# AUSTRALIAN DIGITAL INCLUSION INDEX

## Consultation Paper

## February 2020

### Background

In 2015, the Australian Digital Inclusion Index (ADII) was created as a mechanism to measure the nature and extent of digital inclusion of Australian residents. Populated with data from the Roy Morgan Single Source Survey, the ADII has been used to track digital inclusion over time and to identify the demographic and geographic contours of digital inequality. Since 2016, annual ADII reports have presented findings from the ADII dataset and supplementary research, while the ADII website has been used to distribute a timeseries dataset extending back to 2014 that includes index, sub-index and component results for a range of regions and socio-economic groups.

The Index has been widely used by the not-for-profit and business sectors, and all tiers of government. It has had a significant impact on policy and practice.

In 2019, the ADII Research Team initiated a review seeking to ensure the ADII remains relevant, effective and of public value given a series of emerging challenges and opportunities, including:

- rapid and ongoing changes in digital technologies and the growing significance of the online distribution and consumption of consumer and public services;
- maximising data utility and responding to requests from stakeholders for richer data insights that include the public release of more of the data that underpins the index; and,
- interest from stakeholders in having access to a customised digital inclusion survey and reporting tool they could use to measure digital inclusion in their own communities.

Following a series of round table meetings and an extensive review of international digital inclusion literature and index models, it was determined that the current arrangements for the provision of data to populate the Index would not enable the ADII to meet these challenges and opportunities beyond 2020[1]. To date, the Roy Morgan Single Source has been a cost-effective means of populating the current index with a large national timeseries dataset. But, looking forward there are some limitations in generating data on specific indicators that might form part of an evolving index. There are also restrictions around the public release of the detailed digital inclusion data that underpins the Index as well as the questionnaire used to collect that data.

The ADII Research Team is seeking your input on a revised index and data provision strategy—referred to as ADII 2.0. The basic parameters of the strategy are as follows:

- The use of a purpose-built digital inclusion survey instrument that will be owned and controlled by the ADII Research Team.
- Some change to the indicators that comprise the index, but the retention of the basic Access, Affordability and Abilities architecture.
- A current commitment to produce the index for three years 2021-2023, based on four annual surveys (beginning in 2020 to provide time series data for the 2021 report).

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[1] The 2020 ADII will use the Roy Morgan Single Source as the populating dataset.

- The specific numerical results of ADII 2.0 may not be backwards compatible with the ADII, but the interpretive picture is likely to remain consistent. The value of the new data provision strategy is in being able to provide additional and deeper explanatory insights to inform digital inclusion policy and practice, as well as the opportunity to publicly release the survey and more of the data.
- The size of the sample and the length of the questionnaire used for ADII 2.0 will be limited by the available budget and other logistical considerations. Decisions about the nature and extent of geographic and socio-economic reporting are central to this consultation.

There are five primary aspects of the revised ADII 2.0 index and index data provision strategy that the ADII Research Team seek feedback on:

1. Architecture of the index
2. Geographic reporting
3. Demographic cohort reporting
4. Data reporting and availability
5. Customised public digital inclusion survey and reporting tool

## Consultation topics

### Architecture of the Index

#### ADII

The ADII is designed to generate an overall numerical measure of digital inclusion for individuals based on more than 100 factors relating to personal internet and digital technology access, affordability and use. The factors are assembled in such a way as to first generate a numerical measure for each of three constituent digital inclusion dimensions (sub-indices): Access, Affordability and Digital Ability. An individual's sub-index results are then combined as a simple average to form the overall index score.

#### ADII 2.0

ADII 2.0 will continue to measure the digital inclusion of individuals. As with the ADII, an overall digital inclusion index score will be generated as well as scores for each of three constituent dimensions of digital inclusion: Access, Affordability and Digital Ability.

There will be modification to the factors that form each of the three sub-indices as follows:

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| | REVISED | UNDER REVIEW | REMOVED |
|---|---|---|---|
| **ACCESS** | • Frequency of internet access<br>• Access device technologies<br>• Access device technologies<br>• Access to multiple modes of internet connection<br>• Mobile internet access<br>• Fixed internet access | • Mobile internet data (the rise of unlimited Mobile Phone and Mobile Broadband data plans is challenging this indicator)<br>• Fixed internet data (the rise of unlimited Fixed Broadband data plans is challenging this indicator)<br>• Access to personal digital technologies (Recognition of the utility of a range of access device technologies beyond the computer and mobile phone. May include tablet, smart home devices, wearables, etc.) | • Places of internet access |
| **AFFORDABILITY** | • Relative Expenditure | • Value of Expenditure (the rise of unlimited Mobile Phone, Mobile Broadband and Fixed Broadband data plans is challenging this indicator)<br>• Cost as barrier to access (Captures affordability impact on those currently without internet products) | |
| **DIGITAL ABILITY** | • Attitudes to the internet and digital technologies | • Basic Skills<br>• Advanced Activities<br>• (Revision considering use of Internet Skills Scale (ISS) model – developed by Van Deursen, Helsper, and Eynon (2016) | |

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**Discussion points**

- Should emerging personal digital access technologies be considered as part of a revised Access sub-index? For example, does (or will) having a smart watch or voice activated speaker in the home provide a greater level of digital inclusion?
- Has the rise of 'unlimited' plans reduced the consumer concerns about data use to the extent that data allowances are no longer a useful measure of personal access and value for expenditure?
- Should 5G be used as an indicator of higher quality mobile internet access?
- What skills are most important for thriving in a digital world today, and in dealing with the risks of increased online engagement?
- A possible use of ADII 2.0 may be to use it as an evaluation tool for digital ability programs. Would this be of value? And if so, what are the key outcomes that should be measured? For example, increased skills, or confidence?

