



The origins of state funding for stormwater management



Stormwater NSW | 18 June 2024



Governments (and the community) increasingly have a vision and objectives for 'greener' and more 'liveable' cities.



Larger scale planning documents are shifting emphasis to the importance of sustainable, healthy, liveable places and the need to plan and invest to achieve this. This sets the frame for more specific placed based infrastructure planning



GREATER SYDNEY REGION PLAN
A Metropolis of Three Cities
 – connecting people



Liveability

The city will emerge with the development of new neighbourhoods and centres, and with urban renewal close to existing centres. Place-making will help to design neighbourhoods with fine grain fabric and human scale. This will support healthy lifestyles and connected communities.

Sustainability

Development along the spine of South Creek and its tributaries will re-imagine liveability and sustainability, providing new cool and green neighbourhoods and centres with generous open space in a parkland setting. Increased tree canopy cover will provide shade and shelter for walkable neighbourhoods within easy reach of shops and services. The parkland character will be enhanced by the national parks and rural areas framing the city.

A city of great places

Designing places for people

Objective 12: Great places that bring people together

Objective 13: Environmental heritage is identified, conserved and enhanced

An efficient city

Using resources wisely

Objective 33: A low-carbon city contributes to net-zero emissions by 2050 and mitigates climate change

Objective 34: Energy and water flows are captured, used and re-used

Objective 35: More waste is re-used and recycled to support the development of a circular economy

A city in its landscape

Valuing green spaces and landscape

Objective 25: The coast and waterways are protected and healthier

Objective 26: A cool and green parkland city in the South Creek corridor

Objective 27: Biodiversity is protected, urban bushland and remnant vegetation is enhanced

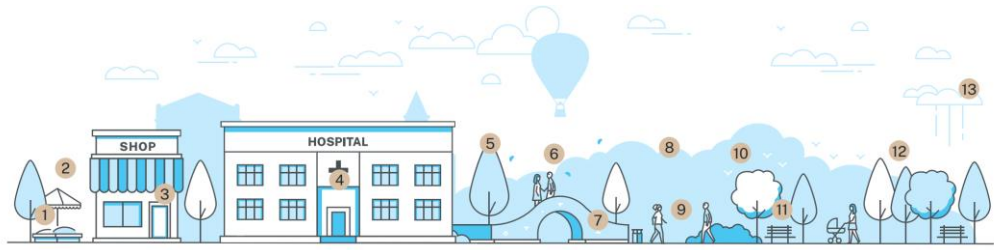
Objective 28: Scenic and cultural landscapes are protected

Objective 29: Environmental, social and economic values in rural areas are protected and enhanced

Objective 30: Urban tree canopy cover is increased

Objective 31: Public open space is accessible, protected and enhanced

Objective 32: The Green Grid links parks, open spaces, bushland and walking and cycling paths



- 1 Reduces heating and cooling costs
- 6 Supports community cohesion
- 10 Provides food and shelter for wildlife
- 2 Improves amenity
- 7 Improves the life span of key assets
- 11 Creates a sense of place and identity
- 3 Promotes higher spending in retail areas
- 8 Improves air quality by removing dust and particles
- 12 Carbon sequestration
- 4 Reduces health care costs
- 9 Improves physical and mental health
- 13 Reduces storm water run off
- 5 Shades cools streets and public spaces

