# Valuing Social Housing

# Final Research Report

## (See also Attachment A – Domain Tables)

**Authors**:

Judy Kraatz

Giles Thomson

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The research described in this report was carried out by:

**Project Leader**
Judy Kraatz - Griffith University Cities Research Institute

**Project Steering Group Members**
Judith Yates - PSG Chairperson
**Core Partners**
Sarah Mewett - WA Housing (WAHA)
Veronica Pannell - WAHA
Heidi Roberts - Queensland Department of Housing and Public Works (QDHPW)
Kathy Roil - NSW Land and Housing Corporation (NSW LAHC)
Kim Shmuel - NSW LAHC
Jessica Dominguez - NSW LAHC
Sherif Mohamed – Griffith University
George Earl – Griffith University and NAHC
Peter Newman – Curtin University
**Project Partner**
Mike Myers - National Affordable Housing Consortium (NAHC)
**Project Affiliates**
Lyn Brun - Access Housing
Sonya Keep - Common Ground Qld
Andre Brits - Logan City Council
Tina Davey - KPMG Aging & Human Services
Amy Maynard - Brisbane Housing Brisbane

**Researchers**
Judy Kraatz - Griffith University Cities Research Institute
Giles Thomson - Curtin University Sustainable Policy Institute

The input of Heather Shearer from the Griffith University Cities Research Institute is also acknowledged.

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# 1. EXECUTIVE SUMMARY

The effective and appropriate provision of social housing, as an integral part of the housing continuum, is increasingly difficult in light of current fiscal constraints and changing and increasing housing need. In 2016, there were around 400,000 households living in social housing in Australia, with around 200,000 on social housing wait lists (Productivity Commission 2016). It is vital that an economically and socially sustainable framework for the provision of social housing is achieved. To meet this challenge, many innovative models are being explored both in Australia and internationally, including partnerships and financing arrangements involving a mix of public, private and not for profit agencies.

Contextualisation of the need for better access to social housing is critical in addressing this demand. Given current fiscal limitations on governments across Australia, it is unlikely that significant funds will become available to address the considerable waiting lists for social housing. It is most likely then that government provision of social housing will continue to be targeted at those in severe need, while at the same time, further avenues for affordable housing will be addressed.

It is necessary to build an evidence base which supports investment across both housing and non-housing outcomes. This evidence base, which aims to strengthen the policy environment for housing, as an essential piece of social and economic infrastructure, should address:

- the return on investment from a broader economic, social and individual perspective;
- engagement with the narratives, identifying how safe and secure housing changes the ability of people to engage in education and employment, improving (productivity) outcomes, some benefits of which may not be seen for 5 to 10 years, or in the next generation;
- improved access to appropriate and useful data to inform decision making (requiring better use of existing data and better collection of more targeted data).

*Housing is an integrative good, it is linked to many other sectors such as: health, economic security, energy security, transportation, education, employment. Housing also influences issues such as social cohesion and neighbourhood security. As an aggregate part of development efforts, housing is a key element in delivering sustainable urban development. The integrative nature of housing requires the social, cultural, environmental and economic facets of housing to be addressed in an integrated way.* Rosenfeld, O. (2015). Social Housing in the UNECE Region: Models, Trends and Challenges. Geneva, Switzerland, United Nations Economic Commission for Europe.

This research builds on that undertaken in the previous Sustainable Built Environment National Research Centre (SBEnrc) *Rethinking Social Housing* project - http://www.sbenrc.com.au/research-programs/1-31-rethinking-social-housing-effective-efficient-equitable-e3/. A central element of the approach established in that research is productivity for both the individual and for society more broadly. This present study identified a broad range of housing and non-housing outcomes which can be attributed to having safe and stable housing, for example, improved resident well-being, better employment outcomes, stronger community ties and a sense of safety within a neighbourhood. This has benefits across stakeholders and agencies, from the tenant to the housing provider, and to the local, state and commonwealth governments.

***Valuing Social Housing* has delivered:**

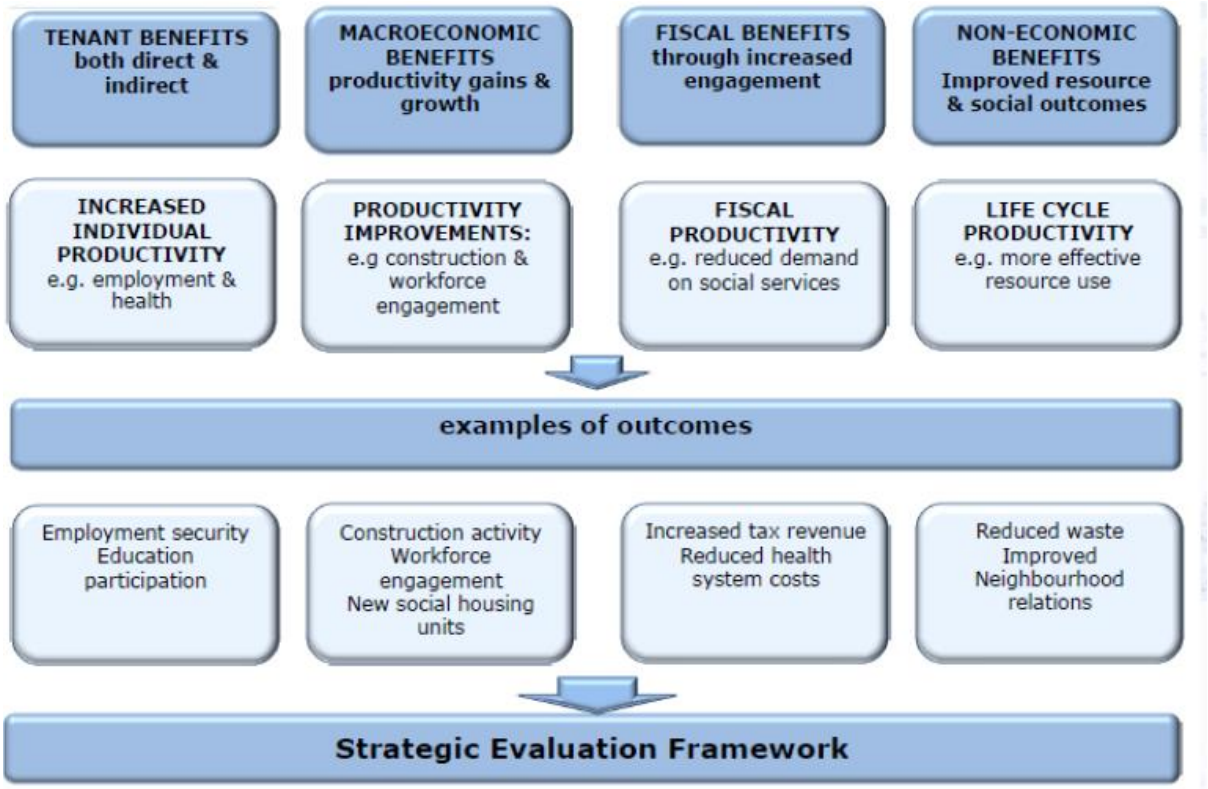
- *Strategic Evaluation Framework* – a methodology for building the evidence base for justifying further investment in social (and affordable) housing.
- *Domain Tables* - across the 9 domains, including 53 outcomes and over 180 indicators: detailing over 60 academic references in support of the links between housing and non-housing outcomes; return on investment information across SROI, WVA and narratives; and details of over 40 relevant Australian datasets.
- *Data Summary Tables* – expanding on the information provided in the Domain Tables.
- *Composite Return on Investment (CROI)* – methodology for addressing the broad based potential for ROI when building the case for investment, for example with state-based Treasury.
- *Summary of findings: data and social housing* – from a roundtable which bought together partner agencies and content experts to explore issues and opportunities for improving data access, gathering and application.

# 2. RETHINKING SOCIAL HOUSING AND THE PRODUCTIVITY CONTEXT

This research builds on that undertaken in the previous SBEnrc *Rethinking Social Housing* project[1]. A central element of the approach established in that research is productivity, both for the individual and for society more broadly (Figure 1).

[1] http://www.sbenrc.com.au/research-programs/1-31-rethinking-social-housing-effective-efficient-equitable-e3/

**Figure 1 - A productivity focus and social housing**




A broad range of relevant housing and non-housing outcomes have been attributed to having safe and stable housing, for example, improved resident well-being, better employment outcomes, stronger community ties and a sense of safety within a neighbourhood. This has benefits across stakeholders and agencies, for the tenant, the housing provider, and also for local, state and commonwealth governments.

## 2.1 What is the case for change?

> *Housing is an integrative good, it is linked to many other sectors such as health, economic security, energy security, transportation, education and employment. Housing also influences issues such as social cohesion and neighbourhood security. As an aggregate part of development efforts, housing is a key element in delivering sustainable urban development. The integrative nature of housing requires the social, cultural, environmental and economic facets of housing to be addressed in an integrated way (Rosenfeld, 2015).*

The effective and appropriate provision of social housing, as an integral part of the housing continuum, is increasingly difficult in light of current fiscal constraints and increasing and changing housing needs. Achieving an economically and socially sustainable framework for the provision of social housing, as part of addressing the pressing need for affordable housing, is vital. To meet this challenge, many innovative models are being explored internationally, including partnerships and

financing arrangements involving a mix of public, private and not for profit provider funds.

Contextualising the need for better access to social housing is critical to realistically addressing this demand. Given current fiscal limitations on governments across Australia, it is unlikely that significant funds will become available to address the considerable waiting list for housing. It is most likely then that the provision of social housing by governments will continue to be targeted at those in severe need, meaning that a significant cohort of people will remain in need of housing assistance. Improving the supply of more affordable housing in appropriate locations in conjunction with not for profit providers, through innovative financing models (Council on Federal Financial Relations 2016) is an integral part of addressing the social housing shortfall. Additionally, the need to establish a viable and sustainable pathway from social housing to affordable housing is required.

The social housing sector in Australia includes public and community housing, as well as state-owned and managed Aboriginal and Torres Strait Islander (ATSI) housing (Romans 2014). In 2016, there were approximately 400,000 households across Australia living in social housing, with a waiting list of around 200,000 households (Productivity Commission 2016).

Innovative ways of looking at both the policy and the delivery aspects of social housing provision are required. This project is seeking to develop a framework to provide greater evidence, linked to several layers of return on investment, to help address these issues. In addition, researchers at Griffith University School of Business, in conjunction with the National Affordable Housing Consortium, are seeking to develop innovative financial instruments to attract institutional investments into the Australian social housing sector. This project is evaluating the risks and returns of social housing based on advanced and recently developed models and theories in finance, such as the real options model, in order to develop the incomplete financial market for social housing in this country (Earl, Kraatz et al. 2016)

# 3. USING THE STRATEGIC EVALUATION FRAMEWORK

The report details the critical elements of the framework, including:

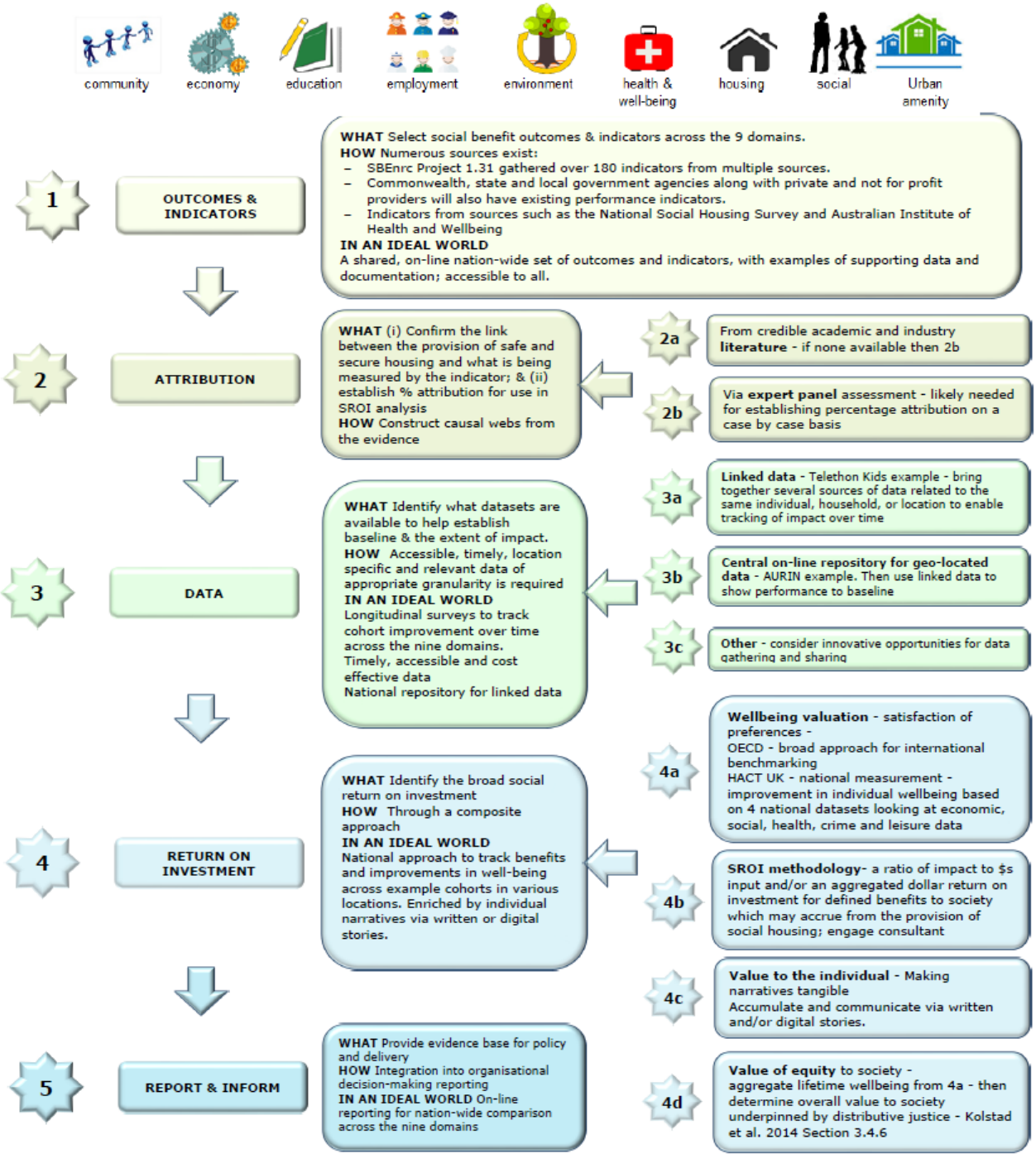
- A *methodology* for building the evidence base for justifying further investment in social (and affordable) housing.
- *Domain Tables* - across the 9 domains, including 53 outcomes and over 180 indicators: detailing academic references in support of the links between housing and non-housing outcomes; return on investment information across SROI, WVA and narratives; and details of over 40 relevant Australian datasets.

- *Extended Dataset Summary Tables* – expanding on the information provided in the Domain Tables. See Section 5 of this report.
- *Composite Return on Investment* – methodology for addressing the broad based potential for ROI when building the case for investment, for example with state-based Treasury.
- *Summary of findings: data and social housing* – from a roundtable which bought together partner agencies and content experts to explore issues and opportunities for improving data access, gathering and application.

The framework intent is therefore to provide evidence about the social benefits of providing safe and secure housing to those in need of assistance. It is intended to provide the basis for the consolidation of existing knowledge and to build rigour around future policy making and delivery.

Figure 2 identifies the steps proposed within the strategic evaluation framework to provide greater evidence of the social benefits of providing safe and secure housing to those in need of assistance.

**Figure 2 - Strategic evaluation framework: flow chart**



## 3.1 Elements of the framework

### 3.1.1 Domain Tables (see Attachment A)

This report brings together the four elements of this framework in these *Domain Tables*. These tables:

- span the nine housing related domains (community, economy, education, employment, environment, health and well-being, housing, social and urban amenity)
- include 53 outcomes and over 180 indicators gathered as a part of the *Rethinking Social Housing* project
- detail the findings of a limited review of both academic and industry literature which provides evidence of links between having access to safe and secure housing, and improved non-housing outcomes
- consolidate return on investment information gathered from a further limited review of the literature relating to social return on investment (SROI), well-being valuation analysis (WVA), narratives and the value of equity
- bring together details and metalinks for over 40 relevant Australian datasets (See Extended Dataset Summary tables, Section 5).

### 3.1.2 Attributing non-housing outcomes to good social housing

The aim of this element is to identify causal links or associations between having safe and secure housing (especially social housing) and other selected non-housing outcomes, across the nine domains presented in our outcomes and indicators tables. This is important in understanding the impact of policy changes. For example, Wood, Flatau et al. (2016) identify that 'the provision of public housing significantly reduces health service use' (Wood, Flatau et al. 2016). Identifying the *percentage attribution,* that is the extent to which having safe and secure housing contributes to improved health, is also important when monetising the return on investment.

Our research identifies three steps in this process: (i) review the available literature; (ii) undertake an expert panel analysis to determine the percentage attribution where needed; and (iii) illustrate findings for transparency.

Step 1 - Review of the literature

A significant amount of Australian and international literature exists which identifies links between housing and non-housing outcomes. *Attachment 2 - Combined Tables* provides evidence gathered to date across the nine domains.

One key approach to determining these relationships is to undertake interviews and surveys such as the long-term Moving to Opportunity studies undertaken in the US[2],

[2] http://www.nber.org/mtopublic/

the Bridge et al. 2003 study and the Phibbs and Young study, reported on in 2005 (Bridge, Flatau et al. 2003, Phibbs and Young 2005). These and similar reports have been a significant source of evidence for the associated tables.

