The presentation of the attached user guide aims to address the conference themes by considering the challenge posed by Stiglitz (2010) to the Australian Productivity Commission, namely to foster an understanding that the wellbeing of humanity is dependent on the global commons. The focus of the research is on addressing social, economic and environmental factors that help to mitigate and adapt to climate change. Joseph Stiglitz, past president of the World Bank has stressed (at the invitation of the Australian Productivity Commission) that the bottom line is wellbeing – this requires building stocks for the future (Stiglitz, et al, 2010). Wellbeing is crucial to re-designing economics. It explores the potential for participatory democracy and governance to a) monitor, b) match services to need and c) mitigate risk and adapt to climate change. This is vital for ethics and stewardship on behalf of future generations.

According to Barbara Dickens from the Urban Renewal Department:

Pathways to Wellbeing software offer a unique avenue for ongoing, long-term engagement between local residents and local government. It facilitates considering the consequences of our choices for ourselves, others and the environment. These considerations are used to shape evidenced-based policy to inform decision making at the local level. By asking residents to make choices from Pathways to Wellbeing scenarios, participants are invited to make changes in their lives. It aims to help them think through the implications and consequences of their choices for themselves and future generations. The choices relate to sustainable living and the extent to which people are prepared to adapt their lives to mitigate the effects of climate change. It is hoped that this will help people to adapt to the convergent challenges and that they will be able to change their socio-economic choices through adapting their culture. Thus the research is about cultural transformation.

While enabling individual citizens to manage their pathways, the software enables analysis of the responses to inform and assist local government in matching service outcomes to the perceived needs of service users. It provides a means to work out where to ‘draw the line’ based on inclusive testing of ideas with those who are to be affected by the decisions. It also enables comparisons across the different pathways to establish not only how the pathways differ, but also how they overlap – and therefore to find common ground with regard to their views – their concerns, values, priorities and approaches to how they want to live their lives. The paper considers the potential for a digital score card to address social, economic and environmental factors that support or undermine adaptation to the challenges and mitigation of the effects of climate change. It evaluates the extent to which the approach enables the community to consider their perceived assets and risks and the implications of their consumption choices for developing wellbeing stocks.

Keywords: wellbeing, climate change, risk, engagement, mitigation

The issue of national identity versus global identity has never been more important. The problem is that as people compete for scarce resources they fracture the shared identity that is so important for a sustainable world. The scaling up of digital technology can either enable us to achieve our potential which could, in the words used by John Man turn us into ‘cells in a planet sized brain’ (Florini, 2003: 195) or it could lead to our becoming increasingly Asbergerish, because we spend too much time in front of a computer screen or connected with out digital technology, that we forget how to live in relation to others and the environment and how to communicated effectively in real time (Greenfield, 2008). Engaging with one another in real time requires being able to connect emotionally with one another. The capability to communicate in many ways and to respond effectively and quickly to increased risks is the topic of ‘Transformation from Wall Street to Wellbeing: implications for trans disciplinarity, democracy, governance and ethics
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Resilience is defined as the adaptive capacity of the physical environment, of an individual or of a group. It concerns factors such as the capacity of members of a community to act together and to be able to modify or even transform existing ways of life (Rose, 2004, 2005, Hulme 2009) and thus personal, community or regional resilience, measured by a human sustainability footprint that will be based on an adaptation of the Max Neef (1991) Human Sustainability Scale, the Tuvalu test (Murray, et al 2007) and West Churchman’s (1971,1982) approach to testing ideas through ‘sweeping in for example : social, cultural, political, economic and environmental variables’ and ‘unfolding the values’ of diverse stakeholders.

Hannah Arendt (1969) criticized closed systems and the Operations Research Approach for imposing change through simplistic scenarios that pose a false dichotomy or an oversimplification of options that encourage a compromise without exploring wide-ranging systemic complicity (Arendt, 1963)). The critical tradition of the Frankfurt School, critical heuristics and open systemic intervention (Midgley, 2000) underpin this research. Arendt has criticized the systems approach for imposing change through ABC type scenarios that pose a false dichotomy or an oversimplification of options and then encourage a compromise through option C. Whilst the criticism is fair for closed systems and operations research, it does not apply to the work of critical heuristics or open systems that cut through the governance game and the minutiae of bureaucracy that is pervasive, banal and part of the complicit, wicked problems.

