

The role of infrastructure in addressing regional disadvantage in Victoria

Background paper

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For Infrastructure Victoria

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Executive summary

Defining disadvantage

In this paper, 'disadvantage' describes people experiencing a low standard of living due to a lack of economic, human or social capital resources, or a lack of access to the opportunities to generate those resources. In regional Victoria, 15% of adults and 23% of children live below the poverty line, and a broader group is vulnerable to more severe disadvantage, and/or lack access to service resources because of distance.

While disadvantage can be found in all communities in regional Victoria it is concentrated in certain geographic areas, because of drivers relating to restructuring of industries and work; ageing, increasing wealth inequality (particularly related to housing); and climate change. The largest number of disadvantaged people live in (and are migrating to) the regional cities, but there are pockets of disadvantage in rural "amenity areas" in the peri urban fringe (rural areas adjacent to large cities, particularly Melbourne) and rural production areas (rural areas far from urban areas).

Time series data show disadvantage in regional Victoria is complex and multifactorial, entrenched in a relatively small number of places, and shows few signs of improvement over time (JSS 2015).

The role of infrastructure in addressing disadvantage

Infrastructure Victoria's *Victoria's 30 Year Infrastructure Strategy* (2016) describes infrastructure as being about connectivity:

"The transport system enables people and goods to get to and from places. Communication networks collapse the distances between places. Education infrastructure enables the transfer of knowledge between people. Health infrastructure allows people to access the expertise of others. Shared community spaces, like libraries and parks, enable people to commune with each other and with nature. Essential services, like water and electricity, connect homes and businesses through grids that are often hidden from view" (Infrastructure Victoria 2016: 42).

The connectivity that infrastructure fosters has a limited but important role in alleviating disadvantage by:

- » **Improving access to economic resources and services in general through:**
 - **digital connectivity and transport connectivity** to jobs and education, health and other services
 - **reduced cost of living**, particularly through housing, or reduced energy, transport, digital or other 'out of pocket' costs
- » **Improving access to education and health (human capital) resources across the life course** (early years, school and adult education) either through transport or digital connectivity (above), and/or facilities or new models of services, such as electronic (e-) services
- » **Improving access to social capital building resources** through facilities that develop local participation and leadership, and therefore the social

health/wellbeing, amenity and governance of communities, including supporting the civic entrepreneurs that make infrastructure “work”.

A place-based approach for prioritising infrastructure

This brief review of the literature highlights a range of issues that are important in considering how to prioritise infrastructure. Any model will need to be:

1. **Flexible:** because disadvantage has a different character in different places.
2. **Part of a package of coordinated activities:** because disadvantage is multifactorial. Infrastructure will need to be part of a targeted package of integrated investments across government, that address multiple risk factors simultaneously, rather than focusing on single issues. This will require local area plans, and joined up service planning across portfolios, and/or the three levels of government.
3. **Future proofed:** because disadvantage may change further over time.

Priority will need to be given to:

1. **Interventions that target life stages that have bigger impacts:** the early years; school completion and transition to work; family wellbeing; and ageing.
2. **Interventions that use new models (innovation) to create greater connectivity and efficiencies,** for example, electronic-, tele-, app- and mobile services, hub and spoke models, and shared infrastructure. New models can also use the existing, latent assets in communities to reduce “white elephants” that are costly for communities to manage.
 - » **Interventions that are supported by communities – local energy, leadership, civic entrepreneurs and community networks – that make infrastructure “work”.** Local strategic knowledge, and community engagement/co-design in planning, provides an understanding of the priorities, interests and capabilities of communities, can make infrastructure fit for purpose, and help address potential threats to its success.

These challenges and considerations make place-based approaches for considering infrastructure appropriate. Place-based approaches consider the different functions of places, and consider each’s potential for “[drawing] on their own skills and innovation capabilities” in setting local development agendas (Barca 2009: 5). This is achieved through “the promotion of bundles of integrated, place tailored public goods and services, designed and implemented by eliciting and aggregating local preferences and knowledge through participatory political institutions, and by establishing linkages with other places” (Barca 2009: 5).

These approaches recognise that, in addition to examining economic assets, place-based approaches require the strengthening local and regional institutions that are able to assess and develop local economic assets and actively shape local policy (social capital), and develop human capital to promote innovation.

1. Introduction

This discussion paper provides a brief literature review into disadvantage in regional Victoria as a background to Infrastructure Victoria's deliberations about 30 year priorities.

It is presented in three sections. The first defines disadvantage and describes what it looks like in regional Victoria. The second describes the role of infrastructure in addressing disadvantage. The final section describes some of the challenges and considerations for prioritising infrastructure for discussion that the literature highlights.

This paper is not exhaustive, only drawing on key literature and case studies. Infrastructure is an important but not sufficient lever for addressing disadvantage, and this paper does not address the other policy reforms needed. Infrastructure Victoria's focus on the Victorian governments role in infrastructure delivery also means that important infrastructure that others hold the primary responsibility for, is not discussed. It is acknowledged that the Victorian government has a long history of addressing place-based disadvantage, and is continuing to do so. Its work has shaped much of the thinking in this paper and it is supporting many of the innovations discussed in this paper.

2. Defining disadvantage

In this paper, 'disadvantage' describes people experiencing a low standard of living due to a lack of economic, human or social capital resources, or a lack of access to the opportunities to generate those resources (European Commission in Eurostat 2010; Pope 2011).

Disadvantage is a relative concept, with people on a continuum from most disadvantaged to most advantaged. Each person's standard of living depends on a complex of factors related to their economic, human and social capital assets, and these are in turn shaped by the opportunities available to them from the areas in which they live. Where the line should be drawn about who is disadvantaged is a judgement, but the main ways the continuum is categorised in Australia is described in the next section.

In general, disadvantaged people:

- » **have low incomes and/or resources** because they:
 - can't access (enough) work, or the education and (re)-training opportunities to develop the appropriate skills for work
 - have no or low incomes because they are, for example, under-superannuated retirees, people on disability pensions or Newstart, carers of others with low incomes, or those temporarily incapacitated by mental or other illness/injury
 - experience cost of living pressures, for example from housing, energy, transport or health costs, or lack of insurance when needed (described in section 2.1)

- » **live in places with poor access to services and opportunities**, for example, in agricultural areas with declining populations that are unable to maintain viable services/facilities, Aboriginal mission-established communities that were created away from economic opportunities and services, or growth areas on the outskirts of large regional cities (described in section 2.2).

Disadvantage is associated with a wide range of negative outcomes such as: poor development, poor physical and mental health, disability, poor school retention and attainment, labour market disadvantage, poor ageing, early mortality, being a victim of violence, contact with the justice system, and discrimination (Australian Government 2009). These associations are complex and can be both the result, and cause, of disadvantage. For example, poor health and discrimination can be outcomes of disadvantage, but can also be barriers that cause or compound it.

2.1 Types of disadvantage

There are different (but overlapping) types of disadvantage described across the continuum of disadvantage: poverty, precariousness, and geographic disadvantage (Pope 2011).

Poverty

Poverty is a policy term used to signal when a person or household's income and resources are so inadequate they preclude an acceptable standard of living (European Commission in Eurostat 2010). People living in poverty therefore have **severely restricted resources and opportunities** (Pope 2011). In Australia, poverty is traditionally measured using income, but this does not account for the wealth resources, in particular housing costs and superannuation, that also contribute to standard of living (Saunders & Naidoo 2018). Income based poverty lines have been shown to overestimate deprivation in older populations, and underestimate it in younger ones (Saunders & Naidoo 2018).

Nonetheless, an analysis by the National Centre for Social and Economic Modelling shows poverty exists in every Victorian community, and it affects a diverse range of people (Tanton, Peel & Vidyattama 2018). In regional Victoria, 15% of adults and 23% of children, live below the poverty line of a household income of \$353.45 per week, after housing costs¹ (Tanton, Peel & Vidyattama 2018). This represents around 214 000 people; and a higher proportion than in Melbourne (13%) (Tanton, Peel & Vidyattama 2018).

¹ This study used a half-median after-housing equivalised disposable income poverty line. Using Victorian estimates from the 2015-16 ABS *Survey of Income and Housing*, they calculated a household's disposable income (after paying direct taxes and receiving income support payments) and subtracted household's housing costs, including rent, mortgage payments and water and property rates. They then made an adjustment for the number and age of people living in the household, so income could be compared in families of different sizes. The median figure (at which half the population is above, and half is below) is found and the poverty line set at 50% of this amount (this is the more conservative threshold of the usual 50% or 60% of median income).