Step 2 - Expert panel analysis

Establishing an expert panel of practitioners and researchers is recommended: (i) where a specific link has not been discovered in the literature but is considered possible; (ii) where the difference in context is significant enough to warrant further consideration; or (iii) where the percentage attribution is required to establish the social return on investment (for example). The Scottish Government's *Good Places Better Health* model is recommended as a guide. This is based on a Modified DPSEEA model (Figure 3) adapted from the World Health Organisation's DPSIR (drivers, pressures, state, impacts, responses) model. This model is widely used to structure thinking around the relationships between the environment and other socioeconomic activities.

Figure 3 - Elements of the Modified DPSEEA Model (The Scottish Government 2008)

| Element | |
|---|---|
| Drivers | Society level: social, economic or political influences on the environment |
| Pressures | Factors resulting from drivers which act to modify or change the environmental state |
| State | The resultant environment which has been modified due to the pressure |
| Exposure | Human interaction with modified environment |
| Effects | Human health effect |
| Actions | Policy and practice designed to address particular factors identified in the chain |
| Context | Individual level: Social, economic, demographic factors which influence a person's exposure to the modified environment or which lead to a health effect |

A seven minute overview of this approach, *Good Places Better Health A Tool for Co-Production,* is available at: https://www.youtube.com/watch?v=CHSPjc2lHGc&list=PLh2wA32--fZs8chBXyOs1Fb8nJ0Wp6P6u&index=4 .

One example of an outcome of the mind map approach developed by the Scottish team is shown in Figure 4 (HOME mind map) (note that the focus of this study is childhood health). Overlaying this, the thought bubbles show how it can be applied in our research, that is: driving forces are the policy and delivery approaches and constraints; indicators can equate to exposure; and the effect is the outcome. For example, the cost of housing maintenance is a driver; with building and maintenance of housing types not conducive to children's play a pressure; leading to a state that a house is not child friendly (which can be used as an indicator); affecting a child's

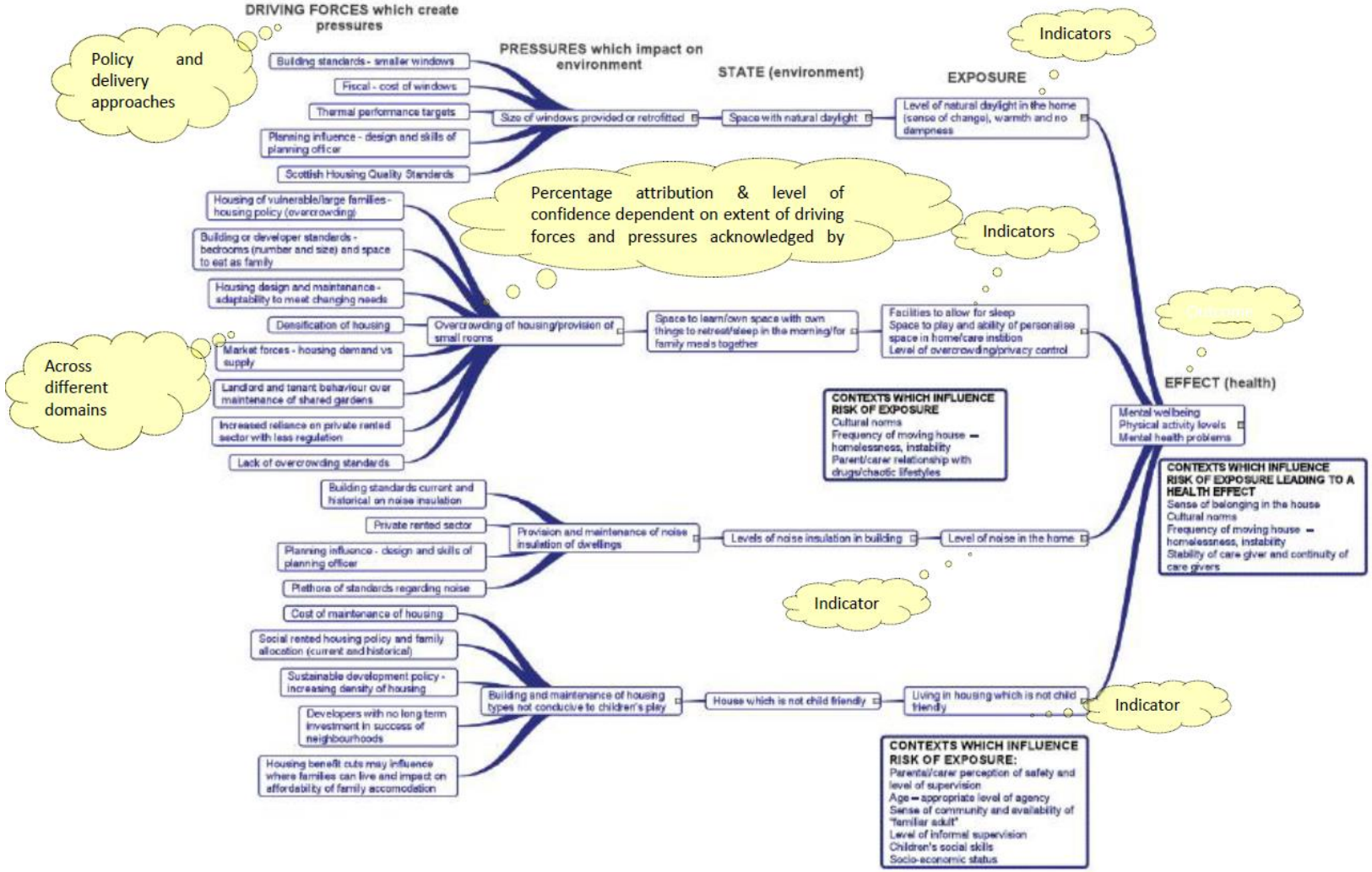
mental well-being and physical activity levels (as an effect or outcome). This can then be considered as an association with the various costs assigned in the return on investment analysis, and with childhood outcomes tracked over time through linking child health and housing maintenance data.

The quality of quantitative evidence can also be recorded as a part of this process. A similar method is proposed to that which was used in the 2014 report by the International Panel on Climate Change (International Panel on Climate Change (IPCC) 2014), assigning:

- *Level of Confidence*: very high, high, medium, low
- *Quality of Evidence*: robust, medium, low
- *Level of Agreement*: high, medium, low

The *percentage attribution*, that is 'the amount of the outcome that can be uniquely attributed to the designated program or activity' (Ravi and Reinhardt 2011), can also be determined by this expert panel. This percentage is required as part of the *social return on investment* analysis which is proposed as part of *the composite return on investment method*. Such attribution will depend on the specific geographical, social and policy environment in which the issue is being addressed, and so would need to be undertaken on a case/policy or agency specific basis.

Figure 4 - HOME Mind Map modified for Valuing Social Housing Project (The Scottish Government 2008)

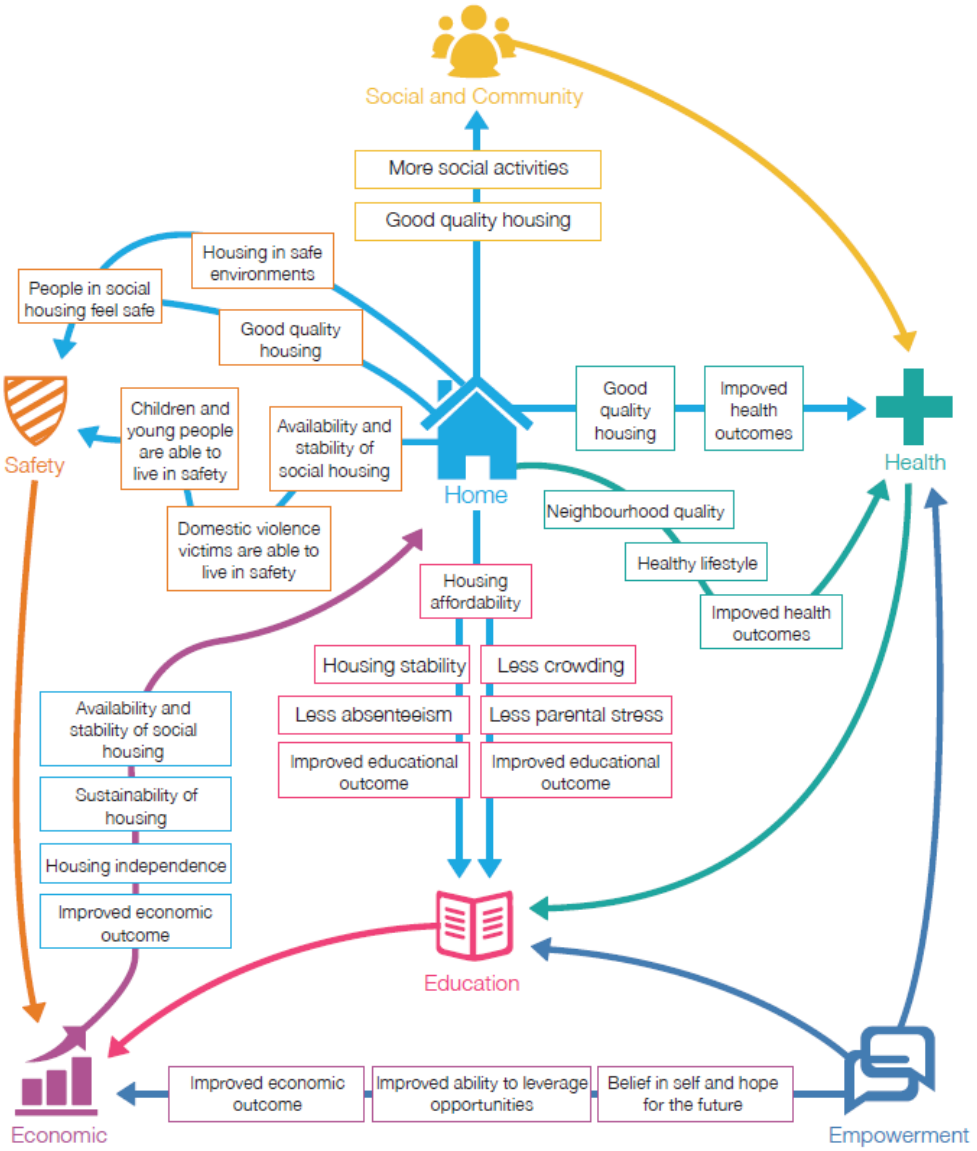


Step 3 - Consolidate findings:

Two tools are proposed for consolidating outcomes from this process:

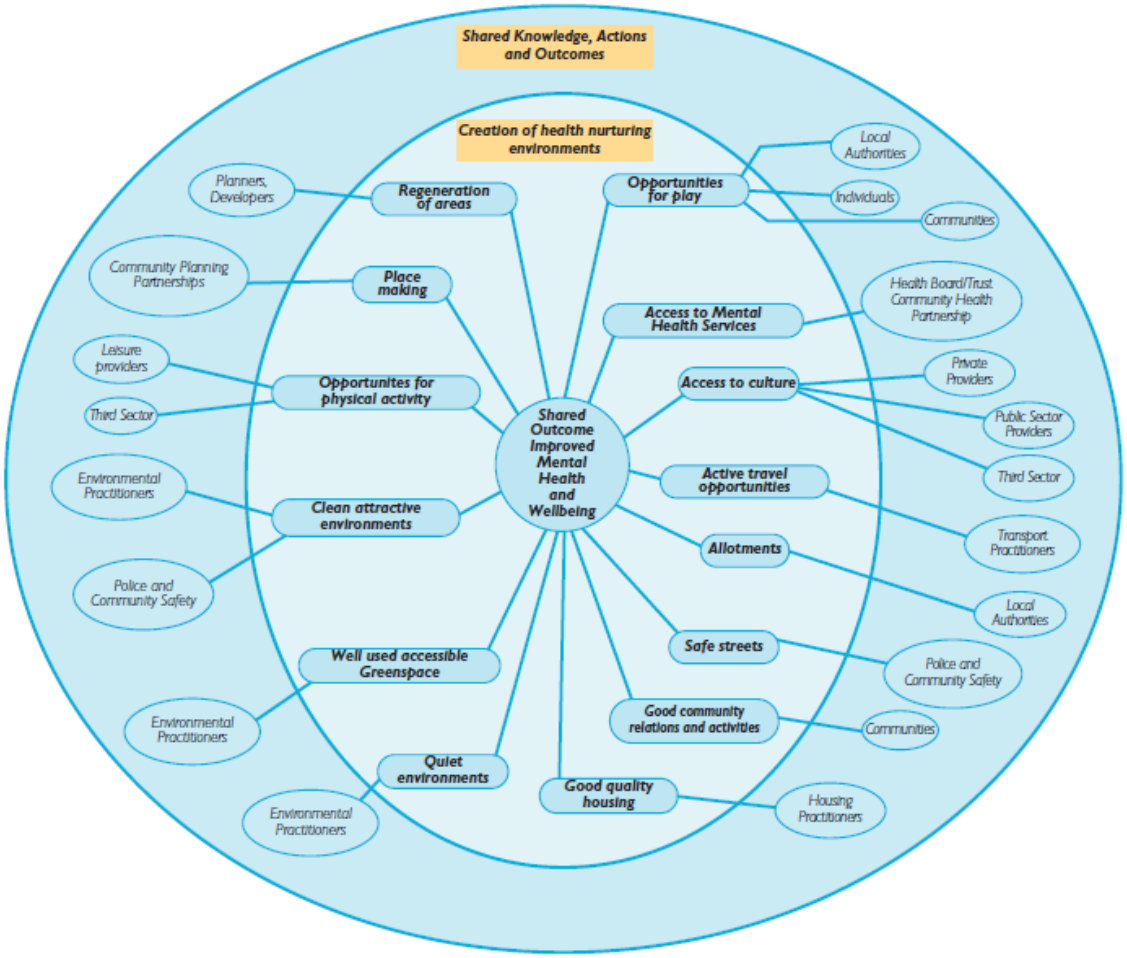
- Causal webs - Figure 5 shows a causal web developed by NSW Families and Community Services as a part of the Outcomes Framework focus. This aligns with the Canadian model of causal webs which is also informing this research (Canada Mortgage and Housing Corporation (CMHC) 2011). This is proposed as an effective way of communicating the complexity of the inter-relationships for specific purposes and/or audiences where all the detail in the individual mind-maps is not required. Of note also is Section 3.5 of the Overcoming Indigenous Disadvantage Key Indicators 2016 report which identifies interactions across the report's framework (Steering Committee for the Review of Government Service Provision 2016).

**Figure 5 - Causal Web - NSW Human Services Outcomes Framework: Application to social housing (Chilvers, Stewart et al. 2016)**



- Globe of responsibilities - the globe presented Figure 6 in can be used to identify and communicate to those with key responsibilities, , and those with whom consultation needs to occur to deliver outcomes.

**Figure 6 - Good Places Better Health - creating positive health nurturing environments through shared outcomes, knowledge and action (The Scottish Government 2008)**




## 3.1.3 Data

### *3.1.3..1. Issues and opportunities*

A data and social housing virtual roundtable was held in November 2016, with representatives from each partner organisation and other organisations including the Australian University Research Infrastructure Network (AURIN) and Griffith University's eResearch Services.

The following are the issues and opportunities identified in the course of this roundtable.

**Some key issues:**

- Privacy is paramount

- What do we want to know; why do we want to know it; how will we use it; who is the recipient of the data; and what is the benefit?
- Costs of data collection, linked data, and maintenance
- State of the systems
- Time frames – collection, currency and linkage
- Responsibility of holding and managing linked data
- Higher level freely available open data exists which can be accessed and used
- Changing need for data
- Context specific data required
- Distinction between research data (policy development) and operational data (client management)
- Fitness for purpose
- Data consent versus transparency of use (where consent is not required but benefits are well defined and accepted for and by the community)
- A minimum commitment of 10 years is required to see results.

**Some key opportunities**

- Evidence is required to illustrate the inputs-outputs–outcomes cycle of social housing to demonstrate what social housing investment delivers.
- There is a need for more holistic outcomes - in some cases it is individual and in some cases it is precinct based (e.g., future growth).
- Linked data (i.e., linking people) allows for the longitudinal analysis of individuals to articulate the impact of housing with data analysis, looking at outcome before housing, outcome in housing, outcome after housing. This process, repeated over a number of individuals using de-identified data, can provide good evidence for the impact of housing. While technology exists to do this, a critical issue is the release of data from a political / social perspective. Developing a governance structure for the release of data to the satisfaction of the data custodians / authorities is an important opportunity. Examples Telethon Kids Institute - http://telethonkids.org.au/about-us/ , Logan Together - http://logantogether.org.au/research-theory/ , AIHW - http://www.aihw.gov.au/data/
- *Australian University Research Infrastructure Network* (AURIN)[3] **-** AURIN is a federal government initiative to provide a federated, securitised infrastructure network to support Australian urban researchers and policy makers. It offers geolocated data through a spatial decision support system and is designed to increase data gathering efficiencies. It is a license based access system with about 5,000 users, with 1,600 datasets on property, health, Australian Bureau of Statistics (ABS), micro-simulation data, etc. Data granularity varies, prioritising national coverage at the finest level of aggregation. It is possible to export or import the data in a securitised account, to facilitate sharing with different levels of access, including linked access, depending on the project.
- Griffith University eResearch data projects include the *Biodiversity and Climate Change Virtual Laboratory* (BCCVL). *The Biodiversity and Climate Change Virtual Laboratory*

[3] https://aurin.org.au/

*(BCCVL) is a "one stop modelling shop" that simplifies the process of biodiversity-climate change modelling. Its mission is to connect the research community to Australia's national computation infrastructure by integrating a suite of tools in a coherent online environment where researchers can access data and perform data analysis and modelling … The BCCVL is supported by the National eResearch Tools and Resources Project (NeCTAR), an initiative of the Commonwealth being conducted as part of the Super Science Initiative and financed from the Education Investment Fund, Department of Industry, Innovation, Science, Research and Tertiary Education*[4]. BCCVL is similar to AURIN in providing modelling and analytical tools for research and universities, which may provide an example for the future management and analysis of social housing data. It enables the modelling of variables now and into the future through the provision of standardised modelling tools to allow researchers to interrogate data that is not always complete. As it is expensive to collect on-ground information, it is important to be able to model this, and to provide this level of sophistication. The BCCVL researchers work with experts, and seek out those relevant to the discipline.

