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### Abbreviations

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<tr>
<td>ABNTA</td>
<td>Antigua and Barbuda National Training Agency</td>
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<td>ADB</td>
<td>Asian Development Bank</td>
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<tr>
<td>APTC</td>
<td>Australia-Pacific Technical College</td>
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<td>BOTA</td>
<td>Botswana Training Authority</td>
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<tr>
<td>DANIDA</td>
<td>Danish International Development Agency</td>
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<td>DoL</td>
<td>Department of Labour</td>
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<td>EC</td>
<td>European Commission</td>
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<td>ETF</td>
<td>European Training Foundation</td>
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<td>FET</td>
<td>Further Education and Training</td>
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<td>GDP</td>
<td>Gross domestic product</td>
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<td>GIZ</td>
<td>German Society for International Cooperation</td>
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<td>HRDS</td>
<td>Human Resource Development Strategy</td>
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<td>IAG</td>
<td>Industry Advisory Group</td>
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<td>ICT</td>
<td>Information and communication technology</td>
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<td>ISCED</td>
<td>International Standard Classification of Education</td>
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<td>ILO</td>
<td>International Labour Organization</td>
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<td>JICA</td>
<td>Japan International Cooperation Agency</td>
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<td>JOI</td>
<td>Job opportunity index</td>
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<tr>
<td>KCT</td>
<td>Kenyan Catering and Tourism</td>
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<td>LMIS</td>
<td>Labour market information systems</td>
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<tr>
<td>M&amp;E</td>
<td>Monitoring and evaluation</td>
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<tr>
<td>MDG</td>
<td>Millennium Development Goal</td>
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<tr>
<td>NTA</td>
<td>National Training Agency</td>
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<td>NTB</td>
<td>National Training Board</td>
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<td>NVQF</td>
<td>National vocational qualification framework</td>
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<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
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<td>PIF</td>
<td>Pacific Islands Forum</td>
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<td>PPP</td>
<td>Public-private partnership</td>
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<td>TVET</td>
<td>Technical and vocational education and training</td>
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<tr>
<td>SACAM</td>
<td>Schools of Automotive, Construction &amp; Electrical and Manufacturing</td>
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<tr>
<td>SETA</td>
<td>Sector education and training authority</td>
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<tr>
<td>SHCS</td>
<td>Schools of Health and Community Services</td>
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<tr>
<td>SIC</td>
<td>Standard Industrial Classification</td>
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<tr>
<td>SIYB</td>
<td>Start and improve your own business</td>
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<tr>
<td>SMA</td>
<td>Sekolah Menengah Atlas (Indonesia)</td>
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<td>SMK</td>
<td>Sekolah Menengah Kejuruan (Indonesia)</td>
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<tr>
<td>SSTF</td>
<td>Standard Setting Task Force</td>
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<td>STH</td>
<td>Schools of Tourism and Hospitality</td>
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<td>SWAp</td>
<td>Sector-wide approach</td>
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<tr>
<td>UNESCO</td>
<td>United Nations Educational, Scientific and Cultural Organization</td>
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<td>UNEVOC</td>
<td>UNESCO International Centre for Technical and Vocational Education and Training</td>
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About the paper

Over the past 10 years, the developing world has experienced a growth in the provision of technical and vocational education and training (TVET) and skills programs. In part, this growth is due to increased investments in skills development and TVET by governments and donors who view it as a solution for the many complex socio-economic problems that developing countries face.

Rising population levels, growing school completion rates and a lack of employment opportunities have increased the demand from young people for vocational-oriented skills training. This increased demand is further extended by the ambitious nature of many countries’ development plans. As countries seek to reach ‘knowledge economy’ status and support employment growth in the private sector, a number of governments have embarked on large-scale reforms to their skills development and TVET systems.

Another factor driving investments in TVET is the growing youth unemployment levels. Youth unemployment in the Asia-Pacific region has risen rapidly, with rates reaching around 36 million for those between the ages 15 and 24. This has a gender dimension with youth unemployment for females standing at around 15.7%, compared to 14% for males. The International Labour Organization (ILO) comments “that this situation can lead to a lost generation who detach themselves completely from the labour market.” ¹ The so called spring uprising in parts of North Africa and the Middle East demonstrate the role that excluded youth could play in bringing about political instability. It is against this background that governments are investing a considerable amount of resources to reform their TVET systems and provide young people with the skills to gain productive employment.

However, despite the good intentions of such reforms, skills development and TVET initiatives are frequently under resourced and characterised by fragmentation, lack of capacity, and curricula that are unresponsive to the labour market. This is compounded by the fact that those working in the skills development and TVET field often lack the capacity to develop market-responsive programs.

The donor community, along with most governments, is aware of the constraints facing skills development and TVET and is attempting to respond accordingly by moving towards sector-wide reform, in which donors and governments work together in a coordinated manner to ensure that systemic constraints within skills development and TVET systems are addressed, capacity is enhanced and program provision becomes responsive to the needs of the labour market.

This paper is intended to provide managers with an improved understanding of the complex processes surrounding skills development and TVET reform, and to examine the role that AusAID can play in ensuring provision becomes more sustainable. This aim will be achieved through addressing the following questions:

1. What is the meaning and location of skills development and TVET?
2. What are the reasons for investing in skills development and TVET?
3. What lessons can be gained from donor experiences of investing in skills development and TVET?
4. What measures are required to make skills development and TVET systems more demand driven?
5. What reforms are required to improve the supply of skills development and TVET?
6. How can mechanisms for funding skills development and TVET be made more effective and efficient?
7. What practical actions can be taken by AusAID to make provision more sustainable?

¹ ILO (2010).
1. What is the meaning and location of skills development and technical and vocational education and training?

According to UNESCO, TVET is defined as:

“...a comprehensive term referring to those aspects of the education process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life.”

However, emphasis is now being given to the outcomes of the education and training process regardless of where it takes place, especially with regard to the development of employability skills. According to the ILO:

“Employability encompasses the skills, knowledge and competencies that enhance a young person’s ability to gain and retain a job, progress at work and cope with change, secure another job if she/he so wishes or has been laid off, and enter the labour market at different periods of the life cycle. Young people are most employable when they have broad-based education and training, basic and portable skills, including core skills, such as teamwork, problem solving, knowledge of information and communication technologies, and communication and language skills.”

The meanings of skills development and TVET vary according to the context in which provision takes place and how the education and training system interfaces with the labour market. In some countries, there are greater alignments between the education and training system and the labour market, for example in Germany, where emphasis is given to pre-employment training in specific occupations. In other countries the interface is less closely aligned, as in the USA, where general education dominates and most occupational training occurs once people have a job, rather than as pre-employment training.

Historically, developing countries represent a more complex environment for skills development and TVET systems, and limited attention has been given to the interface between education and training and the labour market. Imported solutions from developed countries are not always appropriate to the context. For instance, a number of developing countries have found that it is not possible to implement apprenticeship-style TVET systems in labour markets that are not structured to incorporate these, or where the institutional support systems are lacking. The practical message to arise from this debate is that policy-makers and donors should carefully consider the nature of the training/labour market interface before embarking on any significant reform to a country’s TVET system. The failure to do so could impact negatively on the process of skills development and employment outcomes. Moreover, it is important to take into account the balance between basic education and vocational education. Effective skills development can only occur if young people have good foundation skills in literacy, numeracy, and critical thinking skills.

When embarking on skills development and TVET reforms, it is also vital to understand the types of institutions and support structures that are involved in the development and delivery of skills. In the past it was relatively easy to distinguish between work-based and institutional forms of learning, as well as between formal and non-formal delivery mechanisms. However, with the movement towards

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2 General education is an integrated learning experience structured across subject disciplines to provide the set of skills and knowledge needed to function in society.
4 See www.ilo.org/youthmakingithappen/skills/
5 OECD (2000).
6 Basic Education is defined by ISCED as the first 9 years of formal schooling comprising two levels: 6 years of primary education and 3 of lower secondary; see also Basic Education in Glossary of Terms in AusAID ERF (2011).
the use of blended learning, together with the introduction of qualification frameworks, the location where learning takes place and the mechanisms of delivery have become more flexible.

