



Water Sensitive SA – Three-Year Program Review – Final Report

August 2021



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CONSULTING



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Acknowledgement of Country

This project reviewed the Water Sensitive SA program, we acknowledge the Traditional Custodians of country throughout South Australia and their connections to land, sea and community.

Acknowledgements

This report has involved the collective effort of several individuals and organisations. The following people are acknowledged for their support and input into this project:

- Mellissa Bradley, Water Sensitive SA Program Manager
- Kathryn Bothe, Water Sensitive SA Communication & Events Manager
- Sam Phillips, Green Adelaide
- All interviewees and Water Sensitive SA funding partners
- Practitioners and community members who participated in the survey

Cover image: Water Sensitive SA collage.

Document Management

Version	Date	Author(s)	Distribution
1 -Draft	30 June 2021	R.Catchlove	Mellissa Bradley, Water Sensitive SA Program Manager
2 -Final	6 August 2021	R.Catchlove	Mellissa Bradley, Water Sensitive SA Program Manager

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EXECUTIVE SUMMARY

Water Sensitive South Australia (Water Sensitive SA) is a capacity building program for water practitioners in South Australia. The core aim of the program is to improve the capacity of practitioners and institutions to design, build and maintain water sensitive urban design (WSUD) assets. The Program Manager (on behalf of the Steering Committee and funders) commissioned a review of the program as it approaches the end of the third year of operation.

This report, completed in mid-2021 by Wave Consulting, was commissioned to provide an independent evaluation against an agreed set of Key Performance Indicators (KPIs) and evaluation questions.

The report is based on three datasets: perceptions of funding partners (collected through 15 one-on-one interviews with individual funding partner representatives), and perceptions of practitioners, and perceptions of the community, gathered through separate online surveys.

The funders and practitioners are very supportive and positive about the work to date and would like to see the program continue.

The recommendations are as follows:

1. Based on feedback from funding agencies, continue the Water Sensitive SA program.
2. At upcoming steering committee meetings consider the following questions:
 - What is the priority amongst these three main areas of work that Water Sensitive SA deliver: advocacy, capacity building and community engagement?
 - If the funders are so satisfied with the program, why can't this enthusiasm be leveraged to double the funding contributions?
 - Consider if there are other funding mechanisms that may be underutilised, such as infrastructure levees and philanthropic organisations.

- What is the succession plan to ensure that the value of Water Sensitive SA will continue if or when the program manager leaves?
3. Continue to run core services such as training events, sharing case studies, and the development of technical documents like WSUD guidelines, as it has widespread support from practitioners and the community
 4. Increase focus on the costs, benefits, and develop an industry wide mechanism to actively track the life cycle costs of infrastructure.
 5. Continue to align WSUD research and assets as part of the smarter cities and climate resilient infrastructure strategies and movement, thereby embedding WSUD into planning and infrastructure projects.
 6. Seek additional funding under a 'regional development' angle to support regional councils with WSUD strategy, design, construction and maintenance.
 7. Consider in the following years how Water Sensitive SA may facilitate or support a research program, now that the main institutions that were delivering research have concluded.

1 Introduction

Water Sensitive South Australia (Water Sensitive SA) is a capacity building program for water practitioners in South Australia. The core aim of the program is to improve the capacity of practitioners and institutions to design, build and maintain water sensitive urban design (WSUD) assets. The Program Manager (on behalf of the Steering Committee and funders) commissioned a review of the program as it approaches the end of the third year of operation.

This report, completed in mid-2021 by Wave Consulting, was commissioned to provide an independent evaluation against an agreed set of KPIs and evaluation questions.

The report is based on data gathered between April and June 2021, with the scope of data collection limited to seeking professional views of the funding partners and practitioners, and then data collected from two surveys (a practitioner / industry one, and a community survey).

The audience of this report is the Water Sensitive SA Steering Committee, Program Manager and funding partners.

2 Background

Water sensitive urban design is “an approach to urban planning and design that integrates the management of the total water cycle into the land use planning and development process” (Water for Good, 2009).

3 The program

Water Sensitive SA was established in October 2014 with funding until 30 June 2017 from several investment partners including the Adelaide and Mount Lofty Ranges Natural Resources Management Board, selected Greater Adelaide Councils, SA Water, Stormwater SA, Local Government Association, and the EPA. The program is undertaking this regular review process and

preparing for the new 2021/2022 financial year and confirming funding for this year and beyond.

It is resourced by two staff, a Program Manager (full time equivalent (FTE) of 0.6) and a Communications Officer (0.2).

The vision :

Water sensitive communities that support cooler, greener, wilder – more sustainable and resilient places to live and work.

The mission:

To support government, industry and community to mainstream water sensitive urban design (WSUD) and integrated water management (IWM) practices that enhance wellbeing and ecological health. The main objectives:

WSUD is an integral component in urban development, major capital works and asset renewal to facilitate the transition of the state’s cities and towns to water sensitive communities.

All relevant government and industry sectors and the community have the commitment, knowledge, and skills to deliver cooler, greener, wilder water sensitive communities.

The key outcomes are:

- Benefits of WSUD are understood
 - Increased awareness and understanding of benefits of WSUD and how it can be implemented.
- Informed decision makers
 - Organisational culture embraces the inclusion of WSUD in future investments.
- WSUD in Policy
 - Performance-based WSUD and green infrastructure (GI) policies are embedded within the SA planning system and associated guidelines.
- Grey to green

- WSUD is integrated into asset renewal, capital works projects, urban development, and retrofit of existing homes and gardens.
- Effective application
 - Practitioners apply best practice WSUD and IWM strategies effectively to achieve desired water quality, flood management, water conservation and urban greening objectives.

4 Scope

The scope of this evaluation is to:

- Review the impact and achievements of the Water Sensitive SA program in the context of its updated strategic plan
- Review the vision and purpose of Water Sensitive SA, through interviews with all funders
- Identify any emerging WSUD capacity building needs of South Australian practitioners.

The measures of success for Water Sensitive SA are:

1. Increased favourable authorising environment for investment decision making for WSUD principles and practices.
2. Increased awareness and understanding of how WSUD can be applied at a range of scales.
3. Increased application of WSUD principles and practices in new developments, capital works, asset renewal, and retrofits of existing homes and gardens.
4. Decreased financial risk associated with the effective application of WSUD principles and techniques.
5. Avoid or delay infrastructure augmentation investment associated with distributed WSUD solutions throughout urban catchments.

5 Evaluation method

The method to evaluate the success of the Water Sensitive SA program, over the period April 2021 to June 2021, was as follows:

- Review of documentation from Water Sensitive SA, including the business plan, engagement plan, website, and newsletters.
- Conduct 15 one-on-one interviews (conducted as online meetings).
- An online survey of practitioners and follow up data analysis
- An online survey of community members and follow up data analysis.
- Discussion with the Water Sensitive SA Program Manager to finalise recommendations.

The method included both qualitative and quantitative elements. The method was limited in terms of who represented the funders in the interviews, their experience to date with the program, and their interest in participating in an evaluation survey.

The interview questions and online survey were developed in collaboration with the Program Manager, who has intimate knowledge of the audience, industry, and data required to complete the evaluation.

The interview questions covered the broad themes of:

- Involvement and experience to date
- Purpose
- Achievements and satisfaction with the advocacy for WSUD inclusion within the Planning and Design Code
- Program achievements
- Membership benefits
- Future focus

It must be acknowledged that there is a strong element of self-selection inherent in this method and is biased towards those with an interest in WSUD and capacity building, and those who are relatively familiar with the purpose of Water Sensitive SA. The evaluation did not include any broader engagement (beyond the community survey) to counter that inherent bias, but this method does provide an informed perspective on the benefits, challenges and achievements of the program.

6 Partner and practitioner feedback

6.1 Perceptions of funding partners

15 one on one interviewees were completed in May and June 2021. The people interviewed were funders and mostly at the team leader or officer level, with the occasional manager. The representatives that were interviewed were usually the main representative of their organisation and link with Water Sensitive SA and were reasonably knowledgeable with the history of Water Sensitive SA.

The overall view from funding partners was that they very satisfied with the program and believe it should continue. They highly value the focus on advocacy for WSUD inclusions in the Planning and Design Code update, have immense respect for the program manager and, subject to internal sign off, would continue to fund the program into the future.

The key areas of success mentioned in the interviews were:

- The level of effort put into influencing the update to the Planning and Design Code change.
- Ongoing training and engagement with practitioners.
- Documentation of, and presentation of, case studies of good WSUD across greater Adelaide.
- Establishment of Water Sensitive SA as the primary place to find information on WSUD.
- The strategic alignment of the program with State government policy and in particular the Green Adelaide agenda.
- Delivery of useful tools and products.
- Ensuring there was a clear link with the CRC for Water Sensitive Cities (CRCWSC) and other research programs in the region.
- Clear and regular communications.
- A sincere acknowledgement of Mellissa as an effective, enthusiastic, well connected and efficient program manager.

The areas where there is still a challenge for Water Sensitive SA to deliver on were:

- Engaging with the building and development industry.
- Decreasing the financial risk of WSUD.
- Further demonstrating the value of WSUD through cost benefit tools, data, and studies.
- Increasing the delivery of well design and constructed WSUD on the ground.
- Reaching the executive and political level (though many also acknowledged that this may be difficult).
- Engaging practitioners outside those that are already involved or aware of WSUD.
- Engaging practitioners outside of the metro area.