- Other applications of linked data from Griffith eResearch Services include: (i) a project with the Menzies Institute at the Gold Coast University Hospital to develop a joint / virtual facility to create a data resource combining hospital administration and Griffith Clinics data, and to streamline access to the data for research projects. The ideal would be to look at methods like machine learning to explore data in situ. (ii) The Health, Innovation and Engagement project (HiVE) – *is a partnership to establish a repository of data collected through the Gold Coast Health and Knowledge Precinct; Gold Coast University Hospital and the Griffith Health Centre … to establish new areas of research or enhance existing data sets across clinical research platforms. This project involves linkages with data services that are already in existence and safely linking and integrating data into a larger collection from a range of sources across the Gold Coast region to invest, enable and sustain health research at Griffith University*[5]. (iii) The Griffith Social Analytics Lab[6] with the Qld Police and IT services, with very strict protocols about how data can be accessed.
- The NSW Data Analytics Centre (DAC), announced in August 2016 by the Minister for Innovation and Better Regulation, is highly relevant as it facilitates data sharing between agencies to inform more efficient, strategic, whole-of-government evidence based decision making (see: https://www.finance.nsw.gov.au/nsw-data-analytics-centre). The DAC presents a model that, while still less than six months old at the time of writing this report, may offer lessons about how to increase the speed of linked data collection and analysis. Early demonstration exercises are showing turn around times as quick as four months, where conventional practice may take anything from 12 to 18 months just to prepare (approve, link, release) the data.
- Geographic Information Systems (GIS) visualisation - how data can be visualised, including information on type, scale, currency, accuracy and availability of data. Access is available to free or costed datasets through the federal, state and local governments. Many of these can be represented spatially; that is, on a map, using software such as

[4] https://www.griffith.edu.au/research/research-excellence/climate-resilient-decision-support-toolkit/the-biodiversity-and-climate-change-virtual-laboratory and http://www.bccvl.org.au/about/

[5] https://projects.ands.org.au/id/HVC22

[6] [6] https://www.griffith.edu.au/criminology-law/griffith-criminology-institute/our-projects/griffith-secure-data-facility

ArcMap[7]. This enables quick and easy visualisation of the relationship between various datasets. This data can also be manipulated in ArcMap and the tables exported for further statistical and other analysis. Data can also be analysed longitudinally, for example using Census data from consecutive or a range of years. In the Gold Coast as a study area, data was collected for various datasets at SA2 level and for the 2011 Census year. These included SEIFA (socio-economic indicators for areas), education (over/under yr10), type of housing (detached, semi, apartment), house and unit prices, Centrelink housing assistance, health variables (extracted from AURIN), percentage of social housing (from ABS), etc. A series of maps was then created showing the distribution and relationship of housing variables; and a single SPSS table was created with each variable linked to the SA2 number and name. Some basic correlations and graphs were prepared, and results could then be analysed. Many other variables can also be mapped, such as distance to public transport, proximity to highways, distance to parks, land use, and the like, linking to the nine domains. Other spatial data can also be obtained from ABS, Qld Spatial Catalogue, Google Earth Queensland Globe, and local authorities.

- Hierarchy of data within a national framework – a high level framework with enough flexibility over time and across jurisdictions so we can see measurable things across the states, while tools are available at a regional / local level specific to that area. Couple this hierarchy with a nation-wide forum for developing a consistent, efficient and effective data environment to inform policy making and delivery, and with a national network of interested agencies to facilitate an efficient development and learning pathway. For example, existing platforms such as AURIN - https://aurin.org.au/ and HiVE offer research infrastructure that could be used as securitised, central repositories to facilitate social housing data aggregation and sharing.
- Explore machine learning, to measure data in situ (cf. "big data") especially for the collection of missing or under-measured indicators. NSWDAC may provide a good example of this.

#### *3.1.3..2. Identified datasets*

Refer to Appendix A, Data Set Summary, for a summary of identified national and state based datasets which align with the nine domains. This was compiled in late 2016, and may not be a complete listing.

#### *3.1.3..3. Possible implementation pathways*

A number of organisations and projects are demonstrating the benefits of linked data analysis and how this analysis can inform evidence based policy. Amongst these are:

- Telethon Kids Institute (TKI) Developmental Pathways in WA
- Logan Together in Queensland
- NSW Data Analytics Centre - https://www.finance.nsw.gov.au/nsw-data-analytics-centre
- AURIN (the Australian Urban Research Infrastructure Network – co-ordinated through Melbourne University)
- HiVE Digital Repository Griffith University

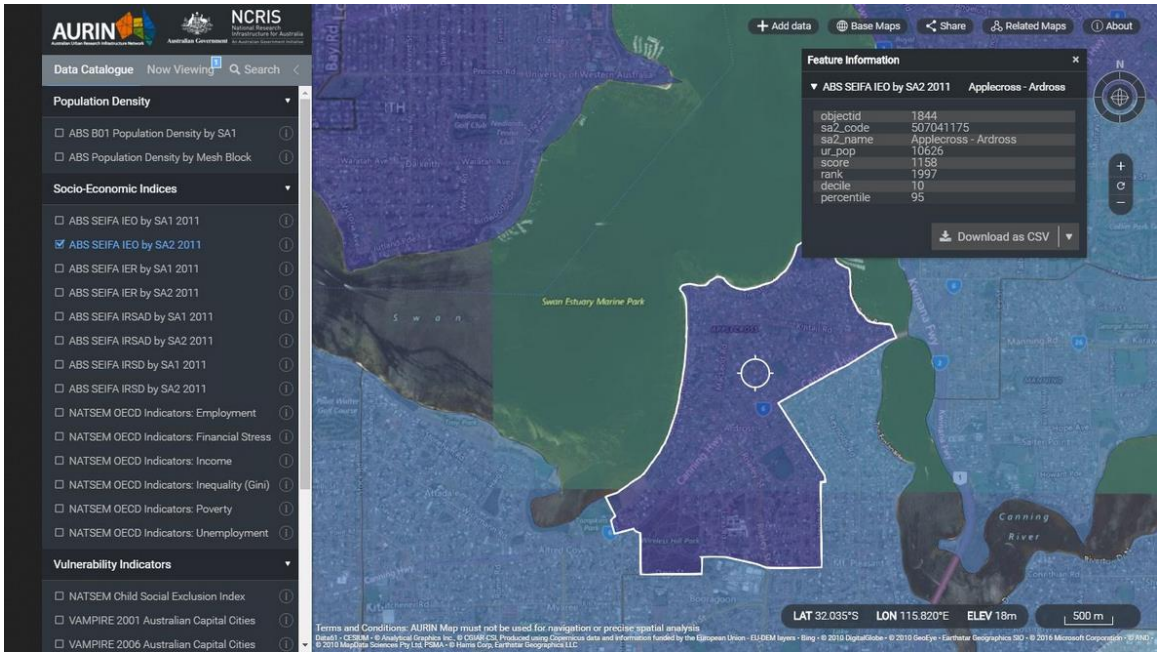
[7] http://desktop.arcgis.com/en/arcmap/

- AIHW - can provide researchers and policy makers with secure access to linked data to investigate vital health topics. http://www.aihw.gov.au/data/

To properly evaluate the broader, non-housing related impacts of social housing it would be necessary to conduct a robust study with a clear cohort of people who have access to social housing. Ideally this would be a longitudinal study that looks at the individuals before, during and after their experience within social housing. There would be a like control / case control study that includes people who are within the system and people who have not been in the system. The following examples describe a few possible approaches based upon existing resources.

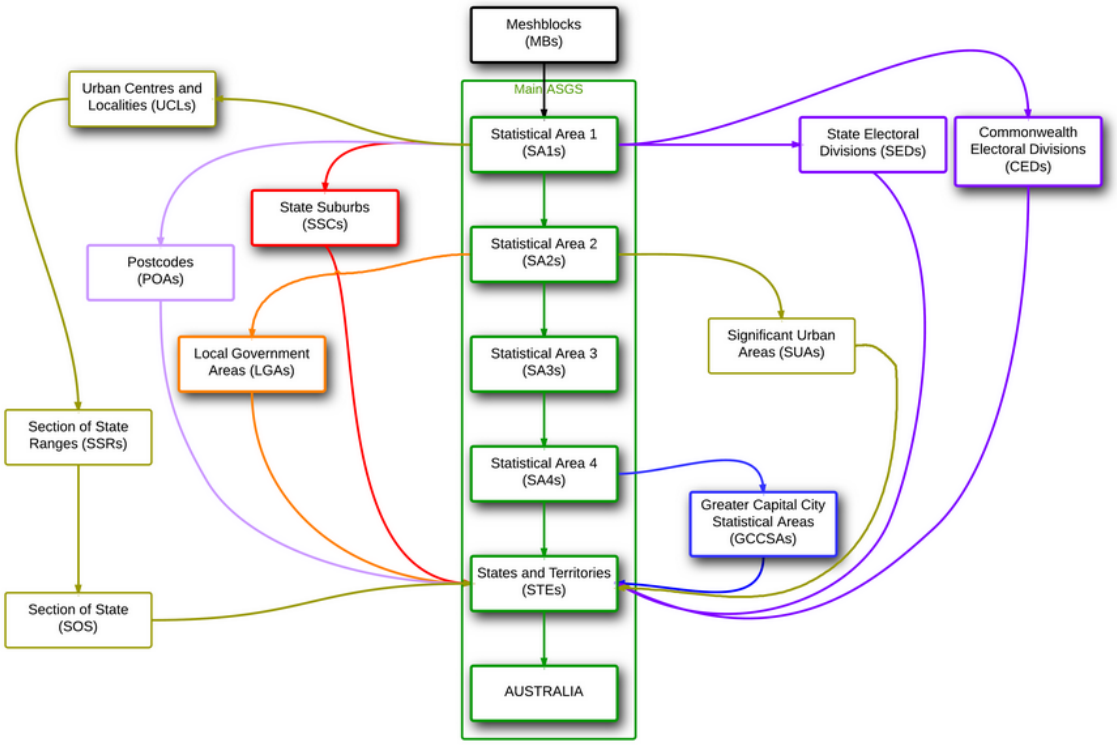
The Australian Urban Research Infrastructure Network (AURIN) makes data sets easily available to a wide array of researchers. AURIN's mandate is to provide "an evidence base for policy" and it "encourages more research to support urban resource management and policy decisions by making information easier to access". It comes with over 1600 datasets. By way of example, it can be used to show the geographic variability of Socio-Economic Indices (Figure 7).

**Figure 7 - Education and occupation example for Applecross, Perth (source, AURIN)**




While this accessibility is useful, it presents ethical issues relating to data privacy. To overcome this, data is aggregated so that individuals are not identifiable. The finest grain of data available is at the SA1 (Statistical Area 1), roughly 200-800 persons (Figure 8), the image above (Figure 7) only provides data at SA2 (roughly 3,000-25,000 persons).

**Figure 8 - Standard Australian Statistical Geographic Areas (ASGS) (source, AURIN). NB where mesh blocks are the smallest geographical region in the ASGS consisting of 30-60 dwellings, linked data can provide information on individuals.**




This makes AURIN useful for establishing a baseline or a control that expresses local averages, but because the data is aggregated it can only over-generalise information.

To overcome the limitations of aggregated data, linked data can be used. The following extracts relating to linked data are taken from the WA Data linkage website http://www.datalinkage-wa.org.au/.

*Data linkage is a technique for connecting pieces of information that are thought to relate to the same person, family, place or event. Information is created when a person comes into contact with certain services, for example, when they visit an emergency department, stay in a hospital or register the birth of their child. If these different bits of information can be connected to a person, in a way that does not breach their privacy, it can all be used to produce evidence for improvements in the health of the … community.*

*Privacy is protected by separating this data before it is provided for linkage. Matching only the demographic information, and then making a special key for each group of records that belongs to one person….These keys can then be used to join up the clinical parts of the records, instead of a person's name or other identifying information, for approved purposes.*

Because linked data is de-identified it overcomes privacy constraints, allowing social housing tenants to be analysed without identifying individuals. Linked data therefore allows the detailed analysis and comparison of social housing tenants to determine whether they experience any relative social disadvantage.

Linked data enables studies such as this to occur, however as mentioned previously, the application process for data is typically onerous and requires a long lead time of approximately 12-18 months. However linked data is the only way to understand a particular cohort such as social housing tenants or homeless people, so the time invested is usually worth the additional effort, as the examples below demonstrate.

**Example 1 – Telethon Kids Institute (Telethon Kids Developmental Pathways Project Research Management Group meeting on 3 August, 2016)**

TKI is working on a project for the Justice Research Working Group which is using linked data to track children who have been in contact with multiple government agencies (e.g., justice, mental health, etc.). The project looked for children born between 1994-97 who had contact with four or more government departments. The research demonstrated that 10% of clients use 80% of services. The next phase of work will be to build a profile of who and how this occurs, with the aim of stopping this cycle. Stopping this cycle would benefit the affected individuals, and this in turn could bring about considerable resources and cost savings for service providers.

**Example 2 – AHURI (Wood, Flatau et al. 2016)**

What are the health and social and economic benefits of social housing? Research undertaken by AHURI used linked data for 3,000 individuals as well as self-report Tenant Survey data to examine the impact of public housing provision and support for formerly homeless people and those at risk of homelessness on health service use and health outcomes (Wood et al., 2016). The study found four key findings: (i) that the provision of public housing significantly reduces health service use; (ii) significant direct calculable government health care cost savings arise from the provision of public housing and support for formerly homeless people. The change in use across health care services examined from entry to public housing results in a combined cost saving of $16.4 million or $4,846 per person per year, across all people in the sample for a single year; (iii) the reduction in health service use is greatest for tenancies sustained between one to four years; and (iv) that tenancy sustainability rates were relatively high for those entering public housing (homelessness) and that tenants were highly confident of maintaining their current public housing tenancy.

Most linked data sets are assembled for a particular project, and are then destroyed. The examples above demonstrate the value of linked data analysis, however lead times are slow and the scope is often quite narrow. However, if a centralised platform like AURIN or HiVE could satisfy the security requirements of the data custodians, then it might enable both aggregated data and linked data (to approved users through a securitised interface) to be quickly and readily accessed by policy makers and urban researchers on the one system.

#### 3.1.3..4. Data Visualisation

Figure 1 shows three examples of the initial data visualisation examples prepared for our November Data and Social Housing Roundtable, to illustrate how data visualisation can be undertaken to help inform decision making. AURIN provides a further mature example of this.

The data sources for these examples are the ABS Index for Relative Socio-economic Advantage and Disadvantage (IRSAD) from the Census of Population and Housing, and Socio-economic Indexes for Areas (SEIFA) Australia 2011. The Australian Urban Infrastructure Network (AURIN) and the Household, Income and Labour Dynamics in Australia (HILDA) and others are also valuable sources.

To develop these maps, the following steps were undertaken:

i. Geographically reference boundary files were downloaded from the ABS, and used to create a map of the study area (in this case, the Gold Coast City Council LGA).
    - These boundary files were Statistical Area 1 (SA1), Statistical Area 2 (SA2) (for Census data post 2011) and Census Collection District (CCD) (for Census data prior to 2011). SA1 is the smallest geographical area for which Census data is readily available.

