WHICH POPULATION FORECAST SHOULD I USE?

HOW TO CHOOSE THE RIGHT FORECAST FOR YOUR DECISION ▶

.id the population experts

Lailani Burra heads up .id's content and strategy team, responsible for sharing .id's knowledge and insights with our clients. She has worked with numerous clients across retail, finance, property, local government, education and not-for-profits to put together the best evidence-base for their spatial decision making. She worked with .id's population forecasters and spatial consultants to put the "Which forecast?" ebook and webinar together so that all the information about population forecasting is in one place.

If you would prefer to listen along to a recorded webinar of this slide show it is available on YouTube here…

INTRODUCTION

IF YOUR ORGANISATION IS PLANNING FOR THE FUTURE, AT SOME POINT YOU'LL NEED TO RELY ON A POPULATION FORECAST

POPULATION FORECASTS

- Knowing how the population will change is extremely valuable for any organisation that is planning for the future.
- It is particularly important for organisations making decisions about WHEN and WHERE to locate their facilities and services.
- To inform your plans and make confident decisions you will need to rely on a population forecast.
- However it can be challenging to find a reliable source of data that aligns with your business objectives.
- There are many forecasts available, produced by different organisations for various purposes, using different assumptions and methodologies and providing different outputs.

THE 10 THINGS YOU NEED TO KNOW ABOUT FORECASTS

10 THINGS TO CHECK

1. What forecasts are available?
2. What geography are the forecasts produced for?
3. What time period do the forecasts cover?
4. What outputs are available?
5. What year do the forecasts commence?
6. What methodology is used?
7. What are the demographic assumptions?
8. What are the land use assumptions?
9. How independent are the forecasts?
10. How much do the forecasts cost?

1
WHAT FORECASTS ARE AVAILABLE?

1. WHAT FORECASTS ARE AVAILABLE?

- **National projections**
  ABS, Treasury, Dept Health & Aging
- **State Government projections**
  Department of Planning for each state
- **Local Government forecasts**
  forecast.id, one-off consultancies
- **Micro-geography forecasts**
  .id Small Area Forecast information (SAFi)
  Vic, NSW, ACT, WA (and QLD coming soon…)