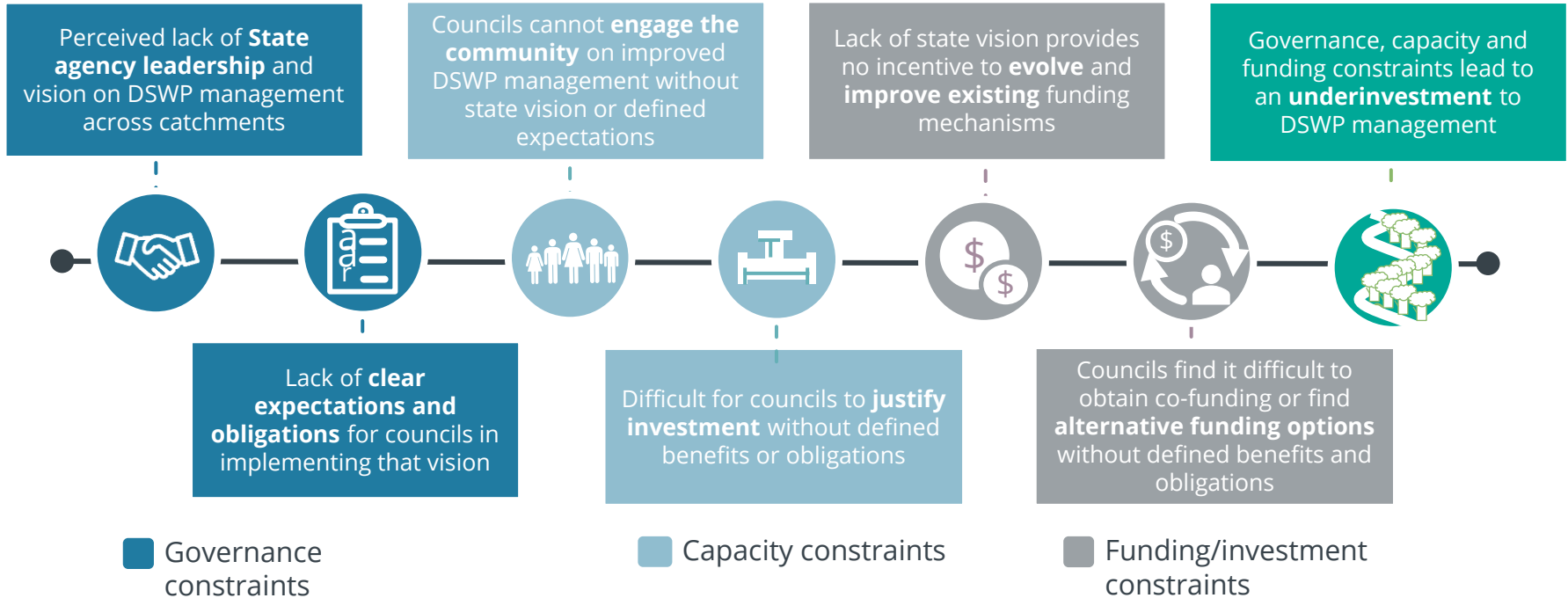
Stormwater management can contribute to meeting these objectives

Nature-based, 'blue green' infrastructure solutions are increasingly recognised as multi-service delivering investments that provide a wide range of community benefits

