Inclusive Growth Score™ Methodology - Australia

INTRODUCTION

The Inclusive Growth Score is a public-access, web-based service that enables users to learn about measures of inclusion and growth within statistical areas across Australia. The Score is a means by which users can benchmark existing levels of inclusion and growth within statistical areas, and by which they can measure whether actions, policies, and investments increased or decreased measures of inclusive growth.

The map presents an Inclusive Growth Score for each statistical area. The Score is based on 16 metrics from multiple data sources, including census data, firmographic data from 3rd parties, and anonymized and aggregated Mastercard transaction data (see DATA SOURCES for more details). The Score ranks a given statistical area in comparison to statistical areas across the country, within the same state, and the same level of urbanization as measured by the ABS (see BENCHMARKING for more details). The higher a statistical area's Inclusive Growth Score, the greater the composite parts of inclusion and growth (see SCORE METHODOLOGY below for more details)

SCORE METHODOLOGY

The Inclusive Growth Score is composed of three pillars: Place, Economy, and Community. Pillars are composed of Growth (level of change) and Inclusion (rate/distribution) metrics. The measures of Growth provide detailed views into how communities are changing over time. While measures of inclusion are static figures speaking to the accessibility of resources or community assets. For more details on which metrics classify as Growth and Inclusion, please see PILLARS / METRICS below.

The Inclusive Growth Score, Pillars, and underlying metrics are transformed into percentile ranks (0-100) relative to a user selected base (see BENCHMARKING for more details). To calculate the ranks, all statistical areas are rank ordered according to the metric value. The Score is calculated by taking the statistical area's relative position, divided by the total number of statistical areas in the benchmark, and multiplied by 100. An illustrative example of the calculation

> [Example Statistical Area], Metric A's rank = 500
> Total number of Statistical Areas in [Example Statistical Area]'s State = 1000
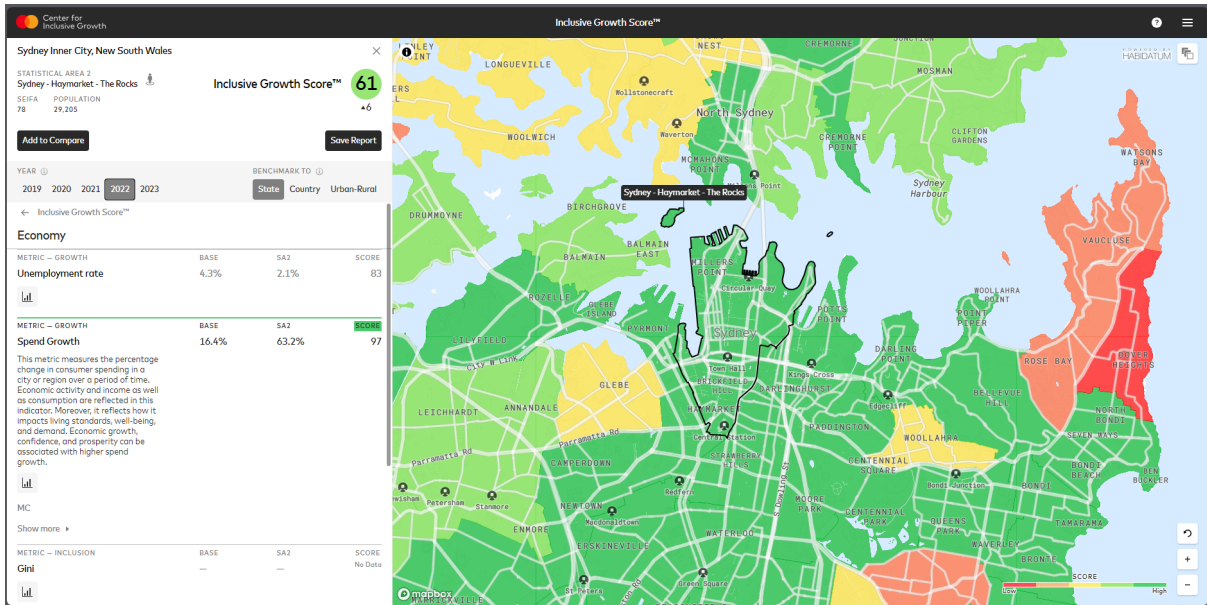> Score = 500/1000 * 100 = 50

The average score, as in the illustrative example above, is 50. Per metrics, the distribution of values varies greatly. Across the 21 metrics powering the Inclusive Growth Score, some metrics have even distributions, wide variation, and tight distribution.