LARGE AREA

SMALL AREA

2
WHAT
IS THE
GEOGRAPHY?

2. WHAT IS THE GEOGRAPHY ?

LARGE AREA

National projections – ABS, Treasury

Figure: 2

2. WHAT IS THE GEOGRAPHY?

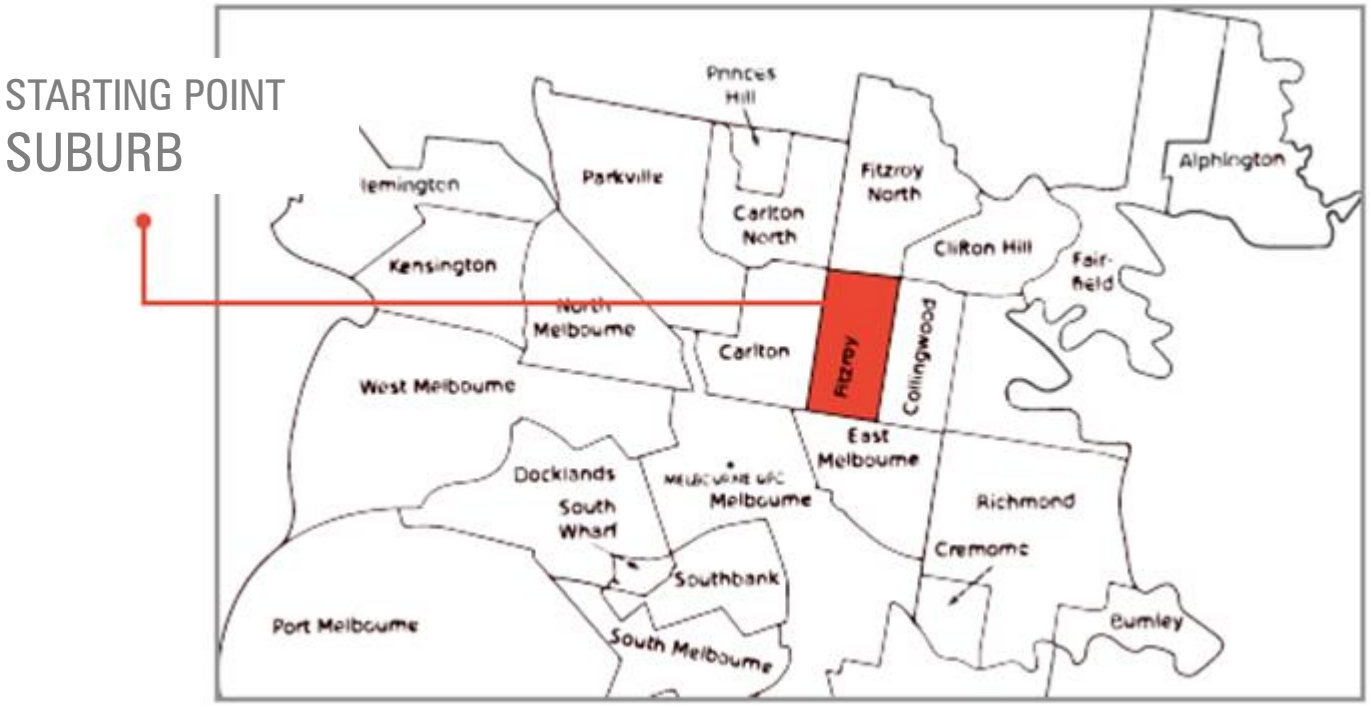
LARGE AREA

State projections – State Government departments

2. WHAT IS THE GEOGRAPHY?

SMALL AREA

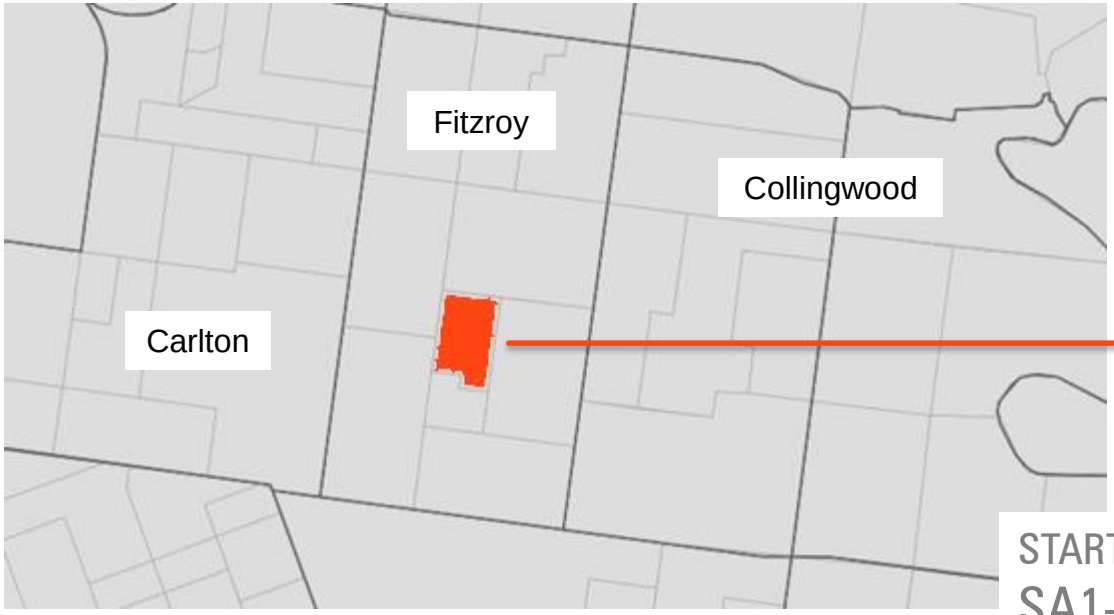
Local government forecasts – forecast.id



