

OCCASIONAL PAPER 30

The role of the urban water industry in contributing to liveability

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WATER SERVICES
ASSOCIATION OF AUSTRALIA

OVERVIEW OF WSAA

The Water Services Association of Australia (WSAA) is the peak body that supports the Australian urban water industry.

Its members and associate members provide water and wastewater services to about 16 million Australians and many of Australia's largest industrial and commercial enterprises.

WSAA facilitates collaboration, knowledge sharing, networking and cooperation within the urban water industry. The collegiate approach of its members has led to industry-wide advances to national water issues.

WSAA can demonstrate success in the standardising industry performance monitoring and benchmarking, as well as many research outcomes of national significance. The Executive of the Association retain strong links with policy makers and legislative bodies and their influencers, to monitor emerging issues of importance. WSAA is regularly consulted and its advice sought by decision makers when developing strategic directions for the water industry.

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Foreword



Liveability dominates current discussion about the planning and performance of cities and regions around the world.

Providing safe, reliable and resilient water and wastewater services provides an underlying foundation for the livability of Australian cities.

By taking a different approach to the work we do, we can realise further multiple benefits for our communities. We need stronger integration of water and urban planning to ensure our water services secure the liveability of our cities and regions, now and into the future.

The companion WSAA Occasional Paper 29 *Urban water planning framework and guidelines* (2014a) explores in more detail how this could be achieved.

The urban water industry is engaging with its customers, communities, planners and all levels of government to build a stronger understanding of the role of water in supporting the liveability of our cities and regions.

The purpose of this paper is to trigger and inform conversations about the role of water in providing and supporting urban liveability.

**Adam Lovell, Executive Director,
WSAA**

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Executive summary

The urban water industry is engaging with governments, stakeholders and customers to understand their views on liveability. We want stakeholder's views on the Australian water industry's role in contributing to the liveability of our cities and regions. The purpose of this paper is to enhance and inform these conversations.

Liveability dominates discussions on the planning and performance of cities and regions around the world. While liveability has many aspects and interpretations, this paper adopts the following definition:

A liveable city or region meets the basic social, environmental and economic needs of its people. It also addresses community values and preferences for amenity, wellbeing and a sense of place.

To be long lasting and resilient a liveable city or region must consider the needs of future generations and use systems thinking to understand and respond to shocks and long-term change.

Many attributes of a liveable city or region are dependent on the availability of water and the way water is used and managed. The urban water industry contributes to liveability by:

- providing affordable water services
- enabling economic productivity and prosperity
- protecting the environment and public health
- making a positive contribution to the amenity and wellbeing of local communities
- understanding customer's values and preferences
- using a scientific approach to identify emerging risks, trends and opportunities to inform strategic planning
- collaborating with a range of stakeholders to plan, design and build water sensitive cities of the future.

Maintaining health and wellbeing as cities grow and increase in density presents a challenge. A focus on enhancing liveability ensures cities remain internationally competitive and continue to attract investment as they grow.

The needs, preferences and aspirations of the water industry's customers are also evolving. We expect the water industry's role will be different from place to place, community to community and will change over time.

There are many indices that claim to measure the liveability of our cities and regions. There are also many performance indicators the water industry measures and reports on that relate to common attributes of liveability. However, we need to develop metrics to measure the state of liveability from our customers' perspective. This will enable us to assess how well our services and solutions respond to our customers' needs and expectations.



The urban water industry's ability to support the aspirations of our cities and customers for liveability is not just about the nature of the work we do. The more critical issue is the way we work. We must:

Engage with our customers and communities to understand their needs, values and preferences for liveability. We need to work out how this relates to the products, services and solutions the urban water industry can provide. As we expect the solutions we offer and the role we fill will be different from place to place, community to community, we need to be better positioned to respond to this variability.

Partner with state and local government, the private sector and community groups to deliver a broader range of benefits from our projects and operations.. This means working more effectively with others. One party in isolation can rarely deliver the broad outcomes that best provide liveability. Delivering better outcomes is dependent on a number of parties working together, collaborating on outcomes and pooling resources for greater efficiency and to multiply benefits.

Innovate to achieve different and broader outcomes that contribute to liveability. Sometimes it might just involve thinking about a problem differently. We need to think more broadly and holistically about the role of water in the urban environment and be open to other ways of doing business and providing solutions. We need to focus on more than just the water and the assets. We will focus on the services we provide and the collateral benefits/impacts of our work that contribute to or detract from liveability.

The efforts of government, urban planners and the urban water industry must also be aligned. All parties need to understand and respond to the requirements and expectations for water in our future cities and regions, and plan for this in a more holistic and integrated way. The companion WSAA Occasional Paper 29 *Urban water planning framework and guidelines* (2014a) will contribute to this.

What is liveability?

There are many descriptions and discussions about what contributes to liveability, but few clear definitions. Most definitions refer to indices used in Australia and internationally to assess liveability for a variety of purposes. This includes:

- assessing community wellbeing
- remuneration for overseas employment postings
- property development comparators.

A relationship between sustainability and liveability is often implied. The question asked is whether liveability is just the new label for sustainability. Liveability appears to be highly context specific; influenced by the needs, values and preferences of individuals and their communities.

This paper adopts the following definition of liveability:

A liveable city or region meets the basic social, environmental and economic needs of its people. It also addresses community values and preferences for amenity, wellbeing and a sense of place.

To be long lasting and resilient, a liveable city or region must consider the needs of future generations and use systems thinking to understand and respond to shocks and long-term change.

How has liveability been defined elsewhere?

A liveable city is one that through good planning provides a vibrant, attractive and secure environment for people to live, work and play, and encompasses good governance, a competitive economy, high quality of living and environmental sustainability (Centre for Livable Cities, Singapore)

Liveability is concerned with the quality of space and the built environment. It is about how easy a place is to use and how safe it feels. It is about creating – and maintaining – a sense of place by creating an environment that is both inviting and enjoyable (United Kingdom Department of Communities and Local Government)

Unique combinations of amenity values (open space, design features, urban vegetation); historic and cultural heritage; location; and intangibles such as character, landscape and sense of place (New Zealand Ministry for the Environment)

Liveability reflects the wellbeing of a community and comprises the many characteristics that make a location a place where people want to live now and in the future (Victorian Competition and Efficiency Commission)

Liveability: A measure of a city's residents' quality of life, used to benchmark cities around the world. Includes social-economic, environmental, transport and recreational measures (Plan Melbourne, Victorian Government)



Why is liveability important?

