## Selected FILTER indicators to be used by FILTER demonstrator (indicators highlighted in yellow will be determined later if the data are available/suitable)

The indicators were selected based on a number of criteria:

1. Applicability to measure common precinct goals/objectives
2. Have the reliable data to compute the indicator
3. Data are available at a range of spatial and temporal scales
4. Represent a range of computational complexity
5. Results are comparable to a benchmark
6. Overall, can present enough information to demonstrate the functionality of FILTER demonstrator (or capacity in handing the various data)

| **FB’ objectives** | **Baseline Indicators** | **Note for measurement** | **Data sources** | **Covering the precinct area** | **Spatial scale** | **Temporal range, (frequency)** | **Metadata availability** | **Comparability with benchmark** | **Computation complexity** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A walkability score of 90% is achieved from homes and workplaces | Access to opportunities and services by walk – overall score |  | AUO | Yes, 21 Australian cities | SA1 | 2018-2024, (3 years) | Yes, link to the metadata [here](https://auo.org.au/portal/metadata/social-infrastructure-mix-index/) | Yes, with other residential precincts | Medium |
| An activity core in each precinct where businesses can thrive and everyday needs are met | Accessibility of social infrastructure: distance to community centres, facilities, church, museum and gallery, theatre, libraries, sports facilities  This accessibility indicator group can provide 6~7 sub-indicators (by destination type) | Percent of dwellings are within certain distance of a destination (by type) | AUO;  DataVic (VicMap Features of Interest) | Yes, 21 Australian cities | SA1, CLUE block | 2018-2024, (3 years) | Yes, link to the metadata [here](https://auo.org.au/portal/metadata/social-infrastructure-mix-index/) | Yes, with other residential precincts | Medium |
|  | Land use diversity (high-level mixture of functionality in local land uses) | The Land Use Mix looks at a specific land use category and compares that to other land use categories within the same geography. This entropy measure quantifies the balance of land use categories using a score | DataVic  (Land use classification shapefile, GIS calculation needed) | Yes, Melbourne GCCSA | SA1 | Regularly | Yes, link to the metadata [here](https://www.land.vic.gov.au/maps-and-spatial/spatial-data/vicmap-catalogue/vicmap-planning) | Yes, with other employment precincts/activity centres | Medium |
| A diverse community, including a mix of income, age, education levels and backgrounds | Diversity of income (residents) | This measure looks at a specific income category and compares that to other income categories within the same geography. This entropy measure quantifies the balance of income categories using a score | ABS | Yes, Australia | SA1 | 1992-2021,  (5 years) | Yes, link to the metadata [here](https://www.abs.gov.au/census/guide-census-data/census-dictionary/latest-release) | Yes, with other precincts | Medium |
| People can access public open space within 200 metres of their home and work | Percent of dwellings and workplaces is within 200 meters of a public open space | A recalculation may be required to meet this exact distance requirement. | AUO; DataVic, (GIS calculation needed) | Yes, 21 Australian cities; Melbourne GCCSA | SA1; CLUE block | 2018-2024, (3 years) | Yes, link to the metadata [here](https://auo.org.au/portal/metadata/housing/) | Yes, with the average of all residential SA1s in the same city | Low |
| At least 6% of all housing is affordable | Percent of households spending more than 30% of total income on housing costs (mortgage or rent) |  | ABS | Yes,  Australia | SA1 | 1992-2021, update 5 years | Yes, link to the metadata [here](https://www.abs.gov.au/statistics/health/health-conditions-and-risks/physical-activity/latest-release) | Yes, with the average of all residential SA1s in the same city | Medium |
