REVIEW OF TERTIARY EDUCATION NEEDS FOR THE WESTERN BAY OF PLENTY REGION

PREPARED BY

APR CONSULTANTS LTD

March 2010
DISCLAIMER

Care has been taken to ensure this report’s contents are as accurate as possible. However, neither APR Consultants Ltd nor Priority One nor any members of the Steering Group or affiliated organisations take responsibility for incorrect information or decisions by any persons based on the information herein.

ACKNOWLEDGMENTS

The research project was administered by Priority One on behalf of the Western Bay of Plenty Tertiary Needs Steering Group. Thanks also to various key informants who offered information and opinions as input to the research.

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EXECUTIVE SUMMARY

This report presents the results of a review of tertiary education needs for the Western Bay of Plenty area. The purpose was to establish tertiary education needs in relation to current and future trends, plans and policies that may impact on training and research services delivered by tertiary providers. The impacts of population growth and emerging business sectors and opportunities are particular areas of focus. Features of this report include:

- Providing a better understanding of the WBoP economy and identifying growth sectors, population trends and related areas over the next 10 years (2010 to 2020).
- Profiling tertiary education organisations and the trends in courses and activities over the past few years.
- Profiling the work of Industry Training Organisations (ITOs) in recent years.
- Summarising the study intentions of school leavers in the region.
- Outlining central and local government policies relevant to tertiary education provision.

The project comprised a review of tertiary education supply and demand, including key strategic drivers. Each aspect was addressed through a combination of literature findings and primary research. The latter was undertaken through interviews and self-response surveys with tertiary education providers, ITOs, secondary schools, Te Puni Kōkiri and industry sector representatives.

Tertiary Education Supply

There are two main public tertiary education providers in the Western Bay of Plenty region, namely the University of Waikato and Bay of Plenty Polytechnic. Other public tertiary education providers in the region include Te Wānanga o Aotearoa and Bay of Plenty District Health Board Clinical School. Extramural/distance education is increasingly popular through such institutions as Massey University, Lincoln University and Open Polytechnic. There are approximately 27 Private Training Enterprises (PTEs) located in the Western Bay of Plenty, many of which are niche providers. The two major PTEs are Bethlehem Tertiary Institute and Avonmore Tertiary Institute. In addition there are a variety of other providers that run short courses, mainly for industry. There is also strong industry training provision in the region with about 3,600 industry trainees and 423 Modern Apprenticeships. Community Support Services, NZITO (dairy and meat), Hospitality, Building and Construction, Competenz (engineering, food and manufacturing) and Forestry represent Industry Training Organisations with the greatest number of trainees in the region.

Tertiary Education Demand

The Bay of Plenty Regional Economic Development Strategy (‘Bay of Connections’) sets out the goals and priorities for economic growth in the Bay of Plenty Region overall. The strategy has been developed around a vision, mission and values supported by four themes: More globally competitive firms; world class infrastructure and skills; environmental sustainability; and innovative and productive industry sectors. These economic development aspirations are embedded within a council-driven growth strategy for the region known as SmartGrowth, which looks out to the year 2051 to provide a context for decision-making. In addition, Priority One has facilitated an economic development strategy known as Smart Economy. One of the key areas identified as requiring more attention is for increased delivery of tertiary education and R&D to add value to primary industries and key sectors. The overall economic vision of the strategy is that ‘the Western Bay of Plenty sub-region is the business location of choice based on sun, sea, soil and people skills resulting in a highly productive, competitive, export-based economy’.
The Western Bay of Plenty area is projected to have strong population growth, an ageing population profile and increasing ethnic and cultural diversity over the coming years. Significant and fast-growing areas of employment include Health Care and Social Assistance, Retail Trade, Manufacturing, Agriculture, Forestry and Fishing, Education and Training, Administrative and Support Services, Arts and Recreational Services, Public Administration and Safety.

Options and Recommendations

Tertiary education demand and supply are influenced by a wide range of factors. Taking into consideration all available information, the following recommendations are offered to the Steering Group for further discussion, for the purpose of maximising the efficiency and effectiveness of tertiary education service delivery. Each of the options has been assessed on the basis of resource effectiveness, scale of impact, level of certainty, regional capability and strategic alignment. More detailed information about each of these recommendations is contained in section 6 of the report.

- Develop a commonly shared, collaborative vision and action plan to guide strategic investment and align the delivery of programmes to meet regional needs and enhance economic and community outcomes.

- Ensure prospective learners are aware of the region's tertiary education and training opportunities.

- Continue to link with key sectors of the community to ensure tertiary education and training meets business and community needs.

- Look to develop higher level tertiary training and research initiatives in the following sectors where opportunities have been identified to strengthen existing competitive advantages:
  - Transport/logistics/supply chain.
  - Science (including food, horticulture, aquaculture, powder metallurgy).
  - Information and communications technology.
  - Tourism.
  - Health and well-being.
  - On-the-job training.

- The following enablers to regional tertiary and research provision were identified to maximise economic and community outcomes:
  - Improved secondary school transitions.
  - Increased leadership/organisational transformation training (including Māori economic potential).
  - Increased attraction of international students.
  - Provision of a 'one stop shop' website for all locally provided programmes and courses.
  - Clustering of training and research into key industry sectors to develop centres of excellence.
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1.0 INTRODUCTION

This report presents the results of a review of tertiary education needs for the Western Bay of Plenty area (defined as Tauranga City and the Western Bay of Plenty District). It is intended that this report will inform an inter-agency Tertiary Needs Action Plan for the period 2009 to 2019. The report supplements a larger and more detailed Reference Document which is confidential to the project funders. In addition, this report supplements a review of future science and research needs in the region which was undertaken jointly by Priority One and the University of Waikato. The project funders – Priority One, University of Waikato and Bay of Plenty Polytechnic – believe there is merit in undertaking a broader review of tertiary education in the wider Bay of Plenty Region at some point in the future.

1.1 Report purpose

The purpose of the review was to establish tertiary education needs in relation to current and future trends, plans and policies that may impact on training and research services delivered by tertiary providers. The impacts of population growth, emerging business sectors and research opportunities are particular areas of focus. The specific project objectives were as follows:

<table>
<thead>
<tr>
<th>Key objectives</th>
<th>Specific aims</th>
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<tbody>
<tr>
<td>1. Determine local tertiary education delivery required to support the goals of Smart Economy by 2020.</td>
<td>Identify future tertiary education demand to be met by delivery in the Western Bay of Plenty Region. Identify current provision and potential for gaps/efficiencies in meeting future demand. Recommend options (including, where relevant, findings from Objective 2).</td>
</tr>
<tr>
<td>2. Take into consideration the likely local science capability required to deliver on goals of Smart Economy by 2020 (as per the research by Priority One and the University of Waikato).</td>
<td>Identify key research, science and technology initiatives of clusters that will include science capability, as well as human and capital resource requirements. Identify potential gaps/synergies and other issues. Review and discuss options on how to address identified gaps/opportunities. Recommend options (including, where relevant, findings from Objective 1).</td>
</tr>
<tr>
<td>3. Determine potential impact of various options (including economic impact, return on investment analysis (cost / benefits, sensitivity, ‘do-nothing’).</td>
<td></td>
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</tbody>
</table>

Source: Project Brief.

The broader requirements of the RFP also provide for consideration of tertiary education and science needs in relation to specific industry sectors such as marine industry production, ICT and the horticultural sector (refer to section 4.1 of this report).

1.2 Education effects on economic growth and community well-being

Having a significant pool of human capital available within the region is a necessary condition for sustainable economic growth. The basis of economic growth is the ability of firms to adapt to change, adopt more effective ideas/technology and dynamically plan, implement and monitor strategic initiatives to ensure ongoing competitiveness. The basis of these characteristics is a highly educated workforce.
An increase in the number of residents with higher level qualifications would result in higher incomes and better levels of local institutional governance and capacity. There are also wider social benefits from higher education. A list of some of these benefits (according to Treasury, 2001) are outlined below.

**Table 1: Education effects on economic growth and community well-being**

- More educated people adopt healthier habits and lifestyles – for instance, they are less likely to smoke or drink heavily and they engage in more exercise.
- Higher levels of education lead to lower take up of social transfer benefits (even when eligible) and, through higher wages, paying more tax.
- More educated people conduct labour market searches more efficiently and effectively.
- The children of better-educated parents themselves do better at school. Moreover, children in communities where the average level of education is higher are more likely to complete secondary schooling, other things being constant.
- Individual education levels are associated with a lower risk of crime, and there is an additional effect from average levels of education in a community.
- Education and literacy skills are positively associated with levels of political and social engagement and participation in voluntary community activities, as well as in resources devoted to charity.
- Community education levels are associated with higher levels of trust, tolerance of diversity, commitment to equality of opportunities and resistance to political alienation.
- Education has both an immediate and long-term positive association with self-reported happiness, even when taking account of the effects of family income.

Source: Compiled from Treasury (2001).

For current standards of living to be maintained in the Western Bay of Plenty, the region will need to be more strongly represented in higher productivity, faster-growing industry sectors. Growth in these sectors is only feasible if the region possesses a sufficient pool of people with higher level qualifications. This implies the need to more effectively retain the region’s young people in local tertiary education opportunities, increase the number of skilled migrants and increase the region’s emphasis on the provision of flexible retraining and up-skilling options for those currently in the workforce.

### 1.3 Report structure

Features of this report include:

- Providing a better understanding of the WBoP economy and identifying growth sectors, population trends and related areas over the next 10 years.
- Profiling tertiary education organisations and the trends in courses and activities over the past few years.
- Profiling the work of Industry Training Organisations (ITOs) in recent years.
- Summarising the study intentions of school leavers in the region.
- Outlining central and local government policies relevant to tertiary education provision, including Tertiary Education Commission (TEC), Ministry of Education, Western Bay of Plenty District Council, Tauranga City Council and Environment Bay of Plenty.
Section 2 provides an overview of New Zealand’s tertiary education policy framework and key trends affecting the tertiary education environment. Section 3 is an overview of tertiary education supply in the Western Bay of Plenty Region by universities, polytechnics, private training establishments, industry training organisations and wānanga. Section 4 provides an overview of high-level strategic considerations and the results from stakeholder consultation undertaken as part of the research project. This includes an overview of areas in which Western Bay of Plenty’s Māori population may require increased access to tertiary training or study provision over the next ten years. Section 5 discusses key drivers of tertiary education demand including national and international education trends, population growth drivers, economic growth drivers and secondary school students’ study intentions.

Section 6 pulls together information from previous sections and discusses ways to achieve a better match between tertiary education and supply. The report provides broad recommendations covering three time periods:

1. Immediate considerations.
2. Matters over the next five years.
3. Matters to be considered over the next 10 years.

Source documents are referenced sparingly throughout this report to aid readability. Key documents are listed in the References section at the end of the report.

### 1.4 Methodology

The project involved a combination of primary research (interviews) and secondary research (review of existing information). Key tasks and milestones with indicative dates are shown below.

**Table 3: Research timetable**

<table>
<thead>
<tr>
<th>Timeframe</th>
<th>Description</th>
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<tbody>
<tr>
<td>Late November 2009</td>
<td>Project commencement</td>
</tr>
<tr>
<td>16 December 2009</td>
<td>Initial Steering Group workshop</td>
</tr>
<tr>
<td>Nov 2009 – Jan 2010</td>
<td>Identifying tertiary education supply</td>
</tr>
<tr>
<td>Nov 2009 – Jan 2010</td>
<td>Identifying tertiary education demand</td>
</tr>
<tr>
<td>Nov 2009 – Jan 2010</td>
<td>Influences on tertiary education and supply</td>
</tr>
<tr>
<td>Nov 2009 – Jan 2010</td>
<td>Tertiary education projections and provision</td>
</tr>
<tr>
<td>10 February 2010</td>
<td>Steering Group workshop – feedback on draft report</td>
</tr>
<tr>
<td>Jan/Feb 2010</td>
<td>Project integration</td>
</tr>
<tr>
<td>Mar 2010</td>
<td>Final report submitted</td>
</tr>
</tbody>
</table>

In broad terms the project comprised a review of tertiary education demand, tertiary education supply, influences on tertiary education supply and demand, and future education needs and options for effective service delivery. Each aspect was addressed through a combination of literature findings and primary research. The latter was undertaken through interviews and self-response surveys with tertiary education providers, ITOs, secondary schools, Te Puni Kōkiri and industry sector representatives. Figure 1 summarises the project in terms of strategic and policy relationships, key stakeholders and next steps.
Figure 1: Western Bay of Plenty Tertiary Needs Study – summary diagram

Source: Priority One.
2.0 POLICY FRAMEWORK

There are a range of influences that impact on the demand and supply of tertiary education in the Western Bay of Plenty, including central and local tertiary education policy and strategy requirements such as the New Zealand Tertiary Education Strategy, statement of tertiary education priorities and recent developments in tertiary education funding policy. These will shape the local future of tertiary education, along with public institutional operating requirements and the market requirements for learners and industry sectors.

2.1 National tertiary education policy environment

Technical and vocational education in New Zealand is mainly offered at institutes of technology, polytechnics, private training establishments and in the workplace. Higher/degree level education is mainly offered at universities, although some other institutions also offer degree programmes. ITOs represent particular industries and maintain national unit standards and qualifications for their sector. They also facilitate on-the-job training including contracting with training providers. The contribution of tertiary education to economic growth is complemented by the operational activities of tertiary institutions and income earned from international students studying in New Zealand.

2.1.1 National expenditure trends

Government expenditure on tertiary education increased at an average rate of around 6% per year in real terms in the decade 2000-2009. During the 2009/10 financial year, the Government is forecast to spend a total of $4 billion on tertiary education. This represents 36% of total education expenditure. Of the $4 billion, almost three-quarters will be invested directly in tertiary education organisations, with the remainder spent on student support initiatives. National allocations for ACE (Adult and Community Education) programmes were reduced from approximately $16 million in 2009 to $2.8 million for 2010 after substantial cuts were announced in the Budget.

2.1.2 Tertiary education participation trends

Tertiary education participation has expanded all over the world and has also become more international in terms of global networking, more mobile staff and students, and higher levels of international collaboration. New Zealand has a high rate of participation in tertiary education, with substantial growth since the 1990s. Until 2005 much of the growth was in certificate and diploma-level study. Recent years have seen a fall in enrolments at levels one to three and increases in enrolments at pre-degree levels 4, 5 and 6 plus degree level and above, driven by a growing population of young people. International students also remain an important part of New Zealand’s tertiary education system.

Demand for tertiary education is currently affected by the ‘baby blip’ (ie, grandchildren of the baby-boomer generation). More young people are also leaving school with sufficient credits to meet university entrance requirements, increasing the demand for higher-level tertiary study. In parallel, the economic recession is creating an incentive for students to remain in education longer before entering the workforce. The ethnic make-up of the 15 to 39 year age group is also changing due to higher proportions of Māori, Pasifika and Asian young people.
2.1.3 **Tertiary Education Strategy**

The Tertiary Education Strategy (TES) 2010-2015 describes the Government’s strategic direction for tertiary education over the next five to 10 years. It outlines the Government’s priorities in terms of expected trends, issues and actions over the next investment plan cycle starting in 2011. It is used to guide TEC’s investment decisions in order to maximise tertiary education's contribution to national goals, and serves as an overall reference point for the Government’s policy-making and relationships with the sector. The TES provides the overall framework within which funding decisions are made by the Government, ensuring that funding supports providers to deliver on outcome priorities.

A key feature of the current TES is its backdrop against the global financial crisis. The economy has contracted significantly due to the global downturn and local recession, curtailing Government income at the same time as increasing the costs of social welfare and debt servicing. The recession is also raising demand for tertiary education, both in new enrolments and existing students increasing their study-load or enrolling in further study. As firms put off growth or downsize to cope with the impact of the recession, more people are seeking to enter education and training to improve their skill levels. Within this economic environment, the Government is seeking to ensure that the tertiary education system achieves the best return on the public’s investment.

Due to the tight fiscal environment, the Government is unable to provide significant funding increases to meet the growing demand for tertiary education. Funding is being moved away from ‘low quality’ qualifications (such as those with low completion rates or poor educational or labour market outcomes) to fund growth in higher-quality qualifications that benefit New Zealanders and contribute to economic growth. Within this environment, tertiary education providers need to manage their costs, continue to seek efficiency gains, ensure the qualifications they offer meet student and employer needs, and explore additional sources of revenue.

A key driver to improve the efficiency of public investment in tertiary education is to improve course and qualification completion rates. The Government is committed to maintaining reasonable fees for students, but will explore ways of giving providers some additional flexibility to raise revenue. Key aspects of the TES 2010-2015 are summarised as follows:

- The Government’s over-arching vision is for a world-leading education system that equips all New Zealanders with the knowledge, skills and values to be successful citizens in the 21st century.

- The vision for the tertiary education sector is for relevant and efficient provision that meets the needs of students, the labour market and the economy. This includes:
  - Providing New Zealanders of all backgrounds with opportunities to gain world-class skills and knowledge.
  - Raising the skills and knowledge of the current and future workforce to meet labour market demand and social needs.
  - Producing high-quality research to build on New Zealand’s knowledge base, respond to the needs of the economy and address environmental and social challenges.
  - Enable Māori to enjoy education success as Māori.
Priorities for the next three to five years include:

- Increasing the number of young people (aged less than 25 years) achieving qualifications at levels four and above, particularly degrees.
- Increasing the number of Māori students enjoying success at higher levels.
- Increasing the number of Pasifika students achieving at higher levels.
- Increasing the number of young people moving successfully from school into tertiary education.
- Improving literacy, language, numeracy and skills outcomes from levels one to three study.
- Improving the educational and financial performance of providers.
- Strengthening research outcomes.

The priorities above will be achieved by targeting priority groups; improving system performance; and supporting high-quality research that helps to drive innovation.

The TES also articulates the Government’s expectations of various types of tertiary education providers and of students, and outlines a range of success indicators that the Government will be monitoring. A recurring theme of the TES is an increased focus on responsiveness to regional community needs. Over the long-term, the tertiary Education Commission (TEC) is progressively introducing a new funding and monitoring system which promotes a stronger focus on the quality and relevance of education and research.

2.1.4 **EFTS funding caps**

PTEs had their government funding capped in 2002. In 2007, TEC capped EFTS at public tertiary education institutions (ie, University, Wānanga and ITPs) until 2010 and introduced the ability to take away funding if institutions exceed or fall short of predicted student numbers by more than 3 percent. This controversial measure remains in place, subject to changes in which types of courses are capped. Students are effectively competing amongst themselves for tertiary education opportunities. The caps are expected to remain in place until such time as the underlying economic climate allows greater Government investment in the education sector. The cap on EFTS applies only to domestic students (ie, those who are New Zealand residents). Providers can enrol as many full fee-paying international students as they wish.

2.2 **Regional and local strategic tertiary education objectives**

At a local level, economic development plans, territorial authority Long-Term Plan and regional and district plans may be important in considering infrastructural effects of tertiary facilities and possible associations with industry-based training activities. The following is a summary overview of relevant economic and strategic plans for the Tauranga and Western Bay of Plenty areas.

