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People & Places

Scenarios of an aspirational economic future for Timaru District

Report commissioned by Venture Timaru

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1. Contents

2. Executive summary

This report has been commissioned by Venture Timaru. Its purpose is to highlight what an aspirational economic future could look like for Timaru, and what achieving such an outlook would rely on.

At its heart, this report helps show:

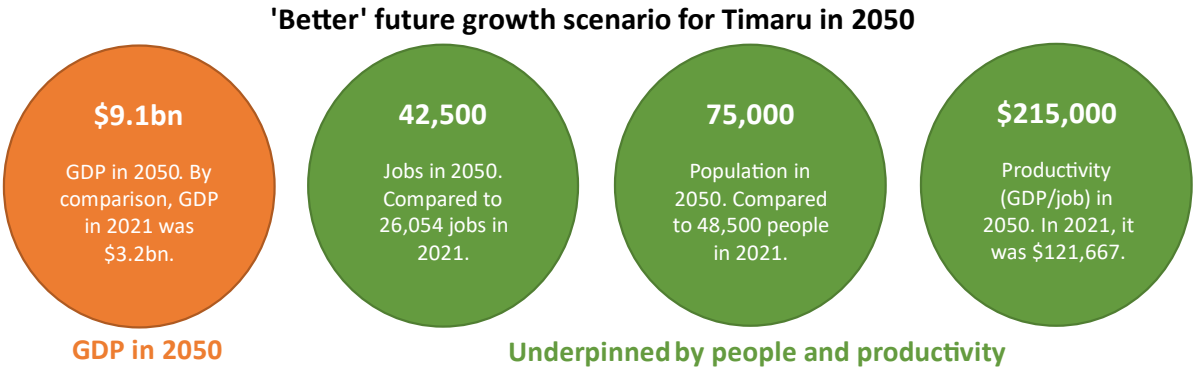
- Where will Timaru's economy be in 2050 if the status quo remains?
- How much larger could Timaru's economy be if there is an aspirational focus on doing better things?
- Which factors would achieving an aspirational economic future rely on?

2.1. Key findings

The potential 'size of the prize' for Timaru's economy from being ambitious is large:

- Timaru currently generates $3.2 billion of GDP (2021).
- If Timaru does no better than just muddle along, with its status quo level of employment and current productivity trajectory then the economy would be worth $4.2 billion in 2050.
- If, instead, there is transformational growth into high productivity employment, then Timaru's economy could be worth $9.1 billion by 2050, which is almost three times its current size.

Figure 1

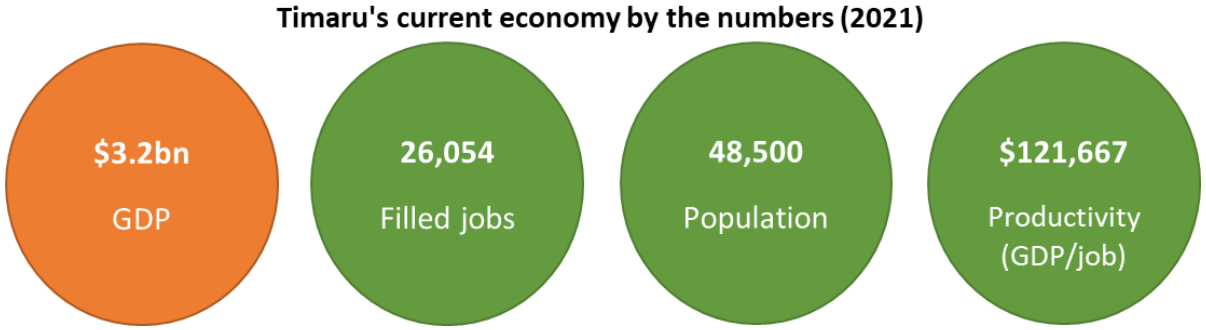


- The outcomes needed to achieve the 'better' future growth scenario are ambitious – both in terms of how many people Timaru would need to attract to fill jobs and how productive industries would need to be:
    - Timaru would need to attract average net migration gains of just over 1,000 people each year to reach a population of 75,000 by 2050.
    - The aspirational productivity outcome in the 'better' scenario would require transformation towards at least one third of Timaru businesses doing things that were at least twice as productive as opportunities under the status quo by 2050.
- Ambitious industry transformation won't happen overnight. Initially many of Timaru's productivity wins will be found working with existing businesses in existing industries. But through time, Timaru can progressively step out from this base and become more transformational in what it does, including breaking into new industries.
- Regardless of which industries help Timaru achieve an aspirational economic future, there will be many factors which are necessary foundations. For example, an additional 9,000 homes, 200-300 classrooms, and 1,500 more health and social assistance workers would be needed by 2050 to support the population growth needed under the aspirational 'better' future growth scenario.

