Resilient Sydney
Discovery Area Diagnostic Report
V3.0 | 05 July 2017

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1.0   Introduction

The following paper is designed to document the process of the Discovery Area Working Group workshops and highlights key inputs from these sessions that have informed the Field of Opportunities (FOO) for the Resilient Sydney Strategy. It also summarises the process undertaken to review the four Discovery Areas and:

- Understand how the city is performing and/or identify concentrated risk and vulnerabilities

- Understand and document gaps in knowledge, collaboration or challenges within the Discovery Areas

- Advance research, strategic thinking or technical studies fundamental for advancing the city's resilience understanding

- Evaluate options to build resilience through integration and interdependencies

Figure 1 highlights how the input from the Discovery Area Working Groups is being used to inform the final strategy.
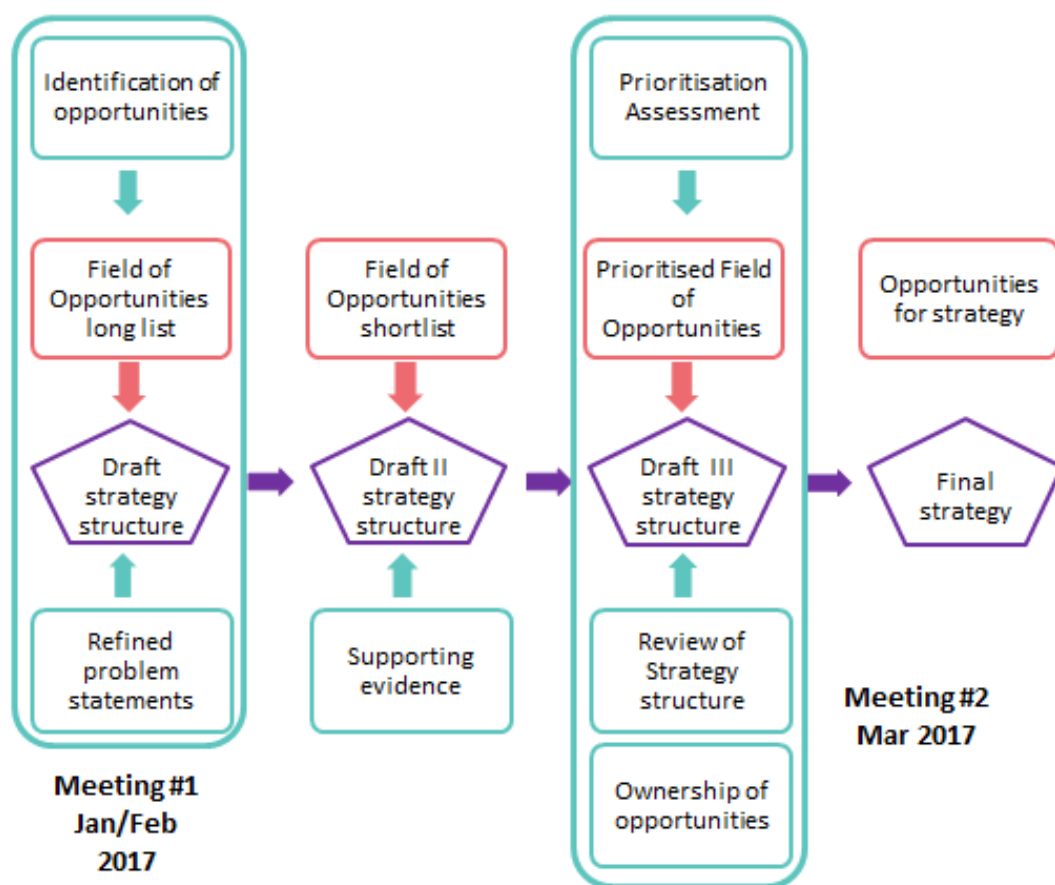
Figure 1 Input from Discovery Area Working Groups

1.1 Phase II reporting

Engagement with the Discovery Area Working Groups, stakeholders, and community has been undertaken in accordance with the Resilient Sydney Phase II Engagement Strategy (23/08/2017). The outcomes of the engagement process has been summarised in the Resilient Sydney Engagement Report (May 2017). Figure 2 summarises the Phase II reporting and the relationship between the engagement report and diagnostic report.

The diagnostic report describes the process used to explore each Discovery Area, cross Discovery Area analysis, and how opportunities for the Field of Opportunities were identified. The key outputs of the diagnostic report include the draft goals, the field of opportunities, and the cross discovery area analysis.

Figure 2 Phase II reporting

The engagement report summarises the Phase II engagement process and documents the outcomes of the community and stakeholder engagement. The engagement report describes key themes and priorities identified during engagement which have informed the strategy vision, goals, and actions.

2.0   Working group Meeting #1

2.1   Background

Figure 3 Resilient Sydney project team (L), from left to right: Adam Davis, AECOM; Rebecca Miller, AECOM; Beck Dawson, Chief Resilience Officer, Resilient Sydney, Suzanna Remmerswaal, AECOM; Sam Kernaghan, 100 Resilient Cities; and Members of the City of Opportunity working group (R)

Resilient Sydney hosted key stakeholders at four, full day workshops examining the resilience challenges facing Sydney. A total of 90 participants representing 70 organisations contributed to the Discovery Areas Working Group sessions that sought to explore the discovery areas identified in the Preliminary Resilience Assessment (PRA) - *How Sydney Works; Adaptive Sydney; Identity in Diversity* and *City of Opportunity*.

Workshop participants comprised 11 representatives from local councils; 20 representatives from NSW state government; 1 representative from federal government; 21 representatives from private businesses; 15 representatives from education and research organisations; 18 representatives from non-profit and advocacy organisations; and, 3 representatives from key utilities / infrastructure providers (refer Appendix A).

In alignment with Resilient Sydney's engagement principles, priority was given to ensuring attendees were as diverse and influential as possible. Each Discovery Area Working Group was overseen by a member of the Resilient Sydney Steering Committee to encourage and ensure cross Discovery Area issues were considered during the engagement process.

The following steering committee members contributed across the four sessions:

*   **How Sydney Works**: Jacki Johnson (IAG)

*   **Adaptive Sydney** : Alan Stoneham (Penrith City Council), Mark Ferguson (Northern Beaches Council)

*   **Identity in Diversity**: Robert Tickner (Australian Business Roundtable for Disaster Resilience and Safer Communities), Meredith Wallace (Bayside Council)

*   **City of Opportunity**: Sam Kernaghan (100 Resilient Cities), Danny Rezek (Deloitte).

Stakeholder feedback confirmed participants valued the interactive activities and diversity of the various workshop groups which included business, service providers, first responders, local and state government, academic institutions, and community organisations.

The following objectives were established to guide each of the working group sessions:

*   Create connections,

*   Building resilience capacity and understanding of resilience,

*   Developing resilience goals for each Discovery Area for input into the strategy, and

*   Identification of opportunities to build resilience within the Metropolitan Sydney context.

Figure 4 Interactive and engaging sessions at Working Group Meeting #1

The workshop sessions were structured around key engagement activities with a summary of the agenda and activities outlined in Table 1.

Table 1 Discovery Area Working Group: Workshop Agenda and Summary

Agenda Item	Summary
Truly madly, deeply Metropolitan Sydney	The morning sought to set the context for the day and provide participants with an appreciation of the spatial representation of key functions across the city and trends shaping its ongoing growth and development. Three activities shaped the first session:
	- Introductions were led by participants sharing their 'selfie-with-a-stranger' an activity that encouraged participants to take a photo with a stranger in Sydney and explore who they were, what they do, where they live and what they see as challenges facing Sydney.
	- Participants were then asked to 'place' themselves on a map traced out on the floor of the workshop room and go through a series of tasks encouraging them to move from where they went to school, went to work, where they live and where they socialise. The aim was to demonstrate how 'tribal' Sydney is with work concentrated in the east and people often staying close to the areas they live in for recreation rather than venturing to other parts of the city.
	- Participants then formed 'BBQ Teams' to discuss the top 3 – 5 issues that would generally be discussed at a BBQ with friends and family. This sought to unpack the hot topics that people are talking about with regards to Sydney.
	Following the final activity, the group reconvened to explore the correlation of trends/topics raised during the 'BBQ' with the mega trends uncovered in the Resilient Sydney Preliminary Resilience Assessment (PRA). This portion of the agenda also sought to present and review the shocks, stresses and vulnerable assets identified as shaping the city through the PRA.

Figure 5 Selfies with a stranger at Working Group Meeting #1

Figure 6 Participants placing themselves on the 'map' of Sydney, Working Group Meeting #1

Agenda Item	Summary
We have short memories and rose coloured glasses	Contextual information exploring some of the historic shocks, stresses and events shaping Sydney to-date was presented along with an excerpt from Michael Berkowitz's City Talk from November 2016 highlighting how stresses underpin and supercharge shocks, and also how often the events that hit aren't the ones you plan for (e.g. New York planning for a hurricane and instead experiencing plane crashes, terrorist attack and anthrax outbreak before that happens).
	Participants were asked to consider and share their experience of shock events – in either a personal or professional context – and explore what those events taught them and consider what they might do differently next time.
	A series of case studies were shared highlighting the impact of different shock events relevant to each of the discovery areas. Participants were encouraged to consider how the shocks might play out in Sydney, and how we would prepare and respond.
	Finally participants were asked to share their knowledge of the city, and specifically identify the range of secrets; blind spots; and sensitivities the Resilient Sydney team should know about in the context of developing the strategy. This activity sought to uncover those things that the Resilient Sydney team may not have previously considered in developing the PRA or City Context Report; the things that don't work in the city but nobody talks about, and the barriers and blockers to progress. In addition participants were asked to share their 'soap box' issues, providing a chance for them to air grievances or issues they think challenge the capacity and ability of Sydney to respond to its various resilience challenges.
Seeking the resilience dividend **– Resilience 101** - Discovery area review - Direction of travel	The afternoon started with an introduction to resilience theory and the 100 Resilient Cities (100 RC) process (Resilience 101). This was complemented by a detailed review of the challenges facing each of the discovery areas. Participants worked individually or in groups to draft goals for the city to respond to the challenges and embody resilience behaviours. They stuck the goals on posters displaying the dimensions within the 100RC CRF – leadership and strategy, health and wellbeing, infrastructure and environment and economy and society
	The Resilient Sydney team undertook a high-level categorisation exercise to sort the goals into groups/themes and participants were then asked to assign votes to the most important goals.

Figure 7 Working group members prioritising goals, Working Group Meeting #1

Agenda Item	Summary
Opportunities and the resilience dividend	The final session focussed on exploring the resilience dividend and relevant case studies evidencing how the resilience dividend had been realised in other 100 RC cities.

Participants were asked to work either individually or in groups to complete a series of Field of Opportunity (FOO) worksheets. The worksheets gave clear criteria to guide participants as they developed opportunities. These included questions asking if the opportunity were a policy or strategy; action or program; goods or service etc.; the number of people likely to benefit from the initiative; what the project will give e.g. access to health care; the timeframe for delivery; the area of the city the opportunity will benefit and the shocks, stresses, assets, megatrends and CRF dimensions the opportunity would address.

The final portion of the event outlined the next steps of the engagement process (multi-stakeholder workshops and community engagement sessions) and the second workshop. Participants were encouraged to provide feedback and continue to think about and suggest opportunities. Participants were also asked to evaluate the workshop and give suggestions for improvement. This feedback was used to refine subsequent workshops. |

A breakdown of the number of participants across each of the working group sessions is in listed in Table 2. A breakdown of the organisations represented across all four sessions is included in Appendix A.

Table 2 Participation Summary

Working Group	Date	Participants
How Sydney Works	30 January 2017	21
Adaptive Sydney	17 January 2017	27
Identity in Diversity	19 January 2017	18
City of Opportunity	1 February 2017	25

3.0   How Sydney Works

3.1   Resilience challenges, context, and areas for exploration

Drawing on the Resilient Sydney PRA findings and the City Context Report, a discovery area working group focussing *How Sydney Works* was convened. The following set of resilience challenges were identified for this Discovery Area.

How Sydney Works

- **The network of people and services we rely on are often invisible** – we don't think about it much, but almost everything we rely on needs continuous energy supply, internet access and fuel supply. And we need our families, neighbours and friends to feel happy, healthy and part of a community.

- **Especially those we depend on in a crisis** – but when the bad day comes we suddenly realise we are all connected. We need our neighbours to notice if we've evacuated our homes, our phones to call our kids, our air conditioning to work in a heatwave, our trains to get us home and our food to continue to be supplied to our city on trucks, tankers and planes.

- **And crises are increasing in our city** – storms, heatwaves and bushfires are becoming more frequent and more intense. Like cities all over the world we face risks from cyber-attack, disease pandemic and civil unrest. Our future is uncertain.

As highlighted, this discovery area recognises and examines the complex set of interconnections and dependencies across metropolitan Sydney and seeks to respond to the key question of '*how can we understand the connections between our critical systems to manage uncertainty and productivity in our city?*'

The issue of understanding and managing connections in critical systems is further explored by considering:

- Where does our food, water and energy come from? Where does our waste go?

- What are the links and weak points in critical systems and services? These include energy, waste, transport, ecosystem services (air, water, green space, biodiversity), social systems, governance, economy and global supply chains?

- How can Sydney businesses, government and communities better understand vulnerabilities and opportunities?

These questions are particularly pertinent when viewed in the context of the data and statistics for Sydney that reveals:

- Only 20% of Sydney's food comes from the Sydney basin[1]. That means 80% of our food comes from somewhere else, on trucks, ships and planes (often from overseas).
- Trucks, ships and planes (and cars) need fuel to function. 90% of our fuel is imported from the Middle East. If fuel supply were disrupted it is estimated Australia's national reserves would only last 12 days[2].
- We also need continuous electricity supply for air conditioning, lighting, heating, cooking etc. as well as the internet, communications, water supply, waste services. In fact, almost every service we rely on every day needs electricity to function[3].
- This is true of almost every part of our economy – take financial services for instance. Financial services are our strongest sector and 75% of all foreign and Australian banks have their Australian headquarters in Sydney[4]. Financial services need continuous internet function (which needs continuous electricity) to operate.
- We also need internet and communications technology to respond to crises and stay safe – to call our families, call for help and so on.

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[1] www.sydneyfoodfutures.net
[2] ABC, 2014 How long could Australia last if oil supplies dried up
[3] NSW Office of Environment and Heritage, 2014, Towards a Resilient Sydney Urban Adaptation Research Synthesis
[4] Regional Development Australia, 2016, Economic Profile

- The Sydney electricity network is very reliable but heatwaves and storms pose big risks. Extreme weather is the main cause of electricity network failure.
- Wild storms disrupt the network. In heatwaves everyone uses their air conditioning and refrigerators work overtime. Demand soars and the network starts to fail.
- We are experiencing extreme weather more often and with greater intensity[5].
- Breakdown of ICT and cyber-attack have been identified as some of the biggest risks facing Sydney[6].

3.2   Discovery Area Working Group Workshops

As part of the process to explore the Discovery Areas, the *How Sydney Works* Working Group workshop was held on 31st January 2017. It was attended by 21 participants representing a range of public and private organisations, government, and community groups (refer Appendix B). The following summarises the findings and inputs uncovered during the session.

3.2.1   Secrets of Sydney - place based examples & themes

An activity to review and identify additional contextual information was held. The session sought to tap into the personal experience and knowledge of the workshop participants to identify potentially new secrets, sensitivities and blind spots that may impact how *How Sydney Works* is dealt with as the strategy develops. The following summarises the outputs of the group feedback session.

Consolidated feedback:

- There is a lack of alignment between political and practical planning timeframes. There is often a feeling of being hamstrung by political cycles.

- While it is important for a community to know what to do and when, we feel unable to discuss weaknesses "for the knowns". We often group responses and planning by industry sector rather than operating entities. For example it would be beneficial for the water sector to collaborate with others to deliver integrated infrastructure that considers water, emergency services and other relevant stakeholders together.

- Information is a barrier on a number of levels:
    - Information is not shared or made available to enable better planning - it doesn't matter how useful information is, many organisations don't want to put out information that will lead them to be seen badly.
    - A lot of information comes out in a format that is too complex to respond to so action is stymied.
    - We aren't good at identifying the things we don't know and 'fessing' up to our short comings.

- Utilities and agencies have a larger contingency for failure than realised e.g. Sydney Water has a good level of contingency across the network.

- We need to build trust across organisations and stakeholders if we want to enable action.

- The inflexible application of rules that are applied everywhere are dangerous when we don't unpack issues relevant to place.

- We need to explore what is the role of private business in protecting public infrastructure and assets?

- When we assess cost benefit as part of funding applications, we don't look at resilience factors and externalities well. We just transfer the risk to others, it's hard to put a dollar value on external impacts but they have a significant impact.

- At 'Request For Tender' stage proponents should be asked how projects enhance the city's resilience. How does your solution add to and enhance our city's resilience?

- We need criteria for assessment.