Cities need to be built for people, as bringing people together drives productivity. Attracting diverse people and providing business opportunities underpins a city's long-term success. Liveability is important to the productivity of cities and regions.

Liveable, sustainable and resilient cities and regions provide opportunities and confidence for businesses to invest and people to commit to their community's future. There are many attributes that determine the liveability of a city or region. This includes:

- its design
- climate
- traffic congestion
- natural features
- affordability
- exposure and resilience to extreme events.

How does water contribute to liveability?

The role and profile of water in contributing to liveability varies from place to place, over time, and according to the needs, preferences and aspirations of governments and communities.

For many decades the urban water industry has supplied safe and secure drinking water services, reliable sanitation and effective flood management for its customers. The sewerage of our cities was one of the most effective public health interventions in history. It eliminated diseases such as typhoid and cholera. These water-borne diseases were still present in major Australian cities less than 100 years ago.

In recent decades, the focus of wastewater and flood management has broadened to:

- better address waterway health
- protect recreation sites
- contribute to the amenity of rivers, harbours and beaches.

Wastewater and flood management services, that protect the health of our communities and the amenity of our neighbourhoods and waterways, provide a significant foundation for urban liveability. This is a foundation still to be realised in some international cities.

What's changed?

The water industry's has made significant investment in surface water dams to meet a demand projection based on population growth estimates and trends in household, commercial and industrial consumption. This has resulted in safe, reliable water services for many years.

Dams in protected catchments have historically provided a low cost and low energy use water supply. They also store water in years of high rainfall to supplement years of lower rainfall. The occasional use of temporary outdoor water restrictions has helped balance demand.

However, climate change and variability has worsened droughts and floods, and contributed to a long-term drying trend in Southwest Western Australia. As a result we need to rethink the above approach, particularly given significant population growth, demographic shifts (e.g. aging population and rising single person households) and the impacts of a more globalised economy on Australia.

In some parts of Australia, prolonged water restrictions during the Millennium drought (1997-2009) affected community wellbeing with public and private gardens, and sporting fields lost. This led to a highly engaged community demanding a range of responses including:

- water rebates
- decentralised water supply options
- longer-term, large scale technological solutions that are less climate dependent such as recycling and desalination.

Over the past decade, a number of things have changed including:

- households now prefer low level restrictions versus no restrictions. However, they are more opposed to higher level restrictions than they were in 2003 and are willing to pay more to avoid them (McNair and Ward 2012)
- The water industry recognises the impact restrictions can have on community health and wellbeing. Therefore, WSAA updated the restrictions approach so that 'temporary water restrictions should only be invoked when there is a sudden and unpredictable emergency'
- greater community engagement to understand the community's desires for the built environment, including public open space. For example, during the Water Forever planning process, the Perth community said they wanted a green city no matter what the climate. Hence, over 90% of people support the low level permanent water efficiency measures (two days a week sprinkler roster over summer) in Perth
- increasing density of urban living. This puts pressure on the land availability for public purposes and the role of utility land (including land associated with reservoirs, pipeline routes, stormwater channels and urban waterways) in providing public open space, recreational opportunities and pathways, and bike networks.

There is growing evidence of a strong positive relationship between providing access to safe, green open space and the physical health of our communities. In an increasingly congested city it is becoming more important to provide opportunities for:

- incidental exercise, cycling and walking
- community interactions
- access to open outdoor areas.

The water industry is also researching how the use of water in the landscape, as a conscious element in urban planning and design, is as an effective and potentially eco-efficient means of providing urban cooling. This will be increasingly important as Australian cities face more frequent and prolonged periods of heat-wave. Passive urban cooling is critical to moderate energy demands. It can also reduce the impact of heat on some of our most vulnerable communities – the very young, the sick and the elderly.

Contributing to liveability is how the water industry will meet customers' expectations and provide better responses as the world changes and our customers' needs and preferences evolve. To achieve this, we need to extend the breadth of our contribution from just being the city's plumbers. We need to participate in our cities' and regions' future as master planners. This includes working across and linking a range of issues and opportunities to provide value to our customers.



How liveable are Australian cities and towns?

In Australia and internationally, a range of indices exist to assess and compare the liveability of cities for different purposes. The similarities and difference in the attributes used to compile these indices are in Table 1.

AusPol produces the most widely recognised Australian liveability index annually for the Property Council of Australia (see Stolper & Wyatt 2011). AusPol surveys residents of major cities and regional centres across Australia to determine the key attributes of urban liveability. Its Australian survey base gives the Property Council index specific local relevance.

Each year, respondents rank the importance of 17 key liveability attributes for Australian cities and assess their own city against these. This produces a liveability score for each city. The survey receives broad media coverage in capital cities each year.

Over recent years, Australians have scored their cities highly on:

- recreation and outdoor environments
- natural environment
- school and educational facilities
- vibrant cultural scene
- good climate.

Australian cities scored least well on:

- providing quality affordable housing
- environmental sustainability and climate change
- public transport services
- roads and traffic congestion.

Respondents rated state/territory governments' performance poorly against the following attributes:

- making housing affordable
- setting fair property taxes
- supplying infrastructure to keep up with demand
- planning and managing urban growth.



The way water services are provided and water is used has strong links to many of these key attributes, our customers' experience of the cities and regions in which they live, and the way governments' respond to their priorities and challenges. Of the attributes Australian cities scored least well on, the urban water industry can contribute to environmental sustainability and climate change. It can also indirectly influence roads and traffic congestion.

These attributes can be addressed if infrastructure, particularly stormwater infrastructure is developed, managed and maintained in a broader land use planning context. That is, as an environmental, and public health, safety and wellbeing asset, assisting in moving water and people through a community.

