



AMPLIFY
Social Impact
ONLINE

INDICATOR ENGINE
Construction Manual



CENTRE
for **SOCIAL**
IMPACT

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General information

Login to or register for Amplify Online <https://www.live.amplifyonline.csi.edu.au/home/>. NB: Indicator Engine and Yardstick are available through the Amplify Online platform.

For general enquiries, please email us at CSIAmplify@unsw.edu.au.

Recommended citation

Olekalns, A., Mai, C., Dufour, R., Kelly, M. & Ahearn, E-R. (2022). *Indicator Engine Construction Manual*. Centre for Social Impact, UNSW, Sydney.

Amplify Social Impact Online

The Centre for Social Impact (CSI) has been supporting for-purpose organisations to measure and evaluate their social impact since 2008. Some of this support is through the design and implementation of quantitative surveys. In the process, CSI identified a substantial overlap in the needs, challenges and overall process of survey design across the social-purpose sector. In 2018, CSI started to build an online platform to make evaluation more accessible for the for-purpose sector.

Amplify Social Impact is a ground-breaking initiative designed to improve the wellbeing of Australia's communities, families and individuals. It does this by measuring, understanding and influencing the social impact in areas such as housing, education, work, social inclusion and financial wellbeing.

Amplify Social Impact Online (Amplify Online) consists of two impact measurement tools, Indicator Engine and Yardstick. These platforms are designed to be 'one stop shop' for quantitative impact research.

Indicator Engine is a self-service suite of measurement tools which can be used to build and distribute surveys. **Yardstick** is an automated statistical analysis suite which can analyse, link and benchmark the data collected via Indicator Engine with administrative and population data sources.

A significant amount of time is invested into the curation and classification of indicators for Indicator Engine. This Construction Manual explains the primary data processes, methodologies and systems used to develop, grow and maintain Indicator Engine.

This Construction Manual **does** provide:

- ✓ an understanding of how Indicator Engine was constructed
- ✓ additional information about indicators and the PIPLA criteria used in Indicator Engine

This Construction Manual **does not** provide:

- × instructions on how to use Indicator Engine

Last updated: 24 May 2022

Indicator Engine

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What is Indicator Engine?

Indicator Engine is an innovative platform designed to enable organisations to find reliable and validated indicators to know when, where and how they are making a difference.

CSI has undertaken a rigorous process of identifying, classifying and ranking indicators which organisations can use to understand the impact their programs or services have had for the people they work with. CSI has accumulated a database of over 500 indicators, and a significant proportion of these have already been classified and published in Indicator Engine.

What are indicators?

Indicators are measurable markers that show whether progress is being made on individual outcomes or goals. They may show positive, negative or no change over time, and this may be intended or unintended. Indicators can be qualitative or quantitative in nature. Indicators may also be referred to a survey questions, measurement tools, measures, patient report outcomes (PROMs) or variables.

Indicators are highly structured and based on theory or evidence and are usually objective, but they can also capture subjective responses such as attitudes and feelings. Different indicators will be needed to determine how much progress has been made towards a particular goal, output or outcome. Indicators may also be referred to a survey questions, measurement tools, measures, patient report outcomes (PROMs) or variables.

How are indicators selected for Indicator Engine?

Indicators published on Indicator Engine have been sourced through a variety of locations and methodologies. All indicators on Indicator Engine appear in English.

Additional indicators will gradually be added. CSI has identified over 350 additional suitable indicators that will be published on Indicator Engine after they are processed. CSI plans to add additional indicators to Indicator Engine in line with changing and evolving sector needs.

Indicator sources

Indicators for Indicator Engine were mainly identified through:

- **Previous outcome frameworks for CSI clients:** indicators were drawn from the multitude of frameworks previously developed by CSI for various clients.
- **Systematic literature review:** indicators were found through a systematic search of literature for development and validation journal articles. Additional indicators were sourced through 'snowball' sources (identified through the author's list of publications or from relevant development and validation journal articles).

- **Population data sources:** indicators were identified through their creation for and use in Australian panel and population surveys.
- **Requests:** indicators requested by CSI clients or indicators for gap areas identified through user testing.

Population data sources

National and state agencies develop and distribute numerous panel and population studies. Examples of these panel studies include the Household, Income and Labour Dynamics in Australia (HILDA) Survey by the Melbourne Institute and the Census of Population and Housing (Census) by the Australian Bureau of Statistics.

National panel studies are beneficial because they generally collect population data, which can be used by organisations for benchmarking purposes. This data may or may not be public and freely accessible. Panel studies are, however, generally not developed and validated through the principles related to scale development and psychometrics.

Indicator Engine contains various indicators from Australian panel and population studies. There may be slight variations between original population or panel survey questions and the indicator in Indicator Engine. This includes adapting interview format indicators into self-report format. Original interviewer prompts and respondent information are generally included in Indicator Engine to maintain consistency of information received. CSI does not adapt the content or intent of an indicator, and where indicators have been significantly altered, the indicator is not listed as coming from a population data source.