2. WHAT IS THE GEOGRAPHY?

SMALL AREA

Micro-geography forecasts – SAFi



3
WHAT
IS THE TIME PERIOD?

3. WHAT IS THE TIME PERIOD?

- Forecasts are conventionally produced for five-yearly intervals – 2011, 2016, 2021, 2026, 2031, 2036
- SAFi and forecast.id are produced for single years – 2011, 2012, 2013 ……..2036
- This is important if your planning horizon is not in 5 year increments and timing is critical.
- Large area forecasts usually extend to 2101
- Small area forecasts - typically 20 years - because they have to make more localised assumptions about individual housing developments.

4
WHAT
ARE THE
OUTPUTS?

4. WHAT ARE THE OUTPUTS?

Depending on the provider, population forecast outputs can include:

- POPULATION – how many people will live here
- AGE & GENDER – by five-year cohorts
  – by single year of age (important for age-based planning)
- DWELLINGS – how many physical houses will there be
- HOUSEHOLDS – how many households will occupy those houses (and what the vacancy rate will be)
- TYPE OF HOUSEHOLDS – and what type of households they will form (two parent families, couples without children, group households, lone person households, one parent families etc.)
- BIRTHS - important for education planners
- DEATHS – important for cemetery provision

5

WHAT

YEAR DO THE FORECASTS COMMENCE?

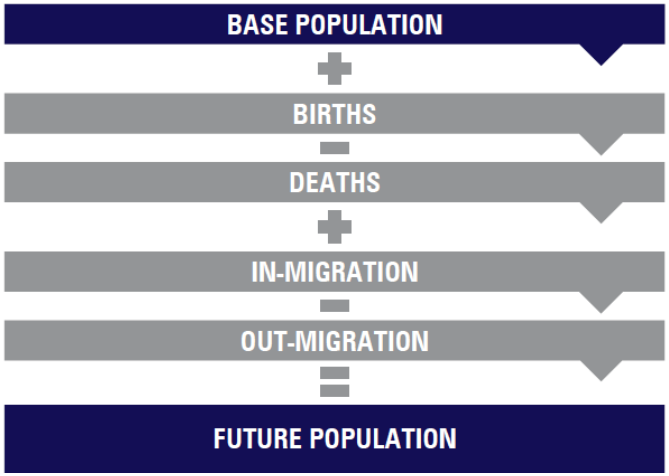
5. **WHAT** YEAR DO THE FORECASTS COMMENCE?

- The first year of the forecasts should be the last year the population was officially counted in a Census.
- This is the last time we knew what the population was.
- Current forecasts should be based on the 2011 Estimated Resident Population (ERP), which in turn is based on the 2011 Census with some adjustments to make it more accurate.
- If the forecasts you are using are based on earlier data, such as the 2006 Census, you should be very cautious about using them.
- Check how often the forecasts are reviewed. The more frequent the better. Anything over five-years old should be treated with caution.

6
WHAT METHODOLOGY IS USED?

6. **WHAT** METHODOLOGY IS USED?

- The most common method for converting the base data (2011) to forecasts is the cohort component method



DEMOGRAPHIC ASSUMPTIONS

- Large-area forecasts use a top-down methodology to apportion the total population to smaller areas
- Small-area forecasts use a bottom-up methodology to create the total population

LAND USE ASSUMPTIONS

7
WHAT ARE THE DEMOGRAPHIC ASSUMPTIONS?

7. **WHAT** ARE THE DEMOGRAPHIC ASSUMPTIONS?

To arrive at an overall population figure, forecasters have to make assumptions about:

- The rate of births and deaths – social and health trends
- Net overseas migration – competitiveness of Australian economy, migration policy
- Net interstate migration – competitiveness of each state economy, lifestyle factors

This results in the overall population figure.

Different assumptions can lead to very different results.