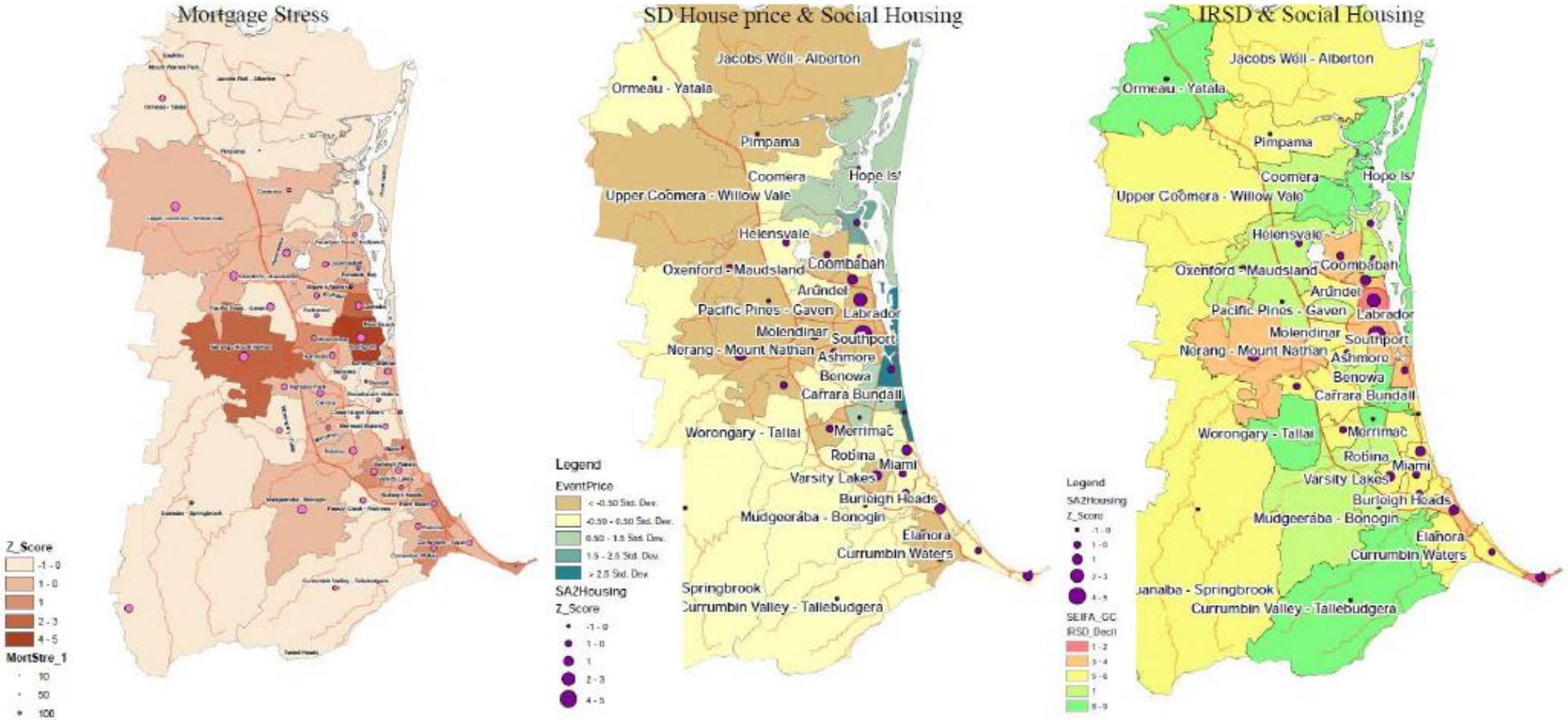
ii. Data files, (usually in CSV format) were downloaded, e.g., the ABS IRSAD data for SAS 1& 2.
    - Data is also available (or can be converted to) Excel, SPSS and DB4.
    - ArcMap 10.3 was used to link data in the tables by the unique code number for the SA1 (or SA2/CCD).
    - This was then mapped and visualised using ArcMap.

iii. Derived data was then calculated from the pure data and columns added with this\the ArcMap (http://desktop.arcgis.com/en/arcmap/ ) spatial analysis software was then used to develop these maps.
    - Other Geographical Information Systems (GIS) tools include Mapinfo (http://www.pitneybowes.com/au/location-intelligence/geographic-information-systems/mapinfo-pro.html ) and QGIS (http://mapsolutions.com.au/products/quantum-gis.aspx ).
    - Standard deviations were used in some instances to highlight areas which differed significantly from the norm.

iv. A further step (not undertaken here) would then be to use visualisation software such as Google Earth (https://www.google.com/earth/ ) – see AURIN. At this stage other elements can be overlaid, such as the Queensland transit network which is available from Queensland Transport and overlays road and footpath networks. In the case of the social housing framework, this could include locations of bus and train stations, hospitals, centres of employment and support services, and sports facilities and parks. Then, based on local knowledge, weightings can be added to access to these facilities (for example in the case of access to public transport, a common walkable distance is assumed to be 400 metres, but of course this varies due to relief, shading and traffic volume, as well as the demographics of the population).

This is based on cross-sectional data (i.e. ABS) and not longitudinal or 'big' data, which is an opportunity for future research.

**Figure 9 – Data visualisation example for Gold Coast (2016)**




Note: Data sources: ABS Index for Relative Socio-economic Advantage and Disadvantage (IRSAD) from the Census of Population and Housing: Socio-economic Indexes for Areas (SEIFA) Australia 2011

### 3.1.4 Composite approach to return on investment (CROI)

The aim in developing this element is to establish a robust methodology for valuing the return on investment of providing social housing, in order to build the case for on-going investment. This is one element of our proposed *strategic evaluation framework* as illustrated below.

**Why a composite approach**: It is proposed that a single method does not capture the complex nature of the value returned to society and the individual of having access to safe and secure housing. Four elements are proposed in order to address this complexity. These could be used in parallel to understand and articulate the broad value of the provision of social housing. This composite approach also embraces the productivity based conceptual framework developed in our previous research[8], where four aspects of productive return are considered: individual; macroeconomic; fiscal; and non-financial.

Sub-element 1 – Social Return on Investment (SROI) - used to provide a ratio of impact to $ input and/or an aggregated dollar return on investment for defined ***benefits to society*** which may accrue from the provision of social housing. This is determined through: identifying key outcomes, indicators, and impacts; establishing financial proxies for these; determining a dollar value for this benefit. A detailed guide to this methodology is available on the Social Value UK website[9].

Sub-element 2 – Well-being valuation - The Organisation for Economic Co-operation and Development (OECD) has been developing an approach to measuring well-being for several years. In the UK, a well-being valuation analysis method has been developed for community housing associations to measure the impact of their investment in terms of well-being. This method addresses the ***impact*** of the broader non-housing benefits of access to safe and secure housing ***on an average person's well-being***, and places a dollar value on these benefits. On-line UK-based tools are available for community housing providers[10] to undertake this analysis.

Sub-element 3 – Value to the individual – individuals' narratives can be used to understand the value of both the housing and non-housing benefits of safe and secure housing. The value a person places on a given amenity such as a home (or a job) varies depending on their life situation. These rich narratives are currently captured in annual reports, and also more increasingly in digital stories.

Sub-element 4 – Value of equity - Comparing, understanding and aggregating the value different people place on such social infrastructure can lead to understanding the broader value to society of providing more equitable access to such resources. Published work by the International Panel for Climate Change provides the grounding for future research on this third element (Kolstad, Urama et al. 2014). Additionally, the OECD report, All on Board, explores this further (Organisation for Economic Co-operation and Development 2015a).

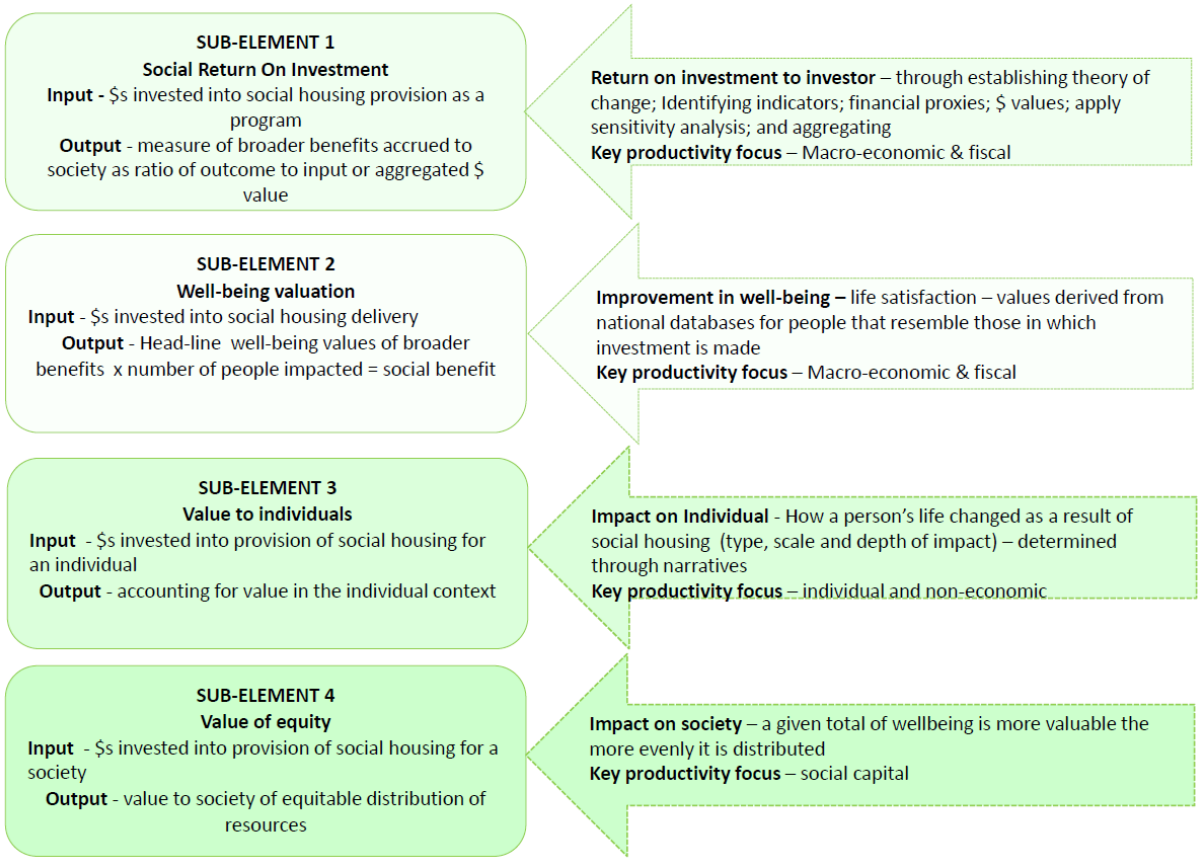
[8] http://www.sbenrc.com.au/research-programs/1-31-rethinking-social-housing-effective-efficient-equitable-e3/

[9] http://www.socialvalueuk.org/resources/guide-to-sroi/

[10] http://www.hact.org.uk/social-value-bank

Figure 10 illustrates how value can be determined by using four different methods, providing examples, available tools and the kind of data required to support this approach. Whilst Treasury decisions are most likely to be influenced by SROI, given the economic and financial focus of their reports to budget review committees and cabinets, these other sub-elements are important in terms of supporting the case for change - hence a composite approach.

**Figure 10 - Composite approach to return on investment**




### *3.1.4..1. Sub-element 1 - social return on investment analysis (SROI)*

The SROI process establishes financial proxies for key indicators along with valuations for impacts. These can then provide a total $ value for the social return on investment, from which a ratio of inputs to impacts can be derived. For example, 'the Victorian Woman's Housing Association delivers $3.14 of social value for every $1.00 invested' (Kliger, Large et al. 2011).

This can be determined from organisational data for establishing scope; identifying stakeholders; mapping relationships between inputs, outputs and outcomes; data to support outcomes and valuing this; establishing impact (e.g., excluding what would have happened anyway); summing the benefits, subtracting the negatives and comparing the result to the original investment (various sensitivity analyses can be applied here); reporting and using results.

SROI can be used to evaluate past investments or forecast future investment returns across housing and non-housing outcomes for providing safe and secure housing.

Key issues:

- Identifying the *scope* of the analysis and the appropriate *indicators*.
- *Attribution* - need to understand the extent to which non-housing outcomes can be attributed to the provision of, i.e., percentage attribution. A follow-on discussion paper will address this.
- Gathering *data* across the nine domains on change, duration of change, appropriate financial proxies.
- Identifying financial proxies for each indicator and assigning $ values - in the UK the HACT Social Value Bank can assist with this - http://www.hact.org.uk/social-value-bank
- *Deadweight* and *Drop-off* - what would have happened anyway and does the outcome drop off over time.

Social Value UK[11] provides good guidance on the SROI process. Additionally there are several accredited organisations in Australia which can undertake SROI analysis. NSW FACS is also developing theirown methodology paper.

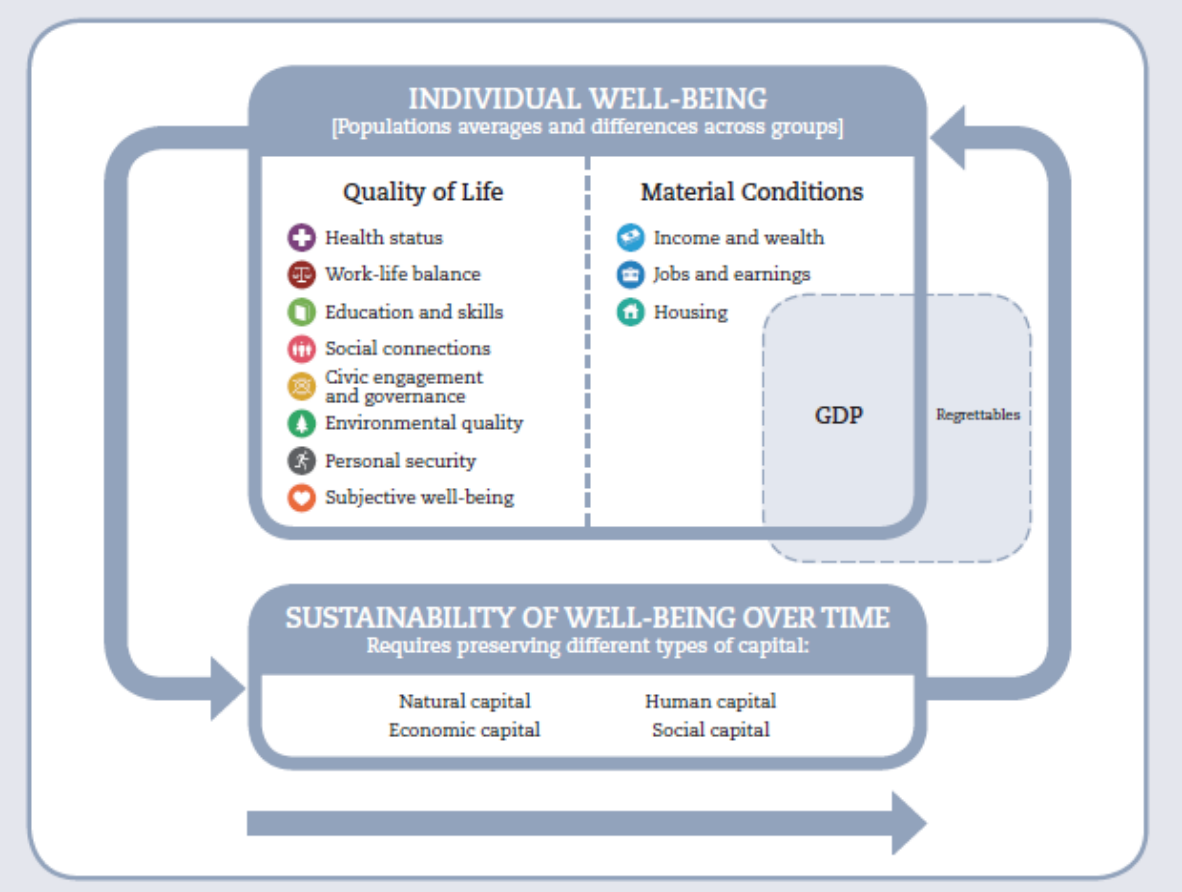
#### *3.1.4..2. Sub-element 2 - well-being valuation*

The Organisation for Economic Co-operation and Development (OECD) has been actively developing methods and guidelines for several years around the measurement of well-being[12]. This relates to 'how people experience and evaluate their life as a whole' (Organisation for Economic Co-operation and Development 2013a). They have established eleven dimensions related to material conditions and quality of life **Error! Reference source ot found.**(Organisation for Economic Co-operation and Development 2013). In the UK, a well-being valuation methodology, specifically developed for community housing providers, has been developed to enable them 'to measure the success of a social intervention by how much it increases a person's well-being' (Trotter, Vine et al. 2015).

Kolstad et al. (2014) also discuss several different approaches to well-being and its measurement (see section 3.4.3 and 3.6 of that report).

[11] http://www.socialvalueuk.org/resources/guide-to-sroi/
[12] http://www.oecd.org/statistics/measuring-well-being-and-progress.htm

**Figure 11 - OECD Framework for measuring well-being and progress (Organisation for Economic Co-operation and Development 2013)**




Like data can be determined from the OECD, well-being work is captured in the *Better Life Index*. This interactive web-based tool provides a potential template for bringing together data gathered for our framework in an accessible way. Extending this approach, the UK-based *Well-Being Valuation* (WV) analysis works on the basis of 'finding from the data the equivalent amount of money needed to increase someone's well-being by the same amount' (Trotter, Vine et al. 2015). Community housing providers in the UK can access the *Social Value Bank*[13] (drawing on data from four national datasets) to undertake a valuation of their social impact. A *Value Calculator*[14] is available for download from HACT UK for this purpose. This draws information from four national datasets: British Household Panel Survey; Understanding Society; Crime Survey for England and Wales; and the Taking Part Survey.

- British Household Panel Survey – with a focus on *social and economic* changes in individuals and households has been gathering data since 1991, following the same group of people over several years - https://www.iser.essex.ac.uk/bhps
- Understanding Society – a UK based longitudinal study of 40,000 households - following *social and economic circumstances, attitudes, behaviours and health* - https://www.understandingsociety.ac.uk/
- Crime Survey for England and Wales – 'used by the Government to evaluate and develop *crime reduction policies* as well as providing vital information about the changing levels of crime over the last 30 years' - http://www.crimesurvey.co.uk/

[13] http://www.hact.org.uk/social-value-bank
[14] http://www.hact.org.uk/value-calculator

- The Taking Part survey – 'collects data on many aspects of *leisure, culture and sport* in England, as well as an in-depth range of socio-demographic information on respondents' - https://www.gov.uk/government/collections/taking-part

**What does this give us**: WV analysis for the UK community housing sector provides headline well-being values for specific financial proxies for improvement in individual well-being for the average person, based on their access to community housing.

Key issues include:

- Ready access to data and values to undertake such an analysis. The UK tool is based on 'most popular community investment activity related outcomes'.
- Resources to build equivalent tools for Australia using the OECD guidelines to enable international comparison.
- Represents the average person rather than members of a cohort likely to need social housing, especially where residualised.
- Chapter 3 of the Intergovernmental Panel on Climate Change (Kolstad, Urama et al. 2014) provides a discussion on temporal and lifetime well-being which may contribute to this aspect of our research.
- The 2016 Overcoming Indigenous Disadvantage Key Indicators Report addresses well-being, providing the potential for future measurement (Steering Committee for the Review of Government Service Provision 2016).

Well-being valuations would need to be established for an Australian context, drawing on national and state databases. Ideally, these valuations would be accessible in a similar way to other online resources such as: HACT UK Value Calculator; the Global Value Exchange[15]; and the OECD Better Life Index tool and website[16].

#### *3.1.4..3. Sub-element 3 – value to the individual*

The intent of this sub-element is twofold: (i) to determine and account for the nature of the *impact on an individual* (type, scale and depth); and (ii) to articulate to society the value of improving the quality of life for all.

- *type of impact*—the nature of the impact(s) on each person or organization - as outputs or outcomes
- *scale of impact*—the number of people or organizations affected
- *depth of impact*—the amount or intensity of change experienced, per type of impact, per person affected - i.e., change in subjectively experienced well-being (McCreless and Trelstad 2012).