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[5] CSIRO and BoM, 2015, Climate Change in Australia and NARCLiM, 2016, Metropolitan Sydney Climate Change Snapshot
[6] Resilient Sydney, 2016, City Context Report

- Need to consider the cumulative impacts of risks to certain areas and then balance with trade-offs – development planning etc. E.g. we are geographically locked into the location of certain assets (the CBD) and potential vulnerabilities (Warragamba Dam)

Based on the above, three core themes emerged to guide areas of further exploration for How Sydney Works:

1. **Collaboration** – organisations, agencies and stakeholders having a better level of exposure to each other to support a joined-up decision-making process that addresses policy and planning cycles, supply chain interdependencies.

2. **Information** – collating, sharing, interpreting and accessing information to support informed decision-making and planning.

3. **Assessment** – we need to establish a mechanism for addressing resilience in planning and projects.

The majority of the workshop participants found it challenging to focus solely on their Discovery Area. During the sessions participants often provided feedback relating to the other discovery areas, a summary of those that were raised in *How Sydney Works* is included in Table 4.

Table 3 How Sydney Works - secrets relating to other discovery areas

Adaptive Sydney	Identity in Diversity	City of Opportunity
• The assembly point for the city is in a detention basin!	• We're not talking about how inclusive we really are as Australians. Do we know what resources exist in our communities?	• A fundamental change in high density living brings challenges that aren't being addressed
		• The inflexible application of rules that are applied everywhere are dangerous when we don't unpack issues relevant to place
		• Who are the trusted organisations that can create the connections in communities where people will come back?

3.3   Goals and Opportunities

The workshop was also used to identify a series of goals and accompanying opportunities to help evolve a response to *How Sydney Works* and inform development of the resilience strategy.

3.3.1   Working Group Resilience Goals

Participants were asked to brainstorm relevant goals to focus the development of opportunities for the relevant discovery area. Participants were asked to suggest ideas which were then categorised based on themes and then voted on to highlight those that resonated strongest with the group. A full list of the goals identified for *How Sydney Works* is captured in Appendix C. Of more than 60 goals put forward, the following represents the list of highest prioritised potential goals:

- Resilience built into our education curriculum.
- Carbon neutral by 2050 - already government policy (quick wins), already business cases supporting it, then can analyse and communicate wider benefits (e.g. fuel dependency).
- Community development that identifies how we are the "same" but also aid being comfortable with our differences (more social cohesion).
- Put a dollar value on resilience and redundancy.

While the above summaries the resilience goals as voted by the workshop participants, the following presents the general considerations discussed as critical to informing the corresponding goals.

- **Policies / standards** - Resilience assessment will be integral to all decisions in land use and social planning.

- **Collaboration** - a resilience network (formal and informal) should be established to enable sharing of information collaboration and better outcomes for our whole city.

- **Communications** - In an emergency, Sydney will function as a set of communities to convey information and make sure everyone is accounted for and looked after.

- **Education** – Resilience needs to be built into our education curriculum.

- **Climate aware** - Carbon neutrality – we already government policy, and the business cases we need to analyse and communicate wider benefits (e.g. fuel dependency).

3.3.2 Opportunities

The workshop also sought to identify specific actions and initiatives to inform the Resilient Sydney FOO. Analysis of the opportunities show that 50% of opportunities generated from all consultation[7] relate to *How Sydney Works*, opportunities directly related to power, water or transport failures comprise 46% of all opportunities identified.

The following provides a snap shot of the opportunities presented during the feedback session.

- **Anywhere work in Sydney:** aims to repurpose unused spaces in Sydney to set up flexible work spaces to support the revitalisation of unused assets and create linkages between hubs across metropolitan Sydney.

- **Resiliency Precincts:** the premise of the opportunity is to explore what is needed to create resiliency at a city level and then apply it at a community level with each street in a community addressing a different resilience characteristic that collectively would contribute towards a resilient precinct.

- **Integrated 3-D model of Sydney:** uses GIS and BIM to map critical assets and identify challenges and weaknesses across the city as a system. The model could be used for multiple purposes to support efforts to build resilience and preparedness.

- **Travelling Pot-Luck Market:** the concept is of a travelling market that showcases the best of different parts of the city – from places you may have never been and/or may never go. The markets would be aimed at celebrating cultures and identities across Sydney.

Section 3 provides further detail on how the process outlined to refine the opportunities for eventual inclusion in the strategy.

3.4 Spotlight: Business continuity planning & supply chain management

To test and review the PRA Discovery Areas and the issues explored in the City Context Report, a series of content development gaps were identified as part of the diagnostic review process. This section provides an overview of the issues relevant to the context of *How Sydney Works* and explores the issue of Business Continuity Planning (BCP) and Supply Chain Management. Specifically, the interdependent networks, supply chains and connections that underpin *How Sydney Works* and are of particular importance in times of crisis and shock were considered a crucial issue for exploration.

3.4.1 Business Continuity Planning

Planning and preparedness are critical steps in business continuity planning and disaster recovery. To understand the importance of Business Continuity Planning it is important to fist explore some key terminology related to its practice[8].

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[7] Consultation includes 4 x Discovery Area Working Group Workshop s; 4 x Multi-Stakeholder Workshop s; and, 6 x Community Engagement Workshops
[8] Sources:
https://www.isaca.org/Groups/Professional-English/business-continuity-disaster-recovery-planning/Pages/ViewDiscussion.aspx?PostID=72

Business Continuity Planning (BCP) is the process of creating systems of prevention and recovery to deal with potential threats to a company. Threats include any event that could negatively impact operations ranging from supply chain interruption, to the loss or damage to critical infrastructure (major machinery or computing /network resource).

Disaster Recovery Planning (DRP) generally relates to how an organisation's information technology (IT) should recover and is an important subset of broader BCP practice.

At a business level, identifying and understanding the relevant stakeholders in the supply chain is as critical as understanding how an organisation will remain functionality and operation in a shock event. At a community level, understanding how critical services and first responders will react in shock events is critical in managing disruption and panic in times of social unrest and distress.

Industry statistics show that over 40% of businesses that do not have BCP or DR plan go out of business after a major loss like fire, flooding or sabotage and that the survival rate of business with a DR plan is less than 10% (Interactive, 2011, p.4)[9].

While most organisations' BCP activities are held as commercial-in-confidence due to the sensitive corporate information they contain, there are a number of public sector responses that provide useful case studies and are helpful in identifying key considerations that should comprise BCP.

An essential element of all good-practice BCP activities is ensuring the plan is rehearsed and tested with training exercises often considered as a key determinant of success. On the 28th August 2016 a scenario to test emergency responses to a plane crash at Barangaroo was coordinated by NSW Police. The simulated event called on 700 emergency personnel to respond to the incident designed to test and replicate the pressures of a real life scenario.[10]

The drill involved a hypothetical plane taking off from Sydney Airport, sustaining damage and then crashing at Barangaroo with mass casualties. Every aspect of the city's emergency response was to have been activated in the scenario, dubbed 'Exercise Sydney CBD 2016'.

The simulated event scenario took 12 months of planning and involved 15 agencies including NSW Police, Fire and Rescue NSW, Roads and Maritime Services, paramedics, transport authorities, local councils, NSW Health's Disaster/Crisis department, Sydney Airport, air safety services and the Red Cross.

3.4.2   Supply Chain Management

As highlighted in the City Context Report, Sydney's reliance on supply chains is often under estimated and the city's level of preparedness and ability to respond when they are disrupted is a key area of vulnerability. The following profiles two global examples of supply chain interdependency and demonstrate how vulnerable businesses and communities can be when supplies are interrupted.

In June 2011, widespread flooding across Bangkok, Thailand brought a number of global industries to a standstill with supply chains interrupted for a number of major electronics and automotive manufacturers. Over 300 Japanese companies were affected by the disaster with car manufacturer, Honda forced to completely suspend production for 175 days at a major plant responsible for 5% of the company's global production. Honda lost 150,000 cars with impacts felt across Japan, Indonesia, Malaysia and the USA[11].

Another instance of supply chain disruption within the automotive sector can be observed in 1999 in the Sakarya Province in Turkey. A massive earthquake, measuring 7.6 on the Richter scale devastated the city and local region with 17,000 people losing their lives. Due to sustainable and resilient design approaches the local Ford plant was virtually untouched, however staff and supplies were unable to get in or out of the plant for months because the region's surrounding infrastructure – roads, rail and freight networks were completely devastated.

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http://www.cio.com/article/2439506/security0/business-continuity-and-disaster-recovery-planning-definition-and-solutions.html
https://en.wikipedia.org/wiki/Business_continuity_planning#cite_note-1
[9] https://interactive.com.au/upload/files/Interactive-Whitepaper-Business-Continuity-QLD_Floods-Mar2012.pdf
[10] http://www.smh.com.au/nsw/catastrophic-plane-crash-replicated-in-sydney-emergency-response-drill-20160827-gr2t2k.html
[11] https://www.cogitasia.com/economic-damage-of-thailands-flooding/ http://water.columbia.edu/files/2014/10/supply_chain_Thailand.pdf

4.0   Adaptive Sydney

4.1   Resilience challenges, context, and areas for exploration

Drawing on the Resilient Sydney PRA findings and the City Context Report, a discovery area working group focussing on *Adaptive Sydney* was convened. The following set of resilience challenges were identified for this Discovery Area.

Adaptive Sydney

- **Our weather is extreme** – Sydney is getting hotter and wild storms are increasing. Extreme weather is bringing people, buildings, infrastructure and the natural environment to breaking point
- **Our health is declining** – our increasingly sedentary lifestyles are compounded by a hot, noisy and polluted environment
- **And technology is changing our society** – transforming the way we understand, respond and plan our city

As highlighted, this discovery area explores the need to review and adapt city planning, the built environment and financing to cool and adapt our cities. It also talks to the fact that extreme weather events registered as Sydney's highest ranked shock and in particular the challenge posed by the need to adapting to extreme heat. These challenges are further explored by considering:

- How can our communities and critical infrastructure be better protected from extreme heat and localised flooding from storms?

- How can Sydney adapt to the impacts of a changing climate?

- How can we make Sydney more liveable, so we are comfortable in the heat and have clean water?

- How might business, government and communities collaborate to increase the adaptive capacity across our city?

These questions are particularly pertinent when viewed in the context of the data and statistics for Sydney that reveals:

Extreme weather:

- We are experiencing extreme weather more often and with greater intensity[12]
- The intensity of storms is increasing, our sea levels are rising and heatwaves, droughts and bushfires are becoming more frequent and more intense. These trends will continue to grow[13].
- Heat is our biggest risk. Heatwaves cause demands for energy, water and health services to soar[14].
- It is expected there will be an additional 79 deaths per year from heat stress by 2050[15].
- Western Sydney will be particularly at risk with an expected 5 – 10 additional hot days by 2030 as a result of rapid rates of construction[16]

Urban Heat Island Effect:

- Cities are often hotter than surrounding areas. This is because we clear vegetation (and shade) and replace it with buildings and infrastructure made of dark materials like bitumen, concrete and dark roofing materials.
- These materials cause the temperature to rise and radiate heat back into the atmosphere.
- Our growth areas are already hot because of the geography of Sydney, and the fact that there is no sea breeze inland.

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[12] CSIRO and BoM, 2015, Climate Change in Australia and NARCLiM, 2016, Metropolitan Sydney Climate Change Snapshot
[13] CSIRO and BoM, 2015, Climate Change in Australia and NARCLiM, 2016, Metropolitan Sydney Climate Change Snapshot
[14] NARCLiM, 2016, Metropolitan Sydney Climate Change Snapshot
[15] SMH, Lucky Cormack, 2016, Sydney Area an 'Urban Heat Island' Vulnerable to Extreme Temperatures
[16] SMH, Lucky Cormack, 2016, Sydney Area an 'Urban Heat Island' Vulnerable to Extreme Temperatures

- On average Parramatta experiences 13 days per year where temperatures are 35 degrees and over. The Sydney CBD experiences 4[17]
- The materials we use when we build houses in new parts of Sydney do not necessarily help people stay cool and comfortable in heatwaves.

Chronic disease:

- A hot, hostile environment makes walking and exercising impossible in our growth areas.
- Chronic and lifestyle diseases are increasing and are the highest cause of death in Sydney. Around 50% of our population are overweight or obese – 45% of people in the north and 55% of people in the west.[18]
- Western Sydney has almost 10% fewer hospital beds per 100, 000 residents than all the other parts of Sydney combined, and fewer staff proportionally. Yet there is higher demand, with higher rates of admissions in western Sydney[19].

Impacts of storms:

- Rainwater rushes along roads and hard surfaces into waterways during storms, taking pollution with it. If there were plants and soil more rainwater would be absorbed back into the ground.
- The sewerage system often overflows in storms, pouring into creeks, waterways and eventually the sea. This is because our water and waste water systems are old and parts of the network need to be upgraded.
- We will need really good water and waste water systems in our growth areas.

Technology:

- We rely on electricity supply every day.
- We also rely on information and communications technology (ICT) such as our phones and the internet. And ICT needs continuous electricity supply.
- Business needs electricity and ICT to function.
- We also need internet and communications technology to respond to crises and stay safe – to call our families, call for help and so on.
- The Sydney electricity network is very reliable, but extreme weather can still cause systems to crash.
- Extreme weather is the main cause of electricity network failure.
- Wild storms cause blackouts.
- In heatwaves everyone uses their air conditioning and refrigerators work overtime. Demand soars and the network starts to fail[20].

4.2   Discovery Area Working Group Workshops

As part of the process to explore the Discovery Areas, the *Adaptive Sydney* Working Group workshop was held on the 17th January 2017. It was attended by 27 participants representing a range of public and private organisations, government, and community groups (refer Appendix B). The *Adaptive* Sydney Working Group was the first of the four workshops held and the insights and feedback gained from the session informed refinements that were made to the structure of the remaining sessions. The following summarises the findings and inputs uncovered during the session.

4.2.1   Secrets of Sydney - place based examples & themes

An activity to review and identify additional contextual information was held. The session sought to tap into the personal experience and knowledge of the workshop participants to identify potentially new secrets, sensitivities and blind spots that may impact how *Adaptive Sydney* is dealt with as the strategy develops. The following summarises the outputs of the group feedback session.

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[17] SMH, Lucky Cormack, 2016, Sydney Area an 'Urban Heat Island' Vulnerable to Extreme Temperatures
[18] Department of Planning 2013, Towards a Resilient Sydney – Socio-Economic Profile.
[19] WSROC, 2012, Comparative Study of Health Services
[20] Resilient Sydney, 2016, City Context Report

Consolidated feedback:

- Our building stock is not constructed for heat and is reliant on connections to the energy grid to be comfortable. We have a concentration of Sydney's most vulnerable people living in its hottest areas.

- Much of our spending is directed towards keeping things the same (predictable) and not geared towards adaptation and resilience. We seem to observe a failure to learn and adapt – there's a propensity to maintain the status quo. We've known for a long time that heat is a particular issue for Western Sydney, that bushfire risk is increasing in areas like the Blue Mountains and that our coastal areas are vulnerable to events like the one in Collaroy last year, but what are we doing about it?

   - Legislative requirements impede change.

- How do you artificially induce social cohesion? If it's all about people and human connections in time of crisis, do we need an emergency response equivalent to RUOK day – is your neighbour ok?

- Sydney doesn't learn from other cities (or from its own past) – other cities face similar climate challenges but we're not looking at what they're doing and applying those lessons here.

- Key growth corridors for Metropolitan Sydney lie in the Hawkesbury/Nepean floodplain. We are already have 40,0000 people living in a flood catchment, we'd be unable to evacuate people in these areas currently and we're not addressing how this will be compounded by growth in this corridor – lack of informed planning decisions.

- There is a lack of understanding within the community regarding evacuation needs, do people know they're living in a flood catchment, do they know what to do in major flood event?

- Growth plans are not taking into account climate change, political leaders and even business are still climate deniers, or have vested in interest in not adapting. Climate change will continue to be a problem for legacy pollution hot spots such as Alexandra Canal and Homebush and prevent future uses of the waterways in these areas and the creation of a water sensitive city. An increase in rainfall events will cause legacy pollutants from areas such as these to be relocated into our harbour and creeks.

- We're not talking about what it will take or what it will cost to build national adaptation measures, we don't understand or consider these in our decision making. This lack of attention on a key issue means we're under prepared, our wastewater treatment plants are a key example of this, for instance the one in Manly is over capacity and reaching near critical points during an event.

   - Misinformation is an issue – decisions are made on facts not opinions we need to see informed decision making.

- We don't know how good we have it (in contrast to other parts of the world), and we don't understand why it's so good. Other cities have significant issues with poverty, racial inequity, and crime. We need to understand how we have it good, and why we have it good to ensure it stays good.

   - The city is getting worse though, in 15 years since I moved to Sydney I have seen the city get worse, and I've been questioning why certain decisions have been made.

- Why don't we focus on our strengths and the city's successes rather than focussing on the negative – that might provide a strong place to start?

Based on the above, three core themes emerged to guide areas of further exploration for *Adaptive Sydney*:

1. **Planning/Decision-making – informed decision making**: We need to learn from past mistakes and from other cities to inform future decision about planning and development. We need informed decision-making to influence future planning and policies.

2. **Adaptation**: We need to be better prepared, we need to be considering the projected impacts from climate change and understanding what and where we need to adapt to build resilience across the city.

