The role of public health professionals as advocates: *A case study of urban nature-based solutions*

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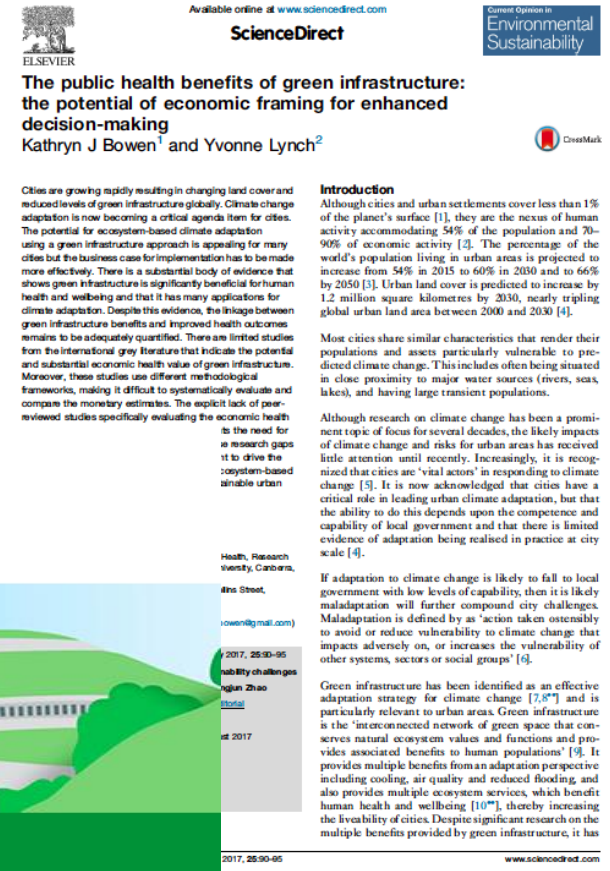
Local example:
Clean Air & Urban Landscapes Hub



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Current Opinion in Environmental Sustainability

The public health benefits of green infrastructure: the potential of economic framing for enhanced decision-making

Kathryn J Bowen[1] and Yvonne Lynch[2]

Cities are growing rapidly resulting in changing land cover and reduced levels of green infrastructure globally. Climate change adaptation is now becoming a critical agenda item for cities. The potential for ecosystem-based climate adaptation using a green infrastructure approach is appealing for many cities but the business case for implementation has to be made more effectively. There is a substantial body of evidence that shows green infrastructure is significantly beneficial for human health and wellbeing and that it has many applications for climate adaptation. Despite this evidence, the linkage between green infrastructure benefits and improved health outcomes remains to be adequately quantified. There are limited studies from the international grey literature that indicate the potential and substantial economic health value of green infrastructure. Moreover, these studies use different methodological frameworks, making it difficult to systematically evaluate and compare the monetary estimates. The explicit lack of peer-reviewed studies specifically evaluating the economic health

Introduction

Although cities and urban settlements cover less than 1% of the planet's surface [1], they are the nexus of human activity accommodating 54% of the population and 70–90% of economic activity [2]. The percentage of the world's population living in urban areas is projected to increase from 54% in 2015 to 60% in 2030 and to 66% by 2050 [3]. Urban land cover is predicted to increase by 1.2 million square kilometres by 2030, nearly tripling global urban land area between 2000 and 2030 [4].

Most cities share similar characteristics that render their populations and assets particularly vulnerable to predicted climate change. This includes often being situated in close proximity to major water sources (rivers, seas, lakes), and having large transient populations.

Although research on climate change has been a prominent topic of focus for several decades, the likely impacts of climate change and risks for urban areas has received little attention until recently. Increasingly, it is recognized that cities are 'vital actors' in responding to climate change [5]. It is now acknowledged that cities have a critical role in leading urban climate adaptation, but that the ability to do this depends upon the competence and capability of local government and that there is limited evidence of adaptation being realised in practice at city scale [4].

If adaptation to climate change is likely to fall to local government with low levels of capability, then it is likely maladaptation will further compound city challenges. Maladaptation is defined by as 'action taken ostensibly to avoid or reduce vulnerability to climate change that impacts adversely on, or increases the vulnerability of other systems, sectors or social groups' [6].

Green infrastructure has been identified as an effective adaptation strategy for climate change [7,8••] and is particularly relevant to urban areas. Green infrastructure is the 'interconnected network of green space that conserves natural ecosystem values and functions and provides associated benefits to human populations' [9]. It provides multiple benefits from an adaptation perspective including cooling, air quality and reduced flooding, and also provides multiple ecosystem services, which benefit human health and wellbeing [10••], thereby increasing the liveability of cities. Despite significant research on the multiple benefits provided by green infrastructure, it has

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Environmentally sustainable cities are healthy and productive places. The themes of CAUL Hub research include air quality, urban greening, transport futures and urban biodiversity.