3. Timaru's current economic context

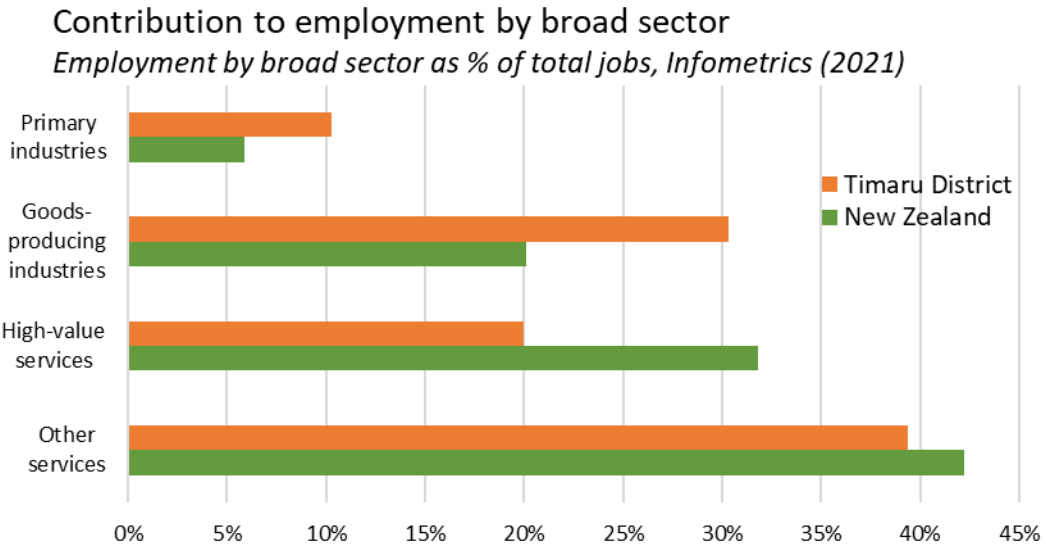
There were 48,500 residents in Timaru in 2021 and employment sat at 26,054 jobs. Each job produced $121,667 of GDP (compared to $124,980 nationally), meaning Timaru generated total GDP of $3.2 billion.

Figure 2 – The current size of Timaru's economy, source: Infometrics and Statistics NZ



Employment in Timaru is more heavily concentrated on primary and goods-producing industries than nationally. Primary industries centre on dairy farming, sheep and beef farming, arable farming, and fishing. Goods-producing industries tend to be concentrated on processing of food and fibre products, although there is some machinery and equipment manufacturing to support the primary sector. High-value professional services are less represented in Timaru than the rest of New Zealand, but Timaru is a service centre for South Canterbury so has relatively high health, education, and retail employment.

Figure 3



Over the past 10 years, growth in Timaru has lagged the New Zealand average for GDP, jobs, and population. But productivity growth in Timaru was slightly above the national average.

Table 1

Comparing growth in Timaru against New Zealand over the past decade
Annual average percentage change, 2011-2021, calculations from Infometrics and Statistics NZ data

	Timaru	NZ
GDP ($ billion)	2.2%	2.6%
Jobs	1.2%	1.9%
Population	0.8%	1.6%
Productivity (GDP/job)	1.0%	0.8%

4. Aspirational future scenarios for 2050

This section introduces three scenarios for where Timaru's economy could be in 2050. The scenarios range from conservative to aspirational – and are designed to highlight the 'size of the prize' from being ambitious.

4.2. Overview of future scenarios for the Timaru economy

The three hypothetical scenarios modelled in this report for Timaru's economy in 2050 are:

- **The 'status quo' (low) scenario**. This scenario highlights what will happen to Timaru's economy if it can only maintain the status quo level of employment and its industries merely muddle along their current productivity trajectories.
- **The 'more' (medium) scenario**. This scenario highlights what will happen to Timaru's economy if it can gradually expand its underlying level of employment, but only in industries based around the district's current productivity trajectory, rather than in anything transformational.
- **The 'better' (high/transformational) scenario**. This scenario is the most ambitious and is based on doing more of things that are better. It highlights what would happen if Timaru can evolve its economy and grow employment into an industry footprint with transformationally higher productivity.