Table 1: Comparison of attributes assessed by various liveability indexes (Holmes 2013)

	EIU/Mercer (by The Economist)	ACF Sustainable Cities Index	Community Indicators Victoria	Australian Unity Wellbeing	London Quality of Life	NZ Quality of Life Project
Health/Wellbeing	√	√	√	√	√	√
Air quality	√	√			√	
Water availability/Quality	√	√	√			
Flooding					√	
Housing			√		√	
Employment		√	√		√	√
Access to services	√		√			√
Food production	√	√	√			
Affordability		√	√		√	√
Local economy	√			√	√	
Infrastructure	√					
Community connection			√	√		√
Stress/Emotional support			√			√
Education	√	√	√			
Safety/crime	√		√	√	√	√
Local identity						√
Transport	√	√	√		√	√
Natural environment/ Biodiversity		√		√	√	
Urban form/amenity		√			√	√
Green building		√				
Climate change	√	√				
Public participation		√	√			
Personal freedom	√			√		
Governance/leadership				√		
Leisure/Recreation			√			√
Equity					√	
Ecological footprint		√	√		√	

Water’s contribution to liveability

The Council of Australian Governments’ (COAG) has a common and agreed national objective to ensure Australian cities are:

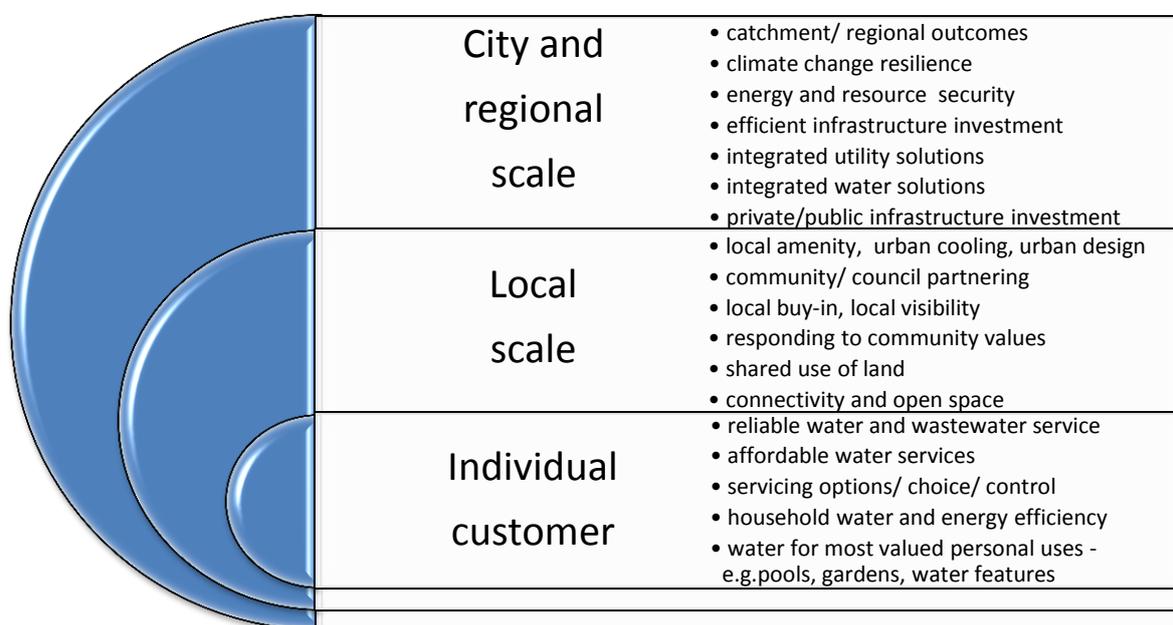
- globally competitive
- productive
- sustainable
- liveable
- socially inclusive
- well placed to meet future challenges and growth.

Numerous case studies show the ways in which the urban water industry contributes to this national objective for Australian cities, particularly in terms of liveability. These are illustrative of the research, investigations, innovation, and implementation strategies characteristic of current best practice in the industry (outlined in the WSAA Background Paper *Urban water utilities in Australia: case studies in planning and liveability* (WSAA 2014b)).

The scope of services and interactions of these, and the natural and built assets associated with them in the urban water industry, are extensive and complex – see Figure 3.

The way we manage water affects almost every way individuals and communities experience their cities, regions and towns. Therefore the urban water industry’s contribution to liveability occurs at different scales within the cities and regions (Figure 2).

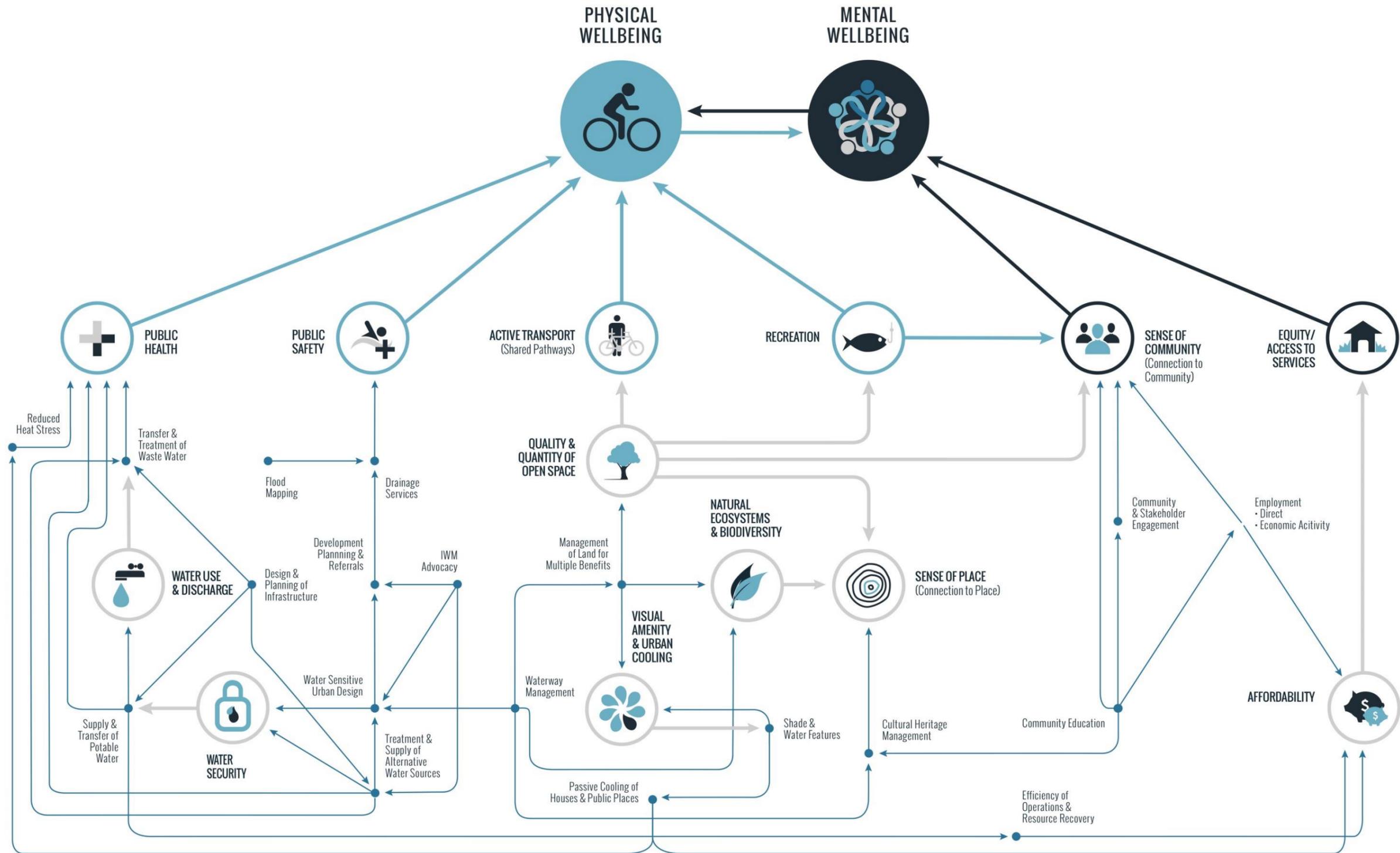
Figure 2: Water industry’s contribution to liveability over different scales



