Unitec Environmental Scan 2017
March 2017

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Executive Summary

Political

1) **Outcomes:** Outcomes are the effect that public institutions have on the wider world (social, economic, cultural, and environmental), and in recent years, the government has become increasingly focused on tracking these. The government is focused on the "return on investment" from tertiary education; if it is funding a service, what benefits is it receiving? The number of enrolments in tertiary education is a poor indicator of overall benefits.
   a) *What does this mean for Unitec?* We need to think about whether our planning is sufficiently outcomes-focused (outwards looking in) and whether we need to shift away from current, more institutionally-centric approaches. This can be simplified to the difference between "achieving great results for New Zealand" and "being a world-class institute of technology."
2) **Flexibility:** There is growing emphasis on "flexibility" in the tertiary system (partly because this is seen as a way to achieve positive outcomes.) Flexibility is largely seen as involving easier re-allocations of funding, a constantly evolving set of qualifications and programmes, and generally greater freedom for institutions (freedom also meaning more risk.) A more flexible system is seen as being better suited to an evolving environment.
   a) *What does this mean for Unitec?* Our Transformation is designed to make us more flexible, and better able to cope with an evolving external environment. However, flexibility has risks: how do we balance academic rigour with innovation? How might we make best use of "bulk" funding? What would be the implications of longer funding periods, with less certainty?
3) **Maori and Pacific:** There remain concerns about the underperformance of Māori and Pasifika in the tertiary system. Despite efforts, participation, achievement, and outcome results for these groups are lower than other demographic groups. This will be of particular concern in the future as they become a larger proportion of New Zealand's population.
   a) *What does this mean for Unitec?* Participation and achievement scores for Māori and Pasifika are below the overall average for Unitec students. This has occurred despite a number of initiatives, and clear focus in our Investment Plans. Is sufficient attention being paid to the issue?
4) **Student Focus:** Related to the increasing emphasis on flexibility is an emphasis on student agency. This includes such initiatives as the Key Information Set, but is also notable in some of the recommendations of the Productivity Commission, and in the general rhetoric of the Tertiary Education's Commission "Investment Approach." Student focus implies altering the tertiary system so it is more responsive to student needs and desires, rather than the perspectives of providers.
   a) *What does this mean for Unitec?* Greater transparency and visibility of graduate outcomes may alter student decision-making away from more emotive factors towards clearer assessments of cost and benefit. Alternatively, regarding students as pure customers may have the opposite effect, triggering marketing wars. There are also issues to resolve in relation to student assessments of quality, as well as the positions of institutions and employers.
5) **Evolution:** While there is substantial emphasis on the changing nature of the tertiary system, and the need for changing policy settings, the overall political perspective is one of evolutionary, rather than revolutionary change. Major policy changes (such as those proposed by the Productivity Commission) have largely been precluded, and what remains instead is a set of minor changes, such as the ability to modify specific funding conditions. More radical moves, such as outcomes or output funding, are unlikely.

a) *What does this mean for Unitec?* Policy change is unlikely to occur at a speed too fast for us to quickly adapt; instead, our Transformation may, depending on its success, position us in a way that enables us to quickly adapt to new policy settings and gain a comparative advantage.

6) **Industry:** The government wants to see the tertiary sector work more closely with industry (broadly defined). It wants to see industry-led research, industry involvement in the development of qualifications, and a better match between graduate skills and industry needs.
   a) *What does this mean for Unitec?* We already have close ties with industry. Are these sufficient? How much authority should industry have, considering they don't directly pay us?

Economic

1) **Macro growth continues:** New Zealand looks set to enter its eighth consecutive year of growth. Annual GDP growth is set to top 3% over the next couple of years, as a wave of building work progresses and higher dairy prices provide some relief to rural regions. Population has boosted activity across a range of sectors, and is likely to continue to do so as long as job prospects remain favourable here. The OCR is expected to remain unchanged, but higher interest rates are likely to take the edge off house prices and consumer spending.
   a) *What does this mean for Unitec?* At the macro level, a healthy economy means fewer people choosing tertiary education, thus reducing the overall enrolment pool (although this is still intermediated by institution-specific factors). The overall tertiary pool is likely to remain stagnant, if not in slight decline, over the next three-five years.
2) **Inflation low but on the way up:** Inflation, both in New Zealand and around the globe, has been running at very low levels over recent years but is on the way up. Building cost inflation is running well above the overall index due to capacity constraints. While the New Zealand dollar remains relatively high, the NZD/USD exchange rate is expected to ease back through 2017. Many Asian economies are at risk of tightening global trade restrictions, which could also impact the New Zealand dollar. As a result, the Kiwi is expected to lose some ground.
   a) *What does this mean for Unitec?* Inflation in building costs may impose pressures on some of our major upcoming Transformation projects, and some form of re-phasing or hedging might be required. The relatively high NZD is likely to reduce New Zealand's attractiveness to international students, and although it may drop as noted, this may be counterbalanced by reductions in the strength of key Asian economies, reducing their demand for international education.
3) **China and India:** Both economies are expected to continue to grow substantially over the next few years, albeit at a slower rate than they have in recent times. A key attribute of growth in both economies is the development of substantially bigger and richer middle-classes. This will support continued growth in the number of Chinese students considering international education. However, there are risks for the Chinese economy stemming from Trump-proposed large trade tariffs. There has been a recent decline in arrivals on student visas. However, overall student arrivals are still expected to be higher than in earlier years owing to the global lift in the number of students studying overseas.
   a) *What does this mean for Unitec?* As their middle classes grow, China and India are likely to produce increasing numbers of potential international students. However, the development of domestic capacity will mediate the number who will take up that option, and New Zealand as a destination may become less attractive due to policy changes. Any major trade wars triggered by the new United States administration could seriously damage the Asian international student market. Diversification into additional markets is likely to mitigate risks attached to economic downturns in particular source countries, but is unlikely to affect the impact of policy changes.
4) **Unemployment and labour availability:** Underlying growth in employment in New Zealand has been very strong and the ease of finding skilled labour has continued to decline, leading to moderate wage growth. Despite an increase in unemployment rate, the labour market has been tightening across the board, with capacity constraints now spreading well beyond the construction and tourism sectors. The unemployment rate is expected to decline over the next 2-3 years but there are marked regional differences.

What does this mean for Unitec? From a supply-side perspective, it is likely we will be able to place skilled graduates into a range of roles in the near future. From a demand-side perspective, however, enrolments may suffer as potential students take up employment opportunities. This is likely to have a particular impact in lower-level qualifications (certificates and diplomas) as these are the areas in which the current healthy state of employment renders a qualification unnecessary.

5) **Varied industry outlooks:** Job growth has been increasing for construction and related service industries, including financial services, public administration, safety, rental and real estate and healthcare. Growth in the construction and service sectors will continue to be supported by population growth, and tourism has also been in a strong growth state.

   What does this mean for Unitec? Currently, our offerings span multiple industry sectors, some of them with weaker employment outlooks. It is likely that more closely linking our planning, and thus programme offerings, to industry projections will help ensure that we produce the right type of graduates for New Zealand's economic, social, and cultural wellbeing. However, there are significant risks in attempting to be too precise, and as such some degree of flexibility and generic skill development is vital.

6) **Storm clouds on the horizon:** Current economic forecasts are all based on assumptions of general international stability. However, the new United States administration has threatened major trade tariffs on several significant economies, including China and Mexico. The impact of these tariffs could be a disruption to the global economy, which could have cascading effects on New Zealand. While this is a worst case scenario, it is a possibility that forecast growth and employment could be slowed, or even reversed, and the world could slip into another global recession in the next few years.

   What does this mean for Unitec? A global recession would likely lead to significant jumps in unemployment, which would likely drive enrolments to Unitec. However, if the recession were large enough, it might force the government to consider additional austerity measures, which might include reductions in funding to tertiary institutions. A recession would also make it more difficult for us to fulfil our primary function of placing our graduates into employment.

Social

1) **New Zealand Demography:** New Zealand will continue to grow relatively rapidly over the next two decades. Its population will become older and more ethnically diverse.
   a) *What does this mean for Unitec?* While there will be more potential domestic students, simply due to population increases, many of these will be in groups traditionally under-represented in tertiary education: older people, Maori, and Pacific. There may thus be opportunities to widen our catchments to better encompass these groups. Pedagogy and support services may in turn need to evolve to adapt to these different groups.
2) **Auckland Demography:** Auckland will follow broader New Zealand trends, only more rapidly, growing faster and with greater ethnic diversity. Much of this growth will be either in the very centre, or on the urban fringe (a donut pattern). New transport links, such as the City Rail Link and Waterview Extension, may alter movement patterns.
   a) *What does this mean for Unitec?* Auckland's traditional catchment is west Auckland, where there will be some growth, but mostly at a distance. Significant growth in the central suburbs due to intensification, coupled with new transport linkages, may make the Unitec Mt Albert campus increasingly accessible to a greater number of potential students. However, this would require competing with the existing central institutions (UoA and AUT).
3) **Housing Affordability:** Auckland housing is becoming increasingly unaffordable – while rent prices have lagged behind sale prices, they are now reaching levels unaffordable to some students.

a) *What does this mean for Unitec?* If rental prices continue to climb, students may increasingly vote with their feet and relocate to smaller regional centres, where student-type work is easily available, but the cost of living is reduced. There were some indications of this in the 2016 dip in EFTS across three Auckland institutions. Unitec might need to consider the provision of additional student accommodation in the future.

4) **Financial Pressures on Students:** Recent surveys, both nationally and at Unitec, indicate that students perceive significant financial pressures. These pressures can impact on decisions to continue studying (or take up studying in the first place).
   a) *What does this mean for Unitec?* The greatest direct costs facing students are fees and housing; as noted above, student housing is one possibility. In terms of fees, there may be a need to explore scholarships, particularly for priority groups. Other options might include expanding those support services that enable financially-constrained students to study here, such as the childcare centre.
5) **Our Students:** Student and graduate NPS are trending downwards, largely due to general perceptions of disorganisation and chaos, some linked to the construction and changes associated with Transformation. Recent internal research has indicated that the traditional stereotype of 18 year-old, socially active school-leavers does not apply significantly to our student body, but that there are instead five distinct segments.
   a) *What does this mean for Unitec?* If NPS continues to decline, future enrolments are likely to follow, as word of mouth is a key information source. The diversity of the Unitec student population indicates that a generic approach to support services, timetabling, and marketing is unlikely to be optimal, and as such a greater degree of targeting might be beneficial.

Technological

1) **5th Generation Wireless:** 5G may increase global wireless capacity to a point where it is capable of creating an "always connected" world, with potential impacts on technology and social patterns.
   a) *What does this mean for Unitec?* 5G is a key enabler for the Internet of Things; Unitec needs to be consider the effect this might have on both pedagogical and back-office functions.
2) **Internet of Things:** A growing number of otherwise "dumb" items are becoming internet-connected (fridges, televisions etc.) This creates opportunities for information sharing and co-ordination, as well as risks.
   a) *What does this mean for Unitec?* The IoT will likely require the teaching of new content, at the same time as it facilitates new ways of teaching. As technology becomes even more a part of everyday life, broader philosophical and ethical issues will require greater attention.
3) **MOOCs:** MOOCs have been around for almost a decade, and are steadily growing. Rather than replacing traditional universities, they seem to be shifting towards ongoing professional development and bite-sized learning.
   a) *What does this mean for Unitec?* MOOCs are unlikely to disrupt Unitec's business model entirely, but at the same time, it is unlikely that Unitec would be able to establish successful MOOCs due to a lack of brand reputation. Rather, it is vital to consider which current Unitec niches might lend themselves to MOOC exploration.
4) **Physical and Digital Worlds:** Virtual, Augmented, and other realities are creating new industries but also new pedagogical opportunities.
   a) *What does this mean for Unitec?* New digital realities present an opportunity for innovative pedagogy, particularly in applied fields, that could greatly facilitate student success. However, they are unlikely to be cheap, and a careful analysis of cost versus benefit might be useful.
5) **Technology and Employment:** There is substantial rhetoric about the disruptive effect of technology on the employment environment. However, data indicates that the employment environment remains relatively stable, with no increase in velocity whether in New Zealand or the United States.

a) *What does this mean for Unitec?* Any analysis of future employment needs to be carefully developed and avoid being too easily captured by marketing froth. Hard numbers are likely to be the best predictor of future economic trends.

6) **BYOD, Learning, and Technology:** An increasing number of institutions are introducing BYOD policies, and some students prefer the freedom of using their own devices.
   a) *What does this mean for Unitec?* Good BYOD policies involve a balance between efficiency and ease-of-use, and equity issues. While BYOD may reduce institutional costs, and be more convenient for some students, those without resources to acquire devices may be disadvantaged.

Organisational

1) **Positive Graduate Outcomes:** Unitec's primary function is to equip students with the necessary skills for employment, and latest results indicate significant successes in this area. Raw graduate employment rates were up, and even when adjusted for the healthy external employment environment, showed continued improvement. We exceeded our target.
   a) *What does this mean for Unitec?* We are achieving our primary purpose, and can be relatively confident that our teaching practice remains fitting for the external environment. We need to ensure that as we transition to new pedagogies, we are still achieving these positive graduate results.
2) **Declining EFTS:** EFTS numbers dropped significantly in 2016, and domestic EFTS have been declining for some years. International EFTS are much more volatile. There is significant decline in EFTS in lower-level qualifications, and particular networks have seen very sizeable drops.
   a) *What does this mean for Unitec?* This steady reduction in EFTS, particularly domestic EFTS, is of major concern given the implications for our financial sustainability. The relative strength of longer (degree-level) qualifications vis a vis shorter qualifications (certificates and diplomas) is counter-intuitive, as it is increasingly believed that longer, less flexible qualifications are not suited to the market.
3) **Increased Research:** Research outputs in 2015 and 2016 reached previously unattained levels due to a combination of improved reporting and greater focus. External research income and the number of industry partnerships have also increased.
   a) *What does this mean for Unitec?* Research differentiates Unitec from other ITPs, and early signs are that the new research strategy is achieving significant gains. Due to the lag effect of staff departures, however, it is likely vital that close attention is paid to this as the loss of a few staff could cause reductions in output quantity and quality.
4) **Declining Educational Performance Indicators:** Unitec is experiencing an unusual reduction in key EPIs, including course completion, progression, and retention. While reductions in progression may be simply due to an improved economy, drops in the others are of concern and may indicate increasing student dissatisfaction with their Unitec experience.
   a) *What does this mean for Unitec?* EPI losses may mean a loss of performance based funding, but might also have significant reputational effects if they continue. Unitec is faced with a conundrum as declining EFTS impose pressures to drop entry standards, while improving EPIs may require increasing standards.
5) **Environment:** Unitec has embarked on an ambitious One Planet strategy. Results in 2016 were mixed, with highlights including a substantial reduction in carbon (including air travel) and the achievement of Carbon Neutral status. There were less positive water and waste results.
   a) *What does this mean for Unitec?* One Planet is a very ambitious strategy, whose goals will require significant changes in working practices. It may be necessary to initiate more substantial projects to achieve these goals, as otherwise their achievement is unlikely.

6) **Low Staff Morale:** Our 2016 mini-survey indicates that staff Net Promoter Score remains extremely low at -56; in the absence of a full survey, reasons for this cannot be confirmed, but are likely to be similar as those in the 2015 survey. There have been incidents, such as what occurred at Waitakere campus, that indicate that staff are very unhappy with some strategic decisions.
   a) *What does this mean for Unitec?* Staff are one of our four Critical Success Factors, and low morale and engagement may be a major hindrance to achieving our other goals. In particular, the impact of low-morale staff on students, given their frequency of interactions, may be negative.
7) **Staff Demographics:** The ratio of academic:allied Full Time Equivalents (FTE) remains below 1 (more allied than academic staff). Our ethnic mix remains diverse. However, there remain significant gender inequities in relation to remuneration. Unitec's remuneration structure also appears to be becoming less linked to overall performance.
   a) *What does this mean for Unitec?* Academic staff deliver Unitec's primary services, and thus care must be taken to ensure there is an adequate front office:back office ratio. Issues of remuneration may cause staff resentment or may be indicative of more significant underlying difficulties in calculating value.

Competitor

1) **Declining Market Share:** Unitec's share of EFTS – whether in Auckland, as part of the Metro Group, or as part of the broader ITP sector – is in decline, with the most significant drop between 2015 and 2016. The decline is particularly apparent in domestic EFTS
   a) *What does this mean for Unitec?* Domestic EFTS are the lifeblood of institutions, given the volatility of international markets. If Unitec's share continues to decline in a flat-to-declining overall market, it will face significant financial pressures.
2) **Brand Perceptions of Unitec:** Awareness of Unitec has dropped in recent years, while consideration has improved. First choice has remained very low, and is the same, or lower, than institutions with much less awareness.
   a) *What does this mean for Unitec?* Unitec is well known, but not well-loved. Word of mouth is key to institutional reputation, and efforts to improve this may be key, rather than formal marketing.
3) **Lack of Unique Offerings:** Unitec has few unique offerings either in Auckland or nationally, and will be losing its monopoly on one of those programmes in 2018.
   a) *What does this mean for Unitec?* In the absence of unique offerings, Unitec must compete on brand and reputation. This poses difficulties given the issues with perceptions noted above.
4) **Universities Valued Over ITPs:** In general, a very small proportion of intending students prefer ITPS over universities. While this is not reflected in overall enrolment numbers (i.e. universities are not growing at a dramatic rate), this may simply indicate an inability or unwillingness of universities to absorb all potential enrolees.
   a) *What does this mean for Unitec?* Unitec failed to became a university of technology in the early 2000s, and as a result, is still perceived as being of lesser quality. Given broader perceptions of ITPs, there is likely to be a ceiling of likely enrolees for Unitec, except in cases of significant economic distress.
5) **Key Decision-Making Factors:** Student decision-making is complex, but often focuses on cost, location, timing, and the degree of academic support.
   a) *What does this mean for Unitec?* There is relatively little competition on cost in New Zealand, but Unitec has potential advantages with location (green spaces, free parking) and timing. These might provide areas to build a competitive advantage.

Political (including Legislative)

Key Issues

1) **Outcomes:** Outcomes are the effect that public institutions have on the wider world (social, economic, cultural, and environmental), and in recent years, the government has become increasingly focused on tracking these. The government is focused on the "return on investment" from tertiary education; if it is funding a service, what benefits is it receiving? The number of enrolments in tertiary education is a poor indicator of overall benefits.
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Documents Reviewed

This analysis of the political environment focuses on recent documents from Parliament, various Ministries and Crown Entities, and one political party. The documentation examined is listed below, arranged in diminishing order of importance. Some of these documents have not changed since the 2016 Environmental Scan. Some other documents were reviewed but are not included in the summary.

- Education Act 1989 (including Amendment Bill)
- Tertiary Education Strategy 2014-2019
- Tertiary Education Commission Statement of Intent 2014/16-2018/19
- Tertiary Education Commission Investment Plan Guidelines 2017/2018
- Briefings to the Incoming Minister 2014 and 2016: Tertiary Education Commission
- Briefings to the Incoming Minister 2014 and 2016: Ministry of Education (Tertiary)
- Report by Productivity Commission "New Models of Tertiary Education" 2017
- Labour Party Tertiary Policy 2016
- Employment Outcomes of Tertiary Education Initiative

Education Act 1989

The Education Act 1989 is the principal document in the tertiary education field. It is superior to all policy documentation, including the Tertiary Education Strategy. Two particular aspects of this document are of interest.

At Section 162(4)(b)(ii), the Education Act describes polytechnics in the following way:

a polytechnic is characterised by a wide diversity of continuing education, including vocational training, that contributes to the maintenance, advancement, and dissemination of knowledge and expertise and promotes community learning, and by research, particularly applied and technological research, that aids development.

From this, we can identify a perception by Parliament that we, as a polytechnic, need to ensure our actions encompass this full definition.

Also important is Section 159AA, which describes the Tertiary Education Strategy. This is defined as setting out:

(a) the Government's long-term strategic direction for tertiary education; and
(b) the Government's current and medium-term priorities for tertiary education.

In addition, Section 159AA notes that:

(2) The part of the tertiary education strategy that sets out the Government's long-term strategic direction for tertiary education must address the following:

(a) economic goals:
(b) social goals:
(c) environmental goals:
(d)the development aspirations of Maori and other population groups.

Recently, an amendment bill to the Education Act was introduced to Parliament. The Education (Tertiary Education and Other Matters) Amendment Bill 2016 has a stated goal of increasing funding flexibility to allow quicker responses by institutions, while at the same time strengthening accountability and monitoring. To this end, the Bill proposes a number of changes.

Most importantly, the Minister will be able to amend funding mechanisms (for example, altering subsidy rates) during investment plan periods, and the TEC will have greater ability to impose specific funding conditions. This ability to alter funding mechanisms in turn will encourage the TEC to authorise longer investment periods (likely to be three years), reducing the overall administrative burden. The net result will be *longer* funding periods but with less *certainty* of funding within those periods. The Bill will also impose new requirements for making funding records available to TEC.

The Amendment Bill will bring in changes to ensure more consistent treatment of public and private institutions. This will include funding equity for the same courses, and changing the name of "Private Training Establishment (PTE)" to "Independent Tertiary Establishment (ITE)." There will also be minor technical changes, including some alterations to council operating procedures.

Tertiary Education Strategy 2014-2019

The Tertiary Education Strategy sets out the Government's long-term strategic direction for tertiary education, as well as its current and medium-term priorities. It was written by the Ministry of Education and the Ministry of Business, Innovation, and Employment.

The Minister's Foreword notes that this "new strategy signals a shift towards a more outwards facing New Zealand tertiary education system, with strong links to industry, community, and the global economy." He also notes that a "high-performing tertiary education system can contribute to improved outcomes for individuals and society as a whole."

The Government wants the tertiary education system to:

(1) Improve outcomes for all;
(2) Continue to improve the quality and relevance of tertiary education and research;
(3) Support business and innovation through development of relevant skills and research; and
(4) Build international relationships that contribute to improved competitiveness.

These goals are seen as signalling a shift in focus, one that is more focused on outcomes than previous strategies. Outcomes are the effect on the external environment from the delivery of educational services, and include (a) social outcomes, (b) economic outcomes, and (c) environmental outcomes.

In order to achieve these goals, and improve outcomes for all, the Government has set six priorities for tertiary education:

(1) Delivering skills for industry;
(2) Getting at-risk young people into a career;
(3) Boosting achievement for Maori and Pasifika;
(4) Improving adult literacy and numeracy;
(5) Strengthening research-based institutions; and
(6) Growing international linkages.

Importantly, the Government emphasises that not all of these priorities apply equally to all institutions, and as such, institutions should continue to deliver services that are already delivering good results.

Priority 1, *Delivering skills for industry*, is largely self-explanatory. The Government notes that it has been increasingly difficult for employers to find appropriately skilled people in recent years. It desires tertiary education that provides learners with good career opportunities through matching skills developed with labour market needs. There is a specific focus on STEM (science, technology, engineering, and mathematics) and information technology skills.

Priority 2, *Getting at-risk young people into a career*, focuses on the negative social outcomes for young people not in education, employment, or training. The Government wants tertiary institutions, schools, the government, and industry to work together to help young people achieve the qualifications that give them key employability skills. As well as those not in education, employment, and training, the Government also notes a need to focus on people in low-wage jobs as well as those with disabilities.

Priority 3, *Boosting achievement of Maori and Pasifika*, is largely self-explanatory. The Government notes the changing nature of New Zealand's demographics, and the need for institutions to align to *Ka Hikitia – Accelerating Success 2013-2017* (a Maori success strategy) and the *Pasifika Education Plan 2013-2017* (a more recent Pasifika Operational Strategy was released in January 2017). For both groups, the goal is to reach parity in participation and achievement between Maori and Pasifika, and other parts of the education system.

Priority 4, *Improving adult literacy and numeracy*, is focused on the negative impacts ensuing when people lack the basic skills to participate fully in the modern world. The Government's focus is on level 1 and 2 study. The Government wants the tertiary sector to provide a diverse and flexible range of foundation skills programmes.

Priority 5, *Strengthening research-based institutions*, notes that research can be both academic and business-led, and delivers social, economic, cultural, and environmental benefits. The Government notes a need for institutions to develop skilled staff that can help create a strong research base in New Zealand. The Government will also be focusing research funding towards areas where there is greater business need. As well, the Government wants institutions to work more closely with industry to enhance the transfer of knowledge. The Government also notes a need for either better collaboration between institutions, or a more niche approach, to avoid duplication of effort.

Priority 6, *Growing international linkages*, notes multiple benefits from international education, including income, improved research, and the development of wider benefits for trade. The Government emphasises that New Zealand's international education provision needs to be of high

quality. Five specific goals are set: developing education and research relationships; enhancing business growth strategies; providing a high quality experience; increasing the value of offshore provision; and delivering high quality and internationally recognised qualifications.

Alongside these six priorities, the Government emphasises that the entire tertiary sector needs to improve its performance. All parts of the system must support Maori language and culture.

Tertiary Education Commission – Statement of Intent 2015/16-2018/19

The TEC's Statement of Intent sets out its short-medium term priorities. It notes that its key priority for the next few years will be a refocus of the TEC's "Investment Approach." The goal is a tertiary system that is more relevant and responsive to the needs of learners and employers. This will involve providing the right incentives to tertiary institutions.

Demand for tertiary education is forecast to decline until at least 2018 due to a range of demographic factors. The TEC sees the education sector as undergoing evolutionary, rather than revolutionary, change. To improve planning in this environment, the TEC sees a need to increase the quality of forecasting of learner demand.

The TEC has three main goals for the tertiary education system:

(1) Increasing the proportion of the population with a tertiary qualification;
(2) Producing higher-quality and more relevant research;
(3) Being more responsive to the needs of employers and learners.

In relation to the first goal, the TEC notes that increasing the proportion of qualified people is vital to the future prosperity of all New Zealanders. There is a particular focus on lower-level tertiary qualifications and priority groups, including Maori, Pasifika, and at-risk young people.

In relation to the second goal, the TEC notes the multiple benefits of good research. It notes that high-quality research affects institutional rankings. Most importantly, however, there is a need for research to focus on innovation, economic and social development, and environmental sustainability.

In relation to the third goal, the TEC desires a network of institutions that can respond quickly and effectively to the changing needs of learners and employers at a local and national level. Tertiary education must not be isolated in an "ivory tower" but must be fully grounded in the broader environment.

To achieve these goals, the TEC is modifying its "Investment Approach" to deliver better information, the right incentives, and greater funding flexibility. It is hoped this will create overall system responsiveness to evolving learner and societal demands.

Summary of Guidelines – Investment Plan 2017/18 Guidelines

The TEC released new guidelines for the production of Investment Plans for the 2017/18 funding round on 1 December 2015. As presaged in other documents, there is an emphasis on outcomes, and further focus on the "Investment Approach": what does the government get from the money it provides the tertiary sector?

In this document, the TEC talks about three main goals:

(1) Improving outcomes for learners;
(2) Improving economic and social outcomes;
(3) Underpinned by more effective system stewardship by TEC.

As in related documents, there is mention of a more flexible approach to funding. There is also discussion of better performance measures, which can provide more powerful tools for the TEC in helping shape the sector.

The TEC has identified six "quick wins" that will be a focus during the plan period:

(1) Shining a spotlight on fields of study with poor graduate employment outcomes
(2) Identifying strategic investment opportunities in SAC level 3+
(3) Technical improvements to education performance indicators
(4) Reducing compliance costs for PTEs and community education providers around plan requirements
(5) Creating greater value from Investment Managers working with the sector
(6) Flexible funding models, including competitive funding at levels 1 and 2 and pilots for levels 3 and 4

Briefings to the Incoming Minister 2014 and 2016: Tertiary Education Commission

The 2014 briefing was provided to the incoming minister immediately following the general election of late 2014. It was produced in conjunction with the Ministry of Business, Innovation, and Employment. The overarching theme of this briefing is the need for New Zealand to move towards an outcomes-focused, outwards-looking approach to tertiary education. This includes a focus on the effects achieved by graduates once they leave institutions. There is some concern about institutions simultaneously embarking on large-scale capital investment when demand is forecast to soften.

In order to achieve the desired change, the TEC notes it will need to modify its incentives. This is part of the new "Investment Approach" noted above in the TEC's Statement of Intent. This may involve changes in how the TEC funds institutions.

The TEC sees the ideal future state for tertiary education as:

(1) Dynamic, responsive, and flexible in the short term;
(2) Stable enough to innovate and drive value over the long term;
(3) Based on excellent information;
(4) Linked to the wider world;

(5) Made up of a mix of specialist providers working collaboratively;
(6) Focused on learner outcomes.

The 2016 briefing was produced for the incoming minister, Paul Goldsmith. While the general tenor of the 2014 briefing remained, the new briefing emphasised that New Zealand's tertiary system was functioning well, but there were a range of risks, primarily related to the viability of institutions in an environment of reducing enrolments. These declining enrolments were seen as a particular risk for ITPs. The TEC emphasised its concerns about major capital investments in a tightening economic environment, noting that debt levels were rising across the sector. Further information about the "Investment Approach" was included, emphasising the need to achieve better outcomes for New Zealand through a more flexible system, greater use of information, and working more closely with employers.

Briefings to the Incoming Minister 2014 and 2016: Ministry Of Education (Tertiary)

This was provided to the incoming minister immediately following the general election of late 2014. As with the TEC, the MoE wants a focus on outcomes to emerge. It notes that performance targets are a simple and effective way of achieving this desired behavioural change, and which could be combined with changes in funding mechanisms that allow tertiary institutions to become more flexible.

However, the MoE also notes that equity of participation is also important. As such, tertiary education needs to continue to focus on traditionally under-represented groups, such as Maori and Pasifika.

In December 2016, the MoE released an updated briefing to the new minister, Paul Goldsmith. Unlike the updated TEC briefing this did not contain any substantive new information.