So many people say that they want to be the change, but how? This paper discusses an alternative form of governance and democracy. Creativity guided by humility and the willingness to care for others is needed to underpin the transformation from ‘Wall Street’ to ‘Wellbeing’. I have used the concept ‘Wall Street’ to symbolise economic rationalism and ‘wellbeing’ to symbolise a re-framed approach to ‘being interconnected’ and through treading lightly, rather than slashing pathways that are turned into highways. Wellbeing today does not need to cost the planet. So how do we hold the 1 % in check? How can whistle blowing be achieved? How can we be the change when dollars and cents not wellbeing is the bottom line? The greatest challenges of the day comprise: a) Representation within and across increasingly diverse nation states to address cosmopolitan justice for the common good. b) Accountability to ensure food, water and energy equity. c) Engagement to enable the silenced a voice and a seat at the table.

The paper reflects on the on-going challenge to undertake trans disciplinary research that represents diverse interests and enables people to address many, diverse values that have a strong value dimension. Dialogue on a small scale to create meaningful relationships at a face-to-face level is important for building trust and respecting why people see the world in particular ways. It does not provide an excuse, but it does provide the basis for understanding how and why power corrupts the way in which people behave. The implications of realising that people are human and not digital are profound. Genes are digital, but human beings are able to make choices (albeit shaped and limited by genetics) but nevertheless they respond to the environment based on their own thinking and their own interpretations. Human living systems at best are capable of responding to their environment and constantly evaluating their thoughts and actions. The only constant is change. So if quantum physics is the way forward we are being shaped and determined by the wrong (digital) paradigm (Thurok, 2012). The future is fluid and quantum not predetermined.

The problem with Operations Research is that it sought to control humans and nature as human and natural resources for development. The mechanistic and systems oriented approach however was not intended by West Churchman who understood the importance of contextual human values when considering an area of concern. Thus he called his approach an ‘open systems approach’ and was open to criticism. For this reason the starting point for this paper is that design interventions need to become part of a way of life?
Table 1: Capacity building for good governance requires structures based on norms, facilitated by processes and implemented as praxis.

| Structures | A priori norms concerning the principal /agent relationships that protect regions  
A posteriori checks and balances that are supported by cosmopolitan democracy and governance that enables government representatives and individuals living and or working within a state to have a say.  
Tax base should be developed by means of global taxes to address the high, medium and low incomes of individuals and corporations. A super tax on the top 1% would be transparent. |
| Processes | Whistleblowing by individuals, states and organisations  
Monitoring informed by critical systemic toolkit (McIntyre-Mills, 2006) |
| Actions/Tasks | Social, economic and environmental actions to enhance representation, accountability and sustainability, in terms of what we have, what we value and what we are prepared to change through our actions and relationships |

We need to face up to our own complicity. The ongoing work in progress (McIntyre-Mills and De Vries, 2011, 2012 ) and developed in a forthcoming book addresses a means to operationalize environmental protection through engaging members of the public in the process of developing appropriate measures of wellbeing. This is a vital step in cultural transformation as it raises awareness. It also requests contracting at a household level as to the tradeoffs we are prepared to make in changing our own lives. The burden of responsibility ought not to be shifted to locals without the private sector, welfare sectors and all levels of government playing an equal role. iii

This governance research on exploring a way to re-frame architectures for representation, accountability and sustainability builds on and applies Stiglitz et al (2010) on wellbeing approaches to accounting and accountability. It proposes scaling up this approach by means of the policy suggested in the Aarhus convention (1998). The research thus develops a process by which a suite of measures can be developed with local stakeholders within a region.

