BETTER INTELLIGENCE

BETTER EVIDENCE FOR CHILDREN'S POLICY

Towards improving children's developmental outcomes: Scoping an approach to build better evidence for policy

Final report | June 2018

Caminante, no hay camino, se hace camino al andar.

Traveller, there is no path. The path is made by walking.

Antonio Machado (1875–1939)

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Funded by...

The Australian Government's Data Integration Partnership for Australia (DIPA)

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1. Executive summary

This report presents observations and findings from a scoping study delivered on behalf of the Australian Government Department of Education and Training, and funded by the Australian Government's Data Integration Partnership for Australia (DIPA) initiative.

About the study

The study sought to identify key considerations and opportunities to deliver cross-portfolio insights from integrated (linked) data assets that would assist policymakers and researchers in relation to children's policy, with a focus on children from birth to age 12.

These findings were developed following consultation with key government and non-government stakeholders with an interest in policy and research spanning the responsibilities of the Australian Government departments of Social Services, Health and Education and Training.

A common vision to inform research priorities, data integration and analytics

Developing and adopting a cross-portfolio vision for children's policy would help to ensure research priorities were broadly aligned to policymakers and researchers priorities, which in turn would help to focus data integration and analytics activities.

A cross-portfolio vision for children's policy

Through consultation, the following was developed as a possible vision ...

> *To help children thrive by achieving better outcomes now and into the future across domains of interest, by acting upon insights into...*
>
> - *Barriers and opportunities (risk and protective factors)*
> - *Transition points (across life stages)*
> - *Potential interventions (what works or what may work).*

Further value is likely to be gained by adopting a specific cross-portfolio organising framework, such as *The Nest*, which has been developed by the Australian Research Alliance for Children and Youth (ARACY).

Considering children's policy within a broader lifecourse approach would enhance the applicability of insights across Government in a holistic way.

Research priorities that support the vision

The report identifies five potential research priorities relevant to children's policy, which would support the delivery of the above vision.

- Priority 1: Loved and safe – Safe, stable and nurturing environments
- Priority 2: Material basics – Basic needs met
- Priority 3: Healthy – Born healthy
- Priority 4: Healthy – Positive mental health
- Priority 5: Learning – Equipped for future work, study and life

Ensuring research priorities enable better understanding of 'external factors' (parents, family, home, school) and not merely of the child would maximise value for researchers and policymakers.

Research priorities should be adjusted over time to reflect evolving insights and understanding of the factors influencing children's outcomes.

Data required to address research priorities

The report identifies a number of administrative data assets that, if integrated, will enable policymakers and researchers to derive insights relating to the five identified research priorities. Assets deemed to be of particularly high value included:

- Australian Early Development Census (AEDC) (various)
- Family Tax Benefit (FTB) and other income support data (DSS)
- Income and taxation data (ATO)
- The Census of Population and Housing (ABS)
- National Early Childhood Education and Care Collection (ABS)
- Child Care Management System (ABS)
- Medicare Benefits Schedule (MBS) and Pharmaceutical Benefits Scheme (PBS) (Health)
- Perinatal data (AIHW)
- Child protection, and juvenile justice data (AIHW).

Effectively integrating high priority assets

Given the significant volume and complexity of high value data assets that could be integrated to address research priorities that would advance children's policy, it is critical to prioritise integration efforts.

There are a number of valid reasons to pursue the development of a child-centric dataset in addition to the ongoing development of the person-centric Multi-Agency Data Integration Project (MADIP), including:

- The child-centric – rather than adult-centric – nature of the dataset
- The advantages of the child-centric dataset's existing integration with non-Commonwealth assets.

Integrating the child-centric dataset with MADIP is an obvious long-term end-state that would unlock significant value of both assets. This should be kept in mind when pursuing integration activities with each asset in the short to medium term.

Next steps

This scoping study uncovered a genuine willingness by government and non-government stakeholders to collectively share the challenges and opportunities in children's policy and research.

Future activities to enhance children's policy through developing a shared vision and research agenda, and pursuing integration and analytics activities should leverage this commitment to enhance outcomes in children's policy and beyond.

Conclusion

The study was conceived as a high-level scoping study. As such, the findings are intended to inform and guide further discussions and decisions rather than be prescriptive.

In considering the observations and findings, with due consideration for other strategic priorities of Government and its stakeholders, a path can be forged to unlock the value of our nation's administrative data holdings to enhance outcomes for Australian children, with potentially far-reaching benefits for generations to come.

2. Background and context

Governments at all levels across Australia have a particular policy interest in ensuring every child grows up well. Investment in the early years has the potential to deliver substantial returns accumulating over a child's life, providing broader benefits to society. Strong starts to a child's development can strengthen future outcomes through improving wellbeing, boosting workforce participation, reducing reliance on welfare support and promoting social engagement (Productivity Commission, 2014). Effective social policy in the early years (birth to age 12) can also reduce intergenerational and long-term disadvantage.

There are large overlaps between social policy interests related to the early years of child development that are traditionally the responsibility of separate government portfolios. Many policy areas that fall outside the traditional sphere of early childhood concerns, such as housing and transport, are also influential during these critical years. Although this intertwining of social policy interests is well recognised, government policies addressing issues in the early years are often made in isolation, targeted to individual portfolio concerns, and do not take account of these inter-relationships.

This typically 'portfolio-centric' approach to understanding and addressing these challenges, is exacerbated by a lack of nationally relevant, accessible insight into what works to improve outcomes. This lack of insight is not (necessarily) due to a lack of data. However, a number of factors constrain our ability to derive meaningful insights from our national data assets, including:

- A historical lack of integrating (linking) various data sources
- Legislative, operational and other considerations that impact on the ability to readily integrate (link) administrative data assets (including law and lore)
- Resource and capacity constraints of involved parties.

The Data Integration Partnership for Australia (DIPA)

Addressing these challenges requires a step-change in national strategy, coordination and action. The whole-of-Australian-Government Data Integration Partnership for Australia (DIPA) initiative provides a vehicle for this step-change.

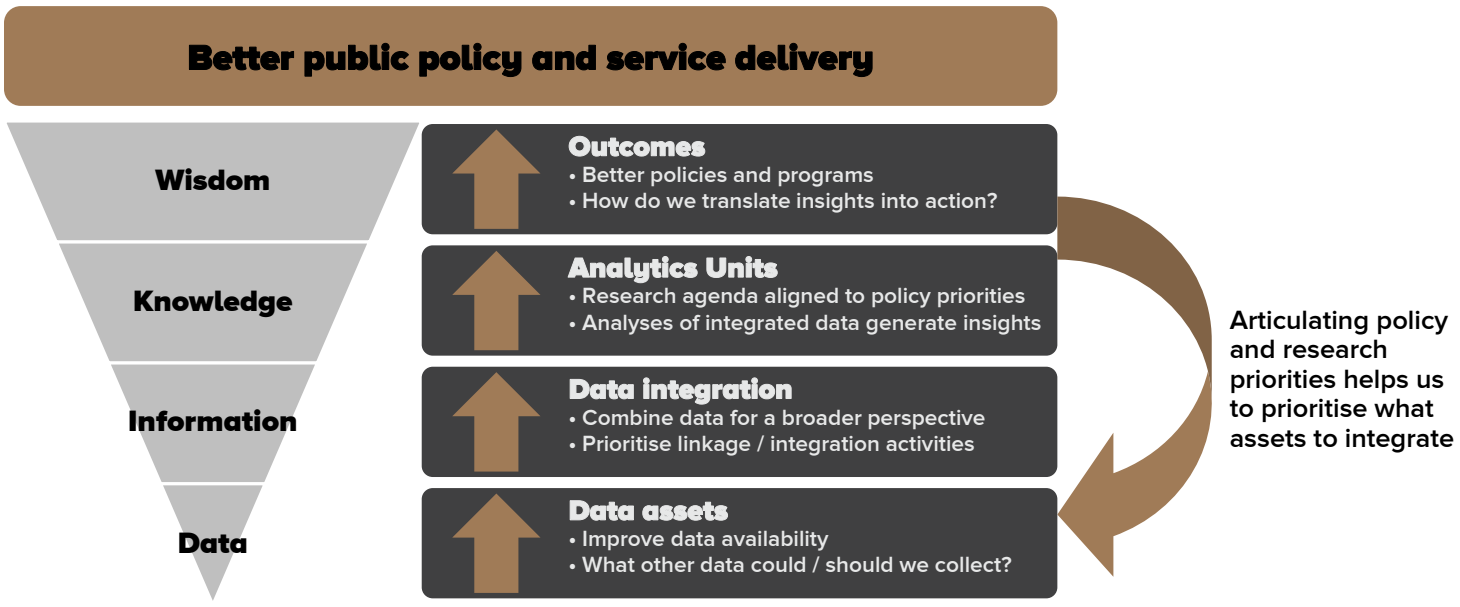
The DIPA initiative provides funding and an overarching framework across three broad areas (see Appendix A), aimed at addressing these challenges to achieve better national outcomes through better policies and programs...