3. **Governance**: The three levels of governance make things challenging and action is often stymied by following the status quo and not being will to adapt and change.

The majority of the workshops participants found it challenging to focus solely on their Discovery Area. During the sessions participants often provided feedback relating to the other discovery areas, a summary of those that were raised in the *Adaptive Sydney* session is included in Table 3.

Table 4 Adaptive Sydney - secrets relating to other discovery areas

How Sydney Works	City of Opportunity
• Sydney's governance structure is an issue and knowing who is responsible for what and whom does it benefit?	• We only have 2 daily newspapers – implications with how information is communicated and disseminated
• There are vested interests in resisting decentralisation	• Community consultation does not equate to community empowerment. There is a greater need for community empowerment to build resilience
• Sydney's capacity to support ourselves – self-sufficiency in terms of food, fuel, health, education is an area of vulnerability– we need to consider our supply chains	

4.3   Goals and Vision

The workshop also sought to explore a series of goals to help evolve a response to *Adaptive Sydney* and inform development of the resilience strategy for Metropolitan Sydney.

4.3.1   Working Group Resilience Goals

Participants were asked to brainstorm goals to focus action to address the discovery area challenges. A full list of the goals identified for *Adaptive Sydney* is captured in Appendix C. Over 50 goals were generated during the session with the following representing those considered to be of highest priority.

- We will change codes and regulations to acknowledge and therefore respond to future climate conditions

- Require resilience assessments prior to planning, development, or construction of all development

- Question economic and cultural assumptions – identifying, accessing data to inform and challenge

- Disclosure of energy performance of buildings and infrastructure assets.

4.3.2   Vision for the strategy

As the first of the four workshops held, the *Adaptive Sydney* session differed slightly from the remaining workshops with participants being asked to complete a Field of Opportunities (FOO) worksheet at their tables, or individually, and submit responses to the Resilient Sydney team, rather than sharing them with the group. Analysis of the opportunities shows that 43% of opportunities generated from all consultation[21] relate to *Adaptive Sydney* and of this, 46% (of all opportunities) addressed extreme weather events (heatwave, bushfire, flooding).

Instead of exploring the opportunities within the collective group, the session attempted to draw from the set of goals identified (refer Section 2.4.1 and Appendix C) to draft a vision for *Adaptive Sydney* that might be used in the strategy. The following presents the output of this activity.

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[21] Consultation includes 4 x Discovery Area Working Group Workshop s; 4 x Multi-Stakeholder Workshop s; and, 6 x Community Engagement Workshops

We will:

- develop innovative investment strategies to assist with the transition to resilience

- promote resilience assessments prior to any planning development or construction of any building or infrastructure

- change codes and regulations to reflect future climate conditions

- support or ensure that more private public partnerships are affordable

- by 2050 have net zero carbon electricity with up to 40% decentralised energy systems.

4.4   Spotlight: Heat and vulnerability mapping – review and best practice

To test and review the PRA Discovery Areas and the issues explored in the City Context Report, a series of content development gaps were identified as part of the diagnostic review process. This section provides an overview of the issues relevant in the context of *Adaptive Sydney* and outlines progress and best practice across Sydney as it relates to the issue of Heat and Vulnerability Mapping.

As identified through the City Context Report, heatwaves are predicted to have the greatest impact on people across the city in terms of mortality rates and hospitalisations. The exacerbation of heat impacts caused by Urban Heat Island (UHI) has been well documented with a number of research projects[22] confirming the linkages between urban canopy cover and vegetation in reducing temperatures within the urban environment. In particular, research into the spatial distribution of green infrastructure at the neighbourhood scale in Sydney has examined how a mix of landscape types (ranging from pavement through to grass and tree cover) affect the temperature around the home, in roads and footpaths and in parklands. The study confirmed that an increase in green cover correlates with reduced temperatures in these areas. The study also found that the availability of green infrastructure is influenced by levels of socio-economic advantage with those living in areas of higher socio-economic advantage having significantly more private green cover but slightly less public green cover than areas of greater disadvantage. Disadvantaged communities were considered to potentially have a greater reliance on public green infrastructure such as parklands as they are more likely to experience a lack of private, residential tree cover.

Best practice across the city:

- Cool Streets: In conjunction with the Western Sydney Regional Organisation of Councils (WSROC) this award-winning project seeks to tackle UHI across the local community by increasing the number of street trees: https://wsroc.com.au/media-a-resources/wsroc-news-stories/focus-on-cool-streets-blacktown

- Greening the City: The following provides an overview of the City of Sydney's plans to help increase green cover:
http://www.cityofsydney.nsw.gov.au/__data/assets/pdf_file/0009/135882/GreeningSydneyPlan.pdf

With temperatures in Western Sydney sometimes reaching 10ºC hotter than the east during extreme heat events it is perhaps unsurprising that the majority of heat mapping that exists for metropolitan Sydney relates to these areas. Councils across Parramatta, Penrith and Blacktown have undertaken a proactive approach to addressing extreme heat through a range of programs, initiatives and data dissemination (publically available heat mapping data). With the exception of heat mapping undertaken by the City of Sydney however, there appears to be a lack of documented and publically available information available relating to heat in the northern and eastern parts of the city.

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[22] Lin, B., Meyers, J., Barnett, G. 2015. *Understanding the potential loss and inequities of greenspace distribution within urban densification* Urban Forestry & Urban Greening, 14 pp 952 – 958
Lin, B., Meyers, J., Beaty. M. and Barnett, G. 2016 *Urban Green Infrastructure Impacts on Climate Regulation Services in Sydney, Australia.* Sustainability 2016, 8, 788

Discussions with CSIRO in the review of this content area indicate that Waverley Council in eastern Sydney has made enquiries to access land surface temperature data within the local government area (LGA) but this seems to be the exception and for the most part there is a lack of consistent and accessible heat mapping data across metropolitan Sydney. A case could be made for developing of a centralised web portal where information such as this could be regularly uploaded, processed and accessed across all areas of Sydney.

Another area for exploration is whether this lack of information is due to a perceived difficulty in accessing data or whether those councils located in northern and eastern Sydney are simply less worried about temperature and the impacts of UHI because of greater levels of canopy cover or access to cooling sea breezes.

Best practice across the city:

- Cool Parramatta: In conjunction with the Western Sydney Regional Organisation of Councils (WSROC) and Western Sydney Local Health District, City of Parramatta Council have launched this program to help raise awareness on the effects of extreme heat http://coolparramatta.com.au/

- Beat the Heat: Penrith City Council's comprehensive approach to addressing extreme heat is documented online and through its Cooling the City Strategy: https://www.penrithcity.nsw.gov.au/beattheheat/

Beating the heat: best practice community outreach across the City of Sydney

On 13 and 14 December 2016, temperatures in the City reached over 36 degrees Celsius with overnight temperatures exceeding 27 degrees Celsius. People sleeping rough are significantly vulnerable as they have limited access to shade and refuge from the heat and may not have access to water and sunscreen. Exposure to high temperatures can make existing illnesses seriously worse (for example trigger a heart attack), cause serious permanent injuries (damage to the brain or other vital organs) as a result of untreated heat stroke, and in extreme cases result in death.

In response, the City and NSW Family and Community Services (FACS) on the advice of St Vincent's Homeless Health activated the Emergency Response Protocol and initiated the Homelessness Severe Weather Sub Plan. A multi-disciplinary team of 20 specialists including City staff, Mission Australia, specialist Aboriginal services, health and housing workers patrolled the local area from 7am each morning. The group targeted known people over 55 and those with a pre-existing health conditions as well as hotspots including Woolloomooloo, Wentworth Park and Belmore Park. The team distributed bottled water, sunscreen, hats and information about where to get out of the sun. They also checked for indicators of heat related illness and provided information on local health clinics and community centres and libraries. Doctors and nurses were on hand to assist with medical check-ups as required. Sun safety information was also disseminated to homelessness services in the City with NSW Health advice on heat related illness and prompts for services to check in with vulnerable clients who may be housed but still at risk. St Vincent Homeless Health and Mission Australia provided water, hats and sunscreen. FACS purchased additional supplies. All staff were advised to wear appropriate personal protection equipment and adhere to workplace health and safety requirements for sun safety.

Across both days, 212 people were engaged and offered support. The intervention was time bound and only required for two days as cooler weather was forecast.

A further area of disparity regarding data availability relates to bushfire risk and exposure. While the Rural Fire Service (RFS) has recently launched a state-wide bushfire prone land mapping tool providing comprehensive information for planning and preparing for bushfire, detailed information about bushfire risk, vulnerability and exposure appears to be limited to those LGAs with the greatest level of risk. For example the Blue Mountains, Hornsby and Ku-ring-gai have a comprehensive level of information relating to preparedness and response available online; however it seems to be limited to these areas. While these specific communities are exposed to the greatest level of bushfire risk, it is worth considering the case for other councils providing further dedicated information and advice and consider broader issues such as the impact of back burning and air quality etc.

Best practice across the city:

- Blue Mountains City Council: Interactive Maps including Bush Fire Prone Property and Bushfire Prone Land Data: http://www.bmcc.nsw.gov.au/bmccmap/index.cfm
- Hornsby Ku-ring-gai Bush Fire Risk Management Plan: Website detailing the councils' join approach to bushfire management http://hkbfmc.org/

5.0   Identity in Diversity

5.1   Resilience challenges, context, and areas for exploration

Drawing on the Resilient Sydney PRA findings and the City Context Report, a discovery area working group focussing *Identity in Diversity* was convened. The following set of resilience challenges were identified for this Discovery Area.

Identity in Diversity

- **Our community is diverse** – We are one of the most culturally diverse cities in the world but we are increasingly segregated. We are creatures of habit, keeping to the places we know. Our choices, built environment, geography, and comfort zones stop us connecting with other cultural groups in other parts of Sydney, so we treat them with suspicion;
- **Intolerance is growing** – racism increases every year in our city. Intolerance undermines our wellbeing, economic prosperity, social cohesion and capacity for civic engagement in our diverse communities

As highlighted, this discovery area recognises and examines the complex set of challenges that arise from a hyper diverse and multicultural society and are compounded by increasing spatial inequity and uneven distribution of cultural communities across metropolitan Sydney. In particular, this discovery area seeks to respond to the key question of '*How can we value diversity in our community to improve social cohesion, inclusion and economic productivity?*'

The issue of understanding and managing cultural contention and intolerance is further explored by considering:

- How can we embrace our high cultural and community diversity to improve social cohesion and economic opportunities for everyone?
- How can we ensure all our cultural communities are respected, included and engaged in democratic and civic community life?
- How can we use our community indicators (wellbeing, economics and social cohesion) to better inform planning and inclusive programs?

These questions are particularly pertinent when viewed in the context of the data and statistics for Sydney that reveals:

Cultural diversity

- Sydney is one of the most hyper-diverse cities on earth. Sydney is more culturally diverse than London, Singapore and New York[23].
- 36% of our population were born overseas[24].
- The top 5 countries for residents born overseas are China (3.6%), England (3.4%), India (2.1%), New Zealand (1.9%) and Vietnam (1.7%).
- Trends indicate that migration of people born in China and India to Australia is increasing each year[25].
- Sydney is home to Australia's largest population of Aboriginal and Torres Strait Islander Peoples[26]

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[23] Resilient Sydney, 2016, City Context Report
[24] Dept. of Planning, 2013, Towards a Resilient Sydney – Socio-Economic Profile
[25] City of Sydney, 2016, Community Profile
[26] Department of Planning, 2013, Towards a Resilient Sydney – Socio-Economic Profile

Intolerance

- Tolerance of cultural diversity is declining in Sydney. The Scanlon Foundation and Monash University found nearly 54% of people in Sydney disagree with the statement 'the government should assist with ethnic minorities', compared with 44% of people from Melbourne[27].
- The survey also found 25 - 27% of Sydneysiders expressed negative or strong negative attitudes towards Muslims, compared to 16% of people surveyed in Melbourne[28]
- Further research by the Scanlon Foundation found Muslim, Aboriginal and Torres Strait Islander and African people experience the highest levels of discrimination. 77% of South Sudanese people surveyed reported experiencing discrimination – the highest number of all[29].

Fragmentation

- Contact with people from different cultural backgrounds can be very difficult in our city.
- Sydney is a patchwork of cultural diversity. Some suburbs are extremely diverse and in others almost everyone is third generation Australian[30] .
- For instance in Parramatta 76% of people were born overseas. 39% of residents speak a language other than English at home, compared to the Australian average of 18%[31].
- Access to public transport depends on where you live in Sydney. The east of the city has the best options and the west and south west the poorest[32].
- Access to transport determines your ability to move around the city, and the ability of other people to come to your part of town.
- Attitudes to cultural diversity are complicated. They depend on socio-economic status, the cultural mix in your area and so on. But there is evidence that over time contact with different cultural groups decreases racism[33].
- Studies have found very little increase in positive attitudes amongst those who live in areas of low diversity[34].

Living together every day – responding to crises

- Strong connections with our families, friends and communities are important for our health and wellbeing[35], economic development and civil and social stability[36].
- They are also important to survive a crisis.
- Extreme events are increasing in our city, and our connections with the rest of the world mean disasters elsewhere affect our lives[37].
- Knowing your neighbours, having good relationships with friends and family, and being part of a peaceful, close knit community means someone will notice if you're missing, help if you're in trouble and get you back on your feet after the crisis has passed.
- Studies show close knit, friendly communities are better prepared for crises, and respond and recover faster than those where there is a lot of friction[38]

Economic benefits of migrants

- Businesses started by migrants with non-English speaking backgrounds are 10% more likely to succeed (Refugee Council of Australia, 2010).
- The Migration Council of Australia estimates that by 2050:

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[27] Markus, 2015, Mapping Social Cohesion, The Scanlon Foundation Surveys 2015
[28] Markus, 2015, Mapping Social Cohesion, The Scanlon Foundation Surveys 2015
[29] Markus, 2016, Australians Today
[30] SBS, 2016, How Diverse is My Suburb?
[31] Western Sydney University, 2016, Centre for Western Sydney Data and Visualisations
[32] Resilient Sydney, 2016, City Context Report
[33] Forrest and Dunn, 2010, Attitudes to Multicultural Values in Diverse Spaces in Australia's Immigrant Cities, Sydney and Melbourne
[34] Forrest and Dunn, 2010, Attitudes to Multicultural Values in Diverse Spaces in Australia's Immigrant Cities, Sydney and Melbourne
[35] The Young Foundation, 2010, Taking the Temperature of Local Communities, the Wellbeing and Resilience Measure
[36] Social Progress Imperative, 2016, Social Progress Index
[37] Resilient Sydney, 2016, City Context Report
[38] Aldrich, 2010, Fixing Recovery, Social Capital in Post-Crisis Recovery

- o *"Australia's projected population will be 38 million by 2050 and migration will be contributing $1,625 billion (1.6 trillion) to Australia's GDP.*
- o *Migration will have added 15.7 per cent to our workforce participation rate, 21.9 per cent to after tax real wages for low skilled workers and 5.9 per cent in GDP per capita growth.*
- o *Each individual migrant will on average be contributing approximately 10 per cent more to Australia's economy than existing residents in terms of economic growth."*[39]

Workplace discrimination

- Australians with Chinese or Middle Eastern names need to apply for more than twice as many jobs to get as many interviews with a Anglo-Saxon name – 68% and 64% more respectively (Booth, Leigh and Varganova, 2010).
- Australians from Asian and other non-European backgrounds such as Middle Eastern and African, are often not being promoted to leadership roles. Research suggests that this is due to unconscious bias in the workplace (Soutphommasane, 2014).

5.2 Discovery Area Working Group Workshops

As part of the process to explore the Discovery Areas the *Identity in Diversity* Working Group workshop was held on 19th January 2017. It was attended by 18 participants representing a range of public and private organisations, government, and community groups (refer Appendix B). The following summarises the findings and inputs from the session.

5.2.1 Secrets of Sydney - place based examples & themes

An activity to review and identify additional contextual information was held. The session sought to tap into the personal experience and knowledge of the workshop participants to identify potentially new secrets, sensitivities and blind spots that may impact how *Identity in Diversity* is dealt with as the strategy develops. The following summarises the outputs of the group feedback session.

Consolidated feedback:

- There is increasing disadvantage present in cultural communities

- Differing feelings of safety and security due to gendered experiences of the city and gender based violence

- The prevalence of privilege is leading to complacency in the community

- Tensions exist within perceived cultural communities, and global events are affecting how communities are perceived widely

- Enhancing sense of vulnerability due to communications/commentary/media view

- There is a lack of accountability of media and portrayal of cultural minorities in the media

- Rapidly changing demographics

- Growing levels of segregation of urban spaces and in schools

- What are our shared values – what does it mean to be Australian?

- We don't talk about how we can engage in democracy, and open up our democratic processes to ensure all are engaged

- We live in a nanny state – need to consider empowerment versus rules

- Expat vs migrants – the perceptions and the use of language (!)

- Planning, designing and operating the built environment – how can we use this as an opportunity to equalise? Open up the conversation and design.

