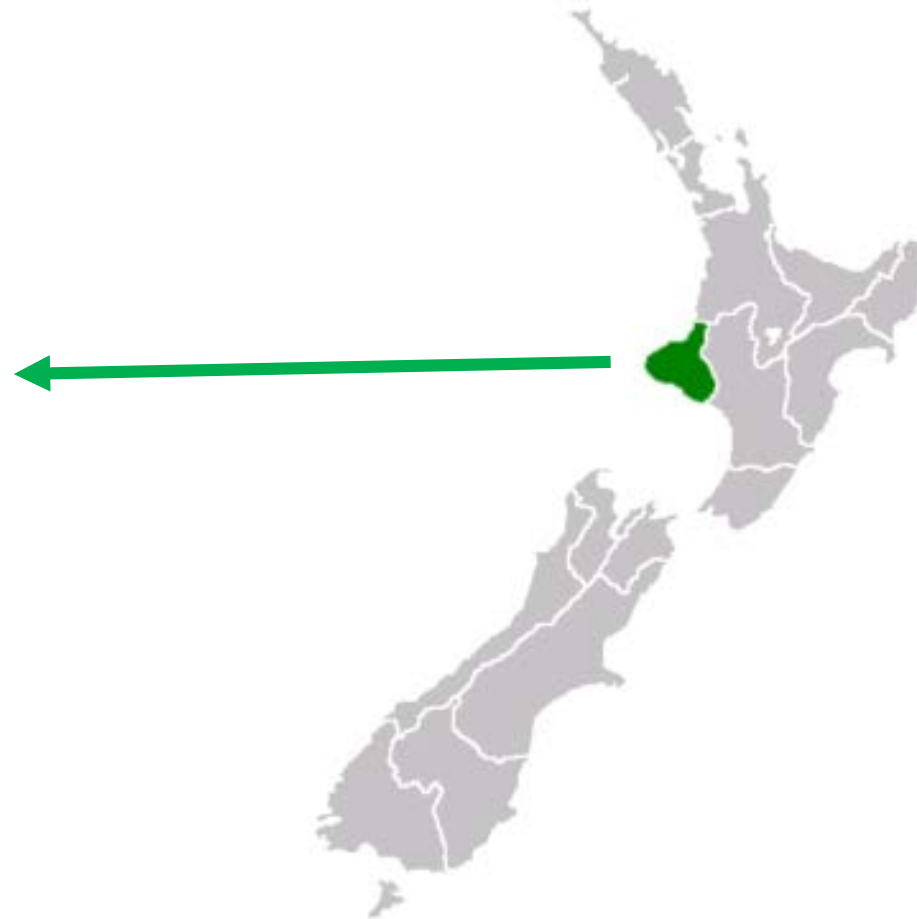
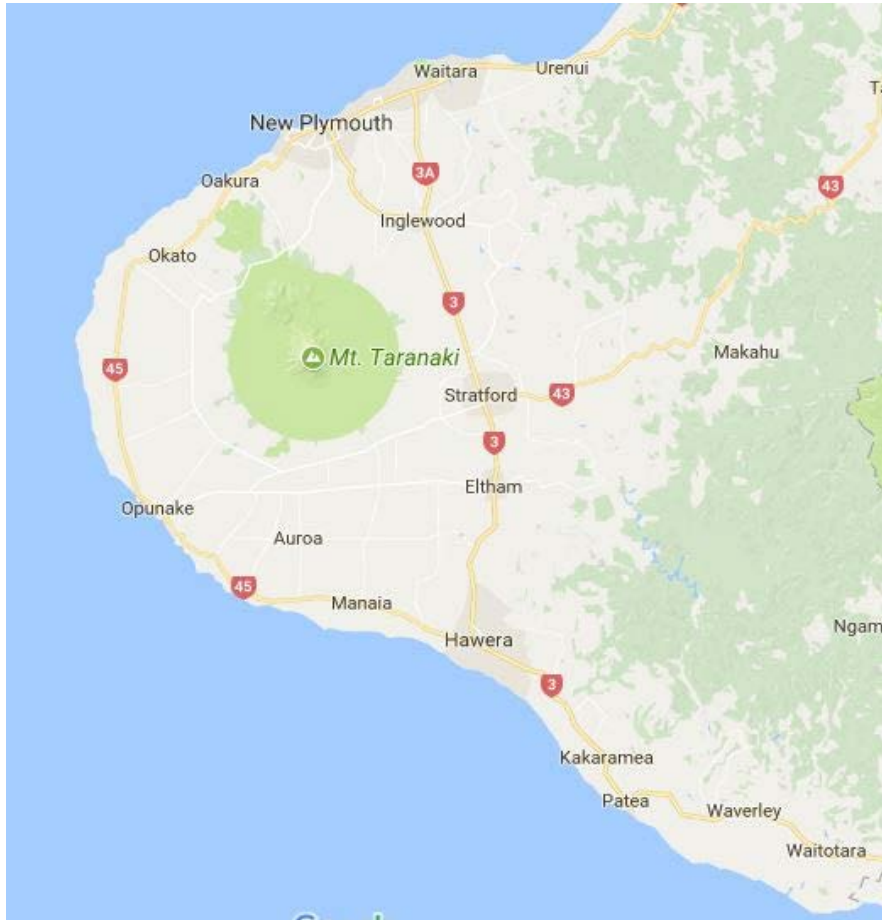


