Curtin University Sustainability Policy Institute

Increasing Political Trust through Deliberative Mini-Publics: The Role of Public Participation Partnerships Required for Sustainability

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This thesis is presented for the Degree of
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by

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Author's Declaration

I declare that this thesis is my own account of my research and contains as its main content work which has not previously been submitted for a degree at any tertiary education institution.

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

Human Ethics

The proposed research study received human research ethics approval from the Curtin University Human Research Ethics Committee, Approval Number RD-30-10.

Robert Weymouth, 20th October 2020

Statement of Contribution

All of the written materials submitted as part of this PhD by publication were conceived and coordinated by Robert Michael Weymouth. The contributions for each published paper are detailed in the Co-authors' Statements.

Robert Weymouth, 20th October 2020

Abstract

The ideal approach to "wicked" problems, such as those associated with the implementation of sustainability, requires cooperative, deliberative and adaptive tactics. A social technology called deliberative democracy shows great promise as a tool to address these types of problems. This thesis by publication consisting of two refereed book chapters and four refereed journal articles, presents evidence to support such a contention [Publication I and III]. It makes practical recommendations about how to use public participation through deliberative mini-publics to increase political trust and scale these successful experiments to assist the current global sustainability agenda – the Sustainable Development Goals [Publication IV].

Deliberative democracy addresses sustainability through its epistemic strengths but also through its ability to build trust. The uncertainty created by the need to engage and reengage with the ill-structured and ill-defined nature of sustainability issues makes trust a necessary and efficient element. This thesis focusses on the underpinning requirement of trust between citizens and government because of these parties' centrality to the make-up of the modern age and contemporary economies. With political trust being on a long-term decline, it has reached a level that could threaten the sustainability agenda and the required integration of social, economic and environmental considerations. The thesis describes the dynamics that have brought trust to this low point and outlines alternatives that can improve the situation. It explains that the core of the dynamics is the inability or unwillingness of governments to meet citizens' expectations of public participation – namely establishing and working in partnership [Publication V]. The deficit in the participation relationship that citizens desire and that which they receive from government tarnishes the perceptions of competence and benevolence in a vicious cycle (and vice versa). Instead, a virtuous cycle can be created through partnerships to shift the assumptions about participation which then improves citizen perceptions of competence and benevolence leading to improved trust [Publication VI].

Two deliberative 100% participatory budgets in the City of Greater Geraldton, Western Australia are used to demonstrate this argument and elucidate the type and nature of participation desired by citizens [Publication VI]. This shines a spotlight on the importance of design and process in deliberative democracy to match citizens' desire for a partnership relationship with government [Publication II]. The suite of six published refereed papers helps develop the argument that it is possible to increase political trust by using deliberative mini-publics, and to orient the City's full budgets towards sustainability. They demonstrate and reflect on the role of public participation in actioning the transition towards sustainability.

Acknowledgements

In no particular order I would like to acknowledge,

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Dedication

To my wife, Peta.   Thank you.   For Everything   Love you.

To my children, Levi and Alia. I want to make a better world for you to be part of. I am not conceited enough to believe this thesis does that (or even my life) but I hope loving you will be enough.

List of publications included in the thesis

The following publications – two refereed book chapters and four refereed journal articles are the basis of this thesis and are provided as appendices following the introductory part, referred to as the exegesis. These publications are denoted in the exegesis by roman numerals. Copyright statements for the published materials can be found in Appendix C.

Book Chapters

I. Hartz-Karp, J., & Weymouth, R. (2017). Deliberative Democracy–Democratic Renewal Capable of Addressing Sustainability. Ch 7, 113-156. In Hartz-Karp, J. & Marinova, D. (eds) *Methods for Sustainability Research*. Edward Elgar, UK.

II. Hartz-Karp, J., & Weymouth, R. (2018). Australian Participatory Budgeting. Oceania Chapter, 403-422. In Dias, N. (ed.) *Hope for Democracy: 30 Years of Participatory Budgeting Worldwide*. Epopeia Records, Portugal.

Journal Articles

III. Weymouth, R., & Hartz-Karp, J. (2015). Deliberative Collaborative Governance as a Democratic Reform to Resolve Wicked Problems and Improve Trust. *Journal of Economic and Social Policy*, 17(1), 1-34.

IV. Weymouth, R., & Hartz-Karp, J. (2018). Principles for Integrating the Implementation of the Sustainable Development Goals in Cities. *Urban Science*, 2(3), 77.

V. Weymouth, R., & Hartz-Karp, J. (2019). Participation in Planning and Governance: Closing the Gap between Satisfaction and Expectation. *Sustainable Earth*, 2(1), 5.

VI. Weymouth, R., Hartz-Karp, J., & Marinova, D. (2020). Repairing Political Trust for Practical Sustainability. *Sustainability*, 12(17), 7055.

Co-Authors' Statements

Publication I

I, Robert Weymouth, contributed 50% to the publication entitled:

I. Hartz-Karp, J., & Weymouth, R. (2017). Deliberative democracy–democratic renewal capable of addressing sustainability. Ch 7, 113-156. In Hartz-Karp, J. & Marinova, D. (eds) *Methods for Sustainability Research*. Edward Elgar, UK.

Robert Weymouth, 20th October 2020

I, as a co-author, endorse that this level of contribution by the candidate indicated above is appropriate.

Co-author 1. Janette Hartz-Karp

Publication II

I, Robert Weymouth, contributed 50% to the publication entitled:

II. Hartz-Karp, J., & Weymouth, R. (2018). Australian Participatory Budgeting. Oceania Chapter, 403-422. In Dias, N. (ed.) *Hope for Democracy: 30 Years of Participatory Budgeting Worldwide*. Epopeia Records, Portugal.

Robert Weymouth, 20th October 2020

I, as a co-author, endorse that this level of contribution by the candidate indicated above is appropriate.

Co-author 1. Janette Hartz-Karp

Publication III

I, Robert Weymouth, contributed 75% to the publication entitled:

III. Weymouth, R., & Hartz-Karp, J. (2015). Deliberative Collaborative Governance as a Democratic Reform to Resolve Wicked Problems and Improve Trust. *Journal of Economic and Social Policy*, 17(1), 1-34.

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Publication IV

I, Robert Weymouth, contributed 75% to the publication entitled:

IV. Weymouth, R., & Hartz-Karp, J. (2018). Principles for Integrating the Implementation of the Sustainable Development Goals in Cities. *Urban Science*, 2(3), 77.

Robert Weymouth, 20th October 2020

I, as a co-author, endorse that this level of contribution by the candidate indicated above is appropriate.

Co-author 1. Janette Hartz-Karp

Publication V

I, Robert Weymouth, contributed 75% to the publication entitled:

V. Weymouth, R., & Hartz-Karp, J. (2019). Participation in Planning and Governance: Closing the Gap between Satisfaction and Expectation. *Sustainable Earth*, 2(1), 5

Robert Weymouth, 20th October 2020

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Co-author 1. Janette Hartz-Karp

Publication VI

I, Robert Weymouth, contributed 60% to the publication entitled:

VI. Weymouth, R., Hartz-Karp, J., & Marinova, D. (2020). Repairing Political Trust for Practical Sustainability. *Sustainability*, 12(17), 7055

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I, as a co-author, endorse that this level of contribution by the candidate indicated above is appropriate.

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I, as a co-author, endorse that this level of contribution by the candidate indicated above is appropriate.

Co-author 2. Dora Marinova

xx

Table of Contents

List of Figures

List of Tables

List of Abbreviations

CGG	City of Greater Geraldton
PB	Participatory Budget
US	United States of America
WA	Western Australia
SDGs	Sustainable Development Goals
DCG	Deliberative Collaborative Governance

Chapter 1   Introduction

This first chapter discusses the context of this PhD thesis to justify and elaborate the need for this research. The scope and analytical framework are then laid out which leads to the thesis' research question and objectives. This research question was answered through a number of peer reviewed publications based on the outcomes from two Participatory Budgets at the City of Greater Geraldton in Western Australia. The chapter finishes by outlining the overall organization of the thesis.

1.1   Research Context and Background

The background to this research and its wider importance influences the research questions and aims posed in this investigation. It also provides insights into the motivation behind the study and helps understand its overall positioning within a broader research agenda.

A popular narrative device for understanding large-scale societal changes is that of megatrends. These represent "a collection of trends, patterns of economic, social or environmental activity that will change the way people live and the science and technology products they demand" [1]. This thesis is motivated by megatrends that appear to be widespread and consequential. The first is the increasing failure of the modern world to resolve wicked problems – particularly sustainability, and the second is the sustained decrease in trust between citizens and governments.

The 'sustainability megatrend' concerns the trending of social, economic and particularly environmental indicators in directions that threaten overall human wellbeing and that of other species of this planet. In themselves these are concerning, but the magnitude of the threat is vastly increased because of the nature of the problem – its 'wickedness' [2-4]. In comparison to 'tame' problems, wicked problems predominantly [5] have ill-defined parameters based partially on lack of knowledge, but mainly because of subjective perspectives on the challenges. These parameters also continuously shift and reveal aspects of the problem that emerge both, over time and in response to attempted solutions. The nature of the problem endpoint, or even its very existence, is uncertain and no ready analogues to other issues can be made. To top it off, wicked problems matter; the consequences of failure to address them are unacceptable.

This class of problem has always been present in human societies but was often indistinguishable from the general challenges to the human population. Improvements in technology and knowledge in modern civilisations have reduced many existing, tame problems to levels of control and management so that wicked problems now stand out as barriers to human flourishing. Sustainability fits all the criteria for wicked problems (Publication III) and

in the era of the Anthropocene where the direction and impact of human societies now have a defining effect on the very face of the planet, understanding this megatrend is of the utmost importance [6-8].

The second megatrend, namely the decline in political trust (specifically, the general trust between citizen and government), is the product of the convergence of a number of trends on both the 'supply' and 'demand' sides of the trust equation. On the 'supply' side of trust, government failures to create outcomes or act in the public's best interest are either increasing or (more likely) the awareness of such failures, is increasing as exemplified by elected officials breaking promises and wider coverage of scandals [9-11]. On the 'demand' side of political trust, citizen expectations of government have changed given social shifts [12,13] and increasingly educated citizen polities have less patience for misbehaviour or ill-intentions [14,15]. This is all combined with a cultural background of shrinking social capital [16] and an erosion of general trust from disrupted attachments, lowered self-concepts and loss of identity [17]. None of these trends are assisted by an existing political system that may reward the creation of division [18].

These two megatrends are deliberately chosen among many others possible [19,20] because the solution to one could also be the solution to the other. Improving political trust will be necessary to adequately deal with wicked problems like sustainability, and political trust can be earned through successfully addressing sustainability problems. The core to this link is the enaction of partnership relationships between citizens and governments. Citizens have expressed a preference for a partnership relationship with their democratic governments [21] and the failure to realise this relationship is an important factor in the decline in trust. Partnerships are also the most adaptive response to wicked problems [22-25]. To respond to the ill-defined nature of the wicked problems, a diversity of perspectives is needed to define the problem and create the responses, and is also necessary as a way of synthesising multiple value sets to come up with subjective judgements on the appropriate problem framing and response. Those holding these perspectives may possess power that can help or hinder solutions, but they also have an intrinsic importance because the perspectives they hold are part of the way to manage wicked problems. The partnerships that maximally engage these perspectives require high levels of trust to initiate engagement with wicked problems like sustainability, but also for the parties to reengage as the problem shifts or new aspects emerge.

This area is ripe for research to confirm such effects and understand more deeply the dynamics that underlie the megatrends. The present study explores these dynamics and puts forward some practical steps that can be taken by governments and citizens wishing to improve trust and sustainability.

1.2 Research Question and Objectives

Considering the context this thesis research is guided by, the following broad question is being posed and addressed:

Can a deliberative democratic mini-public intervention meet citizen expectations of public participation and increase the political trust required for sustainability?

To answer this, several sub-questions were posed that address the logical steps in a chain of argumentation that springs from the main question:

- What is the nature of the problem of implementing sustainability, and what is the recommended approach to this class of wicked problems?

- What is the relationship between political trust, public participation and the preferred solution styles for wicked problems like sustainability?

- Are deliberative democratic mini-publics (particularly deliberative Participatory Budgets) likely to be able to address public participation satisfaction gaps, political trust deficits, sustainability implementation and why?

- What effect do deliberative democratic mini-publics have on citizen trust in government and their satisfaction with public participation in reality?

This PhD thesis by publication addresses each of these sub-questions across several articles. The objectives of each paper and the sub-question they address are outlined in Table 1-1.

Table 1-1 Research sub-questions, publications and objectives.

Sub-questions	Publication	Objectives
What is the nature of the problem of implementing sustainability, and what is the recommended approach to this class of problems?	I - Deliberative Democracy – Democratic Renewal Capable of Addressing Sustainability III - Deliberative Collaborative Governance as a Democratic Reform to Resolve Wicked Problems and Improve Trust IV - Principles for Integrating the Implementation of the Sustainable Development Goals in Cities	These publications collectively: - lay out the importance of wicked problems and sustainability implementation as a special case of these problems - point out the need for, but lack of, guidance for achieving the SDGs at a practical governance level - propose a step-by-step process for the implementation and integration of the SDGs in cities - outline a way to scale and expand the implementation process to cope with the global nature of the problem. - establish the use of deliberative democracy and deliberative collaborative governance as an ideal practical approach to address wicked problems - describe the initiatives of the four-year case study of deliberate collaborative governance at the City of Greater Geraldton.
What is the relationship between political trust, public participation and the preferred solution styles for wicked problems like sustainability?	IV - Principles for Integrating the Implementation of the Sustainable Development Goals in Cities VI - Repairing Political Trust for Practical Sustainability	These publications collectively: - lay out the existing evidence that public participation influences political trust and that this trust is vital to the implementation of sustainability - propose models of governance that either degrade or improve political trust depending on the nature of public participation used.

Sub-questions	Publication	Objectives
Are deliberative democratic mini-publics (particularly deliberative Participatory Budgets) likely to be able to address public participation satisfaction gaps, trust deficits and sustainability implementation?	I - Deliberative Democracy–Democratic Renewal Capable of Addressing Sustainability V - Participation in Planning and Governance: Closing the Gap between Satisfaction and Expectation VI - Repairing Political Trust for Practical Sustainability	These publications collectively: - review the evidence to support deliberative democracy as a methodology for improving sustainability outcomes and mini-publics as a particularly effective pathway - describe the use of mini-publics and deliberative Participatory Budgets and how their design features make them fit-for-purpose solutions - establish the importance of public participation and demonstrate a clear gap between citizens' expectations of their participation in government and their satisfaction with that participation in USA and Western Australia - review literature on the importance of political trust and its recent, sustained decline.
What effect do deliberative democratic mini-publics have on citizen trust in government and their satisfaction with public participation in reality?	II - Australian Participatory Budgeting V - Participation in Planning and Governance: Closing the Gap between Satisfaction and Expectation VI - Repairing Political Trust for Practical Sustainability	These publications collectively: - describe the Australian Participatory Budget model based on 100% participatory budgeting (PB) used in the two case studies as well as their structure, process, representativeness, influence and deliberativeness - partially validate one of the governance models based on the PB case study showing changing participation relationship shifts trust dynamics - review two interventions to better reflect the citizen-preferred relationship of partnership - demonstrate significant improvements in political trust and satisfaction with public participation following the PB interventions - reveal the nature of the partnership relationships associated with the improvements observed.

1.3 Thesis Organisation

Six refereed publications provide the basis for this thesis. The exegesis provides the context for and is an integrated synthesis of these publications. Chapter 2 ('Methods') describes the research design and methodology used in this thesis which is followed by Chapter 3 ('Explanatory Statement') outlining how all papers form a coherent body of knowledge and contribute to the field of research while engaging with the existing literature related to the research question. A summary of the results relating to the four research objectives is provided in Chapter 4 ('Thematic Discussion'). Chapter 5 concludes the thesis and offers recommendations for future research.

The published articles are provided following the exegesis, as well as additional material discussed in the exegesis. Appropriate copyright arrangements have been made to reproduce the texts of the published manuscripts.

Chapter 2   Methods

Having established the research objectives, this chapter outlines the methodological choices taken in this thesis, the case study it is based on, and the methods selected for data collection and analysis. This is followed by a discussion of the constraints and limitations of the research and its scope.

2.1   Research Philosophy

Overall, the research philosophy for this thesis and publications contained in it is a pragmatic combination of interpretivism and positivism. Positivist (or post-positivist) views on reality are objective, unambiguous and value free, strongly utilising numbers and seeking for causality [26,27]. Interpretivism particularly recognises the subjective nature of the meanings that humans create and focusses on in-depth qualitative assessment of these [28]. Since this thesis is situated in social science in an area that can be interpreted in multiple ways [29], an eclectic approach using both philosophies is best to access this [28,30]. Interpretive research was particularly useful in unpacking the deep features [31] of the type of deliberative democratic intervention used; and Publication I focuses on the usefulness of this type of intervention as a methodology for sustainability. The research approach blends inductive and abductive reasoning. That is, it seeks to explore the phenomena of political trust and participation to test and adjust existing theories but also use these theories to interpret the data gathered to arrive at a plausible explanation rather than a deductively perfect one. Both styles of reasoning are generally acknowledged to be more suitable for the social sciences where causation is generally difficult to establish [28,32].

The enabling research strategy for all of this is a combination of case study and action research [33]. Two cases are deeply examined, with the researcher transparently present and oriented to change the existing dynamics [34]. This was partially done to maintain congruency with the larger action research project (discussed below) that the case studies were part of, but also to reveal the mechanisms around political trust and participation in government in an opportunistic context where this dynamic was changing. Case studies are at their most useful in practical fields that are undergoing innovation [35] and, as is shown in the literature review, while political trust is well-studied, the use of a deliberative PB as an intervention is not. The two case studies in this thesis can be categorised as both unique and revelatory [36], but the research does depart from the typical use of case study as a way of looking at phenomena in their unaltered 'natural' setting [37]. These case studies use an actual intervention to modify the system in which the author played a part and become typologically blended with action research [38].

2.2   Methods Overview

As would be expected from the foregoing philosophical stance and the use of case studies, the methodological choice for this thesis is mixed methods - blending statistically analysed quantitative surveys and manually themed one-on-one interviews. The rationale for this choice is discussed in detail in Section 2.4 Research Design. The mixed methods use time horizons which are a mix of short longitudinal (pre and post surveys) time horizons and cross-sectional (citizens, participants and government officials) insights [28]. Table 2-1 provides a summary of the particular methods used under this framework in each of the publications. Precise details of the methods summarised here are given in the subsequent sections.

Table 2-1 Research methods reported in the publications.

Publication	Method
I – Deliberative Democracy–Democratic Renewal Capable of Addressing Sustainability	Literature review and critical analysis of said literature.
II – Australian Participatory Budgeting	Literature review, case study description and critical analysis of said literature.
III – Deliberative Collaborative Governance as a Democratic Reform to Resolve Wicked Problems and Improve Trust	Literature review, critical analysis of said literature and case study description. Explanatory mixed-method design: - documentary and observational analysis of process and budget papers/meetings; - quantitative surveys of deliberative and trust indicators with graphical analysis and descriptive statistics; - semi-structured interviews on trust and deliberation with thematic analysis.
IV – Principles for Integrating the Implementation of the Sustainable Development Goals in Cities	Literature review, critical analysis of literature and synthesis.
V – Participation in Planning and Governance: Closing the Gap between Satisfaction and Expectation	Literature review, critical analysis of literature and synthesis. Explanatory mixed-method design: - documentary and observational analysis of process;

	- quantitative surveys of deliberative and participation indicators with graphical analysis and descriptive statistics; - semi-structured interviews on participation and deliberation with thematic analysis.
VI – Shifting the Dynamics of Trust and Participation in Democratic Governance	Literature review, critical analysis of literature and synthesis. Explanatory mixed-method design: - documentary and observational analysis of process; - quantitative surveys of deliberative and participation indicators with graphical analysis and descriptive statistics; - semi-structured interviews on participation and deliberation with thematic analysis.

2.3   Case Studies

This section describes the two participatory budgets that form the case studies at the heart of this thesis and the context of these initiatives. They were both conducted in the City of Greater Geraldton, Western Australia.

2.3.1   The Context – A Deliberative Collaborative Governance Program

The case studies used in this thesis were part of a larger deliberative collaborative governance project that ran from 2010 to 2014 at the City of Greater Geraldton (CGG) in Western Australia. This region of 12626 km^2 hosts around 35000 people, is situated about 400km north of the capital city of Perth and has seen an economic shift from fishing and agriculture to mining over the last half century. This has raised sustainability challenges that included fly-in–fly-out[1] workforces and rapid population increases. Informal discussions with the editor of the local newspaper during 2010, semi-structured interviews with study participants in 2012-13 and formal interviews with staff, councillors and the Chief Executive Officer (CEO) in February 2010 revealed divergent attitudes between the local government and citizens. Attempts by the

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[1] A method of staffing in remote areas where workers are periodically flown to and from the worksite instead of being permanently located there.

City of Greater Geraldton (the 'City') to consult with its residents were mostly perceived by the public as 'too little too late' with some expressing frustration, and even anger. For their part, public administrators spoke about feeling frustrated with the poor attendance at consultations, low local government voting rates and personal experience of the general public being some combination of narrowly self-interested, indifferent or ill-informed citizens. As a result, residents showed signs of being alienated from the institutions of government (e.g. in low local government voting rates), disinterested in the government's attempts at consultation (rarely participating in any meaningful ways), and with the overall decisions by the local government.

In response to this, the then CEO of the City of Greater Geraldton initiated a joint research project with the Curtin University Sustainability Policy (CUSP) Institute called 'Geraldton 2029 and Beyond' to more collaboratively address the region's future sustainability. This action research project, supported by an Australian Research Council (ARC) Linkage grant, ran for four years from 2010 – 2014 and aimed to operationalise the concept of Deliberative Collaborative Governance (DCG) to test whether it would be an effective means of addressing wicked problems and impacting the levels of political trust in local government (Publication III). The project also applied the principles of adaptive management – applying a flexible, responsive approach with systematic deliberative learning in response to changing or emerging circumstances [39,40]. This thesis concerns the final two components of the CGG DCG project – two participatory budgeting panels.
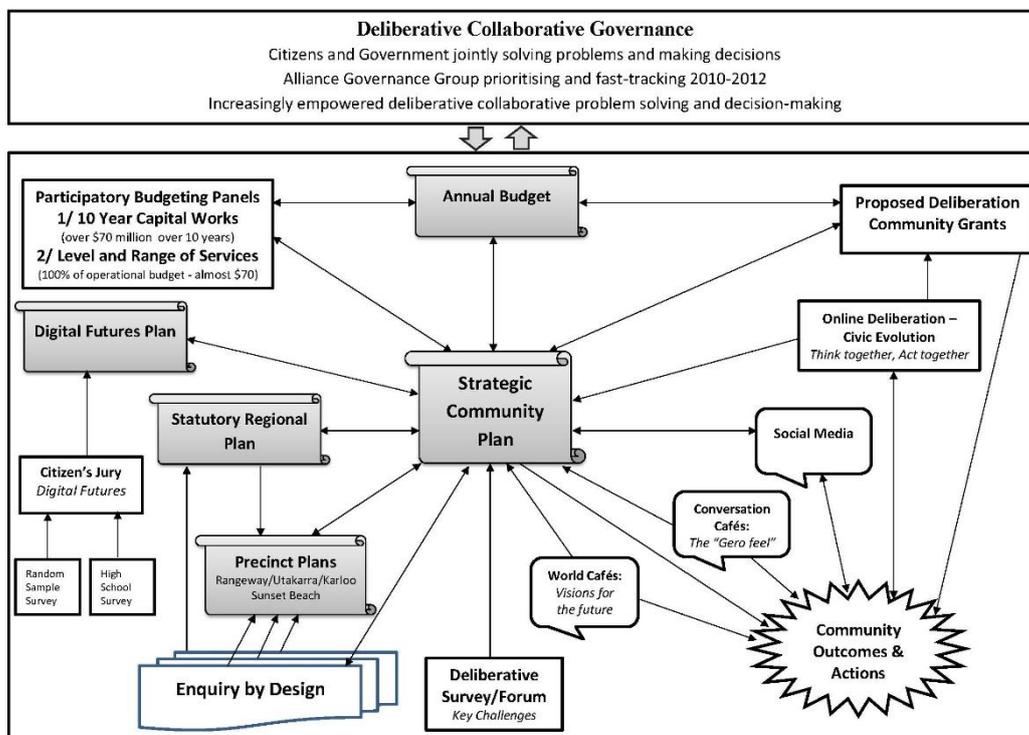
Figure 1 - Geraldton Deliberative Collaborative Governance program – "2029 and Beyond" (Publication III)

Figure 1 illustrates the range of projects used to address some of the wicked problems that arose during the four years of the action research including the PB's the thesis is focussed on. Readers interested in the full descriptions of the particular contexts, problems and outcomes for each component are referred to Publication III. The important learnings from the adaptive process prior to the PB's are described in Publication III and included:

1. The value of real power and influence being invested in the outcomes of a citizen or stakeholder group. Several initiatives dissipated due to disillusionment that participants in these groups felt with the impact they were having.

2. The effectiveness of top-down support from the City. Due to local cultural conditions the most successful projects often involved the City initiating power sharing in response to emerging opportunities/issues rather than engaging existing interest groups [41,42] or attempting to create new ones.

3. The importance of legitimacy and perceptions of legitimacy of process and decisions. If the City were to drive participation from the top, legitimacy of the process and outcomes became important to counter accusations of manipulation or selfish intentions by government. Improved relationships with the local media and recruiting of dispassionate citizens to the process were found to be effective.

These learnings prepared the ground for the final projects in the DCG – the Participatory Budgets.

2.3.2 The 2013/14 Participatory Budgets

The ultimate project in the "2029 and Beyond" program – and the subject of this thesis - was the implementation of two participatory budgets (PB's) conducted in 2013 for the 2013/14 financial year. Participatory Budgets involve the participation of citizens in the setting of all or part of recurring government expenditure [43]. Initial discussions with City staff about a possible next step in the DCG program had revolved around ways to allocate the City's operational expenditure in a tightening fiscal environment [44] and address its share of the Australia wide $15 billion infrastructure backlog averaging $3 million per annum per council [45]). Interest increased after a non-consultative large rate rise in the 2012/13 financial year led to a legal dispute [44] and a subsequent commitment to a PB during mediation.

This 'Australian style' PB (Publication II) was broken into two mini-publics that executed 2 separate PB's covered the entirety of the local government expenditure for the upcoming financial year and the planned infrastructure for the coming decade. A mini-public is a descriptively representative sample of randomly selected citizens who meet to deliberate and influence an issue of importance [46]. In this case the first PB mini-public (called the 'Capital

Works Panel') created criteria to compare, rate and prioritise 130 infrastructure projects using a deliberative form of a multi-criteria analysis technique [47]. The second PB mini-public (called the 'Range and Level of Services Panel') made recommendations on whether operational service areas should be increased, held constant or decreased for the next year according to a values-based process. At the conclusion of both PB Panels, their recommendations were submitted to the elected Council as per the Local Government Act. Both PB's were monitored for deliberative quality by a group of two Councillors and four independent community members known as the Independent Review Committee (IRC). The author was part of the implementation of various projects within the DCG program and acted at various times specifically as facilitator, designer and deliberation support during both PB's.

The precise details of both PB's are described in Publications II and III. Justifications for the design and processes of the PB's plus the history and context of participatory budgeting are discussed in the Explanatory Statement. For the purposes of this methods section, Table 2-2 shows a logistical overview of the two PB's exercises.

Table 2-2 CGG PB logistical properties.

	Capital Works Panel	**Range and Level of Service Panel**
Duration	4 consecutive Saturdays plus a 4-hour wordsmithing session (November 2013)	8 Saturdays plus a 3-hour community feedback workshop (December 2013 – February 2014)
Budgetary Influence	AUD$ 68 million representing 100% of the 10-year Infrastructure Budget of the City (2013-2014 to 2023-2024)	AUD$ 70 million representing 100% of the 2013-2014 Annual Operational Budget of the City
Panellists	50 citizens randomly selected and stratified by age, gender and location invited to participate; 28 citizens commenced and 26 completed the final session	40 citizens randomly selected and stratified by age, gender and location invited to participate; 37 citizens commenced and 35 completed the final session

2.4 Research Design

During the literature review presented as part of Chapter 3, it became clear that a fuller exploration was required regarding what citizens and government expected of each other and how this relates to trust in government. Additionally, it is poorly understood what the effect of changes to the relationship between these two parties would be on political trust and the plausible reasons for those changes. To address these aims, this thesis uses a mixed-methods design. It collects quantitative and qualitative information, analyses it rigorously and concurrently integrates that data in a manner known as convergent design [48]. This approach was chosen for several reasons. Firstly it offsets the weaknesses associated with either purely quantitative or qualitative research such as the subjectivity or inaccuracy of reported accounts (e.g. Corral-Verdugo, 1997), and the inability to explain any changes (or lack thereof) [26,49]. Secondly, for the complex sociological system this thesis examines it should allow a more holistic interpretation of the results generated [50]. Finally, in the interests of epistemic humility it provides a wealth of data to leave room for uses of the findings that cannot be anticipated beforehand [51]. The rest of this section describes the actual methods used for the quantitative and qualitative data collection.

2.4.1 Quantitative Data

Some measurement of the attitudes of citizens and government toward each other in the CGG is required to determine whether the case study is to be generalisable to other contexts and also to interface with existing scholarship in this field. Such measurement can also provide a baseline from which to detect any changes during and after an intervention.

Quantitative surveys[2] around three broad themes were created, namely: political trust, political participation and deliberative democratic nature. Trust and participation surveys were administered to 2,000 randomly selected residents of the CGG community one month prior to the start of the first PB. These same surveys were administered to the mini-public participants at the very start of their first Panel session, the very end of the last session and at the beginning of two other sessions in between. In contrast, the surveys measuring various deliberation indicators were completed by the mini-public participants at the end of each session. Staff/Councillor surveys on trust and participation were administered either at the same time as the mini-public participants if they were present, or at the start of an interview.

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[2] Since they are field work related these instruments will be referred to as 'surveys' rather than 'questionnaires' which is usually associated with laboratory experiments.

2.4.1.1   Trust

The trust surveys were based on the US General Social Survey which is generally regarded to be valid and accurate [52] and uses a range of proxies for trust (such as confidence, honesty, loyalty and fairness) that had been used in other PB's [53]. Question wording avoided negative phrasing to prevent associations with the related but different concept of distrust [54]. Long scale (7 point) Likert items were used [55] to produce high internal consistency with most of the proxy questions behaving in the same manner as the general question: "*I believe that, overall, the City of Greater Geraldton is trustworthy*"[3]. Trust ratings of individual government functions (e.g. waste collection, regulation or policing) are highly contextual and difficult to link to overall trust in government [56]. For this reason, and for internal consistency, the generalised trust question above is the focus of the results.

2.4.1.2   Participation
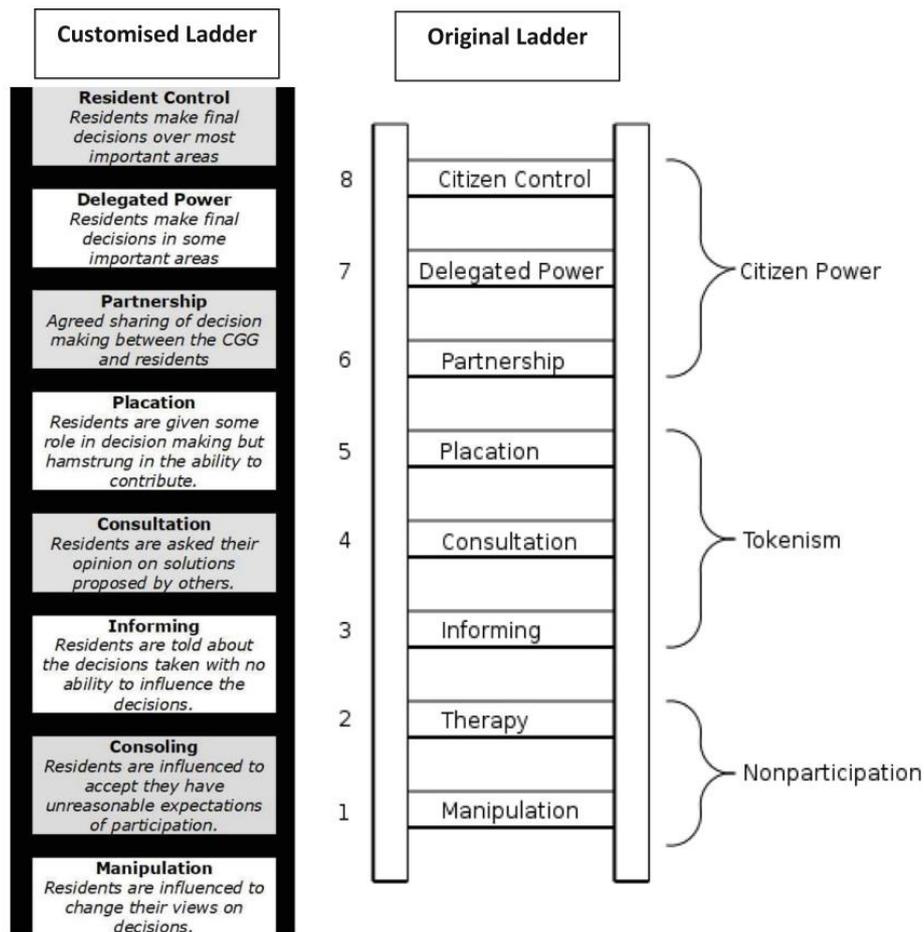
Figure 2 - Customised Arnstein Ladder side by side with Arnstein's original Ladder (Publication V)

Understanding citizen expectations and experience of participation in government was achieved using a standardised spectrum of participation called the Arnstein Ladder [57] which has a history of use by researchers for diagnostic and prescriptive purposes [58-64]. Figure 2 shows the original Arnstein Ladder placed alongside the customisation of the ladder that was used in the CGG surveys. Compared to the original, the language was updated to match current understandings (e.g. 'therapy' to 'consoling') and short explanatory sentences were added for each rung. It provides an eight-point scale for assessing a citizen's expectations of participation in government with the potential to assess their experience in this. The questions "*CURRENTLY, how do you feel the City of Greater Geraldton treats its residents?*" and "*IDEALLY, how would you like the City of Greater Geraldton to treat its residents*?" were included with pictures of the ladder, so participants could mark their preferred assessments.

The use of the Ladder is not without controversy. Some scholars have criticised it for being too theoretical at the extremes of the spectrum and normatively offensive in the middle [65]. Others believe the Ladder is too limited and simplistic [64] and should not join an empirical and normative scale [66]. Finally, the image of a ladder could culturally imply that rungs further up were in some way superior. In spite of these criticisms, several factors recommended its use in this study:

- Its continued widespread use in various guises [64,67,68], particularly by public engagement practitioners and researchers [69,70];

- The opportunity for comparison to other large scale participation studies [71] where institutionalised power exists in a nearly dichotomous relationship with citizens, such as in Australia, Europe and the US [72];

- Its use of norms actually allowed for measurement of citizen/government values as well as empirical assessments against those norms;

- The customised Ladder with its explanatory annotations was found to be an educative tool in pilot testing, providing clarity and common language, with a clear classification of government relationship types compared to other tools. The annotations were particularly valuable to ensure consistency for repeated applications of the survey;

- In contrast to the Foucaultian oppositional stance in the framing language of the Arnstein Ladder, the deliberative democratic intervention implemented in this case study takes a Habermasian collaborative [73]. To avoid the presumption of collaboration in other participation models [74], this oppositional approach was chosen to circumvent tilting preferences;

- Fear that images of a ladder might cause a uniform selection of the top rungs seems to be unfounded and not supported by the data (Section 4.3), with the conducted interviews confirming the absence of judgement of superiority for the highest rungs.

2.4.1.3 Deliberative Democratic Nature

Since a deliberative democratic intervention was being introduced, this also needed to be assessed through both qualitative and quantitative lenses [75]. The framework that was used is a practical one [76] that characterises an instance of deliberative democracy as exhibiting three traits:

1. **Influence** – Forms of democracy definitionally require the will of legitimately constituted representatives to be embodied through some exercise of power or influence. Thus, for deliberative democracy, the outcomes of the deliberation must have some tangible impact on the topic at hand. Influence can manifest through a spectrum from the concrete (e.g. policy changes, legislation or funds allocated) to 'softer' forms of power (e.g. transparently sharing public information, common values determination or strategic direction).

2. **Deliberation** – Again, it is axiomatic that the conditions for, and the presence of, deliberation must exist in a deliberative democratic event. The concept of what counts as successful deliberation can be judged across a spectrum from the strongest Habermasian criteria of ideal and competent political communication [77] to a more accepting view of other forms of communication such as humour, rhetoric and nonverbal communication [78].

3. **Representativeness** – to make claims to be democratic and to produce legitimate representations of the common will some method of representing the demos must be used. Once again, degrees of representativeness and associated legitimacies can span the gamut from compulsory referenda, agent representatives and descriptive representation [79]. Mini-publics definitionally use descriptive representation and judge their success in this respect by the closeness of their descriptions (i.e. demographics) and attitudes against the target population/demos.

This framework has been used to analyse deliberative democratic events previously [80]. Alternatives for analysis do exist. Some [81,82] are over-specified for the current research questions, measuring variables such as repetitive events, efficiency, cost and transferability. Others, like the discourse quality index [83], contain a level of precision that is useful for advancing deliberation theory but does not examine the wider variables of representation and how influential the outcomes are. Additionally, it requires textual analysis, privileges Habermasian modes of deliberation, and has difficulty detecting the social aspects of deliberation. More contemporary frameworks examine deliberation in ways which avoid this [84,85] and the study was strongly influenced by the construction and wording of the survey questions (see Appendix A). The final consideration for selecting this framework is its allowance for subjective assessments. Although subjective assessments of performance can be notoriously unreliable, it is important in this case as the investigation concerns relationships (e.g. trust) which are strongly determined by subjective assessments – 'correct' or not.

Assessing each of these three elements was done in the following manner:

1. Determining the degree of influence was more straightforward then can be the case in many mini-publics because their subject in this case was the allocation of local government funds which is statutorily and transparently decided by the CGG Council at its annual budget meeting. Observation of this meeting from the public gallery and interrogation of the published minutes then suffice to determine whether the mini-publics were influential on the budget process.

2. Deliberativeness can be assessed by examining the antecedents of deliberation, the process of deliberating or the outcomes of the process, and a combined approach is recommended [86]. The design of the PB's was interrogated for their likely ability to create the antecedents of deliberation and tested through participant surveys on the effectiveness of each of these design aspects after each sitting day. Also, the overall process was reviewed for its ability to produce deliberation between participants through surveys and observation. Quantitative feedback surveys were administered after each deliberation day, followed immediately by a group interview to check on the neutrality, representativeness, and informational aspects of deliberation by the Independent Review Committee. The questions asked for the participants' assessment of the two important elements of deliberation [87] – the analytic (e.g. *'How well do you feel you were able to learn about the issue/get new information?'*) and social (e.g. *'How much do you feel that your contribution was valued by people at your table?'*). Subjective ratings of this type have been found to generally align with outside observer ratings although subjects tend to be generous in their assessment of analytic rigour [86] (please refer to Appendix A for details).

3. Representativeness was assessed in two ways - through demographic descriptiveness and attitudinal similarity. Mini-publics usually derive their representativeness claims via descriptive representation - that is, by duplicating the demographic characteristics (e.g. age, gender and socio-economic status) of a wider population. A subgroup will also duplicate the interests and attitudes of the wider population they are attempting to represent. This is usually done through random selection that is stratified to duplicate the relevant demographics of a population (see Section 3.4.3). Hence, it is common to assess this representativeness claim by conducting a basic statistical comparison between the demographics of the general population and deliberation participants via surveys. The claim of attitudinal similarity (particularly trust and participation attitudes) of the deliberation participants compared to the general population can also be assessed in a similar manner with attitudinal data gathered through surveys. This also provides a crosscheck on the assumption of descriptive representation - that mirroring demographics mirrors attitudes.

All survey sheets are included in Appendix A. They show how the above issues were handled.

2.4.2   Qualitative Data

Uncovering the reasons for any changes in trust or participation that may be detected, or understanding of concepts such as partnership, required a different modality from the quantitative analysis. The preferred techniques were semi structured, face-to-face interviews as well as direct observation of participants and staff, daily deliberation debriefings, document analysis, and observation of the Council budget meetings.

Since the research questions involved unpacking both, perspectives of the political trust and participation relationship, interviews were held with 25 of the 63 Panellists, 5 of the 15 elected Members of the Council and 11 of the staff involved in the planning and execution of the two PB's. Qualitative data was also gathered during the interviews on the deliberation experience to supplement the participant and staff feedback surveys. All interviews occurred face to face with the same interviewer between May and June of 2014 - shortly after the conclusion of the mini-publics. They were conducted in private, either at work, cafes or home locations, depending on the interviewee preference.

The style of interview would generally be considered doxastic, where the interviewer acts to facilitate by "…*eliciting information from the interviewee that may deepen the understanding of a subject matter with which the interviewee is intimately familiar by virtue of his or her lived experience*" [88]. Within this frame, interviews were conducted in a reflexive [89] and receptive manner to acknowledge the interpretive nature of trust assessments [90]. For example, questions tended to avoid asking respondents to explain their behaviour with 'why'-style questions, and instead focussed on discussing the nature of their experience through 'what'-style questions. The starting questions used in the semi-structured interviews are included in Appendix B.

2.5 Data Analysis

Having outlined how the thesis gathers knowledge this section describes the mixed methods tools used to analyse that data. It covers the quantitative and qualitative analysis performed.

2.5.1 Quantitative Analysis

Data from paper surveys was transcribed into Excel 2016 for visual analysis and basic descriptive statistics and SPSS Statistics V25.0 was used for more advanced statistics. The trust deliberation and participation data were ordinal and generally non-normally distributed. There remains debate about the value of using parametric statistics like averages on such data - as opposed to modal values [91]. However, since it is common in empirical trust studies to do so, parametric tests were conducted for comparison purposes and to detect aggregate changes over the course of each PB. In addition, the following non-parametric tests were also conducted to check for significance of results [92]:

- The non-parametric Mann-Whitney U-test was conducted to determine whether the trust attitudes of the PB Panellists were significantly representative of the wider community. This test is appropriate when comparing two independent variables from two independent groups of ordinal (ranked) data. The size of the significance was also estimated via accepted practice [93].

- The Friedman Two-way ANOVA was conducted to confirm visual impressions of changes of Panellist political trust attitudes over the course of a PB. This test is appropriate when comparing three or more samples of ordinal (ranked) data from the same group and shows whether the samples differ. A pairwise comparison using the Wilcoxon Signed Rank test with a Bonferroni correction was run as a follow-up to check the correct significance level for interpretation of the ANOVA. The size of the significance was also estimated via accepted practice [93].

- To determine the strength and significance of any association between participation and political trust, Kendalls Tau-B test was run on the community baseline data. This test is appropriate when comparing ordinal (ranked) data that is monotonically changing – which visually appeared to be the case.

2.5.2 Qualitative Analysis

The recorded interviews were fully transcribed and analysed thematically [94] using the NVivo V11.0 software. In their role as supporting and explanatory material, extracts of the interviews were used to illustrate the results and in discussion in several papers (Publications III, V and VI).

2.6 Research Constraints

Like all scientific enquiry, this research encountered constraints; some bound up in the research philosophy and methodology choices, and some in the nature of real-world data collection and resourcing limits:

- Case studies, as discussed at the beginning of this chapter, suffer from their generalisability. Contexts like regional, urban, national culture, and satisfaction with democracy could all influence the trust/participation data gathered. Although we make plausible arguments that this case study can be generalised, we should expect there is a non-zero influence from context.

- Participant selection bias was likely in a voluntary sample population and the PB participant survey, and there is evidence of this in the results. Response rates to the community survey were less than 10%. Rates were very high for PB participants, but this group was shown to be more trusting than the general community and older than the Census demographic distribution. Once again, this should temper confidence in the conclusions, in spite of plausible arguments made that this effect is not significant.

- From a positivist standpoint, this research is constrained by the lack of an adequate control group that did not experience the intervention applied to the PB participants. A potential control group was present in the form of the respondents to the community survey as they did not take part in the PB's - although they were not completely unaware of it and would be slightly 'tainted'. The cost of contacting such a group, with such low response rates and their likely attitudinal unrepresentativeness, made such a strategy unfeasible.

- A stronger statement about the trust relationship in participation between government and citizens could be made if more time and resources were available to extend the bounds of this research. The implementation of other sorts of interventions other than the one used would provide more 'data points' to the relationship that was discovered. At the moment, a question remains as to whether there is a minimum improvement in the quality of participation needed for the trust results seen, or whether almost any intervention would be effective. Longitudinally, it is also not clear whether the effects observed may change over time, as timing and resourcing did not permit follow-up.

Having outlined the approach to understanding phenomena and gathering knowledge, the next chapter situates this thesis in the literature of the relevant fields. It also outlines the study's contribution to knowledge development.

Chapter 3   Explanatory Statement

This chapter describes how all the published papers form a coherent body of knowledge and contribute to the field of research in relation to the existing literature. The breadth of material relevant to the research question is quite large and cross-disciplinary making this no short task. Section 3.1 describes the megatrends of sustainability and wicked problems (Publications III and IV) while Section 3.2 and 3.3 review the existing literature relating to participation in and trust of government (Publication V and VI). Deliberative democracy and the state of research on mini-publics and participatory budgeting (Publications I and II) are discussed in Section 3.4.

3.1   Sustainability and Wicked Problems

A foundation for this study are two megatrends. The concept of 'megatrends' describes *"...a collection of trends, patterns of economic, social or environmental activity that will change the way people live and the science and technology products they demand"* [1]. The second megatrend of sustainability could be considered a subset of the first - wicked problems - but it is a topic of such significance that it is explored separately.

3.1.1   Wicked Problems

During the 1970s, the concept of the 'wicked problem' was put forward to help reframe thinking around a pattern of challenges deeply impacting modern societies [5]. A range of social problem typologies followed, including: social messes [95], puzzles [96], super-wicked problems [97] and ill-structured problems [98], with the wicked framing remaining the most popular [99]. To be classified as wicked and qualitatively different from 'tame', a problem must exhibit a majority of the properties below (paraphrased from [5,100]):

- Not easily definable and cannot be fully understood until a solution is proposed. The parameters of a wicked problem can be defined differently depending on the perspective; they are also continuously revealed.

- No agreed stopping rules. Even the existence of an end point is uncertain.

- Solutions are not subjectively true or false. An acceptable problem statement (and solution) requires value judgements.

- No particular solution can be generalised to (or from) other wicked problems.

- Having a large or poorly described set of possible solutions.

- Having high stakes and important consequences. Failure or ignorance is not an option.

Uncertainty is the distinguishing characteristic between tame and wicked problems. The uncertainty of tame problems is limited, probabilistic and controlled - something governments are accustomed to managing. The nonlinear and epistemic uncertainty of wicked problems exists in the definition of the problem, the existence of an end point, and in the effect of solutions. Such uncertainty presents itself [2] in wicked problems like: urban planning [5]; fisheries and coastal governance [101]; water resources management [102]; fracking agriculture and Indigenous health disadvantage [100] as well as climate change [103]. Some wicked problems have been ever-present (e.g. poverty) but others have emerged because of unique circumstances at this point in history (e.g. climate change and sustainability). Ironically, the rise in this latter category of wicked problems has been created by the effectiveness of our civilisation in solving tame problems. For example, the growth in human population from the solution of tame problems like sanitation and human health has allowed human impacts from consumption to rise to the level where they now threaten civilisational continuity.

Three main ways of tackling wicked problems have been suggested [104] based on how power is wielded in response. The authoritative mode features top down, centralised use of power and resources. By comparison, the competitive mode distributes power amongst adversarial parties that compete to achieve goals. These two modes can be effective depending on the urgency, available resources and other contexts, but are not ideal in the face of wicked problems because their inherent properties tend to produce unintended consequences [24]. The competitive modes' use of narrower proxies for problem success like political/commercial success/survival instead of direct solutions to the broader wicked problem can be outpaced by shifts in the problem definition or poor choice of proxies. Existing interest and informational 'silos' between the parties competing within the wicked problem can augment useless internal competition, inhibit information sharing and waste resources. The authoritarian focus on speed, control and one-way communication handicaps the social learning required to understand the wicked problem and keep pace with its changes.

The third, collaborative mode is generally recommended as the most comprehensive and effective [22,23,104]. At its best the collaborative approach has several advantages in the face of wicked problems. It avoids duplicative effort or counterproductive competition. Its freer flow of information allows better characterisation of the problem and quicker reaction to problem changes and solution effectiveness. It empowers and incentivises all stakeholders to contribute to and work on the solution. Finally, its information sharing opens the possibility that one party has faced the problem before and may be able to transform it into a tame problem - or if not, may have an important piece of the problem/solution [25].

24

Such a collaborative approach does have its own challenges. It involves parties taking action to enable other stakeholders to act with collective purpose by accepting group responsibility for the problem and its solution [105]. This can lead to intrinsic governance difficulties - the parties may not acknowledge each other as having the authority or qualifications for solving this problem or even the collective responsibility for managing wicked problems [25,106].

3.1.2   Sustainability

There has been a recognition for several decades now that the impact of human beings on the environmental systems that support human civilisation is reaching a level that threatens the future of the civilisation and can permanently scar the state of those systems [6]. This is a megatrend in human impacts on multiple life and civilizational supporting systems [8,107]. Sustainability has been definitely classified as a problem that is 'wicked' or even super-wicked [97]. These wickedness properties are clearly demonstrated during attempts to implement the common framework of the Sustainable Development Goals [108] (Publication IV) which entrains entities from across state and organisational borders with their own histories, perspectives and agendas [109].

Conceptualising sustainability as wickedness gives insight into the reasons for the past problems of trying to address it but also the hope of a new way forward. The general consequences of wicked problems apply to sustainability and although we cannot specify a solution, we can know certain things about the nature of approaches that will be most effective against it. With sustainability, this is particularly true, since a collaborative approach is universally recommended [3,110]. It is not controversial to say that business-as-usual governance will be inadequate to address sustainability and there is an argument for systemic change [111,112]. With an understanding of the wicked nature of sustainability it is clear that the aggregative nature of the existing representative system creates a competitive model that is ill-suited to sustainability problems. [113]. The case study literature gives some insight that the governance needs to be more participative [114] and precisely that *"...deliberative (rather than neo-managerialist) theories of administration are better suited for the "collective puzzlement of society" that wicked problems require"* [115]. How suitable such deliberative theories are to be used for sustainability [7] is explored below in Section 3.4. after a review of the field of public participation in governance.

3.2   Public Participation in Government

In this section, the importance of public participation to democracy and sustainability is established. This is followed by an exploration of what the appropriate amount of public participation is and whether this meets citizens' requirements.

3.2.1 The Importance of Public Participation

There has been a multi-decadal drive toward greater involvement of non-specialist citizens in planning, policy, service delivery and government generally [116-118]. The rationales for this vary from the normative to the instrumental [119].

Normatively, democratic societies embody the involvement of citizens in the process of governance [120-123] and it is uncontroversial to say that: *'Citizenship participation is the cornerstone of democracy'* [124].What is more controversial is the appropriate degree and type of participation by citizens [125]. Thinking on this spans the pessimistic side of the spectrum from general prohibition of involvement with the decisions of wise philosopher kings (Plato) to the distrust of the capabilities and motivations of citizens [126]. On the more optimistic side involvement can come from elected representatives [127] to widespread grassroots contributions [123,128] or the direct rule embodied in some ancient Greek city states [129] and modern referenda [130].

Instrumental justifications tend to centre on the epistemic improvements that come from public participation –for democratic decision making, sustainability and wicked problems. Democratic decision making is generally argued to benefit in its efficacy from participation [131,132]. The properties of wicked problems (Section 3.1.1) imply that the greater the public participation, the greater the success in managing this type of problem. Given the contested and shifting nature of these types of problems, value judgments are required to be made [133] – ones most legitimately done through public participation [134,135]. From an informational point of view the multiple perspectives possible from public participation increase the chances that the problem will be accurately characterised or shifts detected [4,136]. Failure to have suitable participation not only weakens the epistemic strength [137], but may cause parties to either fail to contribute to the solution or even try to sabotage it [138].

There is some evidence that the type and quality of public participation is specifically important to sustainability and poor quality can undermine outcomes [114,139]. Meta-analysis of large numbers of environmental-based decisions showed that the use of participatory processes was associated with normative gains like improved legitimacy of decisions, and social learning. It also showed that the more complex the problem, the more carefully planned and executed public participation improves epistemic outputs, such as creative solutions [140].

3.2.2 The Status of Public Participation

The normative dimension of public participation leads to the question: "What type of public participation do citizens want?" The instrumental dimension surfaces the follow up question of: "What type of public participation do citizens currently experience?".

To answer the first question, investigations of citizens' preferences for public participation generally do so through comparisons between direct democracy, elected representatives and technocratic rule in various countries. Examples include Finland [141], Denmark [142], USA [143,144] and Spain [145]. The results are usually indeterminant and contradictory showing preferences that were contextual and seemed to straddle all three modes. One of the most influential of these studies used surveys and focus groups to conclude that the US public has a distinct dislike for participation in politics.[146]. This distaste for participation was only balanced by the fear that not being involved in politics would create such corruption and advantage to the political class that citizens feel forced to become involved. The weight of evidence has shifted against this, with data being re-interpreted as frustration with existing participation modes and not political participation generally [147,148], the preferences expressed being found to be shallow and contextual [143] and the conclusions being limited by the interpretation of the focus group results [149].

The second question of satisfaction with the existing public participation occurs in the context of a clear shift in the modes of public participation to less formal and more distributed ones (like social media platforms) [150,151]. In spite of this, the formal decision making structures (like voting) still predominate in most western democracies [152]. Work examining whether citizens feel that the formal governance structures do actually deliver on expectations of public participation generally show a failure to do so. This is true at the local level [153] but also in global meta-analyses, showing that formal governance structures contribute the least to satisfaction with public participation [132].

So, although there has been work to answer questions of what citizens' expectations of public participation are and what their satisfaction is with the formal structures, the answers are unsatisfactory and an alternative method is required.

3.2.3 The Arnstein Gap

An alternative, less Manichean approach which can give us insight into the satisfaction with the participation in formal structures, but also into the expectations for participation outside these structures, is the Arnstein Ladder. The reasons for its choice as a tool in this thesis are detailed in the Methods (Section 2.4.1). This Ladder was first proposed around 50 years ago [57] and has been used to investigate participation in many fields [59,61]. More recently, it was used on participants and professionals via keypad survey at public consultations on transport and energy infrastructure projects. The results from 3000 participants across six states in USA from 2003 to 2015 [154] revealed the following characteristics of the responses:

- The average preference of participants was for a relationship of "partnership" in public participation.

- The preferred relationship of partnership was not being met for either participants or professionals. Instead a 'consultation' or 'informing' type of public participation existed currently. This disparity the authors called the 'Arnstein Gap'.

- The Arnstein Gap was smaller for the professionals due to their estimation that the current public participation level was above the 'consultation' level. The authors called this the 'Professional Conceit'.

These results have been partially duplicated in varied contexts [155,156], hinting that they are widespread[1]. Indirect validation of the preferred type of public participation has also been seen in Australian surveys that show citizens are dissatisfied with the existing informing/consulting relationship, do have a nuanced appreciation of democracy and reject dichotomous approaches [157]. Such a dichotomous approach was used by Hibbing and Morse in the US between direct democratic ('Citizen Control') and technocratic rule ('Informing'). Transposition of this scale locates the preferred level of public participation at their midpoint – or where 'Partnership' is located on the Arnstein Ladder [146]. The Arnstein data allows reinterpretation of surveys based on choices between representative, direct and technocratic rule that were indeterminate [158] as a manifestation of respondents resisting these imposed choices rather than their partnership preference.

The overall interpretation of public participation, supported by the data from the Arnstein tool, is that citizens are indeed dissatisfied with the public participation, primarily because it does not embody partnership between government and citizens [159]. The shift away from formal participation mechanisms like voting is an artifact of this dissatisfaction with the underlying participation relationship. Unfortunately, this understanding would also preclude the informal alternatives (e.g. protests, online activism) being completely satisfying as such actions tend to either embody hostility or domination and not partnership. If so, then the Arnstein Gap and the resultant dissatisfaction will persist.

The original Arnstein Ladder mostly interprets partnership as a power sharing relationship between governments and citizens - distinct from the other rungs on the ladder (e.g. manipulation, informing, consultation or delegation) which have greater degrees of asymmetry in power distribution. When this is combined with the common understanding of the word "partnership", a broader definition for it would be as a relationship between two or more parties that cooperate together, sharing power by using their mostly equivalent levels of influence to achieve a common goal[2]. Such an understanding of partnership implies an interdependence

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[1] Although, this results probably does not apply where dispersed power relationships would complicate the implicit citizen/government dichotomy of the ladder [72] or where institutionalised democratic government has been compromised (e.g. by corruption) or has collapsed [67]

[2] This understanding of partnership would apply not just to government but also to fellow citizens. It is possible (and the qualitative data collected in this thesis suggests so – see Section 4.3) then citizens in a

between government and citizens: an inability or unwillingness to accomplish the common goal of governing without each other. Such an interdependence introduces uncertainty, vulnerability and risk. In the next section the literature around a common strategy for managing such risk and vulnerability is reviewed – that of political trust.

3.3   Trust

This section reviews relevant literature regarding trust, since it is so key to the research question. Initially, trust and political trust are defined and the factors affecting assessments of trust elucidated. With this conceptual understanding, the status of political trust is examined and the reasons for its long-term downward decline expounded upon. The section finishes with a survey of the known links between public participation, political trust and sustainability.

3.3.1   Introduction and Definitions

Trust has been studied across many disciplines such as neuroscience [160], psychology [161], economics [162], evolutionary biology [163], social science [16] and sociology [164] with increasing intensity over the last three decades. This spread and growth of trust research is likely driven by the recognition of it being implicated in issues as broad as economic inequality [165], cynicism [166], increased health, longevity and overall satisfaction with life [161]. Each of the fields interested in trust defines it differently depending on their priorities and paradigms, but there exists a cross disciplinary consensus of it as*: "… the willingness to be vulnerable under conditions of risk and interdependence…"* [167] with positive expectations of the other party's intentions and behaviour. Simpson elaborates on this willingness as: *"... a psychological state or orientation of an actor (the truster) toward a specific partner (the trustee) with whom the actor is in some way interdependent (that is, the truster needs the trustee's cooperation to attain valued outcomes or resources)."* [17].

Two notes should be made regarding these basic definitions of trust. First, there is consensus that trust is definitionally distinct and separable from distrust - its mirror image opposite concerning the expectation that there will be negative intentions and behaviour toward the trustee [168]. Second, there is uncertainty and interdependence implicit in the definition. Trust is not necessary if another party is guaranteed to act in a certain manner (e.g. when it is entirely in their interest); if there is a massive power disparity; or if one party requires no reciprocation from the other party [169]. As Rousseau noted, trust is not a control mechanism but a substitute for it when control is not possible or desirable [167]. In a situation where two parties wish to, or are forced to cooperate, then trust becomes a viable strategy for dealing with not just uncertainty

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democracy would ideally like other citizens to cooperate with them in equitable environment toward a common goal.

[170], but risk. It has certainly been shown to help with uncertainty around government services [171].

3.3.2   Reframing Trust Definitions

Although the above is a perfectly serviceable technical definition, a reframing centred around the determinants of trust is required to enhance its usefulness. Up to 15 variables have been described as influencers of trust [54,166,172], but the intention of this research is to create useful heuristics for application so a focus on fewer than this is needed. To balance granularity of understanding, parsimony of variables and validity of measurement, two factors of primary importance are chosen. The first is a belief in the ability of the trustee to contribute to the outcomes that the truster requires (labelled as 'competence'); and the second is an assessment that the intentions of the trustee are aligned with those of the truster ('benevolence'). The absence of either undermines trust. If a party is well-intentioned but unable to perform, or competent but unreliable, full trust will not be conferred.

This parsimonious choice is supported by literature as being useful. Classes of trust variables were found to cleanly separate between ones describing competence and variables that describe benevolence and integrity when studying trust in websites [54]. This analysis further showed acceptable loadings to justify separating benevolence and integrity, but confirmatory factor analysis of these two variables was less than satisfactory. The use of integrity was synonymous with predictive, forward looking concepts such as reliability, credibility and dependability, and the authors theorized the weak result was due to a lack of time for these to develop. For this reason, the concept of integrity is collapsed into an influence on judgments of whether a trustee is benevolent. Equivalents of this competence/benevolence framework [172] have been used in education [173], public sector management [166] and software utilization [174]. The two-factor model also has empirical support at a country as well as at a personal level [17,175]. In light of this support a more pragmatic definition now emerges: *Trust is a person's judgement that another interdependent person or body has both the benevolence and competence to act in their interest in matters of importance/uncertainty.*

Scholars usefully distinguish between generalized or social trust (described as an overall disposition toward general situations and entities), and specific or particular trust (the disposition toward specific individuals and particular contexts). This thesis is concerned with the trust that citizens have in their governments - a subset of social trust [176]. Trust in government is usually considered a measure of political trust generalised toward political actors in the governance system (as opposed to particular trustees such as elected officials, non-elected public servants, the institutions of government or even the political system itself). For convenience, from this point on, the term 'political trust' will be used to refer to this generalised trust in government. By extension from the general definition, political trust is defined as *a*

citizens' belief in the benevolence or intention of political actors to work in their collective best interests, and the capacity, ability, or competence of those actors to achieve some expected, yet uncertain, governance outcome. These political actors may be individual politicians or the collective institutions of government depending on the context. The governance outcomes may be how well an expected service is provided or whether a norm is satisfied, such as representation or transparency. As indicated, it can serve as a risk management tool for citizens dealing with the uncertainty of an empowered government.

Apart from the elegant congruence with the general definition of trust, this definition mirrors elements described by other authors [177-181], though sometimes with differing semantics [18,172]. This is independently supported by modelling [56] and the analysis of case studies [182] and large data sets [183-186].

3.3.3   The Status of Political Trust

It is generally agreed that there has been a decline of trust in governments in mature democracies in the last four decades [187-189], although this agreement is not universal nor of the same magnitude in all countries [190]. The country that has seen some of the largest declines and has the most extensive data sets is the United States. Political trust has declined from 70 per cent of respondents at mid-century to 33 per cent at the start of the twenty first century believing they could trust the government to do the right thing most of the time [11]. Australian attitudes mirror this trend, if not the magnitude [191], since the data is much less available [192]. Surveys of social attitudes [193] between 2005 and 2013, found those who distrust government rose from 26 per cent to 47 per cent and citizens believing government could "almost never" be trusted increased from 8 per cent (2009) to 24 per cent (2012) [194]. Australians' general trust in government has continued to decline [189] and is at the lowest measured level to date [195]. The primary reasons given for not trusting politicians in particular during qualitative studies can be framed as a lack of competence (failure to accomplish even the routine tasks of government), benevolence (as demonstrated by lack of empathy or caring about citizens) and integrity (following through on public trust) [195-197]. This reinforces the framing of trust used in this thesis.