- Data assets (improving data availability)
- Data integration (combining data for a broader perspective)
- Analytics units (holistic insights and advice).

The Social, Health and Welfare Analytics Unit (SHWAU) is one of four analytics units funded under DIPA, comprising the departments of Social Services, Health, and Education and Training (and supported by the Australian Bureau of Statistics, Australian Institute of Health and Welfare, Data61 and the Digital Transformation Agency).

The DIKW pyramid or hierarchy (standing for Data, Information, Knowledge, Wisdom) is a model for understanding how data (raw facts) can be given context to become information to provide useful descriptions. This information can be processed, along with relevant meaning, to provide us with synthesised knowledge about whole systems. This knowledge, when combined with insight, can in turn be translated into wisdom – the application of which can have an impact on public policy and service delivery (see Figure 1).

Figure 1: Applying the DIKW pyramid for better public policy and service delivery



The work of the Analytics Units is primarily concerned with the 'Knowledge' and 'Wisdom' aspects of the pyramid...

- To pursue a holistic research agenda that is aligned to enduring policy priorities (Knowledge), and
- To ensure insights generated have a positive impact on policy (Wisdom) by...
  - improving the lives of Australian citizens and/or
  - reducing the cost of government services.

In pursuing these objectives, it is expected that the work of the Analytics Units will...

- Adopt a cross-portfolio approach
- Increase the capability of Government to use data.

This project

The key focus of the Analytics Units over the life of DIPA is the generation and application of insights and advice to achieve better policies and programs. To support this, there is a requirement for some foundational work to identify specific opportunities to develop cross-portfolio policy and research priorities. The SHWAU acknowledged that a holistic, cross-portfolio vision for policy and research priorities in relation to children from birth to age 12 did not yet exist.

This project seeks to explore key issues and considerations in developing such a vision, which may inform and guide future efforts to prioritise and integrate other data into a child-centric integrated data asset to support building better evidence for children's policy.

The project team acknowledges the value that survey data can provide in providing insights that are valuable in informing policy; however, in line with DIPA's remit, this scoping study has focused on administrative data sets.

This report presents the key findings and considerations from undertaking this project, which has been informed by discussions and workshops with policymakers from the departments of Social Services, Health, and Education and Training, along with researchers and other key stakeholders. Further information on the background to this project can be found at Appendix B.

3. The importance of shared policy and research priorities

SHWAU member departments collectively share the social, health and welfare policy issues at the Australian Government level.

There is a significant and growing evidence base that shows, at a high level, that these portfolio domains are highly interdependent. For example, the Australian Institute of Health and Welfare's (AIHW) report, *Australia's health 2018*, notes that...

> *A person's health and wellbeing is influenced by individual, societal and socioeconomic factors ... which combine to affect the health of individuals and communities. They include broad features of society and environment; socioeconomic characteristics; a person's knowledge, attitudes and beliefs; health behaviours; psychological factors; safety factors; and biomedical factors. ... In turn, a person's health status influences social and socioeconomic factors; for example, their ability to work, earn an income or participate in their community.*[1]

This growing evidence base supports an ever-increasing focus on understanding the impact of policies, programs and services across portfolios. Historically, this has been difficult due to a dearth of data sets that capture experiences and outcomes of interest across portfolios. The technical aspects of DIPA (improving data availability, and integrating data sets) will address this barrier. However, while the availability of integrated, cross-portfolio data assets is necessary to maximise the impact on policies and outcomes, it is not sufficient

Developing, agreeing to, and then pursuing a shared vision for policy and research priorities will maximise the individual and collective outcomes of involved agencies with limited resources by...

- Ensuring insights generated are more relevant to, and more readily able to be applied across, portfolios
- Enabling external parties (e.g. peak bodies, research institutions, academia) to more easily work with and across portfolios.

Education and other SHWAU member agencies are uniquely placed to significantly contribute to developing this vision given links to both strategy and implementation across portfolios through SHWAU and other whole-of-Australian-Government mechanisms. There is an opportunity to 'grow the muscle' within and across agencies to do this in the children's policy space. This could then inform where and how to do this in other areas of cross-portfolio policy interest.

[1] Australian Institute of Health and Welfare 2018. Australia's health 2018. Australia's health series no. 16. AUS 221. Canberra: AIHW.

4. Cross-portfolio vision for children's policy

A possible, cross-portfolio vision for children's policy was developed following consultation with key government and non-government stakeholders.

Possible vision for children's policy

To help children thrive by achieving better outcomes now and into the future across domains of interest, by acting upon insights into...

- *Barriers and opportunities (risk and protective factors)*
- *Transition points (across life stages)*
- *Potential interventions (what works or what may work).*

The components of the proposed vision are explored below.

Help children thrive...

The language of "Help children thrive" was initially developed after considering how the explicit missions of the involved agencies could be applied to a children's policy context. These missions are as follows...

- Improving the lifetime wellbeing of people and families in Australia (Social Services)
- Better wellbeing for all Australians, now and for future generations (Health)
- Maximising opportunity and prosperity through national leadership on education and training (Education and Training).

This was explicitly tested with key stakeholders, and was thought to sufficiently incorporate all portfolios' interests.

...by achieving better outcomes now and into the future...

A key insight from the stakeholder workshops was a desire to understand how experiences and interventions impact outcomes throughout childhood (and beyond) to ensure that individuals are 'equipped for future work, study and life'. This concept has been captured through the language "...by achieving better outcomes now and into the future".

...across domains of interest...

Given the cross-portfolio nature of this work, it is important to be explicit that the vision spans domains. However, it is also important that the adoption of such a framework should not prescribe or limit thinking or practical application. For these reasons, the proposed language "...across domains of interest..." is deliberately silent on the specific domains, while making explicit reference to needing to span domains.

There are a number of frameworks (Australian and international) that are helpful when thinking about the various factors that contribute towards helping children thrive. In 2012-2013 the Australian Research Alliance for Children and Youth (ARACY) developed *The Nest action agenda*. This work identified six, inter-related, cross-cutting domains that are all required for child and youth wellbeing...

- Loved and safe
- Material basics
- Healthy
- Learning
- Participating
- Positive sense of culture and identity.

This framework was developed following extensive consultation with policy makers and influencers, parents, children and youth, and others. Further details about *the Nest* are in Appendix C.

The appropriateness of using *the Nest* as a possible framework for considering research priorities was tested and confirmed by key stakeholders. As such, it has been used as an organising framework for research priorities, which are articulated in section 5, below.

...by acting upon insights into...

The language "...by acting upon insights into..." is proposed to align the vision with the DIPA intent for the Analytics Units (insights and advice) in a way that explicitly provides a focus on the application of insights, beyond the mere generation of insights.

Barriers and opportunities (risk and protective factors)

Education and other SHWAU member agencies have a deep and enduring interest in the barriers and opportunities faced by children, and the impacts their families, home environment and other factors have on influencing these barriers and opportunities.

Through the development and application of policies and programs, policymakers generally seek to reduce the barriers and/or increase the opportunities for individuals, particular sub-groups (e.g. Indigenous children, or children from disadvantaged or lower socioeconomic backgrounds) or the whole population of interest. The ability to do this is enabled through the deep understanding of…

- Risk factors – the characteristics, events or circumstances that increase the likelihood that an individual (or group) will have a poor or undesirable outcome in the future
- Protective factors – the characteristics, events or circumstances that can reduce the likelihood that an individual (or group) will have a poor or undesirable outcome in the future.

Such factors are often best understood through the development and application of rigorous research, which typically identifies factors to be related across domains (see above).

Transition points (across life stages)

There are a number of key transition points in children's lives that have cross-domain interests and implications for researchers and policymakers, such as…

- Commencing pre-school
- Commencing primary school.

These transition points are of particular value as they provide practical and consistent points at which to…

- Evaluate the impacts of previous experiences (direct, or indirect e.g. parental factors)
- Evaluate the effectiveness of previous interventions
- Determine whether and which additional interventions may need to be developed or applied.

These points provide obvious junctures at which to understand the impacts of these factors across domains (e.g. the impact of health factors on educational outcomes, or vice versa).

Moreover, while the focus of this project is to better understand – and ultimately positively influence – the experiences and outcomes of children from birth to age 12, it is not the case that policymakers' and researchers' interests in individuals cease when they turn 13 years old. To the contrary. Considering a lifecourse approach (see Appendix D for more detail) emphasises the importance of thinking holistically about an individuals' experiences and outcomes over the lifecourse; specifically how influential earlier years can be on outcomes in later life.

A lifecourse approach has been considered when identifying and articulating the research priorities in section 5, including considering the impact parents' experiences (e.g. their education) has on their children (e.g. on their children's health, education).

Potential interventions (what works or what may work)

It is fundamental for social policy departments to understand how to maximise outcomes (with due consideration for cost-effectiveness) by understanding...

- What interventions are the most effective?
- When are the optimal times and durations for these interventions?
- How, if at all, are the above considerations impacted by other factors?

As noted above, it is particularly important to develop this evidence base in consideration of impacts and consequences (intended and unintended) across other policy domains.