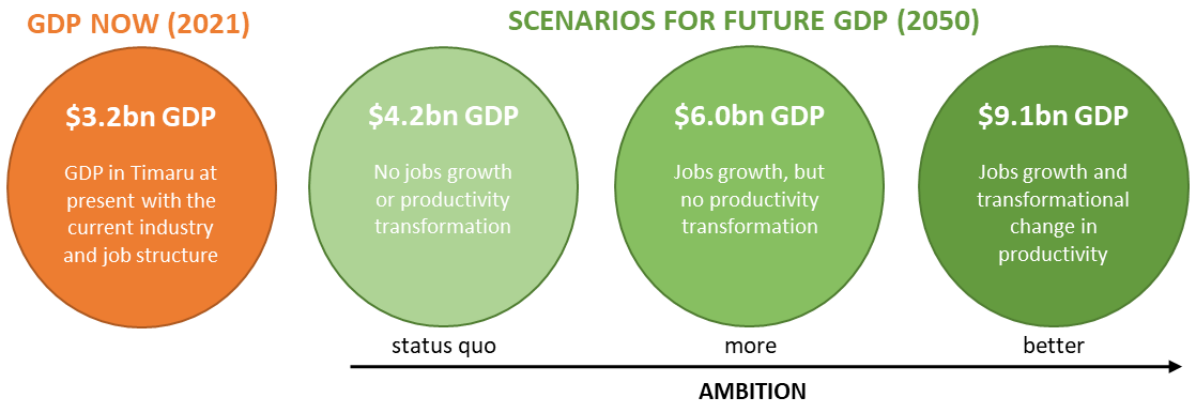
The rest of this section outlines the potential economic impacts for Timaru of each scenario. The detailed assumptions underpinning each scenario and their practicalities are also examined, with a focus on how many people and what productivity levels would be needed to support them.

4.3. 'Size of the prize' for Timaru's economy in each scenario

The potential 'size of the prize' for Timaru's economy from being ambitious is large. Calculations under the three future scenarios show that:

- If Timaru does no better than just muddle along, with its status quo level of employment and current productivity trajectory then the economy would be worth $4.2 billion in 2050, which is one third larger than its current level ($3.2 billion in 2021).
- If instead there is transformational growth into high productivity employment, then Timaru's economy could be worth $9.1 billion by 2050, which is almost three times its current size.

Figure 4 – Timaru's future economic activity (GDP) under conservative through to ambitious scenarios



4.4. Assumptions for achieving future scenarios

Each scenario of future economic activity is driven by assumptions based on jobs and productivity growth. The rest of section 4.4 unpacks the practicalities of each scenario's assumptions.

4.4.1. Assumptions for achieving the 'status quo' future scenario

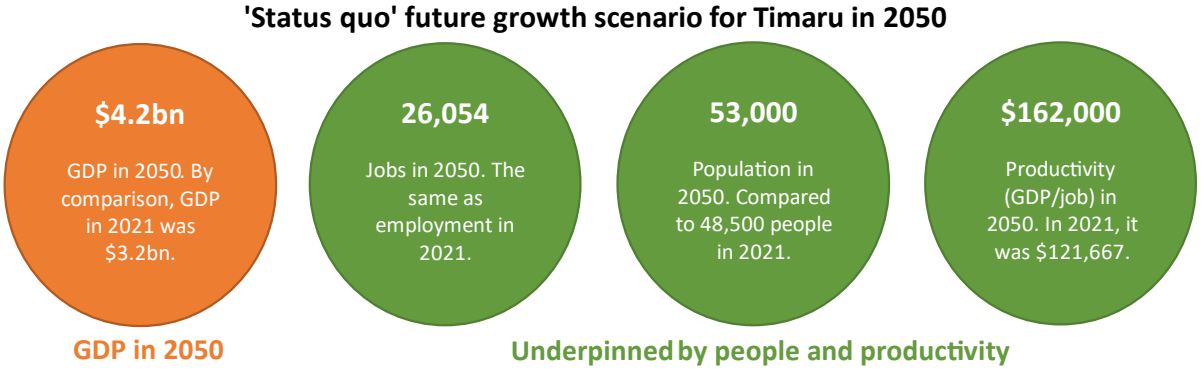
The 'status quo' scenario has the lowest level of ambition for 2050. It simply assumes that:

- Employment in Timaru remains at its current level (26,054 in 2021)
- Productivity growth muddles along at its current trajectory (1.0%pa growth).

In practical terms, achieving the 'status quo' scenario's two assumptions would imply that by 2050:

- Timaru would need a population of 53,000 people, up from its current population of 48,500
- Productivity (GDP per job) would reach $162,000, compared to $121,667 at present.