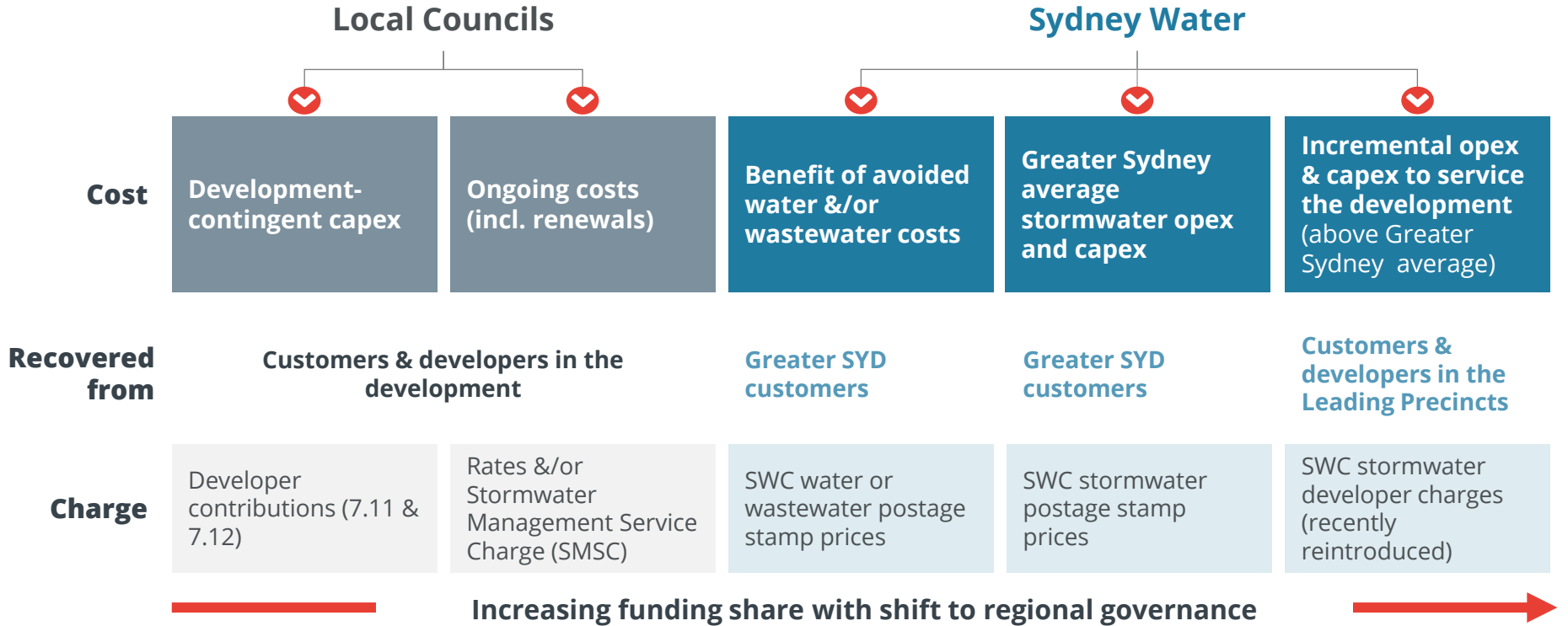


- Reduced likelihood of water restrictions
- Improved system resilience
- Reuse of wastewater & stormwater
- Reduced greenhouse emissions
- Waterway & ocean health
- Flora, fauna & habitat
- Air quality & climate
- Indigenous heritage & culture
- Reduce cooling-related energy demand
- Reduced urban heat-related disease burden
- Increased active & passive recreation in open space
- Increased water-based recreation
- Reduced inactivity-related disease burden

But we still face challenges in delivering these projects



In Greater Sydney, the stormwater funding framework depends on the responsibility for service delivery



Observations on the current funding framework



Local councils

- Funding instruments (and stormwater responsibilities) not always consistent with catchment boundaries, which can impede optimal solutions
- The SMSC has remained fixed (\$25) – unrelated to costs
- Local council rates are capped (at the rate peg)
 - Councils can apply to IPART to increase rates above the rate peg through a 'Special Variation' (SV), but some council reluctance to do so

Sydney Water

IPART's framework for allowing SW to recover its stormwater costs has evolved:

- SW's stormwater charges have increased:
 - with the efficient costs of providing stormwater services
 - to reflect customers' willingness to pay for outcomes above those mandated by regulation
- SW's stormwater charges provide a discount for 'low impact' customers
- SW's stormwater developer charges can recover the incremental capex and opex of providing stormwater services to new developments, and SW has some flexibility in establishing the 'catchment' for its developer charges
- IPART has recognised that stormwater works can efficiently contribute to the delivery of other services, and has allowed some stormwater management costs (in Rouse Hill) to be recovered via sewerage charges to the broader customer base – consistent with the 'impactor pays' principle

So, how can we bridge the gap
between high level **aspirations** and
action?



Funding stormwater management - other supporting measures



Funding

- Improve understanding of the efficient costs and benefits of stormwater management
- Review the stormwater management service charge
- Explore how improved governance arrangements & capacity building can facilitate funding opportunities
- Explore role of State and Commonwealth funding
- Clarify role of SVs in potentially funding stormwater management