This value can be determined from qualitative narratives to be gathered via housing providers, commissioned reports, interviews, surveys and case studies and the like (facilitated by the use of mobile technologies for data gathering).

[15] http://www.globalvaluexchange.org/news/b07bcb501c
[16] http://www.oecdbetterlifeindex.org/#/11111111111

Issues include the resources required to gather, analyse and communicate information and data, and how best to capture the complexity of this data and to present it in a manner which informs policy and delivery.

Surveys, interviews and case studies to build narratives to produce accessible rich outcomes are recommended, for example, http://interactive.nfb.ca/#/outmywindow. Training such as the following could potentially be considered: http://digitalstorytelling.ci.qut.edu.au/index.php/stories/winter_intensive#digital_connections

#### *3.1.4..4. Sub-element 4 - value of equity*

Further theoretical research is required in order to explore this concept in the context of social housing. This consideration is grounded in two realms: (i) the Organisation for Economic and Community Development (OECD) approach to inclusive growth; and (ii) issues of distributive justice and differential value as reported on by the International Panel on Climate Change (IPCC) (Kolstad, Urama et al. 2014).

> *Inequalities and the problems to which they give rise have a spatial dimension. Better transport and housing infrastructure can spur growth and improve inclusiveness in cities, providing vital access assets for economically deprived areas to high-quality jobs and education* (OECD and Ford Foundation 2015).

The OECD Approach

Inclusive growth is defined by the OECD as '*economic growth that creates opportunity for all segments of the population and distributes the dividends of increased prosperity, both in monetary and non-monetary terms fairly across society'* (OECD and Ford Foundation 2015).

This report maintains that inequality in non-income outcomes (such as education, employment opportunities, access to infrastructure and health conditions) can undermine long term growth.

Given the links we have established between having access to safe and secure housing and broader non-housing outcomes, the inclusive growth approach warrants further justification in terms of providing support for the effective investment in social and affordable housing. The following are a few points to note when considering this approach:

- There is an apparent divergence between the growth in multidimensional living standards (for the average Australian) alongside a reduction in economic growth (OECD and Ford Foundation 2015), potentially signally (complex) policy settings which are not in balance.
- Inclusions in multidimensional well-being address current well-being (material living conditions and quality of life); and well-being over time (or for future generations) across economic, natural, human and social capital.
- It is necessary to include the non-monetary dimensions of well-being and to assess the impact of policies on different social groups in terms of employment, health and educational issues and outcomes. For example, those most disadvantaged often live shorter lives and experience difficulty breaking away for problematic educational and employment outcomes (see also (Ianchovichina and Lundstrom 2009, Organisation for Economic Co-operation and Development (OECD) 2014).

- '*Sustained, high growth rates and poverty reduction, however, can be realized only when the sources of growth are expanding, and an increasing share of the labour force is included in the growth process in an efficient way. From a static point of view, growth associated with progressive distributional changes will have a greater impact in reducing poverty than growth which leaves distribution unchanged'* (Ianchovichina and Lundstrom, 2009).
- '*Well-designed and well-regulated open access infrastructure boosts both growth and inclusiveness'* (OECD and Ford Foundation 2015)

As stated at the outset, further research is required to address this sub-element of the *composite return on investment* approach, but it seems relevant to include a focus on inclusive growth to build economic growth. Table 1 details the breakdown of income characteristics for those in public housing. Improving opportunities for better engagement in employment and education to influence both current and intergenerational outcomes could have impacts across several layers of investment.

**Table 1 - Income characteristics of public housing tenants (Council on Federal Financial Relations 2016)**

| Primary source of income | Number | Per cent |
|---|---|---|
| Employee cash income | 24,679 | 7.8 |
| Youth allowance | 1,677 | 0.5 |
| Newstart allowance | 30,080 | 9.6 |
| Other allowances | 999 | 0.3 |
| Age pension | 79,108 | 25.1 |
| Disability pension | 93,112 | 29.6 |
| Other government payment | 59,693 | 19.0 |
| Other cash income | 1,954 | 0.6 |
| Not Stated | 23,661 | 7.5 |
| Total | **314,963** | **100.0** |

Source: AIHW National Housing Assistance Data Repository 2014-15

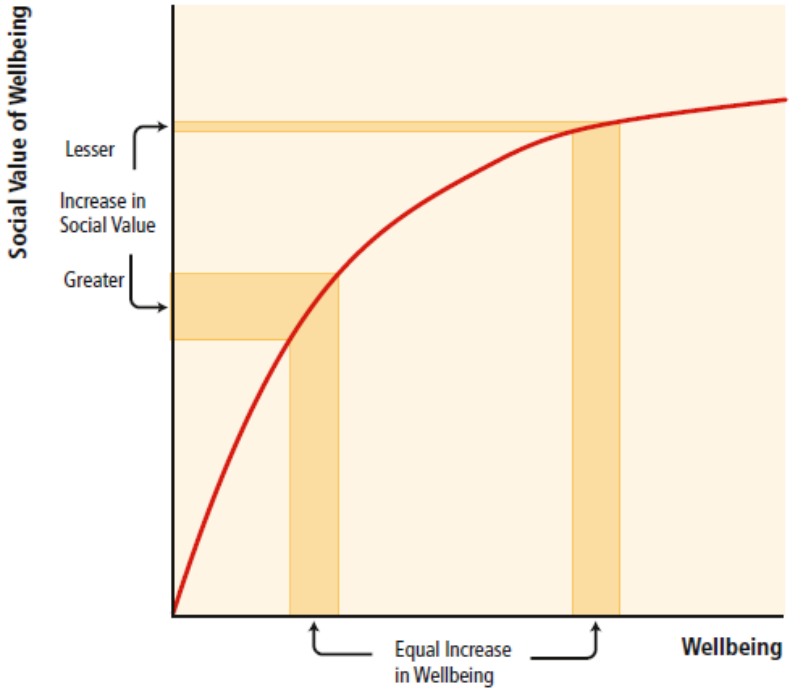
The International Panel on Climate Change (IPCC) Approach

This approach provides a further important dimension to a composite view of return on investment, capturing knowledge and data relevant to the impact on individual outcomes, for specific circumstances (e.g., abilities, point in time, etc.) and in given locations. This would also provide an avenue to compare one person's well-being with another's. Kolstad et al. (2014) discuss this method, which aggregates a person's well-being at a point in time to create *lifetime well-being* for individuals, which can then be aggregated across people to determine an overall value to society. This is contentious but Kolstad et al. further explore this approach to consider the idea of distributive justice, i.e., that equality of well-being does have value (Kolstad, Urama et al. 2014) leading to the ethical theory of prioritarianism, i.e., 'improving a person's well-being contributed more to social welfare if the person is badly off than if they are well off' (Figure 12). Further to this, 'prioritarianism indirectly gives value to equality: it implies that a given total of wellbeing is more valuable the more equally it is distributed' (Kolstad, Urama et al. 2014).

> *Once we have a lifetime wellbeing for each person, the next step is to aggregate these lifetime wellbeings across people, to determine an overall value for society. This involves comparing one person's wellbeing with another's… Utilitarianism gives no value to equality in the distribution of wellbeing: a given total of wellbeing has the same value however unequally it is distributed among people.*

*But the idea of distributive justice … suggests that equality of wellbeing does have value….The resulting ethical theory is called prioritarianism. As Figure 3.1 shows, according to prioritarianism, improving a person's wellbeing contributes more to social welfare if the person is badly off than if they are well off (pp. 222-223).*

**Figure 12.1 - The prioritarian view of social welfare. The figure compares the social values of increases in well-being for a better-off and worse-off person (Kolstad, Urama et al. 2014)**




*The effect of a change on the person's wellbeing is the monetary value of the change multiplied by the rate at which money contributes to the person's wellbeing. This rate is the marginal benefit of money or marginal utility of money to the person. It is generally assumed to diminish with increasing income … In sum, the effect of a change in social value at a particular time is calculated by aggregating the monetary value of the change to each person, weighted by the social marginal value of money to the person, which is the product of the marginal benefit of money to that person and the marginal social value of their wellbeing (Fleurbaey, 2009). Since the marginal benefit of money is generally assumed to diminish with increasing income, the marginal social value of money can be assumed to do the same (Kolstad, Urama et al. 2014).*

Key issues with valuing equity include:

- The resources required to gather, analyse and communicate information and data. Tools such as Lean Data[17] might provide insights into cost effective, individualised data gathering.
- How best to capture the complexity of this data but present it in a manner which informs policy and delivery?

[17] http://ssir.org/articles/entry/the_power_of_lean_data

## 3.2 Strategic Evaluation Framework - Illustrative Examples

### 3.2.1 Illustrative Example # 1 – Reduced financial stress

**Domain**: Economy
**Outcome**: Reduced financial stress
**Indicator**: Relief from being burdened with financial debt
**Attribution**: (Australian Institute of Health and Welfare 2014). Able to manage rent/money better – tenants perceived benefits (Carter and Polevychok 2004), lower rents and mortgage payments mean more disposable income, therefore greater ability to pay off debts (including mortgage). See also: (Canada Mortgage and Housing Corporation (CMHC) 2011)
**Datasets:** See further detail in Dataset Summary tables in Appendix A

- AURIN OECD Indicators: Income, Inequality & Financial Stress (SA2) 2011; Personal & Financial Stressors (SD) 2014; Centre of Full Employment & Equity, (2015): Australia By CofFEE Functional Economic Regions Housing & Labour Data.
- http://www.aihw.gov.au/indigenous-data/health-performance-framework/ Measure 2.08 Income.
- Data.gov.au - http://data.gov.au/dataset?q=debt&sort=extras_harvest_portal+asc%2C+score+desc
- Bankwest Curtin Economics Centre, ABS and Centrelink also likely sources.

**Return on Investment, for example:**

*Sub-element 1 – Social Return on Investment (SROI)*

- No values discovered at this time.

Sub-element 2 – Well-being Valuation Analysis (WVA)

- Fujiwara found a value of £2,300 for services that help people to lift themselves out of heavy debt (Fujiwara, 2013, p.34).
- Trotter, Vine et al. found a value of: £1,593 for being debt-fee; £9,428 for relief from being heavily burdened with debt; £7,347 for being able to pay for housing; £8,917 for financial comfort; £3652 for being able to insure home contents (Trotter, Vine et al., 2014, p.15).

*Sub-element 3 – Value to individual*

- (National Affordable Housing Consortium 2015, p.17) Tenant Profile –'*NRAS helped Stephen move himself and his daughter from a caravan to an apartment. Stephen says the reduced rent made it very affordable for them'*.
- (Common Ground Queensland, 2016) Nina's story '*Last year Nina's hours of work were reduced and she was concerned about being able to afford her rent. Common Ground Qld were able to reduce Nina's rent in line with her reduced income, this saved her from becoming homeless again*'.

*Sub-element 4 – Value of equity*

- Subject to further research.

### 3.2.2 Illustrative Example # 2 – Increased participation in education

**Domain**: Education
**Outcome**: Increased participation
**Indicator**: Participation in adult learning courses
**Attribution**: (Australian Institute of Health and Welfare, 2014, p.20-21) Feel more able to start or continue education/training - perceived tenant benefit;
(Australian Institute of Health and Welfare (AIHW) 2015) 'Adult learning is a powerful tool in achieving better health, education and economic outcomes' (Chandola et al., 2014).
Research also shows that the value of education in midlife is greatest for those with the poorest education at the time of leaving school, with qualifications achieved at this life stage offering a protective effect against coronary heart disease (Chandola et al., 2011). There are strong associations between formal educational attainment (particularly Year 12), parental educational attainment and measures of health literacy (ABS, 2008); (Kliger, Large et al., 2011, p.5-7), 3 women gained higher education certificates after moving into the housing. 'The women linked their ability to further their education with the increased stability found in their lives after moving on from their old circumstances and into new housing'; and others, see Attachment A – Domain Tables.
**Datasets:** See further detail in Dataset Summary tables in Appendix A

- AURIN, Public Health Information Development Unit, (2014): SD Learning or Earning (15-19 y.o).
- http://www.aihw.gov.au/indigenous-data/health-performance-framework/ Measure 2.06 Educational attainment and participation of adults.
- See also Attachment A – Domain Tables.

**Return on Investment, for example:**
*Sub-element 1 – Social Return on Investment (SROI)*

- Kliger, Large et al. find a return of AU$102,473 for an increase in education / training over 20 years (Increase in stakeholders completed/completing TAFE/ other course) (VWHA (Kliger, Large et al., 2011, p.5)).
- Zon, Molson et al. find a return of CA$4,874.55 for additional earning potential resulting from continuing education and retraining, affecting 188,676 people (2006) (Zon, Molson et al., 2014, p 35).

*Sub-element 2 – Well-being Valuation Analysis (WVA)*

- Trotter, Vine et al. find a value of: £1,773 for access to general job training; £1,124 for access to vocational training; £9,447 for access to government training scheme; £1,747 for access to apprenticeships; £807 for access to employment training (Trotter, Vine et al., 2014, p.14).
- Fujiwara finds £754 as the value of undertaking one part-time course to the individual (Fujiwara 2013, p.32).

*Sub-element 3 – Value to individual*

- (Common Ground Queensland, 2016) Anne's story – *'Ann now proudly shares that she has just completed the Ceramics component of the Certificate III in Visual Arts at Queensland TAFE, Brisbane Southbank Campus, and is one of the key artists and tenant co-facilitators engaged in creating the Cross-link Mosaic Sculpture which will grace Brisbane Common Ground's public thoroughfare that links Hope Street and Fleet Lane'*.

*Sub-element 4 – Value of equity*

- Subject to further research.

### 3.2.3 Illustrative Example # 3 – Increased participation in employment

**Domain**: Employment
**Outcome**: Increased participation in employment
**Indicator**: Move from unemployment to employment
**Attribution**: Positive links between stable housing and employment have been identified in several sources including (Bridge, Flatau et al. 2003, Phibbs and Young 2005, Maclennan 2008, Australian Institute of Health and Welfare 2014), and others detailed in *Attachment A Domain Tables*.
**Datasets:** See further detail in Dataset Summary tables in Appendix A

- State or territory based data on tenant employment status and income source, the nature of housing assistance and location of housing may be available.
- Australian Government Dept of Employment - http://lmip.gov.au/default.aspx?LMIP/DownloadableData/LabourForceRegionLFR
- Centrelink - https://www.humanservices.gov.au/corporate/statistical-information-and-data/centrelink-payment-statistics
- AURIN - Regional Australia Institute, (2011): LGA Human Capital Indicators 2011.
- ABS – for example - http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6291.0.55.001Sep%202016?OpenDocument

**Return on Investment, for example:**

*Sub-element 1 – Social Return on Investment (SROI)*

- Australian research found a return of AU$987,012 over a 20 year period per person through increased tax income due to tenants being employed (increased taxes and reduced welfare payments) (Victorian Women's Housing Association 2010, Kliger, Large et al. 2011), and AU$543,894 over a 20 year period through increase in employment (stable employment since tenancy).
- Ravi and Reinhardt found a return of AU$17,784 per year per worker for improved earning potential as measured by part-time employment rates at minimum wage (Ravi and Reinhardt 2011).
- Other international returns also available.

*Sub-element 2 – Well-being Valuation Analysis (WVA)*

- Fujiwara ascribed a value of £8,700 per year in addition to loss of income, in terms of the average person's well-being (Fujiwara 2013).
- Trotter, Vine et al. found a value of £10,767 for full-time employment; £11,588 for self-employment; £1,229 for part-time employment; and £12,034 for a secure job (Trotter, Vine et al. 2014).

*Sub-element 3 – Value to individual*

***An opportunity for Corey:*** *For Corey, life hadn't been kind until starting with Access Place Gardens and Mowing. He was couch surfing with no fixed address. He had no savings, no budgeting skills, and no driver's licence. Since starting with Access Place, Corey's future has started to look brighter. He now has his own place with his grandmother moving in to provide extra support. Thanks to his newly acquired budgeting skills, he has also just purchased a car (Churches of Christ Housing Services 2016).*

*Sub-element 4 – Value of equity*

- Subject to further research.