Nonetheless, it is essential to understand that the provision of formal institutional TVET normally occurs within the formal education system (sometimes with a work-based component), whereas non-formal provision of skills development and TVET takes place in the workplace or a simulated work environment. The different types of provision and policy issues are outlined in Box 1.

### Box 1: A typology for understanding how skills development and TVET are delivered

<table>
<thead>
<tr>
<th>Type of provision</th>
<th>Responsibility</th>
<th>Characteristics of provision</th>
<th>Important issues for policy reform</th>
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<tbody>
<tr>
<td><strong>Formal TVET</strong></td>
<td>Formal TVET based in schools is normally the responsibility of a Ministry of Education. The delivery takes place at secondary schools, post secondary or tertiary level institutions.</td>
<td>Pre-employment skills development and TVET tends to emphasise theory and vocational subjects are incorporated into the curriculum to varying degrees. This involves the teaching of applied vocational skills and developing positive attitudes towards vocational subjects. This may involve the partial vocationalisation of the curriculum and the introduction of more applied topics, such as ICT, cookery, carpentry and home economics into the academic curriculum. Normally, this vocationalisation of the curriculum would occur at the primary or secondary level of schooling (i.e. pre-employment). At the tertiary level, a diverse set of public and private providers are involved in delivering TVET, most of which are normally concerned with producing people that obtain technician or degree level qualifications.</td>
<td>In some countries political pressure may emphasise the complete vocationalisation of the school curriculum. However, effective skills development can only occur if young people have good foundational skills in literacy, numeracy, and critical thinking skills. Therefore, a balance must be achieved between vocational and academic subjects.</td>
</tr>
<tr>
<td><strong>Non-formal VET</strong></td>
<td>Non-formal VET tends to be supported by the Ministry of Labour or Ministries of Employment or Social Affairs. Provision will take place in non-governmental providers or enterprises.</td>
<td>Emphasis is given to vocational training, involving practical acquisition. Vocational programs are designed to enable the learner to acquire the practical skills, knowledge and competencies associated with a particular trade. The successful completion of a program may lead to a recognised qualification. The programs tend to be much shorter in time than formal learning programs, and are primarily targeted at those who enter craft level or semi-skilled occupations.</td>
<td>In many countries, attempts are being made to move responsibility for provision out of government ministries and to National Training Agencies, a significant proportion of which are employer-led.</td>
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7 Blended learning refers to a mixing of different learning environments. Normally, this will combine traditional face-to-face classroom methods with computer-mediated activities, and work-based learning. Adopting blended learning creates a more integrated approach for both instructors and learners.

8 A qualifications framework provides the hierarchy of educational qualifications in a country or region including those accepted by employers (or for entry to tertiary study). The move towards using qualification frameworks and competency-based learning helps focus more on what is achieved or learned, as opposed to the setting in which the processes takes place.

9 “Non-formal” is defined as organised educational activity outside the established formal education system.
Enterprise type is largely self financing and self regulating. In most cases, training is industry specific and concerned with the development of job-related skills. It provides a means of alleviating the financial burden on the state. This can involve the implementation of a formalised apprenticeship scheme in which formal contracts of learning are introduced to help define what is expected of the learner and employer. Normally such apprenticeships combine structured work experience with attendance at a formal education institution. Provided the apprentice has achieved a certain standard of competency, they are provided with a recognised qualification. In some instances the company may provide skills upgrading for their existing workers.

The most important issue relates to how to engage enterprises in the training process and not place a financial burden upon them, particularly when the goal is to support training amongst young people. However, when the training is being used to upgrade the skills of existing workers, there are justifications that employers should contribute towards the costs.

Traditional apprenticeship Workplace based. This type of skills development centres on the traditional master-apprentice relationship which occurs mainly in West Africa and a lesser extent in other parts of Africa, under which technical, managerial and commercial skills are learnt in a practical manner over a number of years.

Evidence suggests that support must occur at the higher value end of the informal sector and centre on initiatives, such as train-the-trainer.

The extent to which governments in the developing world invest in skills development and TVET is not well known. This extends to other key information, including current enrolment levels. UNESCO-UNEVOC and UNESCO Institute for Statistics published the 2012 report *Participation in Formal Technical and Vocational Education and Training Programmes Worldwide* in an attempt to identify what data exists on access to formal TVET in developing countries. This report makes a good start in filling the information gaps, but as the report highlights, there are serious data shortages in the targeted countries where AusAID supports skills development and TVET, particularly in Papua New Guinea and the Pacific Islands, and to a lesser extent, Indonesia. The lack of data to inform decision-making in AusAID targeted countries is an area that needs to be addressed by governments and donors, preferably on a regional basis (see Section 7 of this report: Practical steps for moving forward).

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10 ETF (2012).
2. What are the reasons for investing in skills development and TVET?

At the level of the individual, investing in skills development and TVET provides them with the following:

- the competencies to undertake new tasks
- progress up the career ladder and improvement in their earning potential
- preparing individuals for constant change and improving their ability to engage in lifelong learning
- ensuring that they are equipped with a mixture of skills, competencies and attitudes to continually face new challenges in the labour market
- ‘employability skills’ or key skills, personal attributes deemed to have a marketable value, as well as knowledge about new organisations, and how people in them do their jobs
- non-tangible benefits associated with skills development and TVET, including the motivational benefits that learners can experience from the applied learning context (integrating theory and practical hands-on experience) from a well designed program.

**Box 2: Rates of return to the individual from investing in education at the tertiary level**

The probability of paid employment increases with higher levels of educational qualifications, at all levels starting from secondary school. The largest marginal impacts can be seen with certificates and tertiary education, which raise the expected probability of being in paid employment by about 30% in Vanuatu, 15% in Solomon Islands, 30% in Kiribati and 65% in Samoa.


For the organisation or company, the investment in skills is more about how to:

- improve the flexibility and competencies of employees to carry out their jobs in a more effective manner, all of which can enhance productivity and ultimately profitability
- make employees feel valued and appreciated, leading to higher job satisfaction which ultimately results in reduced turnover
- improve health and safety in the workplace, and correspondingly reduce accidents and illnesses

From the perspective of policy reform the most important benefits to be derived from skills development and TVET can be seen at the national level and include:

- reducing unemployment levels
- improvements in living standards
- tackling of skills shortages and attraction of inwards investments
- helping to respond to the political pressures of rising youth unemployment
- helping countries use their human resources to become more competitive in a global economy

12 Employability skills cover a broad range of non-academic or softer skills and abilities which are of value in the workplace. It includes the ability to work in a team; a willingness to demonstrate initiative and original thought; self-discipline in starting and completing tasks to deadline. For more information on employability skills click here.
14 For information about the business benefits of training see Duncker (2006).
providing a means by which countries can ‘leap frog’ stages of development using human resources as a vehicle for rapid growth

providing a proactive means of encouraging development in targeted economic areas

supporting improved management and governance of institutions, as well as helping to improve civil society, particularly in states that are in conflict, or were formerly in conflict.

In 2012, the ILO’s proposals to the G20 leaders for a training strategy outlined why investments should occur in this area, stating:

“Each country’s prosperity depends on how many of its people are in work and how productive they are, which in turn rests on the skills they have and how effectively those skills are used. Skills are a foundation of decent work.”

However, the important question to be addressed by policymakers is how can they harness the benefits from training and what are the necessary conditions to make this happen? This is a complex question and reference to the experience of the ‘tiger economies’ of South-East Asia can provide some guidance on ways forward. It cannot be assumed that what works in one context will necessarily work in another. Nevertheless, such conditions provide a frame of reference when making decisions about investments in skills development and TVET at the national level (see Box 3).

Box 3: Conditions for effective skills development and TVET provision at the national level

1. There is strong commitment from national, regional and local government to the process of skills formation.

2. Groups of employers in strategic economic sectors recognise and are committed to developing skills in science and technology, as well as priority sectors for development. Unless this commitment occurs, it is difficult to support skills development in those sectors of the economy that provide added value and are vital to economic development.

3. Workers’ organisations are committed to high-level skills development and continual lifelong learning.

4. The provision of non-governmental skills development and TVET is regulated by government intervention to ensure minimum standards and long-term investments are made in strategic areas.