5. Research priorities

Consultation with stakeholders identified a diverse and comprehensive suite of research priorities that policymakers and researchers are interested in across domains and the lifecourse (see Appendix E for full details).

The highest research priorities are summarised below, which, if pursued, were believed to provide the Australian Government with its largest return on investment.

Priority 1 – Loved and safe – Safe, stable and nurturing environments

The two stakeholder workshops separately identified safe, stable and nurturing environments as having the greatest impact on children across domains and into later life. This relates to the home environment – particularly in earlier years – but also relates to child care and school environments as children grow.

Stakeholders considered that, while some international evidence exists, there is a lack of evidence in the Australian context about the specific risk and protective factors, what interventions work and in what doses, and the nature and extent of impacts across domains and across the lifecourse.

Stakeholders believed that parental factors from pre-conception and pre-natal life stages across other domains were likely to have a significant impact on the extent to which the home environment of the child is safe, stable and nurturing, including...

- Learning experiences of the parent/s (e.g. lower levels of education – particularly sex education) may lead to younger parents, with associated implications (e.g. possible reduced capacity to nurture the child, possible lower relative material basic needs met early in the life of the child).

- Health of the parents – particularly poor health and particularly of the mother – may lead to reduced capacity to provide a safe stable and nurturing home environment e.g. though increased financial pressure resulting from health expenses, or reduced physical or mental capacity to provide such an environment.

The negative impacts of a poor home environment were considered to result in a greater (and potentially significant) burden on the health and social services systems from a relatively early age of the child. While implications for the education system (e.g. poorer outcomes, greater support required) would manifest as children entered and progressed through the education system.

This is the case because the extent to which the home environment is safe, stable and nurturing – particularly in earlier years – has a significant impact on the overall trajectory of the child. Home environments that are considered very safe, stable

and nurturing were thought to be a necessary condition to putting children on an 'optimal trajectory' for the rest of their life, including through…

- A stronger head start for their learning journey when they enter pre-school and school
- A faster learning trajectory throughout school
- Better outcomes upon leaving school through being better equipped to deal with a range of life circumstances.

The impacts of this optimal trajectory' were considered to have significant benefits across all domains. Therefore, from an investment perspective, optimising the home environment from a very early age was thought to present policymakers with the biggest return on investment within and across portfolios.

Priority 2 – Material basics – Basic needs met

The adequacy of material basics of a child's family was considered by stakeholders to have far-ranging impacts on a child's ability to thrive across their lifecourse. This is unsurprising given the definition…

"Children and youth who have material basics have access to the things they need to live a 'normal life'. They live in adequate and stable housing, with adequate clothing, healthy food, and clean water, and the materials they need to participate in education and training pathways."[2]

A lack of material basics was considered to be more likely to compound otherwise negative factors in other domains; for example, children without material basics may be more likely to…

- experience greater than average health care needs for a range of reasons, but have less than average ability to meet associated costs
- have reduced ability to participate in school and extracurricular activities, resulting in reduced learning and social outcomes
- be less likely to have breakfast and/or lunch, negatively impacting on learning outcomes.

These factors and outcomes are highly dependent on the parents' circumstances and previous experiences. For this reason, an ability to look back at the extent to which children's parents' basic material needs were met pre-conception and

[2] *The Nest action agenda,* Australian Research Alliance for Children and Youth (ARACY), March 2014. https://www.aracy.org.au/publications-resources/command/download_file/id/329/filename/Second_edition_The_Nest_action_agenda.pdf

prenatal was considered important (which will also provide insight into intergenerational disadvantage).

Again, stakeholders perceived that some international evidence exists that provides some insights into these issues and how they relate across domains, across the lifecourse and across generations; but they noted a paucity of evidence about the Australian experience.

Priority 3 – Healthy – Born healthy

Stakeholders saw a child's health around the time of birth as being a particularly strong predictor of outcomes across the lifecourse, both in the 'Healthy' and other domains. After birth, the ability to diagnose and treat health issues was seen as important.

For example, early hearing problems in the early years of schooling can, if left unaddressed, lead to large loss of learning that hinders children in later years. This could ultimately lead to reduced outcomes and longer-term increased financial burden across the health and social services portfolios.

Parental (particularly maternal) health was seen as a potentially strong influencer of a child's health early in life (and by extension potentially of other outcomes later in life). For this reason, antenatal support provided to mothers was also seen as an important factor to better understand.

While it was noted by some stakeholders that some of these Australian data are available to some researchers (and sometimes linked to other valuable Australian data assets across other domains), there would be significant value in better understanding the impact of these factors on longer term outcomes, nationally.

Priority 4 – Healthy – Positive mental health

Many stakeholders indicated that better understanding the complexities around children's mental health and relevant interactions with other aspects of children's lives, and the lives of those around them, was becoming increasingly important. Aspects of particular interest included…

- The impact of poor mental health on other aspects of the child's life (e.g. relationship formation and retention, civic participation, school engagement and learning outcomes)
- The nature of support received and its impact (on the child's mental health and potentially across other domains)
- Seeking to measure internalising behaviours (e.g. suicidal thoughts) and externalising behaviours (e.g. bullying) of the child
- Inter-relatedness of the child's mental health with the mental health of parents, carers and possibly other family members.

While this was one broad topic area where stakeholders felt that even the international literature (in addition to Australian) was particularly lacking, stakeholders did note that some emerging literature indicates that mental health issues are generally considered to be presenting earlier in children (from around age eight). The implications of this were of particular interest to stakeholders.

Priority 5 – Learning – Equipped for future work, study and life

As outlined above, researchers and policymakers' interests in the experiences and factors that shape individuals' lives and outcomes do not cease when individuals turn 13 years old; the proposed policy vision incorporates language to reflect this.

For stakeholders, this concept was inter-related with many domains, including...

- Literacy and numeracy, along with other aspects in the learning domain such as proficiency in the sciences, digital / technology skills and critical thinking
- The ability to form and keep positive, supportive relationships
    - Children's health (including and particularly mental health) and a lack of material basics was seen as potentially undermining this outcome
    - Protective factors were seen as potentially arising from positive experiences in the 'Loved and safe', 'Participating' and 'Positive sense of culture and identity' domains.

Adopting this as an explicit priority should serve to reinforce a lifecourse approach when considering research that specifically relates to children from birth to age 12.

The requirement for an evidence base that helps explain external factors

As is obvious from the research priorities above, many of the factors that researchers and policymakers are interested in understanding to better inform children's policy requires evidence from sources other than directly from the child.

Instead, for each priority, we also need to understand characteristics relating to one or more of the following...

- Parents' individual characteristics and experiences
- The family and home environment of the child
- The school environment of the child.

Stakeholders felt that understanding the environment within the child's school, including the nature and role of educators and peers, was particularly important, and was an area that is currently relatively opaque to researchers and policymakers.

In addition to providing broader insights, better understanding characteristics and experiences of parents and the family and home environment can particularly help to illuminate drivers of intergenerational disadvantage...

> *We know that family background plays a central role in determining the adult outcomes of young people in countries such as Australia that have high-income inequality. Social disadvantage ... is highly likely to continue across generations within families...*[3]

Figure 2 below maps the evidence base required to fully inform each of the research priorities, which is a useful construct to help consider the data required to address the research priorities outlined above (see section 6, below).

Figure 2: Evidence required to address research priorities, by evidence source

Domain	**Research priority** (dependent variable)	**Evidence source** (independent variables)			
		Child (individual factors)	**Parent** (individual factors)	**Family and home environment**	**School environment** (incl. educators and peers)
Loved and safe	1. Safe, stable and nurturing home environment		■	■	■
Material basics	2. Basic needs met		■	■	
Healthy	3. Born healthy	■	■		
	4. Positive mental health	■	■	■	■
Learning	5. Equipped for future work, study and life	■		■	■

Adjusting research priorities to respond to future insights

The generation of new insights – through research or broader engagement with key stakeholders – may change the relative priority of research priorities, or highlight new priorities. It would therefore be prudent to regularly review research priorities and adjust them as required based on this evolving intelligence.

[3] Source: www.lifecoursecentre.org.au/why-the-life-course-centre

6. Data required to address research priorities

A number of key assets were identified by stakeholders as part of this project. A catalogue of these assets, along with their relevance to the research priorities outlined above, is provided in Appendix F.

The highest priority data assets against each of the research priorities are outlined below.

Priority 1 – Loved and safe – Safe, stable and nurturing environments

The data sets that are likely to provide the most value in addressing Priority 1 are...

- The Census of Population and Housing (ABS) – provides population level coverage of a number of factors about parents and carers, and the household, that can highlight the nature of the family and home environment
- Family Tax Benefit (FTB) and to a lesser extent income support data (DSS) – provides information about stability of carer arrangements and associated income support
- National Early Childhood Education and Care Collection (ABS) and Child Care Management System (DSS) – provides information about participation in early learning programs, which can relate to parents and carers attitudes towards learning
- Child protection data (AIHW) – provides information on the most vulnerable children and their interactions with the child protection system
- Health data (MBS and PBS) (Health) – provides health-related information on children and their parents and families, which can help inform a picture of the home environment.

