



4th water sensitive cities conference



Australian Government
Department of Industry and Science

Business
Cooperative Research
Centres Programme

Application of the WSC Transition Framework

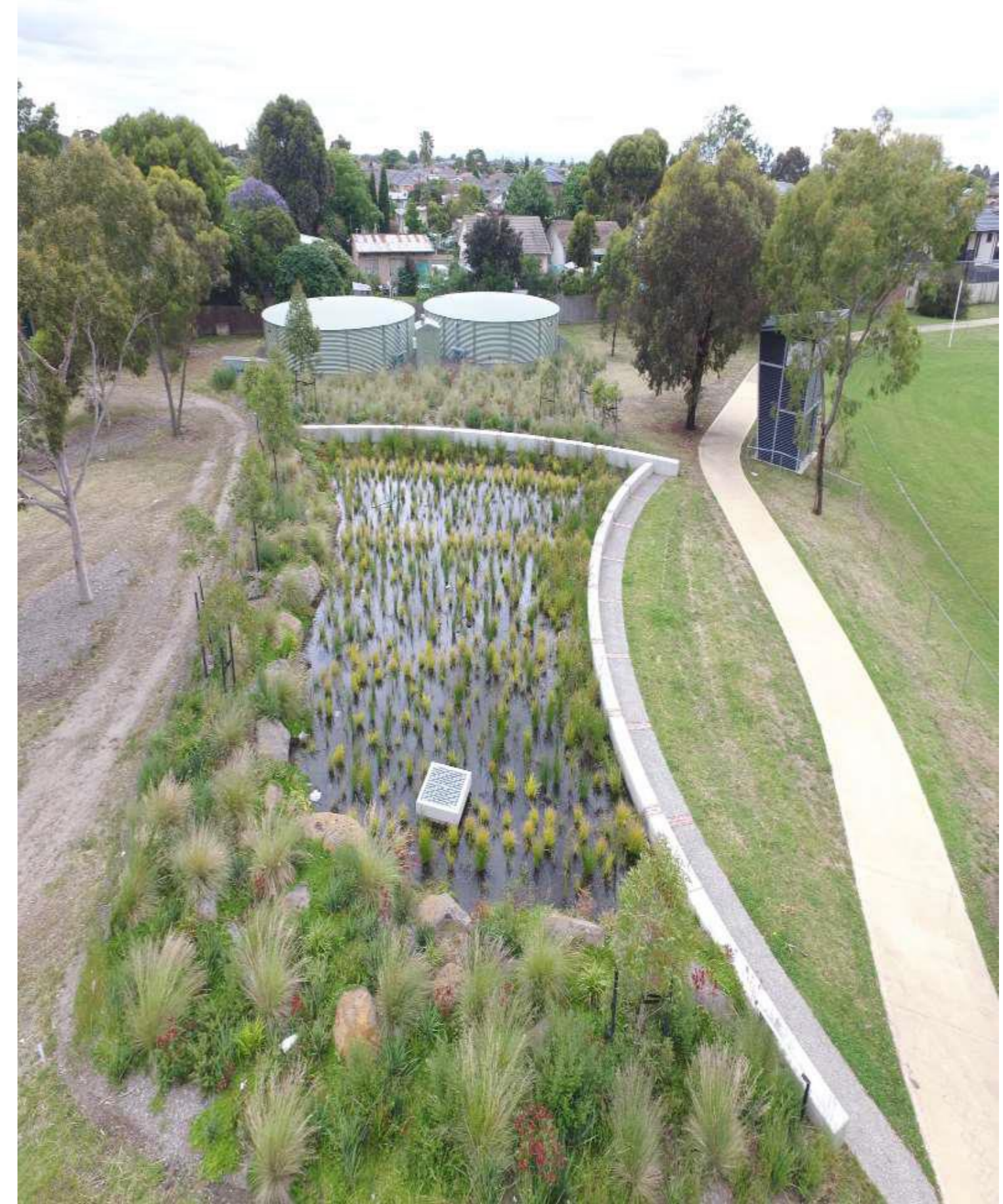
Sara Lloyd
E2Designlab

26-28 March 2019

E2DESIGNLAB

Melbourne Water's Living Rivers funding program

- Established in 2006 Melbourne Water's Living Rivers program aims to improve stormwater management across catchments to reduce waterway pollution and erosion
- It provides funding and support for the 38 Councils in Melbourne Water's service area
- Funding comes from the Waterways & Drainage Charge on water bills
- Grants from Melbourne Water match Council contributions towards improved stormwater management for waterway health



Mutton Reserve Stormwater Harvesting System, Fawkner. Moreland City Council

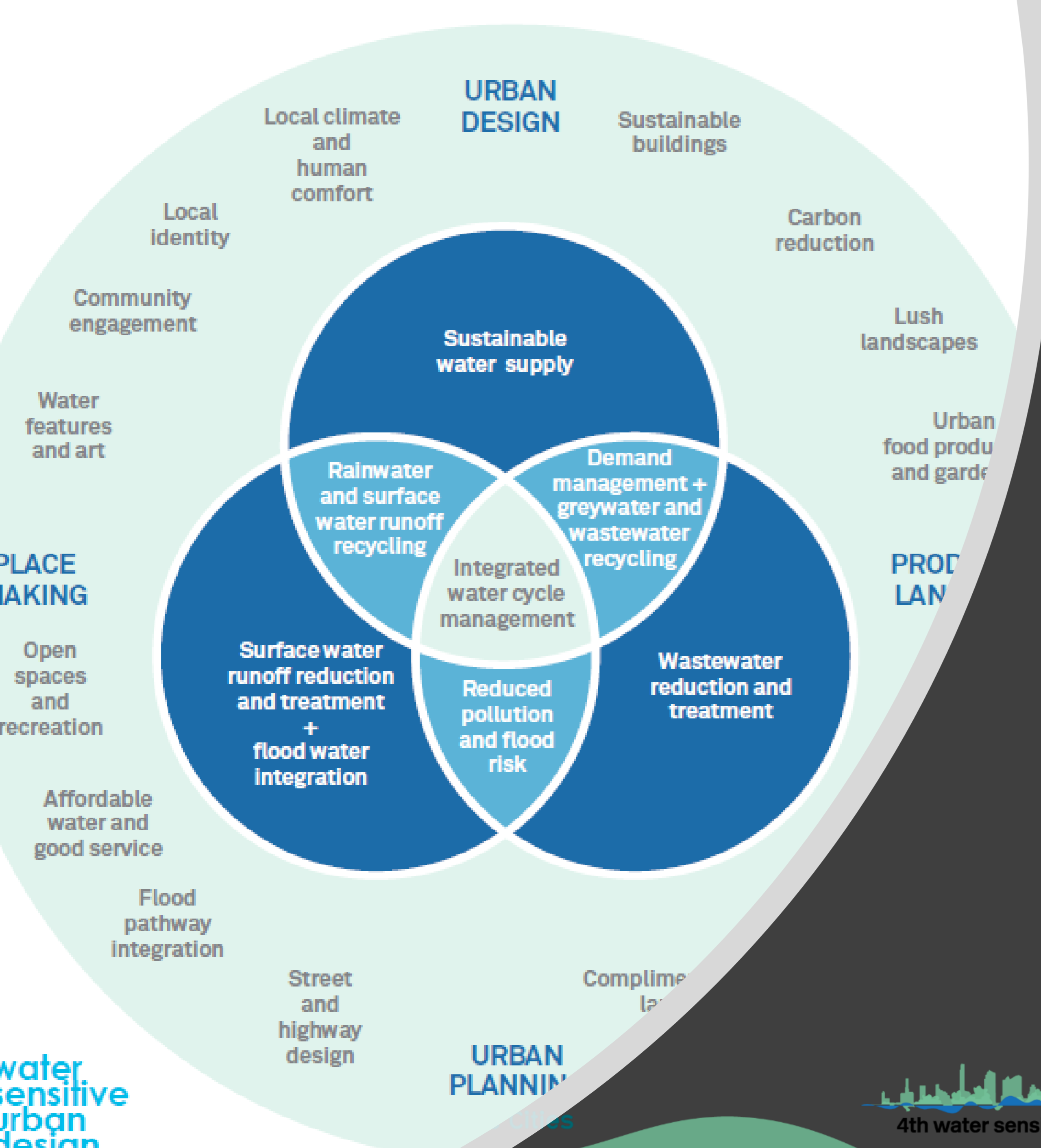
Melbourne Water's Living Rivers funding program