Many national population and panel studies are longitudinal in nature. Indicator Engine aligns indicators with the latest wave of the study unless psychometric evidence exists for a prior wave.

Does CSI have permission to publish indicators on Indicator Engine?

CSI systematically determines that the intellectual property and legal requirements of using an indicator are met before publishing indicators on Indicator Engine. This includes determining the costs or conditions (if any) associated with the use, access to population data for benchmarking purposes and preferred acknowledgement of original authors.

The following process is used by CSI to seek usage permissions for an indicator:

1. The author is contacted using a template developed by CSI
2. If no response is received within two weeks, a second email is sent using the template.
3. If no response is received to the second email within two weeks, a final email is sent using the template.
4. If no response is received to the final emails within two weeks, the email chain containing the three enquiries is forwarded to the author's university or institution, or an additional author on the journal article.
5. If a response is received after any of the above inquiries, the response is actioned with reference to any additional conditions of use and stored by CSI for future reference.

All data collected on Indicator Engine is owned by organisation collecting the data, not CSI.

What types of indicators are included in Indicator Engine?

Indicator Engine contains four types of indicators on Indicator Engine: [demographic](#), [outcome](#), [process](#) and [custom](#).

Demographic indicators

Demographic indicators measure certain characteristics of a population. Examples of demographic indicators include date of birth, age, Indigenous status and ancestry.

Outcome indicators

Outcome indicators measure whether expected effects or changes are occurring as a result of a program. An outcome can be both the results or effects expected by implementing a program, initiative or strategy and the changes that occur in attitudes, values, behaviours or conditions.

Process indicators

Process indicators measure the activities and outputs of a program. Activities are the processes or actions that produce the desired outputs and ultimately outcomes. Outputs are the direct products or the deliverables of program activities. Process indicators are used to indicate whether the program is being implemented as planned and whether the program has contributed to the achievement of outcomes.

Custom indicators

Custom indicators can be created if there are no appropriate indicators to measure a desired outcome. Custom questions can be added through an organisation's account on Indicator Engine.

How are indicators categorised in Indicator Engine?

Indicators are categorised in Indicator Engine by domain and outcome to stipulate what an indicator measures. There are currently eight domains and 35 outcomes within the domains:

Domain	Outcome
Education	Education attainment
	Student performance
	Learning environment
	Attitude towards learning
Employment and Finance	Financial capability
	Financial security
	Employment
	Job satisfaction
	Cost of living
	Retirement transition
Health and Wellbeing	Mental health
	Access to health services
	Physical health
	Quality of life
	Diet and physical activity
	Reproductive health
	Infant and child health
	Alcohol, tobacco and other drugs consumption
	Predictive variable
Sexual health	
Housing and Homelessness	Housing affordability
	Housing safety
	Housing security
	Housing accessibility
	Appropriate housing
Social Cohesion	Social networks
	Healthy relationships
	Social equality

	Social inclusiveness
	Personal rights
	Disaster resilience
Climate and Energy	Environmental awareness
	Environmental behaviours
Demographic	Demographic
Process	Process

See Appendix A for a diagram of the current domain and outcome classifications.

How are the relevant domains and outcomes chosen?

CSI identified initial outcomes areas using a thematic grouping of indicators included in an early version of the indicator bank. These initial outcome areas have expanded, and will continue to expand, to include further indicators. Further indicators are added in line with sector need and panel study reviews.

See Appendix B for a full list of current outcome definitions and references.

What information is available for indicators in Indicator Engine?

The following information is available by clicking the “More” button underneath the indicator’s name in Indicator Engine:

- **Star rating:** indicates the quality of the indicator
- **PIPLA criteria:** detailed information about how the star rating was calculated
- **Other information:** additional information about the indicator

The screenshot displays the Indicator Engine interface. On the left is a navigation sidebar with categories like Education, Employment and Finance (45), Health and Wellbeing (101), Housing and Homelessness (22), Social Cohesion (85), and Climate and Energy (21). The main content area shows a search bar and a list of indicators under 'EMPLOYMENT'. The 'Job satisfaction' indicator is selected, showing a 5-star rating and a description: 'Satisfaction with aspects of job'. Below this, there are sections for 'Job characteristics' (overall quality, overall satisfaction, job demands and complexity, job security, job control), 'Workplace discrimination', and 'Workplace discrimination due to gender'. On the right, the 'Job satisfaction' details are shown, including a reference number (1081), a star rating (5 stars), and the source (HILDA (MI)). Below this are two columns: 'PIPLA Criteria' (Psychometric, Inclusive Design, Population Data, Length, Affordability) and 'Other information' (Respondent, Cohorts, Population Survey, Splitting). At the bottom, there is a scale from 0 (Totally dissatisfied) to 10 (Totally satisfied) with a question '(Q1a) Your...'. A 'Close' button is in the top left, and an 'Outcome' button is in the top right.