It should be noted that even should all of the abovementioned data sets be integrated, there will still be a gap in evidence relating to aspects that are not collected and stored in administrative data holdings but that may have a significant impact on the nature of environments (e.g. the quality of the relationships of individuals within families and households).

Priority 2 – Material basics – Basic needs met

The data sets that are likely to provide the most value in addressing Priority 2 are…

- Income and taxation data (ATO) – provides the most reliable information about income of parents and carers at a population level
- Income support and to a lesser extent FTB data (DSS) – provides information about income support, including changes over time, to supplement ATO data.

Priority 3 – Healthy – Born healthy

The data sets that are likely to provide the most value in addressing Priority 3 are…

- Perinatal data (AIHW) – provides population level maternal and child information about pregnancy and childbirth relating to services received and health outcomes
- Health data (MBS and PBS) (Health) – provides health-related information on children (postnatal) and their parents and families (pre and postnatal).

Priority 4 – Positive mental health

The data sets that are likely to provide the most value in addressing Priority 4 are…

- AEDC (various) – provides information on a number of items related to mental health across two domains: 'Social' and 'Emotional'
- Health data (PBS and MBS) (Health) – provides health-related information on children (postnatal) and their parents and families (pre and postnatal) that can be used to infer poor mental health.

Other information that can provide useful insights likely resides in program-level data that may be held within the departments of Social Services or Health (but outside PBS and MBS data), and possibly in other jurisdictions. Consideration should be given to exploring these other data sources.

Priority 5 – Learning – Equipped for future work, study and life

The data sets that are likely to provide the most value in addressing Priority 5 are…

- AEDC (DET) – provides the first (interim) outcome data to assess trajectory towards being equipped for future work, study and life across five domains: 'Physical', 'Social', 'Emotional', 'Language', 'Communication'
- NAPLAN (various) – provides additional (interim) outcome data to assess trajectory in literacy and numeracy in years 3, 5, 7 and 9

- Juvenile Justice data (AIHW) – provides information on individuals with a particularly poor trajectory (i.e. those under youth justice supervision).

The following data sets provide outcome data beyond age 12…

- Higher education (DET) – provides information of children's eventual trajectory into higher education
- Income and taxation data (ATO) – provides the most reliable information about income resulting from employment, including how this changes over time into adulthood
- Income support data and to a lesser extent FTB (DSS) – provides information about eligibility for, interactions with and reliance on income support including how this changes over time into adulthood.

Prioritising integration activities

The integration of all administrative data sets outlined above would result in a data asset of considerable worth that would be able to address each of the research priorities (noting the limitations in relation to some priorities given that it is only administrative data that is in scope for this project.

However, the effort required to integrate all identified data sets is considerable, involving a substantial investment in time and resources of a number of agencies. Integration efforts should be prioritised in line with the relative research priorities outlined in section 5.

In undertaking this prioritisation, consideration should be given to factors other than just the potential benefits of addressing policy and research priorities, including…

- The legislation governing the use of some data sets may restrict the ability to integrate it and/or restrict access arrangements
- Potential limitations of the data set e.g. the Census of Population and Housing provides point-in-time information at five yearly intervals (at best).

Consideration should also be given to prioritising the cross-portfolio intent of the data set; in this regard, health data is obviously missing from the current child-centric data set (see section 7 below for more detail on the current data set).

7. Effectively integrating high priority data sets

In determining the most appropriate approach to integrating high priority data sets to achieve desired children's policy and research objectives, due consideration should be given to...

- ensuring approaches are fit-for-purpose to meet policy and research objectives
- leveraging existing assets, where it make sense to do so
- ensuring efforts are sensitive to other related activities to realise longer-term benefits, wherever possible.

Existing integrated data assets

Through its focus on data integration, DIPA is specifically looking at the integration of administrative data sets. To date this has involved oversight of the continued development of two integrated data sets...

- MADIP (Multi-Agency Data Integration Project), which is a 'person-centric' data set, which uses Medicare records as the 'spine', and also includes education, welfare, taxation and other health data (see Appendix G)
- BLADE (Business Longitudinal Analysis Data Environment), which is a 'business-centric' data set that includes characteristics and financial information of Australian businesses.

Separately, the Australian Government Department of Education and Training has created a child-centric integrated data set, which uses the AEDC as the spine, and also includes NAPLAN, the National Early Childhood Education and Care Collection, the Child Care Management System, income support and FTB data (Social Services), and the 2011 Census of Population and Housing. A conceptual diagram of the current child-centric data set is in Appendix H.

The case for a child-centric integrated data set

Notionally, it could be considered appropriate to integrate data sets of interest to children's policy into MADIP, rather than continue to pursue a child-centric integrated data set.

However, there is a stronger case for the continued development of a child-centric data set, even while MADIP continues to be currently developed and used. The reasons are as follows...

- A child focus – MADIP generally has an adult focus. Insofar as MADIP can enable researchers and policymakers to understand children's experiences

and outcomes, this can most readily be achieved 'through the eyes of adults'. This can prove problematic when trying to derive insights on some groups of particular interest e.g. children whose caring arrangements change regularly.

    - In addition, the child-centric data set already contains some of the higher value data sets (e.g. AEDC, child care data), whereas MADIP does not.

- Integration with non-Commonwealth data sets – To date, MADIP only integrates Commonwealth data sets, whereas the current child-centric data set already integrates data sets held by other jurisdictions. While jurisdictional data may be included in MADIP in the future, it may be more parsimonious to continue pursuing inter-jurisdictional arrangements with the child-centric data set at this stage.

    - This will allow for a deeper understanding of identifying and addressing any issues to be developed, which can then be applied more broadly across other Government initiatives.

- A longitudinal perspective – While MADIP provides visibility of certain conditions (e.g. household structure), it is less able to provide visibility of the duration of, and changes to, these conditions over time.

- Natural cohorts – As the AEDC is administered every three years, this structurally provides for contained 'cohorts' at regular intervals, against which analyses can be conducted. While it is technically possible to replicate such an approach in MADIP, this natural design reduces analytical complexity.

- Clarity of purpose and resourcing – The expansion of the scope of MADIP to meet the requirements outlined in this report would be significant, particularly when considered against the existing MADIP work program. This would jeopardise the delivery of existing MADIP activities and the activities outlined in this report relating to pursuing children's policy (e.g. through increased burden on resources and governance arrangements).

Being mindful of future integration with MADIP and other data sets

Notwithstanding the findings of the value of pursuing the child-centric integrated data set in parallel with existing MADIP activities, to be maximally valuable the child-centric data set should be developed with a view to eventually integrate it with MADIP. Further work may be required to explore scope, feasibility, options and implementation issues associated with such an approach.

In addition to integration with MADIP, value would be further enhanced by ensuring future ability to...

- Allow other data sets to be integrated, including...
    - Assets held by the Commonwealth, other jurisdictions, and even research institutes (with appropriate governance arrangements)
        - As mentioned above, as the children in the eldest cohort age (they are still in high school), linking data sets that provide information on experiences and outcomes in adulthood will be valuable, including higher education data, income and taxation data, income support and FTB data
    - Different types of assets e.g. surveys such as the Longitudinal Surveys of Australian Youth, and program-level data such as that which is held within DSS's Data Exchange (DEX)
- Enable the resource to be used as the basis for undertaking Randomised Control Trials (RCTs), either as a sampling frame and/or as an evidence base for analyses on 'natural experiments'.

8. Next steps

Consultation with key stakeholders has identified that significant value could be gained from developing the following …

- An agreed cross-portfolio vision for children's policy
- An agreed research agenda to deliver against this vision
- A list of prioritised assets to integrate to address this research agenda
- A suitable vehicle (an integrated child-centric data set) through which to pursue these integration efforts, along with the ability to unlock future value (for Education, SHWAU member agencies and other stakeholders) by enabling further integration with MADIP and other higher value data sets.

This will provide a substantial contribution to children's policy.