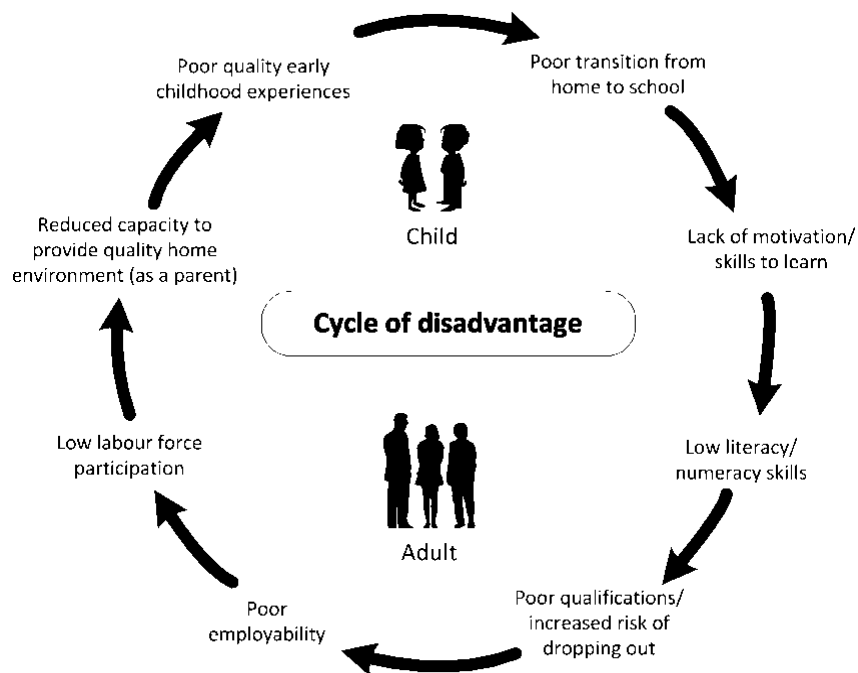
Poverty in regional Victoria is different from Melbourne because the following groups experience higher poverty rates:

- » children under 15 (23%, compared to 17% of children in Melbourne)
- » single parent families (44%, compared to 33% of single parent families in Melbourne)
- » the unemployed (41%, compared to 33% of the unemployed in Melbourne)
- » renters:
 - private renters (26%, compared to 20% of private renters in Melbourne)
 - public renters (54%, compared to 50% public renters in Melbourne)
- » people with a disability (16%, compared to 14% of people with a disability in Melbourne)
- » Aborigines and Torres Strait Islanders (30%, compared to 21% in Melbourne) (Tanton, Peel & Vidyattama 2018).

A study using the *Household Income and Labour Dynamics in Australia* (HILDA) survey data has reported some Australians and their children are deprived of things the majority of Australians consider unacceptable to miss out on. These included: not having medical treatment and medicine when needed (1.5% deprived), warm clothes/bedding if it's cold (0.1%), a substantial meal at least once a day (0.2%), a decent and secure home (0.5%), dental treatment when needed (6%), and at least \$500 of savings for an emergency (13%) (Saunders & Naidoo 2018).

For some people poverty becomes “entrenched”, in what the Productivity Commission (2013) has described as a cycle of deep and persistent intergenerational disadvantage. In this cycle a lack of resources creates poor quality early childhood experiences, that result in children falling behind in school, leading to low labour force participation, further reducing a family's quality of life, etc (Figure 1). Once entrenched, it is harder for a person to move out of poverty, and if they do, there is a greater risk they will fall back into it (Productivity Commission 2018).

Figure 1. The cycle of deep and persistent disadvantage (Productivity Commission 2013)



A NSW study of costs of servicing children and young people, *Forecasting Future Outcomes*, confirms this cycle using linked service data across child protection, housing, justice, health, education, mental health, alcohol and other drug, and commonwealth (welfare MBS and PBS) services (Taylor Fry 2019). Modelling showed the most vulnerable children and young people, also had parents that had experienced out of home care, custody, social housing, hospital or alcohol and drug admission, and welfare (Taylor Fry 2019).

The costs of poverty for governments are significant. For example, the study above shows the cost to State and Federal government (mainly in welfare support and health care) of the 1 000 most vulnerable children and young people to the age of 40 (\$2.5M) will be 15.9 times higher than that for the total under 25-year-old population (\$143k) (Taylor Fry 2019).

Precariousness

There is a broader group of disadvantaged people that have **less-restricted access to resources and opportunities**, who are vulnerable to more severe disadvantage (Pope 2011). The Productivity Commission (2013) used the Brotherhood of St Laurence and Melbourne Institute's *Social Exclusion Monitor* to estimate just under a quarter of Australians aged over 15 years experience "marginal exclusion" (a low score on one or two of seven domains: material resources; employment; education and skills; health and disability; social connection; community; personal safety).

A more recent Productivity Commission (2018) study using HILDA data over fifteen years, found Australians are remarkably mobile across income deciles over the life course (Figure 2). Many experience economic disadvantage at some stage in their lives – due to transition from education to work, job loss, having children, divorce, periods of illness or disability, or retirement – but for most (79%) it lasts less than three years (Productivity Commission 2018). At different times socio-economic deciles consist of different people but top and bottom deciles are 'stickier', and people in these are less likely to move. About 3% of households in the study stayed in the bottom two deciles (~poverty) over the fifteen years (Figure 2).

There is potential for more people in regional Victoria to find themselves in the category of precariousness over the next 30 years because of risks created by: the further restructuring of industries/work; increasing wealth inequality, particularly related to housing; and the impacts of climate change (such as very hot days, drought, bushfires and floods) (see 2.3. *Future drivers of disadvantage* below) (Sevoyan et al 2013; CEDA 2015).

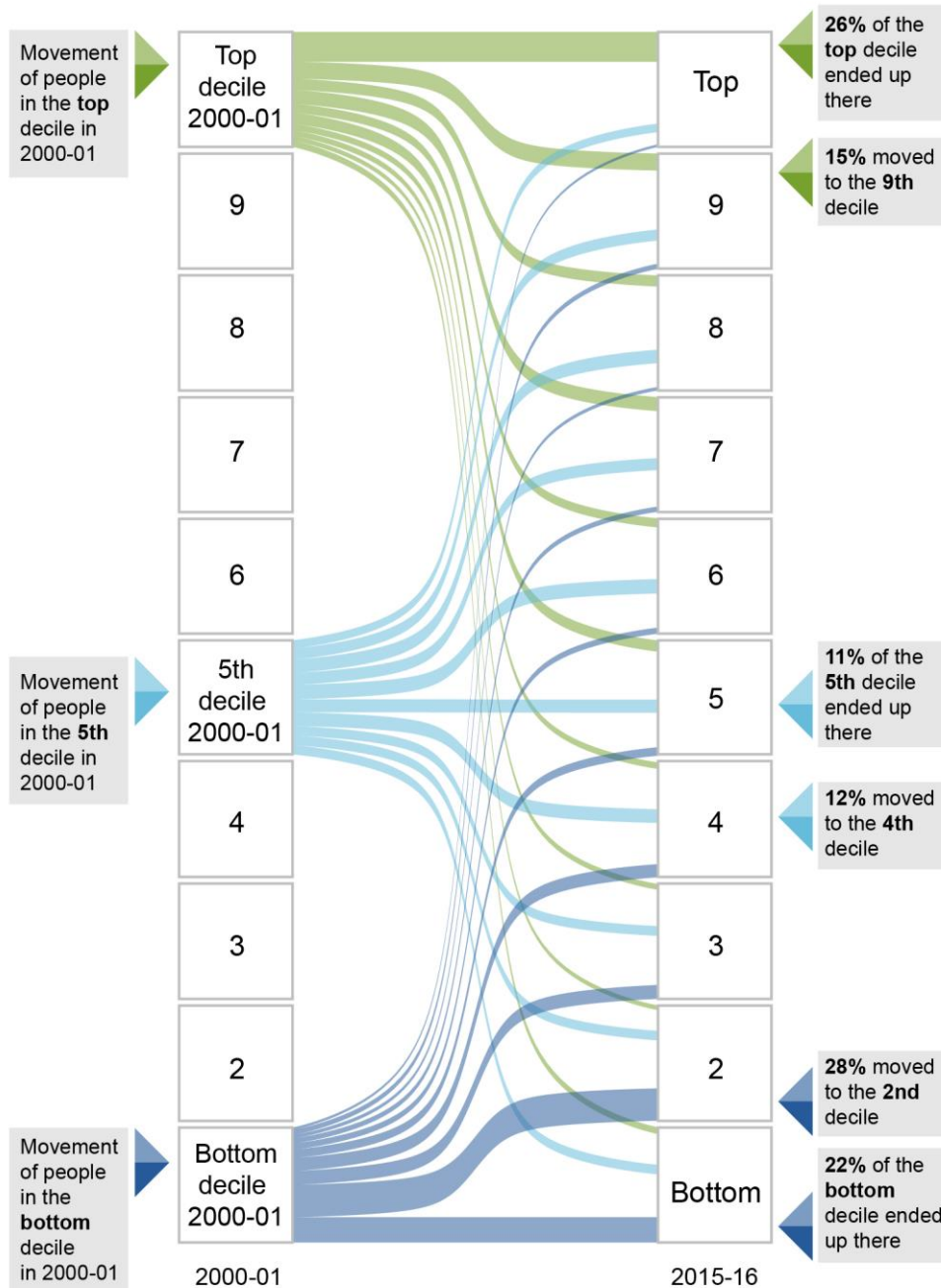
Geographic disadvantage

There is an overlapping, but broader, group in regional Victoria that **lacks access to service resources because of distance**. Being geographically remote from education and human services, compounds poor outcomes for those in poverty, but also affects others living across regional areas (described in the next section). This includes people living in small declining towns in agricultural areas, distant from larger centres, where services are no longer viable. But it may also be an issue in towns closer to large centres that lack particular types of services locally (for example GP's), or even in new developments on the outskirts of regional cities that have no local services and poor transport access (Pope 2011).

In summary, it is difficult in Australia to precisely quantify disadvantage, but estimates suggest 15% of regional Victorians (23% of children) are in income poverty with a

small percentage living with significant deprivation. A further group are likely to be in precarious situations and/or disadvantaged by distance. Disadvantage is entrenched in some families, but others move in and out over their life course. Intervention planning therefore needs to consider the potential for cohorts to change over time.