2.2.1 **Bay of Connections – Bay of Plenty Regional Economic Development Strategy**

The Bay of Plenty Regional Economic Development Strategy (Bay of Connections) sets out the goals and priorities for economic growth in the Bay of Plenty Region overall. The Bay of Connections strategy has been developed around a vision, mission and values supported by four themes and 13 key areas of focus (refer Figure 2). The strategy calls for enhanced investment in tertiary education,
research and development, as well as a focus on basic numeracy and literacy to up-skill the workforce. Specific actions include supporting the development of a co-ordinated statement of regional tertiary education needs and a collaborative regional tertiary education strategy. The strategy also has action plans relating to specific industry sectors.

**Figure 2: Overview of Regional Economic Development Strategy**

Source: Bay of Connections – Bay of Plenty Regional Economic Development Strategy

### 2.2.2 Smart Economy Strategy – Western Bay of Plenty sub-region

The Smart Economy Strategy was commissioned by a partnership of Tauranga City Council, Western Bay of Plenty District Council and Priority One. It also involved Environment Bay of Plenty, key industry sectors, iwi and business agencies (eg, Chamber of Commerce). Implementation of the strategy commenced in August 2004. Smart Economy involves five key areas in its vision to achieve a highly productive, competitive, and export-based economy (refer Table 4). Tertiary education provision is a key driver across a range of these areas, but mainly concentrates on the area of Education and Skills – “The People”. Tertiary education is considered a priority area for implementation of the Smart Economy Strategy. A Tertiary Education Board has been established since implementation. The overall economic vision of the strategy is that 'the Western Bay of Plenty sub-region is the business location of choice based on sun, sea, soil and people skills resulting in a highly productive, competitive, export-based economy'.
2.2.3 Tauranga Tomorrow – Tauranga Community Outcomes Strategy

In addition to the Bay of Connections Strategy, Tauranga City Council has facilitated a multi-agency ‘community outcomes’ strategy known as Tauranga Tomorrow. Outcomes and actions are regularly monitored and reported. One of the key areas identified as requiring more attention is for increased delivery of tertiary education and R&D to add value to primary industries and key sectors.

In 2008, a Bay of Plenty Community Outcomes report monitored progress towards the outcome ‘inspiring and supporting people to learn’. Some of the results relating to tertiary education included:

- Qualifications gained - The region is behind the New Zealand average for highly qualified people and has a high number of students in the region leaving school with no qualification.

- Number of apprenticeships - The number of apprenticeships awarded is growing steadily.

- Tertiary education enrolments - The number of students attending tertiary education courses is not filling the demand for skilled people required by local business and industry.

- Tertiary courses available - A wide range of courses are reported as available in the region, but students need to go outside the region to advance their qualifications (eg, to get a degree).
2.2.4 SmartGrowth – Western Bay of Plenty sub-region

SmartGrowth is a programme aimed at implementing a long-term plan for managing growth in the Western Bay of Plenty to ensure that as the area grows, it will continue to be a great place to live, work and play. The programme is being led by Environment Bay of Plenty, Tauranga City Council, Western Bay of Plenty District Council and tangata whenua, working with community groups and government agencies such as the New Zealand Transport Agency. SmartGrowth grew out of community concerns about continued rapid population growth, and a lack of effective planning to manage this growth. The vision, goals and key themes of the strategy are summarised in Table 5.

Table 5: Western Bay of Plenty sub-regional growth strategy: SmartGrowth

<table>
<thead>
<tr>
<th>Vision</th>
<th>Themes</th>
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<tbody>
<tr>
<td>By the year 2050 the western Bay of Plenty will be a unique sub-region, which has:</td>
<td>• Effective Leadership.</td>
</tr>
<tr>
<td>• Maintained and improved its natural and cultural environment.</td>
<td>• Maintained and improved national and cultural environment.</td>
</tr>
<tr>
<td>• Enhanced the lifestyles of its communities and provided for the social needs of the people.</td>
<td>• Enhanced lifestyles.</td>
</tr>
<tr>
<td>• Created a thriving sustainable economy.</td>
<td>• Efficient and Affordable infrastructure.</td>
</tr>
<tr>
<td>• Provided an efficient and affordable infrastructure.</td>
<td>• Thriving Economy.</td>
</tr>
<tr>
<td>• Implemented an efficient and integrated planning process for growth management.</td>
<td></td>
</tr>
</tbody>
</table>

Source: Priority One

The Strategy’s vision is that: ‘In 50 years' time ... the Western Bay of Plenty is a place where people can contribute to and enjoy a quality of life that meets their needs and aspirations. It provides lifestyle choices from surf to mountain-tops, which support and reflect the natural attributes of the area. There is a strong community feeling accompanied by spirit and pride.’

SmartGrowth includes specific principles relating to tertiary education as follows:

- Tertiary education is under-provided in the Bay of Plenty region. This is a major factor in the lower representation of young adults in the local population. There is strong community desire to improve tertiary services for all, but in particular to retain and attract young people to the region.

- Tertiary education is a key economic driver for the sub-region in terms of local investment and employment in its own right. Also in its ability to retain local students, offer retraining opportunities, retrain older workers, attract students nationally and internationally, and as a strong applied research base allied to local industry and commerce.

- Tertiary education and associated research facilities are a likely catalyst for increasing the desirability of investment in higher skill and higher wage business activities in the sub-region.

- The on-going development of the tertiary campuses continues to be progressed to provide a comprehensive, seamless range of tertiary provision including:
  - Teaching and learning.
  - Research and consultancy.
  - Centres of research excellence.
  - Technology import and transfer.
  - Community satellites in the region.
  - Co-location of providers and support agencies.
Specific SmartGrowth actions relating to tertiary education include:

- Investigate and evaluate opportunities for research capability in Tauranga aligned to distinctive regional strengths and needs through agreed collaborative strategies.
- Support the enhancement of tertiary education opportunities in the sub-region through a collaborative approach between the University of Waikato and also other possible providers.
- Development of a regional tertiary education strategy that gives effect to the SmartEconomy strategy and aligns with sub-regional aspirations.
- Development of a three year plan for delivery based on an understanding of community need.
- Develop partnerships with providers outside the region to fill any gaps in required delivery (skills, training and research).

2.3 Regional Science and Technology Plan

A WBOP Regional Science and Technology Plan is currently being developed by the University of Waikato and Priority One. The aim of the plan is to maximise the contribution of science and technology (S&T) to the economic development of the WBOP through improving coordination between initiatives and informing the evidence base for decision making and planning.

The Plan demonstrates that the WBOP seeks to establish internationally significant S&T capability in the following areas: Coastal and marine; Aquaculture; Powder metallurgy; Horticulture; Transport and Logistics; Information and Communication Technologies (internet search).

The region is undertaking two major new initiatives to help build the innovation ecosystem:

- The ‘House of Science’, facilitating public outreach;
- The ‘Business House’, facilitating science and technology to business opportunities.

There are three major new S&T sites in development in the region:

- The Nautilus S&T Park at Sulphur Pt;
- Applied Powder Metallurgy Research Centre at BOP Polytech Windermere campus;
- Aquaculture centre at the BOP Polytech Windermere campus.

These initiatives are well linked at this stage and there are no obvious duplications or missed opportunities.

The development of Nautilus S&T Park as a mixed use research and science facility stands out as a particular opportunity for efficiencies and synergies through co-location of a number of developments.

The Plan indicates the potential scale of capability impacts of these initiatives in the WBOP by 2020:

- At least 50 new fulltime research and academic staff;
- At least the same number (50) of post graduate qualified staff in business and industry;
- At least 100 associated research and academic staff;
- At least 100 new post graduate students;
- 500 undergraduate students.
3.0 CURRENT AND HISTORICAL TERTIARY EDUCATION SUPPLY

This section presents an analysis of tertiary education provision in Western Bay of Plenty, including a summary overview of the providers, locations and courses available. The analysis includes all major providers such as the University of Waikato, Bay of Plenty Polytechnic, Te Wānanga o Aotearoa, PTEs and ITOs.

3.1 Providers, locations and courses available

There are two main public tertiary education providers located in the Western Bay of Plenty region, namely the University of Waikato and Bay of Plenty Polytechnic. Other public tertiary education providers in the region include Te Wānanga o Aotearoa and Bay of Plenty District Health Board Clinical School, which takes student placements from various other institutions including Waikariki Institute of Technology, University of Auckland, Auckland University of Technology and Waikato Institute of Technology. There is also a variety of other public institutions that draw students from the Western Bay of Plenty area (eg, Massey, Victoria and Otago Universities).

Studying online has become increasingly popular with students in New Zealand. Western Bay of Plenty residents can access flexible learning options which may include online delivery through such institutions as Massey University, Lincoln University and the Open Polytechnic of New Zealand.

There are around 27 Private Training Enterprises (PTEs) located in the Western Bay of Plenty that run programmes accredited by the New Zealand Qualifications Authority (NZQA), many of which are very niche providers. The two major PTEs are Bethlehem Tertiary Institute and Avonmore Tertiary Institute. In addition, there are a variety of other providers that run short courses, mainly for industry.

There is strong industry training provision in the region with about 3,600 industry trainees and 423 modern apprenticeships as at the second quarter of 2009. Community Support Services, NZITO (dairy and meat), Hospitality, Building and Construction, Competenz (engineering, food and manufacturing) and Forestry represent Industry Training Organisations with the greatest number of trainees in Western Bay of Plenty region.

Overall, as at 2008 there were approximately 3,600 EFTS studying at public tertiary institutes and Ministry-funded PTEs in the Western Bay of Plenty. Between 2004 and 2008 the total number of EFTS in the region declined by 9% (refer Table 6).

Table 6: Ministry of Education funded EFTS by level – Western Bay of Plenty sub-region

<table>
<thead>
<tr>
<th>Year</th>
<th>Certificates 1-3</th>
<th>Certificates 4</th>
<th>Diplomas 5-7</th>
<th>Bachelors</th>
<th>Graduate certs/diplomas</th>
<th>Honours &amp; postgrad cert/diplomas</th>
<th>Non formal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>1,375.3</td>
<td>552.3</td>
<td>1,223.4</td>
<td>448.6</td>
<td>46.9</td>
<td>11.5</td>
<td>290.9</td>
<td>3,949.1</td>
</tr>
<tr>
<td>2005</td>
<td>1,359.9</td>
<td>623.5</td>
<td>1,147.4</td>
<td>423.3</td>
<td>55.6</td>
<td>24.6</td>
<td>183.9</td>
<td>3,818.3</td>
</tr>
<tr>
<td>2006</td>
<td>1,299.0</td>
<td>570.1</td>
<td>1,083.6</td>
<td>426.0</td>
<td>66.0</td>
<td>35.5</td>
<td>75.7</td>
<td>3,555.9</td>
</tr>
<tr>
<td>2007</td>
<td>1,256.7</td>
<td>745.0</td>
<td>1,209.8</td>
<td>405.0</td>
<td>67.5</td>
<td>42.3</td>
<td>51.0</td>
<td>3,777.3</td>
</tr>
<tr>
<td>2008</td>
<td>1,178.9</td>
<td>744.3</td>
<td>1,149.7</td>
<td>408.1</td>
<td>67.7</td>
<td>45.4</td>
<td>-</td>
<td>3,594.4</td>
</tr>
</tbody>
</table>

Growth rate 2004-2008: -14.3% 34.8% -6.0% -9.0% 44.5% 294.9% -82.5% -9.0%

Source: Ministry of Education funded EFTS data.
3.1.1 University of Waikato at Tauranga

The University of Waikato has offered courses in Tauranga since 1994. Currently, the following degrees can be completed at Tauranga:

- Bachelor of Business Analysis – Financial*
- Bachelor of Management Studies (Accounting and Marketing majors)*
- Bachelor of Social Sciences*
- Bachelor of Social Work
- Bachelor of Teaching (Early Childhood)
- Bachelor of Teaching (Primary)
- Bachelor of Tourism*

*Begin with the Bay of Polytechnic NZDipBus and pathway into any of these University degrees.

The Diploma of Law is taught at the undergraduate level. The Diploma in Law enables students to complete the first two years of an LLB in Tauranga.

There are also two-year programmes for career changers who hold industry level qualifications and want to become teachers.

The Graduate Diploma in Teaching (Secondary) and the Postgraduate Diploma in Management Studies (PGDip(MgtSt)) are taught in Tauranga. The Graduate Diploma in Teaching (Secondary) is a one-year programme for graduates wanting to train as secondary school teachers. Successful completion of the PGDip(MgtSt) enables students to enrol for an MBA.

All academic programmes offered in the Western Bay of Plenty are now taught at the Bay of Plenty Polytechnic's Windermere or Bongard campuses.

Teaching in 2009 included the following:

- Arts and Social Sciences: Bachelor of Social Sciences, Bachelor of Social Work, Bachelor of Arts papers.
- Computing and Mathematical Sciences: moderating Polytechnic IT programmes, Credit Transfer Agreement into BSc (Computer Science) Applied Computing (2009), Credit Transfer negotiation of pathway into BCGD (ongoing).
- Education, Bachelor of Teaching – Early Childhood and Primary, Graduate Diploma of Teaching – Secondary; School Support Services.
- Law: Diploma in Law, normally a two year programme, comprising seven Law papers by mixed mode delivery. The papers can be credited to the Bachelor of Laws (LLB).
- Science and Engineering: Credit Transfer from BoP Diploma in Marine Studies to Hamilton-based Bachelor of Science and BSc(Tech)
- Waikato Management School: Credit Transfer from the New Zealand Diploma of Business into Bachelor of Business Analysis (Financial), Bachelor of Management Studies, Bachelor of Tourism, and papers towards the Bachelor of Communication Studies, Bachelor of Electronic Commerce.

Over the coming nine year period, 39 PhD and post-doctoral fellows will visit the Bay of Plenty region to work as part of the Intercoast programme.
Key needs identified by the region’s employers and stakeholders have informed the Polytechnic and University Partnership development plan. Consequently programmes are being designed in the following areas:

- Supply chain management.
- Leadership and executive education across a range of fields.
- Marine studies.
- Environmental Science.
- Computer Science, ICT and graphic design.

Other planned developments/opportunities include the following:

- Plans are underway to offer two new papers jointly with Lincoln University in horticultural science, to be delivered in the Bay of Plenty from 2009.
- Teaching in 2010 will include:
  - EFTS in BSc papers taught in Tauranga.
  - A number of INTERCOAST science doctoral students.
  - EFTS and non-EFTS funded programmes in allied health.
  - A number of full cost international students yet to be determined.
  - A possible 30 EFTS in pre-degree programmes which would be articulated with the Bay of Plenty Polytechnic, and so not attributed to UoW EFTS total.
- The University has identified a number of pre-degree, undergraduate and post graduate degree areas to respond to the future needs of the community, businesses and industry within the Bay of Plenty and will be seeking funding for those in the next round of investment plans for 2011-2013 to be negotiated with the Tertiary Education Commission.
- External funding has recently been awarded to support Science and Engineering to develop research and teaching in Tauranga.
- There is anticipated continued use of the Windemere Campus for programmes which are appropriate there, and University occupation of the Tauranga Science Park with the possibility of a central business district presence to be considered further if analysis indicates that as a mid-long term option.
- The planned expansion of tertiary provision over the next ten years will see an increasing need for additional accommodation, particularly in the central business district. The existing downtown campus (the Bongard Centre) owned by the Polytechnic and now shared with the University, is fast being outgrown. Therefore the partnership members, together with Tauranga City Council, are discussing how the growth in tertiary education provision can be accommodated in the CBD.
- Civic leaders and planners are concerned at the de-centering of Tauranga. They intend to reserve a block of land in the central business district for a high rise campus development and have explored some private sector funding options. Whether and when that construction proceeds will depend on the results of the campuses and infrastructure needs analysis.
- Potential funding for Research Centre opportunities linked to ICT clusters in the Bay of Plenty have been identified.
3.1.2 Other Universities

Massey University

- Provides over 150 programmes in a range of areas including business, psychology, social work, communications, education, English, languages, health and sports and fine arts.

- While Massey University runs some MBA workshops in Tauranga, there is no physical full programme delivery in Tauranga either currently or planned in the near future.

- Studying by distance education (extramurally) has become increasingly popular. Massey University has extensive distance learning offerings.

Lincoln University

- Offers the Diploma in Horticulture through regional PTE provider Fruition Horticulture. Also offers horticultural post-graduate study opportunities regionally.

University of Canterbury

- The Diploma in Teaching and Learning (Early Childhood) is a centre-based option offered at University of Canterbury’s Tauranga Campus at 56 Fraser Street. This provides access to a three-year qualification for students who wish to study while working in a licensed early childhood centre.

3.1.3 Bay of Plenty Polytechnic

Key features of tertiary education provision by Bay of Plenty Polytechnic include the following:

- Bay of Plenty Polytechnic has two campuses in Tauranga. Windermere Campus, on the southern side of the city, houses training workshops, restaurants, salons, music recording suites as well as an aquatic centre and gym. The Bongard Centre in the Tauranga CBD is home to business studies, computing and information technology.

- A key institution strategy is to develop a range of effective and productive partnerships with other providers, enabling pathways to appropriate qualifications and levels of attainment complemented with a range of learner support services.

- Over the years, joint delivery agreements have operated with the University of Waikato, Auckland University of Technology and UNITEC. Waiairiki Institute of Technology delivers a Bachelor of Nursing in Tauranga from facilities developed for the programme by Bay of Plenty Polytechnic.

- The institutional relationship with the University of Waikato is by far the most important relationship. Recently Bay of Plenty Polytechnic has offered to effectively develop, though full institutional partnership, two shared campuses at Windermere Drive and the Bongard Centre (CBD). Bay of Plenty Polytechnic believes a significant and equitable partnership with the University of Waikato affords the opportunity to not only better serve the comprehensive tertiary needs of the region but also to establish Tauranga as a legitimate tertiary destination for national and international students.

- The institution is in consultation with Te Whare Wānanga o Awanuirangi exploring opportunities to work together and to create pathways for the learner between the two institutions. Similar discussions are envisaged with Te Whare Wānanga o Aotearoa.
During mid 2007, as a key Quality Reinvestment Programme (QRP) Stage 2 project, the institution performed an intense assessment of all full time programmes of more than one semester duration and decided on a number of programmes to potentially withdraw from.

Programme/qualification developments over the period 2008 – 2010 include:

- Cluster of National Diplomas Level 6 in Quantity Surveying, Construction Site Supervisor and Land Surveying extend present qualifications to higher level.

- Development of National Certificate in Engineering (Fabrication/Heavy) Level 5, and National Certificate Engineering (Mechanical) Level 5 and Level 6 provide extension pathways for already popular Level 4 programmes meeting strong regional need.

- Planned extension of the important existing National Certificate in Electrical Engineering programmes at Levels 2, 3, 4 and 5 to a Level 6 National Diploma by 2010.

- In the School of Business, the successful National Certificate in Real Estate Level 3 is joined by the Diploma of Conveyancing in 2008.

- A successful collaboration with the Horticulture industry businesses and the Horticulture ITO sees the National Certificate Horticulture Level 4 move into Year 3 in 2008 including the National Certificate Level 4 Advanced. These programmes are complemented by the Certificate in Kiwifruit Cadet Programmes (at the demand of industry).

- A group of programmes in Maritime and Seafood Technology is extended with a Level 6 Diploma in Fisheries Management and National Certificate in Seafood (Aquaculture) in cooperation with Seafood Industry Training Organisation (SITO).

- Enrolments in conjoint EFTSY1 and 2 of Diploma in Marine Studies, Diploma in Environmental Management, Diploma in Sport and Recreation, go on to complete the Bachelor of Applied Science and Bachelor of Sport & Recreation from AUT.