Figure 5



It might seem counterintuitive that Timaru would have to expand its population just to maintain its status quo employment levels. But the reason is simple, Timaru's population is rapidly aging and 30% of residents are expected to be aged over 65 by 2050[1], compared to just over 20% aged 65+ at present.

> Timaru would need to grow its population from 48,500 in 2021 to 53,000 by 2050 just to ensure there were sufficient people of working age to maintain Timaru's current level of employment and counteract increasing retirements.

The productivity growth assumption in the 'status quo' scenario is relatively unambitious. It only requires GDP per job in 2050 ($162,000) to sit approximately one third higher than it does currently ($121,667). Several places in New Zealand already have productivity at or approaching this level[2].

4.4.2. Assumptions for achieving the 'more' future growth scenario

The 'more' scenario is based around a slightly more ambitious growth scenario to 2050, where Timaru expands its underlying level of employment. It simply assumes that:

- Employment in Timaru grows at its current trajectory (1.2%pa growth)
- Productivity growth muddles along at its current trajectory (1.0%pa growth).

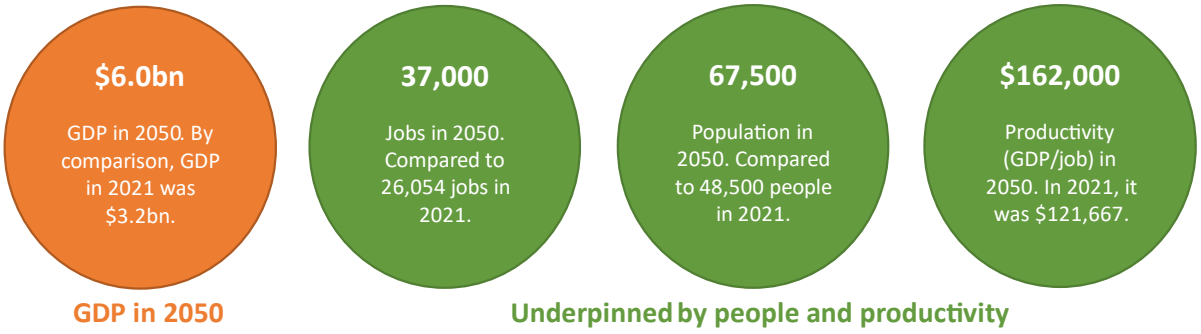
[1] Statistics NZ, subnational population projections (medium scenario), published 31/03/21.
[2] For example, Infometrics Regional Economic Profile shows that productivity (GDP per job) in Waitomo, Waitaki, South Taranaki, Wellington, New Plymouth, and Buller already exceeded $150,000 in 2021.

In practical terms, achieving the 'more' scenario's assumptions would imply that by 2050:

- Employment in Timaru would sit 11,000 jobs higher than currently
- To fill these jobs, Timaru's population would need to rise from 48,500 people to 67,500 people
- Productivity (GDP per job) would reach $162,000, compared to $121,667 at present.

Figure 6

'More' future growth scenario for Timaru in 2050



Timaru's aging population[3] means that lifting the population from 48,500 to 67,500 would need to increasingly be driven by migration from around New Zealand and overseas rather than natural increase.

> Timaru would need to attract a net 800 people each year to lift the population to 67,500 by 2050. This level of migration would be twice as high as Timaru's average migration gains in recent history[4].

4.4.3. Assumptions for achieving the 'better' future growth scenario

The **'better' scenario is the most ambitious and transformational** scenario. It assumes that up to 2050:

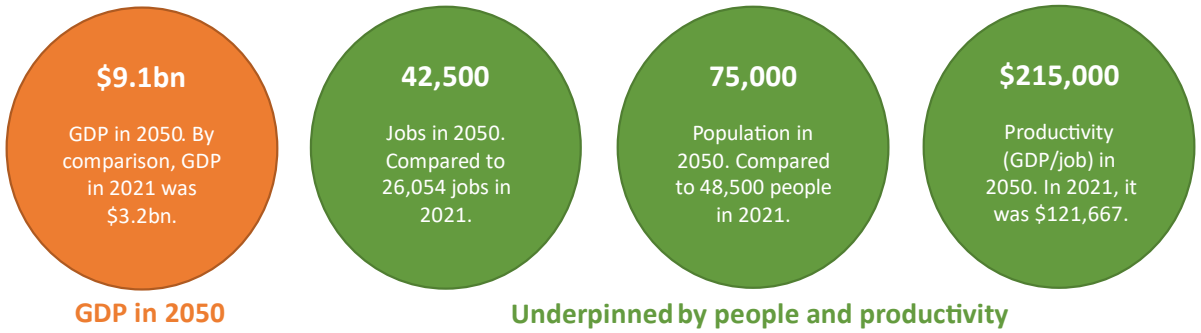
- Employment will grow by 0.5%pa above its current trajectory (1.7%pa growth instead of 1.2%pa)
- Productivity will grow at 1%pa above its current rate (2.0%pa growth instead of 1.0%pa).