5. Formal schooling produces young people with strong intermediate level skills, especially in science, maths, ICT, literacy, numeracy and critical thinking skills.

6. Appropriate academic knowledge is provided at the tertiary level in order to underpin practical skills formation in the workplace.

7. A framework is in place to support the continuing and professional development of trainers and lecturers who work in the field of skills development and TVET, as well as the appropriate incentives to support the development of a skills development and TVET profession.

8. Incentives and financing mechanisms that encourage effective resource use and quality outcomes. The funding system must help encourage the development of a market for skills development and TVET, helping to ensure resources are utilised in an effective and efficient manner.

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15 ILO (2011a).
16 For a more extensive discussion on the human resources conditions for economic take-off see Martinez-Fernandez and Powell (2009).
17 Note: an essential part of this development will be to ensure that those working in the profession are continually exposed to the world of work.
3. What lessons can be gained from donor experiences of investing in skills development and TVET?

3.1 Paradigms in donor funding

During the period 1960 to 1980, World Bank loans for TVET increased from US$929 million to US$2,143 million in the early 1980s. However, the efficacy of TVET development programs began to be questioned in the 1980s following a number of pieces of seminal research which raised concerns at the World Bank about the social rate of returns and cost effectiveness of investments in pre-employment TVET.18

Although there was a subsequent move away from investment in pre-employment skills development and TVET, there has been a continued interest in post-secondary skills development and TVET, but with an increased emphasis on making provision more cost effective and responsive to the labour market. Once again, much of the thinking in this area was influenced by important studies supported by the World Bank, which emphasised the importance of the creation of markets for the supply of and demand for skills.19 Attention was given to labour market information as a means of indicating the nature of demand for specific trades and occupations and recommendations were made about how to improve the responsiveness of supply. Labour market economists call this process signalling, which involves ensuring labour market analysis is based on the best available information regarding the state of the labour market and the economy. Through regular analysis of ‘signalling’ information, planners and decision-makers are able to remain alert to economic and labour market changes and to make interpretations about the demand for different types of skills. This requires an approach that ‘reads off’ signals about economic and labour market trends, rather than extract data from econometric or statistical models. Some of the labour market and economic indicators that signal issues relevant to skills development are (see also section 4.1):

- employment and changes to employment (usually analysed by occupation and sector and geographic region)
- educational levels of the labour force (usually analysed over a longer time period)
- wage trends as an indication of demand for skills
- contributions to gross domestic product of economic sectors (as an indication of the volume of economic activity that could have implications for employment and skills needs).

3.2 Current approaches to donor funding

A consensus has developed amongst certain donors, including the Danish International Development Agency (DANIDA), the German Society for International Cooperation (GIZ), and the Japan International Cooperation Agency (JICA) over the most effective way to support skills development and TVET reform. This involves a move away from building capacity in individual TVET institutions and towards supporting national systems or program reform. The rationale behind such a shift is a recognition that project or institution-based skills development and TVET support may have been successful in individual cases, but it did not tackle the systemic problems present in the skills development and TVET system.20

Another major influence in the donor field, particularly in Asia, has involved the expansion of funds coming from the Asian Development Bank (ADB). Most ADB supported skills development and TVET programs have emphasised the creation of national training agencies and national funds, employer engagement, the setting-up of qualification frameworks, and support for labour market information.

19 World Bank (1991); Middleton et al. (1993). (Both available through the AusAID Library).
20 For a more detailed outline of program reform for TVET click here
Box 4: The Australia-Pacific Technical College (APTC)

The Australia-Pacific Technical College (APTC) was established in July 2007 with Australian Government funding and the backing of the leaders of the Pacific Islands Forum (PIF). The underlying rationale of the APTC is to facilitate regional labour mobility through demand-driven, internationally-recognised and portable technical and vocational skills development, for the formal wage economy. APTC training is open to all fourteen PIF countries and is delivered in workplaces and institutions in four campus countries – PNG, Fiji, Vanuatu and Samoa. A feasibility study for a new Honiara campus will commence soon. APTC’s Australian accredited qualifications (Australian Certificates III and IV) are internationally recognised and its graduates therefore have the advantage of being able to join the global labour market for skilled tradespersons and technicians. The APTC has contributed to the professional development of Pacific TVET staff through delivering the Certificate IV program in Training and Assessment.

APTC Stage II (July 2011-June 2015) continues a focus on the schools of Automotive, Construction & Electrical and Manufacturing (SACEM), Tourism and Hospitality (STH) and Health and Community Services (SHCS) established in Stage I. For Stage II, the target number of APTC graduates is 3,450. In recognition of the competency-based approach to training, all APTC training facilities are established in partnership with local industry/firms where suitable, or local technical training institutions. Strong industry linkages are essential to build the reputation of the APTC, ensure course delivery is demand based and that training provision is relevant to employer needs. Strong linkages are also critical to enable the APTC to access industry equipment and facilities, source part-time lecturers and trainers and to provide workplace attachments.

For more info: www.aptc.edu.au/
4. What measures are required to make the skills development and TVET systems more demand driven?

Skills development and TVET systems need to move away from supply-led approaches, whereby allocation of resources are based on service delivery availability, to demand-driven systems in which labour market analysis informs priority-setting based on skills needs, and in which employers and employee representatives are actively involved in decision-making processes. This will lead to improved governance, and ensure that resources are directed towards skills areas that have an identified market demand. A number of possible reform options for helping to ensure that skills development and TVET systems can operate in a more effective and efficient manner are to:

◗ develop an understanding of which priority skills areas require support
◗ develop frameworks for encouraging demand-led decision-making
◗ undertake qualification reform and support the move towards competency-based training
◗ ensure that trainers have the competencies to deliver training in response to the needs of the labour market
◗ provide transparent information to potential learners and employers about the quality of programs
◗ mobilise and manage funds appropriately
◗ reform the systems for delivery of skills.

4.1 Understanding priority skills areas that should be supported

In the past, policy-makers used ‘manpower planning’ to help identify their skills and employment needs. However, it has been generally recognised that labour markets are more complex than previously assumed and that manpower planning is not effective in the global economy. Policy-makers and planners now favour ‘signalling’ as a means to determine the demand for skills in the labour market. The most commonly used proxies to read signals in the demand for skills include the following:

◗ employment and changes to employment (usually analysed by occupation and sector and geographic region)
◗ educational levels of the labour force (usually analysed over a longer time period)
◗ wage trends as an indication of demand for skills
◗ analysis of job vacancies over time, particularly those that are difficult to fill
◗ contributions to gross domestic product (GDP) of economic sectors (as an indication of the volume of economic activity that could have implications for employment and skills needs).

Other cost-effective means of understanding demand in a given country context include the development of a job opportunity index (JOI), or the setting up of stakeholder/employer driven forums. In contrast to costly and time consuming labour market information systems, the development of a JOI is a very cost-effective means of obtaining signals about the demand for skills in the national or overseas labour market (see Box 5). With regard to stakeholder forums, this involves bringing employers together who operate in the same sector for purposes of discussing how skills issues...

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21 The terms ‘supply-side’ and ‘demand-side’ originate in economic theory; as applied here, the supply of TVET means the number and availability of training opportunities. TVET demand is determined by the number of individuals who wish to undergo training, coupled with employers’ requirements (adapted from www.tcu.gov.on.ca/eng/labourmarket/currenttrends/docs/guide.pdf).

22 Note: The ILO provides an annual survey of labour market trends in most countries, including a list of key labour market indicators. This could provide a useful tool for understanding trends in partner countries. Click here for more information.
impact on the sector. When analysing demand, planners, or stakeholders, must focus on identifying skills areas: a) for which there is a rising demand, b) for which there is a falling demand, and c) that take a long time to develop.23

**Box 5: The setting up of a job opportunity index in Nepal**

In Nepal, the construction of a JOI helped the Government understand what type of skills are in demand overseas and in which countries the demand is greatest for Nepali workers. Essentially, the JOI collated information about jobs being advertised over a 12-month period according to Standard Industrial Classification (SIC) codes. Using such an approach, it is possible to analyse the changing demand for different occupations over time, including whether demand is increasing or decreasing. Over the period of a week, data was collected, collated and analysed for 38,251 vacancies. Not only did this help determine what skills were in demand, but the findings also helped to build memorandums of understanding between the governments of Nepal and other countries about the export of unskilled and semi-skilled workers from Nepal.

