

# Adelaide Needs and Opportunities

# Adelaide's Needs (votes)

- (15) Develop a shared vision and narrative for a water sensitive city
- (12) Understand the business case for a water sensitive city (jobs and prosperity)
- (10) Strengthen policy legislation and regulation to strengthen the transition to a water sensitive Adelaide
- (9) Create positive incentives mechanism to change the change to a water sensitive Adelaide
- (7) Establish enabling economic framework
- (1) Develop and governance coordination and collaboration across agencies

# Adelaide Opportunities

- Adelaide City Council Green streets program
- Re-assessment of all water use and role in a changing climate – grid; offsets; water trading
- Adelaide Airport Urban Heat Island
- City of Unley Leeder Street upgrade
- Developing a framework to evaluate WSUD proposals, move from opportunistic to strategic investment priorities – NRM Board
- Tree Net program – City of Mitchem
- ~~Greater Edenborough Parks – NRM Board~~
- Paynham Street St Peters – streets scape solutions for green infrastructure
- Cost benefit for green infrastructure tool (incl capacity building)

# National Needs - T2 Clusters

## 1 Steering Transitions

- *guiding and influencing*

## 2 Monitoring and Evaluation

- *Performance of technical, natural and management systems;*
- *Optimisation and design*

## 3 Context specific Solutions

- *green/grey/brown fields*
- *Flood/heat/groundwater/climate change*
- *Social and cultural context*

## 4 Integrated Planning and Implementation

- *coordinated and aligned decision making*

## 5 (Socio-economic) Evaluation Frameworks

- *a believable narrative for micro and macro audiences*

# Steering Transition Research Questions

- TBC

# Monitoring and Performance Optimisation - Research Questions

1. Limited *in-situ* and field monitoring of the biophysical water infrastructure developed in Tranche 1 research projects.
2. Absence of a consistent framework which can assess whether the biophysical water infrastructure (implemented to help deliver a water sensitive city) are delivering on the intended multiple benefits/outcomes, now and into the future.
3. Uncertainty around the methods and regimes required to validate and operationally monitor biophysical water infrastructure for multiple benefits/outcomes.

# Context-specific Solutions - Research Questions

1. Methodologies and approaches to achieve adaptable and/or resilient planning, development and implementation strategies, recognising that contexts are dynamic
2. Identifying and creating system-optimal solutions and quantifying the achievable benefits across multiple beneficiaries
3. Innovative concepts and tools for the integration and adaptation of different disciplines and organisations to achieve novel solutions
4. Processes that enable planning, design and implementation of integrated, system-optimal solutions across different spatial and temporal scales
5. Guidance on how to effectively integrate knowledge and tools across different research and practice disciplines and professions
6. Improved knowledge sharing and innovative concepts to enable joint learning processes and capacity building
7. Strategies and methodologies for capturing learnings and disseminate them to other contexts

# Integrated Planning and Implementation - Research Questions

- 1: What processes facilitate integration of planning and implementation and what tools will best aid the implementation of these processes?
- 2: At what scale is integration the most effective?
- 3: How can the intent to integrate (eg via planning and innovation) be assured in on ground implementation?
- 4: What financial models make integration effective?
- 5: How does risk allocation and risk sharing influence integration?



# Evaluation Frameworks - Research Questions

**1:** *What is the economic value of WSUD in contributing to urban liveability and what tools are appropriate for capturing this economic value of tangible and intangible benefits arising from water sensitive technologies and practices?*

**2:** *What criteria should be used to assess the performance and risks of WSUD technologies and systems? Are they trustworthy, credible and context-relevant?*

**3:** *How can evaluative frameworks (i) inform the development of compelling narratives for change and (ii) support the implementation of adaptive management practices?*

## **Tranche 2 - Combined Needs**

### **Enabling structures**

1. Strengthening and aligning policy, legislation and regulation in support of water sensitive cities
2. Shared vision and narrative for water sensitive cities that connects with community values and drives decision making
3. New financial model and incentives that recognises the values and benefits of water sensitive cities
4. Robust and inclusive decision making frameworks
5. Governance frameworks that enable coordination and collaboration across agencies and sectors
6. Holistic evaluation frameworks to support water sensitive city investments

### **On-ground practices**

7. Guidance on how to develop context-specific solutions and asset management regimes
8. Achieving multiple benefits through integrated planning, and design of water systems and the urban form
9. Next generation of flood risk assessment frameworks and tools for a water sensitive cities approach
10. Monitoring and evaluation for improved system design and performance
11. Efficient and effective operations and maintenance systems to achieve water sensitive city outcomes
12. Coherent understanding of groundwater systems and interactions with surface waters

### **Social capital**

13. Influencing water sensitive city outcomes through leadership, collaboration and networks
14. A culture of learning and innovation
15. Translation and sharing of water sensitive cities knowledge
16. Building community and industry connection and engagement
17. Building capacity to deliver a water sensitive cities

# Steering Transitions

- Community support & demand
  - Political/Organisational/Individual –
- Leadership/Influencers/Boundary Spanners
  - CRC as a dialogue facilitator
  - Diagnosis & benchmarking of transitioning over time
  - Knowledge translation at different contexts / scales
  - Decision making principles
  - Vision and narrative
  - Organisational change
  - Process for adaption planning
  - Behaviour change
  - Use & celebrate quick wins
  - Social change

# Monitoring and Performance Optimisation

- • To ensure and validate that the systems/infrastructure we put in place are delivering the intended outcomes and benefits.
- • Feedback loops to enhance performance
- • Ensuring that the delivered benefits occur/persist across diverse, temporal and spatial scales
- • Expand the breadth of social ecology benefits considered and assessed in order to improve our business++ eg. Epidemiological study to identify health benefits
- • Informed and adaptive management practices, including steering/influencing mechanisms (eg incentives, regulations etc.)
- • Monitoring 4 learning
- • Cost efficient and effective monitoring
- • Incentivise information sharing

# Context-specific Solutions

- • How to effectively integrate knowledge and tools across different research and practice disciplines
- • How to better learn together
- • How to best capture learnings and disseminate them to other contexts
- • Contexts:
  - – geo-climatic
  - – socio-cultural / community
  - – hydrologic
  - – ecological
  - – political / legal
  - – institutional / governance
  - – industry capacity
  - – history / temporal
  - – variable: spatial scale (start small; scale-up to achieve quick wins and longer-term objectives)

# Integrated Planning and Implementation

- Understanding why integrated planning is not currently happening
- Proving the concept by demonstrating what integrated planning and implementation looks like, and how integrated planning realises public benefits
- Converting this into planning processes, procedures and tools that:
  - conceptualise and operationalise a holistic planning, design and evaluation process
  - maximise the value of a WSC
  - reduce the risk and deal with the uncertainties
  - building capacity to make this mainstream practice

# Evaluation Frameworks

- To develop a robust and inclusive evaluation framework that provides a
- mechanism for:
  - • holistic decision making
  - • recognizes the multiple values and benefits of WSC
  - • supports WSC investment at multiple scales and for multiple audiences
  - • supports optimised system design and performance
  - • builds a culture of learning and innovation
  - • builds community connection & engagement
  - • provides the WSC narrative for the respective audience