In practical terms, achieving the 'better' scenario's assumptions would imply that by 2050:

- Employment in Timaru would sit 16,500 jobs higher than it does currently
- To fill these jobs, Timaru's population would need to rise from 48,500 people to 75,000 people
- Productivity (GDP per job) would need to reach $215,000, compared to $121,667 at present.

Figure 7

'Better' future growth scenario for Timaru in 2050



[3] A rising death rate, relative to births, is projected to reduce Timaru's population by an average of 175 people a year from 2023 to 2048. Source: Statistics NZ subnational population projections (published 31/03/21).
[4] Between 2013 and 2018, net migration to Timaru averaged 400 people per annum. Source: Statistics NZ subnational population projections (published 31/03/21) which drew on censuses for historical perspectives.

The outcomes needed to achieve the 'better' future scenario are ambitious – both in terms of how many people Timaru would need to attract to fill jobs and how productive industries would need to be.

> Timaru would need to attract average net migration gains of just over 1,000 people each year to reach a population of 75,000 by 2050. This level of migration is ambitious – even during the high growth years of 2013 to 2018 Timaru only attracted an average of 400 people a year.

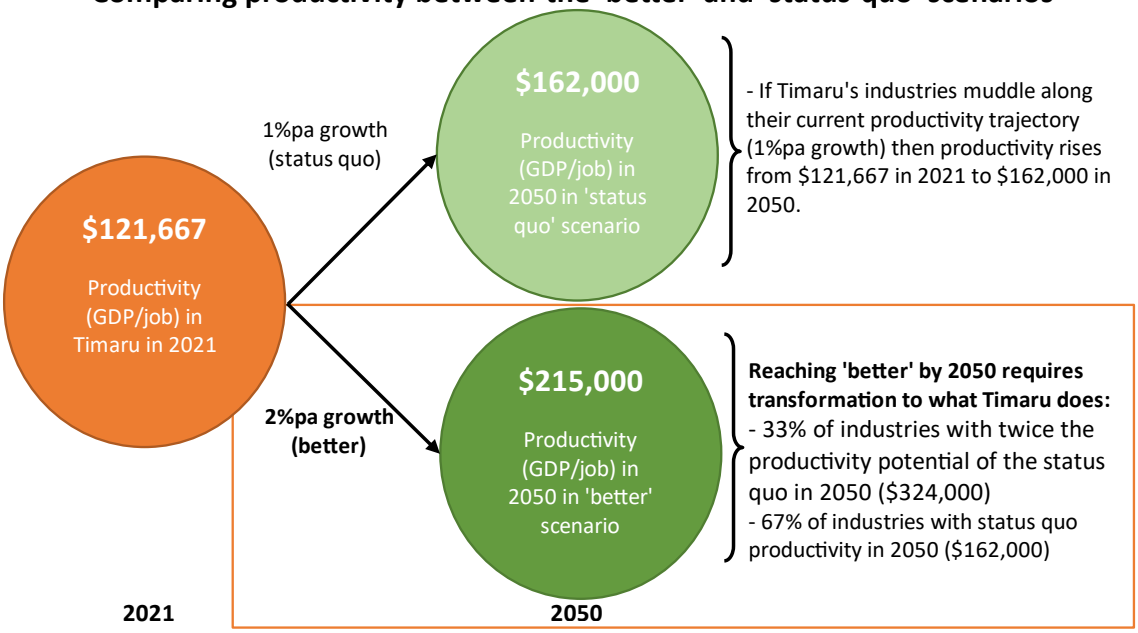
The 'better' scenario's assumption that the long-term rate of productivity growth in Timaru increases from 1.0%pa to 2.0%pa might not sound too ambitious at first brush, but only one district in New Zealand has achieved sustained productivity growth of at least 2.0%pa over the past decade[5].

Only fundamentally shifting the productivity dial into better ways of doing business would allow Timaru to achieve such a sustained high level of productivity growth over a 30-year period to 2050.

> The aspirational productivity outcome in the 'better' scenario would require transformation towards at least one third of Timaru businesses doing things that were at least twice as productive as opportunities under the status quo.