Taranaki Regional Energy Development

Basil Sharp

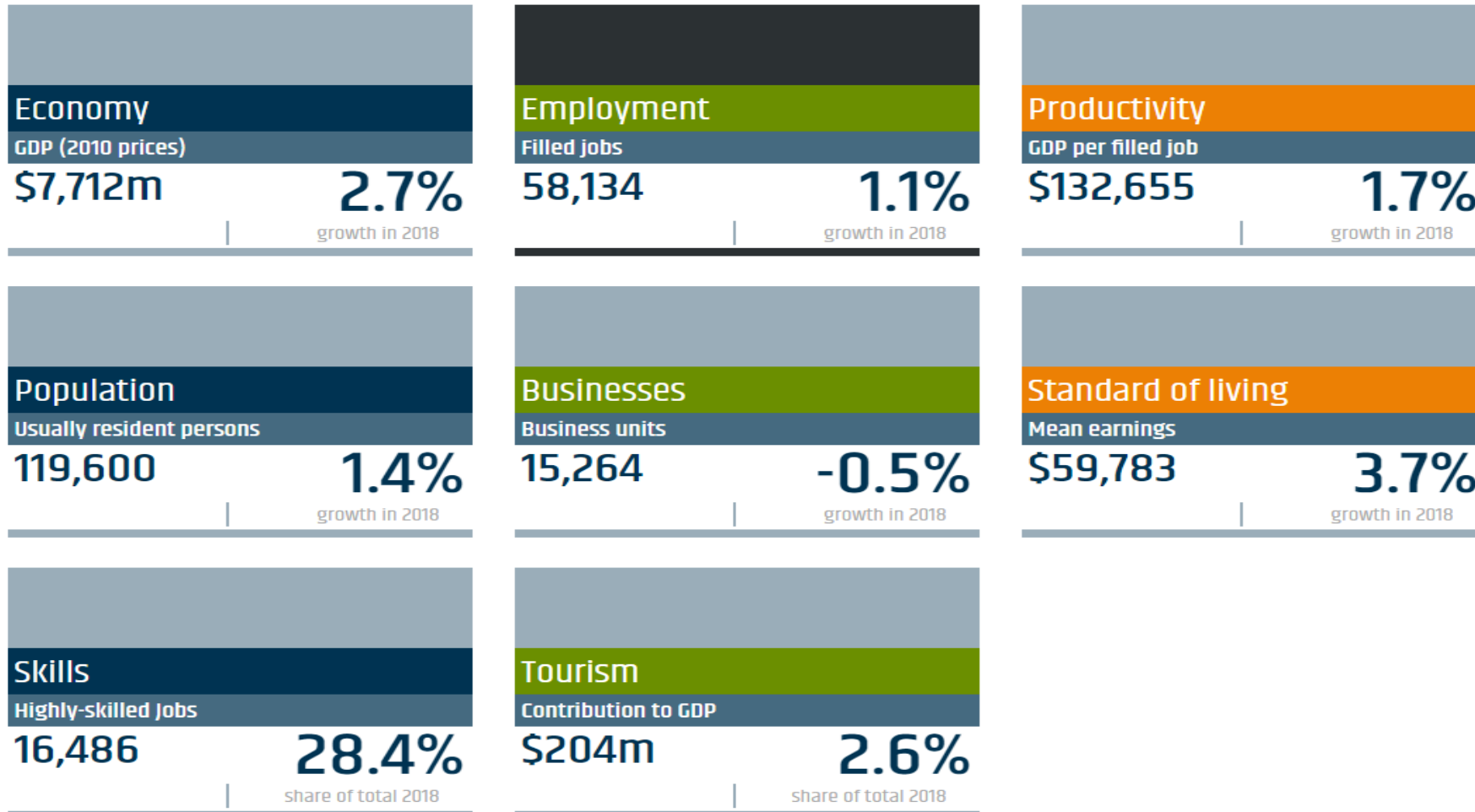
Taranaki region



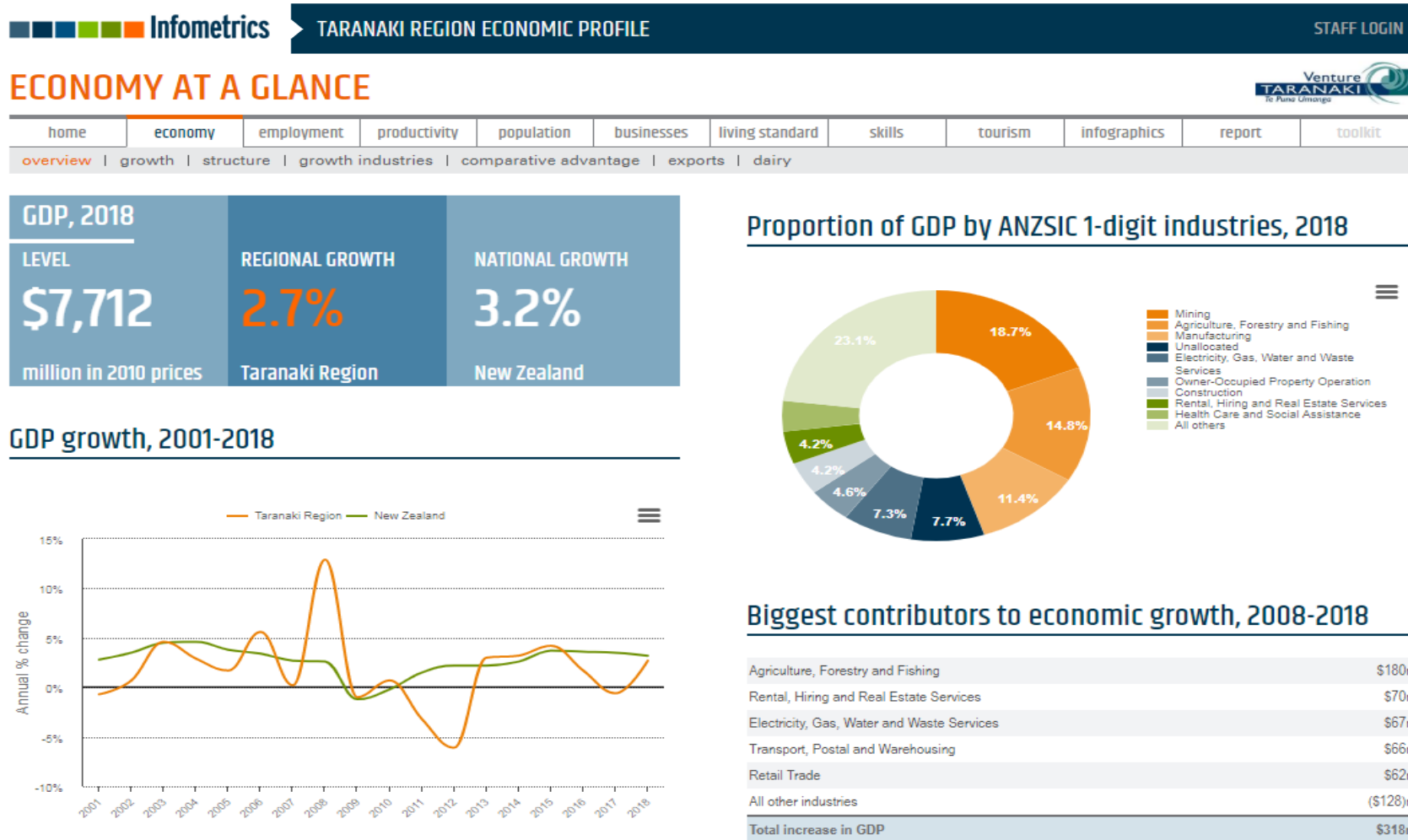
Background

- Population of 119,600, June 2018, 2.4 % of NZ.
- Relies on natural & physical resources for social & economic well being
- Land: 7,200 km², 10% original cover remains, 39% forest cover
- Air quality: have never exceeded AQ standards
- Water: demand from ag. Increased by 28% since 2003; blanket regional restrictions summer 2016/17; consented groundwater increased sevenfold; 4 hydro stations; water quality poorest in lowland urban catchments.
- Produces ~ 10% NZ milk solids
- 4 Hydro stations: ~ 40 MW
- Thermal: ~ 1,200MW + 50MW under construction