This decline in political trust is not confined to national governments, with global surveys indicating trust attitudes toward Australian local governments are indistinguishable from those in the United States, with 51 per cent of respondents having little or no trust in their local government [198]. National surveys in Australia specifically show state and local governments only being trusted by a third of respondents [195].

3.3.4 The Consequences of Declines in Political Trust

It is important to establish whether the consequences of political trust changes make it worth researching and what might be driving such changes. Trust has been regarded for centuries as a key ingredient to good government by luminaries such a Thomas Hobbes, John Locke, Adam Smith, Max Weber and Confucius [199]. The consequences of a decline in political trust are still debated by some scholars, but most objections centre on the idea that governments should not be entirely trusted [164,200,201]. Most scholars agree that some scepticism toward government and individuals is appropriate [168,202], and this is built into various governance structures through the separation of powers and constitutions. We find it useful to distinguish between democracy supporting and democracy degrading types of trust[3]. Excessive trust in individual elected officials, or partisan in-groups compared to the broader society is democracy degrading. However, broad trust in fellow citizens and in democratic institutions like voting and a free press is democracy supporting [190,203-205]. From this perspective, trust in government is an important resource within social systems [206]. Thus, if it declines too much, then it can undermine engagement in politics [207], make government policy implementation harder [183,208-210], prevent long term problems being addressed [211-213] and even destroy or dilute democracy itself [214]. Overall, it is fair to say that low levels of trust, particularly in institutions and democracy itself, are at least generally concerning [15,215].

3.3.5 The Causes of Declines in Political Trust

Having determined the significance of low levels of political trust, it is important to review ideas about what the potential causes could be of the decline in trust in government in the Western world. The literature indicates there is unlikely to be a single cause of decline in trust in government over the last 40 years, with the factors grouped into 'supply' and 'demand' contributions [214]. On the 'supply' side of trust, government failures to create outcomes or act in the public's best interest are either increasing or (more likely), the awareness of such failures is increasing through such examples as elected officials breaking promises and more coverage of scandals [9-11]. On the 'demand' side of political trust, citizen expectations of government have changed given social shifts [12,13] and increasingly educated citizen polities have less patience for misbehaviour or ill-intentions [14,15]. This is combined with a cultural background of shrinking social capital [16], and an erosion of general trust by disrupted attachments, lowered self-concepts and loss of identity [175]. Potentially, all the above lead to reductions in political trust, and are not assisted by an existing political system that may reward the creation of division [18].

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[3] Seldon would refer to this as 'active trust' to differentiate it from 'blind uncritical trust' 203.
   Seldon, A. Trust : How we lost it and how to get it back. Biteback Publishing: New York, 2011..

Rather than focusing on either of these complicated sides, the approach of this thesis is to concentrate on the citizen/government relationship (through public participation) which has the potential to influence both supply (create better outcomes) and demand (meet citizen expectations). This leads to the final sections of this review of the literature: understanding the nature of an intervention to improve political trust that will be used in the thesis' case study, requires a review of how assessments of trust, benevolence and competence are made.

3.3.6 How to Change Assessments of Political Trust

Although some genetic factors influence individual predispositions toward trust, the vast bulk of factors appear to be cultural, and are built from both childhood development experiences and adult relationship interactions [184]. These interactions range from personal trust experiences, to observed experiences of close others, to perceptions of surrounding social trust [161]. There can be general experiences or ones specific to politics and government [176,216]. To give an example for reader clarity, when a citizen is determining whether they trust a proposed government action intended to mitigate climate change, they may be influenced by their hereditary disposition (genetics), overlaid with their childhood experiences with authority figures (development), their last experience with a public official (personal experience), their friends' recent interactions with government regulation (observed experiences) and the 'gist' of any climate debates they may have seen on internet video streaming sites (background trust). All influences these will also be integrated with the particular details of the climate change action proposed and how it impacts on the personal context of the citizen.

These factors will influence trust, but the actual decision will also be subject to both affective (emotional) as well as cognitive (related to knowing) decision-making processes [217][4]. This thesis focuses on the cognitive mechanisms because of their importance [218,219], especially in the pre-existing relationship that almost all citizens have with government [220]. However, the affective elements [221] of trusting should not be forgotten. The cognitive mechanisms have been the subject of increased examination in recent decades. Scholars describe distinct, dual process systems in human cognition (popularized as 'Fast' and 'Slow' thinking), that make decisions such as whether to trust government. 'Fast' (System 1) thinking operates rapidly with little effort and volition, often based on emotions, shortcuts and stereotypes. In comparison 'Slow' (System 2) thinking operates slowly, methodically and with effort, in a more calculated, conscious and methodical manner (popularized by [222])[223]. Either or both systems may operate when making a decision on trust. 'Fast' heuristics although efficient, can be subject to numerous biases such as representativeness, anchoring, adjustment, sunk cost, framing and recency [224-226]. 'Slow', rational thinking is not exempt from having its own biases such as

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[4] Additionally, there are even strong arguments for an extra 'leap of faith' to bridge the gap between good reasons for trust and expectations of trust [90].

motivated reasoning, but these are less numerous [227]. In the example we used above, the citizens' decision to trust government action on climate change is accomplished by using some weighted aggregation of Slow and Fast thinking heuristics. For example, the experience of long wait times at the drivers' licensing centre is generalised to mean that government action on climate change will be incompetent and inefficient (personal experience); or hearing that a family members' experience with land use regulation was inconvenient is taken to mean government is more concerned with red tape than the common good (observed experience); and the proliferation, stridency and passion of climate change sceptic videos in their social media feed creates a feeling of uncertainty as to the competence and benevolence of the government and scientists involved (background trust). On top of this, the citizen may discount any competing reasoning due to their desire to remain part of an ideological in-group (motivated reasoning), as well as other emotional inputs. There is solid evidence of this process operating at a population level with splits in the use of both Fast and Slow systems of thinking found when surveying Australians' political views [157].

When considering the political trust assessment process just described, governments have few options to increase democracy-supporting forms of trust– mostly confined to personal or observed experience[5]. Historically when it became clear in the late 1990's and early 2000's that political trust is strongly dependent on people's assessment of government performance against a normative expectation [215], there was focus on regaining trust by improving government performance [228,229]. These efforts did not interrupt the downward trend in trust [216], and qualitative political psychology research indicated that motivations and benevolence were also integral to citizens' normative expectations of government [146]. This remains the case today, with the OECD finding that: *"In most countries, many respondents feel the government does not properly take account of the views of people like them when formulating social benefits"* [20]. Moreover, citizens directly attribute this deficiency to the collapse in trust; for example, Edelmen reports that 75% of survey participants attributed the decline in trust in government to a failure by the institution to contribute to the greater good [230].

In parallel, evidence from court and police interactions from around the same period showed that procedural justice is very important to legitimacy, and process is at least as important as outcomes – even when the outcomes go against individual self-interest [164,231]. Analysis at both country and individual levels showed the effect of process was larger than that of performance in determining public servant trustworthiness. Moreover, it was found that the two factors are not separable, with good processes tending to produce good outcomes and vice - versa, i.e. good outcomes allowing the space to create quality processes [228].

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[5] Ironically some authors have referred to political trust itself as a wicked problem 214.   Stoker, G.; Evans, M.; Halupka, M. *Bridging the trust divide: Lessons from international experience*; Museum of Australian Democracy: Canberrra, 2019.

It is clear from the above that one of the few effective routes for governments wishing to improve political trust, lies in citizens' collective experience of both the outcomes of governance and the process of arriving at those outcomes. This returns us to the subject of the previous section - public participation in governance – as one of the few areas over which governments can directly influence political trust.

3.3.7 Trust and Participation

There are tentative, but not conclusive empirical links between public participation and political trust [232]. Some of the evidence is of a relationship in the opposite direction; improvements in participation coming with increasing political trust [147,181,233]. Direct studies of participation increasing trust showed civic engagement factors have twice the effect on trust of government performance factors [184,216]. However, the results are highly dependent on the participation design [181] and whether the focus is on the collective, the individual, the outcome, or the process [147,234].

3.3.8 Trust and Sustainability

In Australia the decline in trust has been linked to a lack of satisfaction with democracy, but not in the ideals of democracy: although this commitment to democratic principles appears to be waning in the younger parts of the population [195]. Unfortunately, Australian citizens specifically doubt the ability of government to address wicked problems like sustainability [196].

From the perspective of sustainability and wicked problems, political trust is important. This is not only because of the recommended cooperative approach to sustainability - trust may not always be required for general cooperation [200,201]. Authors have classified it as critical to a solution culture [235,236], and *"... a fundamental strategy for collectively coping with wicked problems"* [237]. Conversely, mistrust [237] confounds government's ability to effectively address wicked problems, which in turn, further reduces public trust [164,238,239]. These recommendations stem from trust's value as a risk management strategy for partners in an uncertain environment.

The use of trust as a way of managing risk makes it ideal for situations where the only certainty is the inevitability of errors, incomplete solutions, fundamental disagreements and constant social learning. In other words – addressing the wicked problem of sustainability. Trust that other parties are competent and have the common goal of the partnership for sustainability at heart, is required to keep them reengaging with new solutions, reanalysing the problem, committing resources and constructively contesting group decisions. When parameters shift, solutions fail, and conflicts arise over defining values, networks with low trust become paralysed or counterproductive in the face of uncertainty [138,240]. Hence, whether or not government has the trust it needs of its citizens to address the wicked problem of sustainability is critical.[6]

Up to this point in reviewing the literature relevant to this thesis, we have seen how trust judgements are made and how government's best option for improving the trust judgements of citizens is through public participation. This is particularly the case, since there is a clear difference between what citizens expect in this area and what they are receiving (the Arnstein Gap). Closing this gap will not only be likely to improve the political trust situation but also improve responses to wicked problems and sustainability. The engagement with the literature is rounded off by examining a governance style whose characteristics strongly place it to address sustainability, close the Arnstein Gap and improve political trust – Deliberative Democracy,

3.4 Deliberative Democracy, Mini-publics and Participatory Budgeting

In this section, the concept of deliberative democracy is defined and its realisation through mini-publics and participatory budgeting reviewed, before the evidence supporting its value to sustainability implementation can be presented. The section finishes by showing the lines of evidence pointing to deliberative democracy being suitable for partnership relationships and trust building.

3.4.1 Definitions and Properties

Deliberative democracy is a "*form of collective decision-making about policy issues, in which a group thoroughly analyses a problem, scrutinizes proposals that reflect a variety of perspectives, and then chooses a well-reasoned solution*" [241]. More succinctly, it's a form of democracy that focusses on deliberation as its defining normative characteristic [242]. It typically allows citizens who represent/mirror the broader population, to meet in egalitarian spaces for deliberation to resolve issues of importance, with the outcomes influencing policy

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[6] Later in this thesis a more extensive argument is made that low levels of trust fundamentally threaten the implementation of sustainability in light of the discussion of results (Section 4.4.4).

development or decision-making [243]. The deliberation spaces should promote respectful communication, using justification and reflection to work toward possible consensus or at least, common ground. This definition is situated with modern theorists [241] who balance agonist and consensus modes [244] with a wider conception of valid discursive types [245] that adhere to the communicative ideals of Habermas [77].

Determining what sort of events constitute deliberative democratic ones can be accomplished in several ways [66,81], but an accepted approach based the definition assesses deliberateness, representativeness and influence [76]:

- Deliberativeness: Participants in a deliberative democratic process weigh arguments and reasons for and against competing options using shared values and rationality [148]. A deliberative group seeks to arrive at a publicly justified decision or conclusion in the service of some "common good" that is based on the preponderance of reasons and arguments favouring one option over another. While the search for common ground is important, reaching consensus is desirable but not essential [78].

- Representation: Representing the will of the demos is important to all forms of democracy, especially one that pays particular attention to the deliberative communication mode. The legitimacy claim to decide on behalf of a group of citizens is definitional to democracy. The deliberative desire to weigh all arguments and perspectives on an issue of importance is a slightly different claim to deliberative legitimacy that drives a search for inclusion of those perspectives [246].

- Influence: All forms of democracy make claim to the outputs of governance having an influence on their citizens, and deliberative democracy is no different. This influence is sometimes delegation of power, but more usually lesser forms of influence, such as recommendations.

3.4.2   Deliberative Democracy as a Partnership Relationship

Interesting research has been conducted during the evolution of the field over the last 40 years [247], but much of it is secondary to the research question in this thesis, since its concern is whether the properties of deliberative democracy can build trust and address sustainability[7]. To this end the first concern of this section is whether deliberative democracy is better at delivering

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[7] This research has also examined the weaknesses of deliberative democracy and its potential for reform. This is discussed in Chapter 5 in so far as it affects the conclusions of this thesis.

a partnership relationship with government than alternatives. The primary alternatives are participatory democracy, direct democracy and, of course, the existing representative system.

Participative democracy does not necessarily speak to the level of participation or influence, and could be classified as operating at almost all but the lowest levels of the Arnstein Ladder [123]. Direct democracy 'overshoots' the partnership level by preferring delegation or citizen control. In this power dynamic there is little to no uncertainty and hence little to no trust required. Representative democracy focusses on the creation of representatives of the citizenry through voting in which citizens notionally have equal power, but mainly in their vote for the selection of representatives. Variations of this system predominate in modern democracies and is facing many legitimacy challenges [15,248]. In modern societies this aggregative approach leads a series of principal-agent relationships [41,79], that do not always function ideally [180,249]. The aggregative nature of a single vote every few years rarely connects up to the public policy cycle, diluting equality, and shifting power to economic elites [250], elected members and non-elected officials [251]. As discussed in Section 3.2.3, Arnstein surveys reinforce the failure of the current representative system to realise partnership with citizens, who instead, rate government's relationship with them as informing or consulting. The properties of deliberative democracy are believed to make it a superior embodiment of partnership and at least a complement to the shortcomings of the existing system [159]. Further justification of this will occur in Section 3.4.5, following the review of mini-publics and participatory budgeting.

3.4.3 Deliberative Mini-publics

If deliberative democracy in principle represents a superior embodiment of partnership, then we would expect that meeting expectations of public participation would cause increases in political trust. While there is evidence of a direct association between trust and deliberation generally [252-255], the argument strengthens around a particular implementation of deliberative democracy that embodies the partnership relationship – deliberative mini-publics [256]. The currently dominant implementation of the principles of deliberative democracy, a mini-public is so called because it descriptively represents a larger public (typically randomly selected from that public and often stratified to mirror important demographic characteristics, such as gender, age, or socioeconomic status). These citizens then deliberate in small groups on a topic of importance, often assisted by an independent facilitator using a range of deliberative 'technologies' [257] that aim to reach collective positions or recommendations [46][8]. Although, they have been subjected to criticism[9] [259], they are the most validated and successful

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[8] Actual mini-public definitions vary. The one used here is considered moderately expansive 258. Ryan, M.; Smith, G. Defining mini-publics. In *Deliberative mini-publics: Involving citizens in the democratic process.*, Grönlund, K.; Bächtiger, A.; Setälä, M., Eds. ECPR Press: Colchester, UK, 2014; pp 9-26..
[9] The relevance of these criticisms to future work will be addressed at the conclusion of this Thesis.

implementation of deliberative democracy (at small scale) to date [260] and are expected to play an important role in improving democracy [157,261].

3.4.4 Deliberative Participatory Budgeting

The final thread of deliberative democracy literature to be drawn together concerns recent participatory innovations in the way government budgets are set. Government budget setting is overwhelmingly an informing or at best, consulting relationship with citizenry [262]. Since the 1990's, starting in South America [263], a more participatory model of budget setting, called participatory budgeting (PB) has evolved, which increases the involvement of citizenry in the setting of some part of a government budget. Initially driven by motivations to improve social justice and combat corruption, but now viewed a good governance [264], it has spread to more than 2500 instances worldwide [265] and is supported by the OECD, the European Union and the United Nations [266]. Participatory budgeting exercises have numerous positive effects, including improving electoral turnout, civic participation, government transparency and accountability, public legitimacy of decisions, and social wellbeing [267,268].

Adopted predominantly by local or municipal governments [262], PB's have developed distinct regional styles [269,270] which vary in process and deliberativeness. For example both the Brazilian and US style focus on widespread mobilisation of the affected communities, sometimes combined with elected representatives directed toward voting on proposals [268]. Additionally, these PB's usually only consider single digit percentages of sections of the total government budget [271]. In contrast the 'Australian' style of PB, addresses much larger fractions of a government's budget (often close to 100%) with a more complete coverage of government areas and operations (see Section 4.2.1 on Scope and Scale of influence). The use of mini-publics predominates as a form of representation and deliberation is comparatively higher [272-274]. For this reason, the Australian style of PB is usefully described as a deliberative PB.

3.4.5 Achieving Partnership through Deliberative PB's to Improve Political Trust

Having drawn together the lines of evidence across the fields of trust, sustainability, public participation and political science, we are now in a position to draw conclusions about the relationship between them. Returning to the conclusion reached in Section 3.3.7, that the current shortfall in public participation expected by citizens is important to improving political trust, we can ask: What characteristics do deliberative PB's have that meet citizen expectations of public participation (facilitate partnership), and how might this create trust between governments and citizens?

Answers to this question consist of those characteristics that enhance the achievement of the common goals of the partnership, and those that relate to the power equity between the partners. The characteristics that help the partners achieve their common goals are:

- The random selection, facilitation and the search for common ground tend to prevent the group polarization and cognitive errors that undermine competent decision-making [255,275-277]. This includes increased knowledge [278] and countering motivated reasoning [279].The process should produce outcomes that are more effective, since they are more epistemically sound and improve the competence of government actions (or budgets) based on them. Additionally, the drive toward common ground rather than an adversarial, aggregative vote is more likely to signal and deliver benevolence-oriented outcomes.

- The tools and processes of deliberation create an environment where participants can preference Slow over Fast thinking both publicly and internally [223,280]. There seems to be a bias toward government actions that trigger 'Fast thinking' heuristics producing overwhelmingly negative attitudes toward politics [223]. The mechanisms that create the negative attitudes are likely related to the decision quality that comes from Slow thinking improving output competence, and suspicions of government benevolence when citizens are nudged toward Fast thinking. Actions that tend to trigger these heuristics include: emphasizing power differentials, increasing cognitive loads on time poor, non-expert citizens or disseminating inadequate or skewed information that is difficult to find, dense in jargon, requiring rapid approval [180]. In contrast, deliberative mini-publics ideally focus on Slow thinking enablers such as allowing adequate time [281], information provision, neutral facilitation [282-284] and diverse perspectives [285].

- The selection of diverse, but non-invested citizens also increases the chance of the group acting benevolently and forming a common will [286,287], rather than leaning towards partisan or narrow ends. Such citizens are less subject to the trust degrading influences in the existing political system, and tend to be more moderate and willing to trust than professional politicians [18]. Once again, this should produce more competent outcomes that are seen as benefiting the whole community.

- Random selection is more effective at mirroring the composition of society than the current system [288]. This improves on both legitimacy (through accurate representation of the demos) and epistemic power (access to a fuller range of values and knowledge of the demos) of mini-public outputs [243,278]. Some mini-publics also integrate vested interests like advocacy groups, think tanks and industry associations recognising their epistemic value and influence [289]. Such groups usually have a

narrower conception of the common good, but also have deep (if skewed) knowledge of, and passion for their causes, that can improve deliberative performance [290]. To manage their benevolence conflict, they can be included as specialist witnesses or minority participants. Potential later resistance to unfavourable mini-public outcomes can also be neutralised by their 'buy in' to an epistemically well-rounded process. Taken together, these characteristics should produce superior, more competent outcomes in comparison to existing consulting/informing relationships.

- Independent process oversight is not definitional to mini-publics, but often used [75,291,292], especially in Australian PB's [272]. External parties such as universities or trusted community groups are often used to validate process fairness and informational neutrality. The willingness of government to install third party safeguards to oversight process and framing to prevent manipulation and maintain political equality is perceived as an act of good faith in the partnership. Such processes provide cues for benevolence, especially when introduced early in the partnering cycle [293]. Trust and procedural justice, demonstrated by power sharing between government and citizens, appear to be intimately linked in case studies [294] and US and European survey data have confirmed this link between trust and process [295].

The power sharing nature of partnerships is primarily exhibited in the influence aspect of deliberative democracy. The charge of a mini-public to deliver an outcome on an influential public policy issue has the effect of equalizing power between participants and technocrats and of motivating citizens to take their work seriously [296]. Participatory Budgets achieve competent power sharing for the common good even more consistently. Their intrinsic concern with concrete matters of money and finance result in tangible outcomes with real influence. Combined with 'baked-in' citizen oversight, PB's distribute power between government and citizens more evenly than deliberative forums on abstract subjects like strategic plans, and with less cherry picking of outputs by governments [297]. The cyclical nature of budgets also makes them highly appropriate for ongoing partnerships [298,299], countering critiques that mini-publics are isolated and opportunistic [128,300]. In practice, not all PB's realise the full potential for a partnering relationship with government through inadequate framing, incomplete deliberation, insufficient power sharing, or lack of repetition. Appropriately called 'consultational' these PB's fall short of full partnership by leaving final allocations to officials, using uninformed opinion based allocation, or allocating insignificant fractions of expenditure [301][10]. This disempowerment [302] can eliminate any trust gains by citizens [303], and lead to government officials believing citizens lack competence [304].

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[10] In essence, having fallen short in all of the influence categories (Spread, Scope, Scale, Specificity, Stay and Say) proposed later in this thesis (Section 4.2.1)

With the suspicion that a change to the existing system can increase trust [305], and with all the characteristics of partnership in place - is there direct evidence of it occurring? General social trust [276,278] as well as interpersonal trust [253] have been found to improve post deliberation, and voters have assessed the outputs of deliberative mini-publics as more competent, benevolent and trustworthy than state legislatures [180,306,307]. The effects of PB's on trust are much less well investigated [262], with only one study conducted that found a statistically significant improvement in political trust [308,309].

3.5   Contribution of the PhD thesis

In this chapter the relevant literature from four fields, sustainability, public participation, trust, and deliberative democracy has been reviewed and linked. The picture that has emerged is of possible links between citizens' desire for a partnership with their governments being key to boosting political trust and coping with the wicked problem of sustainability implementation. The literature indicates that a partnership that infuses government budgeting with reasoned dialogue and the collective judgment of citizens, has the highest chance of meeting these goals. There is a clear need to confirm the influence of a high partnership intervention on political trust, and use this to understand partnership and trust dynamics more deeply.

This need is filled by taking the six publications of this thesis as one cohesive body of knowledge, which makes the following contributions to the existing knowledge in the four fields:

- The confirmation of the importance of partnerships as the preferred level of citizens'– government engagement on the Arnstein Ladder;
- The development of a new theoretical concept, namely of vicious (Consultation Governance) and virtuous (Partnership Governance) cycles of political trust;
- The analysis of two deliberative PB's, showing that they were very strong deliberative democratic mini-publics that met citizen expectations of partnership, increased political trust and partially validated the virtuous cycle of trust;
- The exploration of the nature of partnership relationships amongst citizens and between them and government and how the design, processes and execution of the deliberative PB's fostered these relationships;
- The practical prescription of approaches and principles to address wicked problems generally and specifically those related to sustainability through deliberative mini-publics.

The following Thematic Discussion Chapter outlines how the above claims are achieved.

Chapter 4   Thematic Discussion

This chapter has two purposes:

Firstly, it uses the foregoing literature review in proposing a framework to explain the dynamics of why political trust increases or decreases through two models. Section 4.1.3 outlines a model describing the dynamics between government action and public participation that causes political trust to decrease. A model with alternative dynamics where government action meets public expectations of participation that causes political trust to increase is described in Section 4.1.4.

Secondly, it provides a thematic discussion of the results of the case study interventions from various publications that test the value of the models. Section 4.2 assesses the deliberative democratic PB's as an intervention that could change the dynamics from one model to another (Publication III, V and VI). Section 4.3 considers the results of the intervention on participation (Publication V) and trust attitudes (Publication III, VI). Publications III, V and VI can be found in full below as part of this thesis.

4.1   The Dynamics of Public Participation and Trust: A Framework

Since the earliest days of the study of how government creates and enacts policy, the idea of a sequence of predictable steps or stages that are cyclically repeated by government to address issues has been dominant [310,311]. The usefulness of this conception has been challenged with claims of it being oversimplified [312], but very few scholars reject the idea of a policy cycle, and instead call for improvements and incorporation of extra features to make it match reality more closely [313]. The framework described here, naturally uses a policy cycle similar to that accepted in Australian policy theory, with an emphasis on problem solving of issues and public participation in the process [314] to reveal the dynamics of a local case study. With some modification, it will likely apply outside of Australia to similar technocratic democracies.

To assist the reader in understanding the relationship between the government policy cycles and political trust, the model is built in two stages. First the idealised policy cycle ("Consultation Governance Action cycle"- Section 4.1.3) is described, and then the consequences of these actions for political trust is explored ("Consultation Governance Trust Cycle" Section 4.1.4).

4.1.1 A Model of the Policy Cycle

The consultation governance action cycle shown in Figure 3 is typical of western governments following the ubiquitous New Public Management performance movement of the 1980s [229,315,316]. It represents the actual patterns of behaviour of a typical community engagement cycle for governments that centre their relationship with citizens on peripheral informing and consulting [317,318].
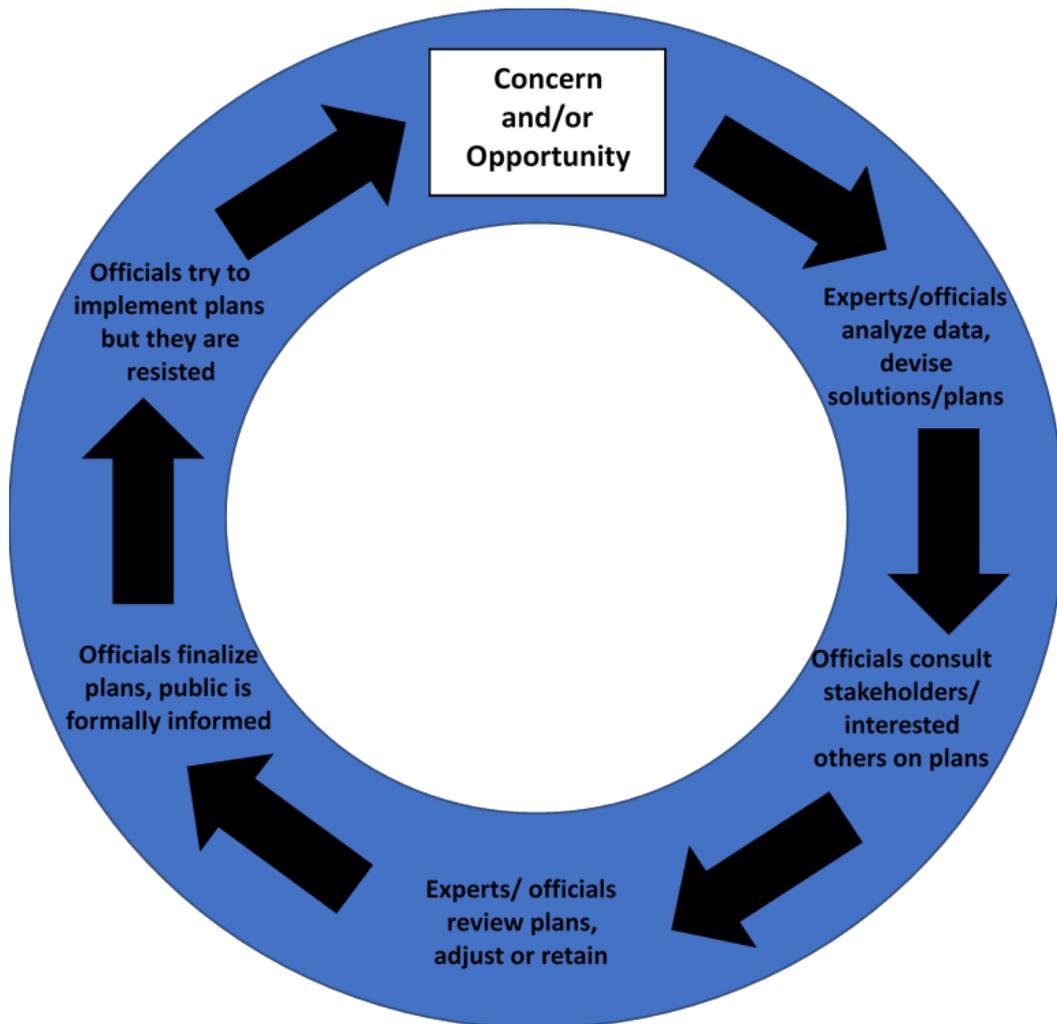
Figure 3 - Consultation Governance Action cycle

At a given point in time a problem appears, or an opportunity arises initiating the cycle. This problem recognition/issue selection or invention/initiation stage is universal to most models [313,319], and rarely involves the general public in the framing of the problem other than in a superficial, non-deliberative manner. Sometimes consultants and outside experts play a role in providing data or suggesting solutions, but governments usually rely on internal processes managed and run by public officers who decide what is the appropriate data to gather, what is the 'best' design process to develop a solution, and what is the 'best' solution. At times,

regulation or political prudence requires [314,320] government officials to interact with interest groups, stakeholders and/or the general public to provide feedback on their proposed solution. Since the participants in this feedback process are either chosen by the government or self-selected through particular interest or specific knowledge, the diversity of citizens and interests that participate in this feedback is invariably very narrow and often based on self/organisational interest.

The next phase involves possibly making modifications to the proposed solution from the feedback, but this is often unstructured and non-transparent. Regardless of whether the proposal is modified or not, it is inevitably released to a public that, just as inevitably, is unlikely to have been involved to date. In some cases, the next stage of implementation of the solution/plan is untroubled, but often the proposals or implementation are met with dissatisfaction, resistance, inefficiency, unintended consequences and sometimes public demonstrations of anger and rejection [318,321-323]. This is often motivated by various sections of the public feeling dissatisfaction, rejection and even anger with their government. The likelihood of such negative public responses is growing because of a more empowered public, willing to voice its dissatisfaction with government [14,15], and the increasing frequency of consequential, unpredictable complex or 'wicked' problems that beset our unsustainable civilization [99,103](Publication I, III, IV). Regardless of the result, the consultation governance action cycle repeats - either with a continuation of the existing problem (which is likely to be now further complicated), or a separate problem/opportunity which is dealt with in the same manner.

4.1.2 The Policy Model and Trust in Government

As discussed in the literature review above, there is general dissatisfaction with the outcomes such cycles create [321,322,324]. The reasons are related to the larger issues of diagnosing the current dissatisfaction with mature democracies. Diagnoses range from the pessimistic (an increase in apathy in citizens - particularly younger ones) to the optimistic (a morphing of political action into alternative modes) [325]. Ercan et al. [325] also posit a parallel causation that disconnection at multiple levels (within government, within the public sphere, between government and citizens) across the system is a powerful force. This thesis supports their idea, particularly in the area of the disconnect between government and citizens. In this interpretation, the policy cycle is ineffective because it does not sufficiently connect citizens and government. This disconnect also degrades trust in government. However, before moving onto this, a further point beyond disconnect should be made in light of the literature reviewed on wicked problems and sustainability. The cycle described below is likely to be effective in the case of 'tame' policy problems. Having problem attributes that are simple/non-consequential/non-novel/well-defined is adequate for the cycle described in Figure 1 and for an informing/consulting

relationship. However, as discussed in Section 3.1, using this approach for wicked problems will lead to non-resolution, ineffectiveness and consequent dissatisfaction.

This thesis proposes that at various points in this governance consultation cycle, citizens in any way involved with the issue, update their assessments of political trust using the cognitive systems previously described (personal experience, observed experience, social background all processed through affective and Fast/Slow thinking) to assess government benevolence and competence (as discussed in the literature review). These assessments are strongly determined at each step of the governance consultation cycle by explicit or implicit signals about the participation relationship with citizens. When these assessments are compared to expectations of the preferred relationship, then trust accordingly increases or decreases. As was argued in the literature review (Section 3.3) this is an important determinant of political trust – particularly so in a public policy cycle where public participation is one of the few levers government has on political trust. Since the survey data indicates that these expectations of participation are usually disappointed - when the consultation cycle is superimposed on the effects of these disappointments, a vicious cycle of negative trust experiences results. In this manner the description of, and justification for, the vicious cycle can now begin (Figure 4).

Understanding the interactivity of trust dynamics is best accomplished by describing the perspectives of both parties [175,326]. Though we outline both government and citizen viewpoints, our focus is on the citizen perspective, given the nature of the research question, the weight of the data gathered, and the pre-eminence of citizens in a democracy.

4.1.3 The Vicious Cycle Model
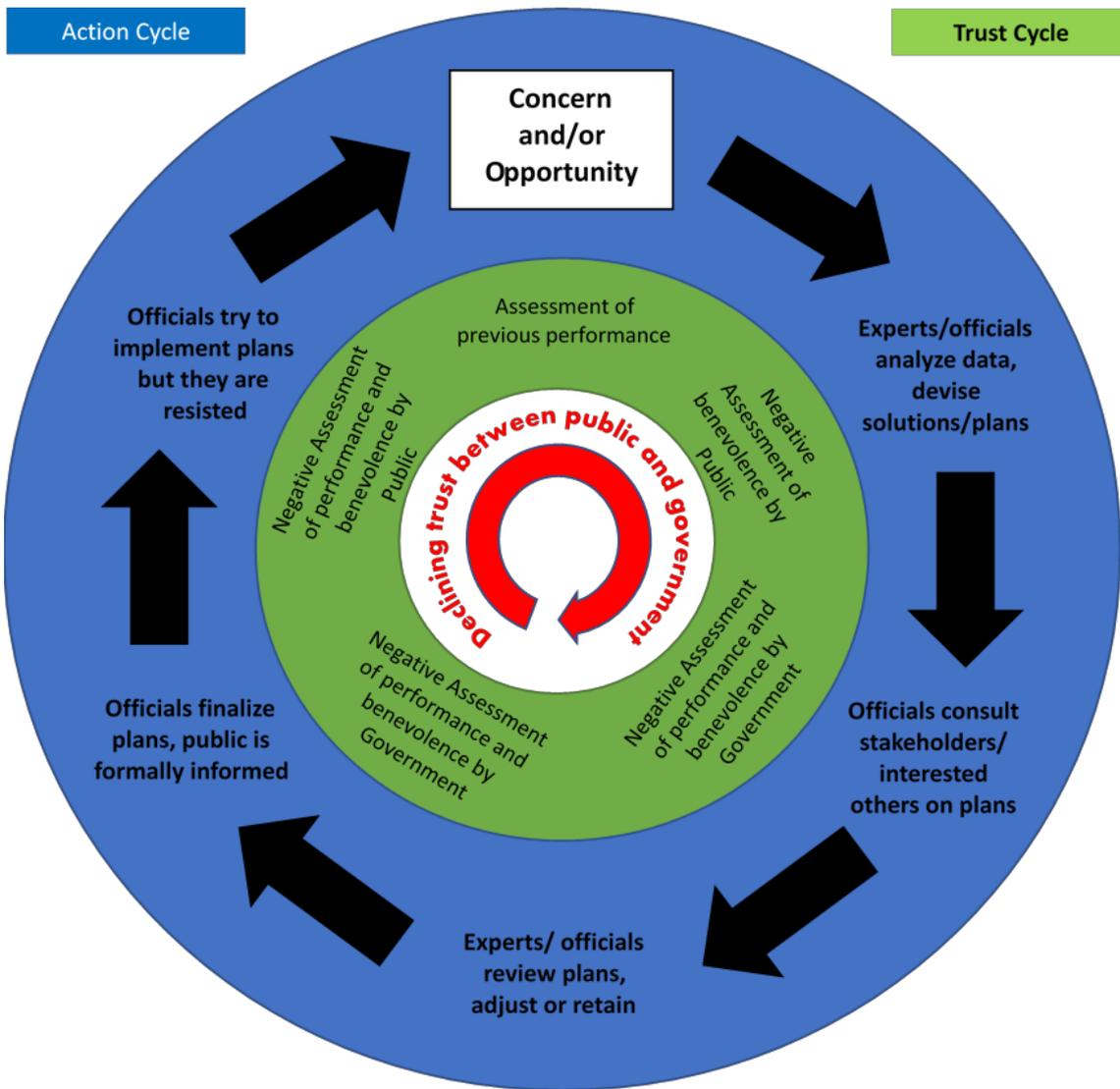
Figure 4 - Consultation Governance Trust Cycle

The problems detected and opportunities grasped in the setting of the policy agenda itself constitute intrinsically political acts [319]; hence they are subject to assessments of benevolence and competence[1]. Through this mechanism, governments can be seen to be incompetent or purposefully ignorant by their selection of a policy agenda. For example, if citizens think the government is not addressing the issues they believe are important in their lives because their government either doesn't care about, or is too disconnected from the average person, then this undermines trust from the start. From then on, citizens' political trust is likely to be eroded, given their preference for a partnership relationship with government. Involving only specialists from the outset would not be regarded as partnership with government, except possibly for those citizens who have a high pre-existing assessment of the benevolence of government. Even in

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[1] Obviously contentious, consequential issues and policies that affect large numbers of people are more likely to have greater effects on political trust than trivial or non-controversial administrative matters. However, the importance of smaller, localized issues should not be lightly dismissed because of the trust-assessing mechanisms outlined previously. Failure to signal competence and/or benevolence in minor matters may be generalized, through Fast thinking heuristics, to overall trust in government.

variations of this stage, where some degree of one way communication to the wider public is incorporated, citizens feel dissatisfied [327]. The following review phase reinforces the lack of partnership, since it predominantly involves parties with sufficient interest, resources or organisation to participate [328]. This absence of participation or transparency can lead citizens to presume that the special interest groups have an outsized influence on the government, swamping the rightful primacy of the broader community interests. In addition to the perceived lack of benevolence, this stage may also provoke citizen feelings that the government lacks the competency to determine and deliver results that align with a broad community sentiment.

Government officials use Fast/Slow thinking and other influences to assess the public's trustworthiness, just as citizens do in their turn. Their interactions with citizens who do not have a particular speciality or interest in an issue tend to leave two impressions. First, that citizens lack the subject knowledge depth and thinking skills compared to passionate advocates and organised interests that lobby government [329]. Second, in a similar manner to the advocates and special interest groups, that individual citizens often act in ways that are either completely selfish or at least narrow in their conception of the common good. Both interactions are likely to degrade the trust of government in citizens. However, its citizens' lack of benevolence towards government that seems to be the major determinant of government trust in citizens, after controlling for individual predilections [330,331]. When one combines these experiences, with constrained time/financial resources, and the belief that trust is overdetermined by performance, government officials may rely on their own aggregation and weighting of views received to represent the common good [332]. This use of official judgements can be effective, particularly for tame problems. However, as the public policy problems grow more complex, it can at best become misleading, and not represent wise public judgement - even when supplemented with tools, such as focus groups and opinion polls [100,333,334].

During the following phase where solutions are reviewed and finalised, political trust is likely to further degrade. The absence of transparency about the process for incorporating and responding to the feedback received, means Fast thinking shortcuts can insert a vacuum of benevolent intentions or even ill intentions into this space. When the announcement phase of the plan or solution follows, it is often perceived by the broader public to be an abrupt communication of a significant change that does not represent their inputs [335]. Citizen expectations of partnership are confounded by being 'informed' instead, and the public displays of dissatisfaction confirm government officials' view that citizens are narrow, irrational, and lack competence [336]. Naturally, this can lead to feelings of anger and rejection among public officials who may become cynical and unwilling to risk further public interaction [318]. These dynamics would explain surveys showing government officials have more trust in government than in citizens [184], and that they rate public participation efforts higher than do citizens (Publication V)[21].

48

So, if each of the aforementioned steps in the consultation cycle has the potential to dash citizens' expectations and reduce trust in government, then it is hardly surprising that the public becomes unwilling to be vulnerable to top-down government decisions [337]. This unwillingness to be vulnerable manifests generally as resistance to the implementation of any plans through actions such as impeding operations, activism, legal challenge and delaying tactics or by pressuring politicians directly to change plans [322,323,338,339]. As a consequence, this active resistance at the end of the consultation cycle just fosters government officials' view of the public as narrowly self-interested/ignorant/irrational. As a consequence, the government undergoes a mirrored unwillingness to make itself vulnerable to the public because of their failure to show benevolence or competence. Even if government's solutions to the problem enjoy some objective success, the failure to convey benevolence throughout the process tends to undermine any overall gains in trust that could have been made. Such an over-focus on performance would at least partially explain the failure of the New Public Management movement to reverse declines in trust.

As consultation governance cycles reoccur and this history of disappointed expectations of benevolence/competence persists, citizens will manifest as a judgment of lack of integrity, which then strengthens negative cognitive heuristics [340] Perceptions will grow that the trustee (the government) operates under principles unacceptable to the trustor (the citizens) [341]. Actual outcomes and any competence demonstrated will matter less and less, and emotional, affective mistrust will grow [220]. This can manifest as a blanket cynicism about government intentions and this reflexive shortcut becomes a higher and higher barrier to building trust [166]. The use of such mechanisms means that the consultation cycle starts with a lower and lower baseline of political trust each time [342], undermining any attempts to engage in the type of relationship citizens prefer.

This downward spiral would be difficult to arrest given what we know from psychological and social studies of trust. Humans seem to exhibit asymmetries in trust, i.e. most people have an imbedded caution and distrust of their fellow citizen [343]. Additionally, experimental subjects using Fast thinking over-attribute the role of self-interest in others behaviours, and systematically overestimate their own benevolence [344]. Both of these biases will negatively affect assessments of trust, leading to the coining of the phrase 'bad is stronger than good' [345]. When this is combined with the well-documented aversion to loss in risk situations [346], it becomes apparent that a negative trust experience is much more powerful than a positive one. Hence, trust is likely to degrade rapidly in response to disappointment [346], and deficits are slow to heal [231] and difficult to redress [175]. This has led to the coining of the phrase: *"Trust comes on foot and disappears on horseback"* [346]

With this pessimistic picture of citizens and government continuously failing to live up to the expectations of the other, it should be no surprise that there is disengagement [147], reduced voting [254] and disgruntled attitudes toward government [347]. However, there is good reason to believe an intervention into these dynamics is possible to create a more virtuous cycle where both parties are more willing to be vulnerable to the other – the basis for this belief and the details of the intervention are described in the next section.

4.1.4 The Virtuous Cycle Model

One of the central hypotheses of this thesis is that changing the relationship between government and citizens to one more focused on meeting citizens' expectations of partnership rather than consultation, should[2] create a different, positive, trust dynamic. Such a governance cycle would allow improved performance to be more strongly associated with trust gains [56] and create an altered, self-reinforcing dynamic where good processes would likely lead to improved outcomes, and good outcomes would make it easier to have better processes [228,348]. This section provides support for this hypothesis and describes the intervention type. It then moves on to describe how such an intervention would change the model dynamics.

There are good theoretical reasons to believe that such positive dynamics can be engineered. Normatively, participation at a partnership level is expected to produce a stronger [118,349] and more just [350] democracy. Citizens show greater satisfaction when they believe that their input is being taken seriously [351] and government administrators also have confidence that citizen input will increase trust [352]. There is also empirical evidence of a connection between trust and those elements of partnership that signal benevolence. Political trust in government has been linked to process elements such as perceptions of fairness [179,353], institutional transparency [232] and the use of more deliberative and participative techniques [119,309,339,353].

There is also support for links between trust and elements of partnership that increase perceived competence. Several authors have argued for, and demonstrated that, partnership relationships allow citizens and government to bring their informational perspectives to a complex problem in a politically equal space, which creates epistemically superior outcomes [137,275,290,354]. These types of complex problems are very common in public policy that involves a plurality of values and where any decision will alienate some group that holds different opinions. The role of the government in these cases is first to identify the relevant public values, understand them, discern how they conflict in this situation, and finally reconcile the conflicting values [59]. Research has shown that addressing this process with a partnership orientation improves the

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[2] Assuming that path dependency or 'lock-in' is not present in the system – which is still a topic of research [221].

perceived competency and legitimacy of the outcomes [81,322,355]. Christensen and Lægreid summarise the overall empirical support for link between the partnership relationship by saying; *"Citizens who are integrated, involved, and engaged in the political system generally have a significantly higher level of trust in most governmental institutions than people who are less integrated, less involved, and less engaged."* [184].

So, if the possibility of a different dynamic is well supported, then what would be the details of how such a partnership-based dynamic could actually be operationalized in a governance cycle? The characteristics of such an operationalisation can be deduced from the definitional work on partnership laid out in the literature review (Section 3.2). As discussed, partnership implies relative power parity between the parties, a commitment to a common goal that is mutually consequential, and significant contributions by both parties to achieve the shared outcomes. These criteria closely match the characteristics and practice of deliberative democracy (particularly mini-publics and PB's), especially in comparison to other democratic modes (see Section 3.4). In the foregoing Literature Review, it was further concluded that a deliberative mini-public PB would be highly effective in addressing political trust deficits.

The mechanism describing how mini-public(s) in a governance cycle can address trust deficits is illustrated in the virtuous cycle below (Figure 5)[3]. This cycle illustrates the particular case of the intervention of a mini-public type partnership since: (a) it has been argued as the most proven implementation of the partnership potential of deliberative democracy and, (b) it was the intervention actually used in this study to improve trust. However, the core of the virtuous cycle is the shift to a partnership relationship between government and citizens and because of this, the following description of the cycle does so by using the general term 'partnership'.

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[3] In the interests of brevity, the entire cycle is presented now that the reader is conceptually familiar with this type of model based on the staged explanation of the previous, vicious cycle.
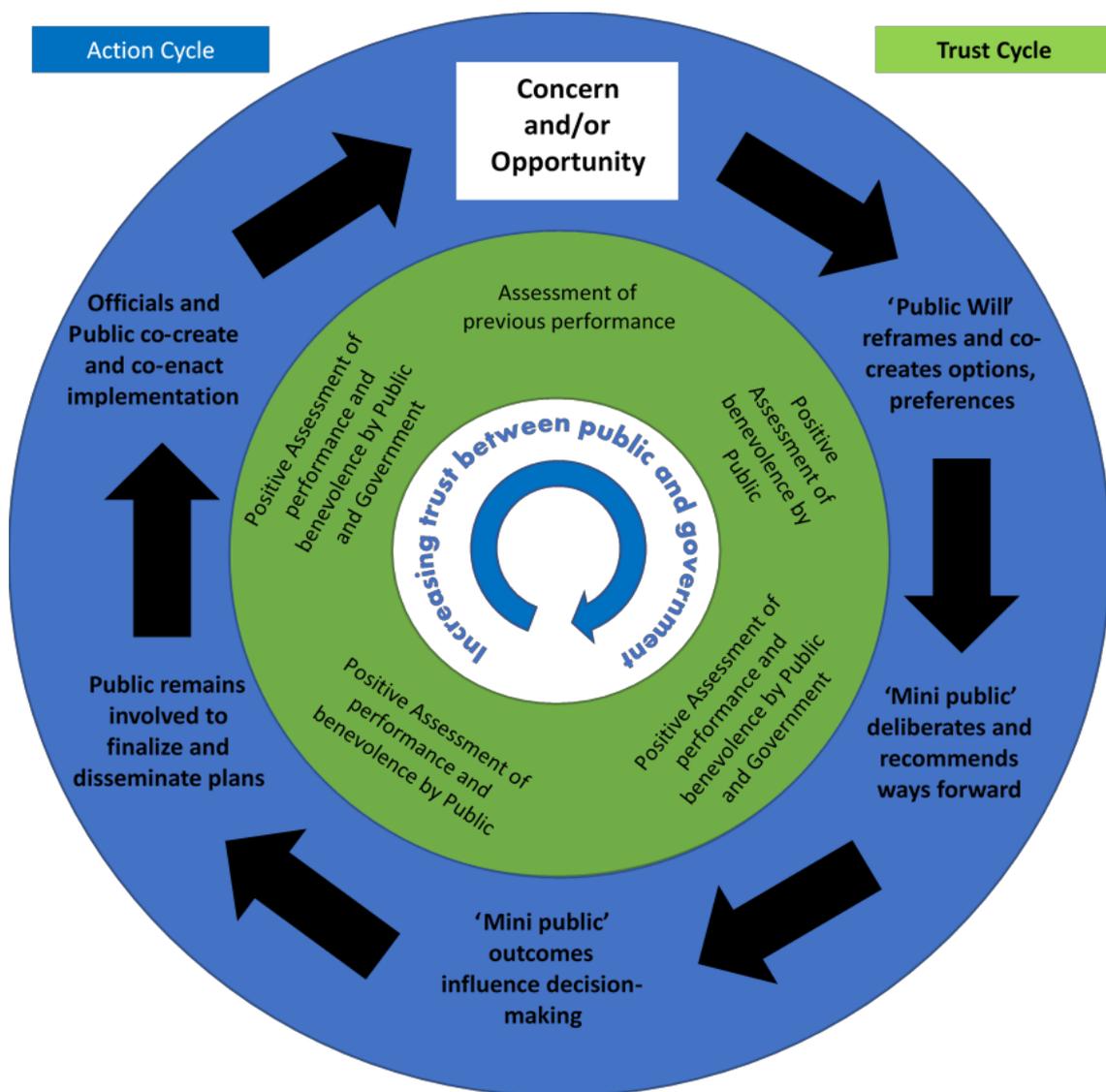
Figure 5 - Partnership Governance Trust Cycle

Like the vicious cycle, the virtuous process (Figure 5) also starts with government awareness of an issue or opportunity. However, instead of uncritically using internal government processes to frame and resolve the situation, government officials first judge whether the issue could be better resolved through a partnership relationship with citizens. As discussed, this would be the case when facing a wicked problem, an issue of pluralistic values, or a matter in which there is a strong expectation of partnership. The intention to share power and the boundaries of that power [229] inform subsequent designs, giving clear expression to the shared power [59,256]. The partnership can occur throughout the governance cycle [259,356], such as problem framing, solution development, prioritization, implementation and evaluation [357,358].

Mini-publics have a history of use and success on their own terms in all these early-stage activities [31,291,307,359]. The use of partnership in the next phase of designing solutions can involve the co-generation of possible options, the co-creation of decision systems to decide between possible options, or the actual delegation of creating a solution to citizens. Once again mini-publics have a track record in activities of this phase ranging from planning problems to constitutional reform [265,292,360]. In the closing phases of implementation or evaluation/review, the partnership might involve sharing in the task of rolling out programs into the wider society, sharing the creation of metrics for the evaluation of the success of such programs, or even an independent citizen review of the success of solutions. Mini-publics have undergone the least development in this phase, though there is some evidence of this [357,358].

Although this 'ends' the cycle, in practice the issue/opportunity is rarely tied up neatly. As hinted at in the vicious cycle, the issue may only be partially resolved, the proposed solutions may depend on other parties or factors outside the control of government, or conditions around an issue can change even over the course of a planning cycle. For the most wicked of problems, no solution may be possible – only an iterative series of interventions and learnings [5,361]. Citizens may remain involved in the monitoring and assessment of the solution, or through a recalled or fresh mini-public to re-examine the recommendations if sufficient ground has shifted in a policy area. Through these ongoing partnerships, mini-publics can create the public value [362] often necessary for the class of problems where one-off ventures are rarely sufficient.

As this virtuous feedback cycle repeats, the effects of meeting citizen expectations of participation accumulate, and the iterative assessments of benevolence solidifies into a sense of integrity – an ethical expectation of behaviour and keeping of commitments [54]. This in turn feeds back into the assessments of trust of both citizens and government, and creates a positive mirror of the vicious dynamic. This has been reflected in interpersonal trust research which has shown that repeated iterations of positive trust experiences build affective trust components [220], leading to a long-term merging of identities from an 'us and them' to an 'us' identity [363,364], which can significantly improve trust [184]. No researchers have observed directly political trust changes in response to repeated iterations of the participation relationship in the virtuous cycle because such a style of governance remains rare and singular. As discussed in Section 3.3, in the few singular instances where political trust was tracked in partnership-type governance, it was generally an improvement on the consultative-type, business as usual processes [53,180,251].

In this section, the groundwork laid down in the literature review was used to describe and justify two systems which show how different participation relationships between government and citizens set up dynamics that cause trust to continuously degrade or improve. Now the thesis is well positioned to examine the results of the case studies described in the Methods

section. The case studies can be seen as representing interventions in the Consultative model with the goal of shifting it toward the Partnership model, and providing plausible explanations why- or why not- shifts in participation and trust did or did not occur.

4.2 Deliberative Democratic Results

As was described in Methods Section, measurement of the quality of the case study intervention as a partnership was done through three deliberative democratic criteria – Influence, Deliberativeness and Representativeness [365]. They are discussed below.

4.2.1 Influence

There is no standard way of assessing the amount of influence that a deliberative democratic exercise [76,85,366] has had. This is partially because influence can be a subtle and subject concept, but also because of a lack of focus on the topic to this point. Such a situation is unfortunate as deliberative democratic exercises generally, and mini-publics in particular, often struggle to be influential. Understanding and assessing influence are also important because the degree of influence of a mini-public should be made clear prior to the delivery of its outcomes. This should be done either because of preventing the disappointments that can come from misunderstandings [367], or to avoid the temptation of having the outcomes ignored or cherry-picked during implementation [297].

Limitations on influence are sometimes natural ones, dictated by geographical or national boundaries; cultural ones such as heads of power of government departments; or political ones such as desires for control of potentially unfavourable decisions. Considering, the importance of the Arnstein Ladder to this thesis, it would seem an obvious candidate to assess influence as power (or influence) is the key factor that separates the rungs [317]. However, it falls short on the widest scale because it only assesses the power sharing within the remit of the government unit that is engaging in participation. A small local council and national government can participate on the same rung of the Ladder, but it could not be argued that the decisions have the same influence on the wider world. To remedy this deficit and fully assess the extent of the influence of the PB's, this thesis frames influence as limitations in either spread, scope, scale, specificity, stay or say[4] (Figure 6).

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[4] These terms are primarily chosen for alliterative reasons.

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                    ┌─────────────────────┐
                    │     Influence       │
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│Spread ││ Scope ││ Scale ││Specificity││ Stay  ││  Say  │
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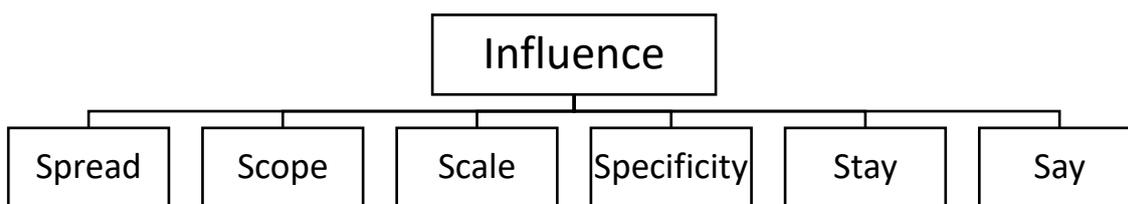
Figure 6– Limitations in Influence

'Spread' describes the absolute reach of the sponsoring government to create the mini-public. This is usually the geographic boundaries of the government, whether municipal (city), regional (provinces), national (states) or even supra-national (continents). This category exists to address the absolute numbers of people being influenced by the outcomes of the mini-public, but is outside the control of the government – in comparison to the following categories. 'Scope' relates to the range of government activities and issues that the mini-public is permitted to affect. For example, a mini-public involved with a local government statutory land-use plan will be limited to giving recommendations that only apply within that local government area under the head of power of the local government. 'Scale' concerns limitations on the amount of influence within an issue or activity that a mini-public can have. Continuing our example, the mini-public may only be permitted to examine the land classification codes or the conservation areas in a land-use plan. 'Specificity' refers to how specific the outcomes from the mini-public are permitted to be. An example in the land-use plan might be the requirement to only produce a generalised, high-level vision for the whole area subject to the plan, as opposed to detailed codes for suburb level developments. 'Stay' is the longitudinal longevity of the influence – i.e. how long does the effect of the deliberative democratic exercise persist, both within its own terms and remit, but also more broadly on governance? This may be the length of time of currency of a strategic land use plan (e.g. 5 -10 years) or the number of times the plan is created through a deliberative mini-public (whether it becomes institutionalised). Finally, 'Say' encapsulates the actual degree of unfiltered implementation the mini-public outcomes will have (e.g. none, possibly some, or total). An obvious framework to characterise 'Say' would be the already discussed Arnstein Ladder; and an illustration in the land-use planning example would be for a government to acknowledge the mini-public recommendations, but not to be bound by them.

Each of these categories of influence can now be assessed for the two PB case studies.

Spread

The City of Greater Geraldton oversees 12625 km^2 containing around 37000 people, including a regional centre. This puts it in the middle range of local government areas in Australia by population and size, but it is small by international standards. The spread of influence is included here only for completeness. The main concerns of this thesis –trust in government and public participation – are dominated by the level of government most relevant to the citizen when they assess the trustworthiness of that government. Additionally, the type of public participation so important to determining trust is overwhelmingly controlled by a discrete, single level of government. In this way national and international comparisons are interesting at the highest level, but secondary to the fact that the spread of the influence was the absolute extent of the CGGs' direct control.

Scope

The scope was the highest possible with all the services for the next financial year and the infrastructure projects for the next ten years provided by the CGG within the remit of the PB's. This represents the full extent of the scope of the CCG operations within its boundaries.

Scale

Within this scope, the PB's reached their maximum scale by examining all budget items under the control of the CGG with two exceptions. Firstly, due to commitments following the furore over the previous year's rate rises, the Council had undertaken to only raise rates (a revenue item) by 5.2% and the Range and Level of Service Panel were asked to accept this as a fixed assumption for their deliberations. Secondly, due to time constraints, the Capital Works Panel was initially asked to prioritise the CGG Executive Managers' top 70 projects rather than the hundreds possible, although eventually a total of 133 projects were assessed, including 45 community nominated ones. Despite these exceptions, the CGG PB's had the greatest relative scale of any PB to date; making recommendations on 100% of both the operational and infrastructure budget of the local government region.

Specificity

Any PB's (whether mini-public based or not) are often limited in their scale and scope with the amounts they deliberate upon being typically relatively low – single digit percentages of the total budget, but have shown themselves less vulnerable to having their influence undermined by lack of specificity in the past [299]. This is likely due to their concrete subject matter - spending and revenue are precise dollar figures usually attached to specific services and this seemed to also apply to the case studies.

56

The specificity of the influence could be classified as medium to high for both PB's. The Range and Level of Service PB made recommendations of either increase, decrease or hold steady the resourcing of the 35 service areas and these are summarised in Figure 7 [368]. The detailed list also included specific actions attached to each recommendation as well as the underpinning reasons. All of the service level changes were also prioritised against value-based criteria, in case there were insufficient funds to implement all of them. These outcomes were designed into the process from the outset, but additional detailed suggestions on how to improve each service area emerged at the urging of the Panellists and were also included – against the advice of the CGG CEO.

Recommended Direction	Service Area
1. Service areas where an **INCREASE** in the service level is recommended.	1.1. **Asset Management:** Develop a rating system for assets, and monitor assets. 1.2. **Land Development:** Increase selling and buying of lots. 1.3. **Land and Leasing:** Increase building maintenance services. 1.4. **Rubbish Collection:** Investigate recycling options for organic waste, and educate the community about current recycling and waste reduction options.
2. Service areas where a **DECREASE** in the level of service is recommended.	2.1. **Aquarena:** Reduce service in winter months. 2.2. **Operations Support:** Review vehicle requirements. 2.3. **Parks:** Reduce maintenance and care of parks.
3. Service areas where there was a **SPLIT VOTE** on the service level provision.	3.1. **Community Engagement** 3.2. **Library** 3.3. **Mullewa Town and Community**
4. Service areas where the level of service should **REMAIN THE SAME with a DIFFERENT FOCUS.**	4.1. **Planning and Design** 4.2. **QPT** 4.3. **Community Development**
5. Service areas where the level of service should **REMAIN THE SAME.**	5.1. **All other services**

Figure 7 - Range and Level of Service PB recommendations summary

The Capital Works PB Panel created a quantitative scoring system for consistently and fairly comparing capital works, as disparate as runway extensions and youth centres, across 6 criteria, as well as assigning a weighting to each criterion by importance. Prior to weighting, the criteria were created through consensus discussions on what the mini-public collectively valued most about living and working in the city-region. This particular design acknowledges the idea of "public values pluralism", which is based on the truism that "nearly all controversies boil down to choices among competing values" [59]. These choices are sharpened in the zero-sum constraints of budgeting where value has to be assigned to each activity vying for constrained resources. The CGG CEO preferred the criteria be developed from the Bruntland-based

economic, environmental, social, cultural and governance sustainability pillars the City had adopted [369]. After deliberating on the possibility of a philosophical shift to these pillars, the Panel resolved to stay with their own criteria. The CGG executive managers decided to independently rate all the infrastructure projects using their pre-existing criteria via their own process. Although the final lists of prioritised projects developed did not significantly differ in their ranking, the presence of two different rating systems held the potential to undermine the potential influence of the Panel recommendations (i.e. the CGG Council now had cause to dilute or be selective regarding their adoption of recommendations).

The following summary of the recommendations to Council shows how the Panel handled this potential for the influence to be undermined. They recommended that Council:

1. *Accept the Panel's criteria system and rankings.*
2. *Rank the projects using both the Panel's system and the Executives' criteria and normalise them with equal weighting to create a combined priority list with Council able to also access both lists to assist debate.*
3. *Support future participation through repeating the Panel process in 2-4 years, using existing Panellists to monitor implementation every six months, and disseminating information about the process and outcomes to the wider public.*
4. *Use deliberative processes in future PB mini-publics such as value based criteria, political equality, informed discussion and process flexibility.*
5. *Ask the executive to revise their criteria to include aspects of the Panel's Criteria and their own knowledge about any gaps such as the areas of safety and governance.*

[370]

Figure 8 shows the scores for both the Panellist and the CGG management as well as their combined value when each was equally weighted. This implies the mini-public recognised the experience and knowledge of the CGG management and decided to acknowledge this expertise by recommending an equally weighted combination of the two systems be adopted. Thus, the overall specificity of influence was maintained.

Project Submissions for the 10 Year Capital Works Plan

*Capital Works Projects proposed and submitted by the community.