Example: Victoria in Future (VIF)

VIF 2012 – NOM = 180,000 ➔ Victorian Population 2051 = 8.7 million

VIF 2014 – NOM = ~250,000 ➔ Victorian Population 2051 = 10 million

Currently NOM = ~150,000

- For a detailed reference guide of the major assumptions for each available forecast, download the ebook Which population forecast should I use?

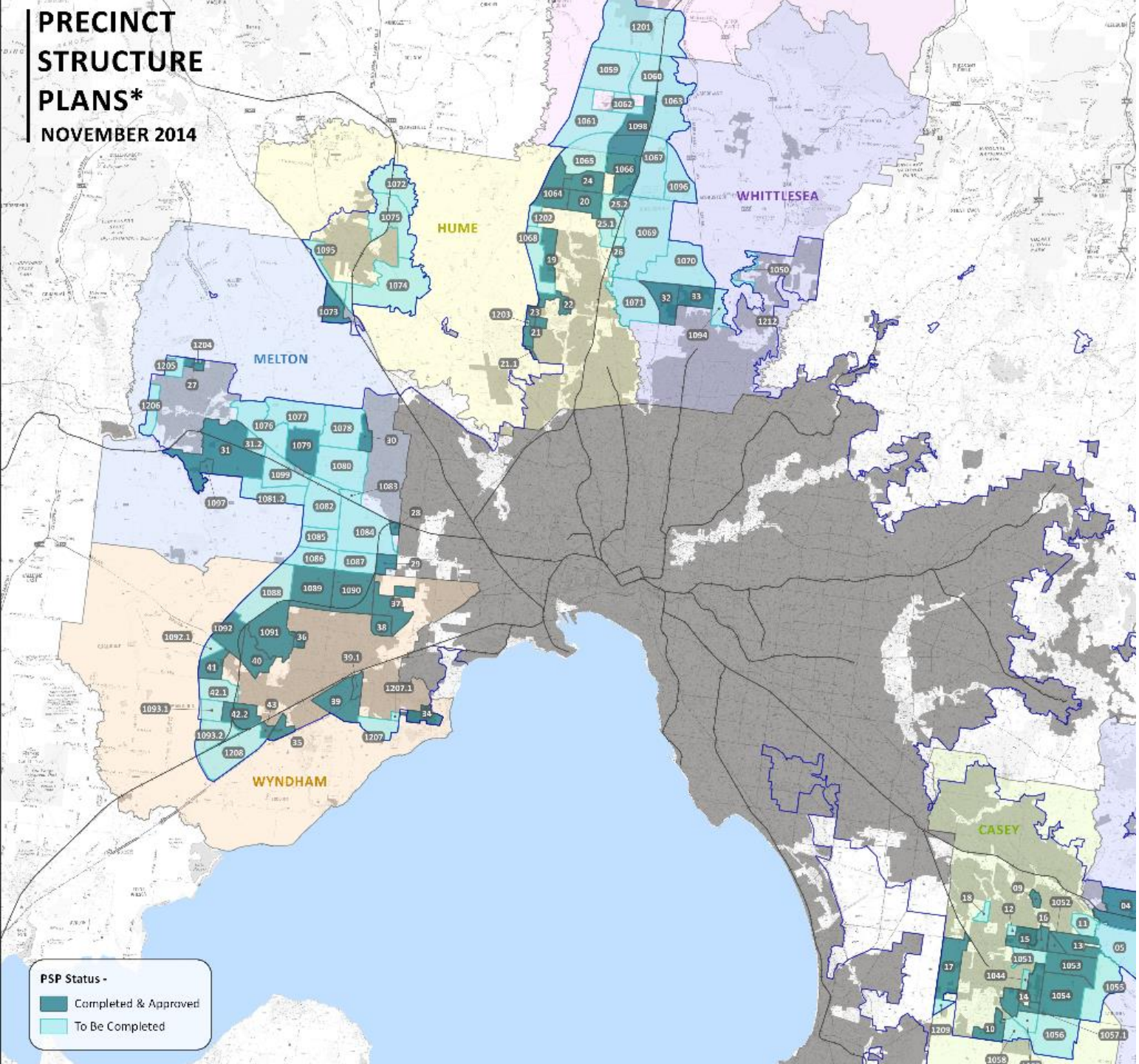
8
WHAT ARE THE LAND USE ASSUMPTIONS?