Figure 2. Movement between income deciles – the proportion of people in the top, 5th and bottom income deciles in 2000-01, by income decile in 2015-16, Australia (Productivity Commission 2018).



2.2 Disadvantaged areas in regional Victoria

While disadvantage can be found in all communities in regional Victoria, analyses using Census data show it is concentrated in certain geographic areas (Figure 3). This offers a lens for considering infrastructure, as it is place-based.

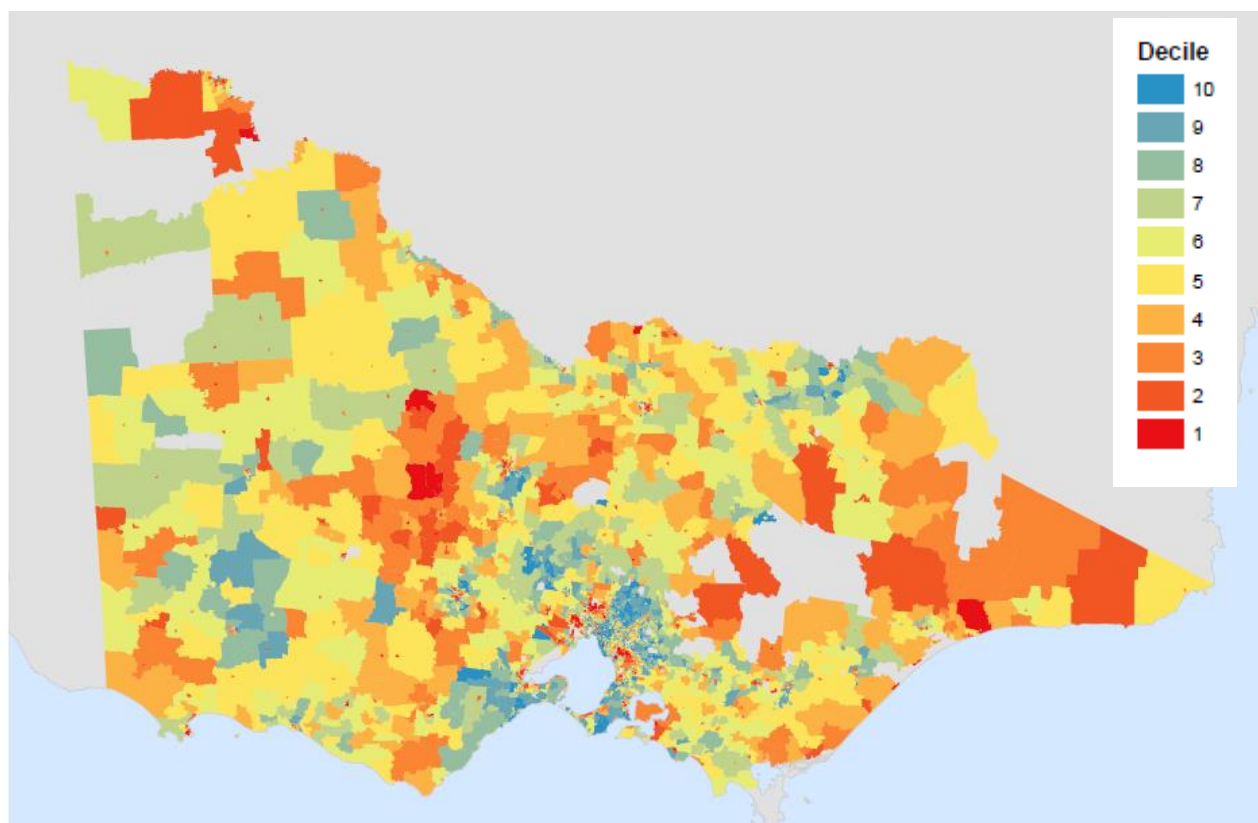
Some places concentrate disadvantage because of cheaper housing/land prices that result from poor connectivity to education, employment, and services, and/or poor amenity, recreation or safety. These characteristics of places negatively impact on residents' life opportunities and can maintain or compound disadvantage (although the latter is contested and not well studied in Australia) (Pawson, Hulse & Cheshire 2015).

In Figure 3 the darkest red indicates concentrations of the most disadvantaged populations in regional Victoria, using a Census index that ranks areas on a continuum of from disadvantage to advantage based on resident's incomes and resources (SEIFA IRSD in Table 1). These map is labelled with the 30 regional postcodes identified as in the top 40 most severely disadvantaged postcodes in Victoria from the Jesuit Social Service's *Dropping Off the Edge* analysis – which adds additional measures to the Census index – such as crime rates (Table 1).

Table 1. The two measures of place-based disadvantage in Australia

The Census based SEIFA Index of Relative Socioeconomic Disadvantage (IRSD)	Dropping off the Edge
(ABS 2018)	(JSS 2015)
<ul style="list-style-type: none"> » low income » low labour force participation: low level of education, unemployment, unskilled workers » low resources: poor housing (low rent, overcrowded dwellings), no internet connection at home, no car, and » vulnerable population groups: single parent families, people with a disability, poor English. 	SEIFA IRSD with added variables on: <ul style="list-style-type: none"> » readiness for school » literacy/numeracy » criminal convictions » domestic violence » prison admissions » psychiatric admissions, and » electricity bill defaults

Figure 3. SEIFA Index of Relative Socioeconomic Disadvantage by small area (SA1) (ABS 2016)



Note: Small area mapping of disadvantage in regional Victoria can be seen in the Victorian Government's *Change and Disadvantage in Regional Victoria* reports (Pope 2011) updated to 2016 in Infrastructure Victoria's factsheets (2019).

The distribution of disadvantage in regional areas has been driven by economic restructuring and migration. Across regional Victoria the economy, particularly the primary industry of agriculture, has been restructuring, causing the purpose, or function, of many regional towns to change (Pope 2011). In the rural areas distant from Melbourne, corporations have amalgamated small family run farms to create large properties run using technology to increase productivity (Barr 2009). The towns in these areas no longer have the purpose of servicing farming communities (Barr 2009). Many services and businesses are no longer viable and younger residents move on to better serviced places, leaving behind declining and ageing populations (Barr 2009).

Conversely, in rural areas close (commutable) to Melbourne, it has been more financially advantageous for farmers to subdivide their land to sell to "amenity migrants": weekenders, commuters, downshiftees and affluent retirees (Barr 2009). Many of the towns in these areas have developed new purposes (Barr 2009). For example, Daylesford has transformed into a tourism destination. While this has led to growth in these towns, it has also increased house prices, and created fewer long term affordable rentals (including as short-stay rentals produce better yields), leading to an out migration of disadvantaged people, also largely to regional cities (Pope 2011; Raynor, Dosen & Otter 2017).

As a result, disadvantage in regional Victoria can usefully be described in three types of places: regional cities, rural "amenity" areas in the peri urban fringe, and rural production areas.

Regional cities

The largest numbers of disadvantaged people living in regional Victoria live in suburbs in the regional cities where there is the greatest access to jobs, housing and services (Pope 2011). Regional cities are growing because their more diversified economies, including services, have been attracting populations from surrounding rural areas, and to a lesser extent from Melbourne (Barr 2009). These include non-affluent retirees, welfare recipients and new migrants (Barr 2009).

Regional areas have housing estates in growth areas

There are now large and rapidly growing greenfield suburbs on the fringe of regional cities without access to services and public transport. One such suburb is predicted to grow to 12 000 by 2030. It drew most (85%) of its new residents from within the regional city between 2011 and 2016, and 15% from very small towns in the surrounding rural areas. In 2016 it mainly had households with a mortgage (42%), but also has a large number of private renters (16%) and a public housing estate that preceded the development (6%). The area has no social services, public transport or places for residents to interact. The new homes have dark roofs, concrete driveways and no established trees for cooling.



Nightingale pictures <https://vimeo.com/338155280>

Rural “amenity areas” in the peri urban fringe

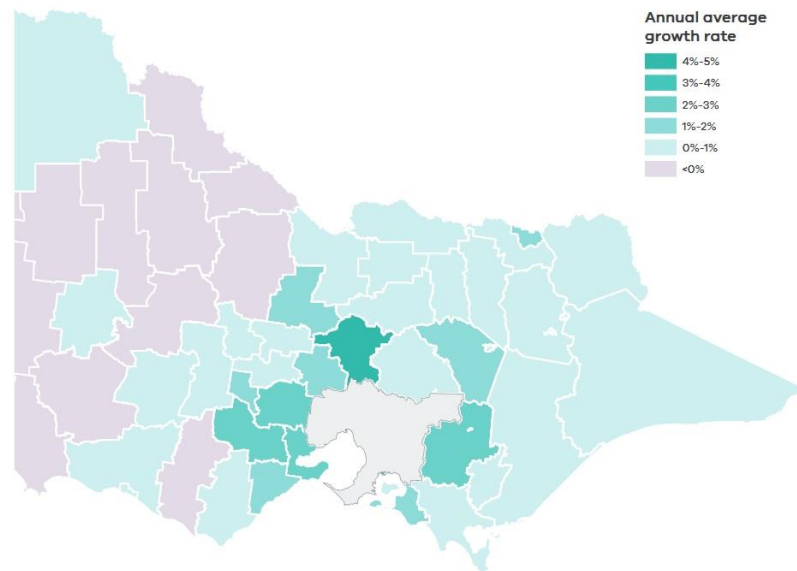
There are pockets of disadvantage in rural “amenity areas” in the peri urban fringe (rural areas adjacent to large cities, particularly Melbourne). Rural towns in “amenity” areas have been growing, some as commuter towns, and others as holiday destinations (some towns have over 50% of the housing empty much of the year) (Figure 4) (Pope 2011). As resident populations, including older and disadvantaged people, become a smaller *proportion* of rate payers in these areas, it can be more difficult to have their service needs prioritised by those who live, work and access services in other places.