Project Priority	PROJECT TITLE	Panel Values Scoring (50% overall) +	City Functions & Governance Scoring (50% overall) =	Total Scoring
1	Mobility impaired access upgrades	46%	39%	85%
2	Beresford Foreshore Coastal Protection	38%	45%	83%
3	RV Facilities Upgrades - Ellendale Pool	39%	43%	82%
4	Extension Runway 03/21, Taxiway Alpha and Apron including Runway Lighting	40%	41%	81%
5	Mullewa Youth Centre	43%	37%	80%
6	Rural Road Upgrades - Annual Program	40%	38%	80%
7	Mullewa Staff Housing - Annual Program	34%	43%	77%
8	Installation of Satellite Based Aircraft Transponders	37%	40%	77%
9	Upgrade to Mullewa In-venue Family Day care Service	42%	34%	76%
10	Purpose built archival storage facility	36%	39%	75%
11	Chapman River CARE Project - Annual Program	38%	37%	75%
12	Intersection Upgrade - Maitland Street and Durlacher Street (Service Relocations & Civil Works)	36%	38%	74%
13	Greys Beach Coastal Protection	30%	44%	74%
14	Meru - Community Reuse & Recycling Centre (CRRC)	39%	35%	74%
15	Pathways - Annual Program	39%	34%	73%
16	Street Signs Annual Program	34%	38%	72%
*17	Welcome signs, sculptures, flags at the north and south entrance to Geraldton	31%	41%	72%
18	Candlebark/Sunnybanks Sump	33%	39%	72%
19	Mullewa Railway Precinct – Water Tank	30%	41%	71%
20	Aboriginal Cultural Centre Mullewa	42%	29%	71%
21	Foreshore Drive Two-waying	35%	35%	70%
22	Renewable and Energy Efficiency Program - Annual Program	38%	32%	70%
23	Intersection Upgrade - Cathedral Avenue & Chapman Road	31%	39%	70%
24	Intersection Upgrade - Place Road & Hibbertia Street	32%	37%	69%
25	Youth Hub	42%	26%	68%

Figure 8 – Final 10 year Capital Works project ranking (first 25)

Stay

The temporal persistence of the influence ('Stay') was mixed – both by the terms of PB's and the wider governance. On its own terms most of the recommendations of both Panels persisted for the stated or implied durations. The Range and Level of Service recommendations were used for the next financial years' budget, and the prioritised list of Capital Works projects for the 10 years until 2024 appear to be adhered to at the time of writing.

There were several other PB recommendations, mostly outside budgeting allocation, but rather aimed at longer-term reform of the governance policy cycle, where the PB's were less influential. Additionally, the first recommendation by the Range and Level of Service Panel that *"…councillors of every ward to publish a list of services they are supporting, so people can decide who to vote for, based on what services they want to increase/decrease."* [368], was not implemented. Also, second specific recommendation that the Capital Works Panel be reconvened every six months to check on implementation did not occur in full, although in late

June 2014, a group of five Panellists was briefed by the Finance Manager on the implementation thus far. However, the outcomes of this meeting are unknown. Nor is it known if this was a one-off meeting. The other specific recommendation from both Panels that similar PB's be reconstituted within the next 2-4 years under specific deliberative conditions was partially implemented. In March 2015, a two-day PB was convened to examine the operational budget for the coming year but the rationale was a larger than expected infrastructure asset deficit and reduction of state and commonwealth grants [371]. This met the criteria to be considered a Participatory Budget and included 11 members of the previous PB's; however, Table 4-1shows that it fell short of the standards on representation, deliberation and influence set by the 2013/14 PB's [372-374].

Influence	Deliberation	Representation
Reduced Specificity – choice of which services to cut versus change to levels of service.	Reduced use of values based criteria – Services framed using the CGG-value sustainability framework and no use of rating criteria in decision to cut services.	Reduced descriptive representation. Only 1/3rd of participants were randomly selected, non-aligned citizens.
Reduced Scale – no consideration of infrastructure and only 98 of 130 services examined.	Reduced time to deliberate according to feedback and amount of time allocated to decisions in agenda.	Similar difficulty in mirroring demographics – participants were predominantly older and white.
Same Scope – all within the CGG boundaries.	Same degree of equality of speech and neutrality of information according to surveys	
Same Stay – one financial year.		
Reduced Say – no pre-commitment to implement or engage with PB recommendations.		

Table 4-1 Deliberative Democratic aspects of the 2014/15 PB compared to the 2013/14 PB's

It is quite possible that the 2015 PB was appropriate for the changed situation but it is also clear that it did not reach the same level of partnership and does not represent the full realisation of the 'Say' of the 2013/14 PB's. Since this time (in the last five years) there has been no further PB conducted by the CGG.

The wider, institutional influence of the CGG PB's on the use of deliberative democracy at the CGG and beyond is mentioned here for conceptual completeness, but any conclusion is beyond the scope of this thesis.

Say

The actual final effect of the outputs of the PB's (the 'Say' component) was very high – at least in the near term. The ground was set by the use of best practice for securing influence with a clear pre-commitment made in the September 2013 Council meeting. This resolved the CGG to:

1. *Seriously consider all recommendations made by the Community Panel;*
2. *Implement recommendations wherever feasible.*
3. *Where a recommendation or recommendations cannot be implemented, Council will clearly communicate the reasons to the Community Panel and the broader community; and*
4. *Where a recommendation or recommendations cannot be implemented, Council will seek to understand the intent of the recommendation/s and work with the Community Panel to find other ways to fulfil the intent.*
5. *Retain the power to veto any or all recommendations made by the Community Panel.*

[368]

This was the maximum say that the Council could extend given the Local Government Act's prohibition on the delegation of budget making. Given this constraint, its most important assurance is that of engagement in reason giving deliberation and working toward implementing the spirit of the recommendations. This shows an intention to give citizens influence in the face of uncertain outcomes and squarely locates the PB's as partnership and below the delegation rung on the Arnstein ladder. Whether the actual relationship could be characterised as partnership in practice is confirmed in the examination of the quantitative and qualitative data in Section 4.3.

With the ground prepared for a high degree of 'Say', did the ultimate influence match the prior commitment? The recommendations of both PB Panels [368,370] were endorsed by the Council and the CEO was directed to use them to structure the upcoming annual budget as well as the future infrastructure spending. There was no public or elected official dissent to these budgets (Publication II) in spite the contentious financial situation of the previous year [44,375,376]. The Special Budget Meeting devoted to the passing of the annual budget contained agenda items allowing elected members to speak to matters of the budget followed by verbal submissions from visitors in the public gallery. These speakers uniformly praised the legitimacy, efforts, and integrity of the PB Panellists and the process. The limited dissenting opinions focussed on the perceived failure to reduce administrative inefficiency and the final vote to approve the budget was unanimous [377]. This aligns with previous findings regarding the importance of process on whether public participation events generally, and PB's in particular, are influential [297].

Taken together then, the 'Say' was in line with the initial government commitments[5], consistent with the mini-publics' recommendations[6] and entirely influential over the budgets of that financial year. Over the longer term, its influence has diminished.

| **Scope**
Range of budgetary areas influenced by outcomes | 100% - All Services and Infrastructure | | | |
Scale Reach of outcomes within budgetary areas	All Services		All proposed Infrastructure for 10 years	
Specificity Degree of detail of outcomes	Direction of Level of Service	Service level suggestions	Combined Weighted Rating system	Prioirtised list of projects
Say Amount of implementation of outcomes	Commitment to implementation, justifiation or further efforts	Implementation of all recommendations	Commitment to implementation, justifiation or further efforts	Implementation of all recommendations

Figure 9 – Influence of the CGG PB's

The key criteria for assessing influence is framed by two questions: Firstly: "How much influence did citizens exert within the bounds of what the government has control over?" (dimensions of Scope, Scale, Specificity, Stay). Secondly: "Of the influence that was promised, what was delivered?" (dimension of Say). Both questions can unequivocally be confirmed as extremely influential (Figure 9); especially in the immediate term and up to the maximum extent permissible by the boundaries and responsibilities of the CGG government. Indeed, a local government would be hard pressed to improve on a power-sharing partnership as comprehensive as this one.

Before moving on to examine the deliberative and representational aspects of the mini-public interventions, it should be noted that although the influence in the "Say" dimension could conceivably be higher (delegation or citizen control) this would not necessarily be beneficial

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[5] The specific service-level suggestions which the Range and Level of Service Panellists produced in the face of CEO's request not to, were considered not subject to the original commitment and it is unknown the extent to which they were implemented. Interviews with management indicated that they regarded most of these ideas as interesting but likely to be unviable due to complications springing from a lack of specialist knowledge and experience by the Panellists in the details of service operations.
[6] Since the Panels made recommendations regarding the repeating of the deliberative mini-publics their discussion in the 'Stay' section would also crossover into the 'Say' section. This is a peculiarity of these cases studies as mini-publics do not typically make recommendations on governance reform unless specifically requested to.

62

from a trust building point of view. Relative equality of power is an important part of partnerships that build trust, but so is respect for the contributions of both parties when working towards a common goal. The integration of the Executive and Citizen rating systems, together with the Council adoption of the combined rating system, is an example of the mutual respect and shared power. Both groups had the ability to reject the contribution of the other but instead chose to integrate them.

4.2.2   Deliberativeness

The next criterion to qualify the intervention as a deliberative democratic one is the deliberativeness exhibited by the participants. Successful deliberation is known to be highly context dependent, so care was taken to enable it in the process design and monitor it throughout the implementation of the PB's.

Process Enablers

Some of the ways that deliberation was central to the process are illustrated in Figure 10 [368]. It illustrates the process used in the Range and Level of Service PB, which was structurally equivalent to that used in the Capital Works PB.

Community Panel Deliberation Process

Understanding the territory

1. Understanding Deliberation and Participatory Budgeting

2. Background briefing; what has lead us to this point?

3. Local Government budgeting briefing; understanding the current range and level of services

4. Practicing deliberation and establishing 'rules of engagement'

Deliberating phase

1. Determining the values that should underlie CGG's budgeting system; developing criteria weighting them according to importance, and assessing each service against each criterion to develop a priority listing of services.

2. Using the priority listing, together with other information, eg level of discretion available, service information sheets, presentations and group deliberations - assess each service to determine its recommended range and level given the financial target, and make additional suggestions to improve service delivery.

Recommending and Report writing phase

Collaboratively developing recommendations

Forming the Final Report- documenting the proceedings and outcomes.

'Signing off' on proceeedings and outcomes.

Deeper learning phase

Listening, 'cross-examining experts' and collaborative learning with;

a) the broader public

b) experts (both City and community)

c) each other

Introductory Workshop Dec 2013; 7 Workshops (February and March 2014)

Figure 10 – Range and Level of Service Deliberation Process

A solid basis for rational arguments was created with a learning phase, as well as an inculcation into the culture of deliberation from the start. Following this, an iterative learning cycle was introduced to allow participants to interrogate specialists with the specific questions they were interested in. Prioritisation and ranking of services or infrastructure were accomplished through the collective development and application of criteria based on what citizens valued about living in the CGG. These criteria then formed part of a multi-criteria analysis [47] which was framed by common agreement on shared values. Agonistic disagreement was then based on genuine points of difference rather than misunderstandings. Allowing self-generation of criteria also ensured independence from framing that may intentionally or unintentionally produce an assessment framework imposed by government specialists or administrators.

Deliberation was also encouraged in ways that are not evident in the diagram. These include:

- Recruitment of neutral citizens – Stratified random selection is primarily used in mini-publics to enhance legitimacy through descriptive representation, but it has the additional benefit of increasing the chances of quality deliberation and dealing with complex issues

[378]. With a large enough group, not only can the existing discourses be represented but other less prominent but important points of view brought forward [290,379]. Although citizens can be expected to have positions on topics being deliberated, they are likely to be less entrenched, more 'disagreement curious'[7] [380], and more able to be shifted than those of interest groups or advocates [42,247,381]. This is particularly the case, since there is no fear of the influence these groups may have on their re-election to government.

- Late stage voting – Voting was used as a last rather than first resort of decision-making - its primary use was for the endorsement of the final report. Where possible, the focus was on reason-giving communication and the search for a common position that the group could consent to (e.g. in the creation of infrastructure criteria or the supermajority voting threshold for report approval). Delaying voting avoided creating divisions around winners and losers and stagnation around early attitudes and positions. This opened space for opinions to shift in the light of data and arguments.

- Facilitated, small groups discussion – participants sat at small tables of 4-6 to maximise quality discussion [354] and had a laptop to access deliberation software (CivicEvolution - https://www.civicevolution.org/) which recorded ideas and enabled prioritisations. Each table was attended by a CGG volunteer facilitator who was tasked with ensuring equality of participation and keeping discussions focussed and on schedule. Participant responses to each stage of the agenda, including majority and minority viewpoints, were entered into the table computers which were then aggregated and themed by an independent team of themers. The generated themes were displayed back to the participants and amended and approved for accuracy in a plenary session. The software was also used for real time prioritisation using multi-criteria analysis or, weighted voting, as required. The results of the small groups were calibrated to enable any extreme group findings to be deliberated by all, firstly to ensure whole of group understanding, and secondly, to provide an opportunity for ratings to be changed or not. The findings from each day's agenda were discussed, modified and agreed to prior to their dissemination as a printed Participant Report. This report was used to gather reactions and responses from the CGG to panellist questions or conclusions.

- Internal and External Reflection/Justification: On a macro level, Figure 10 shows that time was made not just for internal reflection on the topics discussed (e.g. what are the values of importance, what is the best level for a service) but also for external reflection and justification [382]. This also manifested in detailing of the reasoning for selecting criteria

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[7] The quantitative results in the following section also showed that there was a moderate spread of opinions on trustworthiness and participation levels amongst the panellists. Previous work has shown that this moderate level of disagreement induces optimal deliberation [380].

and all recommendations, including during the process, in the final report and the presentation of the preliminary results in a public forum to gather feedback [368,370].

Results

These design elements were judged to be successful in fostering deliberation. Post-workshop surveys of the participants after every meeting were based on accepted methods of measuring mutual respect, understanding, informativeness, neutrality, inclusion and equal opportunity for participation [380,383]. These showed that most participants rated highly the quality of their deliberations on various markers, such as: 97% of the respondents said they understood the issues under discussion very well; 93% stated they learnt about the issues and received new information very well or quite well; and all respondents believed they heard differing viewpoints very well or quite well. On average 90% of the respondents were satisfied with any given workshop they attended. The interviews reinforced these quantitative results and also provided explanatory power for the apparently contradictory in-person observations of some passionate and emotional disagreements during workshops (particularly during the clarifying common values and prioritising projects/services phases). These interviewees acknowledged the tensions but accepted the value of alternative perspectives and were confident there were processes and mechanisms present to manage them. Further discussion on this aspect is given below in the qualitative results sections.

Neutrality and deliberative quality were also confirmed by an external monitoring group which observed the deliberations and met with the participants after each deliberation day without any members of the organising/facilitation team present. This Independent Review Committee (IRC) was made up of Council and external community members, including a lawyer and other respected citizens, and was tasked with certifying the process was fair, transparent and egalitarian, and used comprehensive and unbiased information.

4.2.3   Representativeness

Mini-publics endeavour to create legitimacy by mirroring a larger community with a smaller group that 'looks' and 'thinks' in a similar manner. Demographic description matched to a modern census is a reliable way of charactering populations and the attempt to represent the CGG community was relatively successful on this front. Respondents to both the community surveys and the Panels approximated the census demographics of the region in terms of gender and geographical distribution, but were deficient in three notable areas – youth, aboriginality and outlying settlements [368,370]. To avoid under-representing young and indigenous discourses, specific recruitment was carried out through schools, youth groups, and Aboriginal

organisations using 'snowball sampling'[8]. Finally, to ensure representation from the recently amalgamated small town of Mullewa (population ~ 800), several Mullewa residents were added – disproportionately increasing their proportion for a group of this size. The actual process was carried out by an independent demographer was tasked with recruiting two panels of 34 participants stratified by age, gender, suburb, and aboriginality. Random dialling of 337 landline and mobile numbers secured between 40 and 50 prospective participants for each PB Panel. The Capital Works Panel had 28 attendees at their first session with a 96% retention rate over the next four weeks. The Range and Level of Service Panel had 26 people attend the first session in December 2013 and extra recruitment added 8 participants at the next meeting, with similar retention levels over the next 7 weeks. Such difficulties in recruiting subjects (let alone stratified sub-populations) are common in modern, time-poor societies, but the degree of retention aligns with work showing the importance of influential processes [321]. The Independent Review Committee certified that this selection process was fair and unbiased, and that the Panels were appropriately representative of the larger community.

The attitudinal representativeness that should come with descriptive representation was confirmed by comparison between the community and Panellist surveys to try to ensure external validity [384]. Panel attitudes toward participation in government mirrored the community as well as overseas data (Publication XX), with the exception of members of the mini-publics rating the current relationship higher on the participatory ladder than the community (Figure 11). This is likely because at the time of the survey they had already accepted the invitation to be part of a highly participatory intervention. Interviews with Panellists also confirmed their representativeness through the prevalence of an attitude that an ideal government was one that partners with citizens, to bring competence and benevolence to the table. These ideas were expressed through themes that highlighted traits such as: efficient and effective service delivery, transparency and the focus on common community interests. It was also established that the PB process was much closer to the ideal and superior to the existing regime with its sporadic voting and barriers to participation for non-expert citizens (Publication IV).

To test the external validity of trust attitudes, a non-parametric Mann-Whitney U-test was conducted for statistical significance as the data was ordinal with independent variables from independent groups that were non-normally distributed. For the Capital Works Panel, the test indicated that trust in government by the mini-public (Mean Rank = 56.38, n = 24) was higher than those of the community (Mean Rank = 79.71, n = 127), U = 1053, z = –2.45 (corrected for ties), p = .014, two-tailed. This effect can be described as "small" (r = .19) [93]. For the Operations Panel, trust in government by this mini-public (Mean Rank = 61.55, n = 29) was also higher than those of the community (Mean Rank = 82.37, n = 127), U = 1350, z = –2.302

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[8] A technique where recruited participants identify other subjects from amongst their acquaintances for contact.

(corrected for ties), p = .021, two-tailed. This effect can also be described as "small" (r = .18) and these points are illustrated in Figure 13 belowFigure 13. Note that due to the nature of the Likert scale used, higher ranks indicate more distrust and the statistical relationship is negative (-Z). In summary, trust attitudes were well represented, but the Panellists were slightly more trusting of the government than the overall community.

Summing up, the PB's scored highly on representation, deliberation and influence metrics, and clearly constituted a deliberative democratic intervention. The results from the deliberations are described below.

4.3   Participation and Trust Results

Since the PB's validly tested as a deliberative democratic intervention that is posited as having the attributes of a partnership relationship, three groups of questions remain to support our hypothesis that partnership increases political trust:

1. What did the intervention increase the panel members assessment of the participation level closer to what they regard as ideal? Did this reach Partnership? Why was/Why wasn't the mini-public PB effective in realising partnership as theorised?

2. Did the trust attitudes of the panel members improve over the course of the intervention? What would explain this?

3. Was there an association between increases in the assessment of participation in government and the improvements in trust in government? What are the mechanisms of this association?

The answers to these questions are to be found in the quantitative and qualitative results for both participation (Publication V) and trust (Publication VI) and are reproduced in short here.

4.3.1   Quantitative Results

The quantitative results are based on the analysis of all survey data. They show that the PB's were successful in establishing trust and delivering of useful outcomes for CGG.

Participation

Error! Reference source not found. Figure 11 shows the mean participation levels (both ideal and current) on a scale from 1 (manipulation) to 8 (citizen control) for the PB participants over the course of their workshops. For comparative purposes, the CGG Community results are shown adjacent with those of US participants [154].
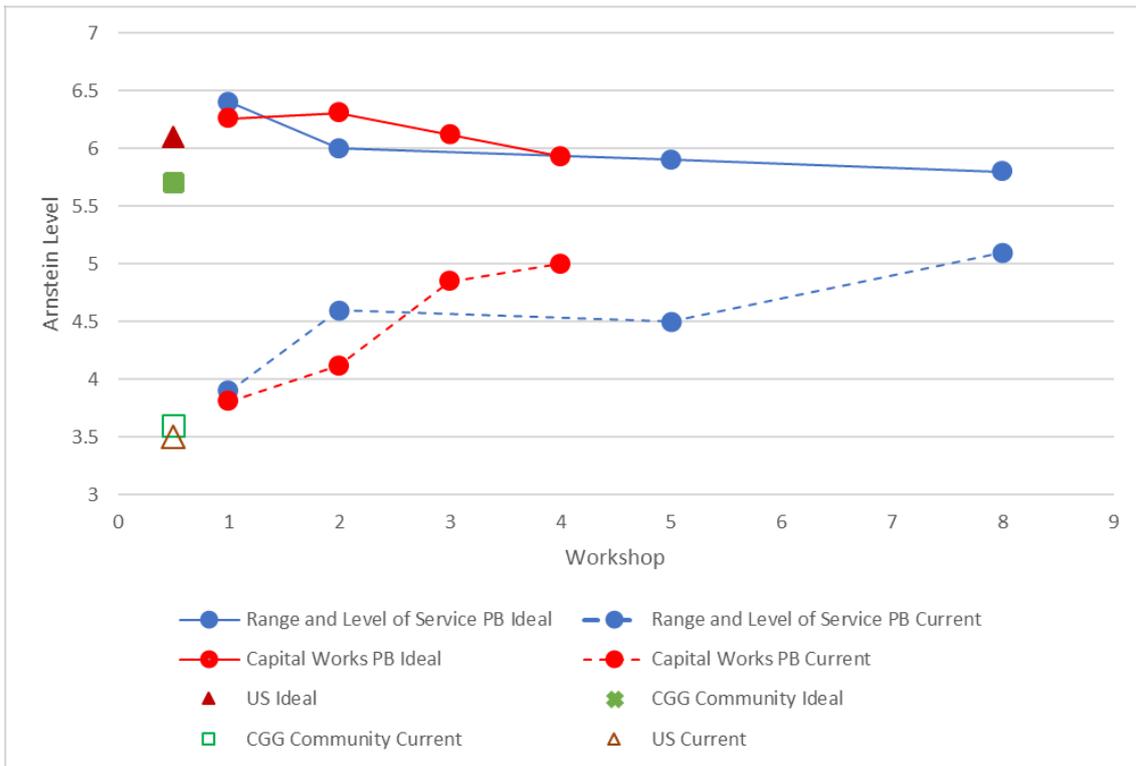
Figure 11 - Arnstein Gap data (Publication V)

This figure reveals several aspects of participation attitudes:

- The deliberative mini-public was successful in increasing the assessment of participation closer to the preferred level of partnership. Overall, the Arnstein gap decreased by around 2/3^{rds} over the course of both PB's. This was in spite of the Range and Level of Service running for double the duration of the Capital Works PB. This indicates that, although a minimum duration is clearly important to creating successful deliberative mini-publics, after this, other factors (likely design and process) are determinative of the assessment of participation.

- The Australian assessment of the current level of participation with government very closely resembled the findings in the US [21,154]. However, the ideal level of participation for the Geraldton community was slightly lower than that for the US (5.7 vs 6.1). It is impossible to explain this in a definitive way at this point, but it is likely a combination of small measurement variation and possibly selection bias in the US sample. Although large (several thousand), the US sample respondents were voluntary participants in transport planning exercises, and it is likely that the self-selected volunteers would have had higher ideals for their relationship with government than the broad community surveyed in Greater Geraldton. This rationale is supported by other research demonstrating that there are indeed biases in general altitudes between self-selected participants and the wider population [147,385].

- The Panellists at the beginning of the participatory budget process were a close attitudinal match to the broader community on their assessment of the current participation level, but they had a higher assessment of the ideal level (6.4 and 6.2 vs 5.7). This result too, could be explained as a form of selection bias. By accepting an invitation to a PB, Panellists may have higher ideals of participation than the general population. Interviews confirmed that the partnership level of participation was the preferred relationship with government.

- All Panellists maintained their ideal level of participation as "partnership" after experiencing a highly participative intervention. If anything, this attitude moderated and stabilised, mitigating against the idea that citizens' nomination of an ideal participative relationship was a normative aspiration, based on naivety and lack of experience. It did not change in spite of citizens being subjected to the rigours of disagreement and the responsibilities of a true partnership relationship [146].

Arnstein surveys in the US additionally showed that bureaucrats concur with citizens that partnership is the ideal type of publication participation [154] and this was confirmed amongst the staff at the CGG (Publication V). It was noted that non-citizens tended to have a better assessment of the current level of participation (labelled the 'professional conceit') and this was also true at the CGG.

Trust

Figure 12 shows the distribution of responses to the political trust statement *"I believe that overall the City of Greater Geraldton is trustworthy"* for participants of the Range and Level of Service PB. The notional curves are included to clarify the patterns of change over the course of the workshop and might give an indication of the distribution of a larger population with less discrete opinions.
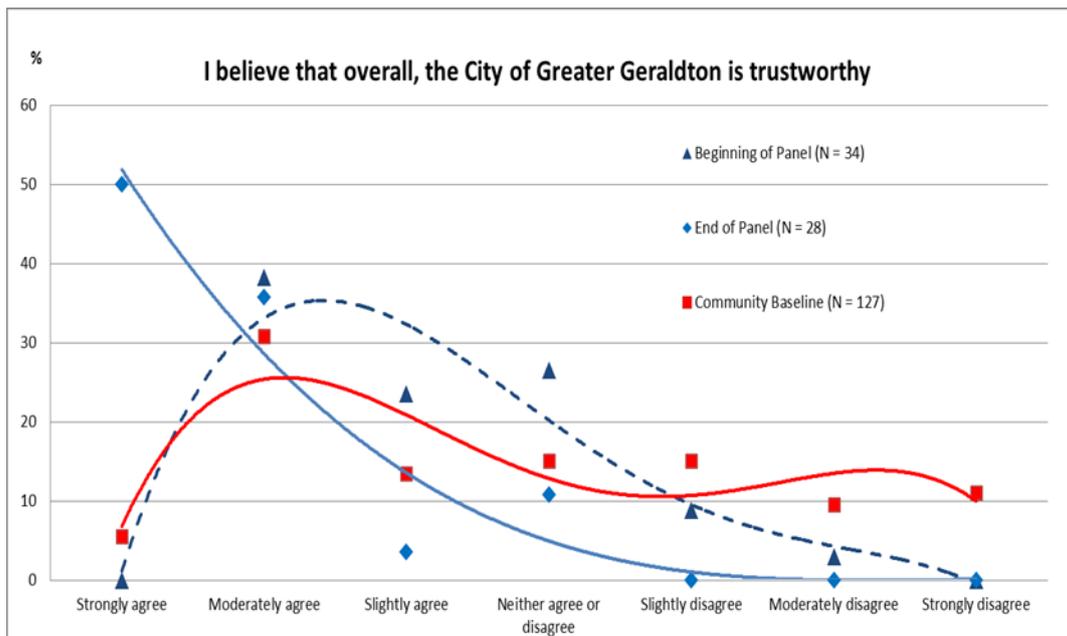
Figure 12 - Range and Level of Service PB Political Trust Levels (Publication III)

The representativeness of the mini-public for trust attitudes that was confirmed statistically above in Section 4.2.3 is reinforced graphically in the Figure. The shift over the PB's to much stronger agreement that the CGG is trustworthy is also clear.

Figure 13 shows the mean trust and participation assessments of the Panellists over the course of both PB's. While the use of mean values to characterise ordinal data can be contested [91], the practice is common in the trust field, and this convention is followed here to enable comparisons. However, in our statistical analysis, non-parametric tests have been applied to check internal validity. As it is common practice to graphically represent increasing scale values as improving trust, we have inverted the mean trust data in Figure 13 to follow this convention.
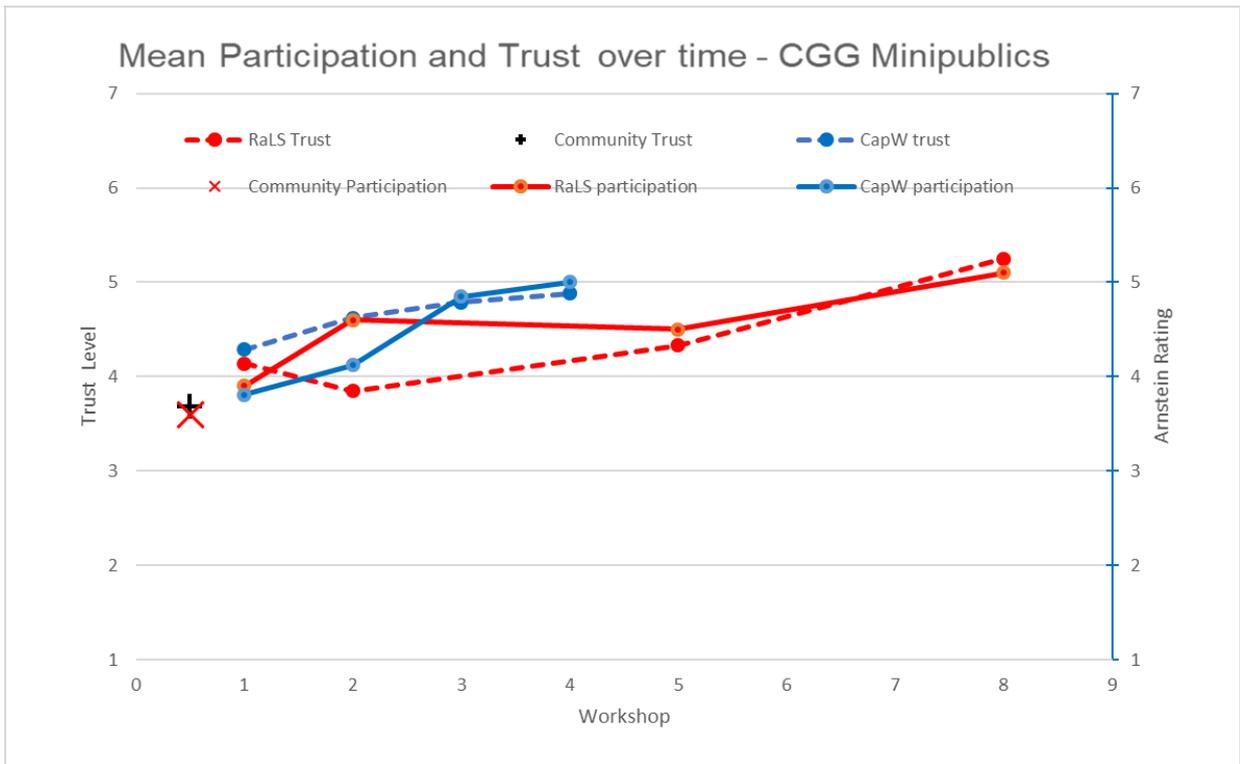
Figure 13 - Trust and participation over the course of the Greater Geraldton PB mini-publics (Publication VI)

Visually, the data indicates that trust in government improved over the duration of both PB's. Participant self-assessment of whether trust had increased confirmed this, with 78% of all Panellists believing their trust in the City of Greater Geraldton had increased over the PB's.

A Friedman Two Way ANOVA on the ordinal, non-normal survey data was applied to statistically verify this impression. For the Capital Works Panel, trust attitudes improved in a statistically significant manner from the first workshop participants attended, to the final workshop, $\chi F2 = 8.107$ (corrected for ties), df =3, N-ties = 16, p = 0.044. Post-hoc analysis of pairwise comparison with Wilcoxon signed-rank tests was conducted with a Bonferroni correction applied, resulting in a significance level set at p < 0.0125. There were statistically significant differences between the 1st and 4th workshop trust levels (Z = -2.719, p = 0.007) and almost between the 2nd and 4th workshops (Z = -2.324, p = 0.020); however, not between the other trust pairs, that is between the 1st and 2nd workshop (Z = -1.493, p = 0.135), the 1st and 3rd workshop (Z = -1.768, p = 0.077), the 2nd and 3rd workshop (Z = -0.277, p = 0.782) and the 3rd and 4th workshop (Z = -0.847, p = 0.397). Following Cohen's rough boundaries for labelling the significance of results to also reflect importance, the effects for these significant figures can be classified as large or medium sized [93].

For the Operations Panel, Workshop 1 was a non-mandatory introductory session and in statistical treatments Workshop 2 was considered to be more representative of the totality of attitudes. During this attendance period participant trust attitudes also improved in a statistically

significant manner; $\chi_F^2 = 19.895$ (corrected for ties), df =2, N-ties = 24, p = 0.001. Post-hoc analysis of pairwise comparison with Wilcoxon signed-rank tests was conducted with a Bonferroni correction applied, resulting in a significance level set at p < 0.017. There were statistically significant differences between the 5th and 8th workshop trust levels (Z = -3.206, p = 0.001) and between the 1st and 8th workshops (Z = -3.797, p = 0.001), but not between the 1st and 5th workshop trust levels (Z = -1.274, p = 0.203). Following [93], the effects for these comparisons were classified as large. In short, while there were clearly statistically significant increases in trust over both PB's, the patterns of this shift were intriguing and require interpretation.

Despite the Operations PB being double the duration of Capital Works PB to cover a more diverse range of budget activities, the improvements in trust and participation were equivalent. This is good evidence that as long as governance actions implement deliberative democratic principles that meet participation expectations, the virtuous trust dynamics are highly likely to function - regardless of duration and scale of complexity. Given the first two workshops for both Panels did not result in statistically significant trust improvement, it could mean that individuals were still forming their trust opinions and hence they were in a state of attitudinal flux. Interviews with both, participants and staff, confirmed an initial phase of dislocation before partnerships manifested - particularly to gain competence in an unfamiliar area. As one Capital Works Panellist expressed: *"We did have to get to know each other then get to know what we were doing. As the weeks went by it got easier to fall into the groove and start doing what we needed to do."* Another Operations Panellist summarised: *"Some people got it straight away and some didn't… I personally found the majority of people found 'it' around week four"*. The lack of statistically significant change in the 3rd and 4th workshops in the Capital Works Panel was also interesting. It could reflect a stabilisation of attitudes toward the end of that PB (where there were 4 measurements over 4 workshops) compared with the Operations Panel (where there was a larger spread between measurements, i.e. 3 over 8 workshops).

Although this forms a plausible picture of a clear increase in trust, the danger of a demand effect confounding these results remains a possibility because of the methods used. This effect concerns experimental subjects changing their behaviour because of their mindfulness of being observed [386] but it is small for the following reasons:

- The results above concern longitudinal changes in trust and participation over multiple retests. Any powerful novelty or demand effects would be expected to lessen and cause any bias to regress to statistical noise compared to initial measurements – none of which is observed.
- As we shall see in Section 4.3, the CGG case studies produced larger trust effects compared to other deliberative interventions implying such effects do not dominate.

- Studies using different types of participation interventions and produced different magnitudes of changes in trust using the same survey methods implying these effects are not significant [308].
- These effects are often exacerbated when the results of measurements are fed back to participants or researchers react to results, neither of which occurred during the PB's.
- There was no indication in the qualitative interviews that the participants were subject to any experimental demand effects. Observations by the authors also detected no evidence of these effects and no motivation to 'please' the researchers (particularly when asked to complete 4-page surveys in the midst of the cognitive fatigue following a day's deliberation).

Hence, it strains credulity that there was not any mechanism that relies on the respondents being able to discern the intentions and biases of the researchers for no obvious gain. Parsimony dictates concluding such effects were negligible

The final piece of information that Figure 13 gives supports the hypothesis of an association between trust and participation. Visually, trust ratings clearly increase as the assessment of participation level rises toward partnership (Level 6) over the course of the PB's. A mathematical test for an association between participation and trust at a population level can be best established using the community survey data. Based on this information such an association was statistically confirmed for these two independent, ordinal variables using Kendalls Tau-B test. It indicated a strong and significant association between participation and trust in government (Tau = -0.296, p < .001, N = 127) as well as with all the other trust proxy questions used.

4.3.2   Qualitative Results

The bulk of the qualitative insight was achieved through thematic analysis of interviews with some supplemental personal observation. In line with our inductive/abductive approach, theming was conducted at a semantic level without explicit influence of pre-existing frames but with an awareness of possible researcher biases [94]. The particular patterns and themes that emerged are discussed and exemplified with specific quotes presented verbatim. Using word-for-word quotes gives authenticity to the explanatory depth the interviews bring to the survey results. In general, the conclusions from in-depth interviews and surveys did not contradict each other. This ever-present danger (due to the reflective/non-reflective tension between the interview/survey modes) was avoided because the interviews were used for explanatory purposes and did not require interviewees to directly and strongly reflect on the participation aspects.

Benevolence and Competence

The most important insight to emerge from the interviews was what the participants understood by their choice of the ideal relationship with the CGG being "partnership". As citizens, they spoke or wished for political equality, where each side respected the other's strengths and skills whilst working toward a common goal. This political equality was realised through the modes of speech but also the sharing of power and decision-making (Section 3.4). It also highlighted how citizens and government officials assessed whether they were in "partnership".

The themes of benevolence and competence emerged at multiple levels throughout the interviews. They characterised the relationship between citizens and government, between government and citizens and between the citizens themselves. The citizens judged the government representatives[9] they interacted with as to whether they were competent in their domain (in this context, budgetary knowledge in their subject areas) and whether they were acting in the best interests of the community. Some indicative quotes on these themes are presented in Table 4-2.

Table 4-2 Examples of citizen perceptions of government competence and benevolence.

Assessments of competence	Assessments of benevolence
"It was … mind boggling the amount of money they have to juggle around, and the amount of projects they have to deal with…I went in there thinking probably the same as everybody else – 'What is Council doing with rates money?' And I came out thinking, 'Well, they are doing a pretty good job actually'." - Panel Member	*"…I understand how hard they work trying to make it all good, including the fact that they started this in the first place and they were willing to give it a go."* – Panel Member
"I think they are very competent - they are far more competent than I believed they were…. the general consensus of their competence is not as high as it should be. People don't understand the level of services and the effort required for that level of services." - Panel Member	*"The people at the Council, the Directors and their passion, their interest, and their willingness to give it a go, sort of makes you feel you are in fairly good hands considering the reputation they have had."* – Panel Member
"The mind boggling the amount of money they have to juggle around and the amount of projects they have to deal with…. Over the course of the 8 weeks my mindset changed from one of questioning: 'What the Council was doing?' to 'They're doing a pretty good job under the circumstances'." - Panel Member	*"I do believe there are genuinely committed to making this place a better place to live but some the ways they go about that aren't achieving that goal."* – Panel Member

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[9] The government officials whom the citizens most directly interacted with were typically manager level. Elected members of Council were often present at workshops but only as observers.

"It's like running a small country, isn't it? I never thought there was so many departments. – I never gave it a thought."	
- Panel Member	
"…we all know that if you send money one way then it doesn't go another. It was really hard to come to fair budget… and of course when you are handling other people's money you need to be more accountable."	*"The process itself was fantastic. The people at the Council - the Directors - their passion, their interest and their willingness to give it a go sort of makes you feel you are in fairly good hands considering the reputation they have had."*
– Panel Member	– Panel Member

The government officials used two analogous but slightly different criteria. They judged the citizens by their competence as deliberative thinkers (rather than subject matter experts), but also by their community orientation (whether they were representing the wider community) (Publication V). This latter form of 'benevolence' - the citizens collectively acting for the benefit of the whole community rather than representing their narrow interests – was primarily determined by reflection on the equity of citizens' decisions and justifications. The competency of deliberating on budgets was assessed through observation of the deliberation processes, the ability to learn new material and the citizen justifications of their decisions (see Table 4-3).

Table 4-3 Examples of government perceptions of citizen competence and benevolence.

Assessments of competence	Assessments of benevolence
"…you use processes to get the best out of the community...they aren't stupid - common sense prevails.... there hasn't been a single result that we have said: 'Where on earth did that come from?' "	*"They owned those values… when that clicked into place - how important it was for them to come up with their own values ...because there was so much passion in the room."*
– Staff Member	– Staff Member
"They are but you have to invest time. You can't expect that people have that competency off the tops of their heads. It's unrealistic. As long as you have realistic expectations that people need support, advice, information, whatever in order to lift their level of competency - it's there."	*"Key moments would be when that clicked into place …When they were done, and Mullewa[10] came up really high, and mobility access came up really high, even though the group wasn't all disabled or in wheelchairs."*
– Staff Member	– Staff Member
… how important it was for them to come up with their own values ...because there was so much passion in the room.	*"I think so. Yeah. Given the questions they were asking, they certainly were taking themselves out of it and looking at the broader picture."*
– Staff Member	– Staff Member

Unexpectedly, the interviews revealed that panellists also judged themselves and their fellow participants through the lens of competence and benevolence (see Table 4-4). Here the context shaped this competence as the ability of non-specialists to perform their tasks of deliberation

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[10] Mullewa is a town 100km from Geraldton with a population of around 600. By any standard a minority component of the Greater Geraldton locality.

and a benevolent orientation to represent the needs of the whole community when forming the budget.

Table 4-4 Examples of citizen perceptions of intra-group competence and benevolence.

Assessments of competence	Assessments of benevolence

"There was so many people, so many different areas at times, it was really tough - we all had different opinions. We did have to get to know each other then get to know what we were doing. As the weeks went by it got easier to fall into the groove and start doing what we needed to do."
     – Panel Member
	"With this process, at least you are getting a random selection of people that are getting a say. And they are real people. They are not undercover, guerrilla politicians just trying to change things. It's how it should be."
	     – Panel Member

"It didn't matter if we had difference of opinion, we listened well to each other, we explained well and then we reached an understanding and agreement and then moved onto the next thing."
     – Panel Member
	"It's a good way to have a say in what's going on as long as that's always tempered by - you are here as a representative. At those meetings I brought up things that I personally don't agree with. But that being said, I know that a lot of my friends and people at work do. So, I still have my view, but I go: 'These people do have some good points, maybe I will include them in what I am doing'. It's about getting the best outcome for everybody. It's about getting the best outcome for everybody. Not just 'Ah well I don't use the pool so shut that down'"
	     – Panel Member

"… we just all seemed to get it, and we all seemed to click and it didn't matter if we had difference of opinion, we listened well to each other, we explained well and then we reached an understanding and agreement and then moved onto the next thing."	*"I think everyone had good intentions. Despite how they started I think by the end of it they did want it to be better."* – Panel Member

The analysis of the interviews was based on looking for indications of the concepts of 'competence' and 'benevolence' to understand what participants meant by 'partnership'. Benevolence referred to the panellists' belief that the intentions of the CGG staff were oriented in the same direction as the panellists. As descriptive representatives of the community, the intentions referred to are not those of the individual, but toward what participants understood to be the common good of the community. To probe the concept of partnership as shared power, the interviews were also examined to ascertain beliefs about the competence of the staff in their jobs as public servants. This competence belief directly relates to the ability of the local government to contribute to the common goal of the PB. Publication V provides extensive samples of specific responses to support these conclusions, but some exemplars follow.

Partnership

As discussed in the literature review (Section 3.2), the partnership relationship on the Arnstein Ladder requires interdependence and mutual trust more than any of the other rungs and hence the components of trust (competence and benevolence) occupy such prominence in this relationship. In addition to the prevalence of competence and benevolence seen above, there was also more direct expressions of partnership in the qualitative data.

Some interviewees spontaneously expressed sentiments like:

"Both panels agreed: You guys are the experts. You should know why and how and what's important, that's why it worked. It needed to be for informed decision-making. (And)... we can learn from the community what's important. What they value, what they want. They can help us prioritise things." - Staff Member

Or more succinctly:

"I think they are doing a good job but they can only do that if we all help out." – Panel Member

In addition, two events were observed that unexpectedly occurred during the deliberations and demonstrated in a concrete manner the partnership relationships in the PB's. The first incident involved a reinforcement of the power-sharing relationship, between participants and officials and was discussed in the Section on *Specificity* (Section 4.2.1). The choice of the Infrastructure Panellists to recommend an equally-weighted combination of the rating systems and priority list to Council shows a willingness to share power and acknowledge the expertise of the CGG administrators. This reflects the partnership relationship that had developed. Such a relationship acknowledged not only the limits of the panellists' knowledge and the extent of local government professionals experience, but also the equal importance of community values, and the common goals of both parties.

The second incident highlighted a break-down in the partnership relationship between panellists. It occurred during a session which the Range and Level of Service Panel received feedback on the panel's preliminary recommendations on the operational budget. As part of a community event to obtain that feedback several panellists volunteered to outline the Panel's recommendations on various areas in the budget to the public meeting. Without warning, one of the panellists, himself a property manager, presented the Panel's recommendations on property management to the public in a way that reflected his/developers' interests and was diametrically opposed to the position the Panel had recommended. All panellists interviewed expressed various levels of dismay and outrage at his behaviour. Following this incident, the Panellists met and decided to make a complaint to the IRC that was overseeing the initiative. The IRC researched what had transpired, speaking to Panellists, staff and the Panellist in question, who,

78

they determined, had indeed misrepresented the Panel's views to the community. After being given an official verbal warning about such behaviour, the Panellists observed that the member in question was much restrained and apparently chastened in subsequent Panel deliberations. This one Panellist's failure to live up to the relationship expected of him - to act in the best interests of the Panel and the wider community, highlighted the strength of the partnership relationship that had developed between the Panellists. Even so, this misdemeanour did not exclude the offending Panellist entirely from the realm of the relationship. Notions of fair play and equal access still prevailed, as the following quote indicated:

"It wasn't a fair representation. That sort of thing divides the group … all the surveys that had been done didn't want that, so then he goes and puts it out there ... It was really disappointing and heartbreaking when he did that. Afterwards, he happened to be one of my teams on the last day and luckily enough he had lost his voice a little on that day. Which I thought was a blessing in disguise, but then in the same token he had things that he wanted to vote for but because he had lost his voice nobody was listening. So I did actually say, 'Hang on guys, I think XXXX is trying to say something' a few times because it still needs to be fair hearing – but gosh, I was so pee'd at him."

Both of these incidents can be seen as examples of the 'appreciative-but-critical' dynamics of the particular type of group identity that commonly forms in deliberation [387,388]. The sense of a meaningful common goal and the design of the deliberation appears to be critical in avoiding the worst aspects of group think, tribalism and polarisation [389,390].

As a final example of the partnering relationship, when participants were asked: "What analogy or metaphor would you use to describe your experience?", answers often reflected their acquired competency; *"...like my head exploded into a whole heap of jigsaw pieces and then putting it back piece by piece over the weeks until I have a whole head again..."* or "*It was like the sun coming out after the clouds. You are in the dark and now it is light."* or similar metaphors such as emerging from a tunnel or looking beyond a screen on which shadows play. Other responses spoke to the notion of benevolent common goals *"...like a football team; having the team and switching positions around and still going for the win."* or experience in military units. In these images we find succinct analogies of the relationship of partnership highlighted by the Arnstein Ladder and the associated social learning [68,72].

Process and Design

The other main cluster of themes that emerged from the interviews concerned the importance of deliberation and the design and processes that supported this – which reinforces the survey results on this topic. Panellists discussed feeling safe expressing and hearing opinions that dissented from their own. This is an important part of the equality of political speech in

deliberation and the participants described deliberative shifts in their, and other people's, opinions. This is important as conditions of power imbalance [391], anxiety and competitiveness have been known to spur shallow thinking that is associated with negative trust [223,344]. There was acknowledgement that these favourable conditions were by design and that the disruption of disagreement was an important and necessary part of community [284]. A sample of the quotes that led to these themes are shown in Table 4-5.

Table 4-5 Examples of Panellist perceptions of the value of process and design

"But this is the just the reality of living in society and if you get a cross-section of people. I found the small groups really good."

"My mind was definitely opened with people's opinions and I definitely think hearing different stories and from people who are passionate about things makes you go – 'Oh that's interesting, I didn't think about that.' So, you become more openminded."

"There was a few times there where they said 'Oh I didn't think about that.' That makes me happy - at least they were listening. They may not change but at least they have heard the argument for the other side."
"… I said – 'hang on a minute here - we are supposed to be making decisions for people out there in the community not just because it is something that we disagree with and we don't like'."

"But I was also being informed as to the whole process - it gave us the information, set us up in a process that allowed us to make decisions based on that."

"I think it was brilliant the way they did it…. I really like the idea of going around to each of the tables and making a decision on each of those. Rather than making a decision on one thing you see the whole thing - which was really good."

"Nearly every day we found things really interesting because 6 or 7 people's views were thrown in. You may see things in a certain direction but after some explanations you may see it in 2 or 3 directions and you have to work out an amicable solution."

"There was a few times there where they said 'oh I didn't think about that'. That makes me happy, at least they were listening. They may not change but at least they have heard the argument for the other side."

"… we just all seemed to get it, and we all seemed to click and it didn't matter if we had difference of opinion, we listened well to each other, we explained well and then we reached an understanding and agreement and then moved onto the next thing."

"… I said – 'hang on a minute here - we are supposed to be making decisions for people out there in the community not just because it is something that we disagree with and we don't like.' "

"We had a job to do and we had to be on the same page, so you do have to ruffle a few feathers a little bit to just to get them to think differently."

"There was one group I worked with that frustrated me to an extent, because they were quite slow to make up their mind… My experience in life is people have different strengths and for some that is being able draw conclusions quickly…but people are different."

Lastly, from a practical point of view, the Panellists noted in personal communications and interviews the importance of being officially welcomed and greeted effusively at every meeting, having uncomfortable chairs replaced, and being provided with quality lunch and refreshments during the workshops. Relatively unimportant operational specifics of the deliberations, "greeting, seating and eating", seemed to create the 'good atmosphere' [284] claimed to be important by practitioners. It is likely these cues concretely and immediately signalled components of cognitive as well as affective (emotion-based) trust [327].

Deliberative democratic theorists have argued that design is important in determining how democratic and effectives participatory processes are [66,81] – arguments that have been supported by data [297]. Other have noted that such designs seem to produce better cooperation than rational choice theory would predict [268]. To these rationales another is now added – design is critical to citizen satisfaction with participation and whether trust is built or degraded.

4.4   Discussion and Implications

In this section the results are further synthesised and related to the wider issues this thesis started with – the building of trust to allow governments and citizens to effectively deal with wicked problems like sustainability implementation.

4.4.1   An Analytical Tool for Explaining the Effect of Participation on Political Trust and Designing Interventions to Achieve Improved Trust

The analysis above allows two robust conclusions. First, it overwhelmingly supports the hypothesis that political trust is powerfully influenced by the type and style of participation and changing this creates significant improvement. Secondly, it confirms that the framework of understanding trust and participation we laid out in the literature is useful as a tool for designing interventions to improve trust. It is more speculative that such interventions would definitely create the virtuous cycle described in Section 4.1.4 since repeated applications were not tested but the dynamics outlined in the virtuous model were present in the data gathered. This makes it highly likely that, at least in the abstract, the cycle should function as described. Even without confirmation of this phenomena the learnings of this study can be extended to analyse other participatory intervention for their effect on trust.

The conceptual breakdown of trust into benevolence and competence components in combination with awareness of citizen preference for partnership allows us to explain why some types of public participation are more, or less, effective in increasing trust. An obvious example is the improvement in trust seen in the participants over the course of the case study PB's which represents the effect of moving from informing/consulting to partnership participation. However, the framework we have outlined can also be used to compare and explain differences on a finer scale. Take for example, the most directly comparable intervention to our case studies - a deliberative PB in Lincoln, Nebraska. Participants there showed statistically significant increases in confidence, trustworthiness and belief in the benevolence and competence of the local government [53] just like in Geraldton. However, compared with this case study, the Geraldton participants experienced a 3-4 times greater increase in trust (after converting different survey scales). On the face of it, this result is problematic – how could two apparently similar interventions produce such a varying strength of effect?

There are two likely possibilities, both of which concern the design and implementation of the PB's. The first was that pre-deliberation trust levels of the Lincoln PB participants were already high - 1.69 (Lincoln scale adjusted) compared to 3.15 (Operations PB) and 2.71 (Capital Works PB) and very high compared to the Greater Geraldton community (3.76). Given that general political trust in the US is at least as low as Australia, this high initial level was likely due to a selection bias in the participants of the Lincoln PB[11]. While this bias was a factor in obtaining attitudinal representation in Geraldton [392], it was accentuated in Nebraska, where the online recruitment methods used produced a sample which is more male, white, educated and liberal than the broader population [53,393,394]. Increasing political trust in a group already certain of the trustworthiness of government would be difficult [395], and hence the possible increase in a more representative group of Nebraskans could actually be greater than that documented and the strength of the effect of partnership has been mismeasured.

However, it is unlikely that this would explain the differences in their entirety. This thesis claims that the explanation for the larger trust gains in Australia is the greater realisation of the partnership ideal of participation. As has been argued extensively above the partnership was realised through deliberation, influence and representation. It has already been highlighted (Section 3.4.4) that there are degrees of deliberativeness in PB's and modelling has shown that increased opportunities to deliberate with dissent in a fine-grained manner produce an epistemically stronger and more authentic common will [396]. Public engagement case studies have also found a strong relationship between higher levels of design and process management and improvements in government/Panellist outcomes and satisfaction [397]. Although there

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[11] This is a recurring problem where demographically and attitudinally unrepresentative groups frustrate the detection of trust changes in response to different types of public participation 327.   Halvorsen, K.E. Assessing the effects of public participation. *Public administration review* **2003**, *63*, 535-543..

were elements of similarity in the PB's in both countries, there was significantly more deliberation of higher quality in the Greater Geraldton PB's. The Nebraskan Panel sat for a single day and made recommendations based on two rounds of presentations, facilitated small group discussions and questions & answers plenaries. The Capital Works Panel met for 4 and a half days and created a multicriteria analysis rating system based on deliberated values with multiple rounds of presentations and interrogation of 130 proposed infrastructure projects. Similarly, the Operational Panel met for 8 days, again determining criteria/values to assess service levels for 30 operational areas as well as specific service level suggestions. The influence of the Nebraskan PB was also differed compared to Greater Geraldton[12] – Scope Scale, Specificity and Say were significantly less [394,398]. As discussed above the Geraldton PB's utilised more descriptively accurate representative mini-publics compared to Nebraska which would boost the legitimacy of their common will formation. Taken together, the enhanced deliberation, influence and representation allowed the Panellists and government to display greater competence and benevolence in a more equal power-sharing arrangement, than in Lincoln. Overall then, the Greater Geraldton trust results are probably more generalisable to typical populations and the realisation of partnership was fuller.

4.4.2 Vicious and Virtuous Cycles of Trust

The test of an intervention to change the dynamics of the vicious cycle described in Section 4.1.3 was successful – at least in the sense that a partnership-based dynamic was successful for a single policy cycle. The follow-up PB in 2015 discussed in Section 4.2.1 could be considered an attempt to continue the cycle of a partnership-based relationship (at a lesser level) but unfortunately no data is available on the effect on the participation or trust. Chapter 5 describes further research that might remedy this situation but there remain several pertinent points that might yet illuminate this topic.

Despite unusual efforts to create a partnership relationship, the current level did not reach ideal participation and the Gap still remained by the end of the PB interventions. It is likely citizen assessment of the current level of participation is not an isolated process that is disconnected from history and context. The remaining Gap then, may represent a distrust of the future benevolence and competence of the CGG based on this past history and context. This manifested in interviews with Panellists expressing great hope but no certainty that a partnership relationship would continue. Hence, it's unlikely then that any single initiative could overcome the residual effects of past relationships with a local government [376], nor overwhelm the other demographic and attitudinal factors that also affect trust [142]. This suggests that multiple partnership cycles will be needed for very high levels of trust to develop. Also, it is

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[12] In sum the Nebraskan PB's were probably more comparable to the 2015 follow-up Geraldton PBs.

unreasonable to expect the Arnstein gap to ever completely close and it would be unwise to expect this to occur.

The Arnstein results above imply that citizens are desirous of a partnership relationship with government and hence should flock to deliberative democratic opportunities like the case study PB's. Low recruitment rates from random lotteries to participate in such initiatives have shown just the opposite response [183] and the response rate to invitations to participate in the CGG PB's was below 20%. Since participants showed overwhelming satisfaction and willingness to be involved in such events again [368,370], this adds to the likelihood of the operation of the trust dynamics described above. The discussion over stealth democracy and its mis-diagnosis of citizens fear of 'politics' as intrinsic disinterest (section XX) takes a further hit with this data. Also, the limited research on low recruitment rates to deliberative events has noted personal factors such as availability, competency and self-image, but the major contribution from an aversion to a 'politics as usual' [385]. That is, citizens are hungry for a partnership with their governments but are suspicious their time will be wasted with shallower interactions. This mechanism would lock in the vicious cycle, but could potentially reinforce the virtuous cycle with sufficient dissemination of knowledge of a new partnership relationship.

4.4.3 Generalisable Nature of the Case Studies

These case studies clearly support the hypothesis that a partnership relationship underlies significant trust improvements, a result made more useful by comparison with data from other contexts. Certainly, the assessments of US and Australian populations of both citizens and bureaucrats of the ideal and current participation relationships are remarkably similar. The baseline Geraldton trust levels at least seem to be comparable with background trust levels in other western nations. For example, a 2001 Norwegian survey showed a similar mean of local government trust - 3.86 (when converted to our 7-point scale) [184]. This is congruent with other research [399], and particularly an International Social Survey Programme survey question across 33 countries which asked about trust in public servants [228]. Hence, this gives confidence the results from these case studies would be applicable outside their context.

4.4.4 Implications for Sustainability

This thesis has made arguments that deliberative democracy is useful to sustainability practitioners, specifically because it creates governance conditions that are ideal for implementation of a sustainability agenda because of its nature as a wicked problem [400]. Further, analysis has shown that deliberative democracy is necessary beyond being an effective governance mode because it also produces increases in trust that are necessary for the partnership between citizens and governments required to address sustainability. This would embody the partnerships for sustainability identified as one of the Sustainable Development

84

Goals (SDG17) [401], but instead of a global focus they work between governments and citizens at national, state and local levels.

Since trust is made up of two components – competency and benevolence, it can now be more precisely specified what governments will need to demonstrate to generate political trust. The competencies that need to be demonstrated when facing wicked problems, particularly sustainability, have been outlined in Publication IV and include the following:

- The recognition of the epistemic challenge of the wicked problem: Identification of the fundamental nature of the problem provides a starting point for the following competencies;
- The ability to make collective value judgements: Since there is divergence on the very nature of the problem and solution, then a series of value judgements—not just of individuals, but also public ones – must be made collectively [133];
- The ability to use and integrate diverse inputs: An approach consisting only of experts and technocrats will be inadequate to deal with the uncertainty around the diagnosis and resolution of wicked problems as they emerge and evolve [4,5]. A scientific, evidenced-based perspective can lay out a partial "map" of the problem/solution space [402,403] but the value judgements of politics [136] and diverse knowledge domains [404] are best to navigate it – particularly the risks, costs and benefits;
- The use of deliberative communication modes: Deliberative communication involves the public exchange of reasons between persons representing different perspectives on a problem, rational reflection and justification of possible solutions. Deliberative discussion has greater epistemic strength than alternatives [137] and represents opportunities for either opinion change or at least clarification of areas of agreement/disagreement. This is well-suited to the wicked problem issues of determining stopping points and what constitutes a better or worse solution [25,136,405];
- The creation of a social learning environment between the partners [68,72]: Since wicked problems required ongoing exploration of the very nature of the problem, the creation of an appropriate learning environment between partners is critical. This began in the PB's with a significant restructuring of the written information provided to the Panellists (a multi month process by an external economist). This was supported by the cross-examination of the 'experts' (i.e. CGG senior management) - provided both in the process design and/or at the request of the Panellists. The use of an independent lead facilitator and agreed ground rules for communication behaviour established an environment highlighting the importance of honesty and willingness to learn from both sides. Management was observed doing their best to answer honestly even if the answers were unpopular (particularly around the viability of a bulk recycling program). Managers also remarked on citizen competence in their probing and intelligent questioning; and some observing Council members commenting on their new learning about the budgeting process. The process feedback noted

in section 4.2.2 (deliberation) attests to the presence of this social learning environment .[368,370]

- The distribution of power combined with collaborative action: The shift in nature of wicked problems and its interpretation in different contexts mean that centralised and unshared power is usually too slow or too unnuanced to effectively address sustainability. Opportunities for collaboration around action, learnings and resources should also be taken advantage of at the discretion of the actors which has led to the UN recommending models of distributed and collaborative power for the SDG [112,406,407].

Beyond these competencies, demonstrations of benevolence will also need to be developed for maximum trust. Benevolence is often signalled through process design – that is, how the competencies above are conceived, planned and implemented. Examples of how the orientation toward the good of the whole can be demonstrated in each of the above competencies might be:

- Recognition of the difficulty and nature as the first step can be seen as a sign of honesty and orientation toward addressing a systematic threat to the common good - as opposed to ignoring it or trying to down-play the role of government or its significance;

- The collective value judgements are made in a way that can be seen to legitimately represent some version of the common good maxim, rather than privileging narrow interests, political ideology or the powerful;

- Diverse inputs are invited and elicited for any value judgement in a manner that can be justified as being from a wide enough group of sources to constitute a collective decision. The process for achieving this actively values each input to the collective synthesis and transparently represents the contribution of each part of the whole solution;

- The deliberative communication is conducted with equality of speech between participants based on information and data agreed to be neutral and unbiased. Such legitimacy conferred by deliberative discussion provides assurance that the inevitable mistakes and unintended consequences of wicked problems are not intentional or manipulated by any party in this contested space;

- The collaborative sharing of the concentrated power of government can provide the most important signal of the intent to work toward a common good, especially in light of the high stakes implicit in the wicked problem.

A government wishing to build trust by following the above recommendations now has a framework and a validated tool – deliberative democratic mini-publics – that together form an effective way to establish political trust with citizens who are involved in their governance.

These mini-publics can also be used as trusted proxies for the wider populace that may not be directly involved as well. Research has shown that voters assess them as competent, benevolent and more trustworthy than state legislatures [180,306,307]. It is unlikely that a mini-public based dynamic will entirely close or resolve political trust issues in the current system [180] and that sometimes governments cannot and should not be trusted [408]. In spite of these caveats, mini-publics have proven themselves valuable to building sustainability supporting trust, and should be combined with other ways to signal benevolence and demonstrate competence, such as donations control, changes to parliamentary entitlements, independent corruption watchdogs and media regulation [205].

Past these reforms, the need to scale the lessons learned in this these will be necessary for the achievement of ambitious goals of global sustainability (Publication IV). The dimensions of scaling:

- from the Grassroots to the Top.

- across Developed and Developing Nations.

- to More and More Complex Problems.

- over Time through Institutionalisation

- for Broader Participation

- through Discourse Diversification and Process Quality

are topics of pressing importance for detailed understanding. Unfortunately, it is beyond the scope of this thesis to do more than describe in principled terms what these involve (Publication IV). The paradigm-shifting possibility for harnessing the repetitive aspect of the wicked nature of sustainability looms intriguingly large though. Typically, the need to revisit sustainability issues as the problem morphs and values are renegotiated, is negatively framed as a challenge. However, this may only be true in the current governance systems which approaches wicked problems in such a way that constantly degrades trust because of the relationship between government and citizens. If governments' and citizens' assessment of the competency and benevolence of each other improved and was built up each time a problem was iterated (i.e. trust increased), then the repetitive nature of sustainability implementation would be reimagined as a strength. Now each time a problem was deliberated, relationships would improve, collective epistemic value would grow, and trust would build. This would constitute a cycle that had changed from vicious to virtuous.