### 3.2.4 Strategic Evaluation Framework - illustrative examples across selected indicators

The following table is a snapshot of the complete set of Combined Tables provided in Attachment A to this Report.

| | | | RETURN ON INVESTMENT | | | |
|---|---|---|---|---|---|---|
| **DOMAIN & OUTCOMES** | **INDICATORS** | **ATTRIBUTION**<br>**References & Nature of attribution**<br>**Quality of Evidence: Robust, Medium, Low** | **Sub-Element 1**<br>**Social Return on Investment (SROI)**<br>**(some economic benefits included also)** | **Sub-Element 2**<br>**Well-being valuation (WV)**<br>**Per person per year** | **Sub-Element 3**<br>**Value to the individual (Narrative)** | **DATASETS**<br>**(Known)**<br>**(Possible)** |
| **COMMUNITY DOMAIN** | | | | | | |
| Culturally rich and vibrant communities<br>(WA priority area) | Opportunities to participate in sports and recreation activities | (The Scottish Government 2011a) - P.17 space to play – impact on mental well-being for children | | £428 Participating in sport at least once per month (Fujiwara 2013) p. 34 | | - State and Territory-based Dept Sport & Rec<br>- DPLG Community services<br>- State and Territory-based support programs<br>-AURIN SA2 OECD Indicators: Volunteering 2011<br>-AURIN Socio-economic variables by Urban Centres & Localities (UCL) for Australia. |
| **ECONOMY DOMAIN** | | | | | | |
| Reduced financial stress<br><br>(WA priority area) | Relief from being burdened with financial debt | (Australian Institute of Health and Welfare 2014) p. 20-210 Able to manage rent/money better – tenants perceived benefits<br><br>See also : (Carter and Polevychok 2004); (Canada Mortgage and Housing Corporation (CMHC) 2011) | | £2,300 services that help people to lift themselves out of heavy debt (Fujiwara, 2013) p.34<br>£1,593 debt-fee; £9,428 relief from being heavily burdened with debt; £7,347 able to pay for housing; £8,917 financial comfort; £3652 able to insure home contents (Trotter, Vine et al. 2014)p.15 | (National Affordable Housing Consortium, 2015) p.17 Tenant Profile - NRAS helped Stephen move himself and his daughter from a caravan to an apartment. Stephen says the reduced rent made it very affordable for them.<br><br>(Common Ground Queensland, 2016) Nina's story 'Last year Nina's hours of work were reduced and she was concerned about being able to afford her rent. Common Ground Qld were able to reduce Nina's rent in line with her reduced income, this saved her from becoming homeless again'.<br><br>(Churches of Christ Housing Services 2016) p.12 Tabra's story<br><br>Housing Authority rent is based on 25% of income, so financial burdens associated with housing should be relieved through social housing tenancy. | -AURIN OECD Indicators: Income, Inequality & Financial Stress (SA2) 2011<br>-AURIN Personal & Financial Stressors (SD) 2014<br>- AURIN Centre of Full Employment & Equity, (2015): Australia By CofFEE Functional Economic Regions Housing & Labour Data<br>Other sources in ABS & - Centrelink |
| **EDUCATION DOMAIN** | | | | | | |
| Increased participation in continuing education | Participation in adult learning courses | (Australian Institute of Health and Welfare 2014)<br>p.20-21 Feel more able to start or continue education/training - perceived tenant benefit | $102,473 Increase in education / training over 20 yrs (Increase in stakeholders completed/completing TAFE/ other course) (VWHA) (VWHA (Kliger, Large et al., 2011)) p.5 **AUS** | £1,773 General training for job; £1,124 Vocational Training; £9,447 Government training scheme; £1,747 Apprenticeships; £ 807 employment training (Trotter, Vine et al. 2014) p.14 **UK** | (Churches of Christ Housing Services 2016)<br>p. 22 Ellie's Story - also just finished a Certificate in Community Services.' | - AURIN, Public Health Information Development Unit, (2014): SD Learning or Earning (15-19 y.o.)<br>- See also list below[18] |

[18] WA Department of Education:

- Attendance

| DOMAIN & OUTCOMES | INDICATORS | ATTRIBUTION<br>References & Nature of attribution<br>Quality of Evidence: Robust, Medium, Low | RETURN ON INVESTMENT<br>Sub-Element 1<br>Social Return on Investment (SROI)<br>(some economic benefits included also) | RETURN ON INVESTMENT<br>Sub-Element 2<br>Well-being valuation (WV)<br>Per person per year | RETURN ON INVESTMENT<br>Sub-Element 3<br>Value to the individual (Narrative) | DATASETS<br>(Known)<br>(Possible) |
|---|---|---|---|---|---|---|
| | | | CA$4,874.55 Additional earning potential resulting from continuing education and retraining. Affecting 188,676 (2006) (Zon, Molson et al., 2014) p. 35 **CAN** | £754 value of undertaking one part-time course to the individual (Fujiwara, 2013) p.32 **UK** | | |
| **EMPLOYMENT DOMAIN** | | | | | | |
| Increased participation in employment<br><br>(NSW & WA priority area) | Move from unemployment to employment | (Australian Institute of Health and Welfare 2014) **AUS** p.20-21 Feel more able to improve job situation - perceived tenant benefit<br><br>(Maclennan 2008) p. iii – job readiness; lowered levels of labour market participation, absenteeism as a result of health issues **CAN**<br><br>(Bridge, Flatau et al. 2003) p. ii amount of labour supplied will depend on the structure & parameters of the HA (housing assistance) program and how this affects labour market opportunities; residing in public housing as a child has beneficial affects on labour market outcomes as a young adult; p. iii evidence that public housing tenure reduces an individual or household's willingness to migrate **AUS**<br><br>(Phibbs and Young 2005) p. ii increase in self esteem reported by some respondents meant they wanted to work on their career **AUS**<br><br>See also (Canada Mortgage and Housing Corporation (CMHC) 2011); (Fauth, Leventhal et al. 2004); (Orr, Feins et al. 2003); (Olsen, Tyler et al. 2005); (Susin | $987,012 increased tax income due to tenants employed over 20 year period (Increased taxes and reduced welfare payments) (VWHA (Kliger, Large et al., 2011)) p.4 **AUS F**<br><br>$543,894 Increase in employment (Stable employment since tenancy) (VWHA (Kliger, Large et al., 2011)) p.6 **AUS M/T**<br><br>$17,784/year per worker Financial Proxy: Improved earning potential as measured by part-time employment rates at minimum wage (Ravi and Reinhardt, 2011) p. 55 **AUS**<br><br>CA$9,532.50 part-time employment at Ontario's minimum wage is used for the financial proxy. 34,519 people affected (Zon, Molson et al., 2014) p. 33 **CAN**<br><br>CBA "Income Support Fiscal and economic benefit from a workless claimant entering work" Fiscal value £7,972; economic value £9,163 **UK** | Unemployment - £8,700 per year in addition to loss of income (Fujiwara, 2013) p.31 **UK**<br><br>Full-time employment £10,767; Self-employment £11,588; Part-time employment £1,229; Secure job £12,034 (Trotter, Vine et al. 2014) p.14 **UK** | (Churches of Christ Housing Services 2016) p 17 Social Enterprise – An opportunity for Corey **AUS** | - State and Territory-based agencies - tenant employment status and income source; nature of Housing Assistance; location of housing<br>- Centrelink<br>-AURIN Regional Australia Institute, (2011): LGA Human Capital Indicators 2011. |

- Suspension
- On-entry assessment
- National Assessment Program – Literacy and Numeracy (NAPLAN) - Years 3, 5, 7 and 9 in reading, writing, language conventions (spelling, grammar and punctuation), numeracy
- WA Literacy and Numeracy Assessment (WALNA) - Years 3, 5 and 7 in reading, writing, spelling, numeracy
- Teacher grades and assessments – reporting to parents and senior secondary.

Currently available for WA public schools only.
Refer to the Australian Curriculum, Assessment and Reporting Authority (ACARA) website http://www.acara.edu.au/reporting for the Measurement Framework for Schooling in Australia.
Commonwealth - Australian Early Development Census (AEDC):

- First year formal schooling - Physical health and wellbeing, social competence, emotional maturity, language and cognitive skills, communication skills and general knowledge.

School Curriculum and Standards Authority:

- WA Certificate of Education (WACE)
- National Assessment Program – Literacy and Numeracy (NAPLAN).

Kindergarten to Year 12 for all WA schools.
Playgroups WA?

| DOMAIN & OUTCOMES | INDICATORS | ATTRIBUTION<br>References & Nature of attribution<br>Quality of Evidence: Robust, Medium, Low | RETURN ON INVESTMENT<br>Sub-Element 1<br>Social Return on Investment (SROI)<br>(some economic benefits included also) | Sub-Element 2<br>Well-being valuation (WV)<br>Per person per year | Sub-Element 3<br>Value to the individual (Narrative) | DATASETS<br>(Known)<br>(Possible) |
|---|---|---|---|---|---|---|
| | | 2005); (Wasserman 2001); (Oreopoulos 2003); (Kliger, Large et al. 2011); (Hay 2005) | | | | |
| **ENVIRONMENT DOMAIN** | | | | | | |
| Dwelling design adequacy appropriateness and quality<br><br>(WA) | Thermal comfort | See also (Canada Mortgage and Housing Corporation (CMHC), 2011)<br><br>(The Scottish Government 2011a) p.17 level of natural daylight, warmth and no dampness - impact on mental wellbeing in children | | | | NSHS – Dwelling condition in social housing |
| Reduced water consumption - process<br>(NSW) | Potable water consumption | See also (Canada Mortgage and Housing Corporation (CMHC) 2011) | | | | NSHS – Social tenant amenity rating – water efficiency |
| **HEALTH DOMAIN** | | | | | | |
| Improved overall health | Reduction in annual spend on health services | (Pawson, Milligan et al. 2015) p.54 – reduction in medications (L) **AUS**<br><br>(Wood, Flatau et al. 2016) p.5 the provision of public housing significantly reduces health service use **AUS**<br><br>(Phibbs and Young 2005) p.i Extra income, which means they can participate in illness prevention programs such as joining a gym and getting more exercise **AUS**<br><br>See also: (Maclennan 2008); (Katz, Kling et al. 2001) | $1,872/ year per household Financial Proxy: Average annual spend on health services (Ravi and Reinhardt 2011) p.56 **AUS**<br><br>$429,975 Improved physical and mental health of women and their children over 0 yrs (Reduced reliance on social workers through time) (Kliger, Large et al., 2011) p. 5 **AUS**<br><br>$4,846 per person/year direct calculable government health care cost savings associated with reduced health service use following public housing entry (Wood, Flatau et al., 2016) p.6 **AUS**<br><br>CD$211 million (cost avoidance) Average homeless adult with severe addictions and/or mental illnesses to cost British Columbia approximately $55,000 per year, a sum reduced to $37,000 per year with adequate supportive housing. (Buzzelli 2009) p.36 **CAN** | | | - Australian Institute of Health and Welfare: Costs of health services. |
| | Subjective well-being | (Kearns, Petticrew et al. 2008b) p.11 – self reported health improvement<br>UK | | £12,470 feel in control of life; £13,080 high confidence (Trotter, Vine et al. 2014) p. 14 **UK** | | - State and Territory-based Depts of Health. See note below[19]<br>- AURIN, University of |

[19] E.g. WA Department of Health:

- WA Health and Wellbeing Surveillance System (HWSS) (population annual surveys). Available online – self-reported health status measured using SF-8 instrument. Kessler 10 used to report psychological distress. Prevalence of major life events e.g. financial hardship, moving house. Data available at large geographical areas; Hospital Morbidity Data System (HMDS); Emergency Department Data Collection (EDDC).

| DOMAIN & OUTCOMES | INDICATORS | ATTRIBUTION<br>References & Nature of attribution<br>Quality of Evidence: Robust, Medium, Low | RETURN ON INVESTMENT<br>Sub-Element 1<br>Social Return on Investment (SROI)<br>(some economic benefits included also) | Sub-Element 2<br>Well-being valuation (WV)<br>Per person per year | Sub-Element 3<br>Value to the individual (Narrative) | DATASETS<br>(Known)<br>(Possible) |
|---|---|---|---|---|---|---|
| | | (Pawson, Milligan et al. 2015) p.54 - improved health (L) **AUS**<br><br>(Phibbs and Young 2005) p.i Reduced stress due to security of tenure and more income **AUS**<br><br>See also (Australian Institute of Health and Welfare, 2014) | | | | Canberra - National Centre for Social and Economic Modelling, (2011): SA2 Life Satisfaction from 0 to 100 (Synthetic Data) |
| **HOUSING DOMAIN** | | | | | | |
| Effective service provision<br><br>(NSW & WA) | Maintenance expenditure per social housing dwelling | (Maclennan 2008) p.54 Poor-quality and substandard housing undermines health; p.58 Results of these studies show that while socio-economic disadvantage makes the largest relative contribution to the explanation of both violent and property crime rates, disadvantage is followed in importance by the relative contribution of the condition of housing in the neighbourhood, indicated by the proportion of dwellings in need of major repairs. As the proportion of dwellings in need of major repair increases, so do the violent and property crime rates net of the other variables in the model.<br><br>(Bridge, Flatau et al. 2003) p.v Poor quality construction and lack of regular maintenance, specifically<br>bad plumbing, poor drainage, lack of insulation and poor ventilation negatively impact on mortality and morbidity; and negatively impact mental health and wellbeing | | Damp £1,068; Poor lighting £1,044; Condensation £645; Rot £598 (Fujiwara, 2013) p.25 | | - State and Territory based agencies |
| SOCIAL DOMAIN | | | | | | |
| Social empowerment | Tenant empowerment (involvement in admin and maintenance) | (Ravi and Reinhardt 2011) p. 3 Greater tenant empowerment allows CH residents to have more control of their residential and personal lives **AUS**<br><br>(Pawson, Milligan et al., 2015) AUS p.54 Increased independence / control over circumstances | | £8,116 active in tenants group (Trotter, Vine et al. 2014) p.15 **UK** | (Churches of Christ Housing Services 2016) - p 27 Robyn's story 'Personally, I really enjoy being in<br>TAG. It's a group thing, its nothing separate. I get personal fulfilment<br>out of going along.' | None found. May require qualitative research |
| Neighbourhood safety (NSW & WA) | Perceptions of safety | (Maclennan 2008) **CAN** p.50-51 various indicators for impact on children on quality of neighbourhood<br><br>(Phibbs and Young 2005) **AUS** p. ii People also felt more secure because they thought they were living in a safer neighbourhood. | | £5,340 Police doing a good job; £11,873 Not worried about crime (Trotter, Vine et al. 2014).14 **UK** | | - AURIN Torrens University - Public Health Information Development Unit, (2014): SLA11 Community Strength (NB. various crime statistics available from WA Police, ABS) |

| DOMAIN & OUTCOMES | INDICATORS | ATTRIBUTION<br>References & Nature of attribution<br>Quality of Evidence: Robust, Medium, Low | RETURN ON INVESTMENT<br>Sub-Element 1<br>Social Return on Investment (SROI)<br>(some economic benefits included also) | RETURN ON INVESTMENT<br>Sub-Element 2<br>Well-being valuation (WV)<br>Per person per year | RETURN ON INVESTMENT<br>Sub-Element 3<br>Value to the individual (Narrative) | DATASETS<br>(Known)<br>(Possible) |
|---|---|---|---|---|---|---|
| | | See also: (Anderson, Charles et al., 2003); (Carter, Polevychuk et al., 2009); (Katz, Kling et al., 2001); (Orr, Feins et al., 2003) ; (Partnership for America's Economic Success (PAES), 2008) | | | | |
| **URBAN AMENITY DOMAIN** | | | | | | |
| Regeneration of the local area (NSW & WA) | Quality of neighbourhood (new indicator) | (The Scottish Government, 2008) p.4 contribution of neighbourhood to mental health; p.5 Good Places Better health program; p.16 - in relation to mental health and well-being, managers will be better equipped to ensure regeneration projects can create positive environments in terms of noise, litter, access to greenspace, access to culture, safe streets, opportunities for play, increased opportunities for active travel, reduced isolation, improved community cohesion…; p.21 - role of regeneration of area, place making, opportunity for physical activity, clean attractive environments, well used accessible greenspace, quiet environments, safe streets, active travel opportunities, opportunities for play on improved mental well-being<br><br>(The Scottish Government 2011a) p.20 – noise sourced such as aircraft and road noise – impact on child health and mental well-being | | £1,747 Good neighbourhood (Trotter, Vine et al. 2014) **UK**<br>£6,500 Regeneration of local area (Fujiwara 2013) **UK** | | Local government authorities |

# 4. MOVING FORWARD

Several key opportunities exist for moving forward with the findings of this research. These include implementation of the research findings, for example:

- WAHA have noted that 'the nine domains will assist us to more effectively communicate and contextualise the complexity of the Housing Authority's authorising and operating environment'. They have also indicated that 'the scalability of the 180 indicators is a key benefit of the SBEnrc Framework and accommodates tailoring to specific policy making and evaluation contexts within the Housing Authority'[20].
- In Queensland, the Department of Housing and Public Works have stated that 'the Strategic Evaluation Framework is supported by a solid analysis of the available information and represents a promising approach to measuring the value of providing social housing. This work will be important in better understanding the complexity of the social housing environment'[21].
- NSW LAHC have stated that 'the Strategic Evaluation Framework will help us prioritise and make informed decisions around future policy making and delivery based around the social benefits across the 9 domains. Particularly useful is the composite approach to valuing the return on investment in order to build a case for on-going investment in social housing. NSW LAHC supports further research into data sharing through secure channels to enable better decisions and policy development'[22].
- NAHC 'is keen to see a new national framework that effectively evaluates the housing and non-housing outcomes of social and affordable housing investment. This will build greater confidence for the business case for future investment and enhance transparency and accountability in the system. We will be using the research along with our National and State colleagues to seek this outcome. In addition NAHC will be using the research to improve our measurement of the 'Social Value' we add to society'[23].

Other future opportunities include:

- A follow-on SBEnrc project, *Procuring Social and Affordable Housing*, currently awaiting final approvals, will use the outcomes of these two SBEnrc projects to inform recommendations on: (i) understanding how housing needs will change over the next 20 years including identifying key challenges, and the relationship to other social measures, for example security, health and social connectedness; (ii) developing better mechanisms to address/deliver social value whilst at the same time addressing risk profiles for those delivering both asset and service-based outcomes; and (ii) making recommendations on how to optimise procurement frameworks to improve delivery of social housing and access to affordable housing.
- An Australian Research Council (ARC) Linkage bid, *An integrated model for a sustainable social housing system* is being finalised for submission. This bid is underpinned by the framework established in this and the previous *Rethinking Social*

[20] Email correspondence from WAHA 16 February 2017
[21] Email correspondence from QDHPW 3 April 2017
[22] Email correspondence from NSW LAHC 28 February 2017
[23] Email correspondence from NAHC 20 February 2017

*Housing* project. This project will aim to develop an innovative integrated redevelopment or asset management, financial evaluation and financing model that can increase supply, upgrade quality, lead to community transformation or renewal and achieve improved social outcomes.

Future areas for research identified in the course of this project include:

- a long term pilot of the strategic evaluation framework
- developing a well-being valuation database to inform the CROI approach, similar to that developed by HACT UK
- further investigation of the value of equity element of the CROI
- investigating options for building a stronger national conversation to strengthen the case for social and affordable housing in Australia as critical social and economic infrastructure.