Productivity Commission Report

In November 2015, the Productivity Commission was tasked by the Government to investigate "how trends in technology, internationalisation, population, tuition costs and demand for skills may drive changes in models of tertiary education." It recently released its report, *New Models of Tertiary Education* (henceforth *New Models)*. *New Models* identifies a number of areas where it feels the New Zealand tertiary sector could be improved. The full report at 402 pages contains a number of findings and recommendations, the most important of which are summarised below:

(1) Changing the student loan scheme so that interest is charged on loans where graduate income is sufficient;
(2) Changing quality assurance, by allowing greater self-accreditation (in particular, in the university sector). Linked to this would be relaxation of credit transfer mechanisms, as well as a proposal to abolish University Entrance and allow individual institutions to set their own entry standards;
(3) Removing government financial guarantees for tertiary institutions, while at the same time allowing institutions to accrue as much debt as they wish. Alongside this, institutions would own and control their assets, but would also be required to pay local government rates. This would give tertiary institutions much greater financial independence (and risk);
(4) Disentangling research and teaching, by relaxing rules around research-led teaching for degrees, and potentially modifying funding models that mix funding to produce both teaching and research;

(5) Moving away from an "inputs focus" and focusing policy and funding on the outcomes of tertiary education, both immediate in terms of graduate success, but also at a broader level in terms of contributions to the overall economic health and productivity of New Zealand;
(6) Allow for greater "mix and match", whether by combining papers from different organisations to create a single qualification, or by simply completing individual papers with no intent of completing a full qualification; and
(7) Further investigate the value of non-provider education, notably via Industry Training Organisations, with an intent of relaxing funding rules relating to such organisations' provision.

It is notable that the most revolutionary of the recommendations contained in the draft report did not make its way into the final report:

(1) Changing the funding model from a "provider-based" approach to a "student-funding" model via a Student Education Account, which would provide each 16 year old with $45,000 in an interest-bearing account with which to purchase tertiary education. With this model, institutions would not be provided any EFTS funding directly, but would rather charge the full amount (i.e. current student fee and government subsidy) to the student directly.

It is unlikely that any of the major recommendations of the report will be implemented in the near future. Both Labour and Green politicians have come out in strong opposition to the report. The sponsoring ministers, Steven Joyce (then Tertiary Education) and Bill English (then Finance) were also both less than supportive when the draft report was released, largely ruling out Student Education Accounts, and entirely ruling out returning interest on student loans; there has been no indication that the current minister, Paul Goldsmith, is any more supportive.

Labour Party Tertiary Education Policy

In 2016, the Labour Party announced a "Working Futures Plan" policy, under which three years of post-school education would be fully publicly funded. These three years could be used for any NZQA course, full or part-time study, and would not need to be contiguous. The policy would be phased in from 2019, and would be fully implemented in 2025. Labour has estimated that at full implementation, the policy would cost $1.2bn per year. Given 2015 total domestic student fee income (tertiary sector) of $960m, this estimate seems to suggest that the anticipated effect of the policy would be an increase of approximately 20% in student numbers over the next 8 years. The impact of the policy may be similar to that of a major economic downturn, which historically has increased polytechnic student numbers. The probability of Labour winning the 2017 election and thus being able to implement this policy is regarded as approximately 50%.

Publishing provider level information on Employment Outcomes of Tertiary Education

From 2017, all tertiary providers will be required to publish information on graduate employment outcomes if they are to continue to receive government funding. This information will be drawn from Statistics New Zealand, who will combine tertiary data with data from the Inland Revenue Department. This data will be published on tertiary websites under the "Key Information for Students" (KIS) name.

This data will show, down to programme level, graduate destinations (employment, studying, or on a benefit), as well as earnings (median and quartiles). Alongside this, tertiary providers will also be required to show costs (both student fee and government subsidy) as well as information about course completion.

This data will be used not only for students, informing their decision making, but also by the Tertiary Education Commission in its discussions with tertiary providers about provision. Such discussions might include recommendations to discontinue or expand particular programmes depending on student employment outcomes.

Economic

Key Issues

1) **Macro growth continues:** New Zealand looks set to enter its eighth consecutive year of growth. Annual GDP growth is set to top 3% over the next couple of years, as a wave of building work progresses and higher dairy prices provide some relief to rural regions. Population has boosted activity across a range of sectors, and is likely to continue to do so as long as job prospects remain favourable here. The OCR is expected to remain unchanged, but higher interest rates are likely to take the edge off house prices and consumer spending.
   a) *What does this mean for Unitec?* At the macro level, a healthy economy means fewer people choosing tertiary education, thus reducing the overall enrolment pool (although this is still intermediated by institution-specific factors). The overall tertiary pool is likely to remain stagnant, if not in slight decline, over the next three-five years.
2) **Inflation low but on the way up:** Inflation, both in New Zealand and around the globe, has been running at very low levels over recent years but is on the way up. Building cost inflation is running well above the overall index due to capacity constraints. While the New Zealand dollar remains relatively high, the NZD/USD exchange rate is expected to ease back through 2017. Many Asian economies are at risk of tightening global trade restrictions, which could also impact the New Zealand dollar. As a result, the Kiwi is expected to lose some ground.
   a) *What does this mean for Unitec?* Inflation in building costs may impose pressures on some of our major upcoming Transformation projects, and some form of re-phasing or hedging might be required. The relatively high NZD is likely to reduce New Zealand's attractiveness to international students, and although it may drop as noted, this may be counterbalanced by reductions in the strength of key Asian economies, reducing their demand for international education.
3) **China and India:** Both economies are expected to continue to grow substantially over the next few years, albeit at a slower rate than they have in recent times. A key attribute of growth in both economies is the development of substantially bigger and richer middle-classes. This will support continued growth in the number of Chinese students considering international education. However, there are risks for the Chinese economy stemming from Trump-proposed large trade tariffs. There has been a recent decline in arrivals on student visas. However, overall student arrivals are still expected to be higher than in earlier years owing to the global lift in the number of students studying overseas.
   a) *What does this mean for Unitec?* As their middle classes grow, China and India are likely to produce increasing numbers of potential international students. However, the development of domestic capacity will mediate the number who will take up that option, and New Zealand as a destination may become less attractive due to policy changes. Any major trade wars triggered by the new United States administration could seriously damage the Asian international student market. Diversification into additional markets is likely to mitigate risks attached to economic downturns in particular source countries, but is unlikely to affect the impact of policy changes.
4) **Unemployment and labour availability:** Underlying growth in employment in New Zealand has been very strong and the ease of finding skilled labour has continued to decline, leading to moderate wage growth. Despite an increase in unemployment rate, the labour market has been tightening across the board, with capacity constraints now spreading well beyond the construction and tourism sectors. The unemployment rate is expected to decline over the next 2-3 years but there are marked regional differences.
   What does this mean for Unitec? From a supply-side perspective, it is likely we will be able to place skilled graduates into a range of roles in the near future. From a demand-side perspective, however, enrolments may suffer as potential students take up employment opportunities. This is likely to have a particular impact in lower-level qualifications (certificates and diplomas) as these are the areas in which the current healthy state of employment renders a qualification unnecessary.

5) **Varied industry outlooks:** Job growth has been increasing for construction and related service industries, including financial services, public administration, safety, rental and real estate and healthcare. Growth in the construction and service sectors will continue to be supported by population growth, and tourism has also been in a strong growth state.

   What does this mean for Unitec? Currently, our offerings span multiple industry sectors, some of them with weaker employment outlooks. It is likely that more closely linking our planning, and thus programme offerings, to industry projections will help ensure that we produce the right type of graduates for New Zealand's economic, social, and cultural wellbeing. However, there are significant risks in attempting to be too precise, and as such some degree of flexibility and generic skill development is vital.

6) **Storm clouds on the horizon:** Current economic forecasts are all based on assumptions of general international stability. However, the new United States administration has threatened major trade tariffs on several significant economies, including China and Mexico. The impact of these tariffs could be a disruption to the global economy, which could have cascading effects on New Zealand. While this is a worst case scenario, it is a possibility that forecast growth and employment could be slowed, or even reversed, and the world could slip into another global recession in the next few years.

   What does this mean for Unitec? A global recession would likely lead to significant jumps in unemployment, which would likely drive enrolments to Unitec. However, if the recession were large enough, it might force the government to consider additional austerity measures, which might include reductions in funding to tertiary institutions. A recession would also make it more difficult for us to fulfil our primary function of placing our graduates into employment.

The New Zealand Macro Story

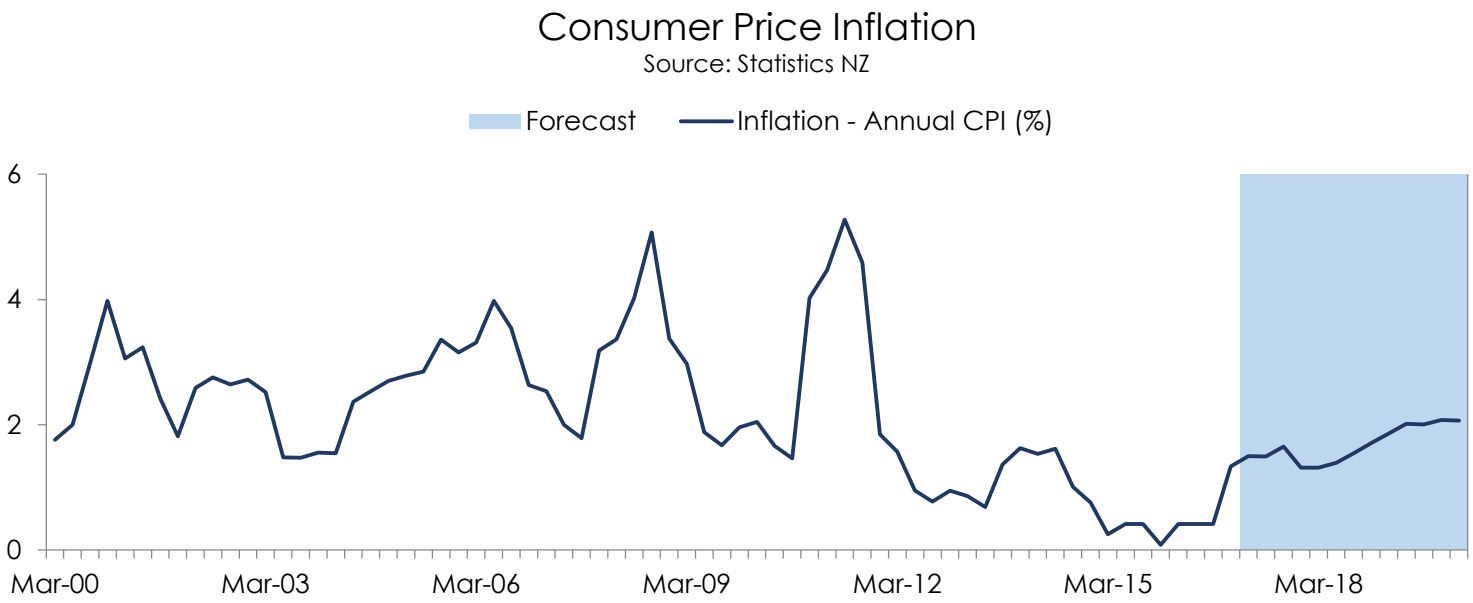
New Zealand's economy ended 2016 on a solid footing. Factors such as low interest rates, strong population growth on the back of net migration, high labour market participation rate, strength in the construction sector and high optimism among businesses spurred strong growth in investment and consumption. A strong domestic economy, the recovery in dairy prices, household confidence and a booming tourism sector mean the expectation is that 2017 will be the eighth consecutive year of growth. A record surge in net migration has lifted the population growth rate to above 2%, which is unusually high by the standards of a Western economy. The consensus is that the New Zealand economy is expected to expand by approximately 3.1% in 2017 and a similar amount in 2018.

This economic growth is likely to be driven more by domestic factors than global factors over the medium term. The construction sector will be focused on new-house builds and completing the earthquake rebuild and New Zealand's growing population will create a need for more infrastructure and commercial buildings. Our export industry is at risk, with key markets potentially being affected by global trade tariffs. However, in the short-term there should be some relief for commodity exporters due to a slight decline in the exchange rate which should provide some support in 2017.

For the past two years, inflation has been running below the Reserve Bank's target of 1-3%. However, a two-year high of 1.3% per annum was reached in the December 2016 quarter and inflation is expected to climb further to 1.5% p.a. by the end of 2017 and 2% p.a. by 2019.

Prices for housing and household utilities rose again in the December 2016 quarter, up 3.3% on the December 2015 quarter. Building costs were also up 6.5% over the same period and are expected to climb further over the next year due to capacity constraints in the construction sector. The biggest contributor to consumer price growth in December (as compared to September) was a 3.7% increase in transport prices. While this outpaced the growth in housing-related consumer prices over the same quarter, it was on the back of a year-long decline in transport-related costs.

Global inflation has also been low but seems to be picking up due to rising commodity prices. Global predictions for inflation in 2017 have recently been revised upwards, so we may see a jump in New Zealand inflation around mid-2018.



Adding to inflationary pressure is the jump in oil prices since November 2016, resulting in New Zealand petrol prices being at the highest level since July 2015. An increase in fuel prices is generally correlated with a downturn in consumer spending growth but the current increase has coincided with a time of high consumer confidence.

The tightening labour market has encouraged consumers to open their wallets for more discretionary spending. Household spending was up 1.6% over the September 2016 quarter, its biggest rise since 2009. Household spending on services and non-durable goods was a main driver of this increase (up 2.0%), with higher spending on travel, accommodation, restaurant meals, recreation and culture, groceries and alcohol. Households also spent more on durable goods such as clothing, furniture/furnishings and AV equipment.

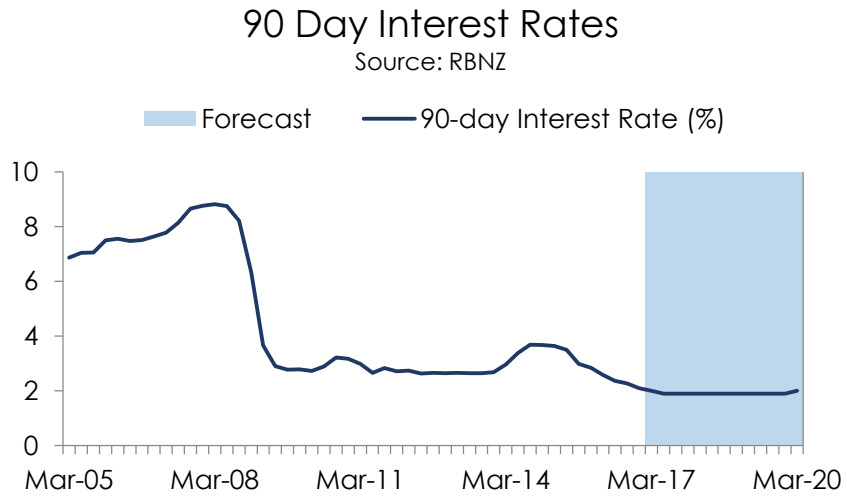
The Reserve Bank has indicated that the Official Cash Rate will remain unchanged at 1.75% for the foreseeable future, despite the recent and predicted increases in inflation. However, with the way the economy is tracking, it is expected that the OCR will be increased at some point. This is not expected to happen in the near future, with indications that the first hike will not happen before 2019, and will be a gradual increase. Inflation is anticipated to remain in the bottom part of the target band for much of the next two years even with the OCR at a record low, and GDP growth is also expected to moderate over the next few years.

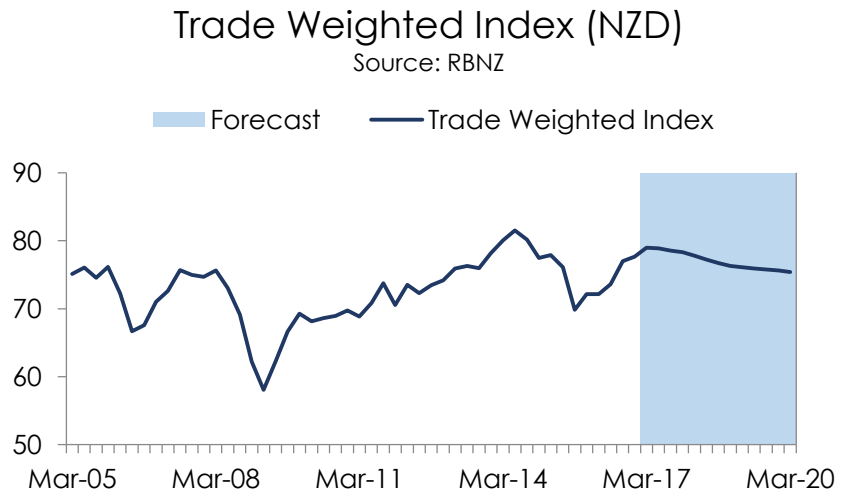
Although the OCR is likely to remain unchanged for some time, it is unlikely that the same stability will be seen in interest rates. Global term interest rates have been rising in response to expectations of increased fiscal stimulus in the US and tightening by the Fed. At the same time, New Zealand banks are facing higher funding costs as borrowing outpaces deposit growth. Combined, these conditions have seen floating mortgage rates rise by

around 10 basis points since November, with fixed-term rates up by around 25 to 50 basis points. On top of this, further upwards pressure on borrowing rates in New Zealand could result if the Fed tightens rates faster than expected, especially if fiscal spending results in a stronger than expected increase in US activity and inflation.

The Kiwi dollar has been somewhat buffeted by global forces in recent months, with the biggest effect coming from the US. The Fed hiked the funds rate in December. This caused the US dollar to strengthen, which led to a corresponding fall in the NZD/USD exchange rate. However, in early 2017 the NZD/USD largely recovered most of the decline. This may be short-lived, as market expectations for future Fed hikes have been brought forward, with a further two hikes expected this year. The RBNZ is unlikely to move on this, so the NZD/USD exchange rate is expected to ease back through 2017. Tightening global trade restrictions could have negative impacts on many Asian economies, which could also weigh on the New Zealand dollar.

The combination of these factors, and a predicted easing off of growth in New Zealand means the Kiwi is expected to lose some ground over 2018.



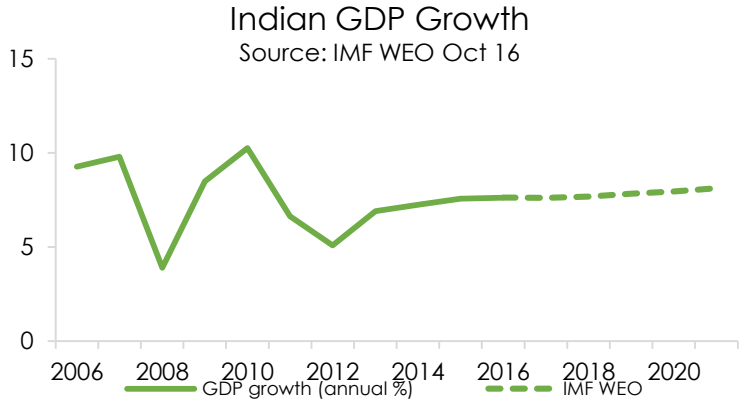


The Global Economy

The outlook for the global economy is positive, with growth over the next two years expected to be up slightly to around 3.5%. Inflation is also trending up slightly. However, there are several areas of uncertainty: (1) the path the Trump administration plans to take for US fiscal and trade policy, (2) Brexit, and (3) political uncertainty in Europe, with several members going to the polls this year. Financial markets rallied initially after the recent US election on the back of talk about large-scale infrastructure spending and tax cuts predicting stronger US growth and inflation. However, this rally has faded somewhat due to uncertainty about whether such policies will be put into action, and international response to discussion of global trade tariffs. Despite a current drop in the US dollar, US term interest rates have maintained their post-election gains which has translated into higher term interest rates around the world, including in New Zealand.

For New Zealand, the biggest risks stemming from Donald Trump's presidency are via the trade-channel. If the US imposes trade tariffs of up to 45% on Chinese and Mexican imports this would have serious repercussions for the global economy. There are substantial risks for the Chinese economy from the global trade environment. China's foreign reserves and growth outlook would be under considerable pressure if large tariffs were placed on their exports. A drop in exports from China to the US would see Chinese economic growth slow more sharply and, in turn, lead to weaker Chinese demand for imports. The drop-off in Chinese demand would be realised in terms of both inputs into the production process, as well as other imports such as food, with weaker growth in Chinese incomes undermining broader spending power across the economy. This is likely to have a flow-on effect to New Zealand. However, China is not quite as reliant on trade as it has been in the past. The economy has been undergoing a major transformation resulting in a rebalance from industry to services which may offer some level of protection.

China's economic growth is already in a long-term slowing trend, having dropped from 11% growth in 2010 to 6.7% in 2016, but remains a major driver of world economic developments. Growth is predicted to drop further, to less than 6% per annum by 2019. However, economic reforms in China that are fuelling an increase in consumption-led rather than export-led growth mean more households are transitioning into a bigger and richer middle-class. This will support demand for New Zealand's consumer-oriented exports. Combined with an increased focus on higher education, this upward trend in household wealth should aid continued growth in the number of Chinese students coming to New Zealand to study if international education maintains its appeal.

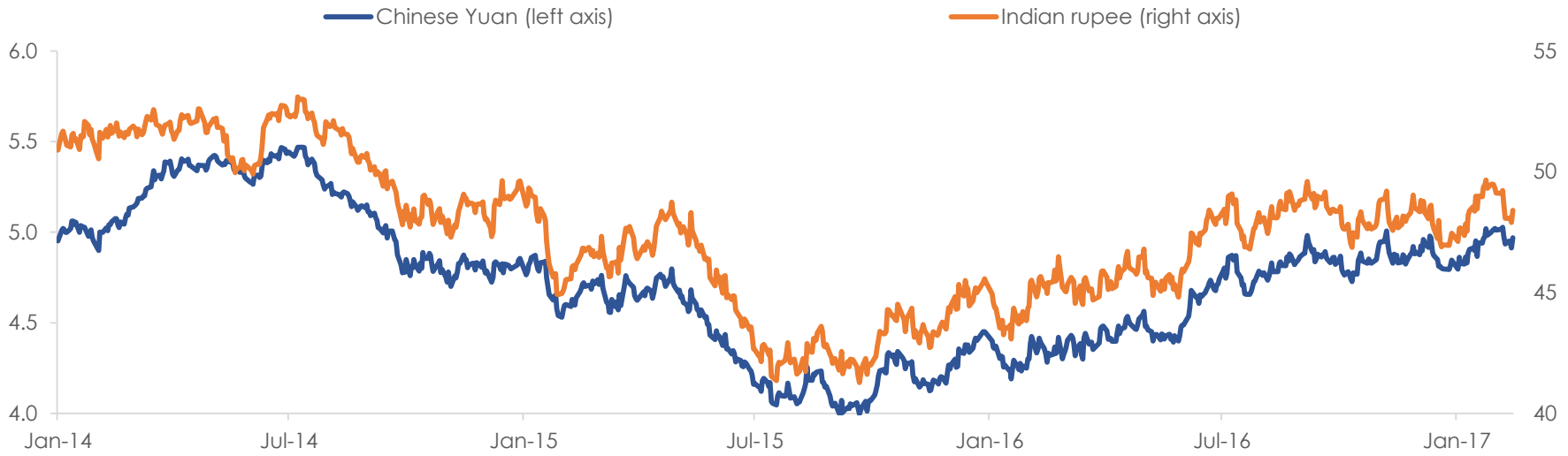


India is another key source of international students. In comparison to other emerging economies, the Indian economy remains one of the fastest growing. India's recent monetary reform has affected economic activity in the short-term, leading to a lower than expected economic growth in 2016 (6.8%). However, growth is expected to pick up in 2017, with the Indian economy projected to grow more than 7% a year over the medium term according to the IMF.

The strength of the New Zealand dollar is one factor affecting the attractiveness of New Zealand institutes to international students. The Kiwi dollar has been persistently strong and continued rising against both the Yuan and Rupee in 2016. The rapid recovery in dairy prices since July 2016 has helped boost the exchange rate. However, a gradual depreciation in the New Zealand dollar is forecast over the next few years due to improving economic prospects and tightening monetary policies overseas. This depreciation may help drive an increase in international student numbers.

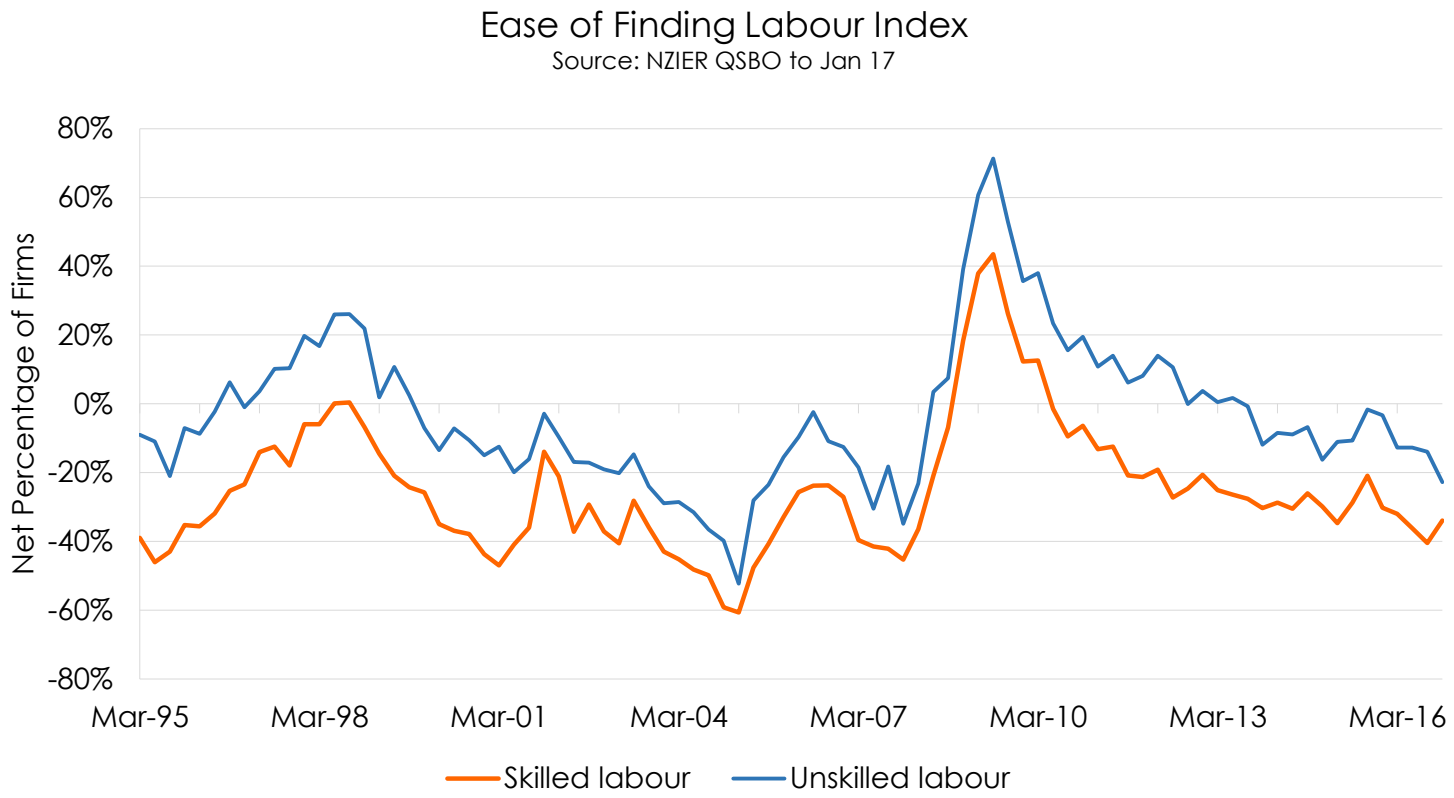
NZD vs Rupee/Yuan

Source: RBNZ



Employment and the Job Market

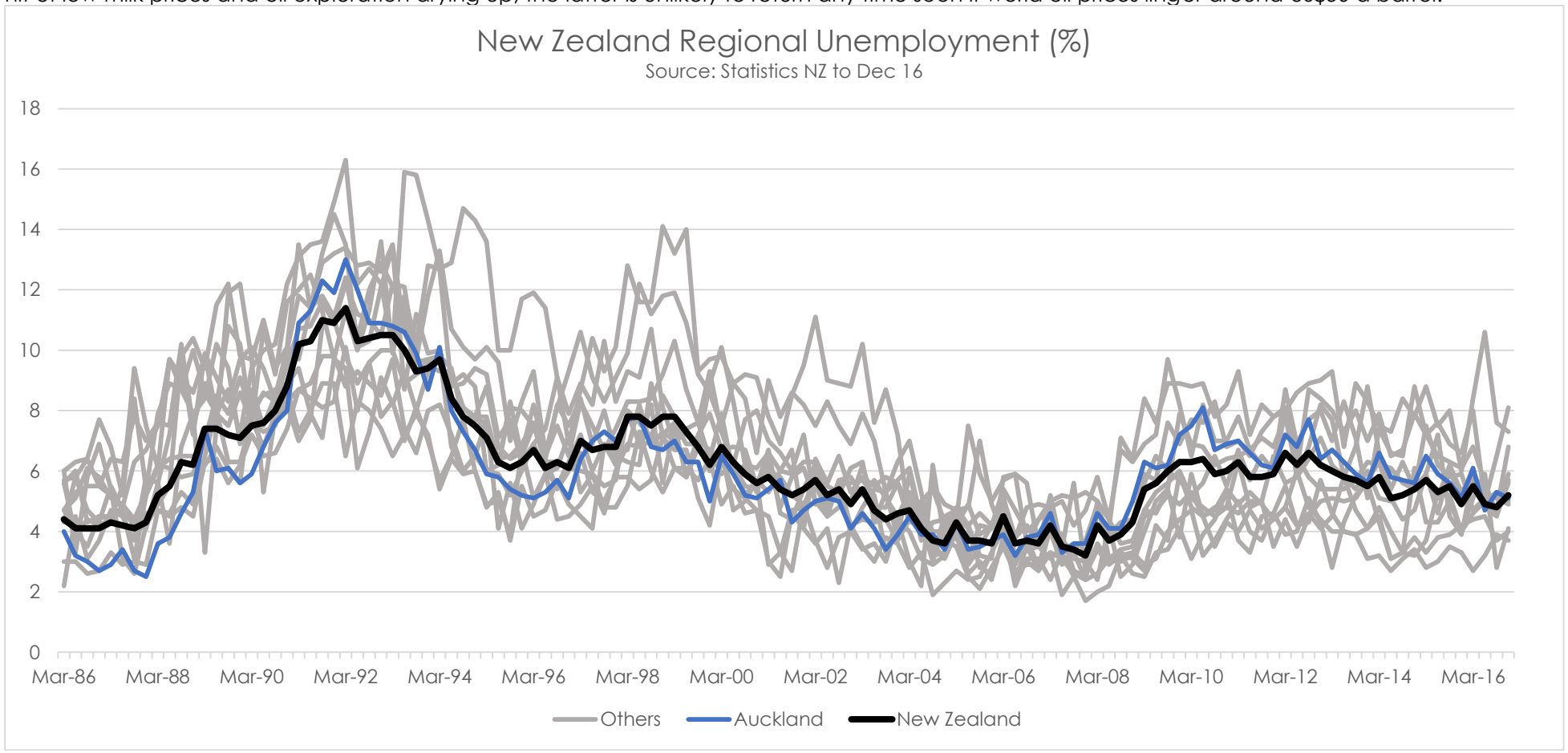
Underlying growth in employment in New Zealand has been very strong. Current estimates are that job numbers will have increased 3.9% for the year ended March 2017, the fastest growth since 1996, which may impact on Unitec domestic student enrolments. The ease of finding labour has declined since the Global Financial Crisis. Finding skilled labour is now one of the biggest problems facing New Zealand businesses, particularly SMEs.