Table 2: Architecture for governance in overlapping domains to maximize changes towards a more sustainable future

<table>
<thead>
<tr>
<th>Structure</th>
<th>Process</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Micro-level Individuals</td>
<td>Aarhus convention (1998)</td>
<td>Questions raised and posed to local government by individuals</td>
</tr>
<tr>
<td>Meso States and regions</td>
<td>Aarhus convention Linked to Global Covenant</td>
<td>On line monitory democracy and governance to address state/market/civil society concern</td>
</tr>
<tr>
<td>Macro Cosmopolitan governance</td>
<td>Legal structures to support the Global Covenant, Aarhus convention and Biospheres Convention</td>
<td>International Criminal Court United Nations</td>
</tr>
</tbody>
</table>

Joy Murray et al’s (2007) Tuvalu Test asks to what extent do nations trample on the rights of others by shortening their life span? “… those groups in society who spend considerably more than the average time
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on earth and in doing so, wittingly or unwittingly, diminish the time that others have to spend, could be said to be acting unfairly..... ...."

The paper based on ongoing research makes the case that stewardship requires transformation of the way that we live. Being the change from moment to moment requires reflection on the way we choose to live our lives and the implications these choices have on others and on the environment. The software is only a means to an end, namely to enable people to reflect on their lives. It only provides a way to enable people to explore the question, how should we live and what constitutes wellbeing? Participants are invited to consider the following: what material and non-material conditions are important to them, by viewing their lives in terms of the Max Neef Human Sustainability Index of being, having doing and interacting. This approach shapes the design and analysis of the research and illustrates the need to be the change through re-thinking the way in which we place human beings above our responsibility for the land. Our sense of identity as citizens of nation states needs to be transformed to take into account the needs of our neighbours and future generations of life. Our research attempts to enable people to think through the ‘if-then’ scenarios, not merely to ‘unfreeze’ (to cite Lewin’s concept), but to work towards sustainable praxis, based on an understanding of our inter relatedness. Creativity is needed to underpin the transformation from ‘Wall street’ to ‘Wellbeing’. I have used the concept ‘Wall Street’ to symbolise economic rationalism and ‘wellbeing’ to symbolise a re-framed transdisciplinary approach. Our sense of identity as citizens of nation states needs to be transformed to take into account the needs of our neighbours and future generations of life.

Participants are asked to reflect on what they have, what they need and what the social, economic and environmental turning points are for the better or the worse in their lives and what the barriers are. They are also asked to consider the services that help them meet their needs are detailed as well. The software updates as it is used. The idea is that it will help people to make better decisions to address complex needs. Excel sheets are provided that give cross tabulations of socio demographic details and the choices they make The idea is that by thinking about their lives they will be able to consider the consequences of their choices on wellbeing. To us the software, please enter your user name as ‘test’ and enter your password as ‘test’.

The starting point is to listen to the three scenarios. The pathway address for local government is https://wellbeing.csem.flinders.edu.au/

Expanding pragmatism is a process to address the context and consequences of human decisions. Let us start with the IPCC formula that addresses the implications of polarising people versus the planet. IPCC formula E (Emissions) = Population X Consumption per person X Energy Efficiency X Energy Emissions. Existential Risk has implications for representation, accountability and sustainability. Consumption is very unequal and the gaps between rich and poor become wider and wider. The root cause of consumption is power without responsibility – so whoever comes to power needs to be held to account through mechanisms to develop social, economic and environmental indicators that secure the wellbeing stocks for the future.

Rights to consume need to be balanced by responsibility to consume in ways that impact the life chances of others (including future generations of life). Thus the rule of law needs to be post national and global supported by a covenant to protect all life. This needs to be secured by overlapping federations of biospheres buttressed in law and supported by a judicial system.

Hence the axiom for expanding pragmatism – we can be free and diverse to the extent that our freedom and diversity does not undermine the rights of others or future generations of life. The test for decisions must be based on the consequences for others and the next generation, based on ‘sweeping in’ the contextual values of stakeholders but making governance decisions that protect the wellbeing of others and future generations of life.