Transformation of concrete channel - Melbourne

Home > News and Events > Media Releases 2016 > October 2016 > Exciting partnership to transform Upper Stony Creek

Exciting partnership to transform Upper Stony Creek

- **Upper Stony Creek in Sunshine North to be transformed into vibrant community space with walking paths, wetlands and a revegetated creek bed**
- **$12.97 million investment will rehabilitate a 1.2 kilometre section of Upper Stony Creek, focussed on the creek area between Furlong Road and Gilmour Road**
- **Works will commence in early 2017 and are expected to be complete mid-2018.**

Upper Stony Creek in Sunshine North will be rehabilitated with an urban forestry project set to create a haven for wildlife as well as a valuable public open space.

Minister for Regional Development Fiona Nash said the Australian Government is investing $5.47 million toward the project through the *National Stronger Regions Fund.*

"I aim to help build the kinds of communities our children and grandchildren want to either stay in or come back to, and a natural setting along a rehabilitated creek helps do that," Minister Nash said.

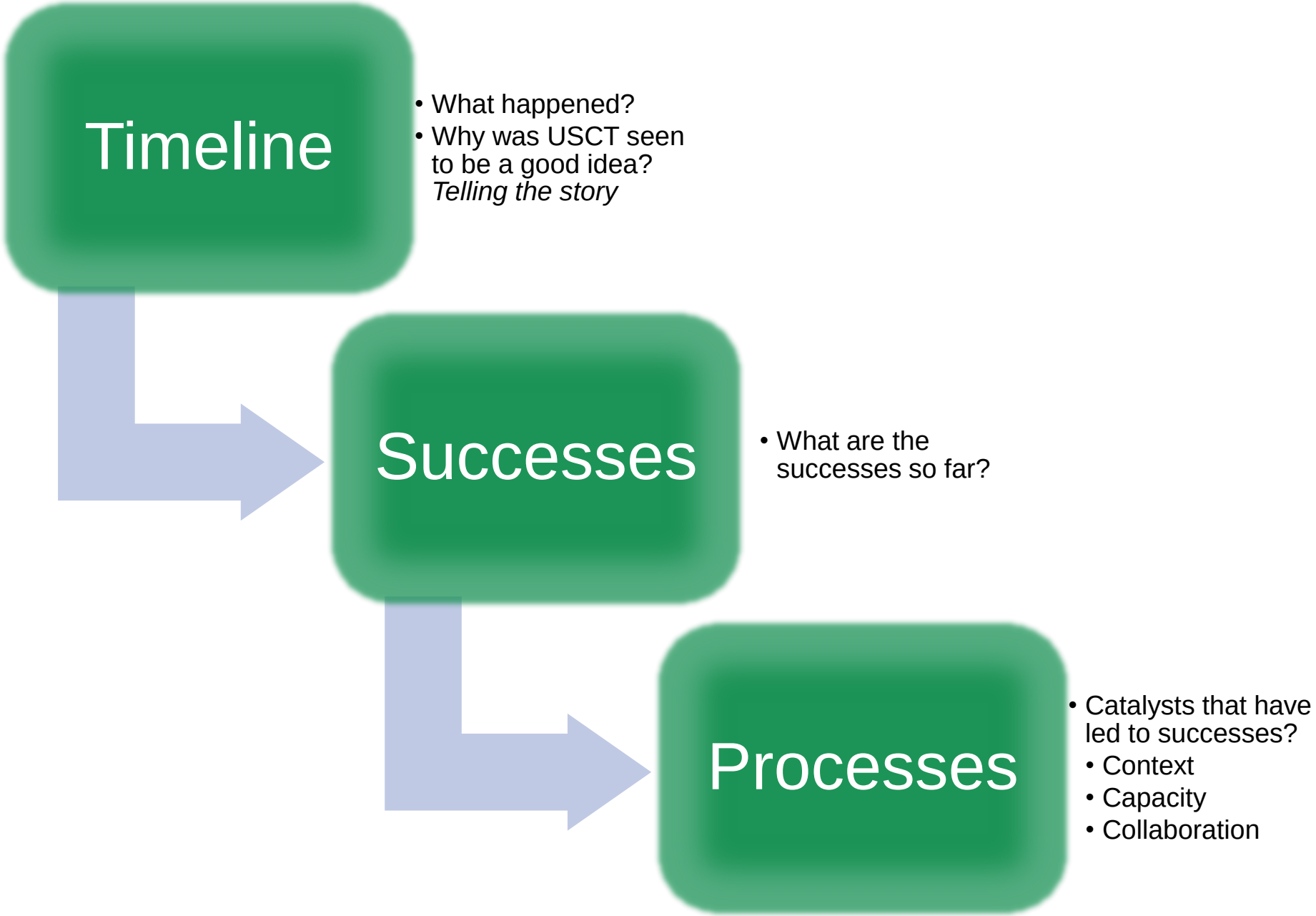
Objectives of the workshop:

To start the discussion on…

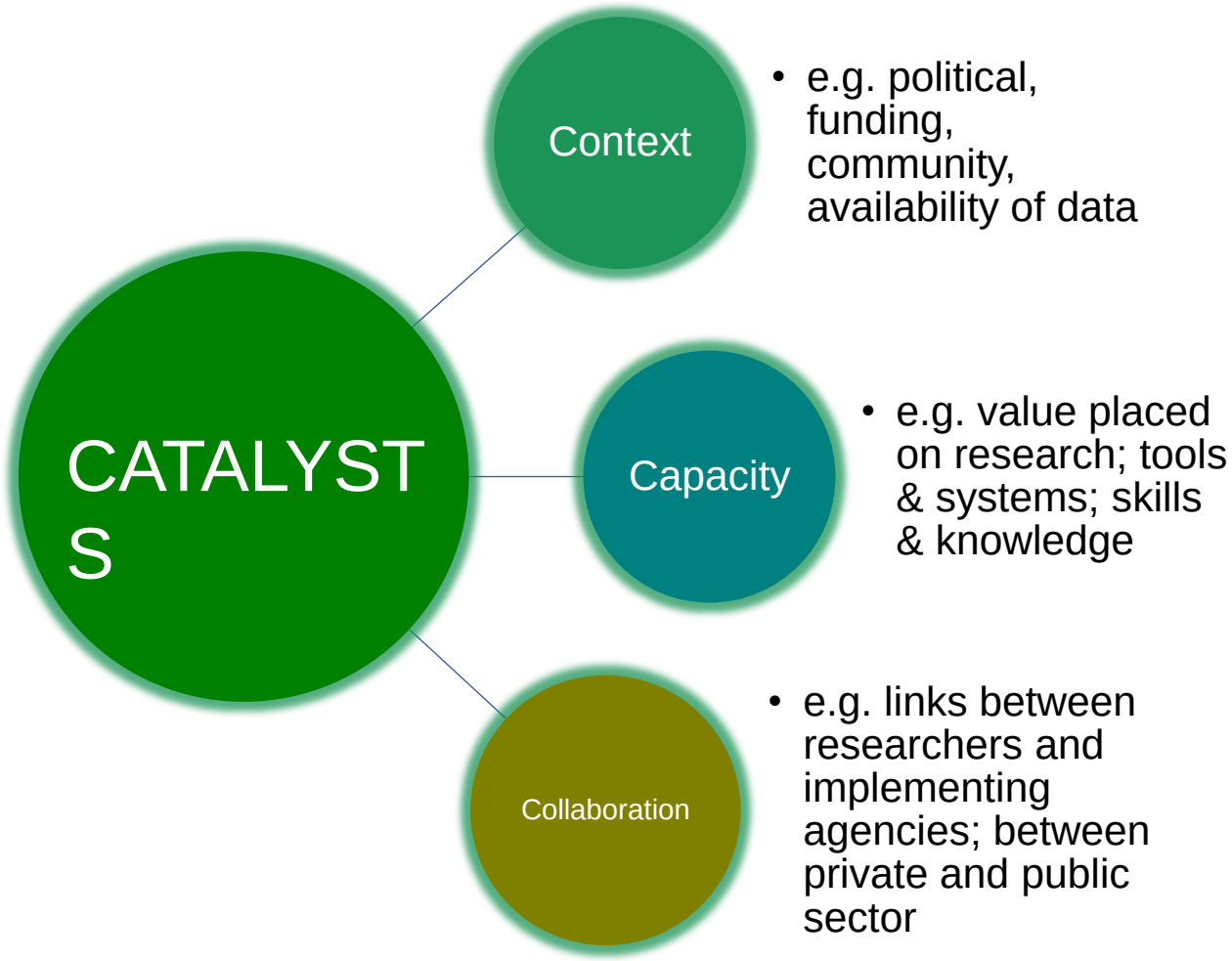
How can the lessons learned so far with USCT be transferred to future urban greening projects?