# 5. APPENDIX A – EXTENDED DATASET SUMMARY

| | Indicator | Name of Dataset | Custodian / Source | Spatial Extent | Type of data | Currency | Description | Metadata/link |
|---|---|---|---|---|---|---|---|---|
| Higher Level Datasets | | | | | | | | |
| | Socio-economic status, advantage and disadvantage, education, occupation, etc. | Socio-Economic Indices for Areas (SEIFA) | Australian Bureau of Statistics ABS | Australia. | Excel, ,KMZ (Google Earth files), data cubes or Table Builder (xls) | Updated every 5 years (based on Census) | "SEIFA is a product developed by the ABS that ranks areas in Australia according to relative socio-economic advantage and disadvantage." 4 Indices calculated from a range of Census variables. Includes:<br>· The Index of Relative Socio-Economic Disadvantage (IRSD)<br>· The Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD)<br>· The Index of Education and Occupation (IEO)<br>· The Index of Economic Resources (IER). | http://www.abs.gov.au/websitedbs/censushome.nsf/home/seifa |
| | General data on housing and income | Housing Dataset | Centrelink (DSS) | SA2 and up (mostly larger) | Various: xls, csv, doc, pdf, kml, json, rrd, etc. (depends on the data) | Various | Point in time data for income units in receipt of Centrelink payments, including information about the type of housing, amount of weekly income and payment type.<br>NOTE: IS NOT PUBLICLY AVAILABLE.<br>Contact Custodian (in link) for access | http://data.gov.au/dataset/d8de9e62-8b82-4d4a-9f50-cdc2f1ba177f |
| | General data on Centrelink payments | Various | | | | | All de-identified. Multiple datasets available (see link) including DSS payments by SA2, DSS payment demographic data, income management summary data, DSS payment trends and profile reports). | http://data.gov.au/organization/department-of-social-services |
| | Land-use (housing, social, etc.) | Open Street Map | Open Street Map. Open source citizen derived data | Global | GPS, proprietary format, can be converted (using QGIS, Arcmap plugin, etc.) to use in other applications. Point, line and polygon data | Ongoing (daily) | Open Street Map has user edited layers for most urban areas, showing locations of sport and recreation sites, such as parks, sports centres, community centres etc. Can be viewed online or downloaded/converted to GIS format. Open Street Map is built by a community of mappers that contribute and maintain data about roads, trails, cafés, railway stations and much more, all over the world. | https://www.openstreetmap.org/node/1546628274 |
| | All | Data.gov.au | Federal Government of Australia | Open source government data | Various | Depends on dataset | Data.gov.au provides an easy way to find, access and reuse public data. Our team works across governments to publish data and continue to improve functionality based on user feedback. We encourage the use of government data to analyse, mashup and develop tools and applications to benefit all Australians. | http://data.gov.au/ |
| | Inequality, etc. | Centrelink payment statistics | DSS | Australia. | various, including doc, pdf, csv, etc. | 2014? | Various datasets available (22); for example, "This is a machine readable file containing DSS payments by Statistical Area 2 for use in National Map. Please see the DSS Demographic Data available here (https://data.gov.au/dataset/dss-payment-demographic-data) for details." | https://www.humanservices.gov.au/corporate/statistical-information-and-data/centrelink-payment-statistics<br><br>http://data.gov.au/organization/department-of-social-services |
| | AURIN Socio-economic variables by Urban Centres & Localities (UCL) for Australia | Aurin (derived from ABS Census) | University of Queensland | Australia (UCL) | Various | 2006 | Socio-economic variables of Urban Centres and Localities in Australia (2006). The variables were derived from the 2006 Census. | http://data.aurin.org.au/dataset/uq-erg-uq-polygon-ucl-socio-economic-variables-ucl |
| | Socio-Economic Variables by PBC for 2013 Australian federal election. | Aurin | University of Queensland | Australia. | Aurin (downloadable as csv, json, shp) | 2013 | Socio-economic variables of 7500 Polling Booth Catchments (PBCs) in Australia. The SA1s at the 2011 Census of Population and Housing were spatially allocated to a nearest polling booth location to form polling booth catchments within each of the 150 Electoral Divisions. The 150 booth catchments layers were then merged into one Australian booth catchments layer. The socio-economic variables were derived from 2011 census. | http://data.aurin.org.au/dataset/uq-erg-uq-election-7500-booth-catchments-socio-economic-variables-na |

| | Indicator | Name of Dataset | Custodian / Source | Spatial Extent | Type of data | Currency | Description | Metadata/link |
|---|---|---|---|---|---|---|---|---|
| | Demographics, etc. | ABS | ABS | Australia. Mesh Blocks to State | Multiple | Current (varies) | ABS has statistics of multiple data sources, and is generally the origin of many of the other datasets listed including those derived from the 5 yearly Census. | http://www.abs.gov.au/ |
| | General | The Household, Income and Labour Dynamics in Australia (HILDA) Survey | University of Melbourne | Australia | Individual de-identified | Current | The Household, Income and Labour Dynamics in Australia (HILDA) Survey is a household-based panel study which began in 2001. It has the following key features:<br>It collects information about economic and subjective well-being, labour market dynamics and family dynamics.<br>Special questionnaire modules are included in each wave. Interviews are conducted annually with all adult members of each household. The panel members are followed over time. The funding has been guaranteed for 18 waves, though the survey is designed to continue for longer than this.<br>The wave 1 panel consisted of 7,682 households and 19,914 individuals. In wave 11 this was topped up with an additional 2,153 households and 5,477 individuals.<br>**Academic and other researchers can apply to use the General Release datasets for their research. NOTE: THIS IS DIFFICULT TO GET ACCESS TO, VERY RESTRICTED** | https://www.melbourneinstitute.com/hilda/ |
| | Housing | Department of Housing and Public Works dataset listing | DPHW | Queensland | List of datasets available | Current | A list of the Department of Housing and Public Works (HPW) datasets assessed for release to the open data portal in line with the department's Open Data Strategy. | https://data.qld.gov.au/dataset/data-release-schedule/resource/85a0f410-6c4f-4846-8e1d-8e903f969777 |
| | Various | Victorian Government Open Data | Victorian Governme nt | Victoria | List of all datasets, various including xls, doc, shp, xml, kmz, etc. | Various | Data that Victorian government departments and agencies have opened and made available to the public. | https://www.data.vic.gov.au/ |
| | | Western Australian Open Data | WA Governme nt | WA | List of all datasets, various including xls, doc, shp, xml, kmz, etc. | Various | The purpose of the Western Australian Whole of Government Open Data Policy is to improve management and use of the public sector's data assets in order to deliver value and benefits for all Western Australians. | http://catalogue.beta.data.wa.gov.au/ |
| | City Data | WCCD Open Data for Cities | World Council of City Data | Global (but incl. Melbourne) | Online indicator map | Current | Based on the first international standard on city data — ISO 37120 — the WCCD Open City Data Portal allows the EXPLORATION, TRACKING, MONITORING, and COMPARISON of member cities on up to 100 service performance and quality of life indicators. Includes education, health, etc. | http://open.dataforcities.org/ |
| 1. Community Domain | | | | | | | | |
| 1.3.4. Culturally rich and vibrant communities | Opportunities to participate in sports and recreation activities | WA Dept Sport & Rec. | WA Dept of Sport and Recreation | Western Australia | | | | |
| | | DPLG Community services | | | | | | |
| | | WAHA support programs | | WA | | | | |
| | | AURIN SA2 OECD Indicators: Volunteering 2011 | Aurin University of Canberra NATSEM | Australia, SA2 | Aurin online portal (can download data in csv or json) | 2011 | This table contains volunteering rates (number of volunteers by age group divided by the population in that age group in the area) by age group (15 - 24, 25 - 44, 45 - 64, 65 - 74, 75 and older) calculated from the 2011 Census for the AURIN Social Indicators project. | http://data.aurin.org.au/dataset/uc-natsem-natsem-natsem-tb5-7-social-indicators-volunteering-geometry-sa2 |

| | Indicator | Name of Dataset | Custodian / Source | Spatial Extent | Type of data | Currency | Description | Metadata/link |
|---|---|---|---|---|---|---|---|---|
| | | Individual state and LGA datasets; for example, open space or parks | i.e. Gold Coast City Council, QPSW | Local Government Areas (LGA) and by cadastre (state) | Shapefile, KML, KMZ, Json, Mapinfo, CSV | Varies by dataset | Given is the data.gov.au link for the Gold Coast City Council upper level (listing of all datasets). However, the data.gov.au has multiple datasets, for various features and formats. This is searchable by name, spatial area, type of data, etc., and has comprehensive metadata information included. | http://data.gov.au/organization/city-of-gold-coast |
| 2. Economy Domain | | | | | | | | |
| 2.9. Reduced financial stress | Relief from being burdened with financial debt | AURIN OECD Indicators: Income, Inequality & Financial Stress (SA2) 2011 | Aurin (derived from ABS Census) | Australia (SA2) | Aurin online portal (can download data in shapefile, mapinfo etc) | 2011 | This table contains estimates of incomes (Median Equivalised, Median Disposable), poverty (using the proportion of people below a half median equivalised disposable household income poverty line), inequality (using the Gini coefficient) and financial stress (had no access to emergency money, can't afford a night out once a fortnight and leaving low income from benefit). Leaving low income from benefit is the gross earning (expressed as a percentage of average full time earnings) required for a family to reach a 60% of median household income threshold from benefits of last resort (state welfare payments or income support). All estimates were derived using a spatial microsimulation model which used the Survey of Income and Housing and the 2011 Census data as base datasets, so they are synthetic estimates. This table forms part of the AURIN Social Indicators project. | http://data.aurin.org.au/dataset/uc-natsem-natsem-natsem-tb5-8-social-indicators-income-synthetic-estimates-geometry-sa2 |
| | | AURIN Personal & Financial Stressors (SD) 2014 | Aurin (derived from ABS Census, held by Torrens University) | Australia (LGA) | Aurin online portal (can download data in shapefile, mapinfo, etc.) | 2011 | Modelled estimates of personal and financial stressors, such as ability to raise funds quickly, cash flow problems, dissaving actions and receiving government support as main source of income. From the ABS General Social Survey (GSS) in 2010, by LGA 2011. | http://data.aurin.org.au/dataset/tua-phidu-lga11-personalandfinancialstressors-lga2011 |
| | | AURIN Centre of Full Employt & Equity, (2015): Australia By CofFEE Functional Economic Regions Housing & Labour Data | Aurin (University of Newcastle) | Australia | Aurin online portal (can download data in shapefile, mapinfo, etc.) | 2006 | Dataset of important labour force statistics for CofFEE Functional Economic Regions (CFERs). The CFERs are an aggregation of Statistical Local Areas (SLAs) using journey to work flows, based on the Intramax method, a hierarchical clustering procedure for interaction data. The CFERs provide a more meaningful aggregation of small areas for the purpose of analysing data, than the administrative areas outlined by the Australian Bureau of Statistics (ABS), somewhat overcoming the Modifiable Areal Unit Problem (MAUP). See http://e1.newcastle.edu.au/coffee/functional_regions/ for full details. Data source: 2006 Census of Population and Housing. | http://data.aurin.org.au/dataset/uon-coffee-cfer-ausbycfer-pg-fer |
| | | Various (search term ''debt'') | Data.gov.au | Australia (from SA1 up) | csv, xls, wsm, shp, json, html, kmz, doc, pdf, etc. | depends on the dataset | Data.gov.au is the online portal for various open datasets from the various levels of the Australian Government.<br>For example, the dataset, 'Personal Insolvency by Postcode' includes the description, "AFSA publish the number of bankrupts, debt agreement debtors and personal insolvency agreement debtors by postcode. The time series starts in 2010–11. Any cell with a value containing one or two have been suppressed to protect the privacy and confidentiality of bankrupts and debtors. Suppressed cells are marked 'np'." | http://data.gov.au/dataset?q=debt&sort=extras_harvest_portal+asc%2C+score+desc |

| | Indicator | Name of Dataset | Custodian / Source | Spatial Extent | Type of data | Currency | Description | Metadata/link |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| 3. Education Domain | | | | | | | | |
| 3.1.2. Increased participation in adult learning courses | Participation in adult learning courses | AURIN, Public Health Information Development Unit, (2014): SD Learning or Earning (15-19 y.o.) | Torrens University Australia - Public Health Information Development Unit | Australia (Statistical Division) | Aurin (can also be downloaded in other formats from the Aurin Portal) | 2011 | The number of 15 to 19 year olds that are either engaged in school, work or further education. That is learning or earning, by SD, for the year 2011. | http://data.aurin.org.au/dataset/tua-phidu-sd-learningorearning-sd |
| | | 4234.0.30.001 - Microdata: Work Related Training and Adult Learning, April 2013 | ABS | Australia | Table Builder (can be downloaded in Excel) | 2013 | This product provides a range of information about the release of microdata from the 2013 Work Related Training and Adult Learning (WRTAL) survey, including details about the survey methodology and how to use the TableBuilder. A data item list and information on the conditions of use and the quality of the microdata, as well as the definitions used, are also provided.<br>Microdata are the most detailed information available from a survey and are generally the responses to individual questions on the questionnaire or data derived from two or more questions and are released with the approval of the Australian Statistician.<br>The WRTAL survey was conducted in April 2013 throughout Australia and is designed to provide statistics about the formal and non-formal learning activities of the population. | http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/4234.0.30.001Main+Features20April+2013 |
| | | **- See also list below[i]** | | | | | | |
| 4. Employment Domain | | | | | | | | |
| 4.1. Increased participation in employment | Move from unemployment to employment | Tenant Employment status and income source | WAHA | | | | | |
| | | Nature of Housing Assistance | WAHA | | | | | |
| | | Location of housing | WAHA | | | | | |
| | | 6291.0.55.001 - Labour Force, Australia, Sep 2016 | ABS | Australia | Excel (time series spreadsheets), datacubes and supertable and pivot tables (longitudinal) | Monthly, time series data | Estimates from the Labour Force Survey (LFS) are based on information collected from people in a sample of dwellings, rather than the entire population. Hence the estimates produced may differ from those that would have been produced if the entire population had been included in the survey. The most common measure of the likely difference (or 'sampling error') is the standard error. | http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/6291.0.55.001Sep%202016?OpenDocument |
| | | Regional Australia Institute, (2011): Human | AURIN | LGA | Aurin (downloadable as CSV or JSON) | | This data has been created by the Regional Australia Institute for the [In]Sight competitive index, released in 2012. Modelled on the World Economic Forum's Global Competitiveness Report, [In]Sight was developed in collaboration with Deloitte Access Economics and combines data from sources including the Australian Bureau of Statistics | |

| | Indicator | Name of Dataset | Custodian / Source | Spatial Extent | Type of data | Currency | Description | Metadata/link |
|---|---|---|---|---|---|---|---|---|
| | | Capital Indicators 2011. | | | | | and the Social Health Atlas of Australia. Human capital is a measure of the capabilities and skills of the workforce in a particular region. Both health and education are major contributors to a region's level of human capital, as both of these factors are understood to increase labour efficiency and competitiveness. Regions of non-metropolitan Australia which have high levels of human capital, that is, a well educated workforce and a propensity towards lifelong learning, are expected to experience higher levels of economic growth, are more adaptive and innovative and are more resilient to negative outside influences. | |
| | | Employment data | Federal Govt (data.gov.au) | SA4 | Excel (xls) downloadable data in time series | Monthly | The Australian Government Department of Employment publishes a range of labour market data on its Labour Market Information Portal website (lmip.gov.au). The link below provides data from the Labour Force Survey conducted by the Australian Bureau of Statistics. The boundaries used in this survey are known as Statistical Area 4 regions. The data provided includes unemployment rate, employment rate, participation rate, youth unemployment rate, unemployment duration, and employment by industry and occupation. | http://lmip.gov.au/default.aspx?LMIP/DownloadableData/LabourForceRegionLFR |
| | | Other employment data | Centrelink | Federal Electorate level | Pdf | Only until 2014 (see below) | See higher level indicators for more information on this and other resources available from Centrelink. | https://www.humanservices.gov.au/corporate/statistical-information-and-data/centrelink-payment-statistics |
| 5. Environmental Domain | | | | | | | | |
| 5.2. Dwelling design adequacy appropriateness and quality | Thermal comfort | NSHS – Dwelling condition in social housing | Australian Institute of Health and Welfare (AIHW) | Australia | Excel data is available by request (see email address in hyperlink) | 2014 | The National Social Housing Survey (NSHS) complements other data sources about social housing in Australia, especially administrative data collected by social housing providers and reported at the national level by the Australian Institute of Health and Welfare (AIHW). These administrative data provide valuable information about the outputs of social housing programs, including the number of houses provided and the extent to which people in special needs groups are able to access social housing. The survey adds to the overall picture by surveying tenants about their experiences of living in social housing. | http://www.aihw.gov.au/housing-assistance/nshs/ |
| | | Your Home | Federal Government of Australia | Australia | Online maps and information | Current | 5th edition of Your Home—Australia's most comprehensive guide to environmentally sustainable homes. This publication continues a long-standing effort by the Australian Government, in partnership with the building and design industry, to give everyone interested in building homes for a sustainable future, comprehensive, expert and independent advice. General information about thermal comfort is available (not a dataset per se, but useful information including maps, pdf downloads and case studies). | http://www.yourhome.gov.au/passive-design/design-climate |
| | | Nationwide House Energy Rating Scheme (NatHERS) | Federal Government of Australia | Australia | Online information, links etc | Current | The Nationwide House Energy Rating Scheme (NatHERS) is a star rating system (out of ten) that rates the energy efficiency of a home, based on its design. By providing a 'measuring tape' to estimate a home's potential heating and cooling energy use, NatHERS helps to make Australian homes more comfortable for their inhabitants and also helps residents to save on energy bills through smarter design choices. Often good design can reduce the amount of energy needed to keep a home comfortable with no or little additional construction cost. | http://www.nathers.gov.au/ |
| 5.4. Reduced water consumption – process | Potable water consumption | NSHS – Social tenant amenity rating – water | AIHW | | | | | |