There are several explanations for why expectations were not met, including the fact that the development, planning, and building industry is so powerful,

and that there is a lack of funds to support the Water Sensitive SA program and deliver advocacy, research and training. These expectations and issues are discussed in the following sections.

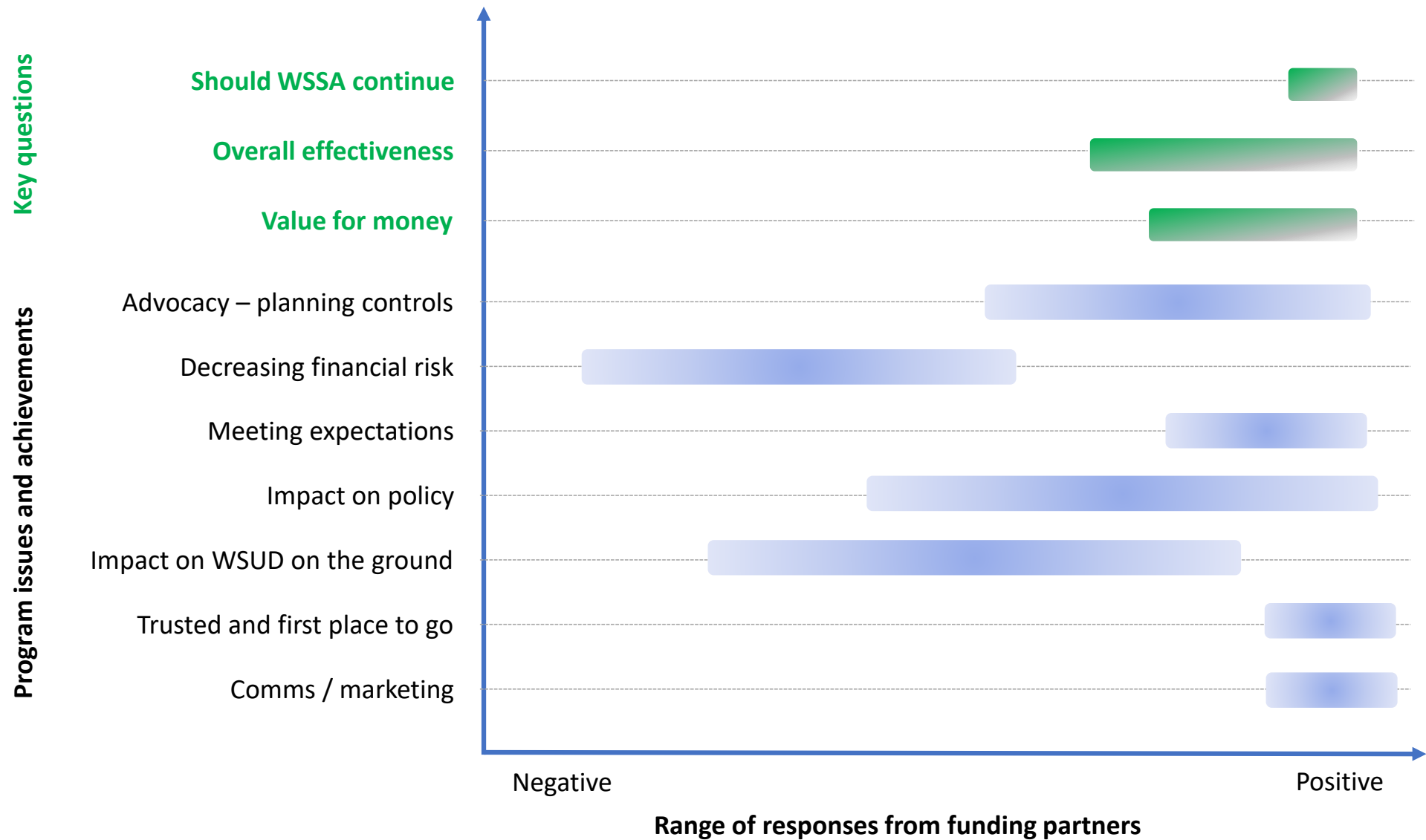


Figure 1. Visualisation of qualitative data collected through the interviews

Figure 1 represents the diversity and the general trend of responses provided in the interviews. It is not a quantitative figure, but the figure broadly captures the diversity of the responses provided.

This section briefly summaries the key points raised in the interviews, under the main questions posed.

6.1.1 What is the core purpose of Water Sensitive SA and has it changed?

The responses to this question were fairly clear and consistent. Most respondents stated that the purpose was to build capacity with practitioners, advocate for changes to policy and regulation, and be the central point for technical information, as well as run training and seminars to increase awareness within the industry and the public on the topic of WSUD.

“Water Sensitive SA is an encyclopedia of knowledge on water sensitive urban design” (Local government funder)”

In terms of a change in focus most interviewees were aware and supportive of a change to focus on advocating for change within the review of the Planning and Design Code.

People then differed on whether this change of focus should be retained, or Water Sensitive SA should revert back to its original purpose. Some hoped that a focus on planning regulations could be retained but were also aware of the limitations in funding and resources that prohibits the group delivering on several objectives.

It is also worth highlighting that most interviewees were fairly conscious of the purpose of the organisation but seem quite unaware of the vision and the objectives. They were often surprised to learn exactly what text was

included in Water Sensitive SA’s vision statement and seemed to think it may be too ambitious. A common response was that this sounds good but is unrealistic. They may be misinterpreting the statement and thinking that Water Sensitive SA alone is aiming to achieve this vision.

What was interesting in terms of the vision was that some interviewees made a reference to the fact that this vision was very cleverly linking with the vision of Green Adelaide and that this was a smart and strategic move from Water Sensitive SA.

6.1.2 How effective was Water Sensitive SA in influencing changes to the Planning and Design Code?

This question produced a range of responses, mostly positive. The overwhelming consensus was that Water Sensitive SA had taken on the job of advocacy with gusto, done everything they could to influence the process and outcomes but the perception of the outcome itself ranged from highly positive to highly negative.

Interestingly, not all of the interviewees were clear on the actual requirements now included in the Planning and Design Code. Some answered the question based on an assumed knowledge that it was either an insufficient set of rules to require WSUD, or on the basis that they believed it was ‘better than nothing’. They often referred to second-hand knowledge of particular requirements in the Code as opposed to stating the requirements with more confidence

It was very clear was that all of the funders were very happy with the effort and strategic approach that Water Sensitive SA had in influencing the process, but also clear that the lobby groups that work against WSUD requirements are very powerful and were ultimately too powerful for Water Sensitive SA to overcome.

Several funders were particularly aware that the advocacy work that was completed could only have been done by a body like Water Sensitive SA. There was a real appreciation of its independence, and the ability to act on behalf of practitioners and local government in particular.

There was a strong appreciation of the role and expertise of Mellissa as program manager, and the ability to develop relationships and alliances with key people within the state government department, that reinforced the view that Water Sensitive SA did everything possible.

“There are only so many technical manuals necessary. Instead, we need increased advocacy, and to advocate to state and local govt for better regulation.”

6.1.3 How successful has Water Sensitive SA been in decreasing the financial risk of WSUD?

Not very successful is the overall consensus. This issue provided the most interesting answers to the interview questions. This objective of Water Sensitive SA’s goes to the core of many of the capacity issues that Water Sensitive SA are tackling; a focus on changes to policy, a focus on costs and benefits, the use of good research to support policy, the ongoing challenge of maintaining infrastructure, increasing the capacity and expertise of planners and engineers, and allocating the appropriate budget to WSUD projects.

In most cases funders were unsure of whether any progress had been made regarding the overall change to life cycle costs of WSUD. But in most cases organisations **did not** seem to be tracking the costs of capital or operating, meaning that it would be very difficult to actually respond with any evidence to this question.

In several instances the interviewees seemed to be unaware that this was an objective of Water Sensitive SA (and should also be an objective of their

organisation), or that without achieving this ‘decreased financial risk’ then it will be very difficult to increase the adoption of WSUD across the city. This mostly indicates that the organisations are still in the early stages of trialling and experimenting with WSUD.

There is one exception to this awareness and appreciation of the financial dimension of WSUD, being the City of Salisbury. This council clearly has a different capacity and understanding of WSUD, has a manager with a lot of experience, is able to think beyond the current problems and policy to the bigger picture of what is required to achieve the vision. They were able to immediately refer to some specific urban development projects that had a goal of exploring how to decrease the financial risk.

“We have examples of bad choices and investment, not necessarily positive one! While we are aware of the CRCWSC CBA tool, we are still going through a process of using the tool and how it applies. We should learn from the ‘climate risk’ sector, where in comparison to WSUD they do it better.”

“I know Water Sensitive SA have Cost Benefit tools and guidelines, but no one reads it. It is left to architects and engineers, but not skilled up enough in this area and not reading the documentation. To be honest we are not seeing any progress re costs.”

6.1.4 Is Water Sensitive SA meeting your expectations?

Yes. No one has anything negative to say about Water Sensitive SA but there are negative sentiments expressed about state government policy positions and the overall level of interest from various state government agencies and their approach to facilitating and delivering WSUD.

Water Sensitive SA is seen as a very respected and effective (albeit small) organisation. There is a huge degree of respect for Mellissa Bradley as the program manager, and the overall delivery of the program.

The EPA is an exception to this anti-state government sentiment, as there was no negative sentiments expressed about the role of the EPA (unprompted), but several negative sentiments made regarding other state government agencies.

“Water Sensitive SA has a great website, with sections for industry and for public, which becomes more important as we engage with public and private owners.”