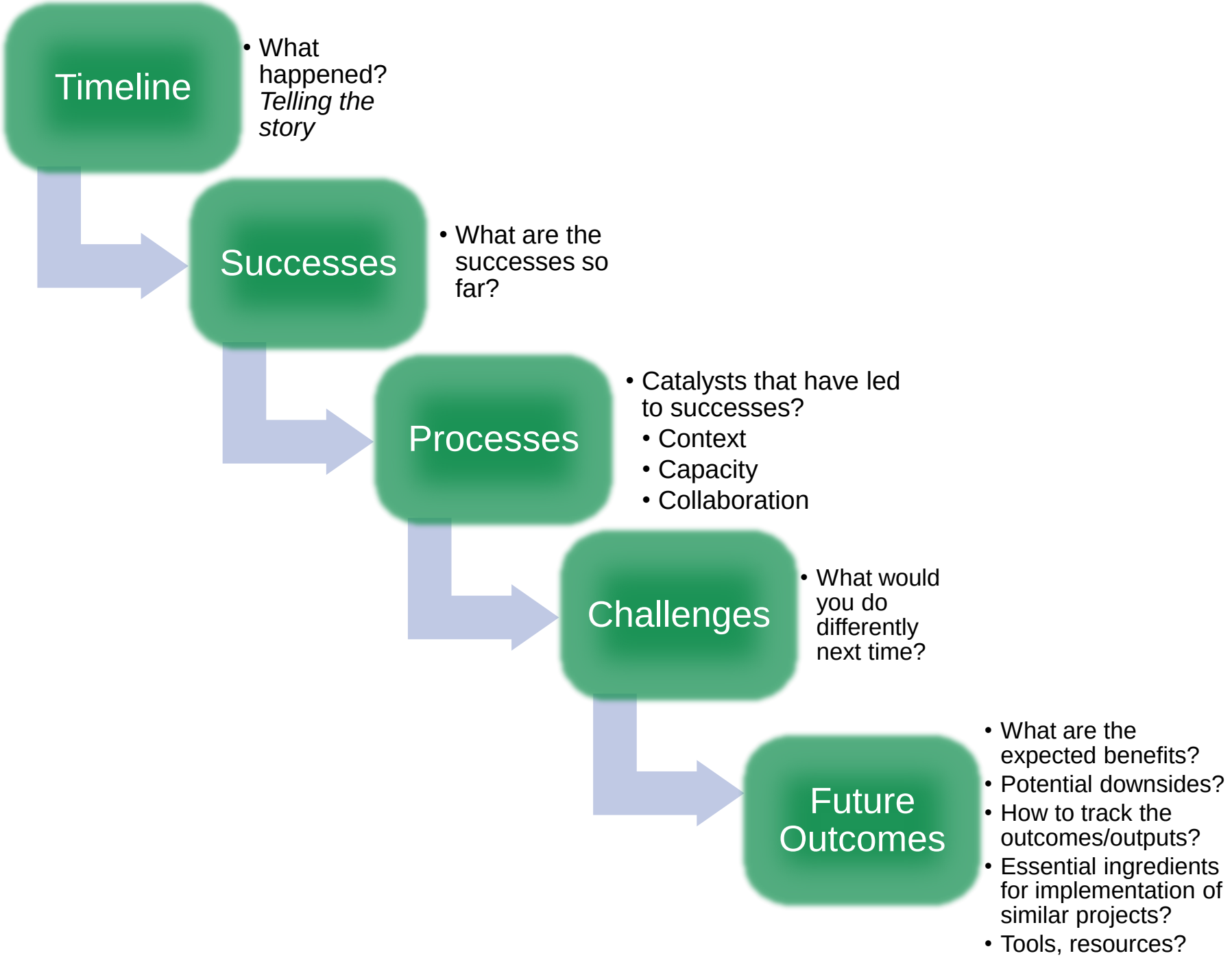
What constitutes the essential ingredients of an urban greening business case?

What has worked well and what might be done differently?


Timeline
• What happened?
• Why was USCT seen to be a good idea?
Telling the story
Successes
• What are the successes so far?
Processes
• Catalysts that have led to successes?
• Context
• Capacity
• Collaboration

Processes


CATALYSTS
Context
Capacity
Collaboration
• e.g. political, funding, community, availability of data
• e.g. value placed on research; tools & systems; skills & knowledge
• e.g. links between researchers and implementing agencies; between private and public sector


Timeline
• What happened? *Telling the story*
Successes
• What are the successes so far?
Processes
• Catalysts that have led to successes?
• Context
• Capacity
• Collaboration
Challenges
• What would you do differently next time?
Future Outcomes
• What are the expected benefits?
• Potential downsides?
• How to track the outcomes/outputs?
• Essential ingredients for implementation of similar projects?
• Tools, resources?

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Benefits of greening ENVIRONMENTAL

Benefits of greening SOCIAL / HEALTH

Benefits of greening ECONOMIC

TE & TOURISM VALUE

30% higher

home value in leafy streets in the same suburb

A research study also found neighbourhood commercial corridors in 'excellent' condition, including a green streetscape were correlated with a 23% **net rise in home values within 400m of a green corridor and 11% rise within 800m**

sitive Urban Design

Flood control can be more effective and manageable

ONSUMPTION BENEFITS

rgy savings heat loss

HEALTH BENEFITS

AUD $3.6 billion (£2 billion) saving per annum

Achieved from making changes in natural and green space that results in just a **1% decrease in sedentary behaviour in the UK**