What do the categories under 'Other information' mean?

The following additional information is provided for each indicator, where available and applicable: [respondent](#), [cohorts](#), [population survey](#), [splitting](#) and [acknowledgement](#).

Respondent

Respondent specifies whether the indicator is designed to be answered by an individual or by proxy.

- **Individual** means that an individual can self-report or answer the survey question.
- **Proxy** refers to indicators where an individual is unable or not intended to self-report, such as observational indicators or indicators to be answered on behalf of children.

Cohorts

Cohorts specifies the specific population that the indicator has been tested within.

- **(Psychom.)** refers to the population group that psychometric assurance has been tested within.
- **(Incl. des.)** refers to the population that the indicator has been inclusively designed with.

Population survey

Population survey specifies the population or panel study that the indicator was sourced from.

- **[D]** specifies that the indicator has been discontinued within a population survey.
- **[A]** specifies that the indicator has been adapted from the original population survey.

Splitting

Splitting specifies whether the indicator can be split by Indicator Engine users.

- **Allowed** means the Indicator can be split. Users can select individual items from the indicators to include in their survey.
- **Not allowed** means the indicator cannot be split and an indicator must be used in its complete form. For indicators that are validated psychometric scales or single items, splitting is not allowed.

The splitting function is still under development and is not available on Indicator Engine at this present time.

Acknowledgement

Acknowledgement acknowledges the author or the source of the indicator in their preferred format. This section will also acknowledge if the indicator has been adapted by CSI or not.

PIPLA criteria

- [What is PIPLA?](#)
 - [What is the purpose of PIPLA?](#)
 - [How are points awarded for each criteria?](#)
 - [How is the star rating calculated?](#)
 - [Why are some indicators missing star ratings?](#)
-

What is PIPLA?

CSI developed the PIPLA criteria to identify indicators with the greatest utility for outcome measurement. PIPLA ratings can be used by for-purpose organisations to make quick and informed decisions about which indicator best measures their desired outcome. High quality indicators are important for evaluation and outcomes measurement.

PIPLA is a five-star criteria evaluation methodology that assesses and rates indicators on:

1. [Psychometric Assurance](#)
2. [Inclusive Design](#)
3. [Population Data](#)
4. [Length](#)
5. [Affordability](#)

What is the purpose of PIPLA?

The PIPLA criteria was created by CSI to standardise the quality and useability of indicators.

CSI reviewed and evaluated several indicator evaluation systems before deciding on an appropriate methodology of assessing indicators for Indicator Engine.

The PIPLA criteria ensures that indicators are processed and classified by various Indicator Engine team members in a rigorous, consistent and standardised manner. It also ensures that the star rating remains consistent across indicators.

How are points awarded for each criteria?

Between 1 to 3 points are awarded for each of the five criteria. These points are summed, resulting in a final “rank” out of 15. This rank is transformed into a [star rating](#) out of 5, based on the total number of points.

Psychometric Assurance

Psychometric assurance assesses the extent to which an indicator consistently measures what it intends to measure. Indicators are awarded points in the PIPLA system for Psychometric Assurance according to the following criteria:

- **Yes:** indicator demonstrates sufficient psychometric strength (**3 points**)
- **Partial:** indicator demonstrates minimum psychometric strength (**2 points**)
- **No:** indicator demonstrates no or insufficient psychometric strength (**1 point**)

Psychometric strength is determined by the **validity** (the extent to which the indicator actually measures what it intends to measure), **reliability** (the extent to which an indicator produces consistent results) and **responsiveness** of an indicator (the extent to which it has the ability to detect change over time), evidenced throughout its statistical development and validation process.

Evidence of psychometric strength is identified by CSI team members through a rigorous and systematic review of relevant literature. As the literature expands, an indicator's PIPLA rating may change as more psychometric evidence becomes available. All psychometric evidence and inclusive design information, when available, aligns with the English version of the indicator, where possible.

CSI's psychometric assurance process is adapted from the COSMIN methodology, a systematic review protocol developed to assess the quality of patient-reported outcome measures (PROMs).

Inclusive Design

Inclusive design assesses the extent to which an indicator was designed and developed in consultation with its target population group. Indicators are awarded points in the PIPLA system for Inclusive Design according to the following criteria:

- **Included:** target population involved in all aspects and decision-making related to scale development, including setting research priorities and involvement in governance and IP (**3 points**)
- **Involved:** some involvement of target population in influencing scale development but limited at higher levels of decision-making; includes cognitive testing, consultation with advisory, professional or target group after scale items have been initially generated (**2 points**)
- **Informed:** no involvement of target population in research decision-making at any stage of scale development, people are merely informed about results/data (**1 point**)

Indicators are ranked against these criteria based on principles developed for doing research with people living with HIV and Aboriginal and Torres Strait Islander people. These principles consider the degree of inclusion and the influence of the research target group in the conceptualisation and development process.