6.1.5 Is WSUD changing on the ground?

The vision of Water Sensitive SA is for a ‘cooler, greener, wilder’ city. If the program is successful, there must be a noticeable change to infrastructure on the ground. Respondents were mixed in their view as to whether anything was changing, or the rate of change.

There is more WSUD being designed and constructed in the region, but mixed views on how much more and whether it is just Council led capital projects or developer led projects. Councils are clearly very different in their approach and budgeting for WSUD projects, with some still in the early phases of considering the issue, while others have ongoing budgets to deliver more and more streetscape and regional projects.

“WSUD is a complex solution. It falls between the gaps, between civil, planning, landscape, climate, urban design, maintenance, flooding. This highlights why it is so important, but also why it is so hard to get buy in.”

“We have 30 to 60 raingardens, but they were not in the asset database and have different regimes of maintenance. Now they are on asset database we can maintain them, so it really helps to define the type of asset - is it a raingarden or swale. Guys on the ground are pretty cluey so they know what to do, but it must be in the asset database, and then more easily maintained and budgeted for.”

6.1.6 What is the biggest barrier to achieving more?

This question generated a range of results that are particularly useful for the future of the program.

The responses fell into the following categories:

- Engaging with and convincing the building and development industry that WSUD is a critical asset within urban development
- Monitoring the implementation of the Planning and Design Code changes, and also ongoing work to help continually improve these standards and codes
- Understanding the costs and benefits of WSUD
- Good design
- Allocating budgets
- Moving beyond the one-off pilot projects
- Ongoing engagement with the community to create a broader movement for cooler, greener and wilder cities.

Overall, there is still a strong sense of unhappiness at where regulation is at, and where it may be going. Interviewees were generally quite aware that the scale of the challenge (being how do we get the right policy requirements and then cost-effectively deliver WSUD infrastructure) is still very large. The unhappiness interestingly is not directed to Water Sensitive SA, and in fact it mostly translates into support and appreciation for Water

Sensitive SA. The unhappiness is usually directed at the state government and developers.

“There is a huge gap between what the Minister wants, and what all departments do. The second biggest barrier is developer resistance. We really need to sell and market to State Govt and understand the benefits of WSUD.”

The challenge of convincing developers to include more (and better) WSUD is an ongoing challenge and one of the main barriers mentioned by interviewees. But also, most interviewees were very aware that as a society and economy there are so many pressures on reducing the upfront cost of housing, and more and more pressure on the size and density of housing, that this is a very big challenge, even though it is a change to housing and urban development that aims to deliver better quality housing and better-quality surrounding environments.

The state government often comes up as a barrier and in some instances, there are specific departments mentioned as blocking progress. The interviewees were predominantly from local government, so an anti-state government perspective is not uncommon.

To shift the overall emphasis and driver for change, some interviewees believed that the biggest challenge was community engagement. If the community were more vocal and supportive and expected better and more WSUD in their development and local area, then state and local governments would have a mandate for change. Community engagement, as a means to changing the narrative around urban development and then WSUD within these development, was seen as a major challenge that could yield significant results. The work to date on events such as ‘Cooler Greener Adelaide’ was acknowledged as part of the work required for a larger community engagement program. There is complexity around the role that Water Sensitive SA should play in this type of community engagement

when it is mostly local councils and State Government that need to and should do community engagement activities.

Several interviewees were aware of the recent tools and products that the CRCWSC have developed, and that Water Sensitive SA then promotes and shares, but this issue of how to best pitch projects in the context of costs and benefits is seen as a large challenge. The tools were seen as too complex and that most practitioners do not have the time or expertise to engage with them. The counter to this argument, often made with technical issues, is if you do not then how will we change!

6.1.7 Why do you fund Water Sensitive SA?

Funders were contributing to this program for a variety of reasons, but mostly it was the access they get to technical expertise, to training, and then to access and contribute to the advocacy work that Water Sensitive SA leads. The leadership and collective representation that Water Sensitive SA delivers is valued and respected.

Several interviewees also acknowledge that the program is tackling issues that are beyond the capacity and resources of what one individual organisation can do. Water Sensitive SA is representing the industry and spending time on advocacy that is often not possible for individuals in busy jobs within the one organisation.

There is an overwhelming sense that the return on investment is significant.

6.1.8 What emerging needs should Water Sensitive SA tackle?

In addition to addressing the big barriers, other emerging needs that should be tackled mostly relate to linking WSUD with climate change, an ongoing focus on urban heat and microclimate issues, and an emerging need to continue to do good quality and local research now that the CRCWSC has finished.

Only a few interviewees raised the subject of the lack of a major research program, but it will be a problem now that the main research entities have finished their programs.

“Keep focusing on the maintenance and the research of how effective water quality assets are.”

Interestingly, there was not that a lot of interviewees had to say on this topic, probably due to the fact that the previous questions elicited the main issues for the program to focus on.

“Climate resilience is a key area, and WSUD contributes to climate resilience. That's an area that the program needs to move towards.”

6.1.9 The brand

Lastly, it is worth noting that Water Sensitive SA as a brand is now firmly established, respected and has a lot of currency in local and State Government as well as in industry. It is the first place to go for information and trusted to be an advocate and representative for professionals on all things WSUD and appears to be as an entity, trusted well above other industry organisations.

6.2 Perceptions of practitioners

In May and June 2021, an online survey was sent to all 590 practitioners on the Water Sensitive SA mailing list and was advertised on social media and through newsletters. The survey included 24 questions, some of which were repeated from the 2017 survey of practitioners.

58 responses were received for the survey. This is a reasonable response rate, considering there was no incentive and no main topic or issue to be responding to. It probably attracts those practitioners that are in the 'converted' and 'interested' sectors. The results should be viewed as not entirely representative of the whole WSUD sector and to contain a positive bias most likely.

The responses to the online survey were overwhelmingly supportive of the program, reinforcing the needs of practitioners for a capacity building program, and reiterated that the Water Sensitive SA program should continue.

The 58 respondents were:

- Mostly from local government, state government and consulting sectors (76% in total from these three sectors),
- Predominantly from engineering, planning, landscape architecture or Directors / CEOs (62% of respondents).
- Have worked in the industry for more than 10 years (79% in total responded)

6.2.1 Key results

The following results are taken from some high-level questions, asked to gain an overall perception of the success of Water Sensitive SA:

- 81% of practitioners are satisfied or very satisfied with the program to date.
- 81% of respondents indicated they felt they had a 'good' or 'very good' level of WSUD knowledge.
- 83% of respondents stated that Water Sensitive SA seminars, training, technical resources and newsletters have increased their knowledge of WSUD.

The 58 respondents were very clearly satisfied with the program to date, with only a few outliers disagreeing with this statement.

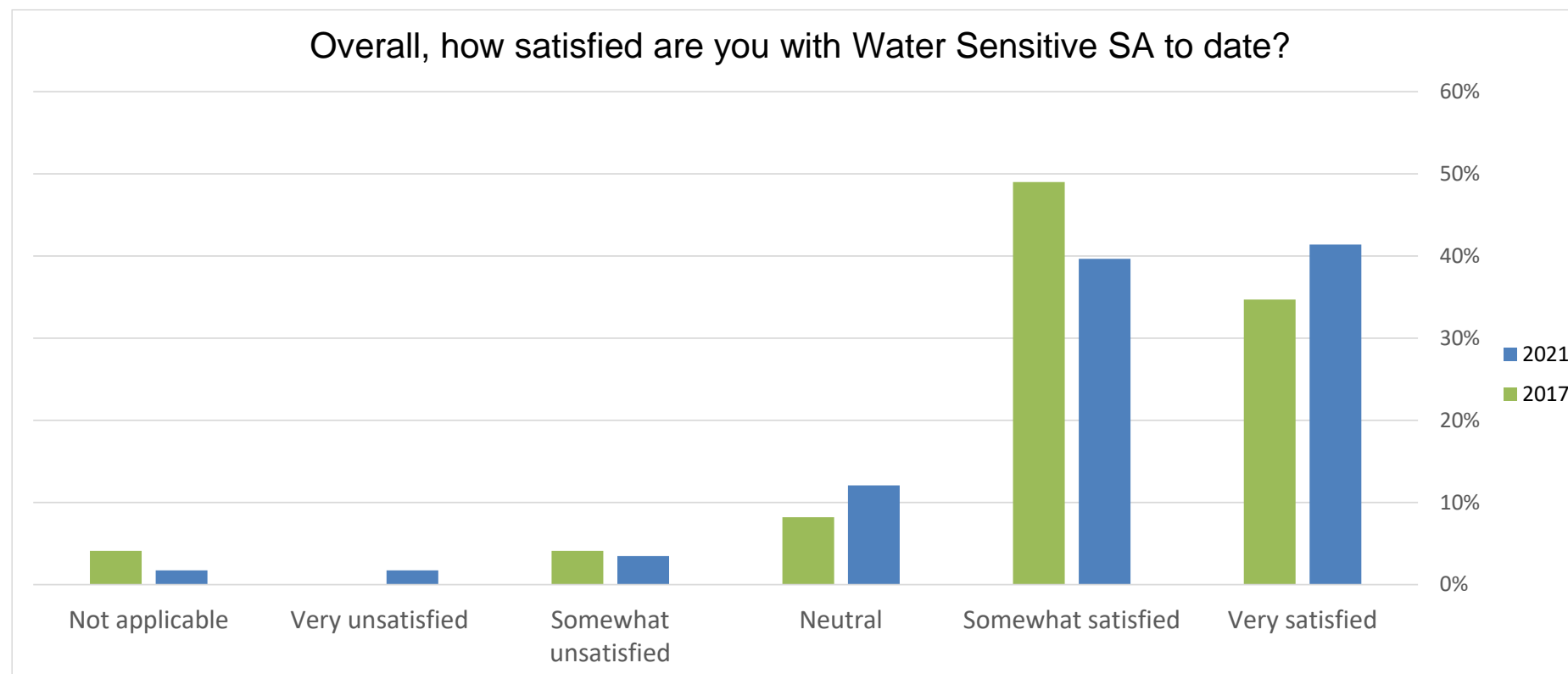


Figure 2. Overall satisfaction with Water Sensitive SA (2017 and 2021)

There has been a positive, albeit subtle, shift towards practitioners becoming more satisfied with the program. This supports the comment above about the reputation and brand that has been established, and the positive feedback on the effectiveness of the program.