- The Living Rivers program works through a partnership and collaborative approach with local government
- Supported staff positions at Councils, over 200 strategy and policy development, guideline development, and capacity building projects
- Has enabled over 400 construction projects of WSUD assets



Williamstown Cricket Ground Wetland and Stormwater Harvesting System. Hobsons Bay City Council





Stormwater quality focus to protect waterway health

Healthy waterways, community values and liveability – IWM focus

Enabling factors for integrated water management



- Champions
- Platforms for connection
- Knowledge
- Projects and application
- Tools and instruments

In order to get on-ground practice right fundamental enabling factors must support 'new' practice'



Water for the environment and liveability		
<p>1. Council leadership</p> <ul style="list-style-type: none"> Set targets for increased WSUD delivery in council and private domain Set targets for stormwater pollution reduction before it runs into waterways Set targets for blue-green corridor developments Reduce surface runoff to a specified number of runoff days per year Commit to maximise WSUD integration into all new and replacement infrastructure and precinct development Commit to retrofit a number of existing Council infrastructure assets Align water and open space strategies <p><i>Commitment to maintenance as a leadership point like the part in Govt. Department advocacy for better controls & standards to encourage culture change</i></p>	<p>2. Requirements and responsibilities</p> <ul style="list-style-type: none"> Identify key 'hold points' in the creation of WSC assets where new procedures/actions can be implemented in order to improve project outcomes Alter the developer contributions regime to support the attainment of WSC outcomes Leverage the strength of the State Environmental Protection Policy as part of policy changes at the municipality level Develop additional planning controls in order to better take advantage of opportunities, avoid making the mistakes of the past and create incentives for developers to incorporate pervious areas and WSUD features into their designs Ensure blue-green corridors and multi-functional open space are embedded into Masterplans, Precinct Plans and other relevant Council documents Ensure developments include micro-climate / cooling impacts (eg: green roofs, green walls etc) and reduced impervious areas Protect existing plants/traps during development processes <p><i>standards & controls in place that link wider targets to each development by/or precinct</i></p>	<p>3. Communication processes</p> <ul style="list-style-type: none"> Develop catchment wide connections (e.g. with Councils) in order to tackle waterway health and Utilise positive reinforcement in order to improve illegal connections and increase compliance with Advocate to and develop partnerships with other ecosystem services Encourage green infrastructure including green facades and planter boxes (especially in residential areas) <p><i>and use Total Bioscience's table</i></p>
<p>4. Knowledge and skills</p> <ul style="list-style-type: none"> Develop WSUD guidelines Train staff in WSUD asset management Create a specialist Water Sensitive Cities and Water Sensitive Urban Design team Protect and improve Creek health: <ul style="list-style-type: none"> Identify and prioritise opportunities for improving water ecosystem (quality, flow, plants, animals) Establish criteria to assess health (links with Melbourne Water) Establish monitoring and evaluation frameworks (KPI's / treatments / condition) 	<p>5. Demonstration projects</p> <ul style="list-style-type: none"> Expand the Dundas Street Wetland Create a strategy to support implementation of GreenStreets Streetscapes and Urban Forest Strategies Resource top five worst sites e.g. 'Greening the Ghetto' in NYC Where practical daylight buried waterways and widen creek corridors (and understand parties involved/overlap) <p><i>aim for implementation of large scale project / at precinct level</i></p>	<p>6. Continuous improvement</p> <ul style="list-style-type: none"> Purchase land in order to reduce encroachment Realign and break existing kerbsides in order to increase passive irrigation Value, consolidate and optimise existing green infrastructure: <ul style="list-style-type: none"> Create a record of WSC assets Create a resourced and budgeted plan for WSC assets Improve usability and desirability of open spaces Review existing open spaces to determine potential for irrigation Recognise and act on roads / private provision of ecosystem services and green corridors Increase plants and trees in a targeted way (not many trees there)

Co-design connecting research & industry practitioners

Indicators developed to rate each enabling factor to ensure consistency in application and interpretation

		Enabling factors				
		Champions	Platforms for connecting	Knowledge	Projects and applications	Tools and instruments
Transition phase	1. Issue emergence	Issue activists		Issue highlighted	Issue examined	
	2. Issue definition	Individual champions	Sharing concerns and ideas	Causes and impacts examined	Solutions explored	Basic information
	3. Shared understanding & issue agreement	Connected champions	Developing a collective voice	Solutions developed	Solutions experimented with	Preliminary practical guidance
	4. Knowledge dissemination	Influential champions	Building broad support	Solutions advanced	Solutions demonstrated at scale	Early policy, regulation and targets
	5. Policy and practice diffusion	Organisational champions	Expanding the community of practice	Capacity building	Widespread implementation and learning	Effective policy, regulation and targets
	6. Embedding new practice	Multi-stakeholder networks	Guiding consistent application	Monitoring and evaluation	Standardisation and refinement	Comprehensive policy and regulation

