbeing, biodiversity and ecosystems, tourism, agriculture, built environment and infrastructure, and emergency management services. *The Small and Medium Enterprise Sector Adaptation Plan* (the Plan), and an industry and resources sector adaptation plan, are the two remaining plans. Their launch in 2019 will bring Queensland's sectors a step closer towards resilience against the impacts of climate change.

## 2.2 Scope and objectives

The Queensland Government's Department of Environment and Science contracted CCIQ to develop the Plan. The sector driven climate adaptation plan for small and medium enterprises aims to:

- support the transformation of the sector's dialogue and understanding around climate change
- bring climate risk to the forefront of sector-wide discussion
- raise the profile of strategies to manage climate risk, that is, climate adaptation strategies.

Most importantly, the Plan proposes future actions to build stronger, more sustainable and resilient businesses, irrespective of where in Queensland the businesses are located. Given the wide scope of the sector, activities in the Plan will overlap with other sector adaptation plans.

CCIQ is the peak organisation for SMEs in Queensland and represents more than 438,000 small and medium businesses. The focus of CCIQ is to advocate for policies that are in the best interests of businesses, the economy and the community. CCIQ advocates on behalf of its members to make businesses more efficient, influence policy, enact legislation and reduce bureaucratic processes at all levels of government.

To develop the Plan, a steering committee was formed to represent various stakeholders in determining the scope of the Plan and the priority issues. The steering committee comprised representatives of the:

- Australian Chamber of Commerce and Industry
- Cairns Chamber of Commerce and Industry
- Chamber of Commerce and Industry Queensland (CCIQ)
- Department of Employment, Small Business and Training
- Department of Environment and Science
- ecoBiz (CCIQ)
- Natural Resource Management Regions Queensland (NRMQR)
- Queensland Council of Social Services (QCOSS).

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<sup>1</sup> Department of Environment and Science 2018, Queensland Climate Change Response

The active participation of QCOSS and NRMQR in the planning process has been an initiative of the Queensland Government to assist in managing social, community, natural resources and environmental cross-sectoral issues. In accordance with the principles of the Queensland Climate Adaptation Strategy, the Plan must include the risks of climate change to SMEs, communities and socially vulnerable people.

The findings of the Plan have highlighted an urgent need to raise awareness across the sector of the importance of managing climate risks. CCIQ believes that this should be achieved through illustration of the sector's potential and resilience, as it is a sector that continuously evolves and improves by seeking out opportunities.

Businesses, by nature, need to be pragmatic in their strategies. For businesses to shift towards climate resilience, they must protect their cash flow. Without acknowledging this risk, SMEs risk poor responses and slower recovery when confronted with the impacts of climate change.

It would be naïve to expect businesses to make the changes necessary to adapt to climate change for altruistic purposes alone. By targeting the profitability concerns of businesses, a connection is formed between the need to implement climate change adaptation strategies, while also making a business resilient to the risks of climate change. As a result of the Plan's focus on protecting cash flow, it is relevant to all businesses.

The SME sector has been a leader in eco-efficiency, and has secured substantial benefits from conserving the use of energy, water and materials, while also reducing the production of waste. An added benefit to the focus on eco-efficiency is reduced business costs.

Responding to the effects of a changing climate, however, is also dependent upon the initiative of SMEs and extends to reducing carbon emissions and reducing enterprise vulnerability to the negative impacts of climatic hazards.

Climate change mitigation is an opportunity for businesses to capitalise on emerging opportunities, such as, green branding and competitive advantage. Such a transformation further enhances the corporate social responsibility of participating businesses.

The Plan recommends actions that will build business resilience through eco-efficiency, mitigation and adaptation activities. In summary, the Plan aims to assist SMEs to develop business sustainability and resilience, while focusing on the protection of cash flow by:

- raising awareness across the sector about climate change and its risks and opportunities
- identifying risks to cash flow that arise out of climate risks
- increasing the adaptive capacity of SMEs
- highlighting business resilience and innovations in the sector
- identifying opportunities for the sector to profitably reduce its impacts, such as, through the reduction of emissions, and through supporting local communities, especially those who are more vulnerable due to climate change.

## **2.3 Development of the Plan**

The development of the Plan was based on a multi-approach methodology that aimed to ensure that the outcomes were dynamic and representative of the sector through research, data analysis, consultation and examples.

The approach consisted of:

- a comprehensive literature review with the key information sources being:
  - publications from NCCARF
  - publications from the Centre for Climate and Energy Solutions
  - climate change information from the Queensland Government
  - the Australian Bureau of Meteorology
  - the Commonwealth Scientific and Industrial Research Organisation's (CSIRO) research on climate change.



- data analysis through a survey on climate change and its impact on businesses
- two workshops—held in Brisbane and Cairns—to explore the risks that SMEs face due to climate change, with participants completing a pre-workshop survey
- case studies of ecoBiz<sup>2</sup> champions and their path to climate change adaptation.

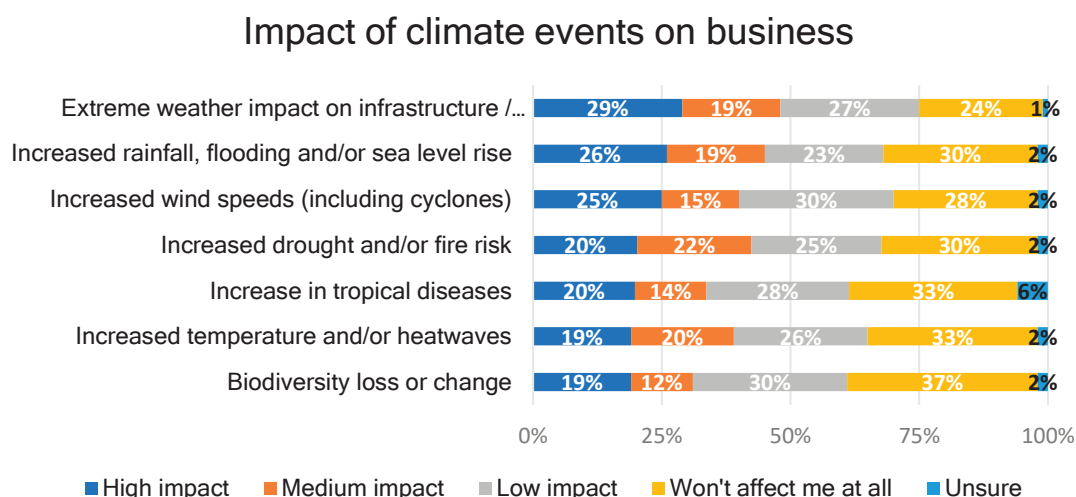
### 2.3.1 Data analysis

CCIQ conducts a quarterly survey, the Suncorp CCIQ Pulse Survey of Business Conditions. It is the largest survey of Queensland businesses available and it provides critical insights into the sentiment of business owners and managers across Queensland. As part of the survey for the June 2018 quarter, questions relating to climate change adaptation were proposed in the ‘hot topic’ section (see Appendix 1).

The survey questions focused on adaptation to climate change with the aim of determining the level of understanding on how climate change has impacted businesses and the progress, to date, towards climate change adaptation.

The results of the survey have been vital in deciding which climate change threats to specifically focus on and to discuss their relevance to businesses. On average, the survey receives around 500 responses, but the survey for the June 2018 quarter only yielded 260 responses, of which 140 responded to the ‘hot topic’ questions on climate change.

The reduced response rate can be due to several factors, however, qualitative responses and anecdotal evidence pointed to a lack of awareness or understanding of how climate change impacts businesses and even a disinterest in the topic. Figure 1 is a representation of responses to questions about the impacts that climate events have on business.



**Figure 1:** Impact of climate events on business. Source: CCIQ Pulse Survey, June quarter, 2018.

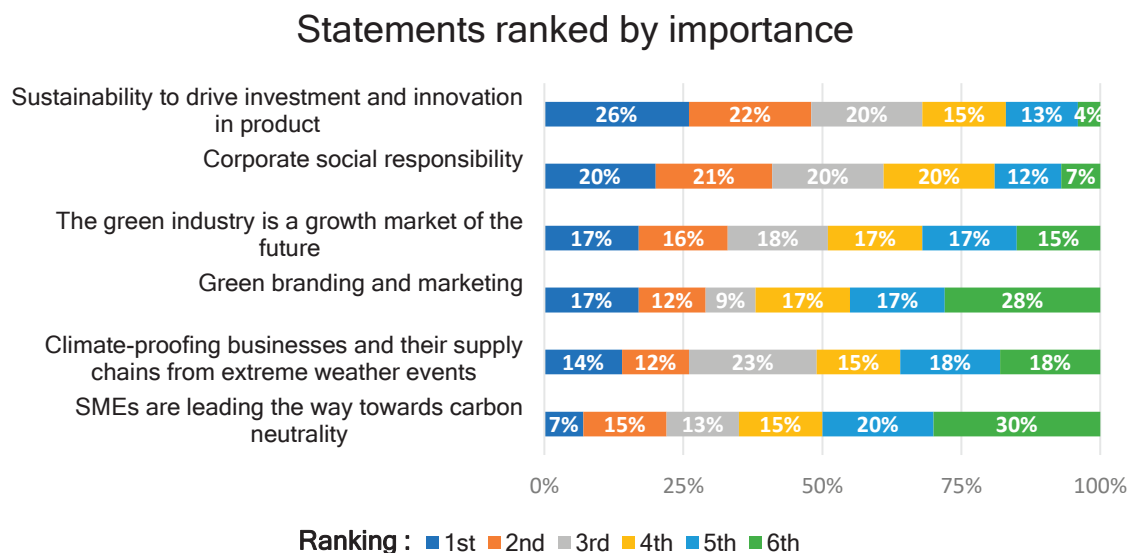
It can be deduced from Figure 1 that most businesses believe that climate events, other than extreme weather<sup>3</sup>, will have limited impact on their business. However, during the workshops that were held, businesses readily acknowledged and identified risks to their business that can arise because of climate change.

The workshop discussions were highly engaged in, interactive and informative. The most likely explanation for the disparity between the survey responses and the workshop engagement is the level of understanding of the two surveyed groups around climate change impacts. Survey respondents were given questions without any prior engagement on the topic, whereas workshop attendees were provided with detailed information about climate change prior to their discussions. Businesses were also asked to rank several statements as part of establishing a vision for small businesses relating to climate change. The rankings

<sup>2</sup> ecoBiz is a free program, funded by the Queensland Government that helps businesses save money across their energy, water and waste bills. It helps businesses develop and implement action plans to save money and increase efficiencies.

<sup>3</sup> In this context, extreme weather refers to cyclones.

are shown in Figure 2 below.



**Figure 2:** Statements ranked by importance. Source: CCIQ Pulse Survey, June quarter, 2018.

The results of the rankings were unsurprising as businesses naturally lean towards business opportunities—such as innovation in products and prospective investment opportunities—and are wary of prospects that may be a burden, for example, an expectation of carbon neutrality in the sector. Interestingly, corporate social responsibility<sup>4</sup> was ranked as the second most important vision for businesses, and arising from this, a case could be made that carbon neutrality is a form of corporate social responsibility. Finding adaptation solutions that result in carbon neutrality in the sector through product innovation, for example, would therefore be an ideal outcome for small and medium enterprises.

One of the survey responses conveyed the sentiment of participants: ‘Climate risks are poorly appreciated. Key stakeholders are not meaningfully engaged and key information is not well framed for ready understanding and acceptance. There are conflicting interests and competition for time and attention. There is also a lack of robust, practical, sensible guidance, not to mention a lack of coordination and collaboration on a sector-wide, long-term or multi-sector effort. What to actually do is not really clear, certain or well understood, and resources are limited and contested.’

### 2.3.2 Workshops

CCIQ hosted two workshops, in Cairns and Brisbane, with businesses to determine<sup>5</sup>:

- what are the risks that businesses face due to climate change threats
- what should be the priority actions for the Plan
- what resources are required for small and medium enterprises to be able to implement climate change adaptation strategies
- if there are any current initiatives that support businesses to adapt to climate change
- the best ways to communicate information on projected climate impacts and recommended actions to business.

The Cairns workshop had seven attendees from the education, professional services, and health and community services industries. The Brisbane workshop had 21 attendees from the property, business services, communications services, education, construction, professional services, export and energy storage, and employment and training industries. The outcomes of these workshops formed the basis of the actions in the Plan.

<sup>4</sup> Corporate Social Responsibility means that corporations have a degree of responsibility not only for the economic consequences of their activities, but also for the social and environmental implications. This is sometimes referred to as a ‘triple bottom line’ approach that considers the economic, social and environmental aspects of corporate activity.

<sup>5</sup> For the full list of questions and topics covered, see Annexure 2.

### 2.3.3 Case studies

The case studies in the Plan provide examples of the adaptation measures of businesses from a range of industries. They are all partners of the ecoBiz program—a free program funded by the Queensland Government that helps businesses to save on their energy, water and waste costs. With the help of ecoBiz coaches, businesses are supported to implement an action plan to save costs and increase efficiencies. Businesses that have completed the requirements of the ecoBiz program, and which have made a minimum 10 per cent reduction in their energy, water and/or waste usage, are recognised as ecoBiz Star Partners. The case studies in the Plan also showcase businesses that: are leading the way in climate change adaptation; cutting business costs; and demonstrating the opportunities that are available for the wider business community. There are also other examples of businesses that are improving their resilience to the threats of climate change while also protecting their profits.

## 3. The sector and climate change

### 3.1 Overview of the sector

Small and medium businesses represent about 19.6 per cent of all Australian businesses, and their diversity is shown in Figures 3 and 4. In Queensland, small businesses employ more than 900,000 people, which represents 44 per cent of the 2,104,000 persons employed by Queensland's private sector. Australian Bureau of Statistics, at June 2017, found there were about 437,600 registered businesses in Queensland. Of those, 426,600 were small businesses with up to 19 employees, 10,400 were medium businesses with 20 to 199 employees, and more than 600 were large enterprises with more than 200 employees.

The Queensland Government Statistician's Office (QGSO) statistics at 2017 indicate the sector is growing each year. In June 2017 there were almost 12,000 more businesses in Queensland than in June 2016—when there were 414,684 registered businesses, with those employing 200 people or fewer representing more than 97 per cent of all businesses (QGSO, 2017). With Queenslanders establishing more businesses each year, it is clear that small businesses hold a significant role in the growth of the state's economy. This is further evidenced by the economic contribution generated by small businesses across Queensland of around \$113 billion per year to the state's economy (Business Queensland, 2018).

Furthermore, many small and medium enterprises are regarded as the innovators of Queensland, using creativity and intelligence to grow their businesses and create a meaningful impact in their communities. Queensland's businesses are actively pursuing opportunities to solve problems, develop products and methods, and reach new markets.