6.2.2 Tracking questions

In order to understand the change in perceptions of WSUD practitioners, the following questions were asked in 2012, 2017 and now again in 2021.

The first tracking question asks where on the 'water sensitive city' spectrum Adelaide is current positioned. Figure 3 illustrates how this has been changing since 2012, which shows practitioners are generally seeing a positive change in the 'city state' in Adelaide.

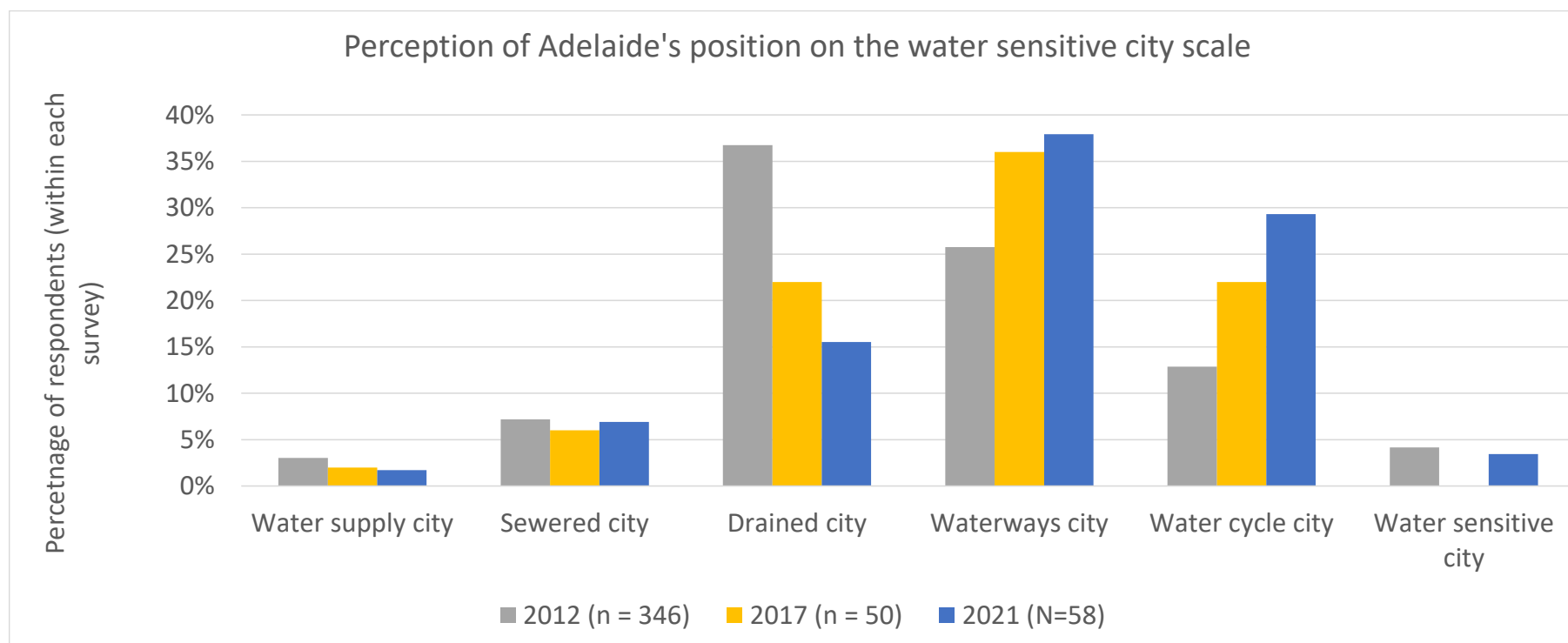


Figure 3. Change in practitioners' perceptions of the position their city sits on a spectrum towards a water sensitive city

Practitioners have indicated that they are seeing an ongoing movement in the type of city that Adelaide is becoming, in the context of the water sensitive city transition state. In 2012 the most popular response was that the city was a 'Drained City', and in 2017 this had shifted to become a 'Waterways City'. In 2021, practitioners still selected 'Waterways City' as the most popular state, but the 'Water Cycle City' option was almost as popular.

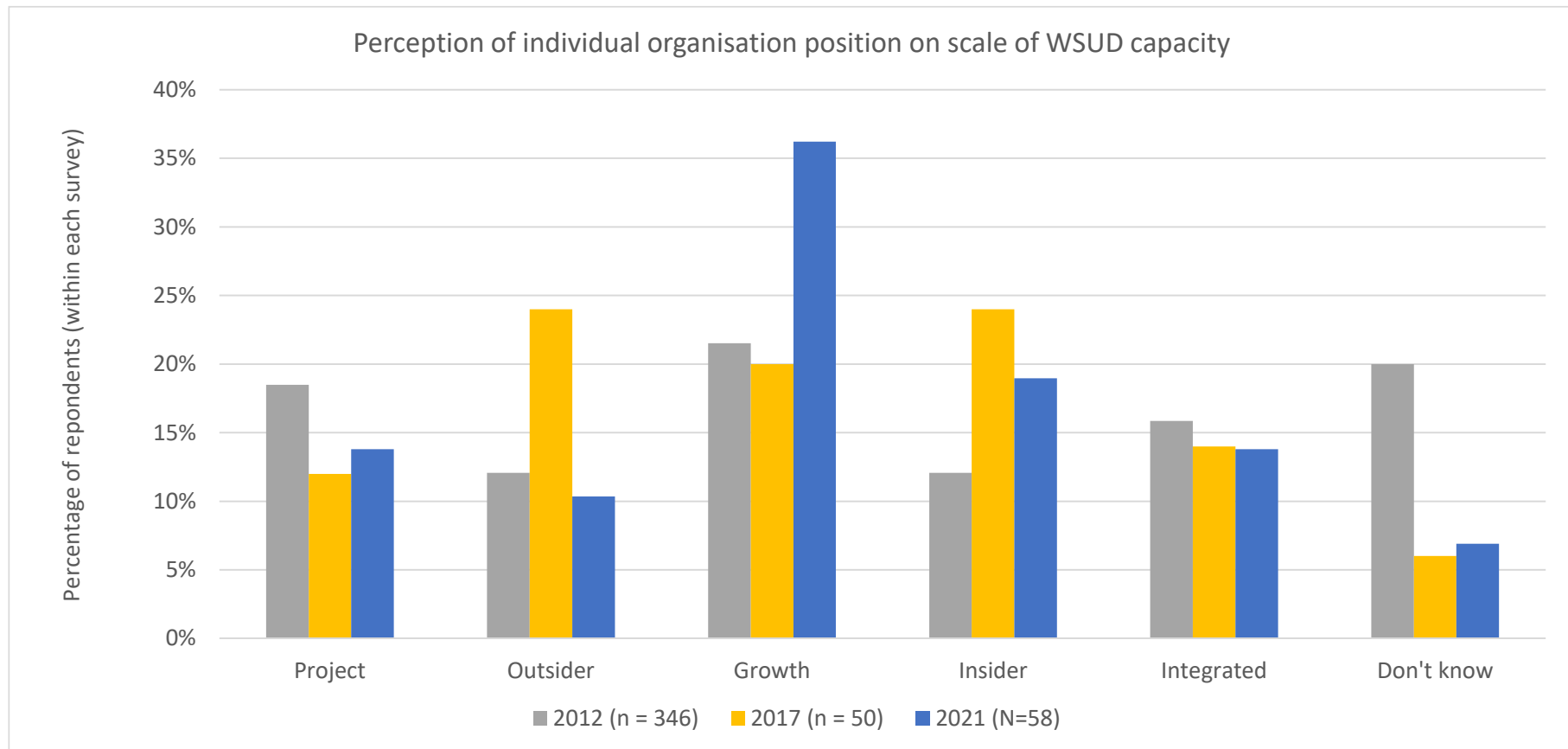


Figure 4. *Change in practitioners' perception of where their organisation is on a spectrum*

There is an ongoing shift in the perception of the position of where individuals see their own organisation, on this spectrum of embracing WSUD (as seen in the change from Project to Outside), but there is still a long way to go for all practitioners to see themselves working in highly integrated organisations.