8. WHAT ARE THE LAND USE ASSUMPTIONS?

TOP DOWN

Large area forecasts

- The overall population figure is generated and distributed to the next geography down using a “top-down” method.
- Historical information about migration between areas
- Broad-brush assumptions about future land supply such as:
  - areas of greenfield land and their expected dwelling density and development timing
  - recent land subdivision and dwelling construction activity
  - likely location and timing of infill



An example of the kind of information that a top-down forecast would consider.

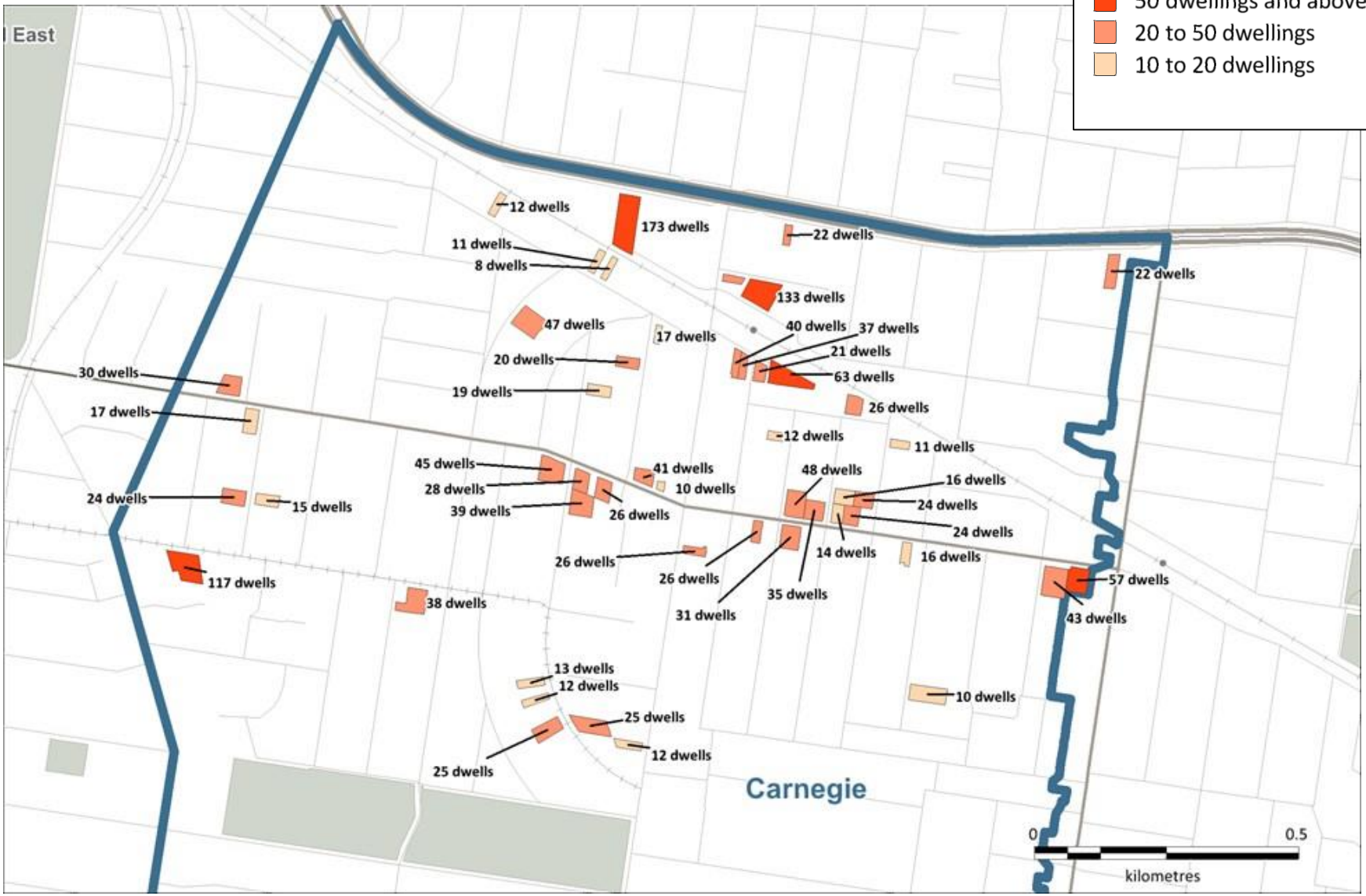
Source: Metropolitan Planning Authority

8. **WHAT** ARE THE LAND USE ASSUMPTIONS?

BOTTOM UP

Small area forecasts

- Small area forecasts (forecast.id, SAFi) distribute population using a “bottom-up” method.
- Each small area is scrutinised for its ability to generate housing.
- The amount and type of housing in each suburb determines its future population size.
- Extremely detailed development assumptions are made about exactly what type of housing will be developed and in which small area, including:
  - major development sites (e.g. industrial site to residential)
  - high density unit development
  - residential infill
  - greenfield/broad hectare sites
  - activity centre development
- This attention to the land use assumptions facilitates greater accuracy in the forecasts



Carnegie, Victoria, 2011+

Source:
.id SAFi

An example of the kind of detail a bottom-up forecast takes into account

9
HOW INDEPENDENT ARE THE FORECASTS?

9. HOW INDEPENDENT ARE THE FORECASTS?

- Knowing the purpose of each forecast helps you to evaluate any likely agenda they may reflect.
- State government forecasts do reflect the government's current policy focus.
- Forecasts which are developed independently of government, such as SAFi, are built on detailed evidence from the bottom up and are not influenced by a particular policy agenda.

10
HOW