With the increasing pressures of population growth, infrastructure constraints and community expectations on our cities, the urban water industry has an ongoing and growing role in delivering liveability across each of these scales. We expect the needs and expectations for liveability will change over time, and will differ from place to place. To ensure we continue to support the growth and prosperity of our cities and the people who live in them, we need to engage with our communities to understand and influence how they will use water to create attractive, enjoyable and affordable places to work and live.

We need to develop a deep understanding of customers’ needs values and willingness to pay for services. We then need to translate this into the way services are designed and delivered. We will also use it to inform our communities’ and governments’ consideration of who benefits, who pays and over what timeframes.

Figure 3: The contribution of the Australian urban water industry to aspects of liveability (Holmes, 2013)



Integrating water and urban planning

The Australian water industry has a key role in influencing public policy debate on the form and function of growing cities, towns and regions. It also has a role in considering how best to service water needs in the short and long term.

Greater integration of planning and providing urban water services with strategic land use planning is essential to deliver services to meet multiple objectives. These objectives include resilience, liveability and good urban design. Liveability also relies on agencies successfully working together as what needs to be achieved usually spans the roles and contributions of a number of players.

Water resource planning will continue to have a strong focus on population growth and demographic change, and other emerging trends and challenges such as climate change and variability. It is also necessary to truly integrate water planning and operations with other sectors, such as energy waste and even transport, to create liveable and sustainable communities.

As the Australian water industry underpins the liveability of our cities, towns and regions, we must have a greater role in urban planning, design and management. Understanding water infrastructure constraints, opportunities and interactions with other sectors is critical. We also need simple, transparent and agreed upon governance frameworks.

WSAA released an Occasional Paper 29, *Urban water planning framework and guidelines* (2014a), which proposes a broadening of urban water planning. This is to address the need for better integration with land use planning and stronger community and stakeholder engagement to achieve multiple objectives that contribute to the liveability of our cities and regions. The framework is summarised in Figure 4.

Strengthening Integrated Water Cycle Planning in Melbourne

The vision for Melbourne's water system is *a smart and resilient water system for a liveable, sustainable and productive Melbourne* to:

- deliver affordable essential water services
- support liveable and sustainable communities
- protect public health
- protect the environmental health of urban waterways
- provide secure water supplies efficiently (Living Victoria Ministerial Council, 2011).

Achieving this vision will require an integrated, resilient water system, planned and managed to achieve the five outcomes. Strengthening the water planning framework is an important part.

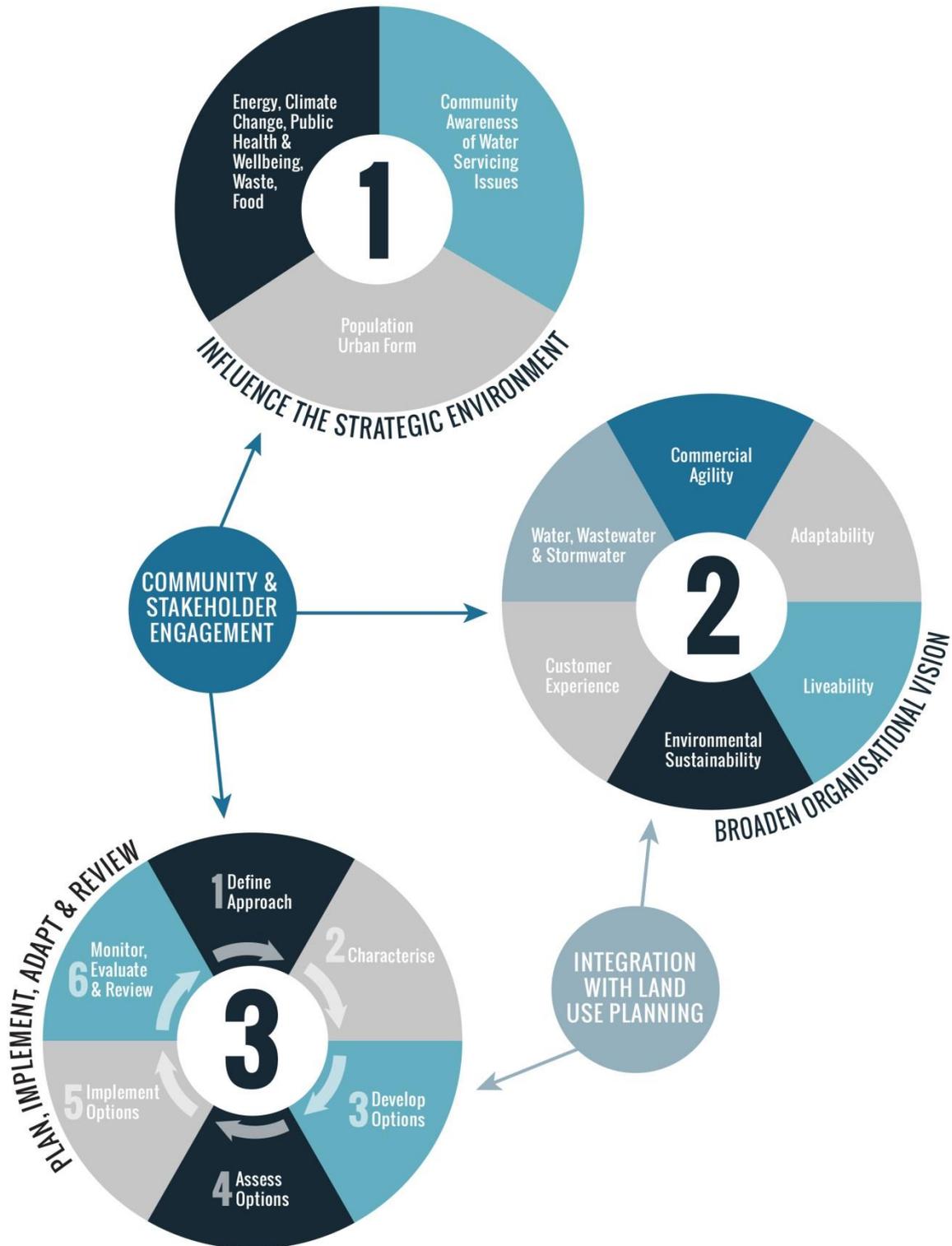
Melbourne's Water Future (OLV 2013) states that 'innovative local solutions to harvesting rainwater and stormwater will create new and exciting street, building and park landscapes'. Specifically to maintain Melbourne as a green and leafy city the strategy will:

- encourage and support the planting and maintenance of new trees – including native trees – in gardens, streets and parks of the outer suburbs developed in the last 30 – 40 years. Public education, working with water authorities and local councils, and incentive and support programs will make this happen
- set new goals for tree canopy coverage and soil moisture for water dependent open space as part of the local integrated water cycle management plans (and ensure these plans include an effective street tree policy).

The key insights of the strategy relevant to liveability include:

- the performance of the water cycle for Melbourne is driven by people and businesses at the local level
- members of the community and businesses should be partners in strategies for water cycle management
- the best solutions provide multiple benefits throughout the community
- water cycle strategies should include continuous improvement to respond to the ongoing evolution of cities and communities.

Figure 4: The urban water planning framework (WSAA 2014a)

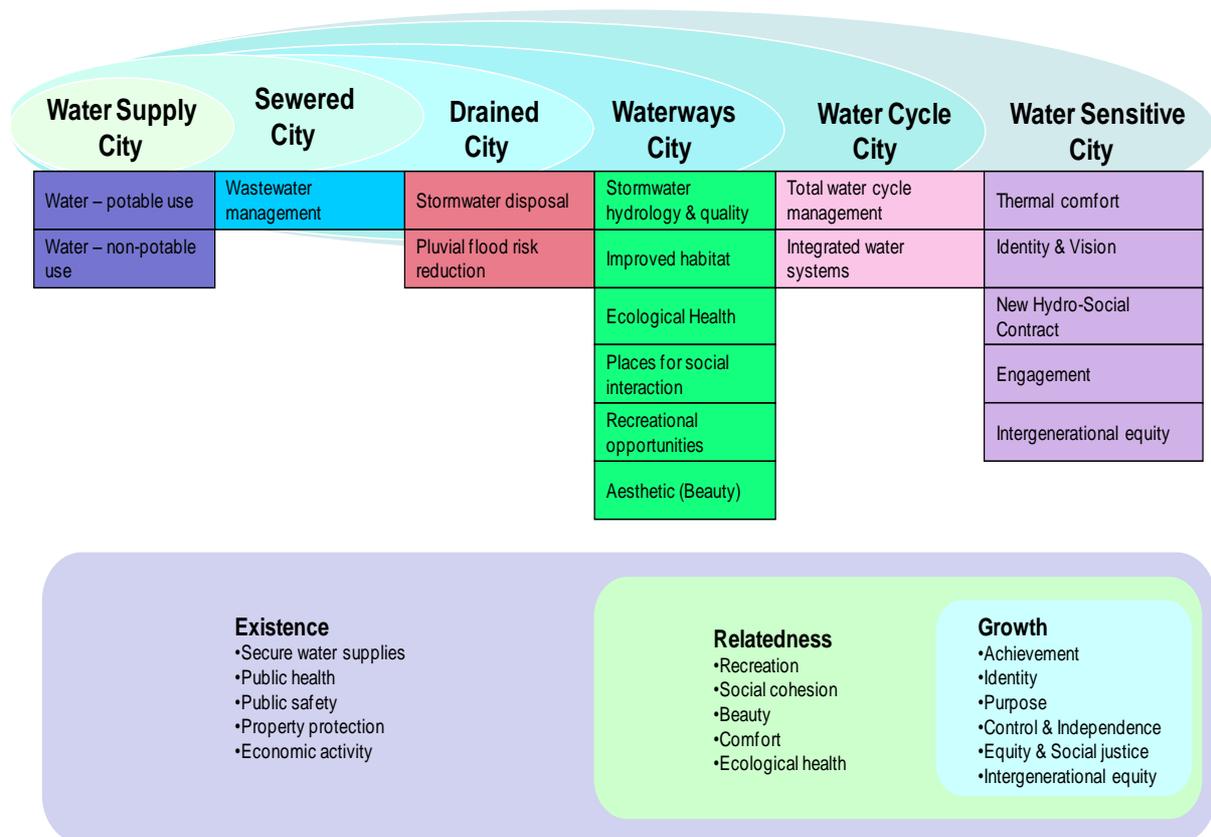


Research supporting liveability

Research by a number of Australian and international organisations, including the Australian Cooperative Research Centre for Water Sensitive Cities, is helping to better describe and quantify the contribution of the urban water sector to the liveability of our cities and towns.

Figure 5 demonstrates the concept of a continuum. It describes how, over time, a city moves from a water supply city simply providing drinking water to a water sensitive city that has all the services we expect. While this includes sewerage and drainage, it is integrated so other community needs are also met. This shows that as cities evolve so does the water services available to a city’s inhabitants - from meeting essential needs (clean water and sanitation) through to providing water-related services that more broadly support growth and personal wellbeing. In contributing to the liveability of cities and towns, the urban water sector is aspiring to achieve a *water sensitive city*.

Figure 5: Illustration of the relationships between city states and societal urban water needs (Johnstone et al., 2012)



Underpinning the evolution to a water sensitive city is that the basic and essential needs of communities is a given before higher order aspirations become relevant to those communities. All communities need ready access to clean water and sanitation at all times. Other needs can be added to these at any time. This needs hierarchy and its relationship to water is summarised in Table 2.