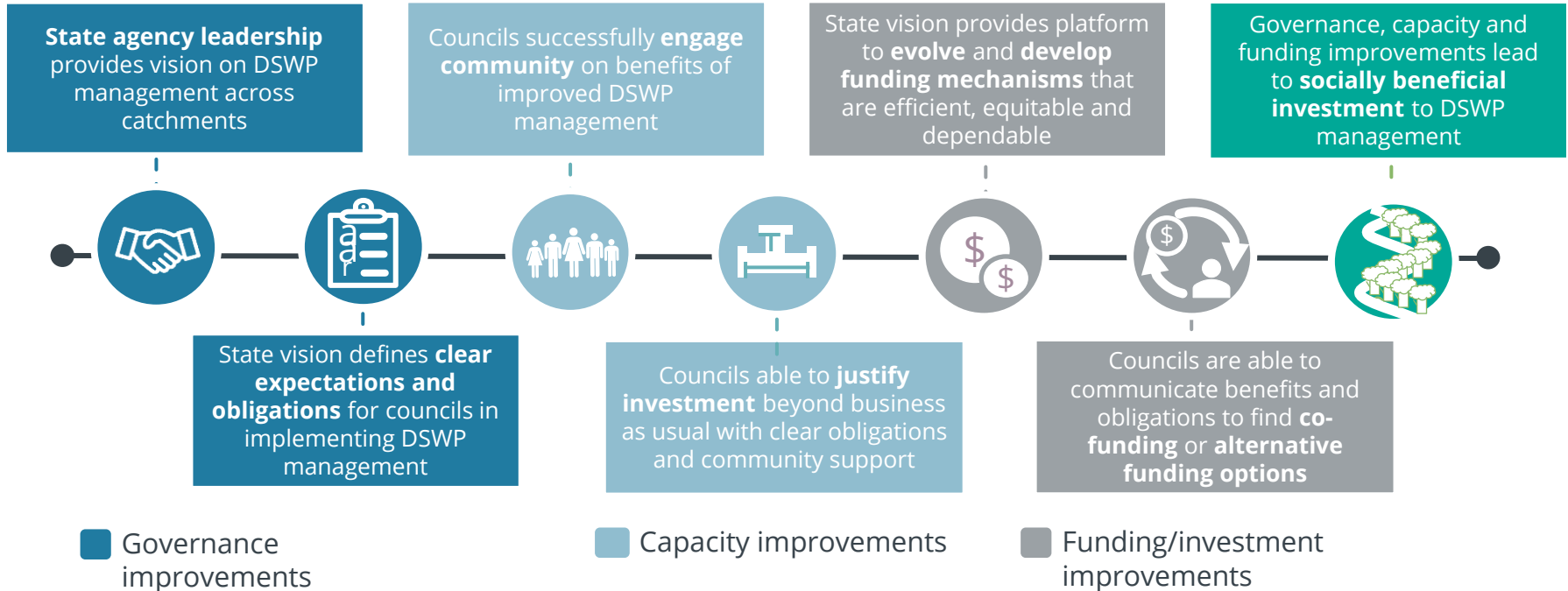
Governance

- Consider developing specific management targets, obligations and outcomes
- Strengthen opportunities for catchment-wide coordination
- Review opportunities for alternative governance arrangements

Capacity

- Strengthen participants ability to identify and community the net benefits of stormwater management
- Develop a framework for engaging with potential sources of co-funding

How can we better support the delivery of value-delivering stormwater services





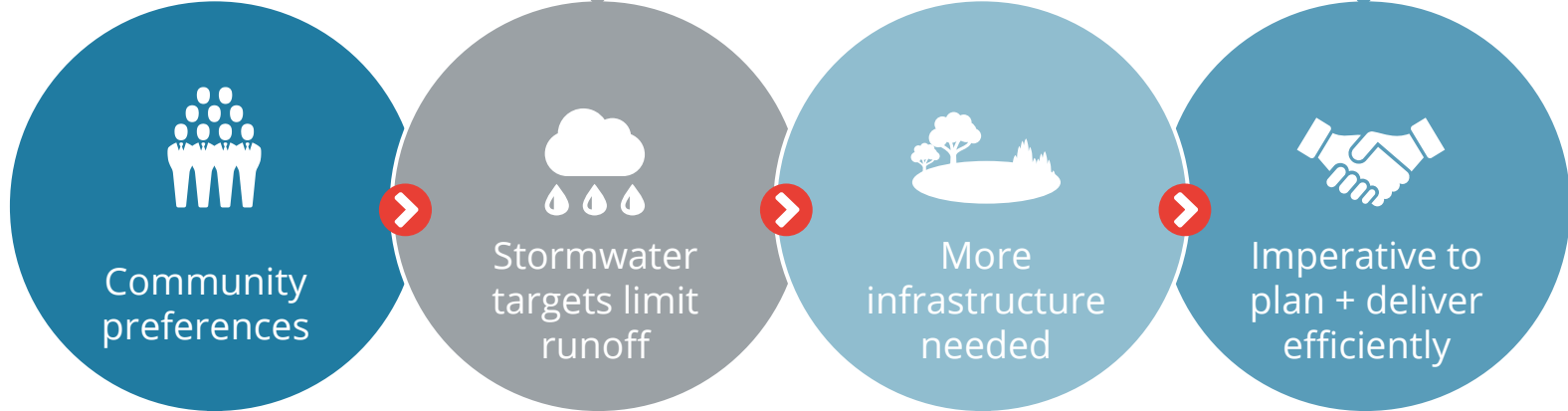
Case-study: changes to stormwater governance and delivery in Western Sydney