Population Data

Indicators are assessed on whether population data is available. Indicators are awarded points in the PIPLA system for Population Data according to the following criteria:

- **Representative:** representative population data is available and has been collected within the past 5 years (**3 points**)
- **Non-representative:** non-representative population data is available and has been collected within the past 5 years, OR population data is available and was collected within the past 6-100 years (**2 points**).
- **None:** population data is not available or has never been collected (**1 point**)

Population data can be used to benchmark and compare outcomes across similar programs or population groups. This can help organisations to understand the strength of their outcome compared to baseline data or other programs.

Length

Indicators are assessed on the number of items or individual survey questions it contains. Indicators are awarded points in the PIPLA system for Length according to the following criteria:

- Indicator is less than 12 items in length (**3 points**)
- Indicator is 12-23 items in length (**2 points**)
- Indicator is 24 or more items in length (**1 point**)

Short indicators, requiring minimal time for completion, minimise survey fatigue experienced by respondents and reduce time required for analysis for organisations.

Affordability

Indicators are assessed on the monetary cost of the indicator. Indicators are awarded points in the PIPLA system for Affordability according to the following criteria:

- **Free:** no cost involved in using the indicator (**3 points**)
- **Unconfirmed:** cost yet to be confirmed (**2 points**)
- **Cost:** monetary cost involved to access the indicator (**1 point**)

It is anticipated that many for-purpose organisations accessing Indicator Engine will have limited financial resources to access costly indicators. Presently, only free to access indicators are published on Indicator Engine.

How is the star rating calculated?

On Indicator Engine, an indicator's final rank out of 15 points is converted into the 5-star rating using Jenks natural breaks optimisation.

Jenks natural breaks optimisation is a data clustering method designed to reduce within class, and maximise between class variance. Indicator Engine calculates Jenks natural breaks according to the optimal configuration for indicators to be ranked across five classes, with unlimited iterations. This calculation is completed on the entire Indicator Engine databank, including published indicators on the Indicator Engine platform and unprocessed indicators on the internal CSI databank. Calculation for the optimal configuration of indicator star ratings on the Indicator Engine platform is conducted periodically as more indicators are uploaded to the platform.

Consequently, star ratings (and rank-cut offs) will change over time as the quality and volume of the Indicator Engine databank improves. Different rank cut-offs are used for outcome, process and demographic indicators.

Why are some indicators missing star ratings?

Classifying indicators through the PIPLA criteria is an extensive and time-consuming process. Due to limited resources, not all indicators on Indicator Engine have been fully classified. To enable Indicator Engine end-users to have access to a larger range of indicators for their surveys, Indicator Engine has published a mix of full classification and limited classification indicators:

Full classification indicators are fully classified through the PIPLA criteria system. They are published on Indicator Engine with full details and a star rating.

Limited classification indicators are published on Indicator Engine with limited details and no star rating. It is intended that, over time, all published indicators will be fully classified through the PIPLA criteria system.

Glossary

Activities	The processes or actions that produce the desired outputs and ultimately outcomes.
Amplify Insights	In-depth insights on key social issue areas revealing the nature of the issue in Australia and promising strategies to address the problem.
Amplify Online	Amplify Social Impact Online (or Amplify Online) is a platform of online tools, research reports and event series to improve social outcomes in housing, education, work, social inclusion and financial wellbeing. CSI's Amplify Social Impact Initiative consists of Amplify Insights, the Australian Social Progress Index, Indicator Engine, Yardstick and Connect and Convene for Systems Change.
Australian Social Progress Index	Holistic assessment of how states and territories are faring against a set of indicators that measure wellbeing, aligned to the UN Sustainable Development Goals to amplify sector needs and accomplishments.
Baseline	The initial information collected about the condition or performance of subjects prior to the implementation of an intervention or program, to which progress can be compared at strategic points during and at completion of the program.
Benchmarking	A process of measuring an outcome, change or performance against 'reference points' from another established program or national measures. For example, measuring education outcomes from a local program against state-level education.
Cohort	The population that the indicator has been tested within for psychometric assurance and/or the population that the indicator has been inclusively designed with.
Connect and Convene for Systems Change	A series of events that bring people together across sectors (NFP, government, philanthropy, business) to come up with shared purpose and innovative solutions to these complex problems.
CSI	The Centre for Social Impact (CSI).
Demographic indicator	Indicators that measure the characteristics of a population.
Domain	For the purposes of Indicator Engine, domains are umbrella categories with which indicators fall within, such as Education or Social Cohesion.
Impact	The longer-term sustained social, economic and/or environmental effects or consequences of a program. They may be positive, negative or neutral: intended or unintended.
Inclusive design	The extent to which an indicator was designed and developed in partnership with its target population.
Indicator	Measurable markers that show whether progress is being made on individual outcomes or goals.
Indicator Engine	A cloud-based self-service suite of management tools which can be used to build and distribute surveys to measure social impact. It enables organisations to find reliable and validated measurements to know when, where, and how they are making a difference, as well as enable the collection and analysis of the data.
Outcome	An outcome can be both the results or effects expected by implementing a program, initiative or strategy and the changes that occur in attitudes, values, behaviours or conditions. Changes can be immediate, intermediate or long-term.
Outcome indicator	Indicators that measure whether the expected effects and changes occur as a result of a program.
Outputs	The direct products or deliverables of program activities.
PIPLA	A five-point evaluation criteria created by CSI to measure the quality of indicators. PIPLA is an acronym for Psychometric Assurance, Inclusive Design, Population Data, Length and Affordability.
Population survey	Population survey specifies the population or panel study that the indicator was sourced from.
Process indicator	Indicators that measure the activities or outputs of a program. Process indicators are used to indicate whether a program is being implemented as planned and whether the program has contributed to achievement of outcomes.
Proxy	Where an individual is unable or not intended to self-report on an indicator, such as observational indicators or indicators to be answered on behalf of children.