Summary stats



Regional GDP



Regional Employment

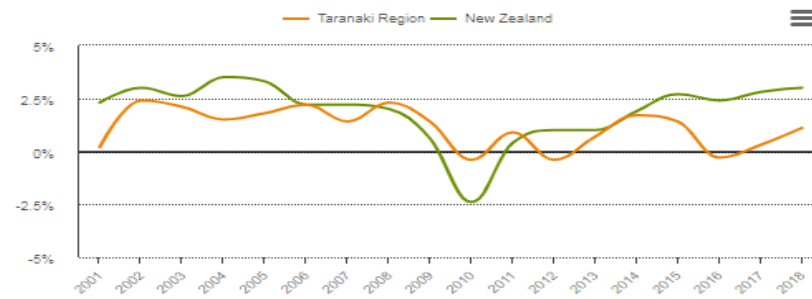
EMPLOYMENT AT A GLANCE



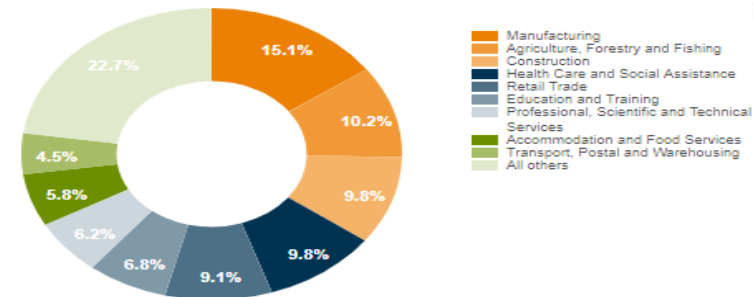
home	economy	employment	productivity	population	businesses	living standard	skills	tourism	infographics	report	toolkit
overview	growth	structure	growth industries - broad	growth industries - detailed	largest industries	self-employment	unemployment				

Employment, 2018		
LEVEL	REGIONAL GROWTH	NATIONAL GROWTH
58,134	1.1%	3.0%
Filled jobs	Taranaki Region	New Zealand

Employment growth, 2001 - 2018



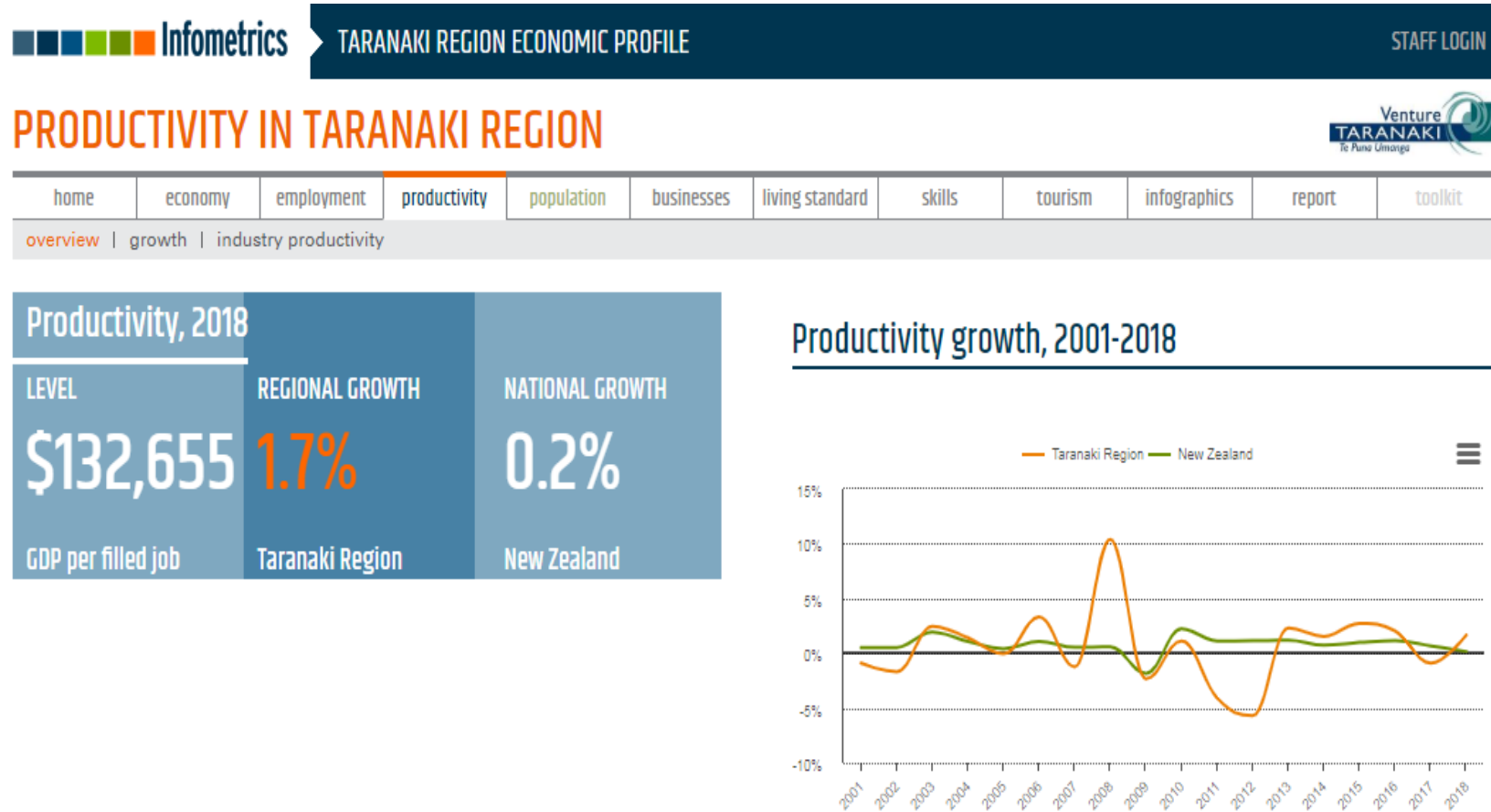
Proportion of filled jobs by ANZSIC 1-digit industries, 2018