Continuing a strong focus on engagement and collaboration

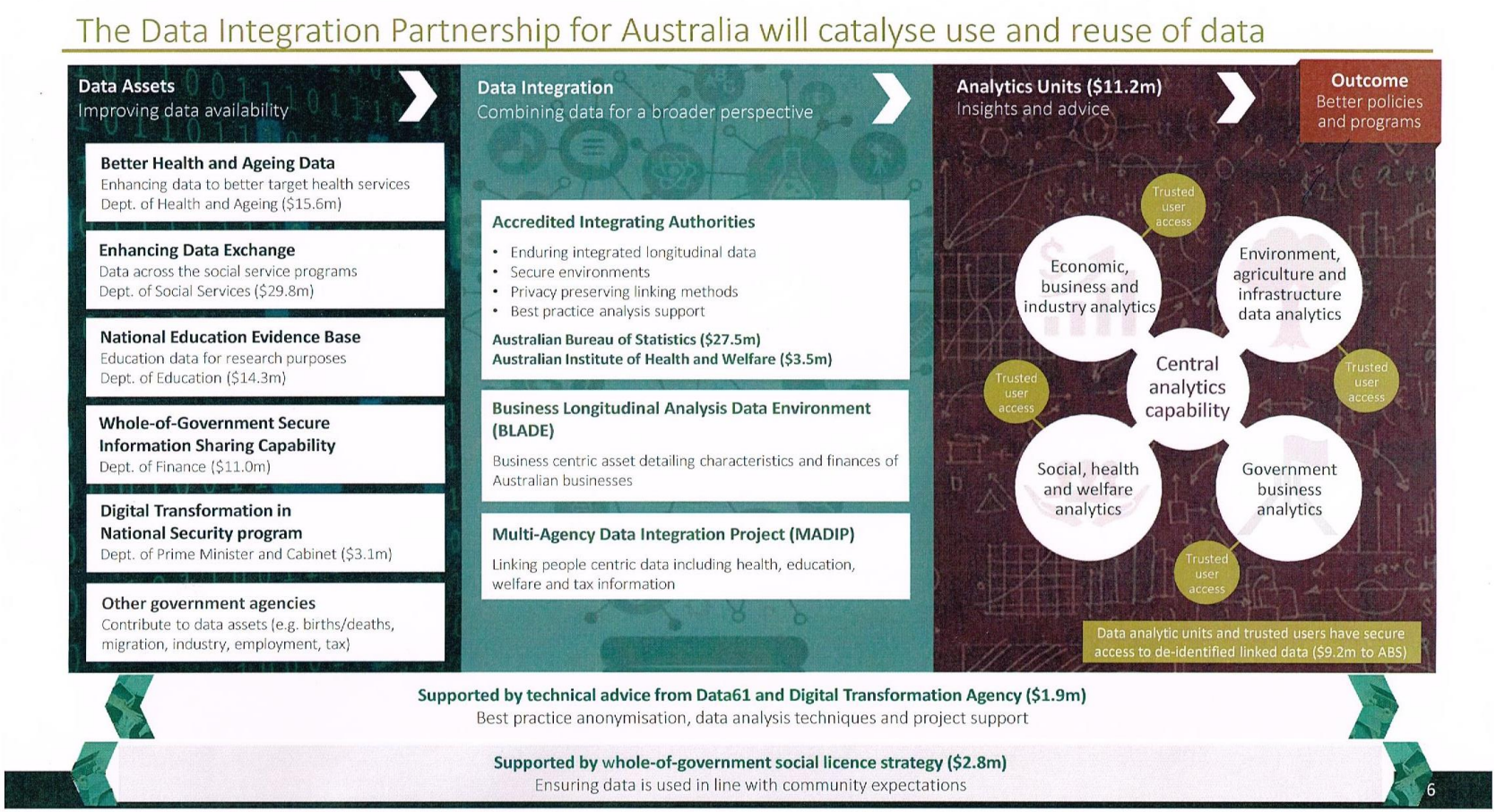
The very strong engagement of key government and non-government stakeholders with the project team throughout this scoping study is notable. There is a genuine willingness by stakeholders to collectively share the challenges and opportunities in children's policy and research.

Cross-portfolio outcomes will be best achieved when each of the departments of Social Services, Health, and Education and Training are equally engaged throughout all stages. Importantly, this benefit can be amplified by engaging stakeholders outside of government (researchers and others) in these processes as joint collaborators, as they can often be less 'constrained' by portfolio demarcations, leading to accelerated and/or greater insights. Engaging non-government stakeholders can also assist with the critical final step of insights informing policy.

Cross-portfolio collaboration is therefore an important capability that Education, and other SHWAU member agencies can deliberately develop. If done well, there is an opportunity to use these experiences as a case study, promulgating this expertise across the broader Australian Government. This is a significant whole-of-Australian-Government leadership opportunity for Education and other SHWAU member agencies.

Appendix A. Data Integration Partnership for Australia (DIPA)

The Data Integration Partnership for Australia (DIPA) is a significant whole-of-Australian-Government initiative, with the purpose of catalysing the use and reuse of data to achieve better policies and programs.



Appendix B. Background to the project

Government at all levels across Australia have a particular policy interest in ensuring every child grows up well. Investment in the early years has the potential to deliver substantial returns accumulating over a child's life, providing broader benefits to society. Strong starts to a child's development can strengthen future outcomes through improving wellbeing, boosting workforce participation, reducing reliance on welfare support and promoting social engagement (Productivity Commission, 2014). Effective social policy in the early years (birth to age 12) can also reduce intergenerational and long-term disadvantage.

Policies relating to children's development span a range of aspects, from maternal health and immunisation against childhood diseases to children's physical and mental health and development, general wellbeing and socialising skills and their education. The AIHW's Children's Headline Indicators (CHI)[4] measure trends and reports on many of these aspects relating to children's health, development and wellbeing.

Evidence from the literature show that many aspects of a child's early experiences are intertwined: poor progress in one area can affect progress in another (Hertzman, 2010; Maggi et al., 2010). Conversely, good policy making in one aspect can flow through to others. For example, programs that ensure children have health checks early in life support the early identification of hearing problems, enabling early intervention and improving subsequent education and learning outcomes. Improving children's health and family relationships can boost school engagement, child wellbeing and learning outcomes, while education in schools can support nutrition, health and social relationships outside the school gate.

There is large overlap between social policy interests related to the early years of child development that are traditionally the responsibility of separate government portfolios. Many policy areas that fall outside the traditional sphere of early childhood concerns, such as housing and transport, are also influential during these critical years. Although this intertwining of social policy interests is well recognised, government policies addressing issues in the early years are often made in isolation, targeted to individual portfolio concerns, and do not take account of these inter-relationships. Notably, development of cross-portfolio early years policy is hindered by a lack of joined-up data and evidence that would help shed light on the impact of policy decisions on the many aspects of children's development. The recent Productivity Commission Inquiry into the National Education Evidence Base highlighted the importance of improving early childhood evidence for this purpose.

[4] https://www.aihw.gov.au/reports/children-youth/childrens-headline-indicators/contents/dynamic-data-displays

Current progress

Successful data linkage and sharing efforts to date now provide an opportunity to increase our understanding of the complex inter-relationships in children's early years. In recent years, the Australian Government has led efforts to open up avenues for sharing and accessing data[5]. The Data Integration Partnership for Australia (DIPA) has been formed as an investment to maximise the use and value of the Government's data assets through data integration and analysis, creating new insights into important and complex policy questions. Under DIPA arrangements, there are provisions to undertake whole of government research projects each year, with project endorsement determined by the cross-portfolio Deputy Secretary Data Group. This approach is in alignment with international government practices encouraging greater use of data through open data policies, which will increase the transparency and accountability of government processes (Productivity Commission, 2017).

Existing datasets

A range of valuable data linkage and analysis projects have already commenced, supporting and building higher quality evidence to address whole of government policy questions. These include the Multi-Agency Data Integration Project (MADIP), which joins up information from the Department of Social Services (DSS), the Department of Health, the Australian Bureau of Statistics (ABS) and the Australian Taxation Office (ATO), as well as the Personal Income Tax and Migrants Integrated Dataset which joins information from ATO, ABS, the Department of Social Services (DSS) and the Department of Home Affairs. This work focuses primarily on the experiences and outcomes of adults, although some information from the Australian Early Development Census (AEDC) has been integrated into MADIP.

Work to build a child-centric data spine has progressed through other avenues. Linkage efforts focusing on the early experiences of children at the cross-governmental level has most notably included work for AESOC to help address and minimise developmental vulnerabilities for Indigenous children and to strengthen understanding of vulnerability and disadvantage through the Vulnerable and Disadvantaged Children project, which links data on children's early learning and care experiences and family circumstances to data on their transitions to schooling and learning outcomes.

[5] https://pmc.gov.au/public-data/open-data

The Department of Education and Training has also led efforts to join together information from a range of data sources held or collected by Commonwealth agencies to create a longitudinal child-centric view of children's lives and experiences, including...

- Australian Early Development Census (AEDC) 2012 – children's developmental vulnerability in their first year of full-time school
- National Early Childhood Education and Care Collection (NECECC) 2011 – information on children's participation in preschool
- Census of Population and Housing 2011 – information on the children's background and family characteristics (such as family composition and parents' education, occupation, employment status and income at a point in time)
- Family Tax Benefit (FTB) and income support (through Department of Social Services) – longitudinal information on the changes in family circumstances, including family characteristics, parent workforce participation and reliance on welfare
- National Assessment Program for Literacy and Numeracy (NAPLAN) – children's achievement in literacy and numeracy at Year 3 for children in 2012 AEDC (predominantly 2015).
- Child Care Management System (CCMS) Data – children's participation in child care services from birth

Building more comprehensive evidence bases of children's experiences across a range of life aspects as they grow provides a powerful opportunity for governments to develop a holistic understanding of the interplay of factors affecting children's developmental outcomes, as well as insight into how best to improve children's developmental journey and the points where intervention would be most effective.