| | Indicator | Name of Dataset | Custodian / Source | Spatial Extent | Type of data | Currency | Description | Metadata/link |
|---|---|---|---|---|---|---|---|---|
| | | efficiency | | | | | | |
| | | Water Security and Consumption Update | SEQ Water | Queensland | Per part of State. Online tables | Current, monthly update | SEQ Water releases a range of water consumption information; average consumption per person/household; per part of State, dam levels etc. | http://www.seqwater.com.au/water-security-and-consumption-update |
| | | Water Consumption | Various | Australia | Online | Current | Other States & Territories (and larger LGAs within States) release regular water consumption information by various spatial levels. | See various: i.e. http://www.melbournewater.com.au/waterdata/wateruse/pages/default.aspx |
| 6. Health Domain | | | | | | | | |
| 6.2. Improved overall health | Reduction in annual spend on health services | Australian Institute of Health and Welfare: Costs of Health services. | AIHW (Federal Government of Australia) | Australia | Publications (online and downloadable). Includes data tables (Excel). Note; publication is not free | 2015 | We collect, analyse and publish estimates of expenditure on health and welfare. We also focus on the cost of health services for Aboriginal and Torres Strait Islander peoples, expenditure on public health activities by governments and the cost of diseases. How much Australia spends on health and welfare, where the money to fund the expenditure comes from and the types of goods and services that attract expenditure are all important elements in understanding the efficiency and effectiveness of Australia's health and welfare systems. This involves being aware not only of the overall level of expenditure, but also of the societal, political and economic pressures that influence the way funding is provided and used. Expenditure is analysed in terms of who provides the services, who funds them and what types of services are funded. | http://www.aihw.gov.au/health-expenditure/ |
| | | Annual spend on mental health services | AIHW (Federal Government of Australia) | Australia (by State) | pdf and tables (excel) can be downloaded or through portal | 2014 | This section reviews the available information on recurrent expenditure (running costs) for mental health-related services. Health expenditure (what was spent) and health funding (who provided the funds) are distinct but related concepts essential to understanding the financial resources used by the health system. Data on expenditure and funding, calculated in both current and constant prices, are derived from a variety of sources, as outlined in the data source section. Constant prices are adjusted to 2013–14 levels, with the exception of data relating to Australian Government Medicare expenditure and mental health-related medications subsidised under the PBS and RPBS that are adjusted to 2012–13 levels. Further information on health expenditure is available in Health Expenditure Australia 2013–14 (AIHW 2015). | https://mhsa.aihw.gov.au/resources/expenditure/ |
| | | SA2 OECD Indicators: MBS and PBS data | Aurin (UC-NATSEM) | Australia (SA2) | Aurin (data can also be downloaded in various formats) | 2011 | This table contains data on Medical Benefits System (MBS) and Pharmaceutical Benefits System (PBD) recipients for SA2's across Australia including the number and percent in each category. The data was calculated from the 2011 Census for the AURIN Social Indicators project. | http://data.aurin.org.au/dataset/uc-natsem-natsem-natsem-tb5-3-mbs-and-pbs-geometry-sa2 |
| | Subjective well-being | AURIN, University of Canberra - National Centre for Social and Economic Modelling, (2011): | Aurin (UC-NATSEM) | Australia (SA2) | Aurin (data can also be downloaded in various formats) | 2011 | This table contains synthetic estimates on Subjective Well-being for SA2's across Australia including the number and percent of persons on a subjective life satisfaction preference scale of 0-100, where 0 completely unsatisfied 10 20 30 40 50 neither unsatisfied nor satisfied 60 70 80 90 100 completely satisfied. The data is calculated using a spatial microsimulation method to estimate small area (SA2) subjective well-being in Australia. The procedure uses the Australian Unity Wellbeing Index survey and the 2011 Census data. | http://data.aurin.org.au/dataset/uc-natsem-natsem-natsem-tb3-lifesat-0-to-100-geometry-sa2 |

| | Indicator | Name of Dataset | Custodian / Source | Spatial Extent | Type of data | Currency | Description | Metadata/link |
|---|---|---|---|---|---|---|---|---|
| | | SA2 Life Satisfaction from 0 to 100 (Synthetic Data | | | | | | |
| | | Subjective Wellbeing | Community Indicators Victoria | Victoria | Online information | 2011 | Quality of life measures the fit between a person's hopes and expectations and their present experience. Objective quality of life is about fulfilling the societal and cultural demands for material wealth, social status and physical wellbeing, whereas subjective quality of life is about feeling good and being satisfied with things in general. The overall quality of life reflects the difference, that is, the gap between the hopes and expectations of a person and their present experience. | http://www.communityindicators.net.au/metadata_items/subjective_wellbeing |
| | | The Subjective Wellbeing of young people in Youth Connections | RMIT and Federal Government of Australia (Dept of Education and Training) | Australia | Word or pdf (research results) | 2015 | To measure changes in wellbeing, Youth Connections service providers apply the Personal Wellbeing Index – School Children survey to assess the Subjective Wellbeing of service recipients. Over 27,743 participants completed the survey between 2011 and 2013. 7,181 of these young people completed the survey on two occasions – entry and exit. | https://docs.education.gov.au/documents/subjective-wellbeing-young-people-youth-connections |
| 7. Housing Domain | | | | | | | | |
| 7.5. Effective service provision | Maintenance expenditure per social housing dwelling | Social Housing Stock | SA Government | South Australia | Excel | 2016 | Housing Affordability Supply and Demand Data. Breakdown of social housing stock by community housing and public housing, by Local Government Area.<br><br>**NOTE: The SA Government has a lot of information about social housing. Can look at more detail in top page: https://data.sa.gov.au/data/organization/dept-for-communities-and-social-inclusion** | https://data.sa.gov.au/data/dataset/778b9f71-5e1b-4e1c-86a2-6360ab9b0662 |
| | | Social Housing Dashboard | NSW Gov. | NSW | Online searchable form | Current | The data within this dashboard shows how we are performing against our objective to use social housing assistance to break disadvantage by:<br>• improving the economic and social outcomes of people in social housing and using other forms of housing assistance<br>• reducing the rate of people experiencing homelessness<br>• improving the financial position of the social housing portfolio. | http://data.nsw.gov.au/data/dataset/social-housing-dashboard/resource/cab9176a-4924-4b4a-ba9d-4dbc179ea2bd?inner_span=True |
| | | Property management of the state's social housing assets including modifications and maintenance. | Queensland Gov. | Qld | CSV | 2015 - 2016 | Property management of the state's social housing assets including modifications and maintenance.<br>Details of the expenditure includes suburb, postcode, cost, asset types, electorate and government authority and category. | https://data.qld.gov.au/dataset/property-management-government-owned-assets |
| | | Various | Qld Gov | Qld | Various | Various | List of all datasets searchable by the word 'housing' on Qld Govt Data Portal | https://data.qld.gov.au/dataset?q=housing |

| | Indicator | Name of Dataset | Custodian / Source | Spatial Extent | Type of data | Currency | Description | Metadata/link |
|---|---|---|---|---|---|---|---|---|
| | | Various | Vic. Gov. | Vic | Various | Various | See higher level listing | |
| | | Various | WA Gov. | WA | Various | Various | See higher level listing | |
| | | WA Dept of Health. See note below[ii] | | | | | | |
| 8. Social Domain | | | | | | | | |
| 8.3. Social empowerment | Tenant empowerment (involvement in admin and maintenance) | Research Report | AHURI | Various | pdf | | Review of tenant empowerment is found in the report (in the link). Used data from two official Australian 'management expenditure' and tenant outcomes 'performance' measures, namely the 'net recurrent cost per dwelling' metric and a 'customer satisfaction' measure, each of which is reported in the Productivity Commission's 'Report on Government Services' series. | https://www.ahuri.edu.au/__data/assets/pdf_file/0018/5760/AHURI_Final_Report_No257_Assessing_management_costs_and_tenant_outcomes_in_social_housing_recommended_methods_and_future_directions.pdf |
| 8.4.17. Perceptions of safety | Perceptions of safety | AURIN SLA11 Community Strength. Torrens University Public Health Information Development Unit, (2014): | Torrens University SA | Australia, SLA | Aurin (downloadable in other formats) | 2011 | Modelled estimates of community strengths including: voluntary work, giving or receiving support in times of crisis, feeling safe, and views on other cultures - in 2010 by SLA 2011. | http://data.aurin.org.au/dataset/tua-phidu-sla11-communitystrength-sla2011 |
| | | Various crime statistics available from WA Police | | | | | | |
| | | Crime statistics | AIC | Australia, very high level (i.e., State) | Charts and tables (xls) | Current | | http://www.aic.gov.au/statistics.html |
| | | Perception of Safety | Community Indicators Victoria | Victoria | Only seems to be available as an online map (possibly can get data from agency) | 2011 + (supposedly every 3 years) | Vic Health Indicator Surveys. Includes 4 questions with direct relevance to perceptions of safety. | http://www.communityindicators.net.au/metadata_items/perceptions_of_safety |
| | | Locations and type of crime | Qld Gov. | Queensland | Json file format (or viewable on Qld Police site as a map) | 2013 | A list of reported offences and their associated geographical location which intersect the specified geographic boundaries and match the specified date range and offence type. | https://data.qld.gov.au/dataset/crime-locations-2000-present/resource/9929b28c-a0d2-4496-b06e-c7024676b298 |
| 9. Urban Amenity Domain | | | | | | | | |

| | Indicator | Name of Dataset | Custodian / Source | Spatial Extent | Type of data | Currency | Description | Metadata/link |
|---|---|---|---|---|---|---|---|---|
| 9.3. Regeneration of the local area | Quality of neighbourhood | AURIN Australian Population and Migration Research Centre, (2015): SA1 Metro ARIA 2014 for Australian Capital City Urban Centres. | University of Adelaide | Australia (urban centres) | Aurin (downloadable in various formats) | 2014 | The Metro ARIA dataset provides six indices to comparatively evaluate metropolitan accessibility both within and across all Australian capital cities. The indices reflect the ease or difficulty people face accessing basic services within metropolitan areas, and is based on the measurement of road distances people travel to reach different services. Metro ARIA is a composite index which combines accessibility measures for five different service themes: (1) Education; (2) Health; (3) Shopping; (4) Public Transport; and (5) Financial/Postal services. Metro ARIA and each of the service theme sub-indices have been calculated at SA1 level and classified into five accessibility levels graded from low to high, a numeric and text description of each class is included, and are available for viewing and analysis within the AURIN portal. Metro ARIA is based on the Accessibility/ Remoteness Index of Australia (ARIA) methodology which focuses on quantifying remoteness in non-metropolitan areas. ARIA+ is widely accepted as Australia's most authoritative geographic measure of remoteness, used by the Australian Bureau of Statistics for the Remoteness Area classification since 2001. Geometry Type: Polygon. Australian Bureau of Statistics (ABS) 2011 SA1 for capital city 2011 Urban Centres. For more information about ARIA see: For more information about Metro ARIA see: http://www.adelaide.edu.au/apmrc/research/ | http://data.aurin.org.au/dataset/ua-apmrc-ua-apmrc-metroaria-sa1 |

[i] WA Department of Education: Currently available for WA public schools only.

· Attendance; Suspension; On-entry assessment

· National Assessment Program – Literacy and Numeracy (NAPLAN) - Years 3, 5, 7 and 9 in reading, writing, language conventions (spelling, grammar and punctuation), numeracy

· WA Literacy and Numeracy Assessment (WALNA) - Years 3, 5 and 7 in reading, writing, spelling, numeracy

· Teacher grades and assessments – reporting to parents & senior secondary.

Refer to the Australian Curriculum, Assessment and Reporting Authority (ACARA) website http://www.acara.edu.au/reporting for the Measurement Framework for Schooling in Australia.

Commonwealth - Australian Early Development Census:

· First year formal schooling - Physical health and wellbeing, social competence, emotional maturity, language and cognitive skills, communication skills and general knowledge.

School Curriculum and Standards Authority:

· WA Certificate of Education (WACE) ; National Assessment Program – Literacy and Numeracy (NAPLAN).

Kindergarten to Year 12 for all WA schools.

[ii] WA Department of Health:

· WA Health and Wellbeing Surveillance System (HWSS) (population annual surveys). Available online – self-reported health status measured using SF-8 instrument. hardship, moving house. Data available at large geographical areas.

Kessler 10 used to report psychological distress. Prevalence of major life events e.g. financial

· Hospital Morbidity Data System (HMDS)

· Emergency Department Data Collection (EDDC).

# 6. APPENDIX B - OTHER OUTPUTS

| | Description | Planned | Priority | Example |
|---|---|---|---|---|
| Events | Partner Events (Internal) | Y | 1 | • Project Steering Group Meetings – quarterly<br>• Presentation to QDHPW Delivery and Contract Management Board 24 March 2016<br>• SBEnrc Board Room Briefing – May 2016 |
| | Partner Events (External) | Y | | Kraatz, J.A., Rethinking Social Housing, Griffith Housing Futures Symposium, Griffith University, Brisbane, 23 March 2016. |
| | Industry Events | Y | | • Rethinking Social Housing YouTube video to be hosted on the QShelter Conference website as a resource for attendees: https://qsconference.org/<br>• Valuing Social Housing abstract submitted for the QShelter State Conference, 1-2 June 2017. |
| | Academic Conferences | Y | 1 | • Kraatz, J.A., Thomson, G. and Newman, P., Valuing Social Housing, *Liveable Cities Conference*, Melbourne, 26-28 June 2016.<br>• Earl, G., Kraatz, J., Liu, B., Mohamed, S., Roca, E. and Jayawardena N. Social Housing Finance in Australia as a Missing or Incomplete Market: A Review of the Literature, Sustainable Housing 2016 – *International Conference on Housing Planning, Management and Usability*, Lisbon Portugal 16-18 November 2016. |
| | Community Engagement | | | Kraatz, J.A., Response submitted to the QDHPW Working Together for Better Housing and Sustainable Communities discussion paper - https://www.getinvolved.qld.gov.au/gi/consultation/2978/view.html - 23 March 2016. |
| Publications | Project Updates - | Y | | • Progress Report 1 tabled at PSG on 6 July 2016<br>• Progress Report 2 finalised October 2016<br>• Draft Final and Research Reports to be tables at PSG 8 Feb. 2017. |
| | Industry Newsletters | Y | | European Network for Housing Researchers Newsletter – 2016 #2 |
| | Partner Internal Communications | Y | | YouTube to be provided to Impact@Griffith Sciences |
| | Industry Magazines | Y | | Kraatz, J.A. 'Valuing Social Housing' HousingWORKS Vol 11/4 December 2016 |
| | Academic Journals | Y | | Australian Journal of Social Issues - withdrawn<br>Housing Studies - planned |
| | Books and Chapters | Y | 1 | Kraatz, J.A., Matan, A. & Newman, P. (2017) 'Integrating Information for More Productive Social Housing Outcomes', in A.X. Sanchez; K.D.Hampson, and G.London, (eds) Integrating Information across the Built Environment Industry, to be published by Routledge, 2017 |
| | Industry Focused 4-page Brochure | | | |
| | Industry Focused Report | Y | 1 | Draft provided to PSG on 8 Feb. 2017 for comment |
| Other | Audio Visual Clips (i.e. YouTube) | Y | | Filming completed in January 2017. Draft presented for comment to PSG prior to PSG on 8 Feb. 2017. |
| | Networks | Y | | • CIB - TG 90 - Information Integration in Construction & WO 69 - Residential Studies<br>• European Network of Housing Researchers (ENHR)<br>• Qld Ministerial Consultative Housing Committee |
| | Twitter | Y | | RethinkSocialHousing@DrJAKraatz |
| | PPT Slide Deck | Y | | Posted on website |
| | Short PD Courses | | | |
| | Email Database | | | |
| | Websites | Y | 1 | http://www.sbenrc.com.au/research-programs/1-41-valuing-social-housing/ - updated Jan. 2017 |
| | Fact Sheets | Y | 1 | completed |
| | Media Releases | Y | | |

# 7. APPENDIX C - GLOSSARY

ABS Australian Bureau of Statistics

AIHW Australian Institute of health and Wellbeing

AURIN Australian University Research Infrastructure Network

BIM building information modelling

COAG Council of Australian Governments

GFC Global Financial Crisis

HILDA Household, Income and Labour Dynamics in Australia

IPCC International Panel on Climate Change

IRSAD ABS Index for Relative Socio-economic Advantage and Disadvantage

NAHC National Affordable Housing Consortium

OECD Organisation for Economic and Community Development

SBEnrc Sustainable Built Environment National Research Centre

SEIFA ABS Census of Population and Housing: Socio-economic Indexes for Areas

SROI social return on investment

TKI Telethon Kids Institute

WVA wellbeing valuation analysis

# 8. APPENDIX D – AUTHORS' BIOGRAPHIES

**Judy Kraatz, Senior Research Fellow, Griffith University, Brisbane, Australia**

Judy is a Senior Research Fellow with the Cities Research Institute at Griffith University. Judy has over twenty-five years of professional activity in the built environment: as a design architect; leading a team of professionals delivering city-wide solutions for public buildings and parklands; and integrating sustainability into curriculum, design practice and business solutions. Judy's research addresses issues of corporate and social responsibility in the delivery of urban and social infrastructure. Judy brings a focus on meta-research and evaluation frameworks to better leverage research to achieve practical outcomes for both the urban environment and its residents. Current research is focusing on the need for an efficient, effective and equitable social housing sector in Australia.

**Giles Thomson, Research Associate, Curtin University Sustainability Policy Institute, Perth, Australia**

Giles Thomson is an urban designer and a PhD candidate researching regenerative urbanism at Curtin University as part of the Co-Operative Research Centre for Low Carbon Living. His previous work experience included urban regeneration projects in the UK and Australia most recently he was Research Leader for the South Australian Government's Integrated Design Strategy (5000plus.net.au).

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