- NZ Diploma in Business and Diploma in Tourism – complete graduate years with the University of Waikato Bachelor of Management Studies and Bachelor of Tourism respectively.

Planned developments/opportunities include:

- Bay of Plenty Polytechnic will continue to implement academic development plans to ensure integrated (seamless) pathways are available to higher levels of attainment L4 through to L5-7.

- Pathway creation from lower levels may well involve feeder programmes from PTEs in the sub-region, and at higher levels will incorporate partnership agreements with other Tertiary Education Institutions (TEIs) (eg University of Waikato, Auckland University of Technology, Te Whare Wānanga o Awanarangi).

- The growing importance of transport and supply chain management in the region sees the suite of Road Transport and Logistics programmes further complemented in 2010 by a group of Certificate programmes at Levels 3-4, certificate in Warehousing & Logistics Level 3-4, Certificate in Plant Operator Level 3 – 4 and Certificate in Civil Construction Level 3-4.

- Major capital projects reflected in the institution’s campus development plan over the next 3-4 years include new Applied Technology workshops, a possible joint venture multi purpose indoor
arena with Tauranga City Council, stage one of student accommodation and investment in a more comprehensive range of student services sited at Windermere and downtown Bongard Centre.

- The impact of the capped funding environment is leading the institution to re-examine its international student strategy as an important potential alternative revenue source.

- Tauranga is the nation’s major export port and a national rail and road transport hub. Transport logistics is therefore one such possible area of distinctiveness, building on Bay of Plenty Polytechnic's Road Transport training, the L6 Diploma in Logistics and perhaps culminating in an applied degree with the University of Waikato. Other discipline areas of real strength and potential national distinctiveness are marine and aquaculture, horticulture (and primary production) and sport and wellness.

- Memorandum of Understanding with Tranzqual and a feasibility study exploring the establishment of a National Centre of Expertise for Road Transport and Logistics Industries.

3.1.4 Bay of Plenty District Health Board

The Bay of Plenty DHB Clinical School was officially opened during 2007, with a new campus opened during 2009. The School has a major focus on under-graduate placement programmes with some post-graduate programmes also available, and takes student placements from Waikato Institute of Technology (nursing), University of Auckland (medical), Auckland University of Technology (allied health), Waikato Institute of Technology (midwifery) and a variety of other national and international institutions.

The School is undergoing development of a clinical research facility with the aim of encouraging staff into research programmes and the appointment of staff to senior lectureships. There is also increasing medical placement provision with the University of Auckland, including a rural immersion programme from 2011. The School had about 500 under-graduate student enrolments in 2009.

3.1.5 The Open Polytechnic

The Open Polytechnic's perspective as a national open learning provider is that there is a growing need for flexible access to up-skilling opportunities for people in or near the workforce, and those unable to easily access local learning options such as those in rural areas. The Open Polytechnic meets a significant portion of tertiary education demand through its open learning services (refer Tables 7 and 8). Nevertheless, there is a level of unmet demand by people who require flexible access to learning combined with a contact support component. To meet this need, the Open Polytechnic believes it makes sense to consider networked approaches to blended learning by deploying its distance learning design and delivery services in partnership with local contact providers.

Table 7: Number of distinct students enrolled in Open Polytechnic Qualifications that have a Western Bay of Plenty of Tauranga postcode

<table>
<thead>
<tr>
<th>Year</th>
<th>Western BOP Districts</th>
<th>Tauranga City</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>384</td>
<td>733</td>
<td>1,117</td>
</tr>
<tr>
<td>2008</td>
<td>255</td>
<td>624</td>
<td>879</td>
</tr>
<tr>
<td>2009</td>
<td>342</td>
<td>673</td>
<td>1,015</td>
</tr>
<tr>
<td>% change 2007-2009</td>
<td>-10.9%</td>
<td>-8.2%</td>
<td>-9.1%</td>
</tr>
</tbody>
</table>

Source: The Open Polytechnic of New Zealand
Table 8: Open Polytechnic programmes

<table>
<thead>
<tr>
<th>Engineering and trades</th>
<th>Business and management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real estate</td>
<td>Construction</td>
</tr>
<tr>
<td>Sales, marketing and communication</td>
<td>Environmental and sustainability</td>
</tr>
<tr>
<td>Art and design</td>
<td>Law</td>
</tr>
<tr>
<td>Horticulture and agriculture</td>
<td>Education and community services</td>
</tr>
<tr>
<td>Small business</td>
<td>Humanities, social sciences and communications</td>
</tr>
<tr>
<td>Information and library studies</td>
<td>Computing and IT</td>
</tr>
<tr>
<td>Psychology, pharmacy, health and well-being</td>
<td>Home ownership</td>
</tr>
</tbody>
</table>

*Source: The Open Polytechnic*

### 3.1.6 Te Wānanga o Aotearoa

Te Wānanga o Aotearoa has a campus location in Tauranga offering a range of qualifications from certificate to degrees. The following courses are available:

- Matauranga Māori.
- Computing Level 2, 3, 4.
- Social work – Certificate through to Bachelor.
- Sport and recreation.
- Cable Logging training.
- Small business management (contact).
- Raranga.
- Te Arataki Manu Korero.
- Te Reo Māori – Te Tohu Matauranga, Te Ara reo Māori & Te Putaketanga o te reo.

Courses that are planned to be introduced in the next five years include:

- Diploma in Māori Governance and Trusteeship.
- Level 7 Te Pinakitanga o te Reo.
- Rongoa (medicines that are produced from native plants).
- Tikanga Māori (Customs and traditions).
- Diploma in Clinical Supervision.
- Certificate in Waka Ama (outrigger canoe).
- Diploma in Business.

### 3.1.7 Private Training Establishments (PTEs)

There are approximately 27 PTEs in the Western Bay of Plenty Region, of which the Ministry-funded PTEs accounted for at least 800 Equivalent Full-time Students (EFTS) in 2008 (refer Table 9). Many of these PTEs are either niche providers or national providers that have only a marginal amount of training provision in the region.
## Table 9: Ministry-funded PTEs and training provision in the Western Bay of Plenty area 2008

<table>
<thead>
<tr>
<th>Provider</th>
<th>Field of Study</th>
<th>Certificates 1-3</th>
<th>Certificates 4</th>
<th>Diplomas 5-7</th>
<th>Bachelor's</th>
<th>Graduate certificates/diplomas</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture New Zealand</td>
<td>General Land Skills/Agriculture and Horticulture</td>
<td>3.68</td>
<td>3.68</td>
<td></td>
<td></td>
<td></td>
<td>3.68</td>
</tr>
<tr>
<td>Sues Unlimited</td>
<td>Health (N.E.C., mixed or N.F.D.)</td>
<td></td>
<td>10.87</td>
<td></td>
<td></td>
<td></td>
<td>10.87</td>
</tr>
<tr>
<td>The New Zealand School of Radio</td>
<td>Journalism, Communication and Media Studies</td>
<td>11.88</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11.88</td>
</tr>
<tr>
<td>Adventure Education Limited</td>
<td>Business Management</td>
<td>143.58</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>143.58</td>
</tr>
<tr>
<td></td>
<td>Sport and Recreation Activities</td>
<td>4.42</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.42</td>
</tr>
<tr>
<td></td>
<td>Sports Coaching, Playing, Officiating and Instructing</td>
<td>19.78</td>
<td>6.84</td>
<td>0.98</td>
<td></td>
<td></td>
<td>27.60</td>
</tr>
<tr>
<td></td>
<td>Job Search Skills Programmes</td>
<td>2.37</td>
<td>1.17</td>
<td></td>
<td></td>
<td></td>
<td>3.54</td>
</tr>
<tr>
<td>Tauranga Hair Design Academy Limited</td>
<td>Hairdressing</td>
<td>44.81</td>
<td>16.70</td>
<td></td>
<td></td>
<td></td>
<td>61.51</td>
</tr>
<tr>
<td>Adventure Sports Institute of NZ</td>
<td>Sport and Recreation Activities</td>
<td>24.98</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>24.98</td>
</tr>
<tr>
<td>Bay of Plenty College of Homeopathy</td>
<td>Veterinary Studies (N.E.C., mixed or N.F.D.)</td>
<td></td>
<td>21.83</td>
<td></td>
<td></td>
<td></td>
<td>21.83</td>
</tr>
<tr>
<td></td>
<td>Naturopathy and Homeopathy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>132.04</td>
</tr>
<tr>
<td>Faith Bible College</td>
<td>Career Development Programmes</td>
<td>37.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>37.38</td>
</tr>
<tr>
<td>South Pacific Bible College</td>
<td>Translating and Interpreting</td>
<td>1.16</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.16</td>
</tr>
<tr>
<td></td>
<td>Religious Studies</td>
<td>12.25</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12.25</td>
</tr>
<tr>
<td>Avonmore Tertiary Academy</td>
<td>Systems Analysis and Design</td>
<td>18.59</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>18.59</td>
</tr>
<tr>
<td></td>
<td>Information Systems (N.E.C., mixed or N.F.D.)</td>
<td>37.48</td>
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<td></td>
<td></td>
<td></td>
<td>37.48</td>
</tr>
<tr>
<td></td>
<td>Secretarial and Office Studies</td>
<td>1.01</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.01</td>
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<tr>
<td></td>
<td>Text Processing and Office Tools</td>
<td>15.92</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>15.92</td>
</tr>
<tr>
<td>Bethlehem Tertiary Institute</td>
<td>Teacher Education: Early Childhood (Pre-Service)</td>
<td>29.31</td>
<td>17.74</td>
<td></td>
<td></td>
<td></td>
<td>47.04</td>
</tr>
<tr>
<td></td>
<td>Teacher Education: Primary (Pre-Service)</td>
<td>72.66</td>
<td>0.13</td>
<td>72.78</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teacher Education: Secondary (Pre-Service)</td>
<td>14.88</td>
<td></td>
<td>14.88</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Counselling</td>
<td>46.51</td>
<td>51.01</td>
<td>1.13</td>
<td></td>
<td></td>
<td>98.65</td>
</tr>
<tr>
<td>Academy of Diving Trust</td>
<td>Paramedical Studies</td>
<td>0.49</td>
<td></td>
<td>0.49</td>
<td></td>
<td></td>
<td>0.49</td>
</tr>
<tr>
<td></td>
<td>First Aid</td>
<td>1.66</td>
<td>0.06</td>
<td>1.72</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sport and Recreation Activities</td>
<td>1.02</td>
<td></td>
<td>1.02</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sports Coaching, Playing, Officiating and Instructing</td>
<td>3.80</td>
<td></td>
<td>3.80</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Job Search Skills Programmes</td>
<td>0.12</td>
<td></td>
<td>0.12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td>128.86</td>
<td>170.43</td>
<td>324.10</td>
<td>152.98</td>
<td>33.86</td>
<td>810.23</td>
</tr>
</tbody>
</table>

Source: Ministry of Education spreadsheet: (‘EFTS enrolled in the Tauranga and Western Bay of Plenty District by Provider, Field of Study and Qualification Level 2008’ – received February 2010).

Note: Feedback from local providers suggests that the information above is incomplete. For example, Agriculture New Zealand delivers through a sub-contract to Telford Rural Polytechnic and has an estimated 2008 EFTS figure of 10-20 (rather than the 3.68 EFTS shown in the table).

In addition, there are a variety of other providers that run short courses. The following providers were identified through industry consultation:

- Gen-i – information and communications technology.
- Envision IT – information and communications technology.
- The Dance Education Centre – performing arts.
- Vanessa Byrnes School of Drama – performing arts.
Review of Tertiary Education Needs for the Western Bay of Plenty Region (March 2010)

- The Dance House – performing arts.
- Local HSNO test certifiers – approved handler training.
- Leadership Development New Zealand (national provider with delivery into Western Bay of Plenty) – team leader development courses.
- Dale Carnegie Training (international provider with Bay of Plenty/Waikato office) – communications, human relations and leadership training courses.
- Enterprise Training (national provider contracted by New Zealand Trade and Enterprise to design and deliver the Enterprise Training Programme) – various topics.
- Whittaker Training (Tauranga based) – driver licensing & testing eg, Forklift training certificate.
- Tauranga Chamber of Commerce – various short courses.
- Essential First Aid – health and safety.
- A1 First Aid Limited – health and safety.
- Kiwihost – customer service.

It is also understood that from time to time the New Zealand institute of Directors and New Zealand Institute of Management deliver short courses and programmes in the Western Bay of Plenty.

3.1.8 Industry Training Organisations (ITOs)

Analysis of TEC data for the period 2005-2009 indicates that:

- The total number of industry trainees in the Western Bay of Plenty area increased from approximately 3,700 in the year 2005, peaking at more than 4,000 over the period 2006-2008 and then dropping back to 3,700 in the year 2009.

- As at 2009, the most popular/common ITOs for industry trainees in Tauranga City were Community Support Services, Hospitality, Building & Construction, Forestry and Competenz (engineering, food and manufacturing). The most popular ITOs in the Western Bay of Plenty District were NZITO (dairy and meat), Horticulture, Road Transport and Agriculture.

- The number of Modern Apprenticeship in the Western Bay of Plenty increased from 350 to 460 over the period 2005-2008 and then decreased to around 420 during 2009.

- As at 2009, the most popular/common ITOs for Modern Apprenticeships in Tauranga City were Building & construction, Motor engineering, Engineering, Horticulture and Plumbing. The most popular in the Western Bay of Plenty District were Building & construction, Motor engineering, Horticulture and Engineering.

3.2 Partnership between University of Waikato and Bay of Plenty Polytechnic

The University of Waikato and Bay of Plenty Polytechnic have been working together for more than a decade to increase tertiary education opportunities in the Western Bay of Plenty region. By working in partnership, these two large providers can offer bachelor-level degrees and diplomas to help raise the level of skills in the region. Ongoing discussions with iwi, businesses and community leaders helped define priorities in relation to jointly delivered programmes. Consequently, courses in areas such as health management, computer science, marine studies, agri-business and graphic design are being developed, alongside accounting, marketing, tourism, management, law, finance, social work and Early Childhood, Primary and Secondary Teacher Training that is already offered. University courses and qualifications complement and build on the Polytechnic’s certificate and diploma programmes and are tailored to the distinctive needs of the region.
The full inter-institutional Partnership involves:

- Delivering integrated and coordinated tertiary education to one of the fastest growing regions of New Zealand.
- Providing a first class Polytechnic and first class University to drive economic growth in the region.
- Developing a unique portfolio of tertiary teaching and research programmes which are specifically matched to regional needs and strengths as articulated by stakeholders.
- Contributing to the Government's 'skills strategy' and economic transformation goals for the region and New Zealand and to the SmartGrowth growth management strategy.
- Developing and signalling the Western Bay of Plenty as a centre for education, research and entrepreneurship.
- Providing for more effective and efficient utilisation of campuses, resources, systems and facilities between both institutions.

4.0 STRATEGIC CONSIDERATIONS AND STAKEHOLDER CONSULTATION

This section presents a review of tertiary education provision in the Western Bay of Plenty by specific industry sectors including marine, ICT, food/horticultural and other sectors of interest. A broad overview is initially presented for each strategic sector, followed by summary feedback industry sector stakeholder interviews and surveys. Responses were received from 37 industry stakeholders through a mix of e-mail and telephone enquiries. Feedback was also gleaned from secondary schools, PTEs, ITOs and other providers through interviews and surveys as part of the research process. Key findings are summarised as follows.

4.1 Education provider consultation results

Three stakeholders commented on the need for further opportunities to complete a broader range of degree level programmes in the sub-region. One of these stakeholders suggested that a full university could be warranted given the region's growing population base. These stakeholders generally looked positively upon the progress that the University of Waikato and Bay of Plenty Polytechnic were making with regard to establishing degree level provision in the region and although there are programme transfers available from regional providers to other tertiary providers (eg, Bay of Plenty Polytechnic to AUT and Fruition Horticulture to Lincoln University), one stakeholder suggested there might be further opportunities to link local study with programmes at other tertiary providers. Another stakeholder commented on the need for more urgency in establishing a broader range of university qualifications in the region.

Some stakeholders gave further detail with regard to necessary degree level programmes to be provided in the region. One stakeholder suggested that further provision of full degree programmes in the arts, fine arts, sciences, commerce, humanities, health and engineering would be of benefit. Other specific suggestions included a food technology programme, a marine-based programme, science and health programmes (other than level 6 and above nursing programmes), extension of
the law programme pathway (ie, increase years available in Tauranga) and an engineering programme pathway.

In the agriculture field there was a perceived need for industry training at pre-employment and certificate levels nationwide and for specialist training in niche provision areas such as organics and small block holder training. The opportunity for collaboration between PTEs and ITPs was mentioned as a possible solution to addressing these needs at a regional level. Regional horticultural sector needs included basic plant physiology for growers in order for them to make better crop management decisions; understanding of soil biology, chemistry and physics, in order to make better nutrition management decisions; and short courses on workplace communication, conflict management etc.

One stakeholder commented on the urgent need for management training of Māori to enable iwi development aspirations to be realised. This includes education provision in a wide range of managerial disciplines such as business development, asset management, resource management and investment management.

Cleaning training was identified as an area where there is a lack of regional providers as it is thought that no one is interested in offering such a course.

Accommodation was identified by a secondary school stakeholder as an important area relating to current tertiary education provision and it was suggested that development of accommodation needs to take priority.

Young people and school leavers were commonly mentioned as a group not well catered for in terms of regional tertiary education provision. Firstly, there is the group of academically ‘able’ students who are capable of achieving degrees at bachelor and post graduate level, who at present must leave the region to gain such tertiary qualifications (apart from those available through Bay of Plenty Polytechnic and the University of Waikato). Secondly, there is the group of students who will not achieve at the academic level, including some students that might be more ‘at risk’, and this was thought by many of the stakeholders to be an area of growing need and one where there is high associated social risks.

The relatively small perceived industry base of the Western Bay of Plenty was mentioned as making it considerably difficult for youth to find employment. A stakeholder from the PTE sector mentioned the growing burden upon secondary schools to manage a large group of students disinterested in academic education, but for whom little other opportunities are available. A secondary school stakeholder identified that trade and practical skills were not well catered for in the region with regard to tertiary education, particularly with students in transition from school to higher education and considering strong competition against adult entry. Another secondary school stakeholder suggested that some PTEs (eg, Employ NZ, Employment Plus) were offering good programmes targeted at this group (eg, trades orientated programmes) but that such programmes are highly under resourced and the region overall is under resourced with such programmes.

There was a comment made by one stakeholder that noted the responsibility upon students to be aware of the training opportunities offered in the region. This comment reflects concerns raised by Steering Group members of the potential lack of awareness on the part of students and the general public of tertiary education opportunities that are available in WBoP region.

Two comments referred to the need for future provision to focus on specialist niche programmes, where the region has an advantage. Two stakeholders gave examples of marine sciences and environmental studies being potential niche areas of tertiary education within the region, where there is already diploma level provision and the opportunity to pathway outside the region to university level science programmes (eg, UoW and AUT).
Science programmes in general could also have application to the education and qualification needs of other strategic sectors of the WBOP economy mentioned by stakeholders, namely horticulture, aquaculture and agriculture.

Two stakeholders identified a future need for aquaculture programmes, where there is sub-degree provision available and research laboratories focussing on aquaculture, marine and environmental science being developed in the region. Potential gaps in aquaculture training provision are identified in the industry stakeholder responses. Another stakeholder identified horticultural programmes as a future regional need. Based on evidence from other industry stakeholders, the need appears to be in the science and food technology areas rather than at sub-degree and industry training levels. It is also in the areas of management specific to aquaculture and horticulture sectors where future training needs may exist.