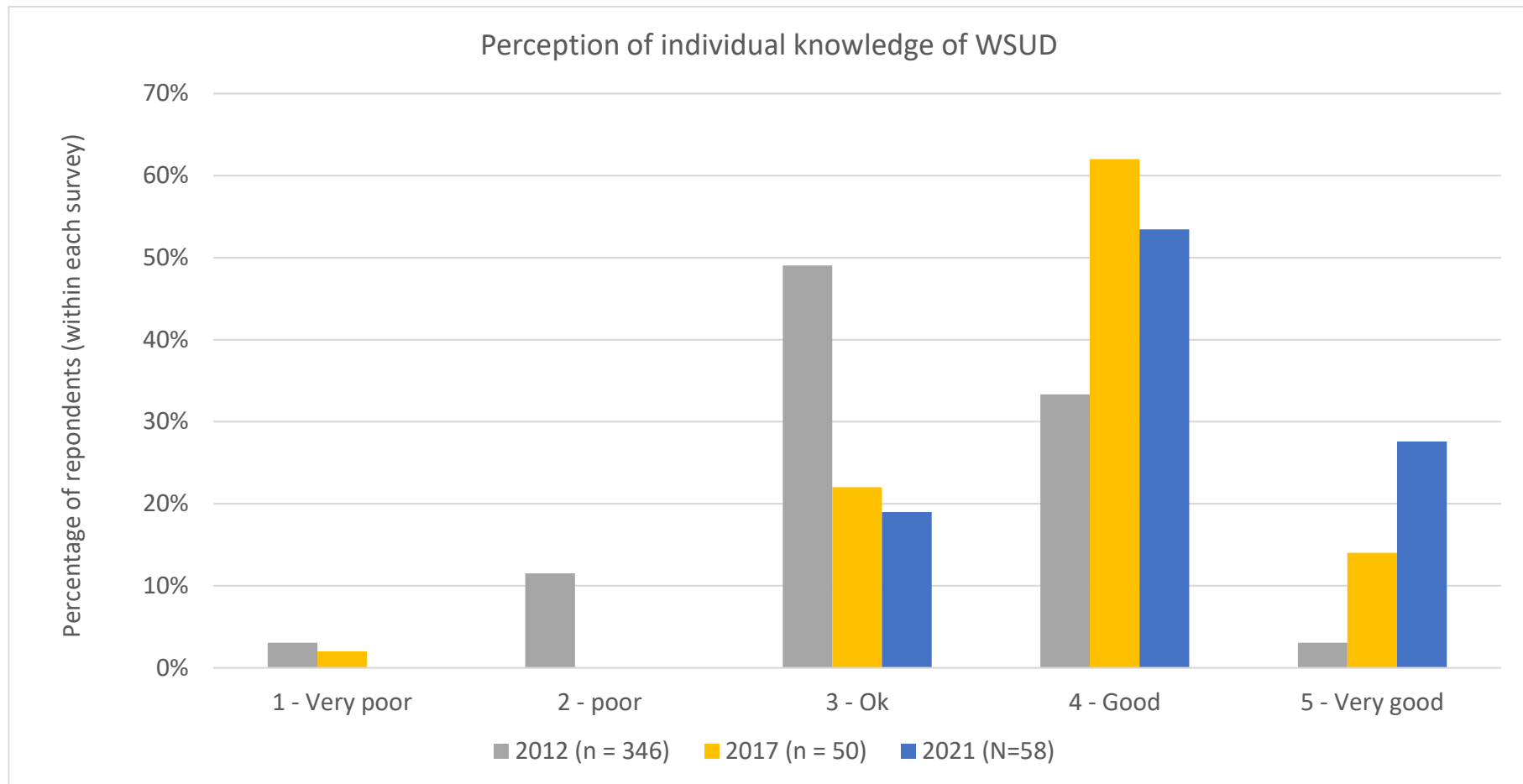


Figure 5. Change in practitioners' perception of their knowledge of WSUD

There is a clear shift in knowledge of WSUD in the industry, which is supported by the funding organisations reporting that Water Sensitive SA continues to provide value to them and the industry regarding training and capacity building. Those who perceived their individual knowledge of WSUD to be 'good' or 'very good' made up 36% of respondents in 2012, this increased to 76% in 2017, and increased further to 81% in 2021.

While the data is not broken down into sectors, and the surveys are not linked in that we can track who is improving in knowledge, it is likely that the engineers and planners in Council are more involved, attending more training, and mostly likely to be gaining more knowledge of WSUD over the past three years.

6.2.3 Other noteworthy results

A key issue that Water Sensitive SA has been focusing on for the past year or two has been advocacy to influence to the inclusion of WSUD requirements in the Planning and Design Code. Respondents seem to indicate that Water Sensitive SA has been an active advocate (see Figure 6), but at the same time as seen in Figure 7, there is still a large degree of satisfaction regarding the outcome and actual local rules that apply to WSUD in local government.