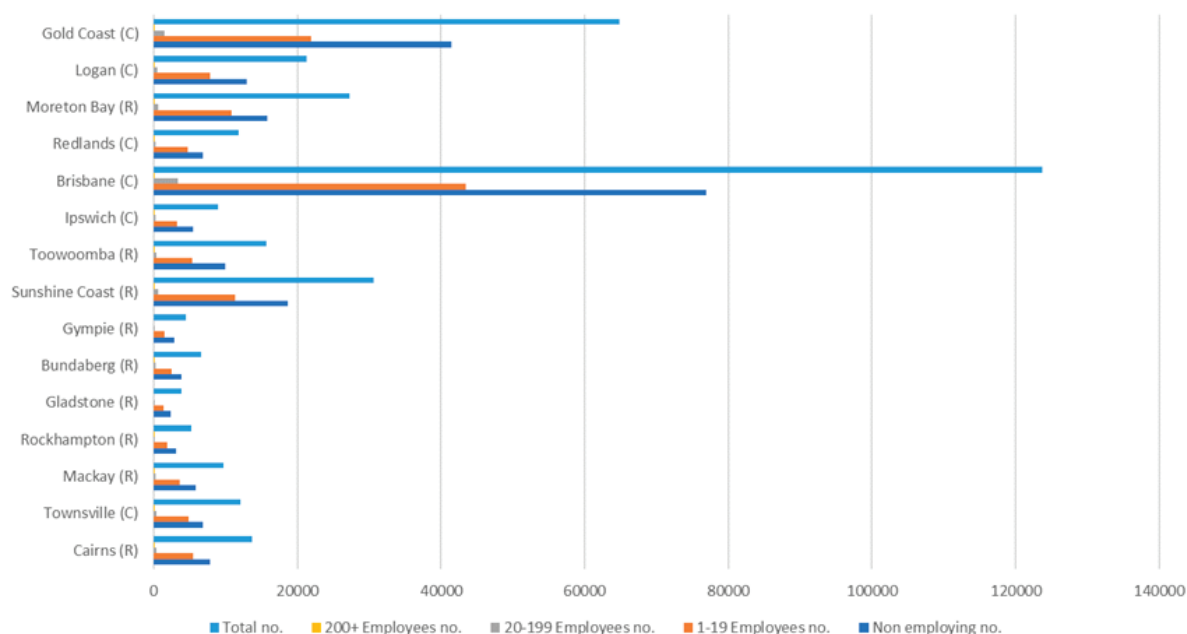


**Figure 3:** Queensland's business numbers by ANZSIC industry. Source: ABS, 2018.

ANZSIC Industry Divisions	Non Employing no.	1-19 Employees no.	20-199 Employees no.	200+ Employees no.	Total no.
Agriculture, Forestry & Fishing	31492	9083	644	24	41284
Mining	1078	650	92	31	1870
Manufacturing	7424	7816	1025	87	16393
Electricity, Gas, Water & Waste	660	539	42	12	1249
Construction	44473	29689	983	25	75194
Wholesale Trade	6511	6161	613	34	13314
Retail Trade	10588	13354	1089	21	25032
Accommodation & Food Services	4811	11224	1580	73	17682
Transport, Postal & Warehousing	19786	7467	456	34	27738
Information Media & Telecommunications	2061	1056	80	0	3186
Financial & Insurance Services	29958	6069	167	22	36215
Rental, Hiring & Real Estate	42211	8065	405	9	50694
Professional, Scientific & Technical Services	22505	16988	770	32	40271
Administrative & Support Services	14025	9925	853	85	24890
Public Administration & Safety	743	492	95	8	1355
Education & Training	3093	2582	302	27	6007
Health Care & Social Assistance	12859	11231	678	60	24850
Arts & Recreation Services	3011	1780	174	15	4994
Other Services	13355	11832	347	15	25534
<b>Total</b>	<b>270644</b>	<b>156003</b>	<b>10395</b>	<b>614</b>	<b>437752</b>

**Figure 4:** Queensland businesses by size and industry. Source: ABS, 2018.

Located everywhere in Queensland, businesses contribute to the livelihood of Queensland's metropolitan, regional and rural areas. The Brisbane region has the highest number of small and medium-sized businesses in the state, as shown in Figure 5. Other regions in the state's south east—including the Sunshine Coast, the Gold Coast and Logan—have a strong number of start-ups as a result of their communications and transport connectivity to Brisbane, as shown in Figure 6.



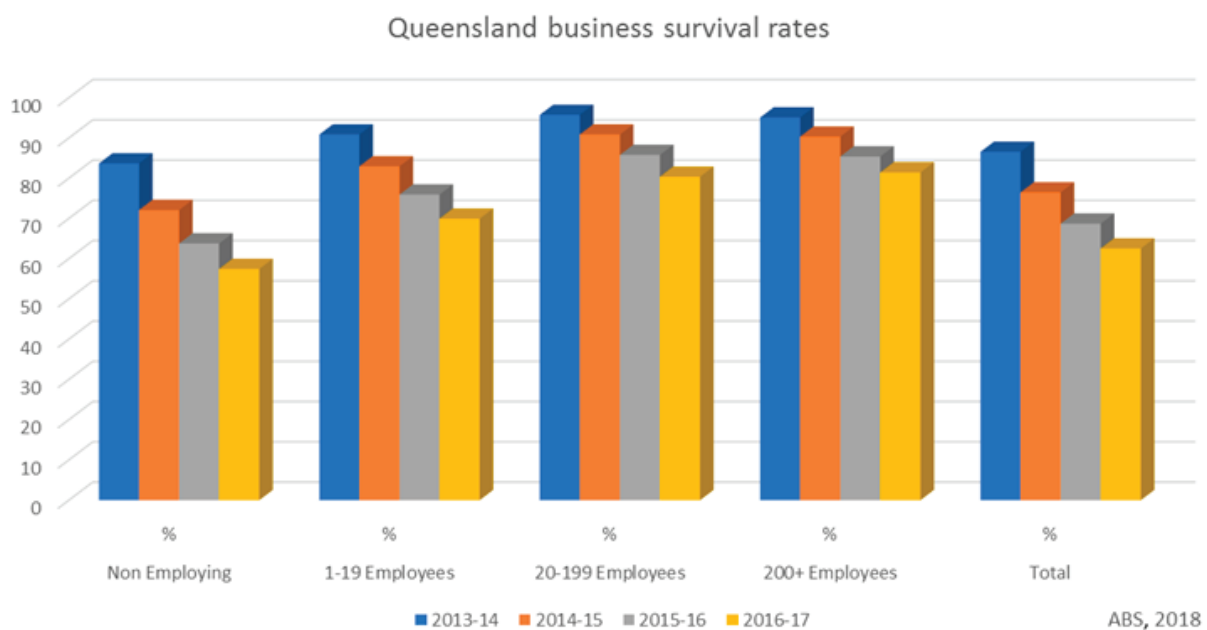
**Figure 5:** Queensland businesses by region and number of employees. Source: ABS, 2018.



City (C) / Regional Centre (R)	Non employing	1-19 Employees	20-199 Employees	200+ Employees	Total
Cairns (R)	7818	5426	389	8	13641
Townsville (C)	6839	4815	346	6	12006
Mackay (R)	5879	3609	249	4	9741
Rockhampton (R)	3124	1908	160	3	5195
Gladstone (R)	2350	1400	85	0	3835
Bundaberg (R)	3823	2532	194	7	6556
Gympie (R)	2842	1495	66	0	4403
Sunshine Coast (R)	18680	11353	567	21	30621
Toowoomba (R)	9981	5281	348	10	15620
Ipswich (C)	5478	3230	200	4	8912
Brisbane (C)	76860	43390	3401	96	123747
Redlands (C)	6872	4729	210	8	11819
Moreton Bay (R)	15796	10827	572	16	27211
Logan (C)	12903	7851	463	14	21231
Gold Coast (C)	41410	21947	1447	45	64849

**Figure 6:** Queensland businesses by size and region. Source: ABS, 2018.

Small businesses, in particular, generally have a much lower survival rate than medium and large businesses. The rate of attrition of small businesses highlights the greater susceptibility of the sector to major economic downturns—and the correlation between levels of employment and the constraints on profit margins, as shown in Figure 7. Small and medium businesses are more likely to succeed when they employ more employees, which is also a signal that the business is growing and can support the outlays necessary to attract and retain increased staff capability and capacity.

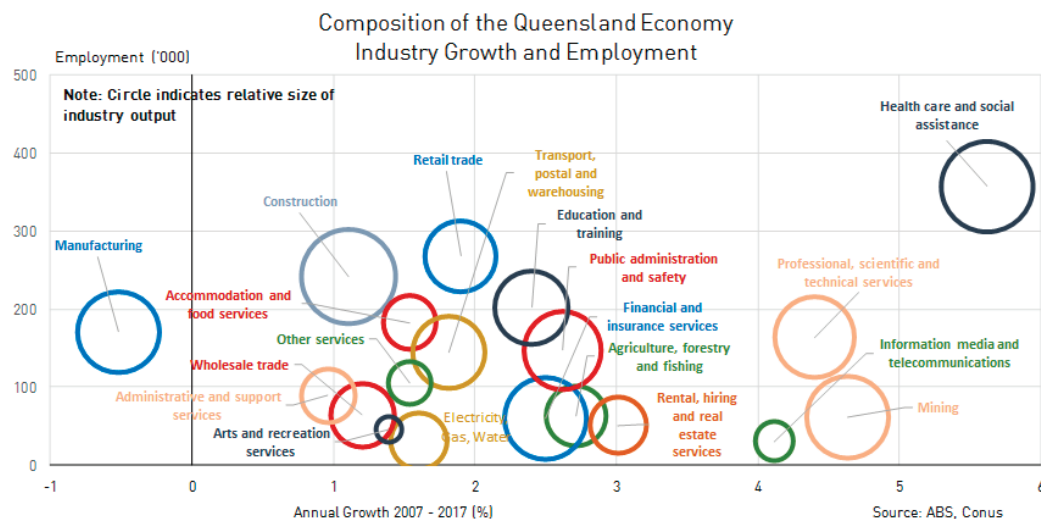


**Figure 7:** Survival rates of Queensland businesses by size from June 2016 to June 2017. Source: ABS, 2018.

Year	Survival rates				
	Non Employing	1-19 Employees	20-199 Employees	200+ Employees	Total
	%	%	%	%	%
2013-14	84	91	96	95	87
2014-15	72	83	91	90	76
2015-16	64	76	86	85	69
2016-17	57	70	80	81	63

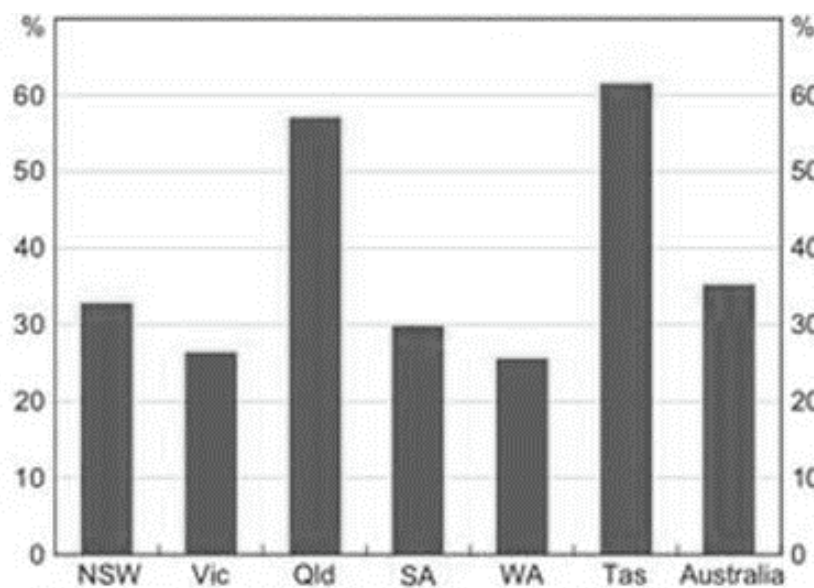
**Figure 8:** Queensland business survival rate, from June 2013 to June 2017. Source: ABS, 2018.

Queensland has an increasingly diversified economy and is a recognised leader in a number of industries that support high employment numbers and secure regional livelihoods, as shown in Figure 9. Queensland's strongest employment opportunities are found mainly in the service, agriculture, construction, tourism and resources sectors. Of the expanding industries, Queensland has experienced significant growth in its health care and social assistance sector—with an annual growth rate of more than five per cent over the decade between 2007 and 2017. This is partly due to the introduction of the National Disability Insurance Scheme (NDIS). Furthermore, the decade to 2018 also experienced strong growth in the professional, scientific and technical services industry which underpins Queensland's knowledge sector and is key to the worldwide digitalisation of our economy.



**Figure 9:** Composition of the Queensland economy—industry, growth and employment, 2007–2017. Source: ABS, Conus.

Across Australia, Tasmania has the highest percentage of small businesses in regional areas, followed by Queensland in second place, as shown in Figure 10. On average in Australia, 35 per cent of businesses are located outside of capital cities. Of all Australian capitals, Brisbane has the highest number of small and medium businesses. Overall, more than half of Queensland's businesses are located outside of Brisbane. This reflects the strength of the south east region and Queensland's strong industries of agriculture, tourism and resources, which are typically located in the state's regional and rural areas.



**Figure 10:** Small businesses in regional areas by state, 2008–2009. Source: Reserve Bank of Australia, 2012—Small Business: An Economic Overview.

Small businesses are often just as capable at executing ideas as larger companies, but the challenges they face are vastly different. The primary challenges include the lack of resources and upfront capital which constrain their capacity to deliver outcomes. Small businesses have more volatile revenues. Resistance and recovery from external shocks—such as, adverse economic conditions and natural disasters—are therefore more of a challenge for small businesses.

There is also a tendency for small business owners to draw on household assets for financing, rather than debt financing, and this places the survivability of small businesses more at risk than that of larger corporations. When there is an event such as a bushfire, flood or cyclone, business owners have double the recovery burden, due to threats and damage to both home and business. As such, the sector is among the most vulnerable to climate change, of all economic sectors.

There are, however, clear advantages of operating a small business. With greater access to management, decision-making and internal communications can be more direct. This means innovation—and the testing of new products or services—can occur relatively quickly and easily. Furthermore, because a small business is closer to its customers, it is in a better position to receive feedback and observe changing preferences.

From 2016 to 2018, the Suncorp CCIQ Pulse Survey of Business Conditions—which reflects the sentiment of Queensland business operators—found three key trends:

1. Regional business performance was consistently weaker compared with businesses in south east Queensland, across all indicators, including profitability, revenue and general business conditions.
2. Energy costs are a key constraint on businesses, and were consistently raised as one of the top three issues.
3. A severe distrust of government and politicians—at both state and federal levels—arising from a lack of consistency in policy and instability caused by party in-fighting. The international political climate has also increasingly affected business sentiment.

Businesses have long been regarded as shaping the identity of the localities and communities in which they operate, and of being integral to their social fabric. Supporting Queensland's small and medium enterprises is not only economically and socially beneficial, it is an acknowledgement of the tremendous risk and challenges inherent in operating a business. The protection of businesses ultimately contributes to the protection of the community and its social fabric.

## **3.2 Climate risks facing business**

### **3.2.1 Climate change impacts**

The most serious climate change threats for a large range of businesses—as identified during the survey and workshops for the Plan—are outlined below.

#### **Temperature rise**

One of the most noticeable effects of climate change is the increasing duration of hot weather, including heatwaves. Australia's average surface air temperature has increased by one degree Celsius since national records began in 1910, and especially since 1950. The rise in temperature has been accompanied by increases in the duration, intensity and frequency of heatwaves across Australia since 1950.<sup>6</sup>

According to National Climate Change Adaptation Research Facility (NCCARF), the primary risks from increased heat, and heatwaves, are likely to be in human health, infrastructure (mechanical failure) and primary productive sectors as well as individual plant and animal species.<sup>7</sup> The findings from the workshops support NCCARF's research.

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<sup>6</sup> Australian climate trends (Climate Change in Australia 2018)

<sup>7</sup> Synthesis Summary (NCCARF, 2016)

Businesses indicated the biggest risks they faced, due to increased heat, related to the health and wellbeing of their employees. Extreme heat may lead to fatigue, lost productivity and even the stopping of work. Heatwaves can also affect morale, with heat negatively impacting on mental health. During the workshops, businesses raised concerns about how to protect the wellbeing of their employees while ensuring that productivity is not significantly reduced and the potential liability of employees falling ill during the course of business.