The seasonally adjusted labour force participation rate continues to grow, rising to 70.5% in the December 2016 quarter. The employment rate also rose to 66.9%. This is the fifth consecutive quarter where growth in employment has exceeded growth in the working age population. In the same period, the seasonally adjusted unemployment rate rose to 5.2%, a result of an expansion in the labour market. However, Infometrics forecast the unemployment rate to track downwards over the next 2.5 years, accompanied by higher workforce participation than previously anticipated.

Despite the increase in unemployment rate, the labour market has been tightening across the board, with capacity constraints now spreading well beyond the construction and tourism sectors. This is likely to result in increased wage pressures as companies need to pay more to attract and retain staff. This will result in a slightly faster pick-up in labour costs than previously anticipated.

Within the labour market there are noteworthy regional differences. Auckland and the Bay of Plenty, the regions that have experienced the strongest population growth, have also seen the strongest improvement in their jobless rates. In contrast, unemployment has been flat or even rising in the last couple of years in the more dairy-focused regions such as the Waikato, Canterbury and Southland. Taranaki has suffered the most through the double hit of low milk prices and oil exploration drying up; the latter is unlikely to return any time soon if world oil prices linger around US$50 a barrel.



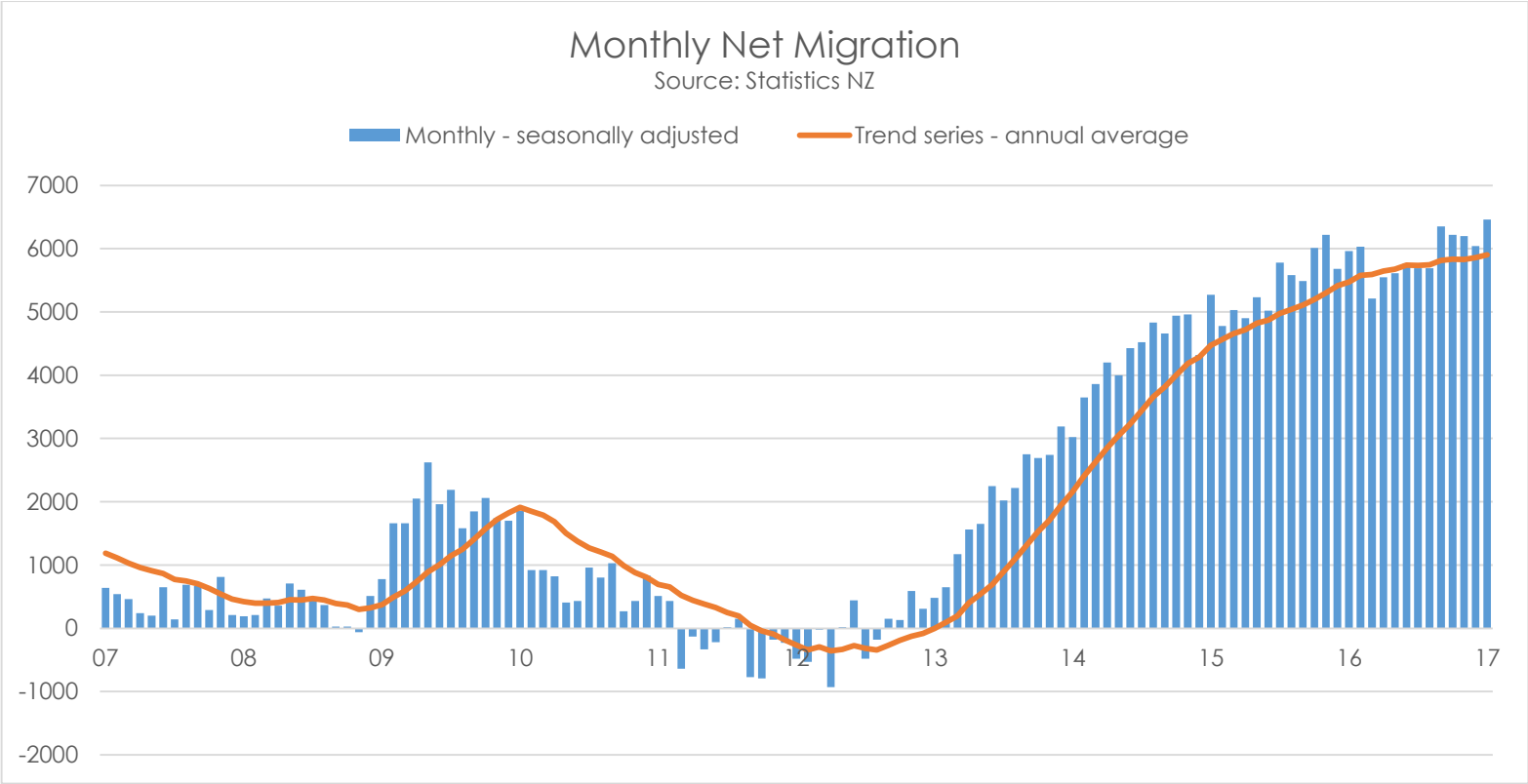
Part-time employment fell by 2.2% over the last quarter, while full-time employment rate rose by 1.6%. Typically, a shift from part-time to full-time employment indicates the early stages of business expansion, as businesses tend to offer their existing part-time employees more hours before looking to the wider labour force. Given that construction and tourism-related services have already gone through a significant expansion period, it suggests that economic growth has become more broadly based. Employment in construction, and accommodation and food services continued to expand, but at a slower pace than previous quarters, rising by 7.5% p.a. and 7.0% p.a. respectively in the December quarter.

Employment in the professional, scientific, technical, administration, and support services, which accounted for 42% of all new job creation, rose by 10% p.a. in the December quarter, the fastest rate of growth the industry has experienced since the mid-1990s. Employment in health and social assistance also rose at an above average rate of 4.2% in the December quarter. There is evidence emerging of tightness in the education and training sector, with wages in the December quarter increasing by 4.2% p.a., well above the four-year average of 2.4% p.a. Anecdotal reports suggest that that finding skilled teachers is becoming increasing difficult.

Overall wage growth as recorded by the Quarterly Employment Survey was very weak, at 1.3% p.a., due to increased employment in lower-paid jobs in healthcare, accommodation, and food services. However, the labour cost index showed that labour costs growth was steady after adjusting for compositional changes in the workforce. The minimum wage and training wage will be raised by a respective 50c and 40c in April 2017, which will put further pressure on wages in industries with high proportions of low-waged workers.

International Migration

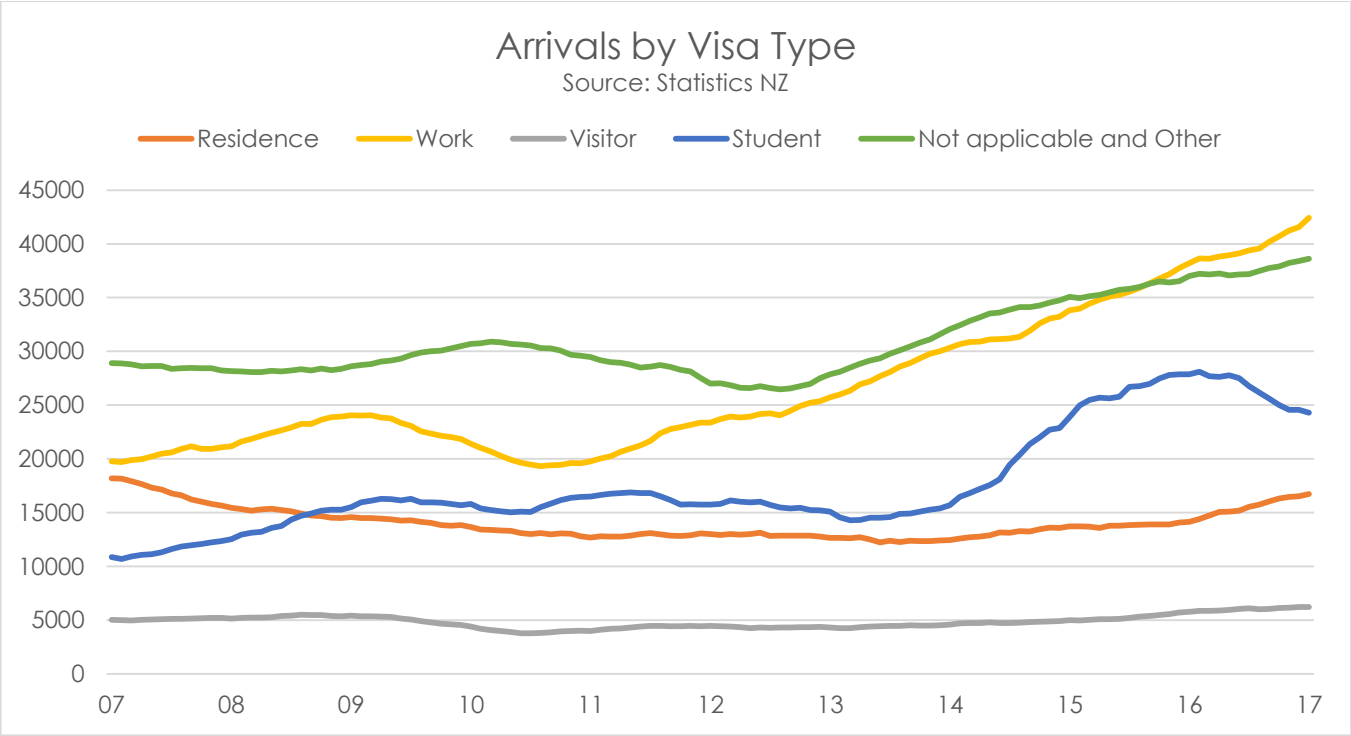
Annual net migration began 2017 on a positive note, rising to 71,305 in January from about 65,000 a year earlier. Net migration increased by a seasonally adjusted 3.6%, the strongest rise in 18-months. This strength was due to permanent and long term arrivals climbing to a record 11,370 people in January, highlighting the attractiveness of New Zealand's labour market and political and economic uncertainty overseas.



In the three months to January, the number of people departing the country rose by 7.9% p.a. The increase in departures may reflect the strong number of arrivals on student and working visas over the last few years who are now returning home. In contrast, departures of New Zealand citizens rose by only 0.6% p.a. in January, due to strong domestic employment opportunities and positive economic conditions.

Arrivals on working visas rose by 17% p.a. in the three months to January, compared to last year, and made up 31% of all arrivals. This influx of workers to New Zealand is encouraging given that our labour market is becoming increasingly tight across a broader range of industries.

The rise and subsequent decline in arrivals on student visas has gained much media attention since the rule changes in late 2013 allowed students to work more hours in paid employment while studying here and English language testing requirements were relaxed. The government's move in 2015 to tighten those language testing requirements again meant that the number of people arriving on student visas began to fall early in 2016. In the December quarter of 2016, the number of people arriving on student visas was 22% lower than in December 2015.



However, the number of approved student applications was still elevated at around 103,000 people for the 2016 year – and the number of declined applicants has shrunk since the more stringent English language requirements came back into force, with pre-screening of applications resulting in fewer being declined. Overall student arrivals are still expected to be higher than in earlier years owing to the global lift in the number of students studying overseas

The most significant contributors to the annual rise in migration were arrivals from South Africa and the United Kingdom, which rose by 70% p.a. and 21% p.a. respectively. On the other side of the ledger were arrivals from Asia, which fell by 5.2% p.a. in January, led by a 28% p.a. fall in people arriving from India. The recent pullback in international student numbers is a likely explanation for this fall, as Indian student numbers rose significantly during 2014 and 2015 and are currently our second largest market for international students.

Infometrics expect annual net migration to continue to rise over the first half of this year. Although tighter resident visa requirements, which came into force in October last year, are expected to soften arrival numbers going forward, they believe this effect will be outweighed by an increase in work visa arrivals.

The Housing Market

The solid outlook for New Zealand's economic growth masks several risks. One such risk is that posed on the housing market by an increase in interest rates. In particular, those holding mortgages in the Auckland market are especially vulnerable to even moderate interest rate increases. House prices in Auckland have now risen to a level where they require 13.3 years of personal income to repay, despite mortgage rates being at the lowest level. Servicing this debt now represents a much higher proportion of income than in 2007.

Wholesale interest rates are predicted to gradually start rising over the next year or two and even a modest increase of 1-2 percentage points in interest rates would be problematic for many mortgage holders in Auckland, as well as further locking new buyers out of the market.

A consequence of an increase in forced sales could be a drop in house prices. However, the extent and timing of this is hard to predict. Given the magnitude of under-supply of housing in Auckland, and the additional pressure put on the Auckland market by net migration, house prices in Auckland could continue to rise substantially. However, outside of the Auckland market there could be a different story, with lower demand in some regions not justifying current high prices. Infometrics believe that net migration and population growth in these regions will be easing at the same time as interest rates are starting to rise which could be the catalyst for a housing market correction.

An additional consequence of a declining growth in house prices is the potential for a corresponding decline in consumer spending. In New Zealand there has traditionally been a strong correlation between the growth-rate of house prices and rate of household spending. If house price growth slows, the expectation is that growth in consumer spending will also slow if the same relationship holds true.

The IMF has highlighted risks around New Zealand's rising household debt levels – the ratio of debt-to-incomes has pushed above its pre-Global Financial Crisis high over the last 18 months. The increasing debt is clearly linked to soaring house prices, so the overall net wealth position of households appears solid enough. But as the IMF pointed out, a negative shock such as a sharp slowdown in Chinese economic growth, or anything else that caused a significant correction in house prices, would leave households' balance sheets looking much less healthy.

Westpac economists predict that if spending growth does indeed slow then upward pressure on domestic prices could also be lower than predicted which would make it hard to reach the Reserve Bank of New Zealand's overall inflation target. To manage this situation, the RBNZ will have to be very mindful of the timing and extent of interest rate increases.

The Politico-Economic Landscape

The politico-economic landscape in New Zealand has significantly changed with the resignation of John Key in December 2016 and the subsequent appointment of Bill English as Prime Minister. Looking ahead to the election in September 2017, the uncertainty created by this change in leadership is likely to result in a much closer race between National and Labour/Greens than previously anticipated. A tight race will also mean that both sides will be forced to make bigger promises in order to obtain the vote, which may have significant economic effects.

National may well need additional coalition partners to form a majority government this election if the number of seats held by their supporting parties is lower than it has been in previous elections. A similar scenario applies to the Labour/Green alliance which opens the way for minor parties to have more influence and demand more concessions. In terms of economic policy, this means that minor parties such as NZ First will have an increased influence. The areas where the National party appears most vulnerable are migration, housing affordability, foreign investment in New Zealand and the age of eligibility of NZ superannuation. There has already been some policy movement in many of these areas, notably Bill English's recent announcement that the age of superannuation eligibility will increase to 67, and these are core platform areas that Winston Peters will campaign on.

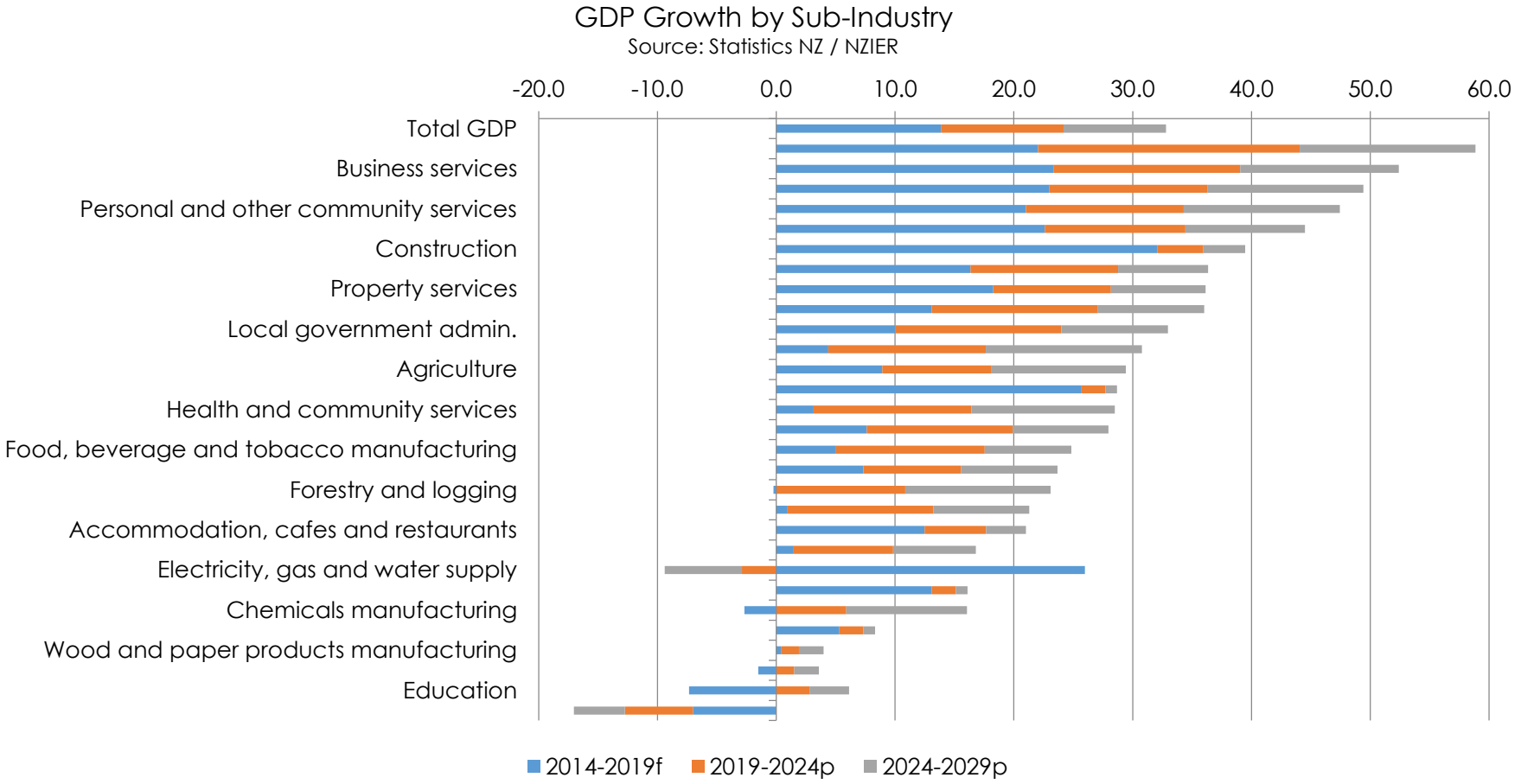
There is also uncertainty around New Zealand's monetary policy framework in the lead-up to the next election. Labour may well add a focus on employment to the Reserve Bank's goals, and if NZ First holds the balance of power after the election they could demand changes to monetary policy as a condition of support. The planned resignation of the RBNZ Governor in September, coinciding with the election, adds another source of uncertainty for monetary policy. The new appointment will not be made until after the election, which opens the door to appoint a candidate open to the views of the incoming government.

According to Westpac economists, regardless of who wins power, the scope for additional spending promises is greater than it has been for the last decade due to the operating balance back in surplus. Labour has indicated it would favour more social spending, a position supported by the Greens. National has long favoured personal tax cuts, but has raised the possibility of a family assistance package. The government also runs a sizeable capital expenditure budget, covering areas such as roads, hospitals, schools and defence. The capital spending allowance has already been increased twice in the last year, in recognition that the nation's infrastructure needs to keep up with its rapidly growing population.

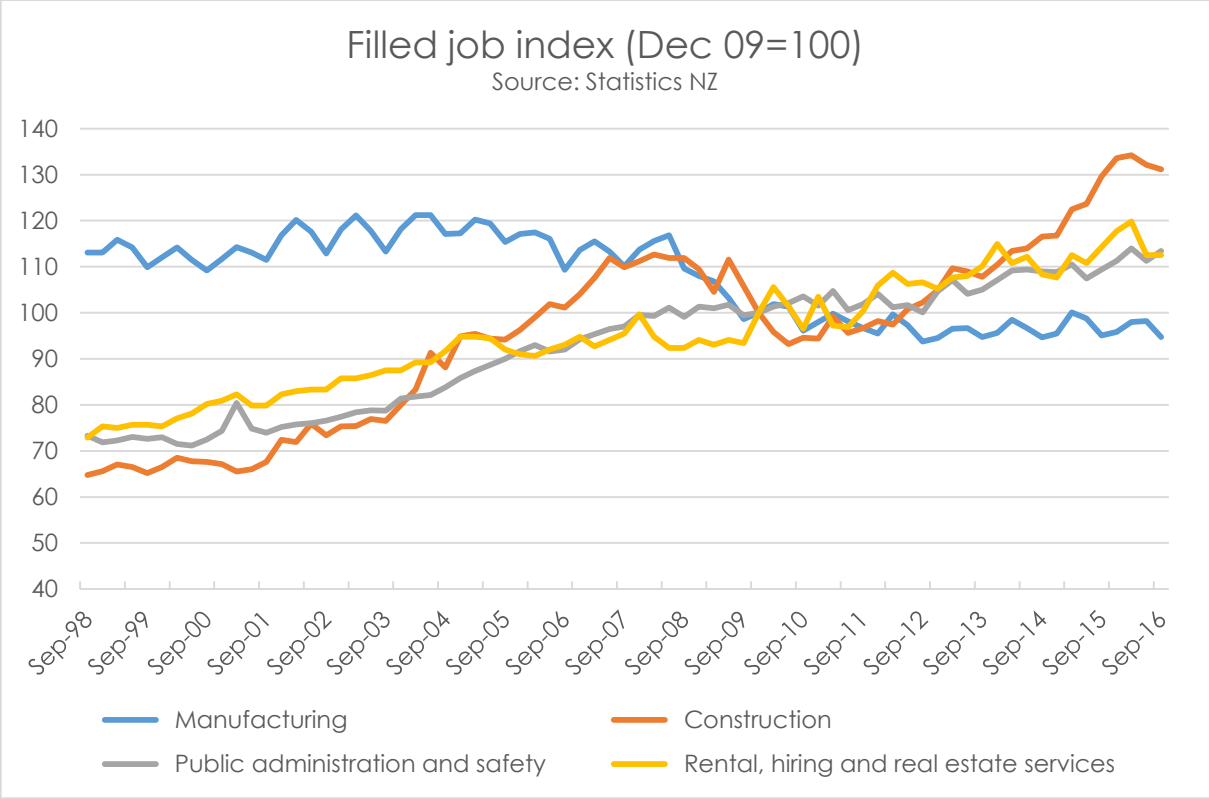
Increased capital spending is projected in the medium term according to the Treasury's Half Year Economic and Fiscal Update published in December 2016. The update highlights a significant lift in capital expenditure over the next five years compared to the last five years, including increased spending on infrastructure, education and defence. With net migration and population projected to continue over the coming years, it is likely that a further boost to spending in this area will be needed to meet the physical and social infrastructure needs of a rising population.

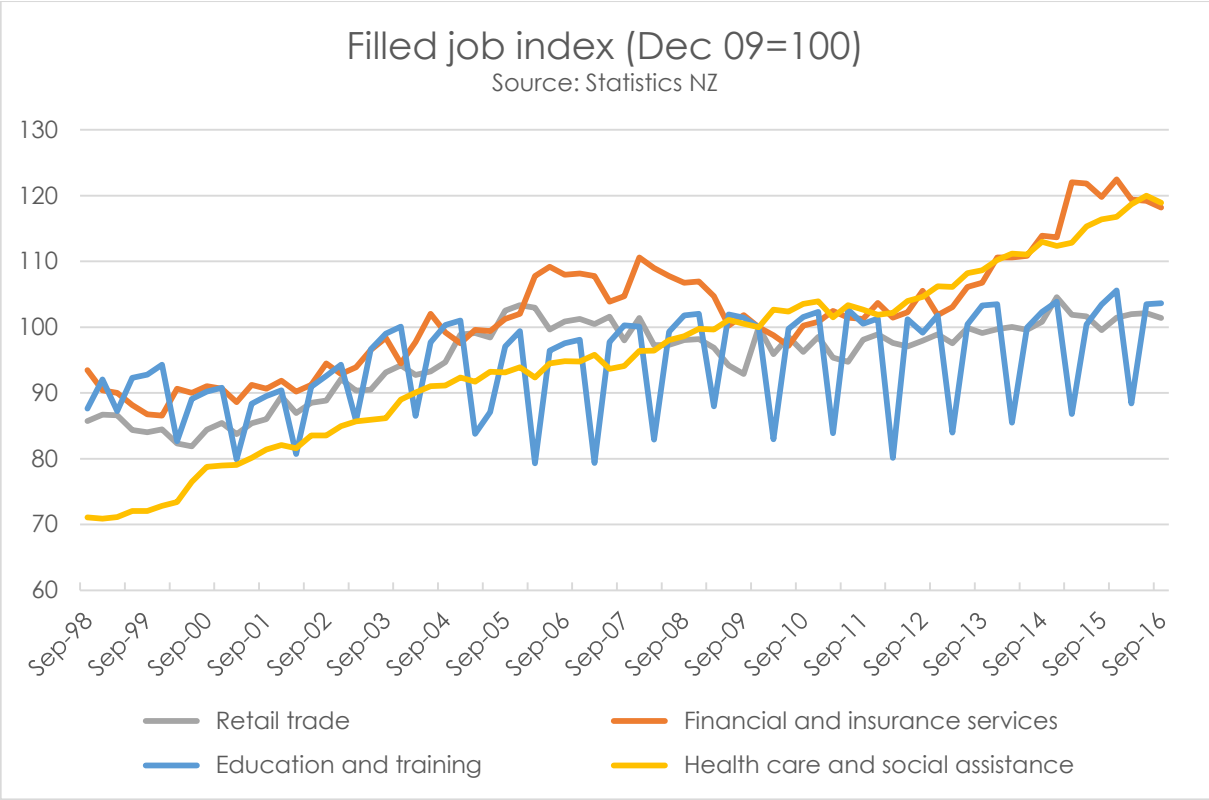
Industry Trends

Growth in the construction sector will be supported by population growth - more housing and infrastructure is required as the population expands. This growth is also fuelling growth in the service sectors and in construction-related manufacturing. Tourism has also been in a strong growth state. Visitor arrivals from China have been at all-time highs, supported by the depreciation of the New Zealand dollar in the middle of 2015 and the gradual loosening of travel restrictions in China, leading to robust growth in travel services exports. A shift in travel preferences, significantly slower income growth and/or heightened uncertainty abroad pose risks to the outlook for both the tourism and education services sectors.

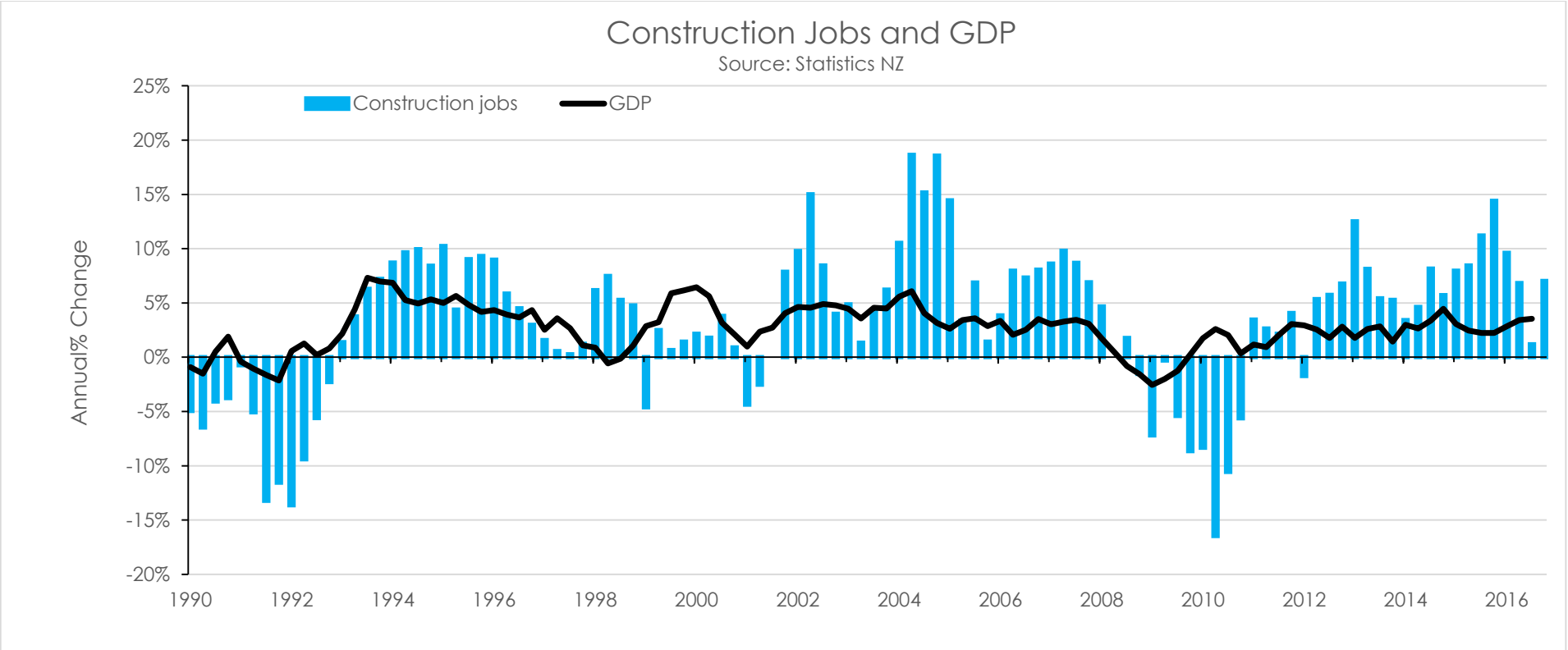


The graphs below show the pattern of job growth in various industry sectors. The graphs have been indexed to 100 at December. Job growth has been increasing for construction and related service industries, including financial services, public administration, safety, rental and real estate and healthcare.