Two stakeholders commented on future needs in ICT. One of these stakeholders highlighted the need as being the establishment of higher level programmes that focus on generic skills with multi-disciplinary qualifications, rather than courses specialising in a narrow field such as IT networking or programming.

Four stakeholders identified population growth as being a significant driver of future tertiary education provision in the region. One stakeholder mentioned that this growth will present increasing business and employment opportunities and the need for planning and development of infrastructure that will allow more graduates to reside within the region. Another stakeholder predicted that the needs of an expanded industry sector would drive demand for more specialised skills, greater worker productivity and people with the capability to adapt to change. The aging trend that is projected amongst the growing population was identified as an additional driver of future skills needs in the region. This population growth, coupled with migration, was predicted by another stakeholder to lead to more diverse ethnic groups and different cultural expectations within the region.

Two stakeholders identified the primary sector, in terms of horticulture, aquaculture and agriculture, as remaining a key driver of future skills needs and training demand in the region. One of these stakeholders pointed to employment growth being in the more technical and innovative aspects of the primary sector.

Two stakeholders identified iwi needs, both in commercial and social environments, as being drivers of future regional provision.

One stakeholder identified areas that have the potential to drive regional tertiary education demand as the growth of jobs available that are relevant to regional training, meaningful links between training and industry, growth in higher level jobs in the region and research facilities and funding that support tertiary education.

Other industrial drivers of future regional provision identified by stakeholders included:

- An increase in demand for loader driver and measurement skills, based on the increasing tonnage of logs being sent through the port.
- Tourism growth.
- Growth in services, support agencies and retail sectors.
- Employers and consumers demanding qualified tradesman on site would drive trades training demand.
Other policy drivers or constraints on future regional provision identified by stakeholders included:

- Ongoing need for literacy and numeracy in the workplace.
- Affordability of training and education beyond compulsory age groups.
- Inflexibility of current government policy with regard to tertiary education.
- Cost of tertiary education needing to be brought into line with levels of income.
- Government policy with regard to the WBOP region.
- Regional policy and collaboration that supports the creation of a ‘vibrant city’ approach, where educated people and students are attracted to the city’s cultural vibrancy (eg, theatre, shows, entertainment, sports facilities).
- Building upon regional cooperation between providers, government, industry and other agencies already inherent in the region.

Other social drivers or constraints on future regional provision identified by stakeholders included:

- Provision of tertiary education resources and opportunities to secondary schools.
- Families’ ability to assist with tertiary education costs might be decreasing due to unemployment, parents on part time jobs, with less education and with more on the minimum wage.
- Increasing numbers of students taking up tertiary education opportunities and choosing to remain in the region.

Two PTEs expressed a view that they are being crowded out by the expanding range of course offerings from Bay of Plenty Polytechnic and signalled a preference for more collaboration amongst providers. One stakeholder gave an example of aspects where Bay of Plenty Polytechnic could assist, being the management of quality assurance and assessment of courses. The stakeholder indicated that such collaboration could have the potential to place downward pressure on training costs for industry. The stakeholder also suggested potential training gaps in pre-trade training, basic industry skills and applying literacy and numeracy skills to the workplace, where a PTE could assist in giving students the opportunity to enter work experience and in finding paid employment. Another stakeholder also mentioned the opportunity that their PTE could present with regard to assisting job placement of students.

4.2 Western Bay of Plenty tertiary education by industry sector

4.2.1 Marine

The Western Bay of Plenty is recognised as providing some of the world’s best boat design and construction firms, with around 18 commercial boat builders working from the region and more than 170 organisations having some contact with the marine industry. It is estimated that 75-80% of the new boatbuilding revenue in the region comes from the export of large boats. The development of Tauranga City’s Harbour Central Marine Precinct will support and boost an industry already leading the way internationally in craftsmanship, composites and especially innovation. Harbour Central will see the development of an $80m marine precinct for boat building and re-fit. This initiative is forecast to contribute over $100m into the local economy annually and create up to 500 new skilled jobs. The first stage of development is expected to begin this year.

There was little feedback provided by marine industry stakeholders, however provider feedback suggests that there is presently limited capability with regard to Bay of Plenty Polytechnic’s provision of specific boatbuilding courses. There is reported to be limited scale of industry to support course demand at present, with the exception of a night school programme delivered by a qualified private tutor. Western Bay of Plenty trainees and apprentices obtain subsidised travel to Auckland and Whangarei for block courses at Unitec and Northtec respectively. Anticipated growth of New
Zealand’s marine industry and the cluster of industry located in Tauranga (6% of national industry, compared to Auckland’s 58%) could warrant local provision of block courses within the next ten years.

4.2.2 Information & Communications Technology

The Western Bay of Plenty ICT Cluster was established in 2003 and has now grown to over 300 members from 160 ICT and related businesses. Increasingly, the cluster is focusing on the growth of software development companies. The aim is to encourage the exporting of ICT products and generate collaborative opportunities with other sectors using ICT as an export enabler. The development of a separate but related cluster of expertise in advanced internet search technologies will involve collaboration between the University of Waikato and Auckland University of Technology (AUT), the University of Wales and Pingar, a Tauranga based company. The goal of this collaboration is to grow a major programme of work around next generation internet search and information retrieval software (knowledge engineering).

Nine industry stakeholders gave feedback from the ICT sector. These stakeholders reported the need for a range of technical short courses to be delivered in Western Bay of Plenty region. Amongst those mentioned were Gen-i/Envision IT courses, Microsoft/Cisco courses (e.g., Active Directory, MCSE, CCNA/CCNP), open-source courses and IT infrastructure library courses. There was also a reoccurring indication of the need for local IT graduates and professionals to be versed in broader skill sets, including practises of IT business analysis, IT project management and product design, engineering and development.

Two stakeholders concerned with promoting growth of the WBoP ICT sector over the next ten years alluded to the need for higher level ICT programmes being offered in the region. Providing engineering programmes in both hardware and embedded software that could lead to regional product manufacturing was one such area mentioned. Another involved providing ICT post-graduate training and research facilities attached to a major university and potentially leveraging off key local industry clusters such as aquaculture, horticulture, logistics and forestry.

Presently, it was thought that there is no real impetus for ICT companies to set up locally or for local companies to expand. This was also reflected in another employer lamenting a general lack of corporate experience in local applicants. Provision of higher level programmes and research facilities were seen as enablers of regional industry growth, with local government support and university backing as prerequisites to this.

4.2.3 Food and Horticulture (including post harvest)

The Bay of Plenty regional economic strategy has a strong focus on leveraging the region’s capability in horticulture and food processing by encouraging innovation and collaboration, leading to new product development and commercialisation. Currently, added value food production and horticulture is by far the biggest export earner in the Western Bay of Plenty, contributing $2 billion per annum to New Zealand’s exports. A food industry strategic advisory group has been established to determine the exact nature of initiatives in this space.

Five industry stakeholders gave feedback from the food and horticulture sector. Two commented that most technical skills are well provided through regional provision (including ITO provision) and that extramural opportunities in higher level programmes are available through Massey University and Lincoln University. Two other stakeholders both agreed that supply chain management courses could be provided locally and this was reiterated by a stakeholder from the logistics sector mentioning a need for logistics courses that focussed on agricultural and horticultural sectors. Export marketing and management focussed on food and horticulture sectors may also be an area requiring course provision, according to one stakeholder.
One stakeholder indicated that productivity gains in regional horticultural industries will be driven in large part through technology transfer to producers and processors. Another stakeholder discussed the opportunities that lay in horticultural systems management and the resulting development of value-added products (eg, managing kiwifruit waste, extracting refined enzymes).

4.2.4 Aquaculture

Aquaculture has been identified as a critical sector for development of the broader Bay of Plenty region, with the regional aquaculture strategy setting out a goal to grow an export industry of $250m by 2025. The major catalyst for this is a 3,800 hectare site off Opotiki being developed by Eastern Sea Farms Ltd, a joint venture between Whakatohea Māori Trust Board, Tasman Mussels and New Zealand Sea Farms. This will be supported by training, development and research capability largely based in, or delivered from, Tauranga. The stated aim of the strategy is to create a ‘world class aquaculture site’ in the BOP. The development of a 3,800 hectare mussel farm in the Eastern Bay of Plenty has also been granted permission through the High Court. It will become the largest mussel farm in New Zealand, projected to employ more than 900 people and inject $34 million into the Opotiki district's economy. Construction of the farm is planned to take place in four stages spanning about 12 years. A further pre-moratorium mussel farm application for 4,009 ha near Pukehina/Otamarakau, in the central Bay of Plenty is yet to be heard.

Bay of Plenty Polytechnic is investigating research opportunities in aquaculture with the University of Waikato and the Cawthron Institute of Nelson, which is already working in Eastern Bay of Plenty and Coromandel. Bay of Plenty Polytechnic is also developing aquaculture laboratories to enhance research capability. The Polytechnic currently runs the National Certificate in Aquaculture. The recently released Bay of Plenty Aquaculture Strategy envisions the region as leading the world in aquaculture technologies with sustainable practises. It seeks to establish an international reputation in both applied and theoretical aquaculture training and education.

One industry stakeholder gave feedback from the aquaculture sector. This stakeholder indicated the need for a variety of course provision including short courses in administration and management of marine farms; short courses in vessel maintenance, crewing and safe ship management; certificate in environmental monitoring of aquaculture (marine and freshwater); and certificate in aquaculture funding, finance and book keeping (the money and administrative side of aquaculture ventures).

The stakeholder went on to comment that SITO provides many unit standards which are of great value to aquaculture workers and factory employees. However, there are gaps in expertise in the areas of responsibility generally left to middle managers, for example, insurance, budgeting, environmental laws, risk management, report writing and human resource management. There is possibly no such courses that have a slant on a quaculture available in New Zealand and probably elsewhere in the Pacific or Australasia. Another stakeholder emphasised the importance of environmental management being applied to the aquaculture sector.

4.2.5 Health

The Bay of Plenty Clinical School was established by Bay of Plenty District Health Board in 2007 to develop clinical training and research initiatives that would attract healthcare students and encourage them to return as employees once qualified. Since its inception the School has increased the number of undergraduate students placed in services likely to face future workforce shortages, and in 2009 provided clinical placements for 480 students from medical, nursing and allied health disciplines. The Clinical School is also working to develop a substantive research capability that can deliver improved health outcomes for the BOP region and provide development opportunities for students and staff.
Four industry stakeholders gave feedback from the health sector. The Bay of Plenty DHB Clinical School is seen as a significant asset in the regional health sector and is encouraged to further their relationships with private health organisations (eg, Memorandum of Understanding with Grace Southern Cross Hospitals) to assist with regional training needs. For example, a stakeholder from the private health sector indicated areas of need in physiotherapy training and nursing assessment courses.

The most significant training need within the sector appears to be in aged care. Two stakeholders alluded to the increasing need for skilled people to provide care for people with age-related disabilities in their own homes or to provide skilled dementia care in residential care facilities or day centres. There are reported to be significant increases (10-35%) being experienced in all clinical service areas and rest home carer numbers are predicted to double over the next ten years. The DHB Clinical School is not currently resourced for training in the aged care sector. However, the DHB does recognise the training needs of this sector and has a considered responsibility to develop training initiatives in this area, which are currently on the school’s agenda.

Another stakeholder commented that most level 2-3 standards are on-job training and assessment. However, the regulatory environment is driving demand for higher qualification standards within the sector. Careerforce (the community and Social Service ITO) is developing level 4, 5 and 6 qualifications for community and social service industry training and is looking to work with an education provider in the region to deliver courses.

4.2.6 Performing Arts

Internationally, the benefits of a reputation for creativity, culture and innovation are becoming more evident. This message is being heard in the Bay of Plenty. Priority One includes art and culture opportunities as one of the driving forces behind encouraging key business people to relocate to the Western Bay of Plenty.

A 2009 Scoping Study of Performing Arts and Music in the BoP provides details on the training needs in the sector. The report findings, supplemented by stakeholder feedback, indicates the need for holistic performing arts training, short courses for secondary school teachers, a summer school programme, Māori performing arts and a one year diploma.

One industry stakeholder gave feedback from the performing arts sector. The stakeholder added that business qualifications with a focus on arts should be provided locally, so that those in private industry would feel confident to undertake the training and that it would be relevant to them. In addition to this, as more schools invest in performing arts infrastructure (eg, Bethlehem College), the greater the demand for well trained staff and ongoing professional development for those working in the area. There may also be a lack of knowledge/awareness of tertiary education pathways to performing arts (eg, NZ School of Drama, Tuwharetoa) amongst some secondary school teachers.

The stakeholder concluded that all industries need creativity in product design and marketing and that there would be an ongoing need to provide creativity training to professionals across a range of industries, either as a separate qualification or embedded within other qualifications.
4.2.7 Chemicals

The Western Bay of Plenty has a substantial number of chemical manufacturing and supply chain participants servicing the dairy, pulp and paper and manufacturing sectors.

Two industry stakeholders gave feedback from the chemicals sector. Both strongly agreed that chemicals handling courses should be provided locally and one respondent strongly felt that training in chemical use in agricultural applications should be provided locally. One stakeholder expanded on the need for chemicals handling courses to be very practical and modular so employers can pick training specific to their needs, in a laboratory setting and with possible public-private collaboration in delivery. The other stakeholder commented on the need for a HSNO approved handlers course.

Systems thinking and industrial design were seen as disciplines that could be a focus of the region and areas that have direct application to many of the region’s strategic sectors (eg, chemicals, titanium, horticulture, aquaculture, building and construction, infrastructure, rainwater and stormwater, marine and coastal sectors). Such disciplines could be embedded in a range of university degrees (eg, business management, science, and engineering) and could be offered as an MBA for managers wishing to up-skill.

Other courses and educational facilities that were seen as needed over the next ten years included laboratory facilities and skills training (eg, potential for public-private collaborative facility), health and safety management systems, environmental management and design, and manufacturing (eg, Association of Manufacturing Excellence courses).

4.2.8 Manufacturing and Engineering

A major initiative in the region is seeking to develop a significant ($1 billion) export industry by 2020, based on New Zealand companies selling products using a unique process for making titanium alloy powders developed by Titanox Developments Limited. A key component of the development of Titanium industry is the development of an Applied Powder Metallurgy Research Centre (APMRC) based in Tauranga, involving collaboration between the Titanium Industry Development Association (TIDA) and Bay of Plenty Polytechnic. The vision is for the APMRC to be a world leading site for powder metallurgy related research and training.

Five industry stakeholders gave feedback from the manufacturing and engineering sector. There were indications of training demand within the sector with regard to short courses in leadership, communications, management and enterprise training. This was reflected in all of the stakeholders agreeing (with two strongly agreeing) that courses in supervisory/leadership skills should be provided in the region. However, it appears that design skills are an area even higher in demand amongst regional manufacturers. All of the stakeholders agreed (with four strongly agreeing) that training in design skills (CAD design) should be provided in the region. The other main areas identified for regional training provision included customer service and business skills, chemical handling, diploma in engineering, and metallurgy courses.

There were concerns raised by a couple of stakeholders with regard to the lack of scale of manufacturing in the region being able to support high level engineering programmes and graduates. However, these same stakeholders did see a need for high level engineering programmes (including design) to be provided regionally in the future. Another stakeholder mentioned the need for technical engineering courses in the region to be multidimensional and to allow graduates to staircase to higher programmes.

Another stakeholder reiterated that engineering diplomas and metallurgy courses should not be purely prescriptive and that they should rather give students an understanding of the technology and materials, and how to apply them in production processes and new product design. In doing so, local
qualifications (eg, design and engineering) and the graduates they produce can contribute in the productive areas of high technology manufacturing and product design.

4.2.9 Transport, Logistics and Distribution/Supply Chain

The Bay of Connections Strategy includes a focus on ensuring that infrastructure needs do not constrain development. Bay of Plenty Polytechnic is working on establishing a Centre of Expertise in Transport and Logistics in Tauranga. This would draw on key regional resources such as the port, road and rail linkages to create a pre-eminent location for transport and logistics research and training in New Zealand, integrating University, Polytechnic and industry capabilities. It would support the Port of Tauranga’s position as the leading port in NZ and a leading player in the Asia-Pacific network, as well as improving the region’s productivity and environmental sustainability.

Six industry stakeholders gave feedback from the transport, logistics and distribution sector. One stakeholder from the ports sector indicated that the Transqual ITO unit standards and workplace assessments were their preferred arrangement and that the Port and Stevedoring Association were also playing a role in working with NZQA to develop specific industry courses and programmes. At the technical level, the stakeholder advised that Bay of Plenty Polytechnic should work in with Transqual to support provision in the sector. Comments from another stakeholder indicate that this is already occurring to some extent, with both organisations working closely toward a potential National Centre of Expertise being located in the region. Training in operational areas (as opposed to academic) is likely to remain a key component of demand over the next ten years, particularly with baby boomer retirements likely to impact at the operational staff level where most vacancies are filled locally.

There was, however, a perception expressed by another stakeholder that greater subsidies needed to be extracted from ITOs and that currently administration was taking up a disproportionate part of ITO budgets.

Tertiary education training and qualifications in the sector was thought by another stakeholder to be heavily fragmented, with inadequate alignment between lower level industry training and higher level qualifications. A much more integrated and connected suite of transport/logistics qualifications within a national framework and with pathways to higher level university qualifications (graduate and post-graduate) was suggested. Another stakeholder thought it would be helpful to be able to complete post graduate studies in business management regionally, although doubted there being significant demand in the sector overall. The stakeholder also commented that Tauranga could be a place for under-graduate degrees that specialise in disciplines such as international trade and markets and international trade law. Another stakeholder alluded to higher level management degrees in human resources, marketing, finance and property as being relevant to the regional sector.

One stakeholder indicated that there were a range of short or specialised logistics courses with the potential to be provided regionally. This would be in areas such as import/export operations, forwarding content, port agency operations, brokerage content, international trade/law and those around other port-related activities (eg, bulk vessels).

The local flight school (Bay Flight International) was thought to be a valuable regional asset by one stakeholder. The significance the school has to the national air transport sector as well as the regional economy was thought to necessitate its continued funding.
4.2.10 Building and Construction

The importance of the construction industry to the region reflects the high population growth of recent years. There are approximately 5,000 people (8.3% of the workforce) employed in this sector, which is above the national average. Construction is the largest industry in the region in terms of total output and fourth largest in terms of supplying goods and services to the rest of New Zealand. Despite the 2008/09 economic downturn, construction is expected to continue to be a key growth industry in the region long term due to the projected high population growth.

Seven industry stakeholders gave feedback from the building and construction sector. A range of ITOs play a major role in administering the provision of technical training in the sector. From the stakeholders' perspective it is important that trades-based skills training (e.g., joinery, furniture and kitchen polishing and painting, masonry, plumbing and roofing) are available within the region and are encouraged at secondary school. Some areas of trades training where there might be gaps regionally include painting/decorating, brick and block laying and sign-making. There was also a view expressed of the need for part-time and evening class options to allow people with day job commitments to up-skill.

Similar to the manufacturing and engineering sector, CAD training was highlighted by building and construction stakeholders as an area of provision that should be available in the region. Project and construction management was another area where all stakeholders agreed that courses should be provided in the region, the demand for which is most likely to exist as professional development and higher level programmes.