It is important to note, however, that in some countries, the assessment of need will also be driven by political or social requirements. For instance, in many South Pacific countries, rising youth unemployment is a serious political and social concern, and needs assessments have therefore focused on the possible causes, nature and extent of youth unemployment, and on policies that might be implemented to solve the problem. This is important since any response for tackling youth unemployment must address the causes. For instance, in Vanuatu, there was a lot of political pressure to support training for youth to tackle the rising unemployment levels amongst this group. However, research found that one of the most effective ways of tackling youth unemployment is to support the skills upgrading of those already in work, primarily because this supports the growth and expansion of existing businesses and is more likely to result in improved employment opportunities for young people, as opposed to solely targeting resources at training unemployed youth (see also Box 13).

### 4.2 Frameworks for encouraging demand-led decision-making

Appropriate policy frameworks and institutional structures must be in place to ensure the success of demand-driven skills systems. In the 1970s and 1980s, decisions about skills development were primarily undertaken by planning units in government ministries of labour, resulting in supply-driven systems and decisions that were often influenced by the political desires of the minister in office or the changes to demographic patterns, as opposed to any defined needs based on the direction of the economy or the labour market. Under a demand-driven approach, the state should become a facilitator, helping to create a more flexible and demand-driven environment for skills development. Employers must play an important role in driving the reform process, including having an input into decisions about the direction of TVET policy, the allocation of resources and the means of skills development delivery.

In order to ensure that skills development and TVET provision becomes responsive to markets, many countries have recently established National Training Boards (NTBs) or Agencies (NTAs), to replace the former planning units within ministries. These represent new lines of thinking about how to improve cost effectiveness and accountability in public management. Normally, NTBs and NTAs are independent from ministerial control and are employer-led bodies. To date, there are no comprehensive evaluations of their performance, but a significant number of countries in Southern and East Africa (South Africa, Botswana, Mozambique, Namibia and Kenya), the Caribbean (Jamaica, St. Vincent and Antigua) and, to a lesser extent, Asia (Pakistan and Indonesia) have started to develop and implement such systems.

The independence of NTBs or NTAs from ministerial control and the involvement of employers can promote flexibility, encourage non-governmental TVET provision and improve the responsiveness of skills systems to labour market demands. However, the setting up of such bodies is problematic...
in certain contexts. For instance, in least developed countries and small island economies, they have limited application due to the small size of the formal sector and the reluctance of employers to provide the long-term commitment to develop such structures. This in part explains why there has been a tendency for these structures to be established in middle-income countries. Unless appropriate legislation is introduced, there can be a tendency for NTAs to merely perform the function of an advisory body, as occurs in South Africa. Under such circumstances, employers may not be given sufficient power to make decisions, and future strategies for skills development may not match the needs of the business community.

In an attempt to institutionalise employer involvement in skills development and TVET provision, a number of countries (Canada, New Zealand, the Netherlands and Singapore) have established industry training boards or sector skills councils. Normally these are employer-led, report to the NTA and cover all training issues within a particular sector (see Box 6). There are also examples of where sector bodies for supporting skills strategies have been established in smaller developing economies (see Box 7).

### Box 6: Strategies for supporting employer engagement – Lessons from Pakistan

A number of skills development and TVET reforms are taking place in Pakistan to improve labour market responsiveness. At the heart of these reforms is an attempt to improve links between employers and the Government through the setting up of Industry Advisory Groups (IAGs). Each of the IAGs will contain representatives from large, medium and small enterprises, including all sub-industries that fall within the category. The primary responsibilities of these new structures will be to carry out periodic sector surveys, identify skills needs in their sectors, indicate new and emerging areas and occupations, and determine and update competency standards for workers.

### Box 7: Antigua and Barbuda – Sector bodies and the development of occupational standards

Antigua and Barbuda are small island developing countries in the Caribbean, and as such, this example may be relevant to the Pacific. The Antigua and Barbuda National Training Agency (ABNTA) was established under the 2007 ABNTA Act in order to coordinate existing provision and to develop a national TVET policy. As a result of this Act, the functions of the ABNTA focused upon the development of recognised occupational standards and a qualification system, ensuring that employers are provided with a certified and competent workforce. The vehicles for implementing reform are industry-led bodies, covering the following sectors: hospitality, personal services, building and construction, and engineering and automotive services. Responsibility for these bodies was given to an inter-management committee, comprising eight members from the private sector, two representatives from organised labour and two from the public sector. The employers within each of the industry-led bodies would review occupational standards in their sector every 3 years and in the light of new labour market demands, identify new sets of tasks, changes in the complexity of skills, new types of knowledge required to do the tasks, as well as changes in generic vocational and personal skills. These industry-led bodies would be responsible for the development and subsequent implementation of sector-based plans.

4.3 Qualification reform and the move towards competency-based training

Part of the process towards a demand-driven system involves reform of the existing vocational qualification system. In most developing countries this has seen the introduction of a competency-based training system. Normally, competency-based systems are more concerned with measuring what a person can do. This involves the development of a modular system based on the competencies required by a person to perform certain tasks associated with their job (see Box 8). These modules form the basis for a qualification and are normally linked to levels on a qualification framework. The competency-based approach also requires the development of new methods of assessment and performance tests. Under this approach a learner must demonstrate in a practical manner that they have obtained defined competencies, skills and knowledge. This is normally assessed by a trained assessor and the processes themselves are also assessed by an external

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24 For information on the types of countries which have established sector skill bodies see Ashton (2006).
validator. The former approach differs from the traditional classroom approach where emphasis is given to the delivery of skills in a specific location over a certain time period, and where the learners are given a final examination.

Box 8: The development of occupational standards in Botswana

Under the Vocational Training Act 2003, the Botswana Training Authority (BOTA), was given responsibility for the setting and development of occupational standards. This is a complex process involving a number of systematic stages. The responsibility for developing standards is given to a Standard Setting Task Force (SSTF) and separate ones are established for different industrial sectors, such as for tourism, construction, agriculture etc. Each SSTF will develop training standards for a specific occupation at a particular skills level, in terms of the competencies that a person in that job or occupation is expected to demonstrate. During this process, a template is followed by the SSTF, ensuring that a common format is followed when the standards are developed. Every time a standard is developed it has to be endorsed by BOTA and also stakeholders. Once the standards have passed through this quality assurance process they are placed on a database for use by providers.

Some countries have taken the competency-based approach a stage further and developed national vocational qualification frameworks (NVQFs). NVQFs provide flexibility for an individual in terms of how, where and when they obtain a qualification. However, this rests on the assumption that qualification pathways have been developed to facilitate movement within and between different parts of a country’s education and training system (see Box 9). For the employer, it ensures that any qualification reflects the changing skills needs of the workplace and that their employees acquire new skills in a much shorter time period than would occur under traditional approaches. In certain instances countries also introduce a system for recognition of prior or current learning. This provides skilled workers who have practical experience, but don’t have formal qualifications, with the opportunity to have their skills assessed against national standards and for successful ones to obtain certification.

Box 9: National vocational qualification framework – the case of Sri Lanka

In Sri Lanka, a lack of uniformity across skills development and TVET institutions created a situation in which industry was not provided with trained workers that had the skills or competencies required. In response to this situation, the Government started to develop its NVQF. However, the first stage involved the initial development of competency standards and the curriculum at the craft level (2 years before the NVQF was launched). Industry was extensively consulted and involved in these processes. Now the NVQF covers 96 occupations at craft level, 14 fields at technician level and 4 at degree level.

Nevertheless, the process of setting up a qualification framework is not straightforward and requires that the appropriate quality processes, as well as the establishment of the necessary management and governance structures are put in place. The quality assurance processes must ensure that a qualification is ‘fit for purpose’. That is to say, that the qualification must go through a validation process to ensure that successful students have achieved minimum standards that are recognised internationally and also reflect the needs of the labour market. In addition, institutions must pass a registration and accreditation process to ensure that they have the physical, institutional and human capacity to deliver defined TVET and skills programs.