The Place, Economy, and Community Pillar values are the average value of the pillar's six metrics. The Inclusion and Growth Metric Type values are the average value of each of the underlying corresponding metrics. The average of the metric percentiles across the two metric types (Inclusion and Growth) produces the Inclusive Growth Score. Scores are distributed equally on the map into 5 equal colour bins from red (lowest score) to green (highest score). Each colour bin has an equal (1/5th) number of statistical areas represented.

For Inclusion metrics the Score follows the ranking calculation detailed above. For Growth metrics, the score is a weighted average of the ranking in the base year (2019) and the ranking in the recent year.

$$Growth = \frac{1}{3} * Rank\ for\ Base\ Year + \frac{2}{3} Rank(\frac{Recent\ Year - Prior\ Year}{Prior\ Year})$$

The weighting of the base year helps account for magnitudes of growth based on statistical areas varying 'starting points' in recent years, beginning with IGS's starting year (2019). For example, statistical areas with very little commerce will exhibit high magnitudes of growth (on the scale of +100%) as the starting level of commerce is so small, whereas more commerce heavy statistical areas will likely show slower progression. This calculation enables a measure of relative improvement, with a common anchor used for each new year of data available. As a result of this calculation, it is common to see Growth measures with metric values greater than the benchmark, but a Score lower than 50; this is a direct consequence of the baseline weighting detailed above. For example, per the screenshot below, Spend Growth in the Sydney – Haymarket – The Rocks SA2 grew 63.2% from 2021 to 2022, in comparison to the 16.4% average growth across the United States. The Personal Income Score is 97 – this indicates that though this community in Sydney CBD had a high spend growth, it's likely due to the recovery from the impact of COVID in preceding years.

For questions, more details, or feedback, please contact **inclusivegrowthscore@mastercard.com**.

For each of the 21 metrics, there is a Score as well as the underlying data, presented in the units of the measure.

The Inclusive Growth Score is constructed to deliver a yearly release. For metrics with missing years, data is pulled from the adjacent prior year. For ABS survey metrics, multi-year aggregation is applied to normalize the survey data and scores applied to the year following the latest survey date. For Mastercard data, metrics reflect the year selected (See METRIC FORMULAS for more information).

BENCHMARKING

Within the platform, the 'BENCHMARK TO' functionality enables three calculations of the Score: State, Country, and Urban-Rural. The Score ranks a given statistical area in comparison to statistical areas within the same state, across the country, and the same level of urbanisation as measured by the ABS.

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DATA SOURCES

Mastercard – Mastercard is a leading global payments & technology company that connects consumers, businesses, merchants, issuers & governments around the world. The Inclusive Growth Score includes insights based on Mastercard's anonymized and aggregated transaction and merchant location data.

ABS - The Australian Bureau of Statistics (ABS) is Australia's national statistical agency, providing trusted official statistics on a wide range of economic, social, population and environmental matters of importance to Australia. The Inclusive Growth Score uses the ABS data on population, income, education, health and other indicators at the SA2 level.

CoreLogic - CoreLogic is Australia's leading provider of property data, analytics and insights. CoreLogic covers 98% of the Australian property market and provides comprehensive information on property values, market trends, risk exposure, demographics and more. The Inclusive Growth Score uses the CoreLogic data on various aspects of housing affordability and quality at the SA2 level.

Bureau of Meteorology – The Bureau of Meteorology is Australia's national weather, climate and water agency. Its expertise and services assist Australians in dealing with the harsh realities of their natural environment, including drought, floods, fires, storms, tsunami and tropical cyclones. Through regular forecasts, warnings, monitoring and advice spanning the Australian region and Antarctic territory, the Bureau provides one of the most fundamental and widely used services of government. The Inclusive Growth Score uses historical weather data mapped to SA2 level to create extreme weather indicator.

Please contact us at inclusivegrowthscore@mastercard.com for more details.