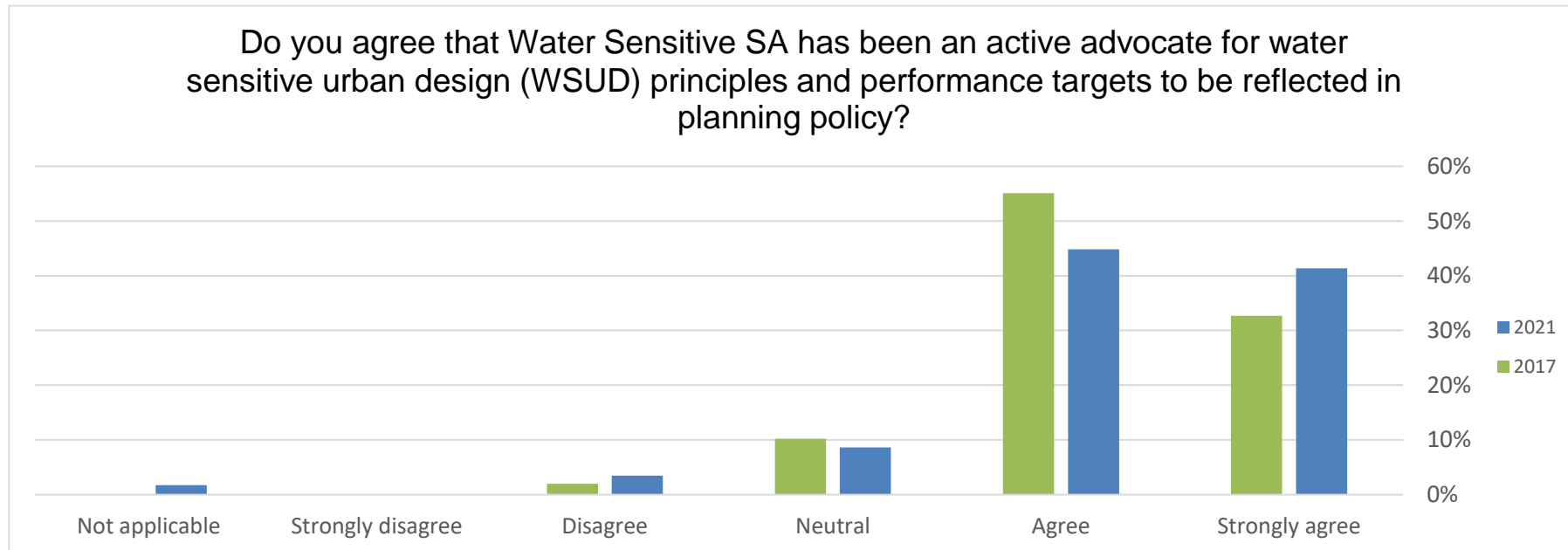


Figure 6. Perceptions on Water Sensitive SA advocacy

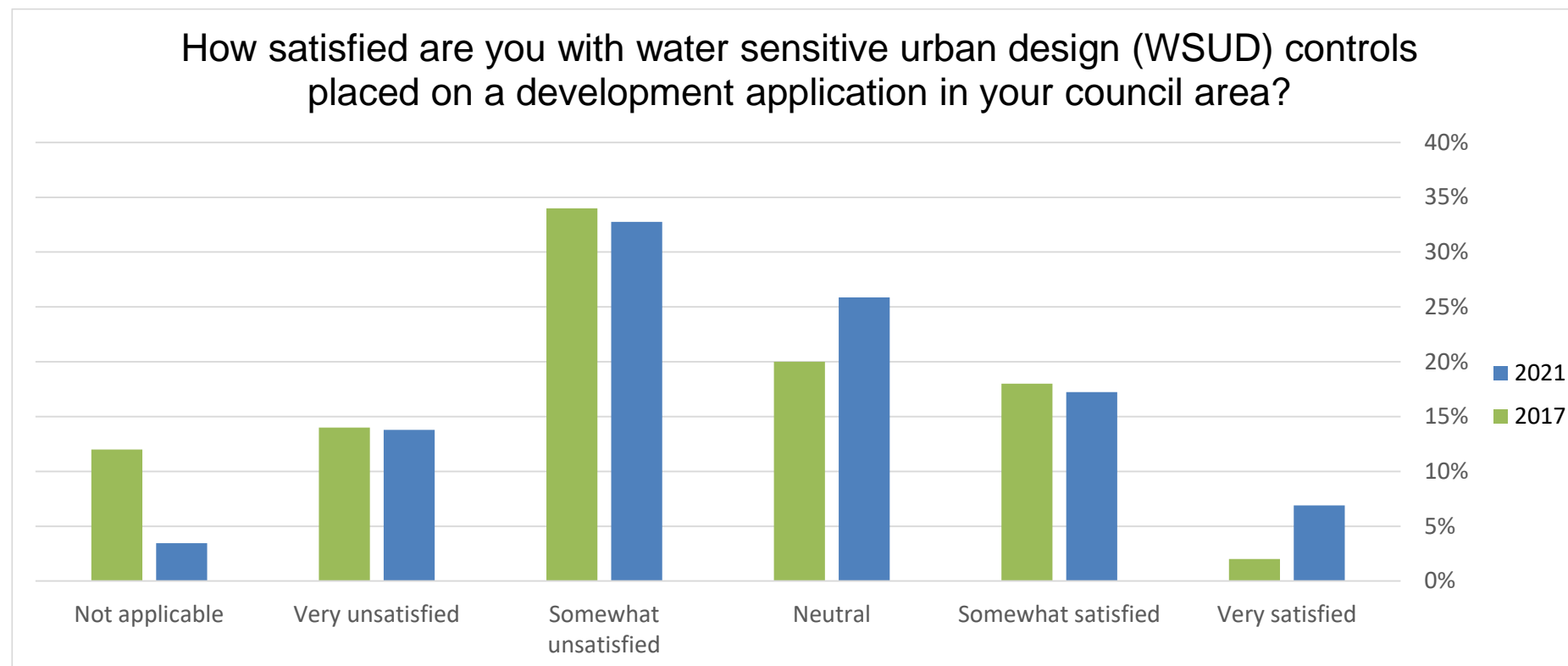


Figure 7. *Satisfaction with local planning controls*

Water Sensitive SA is constantly developing, sharing and promoting tools, guidelines, and industry events that help to increase the capacity of practitioners and organisations. A survey question was included that asked respondents to rate their familiarity with the various products that Water Sensitive SA have produced. Events and fact sheets were rated as being the most familiar, and online tools were rated as being the least familiar or unaware. Figure 8 presents the data collected from practitioners regarding this issue.

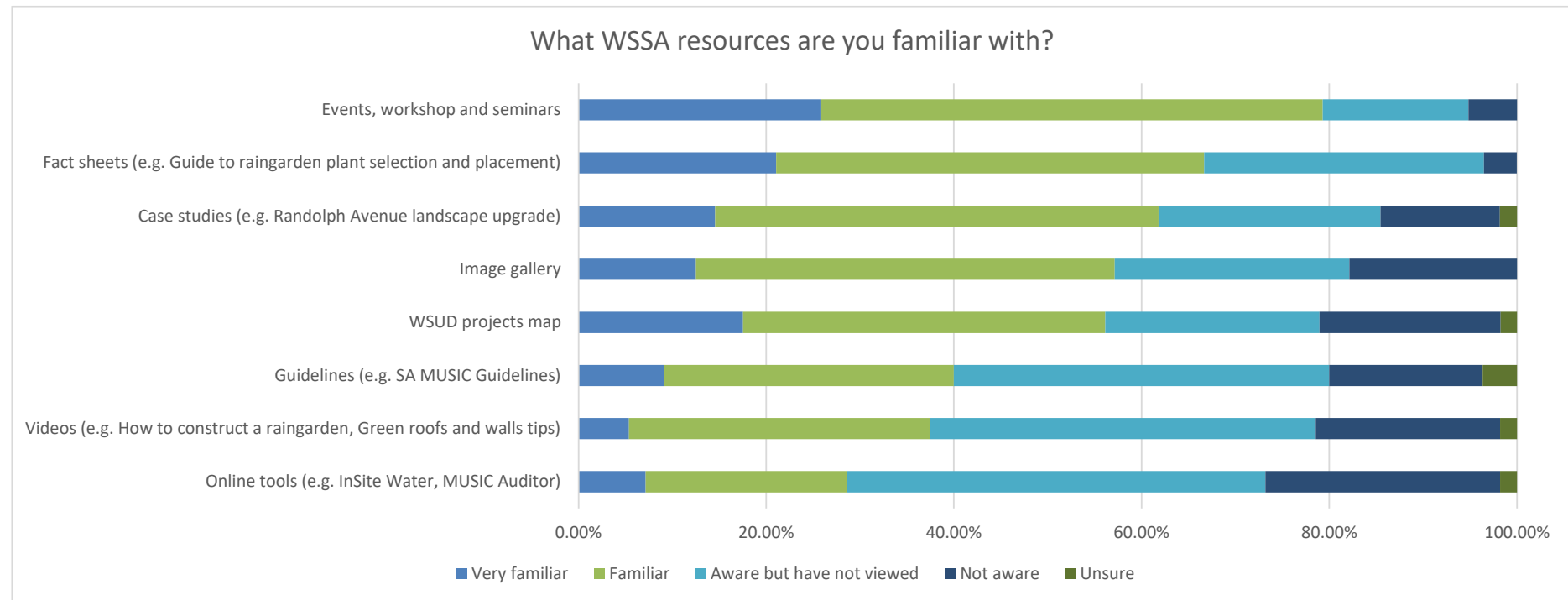


Figure 8. *Familiarity with Water Sensitive SA products and tools*

Respondents were asked if Water Sensitive SA was the primary source of information for WSUD and technical information. The result, presented in Figure 9, was that this was very much true. This issue was also supported several times by the interviewees as well, who also noted that the CRC Water Sensitive Cities, and other capacity building programs around the country were sources of information, but Water Sensitive SA was very good at taking research and ‘localising’ it.

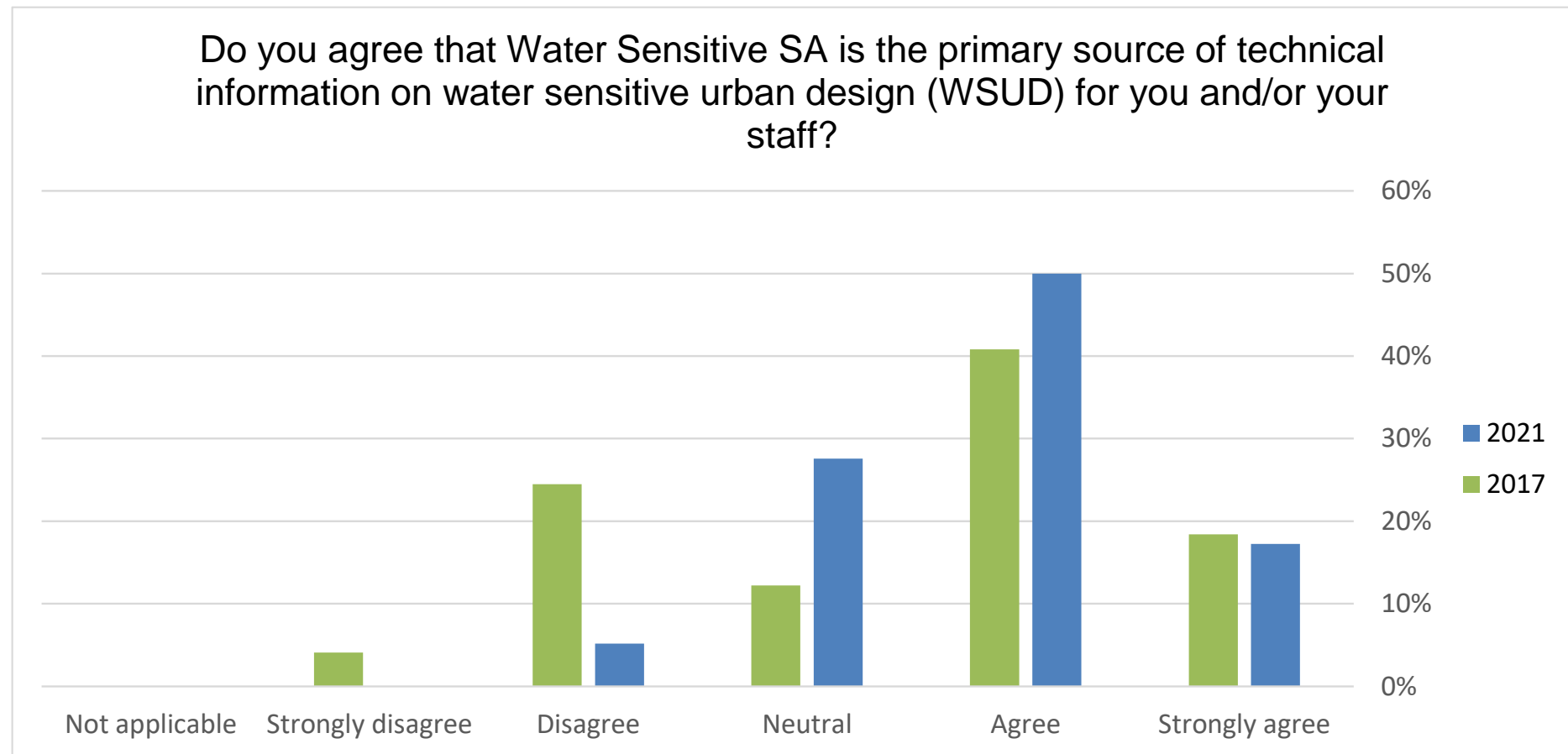


Figure 9. Water Sensitive SA as primary source of technical WSUD information

The online survey also revealed some other results of interest on the perception of the industry at this point in time. This included:

- 96% of respondents felt that Water Sensitive SA had increased their knowledge of WSUD, so correspondingly, only 4% of respondents felt that Water Sensitive SA had NOT increased their knowledge of WSUD.
- 75% of respondents stated that Water Sensitive SA has had a very high or high impact on water sensitive urban practices.
- 54% of respondents believed that if Water Sensitive SA did not continue there would be an “adverse impact of urban development on flooding, water quality, urban heat island effects and overall amenity”.