Industries which created most jobs, 2008-2018

Administrative and Support Services	651
Health Care and Social Assistance	617
Other Services	456
Construction	438
Professional, Scientific and Technical Services	406
All other industries	951
Total increase in employment	3,519

GDP per job




Labour market skills



TARANAKI REGION ECONOMIC PROFILE

STAFF LOGIN

WORKFORCE SKILLS AT A GLANCE



home | economy | employment | productivity | population | businesses | living standard | **skills** | tourism | infographics | report | toolkit

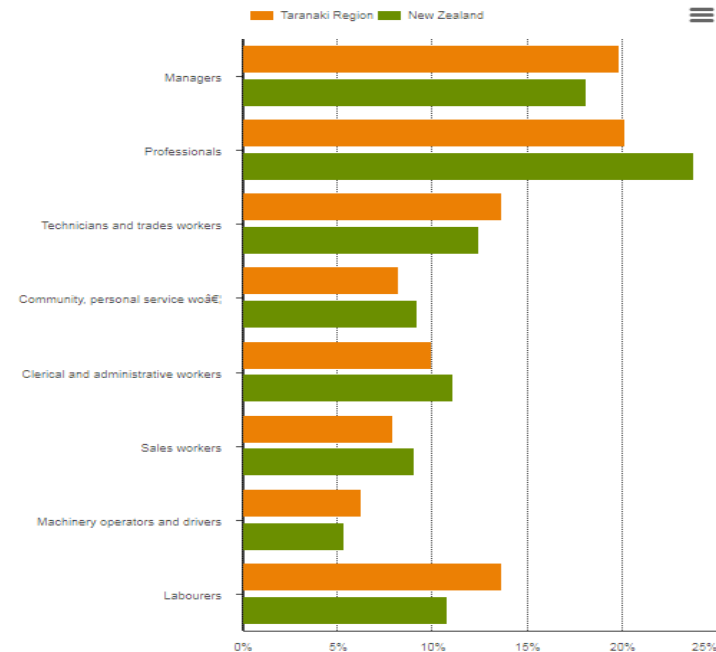
[overview](#) | [broad skill level](#) | [occupation](#) | [growth occupations](#) | [knowledge intensive](#) | [knowledge intensive industries](#) | [qualifications](#)

Knowledge intensive employment in 2018		
LEVEL	SHARE OF TOTAL	SHARE OF TOTAL
13,555	23%	32%
Employment	Taranaki Region	New Zealand