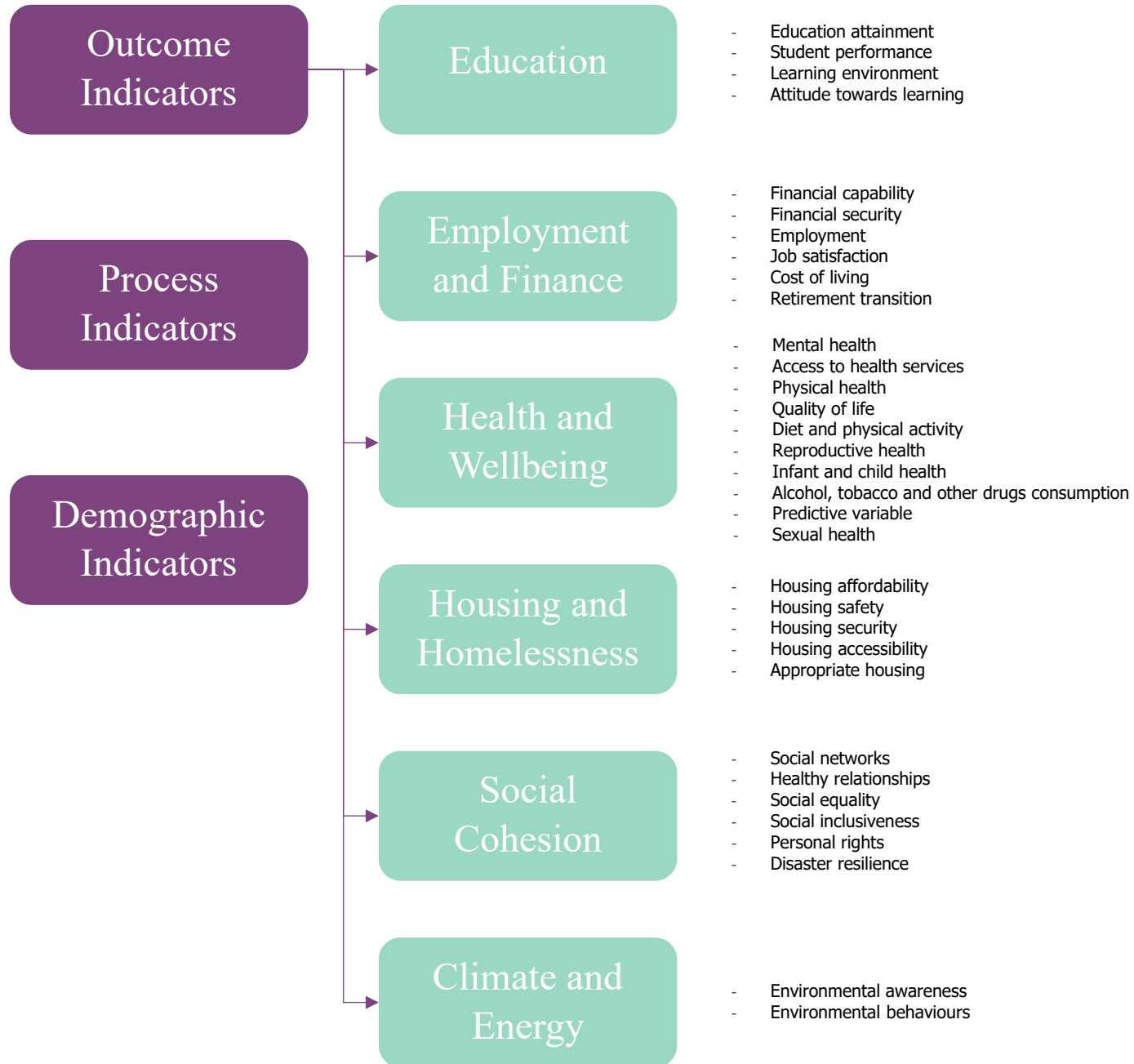
Psychometrics	A branch of psychology that is concerned with the theory and technique of objective measurement as relevant to the statistical evaluation of latent constructs (i.e., attitudes and behaviours) that cannot be measured by direct observation.
Reliability	The extent to which an indicator produces consistent results.
Respondent	The person (either an individual or proxy) designed to respond to the indicator.
Responsiveness	The ability of an indicator to detect change over time.
Splitting	Specifies whether a user on Indicator Engine can select specific, individual items within an indicator for their survey.
Validity	The extent to which an indicator actually measures what it intends to measure.
Yardstick	Linking to Indicator Engine, this benchmarking and analysis tool will reveal organisational and sector performance against national data sets, helping to identify areas for improvement and fostering greater transparency across the social purpose sector.