Rural production areas

There are high proportions (but low numbers) of disadvantaged people in the small towns with declining populations in **rural production areas** (rural areas that are far from functional urban areas) (Figure 4). Disadvantaged populations in these areas include those who have been unable to move to better serviced areas because of the

decreasing value of their homes, and some welfare and migrant populations moving to these places to access cheap housing (Pope 2011).

Figure 4. Areas in regional Victoria in growth and decline - Annual average rate of population change, Regional Local Government Areas, 2018 to 2036 (Victorian Government 2019)



In summary, some drivers of disadvantage cause it to be clustered in particular geographic areas, and different cohorts of people might predominate in each, for different reasons, over time. Some places might also stay disadvantaged, because of their lack of connectivity to resources, even though people move in and out of those areas. In this sense, some places also experience entrenched disadvantage and it will not improve without connectivity. The time series analysis of *Dropping Off the Edge* has described severe disadvantage in Victorian localities as:

- » **complex and multifactorial**
- » **entrenched in a relatively small number of places**
- » **showing few signs of improvement over time** (JSS 2015).

This adds to the complexity of considering infrastructure to address disadvantage in regional Victoria, as do future drivers of change outlined in the next section.

2.3 Future drivers of disadvantage

The economic, social and environmental drivers outlined in Infrastructure Victoria's *Inter-regional Assessment* will continue to shape the distribution of disadvantage over the next 30 years: de-industrialisation and structural change; demographic change (growth/decline, ageing); and climate change (Aither 2019). Three predicted consequences of drivers are worth noting here, because of their potential impact on increasing disadvantage in regional Victoria:

- » the increase of precarious (insecure) work
- » growing wealth inequality

- » the impacts of extreme weather.

Precarious (insecure) work

Over the next few decades the restructuring economy is likely to continue to change the types of work available across regional Victoria. It has been predicted that over the next couple of decades, over a third of jobs in regional areas could be automated by technology, and replaced by new types of higher skilled jobs (CEDA 2015). This may affect the routine unskilled and entry level jobs, which have been vital for disadvantaged populations to break the cycle of disadvantage. A review of 4.2 million job ads across Australia showed jobs now require skills that more than a third of regional Australian students don't have and will therefore need to develop post school (FYA 2017a).

The nature of employment is also changing. Australians are increasingly under-employed and a recent study showed eleven dimensions of job security in Australia are declined from 2012 to 2018 including:

- » **part-time and casual work grew**, with more workers now underemployed, working very short or irregular hours
- » **earnings in insecure jobs are low, and have declined in real terms**
- » **young workers experience labour market insecurity most directly** and forcefully (Carney & Stanford 2018).

Figure 5. The underemployment rate has risen in Victoria since 1980. Source: IV analysis of ABS: 6202.0 - Labour Force Survey data



Wealth inequality

Alongside income inequality, wealth inequality in Australia is increasing (Productivity Commission 2018). Growth in wealth is strongest in the upper deciles, and wealth distribution is more unequal than income (Productivity Commission 2018). Wealth in Australia is held in the main home (39%), superannuation (20%), shares and other financial assets (19%), investment real estate (12%), and other assets such as cars (10%) (Davidson, Saunders & Phillips 2018). The wealthiest 20% of households in Australia own:

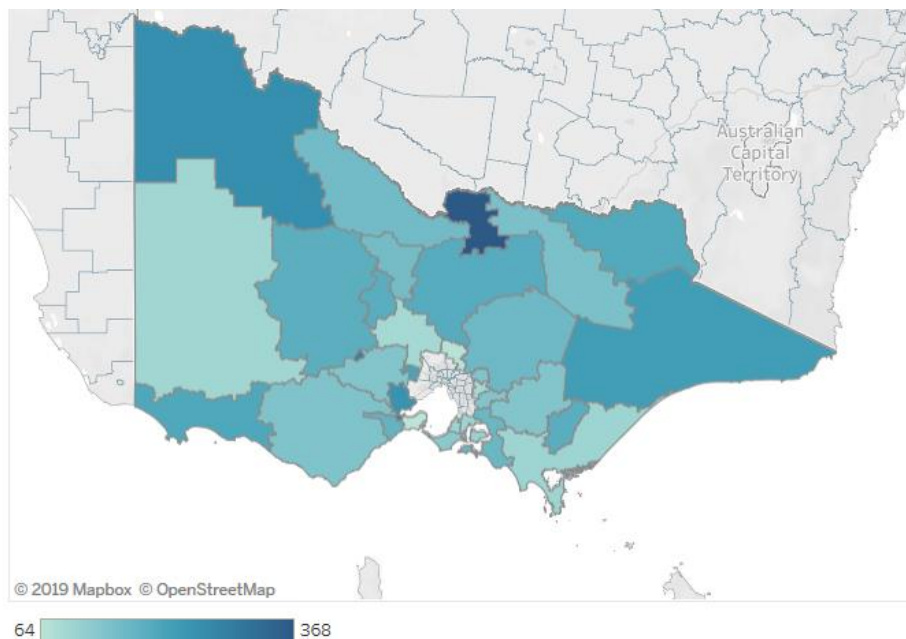
- » 62% of all wealth
- » 80% of wealth in investment properties and shares
- » 60% of all superannuation assets
- » 54% of all wealth in family homes (Davidson, Saunders & Phillips 2018).

The average wealth of a household in this group is \$2.9 million, almost a hundred times that of the lowest 20% (\$30,000) (Davidson, Saunders & Phillips 2018).

A home is the main source of wealth for disadvantaged people but declining housing affordability has disproportionately affected low income earners (Daley & Coates 2018). The bottom 20% of households spend more of their income on housing, and cheaper housing has increased in price faster than more expensive housing (Daley & Coates 2018). Home-ownership rates are subsequently falling among the young and the poor (Daley & Coates 2018).

While renting has increased in regional Victoria, rental affordability has declined (Raynor, Dosen & Otter 2017), and homeless in Shepparton, Geelong and Ballarat (Wendouree) now exceeds the median numbers in metropolitan areas (Figure 6) (CHP 2018).

Figure 6. Homelessness heat map using ABS data by State electorates, regional Victoria (CHP 2018)



Extreme weather

The international literature shows the impacts of a warming climate – particularly from extreme weather such as heatwaves and flooding, but also from prolonged periods of heat, cold or drought – are disproportionately experienced by disadvantaged populations. They compound disadvantage and accumulate over time (Sevoyan et al 2013). Impacts have been described as being on:

- » **health** including increased morbidity, mortality, and mental health issues, particularly for the elderly, chronically ill or homeless
- » **property, infrastructure and services** that need to be retrofitted or rebuilt

- » **economic opportunities** including reduced livelihood options and altered markets that lead to the exclusion of disadvantaged groups
- » **cost of living** as energy, water, food, and transport become more expensive (Sevoyan et al 2013).

The Australian *Impact of Climate Change on Disadvantaged Groups* study has shown disadvantaged households have greater difficulty adapting to extreme weather due to: social exclusion (including in decision-making); a lack of access to adaptation options; difficulties in accessing information; and difficulties accessing financial services (Sevoyan et al 2013). Emerging research shows under insurance is an issue, particularly with renters (Booth & Lucas 2018). Contents insurance covers temporary accommodation after disasters, and researchers have described, after the Tasmanian floods, renters becoming homeless or staying in damaged housing, because they weren't covered (Booth & Lucas 2018). Insurance premiums are rising in areas prone to extreme weather events, and in some areas it is now unavailable (Booth & Lucas 2018).

Disadvantaged groups in regional areas have a strong feeling of vulnerability and show ingenuity and resilience in adapting to extreme weather and cost of living rises, but their resources and ability to cope are stretched, and will not offset impacts (Sevoyan et al 2013).

3. The role of infrastructure in addressing disadvantage

Infrastructure Victoria's *Victoria's 30 Year Infrastructure Strategy* (2016) describes infrastructure as being about connectivity:

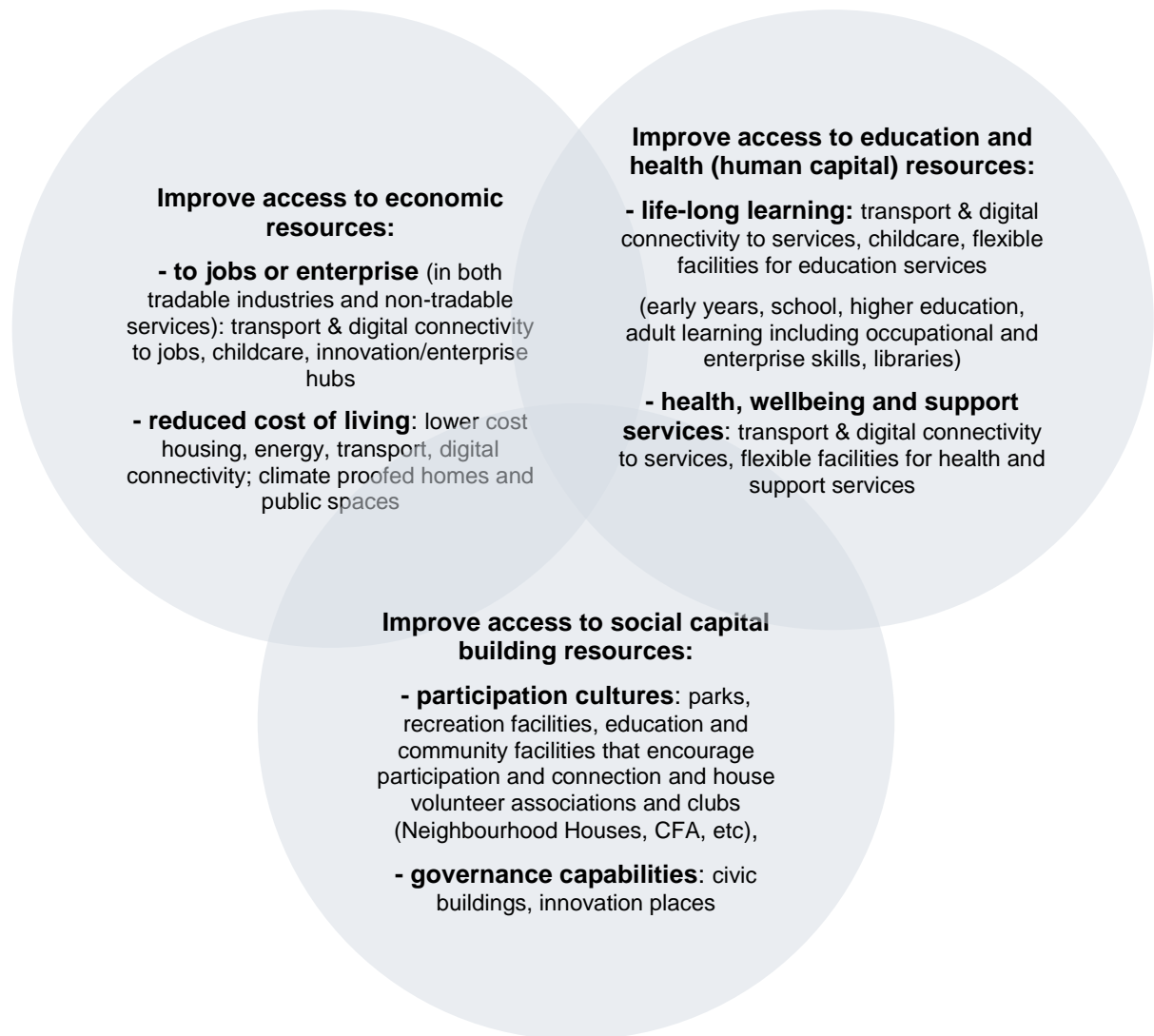
"The transport system enables people and goods to get to and from places. Communication networks collapse the distances between places. Education infrastructure enables the transfer of knowledge between people. Health infrastructure allows people to access the expertise of others. Shared community spaces, like libraries and parks, enable people to commune with each other and with nature. Essential services, like water and electricity, connect homes and businesses through grids that are often hidden from view" (Infrastructure Victoria 2016: 42).

The connectivity that infrastructure fosters has a limited but important role in alleviating disadvantage by creating opportunities for people to develop their economic, human and social capital resources (all convertible into economic resources (Bourdieu in Harker, Mahar & Wilkes 1990) (Figure 7). It can:

- » **Improve access to economic resources and services in general through:**
 - **digital connectivity and transport connectivity** to jobs and education, health and other services
 - **reduced cost of living**, particularly through housing, or reduced energy, transport, digital or other 'out of pocket' costs
- » **Improve access to education and health (human capital) resources across the life course** (early years, school and adult education) either through transport or digital connectivity (above), and/or facilities or new models of services, such as electronic (e-) services

- » **Improve access to social capital building resources** through facilities that develop local participation and leadership, and therefore the social health/wellbeing, amenity and governance of communities, including supporting the civic entrepreneurs that make infrastructure “work”.

Figure 7. Potential infrastructure investments that help address regional disadvantage



The following section outlines the types of infrastructure that could help alleviate disadvantage, and the points in the cycle of disadvantage that evidence suggest are most important. For brevity this section focuses on the Victorian government's role in provision, but it is acknowledged it is often a co-investor with other levels of government or other agencies. It is also acknowledged that other non-infrastructure policy levers are essential for reducing disadvantage, as are the infrastructure solutions outlined in the *Competitive Advantages* stream of Infrastructure Victoria's work (that develop local industries and employment) (Acil Allen forthcoming), but these are not discussed.

This section includes examples of infrastructure innovations that communities are designing with the assistance of governments, for example free WiFi or shared facilities, to address the complexity of disadvantage. These examples are included to show innovation is possible. They are illustrative, not definitive, and are drawn from a wide range of contexts both here and overseas. Determining scalability to other communities is beyond the scope of this paper.

3.1 Improved access to economic resources and services in general

3.1.1. Digital connectivity and transport

A Parliament of Victoria inquiry (2010) found inadequate communications infrastructure and limited transport options compound regional Victorian's challenges in accessing employment, educational/training, and human services that reduce disadvantage (items across Figure 7).

Digital connectivity

Regional Victorian's have lower rates of internet connection, and inferior internet speed and reliability, than Melbourne residents (RTIRC 2018). It is too early to know if new technologies like the NBN will address this (RTIRC 2018).

Internet connection at home is the only reliable data measure of digital connectivity in Australia. In regional Victoria one in four people (22%) live in a household without internet access (compared to 14% in Melbourne). In Australia people without internet at home are more likely to be:

- » people on low incomes (including families with children) (33%)
- » the unemployed (28%)
- » older people (~20% of those aged 55-64, and ~40% of those over 65)
- » migrants from non-English speaking countries (18%)
- » those living in in regional areas (17% in inner and 19% in outer regional areas (Thomas, Wilson & Park 2018 – analysis of the Australian Bureau of Statistics *Australian Household Use of Information Technology Survey 2016-17*).

Regional Victorians have much to gain from the services available from the internet, but cost is reported a major barrier (Thomas, Wilson & Park 2018). Online health, education and employment services will also increase efficiencies for governments, for example by curbing costs of providing health care for an ageing and dispersed population across regional Victoria (Infrastructure Australia 2019).

The Victorian government has a role, alongside the Commonwealth, in providing the infrastructure to improve digital connectivity and download speeds across regional Victoria. It can fund private companies to address gaps using ADSL, cable, fibre,

satellite and wireless technologies, particularly in locations where low population density mean large investments for companies for low returns. It can also fund the development of free WiFi and new forms of digital service delivery. Examples of communities using digital connectivity to reduce disadvantage can be seen in the box below.

Increasing internet connectivity in disadvantaged areas

In Bury in UK, a school, telecoms company and local government have provided Community Wi-Fi to residents through 50 lamp-post mounted and powered WiFi hubs. Residents have unlimited, 24/7, free, fast internet access “with no vouchers, log-ins or limits”. The system was developed to help students at the school with their learning, as 40% did not have broadband at home, the school supplied computers to ensure every student is digitally literate (Guardian 2013). Free internet has a range of benefits for disadvantaged households. It decreases expenditure, and increases access to the job searches and services increasingly offered through apps, e-health, and websites.

Some Victorian examples of novel apps that can help regional Victorian access services include:

- » *Ask Izzy* (<https://askizzy.org.au/>) is an app created by InfoXchange in partnership with Google, realestate.com.au, and News Corp Australia, to connect people to services when they are at risk of homelessness or violence, the service generated 2 million searches in its first two years (Pro Bono 2019).
- » *Clickability* (<https://clickability.com.au/>) is a web site of user generated ratings and reviews about services for people with a disability. Clickability is using collective consumer response to drive the design of services.
- » *Gather My Crew* (<https://gathermycrew.org.au/>) is an online rostering tool allows people to ask for the practical help they need from their gathered ‘Crew Members’ (friends, family, neighbours and colleagues). Designed for people who hit difficult times such as a serious illness, baby, sudden death, or ageing parent.

Transport

Given the lack of other transport options, it is not surprising a smaller proportion of regional Victorians have no car (5.3%), and therefore are less likely to “often have difficulty, or cannot get to places needed by transport” (3.9%), than those living in Melbourne (8.7% and 4.3% respectively) (PHIDU 2019). Those without a car are more likely to be:

- » over 60 (40% of those with no car, but 29% of population)
- » lone person households (52% of those with no car, but 16% of population)
- » people with a disability (19% of those with no car, compared to 12% of the population)
- » Aboriginal or Torres Strait Islander (5% of those with no cars, 1.6% of population) (ABS 2016).

Public transport is being stretched in areas of rapid population growth in regional Victoria and infrastructure is ageing (Infrastructure Australia 2019). While improvements in public transport would help alleviate disadvantage, it can be

unviable in low density areas, and may not be direct or frequent enough for those with age or disability issues.

Community transport that can go door-to-door has long been espoused as a solution, and there are many examples of communities using idle transport, to create tailored local services. The school and community bus in Lake Bolac, for example, is used to get bush nursing clients to services when not taking students to and from school. Many of these projects are run by volunteers, which make them difficult to sustain, but new initiatives in the car sharing space, following the success of private vehicle ride sharing, are starting to examine services for disadvantaged groups (see box below).

The Victorian government is responsible for the provision of public transport infrastructure planning to improve transport connectivity in regional Victoria. It can also provide the infrastructure (vehicles, electric vehicle charging stations, car parking, etc) that will allow private companies and not-for-profits to innovate and create door-to-door services. The rapid transition of the transport sector by technology (ultimately to driverless vehicles) offers considerable potential for new options in the future (Infrastructure Australia 2019).