MUCH SHOULD I PAY?

10. HOW MUCH SHOULD I PAY?

- Many government agencies provide users with access to large area forecasts free of charge, but they may lack the detail required. Investing time to cut them into smaller areas is expensive and leads to serious inaccuracies.
- Forecast.id is developed by .id for local government clients. They fund the forecasts, and usually make the outputs publicly available. These are fantastic free resource if they cover the areas you are working in, you don't need a state-wide perspective and you don't work in many areas at once.
- SAFi is a huge project undertaken independently at .id by ten full-time forecasters. A fee for service applies depending on the level of detail required. This makes sense for organisations making decisions across multiple geographic areas, requiring their own catchments and detailed outputs, and who are need to increase confidence and decrease risk when making critical investment decisions.

WHICH ONE IS RIGHT FOR ME?

So you can see that there are a number of things to consider when choosing a population forecast. For most people, however, there are three things that stand out.

1. GEOGRAPHY

Does it provide data at the right geography?

2. OUTPUTS

Does it provide the outputs I need?

3. ACCURACY

How reliable is the data?

PUTTING IT ALL TOGETHER

- To simplify things, we've put together a comparison table to help you choose the right forecast for your work.
- The next two slides show the following examples…
- Example 1: An aged-care provider looking to expand its facilities into Queensland. They need forecasts for people aged 65 plus for each suburb across the state so that they can identify the best investment opportunities.
- We recommended that they use the Queensland state government forecasts because they provide:
  - state-wide coverage
  - by SA2 (which is close to a suburb)
  - with forecasts every 5-years
  - with 5-year age cohorts combined into 65 plus years.