Pillar	Metric	Source
Place	Newly built housing	ABS
	Residential real estate value	CoreLogic
	Accessible parkland	ABS
	Travel distance to work	ABS
	Housing affordability	ABS, CoreLogic
	Public transport usage	ABS
	Extreme weather events	BOM
Economy	Women owned businesses	ABS
	Small business rep	ABS
	Commercial diversity	Mastercard
	Gini coefficient	ABS
	Spend growth	Mastercard
	Unemployment rate	Labour Market Insights Survey
Community	Pre-school access	ABS
	Distance to nearest hospital	ABS
	Spending per capita	Mastercard
	New business	Mastercard
	Rental assistance recipients	Australian Institute of Health and Welfare
	NDIS participants	NDIS
	Private insurance coverage	Public Health Information Development Unit
	Access to education	ACARA

PLACE

Housing, infrastructure, and the built environment

NEWLY BUILT HOUSING – Growth Metric
Percentage growth in the number of housing units in the SA2 area
Source: ABS

RESIDENTIAL REAL ESTATE VALUE – Growth Metric
Percentage growth of value of residential real estate
Source: CoreLogic

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ACCESSIBLE PARKLAND – **Inclusion Metric**

Percentage of Nature conservation reserve and Multiple-use public forest as a percentage of total land in SA2.
Source: ABS National Land Account

TRAVEL DISTANCE TO WORK – **Inclusion Metric**

The distance in kilometres between a person's place of usual residence and place of work.
Source: ABS

HOUSING AFFORDABILITY– **Inclusion Metric**

Percentage of Median Unit rent as a percentage of median income in SA2.
Source: ABS, CoreLogic

PUBLIC TRANSIT USAGE – **Inclusion Metric**

Percentage of workers who use public transport to commute to work.
Source: ABS

EXTREME WEATHER EVENTS – **Inclusion Metric**

Percentage of days in a year with extreme weather events such as heatwaves, floods, bushfires, etc.
Source: BOM

ECONOMY

Business growth, jobs, and spending

SPEND GROWTH – **Growth Metric**

Percentage growth of spending based on anonymised and aggregated indexed transaction data.
Source: Mastercard GeoInsights

UNEMPLOYMENT RATE – **Growth Metric**

Source: Labour Market Insights Survey

SMALL BUSINESS REPRESENTATION – **Inclusion Metric**

Percentage of small businesses out of all businesses
Source: ABS

WOMEN OWNED BUSINESSES – **Inclusion Metric**

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Percentage of women-owned businesses out of all businesses
Source: ABS

COMMERCIAL DIVERSITY – **Inclusion Metric**
Percentage of industries represented.
Source: ABS

GINI COEFFICIENT – **Inclusion Metric**
Gini coefficient of income inequality (lower coefficient denotes lower inequality) represented through a percentage.
Source: ABS

COMMUNITY
Services and social conditions

NEW BUSINESSES – **Growth Metric**
Percentage growth of net new businesses based on anonymised and aggregated location data.
Source: Mastercard Places

SPENDING PER CAPITA – **Growth Metric**
Percentage growth of average spend per account based on anonymised and aggregated indexed transaction data.
Source: Mastercard GeoInsights

PRE-SCHOOL ACCESS – **Inclusion Metric**
Percentage of population under the age of five enrolled in early education programs
Source: ABS

DISTANCE TO NEAREST HOSPITAL – **Inclusion Metric**
The distance in kilometres from an SA2 to the nearest public or private hospital.
Source: ABS

RENTAL ASSISTANCE RECIPIENTS – **Inclusion Metric**
Total number of households receiving rental assistance as a percentage of all households in the SA2.
Source: Australian Institute of Health and Welfare

NDIS PARTICIPANTS – Inclusion Metric

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Total number of NDIS participants as a percentage of all people living in the SA2.
Source: NDIS

PRIVATE INSURANCE COVERAGE – **Inclusion Metric**
Total number of people with access to private insurance as a percentage of all people living in the SA2
Source: Public Health Information Development Unit

ACCESS TO EDUCATION – Inclusion Metric
Number of schools that are contained within an SA2 as a ratio of the SA2 population.
Source: ACARA

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