Aim of the project

This scoping study will provide a strategic, forward-looking investment that seeks to identify key areas of upcoming research and synergies in cross-portfolio policy priorities in the medium term for improving children's future outcomes. It will explore the feasibility of building a comprehensive child-centric evidence base that captures children's life experiences and development from birth to age 12, meeting the collective policy needs of multiple portfolio agencies. Subsequent work informed by this study will provide a foundation for analysis to inform more effective, targeted

and timely interventions across a range of child development issues including health, education, and family, community and social services policy for children.

This project is fully funded by DIPA's Social, Health and Welfare Analytical Unit and has been endorsed by the cross-portfolio Deputy Secretary Data Group. It is envisaged that results from this project will form the basis for subsequent bids under DIPA.

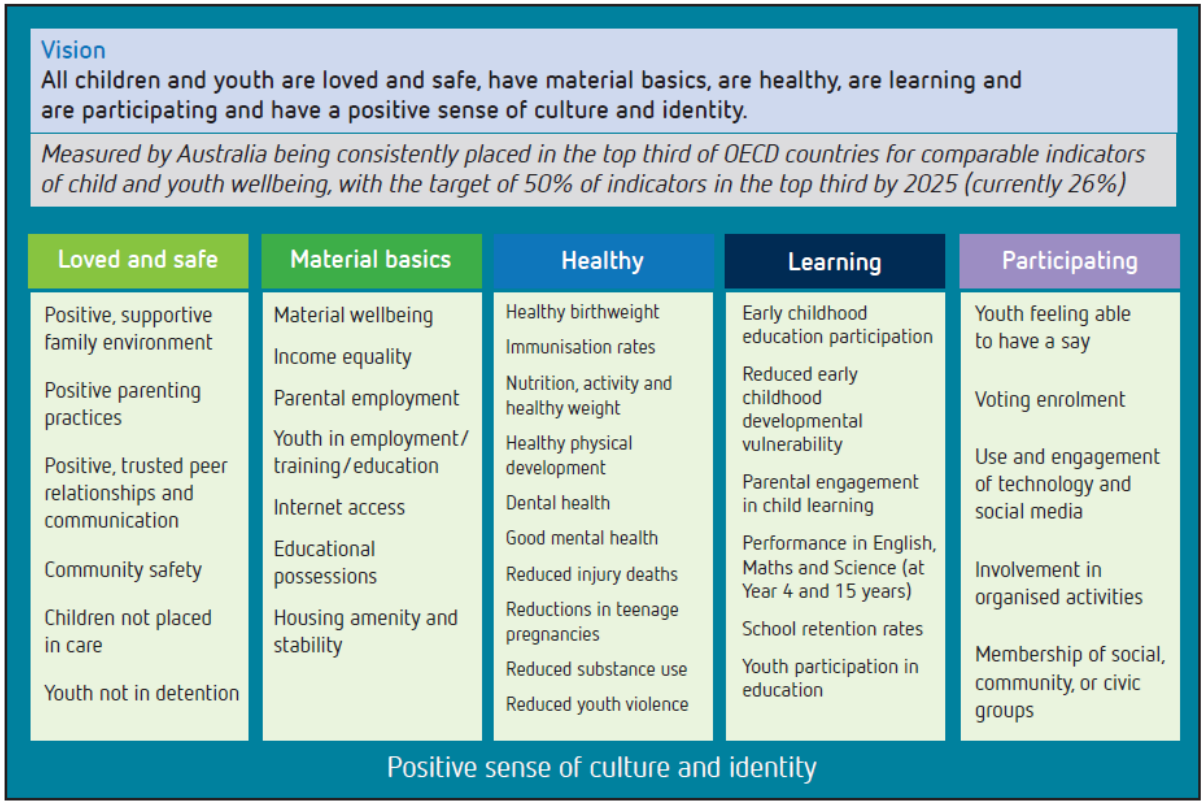
Project approach

The scoping study will adopt a cross-portfolio child-centred approach and build on existing efforts through expanding or adding to the existing child-centric dataset. This will be a collaborative effort from multiple government departments and academics with policy responsibilities and research interests concerning children.

The project is being led by the Schools Evidence and Analysis team at the Department of Education and Training. This team has contracted a consultant – Better Intelligence – to undertake the main work of the scoping study.

Appendix C. The Nest: A useful cross-domain framework

The graphic below shows the six domains of *The Nest* framework. This is followed by excerpts from *The Nest action plan*, which outlines the process to develop the framework, and an explanation of the inter-relatedness of the domains.



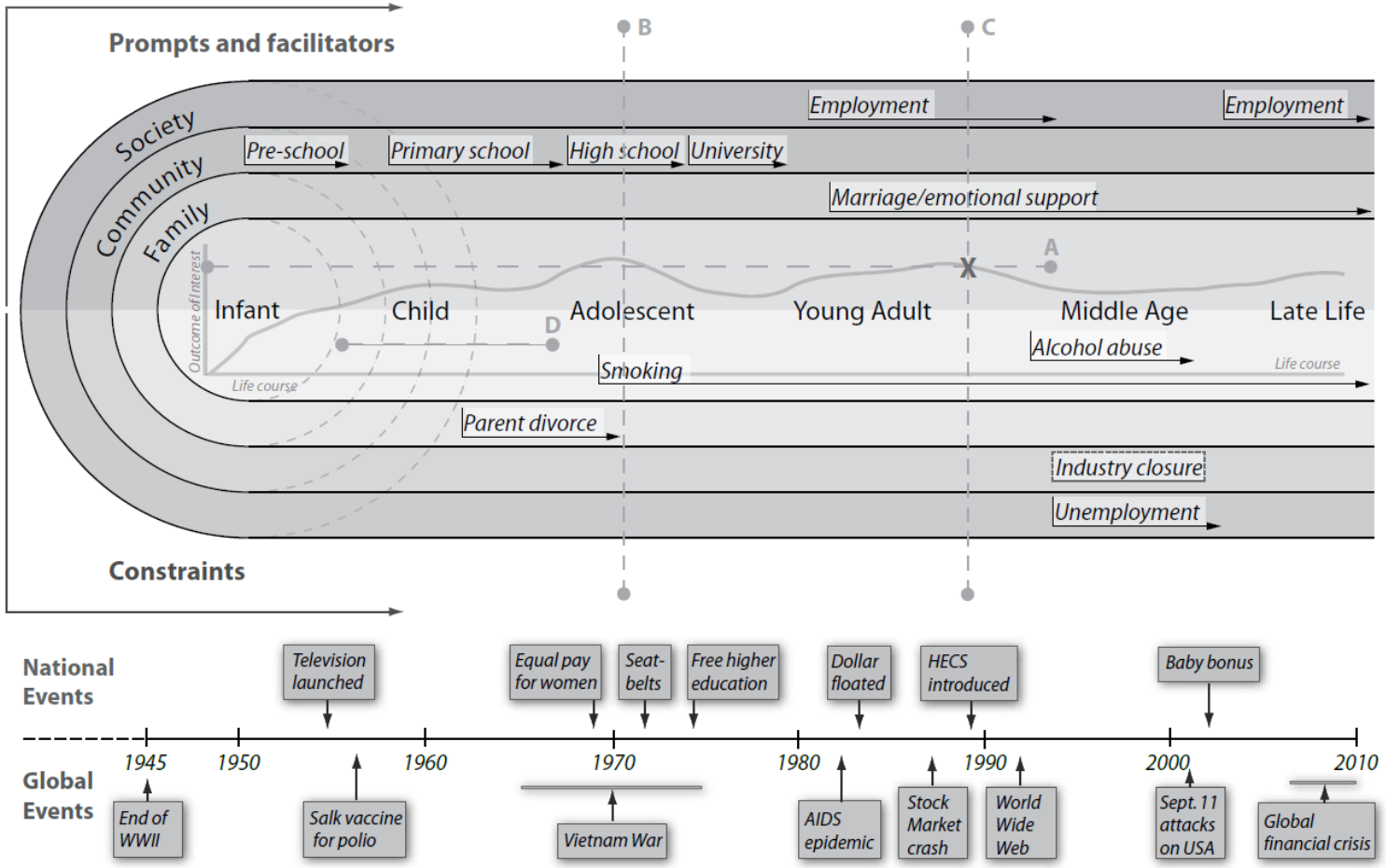
This vision was developed and refined through the collective action of *The Nest* project, involving more than 4000 Australians, including children and youth, parents, leading thinkers, child advocates, policy-makers, service planners and providers across the nation. During 2012, ARACY brought these people together to develop and define measurable outcomes or goals, providing a common framework for taking action on the wellbeing of Australia's children and youth.