Co-design connecting research & industry practitioners

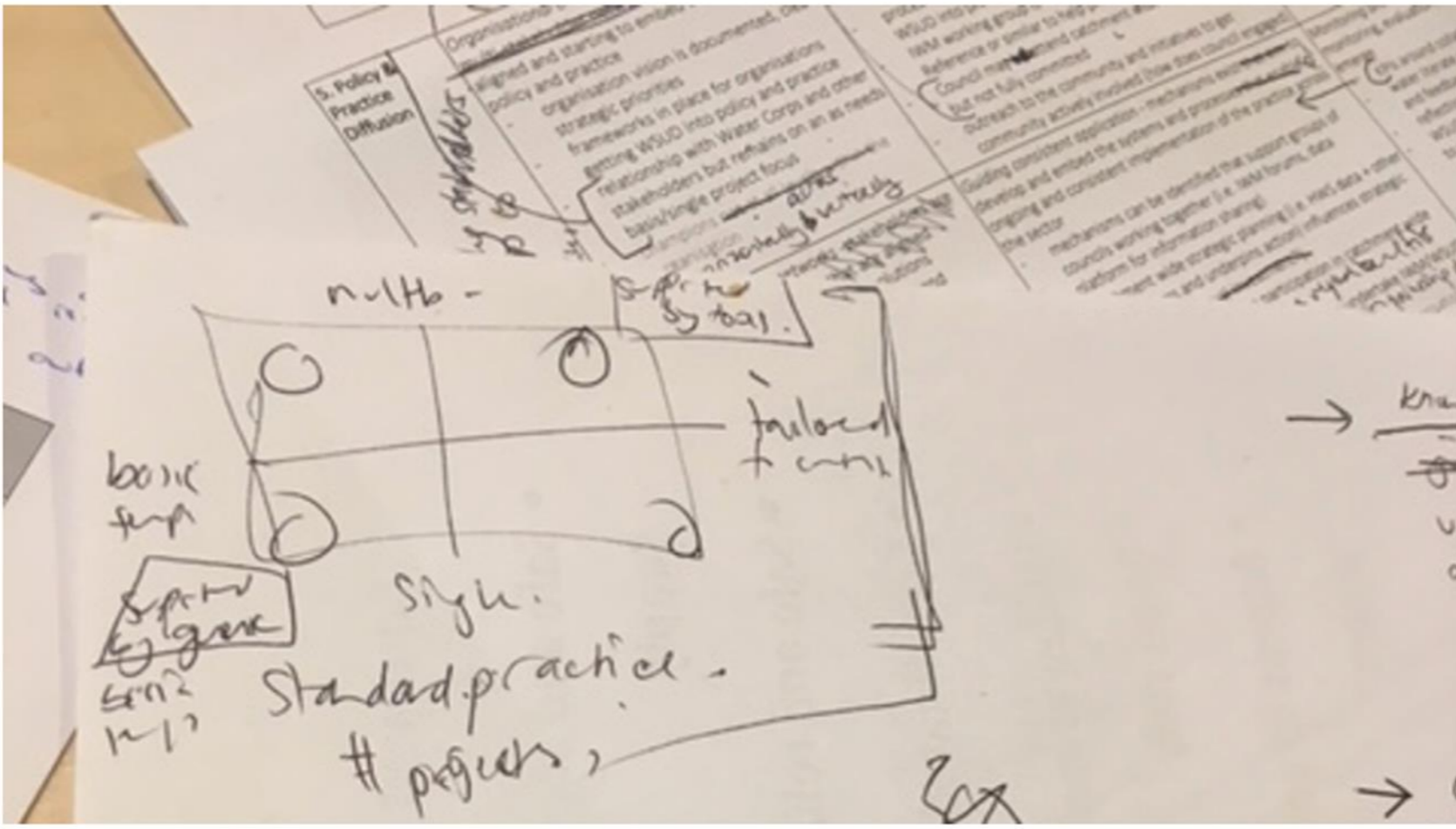
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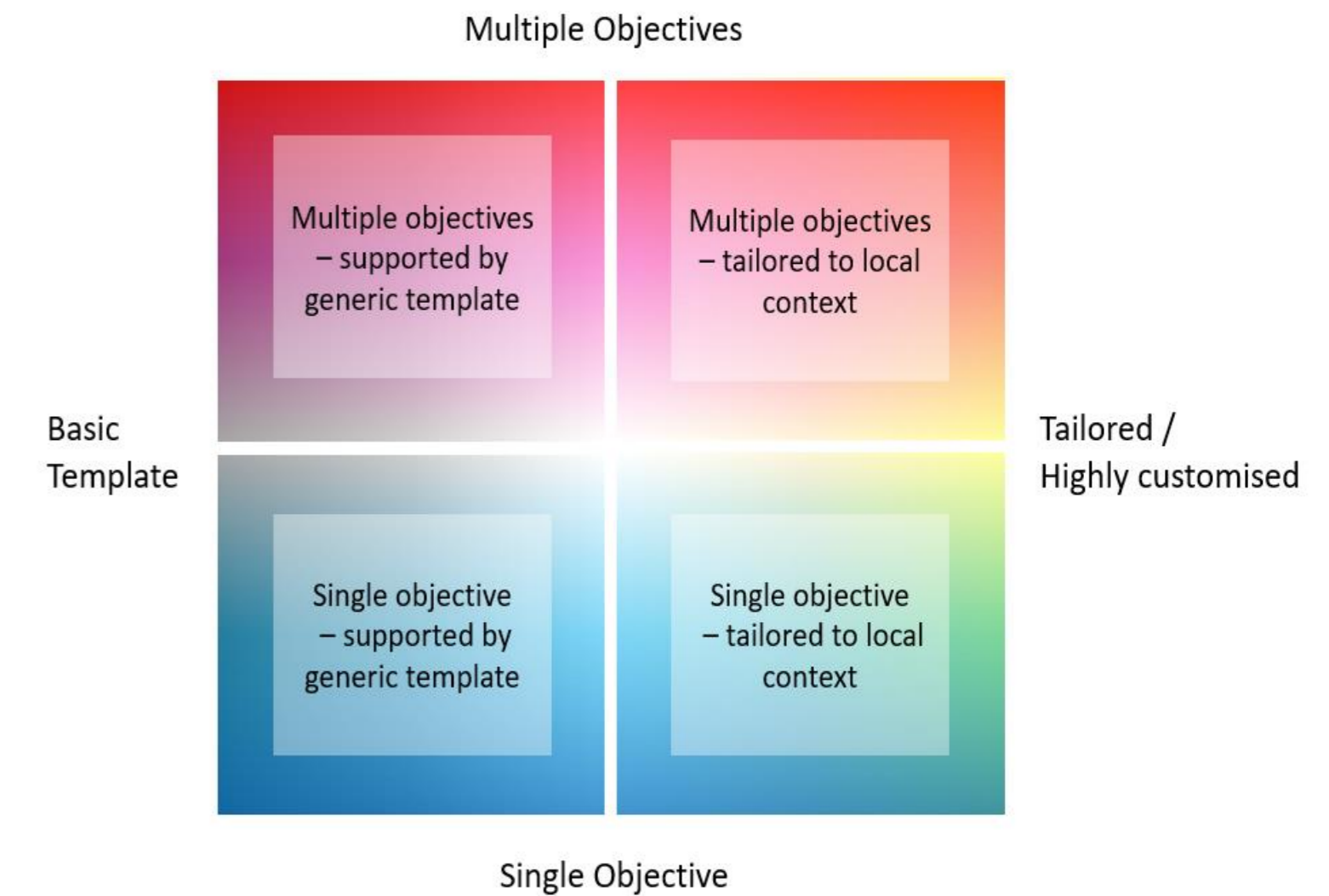
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Transition phase	Champions Key networks of individuals and organisations
Issue Emergence Awareness of waterway health or related issues in local council area	<i>Issue activists</i> – Champion (from council, community or stakeholders) raise a water related issue (waterway health, nuisance flooding, urban amenity, etc.) Indicators (dashes) and examples of what you may see (dots): - Waterway health is a topic of concern and being actively discussed by a champion <ul style="list-style-type: none"> o waterway health been put on the agenda or addressing a related pressing issue would have beneficial outcomes for the waterway
2. Issue Definition Awareness of waterway health or related issues and impact in local council area	<i>Individual champions</i> - (from council, community or stakeholders) champion define a water related issue (waterway health, nuisance flooding, urban amenity, etc.) from their own perspective, providing greater clarity about why it's important for the municipality Indicators (dashes) and examples of what you may see (dots): - One or more recognised champion(s) articulate and define a water related issue, its cause and impact, and relationship to waterway health <ul style="list-style-type: none"> o champion is recognised for their knowledge, passion on a water related issue o issue based problem raised by community, councillor or broader stakeholder leads to a response and draws interest and attention