Chapter 5 Conclusions and Recommendations for Future Research

This thesis is not the end of research on this topic, but like all pieces of useful research it requires replication, corroboration, and follow-up to extend its usefulness. To finish this thesis each of these is elaborated on in addition to some final thoughts.

5.1 Recommendations for Future Research

Naturally enough for a case study, the first recommendation is for validation of these findings – both the empirical results, but also the proposed dynamics. Beyond this, there are useful questions to be answered related to the findings of this thesis, such as: What attitudes and assumptions drive the virtuous and vicious cycles? How could these findings be scaled up? and What are government trust attitudes toward citizens? These are discussed below as areas for future research.

5.1.1 Validation of Trust and Participation Data Results

When assessing the value of the case studies in Greater Geraldton, they were found to be relatively representative in terms of trust and participation attitudes (particularly for the US and Australia – Section 4.2.3). Duplication of deliberative PB's in other countries and other parts of Australia with appropriate measuring regimes would confirm this. Such investigations would also be assisted by cross-country surveys using the Arnstein Ladder. This would confirm the widespread presence of the Arnstein Gap and further analysis could check correlations with political trust levels and different assessments of relationship with government. Additionally, replication of the results of the thesis beyond the local government of the case studies is important as currently the bulk of deliberative PB's are at the local government level. There is good reason to believe that there is spill-over from the trust citizens have in one level of government to other levels [56,184]. In reality, to maximally affect generalised political trust, all levels of government will need to 'pull their weight' in partnering with the public in their own areas.

This thesis argued for an intervention that was the best candidate to meet the partnership expectations of citizens and produced high trust gains. As highlighted in the Thematic

Discussion (Section 4.4.1), small changes in process that signal partnership can produce significant changes in trust, but this relationship needs to be clarified beyond the two points on the public participation- political trust axes this study provides (Informing/Consulting and Partnership). This would delve into whether the relationship is linear – i.e. improving public participation to 'Placation' produces half the gain in political trust, or whether there is a stepwise jump that only occurs at Partnership. Further, would changing the participation level to 'Delegation' or even 'Citizen Control' cause political trust to drop off from the Partnership high and if so, by how much? Further case studies could specifically design for these different types of interventions but could also use some version of a 'control' to determine comparative effects. This thesis took the Consultation Governance Cycle to be the 'control' (or business as usual) case, but a more strictly controlled research regime would see groups of citizens concurrently subjected to interventions that precisely target levels of public participation around the same issue.

A control group approach would also be useful when confirming the proposition that partnership interventions are more effective in addressing wicked problems (and sustainability) compared to other approaches. Current arguments tend to be theoretical and there are no comparative studies to confirm this (Section 3.1). As above, the natural choice of a control would be the current business-as-usual governance approach, but comparative studies could be conducted matching the partnership mode against interventions based on the competitive or market mode, and the authoritarian or top down control mode. Two difficulties immediately present themselves for such a research agenda: The first would be the measurement of sustainability outcomes because of their contested nature – as would be expected from a wicked problem while the second concerns the ethical dimension - wicked problems (and sustainability in particular) are by definition, consequential, so poor outcomes by a control group may be morally unacceptable.

5.1.2   Validation of the Virtuous and Vicious Cycles

Further work is required to generalise the learning from the case studies (a confirmation of a virtuous dynamic) to a confirmation of the broad existence of virtuous and vicious cycles across multiple countries. Such research would improve the usefulness of the results.

This thesis tested an intervention that encompassed most of the policy cycle with the exception of the problem identification (i.e. the start: the problem of budget allocation is pre-framed by the local government) and program implementation (the end: the actual budget formation and implementation). Outside of PB's most individual deliberative democracy mini-publics would not span the policy cycle, which gives an opportunity for other studies to more rigorously test the effect of partnership on sections of the policy cycle.

The use of a Laswellian-type staged policy cycle was fit for purpose for this thesis as it allowed a description of government actions that specially relate to citizen participation (Section 4.1.1). However, this model does have weaknesses, with the foremost amongst them being the failure of the model to illuminate the assumptions[1] that underlie the governance actions and how the agenda-setting and issue-setting process occurs [325,409]. Reworking the virtuous and vicious cycles based on updated public policy models that address these weaknesses could produce a new way of understanding how to intervene in the system to achieve reform. This is particularly true because the agenda-setting process at the earliest point in the vicious cycle sets boundaries as to what gets addressed and what does not, making it a powerful opportunity for partnership and power sharing.

A research agenda for putting the cycles on firmer footing would have multiple aspects such as:

- Establishing the existence of both cycles– the evidence to support the widespread existence of the public policy cycle described in Section 4.1.1 is not complete. A rigorous study would gather process data on a number of government issues/opportunities (e.g. 4-5 observations per country) in several countries; and show that such a typical policy cycle exists through document analysis and interviews. The cycles could then be classified as to the amount and type of public participation they involved (perhaps using the Arnstein Ladder).

- Establishing the effects that both cycles have – since we are interested in trust in government, political trust levels and participation assessments should be monitored to see how they varied during public policy issues as the cycles went around. Some difficulty should be expected in disentangling changes in trust from the many factors that affect it (as we discussed in Section 3.3) and this leads to the final step attributing it to the government actions and the relationships created in the cycle.

- Attributing the causes of the trust effects observed to public participation processes – this is likely to be the most difficult step. The gold standard of proof would be some version of a randomized control trial – a control, and then a series of interventions which had different relationships between governments and citizens –controlling for all the other factors that affect trust. As discussed above this is likely to be difficult to engineer; and natural experiments, where different areas with different sorts of relationships with government exist, could provide data from which to extract evidence.

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[1] See the next section for further work unpacking what these assumptions might be.

5.1.3 Assumptions Underlying the Virtuous and Vicious Dynamics and the Government Perspective

The decisions that set up the virtuous or vicious dynamics are taken by administration members and elected officials through direct decisions, policies and procedures. These choices are all underpinned by two fundamental types of assumptions about public participation.

The first is a set of assumptions about the nature of democracy itself and often returns to the normative issues about the right type and amount of public participation discussed in Section 3.2. This is about the appropriate amount of influence citizens should have in the policy cycle and there are several strands of argument where the choice to involve everyday citizens is not a foregone conclusion. These incorporate situations which:

- Include intelligence and national security information;

- Are designed to remove bias for political benefit such as the setting of interest rates by Reserve Banks, and independent investigators such as government auditors or productivity commissions;

- Use the existing representative mechanisms (such as voting) as sufficient to distil the public will on an issue;

- Require specialist knowledge and experience for a well-informed decision. This might include trade negotiations or public health decisions.

The second set of assumptions regard the nature of citizens themselves and whether they have the opportunity and capacity to contribute to the policy cycle. These would include arguments that:

- There is not enough time for involving citizens because of perceptions of short timeframes or scheduled activity (such as budgets or legislative schedules).

- Sufficient physical and temporal opportunity has been provided for citizens to input to the process (through a set number of physical meetings at certain times – that may or may not suit all citizens).

- Citizens are so time-poor that they are not willing to pay the opportunity cost of being involved in the policy cycle (with busy modern lives everyday citizens are faced with a multiplicity of ways to spend their limited time and do not wish to use it on policy).

- Critical thinking skills are so lacking in the general population that rational decisions are unlikely to emerge from everyday citizens.

- Individuals are too self-interested and narrowly focussed to make decision in the best interests of the whole polity.

These assumptions were hinted at in Publication I and it is important [410] to provide a more useful explanation for the inability to shift cycles than the anodyne "failure of political will" at the institutional level [411,412].

Without an understanding of these assumptions, reforms to change the relationship between citizens and government are likely to encounter barriers – not the least being from elected politicians who disagree with citizens as to the nature of the these reforms [197].

5.1.4   Scaling, Reform and the Deliberative System

Even assuming all the previous research agenda can be achieved, and results are roughly in line with those in this thesis, an even larger challenge presents itself – the practical reform of current governance systems. This will require taking the learnings of this thesis and scaling them across multiple dimensions.

Publications I and IV look at scaling from two different perspectives. Scaling the deliberative democracy principles for sustainability (Publication IV) should proceed from:

- The top to the grassroots;

- Developed to developing nations;

- Less wicked to more wicked problems;

- Limited parts of the policy cycle to all of governance;

- One-off initiatives to institutionalisation;

- Few people to the majority of the world;

- Low quality to high quality deliberation.

Clearly, this is a massive task, badly in need of theoretical and practical investigation.

Scaling deliberative democracy (Publication I) is a current preoccupation of the field [356,413] and is unresolved [31,325]. The case studies themselves failed to induce institutionalisation beyond a diluted single repetition the following year. Even if it had, it's unlikely that a mini-

public based dynamic will entirely close the current political trust gap [180,214], and that sometimes governments cannot and should not be trusted [408]. Additionally, both cycles represent end points on a spectrum of democratic participation between two points on the Arnstein Ladder. Real-world practice could involve a mixture of types of participation at different parts of the cycles (e.g. citizens may be involved non-deliberatively through public polling early in the consultation cycle, or citizens may be absent from the implementation of the mini-public recommendations in the partnership cycle). In spite of these caveats, mini-publics have proven themselves valuable into building democracy supporting trust, and should be combined with other ways to signal benevolence and demonstrate competence such as donation control, changes to parliamentary entitlements, independent corruption watchdogs, and media regulation [205]. Indeed, mini-publics can act as legitimacy and trust proxies for divisive and difficult policy reforms, just such as these.

There are fears that deliberative forums could be used to legitimate the existing power structures and not achieve sustainability outcomes [31], but the biggest concern is that path dependent lock-in has occurred. If trust and social capital have degraded so much that not enough people are willing to be involved in deliberative democracy reforms to make them legitimate, a virtuous cycle cannot be initiated. The strongest proponents [261,414] of this position claim that to become legitimate, deliberative democracy will have to compromise itself by allowing the participation of non-deliberative participants - those unwilling to adhere to deliberation ground rules of egalitarian, open and honest discourse and purposefully remain rude/uninformed. Alternatively, society-wide education programs would need to be instituted, to inculcate participation and deliberation skills. Though this would likely violate liberal standards of free choice. Understandably, there is genuine concern about the ability of deliberative democracy principles to be scaled; and this concern is not completely allayed by the success of the Geraldton PB's case studies. It does, however, provide further impetus for research to determine how important the trust effect is.

5.2   Final Remarks

This thesis started with the research question:

Can a deliberative democratic mini-public intervention meet citizen expectations of public participation and increase the political trust required for sustainability?

It ends with the simple answer – Yes.

Public officials wishing to combat the worrying trend of falling political trust by the publics they serve, now have greater support for some effective strategies and tactics. There had been indirect evidence from Canada and the US that citizens trusted mini-publics more than the

existing political systems and that mini-publics can act as effective trust proxies for the wider citizenry [180]. This thesis complements and advances that work in several significant ways.

Statistical changes in participant trust in the deliberative process itself was directly measured and shows the importance of the process in trust changes. Observations and qualitative stakeholder interviews surfaced the mechanisms for these improvements in political trust. Significant evidence has been adduced to support the presence of two, idealized dynamics that can operate in democratic governance based on different participation relationships between citizens and governments. One model of common government action of a participation type called 'consultation' - while sometimes appropriate - can produce a cycle of diminishing trust because it fails to meet citizen expectations.

The deliberative PB case studies represent an intervention that fostered a partnership-type participation relationship, could shift these dynamics, and found good support for this with demonstrating how meeting partnership expectations through deliberative democracy can improve political trust. This leads to the conclusion that although the term 'public participation' is often used as a catch-all to describe a range of interactions between government and citizens, this phrase obscures more than it reveals, and discrimination is critical to achieving outcomes citizens expect. By meeting expectations, a virtuous cycle can be created when the trust built fosters greater trust, stabilizes the relationship against future challenges and *"... helps people give one another the benefit of the doubt (and remain cooperative) when they need to cope with unintended errors, or noise.*" [161]. This greater trust can be used in the service of effectively managing wicked problems and particularly sustainability.

To start to shift the current mutual lack of trust – to move the dynamics of negative/vicious feedback to a virtuous cycle - it is likely that one or both parties (government officials and citizens) will have to proactively extend trust to the other party. This means being willing to be vulnerable even in the face of a lack of confidence in the other party's benevolence or competence. Given a definition of democracy as 'government by the people'; and the power imbalance implicit in representative democracy, government should be the first to make itself vulnerable [172] by creating a partnership relationship. Honest attempts to reach out for partnership in a deliberation have been empirically shown to be well-received by citizens [147,355]. This is further supported by interpersonal trust research [17] that implies that democracy supporting trust will be boosted in situations where one party refrains from gut-level responses to disappointed expectations, and takes a leap of faith [90] to respond in a constructive manner. The six publications forming the body of this PhD study were able to demonstrated that such an approach is possible.

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Chapter 7   Publications

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Publication I

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7. Deliberative democracy – democratic renewal capable of addressing sustainability

Janette Hartz-Karp and Rob Weymouth

INTRODUCTION

Achieving future sustainability will require decision-making in the interests of the ecosystem, the public good and future generations. Such sustainability governance has been elusive. Researchers have contended that democracy is the most capable mode of reflexively addressing the substantial challenges posed by our constantly changing, unpredictable world (Prugh et al., 2000). To date, though, democratic governance across the globe has not been capable of decision-making that could turn the curve (Friedman, 2005) towards a more sustainable future. Hence, we, the people, will need to participate differently from the way we have been if we hope to create a more sustainable world (Atlee, this volume). Both social and physical sciences agree that achieving this will require new ways of collaborating: 'The technology we need most badly is the technology of . . . how to cooperate to get things done' (McKibben, 2006, n.p.).

STRONG DEMOCRACY': AN EFFECTIVE METHODOLOGY FOR GOVERNANCE CAPABLE OF ADDRESSING SUSTAINABILITY

Achieving greater sustainability will inherently involve people and governance. This is particularly so since sustainability is a contested arena, with non-neutral and ethical premises and implications. Problematically, there are no right answers for resolving sustainability's wicked problems, which are complex, with impacts that are unknown and unknowable. Sustainability is inevitably context-specific, situated in a particular socio-cultural, environmental, economic and governance milieu. Hence, achieving greater resilience will depend on governance that can better understand

113

and work with people's values and preferences, as well as more effectively integrate the local with the global.

It has been proposed that our democracies are less than effective at resolving the complex challenges facing us because they are weak or thin democracies – inherently competitive, combative, and rooted in individualism (Barber, 2003). Such democracies and similarly principled systems have been relatively effective in governing during the linear, stable epoch that has characterised the majority of human history. However, their effectiveness has faltered in the face of growing complexity and this shortfall is expected to grow more chronic with the transition to the non-linear, dynamic epoch of the Anthropocene (Dryzek, 2016). Such democracies contrast with strong democracies in which citizenship is a way of living, where citizens 'govern themselves to the greatest extent possible' (Prugh et al., 2000, p. 112). Such a democracy would support Rousseau's early characterization of it being geared to arriving at a public will that reflects the common good (Rousseau & Cranston, 1762). However, in our current democratic systems, where decision-making is handed over to elected elites who are not accountable to the public until the next elections, citizens have little to no role in self-government in the decisions that impact them daily (Gilens & Page, 2014). In short, '[g]overnments make thousands of decisions that affect individual welfare . . . citizens have only one instrument to control these decisions: the vote' and by relying on this vote, the people are not 'substantively represented' (Manin et al., 1999, pp. 50–51).

For citizens to be substantively represented in decisions that impact them, it will require not just everyday people participating differently, but also governments participating differently (Pateman, 2012). It is contended here that the significant precursor to such a change will be a conscious shift in power relations from the predominance of elected officials using power over the public, to the creation of conditions and ongoing opportunities for power with the people. Supporting this is recent research showing that it is not just political outcomes that have been a focus of people's concerns, but also the political process (Stoker et al., 2014). Examples include those elected being an elite group, atypical of those they represent; and law-making processes being captured by the short-term political focus of gaining or staying in power (Bouricius, this volume). This has been described as the pull between 'old power . . . closed, inaccessible and leader-driven' and 'new power . . . open, participatory and peer driven' that 'reinforces the human instinct to cooperate (rather than compete)' (Heimans & Trimms, 2014, p. 50). Access to continuing opportunities to participate differently via egalitarian, empowered processes will tend to foster responsible citizenship and mutual respect (Gastil & Xenos, 2010), reducing the prevalence of self-interested attitudes and combative relation-

ships that do not support sustainable living (Gastil et al., 2010). It is the possibility of enabling a new power that is the focus of this chapter.

Many methods have been proposed to improve the political process to more effectively increase the power of the people, including: reforming electoral accountability mechanisms (Maloy, 2015), citizen-initiated referenda (Hill, 2003), strengthening advocacy bodies (Maddison & Denniss, 2005) and improving monitoring and representation mechanisms (Alonso et al., 2011). The particular focus of this chapter is on deliberative, collaborative decision-making (Gollagher & Hartz-Karp, 2013), more widely known in political science theory and practice as 'deliberative democracy' (Chambers, 2003; Fishkin, 2009). Deliberative democracy involves the following principles (Carson & Hartz-Karp, 2005):

1. representative/inclusive participation of everyday people, descriptively representative of the broader public;
2. deliberating together – participating meaningfully in an egalitarian environment to resolve issues of importance through a process of carefully considering comprehensive information and the diverse viewpoints on an issue, then co-creating options and weighing them, with the aim of developing a coherent pathway forward based on common ground; and
3. knowing that outcomes will be influential, and will be seen to be so.

Deliberative democracy has the potential to advance the new power relations needed to foster the stronger democracy that will be essential to governance for sustainability .

DELIBERATIVE DEMOCRACY: A METHODOLOGY TO ACHIEVE A STRONG DEMOCRACY

If the current democracies, supported by hierarchical and technocratic decision-making systems, cannot cope with rapid change, complexity and uncertainty, it is clear we need transformational change that will enable us to more effectively respond and adapt to the rapidly changing world. However, as Einstein was purported to have said, we cannot solve our problems with the same thinking we used when we created them.

We are not suggesting here that there should be a radical change to overthrow our current governance regimes. As the Arab Spring in the early 2010s highlighted, doing so can result in chaos, and/or more totalitarian regimes. What we are suggesting is incremental political reform. This has already begun, with a growing number of deliberative democracy

initiatives across the globe that have supplemented and added value to democratic decision-making processes (Fishkin, 2009).

Such democratic reform is very different to the community/stakeholder consultation/engagement and social media initiatives often implemented by democratic governments. The objective of these initiatives is mostly to enable the public to better understand what the government wants to do, and/or to elicit public opinion on these issues. This comes from a number of assumptions about the roles, rights and capacity of both government officials and the general public which we detail in Table 7.1 below. Unfortunately, community engagement outcomes have often been disappointing. Rather than feeling satisfied about being included, the public has often felt unheard, disempowered and disaffected, sometimes outraged. Despite what may have been good intentions, governments have created a vicious cycle; a constant sequence of change that unfortunately reinforces itself and becomes a 'fix that fails'. However, regular deliberative democracy initiatives over time have shown that it is possible to intervene in this system to create a virtuous cycle, a cycle of change fostering favourable results (Weymouth & Hartz-Karp, 2015).

We contend that a key to achieving such a virtuous cycle is to challenge current assumptions about power over citizens being the most effective mode of governance, by providing ongoing opportunities for power with citizens. Such a virtuous cycle would enable a different ethos: with the demos (members of a society who have all the associated rights and responsibilities of membership) feeling both responsible and capable of resolving tough issues; and concomitantly, governments being willing to share power, routinely integrating public wisdom in their decision-making processes. Creating such an ethos, however, would require continuity; individual initiatives can help resolve particular challenges, but are insufficient to turn the curve from the current unsustainable trajectory. Table 7.1 contrasts the two cycles.

There are three unique characteristics of deliberative democracy that make it particularly effective in addressing some of sustainability's critical challenges – its political effectiveness in group decision-making, its adaptive approach to goal seeking, and its responsiveness to changing underlying assumptions. The first characteristic relates to its decision-making method, of using diverse, small group democratic processes, that leverage diversity and crowd wisdom to improve decision accuracy (Kao & Couzin, 2014), epistemic strength (Landemore, 2013) and political legitimacy (Smith, 2009). The second characteristic relates to its use as an adaptive management system applied over the long term to help groups solve emergent problems and take advantage of materialising opportunities. This type of governance so instituted is more transparent and understand-

Table 7.1   From community engagement to deliberative democracy

From community engagement to deliberative democracy
From a vicious cycle to a virtuous cycle:
Responding to a new or existing concern or opportunity

FROM	TO
Assumption: Selected representatives, technocrats and experts should make the decisions, hence: **Action: Officials frame the issue. Data is analysed, often with 'expert' advice. Officials devise solution(s) shaped by risks, costs and political ideology.**	*Assumption: Everyday people have the capacity to collaboratively resolve tough issues; hence:* **Action: Officials determine how decision-making power is best shared in this case.**
Assumption: The public is disinterested, self interested and/or ill informed, so public is unlikely to add value to the policy or decisions, hence: **Action: Officials consult/inform and listen to stakeholders, experts and interested others to discern expert views and public opinion.** **Efforts are made to inform/educate and to invite people to: 'have your say'.**	*Assumption: Resolving complex issues requires diverse viewpoints, egalitarian deliberation, and commitment to the outcomes being influential; hence:* **Action: The broad public is given opportunities to frame the issue, suggest ideas, develop discourses, and create possible options, providing a clearer idea of the public will on this issue.**
Assumption: Since proper process has been implemented, expert opinion considered and public opinion canvassed, the community will comply; hence: **Action: Inputs contrary to the government will are seen to be largely unhelpful; officials may modify the solution to mollify, or keep it 'as is'.** **Plans are finalised and officials formally advise the public.**	*Assumption: Deliberative, collaborative governance will enable wiser, more implementable decisions, with the capacity to be reflexive; hence:* **Action: mini-publics are convened to deliberate the issue – a microcosm of the population is comprehensively informed, consider different viewpoints, exchange reasons, explore values and options, assess options, search for common ground and develop recommendations.**

Table 7.1   (continued)

Assumption: With education/public relations/information, the public will see the wisdom of the government solution, accept it and move on; hence:
Action: Decisions continue to be made the same top-down way, i.e. using power over.

RESULTS

If plans are implemented, or delayed, not implemented or ineffective:

● The public feels unheard, disaffected and/or angry.
● Officials think public is self-interested, or un/misinformed.
● The public resists implementation. Officials defend it. Assumptions are reinforced.

OUTCOMES

Reciprocity and trust between public and officials is decreased.
Legitimacy to act is reduced.
Social and political efficacy is reduced.
Social capital is weakened.

Assumption: If the public feels involved throughout, it is more likely to co-own and co-enact solutions.
Action: Decisions as to the pathway forward are made collaboratively with the broader public, i.e. using power with.

RESULTS

If plans are implemented and effective:

● The new assumptions are reinforced.

If plans are delayed, not implemented or ineffective:

● Negative public outcry is mitigated since it was their fellow citizens who deliberated and decided.

OUTCOMES

Reciprocity and trust between public and officials is increased.
Legitimacy to act is improved.
Social and political efficacy is enhanced.
Social capital is strengthened.

able not only to citizens, but to the broad range of decision-makers and stakeholders involved. This in turn can open up opportunities to address challenges more holistically – critical to future sustainability (Weymouth & Harz-Karp, 2015). The final effective characteristic is that it invites critical enquiry by surfacing and changing assumptions about governance, which enabling reflexive governance (Popa et al., 2015). This is important given the ineptitude of current governance systems in dealing with the earth's sustainability challenges (Steffen et al., 2015). Deliberative democracy, as a research method, stimulates such critical enquiry, employs citizens as researchers and facilitates a learning community and society (Ansell & Geyer, 2016).

MINI-PUBLICS AS A METHOD TO ACHIEVE DELIBERATIVE DEMOCRACY

Deliberative democracy is both a theoretical methodology and a practice, involving a range of approaches to public deliberation and collaborative decision-making. The process involves everyday people, representative of the broader population having a meaningful voice in governance, learning, reflecting and reasoning together in non-coercive, egalitarian environments that promote reciprocity/mutual understanding and trust. A key method of achieving deliberative democracy is through the implementation of mini-publics. These are randomly sampled groups, stratified to mirror the larger population. The so-selected participants deliberate together in facilitated discussion to understand the different viewpoints on an issue, including scientific evidence and data. They then co-create options and weigh them against agreed values in order to find a coherent way forward, which is influential in policy development and decision-making.

Mini-publics are not methods to achieve popular participation in politics, neither are they a form of community consultation. Rather, these randomly sampled participants have the opportunity to stand in for, or represent, the larger public. Hence, they need to be judged by the 'nature and quality of democratic representation' that they achieve (Warren, 2008, p. 51). Zakaras (2010) contended that sortition – descriptive representation – and deliberative democracy perform better than elected representation that overwhelmingly involves the elite who rule in their own interests as measured against the following four values:

1. equal protection of interests – all citizens are of equal worth and should have equal weight or voice in public decisions;

2. recognition – that citizens are responsible agents and participants in public life;
3. political autonomy – the commitment to self-rule; and
4. deliberation – making good decisions that reflect all available evidence and argument.

In view of this, rather than suggesting the replacement of the current democratic system of elected representation, we propose supplementing it with deliberative democracy so it can better reflect democratic ideals of 'empowering ordinary citizens to make important political choices, to rule themselves' (Zakaras, 2010, p. 468). Moreover, this will result in better decisions that are not motivated by short-term re-election concerns, political ideology, or vested interests (Ross, 2011). For deliberative democracy to be institutionalised as an integral part of the democratic system, there will need to be a more effective meeting and integration of top-down and bottom-up intelligence. We can then be certain that decisions take greater account of community values to reach public wisdom, generate enhanced civic agency and achieve co-creation, co-ownership and co-enactment (Atlee, this volume).

Similarly, we are not proposing that deliberative democracy is the only way for people to participate differently to help improve sustainability. There are a myriad of ways humanity can make a difference to sustainability outcomes. However, in our view, a key intervention point, capable of nudging the system in a more sustainable direction, is the discursive nexus between decision-makers, experts, other stakeholders and everyday people, where public wisdom can be co-created and co-enacted. It is our contention that deliberative democracy can leverage long-term sustainability because co-owned solutions will inspire greater legitimacy and support for implementation. Deliberative democracy initiatives[1] have provided evidence of mini-publics receiving public legitimacy, precisely because elected officials did not make the recommendations. Rather, everyday citizens without vested interests had carefully considered all sides of the issue to arrive at their conclusions. A more global review of deliberative democracy initiatives can demonstrate that this methodology is capable of resolving sustainability dilemmas from local to global. However, such initiatives are not sufficiently widespread or well known to achieve ready acceptance either by current governments or by the broad public. To achieve this will require bringing deliberative democracy initiatives to scale.

METHODS TO MORE RAPIDLY SPREAD AND SUSTAIN DELIBERATIVE DEMOCRACY

Five methods to spread and sustain deliberative democracy are listed below. They look at the opportunities from different perspectives.

Increasing the Scale of Deliberative Democracy

Deliberative democracy has often been criticised for its inability to reach sufficient scale to achieve political and democratic legitimacy (Parkinson & Mansbridge, 2012), in that such initiatives have been limited, disconnected and relatively small. The concept of scale, however, is variously understood, with some authors referring to the need for larger numbers participating in deliberations as 'scaling up' (Niemeyer, 2014) while others call it 'scaling out' (Levine et al., 2005). A broad view of scale is adopted here as meaning the expansion of each of the underlying principles of deliberative democracy – representativeness, deliberativeness and influence (Carson & Hartz-Karp, 2005). Given Zakaras' (2010) elucidation of the values of democracy outlined earlier, each of these elements will play an important role in enhancing their democratic legitimacy.

Scaling Representativeness

Deliberative democracy is critiqued for not reaching sufficient numbers of citizens to fully embody the core principle of rule by the demos and hence lacking full legitimacy (Chambers, 2009). Most responses to this criticism involve the literal expansion of participation in deliberations to include ever-increasing numbers of the demos, notably information technologies, social media and online deliberation. Though such technologies are invaluable in eliciting public opinion, to date, they have fallen short in eliciting carefully deliberated public wisdom (Hartz-Karp & Sullivan, 2014). Unless online technologies radically improve with mass uptake, and/or the principles and practices of deliberative democracy become integral to our system of governance, scaling representativeness in terms of numbers alone will remain problematic.

Scaling Deliberativeness

The scaling of deliberativeness focuses on expanding the quality of political communication in terms of its fitness for purpose for a world grappling with complexity and uncertainty. Each aspect of deliberativeness offers a way of scaling:

1. Increasing the diversity of discourses associated with an issue being deliberated in order to improve the contestatory standards of deliberation (Dryzek & Niemeyer, 2008) – these discourses are defined by Dryzek (2013, p. 8) as 'a shared way of apprehending the world' through language and a coherent narrative about the way the world functions, including assumptions, which then frame communication and analysis, and lead to decisions and actions. The authors argue there is increased certainty of quality deliberation if all the discourses (or at least those held by the majority) are present during a deliberation rather than relying on a selection of individual citizens to be statistically likely to represent these discourses. This approach of systematically representing all the discourses has the potentially useful benefit of providing the attitudinal diversity of a demos, while avoiding the need to recruit greater numbers of participants at high cost but with a finite, even small range of views.

2. Deepening and improving the reflection, justification and coherence aspects of deliberation – this is in response to the observation that some groups can be accomplished at reflecting internally on information and values but deficient in externally justifying them in a deliberation and vice versa. Both of these are important markers of the quality of deliberativeness that is required to address sustainability wisely (Dryzek, 2016).

3. Improving the capability of deliberation to more effectively address the range of classes of problems – this refers to issues from relatively simple to the systemic wicked problems that are closely associated with sustainability (Atlee, this volume).

Scaling Influence

Scaling influence refers to the depth of the sway that the results of deliberations have on decision-makers, and how far and deeply those results are felt by those affected by the decisions. This can be accomplished across a number of dimensions:

1. Expanding deliberation to multiple levels of government from local to global, with influence and range broadening at each level. This would entail the reversal of the current trend of successful deliberative democracy experiments largely occurring in geographically localised areas (Levine et al., 2005), rather than at national or international levels.

2. Expanding into parts of the world where it is less common or non-existent, particularly the non-Western world. This assumes the

preferability of democratic governance and the universal ability to deliberate amongst humans (Mercier, 2011).

3. Escalating to deal with classes of problems of greater complexity and wickedness (Weymouth & Hartz-Karp, 2015) that have stymied existing governance systems (Briggs, 2007). The more deliberative democracy can effectively address such issues the more decision-makers are likely to adopt deliberative democracy, and the more likely citizens are to demand it.

4. Extending beyond policy development to the implementation and evaluation elements of government (Bächtiger et al., 2014). This includes how the outcomes of deliberation in one arena or part of a government structure affect decisions or deliberations in other arenas or structures (Bachtiger & Wegmann, 2014).

5. Repeating deliberative democracy processes over time. This allows them to become business as usual in the logic of real-world politics, embedded and institutionalised as part of the way of doing politics (Mansbridge et al., 2012).

The need for interrelationship between these forms of scaling is reflected in a recent turn in deliberative democracy theory suggesting a focus on the deliberative system. In such a system, a series of distinct but coupled parts of the political decision-making apparatus, with varying degrees of deliberativeness, could function in a dynamic way to produce deliberative outcomes at the whole of system scale. The strengths of parts of the system could shore up the weaknesses of other parts. Operationally, such a system is fuzzy and probabilistic, with some overlap and redundancy, but it is still a talk-based approach to conflict (Mansbridge et al., 2012). Moreover, since the deliberative system is described as dynamic and evolving in response to, amongst other things, its own deficiencies, it is the paragon of institutionalisation, interconnectedness and persistence.

However, the focus here is on how to effectively intervene in the current system's inability to address the unpredictability and long-term nature of sustainability. As both social and physical scientists have contended, without new technologies of cooperation (McKibben, 2006) our current and impending sustainability predicaments will not be adequately addressed. In our view, deliberative democratic mini-publics exemplify one of these new technologies. Therefore institutionalisation of mini-publics, taken to scale to address key sustainability challenges, has the potential to be such an intervention.

Institutionalisation

In our view, the scaling of influence through repetition of deliberative democracy is a key to institutionalisation. Early examples of deliberative democracy initiatives that persisted over a decade or more (though are now defunded) include: the Tuscany Law of Participation – Law 69 (Lewanski, 2013); the Danish Consensus Conferences on technological issues; and the two legislated Citizen Assemblies in Canada. Other ongoing initiatives include the Constitutional Conventions in the UK and Europe; and the Citizens Initiative Review in Oregon, USA.

The most prolific category (though often not deliberative as defined here) is the participatory budgeting (PB) initiatives (Allegretti & Hartz-Karp, this volume) taking place in over 2,500 places across the globe (Sintomer et al., 2012). In South America, PBs have shown that long-term institutionalisation is most likely to occur when the public has had sufficient positive experiences of direct involvement in budgetary decision-making (i.e. decision-making that is co-decisional, not consultative) that governments, regardless of political persuasion, have continued to retain and support. Additional enablers include: governments ensuring that the people remain central to governance, as co-responsible as well as co-decisional actors; evolutionary initiatives rather than repeated rituals, and concretising decisions so the people see evidence of the collective decisions made (Alves & Allegretti, 2012).

Our own experience of institutionalising deliberative democracy via ongoing mini-publics has shown that adaptive management is critical to success (Weymouth & Hartz-Karp, 2015). Adaptive management involves achieving goals through the principled shifting of plans and resources to match changing circumstances and evaluation of existing strategies. Moreover, it requires reflexivity (Dryzek, 2016). Adaptive management and reflexivity have been trialled in two ongoing deliberative democracy initiatives over four years – the first with a state government Ministry of Planning and Infrastructure and the second with a regional city in Western Australia, where deliberative democracy mini-publics were implemented to address each major sustainability issue as it emerged. Both long-term initiatives involved the constant changing of plans to respond to lessons learned and emergent opportunities. An experimental approach to the integration of design, management and monitoring of initiatives was taken in both. Both aimed to arrive at more robust decision-making in the face of sustainability. This required systematically testing assumptions in order to adapt and learn, particularly assumptions about the capacity of everyday people to reach sustainability decisions in the public good. The public deliberation processes were monitored to assess their fitness for purpose,

and the outcomes were monitored to ascertain the extent to which the decision-making that resulted was robust. Enhancing new learning rather than repeating prior errors was possible through adapting the processes that followed.

CONCLUSION

Experience with deliberative democracy, in particular by the authors, has highlighted what is easily doable and what is more difficult to achieve. The first lesson is that there is not, and is not likely to be, any single way of applying deliberative democracy that could address all contexts. However, as a cover-all methodology, deliberative democracy mini-publics have been successfully applied to address particular sustainability issues at every level of governance.

The second lesson is that the institutionalisation of deliberative democracy is vexatious, inevitably dependent on those in power at the time. Shifting power relations is never easy. Though laws may be instituted to do so, without continued political support and funding they become toothless (as per the Tuscany Law of Participation). Ongoing citizen-centred renewal is also needed (as per the South American PB's).

However, when there is no history of institutionalised deliberative democracy, then decision-making pioneers are critical in forging a new path by championing power with the people to collaboratively resolve tough issues. For deliberative democracy to continue in the medium term at least, it needs to be responsive to any sustainability challenge or opportunity that arises. Responses cannot be standardised into repetitive rituals. Reflexive and adaptive management of deliberative democracy is not a tool box (though tools and techniques can be helpful). Rather, deliberative democracy is a methodology that has at its base a core set of principles: representativeness, inclusiveness, influence and egalitarianism. To respond adequately to complex sustainability issues, these principles need to be scaled or extended upwards and outwards, as well as deepened and honed in terms of quality of execution.

Given the high level of electoral abstinence and political disaffection across many democracies, pressure is being exerted across the globe to demonstrate their legitimacy as effective modes of governance. Achieving this is highly unlikely without some form of democratic renewal. The implementation and institutionalisation of deliberative democracy as a methodology will help to achieve strong democracy, which in turn will be critical to achieving a more sustainable world.

NOTE

1. See the legitimacy results from the Citizens Initiative Review in Oregon, USA (Gastil et al., 2014), the Citizens' Assemblies in British Columbia and Ontario, Canada (Fournier et al., 2011) and the Participatory Budgeting Panels in Geraldton (Weymouth & Hartz-Karp, 2015).

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Australian Participatory Budgeting

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Introduction: Participatory Budgeting the Australian Way

Australian Participatory Budgeting (PB) constitutes a significantly different branch from the tree of participatory budgeting initiatives world-wide. It remains a democratic process, of course, but goes beyond what has come to be expected in participatory budgeting initiatives. Ordinary citizens still provide input into the allocations of a government budget. However, rather than dealing with only a small proportion of a given budget – typically around 10 percent (Avritzer, 2006) – in Australia, citizens have allocated up to 100 percent.

tGiven the complexity of budgeting for an entire city or region, following the typical PB method of relying on civic groups to develop projects (with citizens voting on their priorities) could prove unworkable. Ordinary citizens are unlikely to understand the complexity of government budgeting; they have limited and often inaccurate information; and they seldom have sufficient knowledge of the risks involved in failing to maintain or invest in new infrastructure and services. Voting typically is determined by individual opinions, and occurs without careful consideration of alternative viewpoints and reliable factual information. Taking responsibility for 100 percent of a budget requires a deep understanding of the budgeting system, underlying principles, and the inevitable trade-offs.

Australian PBs endeavour to balance people's desire to express their opinions ('having one's say') with (open-minded) listening for learning. They also challenge participants to 'think slow' (consciously, logically, deliberatively) rather than 'fast' (reactively, emotionally, often stereotypically) (Stoker, Hay, & Barr, 2016). Australian PBs also set aside the principle of majoritarianism, with its ultimately coercive and mechanical character, in favour of reflec-

tion, reason-giving, and consensus. The short term for this methodology is 'deliberative democracy.' It emphasises the values of representativeness, active participation, deliberation (i.e., weighing of costs and benefits, advantages and disadvantages), and citizen influence in the policy-making process (Carson and Hartz-Karp, 2005). Experience with deliberative democracy across the globe has revealed other benefits as well, including an improved sense of political efficacy, increased civic-mindedness, higher levels of mutual trust between government and people, and increasing the legitimacy of decisions (Fung and Wright, 2001).

In the Australian PB, the task of non-expert participants is similar to that normally reserved for elected representatives. Importantly, though, the Australian PB does not eliminate elected representation. Rather, it brings citizens into the realm of sharing problems and opportunities with elected governments and thereby brings community values to the fore in decision-making about principles and trade-offs. As a result, the Australian PB helps restore public trust in our democratic institutions (Weymouth & Hartz-Karp, 2015). Affording everyday people such influence is the archetype envisioned by various democratic reformers (Burnheim, 2006; Gastil, 2000; Carson & Martin, 1999).

The extent of civic responsibility required to allocate 100 percent of a city-region budget is substantial and cannot be fully achieved through the straightforward totting up of participants' likes and dislikes regarding various projects. Such simple registering of people's preferences requires only a few minutes of a large number of people's time. In contrast, the deliberation characteristic of the Australian PB involves careful deliberation over five to eight days, albeit by a much smaller number of people. For example, a typical 'People's Panel' consists of a descriptively representative group of 25-50+ persons selected through stratified random sampling, so that participants mirror the demographics of the larger population.

Proponents of participatory budgeting understandably take great pride in how PBs frequently elicit higher participation rates than the elections of government officials. In contrast, however, the Australian PB assumes that increasing the number of participants may not be the best or only way to empower the people to make decisions.[1] The recruitment process for Australian PBs is inspired by the model of ancient Athens, which relied on sortition (Ober, 2008; Van Reybrouck, 2016). In sortition—better known as random selection or a lottery—every person has an equal chance of being selected. The Australian PB, however, employs ran-

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dom selection in order to create a group whose members collectively are representative of the larger population. Those selected understand they are to speak for the citizenry as a whole (Riedy, 2017). When given the time, support, and expert advice they need to understand and resolve a tough issue, they almost invariably act accordingly[2].

This chapter describes four Australian PBs — two in Western Australia, and two in the eastern states of New South Wales and Victoria — in which citizen participants were given authority to allocate 100 percent of their respective city-region budgets. The processes are described as well as the results. The two in the eastern states were inspired and overseen by the not-for-profit foundation, newDemocracy (https://www.newdemocracy.com.au/). The two in Western Australia involved the authors from inception to conclusion.

Australian Participatory Budgeting: City of Greater Geraldton (CGG), Western Australia

The city-region of Greater Geraldton, located around 400 kms north of the capital city, Perth, Western Australia, has a population of approximately 40,000. The region once had a thriving fishing industry and a strong agricultural base, with some mining. Following significant declines in fishing and agriculture, however, sustainability became a critical issue for the region. One response was a four- year action research partnership between the city-region and Curtin University's Sustainability Policy Institute, which was established to identify and implement people-centred sustainability outcomes. Towards the close of this period, economic problems were exacerbated when a short-lived mining boom turned into a mining bust.

CGG PB Panel Context and Process

The prior edition of *Hope for Democracy* (Dias, 2014) reported on the four-year deliberative democracy initiative in the city-region

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2   In China, (Fishkin, He, Luskin, & Siu, 2010) a variation of participatory budgeting using sortition was used to select local government projects. Called a Deliberative PollTM, it involves surveying randomly selected people prior to and after respondents have spent a day or more learning, questioning and considering the issues. However, in our view, decisions made from the aggregation of survey results, as compared with the collaborative problem solving of Australian PBs, does not fully leverage the collective wisdom available.

of Greater Geraldton (CGG). In that process, citizens were placed at the front and centre of problem-solving and collaborative decision-making to create a more sustainable city-region. Two small-scale PB pilots were conducted in the final stage of regional planning, commencing in the poorest socio-economic precinct. In each instance, AUD$40,000 (plus city support) was secured for prioritised projects. Groups of local residents developed project proposals, which community residents prioritised subsequently. Participants volunteered to take part in the government's tendering processes for those projects and later in their operationalization.

After the community's initial experience with a 'traditional' style of PB, the CGG afforded residents an opportunity to allocate 100 percent of the city-region's budget. The CGG's economic situation had worsened in the mining bust and, as in many if not most city-regions in the country, the demand for services had increasingly outstripped the government's available funds (Dollery, 2012). Over the course of almost four years, deliberative democracy exercises often had been conducted to resolve complex problems and opportunities (Weymouth & Hartz-Karp, 2015) As a result, CGG residents had become accustomed to community-centric problem solving and decision-making. But when the CGG elected officials realised that their budget was going to be seriously in deficit, they raised taxes and rates substantially with no citizen input (ABCNews, 2012). Outraged, some citizens combined to hire a lawyer to take the city to the local government administrative tribunal for not involving the people in such a decision. Through a mediation process, the city pledged in the forthcoming budgetary processes to hold a Participatory Budgeting initiative. Two Australian PBs were implemented, one to allocate the City's long-term (10-year) infrastructure budget, the other to set the city-region's 2014/15 operational budget.

The Infrastructure PB Panel was charged with reviewing the city-region's planned capital works for the next ten years; requesting and considering citizens' additional suggested works proposals; creating a rating system; and using it to prioritise these works. The Operational PB Panel was charged with reviewing and rating the range and level of the services in the CGG operational budget; maintaining a break-even budget, recommending whether service allocations should be reduced or ceased, remain the same or be increased; and providing reasons for the decisions. In the Infrastructure and Operational PB Panels

respectively, a random stratified sample of 30 – 40 residents partici-
pated in five to eight days of deliberation to understand the budgeting
processes, develop funding options, assess them, and make recom-
mendations. These recommendations were then submitted to elected
officials who had already publicly agreed to the maximum degree of
influence allowable under local government regulations. The Council
would seriously consider all the recommendations, implement them
where possible, and provide a public explanation if they could not.

To ensure the representativeness of these two Panels, or 'mini-pub-
lics',[3] an independent local demographer was asked to create a random
sample stratified by age, gender, indigenous and multi-cultural back-
ground, and residential location (as a proxy for socio-economic level).
Participants received expenses for their participation and a small sti-
pend as partial compensation for their time. The time demands were
clarified at the outset (five Saturdays for the Infrastructure PB; eight
Saturdays for the Operational PB) and were strictly adhered to.

The process consisted of the following basic steps:

1. Explanation of the PB's 'charge' and of participatory budget-
ing, deliberative democracy, and quality deliberation;

2. Explanation of the City's overall budgeting process and those
aspects most relevant to the PB's charge (supported by briefing
materials, short presentations, continuous question-and- answer
sessions, and continued availability of 'experts' when needed
during small group deliberations;

3. Clarification of the common values of the Panel and the Stra-
tegic Community Plan, followed by determination of the criteria
for assessing options;

4. Assessment of options and calibration of findings between
small groups;

5. Prioritisation of options, if needed (including weighting of the
assessment criteria);

6. Determination of recommendations;

7. Writing of the Final Report, and subsequent formal presenta-
tion to the City, the Council, and the media.

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3   A mini-public is a microcosm of the wider public, usually a random sample, that
indicates what the broader population likely would decide if given the same information and
opportunity to deliberate (Riedy, 2017).

An Independent Review Committee (IRC) made up of prominent community figures was formed at the outset of each Panel to ensure transparency concerning the representativeness and deliberativeness of the Panel by reviewing the design at each stage of the process, direct observation throughout each day of deliberation, and conducting private question-and-answer sessions with participants at the conclusion of each day's deliberation (in order to provide an official but independent sounding-board for any problems, suggestions, and opportunities for improvement). The IRC also played the role of ombudsman for Panel members if issues arose.

Analysis of Representation, Deliberativeness, and Influence of the CGG PB Panel

Our analysis of each PB Panel was based on their legitimacy in terms of three key criteria required to achieve 'a fully democratic deliberative process': inclusion, deliberation[4], and influence (Carson & Hartz-Karp, 2005: 122). Each of these criteria is considered necessary for the success of the process, and the three are jointly necessary for a process to be 'fully democratic.' The supporting data that follow were gathered through a combination of researcher observation, quantitative surveys, qualitative interviews, and public documents (primarily the reports of the Infrastructure Panel (CGG, 2014b) and the Operational Panel (CGG, 2014a)).

A. Representation

Representing the entirety of the community and its views was understood to be critical, given the task and process involved. Representativeness was achieved primarily through stratified random sampling to create two deliberative democracy mini-publics. That is, the Panel did not attempt to mobilise the mass of local residents, but instead sought to assemble a descriptively representative group of residents mirroring the demographics of the larger population. Descriptive replication of gender, education, country of origin, and percentage of residents living in suburbs (as proxies for lifestyle and

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4   Another valuable approach is Graham Smith's use of 'democratic goods' to evaluate innovations. (Smith, 2009: 12–13).

socio-economic status) was approximated by comparison with regional census data. The percentage of young people and indigenous people was smaller than in the population at large. To avoid under-representing these groups, additional young people were recruited through schools and youth groups, and additional Aboriginal people were 'snowball sampled'[5] through their communities. Finally, to ensure the recently amalgamated small town of Mullewa had a voice, several Mullewa residents were added. The Independent Review Committee certified that the selection process was fair and unbiased, and that the Panels were representative of the larger community.

The broader community was included at various points in both Panel deliberations. Panel participants selected two different face-to-face routes to achieve this. Both Panels included traditional and new social media to promote the Panel process and invite interaction, using newspaper articles, local radio, Twitter, YouTube and Facebook. For the Infrastructure Panel, as well as comment facilities typical to these media, the community was invited to submit infrastructure proposals for Panel assessment alongside the Council proposals. Community proponents submitted proposals and presented them in person to the Infrastructure Panel, responding to Panel members' questions and suggestions. The Operational Panel selected members to present their preliminary recommendations to a large, open community forum for feedback. Panel members then gathered views from the attendees through small group discussions, which Panel members facilitated. The separate PB Panel session that followed this forum discussed each group's feedback and suggestions.

B. Deliberation, including information, decision rules, and decision-making

Deliberation consisted of Panel members discussing an issue; viewing it from different perspectives, including the facts and data; creating options that could resolve issues; adopting criteria with which to assess each option; weighing the options against the criteria; and choosing the best way or ways forward. For the Operational Participatory Budgeting Panel, getting facts and data that participants could

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5   A snowball sample is a nonprobability sampling technique in which existing participants recruit additional subjects.

readily understand required the City Administration to find new ways to present that data. Government budgeting is highly complex, with numerous departments responsible for different aspects of a given service, confounding a holistic understanding. Participants requested this information on one page, specifically in the form of a pie chart that clearly depicted the total cost of each service. After many weeks of work by the Administration, the pie chart was provided to the Panel. [6] Throughout the deliberation, independently facilitated small-group discussions used a new software platform[7] to input the table participants' ideas, including majority and minority viewpoints, to networked table computers. The room's suggestions were then themed by an independent theme team, almost in real time. The themes were projected back into the room and amended by Panel members to better reflect what was said. Where needed, the themes were prioritised using multi-criteria analysis or, more simply, through weighted voting, in which participants could indicate their priorities by allocating 100 points or 'dollars' to various items. Individuals submitted their priorities to the computers, with the online platform immediately computing the room's priorities.

Panel members rated the quality of the deliberations very highly. For example, 97 percent said they understood the issues under discussion very well; 93 percent said they learnt about the issues and got new information very well or quite well; and 100 percent said they heard from people with differing viewpoints very well or quite well. Table facilitators noted significant contestation and dissent in small group discussions during the phases of clarifying common values and prioritising projects and service. This came to the fore during the Operational PB, when emotions rose, and two participants withdrew temporarily from the room, returning soon thereafter when they felt able to continue with the deliberations. Yet interviews indicated participants felt that, despite emotional tensions, they were able to hear strongly held views and express their own. Moreover, they believed their voice had been heard and agreed that dissent was important for all perspectives to be seriously considered. At the end of both Panels, the Independent Review Committee certified that the Panel members were given the time, information (in an understand-

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6   The chart later became the accepted way for the City to present its budget to the public.

7   WhatDoWeThink (current beta version)

able format), and support to execute the 'charge' before them.[8] Decision rules were proposed either by participants or by the lead facilitator together with the organising team. All such suggestions had to be discussed, changed if needed, and finally endorsed through participant consent. The criteria for judging a service or piece of infrastructure were generated by Panel members through extensive deliberation and endorsement. The discussions regarding criteria were the most contested component of both deliberations. For example, despite the City's commitment to the PB's independence, the CEO visited the Infrastructure PB mid-process and told the Panel that the criteria they had developed were not useful and that the Panel should instead conform to the City's pre-existing sustainability framework of separate pillars: social, cultural, economic, environmental, and governance. During follow-up discussions, Panel members were reluctant to dispense with their criteria, which they valued highly, particularly since it had taken two days of difficult deliberations to develop them. Consequently, Panel members and teams undertook calibration testing to determine the reliability and validity of their criteria. The results showed that the Panel's criteria had high levels of reliability and validity. The Panel decided, therefore, to retain their own criteria. Similarly, in the Operational Panel, disagreement arose between several Panel members concerning whether the indigenous community should be given preferential treatment in assessment criteria. As the discussion became very heated, the Panel decided to maintain momentum and delegate wordsmithing and decision-making on this narrow issue to a smaller group of Panel members who had volunteered to work at night between meetings to come to an agreed position.

Deliberative elements such as reflection and justification in the service of the common good were built into the process through the generation of the Panel's value-based criteria and through the request that participants give reasons and reveal their motivations for each service or improvement to infrastructure they supported (see Table 1, below). The criteria developed by participants demonstrated their awareness of tension between competing goods, and hence the inescapability of trade-offs — a fact of life typically obscured by categoris-

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8   These initiatives were also assessed by the review panel of the International Association of Public Participation (IAP2) Core Values awards. They received three coveted 2014 Australasian awards: 1. Research, 2. Planning, and 3. Project of the Year.

ing costs and benefits as economic, social, or environmental. The criteria developed by these everyday people reflected a more thoughtful recognition of conflicts between discrete values and the need to reconcile them than do criteria developed by experts and technocrats. In our view, the generation by participants of values-based criteria has several important advantages in 100 percent PBs:

a) It allocates resources that align with community expectations in a more sophisticated way than an opinion poll, which assumes citizens are fully cognisant of their values and do not need to reflect on them, nor on those of others involved, prior to making important decisions.

b) Considered deliberation helps people recognise values they hold in common. It also helps them understand and acknowledge values they do not share. Further, deliberation requires people to justify their views of the priority they believe their values ought to be assigned relative to other values. It impresses upon people the inescapability of trade-offs and the need to consider whether the expected benefit is worth the cost in terms of other values that must be deemphasised. Value-based criteria can be weighted to incorporate the relative importance of each to the community.

c) Openly discussing and determining the importance of a service or project fosters transparency with regard to participants' interests and motivations. (The scores on each criterion for each project are open to inspection.) In addition, deliberation exerts social pressure on participants to be logically consistent from one project to another. In our experience, such pressure is positive in that it tends to elicit more rigorous thinking from people. This does not mean that other members of the public will necessarily agree with the rationale the mini-public provides. Rather, it means the group's reasoning is more likely to be more internally consistent and to relate clearly to the values and priorities the group recommends.

d) Carefully deliberated and weighted criteria with coherent (reasoned) recommendations increase the accountability of participants to each other and to the larger community.

Table 1 Operational PB Panel: Criteria applied to assess each service

Benefit Versus Cost:
Community benefit compared to financial cost, taking into account who will benefit (for example: whole population? specific groups? future generations?)

Economy, thriving sustainable population:
The service contributes to our healthy, thriving economy that provides diverse employment opportunities and affordable living that will retain and attract new residents.

Environment, living sustainably:
The service contributes to the environment — both natural and built — and our ability to live sustainably, balancing the protection of nature with community requirements/accessibility, and future requirements.

Social/sense of community lifestyle:
The service contributes to our sense of community, big city amenities while retaining a small-town feel, with friendly, accepting, safe, outdoor, sporting, recreational, bushland, and coastal lifestyle.

Culture, creativity, learning:
The service contributes to our cultural heritage, our Aboriginal and Torres Strait Islander and multicultural communities, our creativity, and our life-long learning opportunities.

Community Involvement:
The service (information, awareness education and support) includes community involvement in and support for that service and its planning.

C. Influence

The CGG Council endorsed the Report of the Infrastructure Panel and instructed the CEO to implement the prioritisation and to utilise the rating system[9] created by the Panel for future assessment of infra-structure. The Operational PB report was also endorsed by Council and was used to form the budget for the 2014/2015 financial year. At the Council's Special Budget Meeting, the final budget passed with an absolute majority. Supporters without exception referred to the Panel report as the basis for the legitimacy of the budget and as the justification for their vote. Councillors speaking against the motion (in all instances those elected on a platform of rates reform) did not question the legitimacy or value of the Panel's solutions, but only objected to internal efficiency deficits on the part of the CEO. Additional recommendations for reconvening the Panels in the future were only partially realised.

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9   This rating system was recommended by the Panel as being a normalised combination of the Panel's criteria and the City's criteria.

CGG PB Panel Results and Outcomes[10]

Infrastructure PB Panel Results

The criteria generated by the Infrastructure Panel were used to rate 70 projects put forward by the City, plus an additional 45 projects put forward by the local stakeholders in response to invitations for community-generated proposals. Listed below are the projects that received a weighted score of 80 percent or higher, indicating a strong consensus or 'mandate' for the project:

Table 2 Top Priorities (selected here from the total list of 115 infrastructure projects)

Project ID	Project Title	Panel Rating (weighted)
27	Mobility impaired access upgrades	92%
57	Mullewa Youth Centre	86%
25	Youth Hub	84%
15	Upgrade to Mullewa In-venue Family Day care Service	84%
34	Aboriginal Cultural Centre Mullewa	83%
4	Extension Runway 03/21, Taxiway Alpha and Apron including Runway Lighting	80%
19	Rural Road Upgrades - Annual Program	80%
2	Tennindewa Bush Fire Brigade	80%

The prioritised projects reflect the effort of Panel members to find common ground and to identify the public good. All except the road upgrades and runway extension evince concern and respect for the traditionally disadvantaged segments of the Greater Geraldton community: the mobility-impaired, Aboriginals, youth, and smaller communities (Mullewa and Tennindewa). The results suggest that Panel members set aside any predispositions they might have felt to privilege majoritarianism, individualism, or self-interest. Had they not done so, support for projects would have been distributed in direct proportion to the numerical strength of either the various demographic categories (young, old, singles, families, rich, poor, etc.) or voting blocs reflecting the varying priorities of different locations (e.g., the 35000 residents of the Geraldton centre versus the 400 residents of Mullewa township, of whom 90 percent are white Australian and 10 percent are indigenous people).

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10   Due to the length of the full set of recommendations, only some are reproduced here for the purpose of conveying the breadth and depth of the thinking and decision-making of the Panels.

These results contradict the contention that the 'demos' is by nature self-centered and ill-informed (Carson, 2009). While human nature might encompass such traits, the Panel recommendations suggest that everyday people are capable of critical thinking and acting in the public interest if they are given the opportunity to do so in conditions that encourage cooperation and public-mindedness. Notably, the Panel resolved their disagreement with the City over use of the criteria they had developed rather than the City's. They accomplished this by recommending a statistical method (see Table 3, 1b and 4a) that balanced the integrity of their value- based criteria with an acknowledgement of the experience and expertise of the administration criteria.

Table 3 Infrastructure PB Panel Report Recommendations

> 1a. We recommend that Council adopt our Community Panel criteria and ranking of the 10 Year Capital Works projects.
>
> 1b. We recommend that both City Executive and Community Panel criteria be applied separately to each project. Each project then be assigned a City rank and a Community rank, presented in separate columns. The scores of the top ranks then be normalised to be equal and the statistical normalisation process then be applied to the full list of projects. A new set of ranks be created from the combined scores of City and Community scores added together to give final ranked list. Allow Council to view both City and Community and total scores side by side to facilitate debate in the decision-making process.
>
> 4. We support the City's Executive Management Team response to the criteria our Panel developed:
>
> 4a. That the City will revise their own criteria to rate the 10-year capital works projects, so the City's criteria will focus on those areas not covered by the Community Panel criteria, for example, governance, availability of external funding, safety and other issues.
>
> 4b. That the City will create groups of capital works projects where feasible (e.g. parks), allocating a pool of money for each grouping.

Services PB Panel Results

This Panel's charge was to make recommendations about the range and level of services provided by the Council, but they also made recommendations for future Budgetary Decision-Making Processes. Table 4 includes examples from the extensive list of Service Panel recommendations about services to be increased; decreased; remain the same but with a different focus; or remain the same. The recommended actions for each area are listed, along with the reasoning behind each action.

Elucidating the reasons for recommended action served a dual purpose: First, because each recommended action needed to be verified and voted on by all Panel members, the results showed that panellists clearly reflected upon and justified to each other their points of view in both their small group discussions and with the whole Panel. It was agreed that all actions would be refined or rejected by the whole group, and each action would be assessed according to each of the agreed criteria. Second, since under the WA Local Government Act an elected Council cannot legally delegate budget-making, it was important for Panel members to make their reasons for each recommended action highly transparent in order to maximise the likelihood of acceptability to the Council. This added layer of transparency and accountability is a key advantage of the Australian PBs.

Table 4 Service Level Recommendations from the Operational Panel

Service Area	Specific Action	Reason
Example of services to be increased.		
Asset Management	Proactive rating system of assets which more accurately targets maintenance and replacement needs thereby reducing costs. Monitor assets appropriately. Improve information entered into the asset system to save costs right across city operations and be proactive on projects.	More accurately target maintenance timing and replacement needs thereby reducing costs.
Example of services to be decreased.		
Operations Support	Review of the number of vehicles required. Endorsement given to the new car pool system. Family Day care Service	As service levels change in other departments fleet requirements will vary. Operations support requirements are heavily dependent on staffing levels within the other service areas.
Example of services to remain the same but with a different focus		
Civic Theatre	**Increase:** Spend more on marketing/ advertising for Civic Theatre events. **Decrease:** Remove the box office attendance during the day at the Theatre and move the ticket sales to the City front desk/library. Open box office an hour prior to shows.	More marketing exposure would increase ticket sales and attendance. By closing the box office would save money as the service is already being provided at the Civic Centre.

The Two Eastern States Australian Participatory Budgeting Initiatives
Canada Bay, New South Wales (NSW): The first Australian Participatory Budgeting

Context

Canada Bay is located in Sydney's inner west, and was described previously in the first edition of this book (Dias, 2014). The elected Council was facing the tough question of whether to increase taxes to pay for the services the residents wanted or to cut back on some of those services. In 2012, on the advice of newDemocracy (https://www.newdemocracy.com.au/), a research foundation based in NSW, the Council decided to take the unprecedented step of holding Australia's first Participatory Budgeting Panel on 100 percent of the budget. NewDemocracy outlined the Canada Bay Panel objectives as follows:

1. Make an insightful and innovative set of prioritisation decisions as to the desired range and quality of Council-provided services.

2. Deliver widespread public confidence and acceptance of the priorities, trade-offs, and funding models used as being equitable and based on merit.

This first Australian PB Citizens Panel was differentiated from the typical PB model in three ways:

1. the use of a randomly selected, stratified sample of citizens;

2. the role of the newDemocracy Foundation as a 'nonpartisan intermediary organisation' (Kadlec and Friedman, 2007); and

3. the engagement of Council staff through a parallel process convened by the Council, using a randomly selected staff panel. (Thompson, 2012, p. 1)

This PB initiative differed from other City community consultations in the following ways:

1. The City administration opened all budget information to the panellists.

2. Prior City community consultations mostly reflected the lowest levels of the public empowerment spectrum: 'inform' and 'consult' (https://www.iap2.org.au/About-Us/About-IAP2-Australasia-/Spectrum).
In contrast, this PB reflected one of the highest levels of public empower-

ment: 'collaborate'. Though the Council agreed that this PB Panel would set the level of service to be provided, according to local government legislation, the final approval to the plan had to be given by the elected Council.

3. Randomly-selected participants received a personal invitation, and those selected in the final stratified random sample were given a relatively small daily stipend to cover expenses.

A. Representation

The random sample generated under the auspices of newDemocracy was stratified to reflect the demographics of the city population. Notably, very few of 36 local people who agreed to participate had ever been involved in Council affairs before.

B. Deliberation

The Panel process lasted over five days and involved five stages:

1. Learning about the remit, authority, issue content, how to deliberate, and online tools to be used by participants and the broader community.

2. Understanding and exploring the issues, the public submissions, and Panel ideas, plus expert presentations followed by question-and-answer sessions.