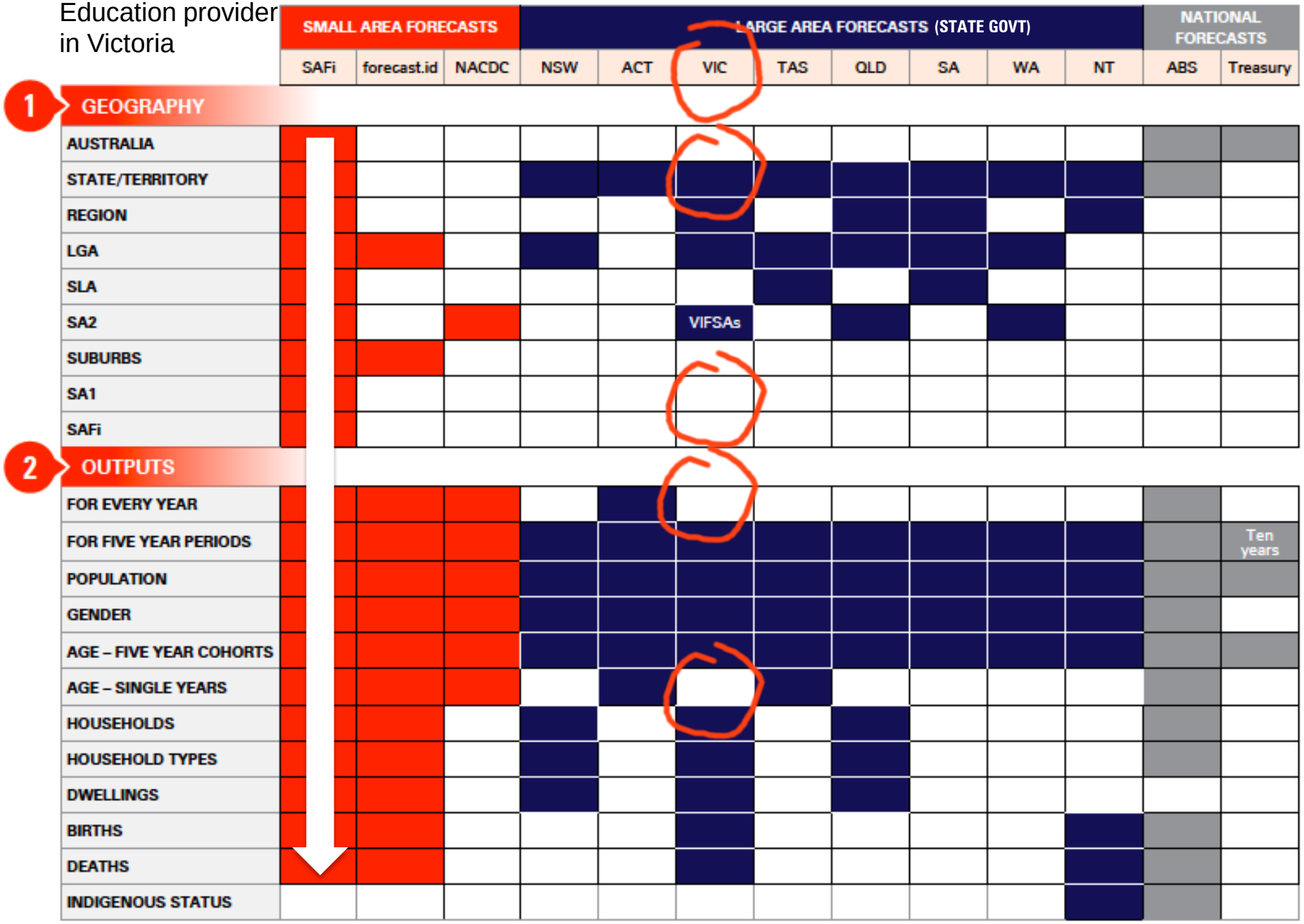
EXAMPLE 1: Age-care provider in Queensland

