Affordability of Stormwater & Flood Risk Management Schemes for Local Government

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Competing and increasing demands on stormwater infrastructure as a result of global and national pressures

- Increased perceptions
- A changing and variable climate
- Urbanisation
- Increasing water quality standards / regulation

A number of challenges to address

Multiple factors lead to inadequate stormwater infrastructure

- Urban sprawl and urban densification
- Urban creep & unplanned growth
- Traditional stormwater management approaches to enable development
- Reactive management and funding of stormwater in response to events
- Aging infrastructure
- Historic ad hoc SW infrastructure

What about funding?

- Upgrading to industry standard can appear cost prohibitive
- Maintenance is a significant cost not often well addressed
- Costs may need to be spread over a period as long as the asset life to make a scheme affordable

Local Government issues

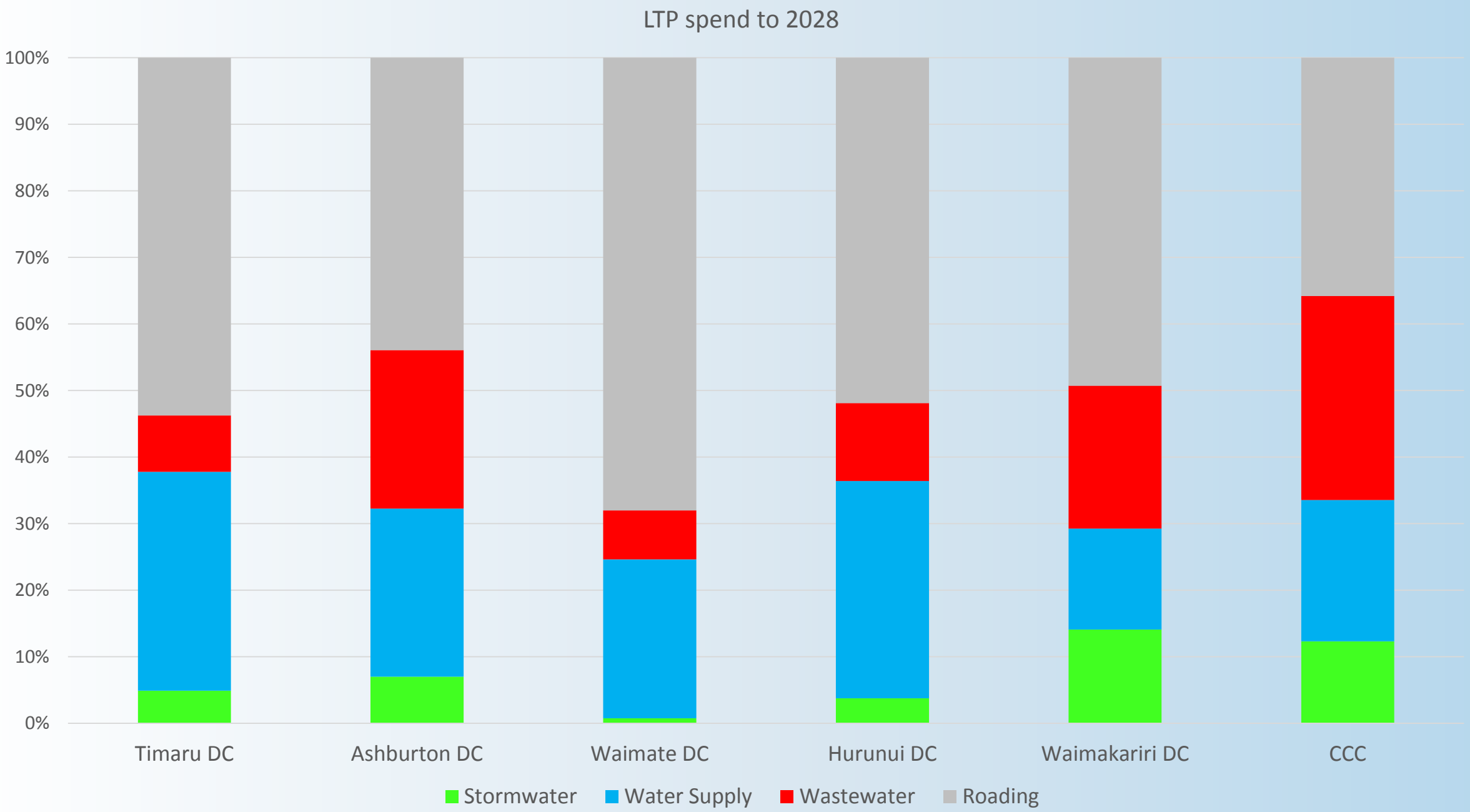
Stormwater as the “poor cousin”

