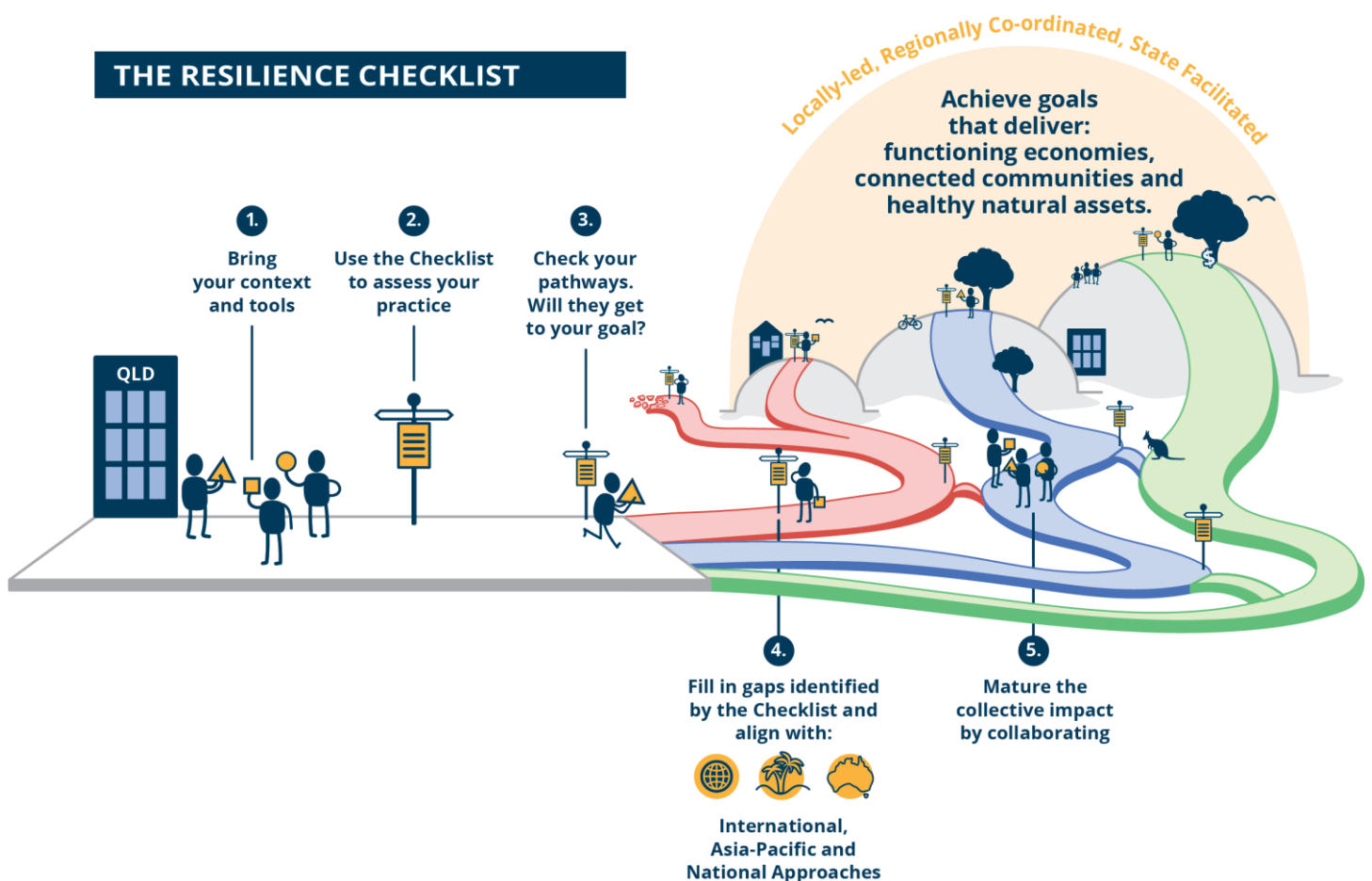# A Resilience Checklist – a guide for doing things differently and acting collectively

(Resilience Checklist version 1.0 July 2020)

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A Technical Report from CSIRO to Queensland Reconstruction Authority

CSIRO Land and Water, Sustainability Pathways Program

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Executive summary

This report introduces a Resilience Checklist as an approach to guiding co-ordination of methods, practice and collective impact for Queensland agencies delivering services and common goals in the future, in a way which is disaster-resilient and adaptive to change.

A Resilience Checklist will enable individual agencies to assess their approach, tools and progress, as well as to compare activities and progress across organisations.
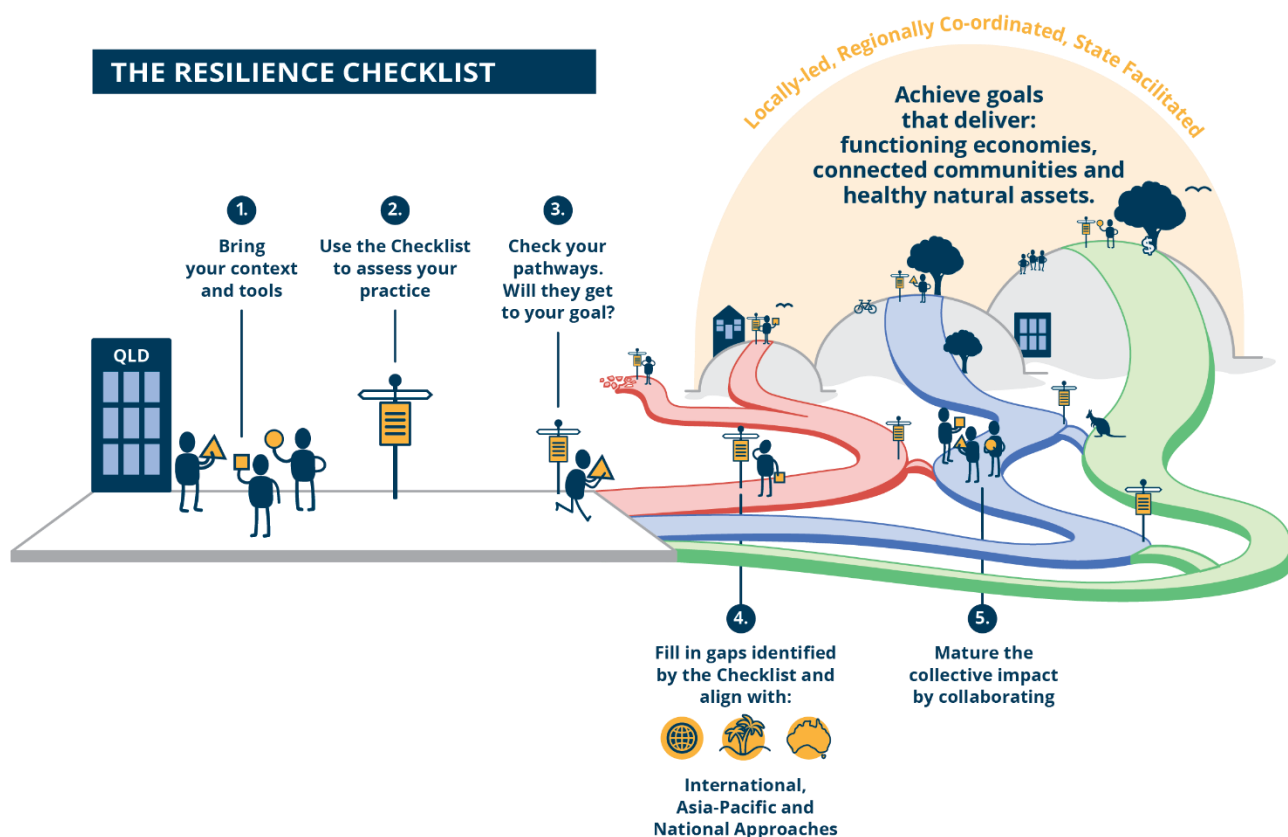
The use of the Resilience Checklist by individual organisations to check their own approaches, and form the basis for collaboration and collective action.

- Why is the Resilience Checklist needed? Across many policy areas of Queensland there are common aspirations for achieving similar outcomes.

- There is, however, a need to improve the technical coherence and co-ordination around the practices of resilience, adaptation, disaster risk reduction, economic development and transitions, and integrated planning, while still allowing for the varied interpretations of definitions and tools/methods that different organisations already have.

- Queensland State agency stakeholders do not need another tool for 'how to do' resilience and adaptation, as there are already multiple approaches in play. The Resilience Checklist provides the guidance to co-ordinate practice.

- The Resilience Checklist supports organisations in a range of ways to reach common goals.

- Steps include:

  1. Bring your context and tools.

  2. Use the Checklist to assess practice.

  3. Check the organisation's pathways – are they 'Doing the same' (shown in red), 'Doing better' (shown in blue) or 'Doing differently' (shown in green)? Will they get to defined goals, in a way which is disaster-resilient and adaptive to change?

  4. Fill in gaps identified by the Checklist and align with international, Asia-Pacific and national approaches.

  5. Mature the collective impact by collaborating across a range of organisations.

Some preliminary user testing of various international and Queensland approaches was conducted in the process of developing the Resilience Checklist, and this revealed that:

- there are several methodological approaches that meet the requirements of the Resilience Checklist, and they could be used or adapted rather than developing new ones;

- some approaches in use in Queensland:

  o do not have the capacity to meet all of the Resilience Checklist requirements because they are so constrained in scope that they ensure remaining on the 'Doing the same' pathway, and therefore less likely to meet goals;

  o have the capacity to meet many of the requirements on the Resilience Checklist – much of the knowledge resides with individual officers and practitioners and is not easily scaled out.

A robust methodological approach is necessary but insufficient – it depends on the application. Approaches are iteratively applied as projects and initiatives mature, and there are examples in Queensland where this iteration is in the early stages.

This is the first version of a 'Resilience Checklist' for Queensland, and it will need further testing, development and learning as it is applied over the next year(s).

The intended use is as a catalyst to support collaborations between Queensland State agencies and a range of other actors to:

- check whether the methodological approaches and tools they are using are consistent with the practices that will be necessary to meet the challenges of climate change and other major disruptions; and

- compare their practice, promoting learning across organisations as well as the opportunities to find gaps, duplications and synergies which could help to build collective impact.

It can be used in many situations supporting government and non-government processes and initiatives across the State. For example, it could support the State-wide rollout of resilience strategies, and plan for deeper coordination of the climate adaptation, disaster risk reduction, and broader planning and investment initiatives for land use and infrastructure, and planning delivery of a range of social services in health, housing, etc. The mechanisms that could be used, and the types of governance arrangements that might support them are further discussed in the companion Narratives report (O'Connell et al., 2020).

1   Why is a Resilience Checklist needed?

1.1   Introduction

The changes in climate, and the changing nature of disruption and escalating scale of disasters in recent decades are underscored by cumulative impacts of chronic stresses and changes, as well as acute events. The only way to avoid worsening outcomes is to work across the whole system – communities, infrastructure, goods and services, economies and natural assets – to understand the causes and effects of cumulative, cascading and compound risk, and to address them by taking collective action.

This will require adapting governance so that public and private organisations, and the communities they serve, have clear roles and responsibilities to support decisions about future goals, and pathways to reach them. These pathways need to help people reach goals in a resilient and adaptable way, successfully navigating the inevitable future shocks and hazardous changes ahead. Co-ordinated collective actions are necessary to address systemic risk.

This report introduces a Resilience Checklist as an approach to guiding co-ordination of methods, practice and collective impact for Queensland agencies delivering services and common goals in the future, in a way which is disaster-resilient and adaptive to change.

1.2   Background to this report

In this report, we build on previous work conducted in Queensland across different government agencies, as well as in the wider communities of practice for resilience, climate adaptation, disaster risk reduction, and transition planning.

The project had three core objectives, which were:

- To deliver a 'compelling narrative' for resilience in Queensland;

- Consult with the other Queensland State agencies;

- Develop a 'resilience framework' that could lead to a more harmonised approach for State agencies. During the course of this project, this product was defined instead as the 'Resilience Checklist'.

This Technical Report is one of three reports created for the project 'Resilience Framework for Queensland – Harmonising Approaches' conducted by CSIRO for Queensland Reconstruction Authority. The others are

- *Key insights on resilience: Conversations with Queensland state agencies* (henceforth called the Interview insights report) (Measham et al., 2020);

- *Disaster-resilient and adaptive to change – narratives to support co-ordinated practice and collective action in Queensland* (henceforth called the Narratives report) (O'Connell et al., 2020).

The purpose of this report is to describe the Resilience Checklist as a guide for Queensland State agencies to assist in better alignment across government, as well as to identify ways in which they can do things differently.

1.3   The broader context of this report, and what it covers

The broader context and narratives of resilience developed in this project are presented in the Narratives report (O'Connell et al., 2020), which should be read first to provide adequate context for this Technical Report. The Narratives report includes a set of four narratives embedded in a broader rationale and context covering[1]:

- *how the related concepts of resilience, adaptation, transitions, integrated planning and disaster risk reduction are framed in Queensland, and how they are being approached by a range of State agencies;*

- *why it's necessary to have a flexible but technically coherent framing and approach across concepts and organisations, and how to do this;*

- *the critical importance of a systems approach, pathways that can deal with the nature and magnitude of required change, and co-ordinated collective action in order to achieve longer terms goals in a way that is disaster-resilient and adaptive to change;*

- an overview of the Resilience Checklist (referring the reader to more detail contained in this Checklist report);

- *how the Resilience Checklist might be used by individual organisations to assess the utility and efficacy of their own approaches, as well as how it might be used across organisations to support co-ordinated and collective action; and*

- *the benefits that may flow from using the Resilience Checklist to help catalyse a more co-ordinated approach.*

Most of the *italicised* content above will not be repeated in this Checklist report. This report will focus on the technical details of **what** the Checklist is, and the approach and methods used to develop it. For the questions about why it was developed, the ways in which it can be used, and the potential benefits please refer to the Narratives report.

1.4   Target audience for this report

The target audience for this report is Queensland State agencies staff with expertise and/or responsibility in developing, using or implementing various approaches and tools for climate and disaster risk reduction, climate adaptation, disaster and emergency management, recovery or resilience planning.

It may also be of interest more broadly to others such as local government, agencies from other State Governments or the Australian Government, private sector or NGO users with similar roles. Overall, achieving the objectives of *Resilient Queensland* (and many other policy objectives) will require inter-disciplinary, trans-disciplinary and multi-objective approaches, with leadership at multiple levels required to guide the dispersed nature of actions, roles, responsibilities and accountabilities across State agencies. The Resilience Checklist is intended to support such initiatives regardless of the organisation.

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[1] Italicised content is contained in the Narratives report rather than this Checklist report.

2 Methods used to develop the Resilience Checklist and supporting narratives

The overall project methodology was comprised of the following[2]:

1. *a process of review of existing policies and approaches in Queensland as well as resilience assessment approaches being applied internationally (Narratives report (O'Connell et al., 2020));*

2. *a series of semi-structured interviews exploring the framings of concepts of resilience, adaptation, transition, and disaster risk reduction; current activities and exploration of what needs to happen next (Interview Insights report (Measham et al., 2020));*

3. a stakeholder workshop (20-21 Feb 2020) designed to test and further develop the narratives identified from the analysis of interviews and policy documents and reports relevant to Queensland, elicit further discussion about what was being done, and what still needed to be done to achieve outcomes. The feedback showed that development of another 'how to' tool or framework for resilience was not desired across agencies because there are already so many. Instead, there was an expressed interest in showing how best to build on what was already in place and provide clear guidance on how best to harmonise, and co-ordinate;

4. using workshop outcomes to develop a ' Resilience Checklist' of actions that need to be done in a co-ordinated way across agencies to achieve the short- and longer-term outcomes desired by State agency stakeholders under the banner of 'functioning economies, connected communities, and healthy natural assets which are disaster resilient and adaptive to change';

5. reviewing, and where appropriate, drawing from a range of international, national and State-based methodologies for resilience, adaptation, disaster risk reduction to develop a Resilience Checklist

6. testing the progress and ideas at a second stakeholder online workshop (3 June 2020);

7. working individually with some stakeholders to test the utility and efficacy of narratives, supporting diagrams, and the 'Checklist' approach;

8. *documenting the overall rationale for the project, ways in which the Resilience Checklist can be used, and designing flexible narratives comprised of visual and text elements for a range of stakeholders to customise for their own contexts (Narratives report (O'Connell et al., 2020).*

The methodology items 3 – 7 are covered in this report, whereas *1, 2, and 8* are covered in the Narratives report. The details of participatory co-design and workshop outcomes for this project are detailed in Appendices A1, A2 and A3.