## Geographic reporting

### ADII

The Roy Morgan Single Source provides a survey sample adequate to calculate ADII scores at the national level and for most states and territories. Robust ADII scores can also be produced for some regional areas. The regional geography is defined by Roy Morgan as part of their Single Source reporting system and does not cohere to ABS regions which underpin, for example, the Australian Census.

### ADII 2.0

The survey sample for ADII 2.0 will be smaller and preclude reporting at the same geographic level as the ADII. Robust ADII 2.0 scores will be produced at the national level and for a national urban/rural division, but it may not be possible to generate survey-derived digital inclusion scores for all states and territories. An alternative to survey-derived scores for smaller geographic units is statistical modelling using ABS Census and other data. This technique could yield model-derived ADII 2.0 scores for smaller geographic areas than the current ADII. One benefit of ADII 2.0 is that the dataset could be publicly released in a form that would enable third parties to undertake small-area statistical modelling. In addition, the availability of a customised public digital inclusion survey instrument will enable communities to generate their own small-area data which can be compared to robust national ADII 2.0 results.

**Discussion points**

- How important are State/Territory scores to users of the Index?
- How likely is it that States/Territories and/or other local communities will conduct ADII 2.0 surveys or undertake spatial statistical modelling?
- How might aligning to ABS regions assist with the usability of the Index?

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## Demographic cohort reporting

### ADII

The Roy Morgan Single Source enables the production of ADII scores for a range of demographic groups at the national level and for the larger population states. The primary groups for which reliable ADII scores are published include those defined by: age, gender, employment, education level, household income, household type (for example, Single Parent), Indigenous Australian status, migrant status and receipt of disability payments.

### ADII 2.0

The ability to produce robust ADII scores for specific population cohorts is determined by both the detail of the demographic data collected from respondents and the size of the sample for each cohort. ADII 2.0 will seek data from respondents that will enable replication of much of the reporting detail of the ADII at the national level, including age, gender, employment, education level attained, household income, household type and ethno-cultural status determined by languages spoken at home. As with the current Index, there are challenges around obtaining scores for smaller cohorts. For ADII 2.0 this will include national population cohorts under 1 million such as Indigenous Australians. Targeted data collection may be required for robust digital inclusion scores for this and other small cohorts. While some of this data collection may occur through ADII 2.0, third parties may choose to collect data on smaller communities using the customised public digital inclusion survey instrument.

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### Discussion points

It is important that the ADII Research Team understand the demographic and socio-economic reporting needs of stakeholders. This will inform both questionnaire design and the sampling process.
- Are the demographic and socio-economic reporting categories of the ADII enough? What other cohorts would stakeholders like data on?
- Are there preferred ways of recognising the measuring demographic groups that the ADII 2.0 should accommodate?

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## Data reporting and availability

### ADII

Currently, the ADII Research Team can publish the ADII score and three sub-index and eight component scores for Australia and a range of identified cohorts. These are published through the release of an annual report and the provision of data tables on the ADII website. It is not possible to publish the results of the 100+ factors that underlie the ADII, sub-index and component scores. It is not possible to make the individual record dataset available to third parties for modelling or other uses.

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**ADII 2.0**

The ADII 2.0 strategy centres on the development of a purpose-built digital inclusion survey instrument that is owned and controlled by the ADII Research Team and a national dataset collected using that instrument which is also owned and controlled by the ADII Research Team. This will provide an opportunity to release aggregate data on each of the factors from which the index, sub-index and component scores are composed. This will facilitate richer reporting and enable stakeholders to more clearly understand the factors that underpin index results. It will also be possible to use the data in entirely new ways – for instance, setting achievement targets based on specific digital inclusion indicators. Under ADII 2.0, it may also be possible to make the de-identified individual respondent record-set available. Those with access to this dataset would be able to undertake a range of actions, including generating new crosstabulations, statistical analyses, and modelling (including small-area spatial modelling).

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**Discussion points**

- Would the release of more detailed data be of value?
- If your organisation would be likely to use such detailed data, in what format and at what level of granularity would this be most useful?

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## Customised public digital inclusion survey and reporting tool

**ADII**

The ADII is populated with data from the Roy Morgan Single Source Survey. The total question-set is very large – just a fraction of these are used in the ADII.

In 2017 the ADII team worked with Roy Morgan to develop the ADII Supplementary Survey (ADIISS). This survey, which can be administered online or face-to-face (using a digital interface), consists of questions from the Single Source survey used to compile the Index. The ADIISS has been used by the ADII Research Team to gather data in remote Indigenous communities, from the Deaf and Hard of Hearing community and newly-arrived migrants in Shepparton.

**ADII 2.0**

The ADII 2.0 strategy centres on the development of a purpose-built digital inclusion survey instrument that is owned and controlled by the ADII Research Team. The ADII Research Team are proposing the development of a custom digital survey tool that could be used by stakeholders to gather data to generate ADII scores comparable to those yielded by the national ADII 2.0 survey. The tool would also include a reporting function through which stakeholders could analyse (or extract) their data and compare it to results ADII 2.0 results.

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**Discussion points**

- Do stakeholders representing specific communities believe they might use the customised public digital inclusion survey instrument to collect their own data?