Businesses also noted concerns relating to increased costs due to higher energy usage for air-conditioning and a concern for the failure of transportation due to mechanical failure. Australian electricity prices are among the highest in the world and using more energy not only adds to the costs incurred by businesses but also reduces their cash flow.

Higher heat levels also place more pressure on Queensland's power grid. Heat can also cause problems with infrastructure, for example, the state of Victoria experienced extreme heat in February 2009 prior to the Black Saturday bushfires. The heat led to transportation failures—due to the buckling of rail lines—and equipment failures, following disruptions to the power supply which also led to a failure of air-conditioning systems.<sup>8</sup>

## **Flooding**

Most infrastructure across Australia is not designed to withstand the severe flooding that has become more frequent, as result of climate change. As the climate is changing, the atmosphere is trapping more heat, which would previously be more fully absorbed by oceans. However, with the temperature of oceanic water also warming, the effect is higher evaporation rates that, in turn, increase the amount of water vapour in the atmosphere. This process is leading to increased rainfall.

During the Plan's workshops, participants voiced their concerns about the need to update their business practices for document storage, telecommunications and supply chains. In particular, businesses can reduce their risks by switching to digital storage and improving their information technology software. Many businesses are still using traditional paper document records systems, placing them at risk of document damage during flooding, bushfires and cyclones.

One of the barriers to improving their software and business practices is costs, yet such an investment would allow for a quicker recovery period from weather events. A bigger challenge is making the updates to software across supply chains, especially given that supply chains are vital for certain business.

### **Case study on the effect of flooding on business**

The Queensland floods from November 2010 to January 2011 left many businesses overwhelmed, with three quarters of the state declared a disaster zone. Immediately after the flood, CCIQ surveyed Queensland businesses and obtained 555 responses.

The majority of survey respondents were located in Brisbane (34.44 per cent). The majority of responding businesses (58.2 per cent) had up to 20 employees; 26.67 per cent had between 21 and 100 employees; and 15.14 per cent had more than 100 employees.

The survey found:

- one in 10 businesses had been fully or partially inundated by flood water
- one in five businesses had endured forced business closures with lost sales
- 15 per cent of businesses had lost of power
- many businesses had been impacted indirectly through customers being affected (55.5 per cent), suppliers being affected (44.5 per cent), or through the inability of employees to attend work (34.59 per cent)
- more than half of the businesses, which had been fully or partially inundated by flood water, had had buildings affected (55.17 per cent)
- many businesses had plant and equipment impacted (43.10 per cent)

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<sup>8</sup> See footnote 7



- many businesses had stock impacted (44.83 per cent)
- two in five businesses had office furniture and equipment impacted
- one in five had motor vehicles affected.

Survey respondents rated their first priority for support, as being financial assistance with their cash flow. Some respondents noted cash flow was important to pay employees, creditors and meet other financial obligations. This result reaffirms the basis of the Plan—cash flow protection is crucial for business resilience and climate change adaptation must be linked to cash flow. Respondents rated as their second priority for support, as being assistance to correct perceptions and spread the word that many businesses were open during, and/or after, the flood.

This issue was also identified in November 2018 during workshops for the Plan. Workshop participants identified that a key risk, arising from the flooding related community perceptions about business continuity. Many businesses continued to trade during and/or after a flood but due to perceptions by customers and the public—that businesses may be closed—business slowed and in some cases, stopped altogether.

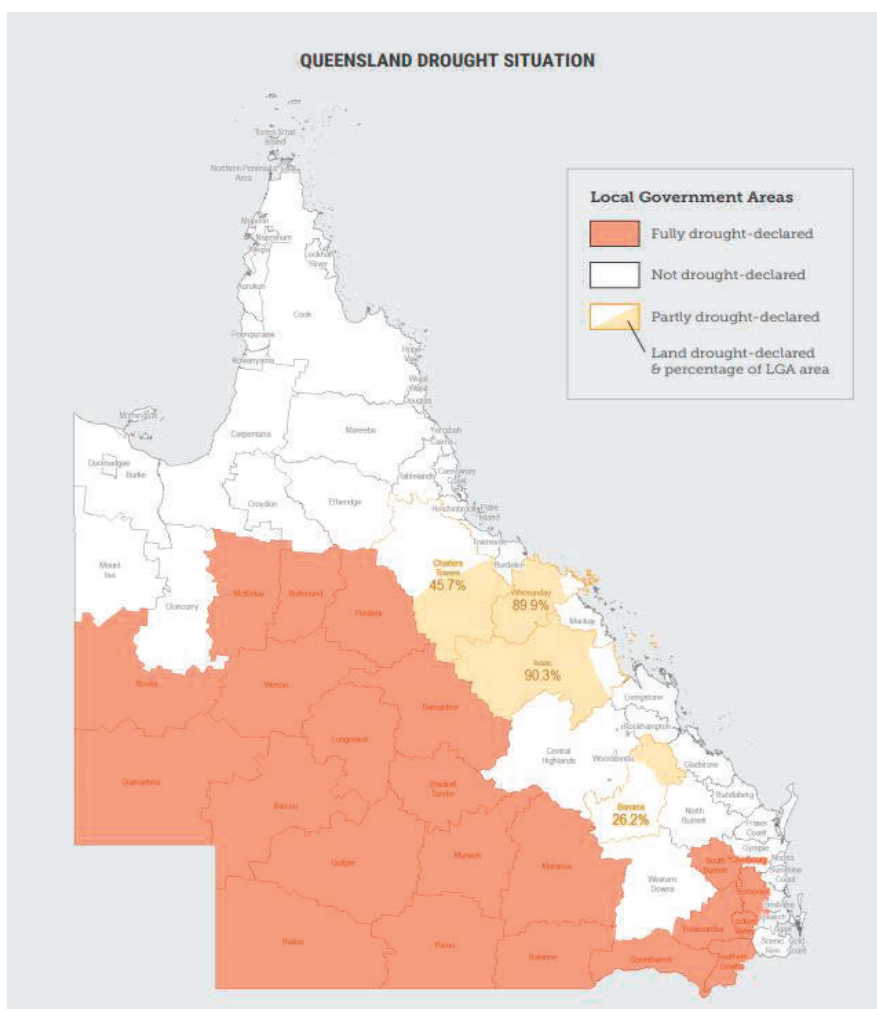
This short-term effect can also have long-term repercussions as future investment may be hindered due to a loss in confidence in a business's ability to recover. Managing these perceptions is vital for business resilience and requires a joint effort between businesses, the government and the media to ensure that it is not only stories of loss and disruption that are portrayed but also stories of resilience and innovation by businesses.

It is therefore important for governments to deliver improved and coordinated messaging to advise the public that businesses are operational after disasters. Figure 11 shows the assistance that businesses needed to recover from flooding, as indicated in the responses to CCIQ survey.

Priority and time frame	Type of assistance	Samples of quotes from people who sought assistance
19.5 per cent  Short term (ST)	Financial assistance with cash flow	'Financial support to retain skilled workers, provide cash flow due to lost revenue, compensation for debtors who are unable to pay pre-existing accounts due to being flood affected.' 'Financially we have had a significant loss of trade due to forced closure during the flood crisis and prior to that for the whole of 2010. We are having major difficulty meeting our obligations to our creditors, as we have extremely limited cash flow.' 'Income support to supplement the losses suffered thus far. We will not be able to pay our rent and this will continue for some time. We need advertising and incentives for people to come and visit.'
5.5 per cent  ST	Concessional loans	'Interest free loan to ensure business cash flow can sustain this disruption to business.' 'Low interest loans or government grants for income loss to help keep paying employees until we are earning again.' 'Small short term loan for cash flow until clients can pay accounts, clients include government agencies.'
3.1 per cent ST	Rental assistance	No quotes from respondents are available.
12.5 per cent ST	Message: Queensland is open.	'Advertising to say that most accommodation businesses in Queensland are still open for business.' 'Tourism operators need to get the message across that people need to come to Brisbane for holidays and not cancel bookings. There have been indications that even the Gold Coast has lost bookings because overseas visitors don't know the difference.'
8.6 per cent ST	Customers	'Marketing support to advertise that the Queensland holidays destinations have not been affected—this includes the Sunshine Coast.'
3.1 per cent ST	Tourism promotion	'Marketing internationally and domestically to bring tourists to Australia, Queensland and the Whitsundays, in particular.'
1.6 per cent Long term (LT)	More accurate media portrayal	'The media needs to let people know not all of Queensland is flooded and encourage people to continue with their travel plans.' 'A clear message is needed through the media that we are open and trading as normal.'

7.8 per cent ST	Deferral of taxes and tax relief	<p>‘Assistance in the form of a means tested (review of profit and loss) program that enables simple and immediate access to concessions (for example, grants and tax breaks) is required.’</p> <p>‘Queensland business needs support from government such as payroll tax, which is an unbearable burden—not only is your business taxed because you employ more Australians but this nasty tax is not even indexed to profit. It is payable come what may. Then there is WorkCover and all of the other obstacles; we need tax relief in desperate times and less governance obstacles.’</p> <p>‘Tax breaks due to a reduced cash flow, such as, deferred business activity statements, tax payments.’</p>
3.9 per cent ST	Deferral of bank loan repayments	<p>‘Bank assistance with regards to the postponement of monthly loan payments and extending our overdraft facility.’</p> <p>‘Defer loan repayments to enable cash flow to pay wages and accounts.’</p>
1.6 per cent ST	Deferral of creditor payments	‘Time out from the Australian Taxation Office, banks and creditors to get cash flow back to order.’
6.3 per cent LT	Flood proof infrastructure	‘A highway that is not flood affected for freight services.’
6.3 per cent ST	Opened transport routes	<p>‘Get the major transit routes open to heavy vehicles.’</p> <p>‘Road infrastructure repairs so we can get supplies into our region and finished goods out of the business.’</p>
3.9 per cent ST	Buy local	‘Ensuring local trades-people get the repair jobs and not fly-in trades-people. Insurance companies and governments must spend their money locally to help local communities to recover. Insurance companies in many cases will supply goods out of Sydney or other major capital cities and local government is becoming the same.’
3.9 per cent ST	Affected customers back up and running	<p>‘My business relies on my customers to have healthy businesses that are operating. I need my clients to recover as quickly as possible.’</p> <p>‘Our clients’ suppliers and customers need to be back in full operation as soon as possible.’</p>
3.1 per cent ST	Earlier power restoration	<p>‘Ensure the supply of power. Delay of several days after the electrical switchboard was certified as okay.’</p> <p>‘We need to be able to get some reliable information from Energex as to why our business is not connected when it has been ready since Monday. There has not been major flooding in our building. We cannot get any information from Energex as to when we can have the power switched on or have a generator to power the building. The building next door has an Energex generator.’</p>
0.8 per cent Medium term (MT)	Abolish stamp duty on insurance	‘Deleting stamp duty on all insurance policies would encourage everyone to take out insurance and thus reduce the cost of insurance policies. Insurance is a huge cost for my business, so any government changes that encourage everyone to have a policy, such as, ditching stamp duty, would reduce the cost for everyone.’
0.8 per cent	Reduced red tape	‘Government and federal government assistance to process building approvals quickly.’

**Figure 11:** Assistance needed to recover from the 2010–2011 Queensland floods. Source: CCIQ, 2011.



**Figure 12:** Queensland's drought situation in 2018. Source: CSIRO, 2018.

### Drought and fire risks

As at October 2018, 58.1 per cent of Queensland was declared a drought zone. The period of time spent by Queensland, and the areas affected by drought, is expected to increase with climate change. Figure 12 indicates the areas of Queensland fully or partially drought declared and areas that were not drought declared in October 2018.

Drought impacts Australia's economy, ecosystems, agriculture, urban water supplies and the health of Australians.<sup>9</sup> The drought in Queensland since 2018 has severely affected the agricultural and many other industries. Many rural businesses are, to a large extent, dependent on the success of the agricultural industry. As a result, when the agriculture industry suffers, other industries do too.

The bushfires that occurred in Queensland in 2018 were yet another reminder of the impacts of climate change. According to the CSIRO, three factors contribute to bushfire—weather, terrain and vegetation—with the frequency and severity of bushfire weather having increased over recent decades.<sup>10</sup>

Indeed, government and business leaders, and industry regulators, are aware that climate change also now represents a systemic financial risk. Participants in the workshops for the Plan identified an increase in insurance premiums as one of the biggest risks arising from bushfires and flooding.

In many instances the cost associated with reducing the risks of a bushfire to business was too high for many businesses and in some instances, insurance companies refused to

<sup>9</sup> See footnote 9

<sup>10</sup> Bushfire Research (CSIRO, 2018)

provide insurance. This may be due to insurance companies having been largely unprepared for the costs associated with a changing climate and the related risks to businesses.

Traditionally, insurance risk has been calculated on the basis of historical loss and harm from similar events. However, climate change is increasingly being recognised as a 'risk amplifier' and hence insurance risk modelling is now in a state of adaptation.

Finity—an Australian and New Zealand independent actuarial and analytical consulting firm—stated that Australian insurers have been relatively relaxed about adopting pricing for climate change.<sup>11</sup> Finity also recommended a more immediate, ongoing and gradual response to pricing for climate change.

The need for a business to obtain insurance is to indemnify against loss and transfer the risk a business would otherwise face to the insurer. Among other considerations, insurance premiums are dependent on the probability of loss, that is, the chance that an event will occur. Determining this probability in the context of climate change has generally been subjective as data has not always been available or reliable.

This may be why insurance companies have been slow to adopt pricing for climate change. There is, however, an argument to be made that research has provided sufficient data and observations for the probability of a climatic event occurring to be considered objective<sup>12</sup>.

In November 2016, the Actuaries Climate Index (ACI) was launched by organisations representing the United States and Canadian actuarial profession. The index measures changes in the frequency of extreme weather and is intended to be an objective measure of observed changes in extreme weather and sea levels and to provide a useful monitoring tool of climate trends<sup>13</sup>.

Following the launch of the ACI, the Australian Actuaries Climate Index (AACI) was established. The AACI aims to help inform actuaries, public policy-makers, companies and the public about climate trends in Australia. The focus is on the extremes, which are related to risks such as inland and coastal flooding, cyclones, drought and heat waves<sup>14</sup>. This is a positive initiative for businesses who need the protection that insurance offers to their cash flow, although the affordability of that insurance is another matter.

## **Tropical cyclones**

Tropical cyclones pose a serious threat to industry in Queensland. Research shows that the number of cyclones is predicted to remain the same or even decrease but the cyclones that do occur are expected to be increasingly severe.

The impacts of extreme weather on small and medium businesses range from damage to infrastructure and products to a stronger risk of injury or death, and disruptions to supply chains. Given that extreme climate also creates risks for workplace health and safety (WHS), it would be sensible to incorporate climate change into routine risk management for businesses.

Interestingly, at the Cairns workshop for the Plan, participants conveyed the view that in far north Queensland, cyclones were a business as usual risk. Many local businesses have already adapted their operational strategies to deal with cyclones. As the adaptation has taken place over time, there is no clear distinction between business practices before adaptation and after.

### **3.2.2 What does climate risks mean for business?**

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<sup>11</sup> General Insurance Insights *Climate Change and Climate Change Costs* (Finity, 2018)

<sup>12</sup> Objective probability refers to the long-run relative frequency of an event based on the assumptions of an infinite number of observations and of no change in the underlying conditions

<sup>13</sup> An overview of the Actuaries Climate Index (Actuaries Digital, 2017)

<sup>14</sup> Australian Actuaries Climate Index FAQs (Actuaries Digital, 2017)



Participants at workshops for the Plan were asked to consider the likelihood of potential outcomes of climate change affecting their business, as follows:

- increased operational costs
- increased capital costs
- reduction in production capacity
- reduced product or service demand
- increased risk management costs
- increased litigation costs
- inability to do business
- new product offerings
- new markets.