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[2] Non-italicised items are covered in this report; italicised items are covered in the related reports.

2.1 Anchoring the Resilience Checklist in a system narrative for Queensland – goals and change pathways

2.1.1 Queensland agency stakeholders see a common goal across the portfolios

There are common aspirations across many policy areas of Queensland, summarised from State agency stakeholder workshops and perusal of the policies as:

'functioning economies, connected communities, healthy natural assets which are disaster resilient and adaptive to change' delivered via a policy philosophy of 'state facilitated, regionally co-ordinated, and locally led planning processes'.

This provides a basis for alignment across various agencies and portfolio areas for the purposes of this report, despite differing expressions of sector-, portfolio- or policy-specific goals.

Analysis of the various initiatives across the State agencies as well as the broader system within which they operate (including the Federal government, local governments, urban and regional communities, industry and private sector) reveal that

- there are varying interpretations of several key concepts (resilience, adaptation, disaster risk reduction, transformation and transition), where and how they intersect, and how to apply them.

- each agency has been developing relationships with regions and local levels, and each use their own tools and approaches. Co-ordination between agencies is still developing.

The net result is that while there are efforts to build towards the common goals, they are fragmented, at times overlap, and place a high cognitive and resource load on those at the regional and local levels.

Consultation through interviews and the stakeholder workshop held 20-21 Feb 2020 provided clear feedback that yet another tool/framework for 'how to do resilience' was not the priority given the plethora of approaches that already exist. Rather, participants wanted something which could harmonise the approaches, provide some guidance on which tools and approaches could be useful to achieve certain desired outcomes, how they fit together, where the gaps are and what tools/approaches already in existence might fill those gaps. The approach used to develop the Resilience Checklist is summarised in Appendix A.1, and the workshop 'Conversation Trackers' are in Appendix A.2 and A.3.

2.1.2 A systems approach with three change pathways

Although the duplication of material between the Narratives report and this one is minimised, one of the narratives presented is central to the development of the Resilience Checklist and is therefore summarised here:

A systems approach is needed – understanding cause and effect, points of leverage, and three pathways ('Doing the same', 'Doing better' and 'Doing differently') to create futures that are disaster-resilient and adaptive to change) (Figure 1**). A full description of this narrative is presented in the Narratives report.**
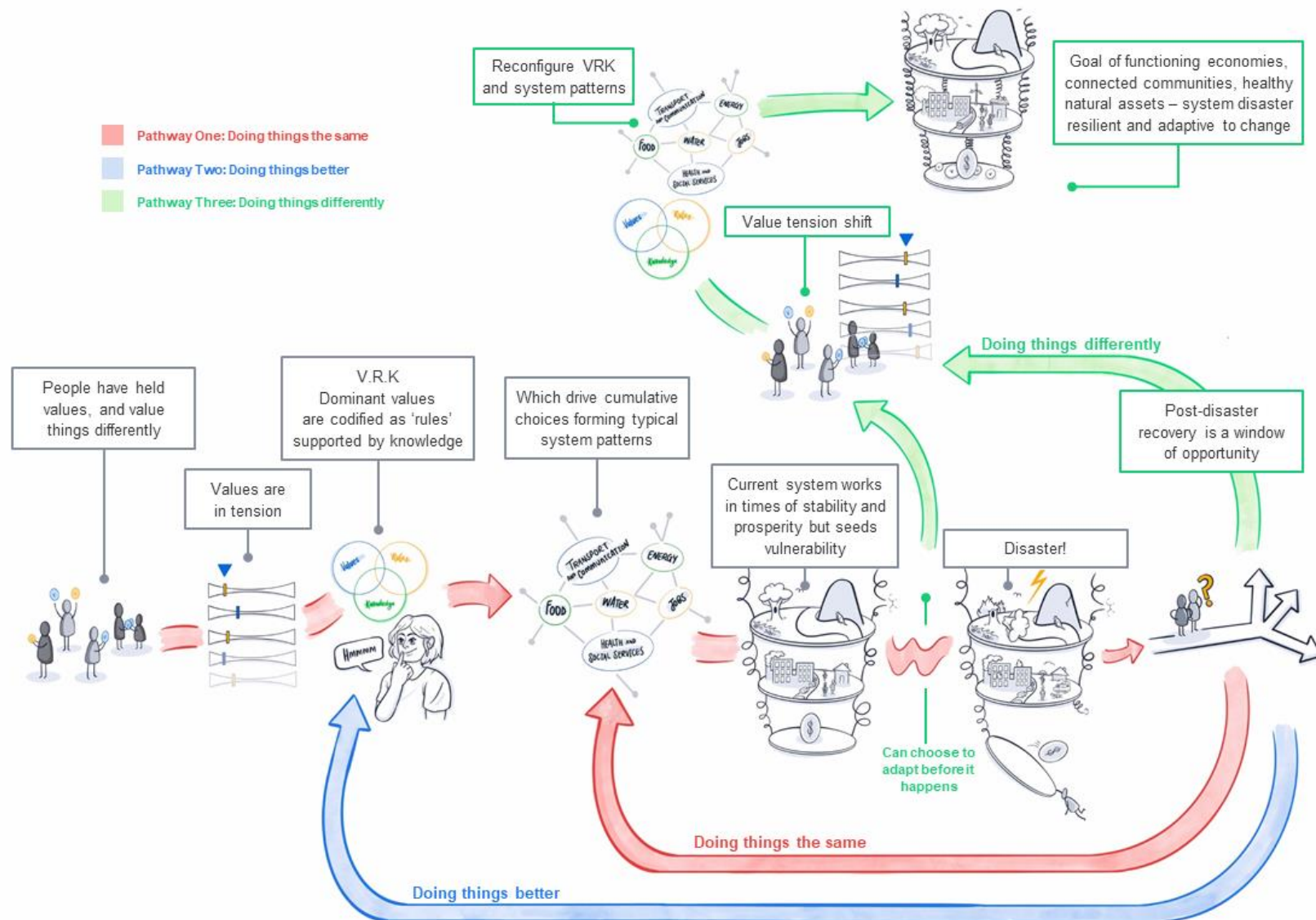
Figure 1 A systems approach is needed – understanding cause and effect, points of leverage, and three pathways ('Doing the same', 'Doing better' and 'Doing differently') to create futures that are disaster-resilient and adaptive to change.

The system narrative distinguishes three pathways

1. **'Doing things the same'** – some parts of the system may be able to continue functioning to deliver goals into the future even with disruption. However, many other parts of the system will not be able to continue to deliver through major disruptions, and trying to put things back the same after disaster risks reinforcing existing vulnerabilities.
2. **'Doing things better'** – some parts of the system may be amenable to incremental changes and adjustments, allowing for improved decisions and actions based on updating knowledge and rules (sometimes called adaptation).
3. **'Doing things differently'** – large parts of the system will not be able to withstand increasing frequency or magnitude of disruption, and will require changes to structure and function in order to continue to deliver on goals and things that are valued. System structural changes can be achieved by addressing root causes including reprioritising values, and aligning knowledge, processes and rules (sometimes called transformation or transformational adaptation).

The Checklist does not expect that all activities require a leap to doing things differently, but rather it is about understanding processes and exploring options for doing things better and/or differently. The Checklist aims to conceptually challenge the existing processes and guides users to design improvements for their work and potentially how to align with others.

2.2 Design considerations

A number of design considerations were identified by reviewing policy and planning documents from multiple agencies, the interviews, the stakeholder workshops as well as consultations with individuals:

1. Many government programs working to deliver to different policy objectives incorporate the ideas of resilience (or some of the variants, climate adaptation, disaster risk reduction and disaster plans, transition to clean growth choices etc).

2. Many people use the concept of resilience in an informal way, often interchangeably with other terms such as disaster risk reduction, adaptation, business continuity, risk management etc. They have different boundaries around the envisaged scope, magnitude and nature of change (see Chapter 3 in the Narratives report for further explanation). The Checklist must support some flexibility in the use/ownership of terms – specifying tight rules around definitions (to add to the many already in use) will not guarantee wide adoption and therefore is not helpful. It is more helpful to describe tangible actions and intended outcomes, specific to the relevant context, rather than relying solely on terms that have different meanings when working across communities of practice that interpret them differently.

3. Stakeholder consultations revealed broad acceptance of a systems approach recognising three broad pathways ('doing the same', 'doing better' and doing differently') as a useful way to visualise and narrate the magnitude and nature of change needed to reach the desired state of *'functioning economies, connected communities, healthy natural assets which are disaster resilient and adaptive to change'*.

4. The Queensland State agencies did not want yet another tool for 'how to do' resilience and adaptation, as there are already multiple approaches in play. Rather, they wanted guidance on

   o the degree to which their existing approaches are able to enable these different pathways to the future desired state; and

o   harmonising the initiatives already at work in order to provide a more coordinated 'state-wide rollout' of resilience by QRA and the complementary initiatives of other agencies and organisations.

2.3   Hierarchical logic of the Checklist

If the goals and desired outcomes of *'functioning economies, connected communities, healthy natural assets which are disaster resilient and adaptive to change'* are (more likely) to be achieved, the following needs must be met

⇨   There is technical coherence around the practices of resilience, adaptation and disaster risk reduction, while still allowing for the varied interpretations of definitions that groups already have

⇨   Tools/methods for planning and assessing resilience must have a certain set of capacities

⇨   And be applied with a certain set of management characteristics, through a trajectory of project maturity

⇨   In order to confer or enhance a certain set of qualities (attributes or characteristics) upon the system

⇨   Which enable the system to deliver on defined goals (*for example 'functioning economies, connected communities, healthy natural assets which are disaster resilient and adaptive to change'*).

The corollary is that anyone can label what they are doing with the term 'resilience', 'adaptation' or 'disaster risk reduction', but the outcomes and benefits they aspire to are less likely to be achieved unless the approach, tools, application and implementation have certain features.

This logic has led to defining a 'Checklist' of features to include in the analysis, design and implementation of any initiative which seeks to contribute to future desired sustainable outcomes.

2.4   The sources informing the structure and features of the Checklist

The Checklist items are synthesised from a number of sources including:

- the input from stakeholder consultation during this project (section 2 and Appendices A1, A2, A3);

- review of contemporary methodological approaches climate adaptation planning, disaster risk reduction, resilience theory and practice and integrated planning;

- knowledge of the rapid changes emerging in the legal, financial and insurance sectors and the anticipated flow-on effects to all sectors of the economy.

2.4.1   Work with stakeholders during this project

The engagement conducted during this project included in depth interviews (Interview Insights report (Measham et al., 2020)), further developing the 'systems narrative' (which was initially developed as part of the Australian Vulnerability Profile (O'Connell et al., 2018)) and working with stakeholders in the workshop to elicit the characteristics of what being on Pathway 3 'Doing things differently' would entail (see Table in Appendix A.1.1)

2.4.2 Key sources of literature of resilience theory and practice

There is an extensive literature on methodological approaches and tools for resilience, adaptation and disaster risk reduction as well as the qualities, properties or characteristics of systems capable of reaching sustainability goals in the face of rapid novel change and high uncertainty. Some of the sources informing this Checklist included (Walker et al., 2006, Folke et al., 2010, Walker and Salt, 2012a, Walker and Salt, 2012b, O'Connell et al., 2013, Abel, 2016, O'Connell et al., 2016, Maru et al., 2017, O'Connell et al., 2018, Sellberg et al., 2018, Elmqvist et al., 2019, Grigg et al., 2019, Walker, 2020) and the references therein.

2.4.3 Contemporary methodological approaches to resilience, adaptation, transition and disaster risk reduction

The items on the checklist were informed by the following contemporary approaches to resilience, adaptation and disaster risk reduction – all of which are focussed on making the sorts of shifts that are necessary to achieve sustainability goals in futures which are faced with rapid and disruptive change:

- AdaptNRM checklist (Rissik et al., 2014);

- Wayfinder (Enfors-Kautsky et al., 2018);

- Resilience, Adaptation Pathways and Transformation Approach (O'Connell et al., 2015, O'Connell et al., 2016, Maru et al., 2017, O'Connell et al., 2019);

- The 100 Resilient Cities City Resilience Index (ARUP and Rockefeller Foundation, Date not provided);

- The Australian Vulnerability Profile (O'Connell et al., 2018);

- Strategic disaster risk assessment guidance (Australian Government (Department of Home Affairs), 2019a).

All of these methodological approaches have the capability to support pathways of analysis, planning and implementation required to drive change towards 'Doing better' and 'Doing differently'.

2.4.4 Rapid changes in legal, financial and insurance sectors

Legal exposure and liability consequences for failing to mitigate, adapt or disclose climate and disaster risks are being increasingly recognised internationally and in Australia, and apply to corporations and government agencies. Exposures include (Barker, 2019):

- Litigation and administrative claims (merits and judicial review) e.g. planning – approvals, boundary adjustments, public resumption of land, compulsory acquisition payments

- Negligence and nuisance e.g. failure to adapt leading to property damage, economic losses following critical infrastructure outages

- Duty of care to citizens and the environment

- Contractual definition of force majeure

- Misleading disclosure, failure to inform

- Duties of directors and offices

There are significant unresolved issues around recognition, quantification and ownership of 'systemic' risk, and this requires solid systems analysis as well as significant changes in governance to address the

mitigation of this systemic risk (Australian Government (Department of Home Affairs), 2019a). There are associated fiduciary duty, due care and diligence implications, and emerging accounting and auditing standards required to declare the 'materiality' of climate-risk exposure (Australian Government, 2019). Business models underpinning the insurance industry are challenged by implications of climate risk (e.g. if insurance companies' own re-insurance costs increase it can drive up insurance premiums to unaffordable levels), and the Government is finding itself acting as the 'insurer of last resort', funded for example via levies on taxes.

There are emerging public- and private-sector led initiatives promoting investments that proactively mitigate disaster risks and enable adaptations to climate change. The National Disaster Risk Reduction Framework, the Taskforce Climate-related Financial Disclosures (TCFD), and Environmental, Social and Governance (ESG) investing (often used synonymously with sustainable or socially responsible investing) are three examples. These recognise the need for, and are incentivising, actions that can be undertaken at scale to contribute to delivering national/regional priorities. The elements that would attract investment are also summarised in the Checklist.

Robust methodological approaches, accounting and disclosure reporting standards are necessary but are not sufficient on their own. They need to be deployed at scale, with sufficient resources and skills, and embedded within governance systems that can support the change, as discussed further in the Narratives report.

In developing the Checklist, this rapidly shifting context, and the implications for government and private sector investments and operations, have been into account and reflected in Checklist items.

3   Description of the Resilience Checklist

The Checklist consists of a set of features of methods, tools or practices that can be applied in any context. It can be applied to any specific method, regardless of whether the framing is one of resilience, adaptation, disaster risk reduction, regional or sector strategies, transitioning communities and economies or other types of planning. It is intended to guide users towards the pathways needed for long-term sustainability.

The Checklist presented in this report as set of tables, and is also available as a simple excel spreadsheet which can be used interactively. It is designed to be used in conjunction with the 'Systems Narrative' (section 2.1.2).