Figure 8

Comparing productivity between the 'better' and 'status quo' scenarios



Achieving transformational change in Timaru's productivity would be a powerful thing, particularly given that attracting new workers to Timaru will be difficult against a context of heightened national and global competition for people. After all, productivity is about working smarter, not harder.

> To put things in perspective, even in the extreme situation that Timaru can't attract enough new residents to lift employment, then a transformative shift in productivity alone would be enough to almost double the size of Timaru's economy (from $3.2 billion of GDP in 2021 to $5.6 billion of GDP in 2050).

[5] Infometrics Regional Profile shows only Tararua (2.0%pa) had productivity (GDP/job) growth of at least 2.0%pa over the past decade. New Zealand's average productivity growth over the past decade was 0.7%pa.

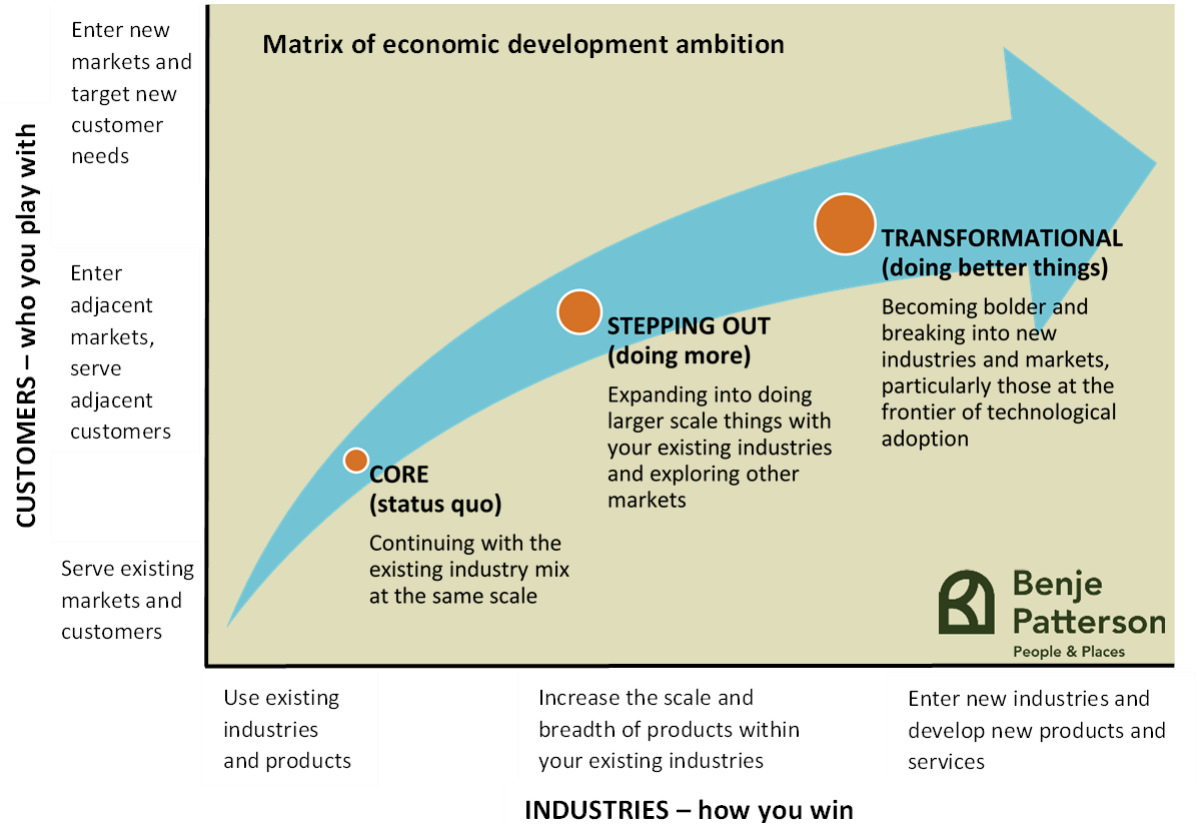
4.5. Stepping towards ambitious industry transformation

The previous sub-section highlighted that under the most aspirational scenario Timaru's economy could expand three-fold over the thirty years to 2050. This aspiration relies on growing and transforming the economy to at least one third of jobs having twice the productivity opportunities to the status quo.

The precise composition of what these industry transitions will be is uncertain and beyond the scope of this report. Nevertheless, this sub-section makes general comments about the decision-making context.

Transformations that build on existing strengths are easier to conceptualise, but 'blue sky' opportunities in new industries are harder to map out and many are reliant on yet-to-be-developed technologies.