Participants regarded increased operational costs and the availability of new markets as being the most likely impacts of climate change on their business. The climate change factors that participants regarded as already impacting their businesses were increased operational and risk management costs.

The climate change factor that participants noted would be least likely to affect their business was the inability to do business. These responses were largely provided by workshop participants who represented retail or food businesses and the results may have been quite different had the businesses been forced to close altogether as a result of natural disasters.

The consultation however highlighted the importance of adaptation and eco-efficiency (being energy, waste and water efficient) in developing business resilience. Opening up new markets is based on the ability to innovate and adapt to change. Eco-efficiency is an under-utilised way to decrease operational costs and has the added benefit of green branding.

An increase in risk management costs may be a short-term cost for businesses but can provide long-term benefits. Without a risk management plan, businesses will potentially suffer greater impacts from the threats of climate change. Their recovery would also be slower.

### **2.2.3 Social vulnerability**

The risks that businesses face from a changing climate have a flow-on effect for the wider community and the socially vulnerable. When a business lacks the resilience to recover from climate change impacts, many of the services that the business provides cease. As a result, vulnerable groups within the community, and the community as a whole, are negatively impacted and require more time to recover.

If a business cannot adapt to climate change, then all of their employees, customers and clients would be negatively impacted through job losses and disruptions to their local economies and supply lines. This impact would be heightened if the business was involved in the supply of essential goods and services such as food products. In regional areas, local people would have to travel further to access the same goods and services, and this would also increase their dependency on transport.

## **4. The state of climate adaptation of the sector**

### **4.1 Existing policy framework**

This section describes the international, Australian and state policy frameworks and activities for climate change adaptation for small and medium enterprises.

## 4.1.1 International and national

Australia's national and international commitments to address climate change are driven by the Paris Agreement—an international treaty which came into effect in 2016 and aims to reduce global warming to under two degrees Celsius by 2050.

One of the Australian Government's programs that seeks to address climate change, is the Emissions Reduction Fund. The fund provides a framework for the creation of carbon credits for a range of emissions reduction projects that improve energy efficiency, encourage fuel switching, capture methane from landfills and store carbon in forests and soils. Another key national policy is the Renewable Energy Target, which came into effect in 2001. The target aims to drive investment in renewable energy and assists households and businesses to install solar and other renewable energy technologies.

The Australian Government also provides guidance on best practice adaptation to assist businesses and communities to manage their climate change risks. For example, Coast Adapt is an online support tool for managing climate risks in coastal zones.<sup>15</sup> In 2006, the Australian Greenhouse Office published *Climate change impact and risk management—A Guide for Business and Government*.<sup>16</sup>

## 4.1.2 State

In 2017, the Queensland Government released the Queensland Climate Change Response (QCCR). The QCCR vision is: An innovative and resilient Queensland that manages the risks and harnesses the opportunities of a changing climate.

The QCCR includes two key strategies:

1. The Queensland Climate Adaptation Strategy 2017–2030
2. The Queensland Climate Transition Strategy.

This *Small and Medium Enterprise Sector Adaptation Plan* (the Plan) is one of eight key sector adaptation plans being developed under the Queensland Climate Adaptation Strategy 2017–2030. The sector-driven plans define the pathways to stronger resilience against climate change impacts and identify priority activities. Since 2017, six plans have been launched for the agriculture, built environment and infrastructure, biodiversity and ecosystems, health and human wellbeing, emergency management services and tourism sectors. A plan for the industry and resources sector will also be launched in 2019.

Queensland's Department of Environment and Science is facilitating the implementation of the QCCR and is supporting the state government's key goals of:

- powering Queensland with 50 per cent renewable energy by 2030
- achieving zero net emissions by 2050
- reducing carbon pollution by setting an interim emissions reduction target of at least 30 per cent below 2005 levels by 2030.

Queensland's zero net emissions target is a long-term goal that will:

- protect the state's interests by positioning the economy to be competitive in a world where carbon pollution is constrained
- provide the Government with the policy direction to manage uncertainty by allocating the costs of transition and reducing the risk of stranded assets and economic shock
- provide a signal to industry and the community that can unlock opportunities for investment and innovation in the state
- demonstrate that Queensland is doing its fair share in the global transition to zero net emissions.

The Queensland Government understands that adapting to climate change and transitioning to a low carbon, clean energy future requires actions across the entire economy. To facilitate

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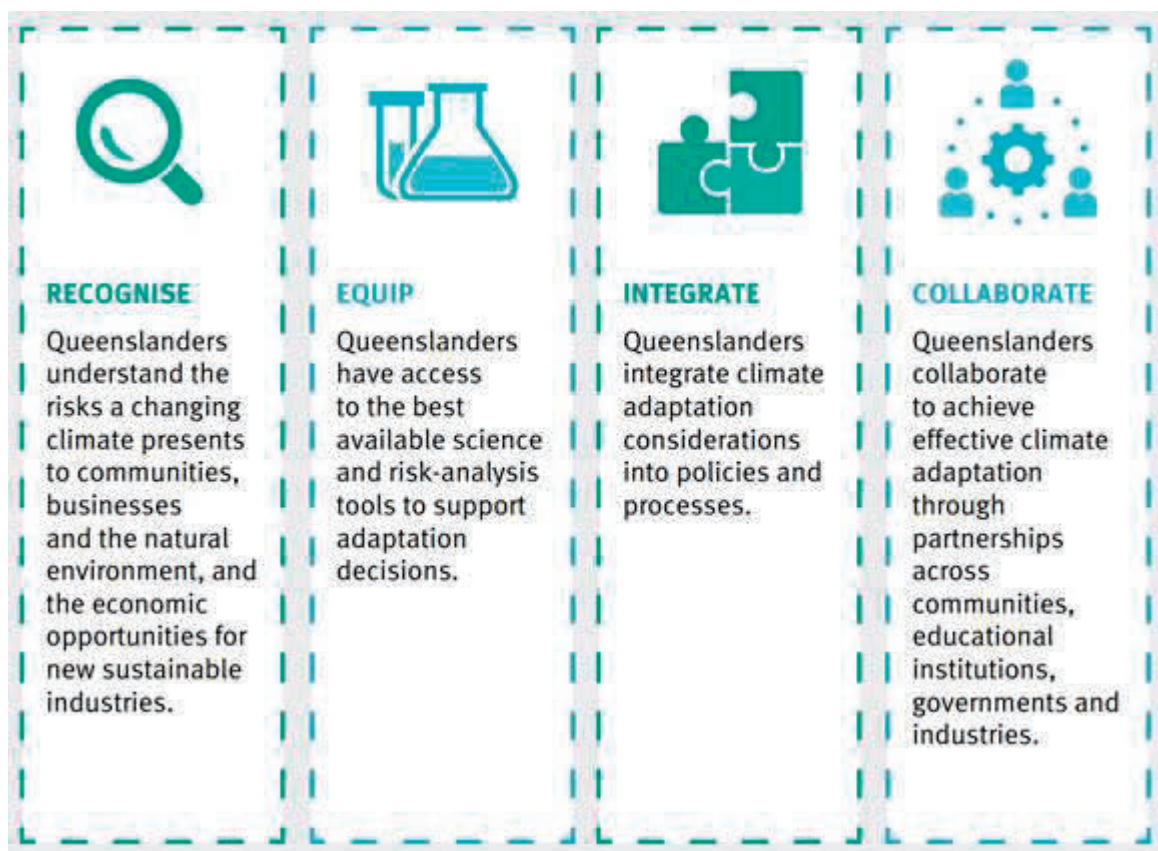
<sup>15</sup> Adapting to Climate Change (Department of Environment and Energy, 2018)

<sup>16</sup> Climate Change Impact and Risk Management *A guide for business and government* (Department of Environment and Heritage, 2006)

this transition the Queensland Government is committed to creating and harnessing new job opportunities through a range of activities including:

- developing the Powering Queensland Plan to stabilise energy prices, secure the supply of the state's electricity and transition to cleaner energy options
- developing the Powering North Queensland Clean Energy Hub that will connect clean energy generators in the north and north west Queensland with the National Electricity Market
- implementing energy efficiency business training programs to support industries and business
- initiating rooftop solar schemes across communities including remote communities, Aboriginal communities and state schools
- expanding opportunities for carbon farming, which will open up new economic potential and jobs.

An extensive range of Queensland Government initiatives further support the Queensland Climate Change Response and details are available on the Department of Environment and Science's website. They include the Queensland Biofutures 10-year Roadmap and Action Plan, the Decarbonisation of the Great Barrier Reef Islands program, the Queensland Electric Super Highway and the \$8.4 million CarbonPlus Fund.



**Figure 13:** Four objectives guiding the goals of the Queensland Climate Adaptation Strategy 2017–2030. Source: Department of Environment and Science.

#### 4.1.3 Local government

Local governments across Queensland are engaging in planning for climate change. Two climate resilience programs operate across Queensland local governments, as follows:

- The Queensland Climate Resilient Councils (QCRC)<sup>17</sup> program—a partnership between the Queensland Government and the Local Government Association of Queensland—supports local governments to plan for and respond to climate change.

<sup>17</sup> <http://qcrc.lgaq.asn.au/program-purpose>

In 2019, 33 local governments were participating in the program including three Aboriginal programs.

- The QCoast2100<sup>18</sup> program—a coastal hazard adaptation planning program that in 2019 involved 31 councils, including seven Aboriginal and Torres Strait Island councils.

Several local government initiatives are underway to plan for climate change or reduce energy usage and carbon emissions, and raise community awareness, as follows:

- The Brisbane City Council's 15-year Brisbane. Clean, Green, Sustainable 2017–2031 plan sets targets such as increasing the natural habitat across the city and reducing household carbon emissions from energy, waste and transport.
- The Whitsunday Regional Council's Climate Change Innovation Hub is developing solutions to assist the region in facing climate change challenges.
- The Burnett Catchment Flood Resilience Strategy—developed in partnership with four councils in the Burnett Catchment, the Wide Bay Burnett Organisation of Councils and the Queensland Reconstruction Authority—is offering a systematic approach to integrated, cross-disciplinary actions across the entire area.
- Since 2016, the Ipswich City Council's LED street lighting project—funded by \$1.2 million from the Australian Government's Energy Efficiency Program—has led to the conversion of more than 2,600 street lights into energy efficient lighting, and this resulted in substantial reductions in energy usage and carbon emissions.

Research has also shown that local governments are being proactive in tackling climate change. The Climate Council's report *Local leadership: Tracking local government progress on climate change* found that councils and communities across Australia were introducing exemplary initiatives to tackle climate change and were also heavily investing in renewable energy projects, such as, the Sunshine Coast Council's solar farm.

Research also included the *Australian Local Government Climate Review 2018*, by Beyond Zero Emissions, ICLEI—Local Governments for Sustainability and Ironbark Sustainability, which found that many councils had corporate and community targets and strategies to reduce carbon emissions.

Key findings of the research noted, however, that local governments needed state and federal support to deliver effective strategies to reduce emissions and many councils were unsatisfied with the federal government's approach to meet global targets.

## **4.2 Programs, tools and opportunities**

In preparing the Plan, a review was conducted of the relevant resources that support the small and medium enterprise sector to prepare for climate change.

### **4.2.1 Existing programs and tools**

The range of initiatives to assist businesses in finding information and guidance in relation to climate change is expanding. Some of the existing programs and tools to guide businesses in dealing with climate adaptation, mitigation and eco-efficiency are listed below.

#### **Bureau of Meteorology**

The Bureau of Meteorology (BoM) provides national meteorological, hydrological and oceanographic services and undertakes research into science and environment related issues in support of its operations and services.<sup>19</sup> The BoM has been engaging with industry in Queensland through providing monthly climate and weather briefings.

#### **The Commonwealth Scientific and Industrial Research Organisation**

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<sup>18</sup> <http://www.qcoast2100.com.au/program-purpose>

<sup>19</sup> See the Australian Government, Bureau of Meteorology website for further details, <http://www.bom.gov.au/>



*The Commonwealth Scientific and Industrial Research Organisation (CSIRO) in conjunction with the Bureau of Meteorology have created a tool known as Climate Change in Australia which assists with climate projections for regions across the nation.*

### **The Low Carbon Living program**

The Low Carbon Living program supports households, businesses and communities to reduce their carbon footprint.<sup>20</sup> A joint initiative by the Low Carbon Living Cooperative Research Centre and the Blue Mountains World Heritage Institute, the program benefits businesses by reducing operational costs and increasing opportunities for marketing and promotion. With an ability to be used in conjunction with the ecoBiz program, the program also gives businesses access to a carbon footprint calculator.

### **The National Climate Change Adaptation Research Facility**

*The National Climate Change Adaptation Research Facility (NCCARF) at Griffith University and supports efforts to build resilience to climate change in government, non-government organisations and the private sector.*<sup>21</sup> The NCCARF library holds reports, such as:

- Understanding the adaptive capacity of Australian small-to-medium enterprises to climate change and variability<sup>22</sup>
- Climate change adaptation in industry and business: A framework for best practice in financial risk assessment, governance and disclosure<sup>23</sup>
- A policy guidance brief, Ensuring business and industry are ready for climate change.

### **The Queensland Future Climate Dashboard**

In 2018, the Queensland Government launched the Queensland Future Climate Dashboard which features the latest climate projections data and data for the years 2030, 2050, 2070 and 2090. The dashboard, which is hosted on the Long Paddock website, provides access to rainfall and pasture outlooks and decision-making tools to support planning for land holders, education, consultants and extension officers.<sup>24</sup>

### **ecoBiz**

The ecoBiz program is a Queensland Government funded free initiative that helps businesses to save costs across their energy, water and waste bills. The program includes coaching for businesses to develop an action plan to improve their use of resources.

### **Resilient Community Organisations<sup>25</sup>**

The Australian Council of Social Service has developed a toolkit, Resilient Community Organisations, to help the community sector and organisations to measure and improve their resilience to disasters and emergencies. The toolkit enables organisations to assess their state of preparedness for disasters and emergencies and identify areas of improvement.

### **The Torres Strait Regional Adaptation and Resilience Plan<sup>26</sup>**

The Torres Strait Regional Adaptation and Resilience Plan assesses climate change risks and identifies actions to reduce climate risks. The Queensland Government is working with the Torres Strait Climate Leaders to implement the plan that will increase resilience in the region now and in the future.

## **4.2.2 Future programs, tools and opportunities**

### **Cities Power Partnership<sup>27</sup>**

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<sup>20</sup> Low Carbon Living, 2018

<sup>21</sup> NCCARF, 2018 <https://nccarf.org.au/>

<sup>22</sup> Understanding the adaptive capacity of Australian small-to-medium enterprises to climate change and variability (Kuruppu, N. et al, 2013)

<sup>23</sup> Climate change adaptation in industry and business: A framework for best practice in financial risk assessment, governance and disclosure (West, JM et al, 2013)

<sup>24</sup> The Long Paddock (Queensland government, 2016)

<sup>25</sup> Resilient Community Organisations (ACOSS, 2015)

<sup>26</sup> <http://www.tsra.gov.au/the-tsra/programmes/env-mgt-program/adapting-to-climate-change>

<sup>27</sup> Local Leadership: Tracking local government progress on climate change (Stock, P. et al, 2017)

Initiated by the Climate Council, the Cities Power Partnership is a free national program that brings together towns and cities which are making the switch to renewable energy. Participating councils have access to a national knowledge hub and an online analytics tool to measure energy, cost and emission savings on projects.