Based on the above, the following themes may guide areas of further exploration for *Identity in Diversity*:

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[39] Migration Council of Australia, 2016 The Economic Impact of Migration http://migrationcouncil.org.au/wp-content/uploads/2016/06/2015_EIOM.pdf

1. **Division**: we are seeing an increase in the disconnections and disparity between different cultural groups within Sydney. These divisions are being exacerbated by rapidly changing demographics across the city and the underlying perceptions and misconceptions about each other.

2. **Opportunity**: there are opportunities to break down barriers to improve and increase levels of cohesion, this ranges from how we plan, design and operate our built environment through to reconsidering how we are governed and interact with government.

While the other workshop sessions revealed a challenge in keeping their insights relevant to their discovery area, this didn't appear to be an issue for the *Identity in Diversity* Discovery Area.

5.3   Goals and Opportunities

5.3.1   Working Group Resilience Goals

The workshop was also used to identify a series of goals and accompanying opportunities to help evolve a response to *Identity in Diversity* and inform development of the resilience strategy.

Participants were asked to brainstorm relevant goals to focus the development of opportunities for the relevant discovery area. Participants were asked to suggest ideas which were then categorised based on themes and voted on to highlight those that resonated strongest with the group. A full list of the goals identified for *Identity in Diversity* is captured in Appendix C. Of more than 60 goals put forward, the following represents the list of highest prioritised potential goals:

- We will learn from and integrate First Nations knowledge on social cohesion

- We will foster and encourage a frank, open and honest discussion of race, culture, privilege and power (role of rhetoric is important)

- We will ensure our leaders reflect our community authentically (targets/quotas?)

- Transport: we will deliver a connected system that removes geographic barriers to cross pollination of community

- Media training and monitoring for community members targeted by media, evolving over time

- We will demonstrate cultural representation in media programming. We will establish safe places to have open dialogues (insight on SBS)

- We will roll out social awareness, appreciation and inclusion programmes in all levels of education. Programmes to encourage a true appreciation of multi-cultural Australia

While the above summaries the resilience goals as voted by the workshop participants, the following presents the general considerations discussed as critical to informing the corresponding goals.

- Diverse leadership – need to ensure our leaders reflect our community authentically (targets / quotas?).

- Media training and monitoring for community members targeted by media, evolving over time.

- We need to foster and encourage a frank, open and honest discussion of race, culture, privilege and power (role of rhetoric important).

- We need to learn from and integrate First Nations knowledge on social cohesion and work with Aboriginal and Torres Strait Islander peoples

5.3.2   Opportunities

The workshop also sought to identify specific actions and initiatives to inform the Resilient Sydney FOO. Analysis of the opportunities shows that 49% of opportunities generated from all consultation[40] relate to *Identity in Diversity* and of this, 43% (of all opportunities) specifically relate to racism or lack of community networks.

The following provides a snap shot of the opportunities presented during the feedback session.

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[40] Consultation includes 4 x Discovery Area Working Group Workshop s; 4 x Multi-Stakeholder Workshop s; and, 6 x Community Engagement Workshops

- Rolling out Racism Bystander Training to wider parts of the community to empower people to speak out when they witness racism

- Using the Sydney Alliance training model to bring leaders from diverse communities together, create new connections and collaboration opportunities, and to support them to advocate better for their communities

- Provide media training for communities which are unfairly represented in the media e.g. Muslim Australians

Section 3 provides further detail on how the process outlined to refine the opportunities for eventual inclusion in the strategy.

5.4   Spotlight: Racism

To test and review the PRA Discovery Areas and the issues explored in the City Context Report, a series of content development gaps were identified as part of the diagnostic review process. This section provides an overview of the issues relevant to the context of *Identify in Diversity* and specifically explores the issue of racism in the context of the city.

As Sydney continues to grow and become increasingly diverse, racism is an issue that stands to exacerbate underlying stresses related to social cohesion and inequity across the city. During the workshop, research presented by Western Sydney University revealed a negative trend in attitudes related to tolerance and acceptance of Muslims. In particular, based on an SBS poll undertaken in 2015-16, 64% of participants from Central Western Sydney recorded anti-Muslim sentiments. This figure was significantly higher than the NSW average of 54.4% and the Australia-wide proportion of 48.6%[41]. These figures are particularly alarming when viewed in the context of Central Western Sydney as the home to the majority of Sydney's Muslim communities. They are also telling when viewed in the context of further data[42] that indicates over 70% of Sydney Muslims strongly agree that there is racial prejudice in Australia.

A case study presented during the session explored a decline in perceived trust between the NSW Police Force and Muslim communities. Over the last six years trust between the two groups had diminished insofar as one-third said that relations had worsened and only 15% said that relations had improved.

While the case study acknowledged that police practice was mostly seen as fair (54% agreed that they trust police, 43% were unsure or disagreed that they trusted police), approximately a third of those engaged had a clear view that there was a procedural injustice in policing. Muslims who experienced racism in policing were more likely to lack trust in police, and to perceive procedural injustice in police actions. Interestingly, a sense of procedural fairness was more likely among those who saw Islam as consistent with Australian norms and society.

The vast majority (76%) agreed that counter terror laws unfairly targeted Muslims. Specific NSW actions (arrests and raids) in the area of Countering Violent Extremism (CVE) were seen as anti-Muslim by 40% and 45% of the respondents. However, preparedness to co-operate with police on general crime issues was very high (over 90%), with only one-in-twenty stating they would be unlikely to assist, or report, to police. Those likely to assist with CVE policing were also in the majority (over 80%) with only one-in-ten saying they would be unlikely to co-operate. Willingness to cooperate was higher still with regard to reporting potential terror events in the community, with over 94% of participants confirming they would be prepared to report on such information.

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[41] Social distance towards Muslims, state surveys, Australia, 2001-2008, n:12512, SBS poll update 2015/6 n:6000
[42] Attitudes towards diversity and equality, Sydney Muslims, 2011-13 (n:585) compared to the national average (Challenging Racism National Survey, 2001-2008 (n:12512))

6.0 City of Opportunity

6.1 Resilience challenges, context, and areas for exploration

Drawing on the Resilient Sydney PRA findings and the City Context Report, a discovery area working group focussing *City of Opportunity* was convened. The following set of resilience challenges were identified for this Discovery Area.

City of Opportunity
Our city is growing – particularly in the west and south west of Sydney   **Inequity is rising** – the cost of housing in Sydney is high and the cheapest places to rent or buy are in the west and south west. However good public transport, education and well paid jobs are far away in the east. Opportunities to grow and prosper in Sydney are largely defined by where we live.   **And the distance between our decisions and their impacts is vast** – our decisions add up over time. The impacts of those that have shaped Sydney are being felt now, mostly by communities located far away from the decision makers themselves.

As highlighted, this discovery area recognises and examines the impact past planning and development decisions have had on the city and examine '*how can our plans for Sydney's growth ensure everyone has equal opportunities to grow and thrive?*'

The need to address and respond to the rise of spatial inequality across Sydney and how we plan for equity and opportunity is further explored by considering:

- How can we integrate resilience principles into decision making frameworks?

- How can we ensure job readiness for the knowledge economy through strategic provision of education in western and south western Sydney?

- What policies and programs would improve housing affordability, healthy active lifestyles and local decision making in Sydney communities?

These questions are particularly pertinent when viewed in the context of the data and statistics for Sydney that reveals:

- Sydney's population will rise to 6.6 million people by 2031[43], and most of the growth will take place in the west and south west.
- By 2031 45% of Sydneysiders will live in the west and south west[44].
- Sydney is the second least affordable city in the world[45]. The median house price in Sydney is 12.2 times median household income[46].
- Households who rent spend around 28% of their income on housing – very close to the 30% threshold for housing stress[47].
- The most affordable places to live in Sydney are in the west and south west[48].
- Access to public transport depends on where you live in Sydney. The east of the city has the best options and the west and south west the poorest – these areas have the highest commutes by private cars in Australia[49]. Commutes by car are expensive, giving people in the west the highest commuter costs.[50]
- 37% of all employment is located in the CBD[51] and there are few opportunities for well-paid employment in the west and south west.

[43] NSW Department of Planning and Environment, 2015, Metropolitan Sydney Factsheet
[44] IPART, 2015, Review of Local Councils for Fit for the Future proposal
[45] www.domain.com.au/news/sydney-melbourne-houses-in-worlds-top-five-most-unaffordable-demographia-20160125-gmd7x2/
[46] News.com.au, 2016, Australian City Has Come In as Second Least Affordable in Housing Survey
[47] City of Sydney, 2015, Housing Issues Paper
[48] SGS Economics and Planning, 2015, Rental Affordability Index
[49] Infrastructure NSW, 2014, State Infrastructure Strategy Update
[50] Western Sydney University, 2016, Addressing Western Sydney's Job Slide
www.uws.edu.au/__data/assets/pdf_file/0019/1064701/JTW_report_complete_7April.pdf
[51] SGS Economics and Planning, 2016, Effective Job Density

- Sydney is Australia's most unequal major city. 20% of all income goes to 1% of Sydney's population and they are located in Vaucluse, Rose Bay, Bellevue Hill and Double Bay[52].
- Less than 6% of all income goes to earners in Blacktown, Campbelltown and Penrith[53].
- Manufacturing (which is in decline) employs the most people in the west, followed by retail and Health Care and Social Assistance[54].
- Financial services are our strongest economic sector and more than 55% of financial services jobs are located in the CBD[55].
- 180, 000 people leave western Sydney each day to access jobs in the east[56].
- Living in the most affordable parts of Sydney and accessing a well-paid job means at least a 1 hour commute each way by car every day[57].
- Western Sydney has lower high school completion rates than the rest of Sydney[58].
- 71.9% of people in North Sydney have post-school qualifications versus 44.9% in south western Sydney.
- Most of Sydney's major universities are located in the east. Western Sydney University is currently the only major university to service the west and south west[59].
- Chronic and lifestyle diseases are increasing and are the highest cause of death in Sydney. Around 50% of our population are overweight or obese – 45% of people in the north and 55% of people in the west.[60]
- We are an aging population, increasing the need for healthcare[61].
- Health services demand and the rising cost of care are amongst our biggest challenges[62]
- Decisions about where we put housing, transport, jobs, education and health services are made by different people and organisations over time. But they add up, and they have shaped our city and the lives of our community
- Our challenge is to make sure the decisions we make now put our community first.

6.2   Discovery Area Working Group Workshops

As part of the process to explore the Discovery Areas, the *City of Opportunity* Working Group workshop was held on 1st February 2017. It was attended by 25 participants representing a range of public and private organisations, government, and community groups (refer Appendix B). The following summarises the findings and inputs from the session.

6.2.1   Secrets of Sydney - place based examples & themes

An activity to review and identify additional contextual information was held. The session sought to tap into the personal experience and knowledge of the workshop participants to identify potentially new secrets, sensitivities and blind spots that may impact how *City of Opportunity* is dealt with as the strategy develops. The following summarises the outputs of the group feedback session.

Consolidated feedback:

- Aging demographic in certain areas

- Aging infrastructure

- Domestic violence in South West Sydney is a significant issue in contrast to other parts of Sydney – cost and length of community; mortgage stress etc. – intergenerational domestic violence – is an issue in new and emerging communities (migrant communities bringing patterns over here)

- Casualization of employment

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[52] Sydney Morning Herald, Matt Wade 2016, NSW the State of Inequality When it Comes to Income
[53] Sydney Morning Herald, Matt Wade 2016, NSW the State of Inequality When it Comes to Income
[54] WSROC Economy and Employment, accessed 25/01/17 wsroc.com.au/issues-campaigns/economy-and-employment
[55] Regional Development Australia, 2016, Economic Profile
[56] Resilient Sydney, 2016, City Context Report
[57] Committee for Sydney, 2016, Are We There Yet? Value Capture and the Future of Public Transport
[58] WSROC, 2016, Education
[59] Resilient Sydney, 2016, City Context Report
[60] Department of Planning 2013, Towards a Resilient Sydney – Socio-Economic Profile.
[61] National Commission of Audit, 2014, Towards Responsible Government
[62] Australian Institute of Health and Welfare, 2014, Australia's Health 2014

- Loss of traditional jobs

- Housing design – we don't build houses that people can live in for life and don't build houses that suit our climate

- Hard to make connections - time and transport compounds isolation

- As a younger person you do a double degree and then masters overseas when you come back the jobs aren't there. Does STEM need to be matched with Arts to provide critical thinking skills

- Pros and cons of higher density living – gentrification can be alienating

- Limits on the ability to densify and expand housing without putting limitations on what can be in the house

- Limited funding cycles – starting from square one again and again – community and capacity building doesn't happen in 3-year funding cycles

- Got the skills and experience and know how to respond we just don't have will to respond – big mismatch in communication and sharing information – trust – failure of the sector to give the will to act

- Barrier – ego and greed. Singlemindedness and self-interest - me mapping not we mapping – sense of entitlement: whose involved at the table and for what benefit

Based on the above, the core themes identified to guide areas of further exploration for *City of Opportunity* relate to:

1. **Workforce uncertainty and instability**: the loss of traditional jobs, the casualization of the workforces and the impacts of globalisation on previous employment hubs such as manufacturing is contributing to uncertainty and instability across Sydney that is contributing to the increase of disparity and inequity.

2. **Social cohesion and connectedness**: there is an increase in instances of domestic violence especially in South West Sydney. Coupled with this, Sydney's sprawl/scale and transport networks make it hard to connect and move around making it difficult to build connections and establish relationships. The feeling of isolation and inequity is being further compounded by gentrification which can be isolating and disorientating for the incumbent communities.

The majority of the workshops participants found it challenging to focus solely on their Discovery Area. During the sessions participants often provided feedback relating to the other discovery areas, a summary of those that were raised in the *City of Opportunity* session is included in Table 5.

Table 5 City of Opportunity - secrets relating to other discovery areas

How Sydney Works	Adaptive Sydney
• 3 days of fuel – poor decision-making and policy planning • Loss of farm land	• Power network isn't large enough to service southwest and northwest

6.3   Goals and Opportunities

The workshop was also used to identify a series of goals and accompanying opportunities to help evolve a response to *City of Opportunity* and inform development of the resilience strategy.

6.3.1   Working Group Resilience Goals

Participants were asked to brainstorm relevant goals to focus the development of opportunities for the relevant discovery area. Participants were asked to suggest ideas which were then categorised based on themes and then voted on to highlight those that resonated strongest with the group. A full list of the goals identified for *City of Opportunity* is captured in Appendix C. Of more than 100 goals put forward (the most of any session) the following represents the list of highest prioritised potential goals:

- Taking full account of social, economic, and environment in policy making decisions

- Include / mandate green infrastructure to change micro climates and heat

- End single issue solutions – prioritise green space / infrastructure , ecology and social spaces

- Utilise an economic framework that accounts for all forms of capital – natural, social, financial, built, human

- We will develop a 50 year plan / vision for Sydney that will link activity and priorities, direction across the 3 levels of government.

- We will open up and maximise value of community assets including for community use

While the above summaries the resilience goals as voted by the workshop participants, the following presents the general considerations discussed as critical to informing the corresponding goals

- Whole of city view across the three tiers of government

- Evidenced-based decision-making - taking full account of social, economic, and environment in policy making decisions.

- Different economic models to address inequity

6.3.2   Opportunities

The workshop also sought to identify specific actions and initiatives to inform the Resilient Sydney FOO. Analysis revealed that 50% of opportunities generated from the consultation[63] relate to *City of Opportunity,* with 50% (of all opportunities) also responding to the stress of inequity.

The following provides a snap shot of the opportunities presented during the feedback session.

- Financial literacy and young women – older women most vulnerable group of society subject to homelessness – trying to tackle this early

- Know your Sydney Stories – KYSS: share experiences and stories of Sydney

- A sustainability strategy for Sydney or NSW with measurable targets

- Neighbourhood Feasts – host a dinner in a public place/ community building and another community comes to you and then you go them – cross town

Section 3 provides further detail on how the process outlined to refine the opportunities for eventual inclusion in the strategy.

6.4   Spotlight: Urban Gentrification

To test and review the PRA Discovery Areas and the issues explored in the City Context Report, a series of content development gaps were identified as part of the diagnostic review process. This section provides an overview of the issues relevant to the context of *City of Opportunity* and specifically explores the issue of urban gentrification in the context of the city.

As the price of housing across Sydney continues to rise, developers and would-be homeowners alike are seeking to capitalise on under developed areas of the city. This increased investment and the rise of gentrification in areas previously considered 'working class' or disadvantaged such as Balmain, Surrey Hills, and more recently Redfern is driving up property prices and in some instances pricing the existing community out of the market. While investment and gentrification is often considered a desirable attribute, a balance must be struck to ensure the spirit of existing communities isn't lost or displaced as a side effect of urban renewal and regeneration.