Figure 9- Matrix of economic development ambition



What is known is that achieving ambitious industry transformation won't happen overnight. Initially many of Timaru's productivity wins will be found working with existing businesses in existing industries to streamline processes, explore adjacent products, and invest in proven technologies.

This approach is consistent with the Productivity Commission's recent inquiry into New Zealand's 'frontier firms' (businesses in the top 10% of those with the highest productivity)[6]. The inquiry researched how the economic contribution of frontier firms can be maximised to lift productivity across the economy. In its findings, the Commission said that we need to identify our frontier firms, learn about the characteristics of these businesses, implement focused innovation policy to strengthen the ecosystems that support them, and encourage the diffusion of their knowledge into non-frontier firms.

The 2021 Timaru District Economic Development Strategy (EDS) highlighted that the sectors in which Timaru has a competitive advantage are related to:

[6] Available here: https://www.productivity.govt.nz/assets/Documents/benchmarking-new-zealands-frontier-firms/2d6a4cd0ea/Benchmarking-New-Zealands-frontier-firms.pdf.

- Food and fibre (particularly dairy, meat, seafood, and food manufacturing)
- Logistics
- Professional, scientific and technical services.

These three sectors are a logical starting point for shifting Timaru's productivity dial. Furthermore, these sectors are also well-aligned to central government strategies and funding mechanisms. For example, all three are embedded directly and indirectly across the government's various Industry Transformation Plans[7], while optimising logistics is the focus of the New Zealand freight and supply chain strategy[8].

Through time, Timaru can progressively step out from this base and become more transformational in what it does, including breaking into new industries with at least twice the productivity potential to the status quo. Exactly what new industries will succeed is uncertain, but in exploring high productivity opportunities, Timaru must be cognisant of broader megatrends. These megatrends are long-term forces that can structurally change the industries in which Timaru might be competitive. Some megatrends to take note of when considering potential new high productivity opportunities include:

- **An increased focus on inclusive growth**. Higher GDP isn't the only goal, instead there must be a balance with the wellbeing of people, communities, and the environment. Investment in productivity can be a vehicle to inclusive growth, as high productivity, technologically driven industries can achieve prosperity and higher wages without unduly pressuring resources.
- **COVID-19's legacy will endure long after the pandemic is over**. Consumer demand patterns have evolved, and businesses may permanently adjust their practices, logistics, and supply chains to minimise future risks of disruptions. The changes create opportunities for localism and for regional locations with good transport connections to major metropolitan areas.
- **The nature of work is changing**. Younger workers have different expectations of work and are more likely to prioritise lifestyle with shorter working weeks and remote working. With good digital and transport connections there are opportunities for Timaru to capitalise on remote working trends and in other jobs that can deliver services 'weightlessly' to customers.
- **Automation will have widespread effects**, particularly in sectors with a lot of routine tasks. Automation brings productivity benefits, but new opportunities will likely focus on workers needing to develop different skills. There may be scope for Timaru to develop and pilot automation on local industries, for example agritech and drone-based agricultural solutions.
- **Adapting to emissions and other environmental factors will have direct and indirect effects**. Government regulations will directly create costs and constraints, particularly within agriculture for those with intensive pastoral farming models. Changing consumer preferences will also create indirect effects, which will likely favour more sustainably managed and lower impact business models. These changes will bring opportunities, for example to research and test how Timaru's food and fibre sector can pilot world-leading productive and sustainable transitions.

The above list should only be taken as a starting point when considering potential 'blue sky' industry opportunities that could help tranformationally lift Timaru's productivity. Megatrends by their very nature are uncertain – it is important to regularly consider other emerging forces. As stated in the Timaru EDS: "Timaru District, its people and businesses, need to embrace and respond to these changes, realising new opportunities and responding to disruptions".

