

# Latest Research Findings on Local Government Maintenance of WSUD Assets



Presenter:

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# What are Stormwater Control Measures (SCM)<sup>1</sup>?



1. SUDS, LID, BMPs, WSUD and more –The evolution and application of terminology surrounding urban drainage (Fletcher *et al.* 2014)

# Is Maintenance a Problem?

## Literature review 2015

- Scotland 2005 – 90% = no maintenance, 22% failures, 2% = working as intended
- Minnesota 2011 – 40% receiving maintenance < once per year
- Pilot Study 2015 – Only 3 of 8 Councils had data  
– Maintenance = leading cause of poor condition

# Who's to blame!

“It seems that for many managers of stormwater systems, there is an expectation that once constructed, SCMs will function well without any oversight”

- Blecken *et al.* 2015

Is it really that simple?!

# Current Research

**RQ1**: What views / perceptions do local government practitioners hold regarding the general condition of SCM?

**RQ2**: What perspectives do practitioners in local government have regarding the quality of maintenance of SCM?

**RQ3**: What factors do practitioners in local government identify as influencing SCM O&M?

**RQ4**: What potential solutions might there be to improving the maintenance of SCM?

# Current Research

RQ1: What views / perceptions do practitioners hold regarding the general condition of SCM to be

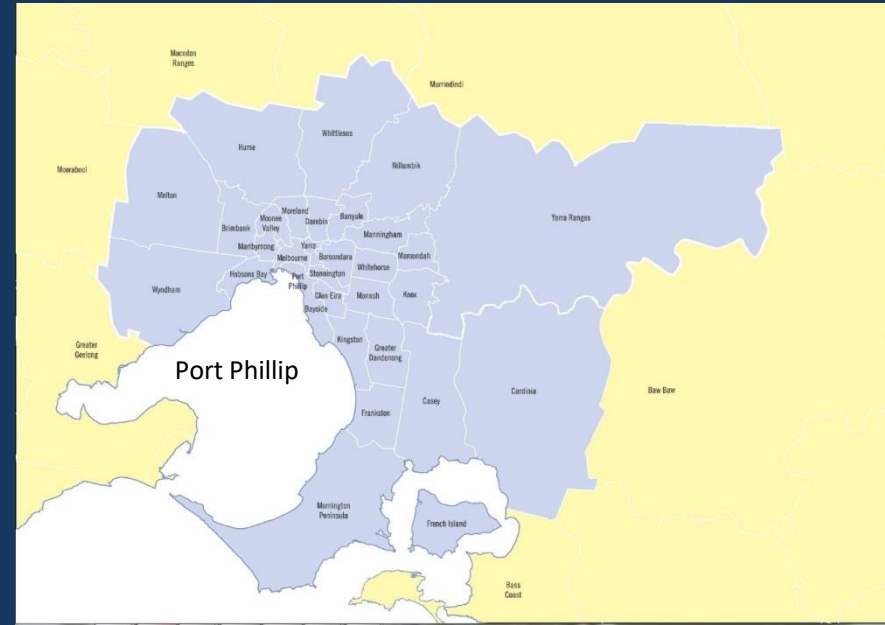
RQ2: What perspectives do practitioners in local govern have regarding the quality of maintenance of SCM?

**RQ3: What factors do practitioners in local government identify as influencing SCM O&M ?**

RQ4: What potential solutions might there be to improving the maintenance of SCM?

# Investigation

- Eight metropolitan municipalities
- Open question survey – 45
- Follow up Interviews – 35
- ~ 10% of analysis complete



Source: Municipal Association of Victoria

# Findings to Date

## Capability and Capacity



- Contractors and consultants
- Council staff
- General Industry knowledge

“There are so many different types of GPTs and there is clearly a lack of understanding about how they work and how they actually clean them effectively.”

# Findings to Date

## Funding



- Visible vs hidden assets
- Revenue sources and rate capping

“... rates are pegged to CPI unless you can justify it which is a fairly high bar to justify why you should go above. The other is there has been a reduction in grants coming from state and federal governments and that has had a really big hit on councils bottom line.”