Table 2: Societal needs in urban water systems (adapted from de Haan et al., 2011)

	Needs category	Urban-water societal need	Description
Existence	Physical and material needs	Drinking water	Safe, secure and accessible supply of water for direct human consumption
		Non-drinking water	Safe, secure and accessible supply of water for uses other than direct human consumption
		Public health	Protection from polluted wastewater and stormwater; tolerable microclimate; public places that promote physical and mental health
		Public safety	Protection of people from the hazards of water, e.g. during floods or storm events
		Property protection	Protection of property and infrastructure from hazards of water, e.g. during floods or storm events
		Economic activity	Industries and jobs that rely on water servicing
Relatedness	Social interaction and inter-personal relationships	Recreation	Places for play, sport and leisure
		Social cohesion	Safe and secure places for social interaction and human connectedness with people
	Societal-environmental inter-relationships	Beauty	Aesthetic urban environments promoting interaction with nature
		Comfort	A pleasant microclimate and landscape for human thermal comfort
		Ecological health	Clean and healthy ecosystems with no negative impact on other ecosystems
Growth	Societal self-esteem and self-actualisation	Identity	Harmony with culture and tradition, to feel belonging. Proud association with urban water systems and environments
		Purpose and ambition	Progress towards a shared vision of a water sensitive future
		Control and independence	Choice and influence on decision-making about water infrastructure and services
		Equity and social justice	Equal opportunity to access the benefits of the urban water system
		Inter-generational equity	Preserve the ability of future generations to meet their water-related needs

Assessing and measuring liveability

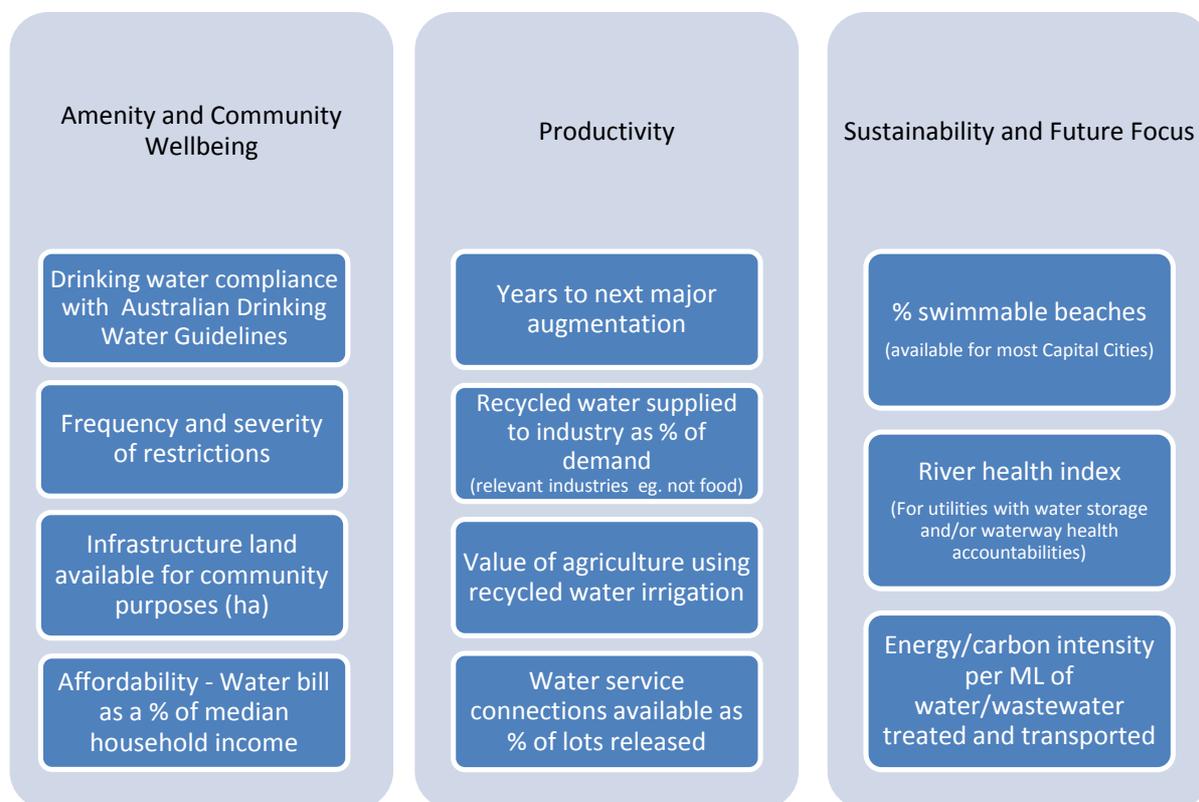
Just as the water industry has worked over the past decade to define, assess, measure and evolve towards delivering sustainable services, now the industry needs to do the same for our contribution to liveable communities. Recent research has found the concept of liveability to be both subjective and normative (Johnstone *et al.*, 2012). Various definitions and applications of liveability are valid as long as the context and needs being addressed are clearly articulated. It also means the attributes or metrics we use to measure and report on liveability will be context specific – they are likely to vary with the scope, scale, location and communities they relate to.

Reporting on our progress – city and regional scale

There has been energetic debate on the value of water industry metrics and scorecards in measuring and communicating the water industry’s role in contributing to liveability. Some believe the metrics make the concept of liveability more tangible for their organisation and its stakeholders. Others argue that metrics overly simplify a highly subjective and multifaceted topic, and do not adequately capture the complex interrelationships between water and the aspects of liveability that water supports.

The Australian water industry collects and reports significant amounts of information on the environments in which it operates, the resources it uses and the outcomes it achieves. This information is reported through national and state regulatory reporting frameworks, as well as through local regulatory and voluntary reporting. Compiling a high-level liveability scorecard could readily occur by drawing from the information already collected and reported by the water industry. The scorecards could inform national performance reporting and/or utilities’ annual reports. It might look something like Figure 6.

Figure 6: Potential high-level liveability scorecard for the urban water industry



Such reporting should not be used for benchmarking. Liveability is highly context specific and subjective. Liveability benchmarking that compares the water industry from one place to another, without taking into account the values and preferences of their communities and customers, misses the point.

Liveability has many dimensions. There are many liveability indices that already benchmark the overall liveability of cities and regions. For now, it may be more relevant to consider how water services relate to a region or cities’ assessed strengths and weaknesses as measured by some of these broader indices.

With time we will develop a more sophisticated understanding of what our customers consider to be the most important attributes of liveability, their expectations and values. From this we can develop metrics to measure the state of liveability from our customers’ perspective and assess how well our services and solutions respond to their needs and expectations.

Industry focused metrics can show how effective and efficient we are in achieving nominated outcomes. However, we also need customer-focused metrics to know whether we are really providing the solutions our customer’s value.

Assessing liveability at a project or local scale

A checklist (Table 3) provides a starting point for assessing the contribution of water-related projects to liveability at a project or local scale.

However, because liveability is subjective and dependent on context, we encourage a more sophisticated approach involving engagement with customers, communities and stakeholders. This provides better focus on the attributes of liveability that are most relevant and of most value for a particular project or location.