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26 For additional information about how to establish a qualification framework see Tuck (2007).
27 Taken from Asian Development Bank (2011).
4.4 Ensure trainers have the competencies to deliver training in response to the needs of the labour market

Ultimately, successful delivery of programs at skills development and TVET institutions will depend on the quality of the trainers and their qualifications. However, in most developing countries, the training of trainers takes place in an ad-hoc manner and is based on the person’s length of service, as opposed to their individual needs or those of the labour market. In order to move away from this ad-hoc approach, planners and managers must become more proactive and where possible, develop a ‘train-the-trainer strategy’. This normally addresses the pay and conditions of those working in the profession, as well as developing a number of qualifications at various levels. These qualifications range from the certificate to degree level, covering technical, industrial and pedagogical skills. The nature of the technical skills and the numbers trained should also reflect the needs and realities of a country’s labour market. The development of such a proactive approach will ensure that trainers and instructors are provided with the skills to help them deliver programs that have an identified labour market demand. Moreover, the development of a series of training programs helps motivate trainers and can facilitate the development of a ‘train-the-trainer’ profession.

4.5 Provide transparent information to potential learners and employers about the quality of programs

In many skills development and TVET systems, there is limited publicly available and objective information about the quality of programs. Under such circumstances, inefficient or ineffective TVET institutions may continue to survive as there is a lack of ability to evaluate their performance. In an attempt to empower the learner, it is necessary that TVET institutions publish information about successful completion rates and employment outcomes. The introduction of such an approach, linked to publicly accessible information on accreditation and quality assurance mechanisms (discussed in Section 4.2), can enable learners to make a more informed choice about those institutions that are most effective. Currently, there is limited research on the impact that such an approach could have on performance of TVET institutions, but examples do exist on how published information can impact on the performance of education institutions (see Box 10).

Box 10: The role played by data in improving performance and choice

A campaign undertaken in Uganda provides an illustration of how the dissemination of educational data helped improve accountability, as well as school performance. Under this campaign, local newspapers were provided with data on the monthly transfer of national grants to districts. The government supported this campaign because, in previous years, schools only received 20% of their grant from central government (the remainder being removed as it filtered down to the different government tiers). This information empowered parents and local schools, enabling them to exert pressure on the appropriate institutions, all of which reduced leakage and ensured that more resources were available at the school level. This also has a knock-on effect of improving performance, particularly in terms of increasing enrolment levels and the quality of existing provision.28

4.6 The management and mobilisation of funds29

It is unlikely that the full cost of implementing a national skills development and TVET reform program could be covered by a developing country government. Therefore, governments, in conjunction with other development partners, must investigate ways of mobilising resources in a sustainable way. Additional funds for skills development and TVET can come from those who benefit from skills

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29 Most of the information about funding was obtained from Johanson and Adams (2004).
development and TVET most, particularly the learners or employers. An alternative strategy can involve the introduction of some form of sales tax or levy.

There are justifications for shifting the financial burden onto learners, provided the country has reached a certain level of development and benefits to be derived from investment in skills outweigh their costs in a short time period. When a skills development and TVET system has been optimally designed and achieves positive labour market outcomes amongst its graduates, then there are equitable justifications for learners to make larger contributions to the costs of their training. In practical terms this could involve the introduction of fees, or the raising of fees for learners. Alternatively, a revolving loan fund could be established, under which learners are required to borrow money in order to finance their training and to make repayments once they have started work. A number of countries are in the stages of establishing revolving loan funds, including Rwanda, Ethiopia and Palestine, as well as small island economies, such as Barbados and Trinidad and Tobago.

With regard to employers, there are two main systems for supporting the funding of skills development and TVET in developing countries: levy-based revenue schemes and levy-based disbursement schemes. Under levy-based revenue schemes the focus of provision tends to be on young people in the formal TVET system, particularly institutions operating in the public sector. The funds for supporting these institutions are normally collected by a tax authority and distributed to a single government TVET coordination authority for disbursement to institutions, based on an annual plan that has to be submitted and approved. The advantage of the revenue-raising levy schemes is that they build on a constant and stable source of funds for TVET. However, on the downside, revenue-raising systems often don’t involve employers and tend to be supply driven, due to the fact that decisions don’t take on board the views of employers or what is needed in the labour market.

In contrast, under levy-based disbursement schemes, the funds are collected by a central government agency and normally based on the payroll of companies. This is enforced by legislation, under which companies are required to pay between 0.5% and 2.5% of their payroll into a centralised training fund. Subsequently, if the company undertakes specified training they can claim back the majority of the funds. There are a number of benefits and disadvantages to implementing a levy-based disbursement system. A key advantage is that a levy-based system provides the government with a revenue base to finance industrial training where none existed before. Moreover, it can be used as a means to intensify training efforts and to raise quality within existing providers. It can also provide governments with a policy tool to subsidise training from the formal to the informal sector. However, a potential disadvantage is inefficiency in the system caused by larger employers not undertaking training, regardless of the incentives being offered.

Another avenue for raising funds for skills development and TVET is through the introduction of a sales tax or a levy on those who do not necessarily benefit from skills development and TVET. One of the most successful examples can be seen in the Kenyan Catering and Tourism (KCT) levy fund. Under the KCT fund, all hotels and restaurants are required to pay a levy of 2% on gross sales on accommodation, food, drink and any services. Part of the reason for the success stems from the fact that the KCT levy fund is run and managed by a semi-autonomous trust that is accountable to a board of directors, dominated by employers. Under this ownership, the trust developed a vision to provide the leading course for sustainable tourism development in East Africa. The collected resources are used to support the Kenya Hotel College which has gained the reputation of being one of the leading providers of skills development and TVET in this sector for the region. The important lessons of the KCT Levy Trust relate to the careful way in which the decentralisation process was managed and to the introduction of effective legislation to ensure compliance with levy payments. During the policy of decentralisation, careful attention was given to the sensitisation of employers, involving their participation in the process and also informing them about the benefit of the levy.

The different revenue raising models are summarised in Box 11.
### Box 11: Revenue raising models for TVET

<table>
<thead>
<tr>
<th>Responsibility</th>
<th>Characteristics of scheme</th>
<th>Important issues for consideration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learners</td>
<td>Introduction of fees or raising of fees for learners</td>
<td>To guard against fees acting as a disincentive for those families on low income scholarships or means-tested conditional cash transfers. Subsidies or grants can be introduced.</td>
</tr>
<tr>
<td></td>
<td>Revolving loan fund</td>
<td>The advantage of the revenue-raising levy schemes is that they build on a constant and stable source of funds for TVET. However, on the downside, revenue-raising systems often don’t involve employers and tend to be supply driven, due to the fact that decisions don’t take on board the views of employers or what is needed in the labour market.</td>
</tr>
<tr>
<td></td>
<td>Levy-based revenue schemes</td>
<td></td>
</tr>
<tr>
<td>Employers</td>
<td>Levy-based disbursement schemes</td>
<td>A key advantage is that a levy-based system provides the government with a revenue base to finance industrial training where none existed before. However, a potential disadvantage is inefficiency in the system caused by larger employers not undertaking training, regardless of the incentives being offered.</td>
</tr>
<tr>
<td>General population</td>
<td>Sales tax or levy</td>
<td>Mechanisms are needed to ensure the management and introduction of effective legislation to ensure compliance with levy payments. Careful attention needs to be given to the sensitisation of employers, involving their participation in the process and also informing them about the benefit of the levy.</td>
</tr>
<tr>
<td></td>
<td>Production-related activities</td>
<td>The ability to generate income will depend on the nature of demand in the local market and the type of resources and expertise at the institution for engaging in such activities.</td>
</tr>
<tr>
<td></td>
<td>Sale of products or services</td>
<td></td>
</tr>
<tr>
<td>Institution</td>
<td>Expanding existing course provision</td>
<td>Some countries have introduced a double shift system in which the same TVET program is delivered twice during the same day, ensuring that maximum use is made of existing resources. Institutes can also develop specific tailor-made programs for companies or government.</td>
</tr>
<tr>
<td>Government</td>
<td>Transfer of funds (voucher system)</td>
<td>In practice, the voucher system has not proved very successful due to the lack of capacity of governments to administer such systems and owing to the limited number of providers that offer real choices or competition.</td>
</tr>
<tr>
<td>Donors</td>
<td>Scholarships</td>
<td>Over the long term, most governments in the developing world would like to reduce their dependency on overseas aid and develop more sustainable forms of funding, involving the private sector.</td>
</tr>
<tr>
<td></td>
<td>Bilateral education assistance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Core funding and projects</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Establishing regional institutions (APTC – Box 4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Market mechanisms and performance linked aid</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Purchaser of specific outcomes such as quality-assured graduates or improved completion rates or gender equality</td>
<td></td>
</tr>
</tbody>
</table>