Connecting research & industry practitioners

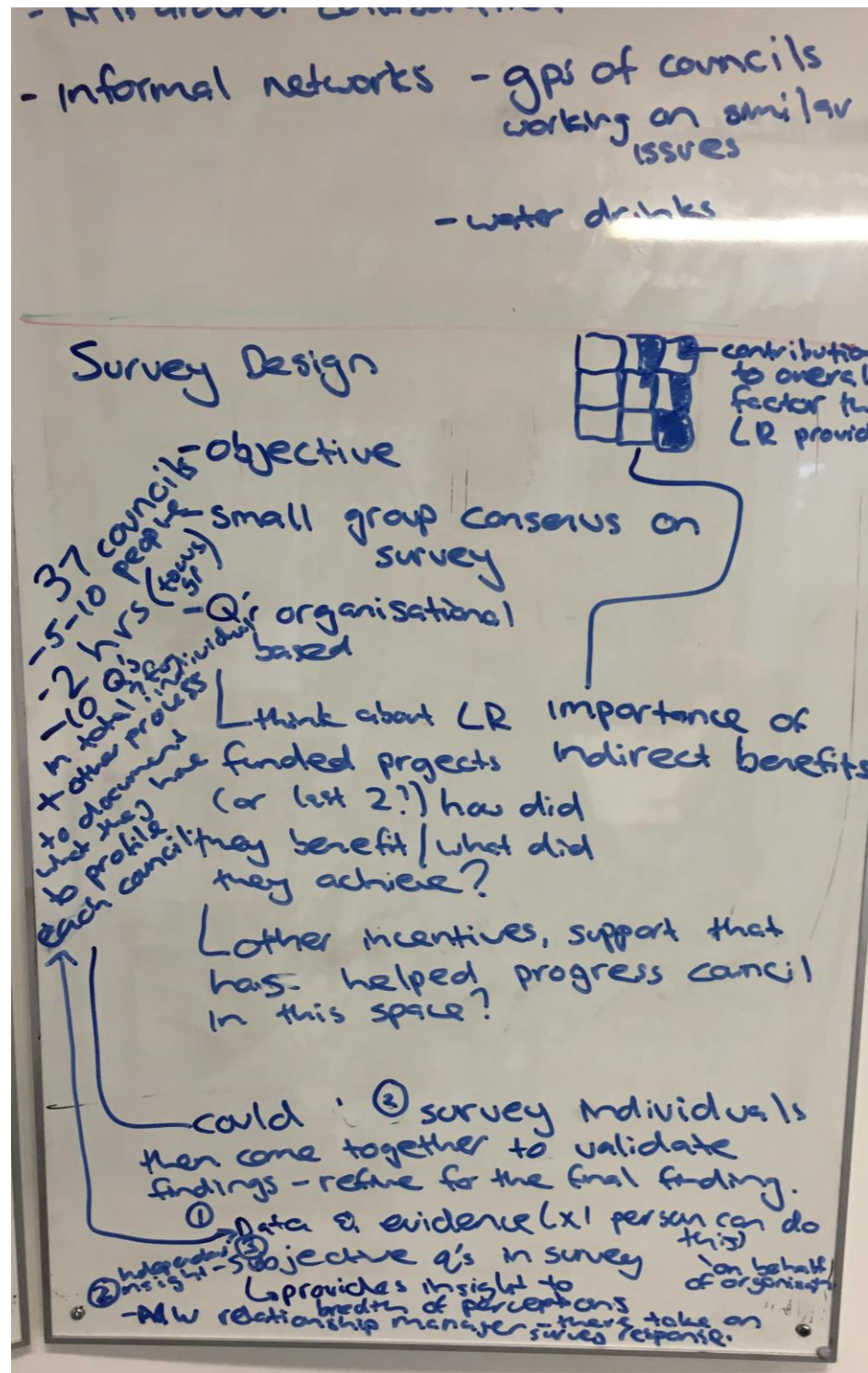
Survey design to gather evidence

Theme	Questions	Matrix cell	Method to assess
	<p>What is standard practice in municipality? - sophistication of solution basic template, single objective, tailored to local context, multiple objectives – supported by generic templates, common tools or integrated modelling platforms</p> 	<p>Project sand application 3, 4, 5 Knowledge and applications 3, 4</p>	<p>Initial contact to respond to (quadrant design question) Validation at focus group</p>
	<p>What influence has living rivers had in leading to:</p> <ul style="list-style-type: none"> - A) the implementation of trial and demonstration projects - B) the roll out of WSUD projects as standard practice 		<p>Initial contact to respond to (open ended question)</p>
	<p>How do these internal champions interact with one another (i.e. mode, quality) e.g. working group, sharing information? Provide examples:</p>	<p>Champions 2,3,4 Platform for connection 2,3,4</p>	<p>Initial contact to respond to (open ended question) Validation at focus group</p>



Connecting research & industry practitioners

Survey design to gather evidence



Phase 1
Key contact
~ 22 Questions



Phase 2
4-8 council representatives
~ 18 Questions



Phase 3
Discussion & validation workshop

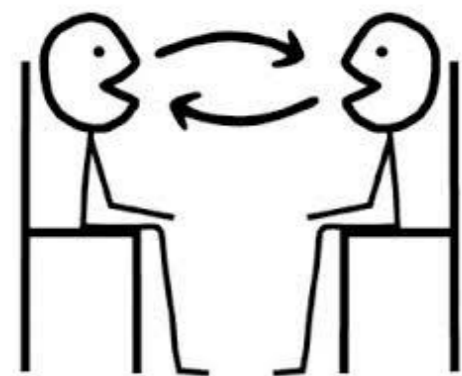
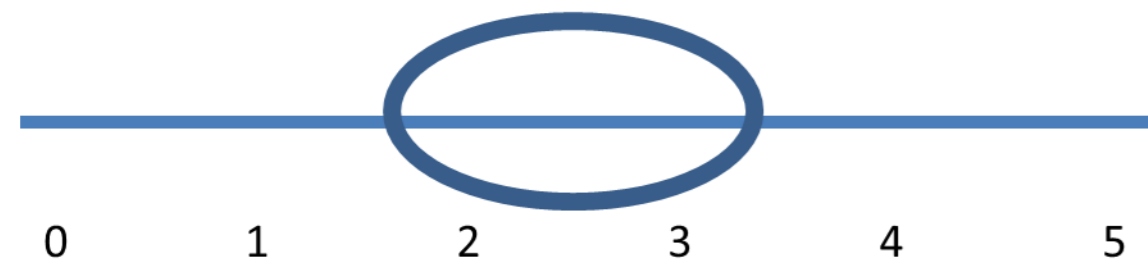


Making sense of the results

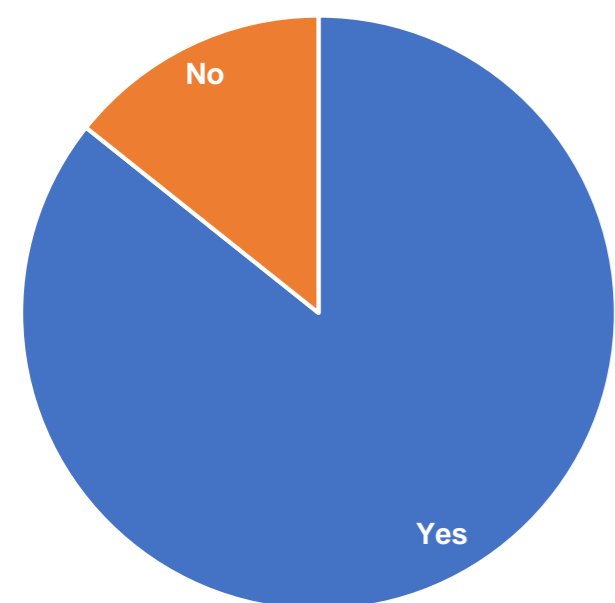
Automated graphing of results to discuss with council

To what extent do organisational monitoring and evaluation processes support transparency, learning and continuous improvement for WSUD/IWM?