6.3 Perceptions of community members

In May and June 2021, an online survey was also sent to all community members on the Water Sensitive SA mailing list and was advertised on social media and through newsletters. The survey included 19 questions, some of which were similar to the above practitioner survey.

53 responses were received for the survey and is the first time in reviewing the overall achievements and strategy of Water Sensitive SA, that the community have been surveyed to get their perspective on the program.

In the 2017 evaluation, there was no specific survey for the community to respond to, so the charts below to do not include a comparison with previous datasets.

The responses to the online survey indicate that the community overwhelmingly want better, greener, more water sensitive urban developments. They saw several opportunities and needs that Water Sensitive SA fulfill, and appreciated a range of benefits that WSUD delivers.

The most interesting responses that were gathered from this community survey relate to:

- a) agreement that water management matters for Greater Adelaide,
- b) the frustration that the respondents have with development and government action to deliver better social and environmental outcomes,
- c) the perceived benefits of WSUD, and
- d) the community interest and passion to learn more about WSUD interventions. The data from these questions is presented below.

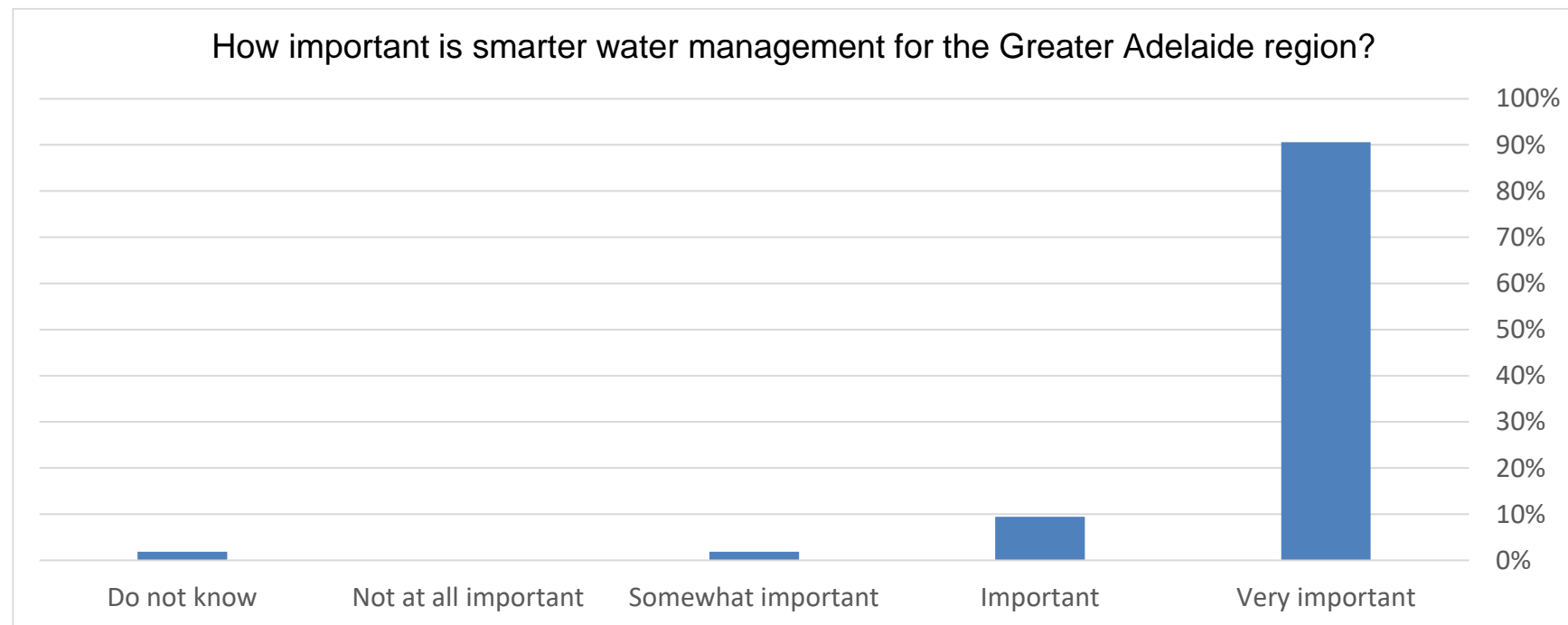


Figure 10. Responses to the question on the importance of water

While the respondents are clearly more interested than most in water and environmental issues, this response to the question on the importance of water was a very strong and clear level of support for more action on water management. One of the respondents stated to an open question:

"It is very sad to walk around my neighbourhood and see the destruction of housing being replaced by poorly designed housing that does not consider climate change that science has been proving for years."

The 53 respondents were quite clear on the range of benefits from a water sensitive urban design approach. the top responses to this question highlighted the value of water conservation and microclimate cooling, whereas other benefits such as reduced costs and property values were not as highly valued. The full range of responses is shown below in Figure 11.

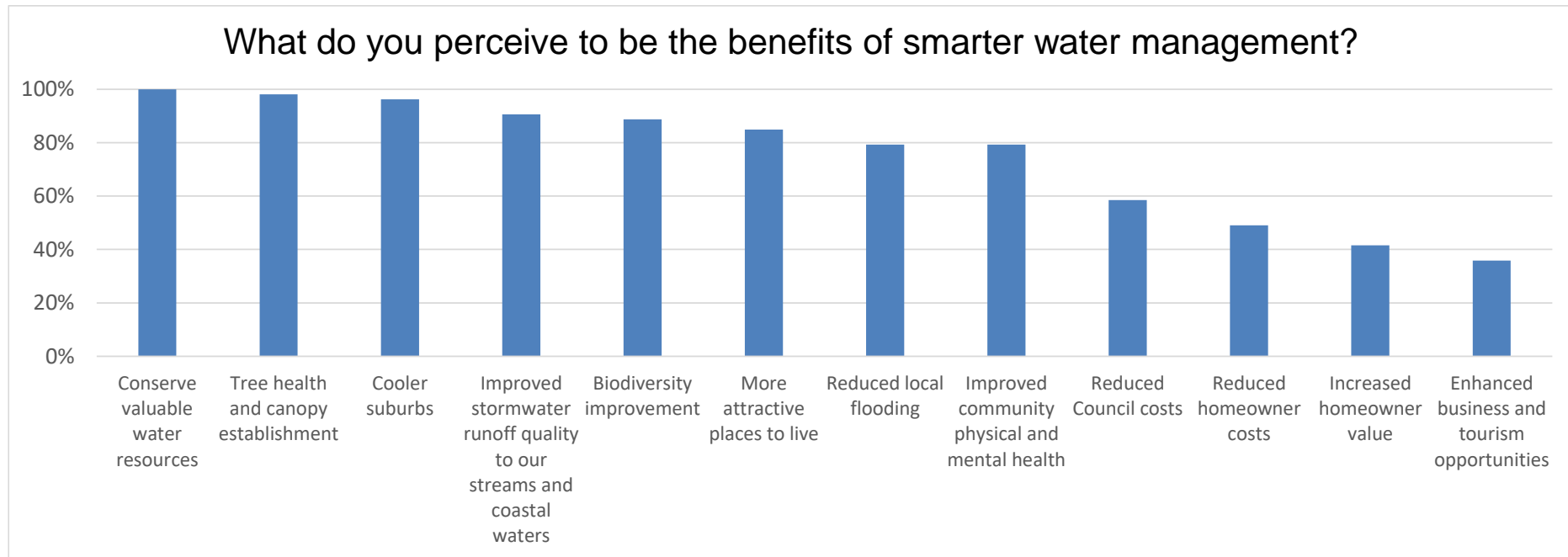


Figure 11. Responses to the question on the perceived benefits of smarter water management

Respondents were quite vocal on the nature of the barriers to 'smarter water management', with many suggesting that costs and politics is a problem, and there that there is a distinct lack of knowledge that is driving a lack of action.