An equally important issue is how the funds are managed. Increasingly a number of countries are setting-up National Training Funds and in the majority of instances they are controlled by employer-led NTAs. Under such an arrangement the funds for skills development and TVET are taken out of the political control of a government ministry and given to a semi-autonomous body, such as an NTA. The involvement of employers in the management of funds can help ensure that funds are used for their intended purpose and that provision becomes more aligned to the needs of employers, including the development of specific funding windows (see Box 12).
Box 12: South Africa – The implementation of a National Skills Fund

In South Africa employers can apply for a grant from the National Skills Fund and a number of other separate grants administered by the Department of Labour (DoL). The National Skills Fund is made up of 20% of the total skills levy paid by employers and is used to address a number of important issues. The DoL administers these resources using a number of ‘funding windows’ – discretionary grants to encourage employers to help the government achieve objectives outlined in the country’s Human Resource Development Strategy (HRDS). These windows are adjusted according to changing priorities identified by the DoL. Under this process, employers can apply for discretionary funds from the National Skills Fund via their sector education and training authority (SETA). For instance, from 2009 to 2010, discretionary funds were given to encourage employees to undertake skills development in adult basic education and training and HIV/AIDS awareness training; and to raise skills levels for those with and without employment, and for those defined as having a disability.30

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30 For details on the levy grant and specific details on the funding windows click here.
5. What reforms are required to improve the supply of skills development and TVET?

Significant reforms are also taking place in the supply of skills development and TVET. The most significant changes are occurring at the central ministry level, where responsibility for provision is being devolved to provincial or local levels, particularly in larger developing countries. In other countries, skills development and TVET institutions are increasingly responsible for managing their own budgets, which often results in such institutions expanding their programs of learning to include evenings or weekends, as well as undertaking other income generation activities. Other reforms to supply include attempts to encourage non-governmental forms of provision. The finer details of such reforms and their implications for effective implementation, including the role played by government and the private sector, are discussed below.

5.1 The movement from delivery to strategic activities

Within most large developing countries there has been a tendency to devolve decision-making and implementation of skills development and TVET down to the provincial or local government level. This has resulted in new functions at the central and local levels for skills development and TVET, both of which have implications for capacity levels and service delivery. At the central government level, ministries are no longer responsible for the actual delivery of TVET or skills programs. Instead, government ministries are becoming responsible for the development of skills policies and strategies, the coordination of different institutions and centres involved in skills development and TVET provision, as well as quality assurance processes and monitoring and evaluation (M&E) activities.

Understandably, the move towards strategic activities at the central government level has influenced the type of skills that professionals and managers require to perform their jobs effectively. Increasingly, emphasis at the central ministry or planning level is given to research and knowledge management-based activities. For instance, one of the most common areas for intervention involves the development of skills strategies and policies which focus on the ways in which employment opportunities amongst learners can be improved. This entails research on the nature and causes of unemployment, dialogue with providers, and the implementation of a more coordinated approach that aims to help improve productive employment opportunities. In addition, this implies the need for high capacity in central ministry staff (e.g. in strategy, policy, M&E) and sub-national officials (in budgeting, implementation, reporting). Increasingly, such ‘joined up’ policies and partnerships, as well as support for capacity building, are currently being supported by donors (see Box 13).

Box 13: Building strategic capacity – The case of TVET reform in Vanuatu

In recent years, Vanuatu has experienced strong economic growth. At the same time, the country also has rising unemployment levels, particularly amongst the youth. Against this background, AusAID implemented two TVET programs over a period of 8 years, which involved successfully working with the Government and stakeholders at different levels of the TVET system. Initially, the program focused on building the capacity at the Ministry of Youth, Development, Sports and Training, particularly in the areas of strategy, policy, M&E, and budgeting. However, more recently, emphasis has been on building capacity at the decentralised levels, including improved employer engagement by the Provincial Training Boards, and improved networking with stakeholders by the TVET centres.

According to evaluations, this program was a success, which can partly be explained by the close relationship established between the different layers of the government system, the ability of the Training Boards to identify local provincial skills needs and also of the capacity of the centres to deliver an integrated approach covering: access to the provision of skills training, business development advice and employment services. This approach provided the strategic framework for involving employers and for allowing learners to gain skills and support for productive employment. Currently, AusAID is investigating the possibility of implementing a third TVET program in which the integrated approach would be extended to other provinces and more emphasis would be given to raising the quality of TVET provision.

31 For information on the types of skills policies being developed in East Asia and Pacific click here
Other examples of strategic frameworks can be found in documents developed by donors and their partners. Perhaps the most significant of these is the recent tertiary education strategy developed by AusAID for the Pacific region (see Box 14).

**Box 14: The development of AusAID’s Pacific Tertiary Education Strategy**

Human capital is one of the key determinants of economic and social progress. A strong focus on basic education is essential, but it is not sufficient to secure regional development across the Pacific and investment in tertiary education is equally important. Investments in tertiary education can support regional development through responding to skills needs, proactively encouraging development in targeted sectors, responding to demographic pressures and urbanisation, supporting regional mobility, facilitating progress towards the Millennium Development Goals (MDGs) and poverty alleviation, as well as strengthening political leaderships and leading to improvements in civil society. However, within the Pacific, access to tertiary education is very low by international standards, and the system is unable to respond to the rising demand for skilled professions in the region or provide young people with the skills needed to work for small to medium enterprises or themselves.

A number of other challenges face the tertiary education system in the region, including: low industry engagement, limited management and government structures, low capacity and a lack of adherence to quality standards and relevance. This forms the context of the recently developed AusAID tertiary education strategy for the Pacific (2012), which aims to increase participation levels, especially for women and disadvantaged groups, and simultaneously raise quality standards. A number of principles underpin the strategy, including: being demand-led, fostering business relationships, quality first, understanding market mechanisms and performance, the encouragement of institutional transparency and accountability, as well as support for regional integration and mobility. The strategy rests on the four pillars (a) Youth Pathways for early school leavers, (b) closing skills gaps, (c) quality tertiary institutions and systems and (d) strengthening the University of the South Pacific and Regional Collaborations. The strategy also contains identified impacts and outcomes, as well as indicators for 2020. A careful monitoring system will also be put in place to track progress towards these indicators and where necessary, appropriate action will be taken to ensure support and corrective action is taken.

5.2 The impact of devolving provision to the local level

In some developing countries, decision-making processes have been totally devolved to TVET institutions or skills centres, providing managers with increased autonomy and accountability for the performance of their institution, albeit within the applicable qualification framework. Under such circumstances, institutions need to develop their own business or strategic plans, and managers will be responsible for the management of budgets at their own institution. Some form of external accreditation and quality assurance would need to be a fundamental component of such devolution to ensure standards. In practical terms, this means that the institution must engage in some form of revenue-generating activities. The most common forms of revenue include the charging of fees, income generation through the sale of goods and services, and government subsidies.

Two methods for increasing revenue are the charging of fees and expanding existing course provision. The expansion of provision can involve the delivery of programs that are in high demand, either in the evening or at the weekend. Some countries have introduced a double shift system in which the same TVET program is delivered twice during the same day, ensuring that maximum use is made of existing resources. Institutes can also develop specific tailor-made programs for companies or government. However, the introduction of fees can present countries with the dilemma of ensuring education access. Without sufficient financial resources, TVET institutions are unable to invest in the equipment and staffing needed to deliver quality programs of learning, but the raising of fees can act as a disincentive for those families on low incomes, and thus result in the lowering of enrolment rates.