One stakeholder highlighted that skills in the water services areas (e.g., water, wastewater and stormwater) both at trade and engineering levels would be particularly important to the region over the next ten years and do not appear to be currently catered for. The stakeholder added that environmental and sustainable building training and education was another area that appears untapped and that it will become increasingly important over the next ten years.

Although it was thought to be helpful to have the region produce local engineering graduates across areas such as science, maths and civil engineering, another stakeholder raised similar concerns to that of some stakeholders in the manufacturing and engineering sector about the scale of local industry to absorb graduates – a chicken and egg situation.

Other stakeholders in the sector seemed more optimistic with regard to the region's economic growth, seeing greater tertiary education provision as necessary to ensure the expansion of industry and to attract and retain high quality staff. One stakeholder mentioned that the infrastructure and urban development planned for the region over the next 10-20 years provided an ideal opportunity for tertiary education providers to plan and provide practical tertiary education and training to cater for this growth and stimulate associated economic growth and industries.

4.2.11 Tourism

The tourism sector contributes over $500m to the local economy annually and is experiencing strong growth fuelled by the cruise ship market and international airports in Hamilton and Rotorua.

Two industry stakeholders gave feedback from the tourism sector. Both strongly agreed that high-level marketing and customer service courses should be provided locally. One stakeholder thought there might be an opportunity to provide a bachelor/diploma in hospitality management (such as that offered at AUT) in the region. The stakeholder highlighted the need for graduates with multifaceted skills and suggested that programmes should include a mix of academic, practical and regional tourism specific courses. Forecast growth in the cruise sector, together with development of
additional tourism product and infrastructure, would have a major effect on future skill needs in the region and this would lead to an environment where more tourism graduates would be able to remain in the region.

4.3 Iwi/Māori development

This section provides an overview of areas in which the Western Bay of Plenty sub-region’s Māori population may require increased access to tertiary training or study provision over the next ten years. Better education is imperative in assisting to release Māori potential as a result of Treaty settlements in the region. In this respect, Māori development should be regarded as a strategic sector in its own right.

Demand will be dependent on the development and utilisation of Iwi organisations’ asset bases, which will provide the foundation for generating increased employment and career opportunities. This section commences with an overview of current and historical education levels of Māori in the sub-region and its implications, and then follows with an overview of Treaty settlements. After this it details a number of potential tertiary needs implications regarding Te Awanui Tauranga Harbour Iwi Management Plan 2008. The section finishes with an overview of selected Māori organisations’ asset bases and initiatives in regard to possible tertiary needs as well as insight gained from an interview with Te Puni Kōkiri’s Waiauki regional manager.

4.3.1 Education and income levels of Māori in the sub-region

For Māori in the sub-region, the challenge is to ensure that their asset base can provide long-term intergenerational social and economic benefits, particularly employment. From an Iwi viewpoint, a constraint to Māori base asset growth acknowledged by BERL (2010) is the levels of Māori human capital, especially in terms of underpinning the quality of governance and capability within decision-making boards or other groups of a similar nature. In terms of returns on assets, Māori in the Waiauki rohe are moving from being passive rent receivers to active business operators and partners.

From an individual Māori point of view, possession of higher levels of qualification are in general associated with greater levels of remuneration and a stronger insulation against adversity in times of recession. Improving the skills, training and qualifications of young Māori is paramount to their future levels of socio-economic well-being and individual self-determination. Overall, there is a strong link between higher level qualifications and potential earnings.

According to 2006 Census data, only 64% of Tauranga City residents between the ages of 25 and 64 years old who declare themselves to be of Māori ethnicity possessed at least upper secondary level qualifications, compared to 80.3% of those who declared themselves to be of European ethnicity. As at 2006, a total of 8.9% Māori in Tauranga possessed some form of tertiary qualification compared to 14.7% for those of European descent (refer to Figure 3).
According to 2006 Census data, 57.7% of Western Bay of Plenty District residents between the ages of 25 and 64 years old who declare themselves to be of Māori ethnicity possessed at least upper secondary level qualifications, compared to 78.3% of those who declared themselves to be of European ethnicity. As at 2006, a total of 6.5% Māori in Western Bay of Plenty District possessed some form of tertiary qualification compared to 12.1% for those of European descent (refer to Figure 4).

Source: MSD Social Report data.
Lower levels of higher education by Māori in the sub-region are reflected in terms of real incomes. The proportion of people living in households in Tauranga City who declare themselves to be of Māori ethnicity with a real gross income less than 60% of the median household equivalised national income benchmarked at 2001 levels, stood at 25.6% as at 2006, compared to 18.0% for those who declare themselves to be of European ethnicity. Similarly, the proportion of people who declare themselves to be of Māori ethnicity living in households Western Bay of Plenty District with a real gross income which is less than 60% of the median household equivalised national income benchmarked at 2001 levels, stood at 25.6% as at 2006 compared to 18.0% for those who declare themselves to be of European ethnicity. According to 2006 census data for the Bay of Plenty Region overall:

- A total of 58% of working age Māori received an income from wages and salaries in 2006, compared to 50% of non-Māori in the Bay of Plenty Region.
- A substantially smaller proportion of Māori received an income from self-employment (7%) compared to non-Māori (19%).
- A larger proportion of Māori received an unemployment benefit (9% compared to 2%) sickness benefit (4% compared to 2%) or invalids benefit (4% compared to 2%).

4.3.2 Treaty of Waitangi settlements and the Māori asset base

The main Tauranga Moana Iwi are all either in pre-negotiations or negotiating towards Treaty of Waitangi Settlements. Both Ngāti Ranginui and Ngāi Te Rangi have received their allocated fisheries assets of $3.87 million and $6.11 million respectively.

Ngāi Te Rangi Iwi

Ngāi Te Rangi Iwi has managed its business through Ngāiterangi Iwi Incorporated Society (NIIS) and Te Matarauranga Trust (TMT) since 1989. In August 2007, Te Rūnanga o Ngāi Te Rangi Iwi Trust (TRONIT) was established to replace NIIS as the representative entity for Ngāi Te Rangi. This was done to enable Ngāi Te Rangi Iwi to receive and manage its commercial fisheries assets. It was also considered to be a better entity for Ngāi Te Rangi going forward. Therefore on 31 March 2009, NIIS ceased to operate and was wound up, with its business and assets transferred to TRONIT.

Some Ngāi Te Rangi hapū run a number of commercial enterprises including the largest Zespri Kiwifruit orchard in New Zealand and extensive farming and forestry initiatives. Fishing is also another major initiative currently being undertaken by some members and hapū of the tribe. Ngāi Te Rangi is currently involved in a number of initiatives which will affect whānau and hapū.

The Ngāi Te Rangi Iwi Incorporated Society provides social and public health services in the areas of care and protection, social work, counselling and homecare support. This service focus of the iwi indicates a demand for health and social service tertiary education amongst Whānau and Hapū.

Te Roopu Whakamana o Nga Hapū o Ngāti Ranginui

Te Roopu Whakamana o Ngā Hapū o Ngāti Ranginui is the mandated entity with the authority to represent the Hapū of Ngāti Ranginui (and 'affiliate' Hapū: Ngāti Pango and Ngāti Rangi) in negotiations with the Crown for the comprehensive settlement of all Ngāti Ranginui historical Treaty claims. The entity is made up of the eight Hapū of Ngāti Ranginui. It is the desire of each hapū to ensure that the integrity, identity and interests of each hapū is maintained and protected. Representatives were selected by each respective hapū at hui in 2005 and 2006. All the representatives then came together and in April to May 2007 further hui were held throughout the
motu where mandate was also sought from the wider whānau of Ranginui. It is the responsibility of the representatives to ensure that the interests of each hapū as well as the collective interests of Ngāti Ranginui are maintained throughout the negotiations up until settlement. The group acts as the Roopu Whakahaere and is accountable to Hapū and the claimant community of Ranginui.

The mandate is to negotiate the settlement only. Once settlement is achieved, a new approved entity called a Post Settlement Governance Entity (PSGE) will be established to manage the settlement assets. The whānau of Ngāti Ranginui will be given the opportunity to vote on this new entity later on down the track when it is to be established.

A strategic goal of Ngāti Ranginui is that of economic strength, encompassing commercial return on assets; maximising usage of land; providing educational grants; developing competency and participation in Aquaculture, Agriculture, Tourism, Horticulture, Forestry, and Floriculture; organising for Whānau, Hapū and marae groups to be up skilled in financial management; encouraging education in all trades and professions; developing good advisory networks; and harnessing the utilisation of modern technology.

Social well-being is another strategic focus of Ngāti Ranginui and indicates demand for health and social service tertiary education amongst Whānau and Hapū. Training in leadership and governance is another area of need as Ngāti Ranginui seeks to develop leadership, knowledge and experience at Whānau, hapū and iwi level; to make effective use of administration and financial systems; to develop its people; and ensure it keeps pace with modern technology.

Te Au Māro o Ngāti Pūkenga

The Crown has signalled its intention to enter into negotiations to settle all of the historical Treaty claims of Ngāti Pūkenga whānui. Te Au Māro o Ngāti Pūkenga has already been mandated by Manaia, Tauranga, Maketū and Pakikaikutu to settle those Ngāti Pūkenga whānui claims, and is now seeking to have that mandate refreshed through a series of refresher mandate hui conducted through December 2009.

Te Awanui Tauranga Harbour Iwi Management Plan 2008

Regional marine and costal issues, particularly with regard to the management of Te Awanui (Tauranga Harbour), are areas in which iwi have a vested interest. Future tertiary needs of Tauranga Moana iwi are likely to reside in areas of coastal, marine, environmental and resource management, focusing in part on an iwi perspective with regard to management. This includes the building of research capability amongst iwi in these areas. This has broader implications upon regional tertiary needs in these areas (and including other areas of planning such as urban, industrial, agricultural/horticultural and infrastructure development), in that training must consider the integration of iwi management perspectives and processes.

Te Awanui Tauranga Harbour Iwi Management Plan 2008 highlights a range of initiatives that will influence tertiary needs over the next ten years:

- Each iwi to source funding to implement a research management unit that supports their hapū with resource management and planning issues. This unit would also support hapū with identifying funding opportunities to assist with specific issues or projects.

- Investigate funding options to identify and establish training programs for tangata whenua to ensure capacity building in water resource management issues.

- Develop and maintain relationships with relevant research-based service providers and
funding agencies to assist with the planning and management of wetland resources.

- Identify funding options to provide capacity building workshops for tangata whenua to participate in resource consent issues including the submissions process and developing cultural impact assessments.
- Capacity building for tangata whenua to undertake customary research with regards to kaimoana in dredged areas.

4.3.3 Overview of selected WBoP Sub-region Māori organisations

Māori Asset Base in the Waikato Economy

A recent BERL report on the Māori asset base in the Waikato economy (2010) (commissioned by Te Puni Kōkiri) indicates the movement of regional iwi organisations into business investment and operations over the past few years. In the Western Bay of Plenty area in particular, this involves a focus on the horticulture, agriculture, fisheries and aquaculture, forestry (including logistics) and tourism sectors. As iwi organisations expand their business operations across the value-chain of these sectors there will be increased numbers of opportunities for local Māori to be employed in a range of areas including harvesting, processing, marketing/retail, management, research and policy. This implies the need for local Māori to engage in tertiary training which will facilitate participation in these sectors.

Tauranga Moana Māori Trust Board

The Tauranga Moana Māori Trust Board has been successful in securing a contract with Housing New Zealand to deliver the Welcome Home First Steps Programme. The Programme will allow the growing Māori population in the Bay of Plenty region to access loans through Housing New Zealand including loans for building on multiple owned Māori lands. This initiative has the potential to provide impetus to Māori urban development and building and construction growth in the region. The focus on developing homes for Māori could provide business opportunities for Māori developers, builders and tradesman and training opportunities for Māori interested in entering the building and construction industry.

The Tauranga Moana Māori Trust Board also provides training in governance and business development in a range of areas including policy development, strategic planning and trustee/staff development. This training is particularly relevant to the ongoing need for effective governance amongst iwi organisations.

Tauranga Moana Māori Tourism Inc

Tauranga Moana Māori Tourism Inc (TMMT) is a non profit, professional organisation dedicated to supporting Māori tourism operators and driving the advancement of Māori tourism within Tauranga Moana. The prime objective of TMMT is the development of cultural tourism in an environmentally responsible, economically sustainable and spiritually, physically and culturally aware manner.

There is thought to be potential for further development of tourism attractions and activities in the WBOP region that may involve iwi. One example is in eco-tourism and the work involved in restoration and protection of flora, fauna and wetlands areas. As well as signalling potential demand amongst Māori for tourism programmes in general, the example above indicates the interconnectedness that Māori tourism has with the environment, which should be reflected in regional tertiary education.
Key informant interview

According to a stakeholder interview, there is an ongoing need for competent governance and management within iwi organisations. The stakeholder went on to mention that the Institute of Directors programme was effective in terms of serving the higher level training needs of those already highly qualified within iwi organisations. There was however, thought to be a more pressing need for tertiary education programmes for those with less understanding in governance and managerial disciplines. Many land trusts, for example, have tended to be risk averse in the past and this remains inherent, although it is changing with the increasing financial resources available and economic opportunities being presented. These organisations need people with a fundamental understanding of financial, risk and resource management and business and strategic planning.

Further investigation shows that Te Wānanga o Aotearoa plans to offer a diploma level Māori and Trusteeship programme in Tauranga which would assist in meeting the need identified above. The recently established Rotorua-based Te Wānanga e Ihenga offers a degree level Māori business development programme and is an example of the type of programme that could be offered in WBOP region in future, particularly as a pathway from the diploma level programme development.

The stakeholder interview identified that another key area of tertiary education need for Māori would be in the sciences and went on to mention that although iwi organisations currently lack research and development capability, some are in the process of implementing strategic objectives in the area and that it is likely to be an area of growth in future. Science was thought to be a key underlying knowledge base in the development of many of the sectors that Māori organisations are either participating in or plan to participate more actively.

An example of this direction is the active approach taken by Te Arawa Fisheries Trust in the seafood and aquaculture sectors, where research and development and other business opportunities are being planned (eg, in aquatic species investments). The Trust recognises the need for capability building in the sector and is planning training initiatives for its people to engage in all types of seafood training and education. The Trust’s fisheries boundaries are located along the Maketu coast and estuary from Wairakei to Te Awa o te Atua, and extend out to the 200 mile exclusive economic zone.

New species development in kiwifruit was thought to result in a prolonged horticultural season in future and increase the employment opportunities and need for more trained people in the sector. Hapū based trusts and individual Māori growers from the Bay of Plenty region have significant investments in the kiwifruit industry through their shares in Te Awanui Huka Pak.

Further comments from stakeholders indicate that trades training and achieving qualifications at level 4 and above will remain important for Māori.
5.0 CURRENT AND FUTURE TERTIARY EDUCATION DEMAND

This section presents an analysis of key drivers of current and future demand for tertiary education. Specific attention is paid to fundamental drivers such as population growth and changing age structures, economic growth and trends in national and international markets for tertiary education services. Census information is summarised in relation to residents’ qualifications and work status. This section concludes with a summary of key results from a previous survey of secondary school students’ study intentions.

5.1 National and international tertiary education trends

The tertiary education sector is constantly evolving in New Zealand and internationally. Whereas students once completed a post-school qualification early in life at one of a few established tertiary education organisations, they are increasingly becoming life-long learners and numerous provider organisations, locations and delivery options are available. LaRocque (2003) categorises the ‘old world’ landscape as focussing on four-year degrees, just-in-case learning, learner mobility and education as a social service, whereas the ‘new world’ landscape includes lifelong learning, just-in-time learning, content mobility and the use of education as an economic tool.

5.1.1 Key developments and trends

Marr, Holt and Benwell (1998) outline three key developments that are having a profound effect on tertiary education:

- Information Technology – The impact of rapid technological development is changing the range of available teaching mechanisms and delivery.

- Student Centred Learning – Where once “the professor” was the main focus of the education delivery, there has been a transition from the traditional teacher-centred approach towards a learner-centred model. This means the student is surrounded by resource material in addition to the lecturer/professor and tuition is problem-based, self-directed and peer-assisted. This facilitates the student to learn at their own pace and in their own way.

- Lifelong Skills Learning – There is a move away from the traditional transfer of technical knowledge from educator to student, to more of a broad-based education experience. This potentially allows the student to have the knowledge to solve problems not previously encountered, even though the student does not have direct training. This is increasingly being sought as a desirable attribute of employees by potential employers.

In 2001, Lauchlan Chipman, vice-chancellor of Central Queensland University outlined the following major trends apparent in international tertiary education at a conference on online learning in a borderless market:

- Higher education will be universal or near universal within 20 years.
- Higher education will be entered and re-entered at multiple points in the life of a citizen.
- Higher education will be increasingly international in focus, derivation and delivery.
- Higher education providers will be expected to demonstrate that they meet increasingly robust standards of quality assurance.
- Higher education will be provided at lower than current levels of taxpayer cost per graduate.
- The campus-based, research intensive university environment will not be replicated to anything like the extent necessary to provide a focal point for the anticipated massive growth in higher
education. Such traditional university campuses will diminish in relative higher education significance, and possibly even in absolute number.

5.1.2 Flexible delivery and e-learning

In line with these trends, the use of flexible delivery and e-learning is increasing in prevalence in tertiary education. E-learning in New Zealand is growing at a steady pace as more institutions identify that flexible learning delivery is essential for overall organisational competitiveness. Most tertiary institutions now have some form of e-learning capability that complements traditional face-to-face delivery. However, tertiary institutions throughout New Zealand vary greatly in their stage of development, level of engagement and commitment to investment in e-learning.

New technologies are constantly being developed to enable and enhance opportunities for flexible education delivery. New Zealand’s tertiary institutions are already focusing on future needs including:

- Designing and developing e-learning content.
- Developing e-learning strategies.
- Deploying and using e-learning tools.
- Addressing learner requirements and preferences.
- Managing and measuring e-learning initiatives.
- Increasing the technology capability to support e-learning.

The University of Waikato has some capability in this area, Bay of Plenty Polytechnic is building up capability and some PTEs already have this capability also (eg, Bethlehem Tertiary Institute). While no detailed investigations around this specific aspect have taken place as part of this research, it is understood from Steering Group feedback that e-learning infrastructure is in place but undeveloped because it is currently under-utilised.

5.1.3 Overall trends in tertiary education participation

Main trends in participation in New Zealand are as follows:

- Growth in participation in tertiary education has leveled off since 2005 (refer Figure 5).
- Most of the growth had previously been at levels 1 to 4, which has been constrained by tighter funding rules.
- Participation in industry training has increased steadily since 2003.
- At postgraduate level, participation has remained constant for Masters degrees and increased for doctorates.
5.1.4 Formal education trends by provider type

A fall in equivalent full-time students in 2008 occurred mainly in the polytechnics due to fewer people studying level 1 to 3 certificates. At universities the number of equivalent full-time students fell slightly – a decrease in international enrolments at bachelors level was almost offset by more domestic enrolments at bachelors level and increased enrolments by postgraduate students. At private training establishments and wānanga, the number of equivalent full-time student units increased in 2008 (refer Figure 6).
5.1.5 Formal education trends by enrolment level

Continuing a downward trend, enrolments at non-degree level fell in 2008 due mainly to a fall in domestic level 1 to 4 certificate enrolments. At degree level and above, enrolments remained stable (refer Figure 7). Postgraduate enrolments by domestic and international students increased, as did bachelors degree enrolments by domestic students. Bachelors enrolments fell for international students. The rise in domestic enrolments was due to the ‘baby blip’ continuing to move from high school age into tertiary education. The decrease in international students was primarily due to a cohort effect – smaller cohorts working through in multi-year qualifications. In contrast, the upward trend in workplace-based enrolments continued in 2008.