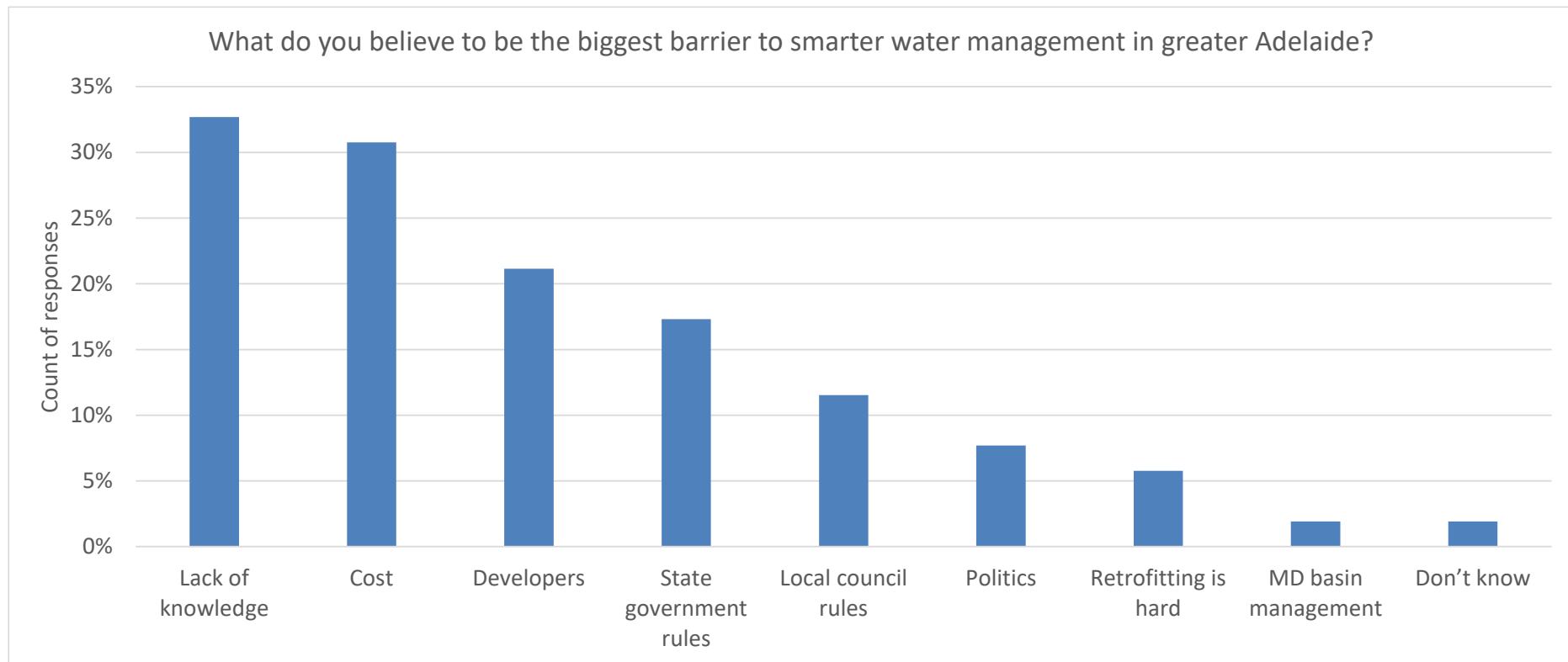


Figure 12. Responses to the question on the biggest barriers to delivering more WSUD

In terms of what people are interested in learning more about, they were particularly keen on how local government can incorporate WSUD, and how to retrofit WSUD. These results are presented below in Figure 13.

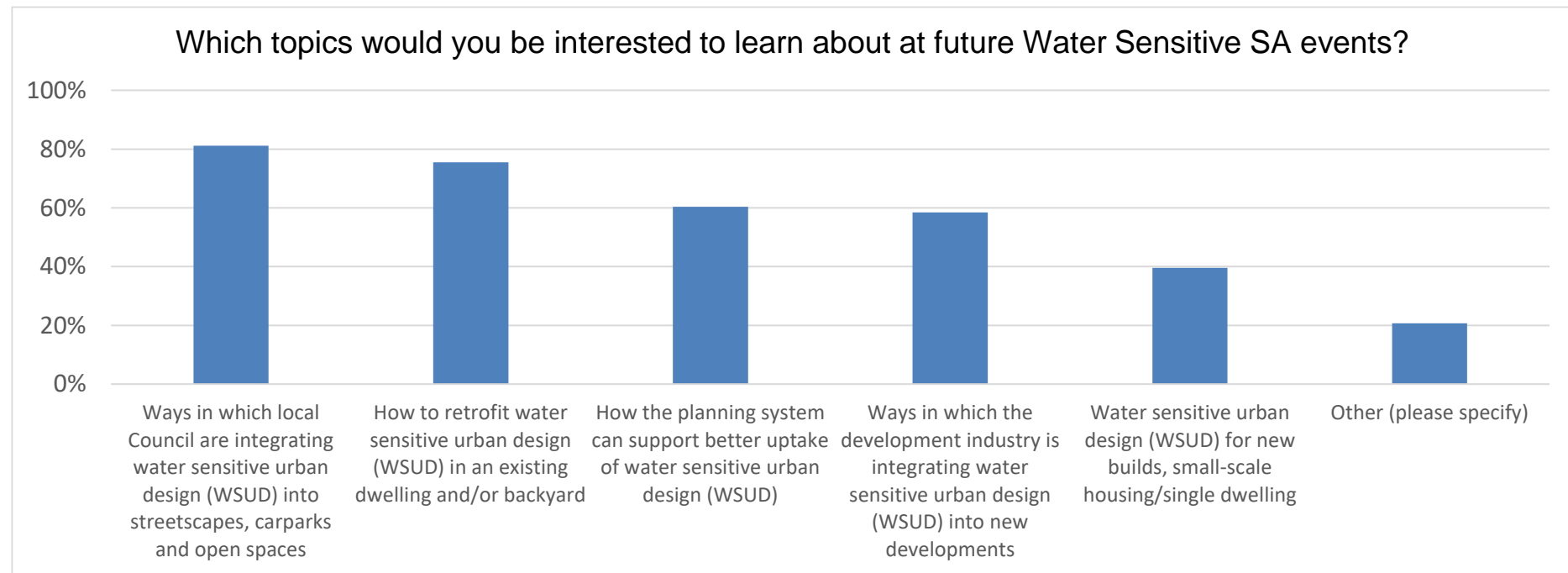


Figure 13. Responses to the question on future topics

‘Other’ answers that were mentioned in the survey in response to ‘future topics’ (as per Figure 13) included:

- First State Government must alter new planning laws to support the Water Sensitive SA policies.
- Encouragement of more use of rainwater tanks by individual households.
- If Council’s focus is on streetscapes, car parks and open spaces, where is the emphasis on residents to be part of water sustainability by functioning more effectively on their own block. It seems to me the emphasis is on mega scale which is necessary but fails to bring the individual along as well.
- Water sensitive design in infill housing.
- Water sensitive issues in regional development.
- What SA Water is doing to prevent wastage.
- Public education regarding sustainable domestic water use, and education of various tradespeople in the building industry about careless disposal of toxic substances into drains and onto gardens and trees. Monitoring of industrial water use.
- Use of residential water storage and ease of access to tanks for those that cannot afford them

- The hot summers, for instance many LARGE trees need a TOP UP or special boost of water by the councils, but they do not do this, and they become stressed /die etc. Yet they spend mega bucks to put in/plant many bushes and trees until big enough and then left to defend in drought conditions. Councils follow a set program and do not seem to be proactive to changes that are needed...such as more mulch/bushes/large trees/swales to hold water for trees to take up.
- Where SA Government thinks our drinking water will come from in 10 to 20 years' time.
- Challenges of urban infill.

There was a general consensus that advocacy, education and ongoing effort to 'raise the bar' to value and protect water is important to the respondents. They clearly value an organisation like Water Sensitive SA. One respondent stated:

"Please keep up your good work. Water security is one of biggest challenges we face and WSUD is one critical strategy to address this."

7 Recommendations

Strategy is the art of sacrifice. This is the main problem to reconcile for the future of Water Sensitive SA, which due to its limited funds cannot realistically deliver everything that the industry and funders want. Something must be sacrificed, or expectations reset, or ideally more funds secured to meet these expectations and needs in the industry and community.

There are a few distinct and different paths that Water Sensitive SA can follow at this point in time, and they all depend on how priorities are set and how much funding is available to support the delivery of Water Sensitive SA.

Some of the main questions facing the program are:

1. Can the program continue to focus on and adequately resource three distinct streams of work: advocacy for better WSUD in the Planning and Design Code, practitioner technical training, and broader community engagement? If not, what should be prioritised?
2. How does Water Sensitive SA work better with, or even formally align with, other industry groups like IPWEA, Stormwater SA and Resilient East etc.?
3. How can the program achieve a step change in the way WSUD is considered as cost-effective infrastructure (i.e., the costs outweigh the benefits and WSUD, over time represents a decreasing financial risk)?
4. How can the program extend its reach to educate more professionals on the benefits, design, and research associated with WSUD?

The recommendations are as follows:

1. Based on feedback from funding agencies, continue the Water Sensitive SA program.
2. At upcoming steering committee meetings consider the following questions:
 - What is the priority amongst these three main areas of work that Water Sensitive SA deliver: advocacy, capacity building and community engagement?
 - If the funders are so satisfied with the program, why can't this enthusiasm be leveraged to double the funding contributions?
 - Consider if there are other funding mechanisms that may be underutilised, such as infrastructure levees and philanthropic organisations.
 - What is the succession plan to ensure that the value of Water Sensitive SA will continue if or when the program manager leaves?
3. Continue to run core services such as training events, sharing case studies, and the development of technical documents like WSUD guidelines, as it has widespread support from practitioners and the community
4. Increase focus on the costs, benefits, and develop an industry wide mechanism to actively track the life cycle costs of infrastructure.
5. Continue to align WSUD research and assets as part of smarter cities and climate resilient infrastructure.
6. Seek additional funding under a 'regional development' angle to support regional councils with WSUD strategy, design, construction and maintenance.
7. Consider in the following years how Water Sensitive SA may facilitate or support a research program, now that the main institutions that were delivering research have concluded.

8 Appendix A – List of funding partners interviewed

The list of people interviewed for this project were:

- Belinda Doebling, Adelaide City Council
- Philip Roetman, City of Burnside
- Sue Graham, City of Campbelltown
- Murali KG, City of Charles Sturt
- Chris Haskas , City of Mitcham
- Jude Nirmalaraja, City of Onkaparinga
- Shaun Fielding, City of Playford
- Jason Tamas, City of Port Adelaide Enfield
- Dameon Roy, City of Salisbury
- Daniel Chan, City of Tea Tree Gully
- Ann Gibbons, Corporation of the City of Marion
- James Mitchell , Corporation of the City of Unley
- Ruth Ward, EPA
- Sam Phillips, Greening Adelaide
- Steven Packer, Rural City of Murray Bridge