# Findings to Date

## Asset Information and Management Systems

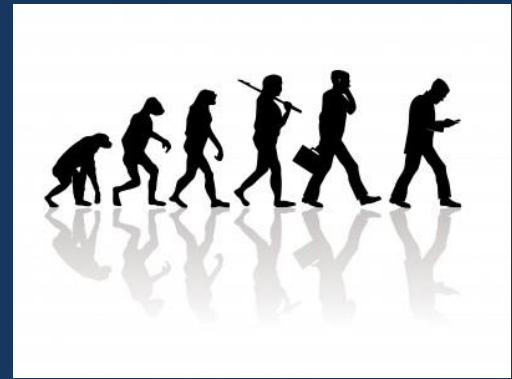


- Administrative process
- Asset Management Digital triangle
- Life Cycle Planning and Forecasting

“having that spatial knowledge, but also having that attributed knowledge around our assets. What’s been done, where it has been done, where these assets exist.”

# Findings to Date

## Innovation Adaptation

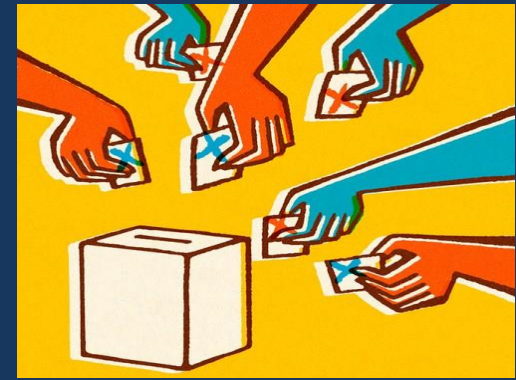


- Unprecedented mix of civil and environmental engineering
- Rapid changes
- Education sector slow to incorporate into existing curriculum

“What has happened is through time we have had shifting goal posts. So, what is best practice now, as to what was best practice five years ago, as to what is best practice 15 years ago. It’s huge”

# Findings to Date

## Municipal Democratic Processes (Local Politics)



- Political attention as a function of community awareness and interest

“We get a lot of people who really love them, and we get a lot of people who are always complaining about them.

*Do they understand what they are for? Even the ones who love them (SCM)?*

I don't think they do, no”

# Findings to Date

## Organisational Culture and Machinations



- Silos
- Legacy
- Professional Bias
- Demarcation of responsibilities
- Restructuring

“ They talk about trying to breakdown silos and, as I said, we’ve just gone through a restructure ... . It’s gone back to other departments to create bubbles of management. A bubble for design, a bubble for project delivery, a bubble for maintenance, a bubble for this, and we are back in our bubble for service delivery.”

# Findings to Date

## Practitioner Preconceptions



- Preconceptions about effectiveness and / or maintenance burden
- Preconceptions about responsibility (e.g. Melbourne Water vs. Council)

“They’re just throw a lines I have picked up on from the senior management, and I have thought ‘mmm, is that why we are really not progressing with where we want to be is because there is some resistance there from a higher level.”

# Findings to Date

## State and Federal Policy / Legislation



- Victorian Planning Provisions – Clause 56.07
- Grant funding – Targeting the right area?
- Amalgamations