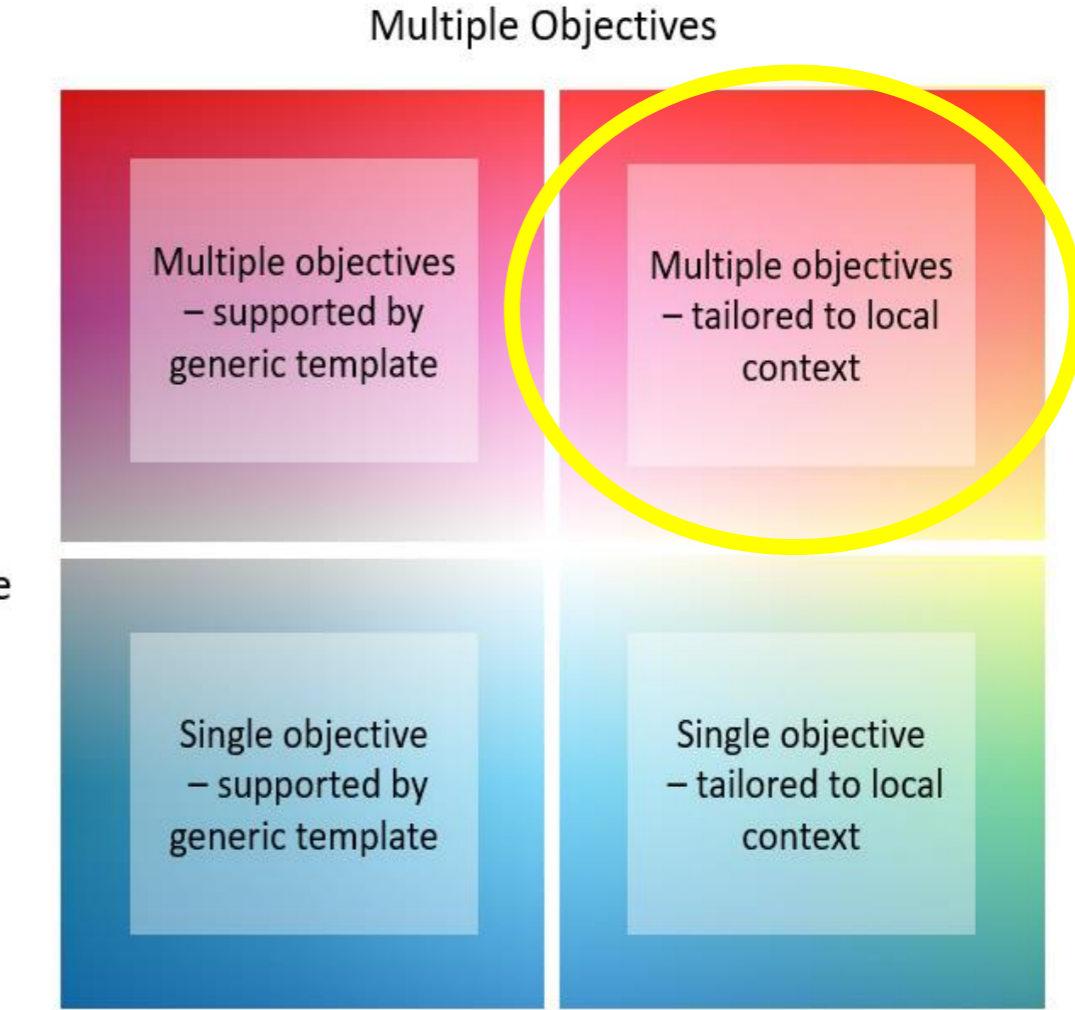
(e.g. opportunities for feedback from community, stakeholders or internally, asset audits, benchmarking for asset management)



Does your Council collaborate externally?