3.1   An overview of the Checklist

The Checklist comprises:

- Metadata – a description of the assessment process – for example what approaches, tools or practices are under consideration, where are they documented, and who is doing the assessment. This is described in section 3.2.
- Level 1 – a simple set of 'entry level' checklist items to enable decision-making individuals and groups start identifying whether these practices are embedded into their approaches, tools and applications thereof. The Level 1 Checklist items are described further in section 3.3.
    - o Checklist items 1 - 6 focus on processes that are known to improve the likelihood of moving towards desired system states and goals. Broadly, these include scoping, collaborative governance, inclusive engagement, systems thinking, adaptive planning and strategic learning processes.
    - o Checklist item 7 is about the outcomes of those processes. Checking that outcomes of items 1 to 6 have conferred the qualities listed in Item 7 provides good guidance, but is not a replacement for a comprehensive Monitoring, Evaluation and Learning program to evaluate on-ground outcomes.
- Level 2 – each of the simpler Level 1 items can be unpacked to a more detailed set of Checklist items, which can be referred to for more detailed descriptions of Level 1 criteria, or to guide a more detailed diagnosis by people within organisations who are responsible for the development and application of methods, approaches and tools for resilience, adaptation, disaster risk reduction etc. Level 2 items are described further in section 3.4.
- For each of these Levels, (as shown in Table 1) there is a simple qualitative assessment of:
    - o the extent to which a checklist item is achieved (0 = not at all,1 = partial, 2 = fully) in
        - ▪ the design or capability of methodological approaches/tools (e.g. as specified in relevant documentation or guidance material);
        - ▪ the application of the approach/tool in any given process, place, project etc (e.g. as evidenced by on-ground outcomes from its application);
    - o the most likely pathway that the approach enables (1 = Doing the same, 2 = Doing better 3 = Doing differently).

Table 1 Rating scheme for Checklist items

Level 1 - Introducing resilience thinking	Level 2 - looking at next level of detail - specific elements of Checklist	Assessing capability of methods/tools Extent to which achieved in design of approach/ tool/method 0 = not at all, 1 = partial 2 = fully	Assessing specific application(s) of method Extent to which achieved in application of approach/ tool/method 0 = not at all, 1 = partial 2 = fully	Pathway 1 = doing same 2 = Doing better 3 = doing differently	Text description of rationale
Items 1 – 7	Each item 1 – 7 is unpacked for specific features	*Filled in by assessor*	*Filled in by assessor*	*Filled in by assessor*	*Filled in by assessor*

3.2 Metadata

Some simple metadata are recorded in the Checklist, as shown in Table 2.

Table 2 Metadata for Checklist

Metadata questions	Text responses
Who is conducting this assessment?	*Filled in by assessor*
What are the specific tools, programs and applications you are assessing? Please list any document referenced.	*Filled in by assessor*
What level of maturity is the method/tool? Are you developing the approach or is it well tested?	*Filled in by assessor*
Is the method/tool set up to apply iteratively – from initial 'light pass' at scoping stages, desktop analysis through to more depth, evidence base with subsequent iterations (For example, a simple workshop elicitation of mental models might be appropriate in some circumstances whereas a full quantitative modelling approach and measured indicators might be appropriate in others). Where are you at with the iteration process?	*Filled in by assessor*
Purpose of assessment	*Filled in by assessor*

3.3 Level 1 – a simple entry point for supporting discussion and learning within teams and agencies

Level 1 Checklist items can be used in a discursive manner to support design and learning (Table 3).

Table 3 Resilience Checklist Level 1.

Item	Description
1. Approach and scope adequate to support coherent practice and level of required change to reach sustainability goals.	Provides clarity about what key words/terms mean in terms of decisions, and practice. This is supported with clear cause-effect logic behind the method or approach being used. Considers the full spectrum of potential system changes (from no change, to large structural change), both identified and unknowable risks, chronic stresses and changes or acute disruptions
2. Collaborative governance practice in the planning process.	Approach is supported by governance and resourcing arrangements that match the nature and magnitude of the required changes and accountable decision-making practices. It fosters collaboration and shared responsibility across scales, levels and sectors to address challenges of institutional inertia and 'camouflaged constraints'.
3. Inclusive and ethical engagement process supports range of perspectives and plausible futures, and builds agency and capability for co-ordinated collective action towards goals.	Problems and opportunities are adequately defined, includes diverse perspectives, values and a broader systems view. There is exploration of a range of plausible futures, consideration of the values, characteristics and functions that people want the future system to hold, as well as what the current trajectory may deliver. There is a fair, safe and ethical dialogue or planning process, with adequate facilitation and leadership to support the process and level of change required. Supports building capability, agency, and capacity for co-ordinated collective action.
4. Systems thinking and analysis is embedded in the approach to identify key points of intervention and the nature and magnitude of change required.	Multiple stakeholder or disciplinary perspectives and values, rules and knowledge are represented in the system description. Incorporates physical (e.g. infrastructure), natural, human (e.g. socio-economic and/or behavioural patterns), governance and technological components of the system. The analysis includes chronic or slow stresses as well as episodic and acute shocks, multiple levels, spatial- and time-scales, key thresholds at which system behaviour changes, and dynamics of cause and effect. Key points of intervention are identified. Nature and magnitude of change required to reach the 'desired future' clear – which parts of the system can stay the same; need incremental or transformational change. Appropriate evidence base is used.
5. Planning for options and pathways to the goals and outcomes flows from inclusive, ethical engagement process and systems approach, and incentivises changes in behaviours, decisions and actions to support the necessary change.	Options are identified based on a systems view, and decisions and actions prioritised and sequenced into adaptive pathways. Approach supports strategic and operational practices with clear roles, actions, responsibilities and decision points within adaptive management cycles. It supports co-ordination across scales and sectors to address systemic challenges by collective action. Likely distribution on private and public benefits and costs is characterised. Cost/benefit tradeoffs are defined, and preferred behaviours, choices and pathways are incentivised. Reliable, credible evidence is used to underpin investment decisions - which are robust to short term political or boom-bust cycles. Appropriate evidence base is used.
6. Active and strategic learning is embedded in every stage of the process, and is acted upon.	Approach operates within strategic adaptive management frameworks that enable multi-loop learning (Loop 1: are we doing things right? Loop 2: are we doing the right things? Loop 3: How do we decide what is right?). Prioritises learning-by-doing by individuals and groups in areas of novel change and high uncertainty. Supported by knowledge management practices for documenting decisions, underpinning evidence base and lessons learned.
7. The approach confers or supports a set of system qualities or properties which move towards goals in a way which is disaster-resilient and adaptive to change.	The on-ground outcomes of any approach may take a long time to manifest and may be expensive or difficult to measure. The outcomes of applying Steps 1 - 6 will increase likelihood of system qualities such as reflective and actively learning; robustness; functional redundancy (diversity and buffer capacity); flexibility, resourcefulness, and integration. A Monitoring, Evaluation and Learning program is set up to evaluate on-ground outcomes of items 1 – 6 – e.g. City Resilience Index has 7 qualities, each with indicators, method for measuring, analysing and interpreting to assess progress.

3.4 Level 2 – a more detailed breakdown of the elements required for planning and achieving resilience outcomes

The following sections show disaggregation of the items 1 – 7 in Level 1. Each of these is assessed in the spreadsheet using the simple rating scheme shown in Table 1.

3.4.1 Item 1 Approach and scope is adequate to support coherent practice and level of required change to reach sustainability goals

Approach and scope are disaggregated into individual features in Table 4.

Table 4 Item 1 Approach and scope is adequate to support coherent practice and level of required change to reach sustainability goals.

Level 1 Introducing Resilience Thinking	Level 2 – next level of detail – specific elements of Checklist
1. Approach and scope is adequate to support coherent practice and level of required change to reach sustainability goals. Provides clarity about what key words/terms mean in terms of decisions, and practice. This is supported with clear cause-effect logic behind the method or approach being used. Considers the full spectrum of potential system changes (from no change, to large structural change), both identified and unknowable risks, chronic stresses and changes or acute disruptions.	A clear explanation of what is meant by central concepts of the approach. Explains clearly the relationships with related concepts such as resilience, adaptation, vulnerability, disaster risk reduction, risk assessment, sustainability, SDGs, adaptation, transformation as appropriate.
	Distinguishes and allows for different kinds of change that might be needed to reach desired objectives and goals - from 'doing the same', minor or incremental change "doing things better", transformation/large structural change "doing things differently".
	Deals with identified risks, stresses, changes or disruptions (specified resilience — resilience "of what, to what")
	Deals with unspecified/unknowable risks, stresses, changes or shocks (general resilience, adaptive capacity)
	Clear logic and methodology is specified in readily available documents
	Readily tailored to different contexts and place-based requirements. Builds on experience and existing mechanisms and tools where possible, helps navigate and implement existing tools, and also fills any gaps that are not covered by these, and provides relevant scaffolding or 'entry points' based on particular context

3.4.2 Item 2 Collaborative governance practice in the planning process.

Collaborative governance is unpacked in Table 5.

Table 5 Item 2 Collaborative governance practice in the planning process.

Level 1 Introducing Resilience Thinking	Level 2 – next level of detail – specific elements of Checklist
2. Collaborative governance practice in the planning process. Approach is supported by governance and resourcing arrangements that match the nature and magnitude of the required changes and accountable decision-making practices. It fosters collaboration and shared responsibility across scales, levels and sectors to address challenges of institutional inertia and deeper-lying constraints which are not visible, and obscured by surface issues.	Adequate and effective project governance arrangements resourced to match nature and magnitude of changes or actions.
	Accountable and transparent decision-making so that all stakeholders are clear on how it works, why, and who is accountable
	Transforms culture in risk Table 5management (e.g. fosters leadership, ownership & buy-in across federal, state and local councils to address institutional inertia and camouflaged constraints)
	Fosters collaboration across governments, between private organisations and public-private sector. Fosters shared responsibility across scales, levels, sectors. Supports action at all levels, guided by principle of decisions being led and owned as locally as possible.
	Methods, data, evidence used well matched to the effort, resources, maturity etc of the project
	Independent review/quality assurance. Measurable (and sometimes monetizable) and consistent standards to give assurance

3.4.3   Item 3 Inclusive and ethical engagement process supports range of perspectives and plausible futures, and builds agency and capability for co-ordinated collective action towards goals.

Engagement processes are disaggregated into individual features in Table 6.

Table 6 Item 3 Inclusive and ethical engagement process supports range of perspectives and plausible futures, and builds agency and capability for co-ordinated collective action towards goals.

Level 1 Introducing Resilience Thinking	Level 2 – next level of detail – specific elements of Checklist
3. Inclusive and ethical engagement process supports range of perspectives and plausible futures, and builds agency and capability for co-ordinated collective action towards goals. Problems and opportunities are adequately defined, include diverse perspectives, values and a broader systems view. There is exploration of a range of plausible futures, consideration of the values, characteristics and functions that people want the future system to hold, as well as what the current trajectory may deliver. There is a fair, safe and ethical dialogue or planning process, with adequate facilitation and leadership to support the process and level of change required. Supports building capability, agency, and capacity for co-ordinated collective action.	Problems and opportunities adequately and broadly defined, and articulated through inclusive processes that enable diversity of perspectives, values and a broader systems view. Clear articulation of intended goals that reflect stakeholder values (and clarity that resilience/adaptation/transformation are not goals in their own right, but rather means to achieving shared goals).
	Facilitates reflection on what is valued in times of crisis, and whether systems need to be reconfigured (doing things differently) to support those values.
	Exploration of a range plausible futures - consideration of the values, characteristics and functions that people want the future 'system' to hold, as well as what the current trajectory/ies may deliver. If these differ (i.e. the desired future system is very different to the one on the current trajectory), there is adequate scope and process to address the issues.
	Inclusive of all groups of stakeholders/shareholders (including diversity of those who stand to benefit or lose, would be needed for implementation or are 'actors for organisational change', different perspectives and types of knowledge etc)
	Fair, safe and ethical dialogue or planning process, taking account of trust, power dynamics, managing conflict etc
	Emphasises and resources adequate facilitation and leadership necessary to support the process (and level of change required)
	Supports building capability, agency and capacity for co-ordinated collective action

3.4.4 Item 4 Systems thinking and analysis is embedded in the approach to identify key points of intervention and the nature and magnitude of change required.

Systems thinking is disaggregated into individual features in Table 7.

Table 7 Item 4 Systems thinking and analysis is embedded in the approach to identify key points of intervention and the nature and magnitude of change required.

Level 1 Introducing Resilience Thinking	Level 2 – next level of detail – specific elements of Checklist
4. Systems thinking and analysis is embedded in the approach to identify key points of intervention and the nature and magnitude of change required. Multiple stakeholder or disciplinary perspectives and values, rules and knowledge are represented in the system description. Incorporates physical (e.g. infrastructure), natural, human (e.g. socio-economic and/or behavioural patterns), governance and technological components of the system. The analysis includes chronic or slow stresses as well as episodic and acute shocks, multiple levels, spatial- and time-scales, key thresholds at which system behaviour changes, and dynamics of cause and effect. Key points of intervention are identified. Nature and magnitude of change required to reach the 'desired future' clear – which parts of the system can stay the same; or need incremental, or transformational change. Appropriate evidence base is used.	Explicit consideration of system boundaries – what is and what isn't considered in the analysis
	Multiple stakeholder or disciplinary perspectives and values represented in system description and dynamics. Incorporates physical (e.g. infrastructure), natural, human (e.g. socio-economic and/or behavioural patterns), governance and technological components of the system
	Multiple scales/levels (e.g. council-level, state, federal) and sectors and their interactions and cumulative consequences are included in the assessment. At least 'scale above' and 'scale below' considered.
	Multiple time scales from immediate through to inter-generational considered.
	Considers 'slow burning' underlying changes and stresses ('slow variables' in the systems literature) as well as episodic or acute shocks ('fast variables'). Identification of the 3 - 5 critical or controlling variables that (usually) determine the dynamics of the system at any given scale.
	Identifies cause-effect relationships, including root causes of problems (values, governance, accountability, etc.), direct and indirect impacts and cascading consequences, and feedback loops
	Considers the possibility of nonlinear behaviour/tipping points /thresholds. Special attention given to thresholds at which irreversible change occurs.

Level 1 Introducing Resilience Thinking	Level 2 – next level of detail – specific elements of Checklist
	Consideration of connectivity/modularity of system components
	Explicit consideration of response diversity (different ways to respond to change and shock) and functional redundancy (spare capacity, buffers) in the system
	Use systems understanding to diagnose leverage/key points of intervention, and the magnitude and nature of change that needs to happen to achieve desired outcomes - Which parts of the system can stay the same – 'doing the same' - Which parts can be incremental change – 'doing better' - Transformational change – 'doing differently'
	Processes for checking whether proposed actions, if implemented, can feasibly achieve the desired changes, values and visions. Consequences or unintended side effects of planned interventions/decisions are explored.

3.4.5 Item 5 Planning for options and pathways to the goals and outcomes flows from inclusive, ethical engagement process and systems approach, and incentivises changes in behaviours, decisions and actions to support the necessary change.

Planning for options and pathways is disaggregated into individual features in Table 8.

Table 8 Item 5 Planning for options and pathways to the goals and outcomes flows from inclusive, ethical engagement process and systems approach, and incentivises changes in behaviours, decisions and actions to support the necessary change.

Level 1 Introducing Resilience Thinking	Level 2 – next level of detail – specific elements of Checklist
5. Planning for options and pathways to the goals and outcomes flows from inclusive, ethical engagement process and systems approach, and incentivises changes in behaviours, decisions and actions to support the necessary change. Options are identified based on a systems view, and decisions and actions prioritised and sequenced into adaptive pathways. Approach supports strategic and operational practices with clear roles, actions, responsibilities and decision points within adaptive management cycles. It supports co-ordination across scales and sectors to address systemic challenges by collective action. Likely distribution on private and public benefits and costs is characterised. Cost/benefit tradeoffs are defined, and preferred behaviours, choices and pathways are incentivised. Reliable, credible evidence is used to underpin investment decisions - which are robust to short term political or boom-bust cycles. Appropriate evidence base is used.	Supports planning of strategy, operations, implementation with clear roles, actions, responsibilities, decision types and points with adaptive management cycles
	Clear and transparent prioritisation and sequencing of decisions and actions into pathways which are co-ordinated and address points of leverage in system, with identified triggers for decisions to change pathway.
	Finds shared pathways, and supports coordination across scales and sectors to address systemic challenges by collective action. Identified immediately actionable findings (e.g. updating existing water security protocols, or investment strategies), or identifies how/when to switch from a 'business as usual' pathway to a different one, grounded in tangible, workable examples.
	Leadership and human resource management within organisations reflect incentives and KPIs that that reward doing differently
	Recognises limits to operating capacity at all levels and coordinate and find synergies to make the most of that capacity for mutually beneficial outcomes
	Explicit recognition of the benefits of investment in doing things better or differently before shocks or disruptions occur, rather than doing so in response afterwards.