Employment in the construction sector can be quite volatile. Construction employment tends to grow rapidly when the economy is doing well, but reduces jobs faster than other sectors in times of recession.



Canterbury has seen an increase in unemployment from very low levels in recent quarters, as earthquake-related building work has passed its peak levels and moved gradually into its wind-down phase. New home building has slowed markedly, while commercial construction is still ramping up and will take several more years to complete. However, the Kaikoura earthquake last November has created a further need for repairs and rebuilding across North Canterbury, the upper South Island and central Wellington. This will add to the capacity constraints on the building industry, but is unlikely to be a dominant macroeconomic theme in the way that the Canterbury earthquakes were.

There has also been a strong lift in demand for more buildings in other parts of the country, particularly across the North Island. Nowhere is this more prominent than in Auckland. The slow rate of building in the years following the Global Financial Crisis, combined with an unexpected surge in population growth, has led to an estimated shortage of 25,000-35,000 homes in Auckland.

Addressing this shortage will not be easy. The building industry is already running into capacity constraints; labour shortages and build quality are growing issues. While the pace of building has been picking up, it remains inadequate – in fact, building consents have actually fallen again in recent months. Now that the city's Unitary Plan, which allows for more and different kinds of homes to be built, has cleared its last legal hurdles, the pace of building should pick up again by mid-year. But as it currently stands, the housing shortage is likely to get worse before it gets better. There is also a

substantial pipeline of building work across the other main centres in the North Island, which have also seen strong population growth but have had the capacity to ramp up homebuilding. While this does offer a potential escape valve for Auckland's housing pressures, the relative size of Auckland means there is a limit to what the other main centres could reasonably absorb.

This should have a positive effect on enrolments in construction and construction-related programmes as the labour shortage in the construction sector drives an increased need for training and re-training. On the flip side, a shortage of labour will drive wages up which could cause challenges for Unitec in retaining teaching staff when jobs outside the education sector are likely to be better remunerated.

The outlook for the dairy sector is looking brighter, with global markets having finally found some balance. Global dairy prices rose 55% over the second half of last year, and have largely held those gains so far this year and current season milk prices pay-outs are expected to be slightly above the average of the past decade. This should improve job prospects in the rural regions.

Reserve Bank data shows that dairy farming debt expanded by 9.2% over the year to June 2015 (well above the 3.9% increase in other agricultural debt) and a further 6.2% over the following 12 months. The increase in dairy-related debt over the last couple of years means that, even with Fonterra's pay-out surging to over $6.50/kg this season, farmers will still be cautious with their spending and concentrate on reducing their debt levels instead. It is likely to be early 2018, once the pay-out for next season is relatively secure, that spending by dairy farmers starts to pick up more significantly.

Other commodity exporters are also enjoying better conditions. Chinese demand has strengthened, with log prices boosted as a result, while tightness in global beef and lamb supply continues to underpin meat prices. However, exchange rate movements have undermined NZ dollar returns, especially for lamb exports to the UK. Brexit is casting further clouds over the outlook for OK demand. Horticulture continues to perform strongly, with apple and kiwifruit exporters reaping the rewards of productivity growth and product innovation that has been particularly successful meeting preferences in the Asian market. But despite the positive start, Infometrics expect commodity prices across the spectrum to lose a little steam this year. Tight supply conditions for some commodities are expected to ease, while the risk of more stringent trade barriers casts a cloud over demand. And moving into 2018, Chinese growth is expected to slow.

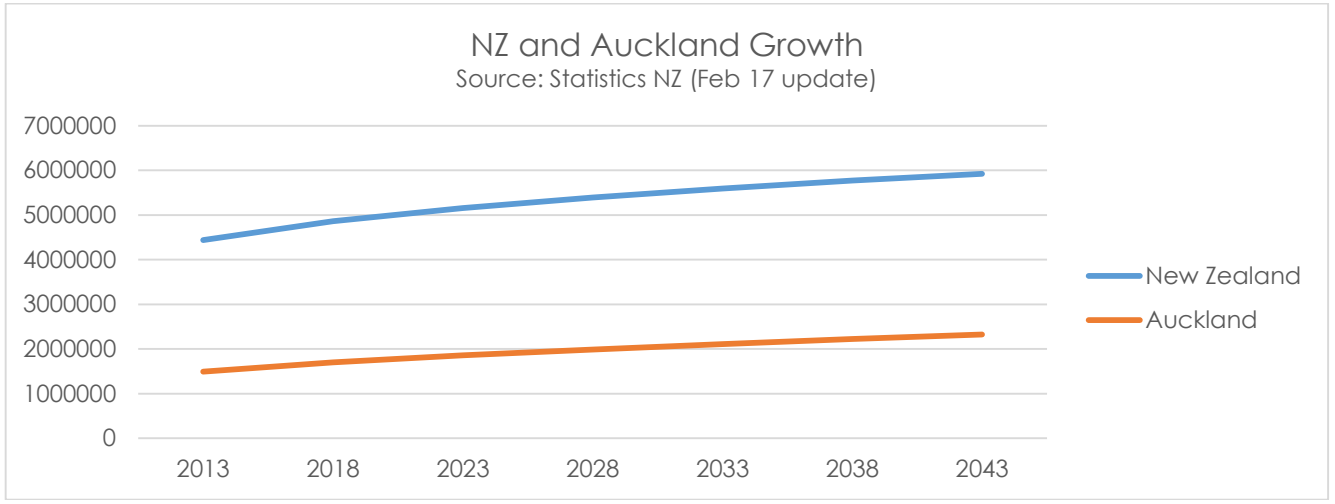
Social

Key Issues

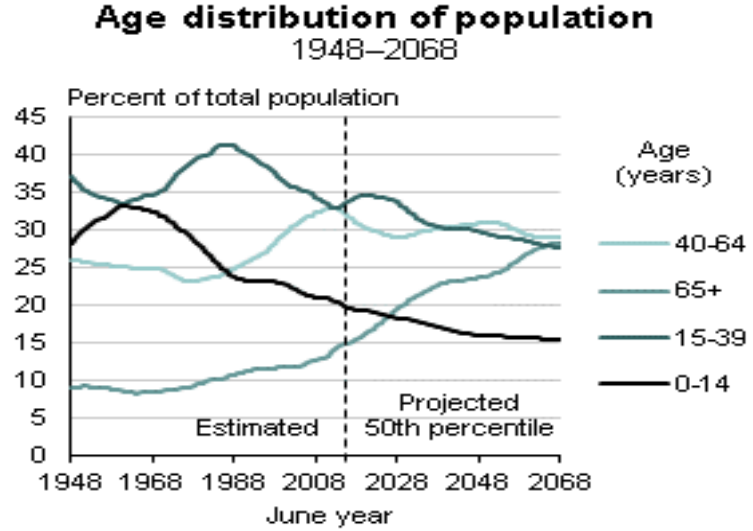
1) **New Zealand Demography:** New Zealand will continue to grow relatively rapidly over the next two decades. Its population will become older and more ethnically diverse.
   a) *What does this mean for Unitec?* While there will be more potential domestic students, simply due to population increases, many of these will be in groups traditionally under-represented in tertiary education: older people, Maori, and Pacific. There may thus be opportunities to widen our catchments to better encompass these groups. Pedagogy and support services may in turn need to evolve to adapt to these different groups.
2) **Auckland Demography:** Auckland will follow broader New Zealand trends, only more rapidly, growing faster and with greater ethnic diversity. Much of this growth will be either in the very centre, or on the urban fringe (a donut pattern). New transport links, such as the City Rail Link and Waterview Extension, may alter movement patterns.
   a) *What does this mean for Unitec?* Auckland's traditional catchment is west Auckland, where there will be some growth, but mostly at a distance. Significant growth in the central suburbs due to intensification, coupled with new transport linkages, may make the Unitec Mt Albert campus increasingly accessible to a greater number of potential students. However, this would require competing with the existing central institutions (UoA and AUT).
3) **Housing Affordability:** Auckland housing is becoming increasingly unaffordable – while rent prices have lagged behind sale prices, they are now reaching levels unaffordable to some students.
   a) *What does this mean for Unitec?* If rental prices continue to climb, students may increasingly vote with their feet and relocate to smaller regional centres, where student-type work is easily available, but the cost of living is reduced. There were some indications of this in the 2016 dip in EFTS across three Auckland institutions. Unitec might need to consider the provision of additional student accommodation in the future.
4) **Financial Pressures on Students:** Recent surveys, both nationally and at Unitec, indicate that students perceive significant financial pressures. These pressures can impact on decisions to continue studying (or take up studying in the first place).
   a) *What does this mean for Unitec?* The greatest direct costs facing students are fees and housing; as noted above, student housing is one possibility. In terms of fees, there may be a need to explore scholarships, particularly for priority groups. Other options might include expanding those support services that enable financially-constrained students to study here, such as the childcare centre.
5) **Our Students:** Student and graduate NPS are trending downwards, largely due to general perceptions of disorganisation and chaos, some linked to the construction and changes associated with Transformation. Recent internal research has indicated that the traditional stereotype of 18 year-old, socially active school-leavers does not apply significantly to our student body, but that there are instead five distinct segments.
   a) *What does this mean for Unitec?* If NPS continues to decline, future enrolments are likely to follow, as word of mouth is a key information source. The diversity of the Unitec student population indicates that a generic approach to support services, timetabling, and marketing is unlikely to be optimal, and as such a greater degree of targeting might be beneficial.

New Zealand Demography

New Zealand's current population is 4.77 million (March 2017). Under Statistics NZ's medium growth projection, this will grow to 5.3 million in 2028, 5.7 million in 2038, then slow a little to hit 5.9 million in 2043. New Zealand's population growth will slow as the population ages and the gap between the number of births and deaths narrows.

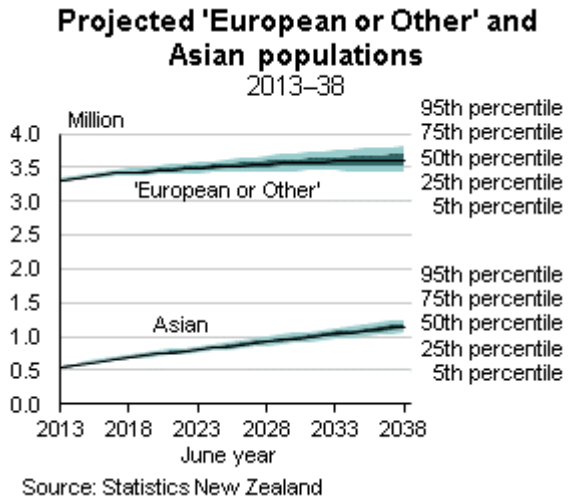


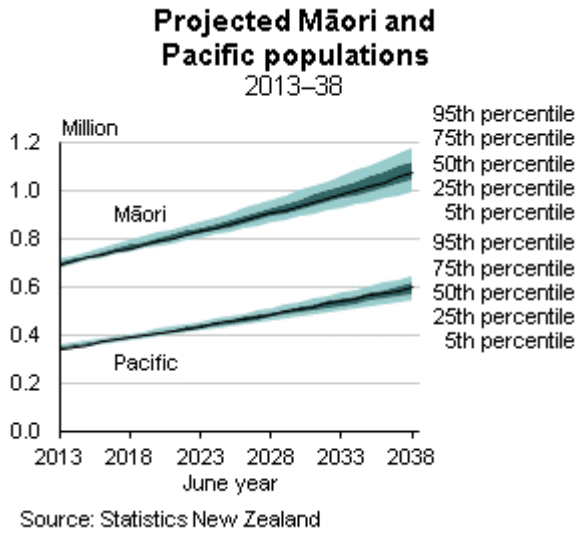
An increasing percentage of the population will be aged 65+, while the proportion in the 0-14 and 14-39 age bands will decrease. This is due to increases in life expectancy and changes in the birth rate.



Approximately 15% of the current population is over 65; this is expected to increase to 21% by 2032, and 24% by 2043. The National Infrastructure Unit's *Thirty Year New Zealand Infrastructure* Plan calculates that New Zealand's median age will increase from 32.8 years in 1996 to 42.7 years by 2043. Māori, Asian, and Pacific populations will continue to grow faster than New Zealand's population overall, and will thus become a greater proportion of the overall population. By the mid-2020s, the Asian population is likely to be larger than the Maori population. In terms of future ethnic mix:

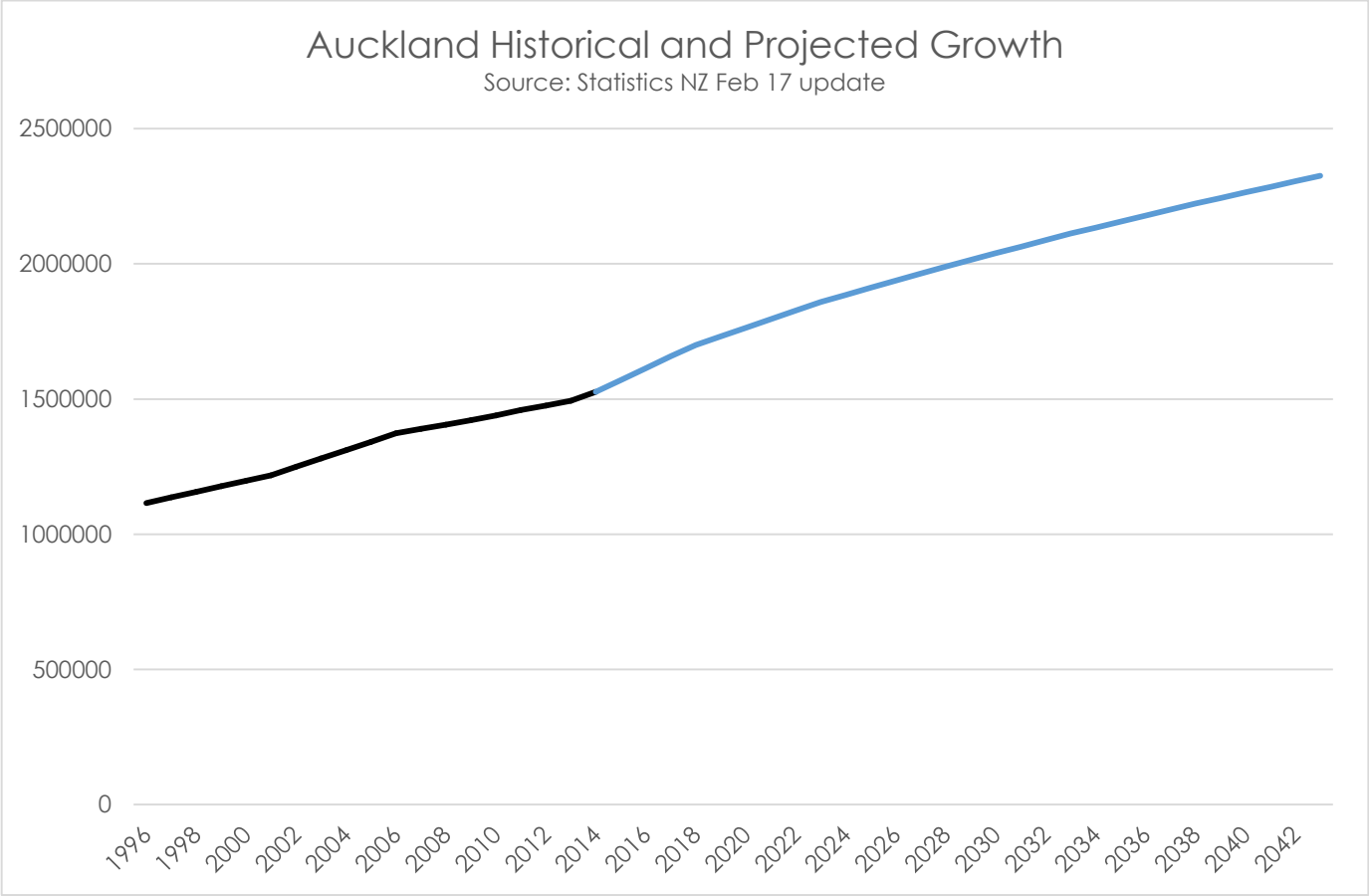
- European/Other will increase to 3.43–3.62 million in 2025 and to 3.43–3.82 million in 2038
- Māori will increase to 0.83–0.91 million in 2025 and to 1.00–1.18 million in 2038
- Asian will increase to 0.81–0.92 million in 2025 and to 1.06–1.26 million in 2038
- Pacific will increase to 0.44–0.48 million in 2025 and to 0.54–0.65 million in 2038



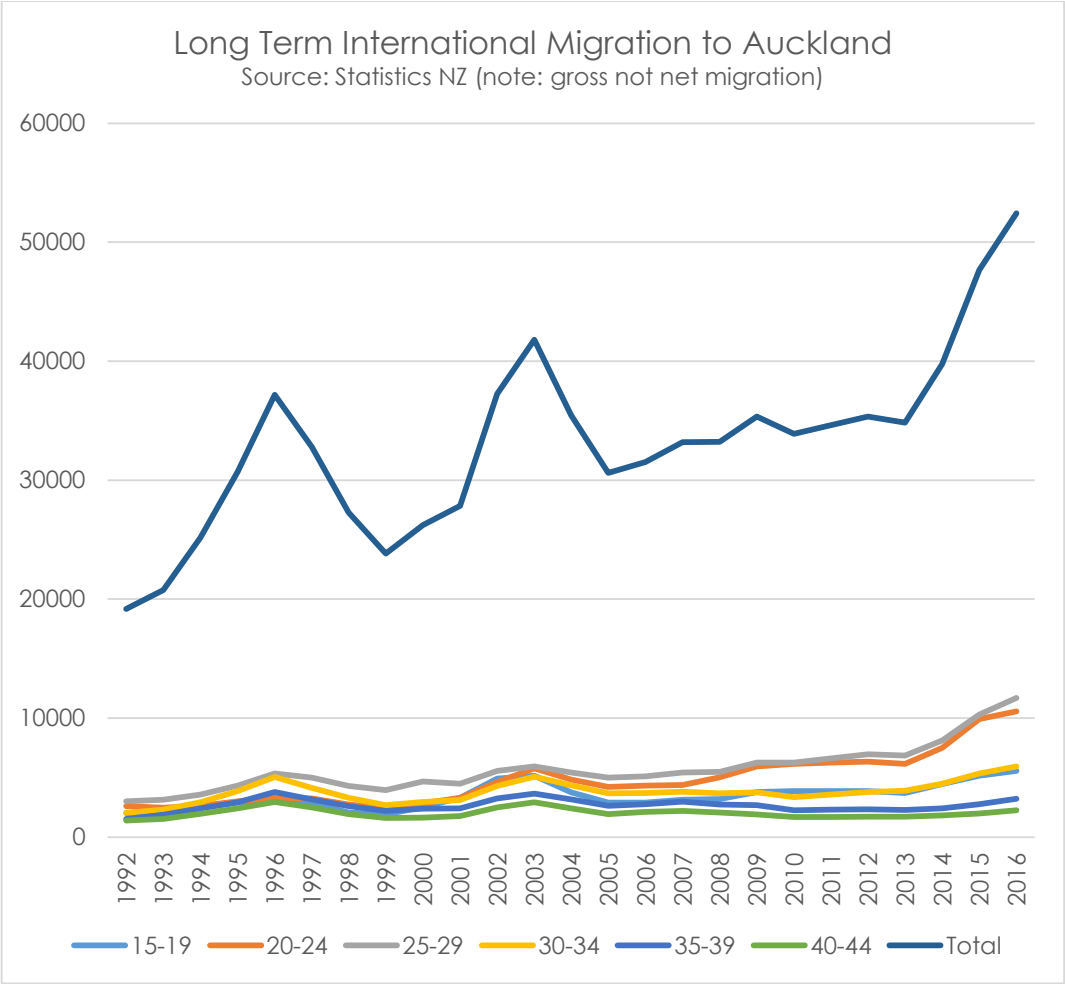


Auckland Demography

Auckland's population may reach 2 million by 2029, which is two years quicker than predicted in Statistics NZ's previous set of projections. By then, the Auckland region will be home to 38% of New Zealand's population, compared with 34% in 2011. By 2043, Auckland could make up 40% of New Zealand's population.

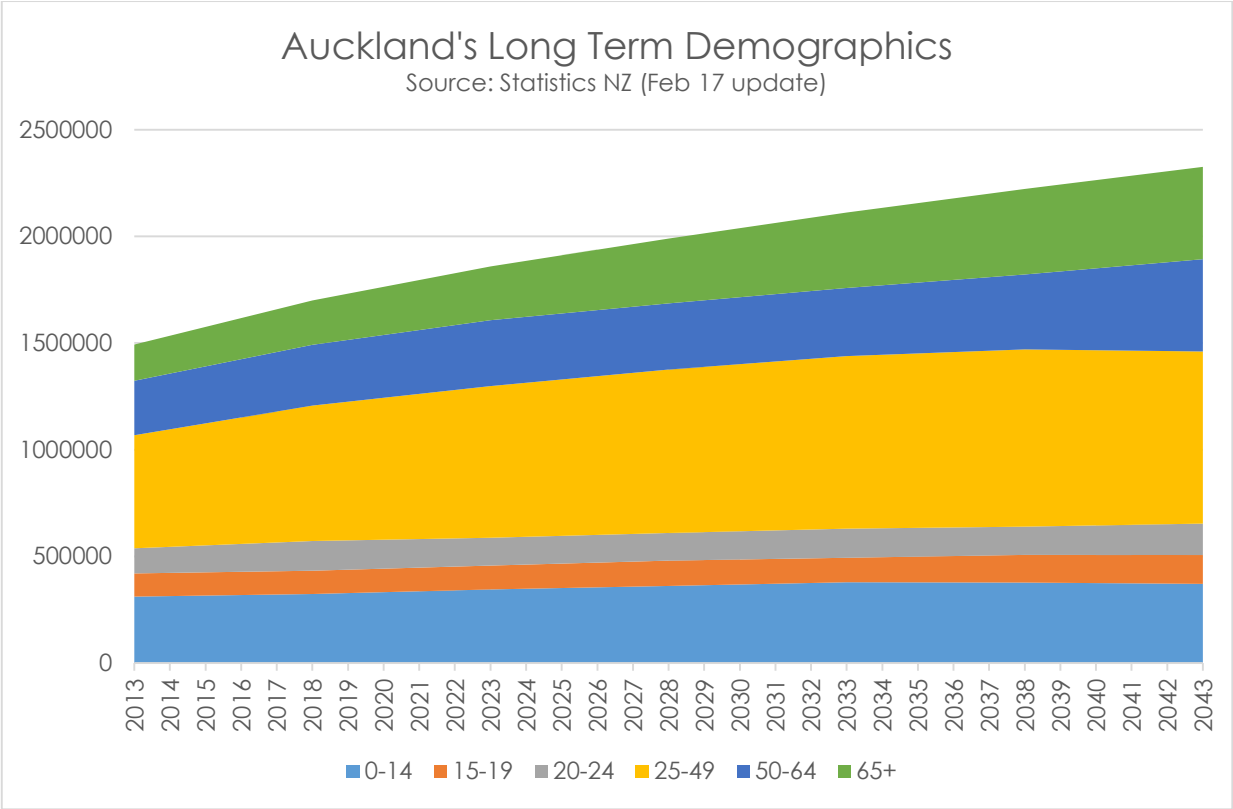


Natural increase (births less deaths) is projected to account for three-fifths of Auckland's growth, and net migration (arrivals less departures) for the remaining two-fifths. The medium projection assumes average net migration of 16,000 a year during 2014–18, and 8,000 a year thereafter. In recent years there has been a substantial increase in migrants in younger age categories, which may in turn affect subsequent birth rates.

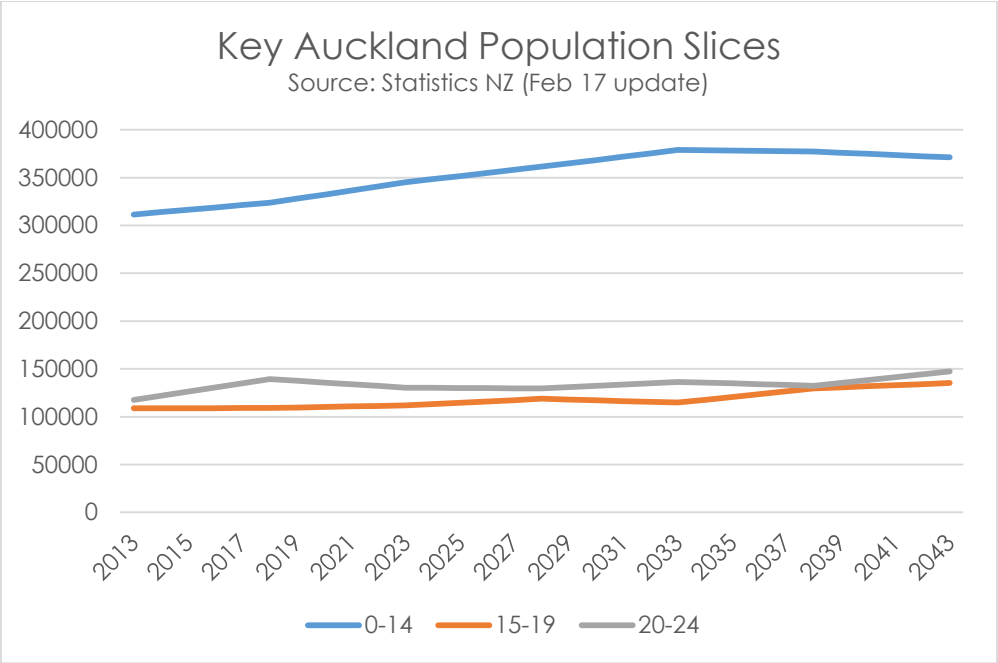


Age

Auckland will age in similar fashion to New Zealand, with an increase from 12% of the population being 65+ today, to 15% by 2027, and 19% by 2043.

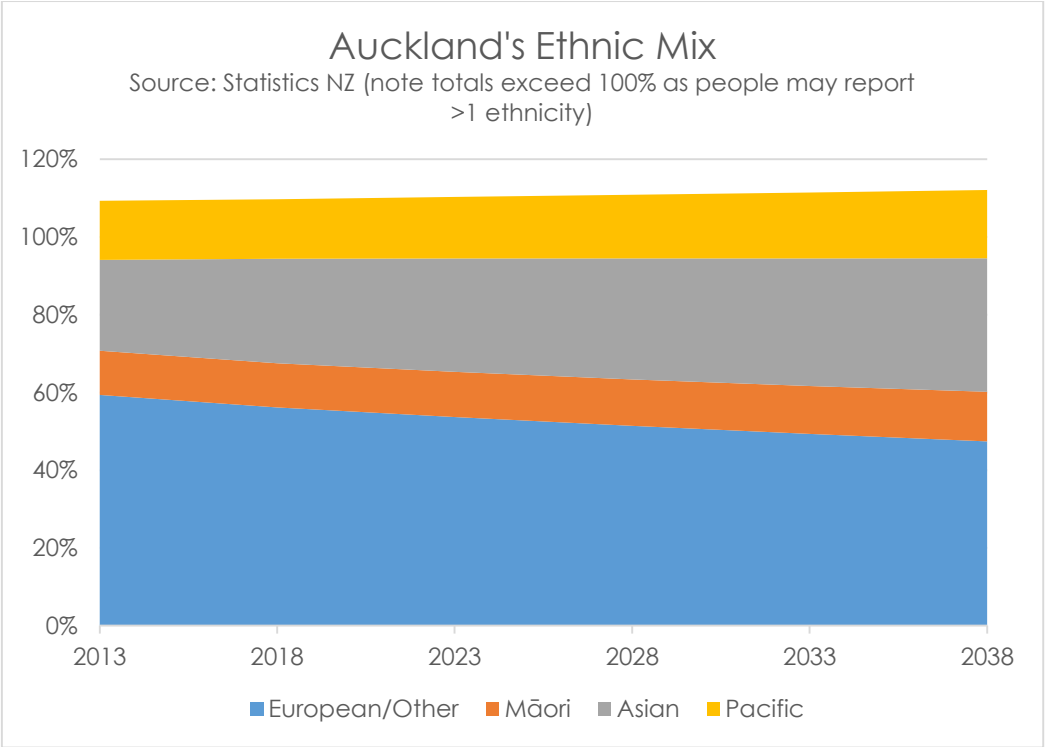


The absolute size of the two key tertiary target cohorts of 15-19 and 20-24 year olds will remain relatively static in the future, and thus will become a proportionally smaller component of the total population: from approximately 15% today to 12% by 2028, where it will remain through to 2043.



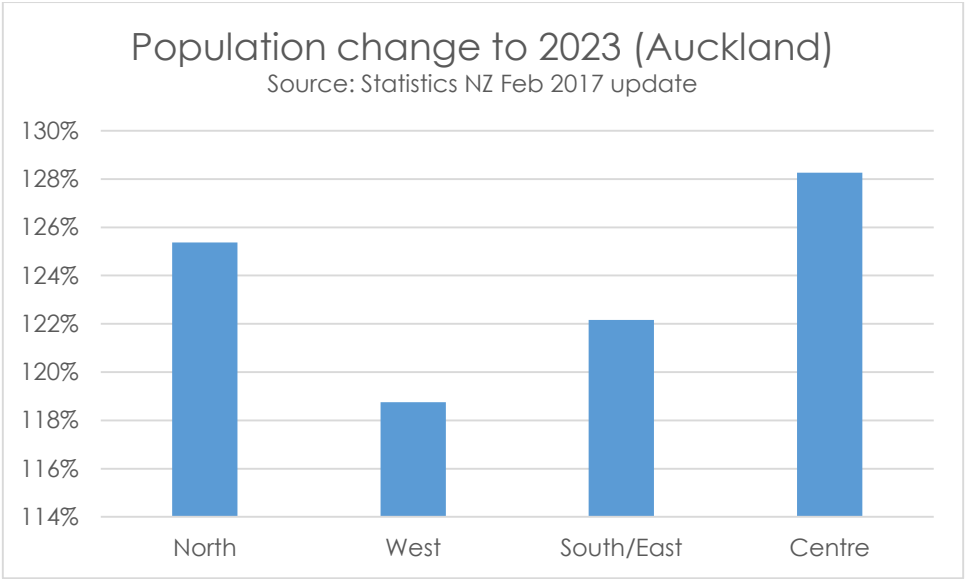
Ethnic Diversity

The Asian population will increase to 29% of Auckland overall by 2023, and to 34% by 2038. There will be smaller proportional changes for the Maori and Pacific populations, the former increasingly to 12% by 2023 and 13% by 2038, the latter to 16% and 17% respectively. Conversely, the European/Other proportion of Auckland's population will drop to 53% in 2023, and then 47% by 2038.