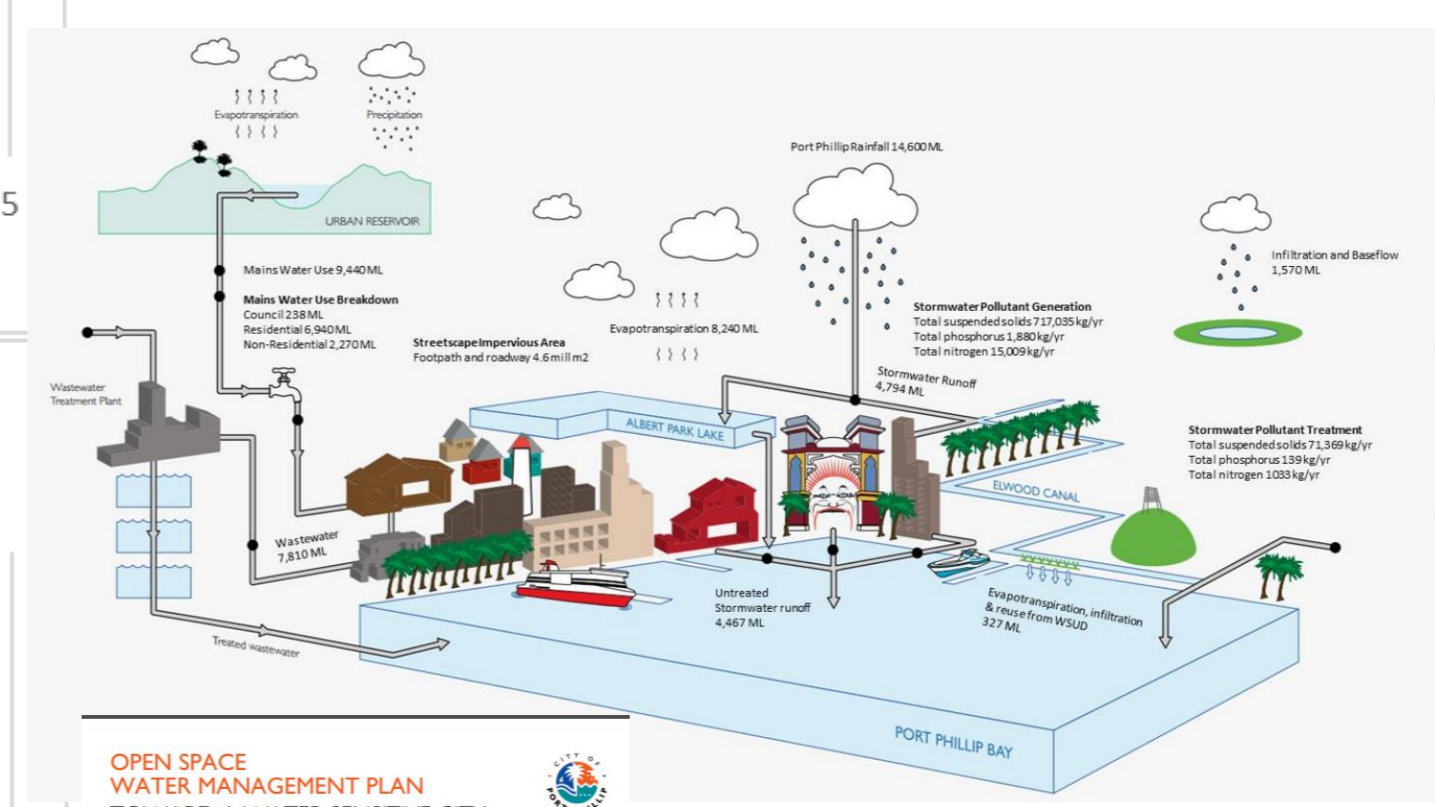


Basic Template

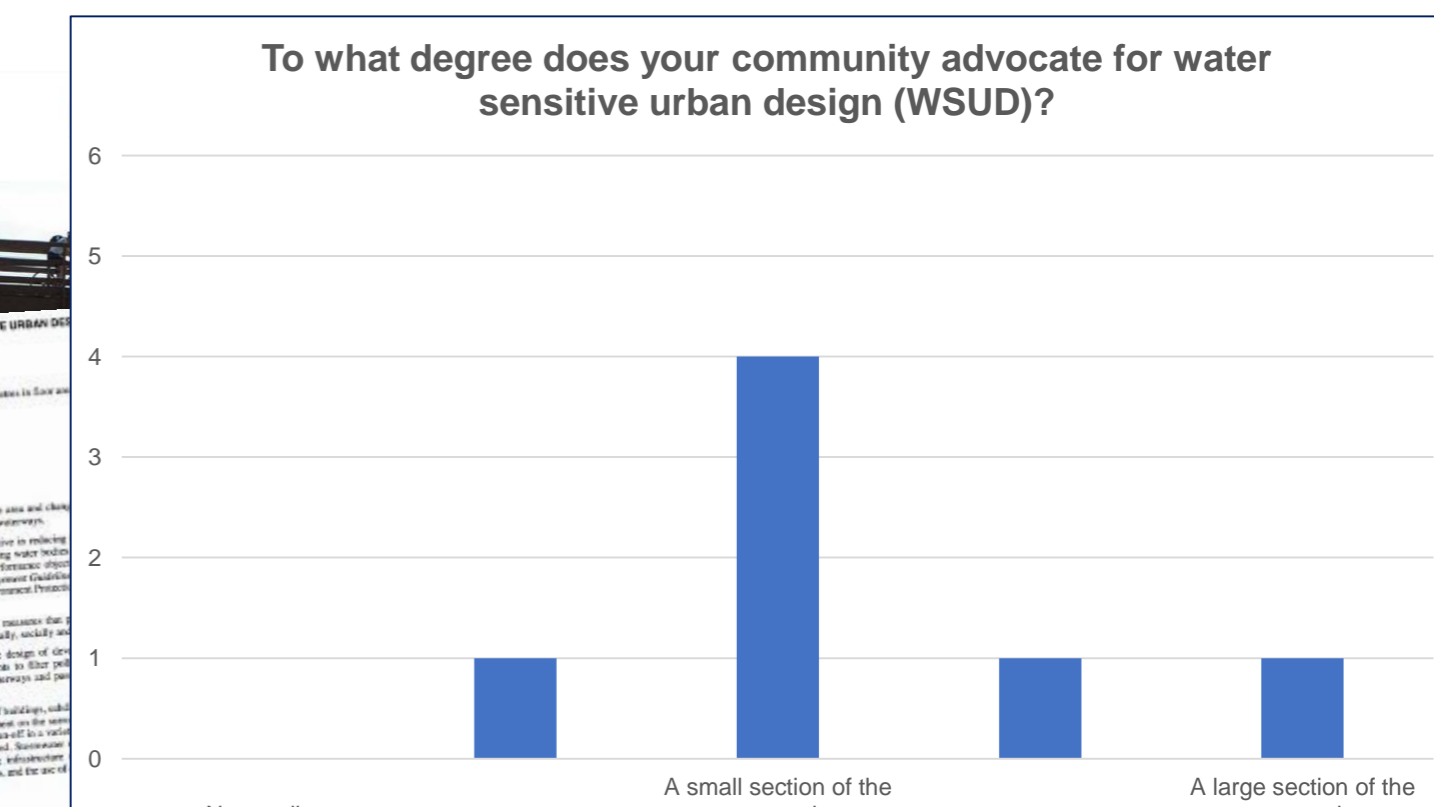
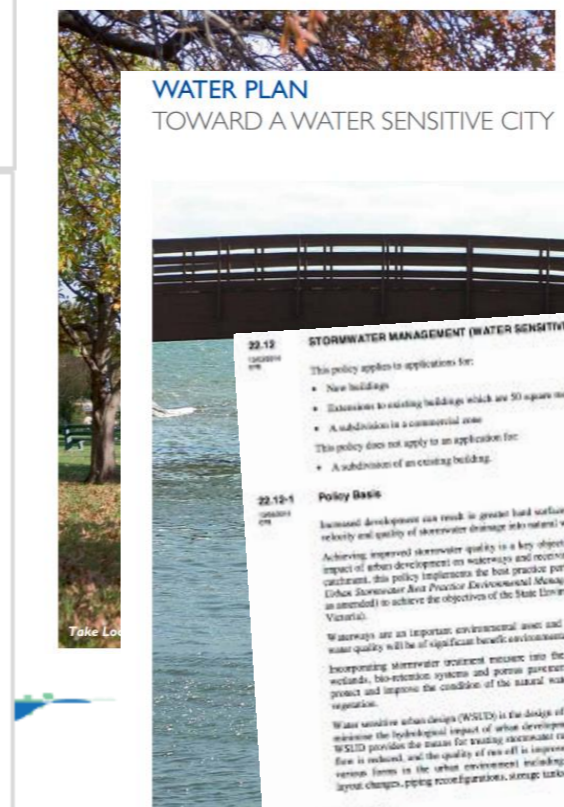


Tailored / Highly customised

Single Objective



OPEN SPACE WATER MANAGEMENT PLAN TOWARD A WATER SENSITIVE CITY



Centralised to decentralised models related to key drivers and local context

COMPLIANCE

- In some instances beyond current but they comply with the developments are change hands the The lack of monitoring patchy and Council

COORDINATION

- There are several breaks down common goal optimal outcomes Design assets interaction with

MAINTENANCE

- Maintenance is a creates long lasting maintenance costs capital costs of water budgets. Thirdly, an asset/program has required to undertake assets/programs, community and urban

SPACE AND SCALE


- Council only have control over a limited is substantial the space available for cost of obtaining new land and the The impact that Council has directly

Validation of draft results

- Pull together evidence relevant to each transition factor and phase
- Interpret findings to assign rating, then create key probing question to clarify and confirm ratings



Enabling factor: Champions
Transition phase 3

Transition phase	Champions Key networks of individuals and organisations	Synthesis
3. Shared Understanding & Issue Agreement Collective understanding of possible solutions supported through informal processes, basic knowledge and pilot projects	<p>Connected champions</p> <p>Champions connect with each other to propose ideas for specific solutions and initiate solution development that address the issue</p> <p>Indicators (black dots) and examples of what you may see (open dots):</p> <ul style="list-style-type: none"> • Multiple champions across different areas of council all focused on the same issue connecting with champions across the sector <ul style="list-style-type: none"> ○ champions have made some progress on the ground (i.e. local WSUD examples) ○ champions are building confidence of role and potential influence within their own council drawing on external support 	<p> Indicator: Multiple champions across different areas of council all focused on the same issue connecting with champions across the sector.</p> <p>Finding: Multiple champions interact across the organisation and interact with other sector champions through training, information/knowledge sharing and project delivery.</p> <p>Evidence:</p> <ul style="list-style-type: none"> • Champions interact with one another via scheduled catch-ups, working group meetings on areas of delivery and more ad hoc peer to peer interactions. • Champions interact with others in the organisation through training activities, project support, knowledge sharing and mentoring around WSUD/IWM project delivery.