A possible way around this dilemma is through the provision of scholarships for those on lower incomes, or the introduction of social protection schemes such as means-tested conditional cash transfers, subsidies or grants that are tied to attendance at a TVET institution. Such schemes have been successful at the school level (to increase attendance at both public and private institutions) in many countries, including India, Bangladesh, Brazil and Mexico, but require substantial government investment.

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32 Youth Pathways: the only sure route to increasing tertiary participation in the short term, without reducing tertiary entry standards, is to assist secondary graduates to become tertiary-ready via bridging and foundation programs. Over the longer term, and to reduce the need for such foundation courses, the solution is to expand access to a quality secondary education.
and donor buy-in and should be combined with labour market measures to increase employment and income levels. It is essential that developing country governments and development partners work to increase the accessibility of skills development and TVET to lower income and marginalised citizens in order to both raise demand for skills development and TVET provision and to combat social inequalities in the education system and beyond.

It is possible for TVET institutions to meet an increasing proportion of their recurrent costs through production-related activities or through the sale of products or services. In some countries in Africa, such as Zambia and Swaziland, and also in Asia, particularly in Indonesia, production related activities account for a significant proportion of income (see Box 15). However, the ability to generate income will depend on the nature of demand in the local market and the type of resources and expertise at the institution for engaging in such activities. Another source of funds for skills development and TVET can come from the government themselves. Normally this involves a transfer mechanism in which funds are used to support competition between public and private TVET institutions. In some instances, governments can introduce a voucher system in which funding is allocated according to enrolment figures, with the assumption that TVET institutions will compete for students. In practice, the voucher system has not proved very successful due to the lack of capacity of governments to administer such systems and owing to the limited number of providers that offer real choices or competition.

Box 15: Training with production – The SMK in Indonesia

Within Indonesia, the concept of linking training with production can be found in the country’s senior secondary schools. These schools are divided into vocational senior secondary schools (Sekolah Menengah Kejuruan – SMK) or general senior secondary schools (Sekolah Menengah Altas – SMA). The curriculum of the SMK focuses solely on the development of job related skills and involves the setting up of factory style ‘production lines’. In most instances, a company is responsible for the setting up of the production line, the provision of the initial training and the quality assurance processes. Perhaps the most successful examples of training with production can be found in Solo, where SMK 2 and SMKS have succeeded in producing laptop computers and more recently, a car. According to the headmaster at SMK2 “what sets us apart from other vocational schools is that communication between the students and the faculty members is very flexible and that industry was extensively involved in all processes”.

A final source of funding comes from donors themselves. Over the long term, most governments in the developing world would like to reduce their dependency on overseas aid and develop more sustainable forms of funding, involving the private sector (as outlined above). Nevertheless, in the short to medium term, it can be expected that bilateral and multilateral overseas aid to TVET and skills development will play an important role, particularly in lower income countries. Much of the current research on the volume of bilateral and multilateral aid to TVET has been conducted in Africa. According to research undertaken by African Economic Outlook over the 1995 to 2006 period, out of the total donor budget for education, only around 3% to 4% of bilateral aid was given to TVET, and a slightly higher 10% of multilateral aid. Moreover, two thirds of these funds were given to the following 10 recipient countries: Uganda (14.5%), Mozambique (11%), Egypt (9.92%), South Africa (9.89%), Senegal (9.29%), Mauritania (7.99%), Algeria (4.46%), Morocco (3.22%), Burkina Faso (2.85%) and Ethiopia (2.53%). Together these countries have received 66% of the $109 million committed to vocational training.

5.3 Expanding the provision of training by enterprises in the informal and formal sector

As mentioned previously, governments in most developing countries can rarely afford the full costs of supporting training. An option for alleviating the financial burden on the Government is to encourage enterprises to become more involved in the delivery of training. In practical terms, how can enterprises be encouraged to provide skills training within the informal and formal sectors? Most of the interventions for training in the informal sector have been driven by donors and focus more on

33 For more about the role of donors click here
the supply side. They tend to involve pre-employment training for those about to enter employment and in-service training in order to raise the productivity of those already in employment. According to research conducted by Johnson and Adams (2004), informal enterprises can also be upgraded through targeted skills development. One of the development partners most active in this area is the ILO (see Box 16). However, the successful development of entrepreneurs can only take place if an effective market demand exists for their products or services, and if continual targeted support is provided to the entrepreneur. In many instances, sustainability is not always possible without lengthy donor support or technical assistance.

**Box 16: ILO – Start and improve your own business**

One of the most comprehensive business support packages is a program developed by the ILO called ‘start and improve your own business’ (SIYB). This program has been specifically designed to reduce unemployment, especially amongst groups who are disadvantaged in the labour market. An extensive program of SIYB has been implemented by the ILO across many developing countries in sub-Saharan Africa and South-East Asia.

Governments face a difficult task in encouraging non-governmental provision in the informal sector. Obviously, governments need to provide some form of regulation in order to ensure that minimum standards are achieved and that institutions adhere to health and safety issues. Government incentives could involve the provision of subsidies to learners, but there is a danger that this might lead to market distortions. In the developed world, vouchers provided to learners have been used to encourage skills development and TVET provision, but there are limited examples of successful implementation in the developing world.

In relation to encouraging provision in the formal sector it is necessary to facilitate the development of partnerships between the public and private sectors – public-private partnerships (PPPs) – or to introduce some form of incentive to encourage companies to train their employees (see Box 17). One of the most common incentives is the levy grant system which is normally used to encourage companies to take on apprentices for 3 to 4 years. However, in most developing countries there has been a decline in the number of participants because the programs are located in declining sectors and the commitment required to complete the 4 years is too costly. There is also a risk that employees may feel ‘trapped’ with a particular employer, rather than able to transfer skills to another work opportunity. At the same time, young people may prefer to study for a higher degree level qualification on the assumption that they can enter a managerial or professional level job. Clearly, the traditional apprenticeship no longer appeals to companies or young people, and an alternative is required to take its place. Perhaps one of the most effective ways forward is some form of modern apprenticeship (like the New Apprenticeships Scheme in Australia) that has more flexible pathways, is linked to competency standards and provides young people with opportunities in the growing knowledge and service sectors.

**Box 17: Partnership with the private sector – Politeknik Aceh in Indonesia**

The Politeknik Aceh provides an example of what can be achieved when partners in the public and private sector work together. A number of different bodies were involved in the setting up of Politeknik Aceh, including: Chevron, the donor USAID, the Ministry of Education and the provincial government. Under this partnership, the provincial government provided the land and the physical building for the polytechnic. The funds for the equipment, institutional building, and training of staff and curriculum development were provided by the other partners. USAID played an important role in providing the technical assistance to ensure that the appropriate management structures and systems were put in place. As a result of this partnership, the polytechnic is now operational and delivering diploma level 3 programs in the following areas: electronics engineering, robotics, engineering, information technology and accounting. The polytechnic’s first graduates are about to enter the labour market.

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34 For more information on SIYB click here
35 The best example of an approach to developing a modern apprenticeship can be found in the learnerships in South Africa. Click here for more information.
6. How can mechanisms for funding skills development and TVET be made more effective and efficient?

Once policies and skills development and TVET strategies have been developed, it is necessary to put in place a system that can help track progress towards defined targets and goals, and also to provide information on how effectively and efficiently resources are being utilised. The types of monitoring and reporting systems depend on the specific needs of a country’s skills development and TVET systems, the available resources and also the expertise available to support implementation. Box 18 provides guidelines on how to approach this issue. There are a number of factors that should be taken into account when designing M&E activities, including what is being measured, what is the most appropriate approach and how often this should take place. Whatever M&E approaches are being used it will be important that the final outputs of the processes are fed back to skills development and TVET institutions and stakeholders, helping them to make more informed decisions and also supporting improved governance.