Sub-Regional Diversity

Auckland's growing population will increase population density. The Auckland CBD will continue to have the highest population density – increasing from 4,600 people per square kilometre in 2006 to possibly over 13,300 people per square kilometre by 2031. In addition, higher density will spread to other parts of Auckland, notably the south. The population density in some western parts of south Auckland will reach Auckland CBD levels by 2031. Within Auckland, the fastest population and household growth over the next 20 years is projected in either the very centre, or in the outer local board areas – a "donut pattern."



There will be differences in the geographic distribution of ethnic populations over the next five years. The largest increase in European/Other will be in the north and west of Auckland. South Auckland is projected to have the greatest increase in Maori and Pacific populations, with west Auckland having the second highest rate of Pacific population growth. The Asian population will grow in a more distributed pattern, and by 2021 will account for 31% of the south Auckland population, 28% of the north Auckland population, and 21% of the west Auckland population.

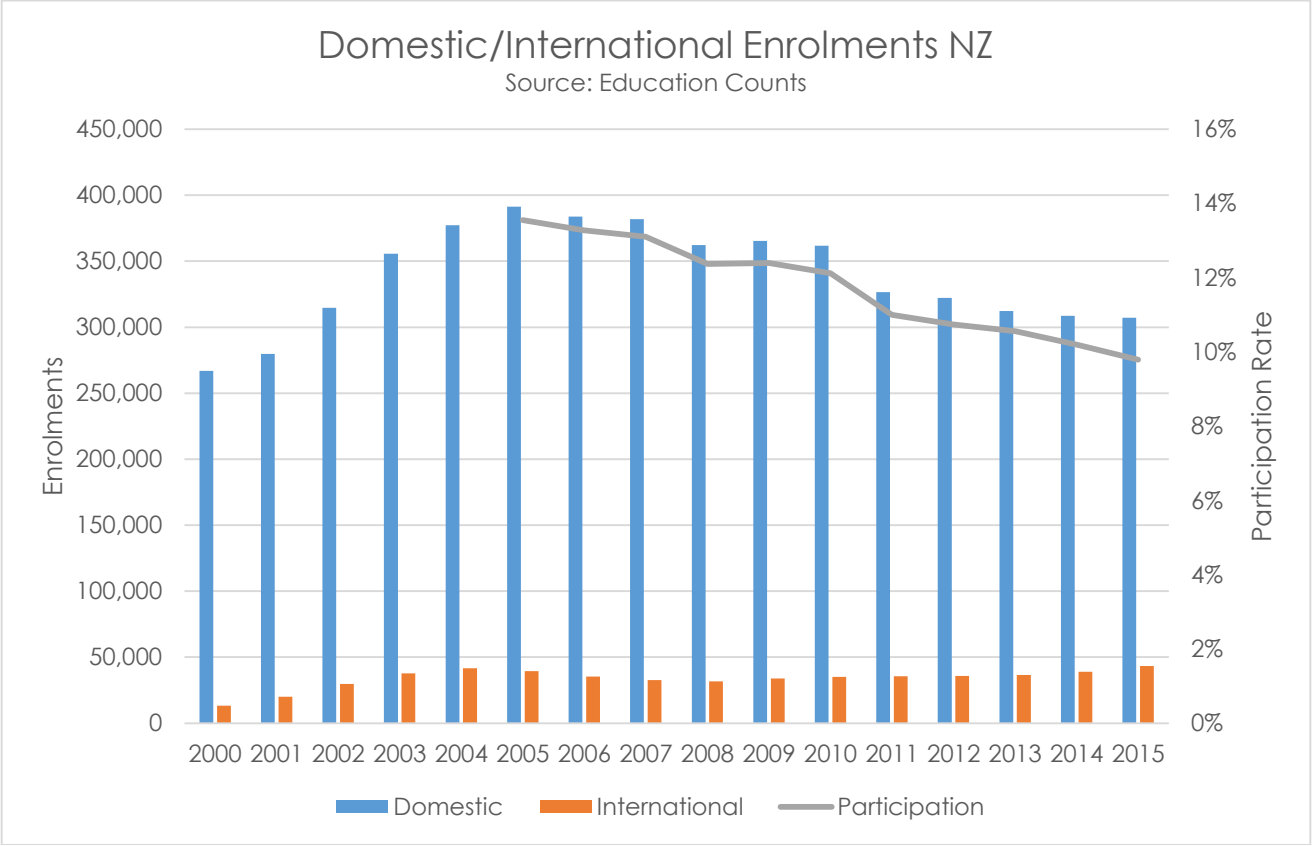
Housing Affordability

According to the TradeMe Rent Price Index, the median rent Auckland in January 2017 for a one/two-bedroom house was $440 per week whilst a three-four-bedroom house in Auckland was $580 per week. The *Thirty Year New Zealand Infrastructure Plan* estimated that Auckland was 26,500 dwellings short of requirements by the end of 2016, and would need to build 250,000 new dwellings over the next 25 years, almost doubling the existing housing stock.

A shortage of housing has had impacts on the rate of homelessness and severe housing deprivation. A recent report from the University of Otago, *Severe housing deprivation in Aotearoa 2001-2013* (2016), notes that the prevalence of severe housing deprivation increased from 1.1% to 1.4% between 2001 and 2013. Of the 41,000 homeless people in New Zealand in 2013, almost 6,000 were studying full-time, with another 1,200 studying part time. What is notable about these figures is that they precede the rapid inflation in house and rental prices that has occurred since 2013.

Trends in Tertiary Participation

Domestic enrolments in tertiary education have declined consistently over the past decade, primarily as the result of tightened governmental policy around part-time and low-value courses (the decline in EFTS has been much less significant). In 2015, enrolments reached their lowest level since 2001. The participation rate has fallen in parallel, and is now below 10%. Conversely, international enrolments have increased over the past few years.



Participation rates have varied dramatically by qualification level. While bachelors, masters, and doctoral level participation rates have remained steady, there has been much greater variation at lower levels. New Zealanders remain enamoured of the more traditional, and lengthier, qualifications, but have been less willing to engage in shorter qualifications. As noted, governmental policy has played a major part, but it is likely that increasing focus on attaining level 2 qualifications at high school, as well as changes in the employment environment, have played a part. However, it is unlikely that there is a simple relationship between employment levels and participation, as trends around the GFC show.

	Certificates 1	Certificates 2	Certificates 3	Certificates 4	Dips/certs 5-7	Bachelors Degrees	Graduate dips/certs	Honours	Masters	Doctorates
2005	1.0%	2.9%	2.8%	2.5%	2.0%	3.5%	0.4%	0.6%	0.3%	0.1%
2006	0.6%	3.0%	2.5%	2.4%	1.9%	3.4%	0.4%	0.6%	0.3%	0.1%
2007	0.5%	2.7%	2.5%	2.4%	1.9%	3.5%	0.4%	0.6%	0.3%	0.1%
2008	0.4%	2.3%	2.3%	2.2%	1.9%	3.5%	0.4%	0.6%	0.3%	0.1%
2009	0.3%	2.0%	2.3%	2.2%	2.0%	3.7%	0.4%	0.7%	0.3%	0.1%
2010	0.3%	1.8%	2.1%	2.1%	2.0%	3.8%	0.4%	0.7%	0.3%	0.2%
2011	0.3%	1.4%	1.7%	1.8%	1.8%	3.8%	0.4%	0.7%	0.3%	0.1%
2012	0.3%	1.3%	1.6%	1.8%	1.6%	3.8%	0.3%	0.7%	0.3%	0.1%
2013	0.4%	1.2%	1.6%	1.7%	1.5%	3.7%	0.3%	0.7%	0.3%	0.1%
2014	0.5%	1.1%	1.7%	1.6%	1.4%	3.6%	0.3%	0.7%	0.3%	0.1%
2015	0.4%	0.9%	1.6%	1.6%	1.3%	3.5%	0.3%	0.7%	0.4%	0.1%

Financial Situation of Tertiary Students

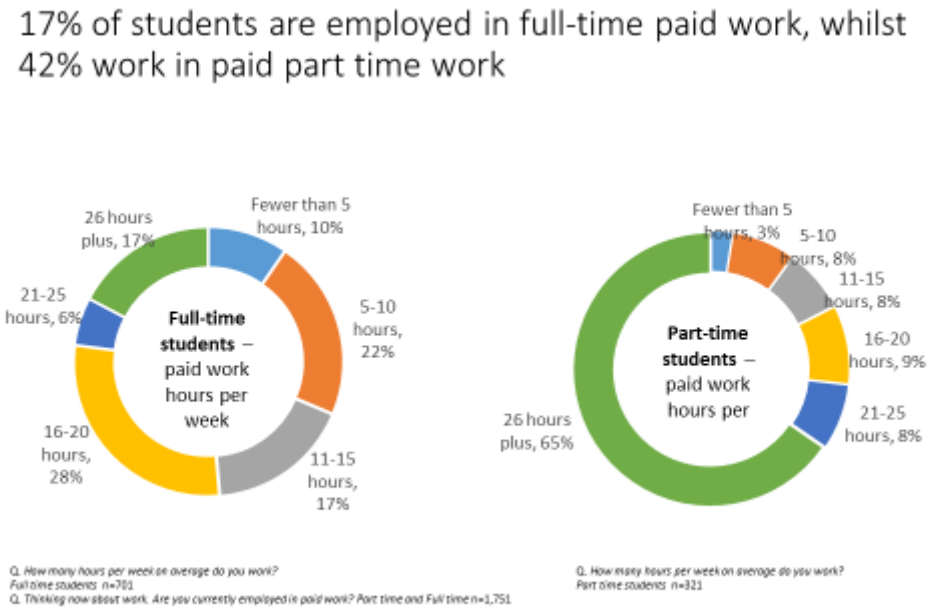
Enrolment trends are likely primarily the result of government policy, but financial issues are also likely to play a part. Many tertiary students are now facing increased financial pressures – fees, costs of living, and other financial responsibilities. A large proportion of students enter the workforce with high levels of debt, which takes years to repay, impacting the timing of major life stages such as purchasing a home. This pressure may be exacerbated for students in Auckland given the higher cost of living. Auckland is regularly included in lists of the world's most expensive cities.

The 2016 U Matter research conducted within Unitec found that 55% of Unitec students stated that at some stage in the last 12 months their income had not covered their living costs, and 31% have gone without food or other necessities as they cannot afford them. Many commented that current student financial support does not meet current basic financial requirements. These views echo those of the 2016 Lin/Child Poverty Action Group report *Lay-bying our Future: The State of Student Hardship in New Zealand*. *Lay-bying our Future* states on page 9 "that student support has remained stagnant in real terms. In 2015, there was a general consumer price index (CPI) increase of only 0.51%. In 2016 the Government announced a zero living costs adjustment. This was attributed to low general inflation, however rent, which is by far the largest cost for students, has continued to rise significantly, particularly in Auckland. The report noted that CPI is not an accurate reflection of the cost of living for a student, as accommodation and textbook costs have risen significantly and considerably faster than general inflation. The Student Allowance and the maximum amount borrowable for student living costs do not even cover the average weekly rent of a student sharing a three-bedroom flat which has increased to $218 in Auckland."

The report goes on to note that "… students are able to borrow $1,000 each year for course-related costs but the amount has remained frozen at this level since its introduction in 1992. The inflation adjusted value of course-related costs in 1992 would be $1,601 in 2015. The cost of textbooks, which are essential items for students, has risen 864% in 30 years, a greater increase than new home prices in Auckland. The reasons for the increase are numerous, but students have little choice but to pay up, or risk their grades. Nowadays tertiary educators use email and cloud-based systems to communicate and teach their students, and students' assignments are required to be word-processed or to utilise software programmes. This means items once considered a 'luxury' such as laptops and computer software have become essential costs for students. It is estimated that the total cost of textbooks and supplies can now total $1,800 per year, adding 10% to 20% to the cost of a tertiary qualification. Students have the options of additional borrowing (though it may be unavailable and if available, high cost), foregoing essential living expenses or items prescribed for their study, or working additional hours which can ultimately compromise their mental wellbeing and the quality of their education" (p.10).

35% of the Unitec students who responded to the U Matter survey had at least one child financially dependent upon them. Of these students, 22% were single parents. *Lay-bying our Future* states that "… sole parents on either a benefit or Student Allowance cannot receive the full Working for Families payments for their children. This means they are denied the In Work Tax Credit of $72.50 per week, and if there is a new-born, the Parental Tax Credit of $2200. The Training Incentive Allowance is no longer available to sole parents. Recent changes mean that they may get the Accommodation Supplement which is generally higher than the Accommodation Benefit if they have a child and qualify for the Student Allowance. However, while these changes are a welcome improvement, most student families are still likely to be in significant financial distress… having sole charge of a young child or children is a barrier to education, work and other activities… the 20 hours government-funded early childhood education and care (ECE) is not necessarily a good fit with sole parents and access to study, and does not cover the full cost of childcare. It is increasingly difficult for a sole parent to attend tertiary institutions as they do not have sufficient time to enrol in full-time study and do not have the resources to take on more debt. This prevents the parent and the child from benefiting from the potential life-changing effects of higher education" (pp.10-11).

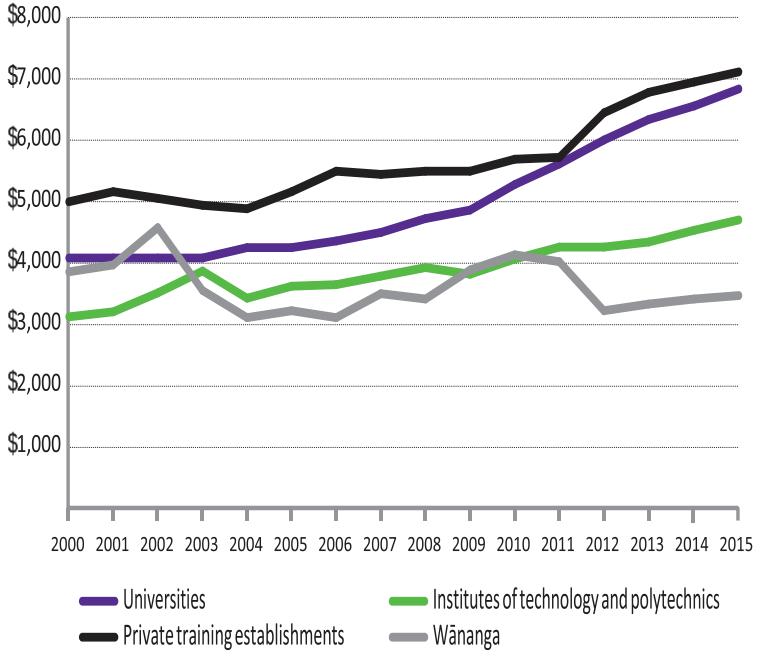
In order to improve their financial situation, many students are working more hours in paid work. However, this can increase the student's stress levels due to decreased time studying and socialising. The New Zealand Union of Student's Association's 2014 survey noted empirical evidence showing that when students have to engage in paid employment for over 15 hours per week, academic performance is compromised. The U Matter student lifestyle project showed that in 2016, 51% of Unitec's full-time students were working 16+ hours per week.



Source: U Matter Student Research 2016, Unitec Business Intelligence Centre

In order to supplement paid work, increased numbers of students are utilising student loans. Of U Matter respondents, 57% state that they are paying for their course with a student loan, this figure is even higher for Pasifika students at 73%. While the average amount borrowed by ITP students for student loans is lower than university or PTE students, it is still considerable, and rose by 3.9% in 2015. The median repayment time for all student loan borrowers in 2015 was 8.4 years. This is the time it will take for half of the borrowers who left study in 2014 to have fully repaid their loans. This compares with the median repayment time of 7.0 years for borrowers who left study in 2011.

Average course fees borrowed by provider type



Source: Ministry of Social Development.

Focus on Unitec Students

Student and Graduate Surveys 2016

In our most recent Student Survey, Net Promoter Score (NPS) decreased from +13 (May 2016) to +10 (October 2016). Students considered the following to be the key improvements required for this score to improve:

- Course organisation, workload and communication
- Physical campus and building issues
- Equipment upgrades
- Parking and transport
- Library and Hub hours
- Spaces to study and socialise
- Food availability and prices
- Quality of teaching and learning methods

In our most recent Graduate Survey, NPS decreased from +26 (2015) to +21 (2016). Students considered course content and structure, and teaching and learning, to be the key improvements required to improve this score.

U Matter Student Lifestyle and Segmentation Survey 2016

This inaugural survey was conducted with 1,964 Unitec students in September 2016. Key findings to come out of this research were:

- Our student cohort is very diverse, **35% of our students have a child financially dependent on them; 56% of our students were not born in New Zealand**. This research challenges the view that students tend to be single, young and highly social
- **5 student segments** have been identified within our student cohort (Family Providers (18%), Career Switchers (26%), Knowledge Seekers (9%), Starters (27%) and Steady Builders (20%). This gives us another lens through which to consider acquisition and retention. We hypothesize that an additional intellectual segment exists. These students may gravitate more to university brands known for leading research.
- At the time of the research, **a third of participants had seriously considered stopping their study in the past 12 months**. This figure is higher for our priority groups – 46% of Māori students and 39% of Pasifika students had seriously considered leaving. The key reason given is their **financial situation**. The research shows that a number of our students are struggling financially, **31% state they have gone without food or other necessities as they cannot afford them**. This is likely to be impacting retention
- Approximately **a third of our students are the first in their family to study at a tertiary institution (35%)**. Again the figures for Māori and Pasifika students are higher – 45% and 40% respectively. These students are likely to have a lot of pressure on them to succeed or may lack the support that other students receive from tertiary educated parents

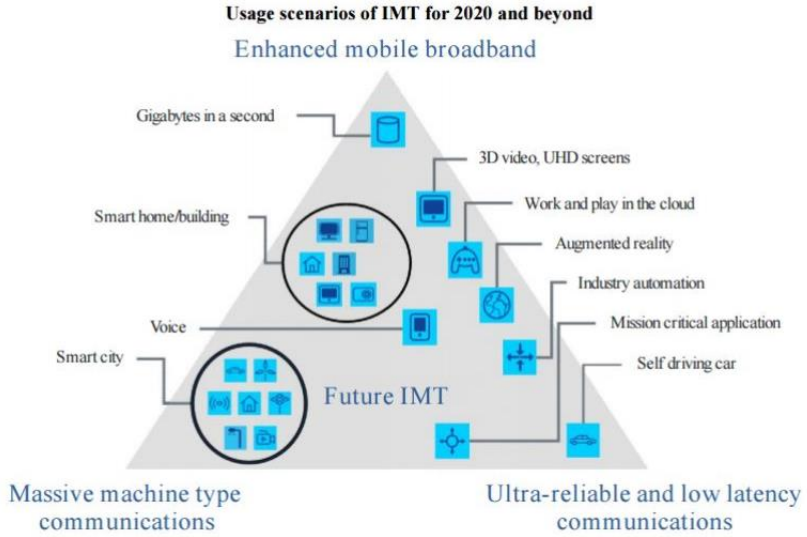
Technological

Key Issues

1) **5th Generation Wireless:** 5G may increase global wireless capacity to a point where it is capable of creating an "always connected" world, with potential impacts on technology and social patterns.
   a) *What does this mean for Unitec?* 5G is a key enabler for the Internet of Things; Unitec needs to be consider the effect this might have on both pedagogical and back-office functions.
2) **Internet of Things:** A growing number of otherwise "dumb" items are becoming internet-connected (fridges, televisions etc.) This creates opportunities for information sharing and co-ordination, as well as risks.
   a) *What does this mean for Unitec?* The IoT will likely require the teaching of new content, at the same time as it facilitates new ways of teaching. As technology becomes even more a part of everyday life, broader philosophical and ethical issues will require greater attention.
3) **MOOCs:** MOOCs have been around for almost a decade, and are steadily growing. Rather than replacing traditional universities, they seem to be shifting towards ongoing professional development and bite-sized learning.
   a) *What does this mean for Unitec?* MOOCs are unlikely to disrupt Unitec's business model entirely, but at the same time, it is unlikely that Unitec would be able to establish successful MOOCs due to a lack of brand reputation. Rather, it is vital to consider which current Unitec niches might lend themselves to MOOC exploration.
4) **Physical and Digital Worlds:** Virtual, Augmented, and other realities are creating new industries but also new pedagogical opportunities.
   a) *What does this mean for Unitec?* New digital realities present an opportunity for innovative pedagogy, particularly in applied fields, that could greatly facilitate student success. However, they are unlikely to be cheap, and a careful analysis of cost versus benefit might be useful.
5) **Technology and Employment:** There is substantial rhetoric about the disruptive effect of technology on the employment environment. However, data indicates that the employment environment remains relatively stable, with no increase in velocity whether in New Zealand or the United States.
   a) *What does this mean for Unitec?* Any analysis of future employment needs to be carefully developed and avoid being too easily captured by marketing froth. Hard numbers are likely to be the best predictor of future economic trends.
6) **BYOD, Learning, and Technology:** An increasing number of institutions are introducing BYOD policies, and some students prefer the freedom of using their own devices.
   a) *What does this mean for Unitec?* Good BYOD policies involve a balance between efficiency and ease-of-use, and equity issues. While BYOD may reduce institutional costs, and be more convenient for some students, those without resources to acquire devices may be disadvantaged.

5th Generation Wireless (5G)

The fifth generation of communications infrastructures, or 5G, is the future network infrastructure supporting the digitisation of economic and societal activities worldwide. 5G will bring together people, things, data, applications, transport systems and cities in a networked communications environment.



It is expected that 5G will roll out worldwide by 2020. 5G will increase network capacity to a point that is capable of handling the expected increase in data transmitted from connected devices (Internet of Things - IoT). Some in the industry are calling 5G 'evolutionary' as it is expected to impact many parts of society and a broad range of industries.

5G is still mostly a concept and industry has not settled on any standards, hence no specifications have been set as of yet, so true speed is not known. Early trials however, have shown that 5G will deliver significantly higher speeds and lower latency than current 4G connection.

Increase in the Internet of Things (IoT)

The Internet of Things (IoT) is the interconnection via the internet of sensors and actuators embedded in physical objects, enabling them to send and receive data. In 2015 there were an estimated 4.9 billion things worldwide connected to the internet. By 2020 McKinsey (2015) predicts that between 20 and 50 billion things will be connected to the internet. Growth will continue to come from connected objects as well as new services based on insights generated from data collected from IoT devices.

The IoT is having an impact across industry sectors as it changes how goods are made and distributed, how products are serviced and refined, and how doctors and patients manage health and wellness. As the IoT continues to grow in usage, McKinsey Global Institute, (Unlocking the potential of things, 2015) estimates the potential economic value could be as much as US$4 to US$11 trillion by 2025.

Source: McKinsey Global Institute (2015), Unlocking the potential of things.

To optimise the opportunities that the IoT will provide, the following are regarded as necessary:

- Policy actions to encourage interoperability;
- Increased security to protect privacy and property rights;
- Investment in new capabilities and talent; and
- Modification of business models and processes.

IoT will have an impact on all areas of society, including tertiary education. While it is still not certain how the increase in IoT will shape how we teach and learn, some experts have suggested the following issues:

- Continued demand for STEM (science, technology, engineering and mathematics) graduates;
- A need for tertiary institutions to support advancing innovation via greater collaboration across departments, institutions and with business e.g. offering interdisciplinary resources and grants;
- Critical thinking on how best to use the IoT to support learning – going beyond the monitoring of data;
- Partnerships between creators of IoT devices and higher education institutions to greater access to multiple data sources that can add value to research on key societal issues e.g. health, urban development etc. Increased security would be required if partnerships of this nature were formed;
- At a teaching/learning level there is an opportunity for students to use data collected from sensors and an option for lecturers to capture real-time collection of data on student performance; and
- Ethnical implications re data on individuals.

Massive Open Online Courses (MOOCs)

MOOC (massive open online courses) participation has grown significantly since first launched in 2008. Data shows an increase in global learners participating in MOOCs year-on-year. The number of students worldwide signing up for at least one MOOCs course in 2015 was approximately 35 million, an increase from 16-18 million in 2014 (Class Central).

The leading MOOCs providers continue to be Coursera, Udacity, edX and Future Learn, partnered with various universities. US News and World Report states that 90% of all MOOCs available are offered by universities in the Top 50: large, known and well respected educational institutions such as Stanford, MIT, Yale and Harvard.

MOOCs are noticing a change in students, from lifelong learners to students seeking professional development and credit for their work. This has seen MOOC providers adopting a business model that includes packaging courses into specialisations, offering credentials for career advancement and more recently offering accredited degrees e.g. University of Illinois, via Coursera offers a Master of Computer Science in Data Science (MCS-DS) completely online. The expectation is that this trend will continue in the near future.

Concurrently, fee paying courses are becoming more common across all platforms. Courses that are seeing higher fees tend to correlate with increased demand in the labour market e.g. science, business and management, computer science and programming. With increased interest and demand, it is not surprising that these subjects have seen substantial growth in the number of courses offered.

In 2016 there were developments in alternative credentialing. Times Higher Education reported that six universities from Australia, Europe, Canada and US piloted a credit transfer system that would enable MOOC students to gain credits towards their degrees from online courses undertaken with a partner university. The proposed scheme is similar to the European Credit Transfer System which enables universities to recognise marks gained while studying at other institutions within the European Union. This is the first international collaboration of this kind.

Overall, MOOCs are shifting towards a professional development target market that is willing to pay a fee to have their work credited. In the future this accreditation is likely to be recognised by selected universities and count towards a degree qualification. It is uncertain what, if any, disruption this will course to traditional modes of tertiary learning in the near future, however it is apparent that changes in online learning are generating discussions in the higher education environment around self-directed learning, distance education and blended learning.

Bringing the Physical and Digital Worlds Together: AR, VR, MR, ER

These are emerging trends and approaches that bridge the physical and digital experiences, including augmented reality, mixed reality, virtual reality and extended reality. Specifically:

- **Augmented reality (AR):** The real-time overlaying of digital (visual or audible) content onto reality, viewed through a device such as a mobile phone, tablet or headset. AR is developed into apps and used on mobile devices to blend digital components into the real world in such a way that they enhance one another, but can easily be told apart. The user is provided with information tailored to the context and space in which they work, operate and/or learn.
- **Mixed reality (MR):** A superset of AR, MR adds digital objects to physical ones, anchoring them to points in the real world. Users can then perceive physical and digital objects in the same space.
- **Virtual reality (VR):** An artificial environment which is experienced through sensory stimuli (as sights and sounds) provided by a computer and in which one's actions partially determine what happens in the environment.
- **Extended reality (ER):** Humans direct devices through separate physical spaces in real time. Those devices could be flying drones, remote undersea exploration craft, or surgical robots.

This type of technology is increasingly playing a role in businesses across industry sectors. Experts are also highlighting the education benefits that AR offer i.e. on-the-job training for new staff would mirror real-world situations in which they perform their job duties, providing hands-on experience without the costs and risks of *real* hands-on. These advancements are gradually being integrated into tertiary education. They can be used to market to prospective students, enhance current students' on-campus and educational experience and, be used as an extension to current learning tools, providing the following benefits:

- Can bring to life concepts that are being taught in the classroom e.g. form, space, distance;
- These tools are typically easy for students to use;
- Can be deployed in a variety of spaces; and
- Are seen to be low cost to implement.

The following examples showcase how VR/AR is being used in tertiary environments:

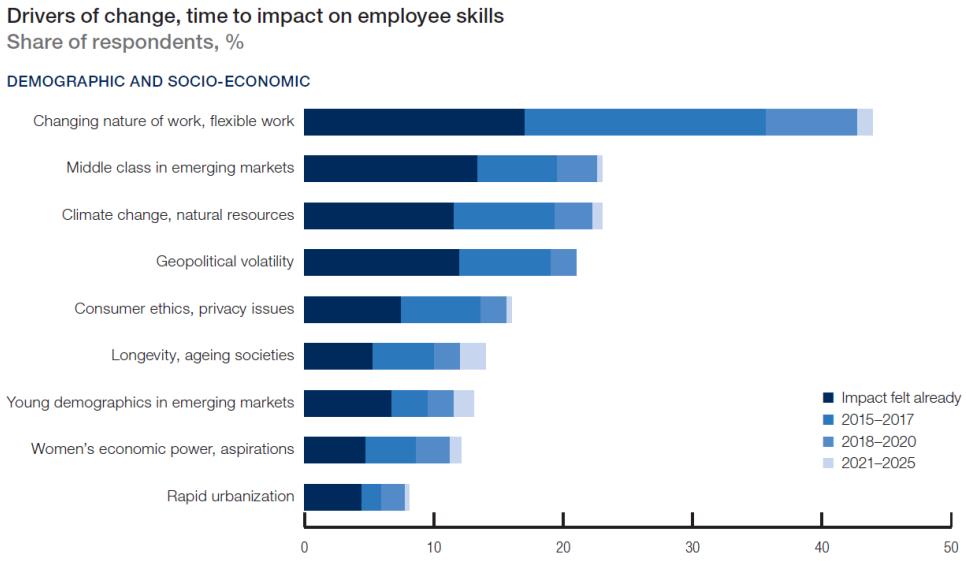
- VR is being used to showcase tertiary campuses at career expos. Prospective students are experiencing virtual reality tours to entice them to visit institutions in person.
- Syracuse University is using VR in a story telling course, this sees students creating 360 degree videos to bring their creations to life.
- UCLA is using an AR teaching sandbox that allows users to sculpt mountains, canyons and rivers which fill with water as the contour of the land changes. Students learn about topography through hands-on experimentation.