3. Reflecting and deliberating in small groups and commencing the prioritisation of issues.

4. Reaching consensus (but with reporting of minority viewpoints) and delivering the prioritised list of SMART (Specific, Measurable, Actionable, Realistic, and Time-delimited) services, their frequency, and the preferred service model

5. Presenting the recommendations to the Mayor, followed by a post- event debriefing. (Thompson, 2012)

C. Influence

The final report delivered to the City was comprehensive in scope and specific. (Full report is available on the newDemocracy website: https://www.newdemocracy.com.au/our-work/192-city-of-canada-bay Executive Summary is included below.) Some significant points:

a) The Panel recognised a significant shortfall in funding for long-term maintenance and renewal of infrastructure, (e.g. roads, storm water drains, and seawalls), which will impact future generations if not addressed.

b) The Panel identified a number of reductions to services, including frequency of street cleansing, frequency of park mowing, and special events.

c) The Panel found some new sources of revenue: limited use of parking meters, user-pays services for non-residents of Canada Bay.

d) After new revenue and cost savings, the Panel accepted that raising rates was necessary to address Council's funding shortfall and to meet community expectations. It concluded that a rates increase of up to 9 percent could be tolerated, especially because this made it possible to minimise the impact on those least able to pay.

e) The Panel also concluded that the Council needs a fundamental rethink of transparency and communication.

Melbourne, Victoria: Australia's 100 percent PB in a Capital City
Context

With over four million residents, Melbourne is Australia's second largest state capital and its fastest growing city. Melbourne is perennially ranked as the world's most liveable city, rating highly on social, cultural, economic, and environmental aspects of urban life. For a number of years, the city had pioneered inclusive, empowered public participation regarding issues of importance to the public. Even so, it was particularly courageous to give a Panel of randomly-selected ordinary citizens such influence over the city's first 10 Year Financial Plan, which involved around AUD$400 million annually and roughly AUD$5 billion over 10 years. The challenge for the Panel was to close an AUD$1.2 billion gap between what the Council had committed to deliver and its capacity ability to fund those commitments.

A. Representation

Under the auspices of newDemocracy, a stratified random sample of 43 residents, students, and business owners were selected and participated throughout the process. Although as an Australian- style PB its focus was mini-public deliberation, the Panel also engaged in outreach through broad invitations to workshops, online budgeting and discussion groups. The Panel met six times during August to November 2014.

B. Deliberation

Like the Canada Bay PB, the Melbourne process involved five phases, though over six days of deliberation:

1. Learning: understanding the Panel's remit and authority; deliberation briefing; agreeing to participation guidelines; listening to expert presentations with question-and-answer sessions; identifying further experts to present; and agreeing to use and learning about online tools.

2. Continued learning and deliberation: exploring content from background materials; generating further requests for information and expertise; briefing sessions with Councillors; and ongoing online Panel discourse.

3. Further deliberation: Developing and agreeing to the structure of the Panel's report and presentation to the Council; additional speakers and question-and-answer sessions; developing the Council proposal; and determining whether more time would be needed to complete the task.

4. Reflecting, deliberating, prioritising: small group work followed by establishing priorities from a long list of reform recommendations and possible funding structures; agreeing to an Executive Summary of five to seven top priorities; finalising the SMART recommendations, with Councillor feedback if desired.

5. Reaching consensus and finalising the report; delivering the prioritised list of reform recommendations to the Lord Mayor and Council; Council and Panel discussion following Council's review of Panel report; and Council publicly announcing their decisions regarding the Panel's recommendations.

A study (Clear Horizon Consulting, 2015) evaluated the extent to which the engagement process adhered to the principles and core values of the International Association for Public Participation (IAP2). It found the process to be both highly effective and appropriate, with all seven IAP2 Core Values (https://www.iap2.org.au/About-Us/About-IAP2-Australasia-/Core-Values) being well expressed throughout the community engagement process. In addition, the process was highly effective according to other good practice community engagement criteria, including the adequacy of engagement scoping and planning, and the usefulness of community input received through the engagement process. Also highly rated were the influence of engagement on the decision-making process, and the impact of the engagement on the reputation of the City of Melbourne. Finally, it was deemed good value for money.

C. Influence

The Panel acknowledged that rate rises were required in order to meet both operating and capital budget requirements. In light of this, the Panel recommended that rates be increased by CPI plus up to 2.5 percent per annum for the next 10 years. The Panel gave several reasons for these recommendations. It recognised that increases were supported by an expected rapid growth in population, substantial new infrastructure, and desired responses to climate change. It also recognised that new infrastructure primarily benefits new population and it is inappropriate for existing ratepayers to bear the full costs when there are means by which the costs may be shared, such as increased developer contributions or debt funding (Melbourne City Council, 2014). Council endorsed these recommendations and has committed to using them to build its 10 Year Financial Plan. Some additional recommendations of importance are summarised below:

a) Developers should contribute more, akin to that paid in the Australian capital cities of Sydney and Brisbane;

b) The City's non-core assets should be sold, but the privatization of core infrastructure or services was not supported because of an expected rapid growth in population;

c) Debt financing to fund infrastructure projects was supported as long as it was not above the AAA credit rating;

d) Because of high cost and low returns, redeveloping the Queen Victoria Market was not supported.

An evaluation study on the impact on governance was conducted by the Electoral Regulation Research Network. The finding most relevant to the PB was that the democratic principle of 'responsive rule' is not fulfilled simply by the periodic election of the Lord Mayor and Councillors. Participatory practices such as deliberative democracy have the potential to be applied much more extensively than the forms of consultation and participation adopted to date (EERN, 2015).

Conclusion

Since the first edition of *Hope for Democracy,* the Australian Participatory Budgeting has grown both in numbers and size of budget while retaining its character of representative, deliberative, influential participation. This style of PB enables everyday people to deal with the complexity of 100 percent budgeting and encourages elected governments to share responsibility more confidently with their constituencies. The difficulty of allocating resources in contemporary government budgets at all levels requires the best individual and group decision-making methods and tools available. While it is true that mass voting is a solidly entrenched practice valued for its ability to aggregate preferences and maintain a minimum of democratic of legitimacy, it is ill suited to the task of making value judgments about priorities and trade-offs—something only the public as a whole has the responsibility, the democratic political authority, and the capacity to make.

In our view, the Australian PB brings significant added value to government decision-making concerning one of its most basic and politically divisive functions: determining what to spend public money on and how much. The efforts by PB participants to justify their proposals, assessments, and priorities with reasons greatly enhance democratic transparency and accountability in a time of worryingly diminished trust in government and democratic political process. Through its representativeness, deliberativeness, and ability to tap into the 'wisdom of the crowd', the Australian PB boosts the stature of PBs world-wide, and in so doing offers hope for the renewal of democracy everywhere.

(17) **Through a new spirit of participatory budgeting in France: Paris (2014-2020)**

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Deliberative Collaborative Governance as a Democratic Reform to Resolve Wicked Problems and Improve Trust

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Deliberative Collaborative Governance as a Democratic Reform to Resolve Wicked Problems and Improve Trust

Abstract

A persistent and increasing governance challenge has appeared in the last several decades in mature democracies at all levels from national to local that stems from declining trust levels in government by citizens. This lack of trust leads to multiple policy implementation problems for governments, city and regional local governments alike, especially those facing complex sustainability issues - wicked problems

A process known as deliberative collaborative governance that enables more meaningful public participation in issues that matter, with greater decision-making transparency, accountability and perceived legitimacy, has been demonstrably effective in helping to redress the governance gap.

National and international examples of deliberative collaborative governance over the last two decades illustrate the potential of this method to close the governance gap. A four year action research case study in a regional town in Western Australia is used to illustrate how deliberative collaborative governance has positively affected the implementation of local government policy and operations including their responses to wicked problems, and reduced the governance gap.

Introduction

Megatrends are usually considered to be long term systemic changes in the way human societies function, or more precisely – "*...a collection of trends, patterns of economic, social or environmental activity that will change the way people live and the science and technology products they demand*" (Hajkowicz, 2012, p. 4)

The dual megatrends of emergent wicked problems and the decline of public trust facing all levels of government present significant challenges to existing governance structures. In particular, this duality has created a 'governance gap' between the expectations of citizens and the ability of governments to meet these expectations, including resolving the challenges of an increasingly unpredictable world. This dilemma is particularly acute for regional Australian local governments, which are subjected to declining levels of trust in their governance as well as bearing the brunt of a suite of wicked problems including climate change and settlement viability.

We show that these two megatrends, the rise of wicked problems and declining trust in governance, are locked in a vicious cycle of feedback loops that increasingly erode government's ability to meet tough challenges. Existing government structures, siloed, technocratic and hierarchical, have been incapable of effectively addressing wicked problems, and of meeting the public's expectation that it is government's job to resolve such issues. This apparent lack of capability further erodes public trust, which makes it even harder to address the challenges – and so the governance gap widens. In our view, one critical element to breaching this governance gap is to fundamentally reform existing governance structures. To explain this reform, we have coined a new term, 'Deliberative Collaborative Governance' (DCG), defined as discursive politics to co-decide issues that matter. We contend that this reform has the capacity to change the existing system dynamics in regional governance to create a virtuous cycle, where greater collective 'ownership' of wicked problems and potential solutions will decrease unrealistic expectations of what government can and cannot do, and increase the likelihood of more effective outcomes. This in turn, will increase public trust in government and hence cultivate a willingness and capacity to take part in future collaborative responses to wicked problems. In this four year case study, we present evidence of the successful implementation of DCG in a local government context, outlining the reasons for its success and highlighting its impacts on complex problem resolution and levels of public trust; suggesting it can become an institutionalised democratic reform.

The megatrend of declining public trust in government

Declining public trust in government has spread across almost all advanced industrial democracies over the last third of the twentieth century, creating a trend that is so universal in its appearance that it has led some scholars to label it "a new feature of contemporary politics, rather than a short-term reaction to problems of governance" (Dalton, 2005, p. 149). The research on this trend has generally concluded that such a situation is unhealthy for societies affected by it (Cook, 2009).

We take a political science perspective on trust as an important resource within social systems (Kramer and Cook, 2004). In particular, for political leaders in a democracy, a lack of trust does not allow them to make long-term decisions and resource commitments necessary for good governance (Hetherington, 1998; Scholz and Lubell, 1998). Moreover, we contend that although trust may not always be required for cooperation (Cook, 2009; Hardin, 2013), in the case of wicked problems, it is an important ingredient for their effective resolution. It is key to understanding and unravelling the inherent complexities of wicked problems; and is also critical to a solution culture (Clarke and Stewart, 1997; Mascarenhas, 2009). Indeed, as King notes, "…trust is a fundamental strategy for collectively coping with wicked problems" (King, 1993, p. 112). Conversely, the "dark heart" of mistrust (King, 1993, p. 114) confounds government's ability to effectively address wicked problems, which in turn, further reduces public trust (Blind, 2007; Levi and Stoker, 2000; SSC, 2012).

World-wide data, including in Australia, shows the magnitude of the distrust megatrend. The USA data sets on trust, which are the most long-term and complete, show long term declines in the extent to which respondents could trust the government to do the right thing most of the time; whether politicians cared what people thought; and whether most government officials were honest and acted for the benefit of all. For example, trust levels decreased from highs of 70 per cent at mid-century, to the end of the 20th century when only 33 per cent of those surveyed believed that they could trust the government to do the right thing most of the time (Dalton, 2005). Even with compulsory voting for State and Federal elections, Australia does not appear to have escaped this trend. Though there is no large scale consistent set of data for Australia (Gollop, 2004), the Australian survey of social attitudes (Evans, 2011) found that between 2005 and 2013, those people who do not have trust in government rose from 26 per cent to 47 per cent; and the Scanlon Foundation national survey found that between 2009 and 2012, the proportion of Australians indicating that government could "almost never" be trusted increased from 8 per cent to 24 per cent (Markus, 2013). As a corollary, Australian trust in government decreased for a third consecutive year, in a multinational trust survey

going down from 52 per cent in 2011 to 43 per cent in 2013 (Edelman, 2013).

This decreasing level of trust applies similarly to local government. A worldwide survey of trust in local government by the World Justice project found trust attitudes in Australia are indistinguishable from those in the United States with 51 per cent of respondents having little or no trust in their local government (Ponce, 2014). In Western Australia, surveys by the Local Government Association (WALGA) found that on average the community cannot bring themselves to even "slightly agree" (on a seven-point Likert scale) that their local council is trustworthy (WALGA, 2014).

The proposed reasons for this low level of trust in our civic institutions are prolific and contested. The Australian experience suggests that it is primarily driven by the public demanding a different relationship with their governments and being more willing to challenge the existing order to get it (Dalton, 2005). Fixes for dwindling levels of trust have tended to focus on ways to restructure the existing political order, such as through media reform, campaign finance reform, and restoring the dignity of the political offices. However, where such proposals have been implemented, they have led to temporary increases in trust followed by a rapid return to low trust values and continued downward trending (Dalton, 2005).

The converse side of this trust issue – public officials' trust in ordinary citizens – has not been as extensively explored. However, in our view, enduring trust has to be a two-way issue, so the lack of data on the degree to which officials in government administrations trust their publics is a significant gap, which is addressed in the following study. Prior to outlining this case study, however, the relationship between decreasing public trust and government's incapacity to resolve wicked problems needs to be explored.

The megatrend of emergent wicked problems

During the 1970s, the concept of the 'wicked problem' was put forward to help reframe thinking around the challenges facing modern societies (Rittel and Webber, 1973). The authors described an emerging, qualitatively different class of difficult social problem such as poverty, crime and social division, which they compared with less difficult, 'tame' problems. Since then, thinking has broadened into a field of thought with typologies including problem classifications such as puzzles (Ackoff, 1974), ill-structured problems (Simon, 1973) and social messes (Horn, 2001). The term 'wicked problems' has now entered into general discourse, and is often described in the literature as one of the globe's megatrends, needing urgent attention.

Degrees of 'wickedness' may exist when a problem contains some elements of definitional criteria but not others, and as the mix of elements changes over time. The following list summarises criteria that we and others have used to assess the wickedness of a problem (Briggs, 2007) and (Gollagher and Hartz-Karp, 2013).

- Wicked problems are not easily definable and cannot be fully understood until a solution is proposed.

- Wicked problems have no agreed stopping rules.

- Solutions to wicked problems are not subjectively true or false.

- No particular solution can be generalised to other wicked problems.

- Wicked problems have a large or poorly described set of possible solutions.

- Wicked problems have high stakes and important consequences.

Examples of wicked problems that confront our case study area, Greater Geraldton, and indeed much of regional Australia, include: Indigenous health disadvantage (Briggs, 2007); fracking and agriculture (Briggs, 2007); fisheries and coastal governance (Jentoft and Chuenpagdee, 2009); water resources management (Light, Medema, and Adamowski, 2013); climate change (Lazarus, 2008); and urban planning (Rittel and Webber, 1973).

There are a range of approaches that categorise ways of resolving wicked problems. In this study, the way power is shared amongst those affected by the wicked problem is the organising heuristic. Three power distributions have been suggested: authoritative, competitive and collaborative (Roberts, 2000). Although each represents a valid approach, depending on urgency, available resources and other contexts, the collaborative approach is generally agreed to be the most comprehensive and effective (Carcasson, 2013; Roberts, 2000; Walker and Ostrom, 2009). The key reason as to why the authoritarian and competitive approaches are understood to be inadequate modes of resolving wicked problems is due their inherent characteristics which tend to produce unintended consequences. These include the authoritarian mode's need to be seen to be *doing something*, and the competitive mode's need to put narrow political/commercial success/survival above the broader problem resolution. An additional complication lies in the administrative silos present in many organisations that augment unhealthy internal competition and inhibit the information sharing and collaboration that can resolve wicked problems (Head, 2008).

Critiques of the collaborative approach have noted its own intrinsic governance difficulties including the requirement of responsibility for managing wicked problems falling to the stakeholders themselves, as opposed to a competitive market or single organisation (Grint, 2008; Kahane, Loptson, Herriman, and Hardy, 2013).

Almost by definition, these parties will view each other as not having the recognised qualifications for solving this problem or even the authority to do so. It has been suggested that leadership in collaboration would be required to resolve this. This would involve taking action to enable other stakeholders to act with collective purpose by accepting group responsibility for the problem and its solution (Fien and Wilson, 2014).

This case study has focused on ways to arrive at this collective purpose and group responsibility through a particular collaborative governance approach, termed as Deliberative Collaborative Governance (DCG). While this case study explores the efficacy of DCG, it is not proposed that this is the only pathway to resolving wicked problems and increasing trust in government. Both these dilemmas are inevitably context-specific and other approaches may be more effective in particular cultures and situations.

The Deliberative Collaborative Governance (DCG) Approach

Gollagher and Hartz-Karp have proposed a particular collaborative governance approach they have termed Deliberative Collaborative Governance (DCG) which they contend as likely to be the most effective in resolving wicked problems, and they have described sustainability examples from across the globe that exhibit at least some of the characteristics of this approach (Gollagher and Hartz-Karp, 2013). The term DCG was coined to address some of the key critiques of two related approaches – Deliberative Democracy and Collaborative Governance.

The theory and practice of Deliberative Democracy – inclusive, deliberative, influential participation in policy development and decision-making - underpins the following study. However this term is not relied on, in part because the critiques of this approach have outlined weaknesses, at least in practice, that need to be addressed if a new form of collaborative governance is to be sustainable. The most frequent of these critiques point to the tendency of deliberative democrats to focus on individual deliberation processes rather than their institutionalisation. Specifically, these critiques highlight the disengagement of deliberative democracy minipublics from the broad public, and their inadequacies in terms of incorporating the views of lobbyists, of addressing vested interests, and of influencing policy (Hendriks, 2009, 2011). It is also argued that there is dissonance between deliberative democratic practice and theory and the current governance systems. On the theoretical front, it is contended that the existing Madisonian representative democracies, in which deliberative democracy generally operates, manifest distrust of uninformed and self-centred publics in their operation and design (Hindess, 2002). Hence, the creation of periodically elected representatives and government

administrations is purposefully intended to divest the operations of government from voters[1] and this undermines the ability of the deliberative and representative systems to co-operate. This distrust of citizens has privileged other actors in the current system, who then resist deliberative reforms. Such actors, identified as interest groups (Hendriks, 2011), can take a dim view of the deliberations and recommendations of a body of randomly selected citizens which the interest groups are ill adapted to interact with, or unable to influence. Other critiques include contestations that ordinary people are neither interested in, nor capable of deliberating complex issues. Some of these critiques and claims are based less on evidence and more on unfounded assumptions, fears and misinformation (Pateman, 2012).

The most problematic critique of deliberative democracy as it relates to sustainable collaborative governance is its lack of success in reforming existing democratic institutions. This critique notes that although proliferating rapidly, the deliberative democracy movement has failed to secure institutionalisation in the existing governance structure in all but a few places around the world, and hence has failed to "democratise democracy" (Pateman, 2012). This failure may manifest in political elites, like media commentators and politicians (Boswell, Niemeyer, and Hendriks, 2013), viewing deliberative democratic processes as unworkable, or a revolutionary movement intending to overthrow the existing system, or alternatively, as an abrogation of the duties of duly elected representatives. Other manifestations involve the suggestion that such increased participation in policy making is often only a facade that helps to legitimise the existing hierarchical political system (Lewis and Marsh, 2012). Critiques also point to conflicting value claims, such as the validity of the descriptive representativeness of deliberate democracy versus the principal-agent representativeness of the existing democratic system (Parkinson, 2004), and evidence of the difficulties of creating participation that is truly open to all aspects of the public (Barnes, Newman, Knops, and Sullivan, 2003). This single case study cannot address all these critiques. However, the broad question of whether this work has 'democratised democracy' is addressed in the discussions of the success characteristics of this work. Other critiques such as their one-off nature, focus on process, lack of influence, and inadequacies regarding interest groups are addressed in discussions of the ways this work has differed from other deliberative democracy initiatives.

The newly coined concept of Deliberative Collaborative Governance (DCG)

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[1] This embedded distrust of citizens adds support to the earlier discussed idea that that the decline in trust of the public in government has its roots in a more educated public willing to challenge elite administrators and representatives. From this perspective, citizens have become more aware of the distrust built into the system, believe the assumptions of the distrust to be unfounded and have therefore lost confidence in the system over recent decades.

reframes deliberative democracy to focus on the transformative reform that is envisaged – a new form of collaborative governance that is solidly grounded in discursiveness and descriptive representativeness (i.e. resembling a representative sample of the population). DCG unites elements of the broad field of collaborative governance with that of deliberative democracy. Ansell and Gash define collaborative governance as an "arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision-making process that is formal, consensus-oriented, and deliberative, and that aims to make or implement public policy or manage public programs or assets" (Ansell and Gash, 2008, p. 544). This concept involves an actor participating with other organised actors in the governance structure (unions, government departments, NGO's) that results in genuine attempts at partnership to formulate policies and create recommendations (Ansell and Gash, 2008). However, as Gollagher and Hartz-Karp argue, the key to more effectively addressing wicked problems is the holistic understanding of the system involved; and achieving this will also require the "*practical wisdom*" (Booth, 2006) of everyday people (Gollagher and Hartz-Karp, 2013). The general public not only bring unique knowledge, experience and pragmatism to a problem, they also bring a representative legitimacy that can go some way to redressing the suspicion and distrust that undermines an effective resolution.

The underlying principles and practices of deliberative democracy can bridge this gap by emphasising:

> … the indispensable role of 'ordinary citizens' in identifying and weighing policy options, establishing priorities, and articulating a direction for action on the part of both government and the community. It does not constitute an alternative to representative democracy; rather, it suggests how democracy might be improved by attending to the 'depopulated' democratic political arena, the 'public space' in which people engage each other in discussion of the challenges and opportunities facing them collectively.

> (Gollagher and Hartz-Karp, 2013, p. 2348)

The literature highlights reasons why the inclusion of everyday people in decision-making might be important to building trust and social capital. Engagement with fellow citizens in a structured deliberative form has been shown to increase the likelihood that a given person will seek out more civic engagement (Gastil, 2008). Moreover, civic engagement (including participation in politics and public affairs) has been the strongest determinant of trust in government (Keele, 2007). This gives reason to believe that experiences of deliberative democracy by governments should increase trust in those governments, a prediction that is borne out by case studies (Pytlikzillig, Tomkins, Herian, and Hoppe, 2012).

The deliberative democratic drive to regenerate citizen agency in modern democratic practice, together with the urgent need to devise more effective ways of addressing wicked problems converge in the concept of deliberative collaborative governance. This is supported in the case study literature which "…suggests that deliberative (rather than neo-managerialist) theories of administration are better suited for the "collective puzzlement of society" that wicked problems require" (Durant and Legge, 2006, p. 309).

For the purposes of this paper we use Gollagher and Hartz-Karp's definition of DCG as involving any governance action that:

> (1)'ordinary citizens' participate (along with one or more government agencies and/or other stakeholding groups) in collaboratively performing tasks such as setting priorities, crafting or analysing policy proposals, devising plans, and recommending actions;
> (2) participants deliberate together concerning options for action or policy adoption; and
> (3) the public's role is that of a full partner with influence sufficient to secure positive responses from the other stakeholders. (Gollagher and Hartz-Karp, 2013, p. 2356).

Obviously, one case study is insufficient evidence to demonstrate the efficacy of DCG as a democratic reform to resolve wicked problems and in so doing, improve typically low levels of public trust. However, the following section outlines a four year action research study where this reform program was implemented, with the aim of pursuing a worthwhile pathway to greater sustainability in in regional development.

A case study approach exploring the efficacy of DCG in resolving wicked problems while improving public trust: Greater Geraldton, Western Australia

The Greater Geraldton City-Region, situated 424 kilometres north of Perth, the capital city of Western Australia, provides an informative case study in the implementation of deliberative collaborative governance in a regional area beset by wicked problems and typically low public trust in government. In the past, economic development of the region has been driven by fishing and agriculture (wheat and wool), but collapsing fish stocks and drought in agricultural areas have resulted in the emergence of mining as a key economic driver. However, the full economic potential of the mining boom is offset by the use of fly-in fly-out

workforces that provide minimal benefit to the City Region. Tourism has become more important to the economy, however remains under-developed. Although demographic projections suggest the population will double to between 80,000 and 100,000 residents by 2020 – 2030, such expansion is not universally supported, with many residents preferring the 'country feel and lifestyle' of the status quo. As with other regional areas in Australia, critical, 'big picture' decisions affecting the area tend to be made at the State and Federal level. Regardless, the City Region needs to find ways to resolve its share of the $15 billion national infrastructure backlog, estimated at around $3 million per annum per council (Dollery, 2012), an increasingly constrained and controversial operational budget (CGG, 2013), and the 'inherently wicked' urban land use planning for projected population growth (Rittel and Webber, 1973). In essence Greater Geraldton, provides a representative archetype of Australian regional cities, facing a number of wicked problems.

Although Greater Geraldton, like most other local governments, had been consulting with its residents, in the main, such efforts were perceived by the public to be 'too little too late'. As a result, residents showed signs of being alienated from the institutions of government (e.g. in low local government voting rates), disinterested in the government's attempts at consultation (rarely participating in any numbers), and frustrated, sometimes angry or even outraged with the decisions of the local government (gleaned through informal discussions with editor Geraldton Guardian during 2010, semi-structured interviews with study participants in 2012-13 and a formal interview with Geraldton CEO in February 2010). Correspondingly, public officials felt dissatisfied with this state of affairs, feeling that their consultations were not worth the effort since the general public was indifferent, ill-informed, or narrowly and unalterably self-interested (as assessed during informal discussions with Geraldton staff and Councillors during 2010). This led the then CEO of Greater Geraldton to initiate the 'Geraldton 2029 and Beyond' initiative, over four years from 2010 – 2014, as a joint research project between the City of Greater Geraldton and Curtin University Sustainability Policy (CUSP) Institute, to more collaboratively address the region's future sustainability – trialling Deliberative Collaborative Governance.

This action research project aimed to test whether DCG would be an effective means of resolving wicked problems as they emerged, and whether such a process would positively impact the levels of public trust in local government and vice versa. The project applied the principles of adaptive management – applying a flexible, responsive approach with systematic deliberative learning to continuously improve participation in the resolution of wicked problems. Hence, in response to emergent opportunities and threats, the project creatively deployed a comprehensive range of deliberative democracy techniques - small and large scale, face-to-face and online, incorporating social media and the regular press - in order

to broaden and deepen participation in the resolution of emergent wicked problems. The effects of these techniques on trust, policy outcomes, attitudes of participants, administration staff and political elites were assessed through a mixture of methods. These included analysis of quantitative surveys, qualitative interviews, direct observation and electronic records of deliberations and policy documents and budgets.

Pioneering forms of Deliberative Collaborative Governance

Instituting authentic collaborative governance - empowered participatory decision-making that is ongoing and trusted - is problematic in the existing hierarchical, technocratic systems of government. Like other collaborative governance initiatives, this action research began by adding to the existing institutions of government a new branch that included broad stakeholder participation in some policy development and decision-making areas. This approach is consistent with the recognised importance of engagement with existing interest groups and elites in decision-making (Boswell et al., 2013; Hendriks, 2011). Accordingly, an 'Alliance Governance Group' was instituted, consisting of industry, government, Indigenous Australians, and Non Government Organisation representatives, invited by the Mayor. To broaden transparency and inclusion, these stakeholders were joined by several everyday citizens who were randomly selected at a public meeting from a pool of volunteers who responded to advertisements in the local newspaper. The intention was for this Alliance Governance Group to be more than an advisory committee. Its purpose was to oversee the upcoming public deliberation processes to ensure their fairness, comprehensiveness, and transparency; and if needed, to prioritise proposals that resulted from these deliberations, then assist with their implementation. To address these demands, the Alliance Governance Group met 'as-needed', or every three months by default. The Group did not have final decision-making authority and any decisions needed to be approved either by the elected Council, or by the City administration if the recommendations fell within their jurisdiction.

Over time, this lack of decision-making power eroded the perceived efficacy of the Alliance Group, causing many of the high profile members to lose interest, and by mutual agreement, it was disbanded after a few years. This lack of influence stemmed from local government legislation and regulation in the Western Australian Local Government Act (2005), which places decision-making authority firmly in the hands of the elected Council, with only limited sharing or delegating power at the discretion of elected officials. Additionally, within the Geraldton Council, a number of elected members were concerned about the potential displacement of their own role and power, so the Alliance Group existed in tepid

waters. The literature has exposed such dilemmas in other venues, with the strictures of the Act and the attitude of such Councillors clearly reflecting the elite attitudes of the current 'principal-agent' model of representative democracy (Boswell et al., 2013; Parkinson, 2004). The demise of the Alliance Group highlighted the importance of decision-makers agreeing and committing to the influence of any public participation prior to its commencement if the continuing effort and good will of citizens was to be nurtured. For the leadership of the City of Greater Geraldton, this brought to light a system dynamic that was not clear beforehand. If a dedicated and empowered body of non-elected Alliance Group members could not easily coexist with local government, given its cultural and legislative constraints (a wicked governance problem), then a different means of collaborative governance would need to be pioneered.

Out of this learning was a positive, unintended consequence of the Alliance Group – an improved understanding by its members of the important role everyday citizens could play in resolving complex problems. This began an improvement in the trust relationship between members which further resulted in several industry heads, Indigenous leaders, the editor of the local newspaper, (the Geraldton Guardian), and the coordinator of the Indigenous radio station continuing to work with the City as informal partners in the ongoing project of developing deliberative collaborative governance to resolve tough problems. This informal relationship, particularly with the editor of the very widely read Guardian, was effective in altering the typically more combative relationship between a local government and the local media for the duration of the project. The agreed aim of the media relationship was to enhance the community's interest in and understanding of complex issues, and to improve the effectiveness of public discourse, including through the Guardian's social media channels. This was important, since in Greater Geraldton, the local newspaper is a significant political actor as many more people get their daily news from the local paper rather than the state/national press than is typical in larger metropolitan centres.

Previously, like most newspapers needing buyers/readers, the Geraldton Guardian had focused on sensationalism (locally called "*muck-raking*"). Unfortunately for the broad dissemination of DCG, it appears that dissent and outrage is news, whereas mutual understanding, agreement and satisfaction (key success factors of public deliberation) is rarely deemed newsworthy and does not make it to print. The informal alliance with the Guardian did not mean that the newspaper forswore its role of the 'Fourth Estate' by becoming uncritically supportive of City and Council decisions, or indeed of all public engagement initiatives. Rather, its role simply expanded to create broader public interest and discourse in the issues under discussion as well as shaping elite opinion, if not favourably, then fairly toward deliberative reforms. Notably, when a proposal for a bike path extension along the

beach front (an outcome of a public deliberation initiative) encountered strong resistance by adjacent high market value home owners, there were 3,000 comments from City residents on the newspaper's Facebook page – a show of support that the City considered significant in their decision.

Over the four years of the project, public deliberation initiatives were created and designed in response to emergent wicked problems. They were both 'bottom up' initiatives instigated by the grass roots, as well as 'top down', instigated by the local government. In terms of grass roots initiatives, a relatively unique problem for Greater Geraldton was the paucity of civic interest groups. In contrast with issues at other levels of government and in other circumstances (Hendriks, 2011), the presence and influence of local civic interest groups in Greater Geraldton is comparatively low (with the exception of sporting clubs). Hence, there is little upward strength from the grass roots, with few bonding or bridging organisations that could generate social capital (Putnam, 2000). To ameliorate this situation, a volunteer program was initiated through an advertisement in the Geraldton Guardian for 'Community Champions' - volunteers who could help to seed public interest in issues that mattered to the community. Forty Community Champions were trained to hold grass roots, small group public deliberations, the first being World Cafes[2]. These were held to understand the sort of community that residents wanted for Geraldton now and into the future. The outcomes of these deliberations on what people wanted to keep and change, and their suggestions for change were prioritised by the Alliance Group together with the Champions, and where possible, were implemented forthwith. However, some of these changes, such as 'planting one million trees' and 'making Geraldton the bike capital of the West' were anything but short term projects, although significant progress has been made in these initiatives (Papas, 2013).

An online deliberation/social media platform, CivicEvolution (initially piloted internally by City staff in November 2010 and advertised to the public in early 2011) was customised to complement the grass roots face-to-face deliberations by the Champions. The aim was to foster digital deliberative collaborative governance. It was hoped that this would allow broader participation by parts of the community that preferred this medium, or were unable engage easily because of time or distance. The software platform enabled self-managed groups of people with a

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[2] At a World Café, nine or more people sit around small tables as in a café, with each person moving progressively from table to table through several rounds of conversation. A host remains at each table, helping incoming people to have deeper conversations and link ideas to create a whole-group dialogue. Participants at each table write down and/or illustrate the main points from their discussion, and these become the record of the meeting. In total, 36 World Cafes were held from May – June 2010, with a total of around 400 participants.

common interest (encouraged to participate through newspaper articles and outreach to existing civic groups) to come together online to propose projects, and deliberate to develop a joint proposal. If at least four of the online team members 'signed off' on a final proposal, it would be submitted and prioritised for support and funding by the Alliance Governance Group. While many online deliberation groups commenced, very few completed their proposals and submitted them to the Alliance Governance Group. Much was learned from this experience. Online deliberation, unsupported by an external facilitator, is atypical of how people interact online – which is characteristically monologic 'dump and run' commentary, with intermittent and greatly varying degrees of interest in and commitment to an issue. Such discussion tends to be possibly informative and certainly entertaining, but rarely thoughtful, respectful, egalitarian discourse. In short it was found that social media interaction very rarely reflects high quality deliberation necessary to DCG. Although this innovative digital grass roots online deliberation initiative was also short lived, it has led to subsequent pioneering efforts in combining online and in-person deliberation by the authors, which it is hoped will be far more fruitful.

The 'Community Champions' also ran the second phase of stimulating grass roots initiatives (some Champions had remained involved and others were elicited). The Champions were trained in, and then organised Community Cafes[3]. The intent of the Cafes was to follow up on issues raised during the prior deliberations about the importance of retaining the "*Gero Feel*", no matter what future development eventuated. The debate about planned increases in urban density had also been taken up in the press. This represented a classic wicked problem, which would be directly confronted in the City's next plan to focus on Geraldton's future natural and urban form. The Conversation Cafes were also augmented by requests to schools and the broad community to submit photos, drawings, poems, essays of what the "*Gero feel*" meant to them. From the school children's artwork, the City created bookmarks, postcards, and banners, all of which are in constant use by the City to reinforce community identity. The outputs of the Conversation Cafes as well as the artwork were used as background information for the large-scale public deliberation on the urban form that followed.

These initiatives run by the Community Champions did produce concrete outcomes that were helpful within the scope of the projects described above, but they were not able to sustain the effort of stimulating grass roots participation. Without the

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[3] A Community Café is a small, hosted, drop-in conversation among diverse people about their views and feelings about issues of importance. They are held in real cafes or other public places to enhance the sense of inclusivity and creativity that can spontaneously occur when people get together. The aim is to foster inquiry rather than debate about issues that matter, and to speak with the heart and the mind.

continued support of the City in training and support, as well as initiating areas to progress (which the City was unable to resource), this initiative gradually faded and ended.

Although these early attempts to pioneer various forms of bottom-up deliberative collaborative governance did not eventuate into long-standing, self-perpetuating, innovative modes of governance, other empowered public deliberation initiatives had more success. Meaningful community participation was achieved and maintained through the constant practice of instituting deliberative 'minipublics' of randomly sampled everyday people deliberating together to resolve tough issues for the City as they arose. A 'minipublic' has been described as follows:

> ...an educative forum that aims to create nearly ideal conditions for citizens to form, articulate, and refine opinions about particular public issues through conversations with one another (Fung, 2011, p. 184).

The literature on minipublics has often been critical of their inability to bring about systemic change because they are mostly one-off initiatives that rarely result in structural changes in governance (Pateman, 2012). However, we contend that the Greater Geraldton 'minipublics' have been able to bring about systemic change, but in a different way to that envisaged in the literature. That is, while Greater Geraldton 'minipublics' were not often systematically repeated for the same specific issue, the principles and processes of minipublics were systematically repeated over an extended period (at least the four years of the study) as the City's most effective response to emergent wicked problems and sustainability opportunities. The literature on minipublics also demonstrates their beneficial aspects as well - in particular, the evidence that they are an effective means of reaching a considered, coherent community voice (Lafont, 2014). This outcome was achieved by all the Greater Geraldton 'minipublics', with each one submitting to the City and Council a Final Report of their agreed recommendations together with a coherent rationale for their decisions.

In Greater Geraldton it has also been observed that the success of DCG has created the conditions for more ambitious collaborations. Each time a 'minipublic' has resolved a complex issue to the satisfaction of public officials and the public (often to the surprise of both), confidence in this modus operandi has increased. In an adaptive manner, when complex or contentious issues then arose, or opportunities presented, care was taken to ensure the most appropriate public deliberation technique or techniques to address that issue and match the confidence level of the City and public was selected. The result has been that the City has tended to achieve a way forward that has had growing legitimacy, acceptability and hence ease of implementation than the top-down decision-making with minimal consultation that

was prominent prior to this project.

The diagram below illustrates how a comprehensive range of deliberative minipublics addressed a wide variety of wicked problems that arose during the four years of this action research. The initial attempts at DCG are also shown and each of the public deliberation minipublics used are described in the boxes below with brief descriptions of the particular context, problem and outcome[4]. However, the most important feature of the diagram below is that each public deliberation had a designated purpose to address an emergent challenge (e.g. planning for the digital future given the early implementation of the National Broadband Network, and managing the budget in a time of deficit), and emergent government requirements (e.g. developing a strategic community plan to drive the City Region's operations; and developing new Statutory and Precinct Plans given the local government merger into 'Greater Geraldton').

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[4] An additional project – "Proposed Deliberation: Community Grants" has also been included to describe a minipublic tasked with allocating the sizable community grants program that the City administers. At the time of publication this project remains subject to feasibility and budget considerations.
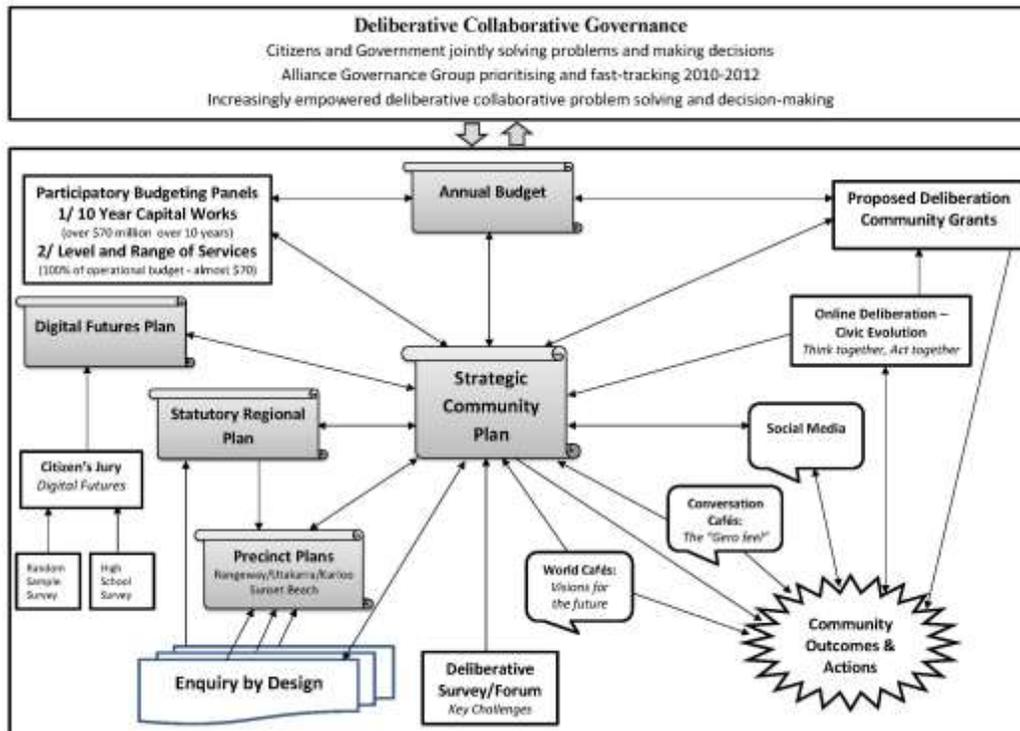
Figure 1: Geraldton Deliberative Collaborative Governance program – "2029 and Beyond"[5]

DCG initiatives implemented in Greater Geraldton

Deliberative Survey/Forum: The purpose of this initiative was to learn more about public views on a range of strategic challenges facing the city region such as an expanding fly-in-fly-out workforce, increasing carbon footprint, and a growing urban population. A comprehensive survey was sent to 3,000 randomly sampled citizens to assess community views on these challenges. Survey recipients were also invited to a one day forum to discuss these issues further. Around 200 people attended. The survey was administered to all forum participants prior to and after the deliberations. The results of first survey represented the community's top-of-the-mind views; the second established that the deliberating group was representative of the broader population's views; and the third noted any shifts in views as a result of deliberation.

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[5] Readers more visually inclined are referred to the City's YouTube site (https://www.youtube.com/user/GreaterGeraldton/videos) which contains several videos illustrating the program elements described in this paper.

During the one-day forum, participants heard expert presentations from differing viewpoints and had opportunities to question and deliberate on these challenges. The forum applied a "21st Century Dialogue" technique that supports large numbers of people (hundreds, even thousands) to deliberate in small groups by using networked computers that enable the outcomes of small group deliberations to be consolidated into a coherent whole-of-room voice. Innovative software, 'CivicEvolution', was used to capture all the discussions of the small group deliberations, project the major themes back into the room virtually in 'real time', and prioritise where useful. Presenters from different viewpoints addressed the issues raised in the survey. The small deliberation groups discussed these and determined gaps, further questions and alternative viewpoints. This iterative process was repeated throughout the deliberation day with different sets of presenters. There was no attempt to reach consensus.

Analysis of the survey results showed that forum participants were indeed good attitudinal representatives of the broader community; and in a result surprising to City staff and Councillors, after deliberation, they showed even stronger support for the City to invest in increased sustainability measures, including carbon neutrality, and showed an increased resistance to a fly-in fly-out workforce. Based on this, the City adjusted its policies. One immediate outcome was the implementation of an ambitious stakeholder deliberation of all stakeholders in the Region's energy chain, which produced a joint private/public proposal to the Federal Government to support plans for an alternative energy City Region project. Unfortunately, the State Government would not support the plan, despite the strong support of the Federal Government at that time.

Citizens Jury (CJ): As part of the IBM Smarter Cities Challenge grant in 2012 a citizen's jury was created of 25 volunteers, from a demographically stratified random sample of residents. Called the 'Community Trustees' they deliberated over a period of 3 weeks around their 'charge' of producing a Digital Futures plan for the City. Their deliberations were supported by background materials and presentations from 'expert witnesses' from the IBM Smarter Cities Team, followed up by 'cross-examination' of the presenters, and small group deliberations. Additionally, surveys about Geraldton's digital situation were sent to the general community and all high school students in years 10-12 and these results also informed the deliberations of the jury. Under professional facilitation the jurors deliberated in small groups and in plenary, to seek common ground, which provided the basis for their recommendations for a joint Digital Futures Plan. This Plan was personally presented to the Hon Stephen Conroy, Federal Minister for Broadband, Communications, and the Digital Economy.
Enquiry-By-Design (EBD): Following an amalgamation to form the new local

government entity of Greater Geraldton a new statutory regional plan and precinct plans were required to create an inclusive land use planning strategy for the new City Region. In August 2011 an Enquiry-By-Design urban planning process called 'Designing our City' was held over three days. It sought interactive win-win solutions for urban planning/design/renewal. A multidisciplinary team of technical experts from statutory planning, state government agencies, and academia worked with around 200 community participants, made up of invited stakeholders, randomly sampled residents, and volunteers. The process started with the forum developing a set of community values using small group deliberation aided by networked computers and the 'CivicEvolution' platform. This was followed by briefings from multidisciplinary experts on best practice urban design. Exploration of what the community valued and what needed to be changed then followed. Based on this information, the multi-disciplinary team prepared six possible planning scenarios for further deliberation, which they presented to the forum on the following afternoon. Participants gave their extensive feedback on these scenarios, which were then reduced in number and presented back to the forum on the 3rd afternoon. From this final round of feedback a consolidated planning scenario for Greater Geraldton was generated. Information elicited in this process was also used (together with the results from the other public deliberations) to help inform Greater Geraldton's Strategic Community Plan (http://integratedplanning.dlg.wa.gov.au/) that drives the City Region's budget and operations.

Following this EBD process and its broad-scale findings, several precinct EBDs were implemented. The first was held in the most socio-economically deprived area of the City, with a disproportionately large proportion of Indigenous residents and State Housing in comparison to the region. As well as small group deliberation and presentations, participants went on a walking tour of a key part the precinct to further understand the issues. At the completion of the precinct EBD, a small scale Participatory Budgeting (PB) process was held to allocate a budget of $30,000+ for immediate improvements to local parks. With the assistance of community members, their preferred projects were implemented soon thereafter. A second precinct level EBD (and small scale PB), was also held in a different (and less deprived) socio-economic area where there was considerable opportunity for redesign. These participatory budgeting events provided valuable experience for the City in this type of exercise and the EBD processes provided strong grounds for the Council and City planning professionals to judge the local development and land use aspirations of the precincts.

Deliberative Participatory Budgeting Panel (PB): Unlike more traditional PB processes across the globe that entrust citizens to allocate around 10 per cent of a City budget, the deliberative PB Panel is charged with 100 per cent of a City budget.

> A Panel of 25-40 randomly sampled residents, stratified according to demographics, deliberate over a series of workshops to understand the budgeting processes, develop funding options, assess them, and make recommendations. These recommendations are submitted to elected officials, who have already publicly committed to the extent of influence the Panel findings will have.

In Greater Geraldton, there were two deliberative PBs, the first PB was charged with recommending how to spend 100 per cent of the infrastructure budget over 10 years, and the second PB with allocating 100 per cent of the operational budget. Twenty-five randomly selected participants participated throughout the first PB and thirty-five participated throughout the second PB

Both PB Panels followed an extensive deliberation process that involved: learning to understand their role and the role of deliberative democracy; understanding the City budgeting process, the content of their 'charge' in terms of the City's entire range capital works projects (1st PB), and services (2nd PB); agreeing to a set of values and criteria upon which to evaluate each of the services or infrastructure; assessing the options and calibrating the findings between all the small groups; prioritising options; determining recommendations; and writing their Final Report and presenting it to the City and Council.

Through the support of networked computers using the CivicEvolution platform, the theming of ideas and reasons, priorities and reports could be carried out virtually in 'real time'. In so doing, the results of the small groups could be continually calibrated and discrepancies discussed; and the findings to be reported each day could be discussed, modified and agreed to prior to the dissemination of the day's Participant Report.

Each participant received this daily Participant Report as did the City staff involved. This enabled the City to discuss the Panel's findings after each session and if needed, to engage in a dialogue with the Panel in the following session. In some instances, the Panelists requested more information. In some instances, the CEO gave advice to the Panel, sometimes heeded, and sometimes not, depending on the Panels' consensus.

In terms of outreach to the broader public, both PBs endeavoured to achieve this, with the first PB inviting community capital works proposals for assessment (over 100 received) which were added to the existing City list to be prioritised; and the second PB presenting their draft recommendations on the range and level of service to a large community forum and requesting feedback. In addition, social media and the partnership with the local newspaper enabled the publication, dissemination and

discussion of information with the broader public before, during, and after the deliberations.

The public deliberation initiatives implemented over this four year case study involved around 2,000 people from a community of 40,000 people[6] and were evaluated in a number of ways to try and understand impacts in the areas of collaborative governance, trust dynamics and deliberation. To ensure that quality deliberation occurred during the initiatives, quantitative surveys based on commonly accepted deliberation factors (Knobloch, Gastil, Reedy, and Cramer Walsh, 2013) were distributed to participants following each initiative. Quantitative surveys based on previous studies were also used to assess trust attitudes and civic engagement (Pytlikzillig et al., 2012), attitudes toward sustainability issues, as well as participation expectations (Bailey, Blandford, Grossardt, and Ripy, 2011) amongst participants before and after initiatives as well as the baseline level of these attitudes in the general community. Semi-structured, in-person qualitative interviews were conducted with participants, overseeing group members, administration staff and elected members of Council at various stages throughout the DCG program to add explanatory depth to the quantitative tools allowed a more open exploration of the effects of initiatives. Finally, direct observation of the initiatives and governance meetings of decision-making bodies such as Council and the Alliance Governance Group by researchers supplemented the reflective data described above.

DCG in Greater Geraldton and its impact on trust

Overall, the research conducted during the four year DCG process in Greater Geraldton that had involved several thousand participants, showed that DCG had made an impact on declining levels of public trust in government. Specifically, results of participant surveys administered prior and post public deliberative initiatives, showed that the vast majority believed that the City had conducted engagements in which they could have their own voice heard, hear the voices of others, get access to unbiased information, and create outcomes that represented all those present, which the City was more than likely to implement. Specific quantitative measurements of attitudinal trust in participants and the community are discussed around Figure 2 below.

On the other side of the trust relationship, the City staff had gained skills and confidence in a new way of operating in partnership with the community, and this manifested in more efficient and effective engagement. Importantly, interviews

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[6] Peripherally, an estimated additional 5,000 citizens have been involved through social media.

with staff members who had directly participated in collaboration events, regardless of organisational position, showed their increased trust in the ability of the community to come to good decisions. From the elected member's side, interviews and informal public statements indicated that their trust in the DCG approach had grown. This was also supported by the aggregated trust attitude of the Council, evidenced by the majoritarian voting decision making process as well as their consistent approval of the outcomes of an increasingly wide range of DCG activities. This is not to imply that this increase in trust was linear. An amalgamation of local Councils to form the Greater Geraldton Region resulted in significant changes in Council membership during this time. Interview evidence from the staff and researchers indicated that all the work done with the prior Councillors to elicit understanding and support for the DCG agenda, including trust and willingness to share power, had to begin anew with the new elected members. Fortunately, the elected Mayor continued to support the DCG process, as did several other Councillors, often spending all day observing the public deliberations. Their attitudes appeared to support a view noted in the literature (Parkinson, 2004), that elected officials legitimacy was significantly improved when the descriptive representativeness of deliberative minipublics was fused with their role as trustees and delegates of the people; i.e. that this form of governance compensated for the weaknesses of each type of representation.

It should also be noted, that while the Council as a body showed a consistent willingness to seriously consider and mostly accept the coherent voice of the minipublics, individual Councillors were not unanimously comfortable with the DCG process. As one of the incumbent members remarked, "*That's what I'm here for, to make decisions on behalf of the residents. They don't want to make the difficult decisions – that's why they elect me*" (though they didn't at the following election). Individual, unsupportive views such as these did not alter the trajectory of trust in the public that built over time, both for the elected members and City staff. It is our contention that this continuous improvement was a function of Deliberative Collaborative Governance being applied systematically by the City leadership to tough issues over a considerable period of time, with consistent success.

The largest setback in the trend of increasing community-wide trust occurred during the final year of the '2029 and Beyond' initiative, when the City decided to significantly raise property rates and service charges with minimal community participation. The City had determined that this rate rise was required to address cost shifting from the State Government, looming infrastructure backlogs, and a revaluation of assets (ABCNews, 2012). Simply advertising in the local paper to inform the community of the rate rise, together with a formal request for feedback,

no longer met community expectations of sharing in important decision-making processes. The resulting outrage manifested in several ways. A social media and petition campaign against the rate rises rapidly gained large popular support (Davis, 2012). A scheduled half council election immediately after the rate rise saw many new candidates stand on platforms of reform related to rates, and almost all incumbents standing for re-election lost their seats to these reform candidates. Significantly, a citizen activist group spontaneously formed (CGGRDC, 2012) and raised a complaint against the City in the judicial forum of the State Administrative Tribunal. During the mediation process, a number of commitments were made to avoid the matter going to hearing, including a commitment by the City to more collaboration and transparency with the community on the following year's budget (CGG, 2013). The mechanism proposed for this collaboration was Participatory Budgeting (PB). This resulted in the implementation of two deliberative Panel PBs - one PB on the City's entire operational budget, and another on the long term capital works program. In terms of DCG, an unfortunate situation was turned into a significant opportunity.

Deliberative Participatory Budgeting Panels – and their potential as a democratic reform

Budgeting at all levels of government exhibits many of the characteristics of wicked problems. There are many divergent views on the impacts and end goals of budgeting, with significant expenditure of common funds involved, and recurrent and shifting goals of spending. Local government budgeting can be even more problematic with revenue sources limited by regulation, strident and powerful community demands for often divergent outcomes, and increasing cost shifting from other levels of government. Public budgeting has previously been regarded as the prerogative of finance and treasury departments, with the final allocation of resources determined by public sector officials. However, particularly in the developing world and increasingly in the western world, this assumption is increasingly being contested through the implementation of participatory budgeting.

Participatory budgeting (PB) is a democratic decision-making process that entrusts citizens (and sometimes non-citizens, too) to allocate public budgets. It involves a set of principles and a variety of methods to enable and empower everyday people to deliberate amongst themselves and with government officials over the allocation of public resources. PBs have now spread across the globe, most prolifically in developing countries, where they are often supported by the World Bank – precisely because they are likely to enhance democracy by improving civic participation in decision-making, bringing transparency and accountability to local governments,

increasing the public legitimacy of decisions made, and improving social wellbeing (Goldfrank, 2012). However, such PBs are entrusted to allocate only approximately 10 per cent of a City-Region's budget (Avritzer, 2006). This markedly contrasts with a recent Australian innovation – a deliberative Panel PB involving 100 per cent of a City-Region's budget.

The more traditional PB depends on community groups developing proposals to spend around 10 per cent of a budget, which are then voted upon by the broader public with the most popular being implemented. The unique Australian PB experience, as previously explained, involves a minipublic Panel of randomly sampled residents, stratified according to demographics, who deliberate over a series of workshops to understand the City Region budgeting processes, develop funding options for 100 per cent of the budget, assess them, and make recommendations which then influence the budgeting decisions made. Canada Bay in New South Wales, Australia pioneered this form of PB with 100 per cent of their operational budget, with elected officials accepting most proposals and endeavouring to find ways to support the intent of others if they weren't accepted (Thompson, 2012). The City of Greater Melbourne People's Panel has recently submitted their recommended allocation of the 5 year City budget, with a positive response from the elected officials, although their detailed response is yet to be announced (Green, 2014). Greater Geraldton is the first example of a randomly sample PB Panels allocating 100 per cent of the operational budget as well as 100 per cent of the 10 year capital works budget; with the elected officials accepting the key recommendations in full.

Both Geraldton PBs have demonstrated their democratic legitimacy in terms of process and outcomes through a variety of mechanisms. In terms of process, participant surveys showed consistently high rates of satisfaction (described later). The small group calibration and iterative learning aspect of the deliberations strengthened claims of the Panels being independent yet well informed and internally consistent. An "*Independent Review Committee*" (IRC) of 5 prominent community members and the Mayor as chair further supported these claims. The IRC was tasked with verifying the representativeness of each Panel[7], the usefulness and adequacy of the information provided, and the time, information, and support given to Panelists. They also played the role of ombudsman for Panel members when issues arose. IRC members attended each Panel session, observed the facilitation and discussion, and then without staff and facilitators present, met with

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[7] In terms of the descriptive representativeness of the two PB Panels, an independent local demographer, elicited the random samples, which were stratified by age, gender, Indigenous and multi-cultural background, as well as residential location (as a proxy for socio-economic level).

Panelists to review their day's experience. They then debriefed the project team to make improvements for the following week.

In Greater Geraldton, the history of effective implementation of DCG was important in reassuring both government and the public that the proposed PBs were not such a high risk venture as initially seemed. The publically demonstrated influence of each of the outcomes of the deliberative exercises in Figure 1 had established that the local government and other interest groups were willing to trust the capacity of the community to make informed, communitarian decisions. The goals of these deliberative events were clearly and publically stated prior to the event and evaluation of the success of event against those goals was conducted by external academic researchers and used to inform upcoming designs and drive continual improvement. The outreach and recruitment for these exercises had also striven for high levels of representation and inclusiveness, including the politically marginalised such as the economically disadvantaged and young people. The City had opened up its participation efforts across multiple areas of its operation over many years to demonstrate its broad shift in approach and had broadened its communication attempts through social media and its alliance with the independent local paper. Finally, the use of adaptive management thinking had enabled DCG to effectively resolve Greater Geraldton's emergent wicked problems as they arose and shift strategies as problem understanding shifted. In sum, DCG implementation in Geraldton had fostered a community willing and able to deliberate complex issues and elected officials and staff willing to entrust them to reach communitarian conclusions (Hartz-Karp, 2012). Hence, when fiscal wicked problems arose, the City and the people were more willing to support empowered public participation in their resolution.

The PB Results – Public trust, the resolution of wicked problems and democratic reform.

Both PB's were successful in terms of effectively resolving wicked budgeting problems as well as redressing trust deficits. In terms of effective problem resolution, Panel members rated the quality of the deliberation process very highly. Some of the final survey results were as follows: 97 per cent said they understood the issues under discussion very well; 93 per cent said they learnt about the issues and got new information very well or quite well; and 100 per cent said they heard from people with differing viewpoints very well or quite well. These results do not imply a lack of divergence of opinion, which is expected in wicked problems, rather they represent levels of satisfaction with the outputs of the process and facilitation. Participant observation of small group discussions during the phases of clarifying common values and prioritising projects and services revealed strong levels of

dissent, sometimes quite passionate and emotional. Indeed one instance required the facilitator to apply dispute resolution techniques to resolve the impasse. This apparent disconnect between the quantitative survey data and the participant observation was clarified through the qualitative interviews with participants. Several participants explained how they felt able to hear strongly held views and express their own, but through the facilitated deliberation process, felt they had come to a conclusion that best suited all perspectives. Some participants likened this to a cathartic process, describing that it felt like "*giving birth to a child*", or "*rushing into a darkened tunnel and emerging into the light on the other side*" or "*having a storm sweep over you before the sun emerges from the clouds*".

In terms of the quality of the solutions to the wicked problems of infrastructure prioritisation and the range and level of service determination, all those involved - the PB participants/Panelists, the City administration, and the elected Council, rated the process and results as very useful and satisfactory. During interviews and surveys, the overwhelming majority of the PB Panelists indicated that they were satisfied with the final recommendations and report they had created, and that it synthesised not only the consensus of the Panel as representatives of the community, but also the expertise of the City staff. The Council endorsed the Report of the Capital Works Panel and instructed the CEO to implement the existing prioritisation, and utilise the Panel's rating system for future assessment of infrastructure. The Range and Level of Services report was also endorsed by Council and was used to form the budget for the 2014/2015 financial year. Clearly, given their acceptance by the decision-makers and apparently, by the broader community, both PBs had effectively resolved the wicked problem of allocating declining budgets but also had dissipated the fears of an ill-informed and selfish citizenry.

The PBs also resulted in significant improvements in the level of public trust in local government. Participant surveys were conducted prior to and after each deliberation day, and were enhanced by qualitative interviews to further understand the quality of deliberations, participant levels of trust and confidence in government's performance and participant's sense of personal efficacy and civic spirit. A large survey based on trust, governance, and civic behaviours and attitudes was also sent to a random sample of 2,000 Geraldton residents before the beginning of the Range and Level of Services Panel. The data from these surveys is shown below with indicative curves to assist visualisation of the attitude distributions.
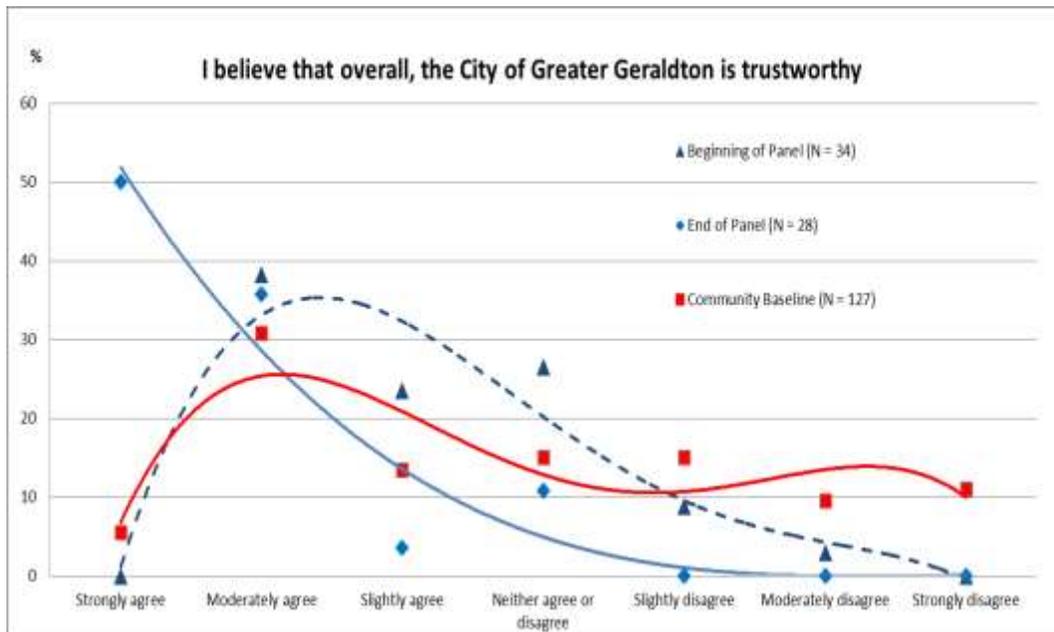
Figure 2: Survey results regarding the trustworthiness of the City of Greater Geraldton (2013)

The most significant result in Figure 2 was the shift in the attitude distribution of the Panelists by the conclusion of their PB. At that time, all participants found the City more trustworthy, with the greatest increase in the 'strongly agree' category. Interviews with participants to further understand this shift indicated that their belief in City officials' competency and benevolence (whether they act in the best interests of the community) had radically shifted. At the root of their change in attitude over the PB, most interviewees pointed to a greater understanding of the complexity and size of the problems that the City struggles with as well as a reassessment of City staff as more well-intentioned and competent than previously believed. The City, like many public organisations, has not been lacking in its efforts to promote its work in traditional and social media. Hence, we contend that the understanding and shift in trust came from the nature of the deliberation process, not from the information per se that was imparted. In the power sharing implicit in the shaping of the budget, the City gave a strong motivation to the Panelists to learn as deeply as possible because of the important influence their work was going to have their fellow residents. Backed by this motivation, the collaboration and iterative nature of the learning with the City staff built personal trust with the Panelists and led to a reassessment of the complexity of the City budget problems and the competency of the staff in dealing with them. We believe this shared collaborative experience of the production (and presentation) of the final report is

key to the improvements in trust as well as acceptance of the outcomes by the larger organisation as legitimate.