Level 1 Introducing Resilience Thinking	Level 2 – next level of detail – specific elements of Checklist
	Provides clarity on the likely distribution of private and public (and intergenerational) benefits and costs. Explicit and ethical consideration of who bears residual consequences of failures to manage risks, and who benefits from decisions.
	Benefits and beneficiaries of doing better or differently are identified, trade-offs characterised, and ways of sharing costs are incentivised. Reliable, credible evidence and accountability/transparency for investment decisions, business cases etc (e.g. evidence of return on investment in resilience or adaptation)
	Recognises and addresses institutional inertia and camouflaged constraints, and fosters broad, inclusive buy-in that is robust to political, boom-bust and other cycles.

3.4.6   Item 6 Active and strategic learning is embedded in every stage of the process, and is acted upon.

Active and strategic learning is disaggregated into individual features in Table 9.

Table 9 Item 6 Active and strategic learning is embedded in every stage of the process, and is acted upon.

Level 1 Introducing Resilience Thinking	Level 2 – next level of detail – specific elements of Checklist
6. Active and strategic learning is embedded in every stage of the process, and is acted upon. Approach operates within strategic adaptive management frameworks that enable multi-loop learning (Loop 1: are we doing things right? Loop 2: are we doing the right things? Loop 3: How do we decide what is right?). Prioritises learning-by-doing by individuals and groups in areas of novel change and high uncertainty. Supported by knowledge management practices for documenting decisions, underpinning evidence base and lessons learned.	Strategic adaptive management (so that actors can act intentionally with an assumption of what outcomes are expected; check assumptions if actions have unexpected outcomes, and make adjustments to act differently). Particularly critical in context of making decisions in uncertain and rapidly changing environment.
	Supports multiple-loop learning. First loop: accountability "did we do things right/as we said we would?" Second loop: "Are we doing the right things?" Third loop: "How do we decide what is right?"
	Supports individual and collective learning and capability building, specific to context (eg differing knowledge types, cultural preferences, power imbalances, recognising the stresses of poverty, trauma and loss can affect language and communication and problem solving etc). Mistakes are acknowledged and recognised as opportunities to learn rather than lay blame.
	Clear plan for capturing and managing formal knowledge gained (via updated plans, reports, and other communications)

3.4.7 Item 7 The approach confers or supports a set of system qualities or properties which move towards goals in a way which is disaster-resilient and adaptive to change.

Unlike items 1 – 6 which are based on activities, item 7 is more of a 'placeholder' to capture desired outcomes of implementation, in terms of:

- the system qualities or properties of resilience and adaptive capacity;

- progress towards goals.

These outcomes can take many years of implementation before they are manifest, or measurable. Theyare not presented in detail in this report, because a proper Monitoring, Evaluation and Learning scheme should be set up. It is still useful, however, to use the items listed here as a qualitative check on whether these qualities are being actively fostered by any plans or implementation of programs and investment based on activities in Items 1 – 6.

There are many useful indicators for various properties of resilience and adaptive capacity – the ones listed in Table 10 should be considered as partial, and illustrative. They are adapted from the 100 Resilient Cities program (ARUP and Rockefeller Foundation, Date not provided), which has a documented set of indicators, methods for measuring them, and tools to facilitate the analysis. There are many other references proposing indicators for the various properties listed in Table 10 (for example see Ifejika Speranza et al. (2014), Ringold et al. (2013), Schipper and Langston (2015)). More testing of the Checklist, and development of specific suitable outcome-based indicators would be advised in the future.

Table 10 Item 7 The approach confers or supports a set of system qualities or properties which move towards goals in a way which is disaster-resilient and adaptive to change.

Level 1 Introducing Resilience Thinking	Level 2 – next level of detail – specific elements of Checklist
7. The approach confers or supports a set of system qualities or properties which move towards goals in a way which is disaster-resilient and adaptive to change. The on-ground outcomes of any approach may take a long time to manifest and may be expensive or difficult to measure. The outcomes of applying Steps 1 - 6 will increase likelihood of system qualities such as reflective and active learning; robustness; functional redundancy (diversity and buffer capacity); flexibility, resourcefulness, and integration. A Monitoring, Evaluation and Learning program is set up to evaluate on-ground outcomes of items 1 – 6 in progress towards goals, and the attributes of resilience.	Reflective and active learning. Reflective systems are accepting of the inherent and ever-increasing uncertainty and change in today's world. They have mechanisms to continuously evolve, and will modify standards or norms based on emerging evidence, rather than seeking permanent solutions based on the status quo. As a result, people and institutions examine and systematically learn from their past experiences, and leverage this learning to inform future decision-making.
	Robust - Robust systems include well-conceived, constructed and managed physical assets, so that they can withstand the impacts of hazard events without significant damage or loss of function. Robust design anticipates potential failures in systems, making provision to ensure failure is predictable, safe, and not disproportionate to the cause. Over-reliance on a single asset, cascading failure and design thresholds that might lead to catastrophic collapse if exceeded are actively avoided.
	Redundant - Redundancy refers to spare capacity purposely created within systems so that they can accommodate disruption, extreme pressures or surges in demand. It includes diversity: the presence of multiple ways to achieve a given need or fulfil a

Level 1 Introducing Resilience Thinking	Level 2 – next level of detail – specific elements of Checklist
	particular function. Examples include distributed infrastructure networks and resource reserves. Redundancies should be intentional, cost-effective and prioritised at a system-wide scale, and should not be an externality of inefficient design
	Flexible - Flexibility implies that systems can change, evolve and adapt in response to changing circumstances. This may favour decentralised and modular approaches to infrastructure or ecosystem management. Flexibility can be achieved through the introduction of new knowledge and technologies, as needed. It also means considering and incorporating indigenous or traditional knowledge and practices in new ways.
	Resourceful - Resourcefulness implies that people and institutions are able to rapidly find different ways to achieve their goals or meet their needs during a shock or when under stress. This may include investing in capacity to anticipate future conditions, set priorities, and respond, for example, by mobilising and coordinating wider human, financial and physical resources. Resourcefulness is instrumental to restoring functionality of critical systems, potentially under severely constrained conditions
	Inclusive - Inclusion emphasises the need for broad consultation and engagement of communities, including the most vulnerable groups. Addressing the shocks or stresses faced by one sector, location, or community in isolation of others is an anathema to the notion of resilience. An inclusive approach contributes to a sense of shared ownership or a joint vision to build city resilience
	Integrated - Integration and alignment between systems in a city, region, state or country promotes consistency in decision-making and ensures that all investments are mutually supportive to a common outcome. Integration is evident within and between resilient systems, and across different scales of their operation. Exchange of information between systems enables them to function collectively and respond rapidly through shorter feedback loops throughout the system

Level 1 Introducing Resilience Thinking	Level 2 – next level of detail – specific elements of Checklist

3.5   Preliminary testing of Checklist

Nine officers from three different organisations have been through the process of assessing their approaches at Level 2 of the Checklist, and the authorship team assessed a number of methodological approaches. This was conducted as part of the process developing and refining the Checklist and the assessments are therefore not presented as results.

This preliminary testing and early, informal feedback has shown that using the Checklist in a qualitative sense to assess current approaches and tools is a useful process to:

- improve understanding of what is meant in practical terms by much-used terms, for example 'active learning', or 'systems approach'. The disaggregated list of items explaining what a systems analysis involves was considered helpful by test respondents. This echoes the feedback to the authors from projects and stakeholders in many countries and contexts that being shown how to do systems analysis in a practical, context-relevant way is one of the most useful benefits of participating in projects or using tools e.g. see (Maru et al., 2017);

- help organisational teams discuss and reflect on the efficacy of their own approaches, identify gaps that can be filled, and opportunities for alignment with other programs, and consider whether or not the approach can be used to create new transition pathways needed to achieve sustainability or service delivery goals, given the challenges of climate change and other disruptions ahead;

- show where the approach, framing or tools being used constrain the potential solutions to ways forward and 'lock in' doing more of the same or incremental change, and highlight where the points of intervention and entry need to be;

- shows that the following tools and approaches developed for resilience and adaptation more generally (a – c below), or for disaster and climate more specifically (d) – have the capacity to do many or all of the items on the Checklist:

    a) Resilience, Adaptation Pathways and Transformation Approach ver 2 (RAPTA) (O'Connell et al., 2019);

    b) Wayfinder (Enfors-Kautsky et al., 2018);

    c) the City Resilience Index from the 100 Resilient Cities program (ARUP and Rockefeller Foundation, Date not provided);

    d) the Strategic Guidance for Climate and Disaster Risk, developed to support the NDRR Framework (Australian Government (Department of Home Affairs), 2019b);

- highlight where items of the Checklist have been implicit in the design or use of an approach, but the approach has not been fully or formally documented and therefore the 'how to apply ...' knowledge resides in individual Queensland State agency officers or the groups they have been working with. For example many of the Checklist items are well applied in Queensland regional resilience strategies (https://www.qra.qld.gov.au/resilient-queensland/regional-resilience-plans with report example at State of Queensland (Queensland Reconstruction Authority) (2020) or the sector plans for climate adaptation (https://www.qld.gov.au/environment/climate/climate-change/adapting/sectors-systems), but the methods themselves are not yet formalised in the ways of those such as RAPTA, Wayfinder or the Strategic Guidance for Climate and Disaster Risk listed above.

4   A narrative summary of the Resilience Checklist and how it could be used

A Resilience Checklist will enable individual agencies to assess their approach, tools and progress, as well as to compare activities and progress across organisations (Error! Reference source not found.**).**

Why is the Resilience Checklist needed? Across many policy areas of Queensland there are common aspirations for achieving similar outcomes.

- Despite slightly different framing in sector-, portfolio- or policy- specific goals – it is clear that Queensland State agencies are pulling together in the same direction.

There is, however, a need to improve the technical coherence and co-ordination around the practices of resilience, adaptation, disaster risk reduction, economic development and transitions, and integrated planning, while still allowing for the varied interpretations of definitions and tools/method that different organisations already have.

Queensland State agency stakeholders do not need another tool for 'how to do' resilience and adaptation, as there are already multiple approaches in play. The Resilience Checklist provides the guidance to co-ordinate practice.

- Rather, guidance is required on:
  - whether various approaches are able to deliver on the task of planning effective pathways to the desired future/goals; and
  - assessing the initiatives already at work, so as to know where and how to co-ordinate, and mature the approach to collective impact.

THE RESILIENCE CHECKLIST

Locally-led, Regionally Co-ordinated, State Facilitated

Achieve goals that deliver: functioning economies, connected communities and healthy natural assets.

QLD

1. Bring your context and tools

2. Use the Checklist to assess your practice

3. Check your pathways. Will they get to your goal?

4. Fill in gaps identified by the Checklist and align with:

International, Asia-Pacific and National Approaches

5. Mature the collective impact by collaborating

Figure 2 The use of the Resilience Checklist by individual organisations to check their own approaches, and form the basis for collaboration and collective action.

The Resilience Checklist support organisations in a range of ways to reach common goals.

- The 'Checklist' is intended to enable each State agency (and many other actors such as local governments, regional groups, and the private sector) to bring their own sector specific initiatives, organisational approaches, methods or tools, and check whether they are on a pathway towards the desired future state of 'functioning economies, connected communities, healthy natural assets which are disaster resilient and adaptive to change'.

- This sets a broad alignment of goals across various agencies and portfolio areas. There are a range of government programs, working to deliver to different policy objectives and legislative structures, which incorporate the ideas of resilience (or related concepts such climate adaptation, disaster risk reduction and disaster plans, transition to clean growth choices).

Step 1 Bring your context and tools.

- Queensland policies across State agencies are nested within a broader set of related disaster risk reduction, adaptation, resilience, integrated planning and economic development approaches at national and international levels

- They are contextualised to Queensland through a policy philosophy of 'state facilitated, regionally co-ordinated, and locally led' planning processes.

Step 2 Use the Checklist to assess practice.

- The Checklist draws on stakeholder engagement conducted during its development, as well as a range of contemporary methodological approaches, knowledge of the state and national policy landscapes, and the needs and rapid changes in the financial, legal and insurance industries.

- Each organisation will bring their own context and tools, tailored to specific needs. Regardless of the approach or tool, there are some generic capacities needed:

  o A systems approach recognising three broad pathways ('Doing the same', 'Doing better' and 'Doing differently') is broadly accepted from the stakeholder consultation as a useful way to visualise and narrate the magnitude and nature of change that needs to occur in order to reach the desired goals.

  o Tools/methods for planning and assessing resilience must be able to support 'Doing the same', 'Doing better' and 'Doing differently' pathways, rather than being constrained in scope. Currently, there is a strong focus on 'doing things better'. This may be sufficient for those parts of the system where there is confidence that values and services can continue to be delivered in the face of future changes in climate, population and uncertainty. However, there is a clear need to do things differently in some parts of the system, as the external drivers of change amplify.

  o The tools/methods must be to be applied with a certain set of management characteristics, iterating to mature the understanding and application of the approach and progress towards collective outcomes.

  o The approaches must confer or enhance a certain set of attributes or characteristics upon the system, which in turn enable the system to deliver on its defined goals despite change and disruption.

Step 3 Check the organisation's pathways. Will they get to defined goals, in a way which is disaster-resilient and adaptive to change?

- Current climate and disaster risk, and broader resilience challenges require systemic change, thus doing things differently. Depending on the risks, uncertainties and opportunities faced by a system of interest, it is possible to have a combination of the three pathways working simultaneously in different parts of the system.

  - 'Doing things the same' – shown in red, the pathway is wide initially representing the easy path of current practice, but it narrows over time representing decreasing ability to achieve desirable outcomes as climate change and other chronic stresses and disruptions continue. A branch forks off this path, leading to a crumbling end – this depicts that the goals won't be reached, and that there is a risk of cascading system failures with this approach.

  - 'Doing better' – recent initiatives have increased the prominence of this approach, especially during recovery after disaster (e.g. 'Build Back Better'). This pathway reduces existing vulnerabilities, creates options, and will address moderate levels of change. This pathway has limited scope to address many systemic risks and vulnerabilities.

  - 'Doing things differently' – this pathway is narrow now representing it is a small component of activity currently and challenging in the current context. It widens over time to indicate that it has the greatest potential for enduring development opportunities and continuing delivery of value and services as change continues across the state and world.

Step 4 Fill in gaps identified by the Checklist and align with international, Asia-Pacific and national approaches.

- Check alignment in policy context, which tends to be siloed and contains many areas of overlapping practice.

- If your approach, tools or context do not support, enable and activate decisions, actions and practices which take you towards the goals in a credible, evidence based way, then there will be gaps (or indeed it could mean that the approach is simply not suitable).

- There are many tools and approaches which outline specific comprehensive methods that could be used or adapted – for example:

  - the Strategic Guidance for Climate and Disaster Risk, developed to support the NDRR Framework (Australian Government (Department of Home Affairs), 2019b);

  - Wayfinder (Enfors-Kautsky et al., 2018);

  - Resilience, Adaptation Pathways and Transformation Approach ver 2 (O'Connell et al., 2019);

  - the City Resilience Index from the 100 Resilient Cities program (ARUP and Rockefeller Foundation, Date not provided).

- In addition, there are many approaches in use in Queensland which cover some, or all of the important methodological capacities. Some of these are documented and formalised, while others are more practice-based and reside within particular individuals or groups. These are further discussed in the Checklist report.

Step 5 Mature the collective impact by collaborating across a range of organisations.

- As well as supporting the approach of individual organisations, the Checklist is intended to facilitate cross-organisational comparison to ensure that there is adequate coverage of all the necessary actions and tasks across the state by the range of actors.

- The Checklist could be complemented by a change in governance arrangements to provide improved co-ordination between State agencies, and with other organisations. These are discussed in Chapter 7.

5   Conclusions and ways forward

Other programs around the world have established Checklists to provide guidance for navigating complex systems, including Donella Meadows' list of 'leverage points' for systems change (Meadows, 1999). Atul Gawande's best-selling book, 'The Checklist Manifesto' is an example of compelling story-telling that highlights the tremendous value of checklists in guiding professionals in all fields through complex, often life-threatening, situations (Gawande, 2010).