The paper reviews work in progress to date makes the case that using a computer-aided model could enhance data collection, analysis and ongoing engagement to address complex social, economic and environmental issues associated with climate change. But it is only one of the approaches for engagement
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and will never be sufficient. Nor will it make a difference, unless it is implemented more widely. So at best it provides an alternative architecture that has some potential for prefiguring change and enabling people to think about their lives and the consequences of their choices.

The software is loaded onto the Flinders Website, in the first instance, but has the potential for links with local governments elsewhere at a sub and post national level within the region. A diverse range of values, emotions and opinions are associated with wellbeing, quality of life and climate change. These can be regarded as a wicked problem, in the sense that it has many, diverse and interrelated variables that are viewed differently by people with different values (see van Gigch and McIntyre-Mills, 2006).

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1 The question must be asked to what extent Western Democracies have remained true to this mission? Unless 
governments are held to account by a monitory democracy, ‘lying in politics’ becomes a norm, not an exception.
The links between politics and research are also strong in democratic societies. Arendt stresses in her chapter ‘Lying 
in Politics in Crises of the Republic’ (Arendt, 1969:11-13) that democracies rely on manipulating the truth. Long 
before ‘spin’ became a topical term, Arendt links the role of researchers in propping up political agendas. According 
to Arendt: 1969:12:
“Reasons aversion to contingency is strong: it was Hegel, the father of grandiose history schemes that philosophical 
contemplation has no other intention than to eliminate the accidental.’ Indeed much of the arsenal of political 
three options…whereby A and C represent the opposite extremes and B the logical middle of the road solution of the problem—has its source in this deep-seated aversion…..The kind of thinking that presents 
both A and C as undesirable, therefore settles on B, hardly serves any other purpose that to divert the mind and 
blunt the judgment for the multitude of real possibilities. What these problem solvers have in common with down 
to earth liars is the attempt to get rid of the facts and the confidence that this should be possible because of the 
inhent contingency of facts…."

2 We live in interesting times’. The outgoing chief Scientist Sir John Beddington warned that the rising demand for 
energy, food and water will create a perfect storm by 2030. Systemic monitory democracy and governance need to 
sure that some users do not profit at the expense of others and future generations of life (Murray, 2006). This 
requires a different approach to praxis and a different architecture for governance and democracy. Overlapping 
federations of nation states need to consider biospheres without jeopardizing the ability of states to uphold social 
and environmental justice.

“Representative government is in crisis today, partly because it has lost, in the course of time, all institutions that 
permitted the citizens’ actual participation, and partly because it is now gravely affected by the disease from which 
the party system suffers: bureaucratization and the two parties ‘tendency to represent nobody except the party 
machines.” (Arendt, 1972:89)

Law, stewardship, culture and behaviour and the way that architectures for democracy and governance are designed 
ned to balance individual and collective needs. Law can be characterized as monist, dualist or based on 
harmonization, to draw on international law. I argue for the latter as a means to strive towards justice based on 
quality of life for all. One truth (monist) responses defended by grand narratives; no truth (postmodernist) 
approached defended by relativism or conflict; mediated (harmonized) responses are based on co-created meaning ( 
McIntyre-Mills, 2000, Crowder, 2003,2004) based on the principle of subsidiarity that can be summed up by the 
axiom that freedom and diversity at the local level needs to be encouraged to the extent that it does not undermine 
the common good. The notion of stewardship is thus also entailed by the axiom.

According to Heycox et al 1997: 4: “Data published by the ABS on the environmental protection expenditures by the 
public sector, including local government, is derived from the public sector finance collection which is based on an 
international Classification of the Functions of Government (COFOG). The problem arises due to the structure of 
COFOG was designed long before collecting data on public sector transactions does not enable the environmental 
component of transactions … to be separately identified”. But separation or disaggregation is quite the wrong way 
to approach the problem. This is why a systemic approach is vital and why the research supports the promotion of 
wellbeing as an integrated measure for a sustainable future.

Part of the rationale for trialing the software was to establish to what extent computing per se is a useful way to 
engage different interest groups and whether it could be useful to enable managing large data sets spanning many 
diverse interrelated variables about which residents have strong values.