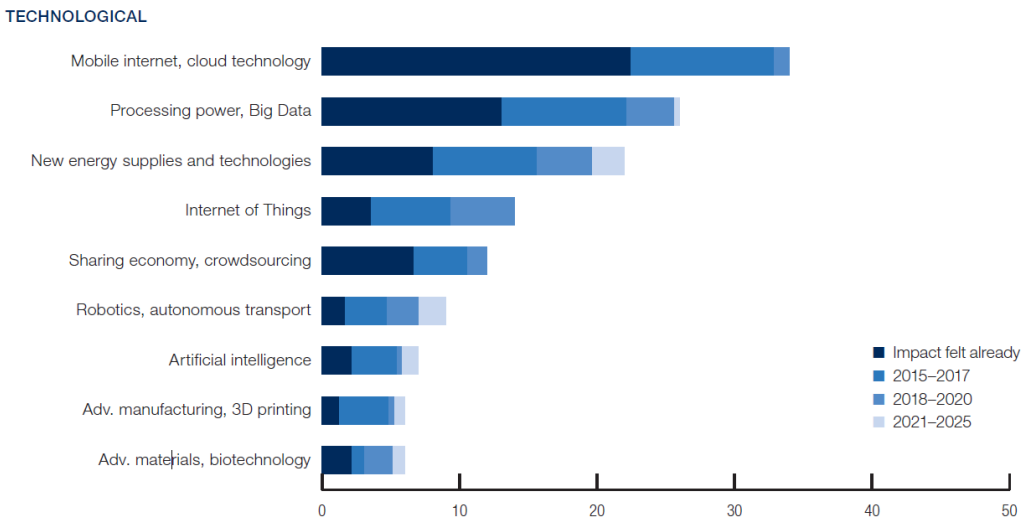
In order to maximise the opportunity that the convergence of physical and digital experiences allow, tertiary institutions:

- Require an IT infrastructure that can provide the data storage and connectivity that is required e.g. Syracuse University found that each story-telling 360 degree video created by students required 20 gigabytes of space and was slow to upload to the server;
- Need to ensure that technology is able to seamlessly integrate with the existing learning environment, rather than users having to spend time adapting to new ways of learning.

Technology and Employment

The World Economic Forum's 'The Future of Jobs' (2016) research highlights disruptive changes to business models and the employment landscape in light of technological advancement, alongside broader socio-economic, geopolitical and demographic developments. The research incorporates the views and perceptions of senior managers from global firms employing 13 million employees across 9 industry sectors. The largest driver of change, as outlined in the table below, is the 'changing nature of work':





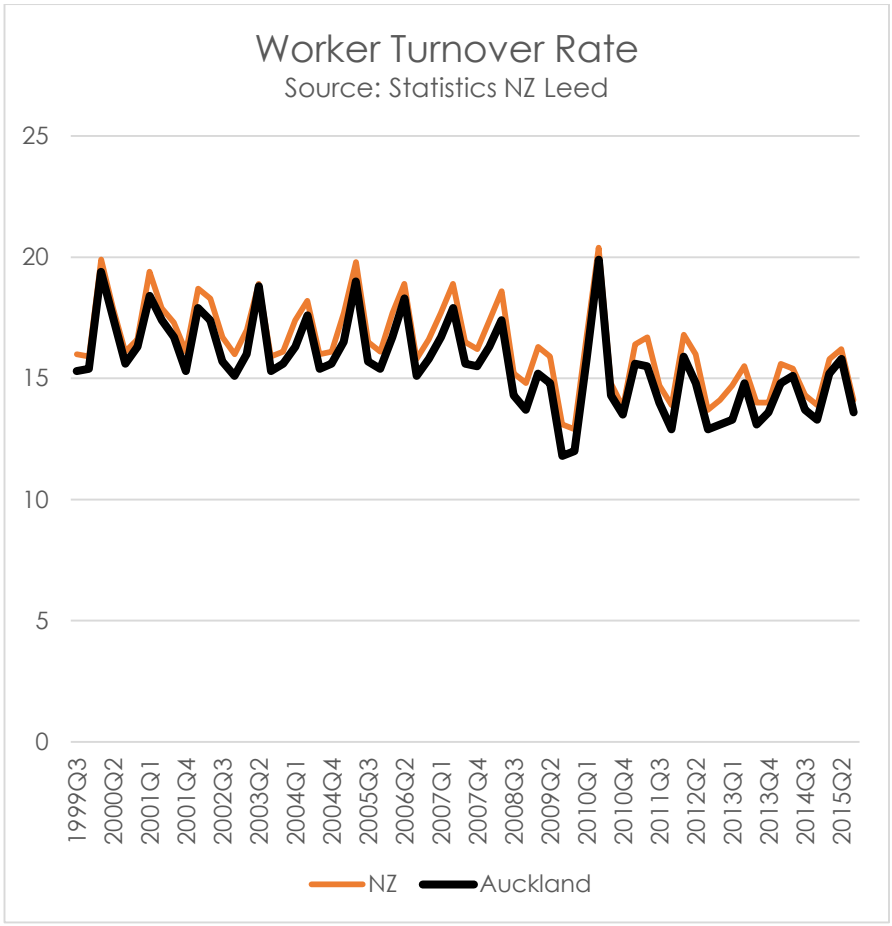
Source: Future of Jobs Survey, World Economic Forum.
Note: Names of drivers have been abbreviated to ensure legibility.

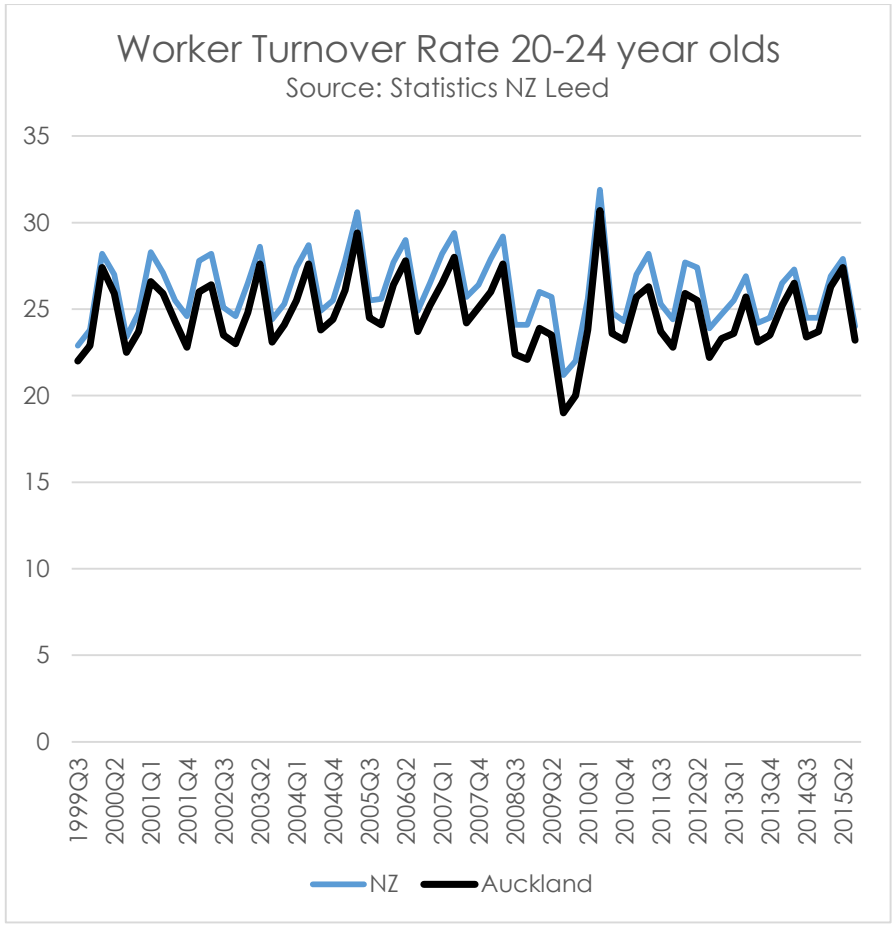
Technological disruption is impacting on business models, and in turn this is affecting skill sets for both current and emerging jobs across industries. Rapid change is seen to be shortening the shelf-life of employees existing skill sets. For most occupations, technology will not replace the employee, rather it will be a substitute for specific tasks carried out as part of the employee's role. This will free up employees to focus on other aspects of the role/organisation, and will require a different skill set. The research suggests that by 2020 over a third of the desired core skills of most occupations will be comprised of skills that are not considered crucial in today's market.

Lower skilled roles, such as office and administration and manufacturing and production, are expected to diminish significantly while computer, mathematical, architectural and engineering related roles will increase. The concern is lower skilled workers could face redundancy without significant upskilling. Simultaneously, competition for in-demand roles will be strong and finding a solid talent pipeline will be critical for businesses.

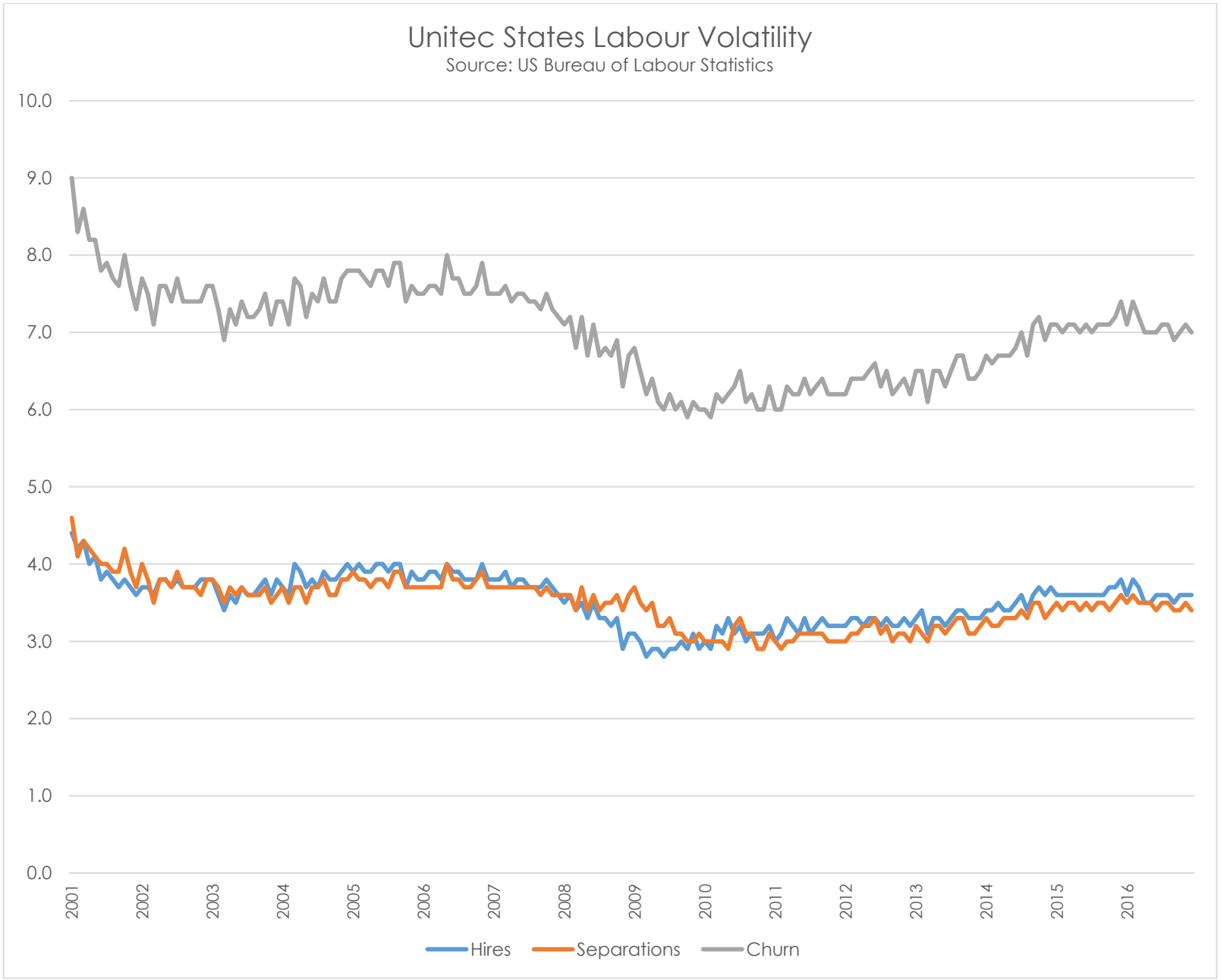
The research emphasizes that senior managers expect the impact of technological, demographic and socioeconomic disruption on business models to occur within the next five years and to significantly impact the employment landscape.

There appears to be an odd disjuncture between the rhetoric of massive disruptive change to the employment market, and the hard evidence from job churn statistics (hires, separations, and the combination). Employment volatility in New Zealand is actually tracking down slightly (i.e. there is actually a lower velocity of job movement than historically), even for 20-24 year olds. This indicates a stable employment environment, or at least one in which the disruptive trends noted have yet to have an impact.





It may be that New Zealand, at the periphery of the world, will lag in absorbing these trends. There is weak evidence for this, as in the United States there has been a steady increase in volatility/churn since the Global Financial Crisis, although it is still well below historical peaks over the past 16 years.


Unitec States Labour Volatility
Source: US Bureau of Labour Statistics
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
2001
2002
2003
2004
2005
2006
2007
2008
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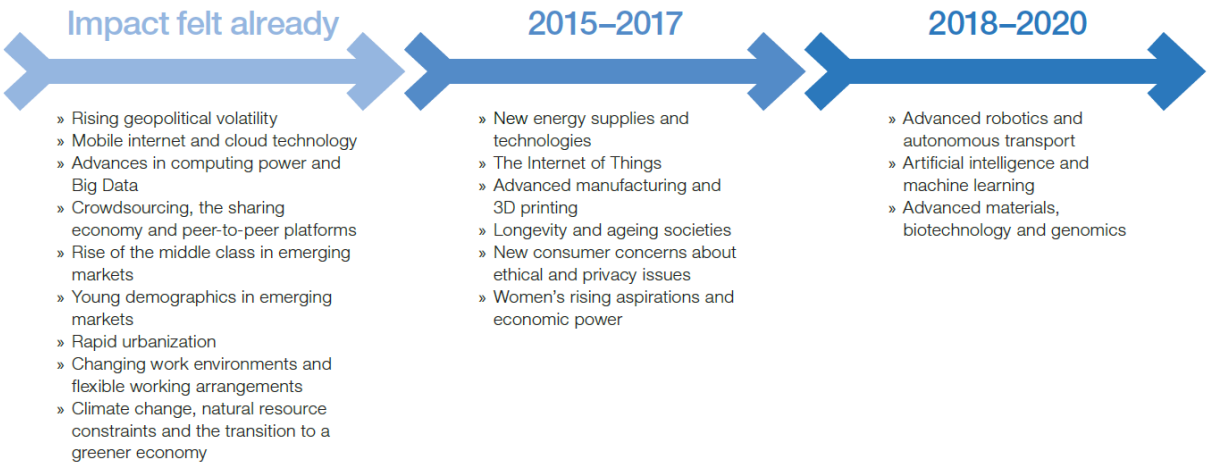
2010
2011
2012
2013
2014
2015
2016
Hires
Separations
Churn

Timeframe to impact industries, business models



Building a workforce with future-proof skills will help to mitigate a potential growth in unemployment and inequality, and enable businesses and employees to capitalise on the opportunities advancement in technology will offer. The research highlights the need for business to prioritise talent development and future workforce strategies, and for government to re-consider the education models of today.

In order for tertiary programmes to remain relevant to the needs of industry, and to ensure students are being taught skills that will future proof them for the above disruptive changes, it will be critical that we have close alignment between course content and future business development. This will be more applicable in some industries than others.

Bring Your Own Device (BYOD), Learning and Technology

BYOD (Bring your own device) is also known as BYOT (Bring your own technology). It involves people bringing their own electronic devices to their learning and/or work environments. With the increase in IoT, the use of technology in many employment contexts, and on-line learning, it is critical that students' have access to technology and it is part of their learning experience.

In 2016 Unitec's Business Intelligence Capability Centre (BICC) conducted research on learning and technology to better understand student's perceptions of the use of technology in a learning environment and their access to technology for learning purposes.

The research results found that the majority of Unitec students have both access to the internet and technology (mobile phone, laptop computer, tablet), with 97% of students owning a mobile phone, 83% a laptop and 42% a tablet or iPad. The majority of students (96%) also have Wifi in their homes. Most are able to bring their own technology into a learning environment.

At the time of the research, students were mostly using technology (e.g. mobile phones) to communicate with other students about class-related matters (83%) and access course content (68%). They were less likely to use technology to participate in interactive class activities (35%), take notes in class (34%) or record a lecture (36%).

Students stated that they want technology to be used in a tertiary environment to enhance their learning experiences, but not to replace face-to-face learning. They are looking for learning support and engagement from learning technology. The expectation from students is as learning technology increases in education, teachers are proficient and able to use the technology confidently.

Organisational

Key Issues

1) **Positive Graduate Outcomes:** Unitec's primary function is to equip students with the necessary skills for employment, and latest results indicate significant successes in this area. Raw graduate employment rates were up, and even when adjusted for the healthy external employment environment, showed continued improvement. We exceeded our target.
   a) *What does this mean for Unitec?* We are achieving our primary purpose, and can be relatively confident that our teaching practice remains fitting for the external environment. We need to ensure that as we transition to new pedagogies, we are still achieving these positive graduate results.
2) **Declining EFTS:** EFTS numbers dropped significantly in 2016, and domestic EFTS have been declining for some years. International EFTS are much more volatile. There is significant decline in EFTS in lower-level qualifications, and particular networks have seen very sizeable drops.
   a) *What does this mean for Unitec?* This steady reduction in EFTS, particularly domestic EFTS, is of major concern given the implications for our financial sustainability. The relative strength of longer (degree-level) qualifications vis a vis shorter qualifications (certificates and diplomas) is counter-intuitive, as it is increasingly believed that longer, less flexible qualifications are not suited to the market.
3) **Increased Research:** Research outputs in 2015 and 2016 reached previously unattained levels due to a combination of improved reporting and greater focus. External research income and the number of industry partnerships have also increased.
   a) *What does this mean for Unitec?* Research differentiates Unitec from other ITPs, and early signs are that the new research strategy is achieving significant gains. Due to the lag effect of staff departures, however, it is likely vital that close attention is paid to this as the loss of a few staff could cause reductions in output quantity and quality.
4) **Declining Educational Performance Indicators:** Unitec is experiencing an unusual reduction in key EPIs, including course completion, progression, and retention. While reductions in progression may be simply due to an improved economy, drops in the others are of concern and may indicate increasing student dissatisfaction with their Unitec experience.
   a) *What does this mean for Unitec?* EPI losses may mean a loss of performance based funding, but might also have significant reputational effects if they continue. Unitec is faced with a conundrum as declining EFTS impose pressures to drop entry standards, while improving EPIs may require increasing standards.
5) **Environment:** Unitec has embarked on an ambitious One Planet strategy. Results in 2016 were mixed, with highlights including a substantial reduction in carbon (including air travel) and the achievement of Carbon Neutral status. There were less positive water and waste results.
   a) *What does this mean for Unitec?* One Planet is a very ambitious strategy, whose goals will require significant changes in working practices. It may be necessary to initiate more substantial projects to achieve these goals, as otherwise their achievement is unlikely.
6) **Low Staff Morale:** Our 2016 mini-survey indicates that staff Net Promoter Score remains extremely low at -56; in the absence of a full survey, reasons for this cannot be confirmed, but are likely to be similar as those in the 2015 survey. There have been incidents, such as what occurred at Waitakere campus, that indicate that staff are very unhappy with some strategic decisions.

a) *What does this mean for Unitec?* Staff are one of our four Critical Success Factors, and low morale and engagement may be a major hindrance to achieving our other goals. In particular, the impact of low-morale staff on students, given their frequency of interactions, may be negative.

7) **Staff Demographics:** The ratio of academic:allied Full Time Equivalents (FTE) remains below 1 (more allied than academic staff). Our ethnic mix remains diverse. However, there remain significant gender inequities in relation to remuneration. Unitec's remuneration structure also appears to be becoming less linked to overall performance.
   a) *What does this mean for Unitec?* Academic staff deliver Unitec's primary services, and thus care must be taken to ensure there is an adequate front office:back office ratio. Issues of remuneration may cause staff resentment or may be indicative of more significant underlying difficulties in calculating value.

Performance Results

Outcomes and Impacts – "What Difference Are We Making for New Zealand?"

Performance Measures

	2013	2014	2015	2016	Target
Graduates Employed, Studying, or Combining (GESC)	**82%**	**81%**	**83%**	**85%**	**90-95%**
Employed Only	54%	52%	56%	63%	NT
Combining Both Study and Employment	11%	14%	14%	11%	NT
All Employed	65%	66%	70%	74%	NT
Studying	16%	15%	13%	11%	NT
GESC (Maori)	-	82%	80%	87%	NT
GESC (Pacific)	-	76%	86%	91%	NT
Graduates employed - Bridgepoint network	-	-	-	45%	NT
Graduates employed - Business and Enterprise Network	-	-	-	72%	NT
Graduates employed - High Technology Network	-	-	-	62%	NT
Graduates employed - Construction & Infrastructure Network	-	-	-	80%	NT
Graduates employed - Engineering Network	-	-	-	75%	NT
Graduates employed - Environmental & Animal Science Network	-	-	-	77%	NT
Graduates employed - Health and Community Network	-	-	-	71%	NT
Graduates employed - Te Miro Interdisciplinary Network	-	-	-	96%	NT
Relevance of Qualification to Graduate Employment	**72%**	**72%**	**75%**	**78%**	**75-80%**
Relevance Adjusted Graduate Employment Rate (RAGER)	**72**	**72**	**78**	**83**	**77**
Employer Net Promoter Score (NPS)	-	-	26	26	NT
Employer-Perceived Graduate Skills – Practical	-	-	83%	83%	NT
Employer-Perceived Graduate Skills – Technical	-	-	85%	85%	NT
Employer-Perceived Graduate Skills – People	-	-	88%	88%	NT
Employer-Perceived Graduate Skills – Technology	-	-	91%	91%	NT
Progression Rate (SAC L1-4) (EPI)	38%	37%	37%	33%	NT
Maori	49%	50%	43%	41%	NT
Pacific	56%	56%	52%	52%	NT
Under 25	49%	49%	49%	48%	NT
Progression Rate (SAC L1-3)	56%	48%	46%	43%	56-64%
Maori	69%	58%	49%	48%	70-75%
Pacific	73%	67%	57%	57%	73-78%
Under 25	66%	61%	61%	59%	66-70%

Our Graduates Employed, Studying, or Combining (GESC) score improved again, primarily due to a substantial increase in graduate employment, with the percentage embarking on further study decreasing. It still fell well short of our ambitious target. The relevance of our qualifications continued

to improve and now falls squarely in our target range. This reflects both an improving external economic situation as well as increasingly relevant qualifications.

GESC results for Maori and Pacific are tracking above our overall scores, which is partly due to proportionally higher progression (higher education) rates for these groups. RAGER improved dramatically as a result of relevance and graduate employment increasing disproportionately to the drop in Auckland unemployment, showing that improvements in our raw numbers were not simply due to broader macroeconomic trends. We substantially exceeded our target.

Graduate employment outcomes were consistent across our networks, with the only outlier Bridgepoint, which is primarily focused on staircasing, rather than directly providing students with skills for immediate employment.

Employer satisfaction with our graduates is high, with particularly pleasing results for the technology and people skills of our graduates. It should be noted this is based on our 2015 survey as we did not repeat the survey for 2016.

Progression rates dropped across the board, with the main positive being relatively stable performance for our key focus groups, including Pacific and Maori students. This drop in progression is partly the result of an improving employment environment, as students can gain employment with lower-level qualifications, and as such may not see substantial value in further staircasing.

Outputs – "What are we delivering to New Zealand?"

Performance Measures

	2013	2014	2015	2016	Target
Qualifications Conferred	3,802	3,740	3,638	3,856	NT
Master's Degrees	60	137	103	133	NT
Bachelor's Degrees	1,027	1,105	1,100	1,224	NT
Postgraduate and Graduate Certificates	81	29	183	418	NT
Postgraduate and Graduate Diplomas	338	310	438	506	NT
Certificates	1,687	1,677	1,438	1,158	NT
Diplomas	609	482	376	417	NT
Science, Technology, Engineering, Maths (STEM)	1,690	1,642	1,577	1,687	NT
Qualification Completion Rate (SAC) (EPI)	65%	70%	72%	75%	66-71%
Maori	56%	57%	63%	65%	NT
Pacific	47%	55%	56%	56%	NT
Under 25	57%	63%	64%	67%	NT
Graduate Net Promoter Score (NPS)	22	22	26	21	30
Course Completion Rate (SAC) (EPI)	82%	82%	81%	80%	82-86%
Maori	76%	75%	75%	73%	77-82%
Pacific	71%	74%	72%	71%	75-80%
Under 25	79%	80%	77%	77%	80-86%
Research Outputs (total quality assured)	**398**	**376**	**614**[1]	**543**[2]	**428**
By type					
Books (edited, written, or contributed to)	32	30	38	20	NT
Journal Articles	167	116	174	151	NT
Conference Presentations and Proceedings	132	144	280	166	NT
Other Types	67	86	122	206	NT
External Research Income (000s)	-	$203	$592	$928	$800
Number of Industry-Funded Research Projects	-	-	17[3]	23	NT

Graduate numbers increased, with a pleasing increase at higher levels as well as in STEM (Science, Technology, Engineering, and Maths) subjects, the latter meeting government policy guidance. We anticipate this greater proportion of graduates at higher levels is likely to continue given changing trends in enrolments. However, overall graduate numbers will drop as the impact of reduced enrolments hits.

[1] 2015 reported 438; significant change caused by substantial late reporting by staff as well as increased proactive information gathering by new Research and Enterprise office.
[2] Estimate based on provisional recording as at 20 January 2017
[3] 2015 reported 21; reduction to 17 based on new classification approach to industry projects

Our qualification completion rate continues to exceed our target, which is partly an indication of improved internal recording processes, and partly due to increased focus on supporting students through their qualifications. Course completion rates have dipped for all groups except Under 25s. We fell short of our overall SAC domestic target but of greater concern have seen wider gaps developing between target and actual performance for Maori and Pacific students.

Our Graduate Net Promoter score dropped by 5 points to approximately the same level as in 2013 and 2014, falling well short of our target. This is unusual given the increase in graduate employment noted earlier. Comments from our graduate survey indicate this is related to Transformation-associated disruption, including staffing changes, administrative difficulties, and facilities shortcomings. However, it is still a positive NPS score, with promoters enjoying a supportive learning environment, approachable lecturers, and a "real world" experience

The 2016 Research Output target was substantially exceeded. There was a slight drop from 2015, but 2015 saw an unprecedented increase that was difficult to repeat. This increase bodes well for the upcoming Performance Based Research Fund (PBRF) round. This increase in outputs occurred despite the departure of a substantial number of research-active staff during 2016.

Growth in industry-funded projects, largely the Metro Research Voucher Scheme, has come about due to increased internal focus, including the establishment of a position devoted to developing joint research projects with industry.

Internal Enablers – "What are we doing internally?"

Performance Measures

	2013	2014	2015	2016	Target
Student Retention (SAC) (EPI)	72%	72%	74%	70%	72-80%
Maori	66%	65%	67%	62%	71-76%
Pacific	62%	65%	72%	68%	71-76%
Under 25	72%	72%	75%	74%	74-79%
Percentage of students in work-integrated learning	55%	56%	49%	49%	60%
EFTS: Academic FTE Ratio	17.7	18.0	18.3	17.8	>20
Student Net Promoter Score	-	15	13	10	25
Student Headcount (Enrolments)	**19,771**	**18,767**	**19,307**	**17,701**	**NT**
Total Equivalent Full-Time Students (EFTS)	**10,152**	**9,771**	**9,968**	**9,100**	**NT**
% Maori	9.4%	9.2%	9.2%	9.3%	NT
% Pacific	14.5%	14.3%	15.0%	14.4%	NT
% Under 25	55.7%	60.5%	57.4%	55.3%	NT
EFTS (SAC)	**7,859**	**7,285**	**7,148**	**6,508**	**7,669**
% Maori	11.2%	11.1%	11.7%	12.0%	13-18%
% Pacific	16.9%	16.7%	18.8%	18.3%	19-20%
% Under 25	54.7%	57.6%	55.3%	53.3%	64-69%
EFTS – International	**1,695**	**1,962**	**2,181**	**2,114**	**2,000**
EFTS – Domestic	**8,457**	**7,809**	**7,786**	**6,986**	**NT**
EFTS – Youth Guarantee	**103**	**108**	**89**	**72**	**NT**
EFTS (SAC) by Programme Level					
Level 3+	7,600	7,020	6,980	6,408	NT
Level 1 to 2	222	226	138	96	NT
Level 3	722	706	587	512	NT
Level 4	1,747	1,474	1,401	1,281	NT
Level 5 to 6	1,295	1,034	1,022	935	NT
Level 7	3,569	3,528	3,445	2,988	NT
Level 8 to 10	303	317	556	696	NT
Students Entering from PTEs	**194**	**212**	**168**	**244**	**NT**
EFTS Entering From PTEs	**128**	**143**	**127**	**121**	**NT**
Students With Prior NEET Status	**1,718**	**1,431**	**923**	**1,075**	**1400-1550**

Student retention has dropped significantly, and is now below our target range. This reflects issues we encountered early in 2016 with a low rate of re-enrolment, which is now a focus in our 2017 enrolment campaign. The drop was lowest for Under 25 students, and consistent for Maori and Pacific.

The percentage of students in work-integrated learning has remained consistent following the change to our reporting methodology in 2015. We had hoped to see an increase in this measure as we undergo a major revamp of our entire curriculum as part of our Transformation programme. Unfortunately, progress has not been as rapid as desired and thus we fell 11% short of our target.