This is the first version of a 'Resilience Checklist' for Queensland, and it will need further testing, development and learning as it is applied over the next year(s).

The intended use is as a catalyst to support collaborations between Queensland State agencies and a range of other actors to:

- check whether the methodological approaches and tools they are using are consistent with the practices that will be necessary to meet the challenges of climate change and other major disruptions; and

- compare their practice, promoting learning across organisations as well as the opportunities to find gaps, duplications and synergies which could help to build collective impact.

It can be used in many situations supporting government and non-government processes and initiatives across the state. For example, it could support the State-wide rollout of resilience strategies, and plan for deeper coordination of the climate adaptation, disaster risk reduction, and broader planning and investment initiatives for land use and infrastructure, and planning delivery of a range of social services in health, housing, etc. The mechanisms that could be used, and the types of governance arrangements that might support them are further discussed in the Narratives report (O'Connell et al., 2020).

Queensland State agencies can take up further testing and development of the Resilience Checklist, and develop suitable governance structures to support further collaboration in order to build from the strong engagement and momentum developed during this project.

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A.1 Appendix Summary of project methods

A.1.1 Stakeholder workshop 20-21 Feb 2020

A workshop entitled 'Harmonising resilience approaches' was held in Brisbane over two half days on 20-21 February 2020. The workshop was held for the following purposes:

- To provide some feedback on what the team heard in interviews conducted with some State agencies.
- To provide an opportunity to have a common framing on resilience and systemic risk.
- To recognise the approaches already in play and identify where there are key gaps.
- To explore the common outcomes desired by agencies, and ways to reach them.

The workshop was designed using the principles represented in the Checklist itself – for example there was an appropriately wide scope to support the magnitude of change required; a range of stakeholders from inside and outside of the target audience of Queensland State agencies, across a range of levels of government and a couple from the private sector; created a safe, ethical and creative dialogue space; and used a systems framing and thinking.

Participants were key decision-makers as well as those who may inform or operationalise decisions in State agencies involved in resilience. Invitees were also encouraged to bring along one or two others from their agency so that these roles are represented. Several industry representatives were invited to Day 1.

On the first day, sessions were constructed around the following questions and objectives:

1. *Where are we going to? The 'demand pull' for a harmonised resilience approach*

This session aimed to:

> • include a range of external speakers providing short vignettes to help frame the 'demand pull' for projects and initiatives that are designed consistently, and can demonstrate and deliver resilience benefits

> • provide some structured exploration of the opportunities for Queensland state agencies that might flow from an opportunity to have a common framing on resilience and systemic risk, and a resilience framework, including what sorts of projects, what types of design, criteria for 'resilience' that the proponents can use and the evaluators of proposals are seeking to fund

2. *Building blocks and foundations – what have we got to work from?*

This session aimed to:

- collectively take stock and better understand the insight and capability in the room to address the demand pull presented in Session 1
- present a summarised thematic analysis of interviews CSIRO undertook with agencies in late 2019 and an emerging narrative, and a short check-in with participants so they can revisit/provide additional thoughts in context
- take a rough inventory of tools (including strategies, plans, frameworks) that agencies and CSIRO have developed and/or are using, and reflection on how well these tools are placed to do the job before us

On the second day, representatives from Queensland Government agencies were invited to join the workshop to further explore opportunities in a Queensland Government context. Sessions were organised as follows:

3. *Building the scaffolding*

This session aimed to:

- explore the appetite for a framework
- clarify features of the framework including what would the framework have to do, and what would some of those things look like?
- unpack some of the different arrows on the system diagram (doing differently compared to doing better, and what sorts of things would distinguish them?)
- discuss what sort of tool, and governance arrangements would be needed?

4. *Sorting out the next steps*

This session aimed to:

- address the 'so what?', and what it means for participants
- identify what steps need to be taken to action it, and by whom

The workshop ended with a closing session to provide a recap of the two days, invite final reflections from participants and the project team, identify follow-up actions, and thank the participants.

The workshops are summarised in the Conversation Trackers in Appendix A.2 and A.3.

The emerging themes from the workshop for identifying what is needed in order for Queensland to deliver on resilience goals, building on what is already in place and what 'doing things differently' might looks like are shown in Table 11.

Table 11 Synthesis themes, issues and requirements emerging from stakeholder workshop 20-21 Feb 2020

Themes	Issues and requirements
Transformational change at system level [in workshop: what does 'doing it differently' look like]	- Needs to support fundamental change in how state, private entities and the community prepare for and respond to changing events – incremental progress will not be enough. Support "doing things differently". - Addresses the systemic nature of the challenges - Transforms culture in risk management (e.g. fosters leadership, ownership & buy-in across federal, state and local councils to address institutional inertia and camouflaged constraints) - Fosters collaboration across governments, between private organisations and public-private sector - Identify and address the root causes of problems, systemic causes and constraints (values, governance, accountability etc) - Supports a long-term shift in values at a population level - Shared system-level vision and objectives
Limits & thresholds	Recognise limits to operating capacity at all levels and coordinate and find synergies to make the most of that capacity for mutually beneficial outcomes
Multi and cross-scale	- Multiple levels (e.g. council-level, state, federal) and sectors and their interactions and cumulative consequences are included in the assessment. - Supports coordination/collaboration across scales and sectors to address systemic challenges.

Themes	Issues and requirements
	• Find shared pathways • Acknowledges and prepares for the long game ("VRK is not quick – it's 20 years to change") • Fosters shared responsibility across scales, levels, sectors
Distributional/equity/fairness considerations	• There is explicit consideration of who bears residual consequences of failures to manage risks, and who benefits from decisions? • Where are the powerful interests, and where can the values/interests of a few override values of the public or future generations? • There is explicit recognition of the relative benefits of investment in *anticipation* (e.g. prevention and preparedness) versus investment in response and recovery. • Make visible those outcomes that are usually hard to measure/quantify • Characterise costs/benefits/values beyond only economic values. • Clarity on the different values/goals/priorities at different levels in the system (and the feasibility of realising those values given climate and other changes) • Characterise trade-offs, winners/losers.
Alternative futures and perspectives	• The design of options is informed by foresighting analyses considering alternative futures and perspectives. • Consider social, economic and natural hazard drivers/shocks/stressors and their interactions (and cascading impacts), not just direct impacts of natural hazards. • Acknowledges and works with different interpretations and use of resilience concepts
Workable/actionable	• Assessments lead to actionable findings, e.g. updating water security protocols, investment strategies that reduce disaster risk while still providing a financial return. • Pathway for how to implement from within a business-as-usual context. • Incentives, key performance indicators etc for disaster management to consider resilience • Enables resilience to be a long-term priority despite political agendas and election cycles • Recognises and addresses institutional inertia and camouflaged constraints • Be grounded in real examples. • Supports action at all levels, guided by principle of subsidiarity (actions and decisions are taken at the most local level possible) • Supports capacity building, upskilling etc in communicating resilience, writing business cases for resilience assessments etc.

Themes	Issues and requirements
	• Reveal options that didn't exist before • Readily tailored to different contexts and place-based requirements • Tools for collecting/measuring/characterising things that are usually too hard to measure
Quality assurance / accountability /learning	• Best science and information in all decision-making processes (and support navigation of all the information) • Reliable, credible evidence and accountability/transparency for investment decisions, business cases etc (e.g. evidence of return on investment in resilience) • Builds on long experience and existing mechanisms and tools where possible, helps navigate and implement existing tools, and also fills any gaps that are not covered by these • Measurable (and sometimes monetizable) and consistent standards to give assurance • Provides a common baseline, language and minimum standards.

A.1.2 Stakeholder workshop 3 June and subsequent consultations

The research and design Team analysed the outputs from the February Stakeholder Workshop. In particular, they focused on the fundamental need to harmonise existing approaches to resilience and adaptation. The research team were careful to ensure that any updated or revised approach built on the extensive work that has already been undertaken across Queensland Government. In response, the design team drafted three variations on a synthesised framework to bring together the resilience and adaptation approaches across Queensland Government in a harmonised way. Importantly, these variations sought to recognise the broader national context in which Queensland leadership occurs and also the regionally coordinated and locally led initiatives that are manifest in delivering action on the ground. In the June Workshop, held virtually, participants, who included a sub-set of the participants in the February workshop plus a few new participants from Queensland agencies, considered each of the variations for the harmonised framework and provided constructive feedback considering the relative benefits and limitations of different options.

Following an introduction from the CSIRO project leader, the Think Place designers facilitated the remainder of the workshop providing a mix of verbal and visual engagement techniques across a multimedia platform, providing reflections, suggestions and improvements in real time. This input was crucial to identifying and refining the final version of the harmonised framework developed by the project team and to ensure it is fit for purpose. Key dimensions of this framework are discussed in Section 4.

A.2 Appendix Conversation tracker from stakeholder workshop 20-21 February 2020

Introduction

Purpose of this document

The purpose of this document is to capture a synthesised summary of the conversations and activities that took place during the co-design workshop held on 20-21st February 2020.

This workshop was hosted by CSIRO as part of the project they are doing with the Queensland Reconstruction Authority (QRA), to find pathways to harmonising a state-wide approach to resilience.

Please note that this document does not capture the conversation verbatim, rather it presents a snapshot of key discussion points and activities.

WORKSHOP DELIVERY TEAM

CSIRO TEAM
Deborah O'Connell, Tom Measham,
Erin Bohensky, Russell Wise

THINKPLACE TEAM
Dayna Hayman

HARMONISING RESILIENCE APPROACHES WORKSHOP
DAY ONE

On day one participants explored two areas for the state government. They explored the *WHY*; the potential need for, benefits of, and opportunities from a harmonised approach to resilience. Then delved into the *WHAT*; a potential 'resilience framework' that would deliver against the why.

DAY ONE AGENDA

Welcome and opening
The background and contextual information of the project.

Session 1
The 'demand pull', value proposition, opportunities of and benefits from a harmonised resilience approach.

Session 2
Building blocks and foundations — what have we got to work from?

Day one recap and closing remarks

QRA Introductions

To open the day Brendan Moon opened the workshop, acknowledging the traditional owners of the land, the Turrbal people. Positioning the day as an "important time in Australia's future and the state."

He spoke about how the current bushfire season built into a disaster because the emergency management did an excellent job but were unfortunately stretched and operating at capacity. To be prepared for the future the state, private entities and community needs a fundamental change in how they response to an event.

"In the past, federal and international progress has been incremental and is not going to be enough for communities. We need to transform our approach and take a systemic approach to the future."

He framed the workshop challenge for the state as an organisation, partners and teams to provide solutions for their communities. As they undertake the change it needs to be informed by science, how it works at national and international level and use this as an opportunity to influence the conversation – as the they were the experts at the community level for Queensland.

He encouraged everyone to share experiences with CSIRO in the workshop to bridge the science, policy and community gap perspectives.

CSIRO Introductions

CSIRO introduced the workshop purpose as supporting the Queensland resilience strategy and wanting to explore the appetite in government and partners in achieving that.

With a bit of housekeeping, CSIRO took time to outline their ethics policy. They thanked participants for sharing their time and ideas, explaining how the workshop would be documented and described the level of confidentiality in what was recorded by de-identifying information.

With the room, they established some rules of participation to ensure a productive and open day:

- Turn off your mobile phones off, and if you need to take a call, please go outside

- Start sentences with 'yes, and...' and not 'no, but...'

- The room agreed that after the workshop the contacts of participants would be shared so they could connect – because it was a rare occasion that the most relevant people were in the room

An ethical approach

CSIRO Human research ethics protocols
- You are participating voluntarily, and can withdraw at any time
- The contributions that you make today may be used for a range of purposes including developing policies, tools and frameworks, publications of a range of types into the future
- The information collected today is not confidential (unless you specifically tell us so), but your specific contribution will not be attributed/identifiable to you by name
- Photos will be taken and used in publications, presentations etc
- Raw workshop data stored on password protected computers across project team and partners

Please let us know if you are NOT comfortable with these, and if you do not want your photo taken

Overview key concepts

After an icebreaker activity CSIRO introduced key concepts they would be working with for the day.

"The terms resilience, adaptation and transformation can be viewed differently by different people or groups. To take the jargon out of it, think of it as a continuum of change - are you talking about no/little change to the system? Moderate/incremental change? Or fundamental change to the way the system operates?"

They explained that 'resilience' is a system property, and applicable to deal with a whole range of stresses and responses, as shown in the 'lasagne diagram' (modified from original concept of Stephen Dredge).

There are slow chronic stresses (e.g. increasing and ageing population); periodic stresses (e.g. drought) that are increasing in frequency. On top of this are increasing acute shocks (e.g. floods, fires) are increasing. These have always broken through the 'threshold' and required emergency response. However, the increasing cumulative stress (shown in pink) and increasing frequency means that catastrophic disaster will be more frequent, unless we can manage the whole set of stresses to stay below the threshold. These are all managed separately by different agencies and could be better co-ordinated around a common resilience framing.

The second concept they introduced, the pop-up book from the Guidance to Strategic Disaster Risk Assessment, shows where we are now, where we need to be, and the bridge needed to go there.
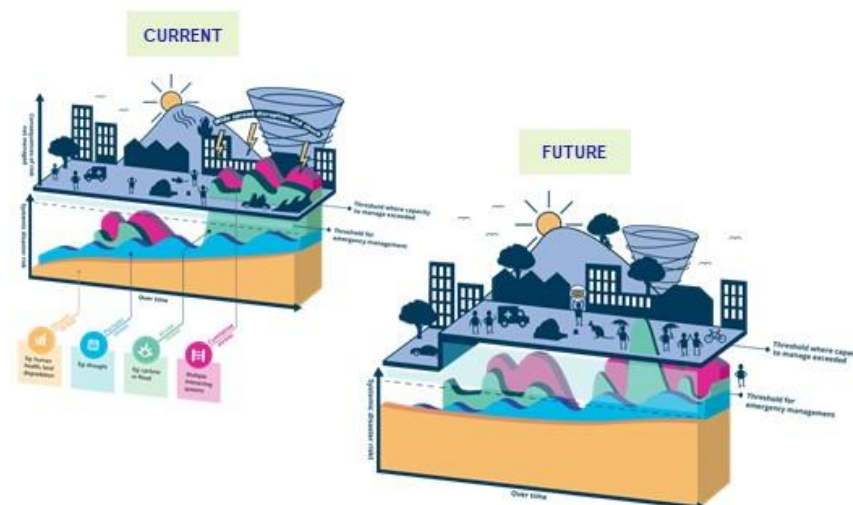
SESSION ONE

Sharing the current context of climate and disaster resilience in Australia

Russell Wise

Session one focused on exploring:

- the perspectives of the demand pull for investments in climate and disaster resilience

- what is required to support investments, and their scaling up, in climate and disaster resilience

- the measures of performance, assessment and prioritisation and assurance needed for investment from state and private entities

- to identify what would better enable or support everyone.

Exploring the different context and perspectives

Participants were asked to use active listening and dot-point on post-it notes as they listened to the presentations in repose to:

'What is the context and your perspective?'

They shared their thoughts through plenary with the room.

"Our motivation for resilience for councils is because there is a common appreciation that the impacts and failure to manage climate risk will be felt at the community level. They have responsibilities, they are elected representatives from community and regardless at what is happening at the federal and state level there is a need to take action for councils."

"We work on the QLD building guidelines – looking after infrastructure. We publish designs and follow Infrastructure Australia. I see it as part of foresight to the alternate future which is more climate change focused. A key element is we have options and those options have been designed to be resilient in long term."

"We do have a strategy for climate change. Our key findings show that climate change is happening and there is an effect our water levels. We have 3 scenarios in the climate change strategy and these will be adopted and in the broader water security protocols we have."

"We know the frequency and severity of disasters are increasing. As an insurer we have a strong motivation in mitigating impact because the cost of recovery directly impacts our business model - impacting on things such as insurance premiums. In turn, this causes consumers to under insure or not insure. We have been working over the last number of years to research cost of natural disaster and what is needed from resilience. With some of these drivers understood, IAG recently partnered with NAB to pilot a resilience investment vehicle project to direct capital to finance new, adapt existing or build new infrastructure to reduce disaster risk and give return."