### **The Small Business and Household Climate Risk Management Tool**

The Small Business and Household Climate Risk Management Tool is being developed by the Queensland Department of Environment and Science and NCCARF to provide information which will support decision-making about climate change risks and simplify the risk assessment process. The tool will also provide links to other resources which encourage adaptation measures and build resilience.

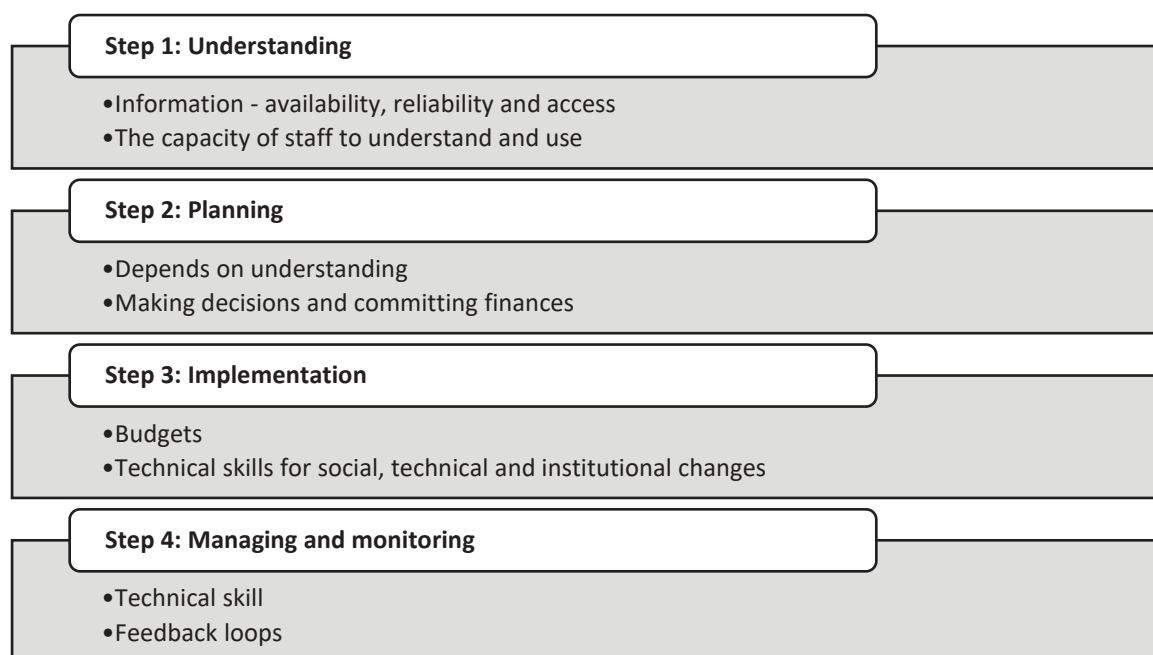
### **Social vulnerability and guidance for the development of adaptation plans**

The Queensland Council of Social Service (QCOSS) is providing guidance on integrating social vulnerability into the eight sector adaptation plans specified under the Queensland Climate Adaptation Strategy, including the *Small and Medium Enterprise Sector Adaptation Plan*. This guidance will be accessible to support small, medium and social enterprises to inform their measures to adapt to climate change. It will encourage a consideration of factors such as: socially vulnerable people and groups; the effects of cultural change; and the need to build community resilience in collaboration with the community.

## **4.3 The Queensland sectoral perspective**

### **4.3.1 Beliefs and attitudes**

Developing an understanding of where businesses are positioned in their climate change adaptation journey (which is ongoing) is crucial to the success of Queensland Climate Adaptation Strategy. Figure 14<sup>28</sup> indicates that the process of adaptation involves four key steps which each contribute to the enhancement of adaptive capacity and resilience.



**Figure 14:** The adaptation process.

Source: Moser, S., Ekstrom, J., 2010, *A Framework to diagnose barriers to climate change adaptation*.

Due to the diversity of the small and medium enterprise sector, developing a clear understanding of the beliefs and attitudes of businesses across Queensland in relation to climate change, has been complex. During consultation for the Plan, it became evident that it was not possible to place businesses into a single category of climate change

<sup>28</sup> This framework is taken from Moser, S., Ekstrom, J., 2010. A Framework to diagnose barriers to climate change adaptation. Proceedings of the national Academy of Sciences of the United States of America 107, 1-6

understanding. The difference in beliefs and attitudes of small and medium enterprises span issues, such as:

- whether they believe that climate change exists
- their level of understanding about climate change, as a physical and socioeconomic phenomenon
- their willingness to engage on the topic
- their willingness to take measures to adapt to climate change, and to search for and seize business opportunities arising from the socioeconomic trends arising from climate adaptation and transition.

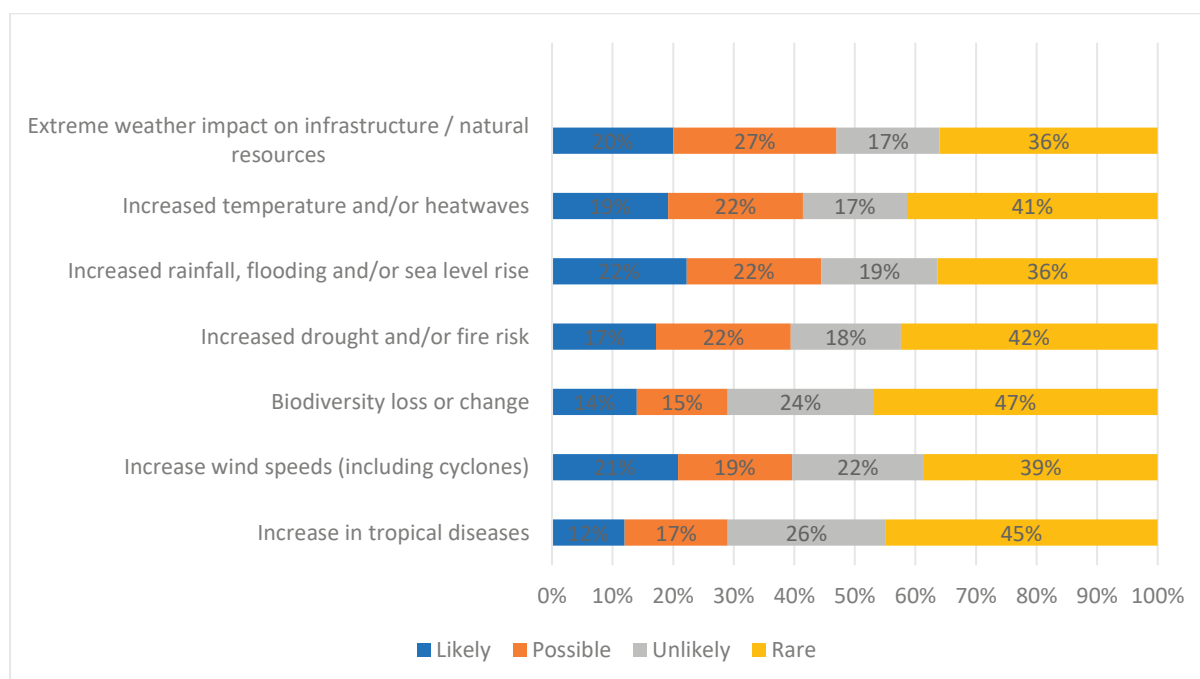
### Belief that climate change exists and level of understanding

Whether climate change exists is regarded a contentious issue across Australia. The questioning of the reality of climate change has been attributed to a lack of national leadership on the subject. As such, the focus has been on practical measures such as lowering power prices and ensuring electricity reliability.

The Suncorp CCIQ Pulse Survey conducted for the Plan during the June 2018 quarter noted that a fifth of respondents did not believe that climate change exists, and this result was regarded as reflecting a general Australian sentiment.

According to a report<sup>29</sup> which tracked Australian attitudes towards climate change, 11 percent of Australians did not believe that climate change exists and 13 percent were unsure if it exists.

Figure 15 shows the results of the Suncorp CCIQ Pulse Survey, in which respondents who believed that climate change existed were asked to identify the likelihood of climatic events presenting a challenge for business—the majority of respondents indicated they thought a climatic event would be a rare challenge to business.



**Figure 15:** The likelihood of climate events impacting on business activity. Source: CCIQ, 2018, Suncorp CCIQ Pulse Survey.

During the two workshops for the Plan, most participants indicated they believed that climate change was real. The results could reflect the issue that participants attended the workshops on the basis that they were already aware of the impacts of climate change.

The feedback from the workshops was positive, with participants inviting discussion about climate change and its impacts on business, while also asking more complex questions

<sup>29</sup> Tracking Australia's attitudes towards climate change and energy (Bennett, E. 2018)

about climate change. It was also apparent, however, that there was a minority of business operators who did not believe in the existence of climate change. Climate change denial was regarded as a barrier that would impact the ability of the sector to adapt to climate change, and as such, it would need to be addressed in the Plan.

#### **4.3.2 Eagerness to engage and take steps to adapt and manage climate risk**

An outcome of the survey process for the Plan was the ability to ascertain the progress of small and medium enterprises towards climate change adaptation. For example, 58 per cent of survey respondents indicated that they did not have a climate change strategy for their businesses. Of the survey respondents that made this admission, 53 per cent did not provide a reason for not having an adaptation strategy; 32 per cent indicated that they did not believe that climate change was real; and 15 per cent indicated that having a climate change strategy was not necessary and would not make a difference.

Of the remaining 42 per cent of survey respondents who did have climate adaptation strategy, many indicated that they have put multiple adaptation strategies in place. These strategies were noted by respondents as relating to: the use of solar energy; reducing and recycling waste; energy efficiency; fuel efficiency through reduced transportation as a result of opting for teleconferences rather than face-to-face meetings and ensuring deliveries took place when their trucks were more fully loaded. Most of these responses reflect climate change mitigation or eco-efficiency practices rather than adaptation strategies but they are useful in providing an overview of the steps that businesses are adopting in respect to climate change. Overall, these activities reflect a commitment to reducing carbon emissions, which is an important consideration for the development of adaptation strategies.

The results to the survey about the eagerness of businesses to adapt to and manage climate risk are further supported by NCCARF's policy guidance brief, *Ensuring business and industry are ready for climate change*<sup>30</sup>. Some of the key points in the brief relate to the private sector not being engaged with climate change risks and adaptation across Australian, with many businesses not recognising the need to adapt. The survey results reiterate the need to improve the sector's awareness about climate change. Small and medium enterprises need to regard climate change adaptation as an integral part of their business resilience. With the effects of climate change becoming a real threat to businesses, their ability to respond and recover from these threats will become harder in the absence of adaptation strategies.

#### **4.3.3 Opportunities for engagement on climate risk**

One of the incentives for the willingness of businesses to adapt is the opportunities that adaptation may present. In spite of the disparity across the sector in regard to beliefs around climate change and its impacts, many businesses can envisage the new and emerging opportunities that climate change presents for the sector.

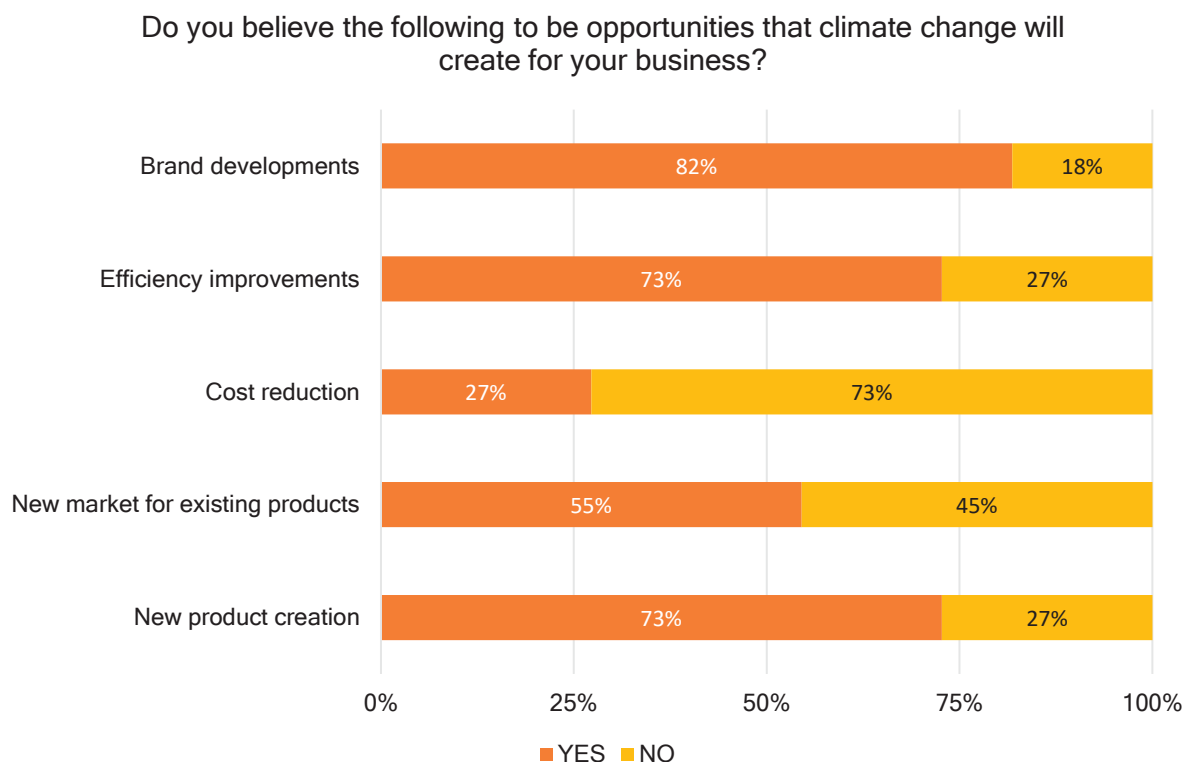
The workshop consultation process for the Plan indicated, for example, that brand development, new product creation and efficiency improvements were the biggest opportunities for business in relation to climate change. Businesses, however, regarded a reduction in costs as the least of all opportunities arising from climate change.

The nature of the new and emerging opportunities for businesses which may arise due to climate change are largely interwoven, for example, new product creation allows for brand development and efficiency improvements, which can also result in cost reduction. It was also suggested that these opportunities should be presented to businesses to build momentum across the sector for climate change adaptation.

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<sup>30</sup> 'Policy Guidance brief 11' *Ensuring business and industry are ready for climate change* (NCCARF, 2013)





**Figure 16:** Opportunities that climate change presents for businesses. Source: CCIQ, 2018, Protecting your business bottom line workshop.

#### 4.4 Adaptation strategies of businesses

The following case studies illustrate the adaptive capacity of Queensland small and medium enterprises. They provide excellent examples of businesses which are using their primary goal to reduce business costs to build resilience through climate change adaptation, mitigation, environmental eco-efficiency or, ideally, a combination of all three factors.

In addition, they are also demonstrating a circular economic approach either from the outset or retrofitted, where practicable. The businesses showcased are partners of the ecoBiz program, which is funded by the Queensland Government and administered by CCIQ. Each of the businesses are rewarded for their initiatives with the same results—decreased costs and more resilient business practices. The case studies were selected to motivate the sector to take proactive measures around preparing for, and adapting to, climate change.

#### 4.4.1 Case study: The Green Island Resort



Image 1: The Green Island Resort has installed solar power as part of its climate resilience measures.