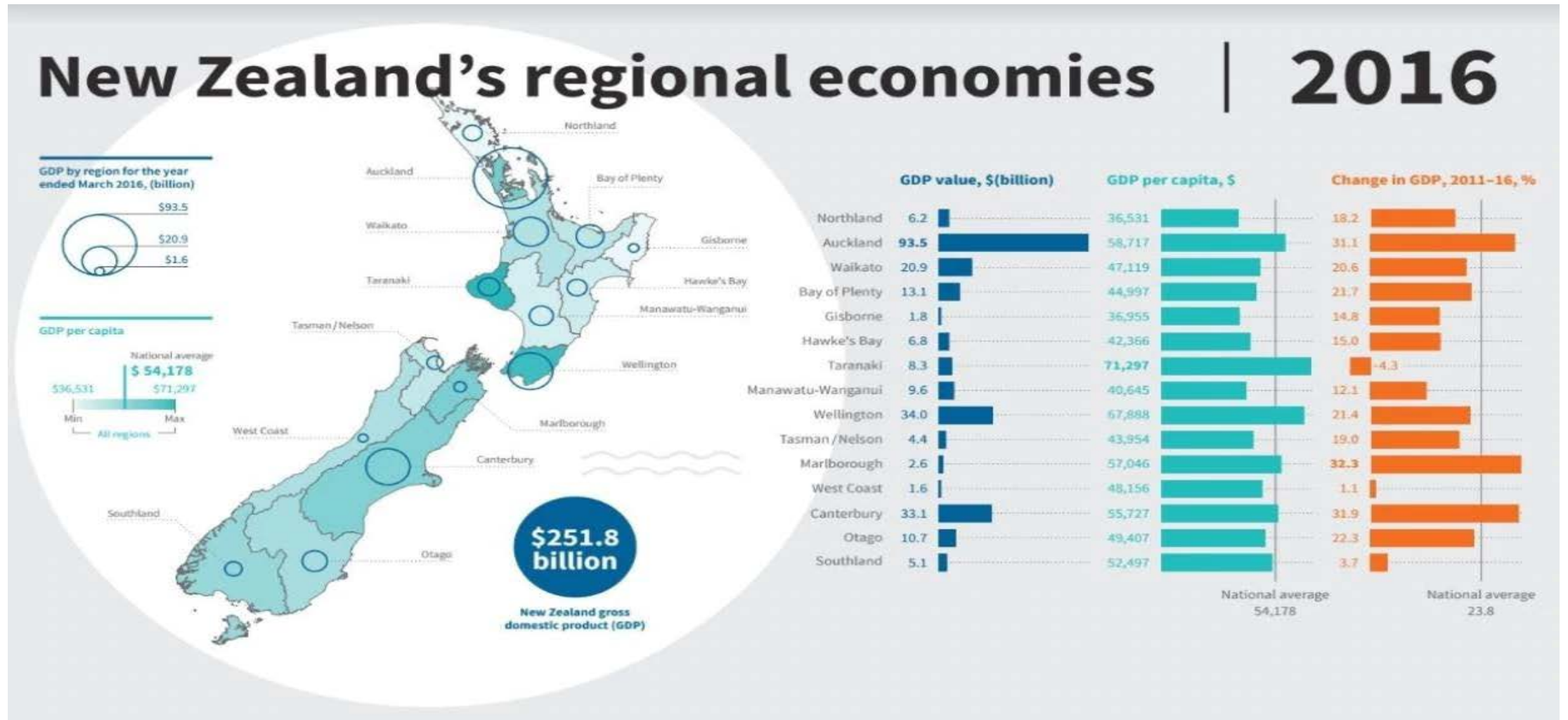
Top 10 qualifications in demand, 2018

Field of study : Level	Employment
Management and Commerce : Certificate (level 1-3)	4,650
Engineering and Related Technologies : Certificate (level 1-3)	4,489
Engineering and Related Technologies : Certificate (level 4)	3,971
Management and Commerce : Degree (level 7+)	3,287
Society and Culture : Certificate (level 1-3)	2,815
Health : Degree (level 7+)	2,581
Education : Degree (level 7+)	2,447
Society and Culture : Degree (level 7+)	2,425
Architecture and Building : Certificate (level 4)	2,344
Engineering and Related Technologies : Degree (level 7+)	2,252

Employment in Taranaki Region and New Zealand (2018)