Exploring the different context and perspectives

"From a banking perspective, investing in climate mitigation is good, as there is an increasing number of proprieties becoming uninsurable which impacts on bank's ability to lend money and for people to borrow finance. We recognise the systemic nature of the challenge and wonder how the finical services sector can do to address some of these challenges."

"For the QLD fire emergency services a key aspect is how do we raise climate change into future safety of community. Key work delivered over the last two year around the disaster risk reduction framework here in QLD. Key tenets of it is to transform culture in risk management across the broader government."

"Government and private sector are well informed in standing risk. We need to engage with scientific research to have the best science and information in all decision making processes moving forward."

"QLD has just come out of 12 natural disasters in one year. The frequency and severity will impact government to deliver core services. As a country we spend to much recovery and not enough on resilience to improve our ability to cope with future events. We've never had such alignment to invest in this space and address risk. We have national Bushfire Recovery Agency, a disaster risk reduction framework and the ability for the state to invest in resilience. Our opportunity to identify activities that could be undertaken and see funding to deliver them end to end."

"Trade exporters capitalise on trends to create opportunities for the state. We see the implication of decisions such as on seafood exports who can't store perishable goods. Flooding has impacting our mineral supply, and freight by destroying rail lines. All this has a direct impact on economy. In my mind how do we get this on the agenda more? The policy here is what will dictate our future."

"The climate change and sustainable future team has spent 10+ years talking about many of the things coming up today. When we had the 1920 fire it was a catalyst for change, many of us thought the same of the floods in 2011. We have a number of programs in place in partnerships, science and work to help propel other organisation. To actually own this and drive this, to understand risk and find shared pathways. We need to move forward."

"For energy, the risk is is to transfer to a network that was built decades ago. The demand causes challenges; How do we keep the lights on? How do we make smart assessment decisions?"

Exploring the different context and perspectives

For the second questions participants were asked:

'What is required to support resilience?'

They shared their thoughts through plenary with the room.

"Understanding stress – the diagram speaks to that and how it is impacting community and economy. It's about understanding how shocks and stresses layer together and how the system of a city are impacted in that process."

"When government makes decisions understanding who benefits positively and negatively - what the risk are on the decisions and not just the 'up side' but taking a broader view of risk."

"Metro Sydney has been working 4+ years to understand the 100 Resilient Cities Framework and the impacts of big scale disasters and populations. The program was tried in 100 cities. It takes a system approach to try an understand the significant shocks in a everyday language at the community level to explain resilience."

Emerging high-level motivators for resilience

Emerging high-level challenges for resilience

Climate change, it's risks and impacts are here.

- With increased severity and frequencies
  - Felt at the community level

Take advantage of the opportunity.

- The alignment of political agendas
- Sparked by the current bush fire disaster.

Desire for future foresight to make resilience decisions for the long term.

To create partnerships with others to understand drivers and risks - you can't do this alone.

To get resilience more on the political and policy agenda.

Perceived lack of tools or clarity around how to implement / use and navigate tools available.

Limited, hard to measure outcomes for clear investment decisions (for different disasters one size doesn't fit all).

Lack of proof for return on investment.

Unclear pathways to understanding, measuring and implement resilience strategies/frameworks into BAU.

Knowing others can – but not sharing how, is causing frustration (e.g. insurers assigning value to a new roof replacement before disaster to limit destruction and will reduce premium etc. as a form of measurement).

Recognition of the need for systems thinking and a widely connected approach needed to succeeded but unclear ways to make this happen.

Emerging characteristics of resilience in QLD

There were several high level characteristics emerging for the motivators for resilience in Queensland:

- A transformative approach to risk management

- Focus on people (who is affected and how much)

- Build on existing mechanisms where possible

- Accounts for interdependencies of the initiative with the broader systems

- Sound (reliable, credible) business cases that consider what is needed for resilience

- Goal focused informed by values /priorities and their compatibility with climate

- Need incentives (organisation culture and KPIs) for disaster management (assessors) to consider resilience

- Resilience assessment needs to be considered broad futures and perspectives

- Disaster resilience needs to consider social, economic and climate (natural hazard) drivers, shocks and stresses

- Need to be measurable (standards and consistence to give assurance)

- Need to have some measures that are monetisable

SESSION TWO
QUESTION ONE

Where are we now and what are our foundations?

Session two focused on exploring the current experience of the Queensland government building resilience by exploring:

- The findings from the research interviews conducted in 2019

- Where are we at now? What are we drawing from?

- What resilience tools do the agencies have?

Erin Bohensky

The interview analysis

In 2019 CSIRO conducted 13 interviews to listen to the QLD agencies' perspectives, inform the next phase of the project and future action and to uncover key insights from the interviewees about resilience and how Queensland agencies work together.

The emerging narrative and findings discovered presented to the participants:

This sparked an open discussion within the room.

New normal

Shared responsibility

Why we need to 'do resilience differently'

→ *Key message 1: it is widely understood that approaches need to change because disasters themselves are changing*

'Resilience-as-usual'

Towards 'Next gen resilience'

Action under the radar

Current resilience framings and future possibilities

→ *Key message 2: resilience is multi-faceted, and some aspects are widely accepted, while others are more intractable and contentious, but potentially transformative*

Camouflaged constraints

High stakes

Barriers and opportunities for 'doing resilience differently'

→ *Key message 3: there are powerful reasons why everyone is not harnessed in the same direction; trade-offs are inevitable in disasters: there are 'winners' and 'losers', but also many opportunities*

Digging deeper on Qld Resilience Strategy

Engaging with Qld Resilience Strategy

Limitations to engagement and pathways forward

→ ?

The interview analysis discussion

"If it's too abstract people don't respond. They need examples in the existing context which has beautiful examples. Because it wasn't useful to counteract the institutional restraints."

"Institutional inertia and camouflaged constraints will still remain. If anything these findings will flush them out how do you might communicate moving forward."

"This very much is reflected in agriculture, even though not interviewed...

These SME's are willing to be involved and coming to us saying 'I want this, I need to do that, be more sustainable so I can be resilience for my business's life and the region'. If they know they are resilient and their neighbours are, then the town will be resilient as well. They can have a tennis club, teacher in town and business in town – they see it building resilience is a shared responsibility.

We need to provide tools and a research based in how they want to see it and what they want to do about it. We need to provide services/products for them and move towards greater ownership and responsibility and that will help."

"Seeking real life examples: 2011 floods, that was a catalyst for change and people usually arrive early to help but then drops off."

Tools for resilience in QLD

The message in the interviews, and also in the room was that there has been significant effort towards tools for risk management, adaptation, and building resilience already. These must be collated, understood, and built upon.

A list of current approaches and tools used to build resilience in QLD was collated by CSIRO, and expanded during the workshop. Thinking about their experiences and the discussion participants were asked; Where are we at now? What are we drawing from? What resilience tools do the agencies have? Post-it noting and discussion shared what they could identify as tools for resilience.
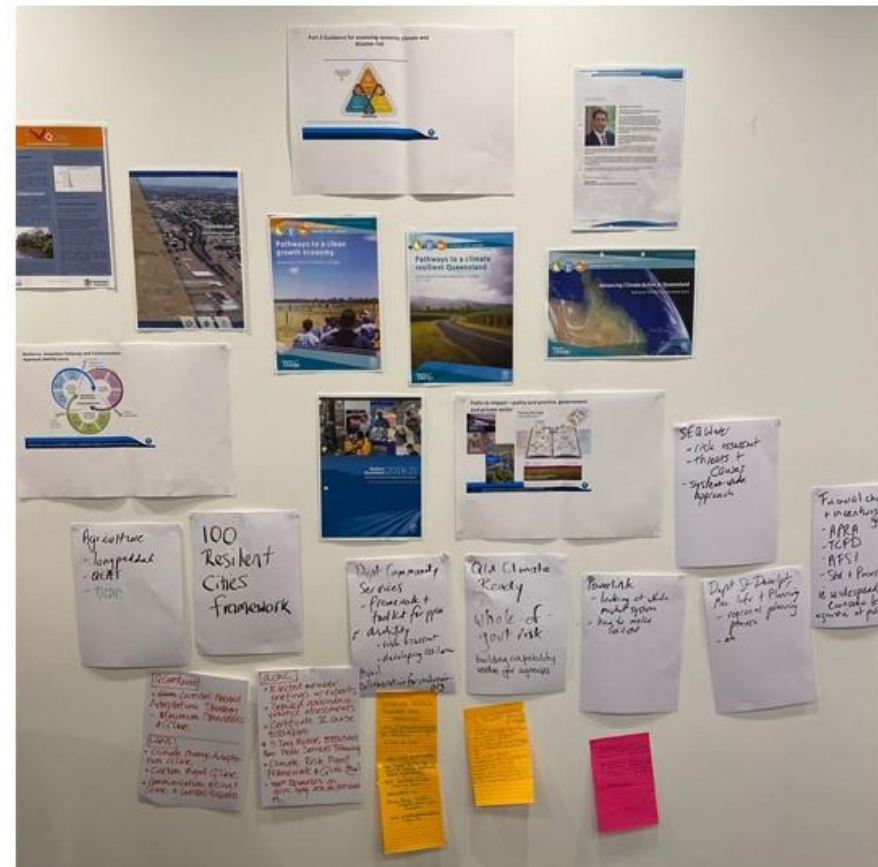
Tools for resilience in QLD

Collected list of 40 identified strategies, frameworks, tools, approaches and organisations used to build resilience in Queensland.

Organisations:

- QCRC
- Circular economy lab
- QCAC QLD advisory council

3

Organisations:

- Face to face briefing with climate specialist
- National credited course through peak services:
  - 3 day climate leadership
  - 1 day executive seminar every year for elected representatives

3

Methods, tools & processes

- Resilience, Adaption Pathways and Transformation Approach (RAPTA)
- AVP Guidance Materials for assessing systemic climate and disaster risk
- Building QLD – ISCA Sustainable assessments requirements
- Building QLD - Guidance requirements to consider climate risk (supply and demand risk) resilience and for sighting
- LGAQ – Communication, engagement guidelines for costal hazards
- Powerlink – looking at whole market systems and seeing how to me resilient
- SEQ Water – risk assessment, threats and causes at a system wide approach
- Department of State Development – infrastructure and regional planning process etc.
- Science dashboard – QLD climate dashboard
- Detailed government assessments and

standards practices introduced to councils

Other DSS funded toolkits

- User driver BCP's for small to medium community based organisations
- BCP facilitation guide (coming soon)
- Money Ready Toolkit – disaster proof your finances
- https://goodshepherdmicrofinance.org.au/
- State development have external facing ways, grant programs and increasing guidance to take into account investing resilience

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Tools for resilience in QLD

Strategies, frameworks & programs

- Resilient Queensland 2018-2021 Framework

- Queensland State Natural Hazard Risk Assessment 2017

- Pathways to a clean growth economy – Queensland Climate Transition Strategy

- Pathways to a climate resilience Queensland – Queensland climate adaption strategy 2017-2030

- Disability included disaster risk reduction

- QCoast 2100 – Costal hazard adaption strategy, minimum standards and guidelines

- Communities Transition

- Built environment and infrastructure sector adoption plan

- QLD Ecobiz Program

- Decarbonising GBR island programs

- Transition Z action

- Biodiversity and ecosystems climate adaption plan

- Small to medium sector adaption plans

- LGAQ – Climate change adaptation guideline

- LGAQ – Carbon management guidelines

- 100 Resilient cities framework

- Agriculture – long paddock & DCAP

- QLD climate ready and whole of government risk – building capability with government agencies

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Organisations:

- Royal Bush Fire Commission announced to research into Australian resilience and adapting to natural disasters

1

"238 resources created for governments."

"There is a bunch of stuff happening - a lot of it bringing people on the journey."

"A whole of government risk process embed into BAU."

"Regional planning process is critical in this process."

"We're using this to guide – 80/30/80 rule which is in 30 days of a disaster 80% will have 80% of supply need."

Do we have what we need as a collective?

To close out the discussion on day one participants in plenary considered all the tools and frameworks identified. In plenary participants discussed if as a collective do they have sufficient tools to bridge where we are at now, to what is needed to address systemic risk and deliver resilience?

"Acknowledge institutional constraints and leadership at federal and state levels."

"Not convinced we do [have what we need], because we have to develop a baseline which you can generate your resilience initiatives off."

"How do we get the commitment to deliver – secure investment?"

"It's not a tool, if you don't have leadership it becomes less effective and leadership isn't keen on pushing boundaries."

"When your directive is to manage this by the government and your credit rating is at risk –it gets action. Then regardless of politics and elections, it's still a focus.

"The baseline inertia is from a lack of knowing what do. Upskilling the language is needed. For example a $12mil goes to coastal hazard adaption. It goes to the most capable person in the council but they don't know how to write a brief for a consultant and across the organisation communication and get people to turn up. Those are all challenges that all exist at the operational level that need the baseline on which to bounce off."

"Linking to right places – as public servant we can do this and it is our job to do it. It's basic risk management for departments."

" We need to be working across departments. Strengthen public servants within the departments to feel confidence and able to drive some of this stuff."

"It's more than the tools, it's how the system is adapting and how leadership is linking into that."

Our collective gap to building systemic resilience

The emerging high-level gaps of the current tools, approaches sand frameworks to building resilience are:

Strategic state level ←————————————→ **Operational level**

- Lack of leadership and buy-in making it difficult to push against institutional inertia and camouflaged constrains.

- Limited collaboration and partnerships across governments, between private organisations, and public-private sector.

- Capability gap in communicating resilience to non-experts (to write business cases to secure funding, hire consultants or communicate to wider organisation).

- No ownership or commitment across federal, state and local councils.

- Uncertainty how to make resilience a long term priority with pollical agendas and elections.

- Knowing where to start and navigating all the information provided for government vs private organisations struggle to find resilience activities to invest in.

⚠

The current picture of resilience for QLD

This is the high-level picture built from the day one of the workshop.

40 Identified strategies, frameworks, tools and organisations working to build resilience

GAP: A CLEAR, SHARED VISION STATEMENT OF WHY RESILIENCE IS IMPORTANT

CURRENT CHALLENGES

Limited, hard to measure before for clear investment decisions (for different disasters one size doesn't fit all).

Lack of proof for return on investment.

Unclear pathways to understanding, measuring and implement resilience strategies/frameworks into BAU.

Knowing others can – but not sharing how it is causing frustration (e.g. insurers assigning value to a new roof replacement before disaster to limit destruction and will reduce premium etc. as a form of measurement).

Recognition of the need for systems thinking and a widely connected approach needed to succeeded but unclear ways to make this happen.

Perceived lack of tools or clarity around how to implement / use and navigate tools available.

GAPS TO GET THERE

Lack of leadership and buy-in making it difficult to push against institutional inertia and camouflaged constraints.

No ownership or commitment across federal, state and local councils.

Uncertainty how to make resilience a long term priority with political agendas and elections.

Limited collaboration and partnerships across governments, between private organisations, and public-private sector.

Capability gap in communicating resilience to non-experts (to write business cases to secure funding, hire consultants or communicate to wider organisation).

Knowing where to start and navigating all the information provided for government vs private organisations struggle to find resilience activities to invest in.

RESILIENCE CHARACTERISTICS

- Focus on people (who is affected and how much).

- Build on existing mechanisms where possible

- Need to be measurable (standards and consistence to give assurance).

- Accounts for interdependencies of the initiative with the broader systems.

- A transformative approach to risk management.

- Need to have some measures that are monetizable.

- Sound (reliable, credible) business cases that consider what is needed for resilience.

- Goal focused informed by values /priorities and their compatibility with climate.

- Disaster resilience needs to consider social, economic and climate (natural hazard) drivers, shocks and stresses.

- Need incentives (organisation culture and KPIs) for disaster management (assessors) to consider resilience.

- Resilience assessment needs to be considered broad futures and perspectives.

Day one recap – key emerging findings

CSIRO recapped what they were hearing from the day one workshop. Highlighting some of the key emerging findings discovered during the day:

- Lack of private industry and government partnership without undermining each other throughout all levels of government. Everyone needs to be involved in the discussion – community needs private services to be resilient not just government.