Our EFTS:Academic FTE ratio dropped despite a significant drop in academic staff in the year. This was due to an even more significant drop in EFTS. Our Student Net Promoter Score dropped by three points, falling well short of our target. Key reasons for satisfaction included friendly, supportive teaching staff, and a good culture and environment. Key reasons for dissatisfaction included Transformation-related disruption, an inefficient enrolment experience, and issues with general disorganisation

2016 saw the single largest drop in EFTS for the past decade, a result of an improving employment market, some internal issues with enrolment processes, and negative media attention that has affected our reputation with prospective students. EFTS dropped by 8.5% as did enrolments. We dropped 8.7% in SAC EFTS and thus fell 15% short of our Investment Plan target; however, we saw positive results with international EFTS and were 6% up on target.

Our mix of students continues to evolve, with steady growth in Levels 8-10 EFTS, largely due to our growing MindLab programmes. Drops in lower-level programmes are due to the improving employment environment. We saw slight growth in Maori participation rates, but fell short of our target; Pacific participation was steady, while we saw a drop in Under 25s. We anticipate that by 2017 we will be within the target ranges for both Maori and Pacific participation.

Focus on EFTS

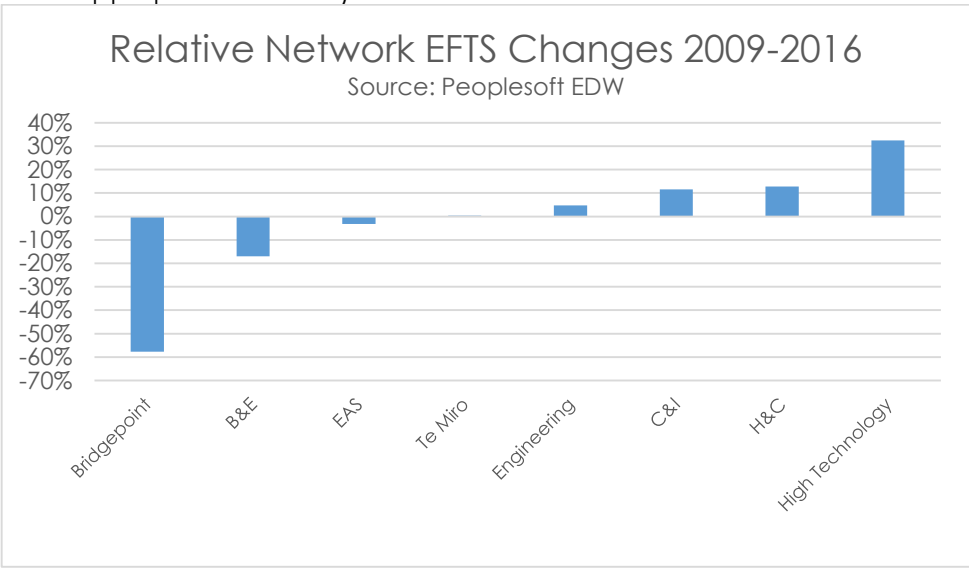
Unitec's performance in gaining enrolments has been relatively poor in recent years. After oscillating performance 2003-2008, we saw consistent growth from 2009-2012. A small drop in 2014 was followed by a small increase, but was then followed by the largest decrease recorded. Much of this volatility is due to international students. Domestic students have declined steadily since 2012.

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Total EFTS	10346	10220	9925	9809	9859	9003	10165	10498	10622	10776	10152	9771	9968	9100
International EFTS	2712	2534	2102	1779	1494	1461	1460	1523	1691	1640	1646	1895	2177	2045
Domestic EFTS	7634	7686	7823	8031	8365	7543	8705	8975	8931	9136	8507	7877	7791	7055

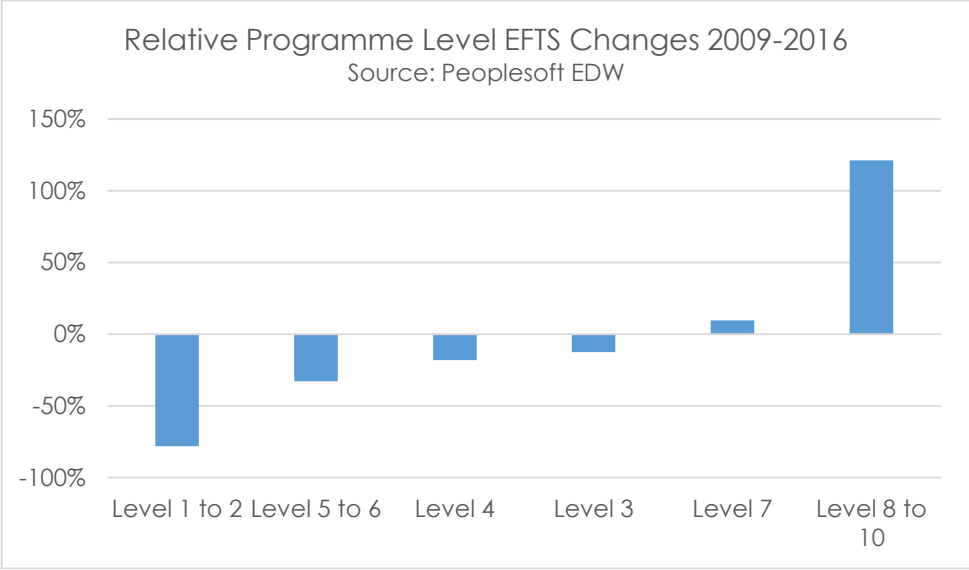
EFTS decline by network and practice pathway group is shown in the following table. We do not have granular data of this nature prior to 2009. There are slight differences as the data below is generated by a live database whereas the table above is derived from the TEC's database. Some rows of old, unused categories have been removed (thus the rows will not add to the total).

Network	2009	2010	2011	2012	2013	2014	2015	2016	Change
Bridgepoint	2227	2092	2003	1729	1501	1262	1103	944	-57.62%
Bridging Education	964	924	902	672	609	507	479	416	-56.86%
Language Studies	1262	1168	1101	1057	892	756	624	528	-58.20%
Business & Enterprise	2123	2390	2437	2623	2432	2339	2216	1763	-16.94%
Business Practice	1213	1486	1485	1633	1493	1536	1487	1159	-4.47%
Creative Industries	910	905	952	990	939	803	728	605	-33.56%
Construction & Infrastructure	1925	2006	1922	1993	1914	1987	2170	2147	11.53%
Architecture	638	602	582	609	581	637	658	653	2.36%
Building Construct. & Services	1287	1404	1339	1384	1333	1350	1512	1494	16.07%
Engineering	1143	1235	1301	1425	1335	1201	1211	1197	4.68%
Engineering	450	503	576	679	661	661	727	712	58.29%
Vehicle Systems & Materials	694	733	725	746	674	539	484	485	-30.07%
Environmental & Animal Science	421	415	461	458	442	428	428	408	-3.18%
Environmental & Animal Science	421	415	461	458	442	428	428	408	-3.18%
Health & Community	1217	1660	1715	1753	1731	1552	1666	1372	12.77%
Community Development	445	711	741	753	748	669	671	545	22.30%
Health Care	451	677	654	669	654	520	651	559	24.00%
Social Practice	321	272	321	332	330	363	344	269	-16.25%
High Technology	586	631	693	702	688	684	797	775	32.39%
Computer Science	586	631	693	702	688	684	797	775	32.39%
Te Miro	86	79	89	93	100	271	110	86	0.34%
Postgraduate	67	63	71	76	77	231	96	80	18.92%
Undergraduate	18	17	18	17	24	39	14	6	-68.09%
The Mind Lab by Unitec						45	283	456	-
Grand Total	10165	10510	10622	10784	10152	9772	9984	9148	-10.00%

There has been sizeable variance in performance by network over the time frame (note: networks did not exist prior to 2016 – historical programmes have been mapped to what would be the appropriate network).



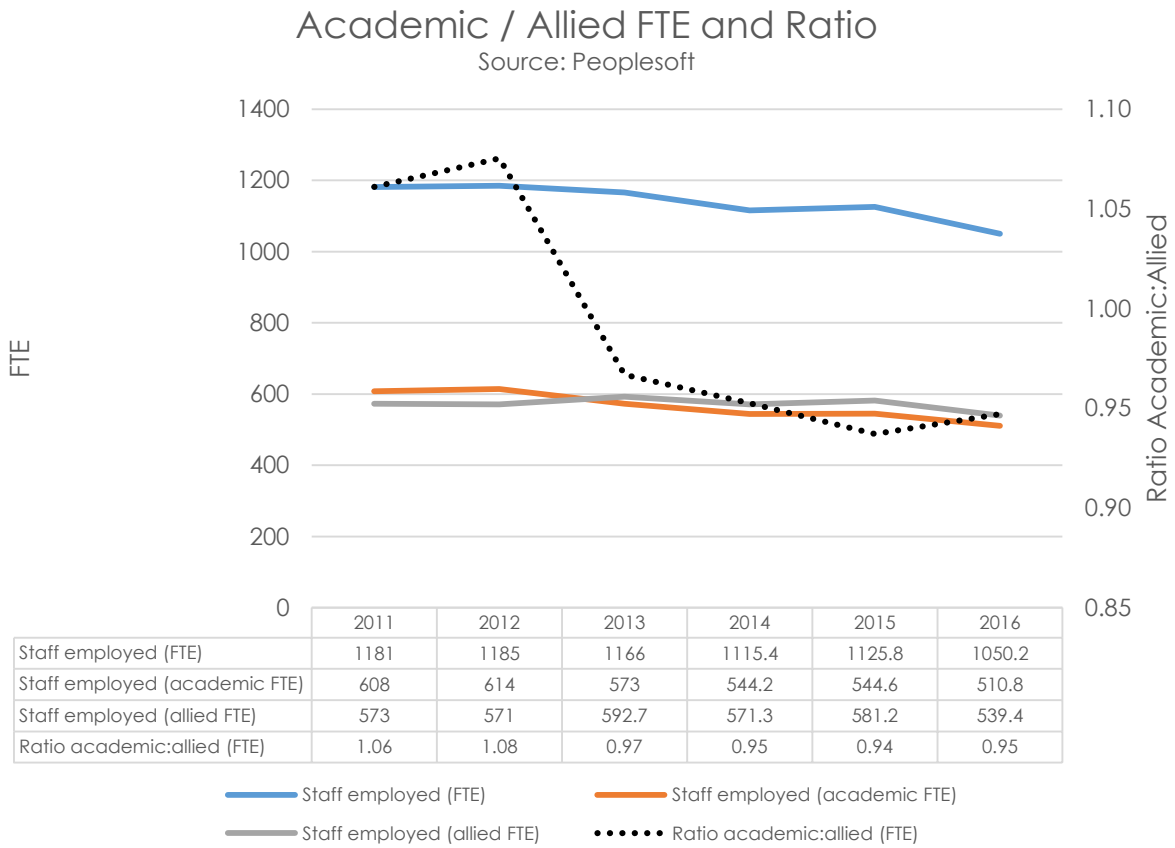
Over the time period, there has been dramatic increase in level 8-10 provision (largely due to MindLab in recent years). However, there have been extremely large drops in level 1-2 (due to competitive provision), with smaller drops at levels 4-6 (due to reduced demand overall).



Staff Statistics

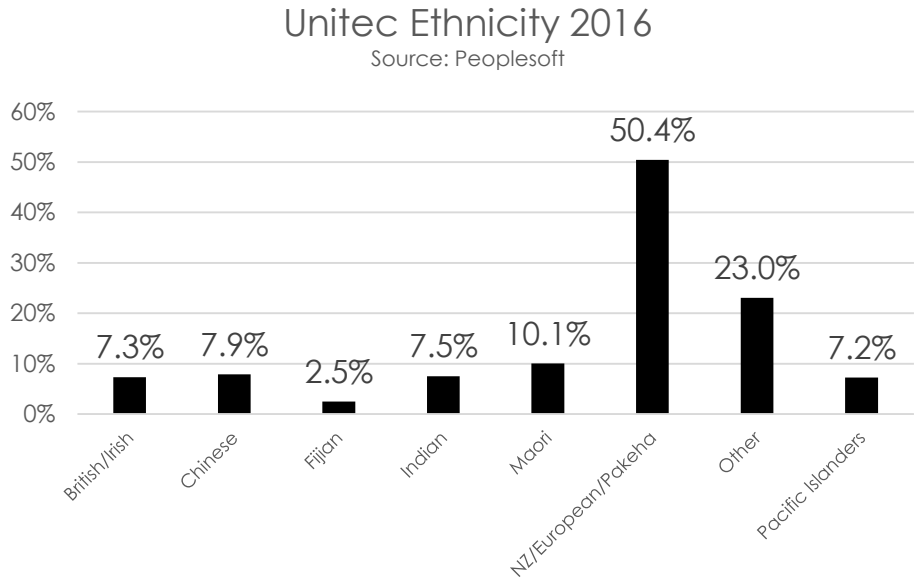
Staff Numbers and Remuneration

During 2016, Unitec has an average headcount (permanent, part-time, and active casual) of 1,340. It accrued 1,050 Full Time Employees over the year. The ratio of academic to allied staff was 1.02:1 for headcount, and 0.95:1 in FTE, indicating a higher proportion of academic staff work less than full-time hours. 2016 saw a drop of 75 FTE, the largest drop since 2013-2014 (as FTE are accrued over the year, the full impact of any reductions in staff numbers are not seen until the following year). While the ratio of academic:allied FTE improved slightly during the year, it might be worthwhile to closely consider the most appropriate level of relative staffing, given the role of academic staff in providing our core outputs.

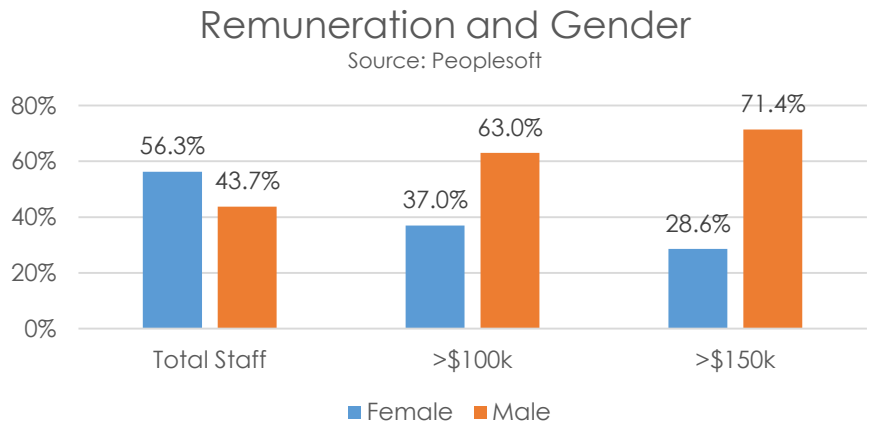


	2011	2012	2013	2014	2015	2016
Staff employed (FTE)	1181	1185	1166	1115.4	1125.8	1050.2
Staff employed (academic FTE)	608	614	573	544.2	544.6	510.8
Staff employed (allied FTE)	573	571	592.7	571.3	581.2	539.4
Ratio academic:allied (FTE)	1.06	1.08	0.97	0.95	0.94	0.95

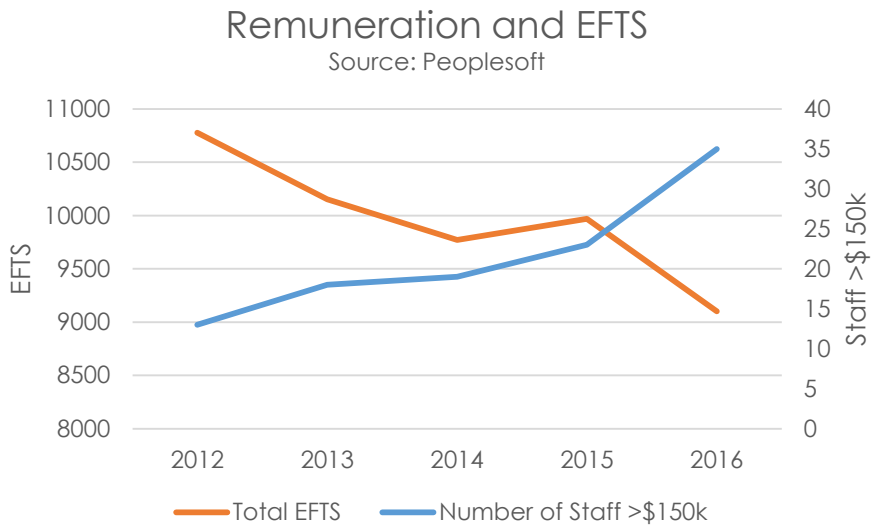
We have recalculated ethnicity using a new, more representative approach. This shows that Unitec has a diverse workforce, with approximately half of our staff identifying as NZ European/Pakeha, 10% as Maori, and Chinese, Indian, British/Irish, and Pacific Islanders all around the 7-8% mark.



Gender equity in remuneration remains an issue of potential concern. This was highlighted in 2016 but does not appear to have improved. While females make up 56% of all Unitec staff, they make up only 37% of staff earning more than $100k, and only 29% of staff earning more than $150k.

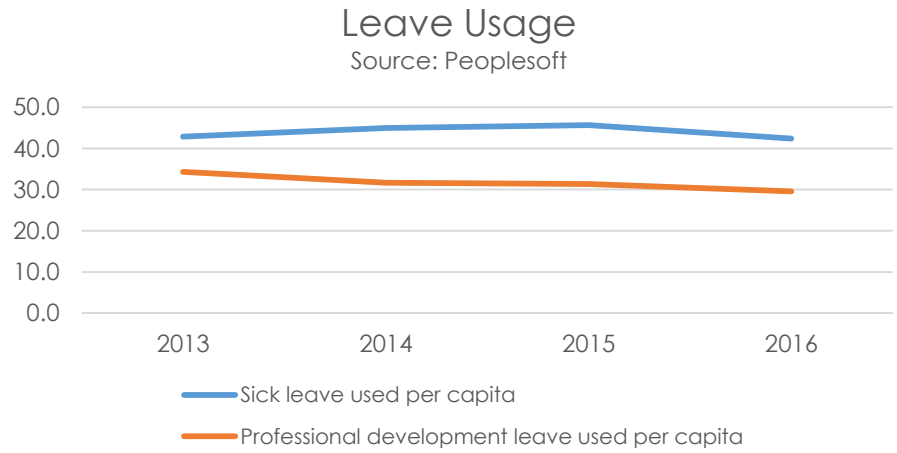


Linked to the above is a potential risk in remuneration structure. The number of staff at Unitec earning more than $150k remuneration has more than doubled in recent years, while at the same time, key financial indicators, such as EFTS and revenue, have not increased at the same rate. This may result in an unsustainable remuneration structure.



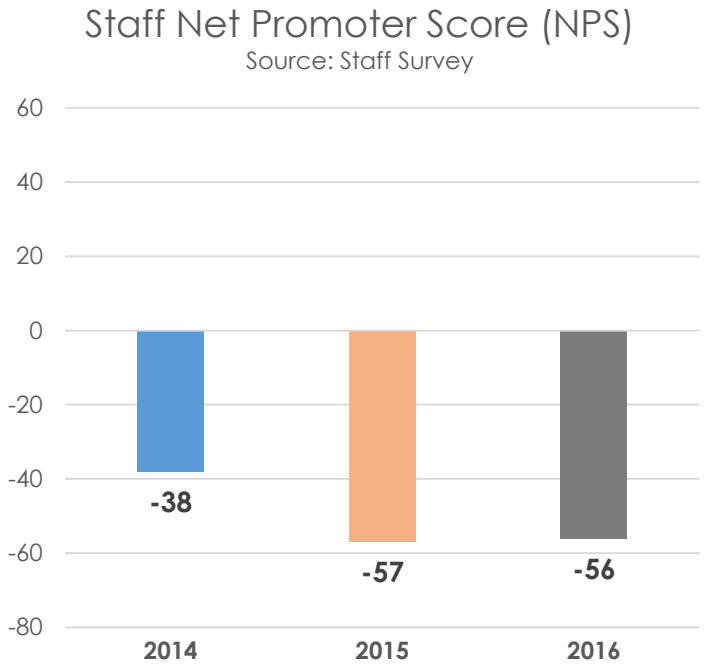
Leave Trends

Sick leave usage dropped in 2016 after consecutive small increases, which is a positive sign as high levels of sick leave usage are often correlated with poor staff morale. Professional development hours have continued to drop.



Staff Survey

No full staff survey was conducted in 2016. Instead, a small half-year survey was conducted. Staff Net Promoter Score (NPS) remains at a very low level (-56). This indicates significant issues with staff morale. In the absence of data from a full Staff Survey, it is difficult to identify root causes, but it is probable that similar issues as were discovered in the 2015 survey remain.



Environment

Unitec has implemented a One Planet sustainability strategy. Key results for 2016 are summarised in the following table.

One Planet Principle	Target	Indicator	2016 Target	2016 Result	Status 2016
Carbon Zero	Reduce Carbon Emissions by 30% (by 2.7% per year) by 2025 & 50% by 2030	Tonnes CO_2e	**3,402**	**3,403**	Within a margin of error of less than 0.001%
Zero Carbon	Achieve Carbon Neutral status through the CEMARs programme	Yes / No	**CarboNZero status Certification**	**Yes**	Achieved
Zero Carbon	Increase space utilisation to 56%*	U% => (Room Frequency (RF) x Occupancy (O))	**32**	**13**	Failed Target
Zero Waste	Reduce waste to landfill by 5% per annum	Tonnes pa	**289**	**366**	Failed Target
Sustainable Transport	≥ 80%[7] of students choosing sustainable transport[8] to travel to campus	% by travel mode	**71%**	**52%**	Failed Target
Sustainable Transport	Reduce air travel carbon emissions by 10% by 2016	Tonnes CO_2e	**1,114**	**1,108**	Achieved
Sustainable Transport	Fossil fuel free fleet by 2020	Tonnes CO_2e			Not Started
Sustainable Transport	All new fleet vehicles must exceed 5* fuel efficiency rating[12]	* rating	**5 * Rating on all new vehicles**	**Purchase of 3.5 * Toyota Dyna.**	Failed Target
Sustainable Materials	90% of goods purchased in accordance with Unitec's Sustainable Procurement policy by 2020	Certification			Not Started
Sustainable Materials	Reduce paper consumption by a further 50% (by 11% per year)	Tonnes	**46.5**	**39.2**	Achieved
Sustainable Food	Establish and increase the proportion of domestically produced food being sold on campus to ≥ 70%	$ spent / year on local produce			Not Started
Sustainable Water	Reduce water consumption to 5.9 m3 / EFTS / year by 2020	m^3 / EFTS	**7.71**	**8.32**	Failed Target
Sustainable Water	Reduce total water use to 59,000 m3 per annum or by ≥30% by 2020	m^3	**69,964**	**75,663**	Failed Target
Sustainable Water	Improve water quality of our receiving environments, Wairaka Puna and Oakley Creek, work with Friends of Oakley Creek and Nga Kaitiakitanga to establish agreed measure				Not Started
Land Use and Wildlife	Increase the Wairaka Stream Macro Invertebrate Community Index (MCI) to 90 by 2020	MIC	**79.9**	**71.7**	Failed Target
Culture and Community	Establish mauri-o-meter biodiversity performance indicators	Yes / No	**Establish mauri-o-meter**	**Yes**	Achieved
Equity and Local Economy	90% of goods purchased in accordance with Unitec's Sustainable Procurement policy	Certification			Not Started

Competitor

Key Issues

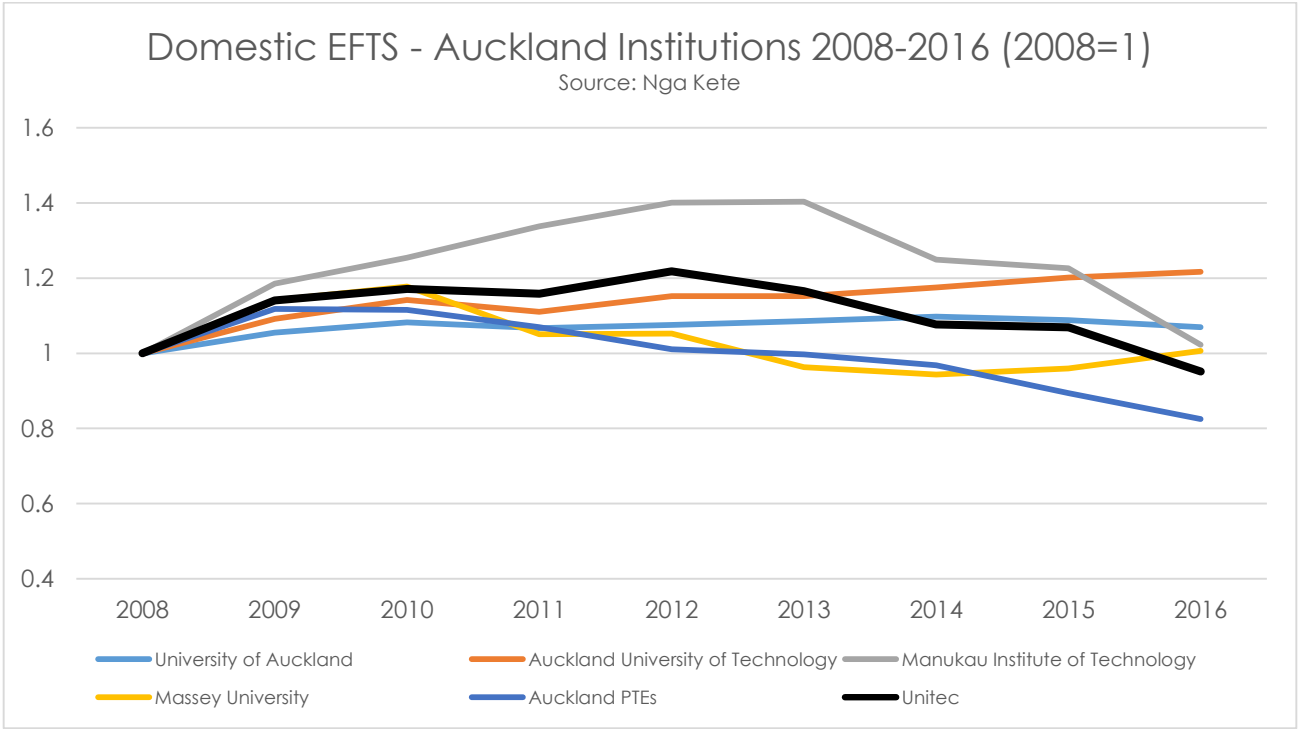
1) **Declining Market Share:** Unitec's share of EFTS – whether in Auckland, as part of the Metro Group, or as part of the broader ITP sector – is in decline, with the most significant drop between 2015 and 2016. The decline is particularly apparent in domestic EFTS
   a) *What does this mean for Unitec?* Domestic EFTS are the lifeblood of institutions, given the volatility of international markets. If Unitec's share continues to decline in a flat-to-declining overall market, it will face significant financial pressures.
2) **Brand Perceptions of Unitec:** Awareness of Unitec has dropped in recent years, while consideration has improved. First choice has remained very low, and is the same, or lower, than institutions with much less awareness.
   a) *What does this mean for Unitec?* Unitec is well known, but not well-loved. Word of mouth is key to institutional reputation, and efforts to improve this may be key, rather than formal marketing.
3) **Lack of Unique Offerings:** Unitec has few unique offerings either in Auckland or nationally, and will be losing its monopoly on one of those programmes in 2018.
   a) *What does this mean for Unitec?* In the absence of unique offerings, Unitec must compete on brand and reputation. This poses difficulties given the issues with perceptions noted above.
4) **Universities Valued Over ITPs:** In general, a very small proportion of intending students prefer ITPS over universities. While this is not reflected in overall enrolment numbers (i.e. universities are not growing at a dramatic rate), this may simply indicate an inability or unwillingness of universities to absorb all potential enrolees.
   a) *What does this mean for Unitec?* Unitec failed to became a university of technology in the early 2000s, and as a result, is still perceived as being of lesser quality. Given broader perceptions of ITPs, there is likely to be a ceiling of likely enrolees for Unitec, except in cases of significant economic distress.
5) **Key Decision-Making Factors:** Student decision-making is complex, but often focuses on cost, location, timing, and the degree of academic support.
   a) *What does this mean for Unitec?* There is relatively little competition on cost in New Zealand, but Unitec has potential advantages with location (green spaces, free parking) and timing. These might provide areas to build a competitive advantage.

Declining Market Share

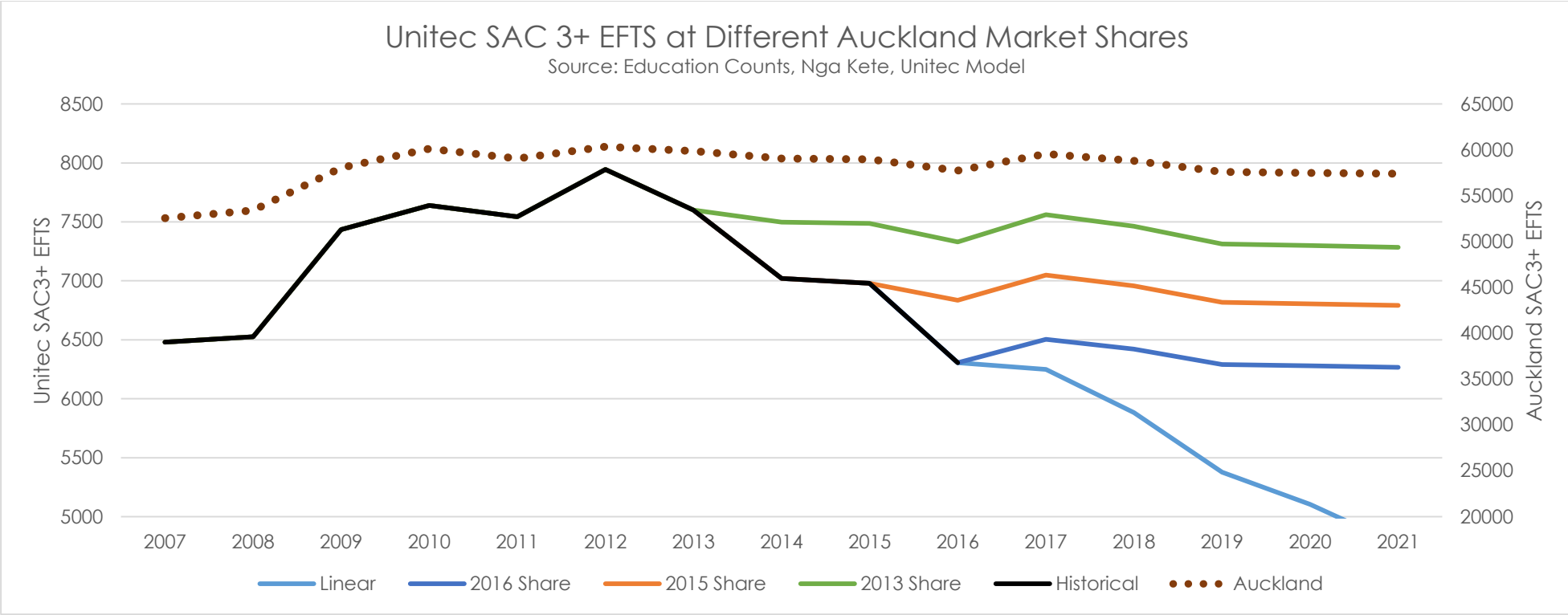
Unitec's market share, whether measured nationally at the sector level, or regionally at the total tertiary level, is in decline. Unitec's market share of Auckland SAC L3+ domestic EFTS (what the Ministry of Education regards as "core" EFTS less vulnerable to year-on-year volatility) has been steadily declining since 2012, when we held 13% of the overall market. In 2016 we held only 10.6% of the market. This is shown in the following table.