The following resources are useful for further information about indicators and outcome measurement:

- [Muir, K. & Bennett, S. \(2014\). The Compass: Your Guide to Social Impact Measurement. Sydney, Australia: The Centre for Social Impact.](#)
- [Bennett, S., Reeve, R., Muir, K., Marjolin, A., Powell, A. \(2016\), Orienting your journey: An approach for indicator assessment and selection, Toolkit, Sydney: Centre for Social Impact](#)
- [Ramia, I., Powell, A., Stratton, K., Stokes, C., Meltzer, A., Muir, K. \(2021\). Roadmap to outcomes measurement. Your step-by-step guide to planning, measuring and communicating social impact. Centre for Social Impact.](#)

Appendix

Appendix A: Domain & Outcome Classification



Appendix B: Outcome definition and references

Domains & Outcomes Key

Domains	Code
Education	1
Employment and Finance	2
Health and Wellbeing	3
Housing and Homelessness	4
Social Cohesion	5
Climate and Energy	6
Demographic	7
Process	8

Outcome Categories			
Name	Code	Definitions	References
Education attainment	1.1	Education attainment is the highest year of school completed and level of highest non-school qualification, regardless of the particular field of study or the type of institution in which the study was undertaken.	https://www.abs.gov.au/ausstats/abs@.nsf/Lookup/2901.0Chapter39202016
Student performance	1.2	The extent to which a person has accomplished specific goals that were the focus of activities in instructional environments.	Steinmayr, R., Meissner, A., Weidinger, A. F., & Wirthwein, L. (2015). Academic Achievement. Oxford Bibliographies. https://www.oxfordbibliographies.com/view/document/obo-9780199756810/obo-9780199756810-0108.xml
Learning environment	1.3	Learning environment refers to the diverse physical and remote locations, contexts, modalities, and cultures in which students learn.	Adapted from https://www.edglossary.org/learning-environment/
Attitude towards learning	1.4	Attitudes are tendencies or internal states of the learner towards anything that they can evaluate, such as learning math, extracurricular activities, the general notion of going to school, their problem solving abilities, level of goal setting and beliefs towards learning.	Adapted from Renaud RD. Attitudes and Dispositions. International Guide to Student Achievement. In: Hattie J, Anderman EM. International guide to student achievement. New York, London: Routledge 2013. P. 57–58. and Sen, H. Ş. (2013). The attitudes of university students towards learning. International Journal of Academic Research, 5(4), 338-342
Financial capability	2.1	The ability to manage money, in a way that best suits personal circumstances, now and into the future.	Australian Securities and Investments Commission. (2020). National Financial Capability Strategy 2018: Australians in control of their financial lives. Retrieved from https://www.financialcapability.gov.au/strategy/download/national-financial-capability-strategy-2018.pdf
Financial security	2.2	The perception of having a financially secure future and meeting future financial goals.	Netemeyer, R., Warmath, D., Fernandes, D., & Lynch, J. (2017). How Am I Doing? Perceived Financial Well-Being, Its Potential Antecedents,