Conclusion

Overall, it is contended here that this action research has achieved a useful level of democratic reform that could well be repeated elsewhere. Deliberative Collaborative Governance over time appeared to bridge the lack of trust that had hampered collaboration, which in turn had exacerbated perceptions of poor government performance in addressing wicked problems, i.e. it had helped to bridge the governance gap between performance and trust. This case study lends hope to the contention DCG has the capacity to change the existing system dynamics to create a virtuous cycle, where greater collective 'ownership' of wicked problems and potential solutions will decrease unrealistic expectations of what government can and cannot do, and increase the likelihood of more effective outcomes. Moreover, this in turn, will increase public trust in government and hence willingness and capacity to take part in future collaborative responses to wicked problems.

At a systemic level, rather than a series of stand-alone bargaining moments, the collaborative governance program evolved, applying adaptive management principles to respond to emergent challenges and opportunities. Around 20 different public deliberation initiatives were implemented, each one designed according to the specific purpose of the issue needing resolution. Many different public deliberation techniques were utilised, often modified and combined in order to achieve the purpose. There were also innovations such as the deliberative PB Panel process, and the online and face-to-face online deliberation platforms. Each project process was designed according to its context and customised to fit the purpose, deemed to be successful strategies in the literature on wicked problems. Over the length of this study, adaptive management ensured the DCG process was resilient, able to withstand setbacks and respond to unanticipated events, adapting processes, techniques and timelines to ensure their relevance.

Some trial and error learning from the Geraldton case study included: the inadequacies of new structures to support collaborative governance; the inadequacies of social media and online deliberation to address complex issues; and the need for public administrators to shift available community development resources from the predominant focus on educating in an endeavour to change public attitudes and behaviours, to a more responsive process of creating opportunities for everyday people to collaboratively problem solve, collaboratively make decisions, and (where feasible), to collaboratively enact the joint decisions

developed on issues of importance to them. This learning led to further understanding about mutuality of trust, namely the need for mutual respect and trust between those who govern and those governed. It became clear, given the somewhat precarious nature of the trust relationship between government and the community, that it will likely require those in power to make the first move – to entrust ordinary people to collaboratively problem solve and partner in decision making. In particular, whether initiatives emanated from the grassroots or were initiated by government, meaningful public participation in joint problem solving and decision-making will need iterative, two-way communication between 'experts' and lay people, with decision-makers finding new ways to better share information, and creating more spaces for entrusting citizens to effectively participate in the resolution of wicked problems .

The results of this case study have shown that is possible to avoid many of the shortcomings discussed in the collaborative governance and deliberative democracy literature. Decisions made after quality public deliberation consistently aimed to achieve the good of the community, rather than self-interest. Decisions made by descriptively representative minipublics in particular, appeared to hold greater legitimacy with interest groups, political actors, media elites and the public, and hence were more easily implemented. For these reasons, and also because the breadth of viewpoints had been carefully considered, the challenges of wicked problems were more likely to be effectively addressed. Finally, closing the virtuous cycle, since this new form of collaborative governance was more open, accountable and inclusive, it engendered greater trust between government and its constituents.

Obviously, one case study is insufficient evidence to comprehensively demonstrate the efficacy of DCG as a democratic reform to resolve wicked problems and in so doing, improve typically low levels of public trust. However, we contend this four year action research study provides evidence of the critical importance of DCG in allowing Australian regions to tackle wicked problems and address some of the most significant megatrend challenges of our time.

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Principles for Integrating the Implementation of the Sustainable Development Goals in Cities

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Abstract: The implementation of the UN's Sustainable Development Goals in the urban centres of the world is one of the most consequential and ambitious projects that the nations of the world have undertaken. Guidance for achieving the goals in an integrated way that creates true sustainability is currently lacking because of the wicked nature of the problem. However, its wickedness highlights the critical importance of governance and decision-making processes for such integration, including the relationship between governments and their citizens. In particular, there is strong evidence to suggest that managing wicked problems like the SDGs is best done through forms of democracy that are deliberative, representative and influential. Called "deliberative democracy", we draw on an existing body of research and case studies of deliberative democracy in action to apply its principles to a step-by-step process for the implementation and integration of the Goals in Cities. The paper concludes with the beginnings of a framework based on deliberative democratic principles, and an outline of methods for the scaling and expansion of the implementation process to cope with the global nature of the problem.

Keywords: sustainable; development; goals; deliberative; democracy; wicked problem

1. Introduction

In 2014 the majority of the world's population—more than 54 percent—lived in cities and by mid-century, this figure is expected to rise to two out of every three human beings on the planet [1]. Meeting the Sustainable Development Goals (SDGs), adopted three years ago by the UN [2], will be critical to ensuring that this radical change does not produce human crises that overwhelm the ability of member states to cope with them.

Early thinking about sustainability assumed the need to recognise trade-offs between demographic, economic (including consumption and technology), environmental, and social/cultural factors. Now the focus has shifted to the need to achieve sustainability " . . . through the integration and acknowledgement of economic, environmental, and social concerns throughout the decision making process" [3]. Though the question of how to realise such integration has received some attention [4], it is unclear how public decision-making processes might be transformed to generate outcomes that support and advance this aim.

In this article, we propose an approach to bridging the strategic gap between the substantive policy goals for long-term sustainability and the means that will be required to attain them. Specifically, we outline a series of principles for achieving the integrated implementation of SDGs in cities, based on the scaling of collaborative problem solving and decision-making. The methodology underlying this framework is "deliberative democracy" (i.e., democratic decision-making that is representative, deliberative, and influential). We discuss several case studies from around the globe in order to illustrate the potential of the proposed framework.

1.1. The Importance of Integrating the SDGs

The SDGs—involving 17 goals with 169 milestones and 232 indicators [5]—represent a positive start to serious efforts to achieve sustainability. Many of the goals focus on broad outcomes such as the mitigation of poverty, hunger, and human-generated climate change. All SDGs will affect human settlements, and more than a third will have a direct impact on urban development [6,7]. Goal 11 (along with its 11 targets) specifically calls for "inclusive, safe, resilient and sustainable cities" in the context of the large and growing percentage of people who reside there and where the majority of both GDP [8] and energy [9] are generated.

The pitfalls of the SDGs have been highlighted [10], especially in cities [11], but there is growing consensus about the importance of integrating the SDGs [12]. Reasons supporting integration abound, including not just the efficiencies it would generate, but also recognition of the interdependent nature of the SDGs and the inescapability of trade-offs. Thus, certain goals may be achieved more easily or synergistically if pursued along with others. For example, providing sanitation is likely to improve economic output [13]. In contrast, recent reviews of the goal indicators show that consumption levels, banking secrecy, tax havens, and weapons exports by rich countries may be inhibiting development in poorer countries [14]. Additionally, we argue that though the nature, definition, and practice of sustainability is contested [15,16], if the goals cannot meet all the commonly accepted criteria for sustainable development, the results will be neither stable nor lasting. In our view, the best route to achieving all SDGs in the most effective ways is via their integration throughout the implementation process.

The case for integrating SDGs has received support not just from theory [17], and modelling [18], but from practical experience. For example, American cities that have been most successful in achieving the SDGs have integrated the goals throughout their existing planning and business operations. [19]. Yet despite this support—plus 11 of the indicators being duplicated across multiple goals, and the creators of the SDGs noting the need for their integration [2]—little progress has been made on frameworks and processes to achieve integrated outcomes [13,20,21].

1.2. The Difficulties of Integrating the SDGs

Understandably, it might be thought that, like many problems in the natural sciences (though less so in the social sciences), the sustainability "problem" can be broken into a finite number of pieces that can be solved discretely and then aggregated to arrive at a successful overall solution. The SDGs, however, address a class of problems that are ill suited to this atomistic and reductionist approach [22]. These problems have been labelled "wicked" and the SDGs qualify as some the most wicked problems facing us [23,24].

Identified initially in planning policy [25], "wicked" problems have now been diagnosed widely in almost every aspect of sustainability [26]. Wicked problems are ill defined, nonlinearly linked, and subjectively viewed. Their converse, the "tame" problem, is one that can be solved by adhering to an established, "tried-and-true", "linear" process of analysis, identification of options, and cost-benefit analysis. Such problems are straightforward—they quickly suggest one or more solutions—even if devising the solution requires a great deal of time and other resources. Tame problems tend to be insulated from the effects of the external environment. Owing to this insulation, they can be "complex" (i.e., composed of many interacting elements (most of them internal)), and yet remain likely to yield a broadly acceptable solution with time and persistence. A wicked problem, in contrast, cannot be solved in a manner that is straightforward, familiar, and "linear". As the originator of this term, Horst Rittel [25], defined it; a wicked problem is distinguished by the following characteristics:

- The problem cannot be understood fully until a solution has been proposed: Every solution to a wicked problem reveals some new aspect of it that requires further adjustments to what has been proposed. This means there is and can be no definitive statement of "the problem". The problem is "ill-structured"—it is composed of interrelated influences, constraints, and effects that vary

with the context in which it is encountered. What "the problem" is depends on the perspective from which an answer to the question is offered; different stakeholders have fundamentally different views about what constitutes the unsatisfactory condition that constitutes the problem and warrants a response.

- There is no clear and uncontested rule for determining when to stop the effort to identify and respond: Because there is no definitive conception of the problem, there can be no definitive solution. The problem-solving process concludes when participants run out of resources—time, money, energy—and is judged to be either "better" or "worse".

- Solutions are not right or wrong: Since no clear, consensual criterion of success exists, solutions offer outcomes that are only "better", "worse", "good enough", or "not good enough". The adequacy of a solution depends on perception of the problem and so stakeholders assess possible solutions from within their respective organising belief systems ("worldviews").

- Every wicked problem and solution is novel and unique: For every wicked problem, large numbers of contributing factors are embedded in a constantly-changing social context. For this reason, problems are unlikely to have been encountered previously, at least in precisely the same form. Each differs substantially from others, making every wicked problem unique. To make things worse, every attempt to solve a wicked problem has consequences that preclude its replication. People cannot learn about the problem without trying solutions, but every solution tried is costly and produces consequences that, intended or not, are apt to generate additional problems.

- The problem is consequential and there is no single clear solution: The effects of the problem are impactful and significant and so are the effects of the solution. Those facing wicked problems, as Rittel says, "have no right to be wrong". Compounding this, it is possible that there may be no solution at all. Or there might be many solutions, none of which can be usefully compared to the others. Or there might be solutions that are never thought of. Devising any viable solution requires imagination and creativity. Settling on one requires judgment.

These characteristics make wicked problems highly resistant to the linear problem-solving attempted in a centralised, top-down, "command-and-control" structure, populated by a limited number of persons whose perspective is technocratic, bureaucratic, or politically partisan and competitive. Dealing effectively with this complexity requires that the relationships between the parties be taken just as seriously and treated just as skilfully as any other factor that is relevant to solving the problem. Both direct and indirect stakeholders must be included in a "meaningful way" in the effort to solve the problem. While there may be a "best" answer for all concerned, there is no single "correct" one. Rather, what matters is whether everyone whose buy-in is needed to devise and implement a solution supports the course decided upon. "To put it more starkly", writes Conklin, "without being included in the thinking and decision-making process, [stakeholders] may seek to undermine or even sabotage the project if their needs are not considered" [27]. The antidote is a problem-solving approach that is non-linear, de-centralised, bottom-up, maximally inclusive, diversely constituted, cooperative, and, recognising the importance of relationships, is orientated to the achievement of a solution that is acceptable to all. Overcoming fragmentation requires sharing: shared knowledge, shared understandings, shared priorities, shared responsibilities, shared effort, shared goodwill, and shared commitment.

In view of the limitations of both centralised, top-down, "technocratic" problem-solving and self-interested political competition, it seems prudent to prioritise alternative approaches to solving wicked problems

1.3. Reforming Governance: Key to Integrating the SDG's

Addressing problems in the public sphere and how decisions should be made to resolve them is the domain of governance. [28,29] Governance was considered but not included as a stand-alone SDG

because of its politically charged nature. Although we agree with the normative aspects of the method we outline here, our arguments in support of it will follow the SDG's implicit approach to governance as an enabler for the Goals rather than as an end in itself. Not surprisingly, a growing literature has emerged detailing the failure of existing modes of national governance to solve wicked problems, and emphasising the need for alternative approaches that are less reductionist and more integrative [30,31]. The concept of governance as a mode of social cooperation between social institutions has been discussed at length in recent years [12]. Considerable disagreement exists, however, concerning the answers to, and relative importance of three basic questions about the decision-making process: Who decides (input)? How do we make decisions (process)? and What happens when we decide (output)? [32].

Following on from our discussion above of their wicked nature, the elements of governance most likely to be needed in efforts to integrate and implement SDGs successfully are as follows:

- Collective Value Judgements: SDGs are intimately linked to a series of value judgements—not just those of individuals, but also public ones that must be formed collectively [33]. How to make such value judgements is essential to the legitimacy of a sustainability governance model. However, forty years ago Rittel commented: "We do not even have a theory that tells us how to find out what might be considered a societally best state." [25]. Fortunately, since this time there has been much theorising and research on legitimate methods for arriving at socially constructed judgements [34,35]. This governance element informs questions of input and process, and highlights the need to create a legitimate way of elevating the values of importance to each of the SDGs.

- Diverse inputs: The uncertainty that attends the diagnosis and resolution of wicked problems means that effective SDG decision-making will resist a purely technocratic approach [22]. It has been shown that attempts to do this by removing politics and value judgments results in de-emphasising important aspects of urban sustainability [16]. While the scientific, evidenced-based perspective is necessary [36], it must take the form of "map making", not "navigating" [23]. Multiple domains of knowledge (e.g., science, traditional, lay, managerial) will have to be brought to bear in the service of sustainability [37]. Over-determining the optimal number and mix of perspectives is also problematic, both because doing so presumes a complete grasp of the boundaries of the problem [38] and also can reduce diversity [39]. While this element shapes the answers to the input governance question, it also shapes the process, in that it dictates that the method for decision-making must invite and elicit the required diversity.

- Deliberative Communication: Prescriptions of the preferred communication mode elucidate the process nature of governance questions. The most conducive mode of problem-solving and decision-making around wicked problems [40] and particularly sustainability issues, tends to be a "deliberative" one [16,41]. Deliberation is a form of communication involving the exchange of reasons between persons representing different political "discourses" (perspectives, worldviews, etc.); rational reflection; and the public justification of possible solutions, with the aim of coming to resolution or action. Deliberative discussion can confer greater legitimacy [42] and exhibits greater epistemic strength than alternatives [43]. This makes deliberation well matched to the deeply contested nature of sustainability issues [44].

- Distributed and Collaborative Power and Action: It is widely acknowledged that distributed and collaborative power will be important to making significant progress toward sustainability [44–46]. Centralised, "top-down" policy-making approaches have been rejected in various quarters, including the UN itself, which recommends collaboration and localisation of the SDG's. (" . . . All stakeholders, acting in collaborative partnership, will implement this plan.") [2]. Competitive mechanisms are viewed with scepticism, especially in light of the well documented failure of markets to achieve improved sustainability [47], and the critique of them as a driver of the current sustainability crisis [48,49]. Acknowledging the general unsuitability of market mechanisms for solving sustainability problems does not preclude use of them (or on "top-down" directives)

as a tool for harnessing support for some goals in some cases. Nevertheless, a collaborative approach to wicked problems is desirable precisely because it is important to "make those people who are being affected into participants of the planning process. They are not merely asked but are actively involved in the planning process" [50]. Engendering such collaboration goes to the process governance question of how decisions are made, but it also has a clear implication of actual influence and power being vested in the outcomes of the collaborative process, rather than an interesting, but hollow discussion (output). This principle is evident in the recent trend toward decentralisation of the SDGs, i.e., implementing them at the local municipal level, where decision-makers are "closer to the people" [51,52]. Even in undemocratic nations, there has been a preference for local implementation [53].

We contend that the governance model that has the greatest potential to satisfy these foregoing sustainability governance requirements is deliberative democracy [54]. Deliberative democracy is characterised by reason giving discourse between everyday people in an egalitarian environment, with the outcomes being influential on government policy or action. It is a political philosophy with roots in the enlightenment, which has undergone intensive research and practice over the past three decades, morphing into an increasingly accepted alternative for democratic decision-making [55,56]. We situate ourselves in this theory continuum with modern theorists [57] who hold to the communicative ideals of Habermas, but accept the need to balance agonist and consensus modes [58] with a freer conception of valid discursive types [59].

Three key governance principles differentiate deliberative democracy from community consultation, "empowered" community engagement, and other forms of democracy and citizen participation [60]. Listing these principles also conveniently allows us to compare them to the governance principles we described above that will implement and integrate the SDGs:

- Deliberation/Weighing: Participants in a deliberative democratic process weigh reasons and arguments for and against competing options using rationality and shared values [61]. In the service of some "common good" the group seeks to arrive at a publicly justified decision or conclusion that is based on the shared judgment that the preponderance of such reasons and arguments favours one option over another. While the search for common ground is important, reaching consensus is desirable but not essential [62]. This principle of deliberation/weighing is no more than the deliberative communication element of the SD governance. In practice, the deliberative ideal can be approached in a number of ways. A wave of research over the last two decades [63], demonstrated how this principle could be achieved through elements of design and execution. Two elements were particularly relevant. The first was the use of randomly selected citizens who often knew little about the topic under deliberation or were politically inactive, but could clarify the values they held dear. This was found to be advantageous to deliberation because participants were not cognitively or emotionally anchored to a position and hence were open to potential attitude shifts on the topic [64]. Being selected by lot also increased their democratic legitimacy—they were seen to have no vested interests. The second element was the inclusion of stakeholders involved in, or affected by, the issue being deliberated, whose expertise and buy-in would be important. Stakeholders with particular expertise and perspectives, including those with credentials and others with community wisdom, can be included in the deliberations in a number of ways other than as members of the deliberating group. This included: becoming members of deliberation overseeing committees to vet information and decision rules for neutrality; contributing position papers on their perspectives; presenting their views and being cross-examined by deliberators; and/or being invited to observe the proceedings. The broader public can also be invited to participate in numerous ways such as being asked to suggest options, present them to the deliberators and respond to their questions; discuss draft recommendations with the deliberators; and/or observe the deliberation process through webcasting or as live audience Such contributions are an important element of high quality deliberation [65].

- Representation/Inclusion: As a form of democracy that pays particular attention to the deliberative communication mode, representation is important to deliberative democracy for two main reasons. Firstly, as a form of democracy, the legitimacy claim to decide on behalf of a "demos" is definitional. Secondly, the deliberative desire to weigh all arguments and perspectives on an issue of importance to a "demos" drives a search for inclusion of those perspectives as another claim to (deliberative) legitimacy [66]. These are the propelling reasons behind the preference for descriptive representation of a population when selecting participants for a deliberative governance process. This is contrasted with the substantive representation common in most electoral democracies where an elected candidate advocates for a constituency based on a pre-set policy agenda. Descriptive representation chooses representatives based on relevant political attitudes that often manifest in demographic characteristics (e.g., age, gender, socio-economic status etc.). Random selection (often with stratification for demographic characteristics to maximise representativeness) is the most common method of achieving a decision-making group who reflect the diversity of outlooks (worldviews) within the general population. This diversity directly contributes to the input diversity that is an important element of governance capable of integrating the SDGs. Additionally, such representativeness brings with it a claim of deliberative legitimacy. This legitimacy boosts the claim that any decisions from the decision-making (process) were made collectively for the common good, since the group descriptively resembles the collective. That claim can then increase the likelihood of influence and action following the deliberative decision-making by the collaborative group (output).

- Influence/Impactfulness: Although deliberative democracy is known for its focus on a particular form of political communication, it remains a form of democracy, and consequently its outputs must have influence on the governance of a group of people. This influence is sometimes a delegation of power, but most deliberative forums take place in the context of existing power structure and statutes and usually have to take account of this. For example, the Citizens Assemblies of British Columbia and Ontario recommended changes to their constitutions that required a referendum to pass and while they were narrowly defeated they were successful within their own terms of producing a measure to be voted on by the populace as a whole [67]. Such influence can often have downstream effects, like in the case of the Irish Constitutional Convention [68] that some have argued was a key initiator of a later, successful abortion referendum [69]. In practice, it has been found that a prior commitment by official decision-makers enables participants to exert influence—and to be seen as exerting influence—on policy development and decision-making about the matter being deliberated. This commitment can stretch from serious consideration of recommendations with a public response, through to implementation through referendum with many ways of being influential.

These principles clearly show that deliberative democracy incorporates the desired governance characteristics best fitted to addressing the wicked problem of integrating the SDGs described above. Although related, we distinguish participatory democracy as a governance system that is best fitted to integrating the SDGs from deliberative democracy. We appreciate the emphasis of participatory democracy on the broad involvement of constituents in a political system if a wicked problem is to be resolved; indeed, in Section 3 we advocate for scaling governance of implementation of the SDGs to as many constituents as is feasible. However, it is the lack of focus on deliberation and collaboration in participatory democracy that in our view, makes it an inferior choice when compared to deliberative democracy as a form of governance to integrate and implement the SDGs. In spite of believing deliberative democracy as a governance system is well matched to the challenge of implementing the SDGs, it is not without its shortcomings. Despite its successful implementation in many countries and improvements in methodology, it has yet to be scaled (both vertically and horizontally) and institutionalised [70]. The need to scale initiatives to improve their scope and reach, while addressing higher levels of complexity, has had only limited success. Retaining high-quality deliberation and containing costs have proved difficult. Institutionalisation has also been problematic, in part because

most existing democratic power structures inherently limit the potential for co-decision-making between elected officials and their constituents, and in part because power is rarely conceded voluntarily. Fortunately, these shortcomings are not insurmountable and do not preclude the use of deliberative democracy in this context. We are not alone in this conclusion, with others identifying it as a viable option for earth systems governance [71,72], and showing it to be effective in discrete SDG implementation in terms of prioritisation [13], consistency, and rational choice [73]. However, because this approach holds such potential to effectively address wicked problems and successfully integrate the SDGs, we hold that it is likely to play a pivotal role in future efforts to realise the latter [4,12,74].

2. A Model for Achieving Integrated SDGs in Cities

Having established the value in a deliberative democratic approach to integrating the implementation of the SDGs, we now move on to a practical application of this approach in urban environments. The official road map for achieving the SDGs in urban environments, "Getting Started on the SDGs in Cities" (which we will refer to as the "Guide") [51] outlines a four-step process:

1. Initiate an inclusive and participatory process of SDG localisation: including awareness raising, multi-stakeholder involvement, strong leadership, and integrated governance.
2. Set the local SDG agenda: equipping the SDGs with ambitious but realistic local agendas, evidence-based decision-making, and public involvement.
3. Plan for SDG implementation: using goal-based planning, both long-term and multi-sectoral, and supporting it with financial resources and partnerships.
4. Monitor SDG progress: by measuring progress and gains in program efficiency using disaggregated data systems, local monitoring, and evaluation that develops local capacity and enhances responsive and accountable governance.

The Guide offers little advice on how to carry out these tasks. Decision-making processes are left vague and ambiguous. It is unclear "who gets to decide", "what process is to be used for decisions", and "what happens when the decision is made". While there are hints that these steps should be "participatory and inclusive", neither a rationale nor instructions are provided (the Guide does provide in boxes a list of potential stakeholders and examples of participation throughout, but there is no exploration of deeper theory or a framework linking and explaining the examples).

To address these inadequacies, the following framework reformulates the four tasks above using the principles of deliberative democracy in order to include enhanced deliberation, representation and influence, while preserving the overall Guide's structure. We offer reasons for this reformulation, and support them with reference to case studies. A note of caution: Implementation and integration of the SDGs is not only a wicked challenge—it is an undertaking unique in human history. There exists little reliable data to draw on in supporting our contention that the governance model we propose affords us the best chance to implement and integrate the SDGs successfully. This is an artefact of the nature of wicked problems discussed in Section 1 and its uniqueness and its shifting nature. Consequently, any overly prescriptive formula or detailed plan would either become rapidly outdated or inapplicable to particular cases. With this in mind, we believe the general application of principles and the illustration of those principles in action in a case study is the most viable approach. This does not mean that scientific principles and rigour should be abandoned, but only that a measure of humility is needed to allow for flexibility, action learning, and reflection and revision.

2.1. Commit to and Prepare for Localised SDG Deliberative Democratic Processes

While deliberative democratic governance processes are important for resolving cities' wicked unsustainability problems, such processes cannot be established and maintained within the usual structures through which government officials acquire their authority and exercise their "power over" people, permitting citizens to "have their say", but keeping "the last word" for themselves. Public servants must put the "service" back into their job descriptions, and agree to explore ways of exercising

"power with" people—committing not only to the principle of citizen empowerment, but allowing citizens to influence the decisions that are made.

Choosing the appropriate degree of influence can be facilitated by referring to spectrums of participation that have been much discussed and modified [75–77]. Different parts of the process may allow for different levels of participation and influence. Clarifying the level of influence is important for two reasons. First, as noted previously, shared responsibility and authority are highly desirable in efforts to resolve wicked problems. Second, survey research from the USA [78] and Australia [79] has shown that citizens prefer a "partnership" relationship with their government rather than an increase in empowerment. They want neither complete control nor marginal consultation, but rather a decision-making process that is respectful of the strengths, resources and experience of ordinary people in combination with the experience and knowledge of elites, and the learning that goes with both. In view of the continuing widespread decline in trust in western democratic governments [80,81], pursuing this aim would do much to restore public trust. Third, a greater level of citizen influence rules out a "business as usual" approach in which decision-making is considered to lie exclusively within the purview of elected representatives. Restricting citizen participation to "inclusion" and substituting stakeholder analysis for genuine collaboration, as outlined in the Guide, will not suffice. Deliberative democracy must "call into existence" [82] a public partner that can articulate the public's voice in all its diversity and complexity [83].

2.2. Co-Design the Local SDG Agenda

In deliberative democracy, the commitment to the public's influence can be demonstrated initially by inviting the local public to set the agenda by prioritising and modifying the SDG targets in a way appropriate to local circumstances and requirements. The public's aspiration to partnership with government can be satisfied by complementing bureaucratic and technocratic expertise with the experience of both "on-the-ground" knowledge and values and priorities that only citizens can bring to the process.

Strong evidence now exists that descriptively representative, deliberative "mini-publics" [83,84] possess the ability to set agendas for achieving sustainability. A mini-public is a microcosm of the wider public. We use an intermediately expansive definition of mini publics of a broadly representative and inclusive sub group of an affected population that engages in structured and facilitated deliberation toward an influential end. One example of a mini-public is a Deliberative Poll [85] implemented in various areas of policy to inform government actions [86]. Often these Deliberative Polls have led to progress toward sustainability in the area of policy being addressed [87,88] as well as shifting citizen attitudes [89].

The authors employed a similar process for the purpose of agenda setting in the city-region of Greater Geraldton, Western Australia [90]. This deliberative poll sought to understand public views on key sustainability challenges facing the city-region. A randomly selected sample of 3000 residents received detailed questionnaires and was invited to attend a "deliberation day" to learn more about the issues. Around 150 randomly sampled community members (stratified by age, gender and geography) participated in this mini-public. Participants filled out the community survey again (to calibrate the results to be representative of the population demographics). Then they listened to different perspectives, cross-examined speakers, discussed the issues raised in small groups and without coming to any decisions, filled out the survey for a final time. The results from the 557 randomly sampled residents who completed their surveys, and around 100 who participated in a one day mini-public, showed resolve for the City to take proactive steps to become carbon neutral, and only increased following the deliberation. This surprised administrators and resulted in a far more ambitious sustainability agenda than originally planned [91].

In a second example of agenda setting in Greater Geraldton, a mini-public of around 250 participants worked in parallel with a multidisciplinary team of around 20 experts over three days to "co-design" a new Statutory Regional Plan to guide future City Region land use planning policies and

decisions [92]. Around 250 community participants (one third randomly sampled, one third invited stakeholder representatives and one third respondents to broad advertisements) deliberated over three days in small groups using networked computers to help synthesise the ideas of the room and facilitate prioritisation of the most important issues. In parallel, the multidisciplinary expert team created geographical picture plans from the community participants' ideas and priorities [93] that underwent continual modification and prioritisation by the community. Once again surprising officials, the plan prioritised the protection of the region's natural assets and structured more sustainable urban living.

In both instances, the enacting of deliberative democracy principles through these mini-publics resulted in new directions that achieved a greater impact by being integrated into institutional processes with broader purposes in the region. Hence, after two years, the results of over a dozen other deliberative democracy initiatives were incorporated into a City-Region Community Charter and the Local Planning Strategy [92]. In turn, the Community Charter later morphed into the Strategic Community Plan, which drives the funding and operations of the city-region. Though the SDGs had not yet been globally adopted, the challenges that these mini-publics addressed covered the same territory. Our experience with these mini-publics has demonstrated consistently that everyday people do not tend to think in the silo'd categories created by technocrats. Instead, they seem to see and understand the world more holistically, thereby achieving integration of diverse topics without conscious effort at the agenda design level.

2.3. Co-Implement the Local SDG Agenda

The SDG Guide does describe a method for planning in a goal-based environment: "backcasting" ("Backcasting" is planning by defining a desired future and looking backwards to identify policies and programs that will logically enable that specified future from the present). While the shift from forecasting to backcasting is admirable, including the integration of collective values with current data and future trends, this does represent only the tip of the implementation iceberg. Implementation also needs to include budget allocation and financing, policy changes, training, regulatory reform, evaluation, progress reporting, and other machinery of government changes. Critically, the legitimacy of government is undermined whenever the authorities try to implement solutions that people believe are made "politically" rather than "on the merits". It suffers as well when there is a "loss of signal" that feeds information back to constituents from officials, and vice versa. Continuous citizen involvement in policy-making, which enables people to feel they've been heard and treated fairly, is essential to sustaining confidence in government.

One example of this co-implementation that has become institutionalised in over 2500 places across the globe is Participatory Budgeting (PB) [94]. PB has demonstrated its ability to change the practice of governments regarding municipal spending [95] and to stimulate local economies, bringing local communities back to life [96]. PB is a family of disparate processes, generally involving local people allocating a pre-determined total (usually around 10 percent of a municipal budget) to projects developed by civic groups. The basic PB process begins with the broader community participating in community assemblies as a first step in engaging groups of residents in developing, discussing, and finally submitting proposals to the local government for costing. These projects are then displayed in public places throughout the community, and people vote for their favourites. The top priorities within the allocated budget are enacted, often with local people assisting in their implementation. Often, local representatives have a role in the scrutiny and monitoring of the process.

With a history of over 20 years in cities, PBs have been recommended by the World Bank [97] for their efficacy in improving health, inequality, social justice, and other non-environmental outcomes [98]. However, it has been argued that this style of PB is not a strongly deliberative experience [83,99] although it scores highly on the principles of influence and inclusion. It has further been suggested, that such deliberation principles are necessary for a fully participatory budgeting experience [96]—and particularly, for the all-encompassing task of implementing the SDGs. A form of PB has been

developed in Australia that does meet the fuller deliberation standard with the other requirements of deliberative democracy.

In the "Australian PB", members of the public usually allocate 100 percent of a municipal budget [90,100]. Municipal budgets are too complex, though, for the usual PB procedure by which local people vote on stakeholder groups' project proposals without deliberation. The increasing demand for services, often with shrinking budgets mitigates against budgetary allocation to long term strategies to achieve goals such as the SDGs. In these circumstances, any PB in which participants wish to allocate funds for one or more SDGs almost certainly will have to meet the requirements of deliberative democratic governance mentioned earlier: distributed power and collaborative decision-making and action; access to information that only a diverse set of participants can supply; and, most important of all, the careful listening, weighing, and balancing that characterise deliberative communication.

Four Australian PBs (all deliberative mini-publics) have been implemented in urban areas: one in Melbourne, Victoria's capital city [101], one in Canada Bay, New South Wales [100], and two in the City-region of Greater Geraldton (CGG) in Western Australia (WA). Each of these PBs illustrated how citizens can integrate multiple SDGs, even strengthening the legitimacy of democratic process, including when tough decisions need to be made, "when the rubber hits the road". The two CGG PBs are described briefly below.

In response to public anger due to large tax increases [102] the municipal government committed to pioneering City-Region Participatory Budgeting [100] on the entire allocation of the local government budget. Two Participatory Budgeting initiatives were established. The participants of both were citizens selected via stratified random sampling by age, gender, cultural background, and residential location by an independent party to constitute a descriptively representative mini-public. The criteria for judging a service or piece of infrastructure were generated by mini-public members through extensive deliberation and endorsement and then calibrated to determine the reliability and validity of their criteria. From the outset, the local government committed to considering all the recommendations of the mini-publics, implementing them where possible, and providing a public explanation if they could not (the maximum degree of influence allowed under local legislation). The first Participatory Budgeting Panel of 30 participants deliberated over four Saturdays to determine the allocation of a ten-year capital works budget of around $AUD 70 million. The elected Council accepted the Panel's Report's recommendations without change [103]. The second Participatory Budgeting Panel of 40 participants deliberated over eight Saturdays on the range and level of City Region services, allocating 100 percent of the operational budget (over $AUD 70 million). Once again, the recommendations were accepted as legitimate and used to create the operational budget for that financial year [104]. The process of both Panels involved vigorously cross examining city administration officials and deliberating together to determine the budget allocations using a combination of a Multi Criteria Analysis and 21st Century Deliberation. In each PB Panel, participants pushed achieving a sustainable future to the front and centre in their deliberations and allocations.

Deliberative elements such as reflection and justification in the service of the common good were built into the process through the generation of the Panel's value-based criteria and through the request that participants give reasons and reveal their motivations for each service or improvement to infrastructure they supported. Panel members rated the quality of the deliberations very highly, stating that they understood the issues under discussion very well (97%); learnt about the issues and got new information very well or quite well (93%); and heard from people with differing viewpoints very well or quite well (100%). Table facilitators noted significant contestation and dissent in small group discussions during the phases of clarifying common values and prioritising projects and service.

Significantly, the criteria developed by participants demonstrated their awareness of tension between competing goods, and hence the inescapability of trade-offs—a fact of life typically obscured by categorising costs and benefits as economic, social, or environmental. The criteria developed by these everyday citizens reflected a more thoughtful recognition of conflicts between discrete values and the need to reconcile them than do criteria developed by experts and technocrats.

In our view, the generation by participants of values-based criteria has several important advantages in deliberative PBs:

- It allocates resources that align with community expectations in a more sophisticated way than an opinion poll, (or a less deliberative PB) which assumes citizens are fully cognisant of their values and do not need to reflect on them, nor on those of others involved, prior to making important decisions.
- Considered deliberation helps people recognise values they hold in common. It also helps them understand and acknowledge values they do not share. Further, deliberation requires people to justify their views of the priority they believe their values ought to be assigned relative to other values. It impresses upon people the inescapability of trade-offs and the need to consider whether the expected benefit is worth the cost in terms of other values that must be deemphasised. Value-based criteria can be weighted to incorporate the relative importance of each to the community.
- Openly discussing and determining the importance of a service or project fosters transparency with regard to participants' interests and motivations. (The scores on each criterion for each project are open to inspection.) In addition, deliberation exerts social pressure on participants to be logically consistent from one project to another. In our experience, such pressure is positive in that it tends to elicit more rigorous thinking from people. This does not mean that other members of the public will necessarily agree with the rationale the mini-public provides. Rather, it means the group's reasoning is more likely to be more internally consistent and to relate clearly to the values and priorities the group recommends.
- Carefully deliberated and weighted criteria with coherent (reasoned) recommendations increase the accountability of participants to each other and to the larger community.

As an example of co-implementation, PB's provide good evidence that such collaboration between governments and those affected by government budgets can be effective. Further, with a deliberative component that focusses on the complex values of a community, they can harness all the deliberative democratic principles to address the extra challenge that comes with integrating SDGs in cities.

2.4. Co-Monitor Progress toward Local SDGs

Monitoring and evaluation may seem an obvious requirement for evidence-based policy, and essential for integrating and implementing SDGs, but traditionally it has been done poorly, even in the well-resourced developed world [61]. As the Guide notes, it can be an expensive and surprisingly politicised process, and for these reasons we recommend monitoring and evaluation based on deliberative democratic principles. From our experience of mini-publics, including in politicised arenas like land use planning and government budgets, which have demonstrated the governance principles needed for co-implementation, the same principles should be applied to monitoring and evaluation. Representative but nonpartisan citizens have shown their ability to hear from both partial and impartial interest groups on technical matters and integrate this with deliberations on their common values. This supports the claim that they could also make useful and influential recommendations regarding what would be important to measure and how it should be measured. There is some literature to indicate this approach can help reduce disagreement stemming from tension between different SDGs and the values they represent, as well as the disputes over transparency and accuracy that often grow out of deeper worries about substantive policy outcomes. Citizens, stakeholders and government officials can develop monitoring and evaluation procedures that all parties will accept as relevant and accurate [105]. Indeed some case studies have already shown that this has been an effective strategy in SDG implementation [106].

3. Scaling the Model

To be effective, collaborative problem-solving processes must be representative, deliberative, and influential. While this is more readily achieved when relatively small numbers of people are involved, difficulties arise when the activity is attempted on a much larger scale. Many SDGs can be realised only through policies crafted and implemented beyond the local level of government, to the regional, national and international levels of policy-making. The larger the affected population, the more stakeholders are involved, the more complex are the problems and issues, the more powerful are the political and economic interests seeking to influence decision-makers, and, in consequence, the more difficult it is to resolve disagreements. The Guide itself cites the need for "cross-border cooperation" [51] and "vertical coordination with national and state/regional governments" [51]. Section 3.2 addresses topics such as inter-jurisdictional coordination, and its recommendations are consistent with the literature on these matters. But while such recommendations are helpful [4,107], they provide neither an overall approach nor a set of principles for achieving the SDGs at bigger and bigger scales. The Guide explains what must happen, but not how to make it happen. How, exactly, can a city "break down traditional sector-based governance structures"; encourage "coordination between departments and public sector institutions", align "development priorities across different levels of government", and encourage "mutually beneficial decision-making [while] minimizing trade-offs"? [51]. This is the gap that deliberative democracy governance principles can help to fill, while avoiding the over-prescription of specific steps, likely to be detrimental to the adaptation needed to address wicked problems of this type.

The question that now needs addressing is whether it is feasible to "scale" deliberative democracy principles and to move them from face-to-face conversations among a small number of people to multiple groups and communities? The challenge for deliberative democracy interfacing with the SDGs is to preserve its strengths while addressing effectively the added difficulties created by the need to involve a more numerous, more diverse, more contentious public. It is our contention that to meet this challenge, each of the three key principles of deliberative democracy noted earlier—influence, representativeness, and deliberativeness—will have to be "scaled" successfully in a number of dimensions that challenge sustainability at a global level.

Many observers who otherwise support deliberative democracy point out that the great majority of initiatives undertaken to date have been ad hoc, disconnected, relatively small and hence limited in their impact [108,109]. Currently, there is also much theorising in the field to respond to this critique [70]. This article responds to the scaling challenge by asking how it could be feasible to enhance the principles of representativeness, deliberativeness, and influence on SDG decision-making whenever, wherever, and with whomever it occurs. The following description proposes a number of areas that are presenting a challenge to the SDGs currently, and offers suggestions as to where we might look for inspiration that this can be done.

3.1. Scaling Deliberative Democractic Principles to the Grass Roots from the Top

Most successful deliberative democracy experiments have been conducted in geographically localised areas [110]. Localised deliberation is consistent with the emphasis on pursuing SDGs "at the grass roots", but the task remains of linking multiple local areas and cities in order to maximise impacts—or to achieve any substantial impact at all. "Vertical" scaling of this sort has been discussed widely [51,111,112]. From our perspective, scaling needs to extend not just to higher levels of political organisation, but beyond the government sector to grassroots organisations affected by the SDGs. Extending beyond government and stakeholders not only increases the legitimacy of agenda setting and implementation, but also improves the decision-making quality by enriching the mix of information, experience, and ideas at the table. It is also clear that strong grass roots/civic support plays an important role in preventing changes in governments from changing this course back to more exclusive top-down control. So far, deliberative democracy has not been widely successful in this sort of scaling as much of its empirical successes have been from the top down direction

(i.e., either driven through existing governmental deliberations or through mini-publics sponsored by governments). Several less deliberative examples, however, indicate what needs to happen for such initiatives to be ongoing. Participatory Budgeting in Brazil, for example, has outlived radical changes in government, Even when incoming governments tried to abandon or weaken the influence of PBs, the citizens' protest was sufficiently strong that the PBs not only persisted, but persisted in being co—decisional [113]. In another less deliberative example, the Transition Initiatives in urban sustainability in Genk, Belgium, exemplifies how the strong connection between the "top" and the "bottom" supports growth and longevity [114]. Policy-makers, NGOs, and community groups may initiate discussions of new practices, experiments or technologies likely to move currently unsustainable routines toward greater sustainability. But irrespective of who takes the lead, others are invited and even expected to collaborate. The four-year deliberative democracy case study in Greater Geraldton, WA [90] exemplifies how vertical scaling can be supported, but may not be sufficient. Here, an attempt was made to scale vertically—downward—to empower ordinary citizens in developing the Strategic Community Plan. Policy-makers recruited, trained and supported the efforts of "Community Champions" to convene local deliberations. Promising proposals were then fast-tracked for potential funding and implementation to give the deliberations influence. Community proposals developed through online deliberation were treated similarly. However, in the long term, the Champions' efforts and online deliberation faded when given less support; and overall, the civic support for deliberative democracy was not strong enough to stop changes in governance from reverting to more traditional styles of "power over" the citizenry [90].

3.2. Scaling Deliberative Democratic Principles across Developed and Developing Nations

Expanding influence into parts of the world where deliberative democracy is less common or non-existent, will increase the chances of meeting the SDGs as a whole. The argument here is that, because the ability to deliberate is universal among human beings, democratic governance procedures and tools can be expected to engage and empower people in ways that existing institutions and practices do not [115]. In turn, just as deliberatively involving ordinary people leads to more effective, implementable policy-making in societies where it is prevalent, involving those people in countries where is it non-prevalent, could secure SDG awareness and policy recommendations more aligned with public values, rather than those of vested interests and government officials [116]. Moreover, as mentioned in Section 1.1, this mode of governance provides a potential mechanism to resolve the clash between some activities of developed nations (such as excessive consumption and arms sales) and the SDG related drives of developing ones (such as responsible consumption and security) [14]. There are examples of the potential for such scaling of influence: The global diffusion of Participatory Budgeting (PB) has been enabled by the World Bank which has lent its mainstream economic support to the promulgation of this initiative by investing millions of dollars in grants and loans in developing nations [97]. Deliberative democracy, predominantly implemented in western countries, is now extending to developing countries, including in Pune, India to improve the liveability of the city [117] as well as elsewhere on the subcontinent [118], and numerous Deliberative Polls that have been held in cities and regions in China over several decades [53].

3.3. Scaling Deliberative Democratic Principles to More and More Complex Problems

Deliberative democracy has specialised in dealing with classes of problems of complexity and "wickedness" [90] that have stymied existing governance systems [31]. Hence, it is well-suited to the task of integrating and implementing SDGs, though its ability to deal with the most complex of issues is still to be fully tested. Deliberative democracy mini-publics have demonstrated their ability to address complex issues that are normally the prerogative of government officials and experts. The Australian PBs, allocating 100% of City budgets, described previously [103,104,119], are a case in point. Participants needed to understand highly complex budgeting, local, state and federal responsibilities and priorities, and then create a system for comparing the costs and benefits

of revenues and expenditures in contexts of growing demands for resources, constrained by fixed revenues. Similarly, the Danish Board of Technology over a 10-year period utilised mini-publics to resolve highly complex technological issues that involved ethical issues. The recommendations of participants influenced subsequent legislation that dealt with those issues [120,121]. Finally, Citizens Juries have tackled complex issues that governments have not been able to resolve including, nuclear waste [122], river management, and infrastructure spending [84]. Despite these successes, it is still an open question as to whether the complexity of SDGs' wide-ranging goals and multitudes of local values can be usefully dealt with by deliberation techniques as tested thus far.

3.4. Scaling Deliberative Democratic Principles to All Parts of the Policy Cycle

Deliberative democracy offers advantages in dealing with problems like integrating and implementing SDGs that require tight feedback loops to incorporate ongoing learnings. Those feedback loops are essential, not just at the stage of devising legislation, but at the stages of planning, implementing, evaluating, and modifying the policy that is adopted. During these stages, the public's informed and considered judgments can be as indispensable as they are when the basic policy is under consideration. To date, unfortunately, we have little experience in scaling to "downstream" or operational/implementation phases [105]. However, with a wicked problem like the SDG implementation, a failure to gather deliberative "wisdom" in the downstream phase of the policy cycle could be catastrophic. It is during the implementation of solutions that the problem tends to shift in response to the intervention, and render ineffective or counterproductive even well-considered and representative plans. This downstream effect is further complicated because it often includes the poorly understood phenomena of how the outcomes of deliberation in one arena or part of a government affect decisions or deliberations in other arenas or structures [123].

3.5. Scaling Deliberative Democratic Principles over Time through Institutionalisation

The inclusion of the SDGs in the Agenda for 2030 implies that they will extend through and beyond the careers of many of the people working on them. Hence, scaling deliberative democracy over time will be important. Ideally, these deliberative democracy processes will become "business as usual" in the politics of liberal democratic governments, becoming deeply embedded and permanently institutionalised [70]. There is some evidence that institutionalisation can be accomplished, though success is patchy. Early examples of deliberative democracy initiatives that for a decade or more include the (now defunct) Tuscany Law of Participation, Law 69 [124], and the Danish Consensus Conferences on technological issues [120]. Other ongoing initiatives include Constitutional Conventions in the UK and Europe [125], and the Citizens Initiative Review in Oregon, Colorado, Arizona and Massachusetts [56]. By far, the most prolific forms of deliberative democracy are the Participatory Budgeting initiatives, which have been conducted in over 2500 places across the globe [94]. The experience of the South American PBs suggests that long-term institutionalisation is most likely to occur when the public has had sufficient positive experiences of direct involvement in sharing substantially in the making of decisions, not just being "consulted" (and, of course, where governments have continued to support them). Other factors contributing to the longevity of PBs include the commitment of governments to ensuring that ordinary people remain central to governance as co-responsible and co-decisional actors. This allows processes to evolve rather than simply being repeating in a ritual fashion (two Western Australian initiatives at State and Local Government levels illustrate the value of permitting processes to evolve) [90,126]; and ensures that decisions produce results that are concrete and observable, so people can see clear evidence of their participation [113]. From this, we gain some insight into the approaches that might allow implementation of the SDGs on multi decadal timescale.

3.6. Scaling Deliberative Democratic Principles for Broader Participation

Two of the key strengths of deliberative democracy are its legitimacy in a contested space [42] and its epistemic strength in the face of uncertainty [43]. These strengths make deliberative democracy especially valuable in attempting to address the contestability and uncertainty inherent in the task of reconciling SDGs, both with other public goods and with each other. Although efforts have been made to maximise legitimacy [71,127,128], at present deliberative democratic methodologies typically do not reach sufficient numbers of citizens to justify the conclusion that they fully embody the core principle of rule by the demos as well as they could [129].

Most responses to this criticism call for the horizontal scaling of deliberation to include ever-increasing numbers of the public. Scaling "out" to involve greater numbers of people while retaining high quality deliberation can enhance the legitimacy of policy outcomes [130] by increasing diversity, by generating substantive decisions that are more "accurate" [131], and by improving effectiveness through greater access to relevant knowledge [43].

Other theorists [132] argue that a higher level of deliberative participation may not be necessary to access the knowledge and to produce the legitimacy of which highly-functional systems of political representation are capable. Unfortunately, the representative model of government at present does not enjoy high levels of trust and satisfaction. Hence, we contend that a nuanced response combining other tools will be maximally effective. The use of descriptive representation (i.e., stratified random sampling) effected through both deliberative practices such as mini-publics and conventional institutional processes can do much to restore public trust in and satisfaction with representative institutions [133]. This entire governance package can be usefully supplemented with non-deliberative input from surveys, opinion polls, and social media. The recent focus on information technologies and their role in scaling participation in governance does require specific qualification like the cautions that apply to opinion surveys generally [134]. While information technology platforms have been invaluable in soliciting public opinion, to date they have fallen far short in terms of generating carefully deliberated public wisdom [135,136]. There have been some attempts to combine online deliberation with mini-publics with some success. For example, 3000 randomly sampled people were invited to work in deliberation teams during Australia's first Citizens Parliament to develop proposals which would form the agenda for the 150-participant mini-public [137].

3.7. Scaling Deliberative Democratic Principles through Discourse Diversificatioin and Process Quality

This dimension of scaling focuses on expanding the quality of political communication in terms of its usefulness for a world grappling with the complexity and uncertainty of sustainable development. This is important as an inability to maintain or increase deliberative quality scaling while scaling representativeness and influence, will simultaneously undercut the legitimacy of any outcomes (potentially being seen to be ill-informed or partisan; or supportive of participatory but not deliberative democracy). Scaling deliberativeness can be achieved in two main ways, each method focusing on a different aspect of deliberation:

One way to improve deliberation is to increase the diversity of "discourses" associated with the issue being deliberated [138]. A discourse is defined by Dryzek as " . . . a shared way of apprehending the world" through language and a coherent narrative about the way the world functions [139]. Each discourse contains assumptions, which then frame communication and analysis, and dispose people to some decisions and actions rather than others. Provided participants make a good faith effort to understand perspectives other than their own, the quality of deliberation rises in direct proportion to the number of effectively represented discourses. Striving to secure the participation of persons who reflect the full range of discourses present in the population may achieve as much attitudinal diversity as a statistically random sample of that population, without the need to expend the resources required to assemble such a sample.

A second way to improve deliberativeness is by making design and execution interventions that raise expectations for participants' seriousness of purpose, preparation, openness, readiness to learn,

reflection, desire to cooperate, realism, and other characteristics of pragmatic, public-spirited civic work. For example, it has been observed that, in some groups, participants can be accomplished at reflecting internally on information and values but are unable to move from the personal activity of reflecting to the collective activities of reason-giving, prioritising, and decision-making. Both of these are important markers of the quality of deliberation [72] and should be improved to scale deliberativeness. The authors have had some success in scaling design features that have been shown to be effective at a small scale through the use of a bespoke software platform that encourages these aspects of deliberation. This platform (WhatDoWeThink^{TM}, https://whatdowethink.com/) has been used primarily with medium to large groups of 30–100 s of participants. It is designed specifically to address several of the challenges commonly encountered in public deliberation. The challenges include: giving voice to all ideas, whether they enjoy widespread support within the group or appeal to only a few participants, and preventing minority views from being rejected too quickly or without justification in a rush to "let the majority decide"; stating ideas succinctly in order to ensure inclusion and acknowledgment while avoiding redundancy; ensuring that all participants have a genuine opportunity to question, clarify, defend, and contest every idea while holding all accountable for their beliefs and actions; transcending the mechanical "adding up" of individual preferences while honouring the principles that each person should "count as one, but not more than one" and that the will of the majority should, other things equal, prevail; and setting collective priorities.

4. Discussion and Conclusions

The Sustainable Development Goals are visionary, ambitious, all-encompassing and interconnected aspirations for a healthier planet and more peaceful and prosperous lives. Like the Millennium Goals that preceded them, while some successes can be celebrated, overall, our progress towards our desired end result remains far from reach. It is now commonly accepted that we need to find new ways of integrating the SDGs to achieve synergies which could accelerate progress. We know what we need to do, but we're far less clear how we might achieve that. The "how" is made more difficult because we are addressing wicked problems and our usual linear thinking will be inappropriate. However, it is now commonly accepted that the "how" will need to involve partnerships between governments, public and private sectors, the 3rd sector and citizenry, and between nations. The task is enormous and the consequences of failing are dire. This article accepts that we do not have tried and true forms of partnership that can propel us forwards to the change we desire. However, we can look to smaller successes where such partnerships have been successful and then visualize ways to scale them up to greater complexity and out to greater numbers of people and nations.

We begin with clarifying the problem we are addressing—implementing SDGs is a wicked problem—and recognizing that achieving significant movement forward will require us to find ways to integrate them. The recognised need for new partnerships has led us to contend that to achieve this, we need to reform governance—the interactions and decision-making of actors within society to resolve collective problems. The elements of governance we deem to be critical to this reform include finding new ways of eliciting collective value judgements, basing these judgements on diverse inputs, applying deliberative communication, and harnessing distributed and collaborative power and action. The principles underlying such governance are described as deliberation/weighing, representation/inclusion and influence/impactfulness, i.e., deliberative democracy. We apply these governance principles to a model for achieving integrated SDGs in cities that takes the following steps: initiate an inclusive and participatory process of SDG localisation; set the local SDG agenda; plan for SDG implementation; and then monitor SDG progress. However, for this process to move from local to global, from relatively simple to highly complex issues, the model would need to be scaled. We take a more innovative tack in this regard, describing how this could be achieved by scaling deliberative democratic principles in a range of directions that are relevant to global sustainability.

The Former UN Secretary, General Ban Ki Moon, once observed that "our struggle for global sustainability will be won or lost in cities" [140]. Accordingly, our focus has been on cities, in particular

how new partnerships in governance can create new ways for cities to integrate and implement SDGs. This will entail democratic renewal that values the empowered participation of everyday people to develop the public wisdom needed to bring about transformative change, i.e., deliberative democracy. There is a sound rationale for supporting deliberative democracy as an important pathway to achieving the SDGs, and there are exemplary case studies. However, we recognise that unless we can scale deliberative democracy in terms of influence, representativeness and deliberativeness, as well as scaling vertically, horizontally, and over time, these pathways are likely to be very limited. The key will be not only achieving intermittent successes, but systematic change. It is now time to test whether by scaling deliberative democracy, and doing this systematically, cities would be better armed to take on the SDG challenge.

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Participation in planning and governance: closing the gap between satisfaction and expectation

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Abstract

Background: Making and implementing decisions to improve long term sustainability, particularly in democratic countries, is a significant challenge. This is exacerbated when citizens' expectations of their relationship with government is significantly at odds with what they experience, since this is likely to further reduce their already low trust in government and its decision-making. Research in the USA has demonstrated a clear gap between citizens' expectations of their participation in government and their satisfaction with that participation. This finding inspired a research project in regional Western Australia to determine if a similar gap existed between citizens' expectations and experience of their relationship with government. Additionally, a public participation intervention was devised to determine whether the gap between citizens' expectations of, and experience with, governance could be reduced and whether the decisions made from such an intervention would be more implementable. To better reflect the partnership relationship citizens expected from government, 'deliberative democracy' initiatives were implemented to resolve the local government's budgeting challenges.

Results: The results demonstrated that a similar gap to that in the USA was present in Western Australia community and the sample populations used in the partnership interventions. Further, the citizens' experience of deliberative democracy substantially reduced the gap between their expectations and experience of government participation. These case studies also revealed the existence and details of the nature of this partnership relationship between citizens and government as well as between the citizens themselves. Moreover, the tough budgetary decisions they made were implemented without public outcry.

Conclusions: These case studies show a promising route to close the gap between citizen expectations and satisfaction with participation in government, as well as having the potential to increase the trust in government so necessary for advances in sustainability. Future research directions have been outlined to improve understanding of how these results could impact on sustainability efforts.

Keywords: Participatory budgeting, Arnstein gap, Deliberative democracy, Participation, Trust

Plain English summary

Achieving widespread sustainability will require high levels of trust in the good intentions and competency of governments by their people. Working against this is the good evidence that a gap exists between what sort of participation relationship people want with their governments and the sort of relationship that governments are delivering. This gap hampers the cooperation between citizens and government so necessary in a world currently grappling with the wicked problem of moving toward sustainability. This study established the generalisability of this disconnect outside the US and conducted an intervention through a case study to try and close this gap. Our paper showed that an intervention that delivered a partnership relationship between citizens and government during the allocation of a public budget was able to significantly close the gap. We discuss the practical designs and techniques that contributed to this type of participation relationship and suggest a link between dissatisfaction with participation relationships in government and the crippling loss of trust in governments

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worldwide. We finish by highlighting research directions that will exploit the advances made in this work.

Introduction

For decades, calls have been made for more effective public participation in planning, policy development and public service delivery [1]. Such calls are particularly pertinent to the journey toward greater sustainability globally [2] and locally [3, 4]. These appeals have not been heeded, despite the continuing decline in citizens trust and confidence in their democratic governments across the globe [5]. This study aims to further understand the role of public participation in influencing these public attitudes towards governance with the purpose of facilitating the implementation of sustainability.

There is general consensus that democracy, at its heart, is a system of government that requires participation from its citizens in the process of planning and executing governance [6]. The degree and nature of this participation varies in different democracies, from voting for representatives, to direct referendums, and in past centuries, the random selection of citizens to government positions [7].

There have also been a broad range of views about the appropriate level of participation: from the lack of general participation implicit in Plato's concept of philosopher kings; to the distrust of the motives and capability of the citizenry of the American Founding fathers [8]; and from delegate vs trustee representation systems [9]; to the modern desire for fuller participation and universal suffrage [10]. However, regardless of one's normative position on the ideal degree of participation in a democracy, an empirical approach is at least as important. This paper concerns itself with this very question: What sort of participation does the democratic public want and what are they getting?.

The empirical approach to public participation, however is not free of contested conclusions. For example, using surveys and focus groups to understand attitudes about participation, Hibbing and Morse developed a concept called 'stealth democracy' [11]. The authors interpreted their results to indicate a dislike for political participation in the US public. This distaste was only balanced by the fear that by not being involved in politics would encourage corruption and advantage the political class, so people felt forced to be involved. Other researchers have critiqued this work from the normative perspective [12] and also methodologically – as being limited by the interpretation of the focus group results [13] and the shallow and contextual preferences expressed [14]. Other empirical studies have focussed on assessing the existing attitudes of large population samples (such as electoral and telephone surveys) toward different types of participation. Some results have attracted popular attention

such as findings that more than half of Australian young people do not find democracy the preferred form of government [15].

Rather than broad studies about the status quo, the following study examined a direct intervention on a sample group to alter the 'business as usual' level of participation, then assessed its impact through surveys and in-depth interviews to deepen the understanding of the survey responses and explain any changes detected. Additionally, surveys of the broader population were conducted to enable population comparisons and to connect this research to that of the larger field. We present our attempt to further understand the role of public participation in influencing public attitudes towards governance in four steps, by:

1. Reviewing the normative and empirical literature on participation in governance.
2. Applying the "Arnstein Ladder" to measure the difference between expectations of participation and what's experienced (the "Arnstein gap").
3. Analysing the Arnstein gap data gathered before, during, and after an intervention in a Western Australian city-region.
4. Analysing the intervention data to further understand the partnership relationship and how the Arnstein Gap can be reduced to improve the relationship between the public and government; with suggestions for future research.

The disparity between participation expectations and experience - the Arnstein gap

When settling on the most appropriate way to assess participation attitudes in this situation, the Arnstein ladder was applied as the measurement tool. This standardised spectrum of participation (see Fig. 1) has been used by disparate researchers for diagnostic and prescriptive purposes [16–19]. The Arnstein ladder [20] was seminal in the evolution of thinking about the role of citizens in planning [1]. It provided an 8 point scale for assessing a citizen's expectations of participation in government had the potential to assess his/her experience in participation in governance. The ladder and its variants have been used particularly in the planning field [19, 21, 22]; as well as in business studies, health planning, international development and child education [23]. It has undergone additions [23, 24] bifurcation [25] and other variations, including into spectrums of public participation, oft used by public engagement practitioners and researchers [26, 27]. Some scholars have rejected the Arnstein ladder outright for being too limited and simplistic [23] or an inappropriate fusing of an empirical and normative scale [28]. Others criticised it for
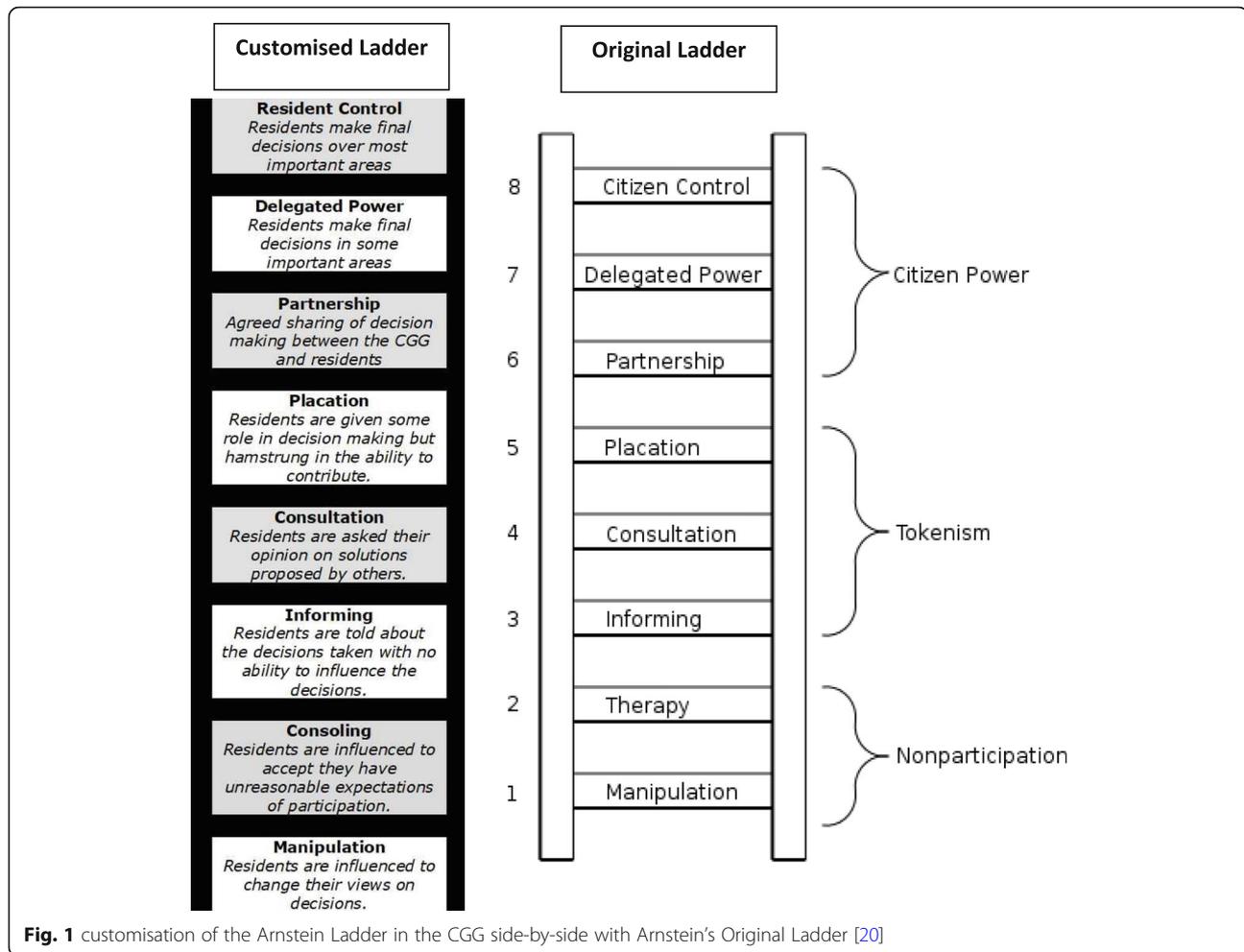
Fig. 1 customisation of the Arnstein Ladder in the CGG side-by-side with Arnstein's Original Ladder [20]

being too theoretical at the extremes of the spectrum and normatively offensive in the middle [29].