The six outcomes are inter-related – for example, having access to material basics is essential to full participation and engagement in learning and education. Their achievement depends on a complex inter-relationship between individual (child) and family factors, and broader community and societal factors. Because of this complexity, focusing just on one outcome at the exclusion of others will not lead to improvement in overall child and youth wellbeing. That is why six 'cross-cutting' priority directions have been identified through *The Nest* consultation with children and youth, *The Nest* summit workshop, and by examining indicators of wellbeing and the current programs and strategies in place in Australia – and internationally – that are proven to work."[6]

[6] *The Nest action agenda,* Australian Research Alliance for Children and Youth (ARACY), March 2014. https://www.aracy.org.au/publications-resources/command/download_file/id/329/filename/Second_edition_The_Nest_action_agenda.pdf

Appendix D. Lifecourse approach

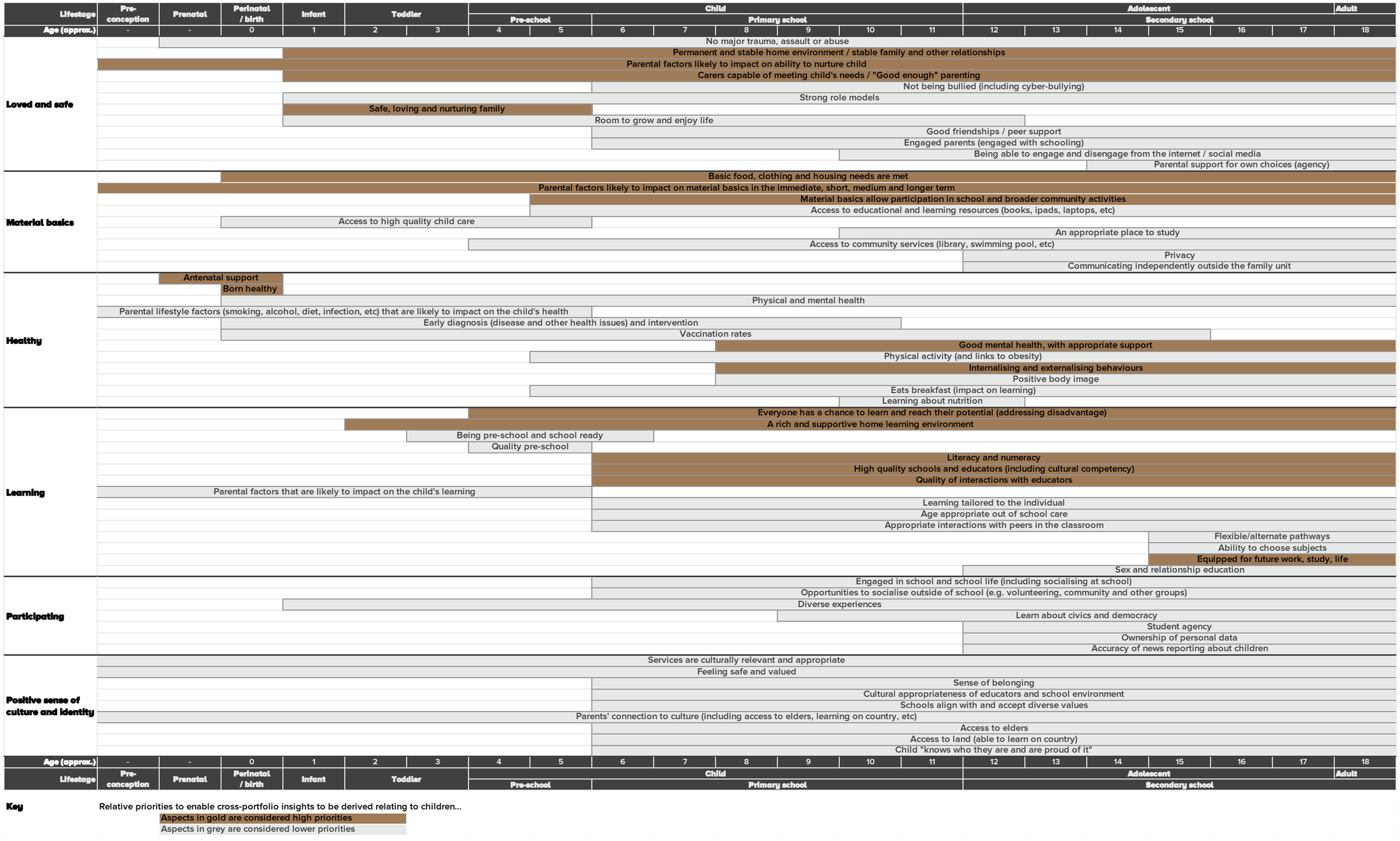
An example of a lifecourse model is displayed in the graphic below, which highlights the inter-relatedness of experiences and outcomes that impact an individual's life, along with external factors from family, community, society, etc[7]



[7] Australasian Epidemiologist December 2009 Vol. 16.3 The development of human capability across the lifecourse, Zubrick et al.

Appendix E. Research priorities

A summary of the evidence required to understand what helps children thrive is shown below. These are the relative interests of workshop participants, not than actual cross-domain impacts.



Key

Relative priorities to enable cross-portfolio insights to be derived relating to children...

Aspects in gold are considered high priorities

Aspects in grey are considered lower priorities

A summary of key evidence of interest to policymakers and researchers across the lifecourse and by domain emerging from the workshops are outlined below.

- Loved and safe – researchers and policymakers become interested in evidence of experiences and outcomes in this domain from birth (perinatal), and retain an interest right across the lifecourse into later life, including...
    - Enduring evidence, such as that there is no major trauma, assault or abuse, and having a stable home life and relationships, having engaged parents and carers
    - Evidence before school commences, such as capable carers, a safe, loving and nurturing family, "good enough" parenting (0-18 years) and strong role models (0-18 years)
    - Evidence while in school, such as not being bullied (physical, mental, cyber), parental support for the child's choices (~14+ years), connections with family, friends and community, and social capacity to build relationships
    - Evidence in later life, such as connections with family, friends and community, social capacity to build relationships, no domestic violence.
- Material basics – policy and research evidence interests begin and continue in line with interest in the *Loved and safe* domain, including...
    - Enduring evidence, such as availability of food, clothing and housing
    - Evidence before school commences, such as no constraints on access to high quality childcare
    - Evidence while in school, such as access to community services (e.g. library, swimming pool), the ability to participate in school and community life, communicating independently outside the family unit, a place to study
    - Evidence in later life, such as material equality, planning for later life security, meaningful employment, sufficient income
- Healthy – interest in evidence of experiences and outcomes begins from conception (prenatal) and continues through to later life...
    - Enduring evidence, such as general physical and mental health and wellbeing

- Evidence before school commences, such as parental access to antenatal care and support and maternal services, being born healthy, early diagnosis and intervention for health conditions (0-10 years)
- Evidence while in school, such as tailored learning, positive body image, learning about nutrition, physical activity, internalising and externalising behaviours, mental health support (8-18 years)
- Evidence in later life, such as resilience and adaptability, affordable healthcare and expenses, having a later life.

- Learning – concern with evidence of these experiences and outcomes begins around childhood, and continues to around middle age...
  - Enduring evidence, such as reaching one's potential, a rich and supportive home learning environment and learning at home (0-18 years)
  - Evidence before school commences, such as early childhood education and care (ECEC), becoming 'school-ready'
  - Evidence while in school, such as quality of school, literacy and numeracy, quality of interactions with educators, sex and relationship education (10-15 years), ability to choose subjects (15+ years), appropriate options for flexible academic and vocational pathways (15-24+ years)
  - Evidence in later life, such as professional and vocational fulfilment, employability.

- Participating – commencing later than all other domains, research and policy evidence interests begin around adolescence, and continue to later life...
  - Enduring evidence, such as having diverse experiences
  - Evidence before school commences, such as positive role-modelling of participation
  - Evidence while in school, such as being engaged in school, leaning about civics and democracy
  - Evidence in later life, such as being equipped to fully participate, belonging to and in society.

- Positive sense of culture and identity – evidence interests begin in childhood and continue right through to later life...
    - Enduring evidence, such as maintaining cultural languages
    - Evidence before school commences, such as culturally appropriate services, feeling valued and safe
    - Evidence while in school, such as culturally appropriate educators, schools align with and accept diverse values, having a sense of belonging, being proud of who they are
    - Evidence in later life, such as feeling included and valued, a sense of belonging.