Alternatives to public transport: bHive community ride sharing

In Bendigo, a bHive (<https://bhive.coop/>) is a cooperative, peer to peer sharing economy platform that will allow local people to create, own and run sharing enterprises. It was established as an alternative to the global tech companies (such as Uber, Air B and B) in an attempt to ensure the annual expenditure of \$2.5 billion on goods and services stayed in the local economy. One of its first activities is to create car sharing, releasing cars that sit idle during the day into public use. They will first organise fleet cars, but are examining the scope for shared disability transport. The initiative is being supported by the Victorian government and they are hoping to have 80 business members and 6 500 community members, and a turnover of \$16 million (\$700k going to charity,) by 2030, keeping spending, transport work and profits in the local community.

3.1.2 Reducing cost of living

Although increasing incomes (particularly pensions and benefits that fall below the poverty line) would create the bigger effect in decreasing disadvantage, decreasing expenditure through cheaper housing, or reduced energy, transport, digital or other 'out of pocket' costs, is also a lever (Figure 7).

Housing is the biggest cost to disadvantaged households, as the majority do not own their own house (Davidson et al. 2018). Research has also shown that the main reason families with children in school do not have internet is cost (Thomas, Wilson & Park 2018).

Housing

For the increasing number of people that cannot afford to buy a house, regional Victoria can be an attractive option, because a greater number of rental properties

are affordable (Raynor, Dosen & Otter 2017). However, a study of a week's rental listings in 2016 (4 148) found very few properties in regional Victoria were affordable for low income households including for:

- » single people/parents on Newstart (>1%), Youth Allowance (0%), Disability Pension (1%), Parenting Payment (2%), Age Pension (6%), Minimum Wage (>15%)
- » couples with children on Newstart (4%) or both on Minimum Wage (27%)
- » couples with no children on Age Pension (10%) (David 2016).

State Government has a role to provide public housing (preferably in places with good access to services and transport). It can also retrofit its' stock to improve energy efficiency (reducing running costs) and utilise the building regulations to ensure the housing supplied by others is climate adapted. The Australian Government provides the Victorian government with funds to support the delivery of housing and homelessness assistance, but the construction of new public housing dwellings is at its lowest rate for 40 years, the quality of existing stock is declining, and waiting lists are increasing (AIHW 2018; Infrastructure Australia 2019).

In the absence of public housing, new models of community housing such as “co-housing” are being developed, particularly for young and older people (AIHW 2018). Co-housing models involve the establishment of a group of independent dwellings, with shared living spaces and/or services, that balance resident's need for independent living and support.

Housing to ensure young people finish school

Education First Youth Foyer in Shepparton places up to 40 young people (aged 16 to 24) at risk of homelessness in subsidised housing on the TAFE campus. Students sign an agreement to continue with their schooling with an attendance rate of 85% before they can move in. They also undertake life and work skills workshops, and are supported by staff available 24 hours a day. The model is working, with evaluation showing 85% of residents engaged in work or education and three-quarters having completed year 12 or a certificate 3 or higher, after one year. <http://foyer.org.au/foyers-in-australia/foyer-locations/>.

Co-housing for older people

Babayagas House is self-managed cohousing in Paris (Shareable 2017). It was established by a group of older women who wished to maintain their independence by living together in a supportive community. Funded by a range of sources including local government, around 21 residents aged 66 to 88 – around a third on the poverty line – pay an affordable rent for their own small apartment and share the cost of a monthly visit by a health professional (Shareable 2017).

3.2 Improved access to education and health services

3.2.1. Education across the life-course

The critical role of education in life outcomes is well described, and international and Australian research shows the employment it enables is the most important route out of disadvantage (Burkett 2015). Work provides a pathway to financial security, mental and physical health, dignity and meaning (FYA 2017). Developing the skills for success in work and life happens over a lifetime – in early years, school and adult education – but early intervention provides the best results (Figure 7).

Early years health and education

In 2018, one in five (19%) Victorian children were assessed as developmentally vulnerable in their first year of school (DET 2018). Higher rates were found in:

- » the most disadvantaged areas (30% of all children in those the most disadvantaged SEIFA areas)
- » regional areas (24% and up to 51% in some regional communities) (DET 2018 – analysis of the *Australian Early Development Census 2018*)
- » children who were:
 - male (26% of all male children)
 - Indigenous (37% of all Indigenous children)
 - not proficient in English (54% of children not proficient in English).

Children who are developmentally vulnerable in their first year of school are more likely to have lower quality early childhood education services and schools in their area (Lamb et al 2015).

International research has shown high-quality early childhood education and care programs can break the cycle of disadvantage (CCCH 2013). Once children fall behind in their learning, the gap stays constant or widens (Heckman 2000 in CCCH 2006). Early years programs are cheaper than treatment, and because they are more effective (show sustained benefits beyond childhood), give the largest economic returns over the long term (CCCH 2006; CCCH 2013).

The Victorian Government funds early learning places and programs. It provides limited infrastructure grants, often as a co-investor with local government on school sites. In general, kindergartens and child care centres are owned by local governments, private companies and not-for profits. Currently the quality and accessibility of facilities vary across areas (Infrastructure Australia 2019).

Mobile services: registered childcare

In Loddon, a rural area of small towns, children from 160 families were arriving at school not ready. A *Strong Families, Strong Children* partnership of eight agencies has begun re-shaping the service system to make it responsive to these families' needs (<http://www.ncllen.org.au/strong-families.html>). They have created a model to address the absence of enriched early learning experiences in the area, through a mobile affordable registered childcare service. A truck with equipment (portacots, change tables, learning aids and play equipment) will drive to a different town each day of the week and set up a full-day service in the local kindergarten. The truck will be run by an experienced worker to train local workers, and help parents connect to other services, including via teleconferencing.

School education

By age 16, nearly one in five (17%) young people in regional Victoria have left full time secondary school education (compared to 13% in Melbourne) (PHIDU 2019). By age 24, a third (33%) of young people are not engaged in either learning or earning (Lamb et al 2015). Young people aged 15 to 21 in Australia who are not in education, employment or training are more likely to be:

- » female (60%)
- » not in the labour force – due to home duties/looking after children (per cent not reported by AIHW)
- » Indigenous (10%)
- » migrants from non-English speaking countries (18%) (AIHW 2017).

Australian research shows early school leaving leads to significant social and economic costs. For individuals there is a decrease in life-time earning by around 10% for every year left early (Leigh & Ryan 2008). For each cohort of early school leavers there are significant economic costs. For the 2014 national cohort of 37 700 early school leavers, the lifetime financial cost to the government and taxpayer is \$12.6 billion (Lamb & Hou 2017). Costs to the community, such as the social consequences of crime and lost earnings, amount to another \$23.2 billion (Lamb & Hou 2017). An international literature review has shown that while post school labour market interventions are important, they do not fully compensate for the transferable knowledge/skills acquired earlier in the education system (ILO 2016). It is therefore important to engage disadvantaged young people in school.

The Victorian government is responsible for planning the provision of facilities, equipment, technology that create the platform from which effective learning can be delivered. Education is highly subsidised by governments, and population growth and the increasing need to teach technology are stretching budgets (Infrastructure Australia 2019). In some regional areas however, shrinking populations are also creating challenges in providing full curriculum, maintaining infrastructure, and keeping schools open (Infrastructure Australia 2019). School closures or poor-quality schools mean some students must travel out of their area (Infrastructure Australia 2019).

Increasingly, the Victorian government is investing in shared school and community facilities in disadvantaged areas, including with philanthropic organisations such as the Colman Foundation, to provide easy access to wrap around services that address barriers to participation for students and their families (including in Shepparton, Bendigo, Seymour, Morwell and Robinvale).

Schools as community facilities

Doveton College is a community focused school with wrap around services for families and children of all ages. The College model was developed after the closure of five non-viable schools requiring significant maintenance in the Dandenong area. It offers maternal and child health, play groups, an early learning centre, Prep to Year 9 schooling, adult learning, family support, health services, fitness classes, employment services and extra-curricular community and volunteer activities. In operation since 2012, evaluation has demonstrated it is highly utilised by the community, including parents in their children's education, adult learning, and by external services (McMahon 2017). Its early learning centre has been assessed as “exceeding an outstanding centre of excellence” for picking up developmental issues early, and the school has improved learning, cognitive and social development outcomes and improved aspirations (McMahon 2017).

Adult education

In a changing economy, new skills are needed by everyone, not just young people. Over the last 25 years in Australia there has been a loss of around 100 000 machinery operator, 400 000 labourer, and 250 000 technician and trades jobs (FYA 2017). These have been replaced by new jobs in community and personal services and professional and business services (FYA 2017). In 2016, a study estimated 2.3% of Australian workers with at least one year of tenure are laid off each year (OECD 2016). New jobs are heavily reliant on a new set of transferable “enterprise skills” including digital literacy, critical thinking, creativity and communication (FYA 2016). The testing of young people over the past decades shows at least a third have left school without digital, problem solving, maths or reading skills – and the rates are double in disadvantaged students (FYA 2014). A lack of the right skills for changing work is therefore a common problem for disadvantaged people.

Free adult education offerings are widely utilised by disadvantaged Victorians, including TAFE, Neighbourhood Houses, and the most used community education resource: public libraries (education is the main reason users use libraries in Victoria) (ABS 2008; PLV 2019). Use of libraries has been increasing faster than population growth over the past 15 years, driven by digital services such as free Wi-Fi and digital device, coding and robotics educational programs (PLV 2019).