Understanding the strengths and limitations of the Arnstein Ladder, it was considered the most appropriate tool for this study. The normative critiques were less consequential since it was used to detect norms as well as empirical attitudes amongst citizens and government professionals. The strengths as an educative tool, providing clarity and common language, with a clear classification of government relationship types, was reinforced in pilot testing where subjects found it easy to understand. The extended range of participation processes described in the ladder assisted in this role as a descriptive and investigative tool [29]. While a ladder could culturally imply that rungs further up the ladder were in some way superior there was not any analytic judgement of superiority [30]. Theoretically, the framing language of the Arnstein ladder represented a Foucaultian oppositional stance, whereas the Habermasian collaborative approach underlay the deliberative democracy intervention implemented in this study. This oppositional approach was

selected purposefully to avoid the presumption of collaboration in other models [31] which could have tilted preferences. Finally, the ladder was selected as it enabled cross comparison with similar surveys used where institutionalised power exists in a nearly dichotomous relationship with citizens [32].

The most significant participation work to date used the Arnstein ladder to measure quality deficits in public involvement in transport and energy infrastructure projects [33]. Both participants in the public consultations and infrastructure professionals were administered the same keypad survey. In reviewing the results from 3000 participants across six states in USA from 2003 to 2015, the authors [34] noted several outcomes pertinent to the following research:

– Citizens' preference was not for a relationship of domination of their government but of "partnership".
– Citizens' expectation of participation was not currently being met by the existing system, which

they judged as engaging in a 'consultation' relationship with them. Both citizens and professionals found the actual participation relationship was falling short of what they expected and the authors named this the 'Arnstein Gap'.

– Citizens and subject matter professionals both had the same preference for an ideal relationship of 'partnership' with government, but they differed in their assessment of the participation being realised - the professionals being more optimistic in their assessment of current levels of participation (called 'professional conceit' by the authors).

Numerous questions could be raised about these conclusions that are also relevant to our current study and we include these here with our attached observations:

– Were respondents' assessments of the current level of participation accurate, i.e. informed and unbiased? It would appear so since to a certain degree the respondents assessments triangulate with that of the professionals (who may or may not be more informed and 'accurate') and both agree there is a gap between the ideal and the reality.

– Did participants understand the meaning of each step on the ladder?
Although respondent interpretation is a constant danger in surveys [13], it was mitigated in the following research by providing a clear explanation of each level under each rung's label (see Fig. 1).

– Did the ladder culturally encourage participants to select higher levels as 'better'?
The following research results, quantitative and qualitative, did not support this notion (i.e. the respondents' ideal level, although elevated, was not in the top two levels of the ladder).

– Finally, did citizens have a faulty or unrealistic expectation of participation in government?
This questions is a return to a normative question which becomes moot in this empirical study: If the public perceived that its government was failing to meet its expectations of participation, then this performance dissatisfaction would be important and consequential, whether it was reasonable or not.

To extend and deepen our understanding of the Arnstein gap, the following research pursued 3 additional questions:

a) Can the finding of a gap be generalised from the United States populations researched to Australians?

b) Can this gap be influenced and reduced by implementing a participatory intervention more in line with citizen expectations; and would such

public participation enable more implementable decisions?

c) Would different interventions result in different effects?

Generalisability of Arnstein gap

So how generalisable is the gap in other contexts? As far as we can tell the gap between citizen expectations and their experience of participation in governance has not been directly measured in any other work. Some studies have partially employed the Arnstein ladder for measuring citizen views of their current of relationship with government. For example: the finding in Lebanon that the overwhelming majority of participation experienced by citizens was of the 'inform' variety [35]; or how the type of engagement used in water shed management affected citizens' assessments on the Arnstein ladder [36]. In light of this we are forced to review work that approaches parts of the gap phenomena in different ways.

Examples can be found of studies that have tried to understand the desired relationship of citizens with government without using the Arnstein Ladder. For example, using a Likert scale between 'direct democracy' and 'unfettered decision-making power for elected officials', US citizens were found to have an average rating for that was around halfway between these endpoints [11]. If we transpose their scale to one that approximates a 6 rung Arnstein ladder from 'citizen control' to 'informing', this preferred 'midpoint' is equivalent to that of 'partnership'. From similar vantage points, other studies have investigated citizens' preferences through comparisons between direct democracy, elected representatives and technocratic rule in various countries such as Finland [37], Denmark [38] America [14, 39] and Spain [40]. The results were often indeterminant and contradictory with preferences that were contextual and seemed to straddle all three modes. This could be explained by a desire by citizens for partnership with experts and politicians when it comes to governance rather than the dichotomous frame imposed in the surveys. If so, this supports the citizen expectation part of the Arnstein gap.

As to the matter of whether expectations are being delivered upon the broadest evidence comes from one of the largest surveys of citizen participation in government in a meta analysis of 100 cases citizen engagement of in the developed and developing world. On the one hand it showed a preponderance of positive effects of citizen participation in government, but on the other, that formal governance processes represented the smallest part of this [41]. This adds to the evidence that there appears to be a gap between the participation government currently offers and the relationship citizens seek– and they will find it outside government if necessary. If this gap is

indeed widespread then can interventions be made to close it through the actions of government?

Implementing a participatory intervention - deliberative democracy in Greater Geraldton, Western Australia

Prior to staging a participation intervention the presence of the Arnstein gap would first need to be detected in our Australian case study. To determine whether the features of the Arnstein gap would be replicated in the Australian context, an Arnstein survey of citizen expectations and experience of participation in government initiatives was sent to 2000 randomly selected residents of the Greater Geraldton city-region. This is an area of 12,626 km2, 430 kms north of the capital city of Western Australia (WA), Perth, with population of around 40,000. The survey showed a community preference for a partnership and an experienced reality between informing and consultation. These research results closely replicated the USA Arnstein gap results.

This research then focused on understanding whether the Arnstein gap could be narrowed if citizens experienced a different form of participation than they were getting – one that aimed to deliver their preferred 'partnership' relationship. Partnership, was defined as a relationship between two or more parties that cooperate together, sharing power by using their mostly equivalent levels of influence (or claims to influence) to achieve a common goal.[1] Partnership is particularly distinct from other rungs on the ladder (e.g. manipulation, informing, consultation, delegation) which have asymmetries in shared power distribution [20]. Although unstated in the original Arnstein ladder article, we assume that the co-operative nature of the partnership relationship was also important (i.e. not competitive or ambivalent), and that it is directed toward some good that was common to the parties. Given this understanding of partnership, deliberative democracy appeared to be a good fit for the planned intervention because of its relationship between government and citizens.

Deliberative democracy differs from other forms of democracy in the manner in which it confers political equality. To explain - representative democracy confers equality through an equal vote to each citizen; participatory democracy confers it by equal opportunity for involvement; and direct democracy confers it through single votes directly on issues. Deliberative democracy realises equality through a communication method that privileges the strength of arguments and the equal ability of participants to justify and reflect on those arguments [42]. The collective outcomes of these deliberations influence policy development or decision-making via common will formation for the society as a whole [43]. This, political equality in service of the common good appeared to be a good fit intervention at the 'partnership'

rung on the ladder. This was especially so since this intervention incorporated cooperation within and between government officials, subject matter experts, and citizens. Equally advantageously were deliberative democracy's well developed, and proven technologies and tools for generating and measuring collaboration and deliberation [10, 44].

Our case study intervention was part of a four year action research program (2010–2014) piloting deliberative democracy in the City of Greater Geraldton (CGG). Numerous deliberative democracy initiatives, detailed elsewhere [45], aimed to change the dynamics of interaction between government and citizens to help develop a more sustainable future for the city-region. Two innovative participatory budgeting initiatives conducted over 2013–2014 were examined specifically to understand participation dynamics. Participatory Budgeting (PB) is a form of public budgeting which has grown exponentially over the last 30 years, where citizens allocate a budget according to their values and criteria [46]. This usually involves citizen groups developing options and the broader public voting on them, with the top priorities within the budget being funded and implemented. Another form of PB, now known as 'The Australian PB' [47] is characterised by randomly selected and stratified juries (or 'mini publics' [48]) meeting over 5–8 weeks to deliberate how 100% of a budget should be allocated. This is distinct from the usual PBs which allocate around 10% of a budget [49, 50].

The CGG PB program consisted of two separate, descriptively representative mini-publics[2] of randomly selected residents of the City stratified by age, gender and geography to match official census data. The first mini-public was tasked with prioritising over $AUD70 million of infrastructure spending over the next 10 years for the local government. Called the 'Capital Works Panel', its 28 citizens met for four and half consecutive Saturdays to create criteria to compare and rate 130 infrastructure projects using a deliberative form of a multi-criteria analysis technique. The second mini-public was asked to set the operational budget of the local government of around $AUD70 million for the next financial year. Called the 'Range and Level of Services Panel' its 35 citizens met for eight consecutive Saturdays to make recommendations on whether service areas should be increased, held constant or decreased, assessed according to a values-based process [17]. At the conclusion of both PB Panels, their recommendations were submitted to the elected Council [51, 52]. The Council endorsed the outcomes of both PBs, using the recommendations to form the budget of the following year as well as the infrastructure program for the following decade. Given the tough economic situation and a contentious history [53] some of the difficult decisions

made normally would have resulted in public and elected official dissent. This did not occur - not only did the Council accept the decisions, so did the public[3] [2, 54].

Data gathering and methods

Having located our case study parameters, we now turn to our approach to understanding the case study. A mixed methodology of quantitative and qualitative methods was used to assess and explain participant and administration staff attitudinal changes, as well as participant evaluations of the quality of the deliberation processes. The Arnstein ladder tool was used in a similar manner to previous studies in developed countries to assess the dichotomous power disparity within the citizen-government/administration relationship. Using Dryzek's criteria for the appropriate use of surveys in this context [13], causal generalisations were not sought from this tool. However short explanations on each rung of the ladder were used to ensure common comprehension and increase the chances of repeatability. To counter some of the other weaknesses of survey tools highlighted earlier, semi structured face-to-face qualitative interviews with randomly selected participants were also implemented to add confirmatory and explanatory power. Interviews were conducted with 25 of the 63 panellists, 5 of the 15 elected Members of the Council and 11 of the staff involved in the planning and execution of the panels. This data gathering was followed by direct observation of participant and staff daily staff debriefings, document analysis, and observation of the elected council budget meetings.

The same survey that was administered to the wider community was also given to the randomly selected PB Panel participants on the first day of the Panels (prior to the beginning of the Panel activities), at the midpoint of the Panel sitting days, and on the final day at the end of the Panel deliberations. Participants in both the community surveys and the PB Panel surveys closely matched the demographics of the region in terms of gender and geographical distribution but with fewer youth than expected from census data [51, 52]. Figure 1 shows the customisation[4] of the ladder that was used in the survey administered to the community and participants with the questions *"CURRENTLY, How do you feel the City of Greater Geraldton treats its residents?"* and *"IDEALLY, How would you like the City of Greater Geraldton to treat its residents?"* The original Arnstein ladder is placed alongside to enable easy comparison.

Additional information was gained through quantitative participant surveys, filled out after each deliberation day, measuring dimensions of deliberativeness and the usefulness of the processes. An Independent Review Committee (IRC) of external community members,

including a lawyer and other respected citizens, oversaw the process to ensure its fairness, transparency and egalitarian nature as well as comprehensiveness and lack of bias in the information presented and available. Members of the IRC met with the participants after each deliberation day without any of the organising/facilitation team present. This gave participants a chance to openly discuss and evaluate the independence, fairness and validity of the process without outside influence. Issues raised were discussed and documented in debrief meetings.

Quantitative results: presence and narrowing of an Arnstein gap

Figure 2 shows the mean participation levels (both ideal and currently) on a scale from 1 (manipulation) – 8 (citizen control) for the PB participants over the course of their workshops. The CGG Community results with those of US participants from Bailey et al. are shown adjacent for comparison purposes.

Four comparative conclusions were elicited at this stage

1. The WA city-region's community assessment of the current level of participation with their government very closely resembled the findings by Bailey et al. [33] in the US. However, the ideal level of participation for the Geraldton community was slightly lower than the US ideal (5.7 vs 6.1). This difference could be explained by a combination of some measurement variation as well as selection bias in that only potential respondents willing to participate in transport planning were included in the US sample. Such willing volunteers could have had higher ideals for their relationship with government than the broader community surveyed in Greater Geraldton. This rationale is supported by other research demonstrating the altitudinal differences between participants in engagement activities and the wider community [55, 56].

2. The panellists at the beginning of the participatory budget process were a close attitudinal match to the broader community on their assessment of the current participation level, but they had a higher assessment of the ideal level (6.4 and 6.2 vs 5.7). This result too, could be explained as a form of selection bias. By accepting an invitation to a PB, panellists may have higher ideals of participation than the general population. Certainly, all interviewees indicated that the partnership level of participation was the preferred relationship with government.

3. The process of being involved in a highly participative intervention did not significantly shift participants' assessment of the ideal level of
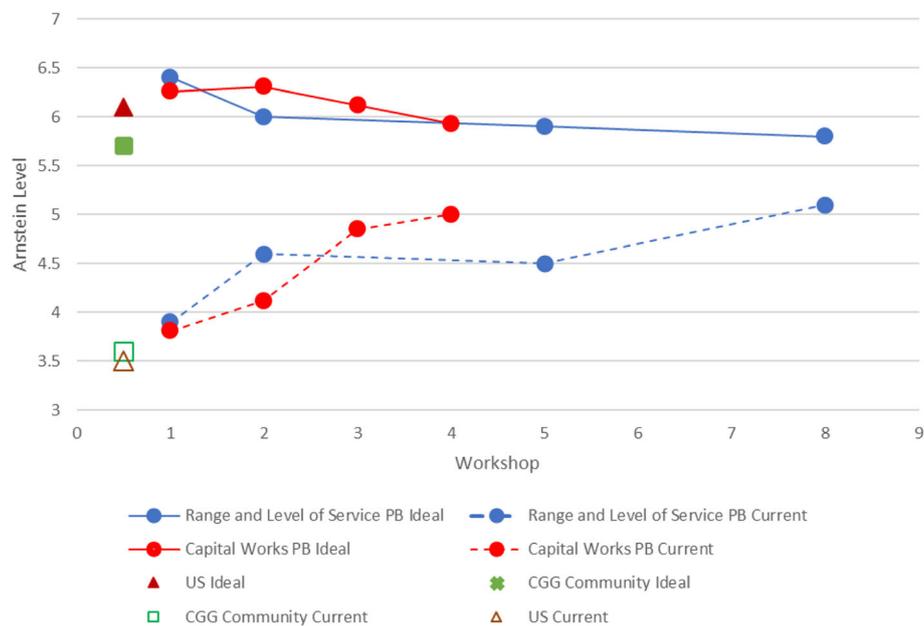
Fig. 2 Arnstein Gap data

participation as "partnership" – this attitude moderated and stabilised, if anything. This seems to mitigate against the possible thesis that the citizens' nomination of an ideal participative relationship was a normative aspiration, and as such, was naïve, ill-informed and would likely change if citizens were subjected to the rigours of disagreement and the responsibilities of a true partnership relationship [11].

4. The Arnstein gap decreased by around 2/3rds over the course of both PB's even though they ran for different durations.

These results indicated that the Arnstein gap applied in Australia and America, across regional areas and over time,[5] and that participatory interventions could potentially narrow the gap.

Qualitative results: partnership relationships between citizens and government

Despite the opportunity to select greater control (citizen control or delegation) respondents preferred the idea of partnership both before, during and after the PB's. This preference was further probed through interviews and survey questions on the 'design for partnership' of this intervention.[6] What generally emerged was a desire for, and approval of, a relationship where political equality was acknowledged, and respect was shown for each party's skills and strengths - all underpinned by intentions to work toward a common

goal. Additionally, the interviews showed that panel participants developed and desired similar partnerships between panel members.

There were several roles involved in the notions of partnership - participants, local government staff, elected representatives and the small Curtin University team. Participants were the deliberators – involved in small group discussion, cross examination of expert witnesses, problem resolution and creation of recommendations. Local government management was responsible for the overall organisation and the provision of information - making available all budget information required by panellists in easily understood ways including written formats, presentations and verbal cross examination. Other administration staff were trained as small group facilitators, themers and scribes. Elected members were allowed to observe but not intervene. The Curtin University team researched the initiative and helped to design and orchestrate it.

To understand what participants meant by 'partnership', we looked for indications of what we called staff 'competence' and 'benevolence' in interviews. Benevolence referred to the panellists' belief that the intentions of the staff were oriented in the same direction as the panellists' intentions – not individually, but toward what participants understood to be the common good of the community, in their roles as descriptive representatives of that community. To probe the concept of partnership as shared power, we also examined beliefs about the competence of the staff in their jobs serving the community. This competence belief

acted as a proxy for the ability of the local government to contribute to the common goal of the panel.

Panellists universally indicated during interviews that they regarded the government staff as highly competent in their areas. For example:

> "It was very interesting to find out what the Council was doing and mind boggling the amount of money they have to juggle around, and the amount of projects they have to deal with … I went in there thinking probably the same as everybody else – 'What is Council doing with rates money?' And I came out thinking, 'Well, they are doing a pretty good job actually'."

> "I think they are very competent - they are far more competent than I believed they were. … the general consensus of their competence is not as high as it should be. People don't understand the level of services and the effort required for that level of services."

There was also consensus that they were acting benevolently in the best interests of the community both generally and in undertaking the PBs.

> "… I understand how hard they work trying to make it all good, including the fact that they started this in the first place and they were willing to give it a go."

> "The people at the Council, the Directors and their passion, their interest, and their willingness to give it a go, sort of makes you feel you are in fairly good hands considering the reputation they have had."

> "I do believe there are genuinely committed to making this place a better place to live but some the ways they go about that aren't achieving that goal."

One panellist at least was aware that the assessment of competency was also occurring from the other side of the relationship.

> "I think they thought the bottom drawer would be where it would go, and that would be the end of it. I don't think they appreciated the fact that if we come out with something silly here, … they are going to look at it and say - 'This is all that's coming out? What we have spent all the time and money and effort on? Don't worry about it in the future'. And that would be sad. It's important that people don't just go in there with those axes to grind."

If there was a partnership relationship between staff and residents, it would also be expected that staff would express similar assessments of benevolence and competence toward the citizens. This was particularly so, since the Arnstein ladder surveys of staff showed their ideal participation rung was also partnership.[7] The staff interviews noted participant competence, though they highlighted the difficult path for both staff and participants to communicate better to achieve mutual understanding. As an infrastructure staff member mused;

> "When they first came in and we gave them a brief on what they had to do - they just didn't seem to get what we were on about. I thought, 'Jesus, if this is what we in for over the next few weeks, we're in strife". But then when we started to get the message across …".

And as a participant commented:

> "It was probably about week 4 I think, when I felt we started to click more. The first few weeks were trying to get everyone to dance around the same campfire. And then when that started happening - you could see it in every table you went to. They were like – 'this is great, this is great', and we started to smash through it."

The overall conclusion by the staff interviewed was that the citizens were competent, and that this was the result of intense work by both parties. As a manager summarised;

> "They are but you have to invest time. You can't expect that people have that competency off the tops of their heads. It's unrealistic. As long as you have realistic expectations that people need support, advice, information, whatever in order to lift their level of competency - it's there."

Most staff also thought participants had the common goal to act in the best interests of the wider community:

> "I think so. Yeah. Given the questions they were asking, they certainly were taking themselves out of it and looking at the broader picture."

> "If you continually remind them that they are here to make decision for the whole community and not just for themselves and you put them in the space where they continually hear from other people and opinions and backgrounds, they do grow. I've seen that."

This assessment of benevolence was also supported by examining the list of prioritised projects produced by the Capital Works Panel which placed minority interests such as outlying settlements, mobility impaired groups,

and youth near the top of the list [51]. As one manager remarked.

"Key moments would be when that clicked into place - how important it was for them to come up with their own values ... because there was so much passion in the room. When they were done, and Mullewa[8] came up really high, and mobility access came up really high, even though the group wasn't all disabled or in wheelchairs."

One staff member summarised this partnership relationship as follows:

"Both panels agreed: You guys are the experts. You should know why and how and what's important, that's why it worked. It needed to be for informed decision-making. (And) ... we can learn from the community what's important. What they value, what they want. They can help us prioritise things."

Qualitative results: partnership relationships between citizen participants

Interviews also showed the existence of partnership relationships between the panellists. Evidence of benevolence included expressions of their fellow panellists being oriented positively toward each other as well as the greater community. Participants described the attribute of competence of their fellows differently to staff, though. For the staff, competence involved the volume of knowledge and experience relevant to local government operations and infrastructure. For participants, competence involved their ability to perform their tasks of representation and deliberation well enough to achieve the goal of allocating the budget for the common good.

The following quotes referred to these competencies and in particular – as the staff also noted - the time it took to get there:

"I think it was a lot to absorb. We knew why we were there, but I had to get my head around how we were going to do it. Some people got it straight away some people didn't get it right to the end. I personally found the majority of people found it was around that week 4."

"There was so many people, so many different areas at times, it was really tough - we all had different opinions. We did have to get to know each other then get to know what we were doing. As the weeks went by it got easier to fall into the groove and start doing what we needed to do."

After this period of orientation and as more effective group dynamics evolved, participants became confident in the quality of their recommendations and this was reflected in daily surveys of their deliberative capacity. Most participants rated highly the quality of their deliberations including neutrality, access to information, ability to hear and be heard and representativeness of results. [51, 52]. Their sense of competence was also reflected in the interviews:

"Nearly every day we found things really interesting because 6 or 7 people's views were thrown in. You may see things in a certain direction but after some explanations you may see it in 2 or 3 directions and you have to work out an amicable solution."

"There was a few times there where they said 'oh I didn't think about that'. That makes me happy, at least they were listening. They may not change but at least they have heard the argument for the other side."

"... we just all seemed to get it, and we all seemed to click and it didn't matter if we had difference of opinion, we listened well to each other, we explained well and then we reached an understanding and agreement and then moved onto the next thing."

On the subject of benevolence - whether their fellow panellists were acting in a manner that would benefit the broader community beyond their own narrow interests - the majority of interviewees found such attitudes prevalent;

"I think everyone had good intentions. Despite how they started I think by the end of it they did want it to be better."

"It's a good way to have a say in what's going on as long as that's always tempered by - you are here as a representative. At those meetings, I brought up things that I personally don't agree with. But that being said, I know that a lot of my friends and people at work do. So, I still have my view but I go 'these people do have some good points, maybe I will include them in what I am doing'. It's about getting the best outcome for everybody. Not just 'ah well I don't use the pool so shut that down'".

As noted earlier, the presence of final recommendations that gave preference to minority interests also reflected decisions made for the common good which gives additional support to claims of participants' benevolence.

How the partnership relationship influenced both the process and outcomes

The data showed a holistic sense of partnership between participants and with the government employees they interacted with. Partnership was characterised by a belief in the other party's ability to do their job (provide expertise and information, or deliberate and represent the community) and a belief in the other party's intention to act in the best interests of the whole community (either in a role as a government 'expert' or a participant descriptively representing the community). Two events that unexpectedly occurred during the deliberations demonstrated in a concrete manner how the presence of these partnership relationships influenced the PBs. The first incident highlighted a break-down in the partnership relationship between panellists; and the second involved a reinforcement of the power sharing relationship, between participants and officials.

The first example occurred during a session which the Range and Level of Service Panel held with the broader community to get feedback on the panel's preliminary recommendations on the operational budget. As part of a community event to get that feedback several panellists volunteered to outline the Panels' recommendations on various areas in the budget to the public meeting. Without warning, one of the panellists, himself a property manager, presented the Panel's recommendations on property management to the public in a way that reflected his/developers' interests rather than the position the Panel had recommended - which was diametrically opposed. All panellists interviewed expressed various levels of dismay and outrage at his behaviour. Following this incident, panellists met and decided to make a complaint to the IRC that was overseeing the initiative. The IRC researched what had transpired, speaking to panellists, staff and the Panellist in question, who, they determined, had indeed misrepresented the Panel's views to the community. After being given an official verbal warning about such behaviour, panellists observed that the Panellist in question was much restrained and apparently chastened in subsequent panel deliberations. This one Panellist's failure to live up to the relationship expected of him - to act in the best interests of the panel and the wider community, highlighted the strength of the partnership relationship that had developed between panellists. Even so, this misdemeanour did not exclude that panellist entirely from the realm of the relationship. Notions of fair play and equal access still prevailed, as the following quote indicated:

"It wasn't a fair representation. That sort of thing divides the group … all the surveys that had been done didn't want that, so then he goes and puts it out there … It was really disappointing and heartbreaking

when he did that. Afterwards, he happened to be one of my teams on the last day and luckily enough he had lost his voice a little on that day. Which I thought was a blessing in disguise, but then in the same token he had things that he wanted to vote for but because he had lost his voice nobody was listening. So I did actually say, 'Hang on guys, I think XXXX is trying to say something' a few times because it still needs to be fair hearing – but gosh, I was so pee'd at him."

The second example portraying the seriousness of the partnership relationship occurred during the Capital Works PB, this time involving panellists and officials over the issue of acceptable rating criteria. Participants developed a values-based set of criteria that was used as a rating system to consistently and fairly compare disparate infrastructure projects (e.g. runway extensions and youth centres). The idea of using community values to create rating criteria was selected because of its ability to enable the prioritisation of projects based on different but equivalent values. This design element was based on the concept of "public values pluralism", where "nearly all controversies boil down to choices among competing values" [17]. This competition between competing values is particularly pertinent in budgeting where constrained resources are being allocated amongst valuable activities. The panellists then used the rating system to create a prioritised list of projects. This process strengthened the power sharing aspect of the partnership, an opportunity potentially missed if the government had been left to rate the projects.

The Panellists' criteria were generated by agreeing on what they valued most about living and working in the city-region. However, the City CEO, preferred management's more standard criteria of economic, environmental, social, cultural and governance pillars. The Panel discussed this and determined to stay with their own criteria. The City management group then independently rated all the infrastructure projects according to their standard criteria. Interestingly, though the final lists of infrastructure priorities developed separately by the City 'experts' and the Panel community members had some differences, they were not significantly different. Since there were now two very different rating systems and something of a stand-off between panellists and City administration about the two systems, the panellists came up with their own way to resolve this. They collectively decided to acknowledge the expert system in their final Report to Council, recommending that a equally weighted combination of the two systems be adopted. Their justification was that although they fully supported their own system, they recognised that City officers had experience, skills and knowledge that made their rating systems valid as well.[9] This recommendation was accepted by the

elected officials and the City administration. This clearly reflected the partnership relationship that had developed between all parties, one that acknowledged the limits of the panelists knowledge, but the equal importance of community values, the expertise of the local government professionals, and the benevolence of all parties.

As a final example of the partnering relationship, when participants were asked "What analogy or metaphor would you use to describe your experience?" answers often reflected their acquired competency; "... *like my head exploded into a whole heap of jigsaw pieces and then putting it back piece by piece over the weeks until I have a whole head again ...*" or "*It was like the sun coming out after the clouds. You are in the dark and now it is light.*" or similar metaphors such as emerging from a tunnel or looking beyond a screen on which shadows play. Other responses spoke to the notion of benevolent common goals "... *like a football team; having the team and switching positions around and still going for the win.*" or experience in military units. In these images we find succinct analogies of the relationship of partnership highlighted by the Arnstein Ladder and the associated social learning [25, 32].

How the intervention created conditions for partnership

Deliberative democracy was selected as the intervention to determine if the Arnstein Gap could be reduced because of the fit of its principles and techniques with creating partnerships between panellists and with government. The specific design and process elements of a deliberative democracy initiative were not assessed as to their precise influence on the Gap. However, based on our experience and the literature [26, 57], the following features were likely influential:

- An egalitarian deliberation environment was created through small group, facilitated deliberation between participants with diverse viewpoints, where equal opportunities to speak and listen in respectful discourse were encouraged. An innovative software platform enabled all views, including minority viewpoints to be acknowledged and considered by the room as a whole.
- Priorities were determined through the collective development and application of values-based criteria in a multi-criteria analysis. This reduced the dependence on those with field specific knowledge and shifted discussions from contentious debate to a deeper understanding of others' values and viewpoints.
- Participation was based on representativeness, i.e. the stratified randomly selected participants understood that they were responsible for representing their community. Participants were unencumbered with the need either for 're-

election' or for self-aggrandisement and could act benevolently in the common good. Though intransigent beliefs that could impede competent deliberation were present, they were random rather than systematic.

- The focus on reason-giving communication enabled greater understanding of differences; and the search for common ground rather than a simple vote that invariably creating winners and losers. This generated space for opinions to shift in the light of data and arguments, rather than stagnate or solidify around early attitudes and positions that voting can precipitate.
- The agenda design maximised the conditions for competent decision-making by providing diverse ways to present information and regular Q&A sessions to enhance the whole group's understanding and level the playing field between participants, government officials and other experts.; This was combined with adequate time for reflection to enable careful consideration of recommendations and their justifications as well as evaluation.
- Operational features signalled the importance of the panellists to the CGG. They were provided comfortable, accessible, respectful environments and scheduling that maximised participation levels and continuous attendance. All panellists were paid per diem or stipend contributions; given access to childcare and travel assistance if needed;; as well as official and public recognition of participants' time and effort.

Before moving from this discussion of the importance of deliberative democracy as an intervention we should acknowledge the possibility that the citizens are being unduly influenced by the government they are in relationship with. Some authors have been concerned that the expertise imbalance between government officials and citizens can lead the citizens to unduly defer to the officials and be less critical, than say advocates and civil advocates [58]. In this case the partnership relationship would be a façade with subtle control in the hands of the government because of this uncritical citizen deference. Considering what is now understood about the emotional-rational nature of human cognition and deliberation we do not doubt that such deference is present and participant interviews indicate a respect for government expertise. It is also true the nature of partnership implies a mutual respect by both parties of the competence and benevolence of the other compared with the mutual suspicion of competitive relationships. The question then, for partnership relationships is whether the degree of deference is undue and uncritical. In our case study there doesn't seem to be much evidence of this

excessive dynamic being present. Certainly, the lack of deference by the panellists to rating system of the CCG executive team compared to their own does not support the idea of excessive deference. Further independence can be found in recommendations of the Range and Level of Services Panel [52] which included suggestions for specific service improvements in all of the City's operations. These recommendations fly in the face of explicit instructions from the City executive team not to provide such suggestions and stick to general suggestions of increase, decrease or maintenance. Finally, we have the certification of the IRC in their final report of their daily monitoring of the workshops that the process was fair and unbiased.

In attempting to explain how this real possibility of 'administrative capture' was avoided, we propose several factors that help balance critical review and emotional relationships. At a theoretical level the process was helped by the selection of deliberative democracy which in principle insists on a critical cycle of reflection and justification between the parties. At a process level, the nature of the 100% PB was primarily about the allocation of scarce resources along community value lines rather than the questioning of a narrower policy positions or re-evaluation of social norms that often concern citizen juries. We believe the role of advocates in these more reflexive policy spaces is much important than in this strictly budgetary space. Particularly in this case where a uniform rating system put values-based criteria at the centre of decision making rather than expertise in particular area. Finally, at an operational and design level, critical reflection was encouraged by the built-in diversity of random group which hedged against the possibility of groupthink and deference. It was also helped by the length and iterative nature of the cross examination of City staff, where the initial presentation of information by staff was followed by room level and table level questioning and justification of the staff by participants. This occurred iteratively over several weeks to allow ongoing critical review as panellists knowledge and experience grew.

The Arnstein gap and the role of trust

Over the course of each PB, this deliberative democracy intervention notably reduced the Arnstein gap between participant expectations and experience. This could have implications for increasing trust between citizens and government, especially when we consider the following three observations.

Despite best efforts to create a partnership relationship the current level did not reach ideal participation and the gap still remained. We assume that citizens assessment of the current level of participation is not an isolated process that is disconnected from history and

context. The remaining gap then, may represent a distrust of the intentions and competence of government based on this past history and context. This manifested in interviews with Panellists expressing great hope but no certainty that a partnership relationship would continue. Hence, it's unlikely then that any single initiative could overcome the residual effects of past relationships with a local government [53], nor overwhelm the other demographic and attitudinal factors that also affect trust [38].

We also observe that if citizens were so desirous of a partnership relationship with government, then surely they would likely flock to such deliberative democratic opportunities like these PBs. However, the low recruitment rates from random lotteries to participate in such initiatives show the opposite response [59]. This pattern was also reflected in the response rate to invitations to participate in these PB's, which were below 20%. However, this figure contrasts markedly with the overwhelming satisfaction and willingness of those who did participate to be involved in such events again [51, 52]. We draw on the limited research on low recruitment rates to explain this discrepancy as a combination of personal factors such as availability, competency and self-image, and a distinct aversion to 'politics as usual' [56]. That is, citizens are hungry for a partnership with their governments but are suspicious their time will be wasted with shallower interactions.

Finally, we observe that Fig. 2 shows a relatively large increase in the assessment of current participation after the first workshop in both PB's and a continuous improvement in this assessment until the final workshops. It doesn't appear this was due to improvements in deliberative conditions over the course of the panels, as deliberation indicators were rated consistently highly throughout both PBs, nor is it solely due to the sheer length of time spent as an 8 week and 4 week process both narrowed the Gap roughly the same amount. Based on our observations and specific comments from interviewees, the initial step improvements came from the deliberative democratic design features described above that were implemented from the first workshop. This immediately and concretely demonstrated the partnership nature of the PB's and was followed up with gradual reinforcement of the partnership relationship as the process unfolded and trust developed in participant and staff competence and benevolence..

Trust appeared to be integral in each of the above observations about the effects of participation in government on citizens. Other researchers have also noted a strong linkage between participation, trust, and their correlates of benevolence and competence [25, 60–62]. This leads us to wonder if citizens who are experiencing an unsatisfactory participation relationship with their

government could be reflecting this in the growing distrust of government that has been documented across many western democracies [63]. If this is the case then it would take some time for citizens to accept that a shift to true partnership was authentic -hence the pattern of slow shrinkage of the Arnstein gap observed over the workshops. This caution would tend to persist even after an authentic partnership experience and manifest as an incomplete convergence of the ideal and current ratings at the end of the PBs. The citizens' unwillingness to participate in mini-publics would also be hampered by mistrust - the lack of equality and civility evident in 'politics as usual' would not engender citizens' trust that a participation process purported to be a partnership would actually be so.

This would indeed be ironic; if the gap itself created a negative trust feedback loop that made it more difficult to 'close' the gap. On the one hand, these research results offer hope that such a 'vicious cycle' could be mitigated by exposure to 'politics-as-unusual'. On the other, creating a 'virtuous cycle' of public trust would require consistent, ongoing partnership relationships with government.

Conclusion and future work

The existence of a gap between what is expected and what is received inevitably will lead to dissatisfaction and distrust. This is equally true of a service, a good, or a relationship with government. Such dissatisfaction and distrust undermines the effectiveness of governments in taking actions over the long time scales and of the flexible nature needed for the wicked problem of sustainability [2]. The research carried out in Greater Geraldton, WA, reaffirmed the USA findings that the relationship citizens preferred with government was partnership, but what they experienced was far less empowered; more like being informed or consulted. With this phenomenon likely to be widespread, a citizen participation intervention was devised – two deliberative democracy initiatives in the form of Australian PBs. The results showed that over the duration of each initiative, the gap between public expectations and what they experienced was reduced. Additionally, it provided insights into the nature of citizens' preferred relationship of partnership, including the desire for cooperation with government on the basis of common interests and mutual competence [39].

This research has led to further questions that will maximise the usefulness of these findings including:

- What is the generalisability of these finding beyond this case study and that in the USA? The case study method enabled us to take substantial strides forward in understanding the sort of intervention likely to reduce the Arnstein Gap and we strongly believe these apply in most western nations. However, to be more useful to sustainability practitioners and governments it will need to be generalised through further research in other places at other times.
- What is the effect of other sorts of interventions? This case study applied a particular deliberative democracy method, specifically, two Australian style PBs, with different participants, at different times and on different budgets topics. Both initiatives resulted in closing the Arnstein Gap. Could other interventions that are targeted to local sustainability goals also reduce the Gap and by how much?
- What is the ability of such initiatives to be scaled out more broadly so as to impact the broader population and sustainability issues that don't respect bureaucratic borders? This question of scaling of deliberative democracy has proven to be problematic [10]. Though some progress has been made [47], it has been a slow, iterative process.
- How important is an initiative's process design in creating a sense of partnership especially when compared with other variables of importance, (e.g. the salience of the topic, numbers of participants involved, whether deliberations are face-to-face or online)? This case study confirms the idea that the design of public participation is at least as important as the level of participation [35, 64]. Additional studies are needed to deeply understand design questions like; How much participatory design does it take to close the Gap per gradation of the Arnstein scale? Or what are the cost benefit trade-offs of closing the Gap in a world of limited resources devoted to working toward sustainability?

Finally, this research highlights a further significant line of enquiry. Arnstein suggested in her original article that the partnership level requires power to be taken from the government, and historically, this has been the case [20]. However, this implies an inevitably adversarial approach between the people and their governments that undermines sustained partnering. Her contention has not been supported by our experience nor our understanding. When partnership has been achieved, the sharing of power in the service of the common good has been predicated on trust between both parties to the relationship - citizens and government. This research offers a potential way forward to increase citizens' worryingly low levels of trust in their democratic governments but it will require both parties to extend trust to each other. Governments developing 'business as unusual' partnering relationships with their citizens will have to trust that given resources and the right

conditions citizens can competently act for the common good. When citizens extend that same trust to their governments, then partnership can become 'business as usual'. This could not only reduce the gap between the participation citizens expect and what they experience, but potentially reduce distrust, empowering coordinated action on the sustainability challenges facing all of us.

Endnotes

[1]Later in this article, we examine evidence of participants' understanding of this concept.

[2]We define a mini public as a broadly representative sub group, demographically mirroring an affected population, that engages in structured and facilitated deliberation toward an influential end.

[3]For further detail on this projects' decision-making in the interests of sustainability, see (Hartz-Karp and Weymouth, 2018) and (Weymouth and Hartz-Karp, 2018).

[4]For comparability, we applied a similar version of the ladder used in the US with some minor differences. In that study, the questions were framed around participation in 'transport planning and design processes', and the questions were asked in reverse order. Also, the transport planning participants responded with electronic keypads with the results being immediately fed back to them, as opposed to filling out paper surveys.

[5]We would caution generalising this conclusion to include nations where institutionalised democratic government has collapsed, has become undermined by corruption (Choguill, 1996), or are in dispersed power relationships that would complicate the implicit dichotomy of the ladder (Tritter and McCallum, 2006).

[6]The interviews generally confirmed the patterns seen in the surveys and added explanatory value as hoped. This outcome went against Dryzek's expectation that in-depth interviews and surveys would be contradictory because of the reflective/non-reflective dichotomy of the interview/survey. We believe this was avoided because the interviews were used for explanatory purposes and did not require interviewees to strongly reflect on the participation aspects.

[7]Although not described here, Arnstein data was gathered for the citizen/government relationship preferences for the staff of the CGG. The results closely mirrored those found in the United States including the presence of a 'professional conceit' – a slightly higher estimation of the current level of participation when compared to citizens.

[8]Mullewa is a town 100 km from Geraldton with a population of around 600.

[9]As we have seen above, if the citizens' participatory attitudes were oriented toward full control or alternatively, full deference to the experts, we would expect the Panel to either reject outright the City rating system (a veto equivalent to 'citizen control') or to abandon their own system (deference equivalent to 'Informing').

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Repairing Political Trust for Practical Sustainability

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Abstract: High levels of trust in government are important in addressing complex issues, including the realization of the mainstream sustainability agenda. However, trust in government has been declining for decades across the western world, undermining legitimacy and hampering policy implementation and planning for long-term sustainability. We hypothesize that an important factor in this decline is citizen disappointment with the current types of public participation in governance and that this could be reversed through a change from informing/consulting to a relationship of partnership. Using case studies from Western Australia, the paper investigates whether an intervention targeted at establishing a partnership relationship through mini-public, deliberative, participatory budgeting would improve trust and help the implementation of sustainability. These results show evidence of improvements in trust and provide conceptual and practical tools for government administrations wishing to close the detrimental trust gap that may hamper the implementation of a sustainability agenda.

1. Introduction

Some of the most interesting questions in the study of sustainable development today concern the practical implementation of the sustainability agenda. What is often presumed within implementation, but not directly addressed, particularly by governments, is the important role of political trust in the real-world achievement of sustainability. Low trust levels can be a significant impediment to action on current sustainability challenges, and a source of future uncertainty that could undermine any achievements or endanger further progress.

The goal of this article is to provide guidance for governments wishing to build political trust when making decisions, either for the implementation of sustainability initiatives or within their wider governance. It outlines principles and processes that could potentially also be used to build political trust during the stage of developing broad understanding of the meaning of sustainability, its values, and priorities. We hypothesize that changing the form of citizens' public participation in governance to one of partnerships will improve political trust levels and the likelihood of implementing sustainability initiatives.

This hypothesis is approached with a blend of inductive and abductive reasoning. We explore the phenomena of political trust, sustainability, and participation to test and adjust existing theories and arrive at a plausible explanation rather than a deductively perfect one. This is an accepted approach given the complexity of the field and the difficulty in establishing causation [1,2]. Specifically, we first examine the literature to ascertain the link between public participation and trust and deduce the intervention type most likely to increase trust. We then use mixed-methods case studies to analyze the effectiveness of the intervention predicted to change the relationship between political actors and citizens and increase trust. Accordingly, this article is organized into three parts:

1.　An overview and synthesis of the literature on political trust and its relationship to citizens' participative relationship with government. This gives grounds for proposing an intervention that could test our hypothesis.

2.　An examination of this intervention via two case studies involving 100% participatory budgeting through deliberative democracy initiatives aimed at developing more sustainable budgeting, to see whether the results support our hypothesis.

3.　A discussion of the implications of the results for political trust and sustainability implementation.

Before embarking on the main analysis in the paper, it is appropriate to establish our framing and definition of trust. Although there are diverse definitions and determinants of trust, all agree that this is a perception affected by a multitude of psychological and other factors [3,4]. Though the precise definitions of trust may vary, we concur with the cross-disciplinary consensus of it as: " … *the willingness to be vulnerable under conditions of risk and interdependence* … " [3] with positive expectations of the other party's intentions and behavior. This willingness manifests as: " … *a psychological state or orientation of an actor (the truster) toward a specific partner (the trustee) with whom the actor is in some way interdependent (that is, the truster needs the trustee's cooperation to attain valued outcomes or resources)*" [4]. We also note that trust is by definition distinct and separable from distrust—its mirror image opposite concerning the expectation that there will be negative intentions and behavior toward the trustee.

Of the many influencers of trust [5–7], we focus on two important to balance granularity of understanding, parsimony of variables, and validity of measurement. The first we call "competence," which is a belief in the ability of the trustee to contribute to the outcomes that the truster requires; the second is described as "benevolence," which is an assessment that the motivation of the trustee is to act in the truster interests. Previous research has found a clean separation between variables describing competence or performance and variables that describe benevolence or integrity [7]. The absence of either undermines trust—either party may be well-intentioned but unable to perform or they may be competent but unreliable or lacking integrity. In either case, less than full trust will be present. This dual focus has been used in various fields [5], including education [8], public sector management [6], interpersonal trust [4,9] and software utilization [10]. By integrating these two drivers, we define trust as: A person's judgement that another interdependent person or body has both the benevolence and competence to act in their interest in matters of importance.

We can extend this definition to help understand political trust since it is a subset of generalized social trust [11,12]. Hence, political trust is a citizens' belief in the benevolence or intention of political actors to work in their collective best interests, and the capacity, ability, or competence of those actors to achieve some expected governance outcome. These political actors may be individual politicians or the collective institutions of government depending on the context. The governance outcome may be a level of service provision or meeting a particular norm, such as transparency or representation. This definition is congruent with the general understanding of trust, and mirrors elements of political trust described by other authors [5,13–17]. The value of this definition is independently supported by modelling [18], the analysis of large data sets [19–23], and it helps guide the exploration to follow.

2. Literature Review

Having established a conceptual understanding, we now review the state of political trust in government globally. This is followed by an overview of the link between public participation and trust in search of interventions that can improve such a relationship.

2.1. Do Citizens Trust Government?

There is plentiful data from the last couple of decades on the public's generalized trust in political actors and the evidence is not reassuring. It is generally (although not universally) agreed that over the last 30 years there has been a long-term decline in citizen trust in government in mature democracies [24]. The best data set is from the US which shows that over 44 years, political trust has

dropped from 78% to 44% [25,26] with increasingly apparent negative impacts [27–30]. Lack of political trust has been shown to undermine public engagement, hamper long-term policy, and hinder collective action [31,32]. On the other hand, increases in trust ameliorate these effects and boost support for unpopular government services and initiatives [33–35].

Utilizing our definition of political trust, the sources of the decline can be framed as either a failure of government to meet citizens' competence expectations, or a failure by government to demonstrate it is acting in the best interests of the citizenry, or both. Previous research has provided examples and clarified these trust-degrading factors. Perceived failure to perform to citizens' competency expectations [29] partially drove the public administration performance movement at the turn of the millennium [26,36], but did not interrupt the downward trend in trust [11]. Evidence from government interactions from around the same period also showed that the actual process is at least as important as performance for trust and legitimacy—even when the outcomes of the process go against individual self-interest [27,37,38]. Such an analysis confirmed that the presence of a government process is a strong signal of respect [39] and indicative of how citizen-centric its intentions are at both country and individual levels. The effect of process was found to be larger than that of performance in determining the trustworthiness of public servants and the two factors are not separable, with good processes tending to produce good outcomes and vice-versa [26]. Adding to this, perceived motivations and benevolence are integral to citizens' normative expectations of government [40], and citizens in many countries believe governments are failing to represent their collective will [41,42].

The decline of political trust appears to be widespread and there is good evidence to support its conceptualization as perceptions of political actors' lack of benevolence toward citizens and/or lack of competency in terms of actions and processes. Given the importance of trust to addressing many of the problems that confront development, finding a way to redress its deficit is a priority for governments which have committed to goals, such as sustainability. Although there are genetic, developmental, cognitive, and affective [4,43] factors that influence any person's trust decision, these are all outside the direct influence of governments or policy actors. However, public participation in governance is one of the few ways government can influence political trust and this is examined below.

2.2. Public Participation as a Way of Building Political Trust

In the literature "public participation" describes the involvement of stakeholders in policies, programs, and plans of governments [44]. Since citizens are important stakeholders in this process in a democracy, their involvement—"citizen participation," shapes the nature of the relationship that citizens have with the decisions of their democratic governments. The type of relationship formed depends on the actions that government officials take to engage with citizens, and that citizens take to influence government actions and decisions [44]. Citizen actions may be formalized, e.g., membership of a political party, attending a consultation, or voting, or not, e.g., public demonstrations or contributing to internet discussion forums [45].

There is strong prima facie evidence for the presumption that citizen participation in democracy is important to political trust. Normatively, this type of participation is intrinsic to the nature and performance of democracy [46,47]; so deficits in citizen participation are shortcomings of this ideal. What is more strongly contested is the type and degree of participation that citizens expect and desire from their government. It has been contended that citizens are mostly disinterested or conflicted regarding participation, and only engage through fear of loss and corruption [40,48]. However, more recently the weight of evidence has shifted against this, with data being re-interpreted as frustration with the existing participation modes and general lack of political participation [49–52]. Further empirical work has confirmed the importance of participation for political trust [53], with civic engagement factors having twice higher effect on trust than government performance factors [11,20]. However, results are highly dependent on the participation design and whether the focus is on the collective, individual, outcome, or process [51,54].

Thus, given the link between participation and trust in government, it is important to ask: What type of participation do citizens expect, and are governments living up to this expectation? Recent research in Australia and the US [55,56] using the tool of a modified Arnstein ladder [55,57,58] (see Figure 1) found a difference between the level of participation that citizens would ideally like and that which is being provided to them—known as the Arnstein gap [59].
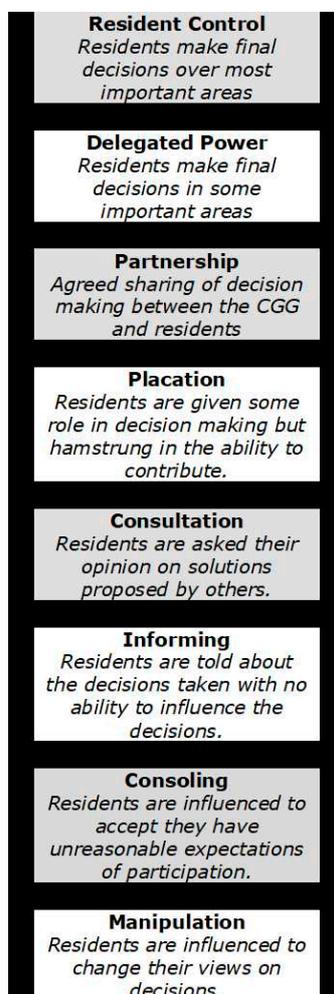
Figure 1. Modified Arnstein ladder referencing City of Greater Geraldton—CGG (with permission [55]).

On average, citizens wish to have a relationship with government characterized as "partnership" on the Arnstein ladder. Instead, they experience "consultation" or "informing," several levels lower on the ladder. This performance/expectation gap was detected in government officials as well as the general public in case studies in the US and Australia [55]. These results overlap with other authors who have found sometimes contradictory preferences for participation in surveys that force dichotomous choices on participants between pure citizen or pure technocratic government control [50,60–62]. Our interpretation is that such framing overly focuses on extremes of direct or representative democracy, which misses the partnership preferred by citizens in most mature democracies. The existing informing/consultation relationship [63] often creates unsatisfactory outcomes, disengagement and barriers to government action [38,64–67], disengagement [51], reduced voting [68], and disgruntled attitudes toward government [69].

Such dissatisfaction and inability to meet citizen expectations degrade trust in government. Limiting the design and planning of solutions to bureaucrats, interest groups, and lobbyists [70] does not always produce holistic results and often creates an impression of government captured

by special interests or manipulating the public to do what is "best" for them [71,72]. Not only do perceptions of competence suffer but also the view of government acting in the public interest or benevolence [6,73]. When failures to solve problems and perceptions of not acting in the public's good repeat over multiple issues and years, affective lack of trust will grow [74] and cognitive biases [75,76] can become self-reinforcing [4,37,77,78].

In addition to having a good understanding of citizens' dissatisfaction with the status quo, there is also evidence that it is possible to meet expectations and close the Arnstein gap. Previous research on the case studies used later in this article analyzed a deliberative democracy intervention [79] aimed specifically at increasing the public participation level to "partnership" [55]. The Arnstein gap between expectation and reality closed by two-thirds in response to this intervention. Furthermore, the qualitative investigation revealed that by selecting "partnership," citizens wished for political equality, where each side respected the other's strengths and skills whilst working toward a common goal. This political equality was realized through the modes of speech but also the sharing of power and decision-making [55]. It also highlighted how citizens and government officials assessed whether they were in "partnership." For the citizens, this centered on whether the government representatives were competent in their domain (in this instance, budgetary allocation in subject areas) and whether they were acting in the best interests of the community. The government officials used two analogous but slightly different criteria. They judged the citizens by their competence as deliberative thinkers (rather than subject matter experts), but also by their community orientation (whether they were representing the wider community) [55]. This latter form of 'benevolence'—the citizens collectively acted for the benefit of the whole community rather than representing their narrow interests—was primarily determined by the officials through examining their decisions and justifications. The competency of deliberating on budgets was assessed through observation of both process and the justifications of the citizen decision-making. These themes of competence and benevolence are strikingly similar to the criteria used to judge trust. In our view, this is no coincidence. The partnership relationship on the Arnstein ladder requires interdependence and mutual trust more than any of the other levels and hence the components of trust occupy such prominence in this relationship. In comparison, at lower levels, citizens are disempowered, so it is not necessary to vest any trust in them; equally at higher levels, citizens hold disproportionate power, and only require the machinery of government to implement their decisions.

So far, we have shown that the literature supports a relationship between public participation and political trust. Now we can specify the details of an intervention that can change the relationship between political actors and citizens to one characterized as "partnership" to effectively improve trust.

2.3. Interventions That Could Improve Trust in Government

Our hypothesis is that a form of intervention exists that can meet citizens' expectations of partnership, and can increase political trust [80]. This is not just based on citizen preferences from surveys, but also two additional lines of evidence. Firstly, there is evidence of a connection between trust and elements of partnership that signal benevolence. Political trust in government has been linked to process elements, such as the openness of government institutions [53], the perception of fairness [15,81], and the use of more deliberative and participative techniques [44,81,82]. As Christensen concludes: "*Citizens who are integrated, involved, and engaged in the political system generally have a significantly higher level of trust in most governmental institutions than people who are less integrated, less involved, and less engaged*" [20]. Secondly, there is solid support for links between trust and elements of partnership that increase perceived competence. Several authors have argued for and demonstrated that a relationship where citizens and government bring their informational perspectives to a complex problem in a more equal manner creates epistemically superior outcomes [83–86]. More specifically, research has shown that using partnership relationships in problems where there is a plurality of conflicting values improves the perceived competency and legitimacy of the outcomes [64,87–89]. These assumptions

hold when there is no path dependency or "lock-in" in the system which is a topic requiring further research [80].

Having established that a partnership intervention is likely to succeed in most common cases, we now move to how it could actually be operationalized in a case study. From our definition of political trust, the relationship would have to be characterized by relative power equality, a focus on performance and outcomes, a necessary and significant contribution by both parties, and commitment to a common goal that is consequential and important. These criteria closely match the characteristics and practice of deliberative democracy. Deliberative democracy focusses on creating egalitarian spaces for deliberation between citizens who represent/mirror the broader population, to resolve issues of importance, with the outcomes influencing policy development or decision-making [90,91]. Deliberation ideally promotes respectful communication, using justification and reflection to work toward possible consensus or common ground. It has a stronger partnership focus than other modes of democratic governance [84,92].

This contrasts with other possible democratic interventions. For example, participative democracy does not necessarily speak to the level of participation or influence, and could be classified as operating at almost all but the lowest levels of the Arnstein ladder [93]. Direct democracy "overshoots" the partnership level by preferring delegation or citizen control which requires much less trust. Representative democracy focuses on the creation of representatives of the citizenry through voting in which citizens notionally have equal power, but only at the time of their vote for the selection of representatives. In modern societies this leads to a series of principal-agent relationships that do not always function as expected [17,94]. The aggregative nature of a single vote every few years rarely connects up to the public policy cycle, diluting equality, and shifting power to economic elites [95], elected members, and non-elected officials [96]. As discussed in the section on participation, Arnstein surveys reinforce the evidence about failure of the current representative system to realize partnership with citizens, instead, rating the government's relationship with them as informing or consulting [55].

While there is evidence of a direct association between trust and deliberation generally [97–99], the strongest arguments for this link focus on a particular implementation of deliberative democracy that embodies the partnership relationship—mini-publics. A mini-public [100] involves a group of citizens who are descriptively representative, i.e., randomly selected from the population, and usually stratified to represent important demographic characteristics, such as gender, age, or socio-economic status. These citizens typically engage in small-group discussions on a topic of importance, with deliberation assisted by an independent facilitator using a range of deliberative technologies [101], and aim to reach collective positions or recommendations [102]. The characteristics of deliberative mini-publics uniquely facilitate partnership. Random selection, facilitation, and the search for common ground tend to prevent group polarization and cognitive errors that undermine competent decision-making [84,99,103,104]. Selecting diverse but non-invested citizens also increases the chance of the group acting benevolently and forming a common will [105,106], rather than leaning towards partisan or narrow ends. Such citizens are less subject to the trust degrading influences in the existing system, and tend to be more moderate and willing to trust than professional politicians [13].

Hence, in terms of finding an effective intervention in the governance cycle to promote partnership and address the declines in political trust, deliberative democracy mini-publics are strong contenders. Such an intervention is applied in the two case studies described below.

3. Methods

In the service of testing our hypothesis, we describe the details of the case studies examined and justify the used intervention. We also outline the methods we used to measure the important variables that allow us to draw conclusions about the validity of the developed hypothesis.

3.1. Case Study Details

The case studies took place in the local government area of the City of Greater Geraldton (referred to as Geraldton) in Western Australia, dominated by the regional center of Geraldton containing around 35,000 people. From 2010 to 2014, a deliberative democracy program was run that included multiple collaborative governance events [107] and culminated in two Australian participatory budgeting initiatives covering 100% of the local government budget [108]. Participatory budgeting (PB) is a democratic process which directly involves citizens in setting part, in our cases all, of a government budget. Over the last three decades, this format has spread from South America, where it originated, to all over the world. It has been adopted predominantly by local governments [109] which have developed distinct regional patterns of execution [110,111]. The most common style of PB has citizen groups developing options for a part of a budget and a wider public voting to prioritize those options. This budget is then spent according to these priorities. The levels of deliberativeness in the process vary depending on the style and region. The "Australian-style" PB typically addresses 100% of a city/region's budget and is executed through the use of deliberative democratic mini-publics. This contrasts with the majority of the PBs to this date which are on the lower end of the deliberative scale and usually only deal with 5% of a larger budget [112,113]. Since the Geraldton PBs rate very highly as deliberative democracy initiatives (see Section 4.1), from this point forward we will refer to these deliberative democracy interventions as the "PBs." This was how the participants understood the process they were selected for and participated in.

Comprehensive details of the Greater Geraldton PBs have been previously documented [108]. In short, two separate mini-publics of between 30 to 40 citizens were drawn by stratified random sampling by independent demographers to ensure descriptive representation of the region's population [114]. The first mini-public was executed in November 2013. Its task was to prioritize over AUD70 million of infrastructure spending for the next decade. Called the "Capital Works Panel," the mini-public panelists met for four and a half consecutive Saturdays to discuss and rate 130 infrastructure projects using a deliberative form of a multi-criteria analysis technique. The second mini-public met for eight consecutive Saturdays to allocate the local government's AUD70 million operational budget for the coming financial year. Called the "Range and Level of Services Panel" or the "Operations PB," panelists made recommendations on whether service areas should be increased, decreased, or held constant, when assessed according to a values-based process [87].

3.2. Case Study Suitability

These two PBs are useful case studies to analyze political trust in the first instance because Australian governments, like many democracies today, are experiencing longitudinal declines in political trust [32]—a worrying trend coupled with surveys showing only about 30% of citizens currently trust the national government [115]. Such lack of trust is specifically focused on most political actors in government with other parts of the executive system, such as law enforcement, not affected to the same degree [116]. Citizens were specifically skeptical of government performance on complex problems, and it seemed to be starting to join a worldwide move toward greater dissatisfaction with the idea of democracy itself [117]. There was also evidence of a belief amongst Australian citizens that governments were not acting in the interests of the greater good [34]. The problem was not confined to the federal level, with only half of the citizens trusting the state government [118] and around the same for local government [119]. In these particular case studies, trust in the local government was probably at a low ebb because of public reaction to large rate rises by the City of Greater Geraldton [120]. This loss of trust was ironically created by attempts by the Greater Geraldton local government to improve the financial aspect of its sustainability, partially in response to incurring infrastructure deficits [121] and funding sustainability services requested by the community [122]. Overall then, the case studies were likely to provide a valid test of a government/citizen trust dynamic that is negative and widely applicable to many democracies.

The case studies are also useful because they allow to test an intervention that authentically embodies citizens' preferred relationship with government—that of partnership, which Australians reaffirm as their ideal [34,55,123]. On the face of it, PBs seem well-suited to achieve a competent power sharing for the common good. Their intrinsic concern with concrete matters of money and finance results in tangible outcomes with real influence. The cyclical nature of budgets also makes them appropriate for the creation of virtuous cycles [124,125], unlike the oft-heard critique of mini-publics, that they are isolated and opportunistic [126,127].

There is some preliminary evidence from US participatory budgeting events that showed statistically significant improvements in political trust between telephone, online, and face-to-face deliberative modes of participation [82,128]. However, many PBs do not realize the full potential for a partnering relationship with political actors through inadequate framing, incomplete deliberation, insufficient power sharing, or lack of repetition. Such "consultational" PBs may leave final allocations to officials, use uninformed opinion-based allocation, or allocate insignificant fractions of expenditure [129]. This can eliminate any trust gains by citizens [130], but also lead to government officials assessing citizens as lacking competence [131].

In the two Greater Geraldton-based Australian PBs, the power sharing was more profound and the deliberation deeper than typical. Not only did these PBs encompass the entirety of the government expenditure in this region, they also started with a pre-commitment to citizen influence on that budget [132]. Although the governing legislation of the City of Greater Geraldton did not allow delegation of budget setting, the elected Council committed to seriously consider all panel recommendations and, where they could not be implemented, publicly explain why and try to implement the spirit of the recommendations.

The deliberation was designed as intrinsic to the PBs and monitored throughout its execution. Again, these case studies present a prima facie valid intervention of partnership.

3.3. Measurement Strategy

To test the proposed intervention requires measurement of its deliberative democratic nature, as well as of any changes in participation and trust. As expected from a three-variable system—the trustor, the trustee, and the distinctive issue in the specific situation [133]—the measurement of the attitude of trust is complex and nuanced. Numerous tools have been applied to this task, each with strengths and weaknesses [23,134]. The intervention in the case studies applied a mixed-methods approach, combining quantitative surveys with direct observation, document analysis, and qualitative interviews [135].

Semi-structured face-to-face interviews were held with 25 of the 63 panelists, five of the 15 elected Members of the Council, and 11 of the staff involved in the planning and execution of the mini-publics. These were conducted in a reflexive and receptive manner to acknowledge the interpretive nature of trust assessments [136–138], transcribed, and analyzed thematically [139] using NVivo 11. In line with our inductive/abductive approach, theming was conducted at a semantic level without explicit influence of pre-existing frames but with an awareness of possible researcher biases [139]. This commonly used thematic analytic method allowed for particular patterns or themes to emerge which are represented in our analysis through specific quotes presented verbatim. Using such word-for-word quotes gives authenticity and explanatory depth of the survey results. The interview material was supplemented by direct observation of participants and staff, daily deliberation debriefings, document analysis, and observation of the Greater Geraldton Council's budget meetings.