San Francisco is one city facing increasing levels of scrutiny for this issue with many suggesting that the tech boom within neighbouring Silicone Valley has spread into the city and is turning previously run down neighbourhoods into desirable places to live, forcing out the previous inhabitants. In the documentary 'San Francisco 2.0' film maker Alexandra Pelosi explores how the influx of people brought into the city as part of the 'tech revolution' is injecting previously unknown levels of wealth and affluence into enclaves previously

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[63] Consultation includes 4 x Discovery Area Working Group Workshop s; 4 x Multi-Stakeholder Workshop s; and, 6 x Community Engagement Workshops

inhabited with entrenched communities of artists and migrants. At the core, Pelosi questions whether the impact of the 'digital gold rush' will change, shape and alter the city's reputation as the counterculture capital of America, one that has for decades attracted bohemians, mavericks, progressives and activists alike. A particular concern for Pelosi is the regeneration underway within the Mission District citing that this area which has for decades been a bastion for immigrants and the downtrodden is experiencing a revitalisation that has led to local businesses being squeezed out and an unprecedented spike in 'no fault evictions'.

As Sydney's continued growth and expansion continues to turn westwards ensuring the City's migrant communities in areas such as Lakemba, Punchbowl and Auburn are also able to remain and thrive and benefit from the impact of community investment will be key. Lessons can be shared and learned from with other cities within the 100RC network, in particular cities such as Norfolk Virginia which share similar traits to Sydney with areas of considerable advantage juxtaposed with areas of considerable economic disadvantage and poverty.

7.0   Field of Opportunity

The opportunities identified within the Discovery Area Working Group workshops have feed into a wider process that comprises inputs from multi stakeholder workshops, and community workshops. Opportunities were also submitted by participants and the public via the http://sydneyyoursay.com.au/resilient-sydney website.

Through this engagement process, 289 opportunities have been identified through consultation, with approximately 30% of these generated through the Discovery Area Working Group and stakeholder workshops and 70% from the community engagement workshops.

Each opportunity has been entered into an opportunity identification form designed to gather information in a manner that allows assessment of the opportunity against the resilience lens. All opportunities have been recorded in the Field of Opportunity (FOO) to ensure their origins can be readily tracked (e.g. which input category they were originated through workshop, community etc.).

Figure 8 summarises the process for refining the opportunities. Further detail is documented in Table 7 with the resilience criteria identified for processing the opportunities documented in Appendix D.

Figure 8 Process to refine the Field of Opportunities

Opportunities	Shortlist	Priorities	Strategy actions
~290 opportunities **70%** community contributions Input from working groups, stakeholders, & community	**~50** opportunities **50%** community contributions Assessed using resilience criteria by Resilient Sydney project team	**~50** opportunities **50%** community contributions Prioritised by working group members, and stakeholders	**~50** opportunities **50%** community contributions Finalised by Resilient Sydney project team and governance

The following table provides some further detail on the breakdown of opportunities identified.

Table 6 Breakdown of the Resilient Sydney FOO

Types of opportunities identified

Policies & strategies, 40%	Actions & programs, 25%	Goods & services, 10%	Others, 25%

Alignment of opportunity to primary discovery areas

Identity in Diversity , 13%

How Sydney Works, 57% | Adaptive Sydney , 24% | City of Opportunity , 6%
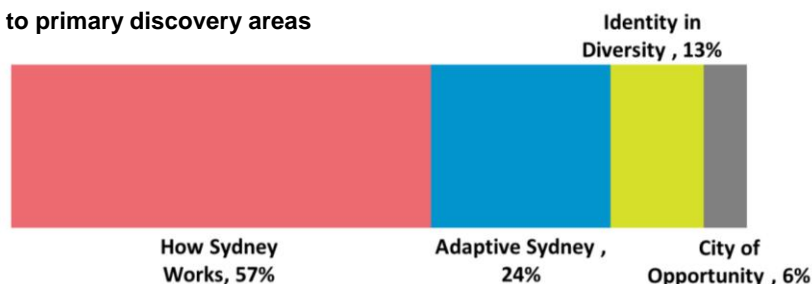
Discovery Areas – Overall, there was an even spread of opportunities against the four discovery areas.

City Resilience Framework – There were twice as many opportunities responded to the dimensions of *Health and Wellbeing* and/or *Economy and Society*.

City of Opportunity, 50% — How Sydney Works, 50% — Identity in Diversity, 49% — Adaptive Sydney, 43%

Leadership and strategy — Health and wellbeing — Infrastructure and Environment — Economy and Society
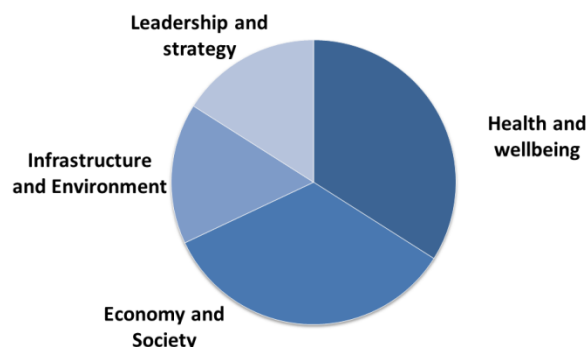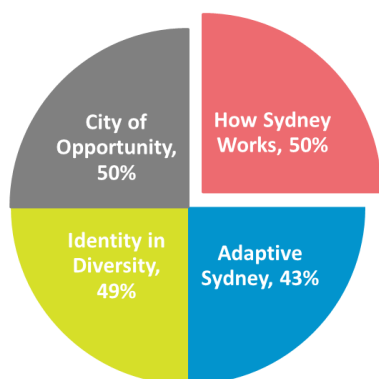
Top shocks addressed by opportunities

Extreme weather   Infrastructure failure   Financial institution failure   Water crisis
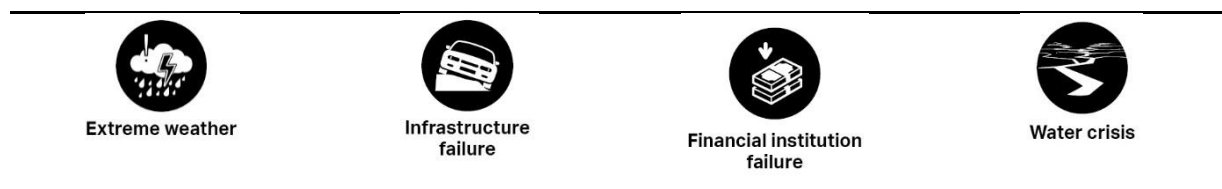
Most critical assets addressed by opportunities

Health Infrastructure   Railways   Commercial Structures   Energy Network

Top stresses addressed by opportunities

Inequity	Social cohesion	Cost of health services	Employment
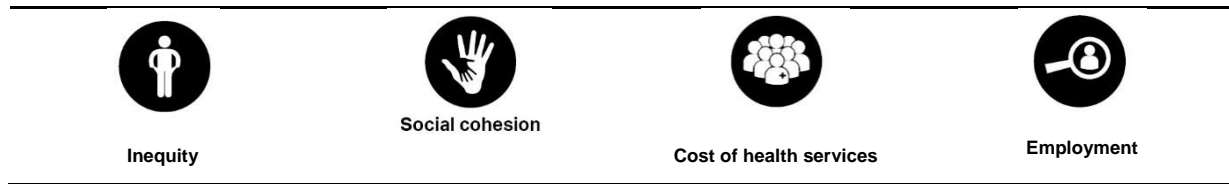
Top mega trends addressed by opportunities

Global temperatures and rising sea levels	Chronic disease	Limited acess to multimodel transport

It is anticipated that of the opportunities identified, the final strategy will contain a prioritised list of 50 opportunities for action.

Figure 9 summarises the development of the field of opportunities at a high level.
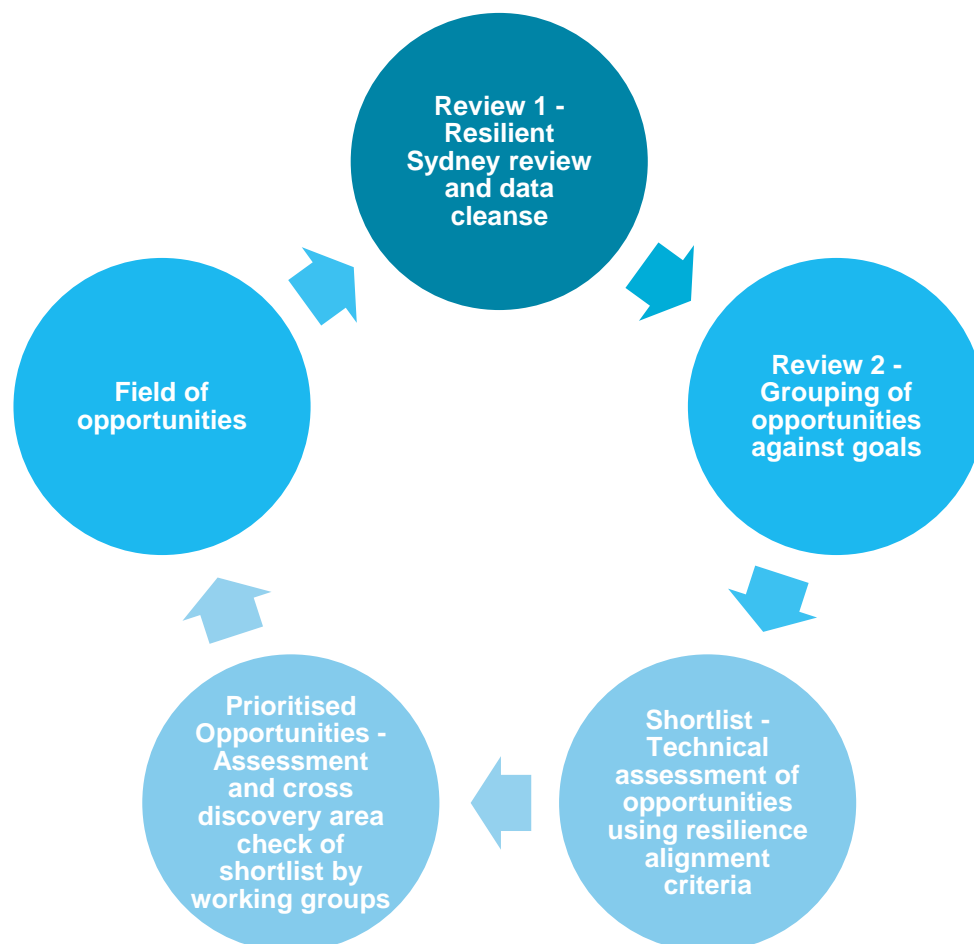
Figure 9 Summary of the FOO development

Table 7 Process of refining the Resilient Sydney FOO

Stage	Field of Opportunities	Review 1	Review 2	Shortlist	Prioritised opportunities	Proposed opportunities	Opportunities in Strategy
No.	289 opportunities	~200 opportunities	~150 opportunities	~75 opportunities	~50 opportunities	~50 opportunities	~50 opportunities
Lead Assessor	Any engagement participant, opportunities are recorded and entered via the engagement form	Resilient Sydney project team	Resilient Sydney project team	Resilient Sydney project team	Discovery area working groups	Resilient Sydney project team and governance	Resilient Sydney project team
Criteria	*Identification*	*High level review and consolidation*	*Categorise and combine*	*Assess and prioritise*	*Prioritise against resilience goals*	*Governance review*	*Final review*
	Each opportunity identified by completing the opportunity worksheet form. Opportunity form questions based on the resilience lens to encourage opportunities that address multiple issues and deliver multiple benefits.	Assessment for: - Duplication - Viability - Directly addresses priority shock/stress	Categorise opportunities against draft goals and group similar opportunities together to create more holistic wide reaching opportunities. Draft goals have been developed based on community and multi-stakeholder values and priorities and strategic considerations.	Assess each opportunity against the resilience alignment criteria. Criteria includes weighted scores for alignment against: - Resilience qualities, behaviours, and lens - Alignment to discovery area Review and refine to ensure that there is a balance across the goals/challenge areas, discovery areas, a mix of owners, and scales.	Discovery area working group prioritisation through facilitated session at working group meeting #2. Identification of owners.	Review by: - Resilient Sydney steering committee - Local and state government - Global resilience review - 100 Resilient Cities.	Final review against resilience goals.

8.0   Cross Discovery Area Review

Throughout the Phase II engagement process cross discovery area engagement was nurtured to foster cross sectoral collaboration and identify opportunities capable of delivering multiple resilience benefits.

This approach was supported through the inclusion of the Steering Committee members in the working groups; the formation of the Resilience Ambassadors Group (comprising representatives from each of Metropolitan Sydney's local government areas); the application of the stakeholder engagement principles of diversity and representation; and culminated in the merging of the four discover area working groups from the previous working group sessions to hold meeting #2 as a single cross discovery working group session.

Objectives of the cross discovery area review included:

- Exploring citywide interdependencies and / or gaps in discovery area research

- Identifying opportunities related to multiple Discovery Areas or relating to Discovery Areas outside of the proponents direct circle of experience / influence

- Ensuring opportunities to address the resilience challenges are provided across Metropolitan Sydney's diverse geographies and communities

- Identifying potential owners for opportunities from across Metropolitan Sydney

- Reviewing and identifying additional ways to develop opportunities that provide multiple benefits or build on existing projects occurring within Metropolitan Sydney

Figure 10 Cross Discovery Area (DA) review

Phase II Oversight	Discovery Area Working Group Meeting #1	Discovery Area Working Group Meeting #2
Cross DA Area Review: - Steering Committee - Resilience Ambassadors - Stakeholder Engagement principles: diversity of influence & representation	How Sydney Works Adaptive Sydney Identity in Diversity City of Opportunity	**Cross DA Review:** - All working group members - Steering Committee - Resilience Ambassadors - Multi-stakeholders

8.1 Cross Discovery Area Engagement Process

The following provides further detail on the groups engaged as part of the cross discovery area review process.

8.1.1 Steering committee oversight of working groups

Each Discovery Area Working Group was overseen by a member of the Resilient Sydney Steering Committee. Steering Committee members brought an invaluable perspective to the working group meetings, emphasising the diversity of the resilience challenges experienced across Metropolitan Sydney and ensuring cross Discovery Areas issues were considered during the discovery area review and opportunity identification process.

8.1.2 Local Government Resilience Ambassadors

The Local Government Resilience Ambassadors group is made up of local government practitioners representing all of the local councils within metropolitan Sydney. Practitioners include a diversity of council roles including strategic planners, risk managers, sustainability officers, town planners and civil engineers. The role of the Ambassadors is to provide local insights into the resilience challenges facing the city and to ensure that cross Discovery Area analysis and context is considered. The Resilience Ambassadors also attended the working group meetings. The list of resilience ambassadors involved in the process is included in Appendix E.

8.1.3 Working group members

In alignment with Resilient Sydney's engagement principles, priority was given to ensuring working group members were diverse, representative (of Sydney) and influential. This was reflected in the quality of the outputs from the working group members, and the depth of their thinking around the associated subject matter.

An example of this is the fact that all four working groups found it challenging to focus solely on their Discovery Area and often provided feedback relating to the other areas. The strength of the working group member's cross discovery area perspective was also reflected by their request to be part of a cross discovery area follow up session which was accepted, with additional invitations extended to the Local Government Resilience Ambassadors and participants from the multi-stakeholder working groups.

8.2 Outcomes

Close to 60% of the opportunities inputted into FOO responded to more than one discovery area. Citywide interdependencies were also explored by working groups during the session to demonstrate participants understanding of the interaction between various components of the city and their contribution to supporting the resilience dividend. Any gaps in the discovery area research identified during the workshop sessions have been addressed following the workshops and will be used to inform the Resilient Sydney strategy as appropriate.

During working group meeting #2, participants undertook a specific exercise to identify potential owners for the shortlisted opportunities and identify further ways to deliver multiple benefits (the resilience dividend). The session also enabled participants to review the prioritised opportunities (for each discovery area) and undertake a high-level gap analysis to identify opportunities to build on existing projects across Metropolitan Sydney.

A summary of the Working Group Meeting #2 cross discovery area review session is documented in the *Cred Working Group Meeting #2 report* (May 2017) and should be read in conjunction with this paper.

9.0 Working group meeting #2

Figure 11 Participants at Discovery Area Working Group Meeting 2

As identified, this paper presents a summary of the diagnostic review undertaken for the Resilient Sydney Discovery Area Working Groups. It also provides a summary of the proposed process to refine the Field of Opportunity that will inform the final Resilient Sydney Strategy.

A second meeting of the Discovery Area Working Groups was convened on the 27 March 2017 and comprised 65 stakeholder participants from a range of organisations. A list of workshop participants is included in Appendix B.

As explored in the previous section, in response to participant feedback, this second meeting combined all four (4) working groups simultaneously to better leverage their experience, acknowledge their contribution, and progress the Resilient Sydney Strategy. Invitations were also extended to the Local Government Resilience Ambassadors and participants from the multi-stakeholder working groups. The objectives for the session included:

- Giving feedback on the Resilient Sydney Strategy framework, especially the goals;
- Evaluating opportunities according to the resilience decision-making framework to create a short list for consideration in the strategy
- Champion/identify champions to develop and own the solutions
- Continuing to build capacity for resilience thinking across Sydney, and
- Continuing to build connections for collaborative action for resilience across Sydney.

Figure 12 Monica Barone, CEO of the city of Sydney (L) opening Working Group Session #2, Maria Doumit (AECOM) facilitating a session (R)

The workshop format consisted of:

- Reviewing the draft goals

- Summarising engagement findings

- Resilience 101 presentation

- Evaluation of opportunities by Discovery Area, and

- Discovery Area Cross Check.