The use of community and stakeholder engagement combined with multi-criteria analysis is one approach to build on this basic checklist approach. This approach involves engaging with community and stakeholder representatives to determine attributes or criteria that are most relevant to making a decision or choosing a project, and weighting them according to their importance. The approach works well to capture the way liveability relates to the needs, values and preferences of specific communities, and the likelihood that the best choices and solutions will vary from place to place, community to community.

Table 3: Liveability checklist (Holmes, 2013)

Liveability outcome	Liveability outputs
Local community benefits	<input type="checkbox"/> Increase in access to quality open space <input type="checkbox"/> Promotion of cultural heritage or shared histories <input type="checkbox"/> Creation of active transport links <input type="checkbox"/> Inclusion of visual amenity <input type="checkbox"/> Improved community safety
Biodiversity	<input type="checkbox"/> Terrestrial environment protection or improvement <input type="checkbox"/> Riparian environment protection or improvement <input type="checkbox"/> Aquatic environment protection or improvement <input type="checkbox"/> Introduction of natural landscapes into urban areas <input type="checkbox"/> Improved management of pest plants and animals
Urban cooling	<input type="checkbox"/> Incorporation of green infrastructure <input type="checkbox"/> Climate resilience measures <input type="checkbox"/> Maintenance of soil moisture to support vegetation <input type="checkbox"/> Creation of water body <input type="checkbox"/> Tree planting activities
Community engagement	<input type="checkbox"/> Active community participation <input type="checkbox"/> Community Learning <input type="checkbox"/> Partnership activity with relevant agency
Value/affordability	<input type="checkbox"/> Supplementary income generation <input type="checkbox"/> Project located in a priority municipality <input type="checkbox"/> Efficiency achieved through multi-functional asset/service <input type="checkbox"/> Efficiency achieved through alternative commercial arrangements <input type="checkbox"/> Improves understanding of intangible costs & benefits

Delivering liveability

The Australian urban water industry has a long and strong history supporting the health of our communities and the prosperity of our cities and regions by providing safe, clean and reliable water and wastewater services. Our customers and communities expect us to continue to perform this role in an invisible and seamless manner, keeping our services available and affordable to everyone. This fundamental role will continue to define our core contribution to liveability.

As our cities evolve, our populations grow, and urban centres become more densely settled, the liveability of our urban environments is becoming a determinant to the health and wellbeing of our customers. It also impacts on the competitiveness of our cities and regions on the world stage to attract investment. The needs, preferences and aspirations of our customers are also evolving. Government, urban planners and the urban water industry must understand and respond to the requirements and expectations for water in our future cities and regions, and plan for this in a more holistic and integrated way.

WSAA's recent Occasional Paper 29 *Urban water planning framework and guidelines* (2014a) provides the suggested basis for better integration between water and urban planning.

Our growing understanding of liveability strongly indicates there is no one answer, no one set of activities, approaches or outcomes that defines the role of the urban water industry. However, it is clear that many aspects of liveability are heavily dependent on the use of water in the urban environment, and the way in which we go about providing water services. It is also clear our communities' and customers' expectations for liveability are value laden and context specific.

The urban water industry wants to engage with its governments, stakeholders and customers to understand their views on liveability, and what they see as the industry's legitimate role in contributing to liveability. What should our role be now and into the future, and how will this be impacted by governments' expectations for increasing contestability in providing urban water services?

The urban water industry's ability to support the aspirations of our cities and our customers for liveability is not just about the nature of the work that we do. The more critical issue is the way we work. We must:

Engage with our customers and communities to understand their needs, values and preferences for liveability. We need to understand how this relates to the products, services and solutions we can provide. As we expect the solutions we offer and the role we fill will be different from place to place, community to community, we need a flexible, dynamic and more agile approach.

Partner with state and local government, the private sector, and community groups. Providing a broader range of benefits from our projects and operations does not mean our services will cost more. More often it means we need to work more effectively with others. Working in isolation rarely delivers broad liveability outcomes. However, a number of parties working together will deliver projects across accountabilities. By multiplying the benefits we can also use available funds more efficiently.

Innovate to achieve different and broader outcomes that contribute to liveability. Sometimes it might just involve thinking about a problem differently. We need to think more broadly and holistically about the role of water in the urban environment, and be open to other ways of doing business and providing solutions. We need to focus on more than just the water and the assets. We need to think about the actual services we provide and collateral benefits/impacts of our work that contribute to or detract from liveability.

The Australian urban water industry is in the middle of a paradigm shift. Our contribution to the liveability of our cities and regions, now and in the future, will fundamentally depend on the breadth and depth of our engagement with governments, communities and our customers. We are more than just the cities' plumbers. We need to participate as master planners, working across and linking issues and opportunities that contribute to liveability and deliver value to our customers.

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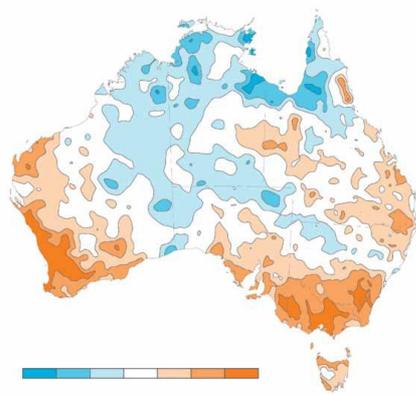
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Appendix A – State approaches

This Appendix outlines how different states are incorporating liveability into key planning and policy documents.

New South Wales

New South Wales is introducing a new planning framework, the most significant overhaul of planning legislation in 30 years.

The new planning framework proposes a clear hierarchy of strategic plans with subordinate delivery plans and codes which aim to ensure that strategic outcomes are delivered at a local level (DP&I). It also aims to streamline the planning approvals process. This includes increasing the range of development classified as exempt or code compliant.

The new planning hierarchy provides a critical opportunity to integrate water and urban planning at the highest levels of the planning hierarchy to achieve liveability outcomes. Unless it happens at this level, the new framework will provide limited opportunity for integration.

The new planning system will adopt some of the key strategic landuse planning currently in place at a state and local level. For Sydney, critical planning documents include:

- Sydney Metropolitan Strategy (DP&I) - a 20-year strategy ‘to build liveable places across Sydney’. It has a strong focus on delivering new housing and addressing transport issues.
- Sustainable Sydney 2030 (City of Sydney) - most strongly links liveability to interconnected green road and waterway networks.

While Government is acknowledging the need to link the *Metropolitan Water Plan* (Metro Water Directorate) for Sydney with strategic landuse planning, a clear and strong link is yet to be established. The most progressive attempt to link integrated water planning to a strategy for Sydney’s future as a city has been attempted by the City of Sydney in its *Decentralised Water Strategy* (City of Sydney). While the affordability of this vision might be debated, it has fundamentally challenged the approach taken to water servicing and water in an urban environment.