**Box 18: Issues and approaches for monitoring and reporting**

<table>
<thead>
<tr>
<th>What is being measured?</th>
<th>What approach to use?</th>
<th>What are the benefits of implementing such an approach?</th>
<th>What are the possible difficulties in implementing such an approach?</th>
<th>How often does data collection take place?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Progress towards defined targets</td>
<td>Reporting templates to collect data</td>
<td>Progress can be measured towards set targets</td>
<td>It can be resource intensive to develop a base-line</td>
<td>Normally every 6 months</td>
</tr>
<tr>
<td>2. Responsiveness of provision</td>
<td>Tracer study of graduates from TVET institutes</td>
<td>Analyse responsiveness of TVET providers and provide a means of comparing performance</td>
<td>Problems can be experienced in contacting graduates</td>
<td>On an annual basis</td>
</tr>
<tr>
<td>3. Skills levels</td>
<td>A stratified survey or census</td>
<td>Important for measuring skill levels and progress towards MDGs</td>
<td>A census can be costly and take time to implement</td>
<td>Every 2 to 3 years</td>
</tr>
<tr>
<td>4. Measure of efficiency</td>
<td>A cost benefit analysis, involving a survey and case study</td>
<td>Measure how efficiently resources are utilised</td>
<td>As above. In addition, this approach requires a complex set of skills</td>
<td>Every 5 years</td>
</tr>
</tbody>
</table>

An example of a well designed M&E framework is the one used by the Department of Labour (DoL) in South Africa for measuring the implementation progress of the country’s National Skills Development Strategy. This M&E framework measures the degree of levy compliance from companies and also reimbursement rates following training, as well as the administrative efficiency of the Sector Education and Training Authority (SETAs). In addition, the framework tackles the performance of Further Education and Training (FET) colleges and provides indicators on a wide range of other skills issues, including: student placement during their studies, employment rates following graduation, the degree to which scarce skills are met and also support for government rural policies.36

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36 See The National Skills Development Strategy 3
A 2012 report produced by UNESCO, with endorsement from the ILO, ETF, EC, OECD, ADB and GIZ identified a number of skills development and TVET areas that should be regularly monitored, including the following:

- access and participation rates
- relevance
- quality and innovation
- governance and financing.37

The development of M&E frameworks is a complex process and governments in developing countries often lack the capacity or resources to support effective implementation. One possible solution to these constraints is for individual countries to participate in regional or wider international monitoring projects or networks. This provides individual countries with access to shared resources, expertise and M&E tools, including regional benchmarks to assess their own progress. This is an important area in which AusAID could support capacity building.

37 UNESCO (2012).
7. What practical actions can be taken by AusAID to make provision more sustainable?

The following represent some practical steps that can be used by AusAID managers for consultation or dialogue with government partners and stakeholders, helping to ensure skills systems become more sustainable:

i. **Review existing reform:** One of the first areas to discuss should be the current state of the existing TVET system and areas for possible reform, including existing policy frameworks, what organisational structures are responsible for the planning and coordination of different types of skills, and who is involved in the actual delivery process, including the mix of public and private providers. When looking at these areas it will be important to pay particular attention to existing capacity levels, whether capacity shortfalls are being addressed and what other donors are involved in this process. It is always best to approach donors already working in the sector and try to find out what type of projects are being funded and why. Similarly, it goes without saying that it is also important to visit the government agency responsible for the planning of TVET in the sector. They can also provide documents and advice about recent, as well as future reforms. Accessing such information will provide a quick means of obtaining accurate information about what is happening in the sector, including potential changes that might occur and who is supporting them.

ii. **Determine the nature and extent of the demand for skills:** When looking at skills needs or requirements, reference should be made to the ILO's Key Indicators for the Labour Market. It will be important to identify what technical and soft skills are required, including those that are in current demand and those anticipated to be in demand in the near future. When undertaking this task, it is also important that estimates, or as they are more commonly called, signals, are obtained about demand, since it is not possible to obtain exact measures. It will be important to ensure that stakeholders are actively involved in this process and that qualitative feedback is obtained. At a practical level this can involve bringing senior managers from companies in the same sector together and asking them a set of questions. Amongst the most important questions are: How is the sector performing? What changes are expected to occur in the sector over the next 5 years? Are these changes related to the use of new technology, legislation or other factors? How do they impact on the workplace and what are the implications for skills most likely to be in demand. The asking of such questions will help generate discussion around how technology and other factors are impacting on the workplace and what type of skills are needed.

iii. **Identify current weaknesses in the skills development and TVET system:** It will be important to identify the constraints or current deficits within the system. These should not be large systemic problems, but those constraints that are readily solved within a short space of time using minimal resources. Often, political pressure requires results to be demonstrated as quickly as possible. Adopting such an approach will help build confidence and support amongst the government staff, as well as stakeholders. Among the things to investigate are what coordination difficulties exist between different government structures and different donors. How can existing information be used to inform decision-making processes (or not)? What is the degree of employer involvement and where does it occur? Another important issue is existing capacity, both within planning units and for those involved in delivery. It will be important to identify how the system could become more sustainable and demand driven, including what roles employers and other stakeholders could play in this process.

iv. **Make recommendations on how the skills development and TVET system could be reformed:** Most developing countries would like to have a TVET strategy that provides an overarching and coherent understanding of the direction they are going in. This should develop...
a vision, identifying the major constraints to achieving that vision and correspondingly where constraints exist, how these constraints can be resolved. In order to start this process it will be necessary to ask government and employers what do they want from their TVET system and who should be the main beneficiaries? Only by asking such question is it possible to generate the information that can be used for further discussions on putting together the strategy, including what are the vision, strategies and target for the next 10 years.

v. **Develop a pilot program to demonstrate quick results:** It will be important to achieve quick results and gain the confidence and trust of government colleagues and other development partners. For instance, it might be possible to establish a stakeholder-driven forum in which groups of employers meet on a regular basis to provide feedback on changes in the workplace. This will involve looking at what are the important sectors to the economy and employment? Similarly, it will be important to investigate what employer associations or employers meetings already occur and in which sectors? It will be necessary to identify where structures for employers exist and how development partners can add value, as opposed to trying to create employer structures, which can be very difficult.

vi. **Implementation of systemic changes:** Once confidence has been developed with the government and other development partners, it will be important to become more proactive and tackle more widespread systemic reform. Among the most obvious issues to discuss is the need to introduce coordination structures and devolve decision-making, ensuring improved accountability and responsiveness. At the systems level, this could involve providing technical advice about how to set up an NTA to undertake this coordination role, covering issues such as management and governance structures, and possibly what new reporting lines will need to be introduced. At the level of the individual institution, it could involve helping them expand provision to meet the growing market demand for vocational skills in the knowledge economy. Once again it will be important to address a number of issues. First, it will be important to determine what skills are needed in the knowledge economy. Second, it will also be important to undertake a quick scan of the region to see if another institution is providing such skills. There is no point developing a program if it is being delivered by another institution. The third stage would centre on developing the occupational standards and where possible link them to a national qualification framework (if they exist). When developing the standards, it is helpful to use those already developed elsewhere and to modify them to the local context by involving employers. The fourth stage would involve the developing of learning packages to help support TVET institutions to develop the new curriculum and also appropriate training for teachers to carry out these tasks. The precise sequences and effort given to each of the former stages will depend on the individual country concerned.

vii. **Support the development or strengthening of regional skills development and TVET networks:** Identify how to build regional networks for skills development and TVET. In most instances, this may require an investigation into what summits or conferences have taken place in the region and whether it is possible to use the structure for developing a TVET network. It may also be possible to join existing networks, particularly those that have been established by donors or academic bodies. Adopting such an approach can provide countries with the opportunity to share costs, tap into best practice and open up wider opportunities for their TVET institution and students.

viii. **Develop an effective monitoring and evaluation system:** It will be important to understand progress and the degree to which effective reform is taking place. Any M&E system must address three questions: 1. Where are we now? 2. Where do we want to go? 3. What progress is being made? Answering the first question requires the establishment of baseline measures. The second question requires the development of targets for the intervention in order to track progress. The third question must be answered with the input of relevant stakeholders at strategic intervals in order to identify and address difficulties where and when they occur.
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