Table 8 provides a summary of the engagement activities undertaken during the second workshop.

Table 8 Working Group Meeting #2 –Process overview

Activity	Detail	Purpose
Experiential activity	Tribes of Sydney Participants placed themselves on a map traced out on the floor of the venue and moved from where they grew up, to where they work now, and where they live and socialise.	Build understanding of the 'tribal' nature of Sydney. There is very little mobility in Sydney – people generally live, work and play in the same small areas, rarely venturing to other parts of our city.
Presentation	Refresher – Resilient Sydney, PRA, Discovery Areas, engagement process. Draft goals	Reinforce learnings from the first round of workshops.
Guided discussions	Table discussions to refine the draft goals.	Seek feedback on the draft goals.
Presentation	Outcomes of the broader consultation process	Enable understanding of issues and priorities for stakeholders and the community.
Guided discussions	Table discussions and feedback on solutions. Participants were seated in groups of 8 at tables dedicated to review of their Discovery Area. Individual feedback forms were provided for each solution. Participants were asked to rank each solution according to	Seek feedback – evaluate solutions to create a final recommended short list.

Activity	Detail	Purpose
	specified criteria and given space to explain their responses.	
Guided discussions	Table discussions. Participants were asked to move to a new table, with a different Discovery Area. Participants were asked to mix up and sit with people from other Working Groups to allow a cross-Discovery Area check.	Seek feedback – evaluate solutions to create a final recommended short list. The cross-Discovery Area check ensured that the final short list of solutions considered challenges and benefits across all the Discovery Areas.

9.1 Review of Goals and Opportunities

Figure 13 Members of Working Group Meeting #2 (L), Stacey Atkinson (R) facilitating at table session

Participants were asked to evaluate 47 opportunities. Each of these were aligned to a series of goals which were developed as an output of the first set of discovery area working groups and comprised 10 – 14 opportunities per discovery area.

The opportunity prioritisation process included:

- Review of resilience strategy goals.

- Assessment of shortlist opportunities per goal.

- Identification of owners, and brainstorming of any gaps and key next steps.

- Cross discovery area review of opportunities.

The final prioritised opportunities will be integrated into the draft vertical logic and reviewed through the Resilient Sydney governance process.

Table 9 presents the goals and top 3 prioritised opportunities for each discovery area.

Table 9 Summary of prioritised opportunities

Discovery area	How Sydney Works	Adaptive Sydney
Goals	A. We will understand risks and interdependencies across metropolitan Sydney B. We will create networks of people and organisations to prepare and stay safe C. We will support communities to manage local needs with local solutions	A. We will cool our city & care for our water B. We will be a climate aware and carbon neutral city C. We will assess the resilience of all property and infrastructure developments
Shortlisted opportunities	From the total of 47 shortlisted opportunities 11 related to *How Sydney Works*	From the total of 47 shortlisted opportunities 12 related to *Adaptive Sydney*
Prioritised opportunities	• Know Your Neighbours • Know Your City, Find A Buddy • Resilience, Precincts and Districts	• Plan for a sustainable energy mix • Metro wide renewable energy generation strategy • Zero carbon sustainability strategy - NSW and Metro
Discovery area	**Identity in Diversity**	**City of Opportunity**
Description	Connect and Respect – *Connecting people, places and cultures*	Collaborate for Equity – *Governance and investment to promote equity and opportunity*
Goals	A. We will learn from First Nations Peoples B. We will reduce segregation to promote respect and value diversity C. We will not tolerate racism	A. We will put people first in a long term vision for Sydney B. We will give our community a real say in the decisions that affect them C. We will only invest in projects that deliver multiple benefits
Shortlisted opportunities	From the total of 47 shortlisted opportunities 10 related to *Identity in Diversity*	From the total of 47 shortlisted opportunities 14 related to *City of Opportunity*
Prioritised opportunities	• Mentoring to close the gap • Sharing Indigenous knowledge in place • Indigenous cultural history in education	• Diverse Decision Makers • Decentralise jobs, Diverse Employment • Housing Diversity for Affordability

10.0   Conclusion

This paper documents the process of the Discovery Area Working Group workshops and highlights key inputs outcomes from these sessions that have informed the Field of Opportunities (FOO) and vertical logic for the Resilient Sydney Strategy.

Engagement with the Discovery Area Working Groups, stakeholders, and community has been undertaken in accordance with the Resilient Sydney Phase II Engagement Strategy (23/08/2017). The working groups met twice, identifying and prioritising opportunities for inclusion as actions in the Resilient Sydney Strategy.

The final prioritised opportunities will be integrated into the draft vertical logic and reviewed through the Resilient Sydney governance process. It is anticipated that of the opportunities identified, the final strategy will contain a prioritised list of 50 opportunities for action.

11.0   Additional references

As noted previously, the following documents should be referenced in conjunction with this report and provide detail on the process and outputs of the stakeholder engagement; community engagement; and, Discovery Areas Workshop 2 engagement approaches.

A summary of all engagement undertaken as part of Phase 2 of the Resilient Sydney programme will be detailed in the *Resilient Sydney Engagement Report,* for release in June 2017.

Reference reports:

- KJA Resilient Sydney Community Engagement Report Revised Draft April 2017
- Cred Resilient Sydney Stakeholder Workshop Outcomes V2 05/04/2017
- Cred Resilient Sydney Final Working Group Outcomes Report Draft 1 01/05/2017
- Resilient Sydney Engagement Report June 2017

Appendix A: Working Group – Participating Organisations

Organisation	# 1 only	# 2 only	Both	Organisation	# 1 only	# 2 only	Both
100 Resilient Cities			✓	Ministry of Police and Emergency Services			✓
202020 Vision			✓	NCOSS – NSW Council of Social Service	✓		
AECOM	✓			Northern Beaches Council			✓
AIRAH - Australian Institute of Refrigeration, Air Conditioning and Heating	✓			NSW Department of Family & Community Services	✓		
All Together Now	✓			NSW Department of Justice	✓		
Art and Language Project	✓			NSW Department of Planning & Environment			✓
Arcadis		✓		NSW Dept. of Premier and Cabinet	✓		
Arup	✓			NSW Health - Population Health	✓		
Australian Human Rights Commission			✓	NSW OEM – NSW Office of Emergency Management	✓		
Australian Sustainable Built Environment Council - ASBEC	✓			NSW Police	✓		
Australian Business Roundtable for Disaster Resilience and Safer Communities			✓	NSW Public Works │ Department of Finance, Services and Innovation	✓		
Bayside Council	✓			NSW SES – NSW State Emergency Services	✓		
Big Picture Communications	✓			Office of Environment & Heritage NSW			✓
Black Dog Institute			✓	Optus SingTel	✓		
Blacktown City Council		✓		Penrith City Council			✓
Campbelltown City Council			✓	Planning Institute of Australia		✓	
CarriageWorks	✓			Property Council of Australia		✓	
Catalysr			✓	QANTAS		✓	
City of Canterbury Bankstown		✓		Randwick City Council		✓	
City of Parramatta	✓			Republic of Everyone		✓	
City of Sydney			✓	Resilient Sydney			✓
Cooks River Alliance		✓		Ryde City Council		✓	
Cooperative Research Centres (CRC) for Low Carbon Living	✓			SGS Economics & Planning			✓
CSIRO			✓	Stockland			✓
Cumberland Council		✓		St Vincent de Paul Society of NSW		✓	
Deloitte	✓			Sydney Airport	✓		
DPC – NSW Department of Premier and Cabinet	✓			Sydney Coastal Councils Group			✓
EY - Ernst & Young			✓	Sydney University	✓		
Frasers Property		✓		Sutherland Shire		✓	
Future Cities Collaborative	✓			Swiss Re			✓
Georges River City Council		✓					
Greater Sydney Commission			✓	Sydney Water Corporation	✓		
Green Building Council of Australia			✓	Tigertail	✓		
Green Cross Australia	✓			United Muslim Women Association Inc.	✓		

Organisation	# 1 only	# 2 only	Both	Organisation	# 1 only	# 2 only	Both
Hornsby Shire Council		✓		UNSW - University of New South Wales			✓
Homelessness NSW	✓						
IAG			✓	UrbanGrowth NSW	✓		
Infrastructure NSW			✓	UTS – University of Technology Sydney			✓✓
Inspiring Australia	✓			Veolia ANZ	✓		
Investa Office	✓			Virgin Australia		✓	
Investor Group on Climate Change			✓	Wanaka Orchard		✓	
Infrastructure Sustainability Council of Australia (ISCA)	✓			Western Sydney University			✓
Lendlease			✓	Westpac Bicentennial Foundation	✓		
Local Government Super	✓			Wollondilly Council		✓	
Liverpool City Council		✓					
Microsoft	✓			Willoughby Council	✓		
Mirvac		✓		WWF Australia			✓
Multicultural NSW			✓	Y-lab	✓		
Mosman Council		✓					

Appendix B: List of Discovery Area Workshop Participants

Attended Discovery Area Working Group Meeting #1

Name	Organisation	Discovery Area
Beck Dawson	Resilient Sydney (City of Sydney)	All
Adam Davis	Resilient Sydney (AECOM)	All
Suzanna Remmerswaal	Resilient Sydney (AECOM)	All
Rebecca Miller	Resilient Sydney (AECOM)	All (except Identity in Diversity)
Kristin Gabriel	Resilient Sydney (City of Sydney)	Adaptive Sydney
Jess Miller	202020 Vision	Adaptive Sydney
Paul Stower	Australian Institute of Refrigeration, Air Conditioning and Heating & Atelier Ten	Adaptive Sydney
Suzanne Toumbourou	Australian Sustainable Built Environment Council - ASBEC	Adaptive Sydney
Chris Derksema	City of Sydney	Adaptive Sydney
Deo Prasad	CRC for Low Carbon Living	Adaptive Sydney
Guy Barnett	Commonwealth Scientific and Industrial Research Organisation (CSIRO)	Adaptive Sydney
Xiaoming Wang	Commonwealth Scientific and Industrial Research Organisation (CSIRO)	Adaptive Sydney
Alex Gold	Greater Sydney Commission	Adaptive Sydney
Jorge Chapa	Green Building Council of Australia	Adaptive Sydney
Crystal Fleming	Investor Group on Climate Change	Adaptive Sydney
Emma Herd	Investor Group on Climate Change	Adaptive Sydney
Nicole Boyd	ISCA - Infrastructure Sustainability Council of Australia	Adaptive Sydney
Bill Hartnett	Local Government Super	Adaptive Sydney
Katy Christian	Northern Beaches Council	Adaptive Sydney
Gabrielle Kuiper	NSW Department of Premier and Cabinet	Adaptive Sydney
Suzanne Dunford	Office of Environment & Heritage NSW	Adaptive Sydney
Nik Comito	Optus SingTel	Adaptive Sydney
Helen Papathanasiou	Parramatta City Council	Adaptive Sydney
Carmel Hamilton	Penrith City Council	Adaptive Sydney
Alan Stoneham	Steering Committee – Penrith City Council	Adaptive Sydney
Mark Ferguson	Steering Committee (Pittwater Council)	Adaptive Sydney
Greg Johnson	Stockland	Adaptive Sydney
Geoff Withycombe	Sydney Coastal Councils Group	Adaptive Sydney
Helen Lochead	University of NSW	Adaptive Sydney

Name	Organisation	Discovery Area
Rod Naylor	Veolia ANZ	Adaptive Sydney
Monica Richter	WWF Australia	Adaptive Sydney
Gary Leung	Y-lab	Adaptive Sydney
Priscilla Brice	All Together Now	Identity in Diversity
Sarah Rhodes	Art and Language Project	Identity in Diversity
Kirsten McDonald	ARUP	Identity in Diversity
Michael de Waal	Australian Human Rights Commission	Identity in Diversity
Alexandra Vandine	Bayside Council	Identity in Diversity
Lisa Havilah	CarriageWorks	Identity in Diversity
Usman Iftikhar	Catalysr	Identity in Diversity
Nina James	Investa Office	Identity in Diversity
Donna Mosford	Multicultural NSW	Identity in Diversity
Majidi Warda	Multicultural NSW	Identity in Diversity
Tanya Smyth	NSW Department of Family & Community Services	Identity in Diversity
Mandy Moore	NSW Office of Emergency Management	Identity in Diversity
Andrew Richards	NSW State Emergency Services	Identity in Diversity
Robert Tickner	Steering Committee (Australian Business Roundtable for Disaster Resilience and Safer Communities)	Identity in Diversity
Meredith Wallace	Steering Committee (Bayside Council)	Identity in Diversity
Maha Abdo	United Muslim Women Association Inc.	Identity in Diversity
Christina Ho	University of Technology Sydney	Identity in Diversity
Kevin Dunn	Western Sydney University	Identity in Diversity
James Rosenwax	AECOM	How Sydney Works
Isabel Workman	Big Picture Communications	How Sydney Works
Geoff King	City of Parramatta	How Sydney Works
Bill Banks	EY - Ernst & Young	How Sydney Works
Alex Gold	Greater Sydney Commission	How Sydney Works
Julie Batch	IAG	How Sydney Works
Maree Abood	Infrastructure NSW	How Sydney Works
Sarah Kinsela	Lendlease	How Sydney Works
Linda Chandler	Microsoft	How Sydney Works
Amanda Smithers	NSW Council of Social Service	How Sydney Works
Jim Henry	NSW Department of Justice	How Sydney Works
Astrid Stephens	NSW Dept. of Premier and Cabinet	How Sydney Works
Jake Billett	NSW Police	How Sydney Works
Karen McCarthy	NSW Police	How Sydney Works

Name	Organisation	Discovery Area
Martin Dwyer	NSW Public Works	Department of Finance, Services and Innovation	How Sydney Works
Jacki Johnson	Steering Committee (IAG)	How Sydney Works
Julia Philips	Sydney Airport	How Sydney Works
Dai Hockaday	Sydney Water Corporation	How Sydney Works
Rick Stone	Tigertail	How Sydney Works
Rodger Watson	University of Technology Sydney	How Sydney Works
Pernille Christensen	University of Technology Sydney	How Sydney Works
Sam Kernaghan	100 Resilient Cities	City of Opportunity
Safiah Moore	ARUP	City of Opportunity
Katherine Boydell	Black Dog Institute	City of Opportunity
Jeff Lawrence	Campbelltown City Council	City of Opportunity
Danny Rezek	Deloitte	City of Opportunity
Alison Morgan	Department of Premier & Cabinet	City of Opportunity
Sandy Burgoyne	Future Cities Collaborative	City of Opportunity
Naomi Martin	Green Building Council of Australia	City of Opportunity
Jeremy Mansfield	Green Cross Australia	City of Opportunity
Digby Hughes	Homelessness NSW	City of Opportunity
Ramana James	IAG	City of Opportunity
Jackie Randles	Inspiring Australia	City of Opportunity
Gary White	NSW Department of Planning & Environment	City of Opportunity
Brendan Nelson	NSW Department of Planning & Environment	City of Opportunity
Peter Sainsbury	NSW Health - Population Health	City of Opportunity
Alison Holloway	SGS Economics & Planning Pty Ltd	City of Opportunity
David Schlosberg	Sydney University	City of Opportunity
Lauren Kajewski	UrbanGrowth NSW	City of Opportunity
Jason Twill	University of Technology Sydney	City of Opportunity
James Arvanitakis	Western Sydney University	City of Opportunity
Alissa Nightingale	Westpac Bicentennial Foundation	City of Opportunity
Angela Casey	Willoughby Council	City of Opportunity
Bridget Foley	Y-Lab	City of Opportunity
Zoie Carroll	Y-Lab	City of Opportunity
Vicki Mullen	Swiss Re	City of Opportunity

Attended Discovery Area Working Group Meeting #2

Name	Organisation	Working Group
Adam Davis	AECOM	Adaptive Sydney
Adrian Enright	QANTAS	How Sydney Works
Alan Stoneham	Penrith City Council	Adaptive Sydney
Alex Gold	Stockland	Adaptive Sydney
Alexis Clarke	Republic of Everyone	Identity in Diversity
Ali Dexter	City of Sydney	Support
Alison Holloway	SGS Economics & Planning Pty Ltd	City of Opportunity
Amy Hogan	Stockland	Identity in Diversity
Andrew Thai	Frasers Property	City of Opportunity
Anna Ashenden	St Vincent de Paul Society NSW	City of Opportunity
Beck Dawson	Resilient Sydney	City of Opportunity
Brendan Nelson	NSW Department of Planning and Environment	City of Opportunity
Bridget Foley	Y-Lab	City of Opportunity
Campbell Young	Committee For Sydney	Identity in Diversity
Carmel Hamilton	Penrith City Council	Adaptive Sydney
Carol Ashworth	Blacktown City Council	City of Opportunity
Christopher Lee	Office of Environment & Heritage NSW	Adaptive Sydney
Colin Griffith	CSIRO	How Sydney Works
Corey Jones	Cumberland Council	How Sydney Works
Crystal Fleming	IGCC	Adaptive Sydney
Danielle Meggos	MPES	Identity in Diversity
Danny Rezek	Deloitte	Identity in Diversity
David Sanderson	Faculty of Built Environment, UNSW	How Sydney Works
Diane Lawrence	Mosman Council	Resilience Ambassador
Donna Mosford	Multicultural NSW	Identity in Diversity
Ed Biel	Wanaka Orchard	How Sydney Works
Eddie Jackson	Liverpool City Council	Adaptive Sydney
Elham Monavari	Mirvac	City of Opportunity
Gary Leung	Y-Lab	Adaptive Sydney
Geoff Withycombe	Sydney Coastal Councils Group	Adaptive Sydney
Greg Johnson	Stockland	Adaptive Sydney
Guy Barnett	CSIRO	Adaptive Sydney
Helen Forsythe	City of Canterbury Bankstown	Adaptive Sydney
Hugh Lee	Australian Asia Association of Bennelong	Identity in Diversity
Ianto Ware	City of Sydney	City of Opportunity
James Arvanitakis	WESTERN SYDNEY UNIVERSITY	City of Opportunity
Jason Twill	Lendlease	Identity in Diversity
Jen Cobley	IAG	How Sydney Works
Jodi Litzenberger	Virgin Australia	Adaptive Sydney
John Brockhoff	PIA	City of Opportunity