Stormwater standards as a driver for change in Western Sydney

Limiting the amount of runoff from new developments is critical to **prevent erosion**

Governance reform can put downward pressure on infrastructure costs



Consultation found that the community wants high-quality “natural” waterways

Preventing runoff means detaining, evaporating and/or reusing stormwater, which **requires additional infrastructure that drives costs up compared to BAU**

Changes to stormwater & waterways governance & servicing solutions



What stormwater and waterways outcomes do we aim for and what (range of) stormwater infrastructure can achieve these?

What regional governance model (arrangements of roles and responsibilities) of stormwater + waterways delivers the greatest value over BAU governance?

(First ever) stormwater quantity targets triggered review of how these could be best met

**Catchment-wide model allows a servicing solution that meets the stormwater targets at least cost
Sydney Water to integrate its stormwater, recycled water and wastewater network**

Blue-green stormwater approach



Typical bio-retention and wetland treatment

Template 1 provides a typical configuration of sediment pits, bio-retention basins and wetlands to treat storm water before discharge into adjacent existing creeks.

This typical configuration has a wide range of applications, including on the edge of a recreational playing field, within a public open space or business park landscape.



- Water infrastructure**
 - 1 Flood detention storage and embankments integrated around WSUD element
 - 2 Shallow marsh wetlands with internal ridges to maximise detention
 - 3 Flow diversion pit or weir to direct treatable low flow rate to bio-retention and wetland zone
- Education, health and recreation**
 - 4 Mixed-use path linking in to wider recreational network. Includes furniture along waters edge to improve public safety.
 - 5 Decorative Industrial Park water feature/artwork integrated with open water basin
 - 6 Industrial Park Gateway plaza integrated with WSUD design, recreational facility (seating / BBQ / canopy) overlooking water feature
- Movement and access**
 - 7 Reinforced grass access tracks around basins to provide maintenance access
- Existing landscape**
 - 8 Basins integrated into local terrain to minimise cut and fill and maximise viewing corridors
- Green and blue grid**
 - 9 Enhanced health and recreational opportunities for industrial park community through connected active transport networks
 - 10 Proposed riparian vegetation integrated into existing planting, enhancing setting and connectivity of existing landscape
 - 11 Urban water and runoff directed into bio-retention system

Legend

- Trunk drainage asset
- Existing Vegetation
- Proposed Vegetation
- Hard surfaced vehicular access for maintenance
- Reinforced grass track
- Access point for maintenance
- Overland water flow direction
- WSUD water flow direction
- Water course flow direction
- +0.0 Relative level to top of bank



Key take-homes/outcomes



The stormwater standard prompted the need to consider all options to achieve this outcome (incl. IWCM vs 'traditional', & alternative governance arrangements)



To ensure the standards are met at least cost, it is critical to evaluate different governance settings. A regional, IWCM approach was identified as the least-cost, socially optimal approach.



A significant uplift in IWCM investment triggered by the environmental standard (as IWCM most efficient way of achieving outcome)



The utility played a critical leadership role, including technical analysis, planning, and coordination amongst stakeholders



Funding certainty is enhanced by clarity in service (regulatory) requirement, particularly if IWCM providers are subject to economic regulation and/or state treasury funding



Timing is critical, but large greenfield developments can be an opportunity to pilot new ways of doing things

The analysis identified an IWCM, regional stormwater management as the socially optimal approach - funding expected via regulated prices

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