**Figure 7: Formal education trends by enrolment level**

![Graph showing formal education trends by enrolment level](image)

Source: Education Counts website.

5.1.6 Trends in industry training

The upward trend in industry training continued in 2008. The number of trainees has increased on average 8.1 percent per year since 2003. This reflects the significant increases in the financial investment in industry training and also the increases in the number of participating employers (refer Figure 8).
5.1.7 Trends in level 1-3 qualifications

The number of students at levels 1 to 3 peaked in 2005 and since then has decreased. The decreases have been due to tighter funding rules (particularly for short courses) and to improvements in the labour market during this period, making work more attractive than study. The largest decrease has been in the number of short courses and in foundation education. The number in vocational education courses has remained steadier. Training Opportunities and Youth Training make up a relatively small part of the provision, as do international enrolments (refer Figure 9). Note that the decreasing trend in students at levels 1 to 3 is likely to have reversed in 2009 as a result of the economic recession; however these figures are not yet available.

Source: Education Counts website.
5.1.8 Trends in level 4-7 qualifications

The decrease from 2007 to 2008 in level 4 to 7 non-degree study was due primarily to a fall in the number of domestic enrolments in level 4 certificate courses. Over the same period, level 4 certificate enrolments by international students increased. The number of level 5 to 7 diploma enrolments increased slightly overall from 2007 to 2008, up by 0.9 percent. The number of domestic enrolments remained steady at this level while those by international students increased (refer Figure 10).

Source: Education Counts website.
5.1.9 **Trends in bachelor and higher degrees enrolments**

Enrolments in bachelors degrees increased slightly overall in 2008 due to an increase in domestic enrolments and a fall in international enrolments. The rise in domestic bachelors enrolments was primarily due to the ‘baby blip’ continuing to move from school into tertiary education. Domestic enrolments increased in 2008 for honours degrees, postgraduate certificates and diplomas, and doctorate degrees, while they fell at Masters level and in graduate certificates and diplomas. While international enrolments decreased at bachelors level in 2008, they increased at all postgraduate levels and in graduate certificates and diplomas (refer Figure 11).

**Figure 11: Students enrolled in bachelor and higher degrees**

![Bar chart showing enrolments in different degrees from 2003 to 2008.]

Source: Education Counts website.

5.1.10 **International student trends**

The New Zealand tertiary education system has one of the highest rates of participation by international students in the Organisation for Economic Co-operation and Development (OECD). Key aspects include the following:

- Most international students seek fields of study which provide skills and credentials that can be readily transferred and will be recognised outside New Zealand. Six out of eight of the top fields of study were in management and commerce. Banking and finance, economics and tourism are the top three fields.
• As international students face significant extra tuition costs compared with domestic students, the choice of what to study is more strongly influenced by future economic returns.

• English language content is likely to be a factor for some non-native English language speakers.

• The number of international students enrolled in New Zealand tertiary education providers grew rapidly until 2004. Numbers decreased from 2004 to 2007 (refer Figure 12), as a result of a number of factors relating to international developments. However, New Zealand retains the second highest proportion worldwide of international students (after Australia).

• The number of doctorate students has increased over the last two years due to funding changes aimed at encouraging participation at this level.

Figure 12: Number of international students enrolled in New Zealand tertiary education providers

In 2008, enrolments by international students remained almost unchanged at 39,800. However, the amount of study by international students, in terms of equivalent fulltime student units, decreased in 2008. Between 2005 and 2007, international enrolments showed a decreasing trend. This was primarily due to a cohort effect – smaller cohorts working through in multi-year qualifications, especially in bachelors degrees. Since 2007, doctoral study by international students has been funded on the same basis as domestic doctoral studies, and this has substantially lowered these fees for international students.

The number and proportion of international students enrolled at bachelors and higher qualification levels continued to decrease in 2008. International students comprised 12 percent of all enrolments at this level in 2008. Study by international students at postgraduate level has increased in recent years. Enrolments at Masters and doctoral level increased significantly. However, the majority of international students studying at bachelors level or higher were enrolled in bachelors-level study (refer Figure 13).
5.1.11 Domestic student trends

National-level data relating to domestic students trends shows the following:

- Teacher education, business and management, and studies in human society remained the three most common fields of study for domestic bachelors graduates for each year between 2002 and 2006.

- Biological sciences, law and sales and marketing have become more common over the last five years, while curriculum and education studies and information systems have dropped out of the top 10.

- The number of domestic graduates increased in total by 980 from 2002 to 2006. The largest numerical increases over this period were in biological sciences (up by 310 graduates), law (up 300), communication and media studies (up 230), and social work and counselling (up 210).

- Other smaller but rapidly growing fields were public health (up 120), and justice and law enforcement (up 110). There was also strong growth in biotechnology and pharmacology and this has seen the ‘other sciences’ field increase by 160 graduates, or 56 percent, since 2002.

- The largest decreases have been in information technology (down from 2002 to 2006 by more than 660 graduates), teacher education (down 380), education studies (down 360) and accountancy (down 230).

- In contrast to the decline in information technology graduates, there has been a 25 percent increase in the number of graduates in graphic and design studies, much of which has been due to growth in computer-based multimedia and design courses. Despite the decline in education graduates, teacher education remained the most common field of study, while information technology fields dropped out of the top 10.
5.2 Population growth drivers

Assuming a medium growth scenario, the Western Bay of Plenty sub-region’s population is projected to increase from 150,000 people as at June 2006 to 187,600 people as at June 2021 (a 37,600 person increase). High and low growth scenarios for the same period project population increases of 50,600 and 24,700 people respectively (refer Figure 14).\(^1\)

Figure 14: Projected population – WBoP Sub-region

The Western Bay of Plenty sub-region’s projected population growth rate corresponds to an average annual rate of approximately 1.5% compared to 0.8% per annum for New Zealand as a whole. This is significantly faster than the growth rates associated with other selected North Island urban sub-regions or cities and stands at around 2,507 people per annum on an arithmetic basis. On average each year, the population of the sub-region is projected to grow at nearly twice the rate of New Zealand as a whole over the period 2006 and 2031.

Note that the SmartGrowth partner agencies have adopted more rapid population growth projections which form the basis of planning and infrastructure provision in the sub-region (refer Table 10). Forecasts of growth in population were made by the University of Waikato and a scenario called Modified Medium Net Migration was adopted. Briefings to Ministers and agencies all use the SmartGrowth data set, as these projections have been agreed by all of the partners and the information is used accordingly. Statistics New Zealand projections have traditionally been less than what has actually occurred in population growth, which was a key reason for SmartGrowth commissioning its own population and demographic projection work. Hence, the Statistics New Zealand official population projections should be seen as conservative for the Western Bay of Plenty sub-region.

\(^{1}\) Note that these official projections are relatively similar to those found in the 2006 Environment Bay of Plenty report: 'Demographic Forecast 2051: Movement and change in population and households in the Bay of Plenty', prepared by the Migration Research Group, University of Waikato.
Table 10: Projected population – SmartGrowth data set

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2021</th>
<th>2051</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>130,000</td>
<td>798,000</td>
<td>286,000</td>
</tr>
<tr>
<td>Households</td>
<td>49,000</td>
<td>79,000</td>
<td>120,000</td>
</tr>
</tbody>
</table>

Source: Priority One/University of Waikato.

5.2.1 Change in population age structure

In the Sub-region between 2006 and 2031, the greatest change in numbers (45.5% of the total population change) is projected to occur in the ‘65+’ age group (up 27,600 people) (refer Table 11).

Table 11: Change in population age structure

<table>
<thead>
<tr>
<th>Age</th>
<th>1996</th>
<th>2001</th>
<th>2006</th>
<th>2031</th>
<th>Change 2006-2031</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>number</td>
<td>%</td>
<td>Av. Ann. %</td>
<td></td>
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<tr>
<td>0–14</td>
<td>25,900</td>
<td>29,800</td>
<td>31,200</td>
<td>37,200</td>
<td>6,000</td>
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<td></td>
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<td></td>
<td></td>
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<td>19.2%</td>
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<td></td>
<td></td>
<td></td>
<td>0.7%</td>
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<tr>
<td>15–39</td>
<td>37,900</td>
<td>40,200</td>
<td>44,200</td>
<td>57,200</td>
<td>13,000</td>
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<td></td>
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<td>29.4%</td>
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<td></td>
<td></td>
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<td>1.0%</td>
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<tr>
<td>40–64</td>
<td>33,400</td>
<td>41,100</td>
<td>49,100</td>
<td>63,300</td>
<td>14,200</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>28.9%</td>
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<td></td>
<td></td>
<td>1.0%</td>
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<tr>
<td>65+</td>
<td>18,400</td>
<td>21,500</td>
<td>25,300</td>
<td>52,900</td>
<td>27,600</td>
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<tr>
<td>Total</td>
<td>115,400</td>
<td>132,600</td>
<td>150,000</td>
<td>210,600</td>
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<td></td>
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<td>40.4%</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>1.4%</td>
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</table>

Source: Compiled from Statistics New Zealand sub-national population projections.

Between 2011 and 2021, the proportion of New Zealand’s population aged less than 40 years old is projected to decrease. Comparing the sub-region to New Zealand as a whole over this period, the proportion of those aged less than 40 years old is projected to decline at a slightly slower rate. In other words, the proportion of those aged under 40 in the sub-region is not projected to decrease as much as for New Zealand as a whole because the proportion is already comparatively lower.

Those aged over 65 years are projected to become a significantly greater proportion of the sub-region’s and New Zealand’s population over the forecast period. The percentage point change between 2011 and 2021 in the proportion of those aged over 65 years in the sub-region is projected to be slightly less than for New Zealand as a whole, standing at 3.4 percentage points compared to 3.8 percentage points respectively. However, the proportion of the sub-region’s population aged 65 years or older is significantly greater than in New Zealand in the forecast period.

5.2.2 Migration overview

Migrants are the most significant driver of rapid population change given New Zealand’s slow natural population growth (ie, births minus deaths). Over the five years between 2001 and 2006, Tauranga City experienced an estimated population increase of 10,930 migrants (including both domestic and international migration), while Western Bay of Plenty District’s net migration grew by 3,030 people (refer Table 12). The sub-region as whole grew by 13,960 people over the five years 2001 to 2006 as a result of people relocating to the area. All other districts in the wider Bay of Plenty Region experienced net negative migration.

Table 12: Sub-national net migration estimates for selected Bay of Plenty Districts (five years ended 2001 and 2006)

<table>
<thead>
<tr>
<th>Year as at June</th>
<th>Taupo District</th>
<th>WBoP District</th>
<th>Tauranga City</th>
<th>Rotorua District</th>
<th>Whakatane District</th>
<th>Kawerau District</th>
<th>Opotiki District</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>-370</td>
<td>2,230</td>
<td>11,010</td>
<td>-3,270</td>
<td>-1,740</td>
<td>-1,290</td>
<td>-550</td>
</tr>
<tr>
<td>2006</td>
<td>-270</td>
<td>3,030</td>
<td>10,930</td>
<td>-1,840</td>
<td>-980</td>
<td>-550</td>
<td>-620</td>
</tr>
</tbody>
</table>

Source: Compiled from Statistics New Zealand sub-national population estimates.

Note: A negative number indicates a net loss of residents from the District attributable to migration.
5.3 Economic growth drivers

5.3.1 Industry growth overview at a national level

Tertiary education provision should in part be predicated upon the largest and fastest growing sectors in the economy historically, as well as sectors that are considered to be strategically beneficial to improving growth prospects. This section provides an overview of industry sectors that are likely to be important in the future and what main factors drive sectoral growth trends.

Key growth trends in the New Zealand economy according to the New Zealand Institute of Economic Research (NZIER) are:

- Increasing demand for services, in particular demand for services which cater for an older population.
- Increased emphasis on environmental management including energy efficiency.
- Wider application of information and communications technologies. This is likely to be a significant driver of growth for at least a decade.
- Increased disintermediation or de-integration – ie, activities within production value chains being undertaken by specialist third parties rather than internally by producers.

**Table 13: Selected fast-growing industries**

<table>
<thead>
<tr>
<th>Industry</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communications Services</td>
<td>Will continue to grow strongly with the increasing application of ICT, although this will slow over time as these become mature technologies.</td>
</tr>
<tr>
<td>Health &amp; Community Services</td>
<td>The ageing population will result in expanded demand for and provision of Health and Community Services, although the current tension in the trade-off between demand and supply of increasingly sophisticated and expensive medical technologies is unlikely to be resolved in the near future.</td>
</tr>
<tr>
<td>Education</td>
<td>Ongoing demand for skills will promote high growth in Education, notwithstanding the falling share of young people in the population. Export education also has strong prospects despite recent difficulties this industry has encountered.</td>
</tr>
<tr>
<td>Agriculture and Food, Beverage and Tobacco Manufacturing</td>
<td>Agriculture is likely to continue to experience moderate growth and labour supply constraints, as labour-intensive service industries will absorb a disproportionate share of extra workers; but both have the potential for above-average increases in labour productivity.</td>
</tr>
<tr>
<td>Forestry &amp; Logging</td>
<td>Projected to expand significantly over the whole period, driven by increasing volumes of wood available for harvesting. However, significantly lower growth in Wood &amp; Paper Products is projected; suggesting processing of timber will not keep up with the expanding supply from the forests. This growth is confined to regions where there has been increased planting coming on stream, and there is some doubt whether the annual volumes predicted will be actually harvested.</td>
</tr>
<tr>
<td>Transport and Storage</td>
<td>Generally grows in line with GDP growth and this is projected to continue, with an extra boost from air travel related to tourism.</td>
</tr>
<tr>
<td>Cultural &amp; Recreational Services Industry</td>
<td>This growth reflects a long-term trend that, as household incomes increase, a greater share of additional expenditure is used for consumption of services rather than purchase of goods.</td>
</tr>
<tr>
<td>Accommodation, Cafés and Restaurants</td>
<td>Domestic and tourist demand will promote relatively strong growth in Accommodation, Cafés and Restaurants. Like other labour-intensive service industries, availability of labour will become a potential constraint to growth.</td>
</tr>
</tbody>
</table>

Source: Compiled from NZIER Quarterly Predictions, December 2007 Quarter.

Note: NZIER publishes a regional outlook supplement as part of its Quarterly Predictions once a year, usually in the December or March quarter. Due to the current economic recession, an updated regional outlook commentary has not been published since the December 2007 quarter.
5.3.2 National-level economic growth

The New Zealand economy contracted over 2008 due to domestic and external shocks. An effect of the international financial crisis that began around September 2008 was to increase the price of funds to New Zealand banks. This, in combination with very tight monetary conditions and rising prices of food, petrol and electricity, slowed the housing market and the overall economy. Large reductions in the Official Cash Rate (OCR) by the Reserve Bank of New Zealand (RBNZ) have been implemented along with tax cuts, although the flow-on effects of these will be lagged and dampened by factors such as credit availability.

At some point in 2010, the Reserve Bank will likely begin to increase the OCR. This will have a stronger effect on domestic demand than in the past, since there are more flexible loans in the system than in previous years and fixed-term rates are not cheap, thereby placing more pressure on consumers and businesses.

Household financial positions were weakened during the recession due to declining house prices and household equity and a weaker employment outlook. Although the housing market is rebounding, the labour market has been sluggish. While interest rates have declined in the past for many households, they are expected to increase over the year, likely in September 2010. Rising prices for necessities such as food and electricity will seem likely to continue to place further pressure on households.

In the short-term, an effect of the slowdown has been that households cut back their discretionary spending, leading to slower real retail growth especially for large durables such as cars. It is expected that many households will continue to be more cautious making larger investments in 2010, although there may be a short-term increase in demand for consumer durables prior to the proposed increase in GST during late 2010. Even though the recovery has begun, growth in remuneration is likely to be slow, thereby limiting domestic demand with the exception of pockets of ‘pent up’ demand.

Firms are still being affected by weak demand, rising costs, declining margins and the effects of a high New Zealand dollar. As with households, firms will be more cautious around new investments and will likely put larger investment projects on hold until such time as the recovery is near complete. To deal with the slowdown, many firms reduced spending by cutting back employee hours and in some cases by reducing staff numbers. Now that the recovery has begun some firms will increase employee hours, but appear unlikely to revert to taking on new staff due to opportunities for greater capacity utilisation.

The economy of the Western Bay of Plenty sub-region has a reasonably strong export-orientation focus. The export sector’s outlook is improving with recovering global demand. To date, much of New Zealand’s exports have been resilient in the face of the global recession. The strength of the Asian and Australian economies have provided a significant buffer to New Zealand’s export sector. However, non-commodity exports have suffered more from the recession and will take longer to recover.

Much of the improvement in the level of the global economic activity over the past year has been attributable to a high degree of coordination of country-based monetary and fiscal stimuli. When and how these stimuli are removed, especially in the US and China; this will have a significant bearing on the global outlook. There is a risk that if the larger economies remove their national-level economic support initiatives too soon, the flow-on effect will be a decline in the level of global economic activity.
5.3.3 Economic growth and the demand for labour

Growth in New Zealand’s GDP reached its lowest point in the year ended March 2009. GDP growth is predicted by the New Zealand Institute of Economic Research (NZIER) to rebound to 1.1% in the year ended March 2010 and 2.6% in the year ended March 2011 (refer Figure 15). Therefore, according to the NZIER’s predictions, the year in which most of the recovery will occur is expected to be 2010. A relatively fast recovery is in part predicated upon the fact that many firms held onto labour and reduced the labour force’s hours, rather than shedding workers, thereby making an increase in production or resumption of service levels a reasonably smooth process.

![Figure 15: Actual and forecast New Zealand real GDP](image)

Source: NZIER Quarterly Predictions (December 2009)
Notes: (1) Chain weighted 1995/96 dollars. (2) GDP estimates subsequent to the year ended March 2009 quarter are forecasts. (3) The graph shows real expenditure on GDP for the year ended in March.

5.3.4 Sub-regional economic growth and higher education

The Western Bay of Plenty sub-region’s real GDP per capita increased by an estimated 1.6% over the five-year period 2004-2009, compared to a national gain of 1.7%. The sub-region’s GDP per capita has remained at around 80% of New Zealand’s figure between 2004 and 2009, while its population growth has been significantly faster than that experienced in New Zealand as a whole. This implies that the Sub-region’s representation in faster-growing sectors has possessed enough scale to have largely compensated for an increase in resident numbers over this period. However, for standards of living to be maintained, the sub-region will need to be more strongly represented in higher productivity faster-growing sectors over the next ten years.

Growth in fast-growing industry sectors is only feasible if the sub-region possesses a sufficient pool of people who possess higher level qualifications. This in turn implies the need to more effectively...
retain the sub-region’s young people in local tertiary education opportunities, increase the number of skilled migrants and overseas students and increase the sub-region’s emphasis on the provision of flexible retraining and up-skilling options for those already in the workforce. This implies that the Western Bay of Plenty sub-region needs to be proactive in increasing education levels so to maintain the status quo and further improve real incomes.