			and Its Relation to Overall Well-Being. SSRN Electronic Journal. doi: 10.2139/ssrn.3485990
Employment	2.3	All persons of working age engaged in any activity to produce goods or provide services for pay or profit during a short reference period, whether 'at work' or 'not at work' due to temporary absence or working-time arrangements.	International Labour Organisation. (2017). Quick guide on sources and uses of labour statistics. Retrieved from http://www.ilo.org/wcmsp5/groups/public/---dgreports/---stat/documents/publication/wcms_590092.pdf
Job satisfaction	2.4	A pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences.	Locke, E.A. (1976) The Nature and Causes of Job Satisfaction. In Dunnette, M.D., Ed., Handbook of Industrial and Organisational Psychology, Vol. 1, 1297-1343.
Cost of living	2.5	The expenses incurred to buy the goods and services that are necessary to maintain a certain standard of living.	Reserve Bank of Australia. (2014). Inflation and the Cost of Living. Retrieved from https://www.rba.gov.au/publications/bulletin/2014/mar/pdf/bu-0314-4.pdf
Retirement transition	2.6	The process of moving from paid work to retirement, including timing, the voluntariness of the decision and diversity of work-retirement pathways.	Dr Jack Noone
Mental health	3.1	A state of wellbeing in which every individual realises their own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to their community.	World Health Organisation. (2004). <i>Promoting mental health: concepts, emerging evidence, practice (Summary Report)</i> . Geneva: World Health Organisation.
Access to health services	3.2	Factors that impact a person's ability to access and engage with health services in a timely manner to achieve the best health outcomes, including the service approachability, acceptability, availability, affordability and appropriateness.	Levesque, Jean-Frederic, Harris, Mark F, & Russell, Grant. (2013). Patient-centred access to health care: conceptualising access at the interface of health systems and populations. <i>International Journal for Equity in Health</i> , 12(1), 18–18. Institute of Medicine, Committee on Monitoring Access to Personal Health Care Services. <i>Access to health care in America</i> . Washington, DC: National Academy Press; 1993. https://www.ncbi.nlm.nih.gov/books/NBK235882/
Physical health	3.3	A state of physical wellbeing, and not merely the absence of disease or infirmity.	Adapted from the Constitution of the World Health Organisation (1946), as appears in World Health Organisation. (2004). <i>Promoting mental health: concepts, emerging evidence</i>
Quality of life	3.4	An individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns. It is a broad-ranging concept affected in a complex way by the persons' physical health, psychological state, level of independence, social relationships and their relationship to salient features of their environment.	World Health Organisation: WHOQOL: measuring quality of life. 1997.

Diet and physical activity	3.5	The food and beverages that we eat and drink, and all physical movement that requires energy expenditure.	Food & nutrition Overview - Australian Institute of Health and Welfare (aihw.gov.au) WHO guidelines on physical activity and sedentary behaviour. Geneva: World Health Organisation; 2020. Licence: CC BY-NC-SA 3.0 IGO
Reproductive health	3.6	A state of physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so.	Adapted from https://www.who.int/westernpacific/health-topics/reproductive-health
Infant and child health	3.7	The extent to which individual children or groups of children are able or enabled to develop and realize their potential, satisfy their needs, and develop the capacities that allow them to interact successfully with their biological, physical, and social environments.	National Research Council and Institute of Medicine. (2004). Children's Health, the Nation's Wealth: Assessing and Improving Child Health. Committee on Evaluation of Children's Health. Board on Children, Youth, and Families, Division of Behavioral and Social Sciences and Education. Washington, DC: The National Academies Press
Alcohol, tobacco and other drugs consumption	3.8	Frequency, amount, type of substance use, impacts on life and lifestyle.	Adapted from https://www.health.nsw.gov.au/mentalhealth/psychosocial/foundations/Pages/types-substance.aspx and https://www.betterhealth.vic.gov.au/health/servicesandsupport/alcohol-and-drugs--dependence-and-addiction#recognising-an-alcohol-and-drug-problem
Predictive variable	3.9	Variable (data point) used to estimate, forecast, or project future events or circumstances.	Adapted from https://dictionary.apa.org/predictor-variables
Sexual health	3.11	A state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled.	https://www.who.int/health-topics/sexual-health#tab=tab_2
Housing affordability	4.1	The relationship between expenditure on housing and household incomes.	https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BriefingBook45p/HousingAffordability
Housing safety	4.2	Housing that does not jeopardise the health, safety, or welfare of its occupants and that permits access to electricity, heat, and running water for the benefit of occupants.	https://code.dccouncil.us/dc/council/code/sections/4-751.01.html
Housing security	4.3	Housing that provides stability, privacy, feelings of safety, belonging and physical comfort.	Adapted from Hulse, K., Saugeres, L. (2008) Housing insecurity and precarious living: an Australian exploration, AHURI Final Report No.