Transitioning towards embedding IWM into everyday practice

Pilot with three councils to refine process and test

Legend:



Green: indicator descriptions are evident in practice.



Yellow: some aspects of the indicator descriptions are evident but not yet fully embed in practice and may be at risk of going backwards.



Grey: indicator descriptions are not evident in practice.

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Reporting results back to council

Enabling factor: Platforms for connecting

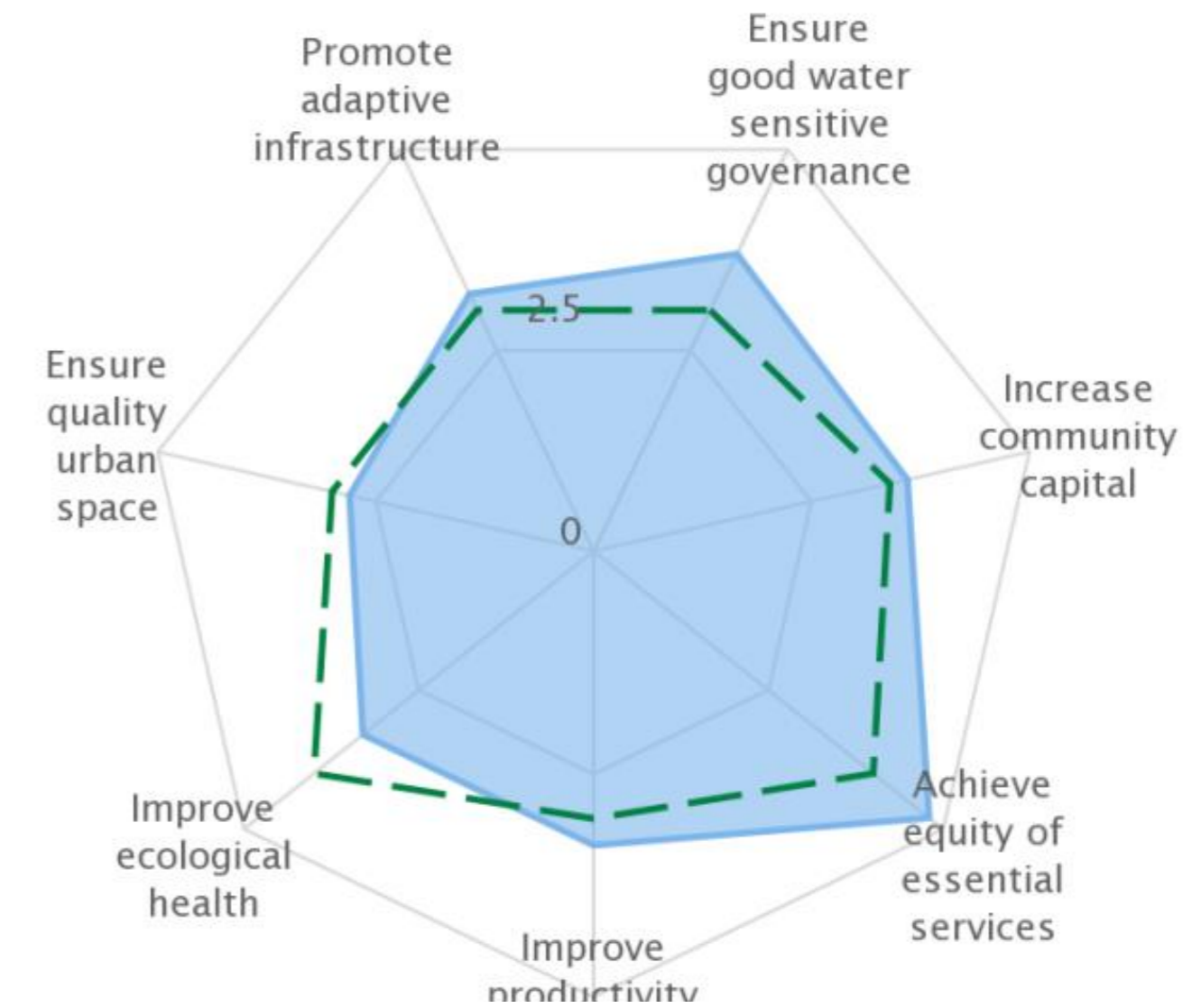
- *Indicator:* Building broader support across the community for outcomes associated with WSUD/IWM.
- *Indicator:* Processes and procedures are in place that connect people and organisations.
- *Indicator:* Meaningful and active participation in catchment-wide based actions to achieve regional outcomes.

Enabling factor: Knowledge

- *Indicator:* Reflection, evaluation and active feedback loops building knowledge for continued improvement across systems.

Enabling factor: Projects and applications

- *Indicator:* Funding mechanisms provide flexibility in how WSUD practices are applied.
- *Indicator:* All development actively incorporates WSUD and assets are effectively implemented and maintained.