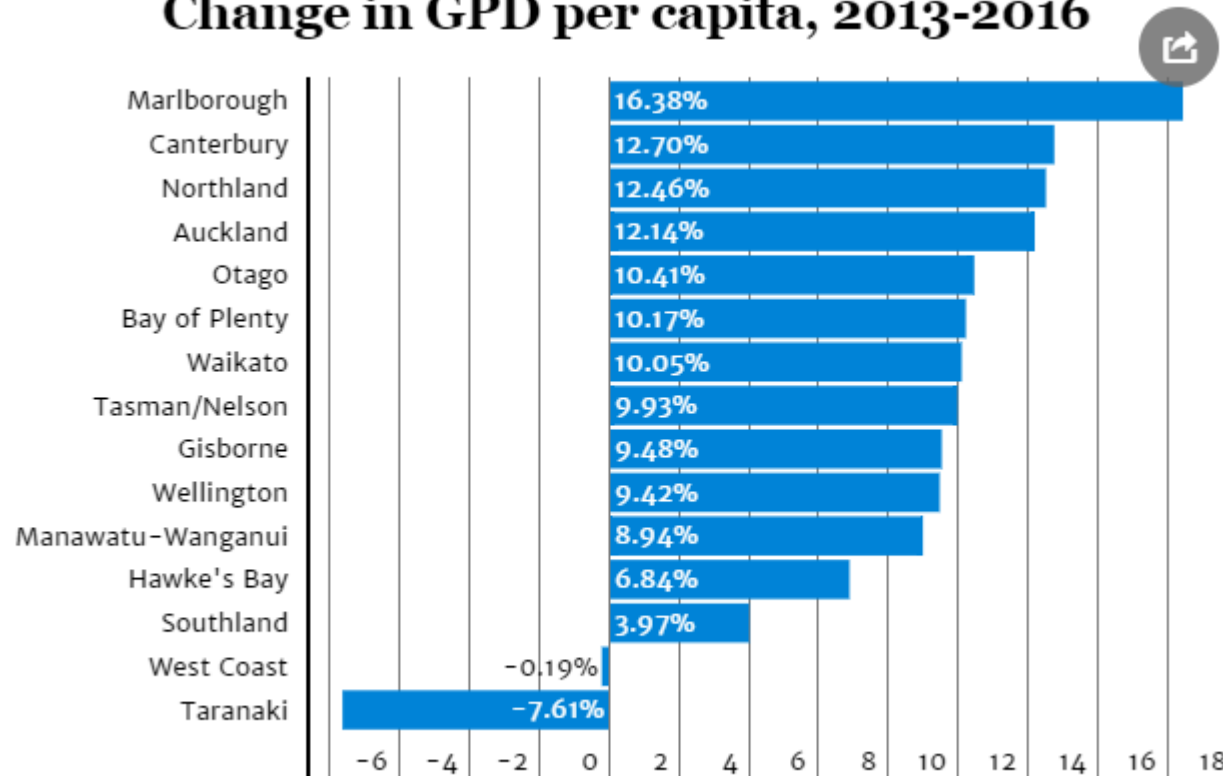


Comparative Stats



Changes in GDP

Change in GDP per capita, 2013-2016



SOURCE: STATISTICS NZ

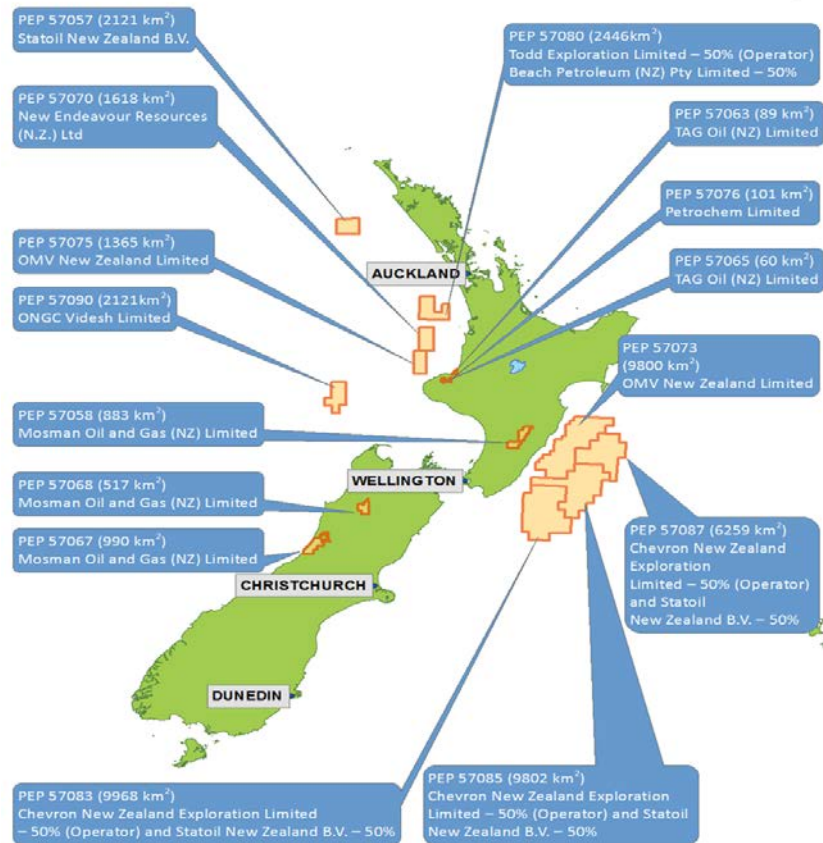
Oil and dairy have long been the region's flotation device but the economic downturn signalled a warning call for an industry shake-up.