Table 14: Tauranga District, Western Bay of Plenty District and NZ – real per capita GDP 2003-2009

<table>
<thead>
<tr>
<th>September Years</th>
<th>Real GDP $M</th>
<th>Est. Resident Population</th>
<th>Real GDP Per Capita ($)</th>
<th>Tauranga/WBoP Ann. grw rate (%)</th>
<th>New Zealand Ann. grw rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>3,489</td>
<td>143,300</td>
<td>24,348</td>
<td>-</td>
<td>30,282</td>
</tr>
<tr>
<td>2005</td>
<td>3,564</td>
<td>146,900</td>
<td>24,261</td>
<td>-0.36</td>
<td>30,789</td>
</tr>
<tr>
<td>2006</td>
<td>3,693</td>
<td>149,900</td>
<td>24,636</td>
<td>1.55</td>
<td>31,051</td>
</tr>
<tr>
<td>2007</td>
<td>3,898</td>
<td>152,700</td>
<td>25,527</td>
<td>3.62</td>
<td>31,601</td>
</tr>
<tr>
<td>2008</td>
<td>4,004</td>
<td>154,900</td>
<td>25,849</td>
<td>1.26</td>
<td>31,780</td>
</tr>
<tr>
<td>2009</td>
<td>3,893</td>
<td>157,400</td>
<td>24,733</td>
<td>-4.32</td>
<td>30,791</td>
</tr>
<tr>
<td>Grw rate 2004-2009</td>
<td>11.6%</td>
<td>9.8%</td>
<td>1.6%</td>
<td>1.7%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Compiled from Infometrics Consulting Ltd and Economic Solutions Ltd data.
Note: GDP per capita in inflation-adjusted dollars for Tauranga/Western Bay of Plenty sourced from Statistics New Zealand population estimates.

5.3.5 Highest qualification gained

The highest level of formal education gained by an individual is a proxy for their level of human capital. More highly skilled occupations usually require higher levels of education and these in turn are associated with higher levels of remuneration and standard of living. The level of skills and human capital in an area is a critical component of economic growth alongside levels of unskilled labour and capital.

The Western Bay of Plenty sub-region has a greater proportion of those with no qualifications compared to New Zealand as a whole. The percentage point difference between those who reside in the sub-region compared to New Zealand who hold no formal education qualifications stood at 2.2 percentage points as at March 2006. The sub-region has a smaller proportion of those with bachelor degrees or higher qualifications compared to New Zealand as a whole. The percentage point difference between those who reside in the sub-region compared to New Zealand who hold bachelor degrees or higher qualifications was -5.1 percentage points as at March 2006 (refer Table 15).

Table 15: Highest qualification gained

<table>
<thead>
<tr>
<th>Area</th>
<th>No qualification</th>
<th>Secondary Qualification</th>
<th>Basic Qualification</th>
<th>Higher Vocational Qualification</th>
<th>Bachelors Degree or above</th>
<th>Unspecified</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total, New Zealand</td>
<td>38.1%</td>
<td>25.0%</td>
<td>31.4%</td>
<td>35.0%</td>
<td>3.7%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Bay of Plenty Region</td>
<td>43.9%</td>
<td>29.6%</td>
<td>26.9%</td>
<td>33.0%</td>
<td>4.0%</td>
<td>5.5%</td>
</tr>
<tr>
<td>Western Bay Of Plenty Sub-region</td>
<td>42.0%</td>
<td>27.2%</td>
<td>29.7%</td>
<td>33.8%</td>
<td>3.9%</td>
<td>5.2%</td>
</tr>
<tr>
<td>Tauranga City</td>
<td>41.8%</td>
<td>26.5%</td>
<td>29.9%</td>
<td>33.7%</td>
<td>3.9%</td>
<td>5.4%</td>
</tr>
<tr>
<td>Western Bay Of Plenty District</td>
<td>42.5%</td>
<td>28.9%</td>
<td>29.2%</td>
<td>33.9%</td>
<td>3.9%</td>
<td>4.8%</td>
</tr>
<tr>
<td>Percentage point differential between Sub-region and NZ</td>
<td>3.86%</td>
<td>2.19%</td>
<td>-1.68%</td>
<td>-1.25%</td>
<td>0.24%</td>
<td>0.70%</td>
</tr>
</tbody>
</table>

Source: Compiled from Statistics New 2006 census data and APR analysis
Note: Percentages relate to a count of qualifications which excluded those who did not specify their highest qualification.
5.3.6 Industry growth overview at a sub-regional level

The following analysis helps to inform where the demand for training and qualifications now and in the future are likely to occur in terms of an extrapolation of the status quo. The five greatest sources of employment in the Western Bay of Plenty sub-region as at February 2009 were as follows:

- Health Care and Social Assistance (8,170 employment counts).
- Retail Trade (7,620 employment counts).
- Manufacturing (6,770 employment counts).
- Agriculture, Forestry and Fishing (5,860 employment counts).
- Education and Training (4,870 employment counts).

Figure 16: Employment in WBoP Sub-region as at February 2009

Source: Compiled from Statistics New Zealand Business Directory data.

Notes: (1) Employment is quantified in terms of employment counts and does not distinguish between part and full-time employment or include those who are self-employed. (2) Percentages listed in parentheses are 4-year average annual percentage changes (2005-2009).

The relative ‘importance’ of industries to a particular area can be summarised using Location Quotients (LQs). A location quotient greater than one indicates that this sector is more important to the Sub-region in employment than the country as a whole, while a quotient less than one indicates the converse. LQs provide an indication of relative specialisation from comparative advantage.

Limitations of using LQ’s as a measure of comparative advantage arise when there is geographic immobility of natural resources and labour, or for public services where there are relatively high fixed ratios of employment per level of capital investment. Industries with high LQ’s are important because they generally bring money into the Western Bay of Plenty sub-region rather than simply circulating money that is already in the area. Industries which have both high LQ’s and relatively high total job numbers typically form a region’s economic base.

- Selected sectors that are bigger employers locally compared to nationally are Agriculture, Forestry and Fishing (1.6), Administration and Support Services, Health Care and Social Assistance (1.3) and Retail Trade (1.3) (refer Figure 17).
• The Sub-region’s minimum and maximum location quotients do not deviate strongly from a value of one, indicating that the sectoral composition of the Sub-region’s workforce is relatively similar to New Zealand as a whole.

Figure 17: Employment Quotients – WBoP Sub-region as at February 2009

Source: Compiled from Statistics New Zealand Business Directory and APR analysis.
Notes: (1) Percentages listed in parentheses are four-year average annual percentage changes (2005-2009). (2) An Employment Quotient greater than one indicates that a selected sector is a more important source of employment locally compared to nationally, while an Employment Quotient which is less than one indicates the converse.

Significant industries for the sub-region’s future in terms of the current situation are those that make a large percentage contribution to total employment and which will also be fast-growing in the future. This especially includes those sectors which sustain skilled labour, capital and infrastructure, whose basis is relatively portable and may alternatively be used to support fast-growing sectors that not yet part of the sub-region’s economy, and/or have strong linkages to current sectors. Significant industries in terms of employment at present have a substantial effect on the local economy since they influence the range of skills, experience and education of workers that reside in the local economy.

• The fastest growing sectors in the sub-region are Administrative and Support Services (8.4% pa), Arts and Recreational Services (8.0% pa), Agriculture, Forestry and Fishing (6.7% pa), Public Administration and Safety (6.6% pa), Mining (6.1% pa) and Education and Training (5.7% pa).

• Four of the sub-region’s slowest growing sectors are also the largest sectors in terms of employment. Slowest growing sectors in the sub-region are Manufacturing (-3.1% pa), Construction (-1.8% pa), Transport, Postal and Warehousing (-0.6% pa) and Retail Trade (0.4% pa).
5.3.7 Employment projections to 2019

The projections presented in this sub-section are based on NZIER’s Medium Term Prospects for national employment growth as at the December 2009 quarter. An estimate of employment as at March 2009 and a forecast for March 2014 were used to calculate the average annual employment growth rate over this period, which stood at 0.87%. This rate was used to compound employment counts as at February 2009 over the forecast period.

Forecasts of employment by sector have been adjusted to take into account the relationship between total average annual growth in the sub-region and growth for each individual industry sector over the past five years to 2009. This approach essentially assumes that the structure of the economy will not change over the forecast period. The results provide an indication of potential levels of employment, although these forecasts exclude sectors whose contribution is not currently included in business frame data but promise to deliver a number of jobs in the future. In other words, the projections provide a baseline forecast that represents a useful extrapolation of the status quo.

The top ten largest employment sectors as at 2019 in the Sub-region are projected to be Preschool and School Education (6.97%) followed by Agriculture and Fishing Support Services (6.50%), Other Store-Based Retailing (5.81%), Medical and Other Health Care Services (5.05%), Professional, Scientific and Technical Services (except Computer Systems Design and Related Services) (4.98%), Food and Beverage Services (4.54%), Hospitals (4.40%), Building Cleaning, Pest Control and Other Support Services (3.87%) and Food Retailing (3.80%) and Administrative Services (3.38%) (refer Figure 19).
With the exception of Other Store-Based Retailing, Food and Beverage Services and Food Retailing, these sectors all grew at faster average annual rates than the Sub-regional average between 2005 and 2009. The greatest contributors to forecast employment growth are Agriculture and Fishing Support Services (18.42%), Preschool and School Education (11.13%) Hospitals (9.48%), Administrative Services (8.83%), Building Cleaning, Pest Control and Other Support Services (6.33%) and Professional, Scientific and Technical Services (except Computer Systems Design and Related Services) (6.29%).

The tertiary education sector has an employment quotient that was only 0.5 as at February 2009, indicating that the Sub-region is a net importer of tertiary education services from the rest of New Zealand. In other words, given the relatively low ‘importance’ of tertiary education in the Sub-region compared to New Zealand as a whole, this implies that a significant number of younger people are leaving the Sub-region to undertake tertiary study elsewhere.

Source: APR Consultants projections (based on NZIER Medium Term Prospects).

5.4 Secondary schools students’ study intentions

A survey of students from nine Western Bay of Plenty secondary schools has been undertaken over the past five years. The schools are: Tauranga Girls College, Otumoetai College, Mt Maunganui College, Bethlehem College, Tauranga Boys College, Katikati College, Aquinas College, Waihi College and Te Puke High School. The main objective of the survey programme is to assess which programme areas are popular, the level of qualification that students aspire to, and also the extent to which students would study in Tauranga. A collection of key survey results are presented below, along with additional contextual comments regarding existing tertiary education provision in the area.
5.4.1 Level of qualification sought

While 70% of the students surveyed in 2008 intended to achieve a Diploma/Degree level qualification, this was a decline from the 74% who intended to achieve the similar level qualification in 2006. The proportion of those intending to achieve an Apprenticeship/Certificate increased from 21% in 2006 to 24% in 2008. The proportion of students who do not intend to study has remained relatively stable at around 5-6% since 2006. Of the students who indicated that they intended to achieve an Apprenticeship/Certificate level qualification in 2008, the most popular programmes reported were Automotive (15%), Army (15%) and Engineering & Welding (14%).

<table>
<thead>
<tr>
<th>Programme</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automotive</td>
<td>18</td>
<td>15</td>
</tr>
<tr>
<td>Army</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>Engineering &amp; Welding</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Building &amp; Construction</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>Sport &amp; Recreation</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Beauty</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Air force</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Electrical &amp; Electronics</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>Hairdressing</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Music</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Hospitality - Chef</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Animal Care</td>
<td>-</td>
<td>7</td>
</tr>
<tr>
<td>Fashion</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Film &amp; TV</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Photography</td>
<td>-</td>
<td>6</td>
</tr>
<tr>
<td>Computing /Information Technology</td>
<td>-</td>
<td>6</td>
</tr>
</tbody>
</table>


Of the students who indicated that they intended to achieve Diploma/Degree level qualifications in 2008, the most popular programmes reported were Law (11%), Psychology (10%) and Science (10%). However, students’ intentions to achieve Diploma/Degree level qualifications have been relatively evenly spread across a range of programmes since 2007.

5.4.2 Institution of choice

Auckland University was the main institution of choice for students in 2008 with one-fifth (20%) stating this to be their preferred choice. This institution has been experiencing a general increase in popularity as an intended destination with students since 2005. Apart from Auckland University, the most popular intended destinations in 2008 were: Otago University (17%), Waikato University (17%), BoP Polytechnic (16%) and Victoria University (15%). However, with the exception of Victoria University, all of these institutions have had a proportional decline in popularity compared to the 2005 survey results.

5.4.3 Intentions to study in Tauranga

In total, 17% of the students in the 2007 and 2008 surveys indicated that they intend to study in Tauranga, with 27% and 24% not sure in 2007 and 2008 respectively. There was a small increase in the number of students who indicated that they do not intend to study in Tauranga (from 56% in 2007 to 59% in 2008).
Table 17: Intentions to study in Tauranga 2004-2008

<table>
<thead>
<tr>
<th></th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>23</td>
<td>27</td>
<td>29</td>
<td>56</td>
<td>59</td>
</tr>
<tr>
<td>Not Sure</td>
<td>40</td>
<td>34</td>
<td>31</td>
<td>27</td>
<td>24</td>
</tr>
<tr>
<td>Yes</td>
<td>37</td>
<td>39</td>
<td>40</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Study Intention Survey 2008 – Research Report July 2009. Note: When comparing the results from previous years, it should be taken into account that changes were made in the questionnaire wording since 2006. In the 2008/2007 surveys the question was formulated: “Are you intending to study in Tauranga?” In the 2006/2005/2004 surveys the question was formulated: “If a similar or identical qualification were available in Tauranga, would you study here?”

The main reason for students not intending to study in Tauranga was that the right programme was not available (51%) (refer Table 18).

Table 18: Reasons for not intending to study in Tauranga 2007-2008

<table>
<thead>
<tr>
<th>Reason</th>
<th>2007</th>
<th>2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right programme not available in Tauranga</td>
<td>50</td>
<td>51</td>
</tr>
<tr>
<td>Want a new experience other than Tauranga</td>
<td>32</td>
<td>35</td>
</tr>
<tr>
<td>Just want to get away from home</td>
<td>18</td>
<td>18</td>
</tr>
<tr>
<td>Tauranga not set up for students</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Friends are going elsewhere</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Don’t know</td>
<td>5</td>
<td>-</td>
</tr>
</tbody>
</table>


Of the students who indicated that the right programme was not available in Tauranga, the most popular Apprenticeship/Certificate programmes that they indicated they intended to achieve was the Air Force (27%), Army (19%) and Police (19%). Note that travel/tourism, sport/recreation and art are offered by Bay of Plenty Polytechnic, so it is surprising that students intending to achieve Apprenticeships/Certificates in these programmes indicated that the right programme was not available in Tauranga. However, these students may have intended achieving more specialised qualifications than were available at Bay of Plenty Polytechnic.

Table 19: Programme of choice (Apprenticeships/Certificates) for those not intending to study in Tauranga 2008

<table>
<thead>
<tr>
<th>Programme</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Force</td>
<td>27</td>
</tr>
<tr>
<td>Army</td>
<td>19</td>
</tr>
<tr>
<td>Police</td>
<td>19</td>
</tr>
<tr>
<td>Tourism &amp; Travel</td>
<td>18</td>
</tr>
<tr>
<td>Other</td>
<td>16</td>
</tr>
<tr>
<td>Sport &amp; Recreation</td>
<td>15</td>
</tr>
<tr>
<td>Art</td>
<td>12</td>
</tr>
<tr>
<td>Engineering &amp; Welding</td>
<td>12</td>
</tr>
<tr>
<td>Fashion</td>
<td>10</td>
</tr>
<tr>
<td>Navy</td>
<td>10</td>
</tr>
<tr>
<td>Film &amp; TV</td>
<td>9</td>
</tr>
<tr>
<td>Floristry</td>
<td>9</td>
</tr>
</tbody>
</table>

Of the students who indicated that the right programme was not available in Tauranga, the most popular Diploma/Degree programmes that they indicated they intended to achieve was Science (15%), Other (15%), Medicine (14%) and Engineering (12%). With the exception of cross-credit programmes with Auckland University of Technology and the University of Waikato, Tauranga is currently absent of Degree qualifications in Science and Engineering that can be completed in full. However, initiatives and infrastructure such as Intercoast, the Nautilus Science & Technology Park at Sulphur Pt, Applied Powder Metallurgy Research Centre at BoP Polytech Windermere campus and Aquaculture centre at the BoP Polytech Windermere campus are expected to become centres where Science Degrees will be available.
6.0 DISCUSSION

This section presents an outline of priority areas for matching the demand for tertiary education against current and planned supply in the Western Bay of Plenty area. Tertiary education demand and supply are each complex phenomena, influenced by a myriad of factors and potentially influencing each other (refer table 20).

Table 20: Influences on tertiary education demand and supply

<table>
<thead>
<tr>
<th>Influences on tertiary education demand</th>
<th>Influences on tertiary education supply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>Government policy framework (eg, growth and innovation fund)</td>
</tr>
<tr>
<td>- population characteristics and changes including gender, age structure, ethnicity, household income, characteristics, migration, population location, use of and access to learning related technologies, mobility.</td>
<td>Tertiary Education Policy Framework, Tertiary organisational related policy:</td>
</tr>
<tr>
<td></td>
<td>- Tertiary Education Strategy and STEP.</td>
</tr>
<tr>
<td></td>
<td>- Regional Plans.</td>
</tr>
<tr>
<td></td>
<td>- Institutional Plans.</td>
</tr>
<tr>
<td>Tertiary Education Policy Framework.</td>
<td>Local and Regional Policy Initiatives and strategies.</td>
</tr>
<tr>
<td>Tertiary student related policy.</td>
<td>- regional development strategies.</td>
</tr>
<tr>
<td>- (eg funding, access provisions).</td>
<td>- employment and skills strategies.</td>
</tr>
<tr>
<td></td>
<td>- district and regional plan provisions.</td>
</tr>
<tr>
<td></td>
<td>- urban growth strategies.</td>
</tr>
<tr>
<td>Industry (demand for graduates and ongoing demand for up-skilling staff):</td>
<td>Secondary Schools</td>
</tr>
<tr>
<td>- employment, productivity, business growth;</td>
<td>- relationships between secondary and tertiary institutions including collaborations, curriculum alignment.</td>
</tr>
<tr>
<td>- strategically important and new (sunrise) industries;</td>
<td></td>
</tr>
<tr>
<td>- sunset industries; and</td>
<td></td>
</tr>
<tr>
<td>- local, regional and national economic growth and outlook.</td>
<td></td>
</tr>
<tr>
<td>Students</td>
<td>Government funding:</td>
</tr>
<tr>
<td>- course preferences- perceptions around careers, costs of education, access, proximity, level and type of course, mobility, historical education achievement, ability/disability, whānau/family and peer influences.</td>
<td>- institutional funding.</td>
</tr>
<tr>
<td></td>
<td>- ITO and other funding.</td>
</tr>
<tr>
<td></td>
<td>- specialist funds (eg, research and development).</td>
</tr>
<tr>
<td>Government student funding</td>
<td>Tertiary organisational characteristics.</td>
</tr>
<tr>
<td>- government funding towards individual student programmes, special assistance available for disadvantaged groups.</td>
<td>- courses available (also levels and types of delivery modes of courses).</td>
</tr>
<tr>
<td></td>
<td>- ability to respond to demand.</td>
</tr>
<tr>
<td></td>
<td>- use of technology (eg, e-learning).</td>
</tr>
<tr>
<td>Societal values</td>
<td>Societal values</td>
</tr>
<tr>
<td>- Importance of tertiary education.</td>
<td>- Importance of government funding for tertiary education.</td>
</tr>
<tr>
<td>Infrastructure – access to transport (eg public transport), broadband.</td>
<td>Technology (ICT)</td>
</tr>
<tr>
<td></td>
<td>- New models of delivery, flexible delivery.</td>
</tr>
<tr>
<td></td>
<td>- Costs of delivery.</td>
</tr>
<tr>
<td></td>
<td>- Adequacies of ICT technology and staff to support learners.</td>
</tr>
</tbody>
</table>
6.1 Supply-related issues

6.1.1 Tertiary education organisations

In summary, there are two main public tertiary education providers located in the Western Bay of Plenty region, namely the University of Waikato and Bay of Plenty Polytechnic. Other public tertiary education providers in the region include Te Wānanga o Aotearoa and Bay of Plenty District Health Board Clinical School. Studying by distance education (extramurally) has become increasingly popular with students in New Zealand. Western Bay of Plenty residents can access distance education, including post-graduate study, through a variety of institutions.