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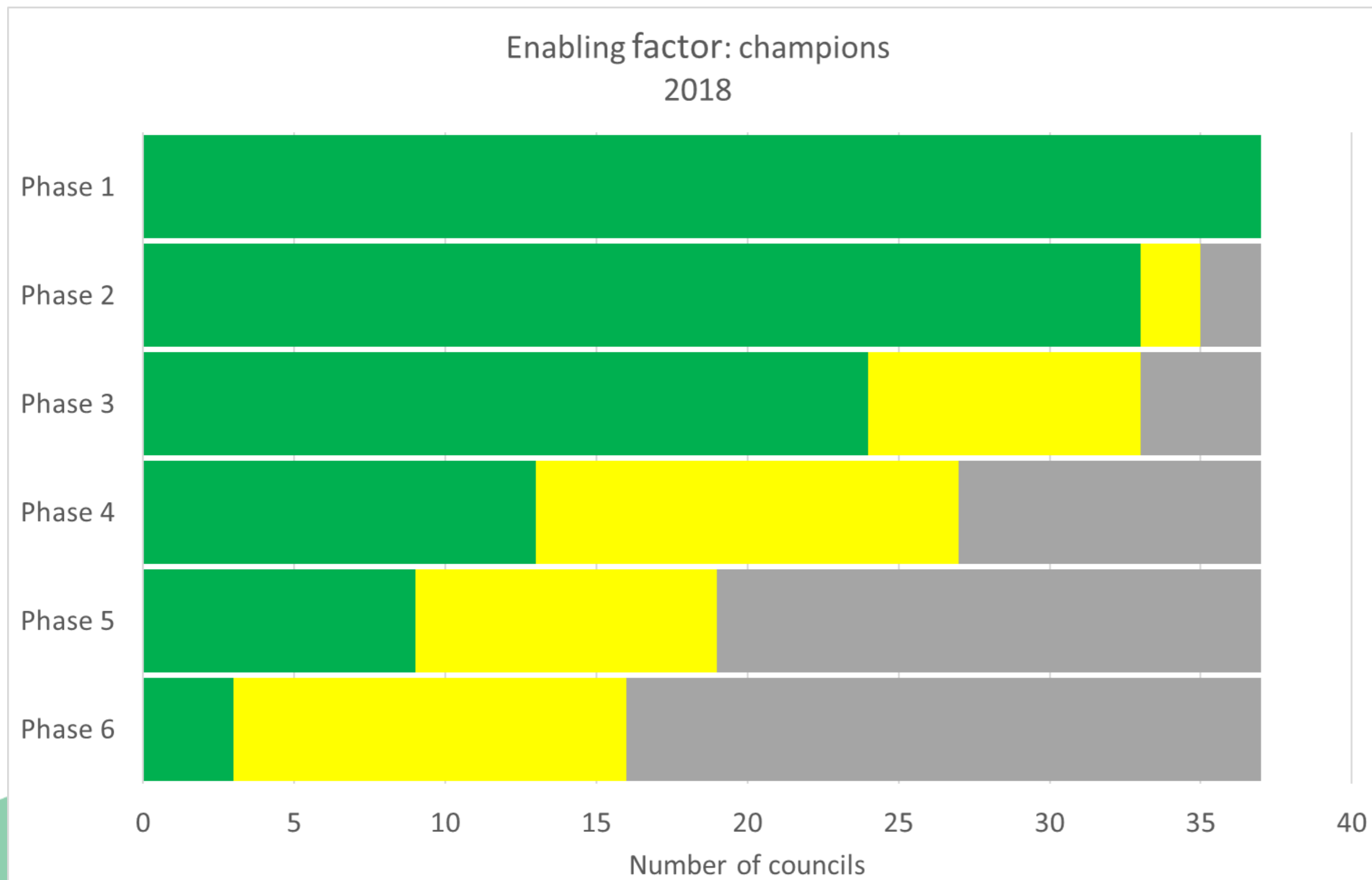
Water Sensitive Cities Benchmarking and Assessment

Port Phillip City Council Area

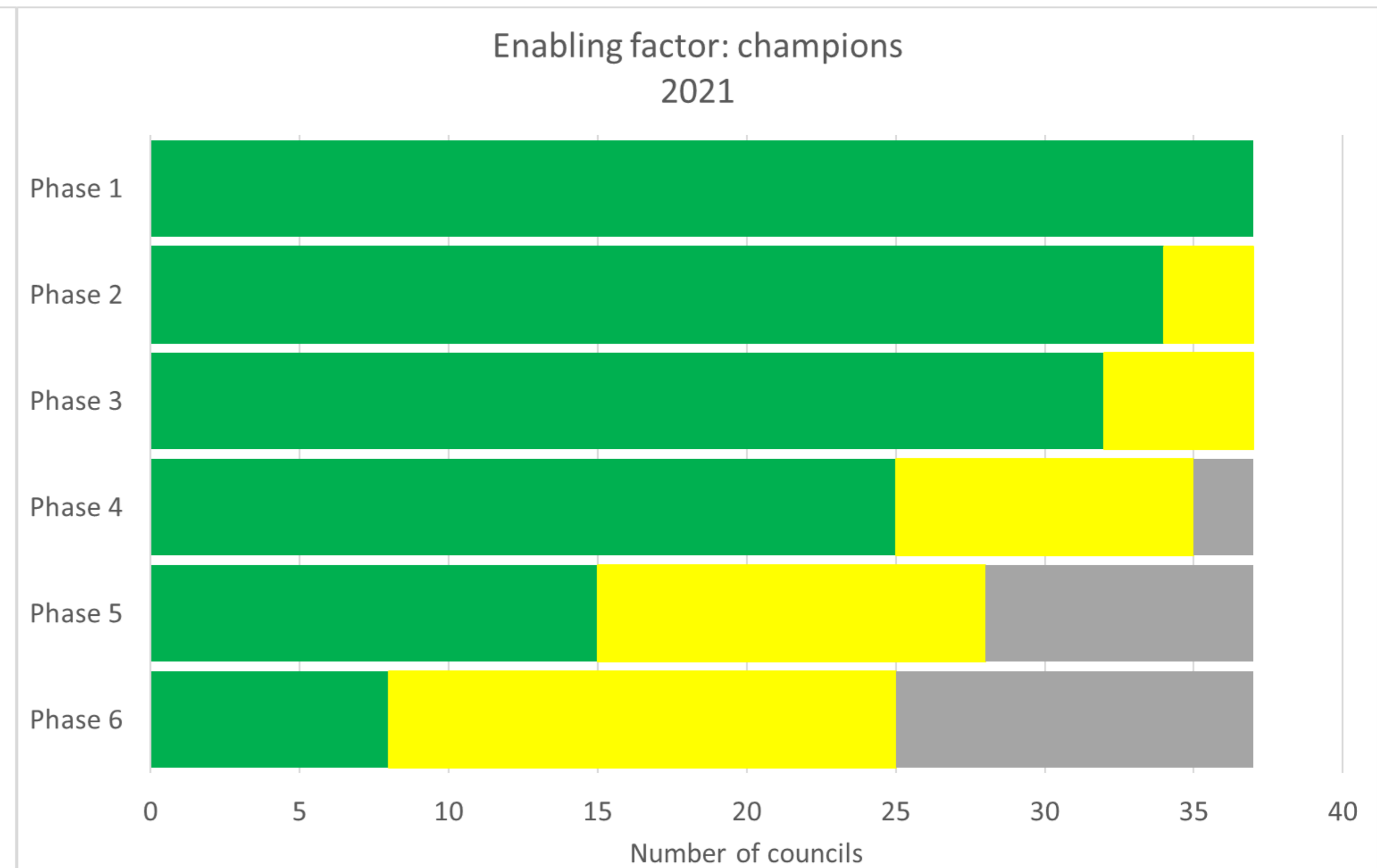
How the information collected will be used

- strategically guide future Living Rivers funding
- report internally on strategic outcomes of program delivery
- assist in the evaluation of the Living Rivers Program

Enabling factor: champions
2018



Enabling factor: champions
2021



Next steps

- Potential to use the online version and roll out to another 10 metro councils
- Timing to use online tools? alpha vs beta versions?

Prototype of Transition Dynamic Framework

Transition Phase	Champions	Platforms for connection	Knowledge	Projects and Applications	Tools and instruments
Issue emergence	Issue activists +		Issue Highlighted +	Issue Examined +	
Issue definition	Individual Champions +	Sharing concerns and Ideas +	Causes and Impacts examined +	Solutions Explored +	
Shared Understanding & Issue Agreement	Connected champions +	Developing a collective voice +	Solutions developed +	Solutions experimented with +	Preliminary practical guidance +
Knowledge Dissemination	Influential champions +	Building broad support +	Solutions advanced +	Solutions demonstrated at scale +	Refined guidance and early policy +
Policy & Practice Diffusion	Organisational champions +	Expanding the community of practice +	Capacity building +	Widespread implementation and learning +	Early regulation and targets +
Embedding New Practice	Multi-stakeholder networks +	Guiding consistent application +	Monitoring and evaluation +	Standardisation and refinement +	Comprehensive policy and regulation +
Justifications	click to set	click to set	click to set	click to set	click to set