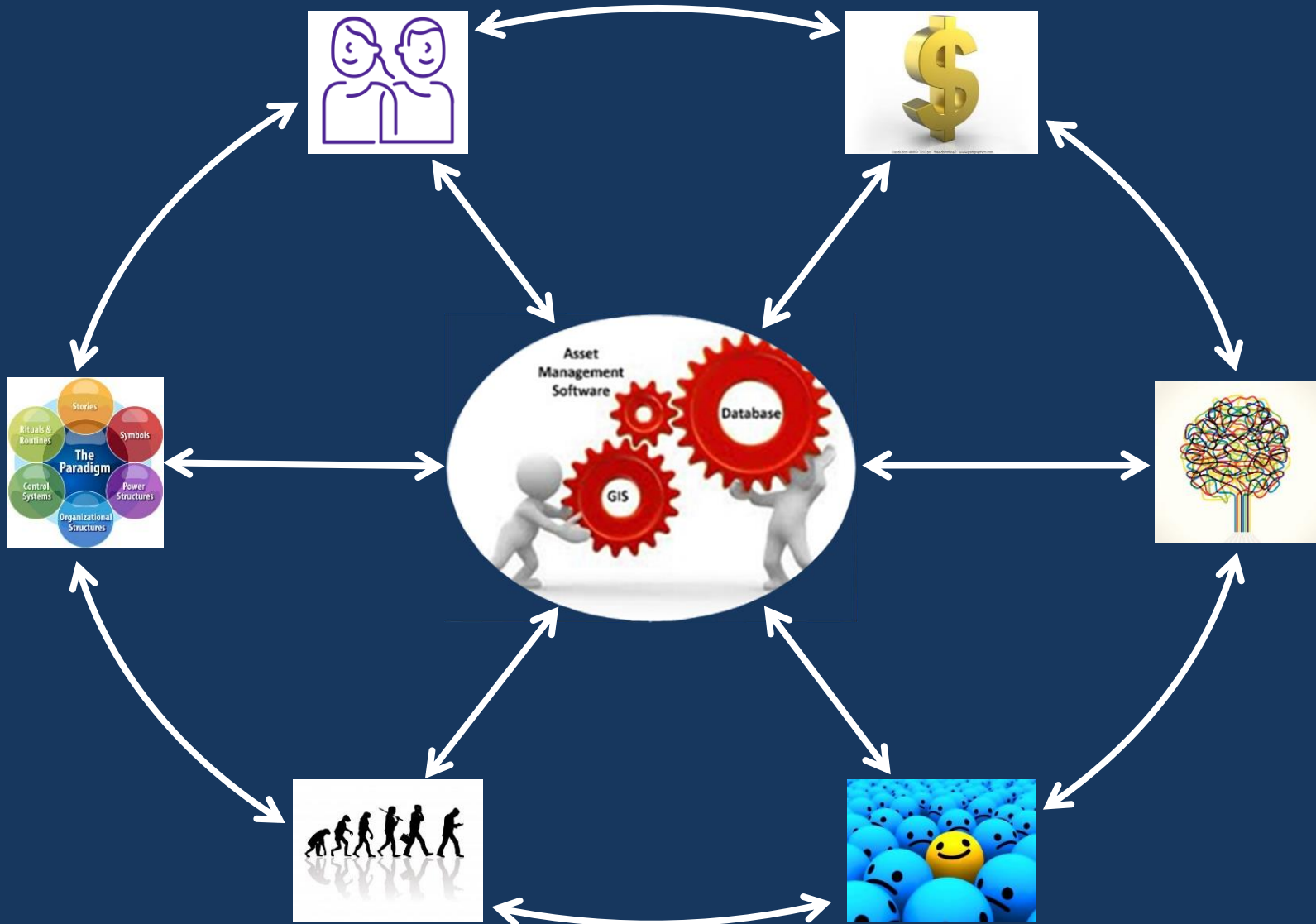
“In fairness, with subdivisions processes, the approval process, there is a fairly strict timeline on councils to approve subdivisions. There isn’t really a lot of window for significant participation through hold points as timelines don’t necessarily allow for that overseeing process.”