- Water and wastewater are lifelines whilst stormwater is more for the public good
- Continuous requirement for safe drinking water and management of wastewater
- Allocation of funding tends to serve these necessities
- Flooding can be devastating, but funding is an intermittent response to flood events and disappears as memories fade

Local Government issues

Stormwater Funding

- Investment and operational expenditure has historically been low
- Spending largely in response to flood events
- E.g. Kate Purton's 2016 paper
- Often funded out of other rates so true costs can be buried


LTP spend to 2028
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Timaru DC
Ashburton DC
Waimate DC
Hurunui DC
Waimakariri DC
CCC
Stormwater
Water Supply
Wastewater
Roading

Local Government issues

Staff

- Larger city Councils have separate strategy, policy, delivery and enforcement roles
- Larger Councils have internal capability and resources to undertake their own design projects
- Smaller councils reliant on external consultants or staff covering multiple disciplines

Local Government issues

- Rating Systems - In some case there is not even a separate stormwater rate
- Competing Political Agendas -Funds directed to more visible projects e.g. roads, parks or bigger ‘flavour of the month’ projects like libraries and swimming pools.
- Economies of scale - Costs to develop design guidelines, codes of practice, stormwater bylaws as well as undertaking investigation and options assessments are often similar, regardless of geographical size or urban density.

What can we do about it?

The key steps of change require

- Collaboration
- Vision
- Adaption

Collaboration

- Bring stakeholders together
- Get buy in and support for stormwater vision and improvement projects
- Opportunities to work smarter and learn from each other
- Collaborating to share knowledge and be more efficient

Collaboration examples

- Joint guideline documents e.g. design guidelines or a Code of Practice
- Collaboration between roading and water (stormwater) departments e.g. roading budgets contributing to stormwater upgrades (i.e. retrofit of treatment)
- Sharing resources
- District councils coming together to address regional issues together

Vision

A Critical step

- Consistency between the vision for regeneration of a town/city and of the district's or region's vision
- Outcomes based
- Considers all aspects of the environment – natural, built and social/cultural
- Consideration for timeframes to achieving the vision
- Understand potential costs
- A more planned approach to avoid 'ad hoc' decisions

Adaptation

How the vision is achieved

- Capture new development to reverse the downward trend (the low hanging fruit)
- Identify stormwater infrastructure required to achieve the vision
- Estimate cost and period over which to work may be funded
- Understand the extent and cost of upgrading the traditional stormwater system gives perspective to consideration of alternatives

Adaptation

- Consider whole of life of the asset
- What else could you do with the same funds over the same period?
- Could you achieve the same result with better outcomes?
- Are there an alternative ways to manage stormwater that reduce the need for hard infrastructure (e.g. catchment-wide implementation of water sensitive design to reduce runoff quantities)

Adaptation

- Think broader in terms of multi-use stormwater facilities, assets and systems
- Who else may be able to contribute to funding?
- Reduce levels of service for below ground infrastructure with higher emphasis on overland flow path management
- Adaptive LoS – identify the critical areas
- Change thinking around developer contributions to assist with critical upgrades.

Adaptation

- The route to achieving the desired vision is an adaptive pathway sharing resource where practical
- Need to be agile and able to adapt - change is the only constant
- Outcomes based approach avoids fixed Levels of Service for primary infrastructure and ‘out of the box’ thinking
- Change the conversation – how a question around LoS is frame is important to get the right answer. Uninformed questions get uninformed answers.

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Thank you.