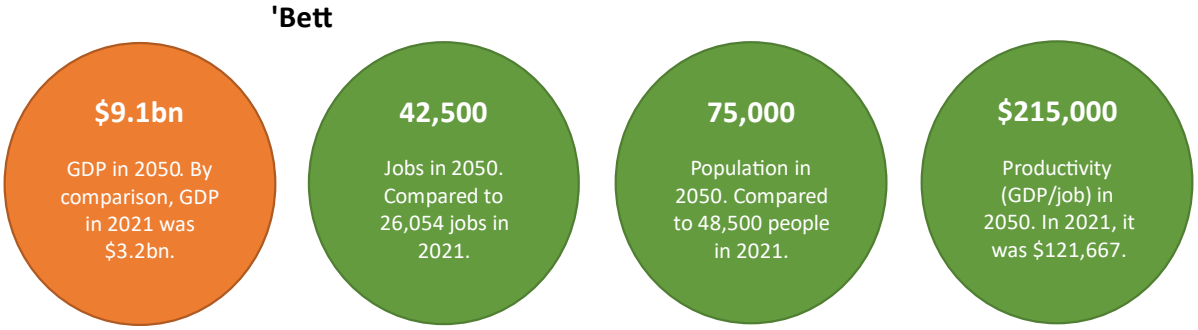
[7] Industry Transformation Plans (ITPs) are a mechanism for implementing the Government's industry policy. ITPs have actions focused on long-term transformation. More here: https://www.mbie.govt.nz/business-and-employment/economic-development/industry-policy/industry-transformation-plans/

[8] The New Zealand freight and supply chain strategy takes a 30+ year view and will inform government and private sector investment. Productivity is key to the strategy. More here: https://www.transport.govt.nz/area-of-interest/freight-and-logistics/new-zealand-freight-and-supply-chain-strategy/

5. Which enabling factors does ambition rely on?

Regardless of which industries help Timaru achieve an aspirational economic future, there will be many factors which are necessary enablers. Productivity, employment, and population growth are key drivers of economic prosperity (see Figure 10), but these can't happen in isolation and in turn rely on underlying foundations related to skills, natural resources, housing, infrastructure, and social and cultural capital.

Figure 10



Enabling factors needed to support achieving the 'better' future growth scenario for 2050 include:

- **Sufficient business land and the right infrastructure**. For businesses to do better things, they will need suitable premises. Even at the lower end of land needed per worker, 16,500 additional jobs would demand a minimum of 30 extra hectares of adequately serviced business land by 2050[9].
- **Access to capital**. Transformational changes in productivity are inherently capital intensive. Accessing investment capital for small to medium businesses is especially difficult in the regions.
- **Digital and transport connections**. Digital and transport connectivity are crucial for businesses' productivity. Remaining connected to friends and family is also important for new residents.
- **People with the right skills**. The 16,500 new jobs would be in much higher productivity roles, with different skills demands to the status quo. Ongoing training to build capability of existing workers to use new technologies will be as important as attracting people with the right skills.
- **Housing**. Population growth of 26,500 people could equate to 9,000 more households by 2050. This number of new households is equivalent to 300 extra houses per year for the next 30 years.
- **Schools.** Within the population expansion of 26,500 people, there would be around 6,000 children of early childhood and school age. Depending on average classroom sizes this could mean an additional 200 to 300 classrooms would be needed in Timaru District by 2050.
- **Health**. An increasing population will place higher demand on health services. In order to maintain similar health service levels[10], Timaru would need at least 1,500 more health and social assistance workers by 2050[11] to account for population growth from 48,500 to 75,000 people.
- **Social and recreational infrastructure**. Community infrastructure and services play an important role in supporting wellbeing, as well as helping to integrate and retain new residents. Investment should scale as populations increase. The 2019/20 Timaru Resident Opinion Survey showed 87% of residents visited a park or reserve in the past year, while 91% used a community facility.

[9] A BERL study showed businesses require 17 to 100 sqm per employee depending on if they are service-based or heavy industry (see page 14: https://www.waikatoregion.govt.nz/assets/WRC/Services/regional-services/BERL-Report-UNISA-Industrial-Land-Demand-Study.pdf).
[10] There were 2,837 employed in health and social assistance in Timaru in 2021 against a population of 48,500.
[11] This estimate is conservative as there would also be additional health demands from an aging population.

6. Concluding remarks

This report has highlighted the power of being ambitious and transformational.

If Timaru can do no better than maintain its current level of employment and muddle along its status quo productivity trajectory then it will only be one third larger by 2050 than it is today.

However, if Timaru can be aspirational in terms of how many jobs it creates, people it attracts, and how productive these jobs are then Timaru's economy could triple in size over the same period. Such a goal would require a transformational shift into at least one third of Timaru's businesses doing things that were at least twice as productive as opportunities under the status quo.

Getting there won't be easy. Transformations that build on existing strengths are easier to conceptualise, but 'blue sky' opportunities in new industries are harder to map out and many are reliant on yet-to-be-developed technologies.

Furthermore, regardless of which industries help Timaru achieve an aspirational economic future, there will be many factors which are necessary enablers. Productivity, employment, and population growth are key drivers of economic prosperity, but these can't happen in isolation and in turn rely on investments in underlying foundations related to skills, natural resources, housing, infrastructure, and social and cultural capital.