There are approximately 27 Private Training Enterprises (PTEs) located in the Western Bay of Plenty that run programmes accredited by the New Zealand Qualifications Authority (NZQA), many of which are very niche providers. The two major PTEs are Bethlehem Tertiary Institute and Avonmore Tertiary Institute. In addition, there are a variety of other providers that run short courses, mainly for industry.

There is strong industry training provision in the region with about 3,600 industry trainees and 423 modern apprenticeships as at the second quarter of 2009. Community Support Services, NZITO (dairy and meat), Hospitality, Building and Construction, Competenz (engineering, food and manufacturing) and Forestry represent Industry Training Organisations with the greatest number of trainees in Western Bay of Plenty region.

6.1.2 Local and regional policy initiatives and strategies

At a strategic level, employment skills strategies, regional and district economic development strategies, urban growth strategies and Council Long-Term Plan processes help set the scene for providing allocations of public resources into areas that will have an influence on tertiary education supply.

Regional and district plans provide a framework for development in terms of where it is likely to occur. This will influence supply in terms of any consenting requirements for a tertiary organisation to establish and deliver programmes into the area.

6.1.3 Secondary schools

Secondary schools and their connectivity to tertiary institutions affect the ability of students to transition easily between the two levels of education. Curriculum alignment programmes allow schools and tertiary institutions to provide compatible offerings, thereby reducing uncertainty for students and tertiary institutions. Further developments in these areas would ensure greater provision of courses at tertiary institutions and enable more collaborative initiatives to occur.
6.2 Demand-related issues

6.2.1 Population

Diversity within the region is reflected by differing age and ethnicity profiles, industry and employment patterns. Key population factors are as follows:

- **Ethnicity** – The ethnic make-up of the population is changing due to higher proportions of Māori, Pasifika and Asian peoples.

- **Age structure** – The population profile for the region is projected to become older over time, in keeping with the broader national trend.

- **Population growth** – The resident population of the Western Bay of Plenty Region is projected to grow to around 210,000 by the year 2031, driven in part by net inward migration.

- **Qualifications** – There remains a slightly higher proportion of adult residents in the Western Bay of Plenty sub-region with no qualification (approximately 27%), compared to the national average of 25%, coupled with a relatively lower proportion of adults with a bachelors degree or higher (17.6% compared to 18.4% for New Zealand as a whole).

6.2.2 Industry

The five greatest sources of employment in the Western Bay of Plenty sub-region as at February 2009 were Health Care and Social Assistance, Retail Trade, Manufacturing, Agriculture, Forestry and Fishing, and Education and Training. The fastest growing local sectors are Administrative and Support Services, Arts and Recreational Services, Agriculture, Forestry and Fishing, Public Administration and Safety, Mining and Education and Training. The greatest contributors to forecast employment growth are Agriculture and Fishing Support Services, Preschool and School Education, Hospitals, Administrative Services, Building Cleaning, Pest Control and Other Support Services, and Professional, Scientific and Technical Services (except Computer Systems Design and Related Services).

There are high labour replacement rates in many industries in the region, particularly large employment industry sectors such as manufacturing, retail, property and business services. Also, while café, accommodation and restaurants and the agricultural sectors have high staff turnover, these are not high employment industries compared to the earlier industry sectors. This factor can provide a source of retraining people in careers and may be a factor in ongoing demand for tertiary education and training in the study area.

Key issues for firms in relation to the labour market in the Western Bay of Plenty region are summarised as follows:

- Firms aiming to enhance productivity over the next decade should support demand for tertiary education and skills training. However, the extent to which this trend is translated into demand for institutional education will depend on employer perceptions of institutional quality as compared to in-house skills training.

- Institutional quality is likely to be predicated on flexibility of provision as well as applicability and relevance of training to the workplace.
As employers seek more productive workers, individuals are likely to perceive a greater need for tertiary education and skills training in order to remain competitive in the labour market. Workers are likely to demand courses that impart highly portable skills and knowledge. Increases in productivity can result in lower labour inputs (and therefore lower levels of employment), but the labour inputs often require higher level education and training. Therefore, while there may be productivity shifts through increased human capital and/or financial capital replacing labour, tertiary education and training will be fundamental to productivity increases.

Ageing of the New Zealand workforce profile implies that increased labour force participation and employment of older workers could partially mitigate the slower and eventually negative growth in the size of the working age population. Increased numbers of older workers in the labour force may reduce average hours per worker, but would not necessarily reduce labour productivity per hour worked. Aging of the New Zealand workforce implies the adaptation of training programmes to the learning needs and styles of older workers.

City and township developments over the coming ten years will place demand on the local construction industry. There is an ongoing need to train people for trades-based careers. There are also distinct industrial clusters, such as the Harbour Central Marine Precinct, that could benefit from more proximate course offerings. Industry-based training is becoming more prominent in the region particularly with regard to trades, manufacturing, health, retail and hospitality. Employer and employee preferences are driving increased options for on-the-job training.

6.2.3 Infrastructure

With significant population and employment growth projected, this will have a major affect on the provision of infrastructure required to support this growth. Tauranga City Council is already committed to a period of major expenditure to rectify existing stormwater issues. Indications are that water, electricity, gas and telephony/broadband will not be limiting factors in terms of future tertiary education demand, however land availability and roading may be. Land is likely to be limiting in terms of projected population growth and the availability of land for industry and housing. In a positive way, the intensification of populations along transport corridors should make local tertiary education facilities more geographically accessible. Expanding broadband infrastructure will also enable greater access to learning opportunities and satisfy some of the demand for flexibility requested by organisations and individuals. Long-term planning policies aim to encourage life-long and localised learning.

6.2.4 Student preferences

Student choice is a key factor in demand for tertiary education. The views of peers, family, schools and messages in media can have a major influence in their decision as to whether they will continue to study and, if they do, their choice of study destination. Key drivers for subject choice include:

- Structure of courses.
- Publicity of shortages in employment areas.
- Media image of glamour occupations such as law and business programmes.
- Financial gain.
- High profile cases.

Previous research also indicates that prerequisite knowledge, subject preparation and student interest/performance in related subject areas are often key to the decisions made by students. As there is choice in the market, tertiary education organisations have to maintain an active marketing presence in the current environment to ensure their sustainability. Challenges in relation to ethnic groups are also identified, with issues such as low parental expectation in some groups needing to be improved to remove barriers to tertiary education.
The transition from secondary school to tertiary level is seen as an area that needs more attention to avoid the loss of students who may go to work for a year and never take up tertiary education even if they originally intended to go there. Some of these students may have been successful at school but lacked the funds or family support to attend tertiary providers. Considerable work is already being done in the WBOP sub-region to transition secondary school students to tertiary education. As mentioned earlier, the WBOP Youth Training Partnership Cluster has been established in response to the lack of funding for a Trades Academy. This is with all 8 secondary schools, BoPP, UoW and the PTE sector. The intention is that this is not limited to trades, but will also find ways for those students who are capable to do first year diploma and degree courses at school. STAR and Gateway funding is also being used by the schools to purchase courses and unit standards from BoPP and some PTEs, to help students gain the credits they need to complete NCEA requirements but also to transition them from secondary to tertiary.

A Regional Tertiary Providers Forum has been in place in the Western Bay of Plenty area for more than six years. Credit recognition occurs automatically for students taking national qualifications from the National Qualifications Framework. Communication is an ongoing challenge, with internal communication among tertiary provider departments needing continued attention as well as communication among all tertiary providers. Perhaps some enhancement of cross-crediting arrangements between universities can be achieved, although work is already being done on that.

6.3 Options and recommendations

6.3.1 Opportunities for more effective regional provision

The building and strengthening of relationships between tertiary providers, schools and industry cannot be underestimated for its potential affect on future tertiary demand and to fill gaps in training and skills. Closer links between these organisations should result in a greater understanding between sectors and less loss of students from tertiary education. A culture of collaboration is already seen by many as a key strength of the Tauranga/Western Bay of Plenty area, providing a strong platform on which to build. Ensuring high quality standards, funding and government backing, new regional institutions and satellite campuses and responding to industry needs are also critical.

The Western Bay of Plenty’s tertiary education sector has an employment quotient of only 0.5, indicating that the Sub-region is a net importer of tertiary education services. This implies that a significant number of younger people are currently leaving the sub-region to undertake tertiary study elsewhere. Tertiary education demand and supply are influenced by a wide range of factors as described in this report. Taking into consideration all available information, the following options and recommendations are offered to the Steering Group for further discussion, for the purpose of maximising the efficiency and effectiveness of tertiary education service delivery.

6.3.2 Immediate considerations

(a) Assuming a medium growth scenario, the Sub-region’s population is projected to increase from 150,000 people as at June 2006 to 187,600 people as at June 2021 (a 37,600 person increase). This represents an average annual rate of approximately 1.5%, which is around twice the national average rate of population growth. Projections prepared by the University of Waikato for the SmartGrowth partners are for even faster growth, reaching 198,000 by the year 2021. Our initial recommendation is therefore for the ongoing development of programmes and courses that cater for the rapid population growth of the Western Bay of Plenty, which will be underpinned by new household formation, new company developments, increasing in the scale of existing organisations and businesses, infrastructure improvements (e.g., roading and stormwater management) and the need to adequately cater for the tertiary education requirements of this growth.
The precise details of how to develop regional programmes and courses to meet future needs should be the focus of ongoing collaboration between providers and other stakeholders. We feel that this research project needs to be followed up with a collaborative strategy and action plan involving key stakeholders (providers and industry). There should also be a regular (e.g., annual) review process to provide oversight of strategy implementation. This forum could provide a mechanism for both planning and evaluation. For example, the ability to provide specific programmes that may meet re-training requirements for people who lose their jobs and are not readily able to relocate to another area.

The collaborative culture that prevails amongst tertiary education providers in the Western Bay of Plenty has been identified as a major advantage compared to some other parts of New Zealand. A Regional Tertiary Providers Forum has been in place in the Western Bay of Plenty area for more than six years. Internal communication among tertiary provider departments needs continued attention as well as communication among all tertiary providers, including PTEs to ensure the most effective and efficient delivery of trades training through partnerships and contracts. Credit recognition occurs automatically for students taking national qualifications from the National Qualifications Framework. Perhaps some enhancement of cross-crediting arrangements between universities can be achieved, with work already being done on that.

At a Steering Group meeting in December 2009, it was identified that Western BoP District Council and other major local employers invest considerable funding into leadership/management training but there is little local provision of this type of programme. There appears to be a substantial opportunity for providing continuous education in relation to high-level Leadership and Organisational Transformation training. Iwi/hapū/Māori trusts are involved in leadership and management development programmes around land management, and the Treaty settlement process may drive additional requirements for leadership and organisational management in relation to Māori commercial interests. We recommend that the University of Waikato-BOPP partnership and/or other local providers consider ways in which such training could be brought to the Western Bay of Plenty. Consideration could also be given to how such programmes might be ‘exported’ to other regions in a way that brings benefits to locally-based providers.

On-the-job training is already a significant mode of delivery in terms of industry trainees and Modern Apprenticeships in the region. This form of delivery will likely remain significant, or become even more significant over time. Our recommendation is to plan/allow for current or increased levels of on-the-job training and Modern Apprenticeships. The details of how this can best be achieved should be developed collaboratively by providers and industry.

Secondary schools and their connectivity to tertiary institutions affect the ability of students to transition easily between the two levels of education. Curriculum alignment programmes allow schools and tertiary institutions to provide compatible offerings, thereby reducing uncertainty for students and tertiary institutions. Considerable work is already being done in the WBOP sub-region to transition secondary school students to tertiary education. For example, the WBOP Youth Training Partnership Cluster has been established in response to the lack of funding for a Trades Academy. This is with all 8 secondary schools, BoPP, UoW and the PTE sector. The intention is that this is not limited to trades, but will also find ways for those students who are capable to do first year diploma and degree courses at school. STAR and Gateway funding is also being used by the schools to purchase courses and unit standards from BoPP and some PTEs, to help students gain the credits they need to complete NCEA requirements but also to transition them from secondary to tertiary. Further developments in these areas would ensure greater provision of courses at tertiary institutions and enable more collaborative initiatives to occur.
(g) There are varying levels of awareness of courses and programmes available in the WBOP. In order to assist school leavers and others contemplating tertiary education, there is a need for an independent, comprehensive website which provides relevant information in real time. The Bay of Connections website has been suggested as one possibility to host such information.

6.3.3 Matters over the next five years

(a) With the exception of cross-credit programmes with Auckland University of Technology and the University of Waikato, Tauranga is currently absent of degree qualifications in science that can be completed in full. Initiatives and infrastructure such as Intercoast, the Nautilus Science & Technology Park at Sulphur Pt, Applied Powder Metallurgy Research Centre at BoP Polytech Windermere campus and Aquaculture centre at the BoP Polytech Windermere campus are expected to become centres where science degrees will be available. Formal consideration should be given to how local tertiary offerings in science can be boosted in the most effective, co-ordinated and efficient manner. The potential for science qualifications (e.g., degrees/ diplomas) needs to be reviewed in the context of strong study intentions by local students, and the alignment with science and local industry. There appear to be synergies between science education needs and the development of laboratories to meet post-graduate activities (e.g., Intercoast); block and short-courses (e.g., HSNO requirements); and general industry science requirements.

(b) In terms of Engineering, there are already strategic developments around metallurgy/Titanox planned for the Western Bay of Plenty. Given the range of opportunities, a model similar to the successful DHB Clinical School could be investigated, whereby a lead agency may facilitate the provision of different high-level qualifications which are separately credentialised through existing tertiary providers (e.g., University of Auckland’s School of Engineering).

(c) The Western Bay of Plenty area has considerable potential as a study destination for international students, particularly around areas in which the University of Waikato has a strong reputation (e.g., management studies and commerce). BoPP has plans to build new student accommodation and undertake joint initiatives to attract more international students. Consideration should be given to a more collaborative approach to marketing and provision to attract international students and provide a combined study and lifestyle experience (including seasonal work). Specific infrastructure is needed to facilitate this, including a review of accommodation and staff requirements for Pastoral Care for international students.

(d) The Western Bay of Plenty ICT Cluster has more than 300 members from 160 ICT and related businesses. Increasingly, the cluster is focusing on the growth of software development companies. The aim is to encourage the exporting of ICT products and generate collaborative opportunities with other sectors using ICT as an export enabler. While there is existing provision of computer science and ICT courses by the University of Waikato at Tauranga, Bay of Plenty Polytechnic, Avonmore Tertiary Institute and other providers, there is an identified need for continued technical IT short courses in such areas as Microsoft Active Directory, Citrix and Open Source Systems. More proactive provision in this area could help create a virtuous circle, building on the success of the Western Bay of Plenty ICT Cluster. This is a strategic area in which there is existing scale that can be built on, framed within the lifestyle opportunities of the Western Bay area.
(e) There is already established course and programme infrastructure around transport, storage and logistics at Bay of Plenty Polytechnic. The presence of New Zealand’s largest port, as well as rail and road transport infrastructure, along with an expressed preference to create a Centre of Expertise in Transport and Logistics, creates an opportunity for higher-level programmes (eg, bachelors degrees and one-year postgraduate diplomas). This is complementary to the University of Bremen partnership in the Intercoast initiative, with strong competency in this area. This may also be complementary to course provision in allied areas such as Finance and HR, and could be integrated/stair-cased with existing lower-level industry training.

(f) The University of Waikato has a Bachelor of Tourism degree which can be completed fully in Tauranga. This could potentially be adapted to be more specific to the region, with a more applied nature covering hospitality, attractions, tourism planning, guiding and other aspects.

6.3.4 Matters over the next ten years

(a) Rapid population growth, combined with population ageing in the Western Bay, creates a number of strategic opportunities including:

- Training and education for older people as a specific focus that is currently not well catered for.
- Growth in health services and aged care workers, and requirements for greater accreditation of workers and service providers (eg, increased demand for block-courses and on-the-job training of aged care workers).
- More generally, there are implications from rapid population growth in terms of a wide range of industry sectors (eg, trades, retail, construction, infrastructure, home care services, etc).

(b) The provision of higher-level qualifications may lead to a virtuous circle of industry investment, jobs, higher salaries, increased scale and returns, and hence increased demand for qualifications. At present the Western Bay of Plenty’s tertiary education sector has a substantial level of under-provision and rapid population and business growth. Our recommendation is to encourage higher-level qualifications across key industry sectors in which the Western Bay of Plenty has comparative advantage or identified strategic opportunities.

(c) There is scope to review potential centres of excellence (eg, collaborations between industry, research, education and training) in key industry sectors such as horticulture, aquaculture, aged care and ICT. These clusters have potential to create more scale, higher levels of sophistication and improved technology transfer and commercialisation, ultimately leading to improved ‘branding’ and higher levels of investment.

(d) There were a lot of comments from stakeholder interviews about the types of courses required. All providers should review this information to determine if the needs are genuine and the scale of needs in these areas (eg, provision of CAD design training, engineering and other infrastructure training to support the growth of the BoP area; provision of a one year diploma in performing arts; etc).
6.3.5 Summary of options and recommendations

Each of the options listed above has been assessed on the basis of resource effectiveness, scale of impact, level of certainty, regional capability and strategic alignment. The recommendations can be summarised as follows:

- Develop a commonly shared, collaborative vision and action plan to guide strategic investment and align the delivery of programmes to meet regional needs and enhance economic and community outcomes.

- Ensure prospective learners are aware of the region’s tertiary education and training opportunities.

- Continue to link with key sectors of the community to ensure tertiary education and training meets business and community needs.

- Look to develop higher level tertiary training and research initiatives in the following sectors where opportunities have been identified to strengthen existing competitive advantages:
  - Transport/logistics/supply chain.
  - Science (including food, horticulture, aquaculture, powder metallurgy).
  - Information and communications technology.
  - Tourism.
  - Health and well-being.
  - On-the-job training.

- The following enablers to regional tertiary and research provision were identified to maximise economic and community outcomes:
  - Improved secondary school transitions.
  - Increased leadership/organisational transformation training (including Māori economic potential).
  - Increased attraction of international students.
  - Provision of a ‘one stop shop’ website for all locally provided programmes and courses.
  - Clustering of training and research into key industry sectors to develop centres of excellence.
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