The Green Island Resort in Far North Queensland is accessible for day trips and longer stays to tourists seeking to experience the Great Barrier Reef and its surrounds. The Green Island Resort has implemented initiatives to improve its resilience to climate threats such as severe weather events. Green Island Resort holds an Advanced Eco Tourism Certification for the preservation and commitment to the island's reef and rainforest surrounds, and the management of the world class eco-sensitive resort. These initiatives include:

- a regular review of the resort's environmental policy, including its environmental management plan
- the installation of solar power and an energy management system to reduce pressure on the resort's diesel generator, which has led to reduced fuel consumption
- installing LED lighting and more efficient air-conditioning and appliances to reduce energy usage
- waste minimisation through splitting waste streams and recycling where possible, including donating soap to charities
- a tertiary sewerage treatment plant and a desalination plant at the Green Island Resort.

The Green Island Resort is a part of the Quicksilver Group, which is dedicated to reducing its environmental impact and preparing for climate change. The business is financially motivated to build resilience to ensure operational continuity and to access financial incentives for being sustainable. The resort has benefited from savings as a result of its reduced need for diesel fuel and maintenance of the generator. There is now an increasing awareness by both the Quicksilver Group, and guests, that the resort is actively pursuing greater environmental and social governance.

#### 4.4.2 Case study: Eco Queenslander Holiday Home



Image 2: The Eco Queenslander Holiday Home at Maryborough supports environmental initiatives (pictured bottom right: Carmel Murdoch as Mary Poppins and Cecile Espigole, owner–operator).

Located in Maryborough, the Eco Queenslander is a 1940s Queenslander that provides accommodation to corporate travellers and holidaymakers.

Features that assist Eco Queenslander to be a sustainable home include:

- a solar electricity system that exports power to the grid—it generates cost savings on power and lowers the house carbon footprint
- roof insulation
- two 5,500 litre rainwater tanks that use gravity feed to avoid the use of an electric or mechanical pump—one is for the washing machine and the other is for watering the garden
- renovations with a view to environmental friendliness, reusing old material such as the old claw bath
- planting many trees and shrubs in the garden
- recycling, composting and using garden debris as mulch
- using green washing and cleaning detergents
- using appliances that are at least rated 4 stars
- drying clothes on a clothes line instead of using a clothes drier
- using energy efficient lighting—compact fluorescent and LED lights
- installing a dual flush toilet and a three-star shower rose
- using toilet paper made from used office paper, which is 100 per cent biodegradable
- using fans in bedrooms and the lounge room as an alternative to air-conditioners
- using recycled paper for invoices and brochures
- making bicycles available to guests.

The Eco Queenslander has participated in CCIQ's ecoBiz program to reduce waste, water and power use, and aims to inspire guests through providing information sheets and magazines on green living. It also sponsors, and is a member of, various environment organisations and initiatives.

#### 4.4.3 Case study: Process Systems



Image 3: Process Systems at Tingalpa has improved the structural design of its buildings.

Founded in 1989, Process Systems is a family-owned business at Tingalpa, which is at the forefront of the valve manufacturing industry. The business manufactures and distributes process valves to industries, such as, mining, irrigation, water treatment, power, plumbing and government. Given that their manufacturing operations requires a high level of energy, the business has adopted measures to reduce its vulnerability to a power outage.

Process Systems has also reduced its impact on the environment and carbon emissions through:

- the installation of solar array and gravity-fed water tanks to reduce reliance on the power grid and ensure business continuity during floods or power outage
- improved structural design of the building space to maximise airflow and control temperature variations, which has the benefits of improving working conditions during hot weather and reducing the cost of air-conditioning
- diversifying the manufacturing process to enable product building on-site and off-site, which reduces the risk of lost assets in the event of climate-related damage.

Process Systems regard sustainable business management as beneficial for the business, the environment and workplace morale. The cost savings of having a climate-ready site positions the business to take advantage of market disruptions. They have their own power and water supplies and also have minimised their production of waste. Through making the worksite more resilient to climatic impacts, Process Systems have also reduced the financial risks of their operations.

#### 4.5 Key challenges and gaps to adaptation in the sector

Despite considerable knowledge, experience, insight and a willingness to engage in climate change adaptation and mitigation, the sector faces several barriers and gaps that have been identified. These challenges have been categorised into knowledge and resource gaps.



## 4.5.1 Knowledge gaps

### Information availability

Research has delivered a plethora of information about climate change adaptation in general. The availability of information specific to small and medium businesses, however, is more limited and tends to focus on industries, such as, tourism and agriculture where the effects of climate change are most obvious.

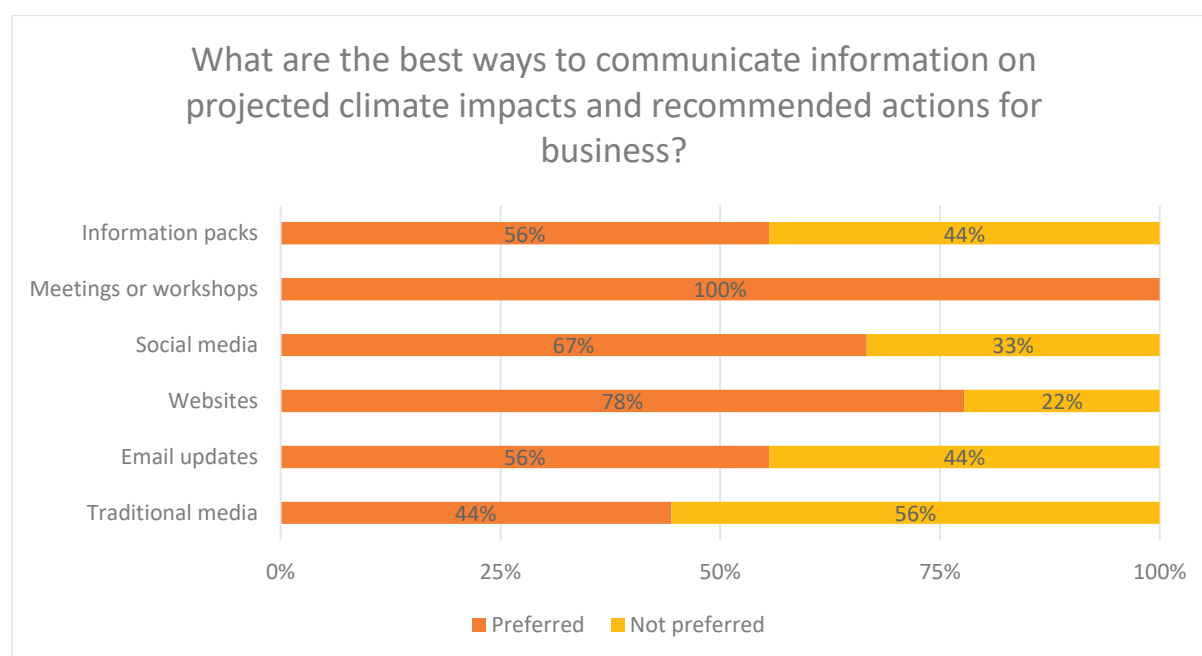
More research is needed for all industries in the business sector that includes trends related to climate change impacts and short and long-term forecasts for the sector—and uses terminology that is business focused. For example, NCCARF's research on climate change is helpful to the sector but the high-level concepts are not necessarily user friendly for business operators. There are gaps in climate change information that is relevant for small and medium businesses—and such information should be conveyed in plain language which highlights its practical relevance for business owners who operate under high pressure and long hours.

### Limited awareness about information sources and support tools

Most business operators have a relatively minimal awareness of the available sources of climate change information and decision support tools. This is amplified by issues with how the climate change information that does exist is communicated to small and medium sized businesses, especially in relation to the consistency of that communication. Business owners are generally time poor and therefore need information that is consistent and perceived as reliable, succinct tailored to their industry and their profitability.

### Communication of information

The limitations to the awareness of the sector about climate change can be attributed to the methods and forums of communicating relevant information. Successful adaptation requires strong and positive communication with the sector, and during the preparation of the Plan, there was a dearth of information on the best methods to target businesses with climate change information. Ensuring effective communication is about knowing which channels businesses are most likely to use. This can differ between industries, business size and the age of the business owner.



**Figure 17:** Preferred methods of communication for businesses. Source: CCIQ, 2018, Protecting your bottom line workshop. All the attendees in the workshop consultation process indicated that their preferred channel for climate change adaptation information is through workshops and meetings, followed by websites. During the discussions around this, the attendees elaborated by advising that the workshops and meetings should be held by trusted sources such as industry bodies and community organisations.

## 4.5.2 Resource gaps

### Industry specific adaptation plans

Many business operators have at their disposal only a limited suite of supports to access relevant climate change adaptation information. Indeed, certain industries do not have industry specific guidelines regarding climate change impacts and adaptation. While the other sector adaptation plans<sup>31</sup> apply to a wide range of industries, the *Small and Medium Enterprise Sector Adaptation Plan* would ideally be supplemented with industry-specific plans to enable more businesses to identify climate change impacts and risks specific to their operations. The Household and Small Business Risk Management Tool will help to bridge this resource gap once it is made widely available. The tool provides guidance on developing an adaptation plan that is applicable for all industries.

### Funding and incentives

Businesses often have limited financial, technical and human resources to dedicate to planning for the impacts of climate change, and have expressed a need for financial support to address the issue of climate adaptation. Existing initiatives—such as, the Queensland Government funded ecoBiz program—represent an ideal framework within which adaptation work with small businesses could occur.

The ecoBiz program is well-established within Queensland's small and medium enterprise sector and is trusted by businesses as a provider of knowledge and practical advice around eco-efficiency. Ideally, small businesses would recognise the value in funding climate adaptation activities that provides protection for their assets and future operations. The scale of financial support necessary to develop targeted adaptation strategies for businesses is lacking.

## 4.6 Barriers and enablers

### 4.6.1 Barriers

During the workshop consultation process for the Plan—in Brisbane and Cairns—participants were asked to categorise factors which hinder, or may hinder, their capacity to manage and adapt to climate change risks. Table 1 showcases the responses.

Category	Factor
Not a barrier	Business culture
Minor barrier	Adaptation guidance
	Current building codes and other industry instruments
	Financing for assets and operation upgrades
	Workplace staff engagement
Major barrier	Access to innovation finance
	Consumers willing to pay additional cost for adaptive and sustainable design features
	Finance risk reduction
	Financing for assets and operational upgrades

**Table 1:** Barriers that hinder a business's capacity to manage and adapt to climate change risks.

Of the workshop responses to questions about the barriers that businesses face in relation to climate change preparations, limited financial resources were an anticipated response. Small and medium businesses often have limited funds for such activities, with their priorities usually focused on more immediate concerns.

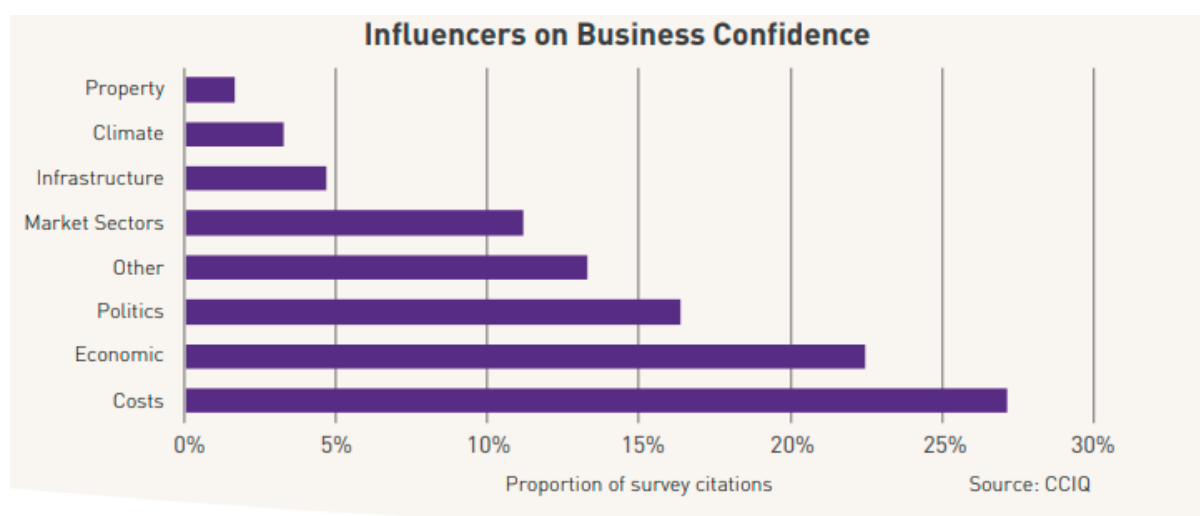
<sup>31</sup> These Sector adaptation plans are the Biodiversity and Ecosystems Climate Adaptation Plan, Human Health and Wellbeing Climate Change Adaptation Plan, Emergency Management SAP, Agriculture SAP, Built Environment and Infrastructure SAP, Queensland Tourism Climate Change SAP and Industry and Resources SAP (still being developed).

Businesses that are consumer focused can, for example, seek to recover the costs of climate change preparations through increasing the costs that are recoverable from the consumer. Alternatively, businesses can seek to reduce costs in other areas of their business so that the extra costs of climate change preparations do not flow to the customer. Many financial challenges to climate change preparations are shaped by external drivers, for example, property rates, taxes and employee wages, which are determined by legislation. Without the support of the government and the community, it is a difficult challenge for businesses to overcome certain financial barriers that climate change adaptation and mitigation will present.

In addition, businesses face behavioral barriers which relate to the general beliefs, attitudes and understanding of small and medium enterprises about climate change and its impacts on their operations. Understanding the behavioral barriers of business owners will help explain the decisions they make and why they make them.<sup>32</sup>

The results of the Suncorp CCIQ Pulse Survey of Business Conditions for the September 2018 quarter indicated that there has been a deterioration in sentiment across the business sector regarding Australia's economic conditions at both state and national level. This sentiment influences the concern business owners have regarding their hesitation to incur further costs for climate change strategies. It also reaffirms the importance of making profitability central to climate change planning.

Studies show that the way in which people process information is strongly influenced by existing attitudes.<sup>33</sup> This finding is especially relevant to business owners, given that many business decisions are influenced by consumer demand. If consumers are unwilling to pay additional costs for adaptive adjustments for climate change, this may lead to inertia and affect the business owner's willingness and ability to implement adaptation strategies. The influence that different barriers have on one another is intricate, intertwined and cannot be addressed in isolation. In Figure 18, the influences on business confidence is illustrated in relation to external drivers, such as, costs and economic issues.



**Figure 18:** Influencers on business confidence. Source: Suncorp CCIQ Pulse Survey of Business Conditions, September 2018.

#### 4.6.2 Enablers

Participants in the consultation process for the Plan were asked to list factors which would enable their capacity to manage and adapt to climate change risks. Factors which were identified as major enablers included being provided with climate change risk information, adaptation guidance and support by customers, government, legislation, and policy to share the burden of climate change adaptation activities.

<sup>32</sup> Barriers to Effective Climate Change Adaptation (Productivity Commission, 2012)

<sup>33</sup> A Framework for Stakeholder Engagement on Climate Adaptation (Gardner, J. et al, 2009)

Participants did not provide an example of a factor which was 'not an enabler' and this implies that there are not many factors that would prevent businesses from implementing adaptation strategies. This result is a positive indication that businesses know the support they require to develop adaptation strategies and how their needs can be addressed by government, stakeholders and influencers. The responses are presented in Table 2.