	SMALL AREA FORECASTS			LARGE AREA FORECASTS (STATE GOVT)								NATIONAL FORECASTS	
	SAFi	forecast.id	NACDC	NSW	ACT	VIC	TAS	QLD	SA	WA	NT	ABS	Treasury
1 GEOGRAPHY													
AUSTRALIA	■												
STATE/TERRITORY	■			■	■	■	■	■	■	■	■		
REGION	■					■		■	■		■		
LGA	■	■		■		■	■	■	■	■			
SLA	■						■		■				
SA2	■		■			VIFSAs		■		■			
SUBURBS	■	■											
SA1	■												
SAFi	■												
2 OUTPUTS													
FOR EVERY YEAR	■	■	■		■								
FOR FIVE YEAR PERIODS	■	■	■	■	■	■	■	■	■	■	■		Ten years
POPULATION	■	■	■	■	■	■	■	■	■	■	■		
GENDER	■	■	■	■	■	■	■	■	■	■	■		
AGE – FIVE YEAR COHORTS	■	■	■	■	■	■	■	■	■	■	■		
AGE – SINGLE YEARS	■	■	■		■		■						
HOUSEHOLDS	■	■		■		■		■					
HOUSEHOLD TYPES	■	■		■		■		■					
DWELLINGS	■	■		■		■		■					
BIRTHS	■	■				■					■		
DEATHS	■	■				■					■		
INDIGENOUS STATUS											■		

PUTTING IT ALL TOGETHER

- Example 2: the Department of Education, Victoria need to forecast the demand for each of their primary and secondary schools across Victoria.
- They need whole of state forecasts. The obvious choice seems to be Vic state govt. forecasts.
- However, they need forecasts for every year of age from 4-19 years so they can forecast the demand for each year level
- They need a forecast for every year rather than every five-years so they can time the movement of children through the year levels
- Each school plans for enrolments from within its catchment. These can be smaller than suburbs – especially primary schools, so they'll need to build them up out of smaller building blocks
- They also need to time the development of new schools on the urban fringe
- SAFi meets all of these requirements.

EXAMPLE 2:
Education provider in Victoria



WHO IS USING SAFi?

.id the population experts

MORE RESOURCES

- Recorded webinar: Which forecast should I use?
- Detailed reference ebook: Which forecast should I use?
- .id blog – SAFI or forecast.id – which one should I use?
- Access to forecast.id sites: Demographic Resource centre
- More information about SAFi including case studies.
- More about .id, the population experts
- Book a consultation with us to discuss your requirements.

Q & A

Q: Is this webinar being recorded?

A: Yes, the webinar has been recorded. It is available for access here on the .id YouTube channel.

Q: When will the Queensland SAFi data be available?

A: The SAFi team have commenced working on a new set of small area forecasts for Queensland. The forecasting process will be a complex one due to Queensland's size, the level of development activity and specific characteristics which are challenging to forecast such as fly-in fly-out and indigenous communities. We hope to have the forecasts completed by December 2016.

Q: To what degree are the forecasts influenced by official State Government projections?

A: Our forecasters consider the direction of State Government policy. For example in Victoria, this would include the intention to develop Fisherman's Bend. However, .id's forecasts do not try to match or use the same assumptions as the state government projections as we take an independent view of the drivers of change.

Q: Does .id prepare any state-wide or regional level population forecasts that are available to the public?

A: SAFi is state-wide for Vic, NSW, ACT & WA. It is available to the public, however, we charge a fee-for-service.

Q & A

Q: Why are the forecast areas different from official ABS statistical geography?

A: Our forecast.id product is developed to assist Councils with their service planning. These forecasts are built on the most useful geography to Council, which is usually gazetted suburbs. These are a more accurate reflection of their communities than official ABS statistical geographies such as SA2s and part of the value-add that we offer.

Our SAFi product is developed for organisations which need to plan across a range of jurisdictions. At its smallest level, it is SA1 derived (SA1s are an official ABS statistical geography). However, in growth corridors, the SA1s cover large geographic areas because each SA1 needs to have at least 200 residents at the time of the last census for confidentiality reasons and few people are currently l living there. To provide greater insight into how these areas are changing we chop these SA1s up into smaller “SAFi” areas. This means we can provide clarity around the sequence of development. SAFi aggregates up to official ABS statistical geographies such as SA2s and above, as well as LGAs.