| An overarching target for 80,000 jobs by 2055 | Total number of jobs |  | ABS;  CLUE survey | Yes, Australia;  Partly, City of Melbourne | Destination zone; CLUE block | 1996-2021 (5 years);  2002-2025  (1 year) | Yes, link to the metadata [here](https://data.melbourne.vic.gov.au/pages/clue/) | Yes, with other employment precincts/activity centres | Low |
| An overarching target for 80,000 residents by 2055 | Total number of residents |  | ABS;  CLUE survey | Yes, Australia;  Partly, City of Melbourne | Destination zone; CLUE block | 1996-2021 (5 years);  2002-2025 (1 year) | Yes, link to the metadata [here](https://data.melbourne.vic.gov.au/pages/clue/) | Yes, with the average of all residential SA1s in the same city | Low |
| Has strong economic resilience and diversity | Industry mix (specialisation) in the local economy | This measure looks at the employment in a specific industry sector and compares that to the employment in other industry sectors within the same geography. This entropy measure quantifies the balance of industry sectors in the local economy using a score | ABS;  CLUE survey | Yes, Australia;  Partly, City of Melbourne | Destination zone, CLUE block | 1996-2021 (5 years);  2002-2025 (1 year) | Yes, link to the metadata [here](https://data.melbourne.vic.gov.au/pages/clue/) | Yes, with other employment precincts/activity centres | Medium |
| The urban heat island effect is reduced (no hotter than Melbourne) | Heat Vulnerability Index | This dataset provides a composite measure of heat vulnerability for Culturally and Linguistically Diverse (CALD) populations in Australia, integrating three key indicators: heat exposure, heat sensibility, and heat adaptive capability | AURIN | Yes,  Australia | SA1 | 2001, 2011, 2016, 2021 (5 years) | Yes, link to metadata [here](https://data.aurin.org.au/dataset/hvi_cityofgreatermelbourne_sa1_2021) | Yes, with the average of heat exposure in Melbourne |  |
| The community is resilient to the shocks and stresses of climate change | Percent of streets in the flood risk zones |  | DataVic  (GIS calculation needed) | Yes, Melbourne GCCSA | SA1, CLUE block |  | Flood risk zones to be advised by DTP |  | Medium |
| Net sewage discharge reduced by 50% | Melbourne Wastewater - Daily Volume Received by Melbourne Water |  | DataVic | Yes, Melbourne GCCSA |  | Daily |  |  | Low |
| Potable water demand of less than 100 litres per person per day | Reduction of per capita water consumption |  | DataVic |  |  |  |  |  | Low |
| Greater diversity of plant species and fauna recorded compared to 2017 levels | Share of land use for native vegetation, waterway corridors, natural wetlands and grasslands in total areas |  | DataVic  (GIS calculation needed) | Yes, Melbourne GCCSA | SA1 |  | Yes, link to metadata [here](https://metashare.maps.vic.gov.au/geonetwork/srv/api/records/70c2a62b-85b4-5191-8fbb-67ed43117bf1/formatters/sdm-html?root=html&output=html) | Yes, with the average of other precinct areas in the same city | Medium |
| Will achieve zero net greenhouse gas emissions by 2050 | Total greenhouse gas emission | Greenhouse Gas Emissions (GHG) from activities taking place within City of Melbourne Local Government Area | DataVic (CO2 sensors) |  | LGA |  | To be advised |  | Low |
| 80% of household waste is diverted from landfill | Percent of household waste is diverted from landfill |  | DataVic (Victorian Recycling Industry Annual Survey) |  |  |  | To be advised |  | Low |

ABS - Australian Bureau of Statistics

VISTA - Victoria Integrated Survey of Travel and Activity

Data Vic - Victorian Government open data

AUO - Australian Urban Observatory

CLUE - Melbourne Census of Land Use and Employment. CLUE survey is ongoing, update every two years.

AURIN - Australian Urban Research Infrastructure Networks

BITRE - Bureau of Infrastructure, Transport, and Regional Economics

**Spatial layers to be considered for the visualisation platform (from small to large spatial units)**

* CLUE block (for City of Melbourne’s census of land use and employment survey)
* SA1
* ABS Journey to work destination zone (for ABS employment data)
* SA2
* Precinct boundary