Category	Factor
Not an enabler	None
Minor enabler	Current building codes and other industry instruments
Major enabler	Risk information
	Adaptation guidance
	Consumers willing to pay additional cost for adaptive and sustainable design features
	Current legislation and regulations
	Business culture
	Climate risk expertise
	Dynamic policy
	Government innovation and support/incentives
	Finance risk reduction
	Current building codes and other industry instruments
	Financing for assets and operational upgrades

**Table 2:** Enablers that support a business's capacity to manage and adapt to climate change risks.

## 5. The Plan

The *Small and Medium Enterprise Sector Adaptation Plan* (the Plan) is the seventh of eight sector adaptation plans to be launched since 2017. Funded by the Queensland Government, sector-driven plans have been launched for the agriculture, built environment and infrastructure, biodiversity and ecosystems, health and human wellbeing, emergency management services, and tourism sectors. A plan for the industry and resources sector will also be launched in 2019.

The Plan proposes actions designed to engage and inform Queensland's small and medium enterprise sector in relation to physical and transition-related climate change risks, with a focus on protecting the cash flow of businesses. The Plan also seeks to engage businesses to explore opportunities arising from climate change that could boost their revenue. Minimising the risks and seizing the opportunities are at the core of the actions in the Plan for businesses in developing their response to climate change.

### 5.1 Proposed actions

Eighteen actions under seven action areas arose from the Plan's development. The action areas are:

1. Workplace Health and Safety
2. Insurability
3. Supporting businesses to support each other
4. Document management systems
5. Using Queensland's future climate projections
6. One-on-one business support
7. Business development.

Each of the 18 actions under these action areas advances the Plan's purpose through:

- Aiming to broadly benefit the sector as a whole rather than specific sub-sectors
- Aiming to avoid harm to, and deliver co-benefits for, the community and environment
- Having resulted from, or been supported by, the Plan's consultation processes



- Having potential in terms of uptake and/or funding by private sector partners and/or government
- Being practical to implement.

The action areas were derived from broad themes that emerged during the engagement activities for the Plan—the surveys, workshops and other consultation with stakeholders. Under each action area are actions which may be applicable to various parties involved in implementing climate change preparations, such as, the business operator, industry bodies, and government organisations.

The discussions that occurred during the consultation for the Plan highlighted that most businesses had only basic knowledge about climate change. To them, the concepts of climate adaptation, climate mitigation and eco-efficiency were interchangeable. For participants in the consultation processes, these concepts were relevant only insofar as they could ideally protect and improve their business's bottom line.

The Plan's actions are intended to inspire discussion and collaboration within the sector around climate change. They focus on supporting businesses to protect their cash flow by better managing physical and transitional climate risks. They also seek to improve the long-term viability of businesses through harnessing opportunities arising from the broader trends around climate adaptation and transition, and sustainability.

The seven action areas of the Plan each feature in a table which includes the relevant actions, key stakeholders, and related sector adaptation plans.

#### 5.1.1 Action area one: Workplace Health and Safety

Small and medium enterprises (SMEs) account for more than 99 per cent of all Queensland businesses and at June 2017 were responsible for the health and safety of around 1.42 million workers.

Many SMEs report lacking a clear sense of their Workplace Health and Safety (WHS) obligations with respect to extreme weather events. With climate risk growing under Queensland's changing climate conditions, employers and employees are eager for support to manage climate-related WHS issues, especially those related to heat stress.

Due to the varying levels of climate exposure applying to different business operations and the varying levels of climate sensitivity and adaptive capacity applying to employees, some workers are more vulnerable to climate-related impacts at work than others.

Workplace laws are very unclear on the issue of heat stress, and there is not a code of practice in Queensland to deal with the specific issue.

Actions	Participants and Stakeholders	Other sector adaptation plans
<b>Action 1.</b> Clarify, and support the SME sector's understanding of, climate-related WHS roles and responsibilities of employers and employees, especially in relation to heat stress.	<ul style="list-style-type: none"> <li>• Peak industry bodies</li> <li>• Office of Industrial Relations</li> <li>• Department of Employment, Small Business and Training</li> </ul>	<ul style="list-style-type: none"> <li>• Human Health and Wellbeing</li> <li>• Emergency Management Services</li> <li>• Agriculture</li> <li>• Tourism</li> </ul>
<b>Action 2.</b> Support the SME sector to comply with climate-related WHS roles and responsibilities, and to reduce the vulnerability of SME workers to climate-related WHS impacts.	<ul style="list-style-type: none"> <li>• Peak industry bodies</li> <li>• Businesses who specialise as workplace health and safety consultants</li> </ul>	<ul style="list-style-type: none"> <li>• Human Health and Wellbeing</li> <li>• Emergency Management Services</li> <li>• Agriculture</li> <li>• Tourism</li> </ul>

**Implementation guidance: Actions 1 and 2**

Conduct a review of workplace health and safety legislation to assess how more clarity might best be achieved as to the roles and responsibilities of employers and employees in the context of climate risk. As an example, there is not presently a code of practice dedicated to dealing with heat stress under Queensland's workplace health and safety laws. Therefore the development of a code of practice to guide employers in this area is potentially an appropriate action. Once more clarity is achieved, employers should be encouraged to ensure that they update their business planning and practices with the findings. This review might best be done by the Queensland Department of Employment, Small Business and Training, working together with peak industry bodies and the Office of Industrial Relations. The timeframe for this should be immediate (one–two years).

**5.1.2 Action area two: Insurability**

The probability of extreme weather events is increasing due to climate change. In the absence of adaptation, it is inevitable that insurance premiums will rise. On top of this, not all hazards are covered by commercial insurance. Hazards such as bushfires, riverine flooding and storm damage are generally covered, but events such as coastal inundation, erosion, landslip and subsidence are all generally excluded, which means people and business are effectively self-insured against these hazards (or insured by the taxpayer).

The issue of an insurability gap has become an urgent concern for SMEs, particularly for businesses in areas of Queensland highly prone to extreme weather conditions and events. Many businesses report struggling to become or remain insured due to rising premiums linked to worsening trends and projections for climate change.

<b>Actions</b>	<b>Participants and Stakeholders</b>	<b>Other sector adaptation plans</b>
<b>Action 3.</b> Seek to better understand existing and growing hot spots in terms of locations and industries in Queensland where SMEs are struggling or likely in the future to struggle to become or remain insured due to climate-related rises in insurance premiums.	<ul style="list-style-type: none"> <li>Insurance Council Australia</li> <li>Actuaries Institute</li> <li>Different peak industry bodies</li> </ul>	<ul style="list-style-type: none"> <li>Agriculture</li> <li>Tourism</li> <li>Built Environment and Infrastructure</li> </ul>
<b>Action 4.</b> Support the collaborative development of solutions to address the insurability gap for SMEs, prioritising existing and growing hot spots across Queensland's SME sector.	<ul style="list-style-type: none"> <li>Insurance Council Australia</li> <li>Actuaries Institute</li> <li>Different peak industry bodies</li> <li>Local and state governments</li> </ul>	<ul style="list-style-type: none"> <li>Agriculture</li> <li>Tourism</li> <li>Built Environment and Infrastructure</li> </ul>
<b>Action 5.</b> Support the SME sector, including new businesses, by providing clear and tailored information about the current and projected climate-related risks that businesses face and by supporting businesses to identify and take the best approach available to them to manage climate risk and take advantage of related opportunities.	<ul style="list-style-type: none"> <li>Different peak industry bodies</li> <li>Insurance Council Australia</li> <li>Local and state governments</li> </ul>	Not applicable

**Implementation guidance: Actions 3, 4 and 5**

In 2014, CCIQ drafted a Queensland Business Insurance Report which specifically addressed the cost of rising insurance premiums as a major constraint on businesses. The findings of the report were based on direct feedback from businesses. The report yielded actions directed at policy-makers, businesses and insurance companies. Given that the report was presented in 2014, another updated report of the same nature would be greatly beneficial and should include a review of current disaster packages. As other sector adaptation plans have also addressed the issue of insurance, this could be a good collaborative initiative. The report itself should be drafted as soon as possible with implementation timeframes for its actions to vary. Further discussion should take place around whether the report should be specific to regional businesses as they have been the hardest hit in recent months from flooding and drought. The timeframe for this should be immediate (one–two years).

### 5.1.3 Action area three: Supporting businesses to support each other

A core source of information for small businesses is simply talking to their peers. Sharing experiences and advice with other businesses often outweighs the use of online searches or government websites.

Queensland SMEs have indicated a strong desire for platforms that will support them to access and discuss industry-specific and expert knowledge, and to collaborate with other businesses on climate-related risks and opportunities.

Actions	Participants and stakeholders	Other sector adaptation plans
<b>Action 6.</b> Identify existing knowledge-sharing and collaboration platforms, and explore the value of establishing new platforms, to support Queensland's SMEs in managing their climate risk and seeking out climate-related opportunities.	<ul style="list-style-type: none"><li>• State government</li><li>• Peak industry bodies</li><li>• Businesses</li></ul>	<ul style="list-style-type: none"><li>• Human Health and Wellbeing</li><li>• Emergency Management Services</li></ul>
<b>Action 7.</b> Identify and support opportunities for peer-to-peer and mentoring programs that support businesses to support each other in establishing and running SMEs that can and do thrive under climate change.	<ul style="list-style-type: none"><li>• State government</li><li>• Local councils</li><li>• Peak industry bodies</li><li>• Businesses</li></ul>	<ul style="list-style-type: none"><li>• Human Health and Wellbeing</li><li>• Emergency Management Services</li></ul>
<b>Action 8.</b> Promote reform of how Queensland's SME community engages with the topic of climate change, so that its significance for them is understood and discussed.	<ul style="list-style-type: none"><li>• State government</li><li>• Peak industry bodies</li><li>• Businesses</li></ul>	<ul style="list-style-type: none"><li>• Human Health and Wellbeing</li><li>• Emergency Management Services</li></ul>

#### Implementation guidance: Actions 6, 7 and 8

The Australian Red Cross has developed a Climate-Ready Communities guide for anyone wanting to prepare for, and adapt to, climate change. The Red Cross resources include the Get Prepared App for individuals and households and is a good example of giving support to communities to have their own conversations about how the things they value will be impacted by climate change and what they can do to continue to thrive. This kind of program can be adapted for small and medium enterprises and is a good example of a knowledge sharing platform. Another example is Supply Chain Sustainability<sup>34</sup>, which is an online learning forum designed to help Australia's property, construction and infrastructure sectors to improve their knowledge of broad sustainability issues. It also includes resources on climate change adaptation. Industry bodies such as CCIQ could also hold forums for members on sharing information regarding climate change adaptation tailored to businesses. This can also be done in collaboration with different councils and local chambers to ensure that information is relevant to the unique challenges each area faces. Local and state government representatives should also attend the forums to update businesses on government initiatives. The forums should not only be specific to different regions but also topic-specific such as insurance. The timeframe for this would be ongoing and the forums would be based on the most pressing concerns or requests made by businesses.

### 5.1.4 Action area four: Document management systems

As extreme weather events—such as, flooding and bushfires—increase in frequency and severity, paper-based business document management systems represent an increasingly weak point in the climate resilience of a small business.

Measures such as transitioning to digital document management systems can greatly improve a business's resilience to climate change. Many small businesses need guidance to use appropriate digital document management software.

<sup>34</sup> Climate Change Adaptation (Supply Chain Sustainability School, 2019)

Actions	Participants and stakeholders	Other sector adaptation plans
<b>Action 9.</b> Take steps to understand the barriers preventing SMEs from digitising their paper-based business document management systems.	<ul style="list-style-type: none"> <li>Businesses</li> </ul>	
<b>Action 10.</b> Support SMEs to digitise their document management systems by addressing the precise barriers they face, including by supporting multi-format guidance materials, webinars and face-to-face support.	<ul style="list-style-type: none"> <li>Peak industry bodies</li> <li>Business optimisation and information technology companies</li> </ul>	

#### Implementation guidance: Actions 9 and 10

Similar to the implementation guidance for the previous actions, industry bodies such as CCIQ can hold webinars and circulate how-to guides for businesses about the practice of digital document storage. This could be done in conjunction with businesses specialising in this area. As a younger generation moves into the business-owner demographic, this issue may become less of a concern given the familiarity with technology of younger generations. That being said, the issue of paper-based documentation is still a problem and should be addressed in the near future. The timeframe for this action is immediate to medium term (one–five years).

### 5.1.5 Action area five: Using Queensland's future climate projections

The SME sector is largely unaware of what the latest science says about projected future climate for Queensland's regions, let alone the possible impacts of these changed climatic conditions on starting or operating their business. Some businesses consulted indicated feeling overwhelmed by climate science information, while others said they were put off by its complexity or lack of consistency.

Overall, businesses felt ill-equipped to understand climate risk, and therefore, to take steps to effectively manage the climate risks facing their business. Businesses had similar feelings about how to profitably transition their business to reduce the carbon emissions that contribute to climate change.

Actions	Participants and stakeholders	Other sector adaptation plans
<b>Action 11.</b> Collaboratively develop and deliver resources, education and training to equip SMEs—at all stages of the business lifecycle—with a knowledge and understanding of climate projections that helps them to identify and understand climate risk in their business planning and operations.	<ul style="list-style-type: none"> <li>Local and state governments</li> <li>Peak industry bodies</li> <li>ecoBiz</li> <li>businesses</li> </ul>	<ul style="list-style-type: none"> <li>Tourism</li> <li>Agriculture</li> </ul>
<b>Action 12.</b> Collaboratively develop and make accessible climate change risk management tools that are tailored to support the SME sector to identify and take steps to manage climate risk, including by helping businesses to visualise and manage risk across their supply chains.	<ul style="list-style-type: none"> <li>Local and state governments</li> <li>ecoBiz</li> <li>businesses</li> <li>Peak industry bodies</li> </ul>	<ul style="list-style-type: none"> <li>Tourism</li> <li>Agriculture</li> </ul>
<b>Action 13.</b> Facilitate the consideration and analysis by SMEs—at all stages of the business lifecycle—of new business opportunities that future climate projections might engender for them. This would ideally occur alongside a facilitated consideration by SMEs of how global megatrends—such as the transition towards zero net emissions, circular economy models, and the increasing focus on resilience— might be leveraged by SMEs as business opportunities (this is addressed at	<ul style="list-style-type: none"> <li>Businesses</li> <li>State government</li> </ul>	

Action 17, whose focus is transition-related climate risk, and which is the counterpart to Action 13).		
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#### Implementation guidance: Actions 11, 12 and 13

Further research needs to be conducted to ascertain the current tools and initiatives which facilitate sustainable infrastructure, technology and the operations of a business. It is quite probable that these types of tools exist already for certain industries and thus the gap in tools for neglected industries should be addressed. This can be achieved through the work of research organisations and/or by working with organisations who already provide these tools by engaging them to extend their services to other industries. The timeframe for this is immediate to medium terms (one–five years).

### 5.1.6 Action area six: One-on-one business support

Queensland's SMEs cite electricity costs as a primary concern, with this being exacerbated by increasingly hot conditions under climate change. Responding to this, and other issues facing the SME sector, Queensland's ecoBiz program, run by CCIQ and funded by DES, is helping businesses make substantial savings across their energy, water and waste bills. These savings are then able to be reinvested by businesses to improve their productivity, resilience and sustainability.

One-on-one coaching is a key feature of the ecoBiz program which supports businesses to develop, implement and review action plans to reduce their costs by improving their operational efficiencies in ways that also reduce their environmental impact. Alongside environmental efficiency improvements, ecoBiz improves the resilience of businesses and reduces their carbon emissions.