# Findings to Date

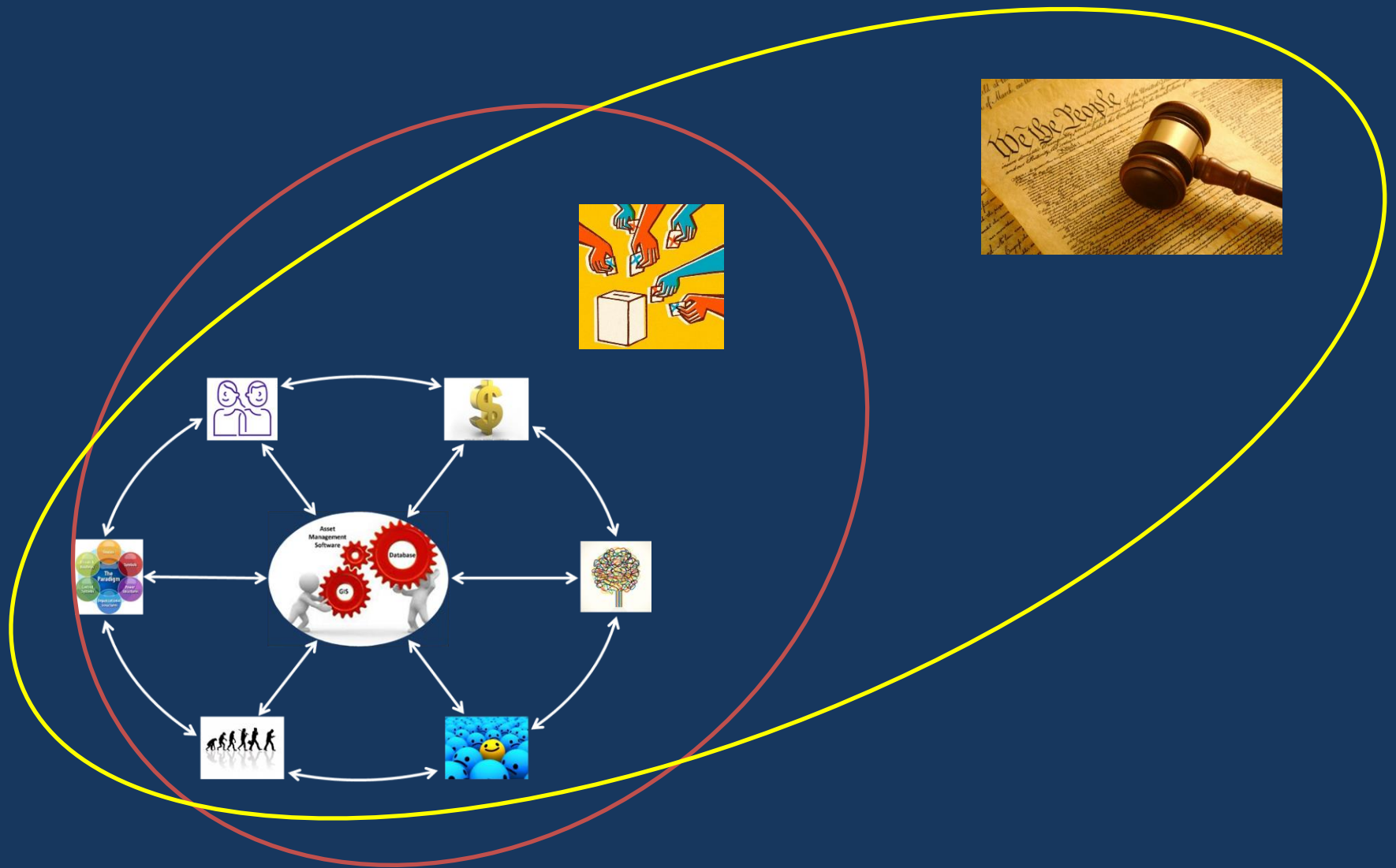
Increasing complexity



“We’ve got water harvesting systems, we’ve got water treatment, we’ve got third pipe. We’ve got all these other complex systems that we have now got to manage in the process.”



# It's Even More Complex



# Solutions?

Too early in study, but the opportunities are likely immense

WSUD Asset Audit Guidelines is as good a place to start as any

“Particularly through the auditing process, I felt that was a huge eye opener, to actually physically walk and look at every single asset ... how they are working and how they are not working ... .”

# Acknowledgements

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