The Victorian government is responsible for planning the provision of facilities, equipment and technology for adult education, including TAFE, Neighbourhood Houses and libraries. As with schools, population growth, technology and the need for transport, mean greater investment is required. Local digital infrastructure and makers/innovation spaces in larger disadvantaged communities will be particularly vital.

Makerspaces for adult learning

The Malcolm X Library (San Diego, US) was remodeled into The IDEA Lab to expose young people in a disadvantaged area to STEAM (Science, Technology, Engineering, Arts and Maths) workforce skills through technical equipment they would not be able to use otherwise. Young people use the lab to record music, use a 3-D printer, play or create games, or borrow a Wi-Fi hotspot for 90 days. The lab hosts programs, such as photography or computer programming, to develop lifelong skills with digital tools. The lab is the first of many digital libraries that will be built within the San Diego Public Library system to promote lifelong learning to a range of age groups. <https://www.sandiego.gov/public-library/locations/valencia-park-malcolm-x-library>

3.2.2. Health and wellbeing services

The complex set of issues associated with disadvantage make health, human, justice and emergency services vital for reducing disadvantage (Figure 7). The types of services required is determined by service planning that outlines models that address current and forecast demand (for example, the “hub and spoke” transport and health services model of NSW will turn certain towns into desirable service centres). In general, regional Victorians have less access to services because of workforce shortages and/or distance to travel to service. Both may make innovative models of connectivity more attractive than facilities.

For brevity, only primary health services are discussed here, although the lessons outlined apply to hospitals, justice, youth justice, police, and emergency services. Health services include the services provided by GPs, nurses, allied health professionals, midwives, pharmacists, dentists and Aboriginal health workers. It is acknowledged that other services are important. Aged care and mental health services are currently the subject of Royal Commissions, which will shed light on infrastructure needs (Infrastructure Australia 2019). All services are stretched by population growth, rises in costs (most services are heavily subsidised), and many additionally from the ageing populations.

Primary health

A literature review by the Australian National and Western Sydney Universities found disadvantaged communities have: higher mortality and morbidity rates (from cardiovascular disease, arthritis, diabetes, cancer, mental health, and disability), higher prevalence of risk factors, and limited access to health care (King et al. 2016). An earlier literature review by the Monash (Bendigo) and Wollongong Universities found inequalities between rural and metropolitan areas for a range of outcomes: excepting access to health care, are the result of rural area’s larger proportion of disadvantaged people, not rurality (Smith, Humphreys & Wilson 2008).

People living in regional areas in Australia have worse access to, and use of:

- » **health services** (AIHW 2017)
- » **medical practitioners** (including specialists) (253 per 100 000 population compared with 409 per 100 000 in major Australian cities) (AIHW 2017).
- » **mental health services** (382 encounters per 1 000 population compared with 482 per 1 000 MBS funded mental health encounters in major cities) (AIHW 2017)

- » **ambulance services**, with only four regional LGAs (Ballarat, Geelong, Warrnambool and Wodonga) having 85% of calls responded to within 15 mins (compared to all but nine metropolitan LGAs – all but one of which were on the metropolitan/ rural interface) (Ambulance Victoria 2018)
- » **fit-for-purpose aged care and disability services**, which are currently the subject of Royal Commissions (Infrastructure Australia 2019).

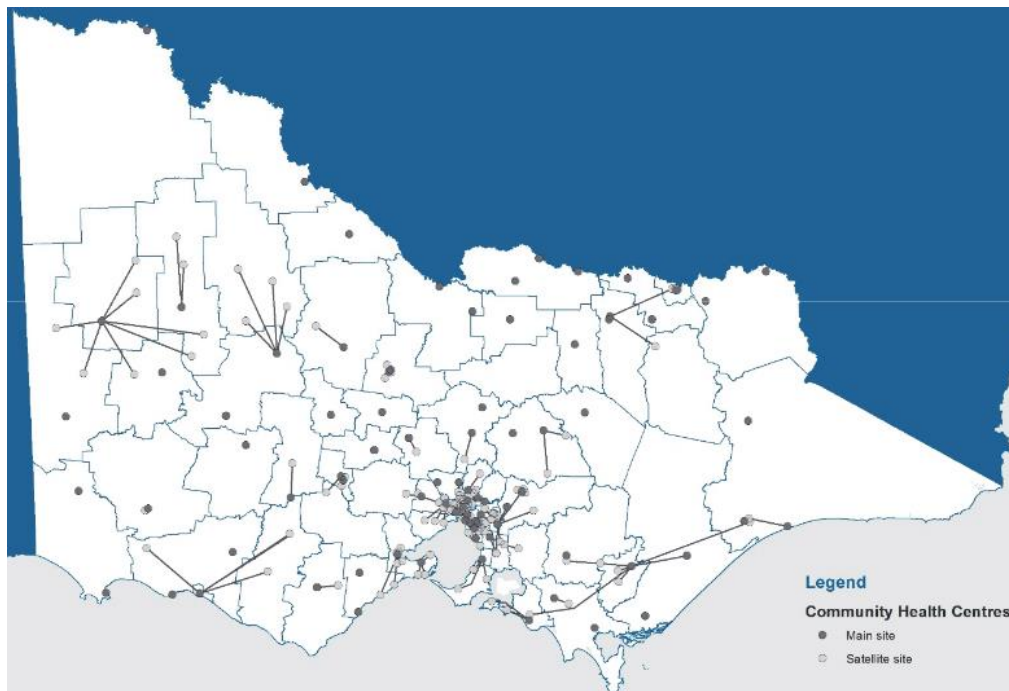
A literature review by Flinders University found those most disadvantaged by a lack of primary care included:

- » those from low socio-economic backgrounds
- » in rural and remote areas
- » Aboriginal and Torres Strait Islanders
- » homeless
- » those experiencing mental health or drug and/or alcohol problems
- » prisoners
- » refugees and asylum seekers
- » victims of domestic violence
- » people living with a disability
- » the elderly
- » caregivers (Bywood, Katterl & Lunnay 2011).

A strong, accessible primary health care system keeps people well, prevents disease, manages child and maternal health, and supports those with chronic conditions. It prevents the higher costs to government of secondary (specialist) and tertiary (hospital) care. A literature review by the Australian National and Western Sydney Universities (2016) found high performing primary health care improves health outcomes, lowers hospital admissions, lowers health care costs, and prevents the negative health outcomes associated with socioeconomic disadvantage (King et al. 2016). Constrained government revenue and increased demand however, are creating cost pressures across the sector (Infrastructure Australia 2019).

The Victorian government funds a range of primary health care services through a network of community health centres, either as full or co-investors in these facilities. This includes 85 community health centres that deliver a diverse range of medical and social services, specifically for disadvantaged people (VAGO 2018). The Victorian government can also provide technology and connectivity infrastructure to ensure efficiency and support new models of care (e-health, tele health, outreach and mobile health), and in some places workforce accommodation. In regional Victoria new models increasingly include shared facilities to reduce infrastructure, create cost efficiencies through shared administration, make work attractive for workers, and make services more accessible to clients. Despite increased expenditure, Australia still lags in providing fit-for-purpose infrastructure for modern health care (Infrastructure Australia 2019).

Figure 8. Victoria has State funded Community Health Centres to provide primary care to disadvantaged populations in some areas (VAGO 2018).



Shared health services, community hub and rural transaction centre

The *Walwa Bush Nursing Centre*, in an isolated town on the upper Murray, was created after a community campaign following the closure of its eight-bed hospital. The community fundraised – and with \$800k from the State government – transformed the hospital with a \$2.1 million infrastructural upgrade into a shared facility (including shared admin) for its primary health services, community centre, and rural transaction centre. It now houses GPs, district nursing, home care, 24hr emergency first response, outpatient clinic, pharmacy, gym, a community centre, IT centre, banking services, RUM radio, a community car, meals on wheels, allied health services, case management, and counselling. The centre is a community owned not-for-profit and has been successfully operating since 2006.

3.5 Improved access to social capital resources

A final set of infrastructure that is important for communities is the social infrastructure that supports participation, health and wellbeing, and the amenity of communities (Figure 7). This includes everything that that helps communities connect: from swimming pools, sporting grounds and parks; to community facilities for education, health, and community activities; to volunteer emergency services; to civic infrastructure for governance. This infrastructure is important for the wide range of health, social, environmental and economic benefits it generates, but it also supports the building of community networks that are vital to make infrastructure “work” (Pope 2011a).

Most of the infrastructure mentioned in this paper requires civic entrepreneurs, leaders and community networks to create impact. Entrepreneurs emerge from communities themselves or involve communities in co-design. Strong local governance, and community engagement in planning, can reduce “white elephants” (too much single purpose infrastructure that is hard to manage) and make infrastructure fit-for-purpose for individual communities.

A literature review of the resources generated by networks in communities shows they are significant (Pope 2011). Two types of networks are important:

- » **bridging networks** of more diverse “weak ties” generated through participation in education, employment and public life (interest groups, sport and recreation, volunteering, etc)
- » **governance networks** that link individuals and organisations to institutions to make decisions about the management and distribution of a community’s overall resources and to turn community assets into outcomes (Pope 2011).

Strong governance is built through the networks created through broader participation (Perkins et al. 1996; Sampson et al. 1997 in Pope 2011a). Disadvantaged communities often miss out on forming these influential networks because of their lower rates of general participation. A population survey by the Department for Victorian Communities (2006) *Indicators of Community Strength* showed that people on low incomes and public housing tenants participate less. They were more likely to be socially isolated, less likely to be volunteers, members of organised groups, or attend community events, and less likely to feel valued by society or that there were opportunities to have a say on issues that were important to them.