- Lack of leadership in government and private sector making it hard to create momentum to break organisation inertia, create buy-in and ownership

- There are a lot of tools out there. Which can be overwhelming and be difficult to navigate and find what is best for your work.

- In developing resilience strategies there is a big question on how we might prepare these together

- First priority needs to be climate change mitigation "when you're in an arm arm wrestle with mother nature something is always going to be coming – we need deal with the root cause of the problem."

Day two will be the opportunity come back together with only the state agencies. The intention to have this ongoing discussion and build coordination and come back to you – it's going to be an ongoing journey

HARMONISING RESILIENCE APPROACHES WORKSHOP
DAY TWO

On day two participants explored the *HOW*; reflecting on the previous day what would be needed to address the gaps and build the foundation for a future of resilience for Queensland.

DAY TWO AGENDA

Welcome and opening

Session 3
What is the appetite for a harmonised resilience approach?

Session 4
What are the features you want in a harmonised approach to resilience?

Day two recap and closing remarks

(Resilience Checklist version 1.0 July 2020) | 23

Opening day two

CSIRO opened day two with summaries the previous days work and discussion into 4 points:

1. Clearly hearing from there is a lot of intention to build resilience but even when there is private capital (e.g. from IGA and NAB Resilience Investment Vehicles) they can't easily find where to invest.

2. In planning and development organisations such as Frasers are voluntarily doing the work.

3. Currently Queensland has a lot of tools, strategies, frameworks risk assessment and methods and guidance around methodology to do strategic risk and it's very good work from agencies.

4. However, each agencies are trying to manage in a sectoral way but the risk Queensland faces is the space between agencies – that they cannot address because they cannot go beyond their remit.

CSIRO framed the day to focus on 'the bridge' and how Queensland is getting from what they currently have to the future of a resilient state.

Resilience in a complex system

CSIRO introduced the key concept and method for resilience in a complex system to inform and frame the workshop. The systems diagram shows three pathways to take that to either reinforce vulnerability or address systemic risks to build resilience.

These three pathways were renamed and explore during the workshop as

1. Doing the same – the old recovery decision-based model where you build back the same system reinforcing the same vulnerability. Example: a road built in a flood zone that gets potholes each year, every time you repair the potholes.

2. Doing better – which some agencies have begun to shift to, which addresses the knowledge or rules that allow for different decisions. Example: instead of building back the same road, you raise it above the regular flood water height, it is still vulnerable to increased severity of flooding.

3. Doing differently – which the addresses and changes the root cause of values that shape the system allowing decisions to become more resilient. Example: you move the road entirely to a different place outside of the flood zone, or even move the town it serves (for e.g. Grantham).
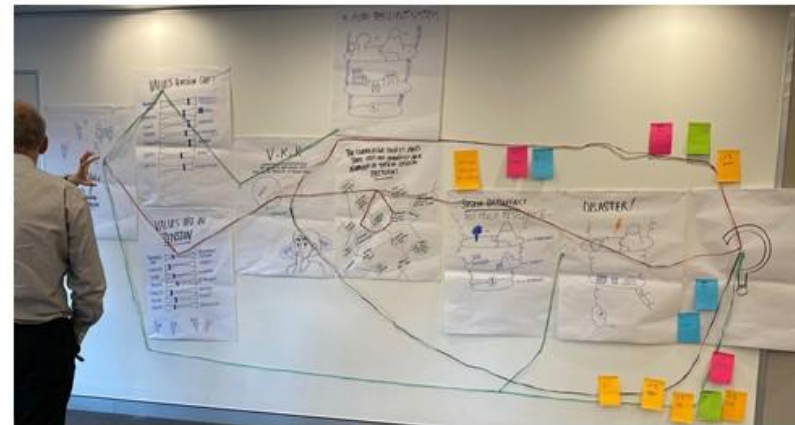
Note: this diagram is a modification from the systems narrative diagram in the CSIRO Tech Report for a systems understanding of disaster
https://publications.csiro.au/rpr/download?pid=csiro:EP187363&dsid=DS16

Systems narrative diagram in discussion
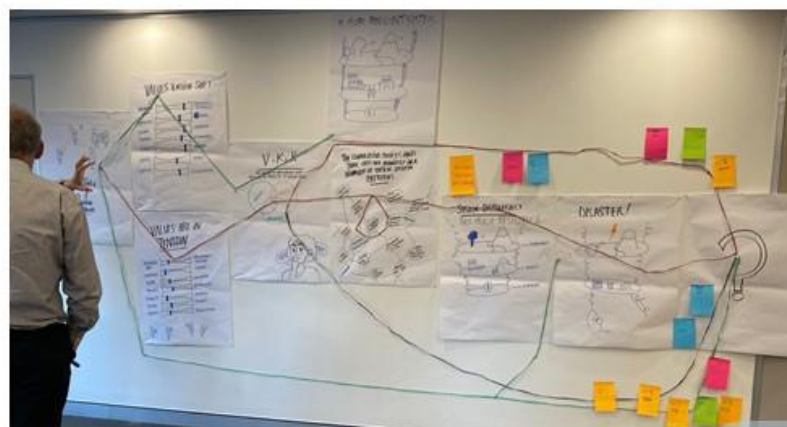
"This process reveals a suite of options you probably didn't think about before. It can be used to structure pathways to change. Ones that are actually required and help you inform where you wanted to end up."

"It's hard to change people's view because they seek information that confirms their view of the world and won't change."

"Many of our system are measured by economic values because of the rules almost required it. That drives the type of knowledge you're going to collect. This is one of the main reasons we don't have information on resilience because the systems hasn't allowed that. How do we shift the values, knowledge and rules (VRK) to enable us to do this?"

"We see values as being expressed through governance through parliamentary process. Voting and democracy are a clear way that expresses people's values. What happens when the values of vested interest in some very powerful individuals are aligned with politics to override values of other individuals and the public."

"VRK is not quick - it's twenty years to change. For example workspace health and safety – twenty years ago it belonged to someone but now it's a collective responsibility."

"How do we get the community shift like the 'slip, slop, slap' and 'clean up Australia day' campaigns? That embedded values shift takes time and it's about how do you get hearts and mind to shift those values."

Pulse check – which pathway do our tools enable?

Participants considered what the three pathways delivered on and the collective tools they have. With three post-its they allocated a percentage (of a total 100%) on where they believed the tools are able contribute across the three pathways.

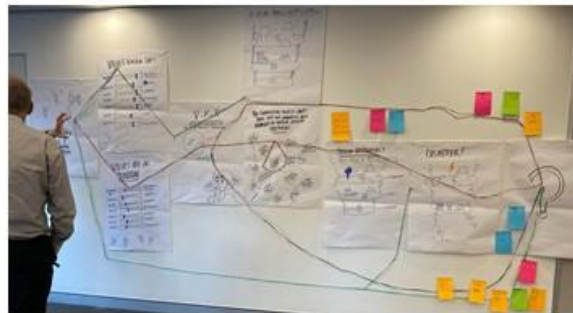At an average the participants believed their tools were delivering:

1. **Doing the same – 50%**

2. **Doing better – 30%**

3. **Doing differently – 20%**

There was strong agreement that even though there is a recognition that we need to "do things differently", only very few of the existing approaches and tools are fit for this purpose.

Towards a harmonised approach

Participants were introduced to three possible design solutions to governance. After the presentation in table groups participants were asked three questions:

- Is there an appetite for a harmonised approach to resilience for Queensland?

- What are the 3 most important things a harmonised resilience approach should achieve? Why?

- What are the features you want in a harmonised approach to resilience?

They reported back their thinking to begin building what a harmonised approach would look like for Queensland.
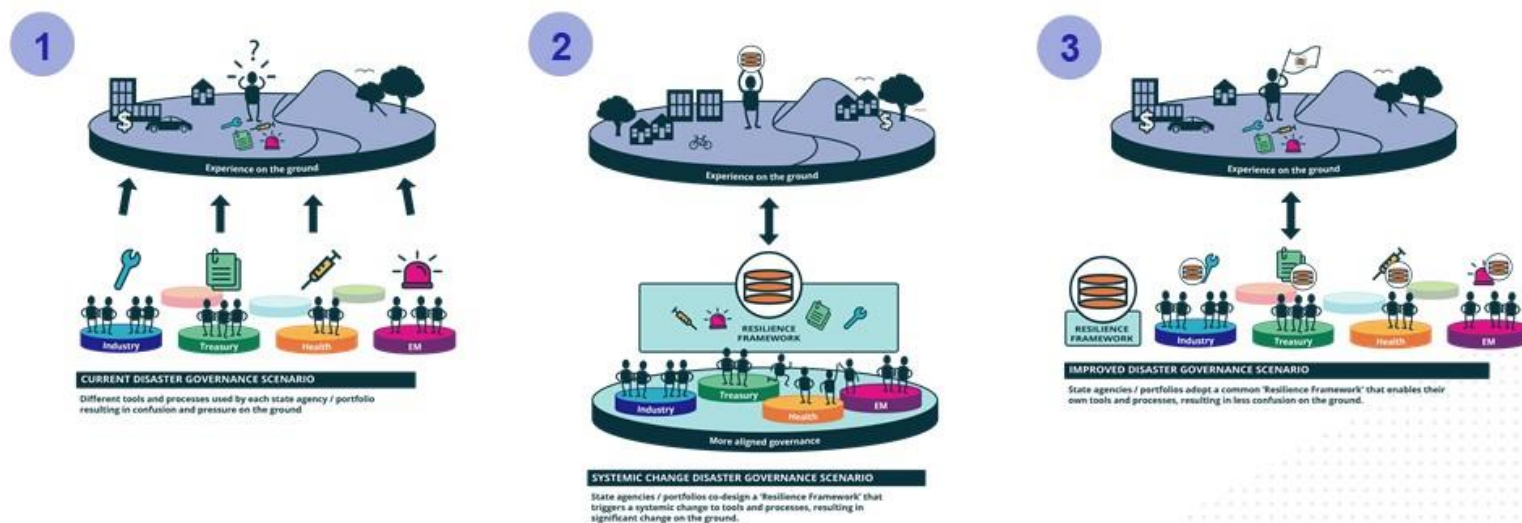
Harmonised approach summary

1. Is there an appetite for a harmonised approach to resilience for Queensland?

There is appetite for a harmonised approach that:

- Contextualises to the multiple different constraints

- Gives a baseline to approaches, language, minimum standards and a common dominator to work from

- Gives considerations to regional / lifestyle different and takes a place based approach

- Gives guidance at the high-level and clear departmental agenda

- Gives the individuals capacity and empowerment to to address challenges and be champions

- Delivers activities and feasible implementation pathways

2. What are the most important things a harmonised resilience approach should achieve?

- A shared vision and common multiple objectives for whole of government

- Identified pathways to implement and measure risk that are feasible

- Perceived fairness (not equity), shared capability and capacity enhancement to deliver

- Opportunities for time to collaborate on shared approaches and solutions

- Balanced outcomes for social, economic, technology and environmental

- Decreased risk to life and property

- Enduring communities that see outcomes

- Stop addressing symptoms and talk about causes

3. What are the features you want in a harmonised approach to resilience?

- A shared vision and understanding of outcomes

- Shared tools to measure current level of resilience, approaches and to prioritise

- A continuous team to design projects, research and ready to implement with funding

- Enables cultural change

- Shared accountability and capability

- Aware of political (national, state, local, organisational) agendas and influences

- True collaboration

- Transparent

- Address systemic causes and constrains (accountability / governance / values)

- Data collection and measuring

- Investment model aligned

- Community engagement

Harmonised approach in detail – Table 1
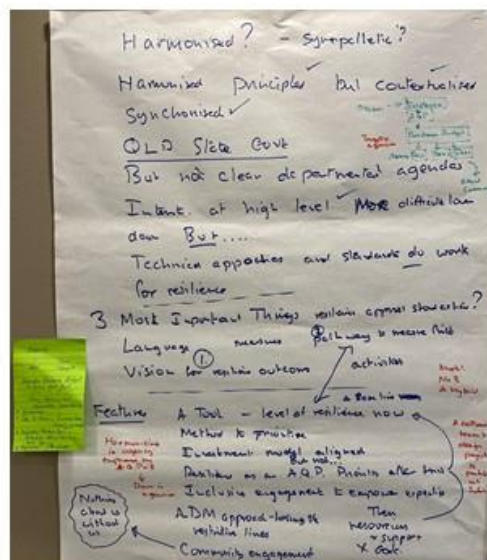
What does harmonised mean?

Harmonised principles that can be contextualised and synchronised

QLD State government

- But no clear department agendas

- Intent at high-level but more difficult lower down BUT technical approaches and standards do work for resilience

Most important things for a resilience approach

1. Vision

2. Pathways to measure risk

3. Language

4. Activities

Features

- A tool to measure level of resilience/risk and pathways forwards with resources and support from government

- A continuous team to design projects to research and implement with funding

- Method to prioritise

- Investment model aligned

- Resilience as an A.Q.P (do priorities after this)

- Inclusive engagement and empower expertise

- ADM approach losing the restrictive lines

- Community engagement – nothing about us without us

Harmonised approach in detail – Table 2
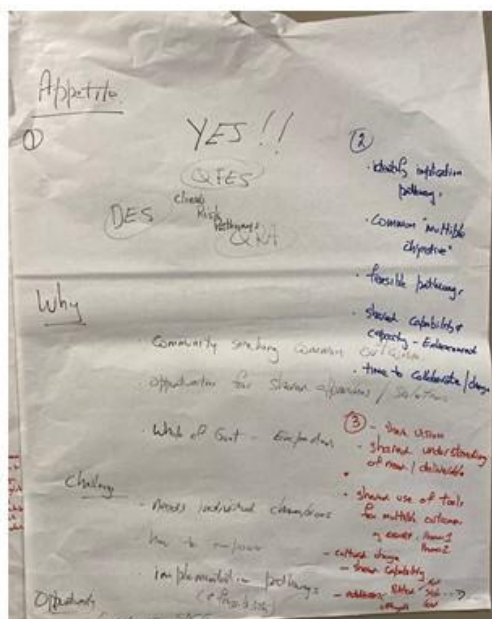
1. Is there an appetite for a harmonised approach to resilience for Queensland?

Appetite yes!

Challenges:

- Needs individual champions
- How do we to empower people?
- Implementations pathways (and feasibility)

Opportunity

- Co-old Vic SDCG

2. What are the 3 most important things a harmonised resilience approach should achieve?

- Identify implementation pathway
- Common 'multiple objectives'
- Feasible pathways
- Shared capability & capacity – enchantment
- Time to collaborate

2.2 Why?

- Community seeking common outcomes
- Opportunities for shared approaches and solutions
- Whole of government expected

3. What are the features you want in a harmonised approach to resilience?

- Shared vision
- Shared understanding of need / deliverable
- Shared use of tools for multiple outcomes e.g. QRMRE: processes 1 & 2
- Cultural change
- Shared capability
- Addresses political (National, state and local) and organisations

Harmonised approach in detail – Table 3
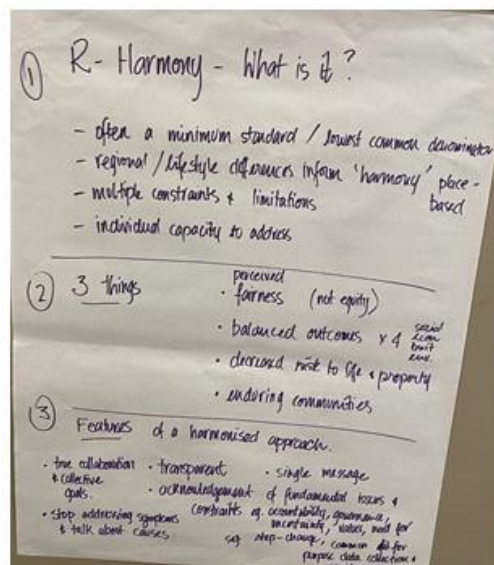
1. Is there an appetite for a harmonised approach to resilience for Queensland?

Harmony what is it?