Quantitative surveys were administered to the wider community as well as the mini-public participants prior to the beginning of the intervention, at the midpoint of the sitting days, and at the end of the Panel deliberations. The trust surveys implemented were based on the General Social Survey (GSS) and other proxies for trust (such as confidence, honesty, loyalty, and fairness) used previously in analyzing PBs [140] and considered to be valid and accurate [141]. A positively phrased wording was applied to avoid associations with distrust [7]. The recommended long scale, seven-point Likert items

(ranging from 1 = strongly agree to 7 = strongly disagree) were used [142] and produced high internal consistency, with the trust proxy questions from the GSS behaving in the same manner as the headline: "*I believe that, overall, the City of Greater Geraldton is trustworthy*" question. Since it is very difficult and highly contextual to link individual government functions to overall trust in government [18], we have focused on the headline metric for our analysis, as we feel it accurately tells the story. We also use an aggregative term ("City of Greater Geraldton") to measure the participants' overall assessment of the trustworthiness of the political actors associated with the local government.

Participation was measured using the Arnstein ladder scale which was deemed a particularly useful tool in this instance in spite of some valid criticisms that it oversimplifies complex governance and inappropriately uses norms in a quantitative scale [143–145]. Its use of norms was a benefit in this case because it allowed for measurement of subjective citizen values as well as empirical assessments, and pilot testing found it was easily understandable and educative for the average participants compared to more sophisticated tools. The scale did not presuppose a collaborative relationship and it also allowed comparison with previous studies [55]. Since a deliberative democracy intervention was also being tested, a number of indicators for representativeness, influence, and deliberativeness were measured [146]. Issues related to the representativeness of the sample demographics and attitudes were similarly assessed to ensure external validity with the wider population [147].

The following section describes the results from this mixed-methods case studies.

4. Results

Our results are focused on answering three questions to confirm the formulated hypothesis. First, "Did the intervention validly test as a deliberative democratic intervention with the attributes of a partnership relationship?" If this is the case, then: "Did the trust attitudes of the participants improve over the course of the intervention?" and finally: "Was there an association between the increase in public participation in government through the PBs and the improvements in the trust in government?" These issues are discussed in turn.

4.1. Quality of the Interventions

The representativeness criteria necessary for a deliberative democratic intervention were primarily achieved by creating a mini-public representation of Greater Geraldton using its demographic characteristics. This was relatively successful with respondents in both the community surveys and the Panels approximating the demographics of the region in terms of gender and geographical distribution, though with fewer youth than expected based on the Australian census data [132,148].

Demography is often a useful proxy for attitudes but to confirm the generalizability of the sample's results, a direct check on attitudinal representativeness was carried out by comparing the community and Panelist surveys. The Panels' attitudes toward participation in government mirrored those of the community (and were similar to overseas data) [55], with the exception of the members of the mini-publics rating the current relationship higher on the participatory ladder than the general community. This is likely because at the time of the survey they had already accepted their invitation to be part of a highly participatory intervention.

With regard to trust attitudes, since the data was ordinal with independent variables from independent groups and non-normally distributed, a non-parametric Mann–Whitney U-test was conducted for significance. For the Capital Works Panel, it indicated that trust in government by the mini-public (mean rank = 56.38, n = 24) was higher than those of the community (mean rank = 79.71, n = 127), U = 1053, z = −2.45 (corrected for ties), p = 0.014, two-tailed. This effect can be described as "small" (r = 0.19) [149]. For the Operations Panel, trust in government by this mini-public (mean rank = 61.55, n = 29) was also higher than those of the community (mean rank = 82.37, n = 127), U = 1350, z = −2.302 (corrected for ties), p = 0.021, two-tailed. This effect can be described as "small" (r = 0.18). The respective points are illustrated in Figure 2. Note that due to the nature of the Likert scale used, higher ranks indicate less trust and the statistical relationship is negative (thus z has negative

values). In summary, trust attitudes were well represented, but Panelists were slightly more trusting of government than the overall community.
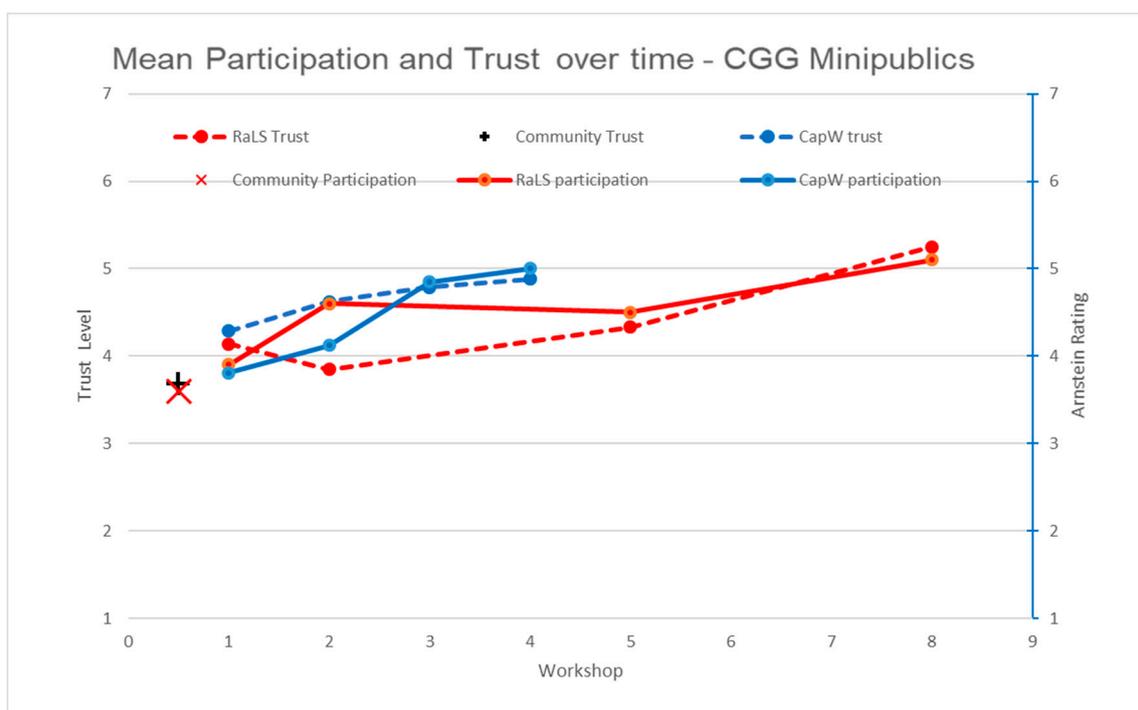
Figure 2. Trust and participation over the course of the City of Greater Geraldton (CGG) participatory budget mini-public.

Assessing the deliberativeness criteria of deliberative democracy revealed that most participants rated highly the quality of their deliberations including neutrality, access to information, ability to hear and be heard, and authenticity of outputs in daily surveys [108]. As is generally typical of PBs [124], the final deliberative democratic characteristic of the amount of influence was high. At the conclusion of both PB Panels, their recommendations were submitted to the elected Council of Greater Geraldton [132,148]. The recommendations were endorsed and formed the budget of the following year as well as the upcoming infrastructure program. Despite the contentious nature of the budgetary process in Geraldton prior to these interventions, there was no public or elected official dissent to these budgets [150].

Considering how highly the PBs scored on the representation, deliberation, and influence metrics, the cases studies clearly constituted a deliberative democratic intervention likely to shift the relationship between citizens and political actors to partnership and increase political trust. The quantitative and qualitative assessment of whether this did actually happen now follows.

4.2. Quantitative Trust Results

Figure 2 shows the mean trust and participation assessments of the Panelists over the two PBs. While the use of mean values to characterize ordinal data can be contested [151], the practice is common in the analysis of trust and this convention is followed here to enable comparisons. However, in our statistical analysis, non-parametric tests were applied to check internal validity. As it is a common practice to graphically represent increasing scale values as representing higher trust, we have inverted the mean trust data in Figure 2 to follow this convention.

Visually, the data indicates that political trust improved over the duration of both PBs. A participant self-assessment of whether trust had increased confirmed this with 78% of all Panelists believing their trust in the City of Greater Geraldton had increased over the PBs. A Friedman two-way ANOVA on

the ordinal, non-normal survey data was applied to statistically verify this impression. For the Capital Works Panel, trust attitudes improved in a statistically significant manner from the first workshop participants attended, to the final workshop, $\chi_F{}^2 = 8.107$ (corrected for ties), df = 3, n–ties = 16, $p = 0.044$. Post–hoc analysis of pairwise comparison with Wilcoxon signed-rank tests was conducted with a Bonferroni correction applied, resulting in a significance level set at $p < 0.0125$. There were statistically significant differences between the first and fourth workshop trust levels (Z = −2.719, $p = 0.007$) and almost between the second and fourth workshops (Z = −2.324, $p = 0.020$); however, not between the other trust pairs, that is between the first and second workshop (Z = −1.493, $p = 0.135$), the first and third workshop (Z = −1.768, $p = 0.077$), the second and third workshop (Z = −0.277, $p = 0.782$), and the third and fourth workshop (Z = −0.847, $p = 0.397$). Following Cohen's rough boundaries for labelling the significance of results to also reflect importance, the effects for these significant figures can be classified as large- or medium-sized [149].

For the Operations Panel, Workshop 1 was a non-mandatory introductory session and in statistical treatments Workshop 2 was considered to be more representative of the totality of attitudes. During this attendance period participant trust attitudes also improved in a statistically significant manner; $\chi_F{}^2 = 19.895$ (corrected for ties), df = 2, n–ties = 24, $p = 0.001$. Post-hoc analysis of pairwise comparison with Wilcoxon signed-rank tests was conducted with a Bonferroni correction applied, resulting in a significance level set at $p < 0.017$. There were statistically significant differences between the fifth and eighth workshop trust levels (Z = −3.206, $p = 0.001$) and between the first and eighth workshops (Z = −3.797, $p = 0.001$), but not between the first and fifth workshop trust levels (Z = −1.274, $p = 0.203$). Following Cohen (2013), the effects for these comparisons were classified as large.

In short, while there were clearly statistically significant increases in trust over both PBs, the patterns of this shift were intriguing and require interpretation. Despite the Operations PB being double the duration of Capital Works PB to cover a more diverse range of budget activities, the improvements in trust and participation were equivalent. This is good evidence that as long as governance actions implement deliberative democratic principles that meet participation expectations, the virtuous trust dynamics are highly likely to function—regardless of duration and scale of complexity. As the first two workshops for both Panels did not result in statistically significant trust improvement, this could mean that individuals were still forming their trust opinions and hence they were in a state of attitudinal flux. Interviews with both participants and Greater Geraldton staff confirmed an initial phase of dislocation before partnerships manifested, particularly to gain competence in an unfamiliar area. As one Capital Works Panelist expressed: "*We did have to get to know each other then get to know what we were doing. As the weeks went by, it got easier to fall into the groove and start doing what we needed to do.*" Another Operations Panelist summarized: "*Some people got it straight away and some didn't … I personally found the majority of people found 'it' around week four.*" The lack of statistically significant change between the third and fourth workshops in the Capital Works Panel was also interesting. It could reflect a stabilization of attitudes toward the end of that PB (where there were four measurements over four workshops) compared with the Operations Panel (where there was a larger spread between measurements, i.e., three over eight workshops).

For the Panelists, Figure 2 clearly shows trust ratings increased as the assessment of the participation level rose toward partnership (Level 6) over the course of the PBs. The broader association between participation and trust in a population can be best established in the community survey and was statistically confirmed for these two independent, ordinal variables using Kendall's Tau-B test. It indicated a strong and significant association between participation and trust in government (Tau = −0.296, $p < 0.001$, $n = 127$) as well as with all other trust proxy questions used.

The danger of a demand effect or Hawthorn effect confounding these results is possible because of the methods used. This effect concerns experimental subjects changing their behavior because of their mindfulness of being observed [152] but we believe it is small for the following reasons:

- As we shall see in Section 5.2, the Greater Geraldton case studies produced large magnitude effects compared to previous studies also with deliberative interventions implying such effects are

not dominant. In addition, other studies have used different types of participation interventions and produced different magnitudes of changes in trust also implying these effects are not significant [128].

- The important results above concern longitudinal changes in trust and participation. Over multiple retesting any powerful novelty or demand effects would be expected to lessen and cause any trends to regress compared to initial measurements—neither of which occurred.
- These effects are often exacerbated when the results of measurements are fed back to participants or researchers react to results, neither of which occurred during the PBs.
- There was no indication in the qualitative interviews that the participants were subject to any experimental demand effects. Observations by the authors also detected no evidence of these effects and no motivation to 'please' the researchers (particularly when completing surveys after the cognitive weariness that comes from hours of deliberation).

Hence, any mechanism that relies on the explanation that the respondents were able to discern the intentions and biases of the researchers for no obvious gain, starts to strain credulity. Parsimony would then dictate we conclude such effects were negligible.

4.3. Qualitative Trust Results

The qualitative analysis helps give weight and depth to the above statistical findings regarding the deliberative democratic process, the nature of partnership but also to confirm our understanding of trust as a combination of competence and benevolence. Interview analysis of both participants and staff reinforced the idea that improvements in trust were linked to a need for partnership [55] and this was seen as superior to the existing regime with its sporadic voting and barriers to participation for non-expert citizens. Most succinctly this was expressed by a citizen as: *"I think they are doing a good job but they can only do that if we all help out."*

The interviews with Panelists revealed this sentiment had its root in aspects of the design and process that encouraged them to act benevolently and produce competent, deliberative outputs (see Table 1). The process also created conditions where citizens and political actors could observe and assess the competence and benevolence of the other party (see Table 2).

Table 1. Examples of citizen perceptions of the importance of competence and benevolence.

Assessments of Competence	Assessments of Benevolence
"It's like running a small country, isn't it? I never thought there was so many departments—I never gave it a thought."—Panel Member	*"With this process, at least you are getting a random selection of people that are getting a say. And they are real people. They are not undercover, guerrilla politicians just trying to change things. It's how it should be."*—Panel Member
	"It's a good way to have a say in what's going on as long as that's always tempered by—you are here as a representative. At those meetings I brought up things that I personally don't agree with. But that being said, I know that a lot of my friends and people at work do. So, I still have my view, but I go: 'These people do have some good points, maybe I will include them in what I am doing'. It's about getting the best outcome for everybody."—Panel Member
"It didn't matter if we had difference of opinion, we listened well to each other, we explained well and then we reached an understanding and agreement and then moved onto the next thing."—Panel Member	
"But I was also being informed as to the whole process—it gave us the information, set us up in a process that allowed us to make decisions based on that."—Panel Member	

Table 2. Examples of government and citizen perceptions of mutual competence and benevolence.

Assessments of Competence	Assessments of Benevolence
" . . . you use processes to get the best out of the community . . . they aren't stupid—common sense prevails . . . there hasn't been a single result that we have said:'Where on earth did that come from?'"—Staff Member *"The mind boggling the amount of money they have to juggle around and the amount of projects they have to deal with . . . . Over the course of the eight weeks my mindset changed from one of questioning:'What the Council was doing?' to 'They're doing a pretty good job under the circumstances.'"*—Panel Member *" . . . we all know that if you send money one way then it doesn't go another. It was really hard to come to fair budget . . . and of course when you are handling other people's money you need to be more accountable."*—Panel Member	*"They owned those values . . . when that clicked into place—how important it was for them to come up with their own values . . . because there was so much passion in the room."*—Staff Member *"The process itself was fantastic. The people at the Council—the Directors—their passion, their interest and their willingness to give it a go sort of makes you feel you are in fairly good hands considering the reputation they have had."*—Panel Member

Conditions of anxiety and competitiveness have been known to spur shallow thinking that is associated with negative trust [76,153], however, the Panelists discussed feeling safe expressing and hearing opinions that dissented from their own (see Table 3). This is an important part of the equality of political speech in deliberation and the participants described deliberative shifts in their—and other people's—opinions.

Table 3. Examples of Panelist perceptions of the value of deliberative process and environments.

"But this is just the reality of living in society and if you get a cross-section of people. I found the small groups really good." *"My mind was definitely opened with people's opinions and I definitely think hearing different stories and from people who are passionate about things makes you go—'Oh that's interesting, I didn't think about that.' So, you become more openminded."* *"There was a few times there where they said 'Oh I didn't think about that.' That makes me happy—at least they were listening. They may not change but at least they have heard the argument for the other side."* *" . . . I said—'hang on a minute here—we are supposed to be making decisions for people out there in the community not just because it is something that we disagree with and we don't like.'"* *"I think it was brilliant the way they did it . . . . I really like the idea of going around to each of the tables and making a decision on each of those. Rather than making a decision on one thing you see the whole thing—which was really good."*

Lastly, from a practical process point of view, the Panelists noted the importance of being officially welcomed and greeted effusively at every meeting, having uncomfortable chairs replaced, and being provided with quality refreshments during the workshops. Relatively unimportant operational specifics of the deliberations, "greeting, seating, and eating," apparently concretely and immediately signaled components of cognitive as well as affective (emotion-based) trust.

5. Discussion

In this discussion we start by commenting on the applicability of the analysis beyond the two Greater Geraldton case studies. Following this, we outline the implications of this data for showing how governments can increase trust in transitioning to sustainability and the importance of trust in government for the implementation of sustainability-based initiatives.

5.1. Generalizable Nature of the Case Studies

These case studies clearly support the hypothesis that a partnership relationship underlies significant trust improvements, a result made more useful by comparison with data from other contexts. The baseline Greater Geraldton trust levels at least seem to be comparable with background trust levels in other western nations. For example, a 2001 Norwegian survey showed a similar mean of local government trust—3.86 (when converted to our seven-point scale) [20]. This is congruent with other research [23], and particularly a question from a survey by the International Social Survey Program

(ISSP) across 33 countries which asked about trust in public servants [26]. Hence, this gives confidence the results from the Greater Geraldton case studies would be applicable outside their context.

5.2. An Analytical Tool for Designing and Explaining the Effect of Participation on Political Trust

The analysis above allows two robust conclusions. First, it overwhelmingly supports our hypothesis that political trust is powerfully influenced by the type and style of participation and changing creates significant improvement. Secondly, it confirms that the framework of understanding trust and participation we laid out at the beginning of this article is useful as a tool for designing interventions to improve trust. The conceptual breakdown of trust into benevolence and competence components in combination with awareness of the citizens' preference for partnership allows us to explain why some types of public participation are more (or less) effective in increasing trust. An example is the improvement in trust seen in the participants over the course of the PBs which represents the effect of moving from informing/consulting to partnership participation. However, the framework we have outlined can also be used to compare and explain differences on a finer scale. The most directly comparable intervention to our case studies is a deliberative PB in Lincoln, Nebraska. Just like in Greater Geraldton, the participants in Lincoln showed statistically significant increases in confidence, trustworthiness and belief in the benevolence and competence of the local government [140]. However, compared with the Lincoln case study, the Geraldton participants experienced a 3–4 times greater increase in trust (after converting different survey scales). On the face of it this result is problematic—how could two apparently similar interventions produce such a varying strength of effect?

There are two likely possibilities, both of which concern the design and implementation of the PBs. The first is that pre-deliberation trust levels of the Lincoln PB participants were already high—1.69 (Lincoln scale adjusted) compared to 3.15 (Operations PB), and 2.71 (Capital Works PB), and very high compared to the Greater Geraldton community (3.76). Given that general political trust in the US is at least as low as in Australia, this high initial level was likely due to a selection bias in the participants of the Lincoln PB. While this bias was a factor in obtaining attitudinal representation in Geraldton [55], it was accentuated in Lincoln, Nebraska, where the online recruitment methods used produced a sample which is more male, white, educated, and liberal than the broader population [140,154,155]. Increasing political trust in a group already certain of the trustworthiness of government would be difficult [156], and hence the possible increase in a more representative group of Nebraskans could actually be greater than that documented and the strength of the effect of partnership can be mismeasured.

However, we believe it is unlikely that this would explain the differences in their entirety. Our dominant explanation for the larger trust gains in Australia is the greater realization of the partnership ideal of participation. We have already highlighted previously that there are degrees of deliberativeness in PBs and modelling has shown that increased opportunities to deliberate with dissent in a fine-grained manner produce an epistemically stronger and more authentic common will [157]. Public engagement case studies have also found a strong relationship between higher levels of design and process management and improvements in government/Panelist outcomes and satisfaction [158]. Bearing this in mind, although there were elements of similarity in the PBs in both countries, there was significantly more deliberation of higher quality in the Greater Geraldton PBs. The Nebraskan Panel sat for a single day and made recommendations based on two rounds of presentations, facilitated small group discussions, and questions and answers plenaries. The Capital Works Panel met for four and a half days and created a multicriteria analysis rating system based on deliberated values with multiple rounds of presentations and interrogation of 130 proposed infrastructure projects. Similarly, the Operational Panel met for eight days, again determining criteria/values to assess service levels for 30 operational areas as well as specific service level suggestions. As more descriptively accurate representative mini-publics compared to Nebraska, the legitimacy of their common will formation was higher. Taken together, this allowed Panelists and government to display greater competence and benevolence in a more equal power-sharing arrangement, than in Lincoln. Overall, we believe

the Greater Geraldton trust results are probably more generalizable to typical populations and the realization of partnership was fuller, as implied by our framework.

5.3. Implications for Sustainability

There is very limited information on whether citizens trust government to specifically be able to address sustainability transition—either as a standalone issue or as a wicked problem [34–36]. The discussion below offers some insights on this topic and elaborates on ways to build trust in government.

5.3.1. The Role of Political Trust for Governments Implementing Sustainability

The results from the Greater Geraldton case studies and understanding of political trust could be useful in the implementation of sustainability. The core of the importance of trust to sustainability lies in the wicked nature of sustainability problems. Governments face a proliferation of such wicked problems [159] with sustainability having all the hallmarks of wickedness [160], such as:

- High consequences of inaction or failure to address the problem;
- No definitive statement of the problem with its parameters defined differently depending on the perspective and continuously revealed, unexpected dimensions of the problem in response to attempted solutions; furthermore, settling on an acceptable statement (and solution) requires value judgements;
- No end-point defined, and even its existence is uncertain; often only improvement or degradation in the status can be determined;
- Limited ability to generalize from other solutions to the existing problem.

These wickedness properties are clearly demonstrated during attempts to implement the common framework of the United Nations Sustainable Development Goals [150,161].

Uncertainty is the defining characteristic of wicked vs. tame problems—not just the limited, controlled uncertainty of tame problems that governments are accustomed to managing, but the nonlinear and epistemic uncertainty. This involves uncertainty in the very definition of the problem, uncertainty of an end-point, and uncertainty in the effect of solutions. In the case of sustainability, this uncertainty is further magnified when the issues entrain entities from across state and organizational borders with their own histories, perspectives, and agendas [162]. Perversely, the only certainties are that mistakes will be made, solutions will be incomplete, disagreements will arise, and learnings will be contingent and narrow. This is the critical role that trust can play and the role it has traditionally played in human relationships, markets, and governance—as a tool for managing uncertainty. Networks with low trust between parties would become paralyzed or act counterproductively when facing the uncertainty of wicked problems [163,164]. With sustainability, this is particularly true, since a collaborative approach is universally recommended [165,166]. When faced with failed solutions, shifting parameters, and value-based conflict over the nature of the problem and possible solutions, trust is required to keep governments and citizens reengaging with the solutions, redefining the problem, committing resources, and contesting these decisions in a constructive manner.

We have previously proposed [150] that deliberative democracy is useful to sustainability practitioners, because it creates governance conditions that are suitable for implementing a sustainability agenda due to its wicked nature. In this article we have shown that deliberative democracy is useful beyond being an effective governance mode as it also produces increases in trust that are necessary for the partnership between citizens and governments required to address sustainability well. This would embody the partnerships for sustainability called for by the UN as one of the Sustainable Development Goals (SDG17) [167], but instead of a global focus they would apply between governments and citizens at national, state, and local levels.

5.3.2. Ways of Building Trust in Government for Implementing Sustainability

Since trust is made up of two components—competence and benevolence, we can now be even more specific regarding what competence and benevolence governments will need to demonstrate to generate the political trust required for implementing and mainstreaming sustainability. The competencies that need to be demonstrated when facing wicked problems, particularly sustainability, have been outlined in our previous work [150] and include the following:

- The recognition of the epistemic challenge of the wicked problem: Identification of the fundamental nature of the problem provides a starting point for the following competencies;
- The ability to make collective value judgements: Since there is divergence on the very nature of the problem and possible solution then a series of value judgements—not just of individuals, but also public ones—must be made collectively [168];
- The ability to use and integrate diverse inputs: An approach consisting only of experts and technocrats will be inadequate to deal with the uncertainty around the diagnosis and resolution of wicked problems as they emerge and evolve [160,169]. A scientific, evidenced-based perspective can lay out a partial "map" of the problem/solution space [170,171] but the value judgements of politics [172] and diverse knowledge domains [173] are best to navigate it, particularly the associated risks, costs, and benefits;
- The use of deliberative communication modes: Deliberative communication involves the public exchange of reasons between persons representing different perspectives on a problem, rational reflection, and justification of possible solutions. Deliberative discussion has greater epistemic strength than alternatives [83] and represents opportunities for either opinion change or at least clarification of areas of agreement/disagreement. This is well-suited to the wicked problem issues of determining stopping points and what constitutes a better or worse solution [172,174,175];
- The distribution of power combined with collaborative action: The shift in nature of wicked problems and its interpretation in different contexts mean that centralized and unshared power is usually too slow or too unnuanced to effectively address sustainability. Opportunities for collaboration around action, learnings, and resources should also be taken advantage of at the discretion of the actors which has led to the UN recommending models of distributed and collaborative power for the SDG [176–178].

Beyond these competencies, demonstrations of benevolence will also need to be developed for maximum trust. Benevolence is often signaled through process design—that this, how the above competencies are conceived, planned, and implemented. Examples of how the orientation toward the good of the whole can be demonstrated in each of the above competencies might be:

- Recognition of the difficulty and nature as the first step can be seen as a sign of honesty and orientation toward addressing a systematic threat to the common good—as opposed to ignoring it or trying to downplay the role of government or its significance;
- The making of collective value judgements in a way that can be seen to legitimately represent some version of the common good maxim, rather than privileging narrow interests, political ideology, or the powerful;
- The inviting and eliciting of diverse inputs for any value judgement in a manner that can be justified as being from a wide-enough group of sources to constitute a collective decision. The process for achieving this should actively value each input to the collective synthesis and transparently represent the contribution of each part of the whole solution;
- The deliberative communication is conducted with equality of speech between participants and based on information and data agreed to be neutral or at least representative of multiple perspectives [88,105]. Although it is impossible to claim that the use of any data is value-neutral, deliberative democratic processes have been successful in creating bodies of agreed information and data sources with high legitimacy. Examples include: the use of interest/advocacy groups

to produce common statements of agreed facts or at least clear statements of their perspectives for consideration (cf. Danish Consensus Conferences [179,180]); allowing mini-publics to call witnesses to present perspectives and discourses (cf. Eastern Australian Citizens' Juries [102]); and creating a mini-public dedicated to producing a consensual statement of facts (cf. Oregon Citizens' Initiative Review [181]). The legitimacy such processes confer on the deliberative discussion provides assurance to partners that the inevitable mistakes and unintended consequences of wicked problems are not intentional or manipulated by any party in this contested space;

- The collaborative sharing of the concentrated power of government can provide the most important signal of the intent to work toward a common good, especially in light of the high stakes implicit in the wicked problem.

5.3.3. Possibilities and Limitations of Trust Building

A government wishing to build trust by following the above recommendations now has a framework and a validated tool—deliberative democratic mini-publics—that together form an effective way to establish political trust with citizens who are involved in their governance. These mini-publics can also be used as trusted proxies for the wider populace that may not be directly involved as well. Research has shown that voters assess them as competent, benevolent, and more trustworthy than state legislatures [17,182,183]. We concur with trust scholars that it is unlikely that a mini-public-based dynamic will entirely close or resolve political trust issues in the current system [17] and that sometimes governments cannot and should not be trusted [184]. In spite of these caveats, mini-publics have proven themselves valuable to building sustainability-supporting trust, and should be combined with other ways to signal benevolence and demonstrate competence, such as control of donations, changes to parliamentary entitlements, independent corruption watchdogs, and media regulation [35].

There are many areas we have left unexplored and can be subjects for future research. For example, one of them is how a trust framework could be created between policy actors who support and who do not support a sustainability agenda. Beyond this, the paradigm-shifting possibility for harnessing the repetitive aspect of the wicked nature of sustainability looms large. The need to revisit sustainability issues as the problem morphs and values are renegotiated, is usually negatively framed as a challenge. However, this may only be true in the current governance systems which approach wicked problems in such a way that constantly degrades trust because of the relationship between government and citizens. If governments' and citizens' assessment of the competency and benevolence of each other improved and was built up each time a wicked problem was iterated (i.e., trust increased), then the repetitive nature of sustainability implementation would be reimagined as a strength. Now each time a problem was deliberated upon, relationships would improve, collective epistemic value would grow, and trust would build. This would constitute a cycle that had changed from vicious to virtuous.

6. Conclusions

While obviously more case studies and further research are needed to corroborate these findings, based on the two Greater Geraldton participatory budgeting interventions we feel confident in asserting the following statements. Political trust is very important for governments trying to successfully implement a sustainability agenda. Changing governments' relationship with their citizens through public participation is an accessible and effective way to increase political trust. The term "public participation" is often used as a catch-all to describe a range of interactions between government and citizens but it is clear this phrase obscures more than it reveals. Creating partnership is critical to achieving the relationship citizens desire and boosting trust. The established theory of deliberative democracy supports a partnership relationship by emphasizing competence and benevolence of the government and the governed. The Greater Geraldton PBs affirm that the actualization of the theory through mini-publics produced such partnerships and generated increases in political trust. This can provide the bond of trust that on the shifting, uncertain, and wicked seas

of sustainability both sides need to be assured of the competency and intentions of the other when navigating these waters.

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Appendix A Quantitative Surveys

Shown below is the Feedback form used to assess deliberativeness of Workshop 8 of the Range and Level of Services PB which is indicative of the forms used for all the PB workshops.

Range and Level of Services Participatory Budgeting
8th Workshop Participant Feedback Form

The information below will **not** be used to identify you personally:

First name initial	Last name initial	Last two numbers in the year you were born (eg. 1970 = 7 and 0)	Last two digits in your phone number
☐	☐	☐ ☐	☐ ☐

		Very well	Quite well	Not very well	Not at all well	Can't say / not sure
1.	How well did the Workshop go for you?	☐1	☐2	☐3	☐4	☐9

2. How useful did you find each of the following aspects of the workshop:

	Very useful	Quite useful	Not very useful	Not at all useful	Can't say
a. The process of reviewing the input from the community workshop last week.	☐1	☐2	☐3	☐4	☐9
b. The feedback from the City on the costings of the draft Recommendations.	☐1	☐2	☐3	☐4	☐9
c. The discussion of how to report the findings (eg. majority/minority/split etc).	☐1	☐2	☐3	☐4	☐9
d. The development of extra recommendations around community involvement and future budgets.	☐1	☐2	☐3	☐4	☐9

3. How well did you feel you were you able to:

	Very well	Quite well	Not very well	Not at all well	Not sure
a. Understand the key issues under discussion	☐1	☐2	☐3	☐4	☐9
b. Learn about the issues / get new information	☐1	☐2	☐3	☐4	☐9
c. Listen to other people's viewpoints	☐1	☐2	☐3	☐4	☐9
d. Express your own views	☐1	☐2	☐3	☐4	☐9
e. Influence the outcomes of the workshop	☐1	☐2	☐3	☐4	☐9

4. How much do you believe that:

	Definitely	Probably	Probably not	Definitely not
a. Your participation was encouraged	☐1	☐2	☐3	☐4
b. Your expertise and experience were utilised	☐1	☐2	☐3	☐4
c. Your contribution was valued by the people running the workshop	☐1	☐2	☐3	☐4
d. Your contribution was valued by the other participants at your table	☐1	☐2	☐3	☐4
e. The workshop process resulted in useful conclusions and outcomes	☐1	☐2	☐3	☐4
f. The outcomes of the workshop are likely to be valued and acted on in the future	☐1	☐2	☐3	☐4

5. To what extent do you feel there was sufficient time made available for:

	Way too much	Too much	About right	Too little	Way too little
a. The process of reviewing the input from the community workshop last week.	☐1	☐2	☐3	☐4	☐9
b. The feedback from the City on the costings of the draft Recommendations.	☐1	☐2	☐3	☐4	☐9
c. The discussion of how to report the findings (eg, majority/minority/split etc).	☐1	☐2	☐3	☐4	☐9
d. The process of developing additional recommendations around community involvement and future budgets.	☐1	☐2	☐3	☐4	☐9

	A lot	Quite a lot	Not much	Not at all	Can't say / not sure
6. To what extent do you think you changed or broadened your views as a result of the workshop discussions?	☐1	☐2	☐3	☐4	☐9

7. To what extent do you feel that the outcomes of the workshop:

	Very well	Quite well	Not very well	Not at all well	Can't say
a. Reflect your own views	☐1	☐2	☐3	☐4	☐9
b. Reflect your table's views	☐1	☐2	☐3	☐4	☐9
c. Reflect common ground of the room	☐1	☐2	☐3	☐4	☐9

	Very valuable	Quite	Not very	Not at all	Can't say / not sure
8. How valuable do you think it is for people to change or broaden their views as a result of a workshop like this?	☐1	☐2	☐3	☐4	☐9

9. To what extent did you feel this was a neutral (unbiased) process?

	Very Well	Quite Well	Not Very Well	Not At All Well	Can't say / not sure
a. Did the facilitator stay neutral (ie, did not try to influence the group with their own views)	☐1	☐2	☐3	☐4	☐9
b. Did the facilitator help everyone participate	☐1	☐2	☐3	☐4	☐9
c. Were the process used fair (ie, not biased in any way)	☐1	☐2	☐3	☐4	☐9
f. Were all the aspects of the topic covered	☐1	☐2	☐3	☐4	☐9

10. Do you have any other comments or suggestions about this workshop?

132

Shown below is the survey used to assess trust and participation attitudes of Workshop 8 of the Range and Level of Services PB which is indicative of the forms used for all the PB workshops.

Range and Level of Services Participatory Budget Participant Survey – Workshop 8

#changesCGGCommunity

information below will **not** be used to identify you personally:

First name initial	Last name initial	Last two numbers in the year you were born (eg, 1970 = 7 and 0)	Last two digits in your phone number
☐	☐	☐ ☐	☐ ☐

- ☐ - -

1. To what extent do you agree or disagree with the following statement:

"I believe that overall, the City of Greater Geraldton is trustworthy."

Strongly Agree	Moderately Agree	Slightly Agree	Neither Disagree or Agree	Slightly Disagree	Moderately Disagree	Strongly Disagree
☐1	☐2	☐3	☐4	☐5	☐6	☐7

2. Please place 1 tick ☑ in the box which best represents your opinion on this sentence:

"Over the course of this Panel my trust in the City of Greater Geraldton has:"

Strongly Decreased	Moderately Decreased	Slightly Decreased	Neither Increased or Decreased	Slightly Increased	Moderately Increased	Strongly Increased
☐1	☐2	☐3	☐4	☐5	☐6	☐7

3. To what extent do you agree or disagree with the following statements about your confidence in the City of Greater Geraldton:

On EACH LINE, please tick ONE box ☑.	Strongly Agree	Agree	Neither Disagree or Agree	Disagree	Strongly Disagree
a. I have a lot of confidence in the City of Greater Geraldton to do the right thing.	☐1	☐2	☐3	☐4	☐5
b. Most City of Greater Geraldton officials treat residents with respect.	☐1	☐2	☐3	☐4	☐5
c. Most City of Greater Geraldton officials are honest.	☐1	☐2	☐3	☐4	☐5
d. The decisions made by the City of Greater Geraldton are neutral and unbiased	☐1	☐2	☐3	☐4	☐5
e. City of Greater Geraldton officials have residents' best interests in mind when they make decisions.	☐1	☐2	☐3	☐4	☐5
f. Most City of Greater Geraldton officials are competent to do their jobs.	☐1	☐2	☐3	☐4	☐5
g. The City of Greater Geraldton usually has good reasons for its decisions, even when those decisions are not popular.	☐1	☐2	☐3	☐4	☐5
h. The City of Greater Geraldton is greatly in need of reform.	☐1	☐2	☐3	☐4	☐5

4. Thinking about your role in your local community to what extent do you agree or disagree with the following statements:

On EACH LINE, please tick ONE box ☑.	Strongly Agree	Agree	Neither Disagree or Agree	Disagree	Strongly Disagree
a. People like me play an important role in the life of my community.	☐1	☐2	☐3	☐4	☐5
b. I often fail to do my part to make my local community a good place to live.	☐1	☐2	☐3	☐4	☐5
c. I take my responsibilities as a citizen seriously.	☐1	☐2	☐3	☐4	☐5

5. Thinking about the Greater Geraldton City Region community in general to what extent do you agree or disagree with the following statements:

On EACH LINE, please tick ONE box ☑.	Strongly Agree	Agree	Neither Disagree or Agree	Disagree	Strongly Disagree
a. People in Geraldton always do their part to make their local community a better place to live	☐₁	☐₂	☐₃	☐₄	☐₅
b. Few people in Geraldton consider voting in local government elections an important civic duty	☐₁	☐₂	☐₃	☐₄	☐₅
c. When asked to do their part, most people in Geraldton will make personal sacrifices if it benefits the community	☐₁	☐₂	☐₃	☐₄	☐₅

6. Thinking about how local government makes decisions for the Greater Geraldton City Region to what extent do you agree or disagree with the following statements:

On EACH LINE, please tick ONE box ☑.	Strongly Agree	Agree	Neither Disagree or Agree	Disagree	Strongly Disagree
a. People like me don't have any say about what the local government does.	☐₁	☐₂	☐₃	☐₄	☐₅
b. There are many legal ways for citizens to successfully influence what local government does.	☐₁	☐₂	☐₃	☐₄	☐₅
c. Local government doesn't care much about what a person like me thinks.	☐₁	☐₂	☐₃	☐₄	☐₅
c. The vote of a person like me in local government elections doesn't make a difference in influencing local decisions.	☐₁	☐₂	☐₃	☐₄	☐₅

7. Thinking about yourself to what extent do you agree or disagree with the following statements:

On EACH LINE, please tick ONE box ☑.	Strongly Agree	Agree	Neither Disagree or Agree	Disagree	Strongly Disagree
a. I consider myself well qualified to participate in politics and community affairs	☐₁	☐₂	☐₃	☐₄	☐₅
b. I have a pretty good understanding of the important issues facing the Greater Geraldton City Region.	☐₁	☐₂	☐₃	☐₄	☐₅
c. I think I am better informed about politics and government than most people.	☐₁	☐₂	☐₃	☐₄	☐₅

8. Do you intend to vote in the next LOCAL GOVERNMENT election?

Almost certainly	Probably	Unsure	Probably Not	Almost Certainly Not
☐₁	☐₂	☐₃	☐₄	☐₆

Do you have any other comments you would like to make about the topics in this survey?

134

People from all around the world have been asked the following questions and we are interested in looking at where the residents of the City of Greater Geraldton fit in with international research in this area.

Please indicate with ONE tick ☑ on the following scale your answer to the following question:

1

CURRENTLY,
How do you feel the CGG treats its residents on this scale?

ONE tick ☑ on this side

☐	8	**Resident Control** — Residents make final decisions over most important areas
☐	7	**Delegated Power** — Residents make final decisions in some important areas
☐	6	**Partnership** — Agreed sharing of decision making between the CGG and residents
☐	5	**Placation** — Residents are given some role in decision making but hamstrung in the ability to contribute.
☐	4	**Consultation** — Residents are asked their opinion on solutions proposed by others.
☐	3	**Informing** — Residents are told about the decisions taken with no ability to influence the decisions.
☐	2	**Consoling** — Residents are influenced to accept they have unreasonable expectations of participation.
☐	1	**Manipulation** — Residents are influenced to change their views on decisions.

PLEASE TURN OVER

135

2

IDEALLY,
How would you like the CGG to treat its residents on this scale?

ONE tick ☑ on this side

☐	8	**Resident Control** — Residents make final decisions over most important areas
☐	7	**Delegated Power** — Residents make final decisions in some important areas
☐	6	**Partnership** — Agreed sharing of decision making between the CGG and residents
☐	5	**Placation** — Residents are given some role in decision making but hamstrung in the ability to contribute.
☐	4	**Consultation** — Residents are asked their opinion on solutions proposed by others.
☐	3	**Informing** — Residents are told about the decisions taken with no ability to influence the decisions.
☐	2	**Consoling** — Residents are influenced to accept they have unreasonable expectations of participation.
☐	1	**Manipulation** — Residents are influenced to change their views on decisions.

136

Shown below is the letter and survey sent to members of the CGG community to probe trust and participation attitudes.

Curtin University

Dear Sir/Madam,

My name is Rob Weymouth and I am currently doing a research study on Greater Geraldton for my PhD degree at Curtin University of Technology.

My research interest is in the level of trust that we have in government – particularly our local governments. For my project in particular I am investigating the attitudes within the community around some of the projects and processes that are happening in your local government.

I would like to ask you various questions about your attitudes toward trust in government, your community and the level of participation in decisions you think is important. Attached to this letter is a 4 page survey on these which should take approximately 10 minutes to complete.

Your involvement in this research is entirely voluntary and the survey is anonymous - no personal information will be obtained other than the general demographics. The results from the survey will be presented only as general conclusions and will be used only for the purposes of this particular research. In adherence to University policy, the questionnaires will be kept in a locked cabinet for seven years and after that they will be destroyed.

If you would like further information about the study, please feel free to contact me on 040 892 4422 or by email: robert.weymouth@postgrad.curtin.edu.au Alternatively, you can contact my supervisor Prof. Janette Hartz-Karp on +61 8 9266 9030 or J.Hartz-Karp@curtin.edu.au.

Once you have finished the survey please place and in the stamped, self addressed envelope provided and it will be posted back to me free of charge.

Thank you very much for your involvement in this research, your participation is greatly appreciated!

Rob Weymouth
PhD Student
Curtin University Sustainability Policy Institute

Community Survey

Curtin University

The City of Greater Geraldton is trying new and innovative events and processes. Sometimes it might be useful to see if individual views have changed over time. To help, please fill out the following table – we cannot (and won't try to) use it to identify you, but it means we can compare people's views now and again in the future.

First name initial	Last name initial	Last two numbers in the year you were born (eg. 1970 = 7 and 0)	Last two digits in your phone number
☐	☐	☐ ☐	☐ ☐

----

1. To what extent do you agree or disagree with the following statement:
   I believe that overall, the City of Greater Geraldton is trustworthy

Strongly Agree	Moderately Agree	Slightly Agree	Neither Disagree or Agree	Slightly Disagree	Moderately Disagree	Strongly Disagree
☐1	☐2	☐3	☐4	☐5	☐6	☐7

2. To what extent do you agree or disagree with the following statements about your confidence in the City of Greater Geraldton:

On EACH LINE, please tick ONE box ☑.	Strongly Agree	Agree	Neither Disagree or Agree	Disagree	Strongly Disagree
a. I have a lot of confidence in the City of Greater Geraldton to do the right thing.	☐1	☐2	☐3	☐4	☐5
b. Most City of Greater Geraldton officials treat residents with respect.	☐1	☐2	☐3	☐4	☐5
c. Most City of Greater Geraldton officials are honest.	☐1	☐2	☐3	☐4	☐5
d. The decisions made by the City of Greater Geraldton are neutral and unbiased	☐1	☐2	☐3	☐4	☐5
e. City of Greater Geraldton officials have residents' best interests in mind when they make decisions.	☐1	☐2	☐3	☐4	☐5
f. Most City of Greater Geraldton officials are competent to do their jobs.	☐1	☐2	☐3	☐4	☐5
g. The City of Greater Geraldton usually has good reasons for its decisions, even when those decisions are not popular.	☐1	☐2	☐3	☐4	☐5
h. The City of Greater Geraldton is greatly in need of reform.	☐1	☐2	☐3	☐4	☐5

3. Thinking about <u>your role in your local community</u> to what extent do you agree or disagree with the following statements:

On EACH LINE, please tick ONE box ☑.	Strongly Agree	Agree	Neither Disagree or Agree	Disagree	Strongly Disagree
a. People like me play an important role in the life of my community.	☐1	☐2	☐3	☐4	☐5
b. I often fail to do my part to make my local community a good place to live.	☐1	☐2	☐3	☐4	☐5
c. I take my responsibilities as a citizen seriously.	☐1	☐2	☐3	☐4	☐5

138

4. Thinking about the Greater Geraldton City Region <u>community in general</u> to what extent do you agree or disagree with the following statements:

On EACH LINE, please tick ONE box ☑.	Strongly Agree	Agree	Neither Disagree or Agree	Disagree	Strongly Disagree
a. People in Geraldton always do their part to make their local community a better place to live.	☐₁	☐₂	☐₃	☐₄	☐₅
b. Few people in Geraldton consider voting in local government elections an important civic duty.	☐₁	☐₂	☐₃	☐₄	☐₅
c. When asked to do their part, most people in Geraldton will make personal sacrifices if it benefits the community.	☐₁	☐₂	☐₃	☐₄	☐₅

5. Thinking about <u>how local government makes decisions</u> for the Greater Geraldton City Region to what extent do you agree or disagree with the following statements:

On EACH LINE, please tick ONE box ☑.	Strongly Agree	Agree	Neither Disagree or Agree	Disagree	Strongly Disagree
a. People like me don't have any say about what the local government does.	☐₁	☐₂	☐₃	☐₄	☐₅
b. There are many legal ways for citizens to successfully influence what local government does.	☐₁	☐₂	☐₃	☐₄	☐₅
c. Local government doesn't care much about what a person like me thinks.	☐₁	☐₂	☐₃	☐₄	☐₅
d. The vote of a person like me in local government elections doesn't make a difference in influencing local decisions.	☐₁	☐₂	☐₃	☐₄	☐₅

6. Thinking about <u>yourself</u> to what extent do you agree or disagree with the following:

On EACH LINE, please tick ONE box ☑.	Strongly Agree	Agree	Neither Disagree or Agree	Disagree	Strongly Disagree
a. I consider myself well qualified to participate in politics and community affairs.	☐₁	☐₂	☐₃	☐₄	☐₅
b. I have a pretty good understanding of the important issues facing the Greater Geraldton City Region.	☐₁	☐₂	☐₃	☐₄	☐₅
c. I think I am better informed about politics and government than most people.	☐₁	☐₂	☐₃	☐₄	☐₅

7. Thinking about <u>conversations that you have with others</u> in the Greater Geraldton City Region, about how frequently do you:

On EACH LINE, please tick ONE box ☑.	At least once a week	At least once a fortnight	At least once a month	Several times a year	Less Regularly
a. Seek out political discussions.	☐₁	☐₂	☐₃	☐₄	☐₅
b. Discuss politics with people who disagree with you.	☐₁	☐₂	☐₃	☐₄	☐₅
c. Justify your political views to others	☐₁	☐₂	☐₃	☐₄	☐₅
d. Listen to the justification of others who disagree with you	☐₁	☐₂	☐₃	☐₄	☐₅
e. Allow other people to challenge your beliefs	☐₁	☐₂	☐₃	☐₄	☐₅

139

8. Thinking about your _interaction in your community_ please answer the following questions:

On EACH LINE, please tick ONE box ✓ .

		Yes	No
a.	Are you a member of a sport group, community group or organisation?	☐4	☐5
b.	Have you ever submitted a letter to an editor, a comment to an online forum or called a radio talk host about a political matter?	☐4	☐5
c.	Have ever been a member of a political party or an advocacy or activist organisation? This may include industry or professional association, environment protection group, social welfare non-profit, rights lobby or anti-policy protest.	☐4	☐5

9. Thinking about any volunteer work you may do please answer the following statements:

	Yes	No
In the last twelve months did you spend any time doing voluntary work through an organisation or group?	☐4	☐5

If you answered "yes" to the previous question please indicate in the box below <u>how much time</u> in the last 12 months you volunteered for and the <u>method and manner</u> in which you volunteered (which organisation, what sort of work is performed etc)??

Now we just need some information about who completed the survey. This information is critical to the statistical processes - without it your answers cannot be used.

10. Which GENDER are you?

Male	Female
☐1	☐2

11. Are you of Aboriginal or Torres Strait Islander origin?

Yes	No
☐1	☐2

12. How long have you lived in Greater Geraldton?

Less than a year	1 – 3 years	4 – 10 years	11 – 20 years	21 + years
☐1	☐2	☐3	☐4	☐5

13. In which suburb do you live?   Postcode ☐ ☐ ☐ ☐

14. Have you ever been to a City of Greater Geraldton community engagement event?
If so please indicate which one(s) in the box below:

Community Champions	☐1	Alliance Governance Group	☐2
Community Survey	☐3	Community Forum (August 2010)	☐4
World Cafés	☐5	Conversation Cafes	☐6
IBM Challenge Community Panel	☐7	Designing Our City (Enquiry by Design)	☐8
Sunset Beach Neighbourhood Planning	☐9	Rangeway, Utakarra and Karloo Neighbourhood Planning	☐10
First Participatory Budget Panel - "10 year Capital Works"	☐11	Second Participatory Budget Panel - "Range and Level of Service"	☐12
Other: (please list)			☐13

These last questions concern your opinion about a scale, represented here as a ladder from least involvement (bottom of the ladder) to most involvement (top of the ladder).

Please indicate with ONE tick ☑ on the following scale your answer to TWO questions:

Qu.1:

CURRENTLY, How do you feel the City of Greater Geraldton treats its residents?

ONE tick ☑ on this side

⬇

☐ 8	**Resident Control** Residents make final decisions over most important areas
☐ 7	**Delegated Power** Residents make final decisions in some important areas
☐ 6	**Partnership** Agreed sharing of decision making between the CGG and residents
☐ 5	**Placation** Residents are given some role in decision making but hamstrung in the ability to contribute.
☐ 4	**Consultation** Residents are asked their opinion on solutions proposed by others.
☐ 3	**Informing** Residents are told about the decisions taken with no ability to influence the decisions.
☐ 2	**Consoling** Residents are influenced to accept they have unreasonable expectations of participation.
☐ 1	**Manipulation** Residents are influenced to change their views on decisions.

Qu.2:

IDEALLY, How would you like the City of Greater Geraldton to treat its residents?

ONE tick ☑ on this side

⬇

☐ 8	**Resident Control** Residents make final decisions over most important areas
☐ 7	**Delegated Power** Residents make final decisions in some important areas
☐ 6	**Partnership** Agreed sharing of decision making between the CGG and residents
☐ 5	**Placation** Residents are given some role in decision making but hamstrung in the ability to contribute.
☐ 4	**Consultation** Residents are asked their opinion on solutions proposed by others.
☐ 3	**Informing** Residents are told about the decisions taken with no ability to influence the decisions.
☐ 2	**Consoling** Residents are influenced to accept they have unreasonable expectations of participation.
☐ 1	**Manipulation** Residents are influenced to change their views on decisions.

141

Appendix B Qualitative Interview Questions, Consent and Information forms

Attached below is the information and consent form required for all interviewees.

CONSENT AGREEMENT - INFORMATION SHEET

Research Title:
Changes in perceptions of mutual trust, competency and civic engagement between local government and citizens around participatory budgeting processes.

Researcher: Robert Weymouth

Investigator: Professor Janette Hartz-Karp

I am a PhD candidate at Curtin University undertaking research on the socio-cultural influences on local government in WA around influential public deliberation. Through case studies, such as this Participatory Budgeting Project, I'm investigating whether participatory budgeting will influence the participants and the members of the local government. The research is funded by a grant from the Australian Research Council and has been given ethics approval by the Curtin University Human Research Ethics Committee (Approval Number RD-30-10).

The interviews will be approximately 30 minutes each in duration and recorded with a digital voice recorder. After the interviews I can send you a draft of the Transcript of Interview for you to review and amend if you would like to. Please note that you will not be personally identified in any reporting of information gathered during the interview and a list of interviewees will not be published or made publicly available.

You may at any time withdraw your consent to participate in this study and your participation is entirely voluntary. Could you please complete the details below if you are willing to give your consent.

If you have any questions about this project please feel free to contact me on 040 892 4422 or by email robert.weymouth@postgrad.curtin.edu.au at any time.   You could also contact my supervisor, Professor Janette Hartz-Karp on 9266 9035; or by email J.Hartz-Karp@curtin.edu.au. My supervisor and I are happy to discuss with you any concerns you may have on how this study will be conducted. If you wish to talk to an independent person about your concerns or if you have a complaint, you can contact Curtin University's Human Research Ethics Committee on 9266 2784 or hrec@curtin.edu.au or in writing C/- Office of Research and Development, Curtin University of Technology, GPO Box U1987, Perth WA 6845.

CONSENT AGREEMENT – AUTHORITY

Research Title:
Changes in perceptions of mutual trust, competency and civic engagement between local government and citizens around participatory budgeting processes.

Researcher: → Robert Weymouth

Investigator: → Professor Janette Hartz-Karp

I (the interviewee) have read the information sheet for this research and understand the purpose of the study. I understand that I will be personally identified but the results of the research may be published. Any questions I have asked have been answered to my satisfaction. I agree to be interviewed by Rob Weymouth, however, I know that my participation is entirely voluntary and that I may change my mind and withdraw my consent at any time prior to the research being published.

I agree that any information I provide for this study may be published by the researcher.

My unique identifier is:

First initial	Last initial	Last two numbers in the year you were born (eg. 1970 = 7 and 0)	Last two digits in your phone number

I would like to review the transcript of this discussion. → Yes ☐ → No ☐

Signed by Participant:

Date: ◌◌◌◌◌◌◌◌◌

Signed by Investigator:

Date: ⋯⋯⋯⋯⋯2014

Researchers Name: Robert Weymouth

144

Below is suggested questions to be used in interviews with citizen participants in the PB's.

Interviews of PB Panel Participants

Introduction

Hello, I'm Rob Weymouth from Curtin University as part of the research team for the Participatory Budget you were involved in. Thank you for agreeing to be interviewed after the Participatory Budget. Because we are world pioneers of using randomly sampled Participatory Budgeting Community Panels, it is important that we document this initiative, and assess its effectiveness from different perspectives, and in particular, those of the participants

To make sure we are able to take account of all your views, I would like to record our interview. Let me assure you that you will not be personally identified in any research that we do on the interviews and if you like, we could send you a transcript and you can add to or take out statements that have been recorded. Also you can ask for me to pause the recording at any stage. If you are okay with this, I have a form for you to sign which gives me permission to record and use the information from our interview.

Questions

1/ How would you describe your overall experience of the Community Panel?

2/ What was the most significant moment for you during your time on the Panel? (please describe? Why was it significant?

[Follow-up questions if needed] - when you were talking in small groups, can you relay any instances where you felt

> things really clicked for you (what do think happened?);
>
> the conversations and groups dynamics were particularly successful and why;
>
> the conversations and group dynamics were particularly challenging and why

3/ What are your views on whether government in general is trustworthy? Is this how you have always felt? [If so/not so can you say why/why not]

4/ What are your views on whether the City of Greater Geraldton is trustworthy? Is this how you have always felt? [If so/not so can you say why/why not]

5/ What do you think is the most important thing that the City of Greater Geraldton could do to increase trust in it by the community?

6/ In talking with others, how do you think they perceive the City of Greater Geraldton staff? Does this reflect your views? [Why/ Why not?]

> Follow-on questions if needed

- Is the general view that the CGG staff are competent? Does this reflect your views? [Why/ Why not?]
- Is the general view that the CGG staff act in the best interests of the Community? Does this reflect your views? [Why/ Why not?]

7/ Having gone through the experience of being on the Panel do you think it has made any difference to how you are in the Geraldton community (your sense of being part of the Geraldton community)?

Follow-on questions if needed - has it made any difference to:

- Your understanding of issues relating to Greater Geraldton? (for example)
- Whether you participate more readily in conversations about City issues? (eg)
- Whether you are more likely to participate in other civic issues in the community? (eg)

8a/ What do you think an ideal community spirit would be like?

b/ In what ways do you think that Geraldton is similar or different from this ideal?

c/ In what ways do you see yourself as similar or different to others in your view on this?

9a/What do you think an ideal local government would be like?

b/ In what ways do you think that the City of Greater Geraldton is similar or different from this ideal?

c/ In what ways do you see yourself as similar or different to others in your view on this?

10/ Now I would like to ask you some short questions to bring our time together to a close:

a/ Do you think you will vote at the next local government election? Have you voted in the past? Often?

b/ Would you participate in a process like this again?

c/ If you had to describe your experience with an image or analogy or metaphor what would it be? [elaborate as necessary]

Thank you for your time.

Below is suggested questions to be used in interviews with government officials who participated in the PB's.

Interviews of City Managers

Introduction

Hello, I'm Rob Weymouth from Curtin University as part of the research team for the Participatory Budget you were involved in. Thank you for agreeing to be interviewed after the Participatory Budget. Because we are world pioneers of using randomly sampled Participatory Budgeting Community Panels, it is important that we document this initiative, and assess its effectiveness from different perspectives, and in particular, those staff who participated.

To make sure we are able to take account of all your views, I would like to record our interview. Let me assure you that you will not be personally identified in any research that we do on the interviews and if you like, we could send you a transcript and you can add to or take out statements that have been recorded. Also you can ask for me to pause the recording at any stage. If you are okay with this, I have a form for you to sign which gives me permission to record and use the information from our interview.

Questions

1. Which Panel(s) were you involved in and what was your particular role in the Panel process? How would you describe your overall experience of the Community Panels?

2. What was the most significant moment for you during your time interacting with the Panel? (please describe? Why was it significant?
   [Follow-up questions if needed] - if you were involved in small group discussions, can you relay any instances where you observed
       things really clicking for others (what do think happened?);
       the conversations and groups dynamics were particularly successful and why;
       the conversations and group dynamics were particularly challenging and why

3. Did you feel the participants could understand the issues under discussion? Did you feel that the participants had access to the unbiased information that they needed to make good decisions? Do you feel that they had sufficient time to come to good decisions?

4. What are your beliefs regarding the amount of involvement residents should have in decision making (fill out and discuss Arnstein ladder as talking point)? Have you always felt like this? [Why/Why not?]

5. What would you say is the City's view toward engagement with the Community?
   [Follow up]
   Is there different views in different parts of the organisation?
   Do they consider it
   (a) a waste of time and resources and a distraction from core business?
   (b) likely to be driven by procedure and requirements?
   (c) likely to be selectively focussed on like minded people,
   (d) just a natural part of the way of doing business.

   In what ways do you see yourself as similar or different to others in your view on this?

6. What are your views on whether the community believes the City of Greater Geraldton is trustworthy? Is this how you have always felt? [If so/not so can you say why/why not]

7. What do you think is the most important thing that the City of Greater Geraldton could do to increase trust in it by the community?

8. How do you think the community perceive the City of Greater Geraldton staff? [Why/ Why not?]
   Follow-on questions if needed
   Is the general view that the CGG staff are competent? [Why/ Why not?]
   Is the general view that the CGG staff act in the best interests of the Community? [Why/ Why not?]

9. Having gone through the experience of being on the Panel do you think it has made any difference to how much you would trust the community to make important decisions about local government?
   Follow-on questions if needed
   Under what circumstances would you trust the community?
   Is the general view in the City that most community members are competent to make decisions in local government matters? [Why/ Why not?/Who does this view sit with?]
   Is the general view in the City that most community members would make decisions in the best interests of the whole Community? [Why/ Why not?]

10. Having gone through the experience of being on the Panel do you think it has made any difference to how you are in the Geraldton community (your sense of being part of the Geraldton community)?- eg has it made any difference to how you participate in conversations about City issues?

11. What do you think an ideal community spirit would be like?
    In what ways do you think that Geraldton is similar or different from this ideal?
    In what ways do you see yourself as similar or different to others in your view on this?

12. What do you think an ideal local government would be like?
    In what ways do you think that the City of Greater Geraldton is similar or different from this ideal?
    In what ways do you see yourself as similar or different to others in your view on this?

Now I would like to ask you some short questions to bring our time together to a close:

13. I'm interested in your views of the final Panel recommendations:

    i/ To what extent do you think the final recommendations reflected the consensus of the Panel?

    ii/ In what ways do think the Panel has or has not addressed the Geraldton's budgetary problems and opportunities? Were there any surprises? (e.g. issues left out or added)?

    iii/ The City has just formed its budget for the new financial year. What has been your role in contributing to this process?

    iv/ How has the budget process been different this year in comparison to other years? What influence do you think the recommendations had on the formation of the budget this year?

    v/ In terms of implementation – what's your sense of
       a/ whether the key recommendations will be implemented?
       b/ whether the Panel's key efficiency and effectiveness recommendations will be seriously considered and possibly implemented?

14. Do you think the City will do PBs in the future? If so, what are your hopes and your concerns about this? Would you participate in a process like this again?

15. If you had to describe your experience with an image or analogy or metaphor what would it be? [elaborate as necessary]

Appendix C   Copyright release for published material

<u>**Publication I**</u>

"Chapter 7: Deliberative democracy – democratic renewal capable of addressing sustainability" by Janette Hartz-Karp and Robert Weymouth in 'Methods for Sustainability Research'.

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Position: Editor at Edward Elgar Publishing Ltd

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Please return signed form to Rob Weymouth, Curtin University Sustainability Policy Institute, Curtin University Western Australia.

<u>**Publication II**</u>

"Australian Participatory Budgeting" by Janette Hartz-Karp and Robert Weymouth in 'Hope for Democracy'

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Name: Nelson Dias

Position: Coordinator and publisher of the book

Date:, 30 / August/ 2018

Publication III

Hi Rob – good luck with the PhD. The Journal is no longer being published so there will be no problem with copyright. Do you still want me to fill out the form?

Regards

Jeremy

From: Robert Michael Weymouth [mailto:robert.weymouth@postgrad.curtin.edu.au]
Sent: Thursday, 6 October 2016 6:00 PM
To: Jeremy Buultjens <Jeremy.BUULTJENS@scu.edu.au>
Subject: requests for permission of use

Hi Jeremy,
       My name is Rob Weymouth and I am writing to you as managing editor of the Journal of Economic and Social Policy.
In 2015 my co-author and I published an article with your journal in 2015 ("*Deliberative Collaborative Governance as a Democratic Reform to Resolve Wicked Problems and Improve Trust*") and we would like permission to use an diagram that was in that article in a forthcoming article on a different but related topic. Naturally we would attribute the diagram to its original publishing location in your journal in the forthcoming article. We hope this is acceptable to you.

Additionally, I am currently undertaking a thesis by publication for my PhD and intend to use this publication in my thesis. My university requires that I seek permission from your journal to republish the paper (with attribution) in my thesis. To this end could you please fill out the permission form attached. Please forgive the overly formal tone of the attached letter and permission form – it is according to a proforma.

Regards,

Rob Weymouth
PhD Candidate | Curtin University Sustainability Policy Institute

Publication IV and VI

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Best regards,
Sabrina Huang
Assistant Editor
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Publication V

"Participation in planning and governance: Closing the gap between satisfaction and expectation."
by Janette Hartz-Karp and Robert Weymouth in 'Sustainable Earth.'

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Signed:

Name: Chris McEntee

Position: Senior Journal Development Editor

Date: 27 March 2019

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