			124, Australian Housing and Urban Research Institute Limited, Melbourne. https://www.ahuri.edu.au/research/final-reports/124 .
Housing accessibility	4.4	Housing that meets the specific needs of vulnerable groups and does not expose them to discrimination.	Adapted from UN Office of the High Commissioner for Human Rights (OHCHR). (2009). The Human Right to Adequate Housing (Rev 1): Fact Sheet No. 21. Retrieved from https://www.ohchr.org/en/publicationsresources/pages/factsheets.aspx and Muir, K., Martin, C., Liu, E., Kaleveld, L., Flatau, P., Etuk, L., and Pawson, H. 2018. Amplify Insights: Housing Affordability & Homelessness. Centre for Social Impact, UNSW Sydney
Appropriate housing	4.5	Housing which enables health, wellbeing, interpersonal relationships, expression of cultural identity, social and economic participation.	Adapted from Muir, K., Martin, C., Liu, E., Kaleveld, L., Flatau, P., Etuk, L., and Pawson, H. 2018. Amplify Insights: Housing Affordability & Homelessness. Centre for Social Impact, UNSW Sydney and UN Office of the High Commissioner for Human Rights (OHCHR). (2009). The Human Right to Adequate Housing (Rev 1): Fact Sheet No. 21. Retrieved from https://www.ohchr.org/en/publicationsresources/pages/factsheets.aspx and
Social networks	5.1	A social network is a social structure that exists between actors—individuals or organisations.	https://edge.sagepub.com/system/files/Ballantine5e_5.1SK_0.pdf https://socialsci.libretexts.org/Bookshelves/Sociology/Book%3A_Sociology_(Boundless)/05%3A_Social_Interaction/5.03%3A_Elements_of_Social_Interaction/5.3H%3A_Social_Networks
Healthy relationships	5.2	A healthy relationship is one which gives you freedom, is not abusive and is respectful.	https://www.1800respect.org.au/healthy-relationships
Social equality	5.3	Social equality considers the distribution of goods, opportunities and burdens in society.	https://www.sv.uio.no/iss/english/research/research-areas/social-inequality/
Social inclusiveness	5.4	The process of improving the terms of participation in society for people who are disadvantaged through enhanced opportunities, access to resources, voice and respect for rights.	https://www.un.org/esa/socdev/rwss/2016/chapter1.pdf
Personal rights	5.5	Rights of personal security, personal liberty, and private property, appertaining to the person.	https://www.merriam-webster.com/dictionary/personal%20rights
Disaster resilience	5.6	The ability of individuals, communities, organisations and states to adapt to and recover from hazards, shocks or stresses without compromising long-term prospects for development.	https://gsdrc.org/topic-guides/disaster-resilience/concepts/what-is-disaster-resilience/
Environmental awareness	6.1	Attitudes or perceptions regarding the consequences of human behaviour on the environment.	Gadenne, David L, Kennedy, Jessica, & McKeiver, Catherine. (2009). An Empirical Study of Environmental Awareness and Practices in SMEs. Journal of Business Ethics, 84(1), 45–63. https://doi.org/10.1007/s10551-008-9672-9 ; Ham, Marija, Mrčela, Dajana, & Horvat, Martina. (2016).

			INSIGHTS FOR MEASURING ENVIRONMENTAL AWARENESS. <i>Ekonomski Vjesnik</i> , 29(1), 159–176.
Environmental behaviours	6.2	Actions that impact the environment in a positive or negative manner (i.e., actions that preserve, prevent damage to, or promote improvements to, the natural and built world).	Adapted from "Pro-environmental behaviours": Kollmuss, A., & Agyeman, J. (2002). Mind the gap: Why do people act environmentally and what are the barriers to pro-environmental behaviour? <i>Environmental Education Research</i> , 8(3), 239–260. https://doi.org/10.10 ; Gilal, F. G., Zhang, J., Gilal, N. G., & Gilal, R. G. (2019). Linking self-determined needs and word of mouth to consumer e-waste disposal behaviour: A test of basic psychological needs theory. <i>Journal of Consumer Behaviour</i> , 18(1), 12–24. https://doi.org/10.1002/cb.174480/13504620220145401 ; Udall, Alina M, de Groot, Judith I. M, de Jong, Simon B, & Shankar, Avi. (2020). How do I see myself? A systematic review of identities in pro-environmental behaviour research. <i>Journal of Consumer Behaviour</i> , 19(2), 108–141. https://doi.org/10.1002/cb.1798
Demographic	7.1	Characteristics of a population; independent variables that cannot be manipulated.	Salkind, Neil J. (2010). <i>Encyclopedia of Research Design</i> . SAGE Publications.
Process	8.1	Measure of a program’s activities and outputs (direct products/deliverables of the activities) that indicate whether a program is being implemented as planned, and contributes to the achievement of outcomes.	Program Performance and Evaluation Office. (2021, June 4). <i>Indicators CDC Approach to Evaluation</i> . Centres for Disease Control and Prevention. https://www.cdc.gov/eval/indicators/index.htm ; New Zealand Qualifications Authority (2021). <i>Evaluation indicators for transitional ITOs</i> . New Zealand Qualifications Authority. https://www.nzqa.govt.nz/providers-partners/external-evaluation-and-review/evaluation-indicators-for-itos/process-indicators/