SAC3+ Market Share	2008	2009	2010	2011	2012	2013	2014	2015	2016
University of Auckland	49.9%	48.3%	47.9%	48.0%	47.3%	48.0%	49.0%	48.6%	49.2%
Auckland University of Technology	25.0%	25.1%	25.3%	25.1%	25.4%	25.5%	26.3%	26.9%	28.0%
Manukau Institute of Technology	7.3%	7.9%	8.1%	8.8%	9.0%	9.1%	8.2%	8.0%	6.9%
Massey University (Albany)	5.8%	6.0%	6.0%	5.5%	5.3%	4.9%	4.9%	4.9%	5.3%
Unitec	**12.1%**	**12.7%**	**12.6%**	**12.6%**	**13.0%**	**12.5%**	**11.7%**	**11.6%**	**10.6%**

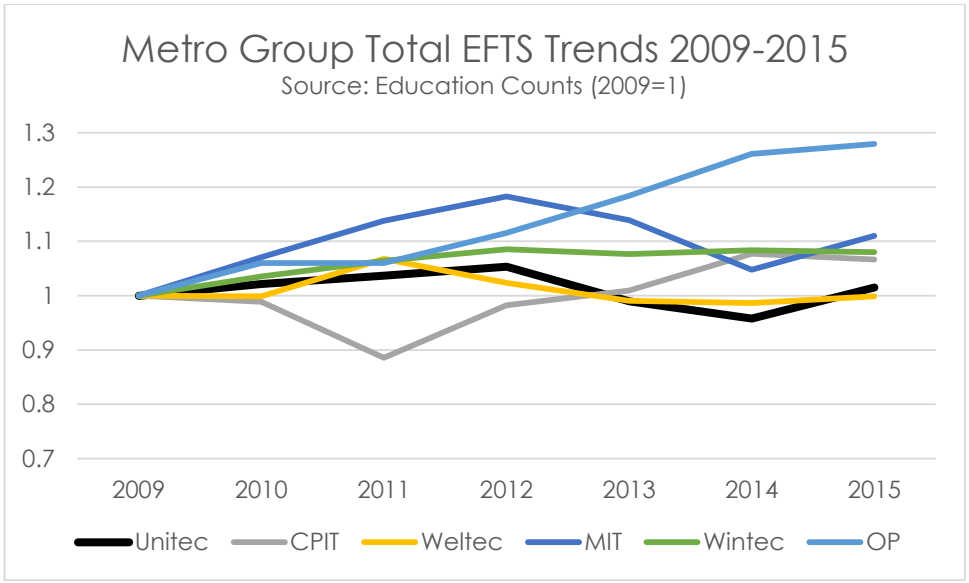
The picture is a little rosier when comparing comparative EFTS changes over the same period and including PTE EFTS. PTEs have dropped almost 20% domestic EFTS over the time period, whereas Unitec has only dropped 5%. And, while MIT is still above Unitec in relative terms to date, their velocity of EFTS indicates they may soon exceed our relative EFTS reduction.

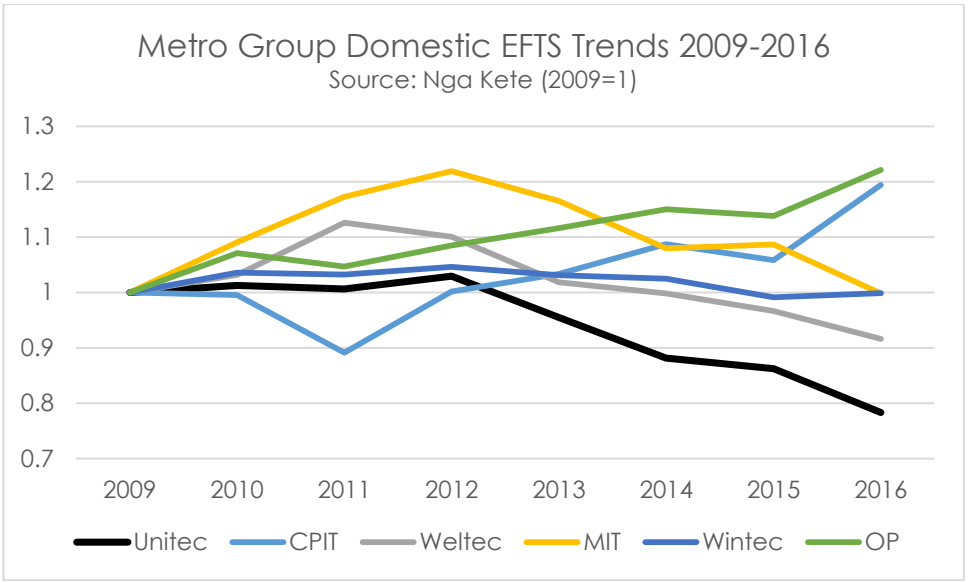


The impact of this declining market share is apparent in the graph below, which presents several counterfactual scenarios for SAC L3+ EFTS: maintaining at (a) 2013 market share, (b) 2015 market share, (c) 2016 market share, or (d) with market share declining along a linear progression. The Auckland line is derived from the Unitec projection model, which is in turn based on the Ministry of Education's model.

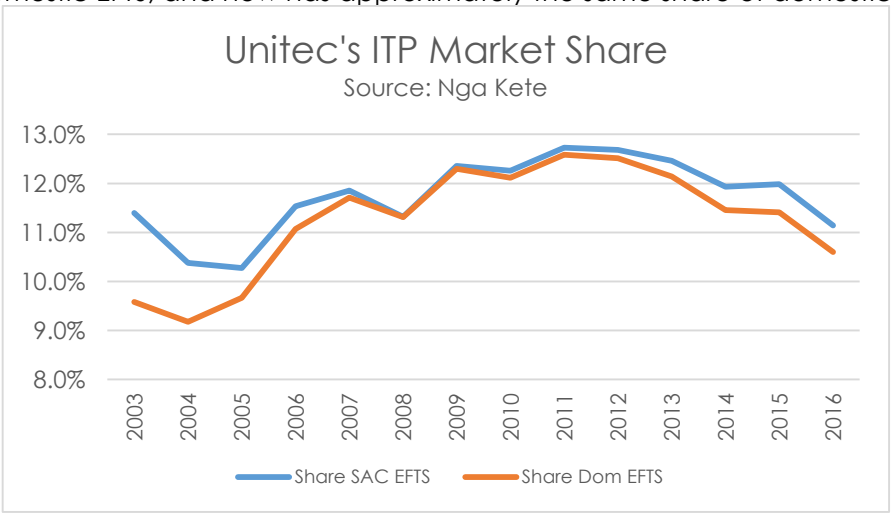


At the national level, the picture is no better. The following graphs show our performance in total EFTS and domestic EFTS relative to the rest of the Metro Group of ITPs. When using 2009 as a base, Unitec is the second worst performer overall (ahead of Weltec), and the worst performer of all for domestic enrolments (although MIT's rate of decline is such that it may overtake us). Due to data unavailability the total EFTS graph does not include 2016.



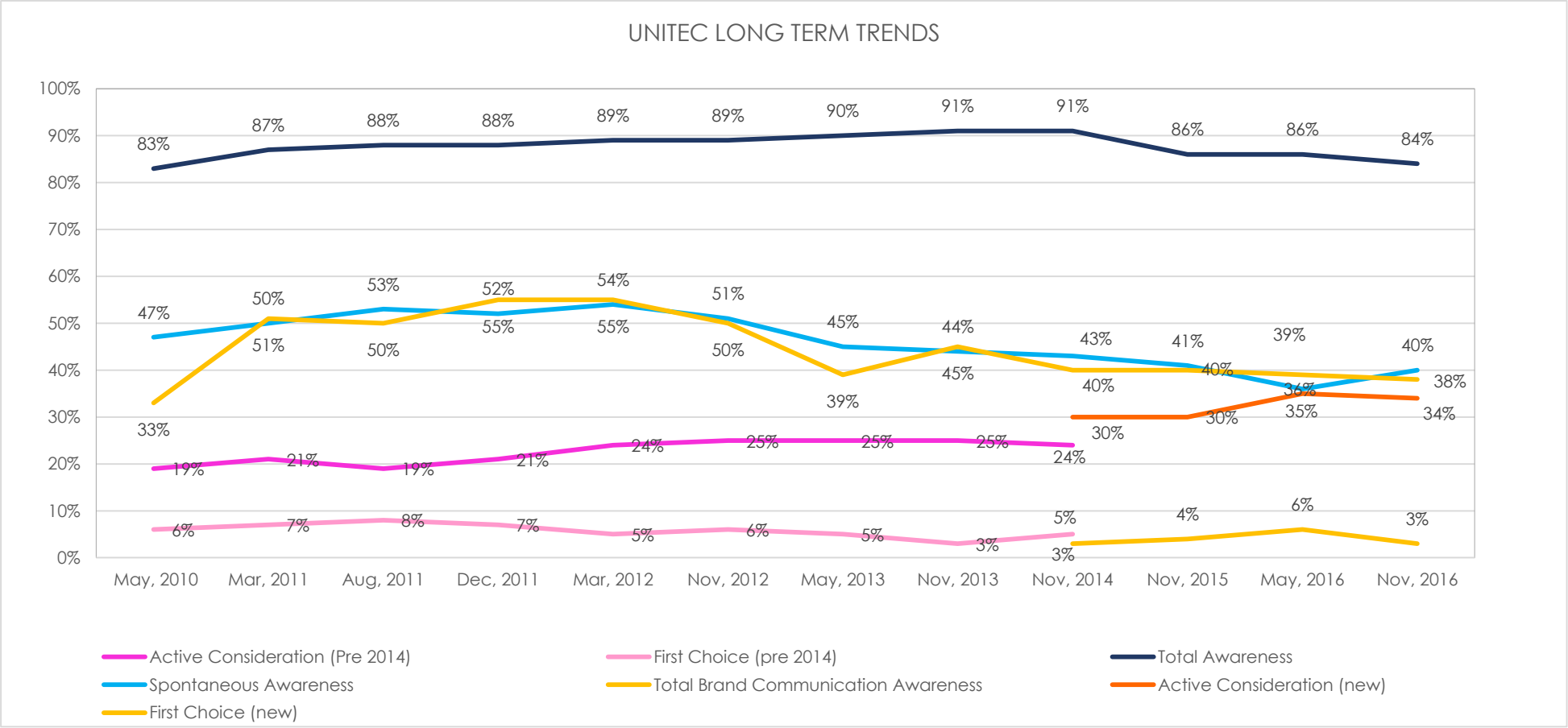


At the broad ITP sector level, and using a longer timescale, a clear trend emerges. Unitec performed particularly well in gaining market share from 2003-2011 or so. Since then it has bled domestic EFTS, and now has approximately the same share of domestic ITP EFTS as in 2006, a decade ago.



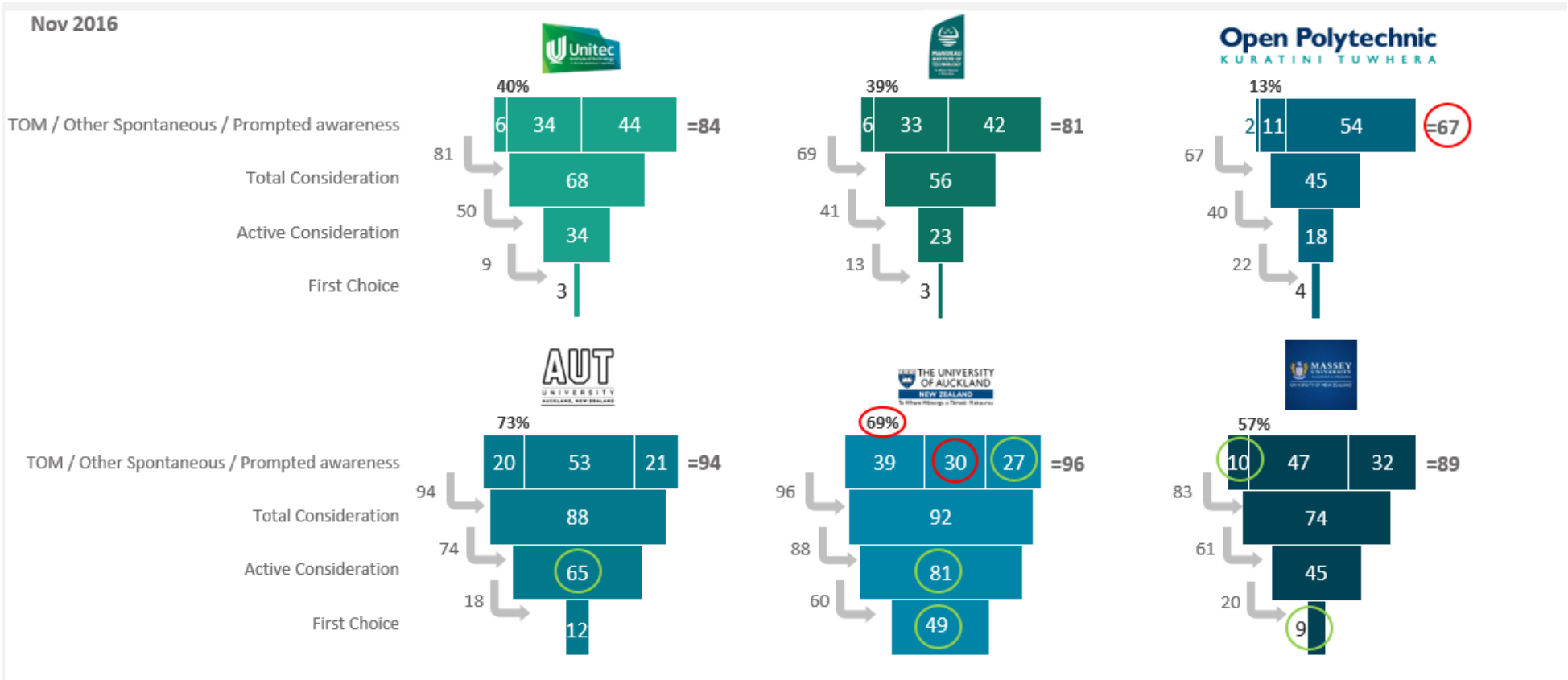
Brand Perceptions of Unitec

Unitec measures brand health and brand equity through regular surveys undertaken by Colmar Brunton using global Millward Brown methodology. Key indicators include awareness (whether people know of Unitec's existence), consideration (whether they would consider attending Unitec), and first choice (whether Unitec would be their first choice institution.) The following graph compares our brand health over time.

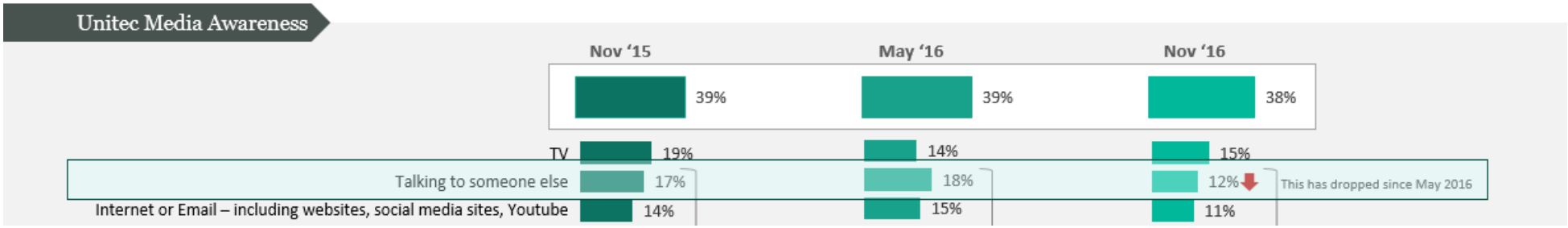


Total awareness has dipped in recent years, whereas consideration has increased – care must be taken, however, as a new methodology for measuring this was introduced in 2014. However, first choice has barely changed (from 4% to 3%, Nov 15 – Nov 16).

The following graph compares our brand health to other institutions in the Auckland area, as well as the Open Polytechnic (which is a truly national-level provider). Unitec's awareness is substantially lower than the universities (including Massey) but is at a similar level to MIT, and well above Open Polytechnic. The gap between Unitec and the universities, as well as Unitec and MIT, widens further at the active consideration, but interestingly, Unitec has a lower first choice score than Open Polytechnic, and the same as MIT, despite much higher scores in the precedent indicators.



Our brand health survey also indicates how important word of mouth is – it is the second most frequent method whereby people find out about Unitec.



As such, negative word of mouth may be a key driver of our brand performance. The following verbatim quotes have been taken from a range of interviews and surveys:

Corporate HR Director: "This is very hard for you guys to change and obviously it's something you are doing by reforming the curriculum but as bad as it sounds I just think it's a reputation thing…it's just a reputation thing, Auckland University has a great reputation. Everyone knows that if you go there it's a pretty top notch degree…We are not terribly familiar with what Unitec students have to offer, it's just reputation. Which is a hard thing to influence really. It's going to take time."

Brand Health Influencers: "They are not good employers and I have friends/colleagues who have had bad work experiences there. I also think they 'guinea pig' student groups with new courses and new staff, so that the students are short-changed. They spend a lot on management and advertising but not enough on retaining and supporting quality staff."

Student: "I have had bad experiences in terms of the way the course was held and run. the common semester in the health sciences paper in Year 1/Semester 1 and Year 2/Semester 2 of the nursing paper. Also not being told of this until our fees had been paid. I do not believe that nursing is the kind of course that can be taught through a computer."

Staff: Though the instability in staffing is not great and I would caution anyone thinking of applying here about that, the other staff and students here are wonderful and people focused and that is why I have rated it a 7."

School Careers Advisor: "Most of our students don't consider Unitec - there is still some negativity about Unitec as a worthwhile place to study. Good luck with this! There have been so many changes within Unitec - staffing, name, availability... Unitec needs to decide who and what it is there for and have some continuity and earn its place in the tertiary landscape."

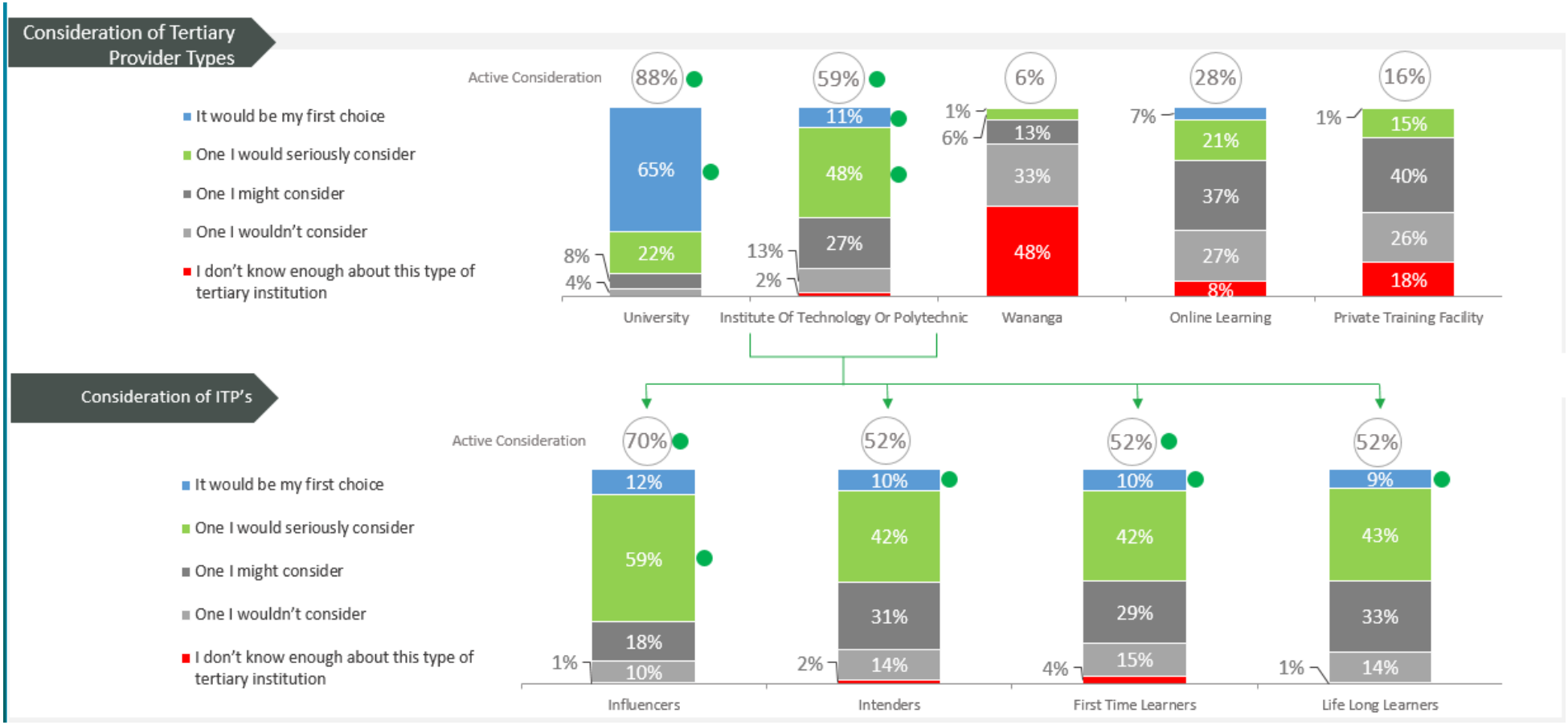
Lack of Unique Offerings

Very few of our major programmes are unique in Auckland or nationally. In a recent survey, we identified only two, which have some of our lowest student satisfaction scores. In 2018, our nationally unique osteopathy programme will no longer be so, as Ara Institute of Canterbury (previously CPIT) will offer it. This lack of uniqueness magnifies the effect of brand perception, as students will be considering like products differentiated solely by reputation.

Programme	Uniqueness	Competitors in Auckland
Nursing	no	3
Osteopathy	yes	- (CPIT 2018)
Medical imaging	yes	-
Architecture	no	1
Construction	no	2
Business	no	3 plus PTE
Engineering	no	2
Computing	no	2 plus PTE
PASA	no	1 plus PTE
CATEC	no	1

Universities Valued over ITPs

One insights from our brand health surveys is that not all potential students would consider an ITP. University study is more attractive to both intending students and influencers. 88% of intending students would actively consider a university, while only 59% would consider an ITP. The gap widens even further at the level of first choice: 65% for universities against 11% for ITPs. This means that any ITP faces significant difficulties in attempting to capture more sizeable shares of the overall tertiary market. The following graph shows different perceptions in greater detail, with additional focus on differing perspectives of those considering ITPs.

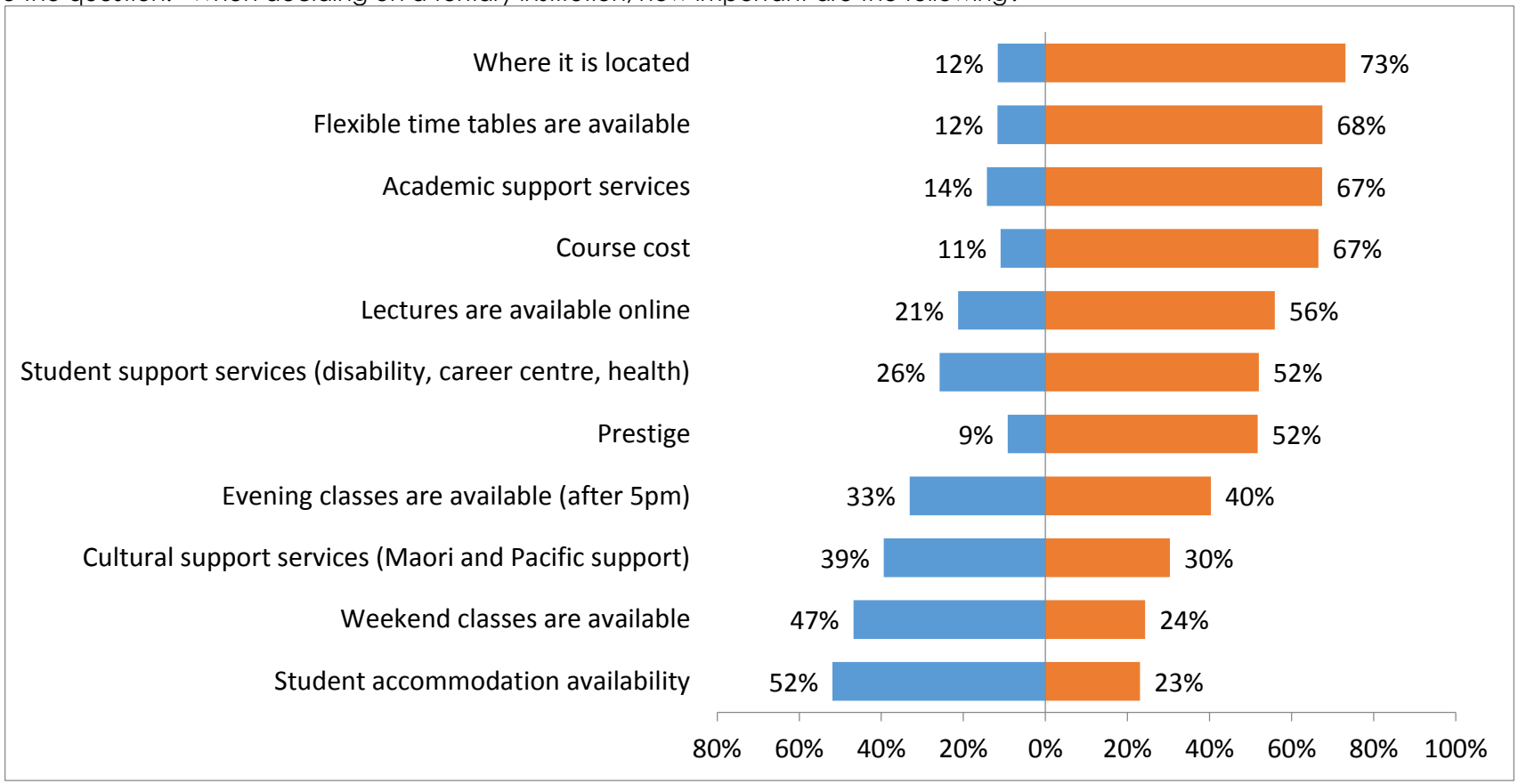


Key Decision-Making Factors

Student decision-making in relation to enrolment is complex and involves multiple factors. In 2013, Unitec conducted a study focusing on factors that influence decision making once the choice of programme has been made. The study identified four key factors:

- Course fees
- Location
- Flexible timetabling
- Academic Support

These factors changed very little depending on whether the student was current, purely enquiring or an intending student. The following graph shows answers to the question: "When deciding on a tertiary institution, how important are the following?"



Other Institution Summary Profiles

The visions, missions, and some details about student services of other institutions are of some interest when considering where Unitec fits within the broader tertiary environment.

Manukau Institute of Technology

- **Purpose:** Our purpose is to get people into great jobs.
- **Vision:** To be widely recognised as the leading Institute of Technology in New Zealand.
- Our Mission: Our mission is to deliver vocationally focused tertiary education, research and technology transfer that ensures Auckland's economy, graduates, employers and communities have the capability and skills to achieve their potential. We recognise that we have a special obligation to serve the people, communities and employers of Counties Manukau and that achieving significantly improved tertiary education outcomes in this subregion is critical to both our mission and to the future economic and social prosperity of the nation.

Open Polytechnic

- **Vision:** A New Zealand that's continually learning to succeed.
- **Purpose:** Growing talent to create value for individuals, employers and the economy.
- NZ's leading distance and online learning provider.
- Flexible study options tailored to fit within your current lifestyle

Auckland University of Technology

- A university for the changing world, an increasingly powerful force for learning and discovery, that promotes the wellbeing of people and their environments,and provides them with opportunities to expand and achieve their aspirations
- Three Campuses: North Shore, City & Manukau
- Student Hub Services
- AUT interNZ – Linking AUT students with business for internships
- AUSM – AUT Student Movement

Waikato Institute of Technology

- **Mission:** To build a stronger community through education, research and career development.
- Part-time study & short courses available
- Free courses
- Youth and mature adults
- Student Learning services

Northern Institute of Technology

- **Mission:** NorthTec will be a leader in the:
    - Excellence of the learning experience for our students;
    - Employability of our graduates; and
    - Contribution that we make to the economic and social development of Te Tai Tokerau.

- 4 locations across Northland with a 5th location opening.
- 'Stay close, go far'
- Short, fees free & online courses

University of Auckland

- **Mission:** A research-led, international university, recognised for excellence in teaching, learning, research, creative work, and administration, for the significance of its contributions to the advancement of knowledge and its commitment to serve its local, national and international communities.
- Online Orientation
- Over 200 clubs and societies to join
- Auckland Uni App
- New Zealand's top ranked university and recognised for excellence
- The Inside Word – blog written by students

This document was produced by Unitec Institute of Technology. All opinions herein are the opinions of the lead writer only and do not express the views of any other Unitec employee, the Unitec Council, or any of the contributing writers.

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