The costs of non-participating communities are significant. The savings to government of fit-for-purpose infrastructure, particularly the use of latent and existing assets, are substantial (Infrastructure Australia 2019).

Regional Victoria has examples of where participation and the building of governance networks is decreasing disadvantage. In Shepparton, the Rumbalara Football Netball Club, affiliated with the Rumbalara Aboriginal Co-Operative, was established in 2006. Alongside successful football and netball teams, the club is a hub for the local Aboriginal community, providing education, health, leadership and social support programs with partner organisations across the region. Its range of community-focused activities is aimed at increasing the general wellbeing of the Indigenous population and building community leadership: providing role models and mentors to young people in the community, and teaching them vital leadership skills. Rumbalara went on to establish the Kaiela Institute to support local leadership and innovation by working on community and economic development projects (www.kaielainstitute.org.au). It has also been instrumental in making Shepparton one of the Council of Australian Governments partnership sites, and more recently one of seven *Empowered Community* sites for Indigenous self-governance across Australia.

The Victorian government can provide funding for infrastructure to foster participation in disadvantaged communities, including facilities that allow community and economic development to occur at the same time, particularly as a co investor with local government.

Shared use community facilities

Every One, Every Day (UK) is a large-scale ‘participatory ecosystem’ being built across disadvantaged neighbourhoods, triggered by concerns that social isolation was creating a lack of collective political voice in poorer neighbourhoods (Participatory City undated). Two shops on high streets (soon to be five) have been converted into makers spaces where people meet, discuss ideas, and launch projects to produce the things they need together. The focus is on “sharing skills, spaces and resources; batch cooking and community meals; food growing and tree planting; trading, making and repairing”. Communities have created food gardens and activities, urban energy projects, co-working spaces, community film festivals, computing/coding workshops, and a games café.

Liyan-ngan Nyirrwa Cultural Wellbeing Centre in Broome is housed with the business and economic development arm of Yawaru’s (Native Land Title Holders) Prescribed Body Corporate (NBY 2019). Culture and heritage have been used to shape a contemporary venue, community development centre and working space to help develop economic opportunities (Figure 9). The Centre (built with 30% Indigenous labour) sits on a landscaped site with public art and ancestor trees, and houses a language centre, family and community programs, cultural projects, exhibitions about Yawaru culture and heritage, a function centre, meeting facilities, and a café focusing on cultural cuisine. It offers a range of activities to draw in both Yawaru families and the wider Broome community, businesses and tourists.

Figure 9. The *Liyan-ngan Nyirrwa Cultural Wellbeing Centre* in Broome – infrastructure that facilitates both community and economic development.



4. A place-based approach for prioritising infrastructure

This brief review of the literature describes disadvantage in regional Victoria and the types of infrastructure solutions that could help address it. It highlights a range of issues that are important when considering prioritising infrastructure.

4.1 Challenges and considerations that arise from the literature

The literature raises three challenges related to the nature of regional disadvantage described in section 2. *Defining disadvantage*.

Any model for selecting infrastructure will need to be:

1. **Flexible: because disadvantage has a different character in different places.** Disadvantage is concentrated in a range of contexts in regional Victoria – including small declining rural towns, growth suburbs in regional cities, public housing estates, and amenity destinations with large non-resident populations. Each location faces different challenges – population growth, decline, ageing, diversity, distance from employment centres and services, climate challenges, etc. This means infrastructure interventions need to be flexible to different localities and be able to adjust to changing circumstances, populations, and needs over time. Interventions should not be what the Productivity Commission's (2017) *Transitioning Regional Economies* report called ineffective, costly one-size-fits-all interventions applied across regions.
2. **Part of a package of coordinated activities: because disadvantage is multifactorial.** The complexity of the drivers and outcomes of disadvantage mean that to be effective infrastructure will need to be part of a targeted package of integrated investments across government, that address multiple risk factors simultaneously, rather than focusing on single issues (Productivity Commission 2013). This will require local area plans, and joined up service planning across portfolios, and/or the three levels of government. It will also require thinking about how to link infrastructure to other reform agendas (such as changes to pensions and benefits) and other government levers such as procurement in the delivery of infrastructure, as is happening in the Geelong region (see box).

Social procurement to create local jobs

In the Geelong region, the GROW (G21 Region Opportunities for Work) collective impact project between philanthropic, business, government and community organisations, aims to turn economic growth into job opportunities for those in areas with persistent disadvantage (Burkett 2015). GROW estimate there will be \$1.2B of major infrastructure projects in the next few years, which could create around 4 500 jobs (Burkett 2015). They are working with public and private procurers, developers, suppliers and investors to create jobs through their procurement and investment spends. At the same time, they are ensuring job seekers can access the support, training and services they need to take up opportunities, and are supporting the development of local entrepreneurs, businesses and not-for-profit enterprises to grow as local employers. GROW's work is funded by The Victorian Government, the G21 Alliance, Give Where You Live Foundation and local governments (Geelong, Colac Otway, Surf Coast, Golden Plains and Queenscliff).

3. **Future proofed: because disadvantage may change further over time.** Changing work, climate, and rates of home ownership, will need to be

considered to future proof areas from further, or compounding, disadvantage. This will require imputing forecasts on risk into models as well as measures of current disadvantage (for example on climate risks). Disadvantaged cohorts within areas can change over time, and understanding who is at risk, will be important.

Three additional considerations can be drawn from the literature about the types of infrastructure that can address disadvantage, outlined in section 3. *The role of infrastructure in addressing disadvantage.*

Priority will need to be given to:

1. **Interventions that target life stages that have bigger impacts:**
 - a. the early years (health and education);
 - b. school completion and transition to work;
 - c. family wellbeing (housing, access to public health and other services such as crisis intervention for family violence); and
 - d. ageing (housing, access to public health and other services) (Figure 1).

Some interventions such as transport and digital connection could assist several stages simultaneously. Some population groups need particular attention: people with disability, the socially isolated, and Aborigines and Torres Strait Islanders.

2. **Interventions that use new models (innovation) to create greater connectivity and efficiencies.** Technology offers significant opportunities to develop more cost-effective models. Electronic-, tele-, app- and mobile services, hub and spoke models, and shared infrastructure, could all increase access and affordability of services, reducing disadvantage. New models should always consider using the existing, latent assets in regional communities, for example to provide fewer, more integrated facilities, to reduce costs and not burden communities with management and maintenance of too many single use facilities. Mount Alexander Shire Council have reported to Infrastructure Victoria, “Council has responsibility for the maintenance and upgrade of 258 community buildings ... we are challenged within the current policy and funding environment to maintain high standards of infrastructure to achieve our vision of "a thriving community working together to create a sustainable and vibrant future" (Infrastructure Victoria 2019). Innovation can reduce “white elephants” and make infrastructure fit-for-purpose for individual communities.
3. **Interventions that are supported by communities – local energy, leadership, civic entrepreneurs and community networks – that make infrastructure “work”.** Selection will therefore not only require data on need, but local knowledge on a community’s capacity to manage infrastructure and provide services. Local strategic knowledge, and community engagement/co-design in planning, provides an understanding of the priorities, interests, strengths and capabilities of communities and the potential threats to the success of infrastructure. Recognising that local communities are in the best position to understand the opportunities and challenges faced by their region, the Victorian Government established nine Regional Partnerships in 2016.

Regional Partnerships comprise of Local Councils, businesses, community leaders, a Regional Development Australia Committee member and a Victorian Government Deputy Secretary. In April 2019, each of the nine Regional Partnerships developed an *Outcome Roadmap* that outlines the aspirations and priorities for the regions (RDV 2019). These *Road Maps* are a good starting point for thinking about local infrastructure needs. This process can also identify where the capacity does not exist and can be built.

4.2 A place-based approach

The challenges and considerations above make place-based approaches for considering infrastructure appropriate. Place-based approaches consider the different functions of places, and consider each's potential for “[drawing] on their own skills and innovation capabilities” in setting local development agendas (Tomaney 2010).

The European Commission has defined the goal of place-based economic development, as “to reduce persistent inefficiency (under-utilisation of the full potential) and inequality (share of people below a given standard of well-being and/or extent of interpersonal disparities) in specific places” (Barca 2009: 5). They argue this can be achieved through, “the promotion of bundles of integrated, place tailored public goods and services, designed and implemented by eliciting and aggregating local preferences and knowledge through participatory political institutions, and by establishing linkages with other places” (Barca 2009: 5).

These approaches recognise that addressing disadvantage requires a combination of actions to improve economic, human and social capital assets (where human and social capitals can be converted into economic capital) (Bourdieu in Harker et al 1990) (Figure 7). This means, in addition to examining economic assets, place-based approaches require: strengthening local and regional institutions that are able to assess and develop local economic assets and actively shape local policy (rather than merely make demands on State and Federal agencies) (social capital), and develop human capital and the promotion of innovation (Tomaney 2010).

Recognising this, the OECD (2019) recently modified its place-based principles for public sector investment to promote growth in regional areas to directly address disadvantaged (Indigenous) communities. The principles include:

- » **tailoring investment to different places** through strategic frameworks based on the local needs, characteristics and aspirations of communities
- » **adopting effective co-ordination instruments** across levels of government,
- » **creating opportunities for meaningful engagement with communities** throughout investment cycle and strengthening the capacity of communities to participate in decision-making about development.

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