Queensland

Liveability in South East Queensland is addressed at the state level through state planning policy and a 30-year strategy (currently being developed). At the local government level, individual plans such as *total water cycle management plans* and *long term community plans* comprise liveability aspects.

State Planning Policy (State Development, Infrastructure and Planning), December 2013

The state planning policy identifies 16 separate state interests under five broad themes. All align with the liveability categories of Existence, Relatedness and Growth identified in the Liveability and Water Sensitive City document (Johnstone *et. al.*, 2012). The Queensland Government’s five broad themes under this state planning policy are:

- liveable communities and housing
- economic growth
- environment and heritage
- hazards and safety
- infrastructure.

Queensland’s Water Sector: a 30 year strategy, Draft discussion paper, 2013 (Department of Energy and Water Supply)

Recognising the inter-related challenges faced by the water sector and other sectors dependent on water (agriculture and resource sectors), the discussion paper outlines a vision for the strategy. This is to *create a Queensland water sector with the capability to deliver integrated catchment-based recreation, water supply, sanitation, irrigation and environmental services at lowest cost*. The discussion paper outlines future needs to achieve an appropriate balance between growing our economy, protecting our environment and lifestyle as well as reducing our water and energy footprint. Enhancing liveability is identified as one of the ways to achieve the vision.

Total Water Cycle Management Plans, Local Government Authorities

As a previous requirement under the *Environmental Protection Policy (water)* 1994, certain local government authorities within South East Queensland developed *total water cycle management plans* (TWCMPs) to integrate land use and infrastructure planning. Brisbane City Council's TWCMP comprises a WaterSmart Strategy with a vision to support the liveability of Brisbane by managing water sustainably and a WaterSmart Action Plan to realise this vision. Moreton Bay Regional Council's TWCMP strategy focuses on maintaining and enhancing the existing social, environmental and economic values of the region, through integrated water management solutions.

Long-Term Community Plans, Local government Authorities

The *long-term community plans* are community inclusive plans developed by local government authorities with a planning horizon of minimum 10 years. These plans are a key mechanism to articulate and action the community's interests, aspirations, needs, visions, values and priorities, comprising the themes of social wellbeing, economic development environmental management and governance.

NetServ Plans, Distributor-Retailers

Under the *South-East Queensland Water (Distribution and Retail Restructuring) Act* 2009 all South East Queensland water distributor-retailers must develop a *Netserv Plan* comprising operational aspects as well as demonstrating contribution to sustainability, emergency response measures, customer service standards and key infrastructure projects planned to support population growth. The *Netserv Plans* should support and reflect the land use planning undertaken by the Queensland Government and the local government authorities.

South Australia

There are three main plans that influence liveability in South Australia, the *South Australian Strategic Plan* (2011 – first launched 2004), the *30 Year Plan for Greater Adelaide* (2010), and *Water for Good* (2009). While each plan has a specific focus there are linkages between all plans, with the South Australian Strategic Plan being the overarching document.

The *South Australian Strategic Plan* includes seven strategic priorities, five of which are directly related to liveability. For example, the strategic priority, creating a vibrant city, has a target of increasing the use of public spaces by the community. Targets and goals in the Strategic Plan are used to guide State agency planning and local council strategic plans to planning and investment.

The *30 Year Plan for Greater Adelaide* was designed to provide a 'spatial expression' of the principles in earlier versions of the Strategic Plan, with the aim of being used to guide State Government planning and delivery of services. The 30 Year Plan focuses on future land use and proposes two main changes to the current situation, the first being to drive more compact and better-designed urban form. The second to create new governance arrangements to enable flexibility in policy and targets to adapt to economic and population changes. The three main objectives, liveability, competitiveness and sustainability and climate change resilience, are underpinned by principles aimed at influencing greater control in changes to the urban form.

The *Water for Good plan* was developed towards the end of the Millennium drought. It focuses on ensuring safe, secure and reliable water supplies to sustain the current and future population of South Australia. There is an emphasis on supplies and services being climate resilient. The plan lists a comprehensive list of actions to assist with the move toward South Australia being a water sensitive state.

The South Australian Government is focusing on a number of strategies to realise the liveability objectives of the combined plans. In the short term it adopted a water sensitive urban design policy that includes voluntary targets and guidelines. The longer term is considering development of an *Urban Water Blueprint* that looks at the combined management of the stormwater and wastewater resources. It also continues the Goyder Institute for Water Research, whose role is to build our knowledge and tools that supports policy decisions around urban water issues.

Victoria

There is considerable work being undertaken in the Victorian planning and policy context to understand and improve liveability. This work includes the release by the Growth Areas Authority of a *Strategic Framework for Creating Liveable New Communities* (GAA) with a focus on improved planning for liveability in Melbourne's Growth areas.

All Victorian councils are currently undertaking municipal public health and wellbeing planning, as required by the Victorian *Public Health and Wellbeing Act* (2008). These four year plans identify goals, strategies and engagement approaches to improving community health and wellbeing, and include climate change responses. Many councils are also implementing the *Healthy Together Communities Strategy*, which is focus on nutrition and physical activity, embedding healthy behaviours through education, workplace and community settings.

More specific to the urban water sector, the Office of Living Victoria was established in 2012. This followed recommendations by the Ministerial Advisory Council for Water to better integrate water and development planning. Recent publications include *Living Melbourne*, *Living Victoria Implementation Plan* and *Melbourne's Water Future*. Much of the work in Victoria is strongly influenced by the work of the Cooperative Research Centre for Water Sensitive Cities.

Western Australia

Liveability is largely addressed collaboratively through the land planning framework. This allows coordinated planning of infrastructure and land uses to achieve community objectives.

Strategic assessment of Perth and Peel (Department of Premier and Cabinet)

This overarching government initiative (State and Federal):

- provides greater certainty in terms of long term land supply to meet the needs of a city of 3.5 million, including infrastructure co ordination
- delivers an effective long term and strategic response to key environmental issues
- provides greater certainty to areas that can be developed and what the obligations will be in terms of mitigation, including environmental offsets.

State Planning Strategy (Draft 2012) (Planning, WA)

Provides a vision for Western Australia to 2050 and beyond based on a framework of planning principles, strategic goals and State strategic directions. Liveability is one of four pillars in the vision.

Liveable Neighbourhoods (Planning)

This is an operational policy to be followed in the design and approval of urban development. It aims to guide sustainable development to 2029 and a development control policy, or code, to facilitate development.