Appendix F. Catalogue of data assets

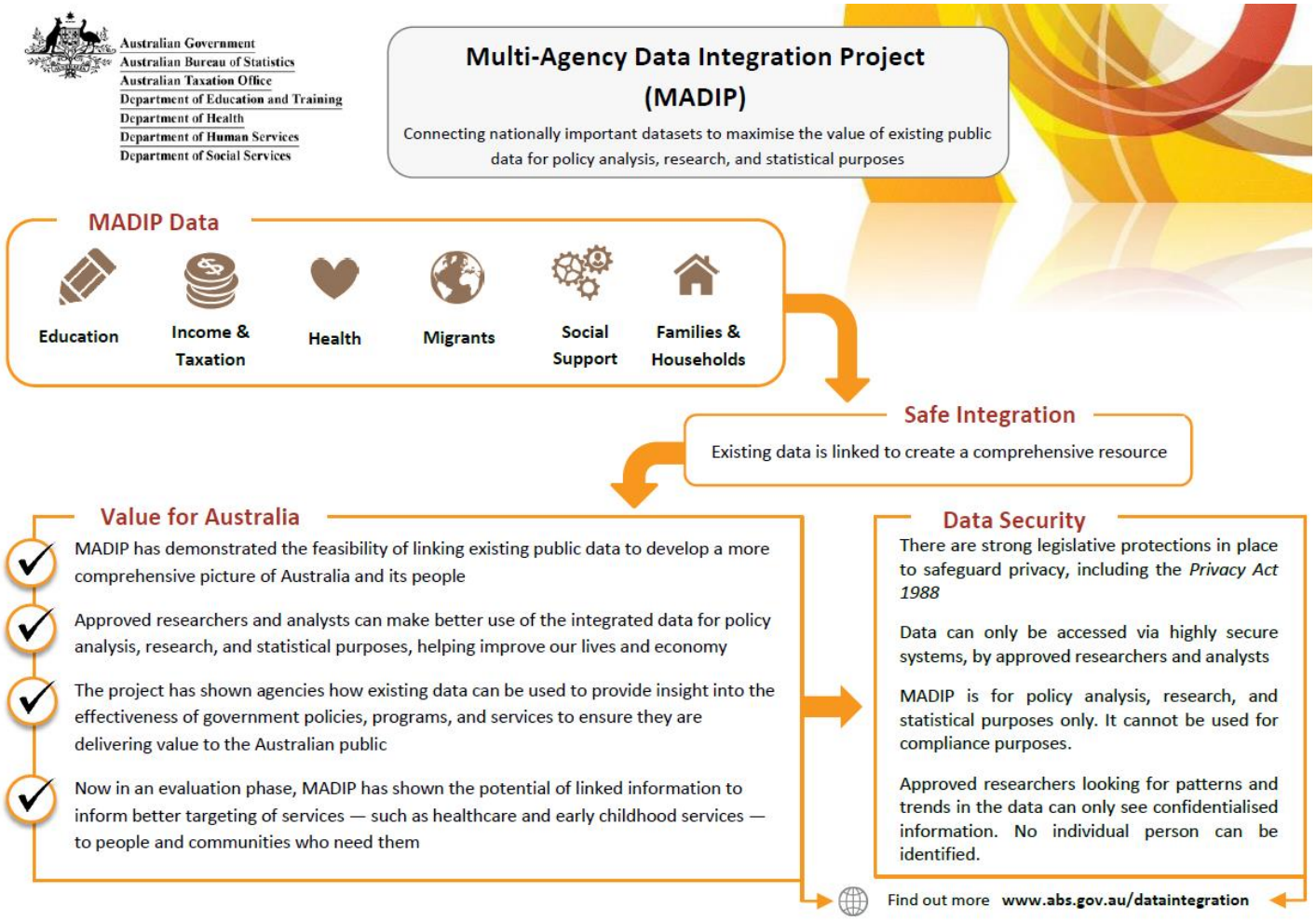
The following two pages present a catalogue of administrative data assets that could be integrated, along with an indication of whether they can address the five identified research priorities, and whether the asset can provide evidence about the child, parent, family / home environment, and/or school environment.

Data asset		Asset value		Ease of access and integration		Research priority					Ability to provide evidence about...			
						Loved and safe	**Material basics**	**Healthy**		**Learning**				
Name	**Data custodian**	**Rating**	**Comment**	**Rating**	**Comment**	1. Safe, stable and nurturing environments	2. Basic needs met	3. Born healthy	4. Positive mental health	5. Equipped for future work, study and life	**Child** (individual factors)	**Parent** (individual factors)	**Family and home environment**	**School environment** (incl. educators and peers)
Medicare Benefits Schedule (MBS)	Australian Government Department of Health	High	Contains information about Medicare items used by individuals. Can be used as a proxy for a range of health indicators (e.g. mental health issues) for children and parents.	Medium	The data asset has been previously integrated with a relatively large number and diverse range of administrative and survey data assets	■		■	■		■	■		
Pharmaceutical Benefits Scheme (PBS)	Australian Government Department of Health	High	Contains information about pharmaceutical items prescribed to individuals. Can be used as a proxy for a range of health indicators (e.g. mental health issues) for children and parents.	Medium	The data asset has been previously integrated with a relatively large number and diverse range of administrative and survey data assets	■		■	■		■	■		
Income support data	Australian Government Department of Social Services	High	Contains information on government payments, along with some information on carers and relationships.	High	Has already been integrated with other data assets to form the existing child-centric data asset.	■	■			■		■	■	
Family Tax Benefit data	Australian Government Department of Social Services	High	Contains information on payments of Family Tax Benefit, along with some information on houshold income, carers and relationships.	High	Has already been integrated with other data assets to form the existing child-centric data asset.	■	■					■	■	
NAPLAN data	Various education jurisdictions	High	Contains education outcome data for children in literacy and numeracy tests in Years 3,5,7 and 9. Annual testing, population data.	Low	Requires agreement from state and territory education authorities, including non-government bodies. Has already been integrated with other data assets to form the existing child-centric data asset.					■	■			
Census of Population and Housing	Australian Bureau of Statistics	High	Contains information about a range of household and family circumstances	High	Legislative restrictions on access to integrated data using this data set. Has been successfully integrated with other data sources, although there are restrictions with linking large amounts of data from multiple Census years together.	■	■					■	■	
Australian Early Development Census	Australian Government Department of Education	High	Contains information on school readiness and developmental vulnerability in children's first year of schooling. Is a population measure covering ~300,000 children in their first year of schooling. Run every three years.	High	Has already been integrated with other data assets to form the base of the existing child-centric data asset.				■	■	■			
Income and taxation data	Australian Taxation Office	High	Contains income and taxation data for employed people. Can be used as a proxy for relative disadvantage (low income earners, poverty) and identify those not employed when linked to population data.	Medium	Has already been successfully integrated with MADIP		■					■		

Data asset		Asset value		Ease of access and integration		Research priority					Ability to provide evidence about...			
						Loved and safe	**Material basics**	**Healthy**		**Learning**				
Name	**Data custodian**	**Rating**	**Comment**	**Rating**	**Comment**	1. Safe, stable and nurturing home and learning environment	2. Basic needs met	3. Born healthy	4. Positive mental health	5. Equipped for future work, study and life	**Child** (individual factors)	**Parent** (individual factors)	**Family and home environment**	**School environment** (incl. educators and peers)
National Early Childhood Education and Care Collection	Australian Bureau of Statistics	High	Links data from the Child Care Management System and data from jurisdictional education authorities around participation in early learning programs.	High	Has already been integrated with other data assets to form the existing child-centric data asset.	■					■			
Child Care Management System	Australian Government Department of Social Services	High	Contains information on child care usage and payments made in support of child care	High	Has already been integrated with other data assets to form the existing child-centric data asset.	■					■			
Higher Education Information Management System	Australian Government Department of Education	Medium	Contains information on higher education students and staff, university offers and acceptances and vocational education and training.	High						■	■			
Child Protection National Minimum Dataset	Australian Institute of Health and Welfare	High	Annual collection of information on child protection in Australia. It contains data on children who come into contact with state and territory departments responsible for child protection including: notifications, investigations and substantiations; care and protection orders; funded out-of-home care; and data for reporting on the National Standards for Out-of-Home Care (NOOHCS).	Medium		■					■	■	■	
Juvenile Justice National Minimum Data Set	Australian Institute of Health and Welfare	High	Annual collection of information on young people under youth justice supervision in Australia. It contains data on all supervised orders (community based and detention) relating to young people under youth justice supervision.	Medium		■				■	■	■		
National Perinatal Data Collection	Australian Institute of Health and Welfare	High	National population-based cross-sectional collection of data on pregnancy and childbirth. The data are based on births reported to the perinatal data collection in each state and territory in Australia. Midwives and other birth attendants complete notification forms for each birth using information obtained from mothers and from hospital or other records. A standard de-identified extract is provided to the AIHW annually	Medium	De-identified data - linkage may be less reliable			■			■	■		

Appendix G. Multi-Agency Data Integration Project (MADIP)

A high level overview of the Multi-Agency Data Integration Project (MADIP) is provided below.



Appendix H. Current child-centric data set

The diagram below shows the data sets currently included in the child-centric data set, which include:

- Australian Early Development Census (AEDC) 2012 – children's developmental vulnerability in their first full year of school
- National Early Childhood Education and Care Collection (NECECC) 2011 – children's participation in preschool
- Census of Population and Housing 2011 – children's background and family characteristics (such as family composition and parents' education, occupation, employment status and income at a point in time)
- Family Tax Benefit (FTB) and income support (through Department of Social Services) – longitudinal information on the changes in family circumstances, including family characteristics, parent workforce participation and reliance on welfare
- National Assessment Program for Literacy and Numeracy (NAPLAN) – children's achievement in literacy and numeracy at Year 3 for children in 2012 AEDC (predominantly 2015).
- Child Care Management System (CCMS) Data – children's participation in child care services from birth