- Often a minimum standard and lowest common dominator

- Regional / lifestyle difference inform 'harmony' and is place based

- Multiple constraints and mitigation

- Individual capacity to address

2. What are the 3 most important things a harmonised resilience approach should achieve?

- Perceived fairness (not equity)

- Balanced outcomes for social, economic, tech and environmental

- Decreased risk to life and property

- Enduring communities

3. What are the features you want in a harmonised approach to resilience?

- True collaboration and collective foals

- Transparent

- Acknowledgment of fundamental issues and constraints e.g. accountability, governance, uncertainty, values and need for significant stepped change, common fit for purpose data collection and monitoring

- Stop addressing symptoms and talk about causes

Harmonised approach discussion quotes

"Implementation of existing approaches and tools – the key breaking point is collaboration. It's in the true sense of what collaboration should be: mutually beneficial outcomes, looking for synergy between work and how can they inform/input into other's work. Sometime it works functionally and sometimes it doesn't."

"There is to much going on to use any of this stuff – it's another one, another one, another one… If we really want to do something, we need to make more time and how can smart people work together to solve some of these things?"

"Data and measurement – collective knowledge it's kind of chook's breakfast and needs systematic collective and baseline."

"How do we future proof this alignment with government?"

"Drought pulls us together and pulls the skills and funding together. We know what do do – because it's drought. But for other disasters there isn't anything else."

"What does resilience mean to different people? Drought is a great example: resilience means different things to them than a small town who's been flooded."

"Collaboration isn't everyone agreeing on something, we have to collectively WORK towards a common goal."

"How do we make sure it doesn't become like the innovation agenda? Which had a big push and now it's become apart of the business – instead of focusing how what why we are doing it."

Actions to take forward from today

Reconcile the approaches of

- 'specified' resilience ('of what? To what?' Which is similar to risk assessment, or 'avoiding bad things') and

- planning for a desired futures/goals/visions, in a way which is robust to a range of possibilities ('general' resilience).

Important because the different agencies in the room are more focussed on one or the other. A more general approach to resilience (decoupled from 'disaster resilience' can bring them together.

Look at pathways to high level values shifts in context of growth and settlement strategy (a new initiative). Look for coordination and optimisation with emerging and new regional initiatives. Take a regional case-based approach.

Articulate a vision of the future that people can sign onto. Which needs to be a priority of every department to establish a baseline of where their resilience is at and set targets relative to that baseline.

Use foresighting and scenarios to encourage thinking differently for ways to encourage investment.

Evaluate current approaches, frameworks and tools – where are they on the bridge? What desired characteristics do they have? Which pathways are they reinforcing? Are there gaps or will they do the required job to meet 'demand pull'?

Clarify the collective purpose and get Treasury and Premier's (and other partners) in the room.

Write up syntheses and lessons from this workshop to provide briefing to all participants, including next steps and a clear expression of need and vision.

Identify specific vehicles for working together e.g. pilot and prototypes.

Agencies to send framework/tools documents to CSIRO for review.

Define the pathway to coordinate existing tools and their implementation.

"I have this analogy of this sick patients that we're at diagnosis level – no wonder we have a different view on tools and if they cut the mustard because we don't know the need or the opportunities."

"As a collective we can't address the challenge/opportunity until we can go there is a commonality to our thinking. The pathway and tools will take their place and measure will take their place and organisation will take their place after that."

"There are missing people in the room: Treasury, Premier's, policy, strategic – the central agencies are critical and they need to be in the room."

Closing comments

CSIRO closed the workshop thanking participants. Enjoying how they have had built their networks and created a safe space to begin discussing below the surface.

CSIRO workshop team

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A.3   Appendix Conversation Tracker from 3 June 2020 online workshop

Where are we in the process?

Interviews and research
June 2019 – December 219

Harmonising Resilience Approaches Workshop
20 February 2020

Harmonising Resilience Approaches Concepts Workshop
3rd June 2020

Final Report Delivery
Deadline: 30th June

Introduction

In February this year, CSIRO and ThinkPlace hosted the 'Harmonising Resilience Approaches Workshop' as part of the project being undertaken with the Queensland Reconstruction Authority (QRA) to find pathways to harmonising a state-wide approach to resilience.

This co-design workshop saw stakeholders come together to explore the potential need for, benefits of, and opportunities from a harmonised approach to resilience, and what a potential 'resilience framework' delivering a state-wide approach to disaster resilience might look like.

We invited participants of that workshop to reconvene for a second co-design session: the 'Harmonising Resilience Benchmarking Workshop'. This workshop was designed to check-in on our progress against the outputs of the first workshop, and collaborate to conceptualise and provide input to drive forward a harmonised approach to disaster resilience in Queensland.

Purpose of this document

The purpose of this document is to capture a synthesised summary of the conversations and activities that took place during the co-design workshop held on 3rd June 2020.

This workshop was hosted by CSIRO for the Queensland Reconstruction Authority (QRA) to being developing a state-wide approach to resilience.

Please note that this document does not capture the conversation verbatim, rather it presents a snapshot of key discussion points and activities.

Opening session

Deborah O'Connell opened the session by summarising the work done in the previous workshop and progress made since then:

1. Participants of the previous workshop held in February provided clear feedback that that yet another resilience tool was NOT what was needed, but indicated that evaluating and harmonising current approaches and defining gaps would be more useful in achieving harmonised approaches.

2. The framing of the prototype concepts was contextualised as being underpinned by systems thinking and a continuous learning mindset. The concepts needed to communicate;

   - how to make robust interventions in the system

   - how to persistently adapt or transform ways of working

   - how to be better prepared in dealing with uncertainty

   - and how to meet sustainability goals and deliver values into the future.

3. Building on the idea of creating a tool to evaluate and harmonise approaches to building resilience, CSIRO have created a check-list approach for users to evaluate their approach against benefits sought by policy goals of 'resilience'.

On the day, a smaller group of people had convened to develop the prototype messages and tools. The current session's focus was on testing and modifying these prototypes.

Quotes captured during the discussion post the opening session

What resonated strongly?

The narrative works; the values to rules analogy is a good one. The values are a critical aspect when considering options. That brings in a wider society question.

The narrative of thriving communities, economy, ecosystems, and regions are resilient to disruption works for me.

Some questions and comments

I think the resilience narrative has limitations in the context of climate adaptation and transition - it inevitably draws the discussion back to 'bouncing back' from transient events/shocks/disruptions rather than adapting to permanent state changes from which bouncing back is not possible.

Is there an opportunity to highlight that all stakeholders are required to participate for success (private and public sectors, communities, etc.

Currently the language is very complex and needs detailed explanation, it needs to be simplified to speak to diverse audiences.

The list of criteria / principles / desirable attributes of the approaches and processes and objectives of resilience is great. But to fulfil all of these will be demanding on resources (time, money, capabilities). So how does one prioritise amongst these and what are the trade offs between them? Is this something the harmonisation framework will help with?

The idea of doing differently does resonate but how will governments respond given the pressure to jump start the economy ?

The tool concept is a good one - however, if you're not a risk management specialist may be difficult to know what to assess and/or where to access a better approach?

Feedback across all three diagrams

We heard that delivering resilience strategy will need holistic evaluative approaches that involve systems thinking that is place-based. Elements of this communication are spread across the three diagrams and will need to be pulled together into one diagram. This slide outlines the elements and communication the participants would like to see in future versions of the diagram.
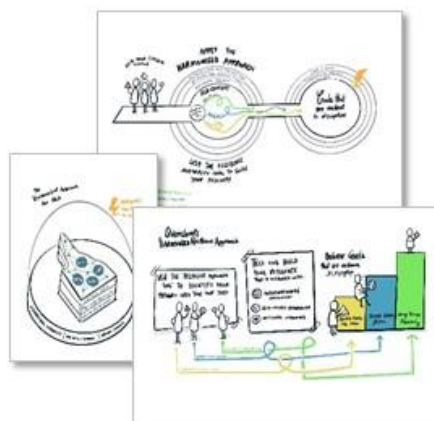
1. **Participants want a clear representation of the what the harmonised approach for building resilience in Queensland entails and the role of the harmonisation maturity tool plays.** Participants would like the diagram to reflect that the approach is locally-led, regionally co-ordinated as well as the approach's relationship with international, Asia-Pacific and national efforts to build resilience. They wanted the representation of the harmonised approach to reflect it's alignment with other projects, materials, other Australian states and local contexts. The role of harmonisation maturity tool needs to be illustrated within the above context.

2. **While the three pathways were comprehended clearly, participants wanted more clarity about what the journey and outcomes of those pathways would imply.** All participants agreed that the diagram needed to represent different outcomes based on the three pathways: 'doing things the same', 'doing things better' and 'doing things differently'. Participants were split on whether they wanted they wanted to depict hierarchical differences between the three pathways because based on one's context, 'building back the same' could be the most suitable option. They pathways were currently delineated and would like to see the ability to transition between pathways visually represented.

3. **Depiction of people and consideration of place-based context needs to communicated strongly for users to identify themselves in the diagram.** Participants thought end-users and the role of their place-based contexts with regards to building resilience was absent. Users could be on varied journeys based on how long they have been working to build resilience, their level of risk, whether they have been impacts by a disaster in the past, etc. These factors have a key role to play on what tools, approaches or pathways are suitable.

4. **Increased information prioritisation.** The participants thought that the diagrams were busy and key messages need to be fortified. Language around what we mean by 'harmonised' and 'maturity' need clarification to ensure clear comprehension.

Detailed feedback for concept 1

This concept received most appreciation amongst the three concepts presented. It was seen to a be the winning concept to be used to explain Queensland's Harmonised Approach to building Resilience and communicated the role of the resilience maturity tool within that approach.
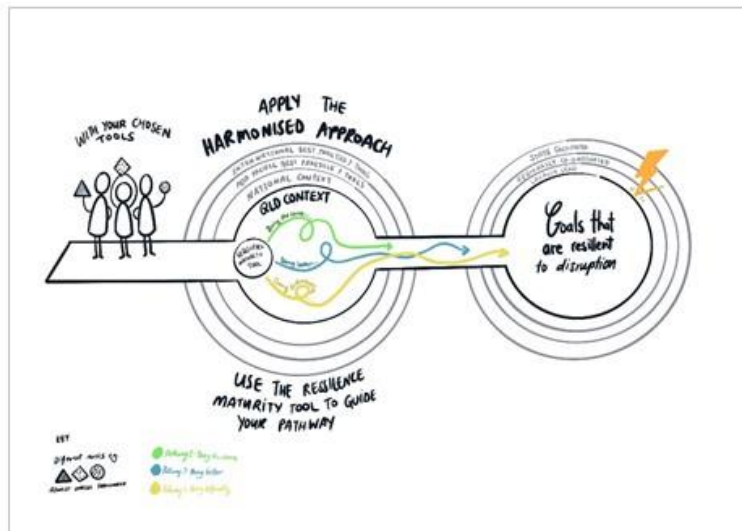
Elements and communication that resonate:

- The connecting panels between the two concentric circles were interpreted as a bridge/seesaw or as a plank in balance. Participants appreciated this representation as it communicated resilience as a journey/a pathway to a goal and the need for a balanced approach. Participants voiced a need for this element to be represented more strongly and with more clarity.

Elements and communication that need improvement:

- The first set of concentric circles were a cause of confusion to many for different reasons. Some have interpreted there to be a hierarchy amongst the various approaches to resilience.

  Others question the relationship between multiple approaches and Queensland approach and wonder if they have provided support to build Queensland's harmonised approach or needs to be referenced to build resilience.

- This concept doesn't depict different outcomes for those on different pathways.

"That the mess in the middle is teased out to provide the optimum outcome through the maturity tool."

"The tool doesn't tell me what outcome should be more aspirational, just helps me to get there."

Detailed feedback for concept 2

This was the least favourite concept amongst the three as it was missing the pathways to resilience and the resilience maturity tool. Participants appreciated the depiction of how Queensland's Harmonised Approach to resilience would play out at the local level.
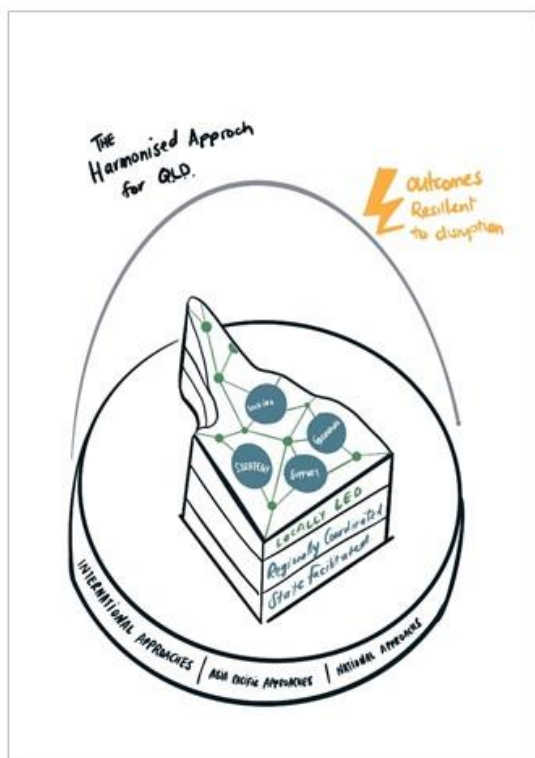
Elements and communication that resonate:

- The diagram communicates resilience-building as locally-led and depicts how it will play out at a grassroot level. The criss-crossing lines is perceived as interconnectedness in Queensland.

- The base of the diagram communicates the resources and approaches that Queensland's approach is being built on.

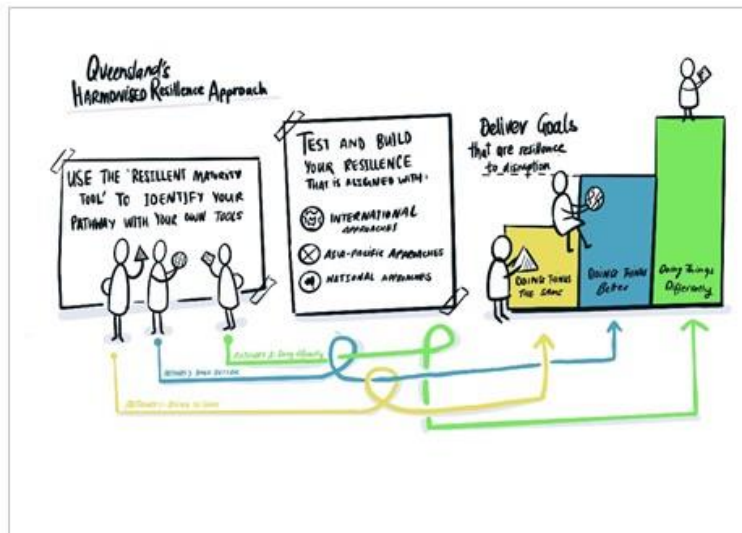**Elements and communication that need improvement:**

- The diagram shows Queensland to be isolated and disconnected from the rest of Australia.

- It doesn't depict pathways to resilience or the resilience maturity tool.

- The lightening bolt is unclear and needs further clarification to explain what we are building resilience against.

"We like to think we are in our bubble, but we are not. Covid has shown us we can't be isolated.."

"Best point is the layers of locally led, regionally co-ordinated and state-facilitated but doesn't provide much information on the approach"

Detailed feedback for concept 3

This concept was to best communicate Queensland Harmonised Approach to Resilience building and the use of the Resilience Maturity tool within that. The linearity, clear three steps, support from text and a varied outcomes for each pathway were elements that contributed to the clear communication

Elements and communication that resonate:

- The depiction of people communicating before picking their pathway was perceived as collaboration

- The process approach: The depiction of individuals using different tools to take them down their pathway as well as drawing on other approaches to inform their journey resonated with participants.

Elements and communication that need improvement:

- Participants thought it was important to showcase that you could move between paths on your journey as this diagram seems to depict three very distinct journeys.

- The depiction of increasing one's resilience threshold wasn't easily understood by everyone and seems to have taken some discussion to communicate clearly.

- This concept doesn't represent how this approach will unfold at a local level.

I think it is important to illustrate that users of the tool can diagnose what pathway they are on and that they can also use this tool to change this pathway if they want to.

The clearest because it tells you the difference between goals at the end.

ThinkPlace

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