"We have been bolstered by our high value industries in agriculture and petroleum but let's also apply fresh thinking and unrelenting enthusiasm into new opportunities," Young said.

Oil & Gas exploration

- NZ has run annual Block Offers since 2012. MBIE selects the release areas based on their prospectivity and commercial interest
- Consult with iwi and hapū in the proposed areas,
- Block Offer “bidding” opens, usually in April each year.
- Once bidding closes - usually around six months later - MBIE assess the bids based on their proposed work programme, and criteria including the applicant’s technical and financial capability and likely capability to meet expected health, safety and environmental requirements.

Examples



Minister Simon Bridges announced 15 new petroleum exploration permits granted for Block Offer 2014



2017:
Westside New Zealand Limited, 12-year offshore permit in the Taranaki Basin.
PEP 60402 has an area of 547km².

End to off-shore exploration



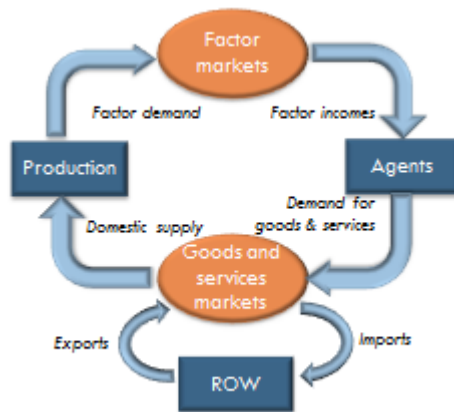
November 2018, Parliament passed the Crown Minerals Amendment Bill, putting an end to new offshore oil and gas exploration. The bill passed by 63 votes to 55.

There are 27 fields in NZ currently producing oil and gas. The last of the permits ends in 2030, but if a discovery is made, production could continue for decades. All existing permits will be protected under the Government's plans.



Computable general equilibrium (CGE) models

models that use economic data to estimate how the economy might react to policy shocks (banning off-shore exploration), technology changes (demand side conservation), or external shocks (oil embargo)



Static models (snap shot) or dynamic models (trace impacts over time)

Macroeconomic impact

- The Government's ban on oil and gas exploration could cost up to \$30b by 2050, NZIER say (19th Feb 2019)
- Reduce real GDP by between \$15 billion (3%) and \$38 billion (7.4%). The medium scenario is a reduction of \$28 billion (5.4%)
- Households: fall in consumption spending by \$4,800 to \$14,200 on average for each year between 2020 and 2050, with a \$9,400 drop in the medium scenario.
- Investment reduction between \$4 billion (5.4%) and \$7 billion (8.4%).
- Export revenue reduction by between \$3 billion (1.6%) and \$10 billion (5.2%).

Regional impacts

- Drop in Taranaki's real GDP > national. Other regions benefit from capital and labour shifting away from the oil and gas industry. These shifts offset a small part of the decline in overall real GDP.
- Reduce real GDP by between 35% and 53%, or \$16 billion and \$40 billion. The impacts on regional consumption, investment and export revenue are strongly negative.
- Households: substantial reduction in their standard of living. From 2020 to 2050, real GDP per household. Equivalent to a \$20,774 fall in household incomes each year for the next 30 years.
- Appreciable reduction in employment by 37%.
- Spill-over effects on other sectors are negative.

Pathways for Taranaki Regional Development: which path would you take?

- You manage a commercial entity linked to oil & gas in Taranaki
 - Your capital & labour force is directly connected with the oil & gas sector
 - Government is not offering further off-shore exploration permits
 - Existing rights to off-shore run out in 2030
- Options?
 - What will you invest in & what support would you require?