Name	Organisation	Working Group
John O'Callaghan	JOC Consulting	Identity in Diversity
Julie Ryland	Hornsby Shire Council	Adaptive Sydney
Katherine Boydell	Black Dog Institute	City of Opportunity
Katy Christian	Northern Beaches Council	Adaptive Sydney
Kristin Gabriel	Resilient Sydney	Identity in Diversity
Kylie McMahon	Ryde Council	Adaptive Sydney
Lauren Flaherty	City of Sydney	Support
Liesl Laker	Office of Environment and Heritage	Adaptive Sydney
Lindy Deitz	Campbelltown City Council	City of Opportunity
Louise McKenzie	TPG	Adaptive Sydney
Mandy Schöne-Salter	TPG - artist	City of Opportunity
Maree Abood	Infrastructure NSW	How Sydney Works
Maria Doumit	AECOM	Adaptive Sydney
Mark Carlon	Sutherland Shire Council	Resilience Ambassador
Meg Frawley	202020 Vision	Adaptive Sydney
Meredith Wallace	Bayside City Council	Identity in Diversity
Michael de Waal	Australian Human Rights Commission	Identity in Diversity
Monica Barone	City of Sydney	City of Opportunity
Naomi Martin	Green Building Council of Australia	City of Opportunity
Pernille Christiansen	UTS	Adaptive Sydney
Peter Maganov	Randwick City Council	Adaptive Sydney
Peter Wright	Wollondilly Council	Adaptive Sydney
Rebecca Lau	Georges River Council	Resilience Ambassador
Richard Featherby	EY - Ernst & Young	City of Opportunity
Robert Tickner	Australian Business Roundtable for Disaster Resilience and Safer Communities	Identity in Diversity
Robert Wood	Virgin Australia	Adaptive Sydney
Rod Simpson	Greater Sydney Commission	City of Opportunity
Rory Martin	Frasers Property	Identity in Diversity
Sarah Reilly	Cred	City of Opportunity
Simon Ng	GBCA	Adaptive Sydney
Stacey Atkinson	AECOM	Identity in Diversity
Stephen Summerhayes	Cooks River Alliance	Adaptive Sydney
Stephen Taylor	Arcadis	City of Opportunity
Suzanna Remmerswaal	AECOM	Adaptive Sydney
Tim Wheeler	Property Council of Australia	How Sydney Works
Trina Geasley	City of Sydney	Adaptive Sydney
Usman Iftikhar	Catalysr	Identity in Diversity
Vicki Mullen	Swiss Re	How Sydney Works
Zulpha Styer	University of New South Wales	Identity in Diversity

Appendix C: *Adaptive Sydney* Resilience Goals[64]

Theme/Category Area	Resilience Goals
	We will diversify our energy, water and wastewater systems by supporting new and more sustainable business models.
	We will enable communities to be part of our energy and water systems, effectively becoming prosumers not just consumers.
	We will cool our streets and communities by planting trees - natures free air conditioners (to be the shadiest city in the world)
	We will design and build our homes and communities to be more resilient to climate extremes and growing affordability and cost of living issues.
	We will all agree that resilience is a top priority for Sydney and that we will plan, find and act to improve our cities resilience.
A resilient and adaptive Sydney - Bounces back from extreme weather events - Creates and builds social capital - Allows us to continue to enjoy a privileged lifestyle and our natural assets	By 2050 or before net zero carbon, electricity up to 40% decentralised
	By 2020 30% increase in community neighbourhood papers
	20% by 2020 increase in vegetation - labour strategy for public and private spaces
We will work together to build resilient communities - where everyone can thrive.	We will engage the community and seek their insights into what they are experiencing and how they are adapting
	Build a book of case studies that show case adaptive responses
	Raise the bar in development approvals by requiring resilience response plans for every major project
	Everyone in Sydney knows who (including institutions) who they can rely on for support in difficult circumstances.
Sydney siders have agreed the future population of Sydney	We will facilitate a conversation that allows us to understand what the appropriate population of Sydney should be to be most resilient
Sydney's people and government are healthy, connected, and recognise the growth potential that comes with change of all kinds	Use technology to: - identify scenarios of change to prepare - identify vulnerability - mobilise resources during events - learn about connectedness after events
Extreme weather, during health and technological change	Great economic, social and health outcomes/benefits are attainable to all people in the city of greater Sydney by enabling technology to address the growing health and wellbeing threats of extreme weather events
Sydney's occupants live in a connected, well-governed city that adapts and responds to weather events, promotes well-being and treats people with dignity and respect	Promote resilience assessments prior to planning, development, or construction of all development[65]

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[64] Note: the format of the outputs from the *Adaptive Sydney* workshop differ to the remaining workshop sessions as it marked the first workshop and the engagement and categorisation approach was refined following the session.
[65] Note: the highlighted cells denote those goals prioritised by participants during the workshop session.

RESILIENT SYDNEY

Theme/Category Area	Resilience Goals
Sydney's occupants are empowered, united, connected, and driven to face long term challenges	Have and support development of training programs that enhance and embed knowledge of resilience
	Encourage all parties to treat the impacted community with dignity and respect
	We are all in this together; let's work together as 'city of villages' to address our adaptive response
	Use people power to send a message to our leaders in government to get past debate and onto adaptive solutions. How can we utilise technology to assist?
	We will make Sydney the coolest place to live - we will enable all Sydneysiders to enjoy and be able to live in an extreme climate
	We will ensure that everyone is able to live and enjoy our beautiful outdoor climate, which means that we will recognise, adapt and respond to our hot, urban environment/extreme climate
	We will make sure that our Sydney lifestyle is not inhibited by its increasingly extreme climate, but that we find and learn ways to prosper and thrive despite extreme climates
A city that is planned and governed to evolve with the changing climate to make life better for all	One Sydney: We will be a broad, diverse and inclusive community, taking and demanding climate action and adaptation. - Leveraging technology to improve healthy liveability, fostering inclusion and engagement and working collaboratively to bring a united sense of pride to our city - Strengthen Sydney through ensuring our critical infrastructure is always available - We will work together across government and business to achieve a resilient city in terms of critical infrastructure
	We will change codes and regulations to reflect the future climate conditions
	We will identify interdependencies through collaborations
	We will understand the values of Sydney's resilience dividend
	We will make informed decisions to enhance society
	We will involve all stakeholders to design solutions for Sydney
Courage to confront, strength to adapt and humility learn	We will provide transparency and awareness of hazards - NSW Government
	We will integrate hazard and risk into planning
	We will develop innovative investment strategies to assist with resilient transitions
	We will design our city to reduce hazard + risk
No-one in harm's way	Accommodation and relocation and importantly not creating liabilities for the future
All people can access affordable and reliable infrastructure service	Support and ensure more PPP (people, planet, profit) investment in affordable reliable infrastructure services
	Robust build environment and connected, liveable and sustainable urban landscapes, with technology that delivers these and opens the door to more opportunities
	Good governance
	Holistic/system thinking, eyes wide open, learning from the past
	Having a clearer vision of where we want technology to take us. Selective use for benefit. Place based, local adaptions that fit culture.
	Individual empowerment
	Aware of the multiple impacts of any decision + have courage to choose
	A city that promotes wellbeing for all through brave evidence based decisions. A city that responds quickly and equitably to disasters as they occur and that learns from their mistakes

Theme/Category Area	Resilience Goals
	I live in a city that acknowledges its strengths, is aware of areas for improvement and courageous enough to discuss these publicly, to test new ways and aware of past mistakes
	Have the courage to questions economic and cultural assumptions
	We will provide high quality urban development that incorporates green infrastructure and urban heat mitigation
	We will maintain existing productive rural lands to safeguard Sydney's good supply
	We will monitor canopy coverage across the metro area over time against targets
	Increased minimum standards for energy performance/thermal comfort of new buildings
	Disclosure of energy performance of buildings and infrastructure assets
	Put in place protocols that govern liveable, sustainable and healthy urban design
	Decentralise our utilities to enable better precinct and building scale self-sufficiency
	Remove red take that gets in the way of community building initiatives (e.g. street parties, community gardens)

Identity in Diversity Resilience Goals

Theme/Category Area	Resilience Goals
ATSI	We will learn from and integrate First Nations knowledge on social cohesion[66]
	We will trial universal basic income in metropolitan Sydney to increase financial independence and improve outcomes for marginalised communities and people.
	Real life Events e.g. public talks (conversations) to get people offline
	We will increase the proportion of people with mental health issues accessing services
	Health and wellbeing - organisations, especially government having a volunteer/mentoring program for staff and community (e.g. community supported agriculture)
	We will ensure that young people have personal connections with people from different cultural backgrounds. E.g. through schooling, sport, etc.
	We will foster and encourage a frank, open and honest discussion of race, culture, privilege and power (role of rhetoric is important)
Opportunity of technology	We will harness technology to connect community and increase access to education, health and opportunity
Diversity in economy	Communities will be built on strong relationships of its diverse members
	We will utilise people with diverse (cultural) skills and backgrounds to make metropolitan Sydney the hub of the global economy. Sydney will represent diverse positions on key issues.
Risk awareness	Sydney councils and their people will plan for their top 10 risks together
	We will be proactive, learn from past experiences and evidence and proactive-based experience
	We will educate people on the risks they face (children at schools, adults)
Diverse leadership	We will ensure our leaders reflect our community authentically (targets/quotas?)
	Sydney will have better civic representation of diverse communities
	Leadership: youth vote

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[66] Note: the highlighted cells denote those goals prioritised by participants during the workshop session.

Theme/Category Area	Resilience Goals
	Leadership/diversity in decision making: Youth + children's councils, see UNICEF's "Child Friendly" cities (quality indicators)
Government Collaboration	Various L.G.A.s working together to provide free for service - engaging - relational meetings, building empathy
	Radically improve governance/structures and collaboration across the levels of government in Sydney
	We will develop guidance for developing program that requires us to work across silos
Long-Term View	We will require grant-making criteria to be long term/long-term thinking
Inclusive Civic Engagement	We will focus on increasing the participation of diverse people in business leadership positions → as entrepreneurs, investors, employers to increase outcomes for the same
	Build and embed capacity/knowledge/skills around cultural awareness/competence across communities, ages, structures
	Sydney will have broader cultural representation/ability on urban planning panels (quotas?)
	ASC will permanently include community representation from the metro-Sydney population - in a democratic approach
	We will ensure that affected communities are consulted in decisions that impact them, and if possible, involve them in the implementation
	NSW will set targets for ethnic representation on panels, committees and leadership roles
	Sydney will enhance minority community trust in government and institutions
	We will invite communities to put forward (?) solutions that they consider important
	Support 18c of the Racial Discrimination Act
	Countering violent extremism - needs to include right - wing extremists e.g. COMPACT grants
Emergency Preparedness	Sydney will rehearse for major disruptive stresses together e.g. disaster simulations
	We will leverage the learned experience with the diverse community of preparing and responding to shocks and stresses
Inclusive infrastructure	Transport: we will deliver a connected system that removes geographic barriers to cross pollination of community
	Invest in long term transformation of public transport
	Green public transport
	We will consult with community, community representatives, organisations before decisions are made about locations of infrastructure and transport routes
	We will work across silos when planning infrastructure
	Activities on trains to make them safe e.g. yoga/craft/music
	Free transport for children and young people
Multi-cultural visibility	Improve diversity of multi-cultural diversity on screen
	Long-term guaranteed outside political cycle funding for multi-cultural programs acquired
	More funding, guidance and opportunities for local councils to build and promote cross-cultural programs
	Put community/civic values at the centre of school, works, business, government, culture (requires leadership)

Theme/Category Area	Resilience Goals
Racism and segregation	We will roll out a public awareness programme to acknowledge the conscious + unconscious bias "call it out" (tv and social media)
	Sydney Siders will speak out against racism - pledge/social movement e.g. bystander anti-racism strategies.
	End public support for segregation (e.g. settlement of schooling)
	Sydney will no longer fund religious segregation through schooling
	Sydney will not settle all refugees in an enclave in Western Sydney →Avoid concentration of refugees
Rhetoric and Power (media)	NSW will sponsor minority communities to self-monitor advocate on media representations
Diversity in Media	Media training and monitoring for community members targeted by media, evolving over time
	We will demonstrate cultural representation in media programming. We will establish safe places to have open dialogues (insight on SBS)
	Using digital world with social cohesion in practice → resulting and get businesses to sponsor programs and projects
	Fake social media news sites will be destroyed
	Protocols will be developed and adhered to media reporting of terrorism
Education	Enhance social cohesion content in school curriculum, e.g. anti-racism
	Expansion of safe schools and other schemes for anti-bullying
	Fund GONSKI
	Curriculum includes social cohesion outcomes
	Education → Awareness → Knowledge. Holistic approach to skilling up for employment social cohesion.
	We will roll out social awareness, appreciation and inclusion programmes in all levels of education. Programmes to encourage a true appreciation of multi-cultural Australia
	Sydney will build anti-bullying initiatives i.e. Safe Schools
	We will introduce educational reform with a focus on experiential learning and a co-operative model of assessment

How Sydney Works Resilience Goals

Theme/Category Area	Resilience Goals
Social Cohesion (productivity)	Community development that identifies how we are the "same" but also aid being comfortable with our differences (more social cohesion)[67]
	As a community we need to have more opportunities to mix, get to know each other across racial/other barriers. (more social cohesion)
	We feel connected to the people who live near us
Education	Education of youth in terms of dealing with shocks
	Support skills for life (Duke of Edinburgh or similar)
	Build greater community education and knowledge of issues
	Resilience built into our education curriculum
	Sydney will be prepared for all type of shocks in short term and long term - embedded into education system
Quick Wins	Provide free ceiling fans in lieu of air conditioners
Funding Mechanisms	Foster micro-networks for power
	Private sector incentives to fund resiliency (tax breaks/credits?)

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[67] Note: the highlighted cells denote those goals prioritised by participants during the workshop session.