Actions	Participants and stakeholders	Other sector adaptation plans
<b>Action 14.</b> Continue to promote the ecoBiz program across the SME sector as an effective way for businesses to reduce their costs and achieve gains in their ecological sustainability, and to make improvements for their climate resilience, while also reducing carbon footprint.	<ul style="list-style-type: none"> <li>State government</li> <li>ecoBiz</li> </ul>	<ul style="list-style-type: none"> <li>Tourism</li> </ul>
<b>Action 15.</b> Explore the merit of expanding the ecoBiz program to include tailored support for businesses to improve their climate resilience—by identifying, understanding and managing physical climate risk, and ideally also transition-related climate risk.	<ul style="list-style-type: none"> <li>State government</li> <li>ecoBiz</li> </ul>	
<b>Action 16.</b> Consider how best to support new SMEs to include environmentally efficient and climate-related risk and opportunity considerations at the earliest stage of their business lifecycle to optimise outcomes.	<ul style="list-style-type: none"> <li>ecoBiz</li> <li>Peak industry bodies</li> </ul>	

#### Implementation guidance: Actions 14, 15 and 16

Queensland's Department of Environment and Science and NCAARF are developing a household and small business risk management tool designed to assist businesses in identifying their risks as a result of climate change. Other tools, such as, the Australian Red Cross Climate Ready Communities guide, also help businesses to create climate ready action plans. Once the development of the household and small business risk management tool is completed, the roll out of the tool will be important to ensure that businesses can use the tool, and therefore industry bodies should be involved in the roll out. It is important that the risk management tool is industry-specific as different industries have different priorities, risks and terminology. Alternatively, if the tool cannot be industry specific, then training and mentoring on how to use the tool should be tailored to specific industries.

### 5.1.7 Action area seven: Business development

Several businesses across the SME sector have identified green or ethical branding as a business opportunity linked to climate change action. They also identified business



opportunities arising from concerns around pollution levels and biodiversity loss. The global responses to these concerns include working towards zero net emissions and developing circular economy models.

The circular economy model refers to a circular way of thinking in respect to managing waste, resources and materials. Instead of an approach characterized as ‘take, make and dispose’, a circular economy reuses and recycles waste, resources and materials. Through the circular approach, new business opportunities can arise for SMEs alongside opportunities to re-brand themselves.

Businesses that align with such trends will be increasingly better positioned to harness new opportunities and manage the risks of a changing climate.

Actions	Participants and stakeholders	Other sector adaptation plans
<b>Action 17.</b> Support SMEs to identify, understand and leverage business opportunities available to them that are linked with reducing the transition-related climate risk of other parties. This might include support for SMEs to harness opportunities related to the growing global focus on resilience, zero net emissions, and circular economy models (Action 13, whose focus is physical climate risk is the counterpart to this action).	<ul style="list-style-type: none"> <li>• Local government</li> <li>• ecoBiz</li> <li>• Peak industry bodies</li> </ul>	<ul style="list-style-type: none"> <li>• Tourism</li> <li>• Agriculture</li> </ul>
<b>Action 18.</b> Support SMEs to understand the social enterprise model of business and the related business opportunities, and where appropriate to apply this model to their own operations whether directly or indirectly through support for social enterprises in their supply chains.	<ul style="list-style-type: none"> <li>• Local government</li> <li>• ecoBiz</li> <li>• Peak industry bodies</li> <li>• State government</li> </ul>	

Implementation guidance: Actions 17 and 18
The ecoBiz program is exploring the possibility of establishing a zero carbon footprint as an additional theme to its program. A business’s carbon emissions would be measured, and guidance provided about how to reduce its emissions if the program is expanded to include this theme. These activities, in addition to the existing ecoBiz program activities, would create a good incentive for businesses. The activities would together reduce a business’s energy, water and waste costs and transition the business into a cleaner growth economy. Funding for the extension of the program to include such a fourth theme would be required. The timeframe for this is immediate to medium term (one–five years).

## 5. Glossary of terms

**CCIQ:** The Chamber of Commerce and Industry Queensland.

**Climate change adaptation:** Climate adaptation refers to the actions taken to reduce the negative impacts of climate change or to take advantage of emerging opportunities. It is about understanding and responding to climate risks and vulnerability of assets (including community assets), systems and services subject to harm from hazards related to climate change.

**Climate change mitigation:** This involves reducing the causes of global warming, either by reducing the production of carbon emissions or by taking carbon dioxide out of the atmosphere through activities such as planting trees which absorb carbon dioxide. See 'climate-related opportunities' below.

**Climate risk:** This can refer to risks that relate to the physical impacts of climate change (such as risks related to floods and bushfires). This can also refer to the risks that relate to the global social and economic changes occurring because of climate change (i.e. the global transition away from carbon pollution) (here, risks might relate to a lack of full or timely adjustment to a decarbonising global economy). Opportunities are the flipside of climate risk. See 'climate-related opportunities' below.

**Climate-related opportunities:** These are jobs and business opportunities created due to the physical reality of climate change, or due to the transition occurring under climate change (the changing social and economic conditions arising because of adjustments the world is making in response to climate change). Here, opportunities might involve developing or selling products or services that assist other parties to manage their own climate risk or identify their own opportunities. Opportunities also exist in terms of participating in low- or zero-net-emissions, or circular economy markets. Starting or becoming a profitable social enterprise is a notable opportunity here.

**Corporate social responsibility:** Corporations have a degree of responsibility not only for the economic consequences of their activities but also for the social and environmental implications of their activities. This is sometimes referred to as a 'triple bottom line' approach that considers the economic, social and environmental aspects of corporate activity.

**Eco-efficiency:** This refers to changing practices to produce the same product or service through using reduced materials and energy and/or generating less waste.

**Green branding:** This means marketing your brand so that consumers associate the brand with environmentally sustainable business practices

**Resilience:** This is about the ability of a system to withstand and recover from an impact without losing its capacity to maintain its core function.

**Social vulnerability:** The capacity and capability of people and communities to prepare for, cope with, and recover from, disasters and climate change. Social vulnerability is influenced by factors such as poverty and inequality, marginalisation, education, food security and diet, access to insurance, transport options, community and family networks, gender, race, socioeconomic status, age and language, geography or housing quality.

**SMEs:** Small and medium enterprises.

**The Plan:** The Small and Medium Enterprise Sector Adaptation Plan.

**Transition:** See 'climate-related opportunities' above.

## 6. Appendix 1

The questions below are from the Suncorp CCIQ Pulse Survey, June quarter, 2018.

1. Which industry sector is your business mostly involved in?
  - agriculture or forestry or fishing
  - mining
  - manufacturing
  - electricity, gas and water supply
  - construction
  - wholesale
  - retail
  - accommodation, cafes and restaurants
  - transport and storage
  - communications services
  - finance or insurance
  - property or business services (including information and communications technologies)
  - government administration and defence
  - education
  - health and community services
  - cultural or recreational and tourism
  - personal services.
2. What is the total number of employees in your organisation?
  - 0–5 employees
  - 6–20
  - 21–100
  - 100 plus.
3. What is the postcode of your business?
4. How do you expect the Queensland economy to perform over the next 12 months in comparison with the last 12 months (much stronger, somewhat stronger, about the same, somewhat weaker, or much weaker)?
5. In your view, what is likely to affect to the performance of the Australian and state economies over the next 12 months?
6. How has your business performed over the last three months compared with the previous three months in the following (increased, stayed the same, decreased, slightly decreased)?
  - total sales and revenue
  - labour costs
  - other operating costs (e.g., electricity, water, insurance and rent)
  - average selling prices
  - profitability
  - employment levels
  - capital expenditure (e.g., buildings, plant and equipment)
  - general business conditions.
7. What factors have positively affected the performance of your business over the last three months?

8. What factors have negatively affected the performance of your business over the last three months?
9. How do you believe your business will perform in the next three months compared with the last three months on the following (significantly increase, increase, stay the same, decrease, significantly decrease)?
- total sales and revenue
  - labour costs
  - other operating costs (e.g. electricity, water, insurance and rent)
  - average selling prices
  - profitability
  - employment levels
  - capital expenditure (e.g. buildings, plant and equipment)
  - general business conditions.
10. How much do these factors constrain your business's growth at present (no constraint, minor, moderate, major, critical constraint)?
- level of demand and economic activity
  - political and economic stability
  - exchange rate and commodity prices
  - interest rates
  - level of business taxes and government charges (federal)
  - level of business taxes and government charges (state and local)
  - insurance premium costs
  - direct wage costs
  - indirect wage costs (e.g. superannuation, workers compensation)
  - compliance and complexity of business taxes and government charges
  - compliance and complexity of industrial relation laws (e.g. awards, agreements, unfair dismissal)
  - compliance and complexity of environmental regulations
  - compliance and complexity of workplace health and safety regulations
  - retaining and recruiting suitably qualified employees
  - availability of business tailored training
  - transport costs and standard of infrastructure
  - communication costs and standard of infrastructure
  - energy costs and standard of infrastructure
  - water costs, standard of infrastructure and water use restrictions
  - climatic conditions (e.g. drought, flooding, storms)
11. Does your location negatively affect the success of your business?
12. Do you pay yourself a regular salary and other forms of remuneration? (select multiple)
- salary
  - superannuation
  - reimbursement of expenses
  - overtime
  - dividend
  - income depends on business conditions.
13. On a scale of 1–10, how would you rate the importance of technology and digital platforms as a connection tool (connecting to customers, suppliers or finances) for your business?
14. How confident are you in reaching 12 month business goals?

15. In establishing a vision for small businesses in the context of climate change, please rank the following statements in order of importance (1 - most important; 6 - least important).
- Small and medium enterprises are leading the way towards carbon neutrality
  - Climate-proofing businesses and their supply chains from extreme weather events
  - The green industry is a growth market of the future
  - Corporate social responsibility
  - Sustainability to drive investment and innovation in product
  - Green branding and marketing

The hot topic questions start from question 16.

16. What negative impact will the following have on your business—please answer by categorising the following (won't affect me at all, low impact, medium impact, high impact, unsure)?
- extreme weather impact on infrastructure or natural resources
  - increased temperature and/or heatwaves
  - increased rainfall, flooding and/or sea level rise
  - increased drought and/or fire risk
  - biodiversity loss or change
  - increased wind speeds (including cyclones)
  - increase in tropical diseases.
17. Identify the likelihood of the following factors being a challenge for your business—please answer by categorising the following (rare, unlikely, possible, likely).
- extreme weather impact on infrastructure or natural resources
  - increased temperature and/or heatwaves
  - increases rainfall, flooding and/or sea level rise
  - increased drought and/or fire risk
  - biodiversity loss or change
  - increased wind speeds (including cyclones)
  - increased tropical diseases.
18. What are the climate adaption strategies you have used for your business? Please indicate 'none' if you do not currently have any.
19. What are the challenges and barriers to implementing climate adaptation strategies in your business?
20. Do you have any other comments regarding climate adaptation?



## 7. Appendix 2

### Protecting your business profits workshop

Name:

Company:

#### Introduction (15 minutes):

- the purpose, goal and methodology of the Small and Medium Enterprise Sector adaptation Plan (the Plan)
- an explanation and discussion of climate threats
- an explanation and discussion of cash flow model.

#### Session one (75 minutes)

1. Please complete the attached first pass risk assessment worksheet by identifying risks to the cash flow of your business that arise from each of the climate change threats under each of the cash flow segments. If you cannot identify risks that are applicable, please indicate 'not applicable'.
2. From the risks that have been identified, please prioritise the risks that have been listed into each of the following:
  - Business as usual (BAU) risks: These are risks that affect the day to day running of the business.
  - Operational critical risks: These are risks that can disrupt business operations.
  - Enterprise critical risks: These are risks that threaten your capacity to stay in business
3. How would you adapt the segment components in your business to make your business resilient to each of the top-rated risks in the categories above?
4. For discussion: What are the specific resources, tools, and assistance that are required to put adaptation plans in place?
5. For discussion: What are the broader adaptation strategies that businesses can adopt that will contribute to:
  - a. reducing the energy and resource intensiveness of your business's products and services
  - b. supporting socially vulnerable groups who are at risk due to climate change.
6. Indicate on the list below, of potential outcomes of climate change, how likely or unlikely it is that each outcome will affect your business:

	Very likely	Unlikely	Likely	Very likely	Already affecting	I do not know	N/A
Increased operational costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased capital costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction in production capacity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduced product/service demand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased risk management costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Increased litigation costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inability to do business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New product offerings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
New markets	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. For discussion: how can the first pass risk assessment worksheet be improved to help businesses better identify risks?

## Session two (70 minutes)

1. Which of these factors hinder or will hinder your business's capacity to manage and adapt to climate change risks?

	Not a barrier	Minor barrier	Major barrier	I do not know
Risk information (identification of exactly what needs to be adapted)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adaptation guidance (in the form of toolsets, programs etc that assist businesses to manage climate risk)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to innovation finance (appetite of banks etc to finance innovative and sustainable development)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers willing to pay additional cost for adaptive and sustainable design features	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Current legislation and regulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business culture (support from Board and/or senior management)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Climate risk expertise (access to relevant skillset and experience to understand, assess and commercially manage risk)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dynamic policy (rapid changes to planning and regulatory requirements)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Government innovation support/incentives (differentiation in support of sustainable versus business as usual practice)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finance risk reduction support (cost of an access to finance and insurance)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Current building codes and other industry instruments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financing for assets and operational upgrades	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Workplace/staff engagement (e.g. training on safety)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rate of change in technology (e.g. digital technology such as access to real time data collection and smart stock management software)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. Of the above factors, please choose the top three factors that are, or will be, the biggest hindrance to your business's capacity to manage and adapt to climate change risks. Please indicate below.
3. Which of these factors enable, or will enable, your business's capacity to manage and adapt to climate change risks?

	Not an enabler	Minor enabler	Major enabler	I do not know
Risk information (identification of exactly what needs to be adapted)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Adaptation guidance (in the form of toolsets, programs etc that assist businesses to manage climate risk)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Access to innovation finance (appetite of banks etc to finance innovative and sustainable development)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Consumers willing to pay additional cost for adaptive and sustainable design features	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Current legislation and regulation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Business culture (support from Board and/or senior management)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Climate risk expertise (access to relevant skillset and experience to understand, assess and commercially manage risk)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dynamic policy (rapid changes to planning and regulatory requirements)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Government innovation support/incentives (differentiation in support of sustainable versus business as usual practice)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Finance risk reduction support (cost of an access to finance and insurance)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Current building codes and other industry instruments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Financing for assets and operational upgrades	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Workplace/staff engagement (e.g. training on safety)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rate of change in technology (e.g. digital technology such as access to real time data collection and smart stock management software)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4. Of the above factors, please choose the top three factors that are, or will be the biggest enablers to your business's capacity to manage and adapt to climate change risks. Please indicate below.
5. Which of the following new opportunities do you feel that climate change might create for your business? Please check all that apply

- ☐ New product creation
- ☐ New market for existing products
- ☐ Cost reduction
- ☐ Efficiency improvements
- ☐ Brand developments
- ☐ N/A
- ☐ Other (please specify)

6. For discussion: Are there any activities or projects undertaken by your business or any other business that you would like to highlight as exemplary or best practice to improve climate readiness and adaptation at an organisational level?
7. In your view, what is the best way to communicate information on projected climate impacts and recommended actions to your business?

- ☐ Traditional media
- ☐ Email updates
- ☐ Websites
- ☐ Social media (e.g. Facebook, Twitter)
- ☐ Meetings or workshops
- ☐ Information packs
- ☐ Other (please specify)

8. For discussion: What do you want to see from the adaptation plan?

### **Conclusion (five minutes)**

General discussion about the Plan.

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[www.qld.gov.au/climatechange](http://www.qld.gov.au/climatechange)