RESILIENT SYDNEY

Theme/Category Area	Resilience Goals
	Sydney will set targets for investing in resilience measures (10%)
Transport	Promote autonomous transport on-demand, where most people can work within 30 minutes of home
	Better use of traffic corridors and traffic flow phasing during key periods of the day
Infrastructure Planning, Procurement and Delivery	Incorporate 'resilience building' in tenders
	Consideration for resilience in all major infrastructure and precinct developments
	Sydney will ensure every piece of essential infrastructure has a resiliency plan
Emergency Services Communications	Emergency services should have dedicated communications capabilities
	Dedicated communications bandwidth for all emergency services during disasters - Including both 3g/4g and internet connectivity options such as wifi
	Central points of communications for government/emergency services/civilians in times of crises
	All local councils will employ suitably qualified personnel to provide emergency management capability
Inclusive City	Sydney will be (and will be seen to be) the "inclusive" capital of the world. Through this inclusiveness, Sydney's residents, visitors and public servants will instil trust and connection that builds unshakeable resilience
	Sydney will have identified most vulnerable people/groups in community
	Seek opportunities where there is increased risk or less resilience (community level)
	Place-based community initiatives →Local government and lead
Innovation and Data sharing	Sydney will share, communicate and alt to be the most "shock prepared city in the world
	Dedicated innovation coordination capability to develop public private solutions for technology challenges
	Provide open data to encourage innovation
	Government will consider behavioural insights to encourage behaviour change
Empowered Communities (involved in decisions)	Empowering communities to take action
	Sydney will change the way community views are realised in planning decisions (mandate subsidiary engagement processes, @ district scale and publish them)
	Sydney will become globally recognised as a city that solves problems through open, collaborative processes that create real value
	Focus on 'Local" and get the discussion happening there
Climate Aware	Sydney should be carbon neutral mid-century, adapt to climate change
	Quick wins - carbon neutral by 2050 - already government policy, already business cases supporting it, then can analyse and communicate wider benefits (e.g. fuel dependency)
	Sydney will be leaders in low carbon economy
Clarify Risk Appetite (flexibility)	Sydney will have a formed a clear view on 'risk appetite'
	Transparency and appropriate information sharing around critical infrastructure
	We will be transparent about the challenges facing the city and the processes in place to address them
Understanding Risk (flexibility)	Sydney, the global city where our resilient future is shared by every one
	Sydney's planners will listen to its experts and enshrine an obligation to respond (like an EIS)
	We will understand how citizens interact with networks of government services and the relationships between services
	Combined operating picture to align priorities and timeline
	Use available technology effectively in decision making

Theme/Category Area	Resilience Goals
	Our city should be mapped with all interdependencies understood to enhance connections
Self-Reliance	Encourage self-reliance, where we know where to go for information when something goes wrong
	Make it local and increase it as a personal issue
	Self aside space for, and encourage, community gardens
Policies and Standards (flexibility)	Update all Australian standards documents for facilities to include the current threat environment
	Funding to allocated based on integrated submissions by agencies to deliver an aspect at resilience for Sydney
	All infrastructure development to be mandated to provide contingency/emergency products e.g. loud speakers outside the building. Alternative evacuation locations.
	Legislative C.I. continuity obligations
Design of Infrastructure	We will consider impacts on other sectors when planning for infrastructure services e.g. transport - energy - water
	Sydney will reduce reliance on energy networks by increasing use of ecosystem services for cooling (e.g. green infrastructure, WSUD)
	We will deliver integrated networks of services to places in accordance with citizen needs
	Through the tendering process, Sydney will include resilience as an integral element in defining infrastructure solutions
Cost Benefit/Value of resilience in infrastructure	Develop a resilience scorecard + make utilities report against it
	Develop concessions for vital/services facilities. Contra agreement with developers
	Value is given to more than one infrastructure outcome
	Put a dollar value on resilience and redundancy
	Develop better cost/benefit methodology for mitigation
	Work left of bank (?)
	Look at cost of doing nothing - socialise this
	Include externalities in cost/benefit analysis
	Only build infrastructure after proper cost/benefit analysis
	Government will provide right balance of policy/guidelines to enable a better self-regulating environment

City of Opportunity Resilience Goals

Theme/Category Area	Resilience Goals
Community Cohesion	Sydney will be a city where everyone knows a neighbour that they could rely on
	We will have connected communities that are enhanced not restricted by the built environment (e.g. planning rules/guides, lower fences)
	We will empower young people in society (health, democracy, planning, work)
	Make sure people smile at art or social interactions while they travel
	Create social and regular events for all people - map them and let people know what's on
	Self-capacity of communities through integrated networks and connections
	We will celebrate record local history

RESILIENT SYDNEY

Theme/Category Area	Resilience Goals
Prioritise community facilities	We will maximise our community assets (physical, culture, people)
	We will maximise use of community facilities
	We will open up and maximise value of community assets including for community use e.g. to meet, connect, learn new things - social capacity building[68]
	Keep outdoor spaces for people to learn and play together
	Have free activities and facilities for people to learn and play in
	Make being active an easy choice - improved footpaths lighting and bike paths
	Focus on community wealth and shared goods and services
Governance/ Democracy	Develop better methods of collective decision making
	Business support networks on resilience practice
	We will appoint a Minister of Inequality
	We will introduce a gross happiness index
	We will alter funding cycles
	We will appoint a minister of Resilience
	Corporate health checks (works wellbeing)
	Engaging more Australians to actively vote
New economy (linked to Inequity and Opportunity)	Investment in start-up inc. time, resources, sharing knowledge)
	Greater collaboration between start-ups and government and corporate
	Starts ups for social good
	Utilise an economic framework that counts for all forms of capital: natural, social, human, financial, built
	We will value human interaction in investment decisions
Addressing Inequity and new/different economy models	Business sector to lead/action employment opportunities for Sydney (especially in Western Sydney)
	Ensure that people in SW pay the same as city/east people pay to access transport, jobs and facilities
	- Develop a core theory or social entitlement - Develop a national system to allocate services and cost the requirement - Merge agencies based on service delivery
	Old economy workers to new economy - manufacturing to renewable energy work
	Plan and encourage growth in employment diversity in areas of urban growth (SW and West)
	We will develop an integrated model of valuing outcomes in the city - across government
	We will share learning around different models of design/delivery cities
	We will build a sharing economy and through this grow sustainability and connect communities
	We will invest in our youth, particularly disadvantaged and those in the case of the Minister
	Create future jobs in areas where houses are being built. 1 job for each house.
	We will target our actions in areas of socio-ecological disadvantage

[68] Note: the highlighted cells denote those goals prioritised by participants during the workshop session.

RESILIENT SYDNEY

Theme/Category Area	Resilience Goals
	Decentralisation → development of working hubs all across Sydney
Communication	Using social media to determine how city feels
	We will ensure better social outcomes delivered through publicly funded events - place making in public realm
	Stop being shocked by the same shocking information
	We will improve communication between agencies and organisations
	Sharing and supporting community: information, assets, wealth, jobs, economic opposites
	Sydney will use social media for social good. We will not sure it to talk negatively about people or to put down our leaders
	We will use the arts as vehicles of community and resilience
	We will develop stories of Sydney on how we want it to change
Community Engagement	We will co-design change with ALL stakeholders
	We will increase the community engagement activity in developing + designing government policies and programs.
	Sydney will learn to listen to each other before it's too late. This can be achieved via interacting chairs. It's called a 'share chair' highly effective in Sweden/Finland: Extract data to find out what matters to people in that community.
	We will involve diverse communities in the planning process (including the vulnerable)
Access to Housing/Housing Affordability	We will work towards affected affordable Housing
	We will ensure affordable housing for key community co-workers within 30 minutes of their work and we will look at multifamily living in big, under occupied houses.
	We will mandate affordable housing for key community workers
	All new housing development must have 35% affordability (based on 30% gross income), and '5% social'
	We will pilot citizen-led housing models
Health, Mental Health and Wealth	Resilience has impact on mental health - suicide rates increasing - how can resilient cities help? Importance to mental health = equity, place, meaningful/activity. Awareness: 1 in 5 Australians has a mental health issue
	Make sure veggies, fruit and water are in all food outlets
	We will reduce the number of food deserts
	We will have accessible, available, mental health services
	We will get our communities moving to attain health and fitness (have fitness card)
Evidence Based Decisions	We will continue to increase evidence based policy - development to support good outcomes for all of Sydney
	Map out the: - Water and power constraints on housing development - Carbon Costs and Financial impacts of curing these -Strategy to balance these costs
	Not just diversity in decision-making, but recognition and valuing of different cultures and identities
	We will continue to try "place-based" tailored approaches to service delivery across Sydney - build and allow flexibility

Theme/Category Area	Resilience Goals
	Taking full account of social, economic and environment in Policy making/decisions
	We will measure, track and calibrate decision outcomes to see impact (+/-)
	We will learn from Indigenous knowledge to explore designing cities
	Use data insights and technology for social good
	Change language of government priority to service basis
	Data sharing enables informed decisions for Sydney
Whole City View	We will develop a 50 year plan/vision for Sydney
	We will develop plans for Sydney that link activity and priorities, direction across the 3 levels of government
	Remodel Sydney as a city of places/villages
	Ask "what must be done?" not "what can we do?"
	Help people across all of Sydney be aware of the opportunities across all of Sydney
	We will develop a food map of Sydney by local to celebrate food cultures/diversity
	Attention to sustainability of goals
	We will facilitate and promote urban and cultural 'tourism' across Sydney
	Discourage concentration of higher order jobs in central Sydney (e.g. office space cap)
	District plans have minimum agricultural practices
Climate Aware and Prepared city	We will consider and include climate change impacts into state government planning (OEH: Enabling Regular Adaptation Projects)
	Integrating equity into adaptation plans
	Acknowledging climate change - Reflected in policy - Reflected in risk management frameworks - Reflective in future decision making
	Climate risk - Set renewable energy target for Sydney to exceed Paris COP goals
	Sydney must have zero C emissions by 2040
	Enabling innovation pathways that support adapting to change (Disrupt BAU)
	Build to Last: support climate resilient building and infrastructure practice (mitigate and adaptive)
Awareness of Risks	Address complexity and relationship between causes of risk
	Awareness of Inequity in the distribution and experience of risk
	Continue to support the really good EM management system we have across the 3 levels of government
	Remember most of us have never had it so good and are the lucky ones globally - What about the "problems" outside of Sydney's control?
	Participatory and community led initiatives on risk aware/share platforms
	Create 'neighbourhood' and community level resilience and EM preparedness plans
Infrastructure and Transport	Ensure infrastructure and transport and land use are not only interactive in planning but also in delivery
	Reduce travel time to most workplaces by 30 minutes max, unless you walk, it may take 45
	Protect and enhance what we have. Do no harm to ecology/biodiversity
	Fix the mobile network. Need mobile phones to be better, stronger, more robust everywhere
	We will spend more money on resilient infrastructure than on recovery

Theme/Category Area	Resilience Goals
	Connectivity technology/transport - Equity of choice - Decentralisation - Public transport - Makes City smaller/state
	We will make Public Transport close to free to use
	Sydney will be a city that spends more money on resilient infrastructure than a disaster recovery
	Equal access and consistent access to fast internet and therefore information and connection
	Include/mandate green infrastructure to change microclimates and heat
	End single issue solutions - prioritise green space/infrastructure and social spaces ('ecology)

Appendix D: Resilience Alignment Criteria

Review 1

Opportunities will proceed for assessment, if the following conditions are met. Assessment for:

- Viability – opportunity is relevant to metropolitan Sydney and is able to gain support from elected officials (or likely to receive support); can be funded from existing sources (or likely to receive funding); is practically implementable, given current technology (or there is high confidence in emerging technology).

- Duplication – Opportunity doesn't duplicate existing or planned future efforts and builds on existing structures.

- Directly addresses a priority shock or stress.

Priority shocks and stresses include:

Shocks	Stresses
1. Extreme weather – heatwaves, storms & bushfires 2. Failure of large financial institutions 3. Infrastructure failures such as power outages 4. Disease pandemic 5. Water crisis – too much or too little 6. Digital network failures 7. Cyber attack 8. Terror attack	1. Increasing health services demand 2. Diminishing social cohesion 3. Loss of housing affordability 4. Increasing chronic illnesses 5. Lack of transport diversity 6. Insufficient employment diversity 7. Increasing geographic inequity 8. Rise in drug and alcohol abuse

Draft goals reflecting community and stakeholder priorities

Discovery area name	**How Sydney Works**	**Adaptive Sydney**
Discovery area description	Stronger Sydney – *Managing risks together*	Innovate and integrate to manage risk - *Adapting for a Changing Climate*
Goals	A. We will understand risks and interdependencies across metropolitan Sydney	A. We will cool our city & care for our water
	B. We will create networks of people and organisations to prepare and stay safe	B. We will be a climate aware and carbon neutral city
	C. We will support communities to manage local needs with local solutions	C. We will assess the resilience of all property and infrastructure developments
Discovery area name	**Identity in Diversity**	**City of Opportunity**
Discovery area description	Connect and Respect – *Connecting people, places and cultures*	Collaborate for Equity – *Governance and investment to promote equity and opportunity*
Goals	A. We will learn from First Nations Peoples	A. We will put people first in a long term vision for Sydney
	B. We will reduce segregation to promote respect and value diversity	B. We will give our community a real say in the decisions that affect them

Shortlist

The following resilience criteria draw on the resilient qualities, behaviours, and lens. These are included in full in the Table the following section.

Alignment to community & stakeholder values, priorities and strategic needs	
Does the opportunity align to the draft goals?	Yes or no
Alignment Criteria	**Points allocated**
Resilience Behaviours	
Aware – Would this opportunity improve understanding and information about risk, how critical city systems work and cascade, and key city challenges?	1 - yes
Integrated – Would this opportunity create new connections, increase collaboration and have the ability to work across silos to help others to understand multiple opportunities when solving challenges?	1 - yes
Adaptive – Would this opportunity assist the city to become more flexible to respond to rapid changes and disruptions?	1 - yes
Diverse – Would this opportunity promote inclusion, maximise potential value and benefits by engaging widely to support decision making?	1 - yes
Self-regulating – Would this opportunity create, support or improve support governance structures and enable iteration and replication at scale?	1 - yes
Resilience Lens	
Does this opportunity approach risks and vulnerabilities in an integrated (cross-sector) and comprehensive way (using the 100RC City Resilience Framework)?	1 - addresses two or more of the City Resilience Framework drivers
Does this opportunity consider impacts of multiple shocks and stresses identified through a broad risk and hazard assessment?	Addressed in Review 1
Have we identified the short, medium, and long-term direct and indirect benefits (and negative impacts) as a result of this opportunity?	1 – for either positive benefits short & medium term / medium & long term / short & long term
Will benefits be experienced by vulnerable communities A vulnerable community is one with significantly diminished capacity to anticipate, withstand and recover from, shocks and stresses (adapted from Red Cross definition).	1 - yes
Benefits will be experienced across multiple demographic communities and/or sectors A demographic community is a subset of society sharing common characteristics (e.g. self-employed, elderly, homeless)	1 – if the needs of more than 2 demographic communities are met
Does this opportunity leverage the ability and capacities of a broad group of stakeholders?	1 – if 2 or more local councils are involved and/or two different sectors including state / federal / market / education / community
Does this opportunity take into consideration cross-jurisdictional implications (i.e. intercity / regional / national)?	1 - yes
Alignment to Discovery Areas	Addressed in Review 1
Alignment to more than 1 Discovery Area (Cross Discovery Area)	1 – per discovery area
Resilient Sydney principles	
Does this opportunity address key city trends for now and the future	1 - yes
Would this opportunity be able to replicate at scale?	1 - yes

Alignment to community & stakeholder values, priorities and strategic needs	
Does the opportunity align to the draft goals?	Yes or no
Alignment Criteria	**Points allocated**
Does this opportunity prioritise equity?	1 - yes
Does this opportunity identify or create investment frameworks?	1 - yes
Does this opportunity integrate future governance?	1 - yes

Appendix E: Resilience Ambassadors

First Name	Last Name	Organization	Position
Sally	Anderson-Day	City of Canada Bay	Manager Community Corporate Strategy
Lucas	Atkinson	Waverley Council	Acting Executive Manager Sustainable Waverley
Sam	Cappelli	City of Ryde	Manager Environment, Health and Building
Mark	Carlon	Sutherland Shire Council	Manager Strategic Planning
Katy	Christian	Northern Beaches Council	Principal Officer - Sustainability
Tina	Christy	Georges River Council	Manager-Development Assessment
Allan	Coker	Wollahra Municipal Council	Director Planning and Development
Peter	Conroy	Willoughby Council	Planning & Infrastructure Director
Craig	Dalli	Lane Cove Council	Executive Manager Corporate Services Division
Rosemary	Dillon	Blue Mountains	Group Manager Integrated Planning & Finance
Michael	Edgar	The Hills Shire Council	Group Manager Strategic Planning
Helen	Forsythe	Canterbury-Bankstown Council	Team Leader Sustainability
Simon	Fox	Burwood Council	Senior Manager Community and Library Services
Kristin	Gabriel	City of Sydney	Senior Project Manager Resilient
Carmel	Hamilton	Penrith City Council	Sustainability Coordinator
Phillipa	Hayes	Hunters Hill Council	Senior Strategic Planner
Eddie	Jackson	Liverpool City Council	Acting Director, Community and Culture
Glennys	James	Blacktown City Council	Assistant General Manager & Director Design & Development
Corey	Jones	Cumberland Council	Integrated Planning & Reporting Co-ordinator
Steve	Kourepis	Hunters Hill Council	Group Manager - Development & Regulatory Control
Rebecca	Lau	Georges River Council	Senior Planner
Jeff	Lawrence	Campbelltown City Council	Director of Strategic Planning
Diane	Lawrence	Mosman Council	Director Community Development
Peter	Maganov	Randwick Council	Manager Sustainability and Strategic Waste
Fiona	Mann	Hawkesbury City Council	Strategic Activities
Michael	McDermid	Northern Beaches Council	Corporate Planning Manager
Kylie	McMahon	City of Ryde	Senior Co-ordinator - Environment
Kate	Napier	Inner West Council	Manager Environmental Services
Kate	Napier	Inner West Council	Manager Environmental Services, Marrickville
Helen	Papathanasiou	City of Parramatta Council	Environmental Outcomes Manager
Kathryn	Parker	Northern Beaches Council	Principal Analyst - Corporate Performance and Strategy
Vanessa	Parkes	Blacktown City Council	Environment
Mary	Rawlings	Northern Beaches Council	Manager, Enterprise Risk & Business Development
Julie	Ryland	Hornsby Shire Council	Natural Resources Strategy Manager
Jenny	Scott	Ku-ring-gai Council	Sustainability Program Leader
Danielle	Stocks	Ku-ring-gai Council	Sustainability Projects Officer, Strategy & Environment
Alexandra	Vandine	Rockdale City Council	Rockdale City Council
Rita	Vella	Georges River Council	Coordinator - Strategic Planning
Heather	Warton	City of Botany Bay	Director Planning and Environment

First Name	Last Name	Organization	Position
Peter	Wright	Wollondilly Shire Council	Manager Community Outcomes
Allan	Willding	Inner West Council	Manager Works and Waste Services, Leichhardt