

# TVET Blueprint

2016-2026

**Developed by**

Department of Human Resources,

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Institutional Strengthening for Skills Development, JFPR, ADB)

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“The government has provided education to our youth. But for the nation to prosper for all time, a sound education must be succeeded by access to the right jobs and responsibilities, so that our youth may bloom as individuals and at the same time serve their Nation well.”

“The greatest and the most valuable wealth we have in Bhutan is our people. We can never go wrong if we invest in human resources – no matter how much it cost, that investment will give our Nation rich dividends and what we lack in number, we must make up in talent.”



His Majesty's address at the 2012 National Day Celebration  
and 2015 Graduate Convocation



# FOREWORD



Bhutan has experienced rapid socio economic growth and development over the last five and half decades. The change process, however, has seen the emergence of a number of problems including increased youth unemployment and at the same time human resources shortages in critical sectors. There has been a prolonged problem of skills gap between demand and supply of human resources. Hence, developing indigenous human resources has become a priority development objective. Having achieved significant improvement in the country's basic education system, the government's emphasis has gradually shifted towards technical and vocational education, to make

Bhutan a skilled based society for development of national economy and employability of our youth in the world of work including global market. The education and training system must respond to aspirations of the youth by providing gainful employment at the same time contributing towards providing much needed skill manpower in the country.

The Bhutan Technical and Vocational Education and Training (TVET) Blueprint developed by the Ministry of Labour and Human Resources articulates a long-term strategic vision that will guide and influence reforms and development in TVET over the next 10 years (2016 to 2026). Achieving close alignment with other Government policies and strategies, the Blueprint outlines a strategic approach for policy reform and development planning in skills development with an objective to address the inherent sector challenges and meet existing and future labour market demands. The implementation of this Blueprint is expected to bring far-reaching reforms in **Skilling Bhutan**. About 110,000 youth will be skilled in ten years span.

A series of carefully planned background studies as well as consultations with several stakeholders mainly comprising policy makers, TVET providers, employers and the society at large were carried out to develop the Blueprint. The primary purpose of such consultations is to ensure sector specific policy advisories and implementation inputs have been integrated in the Blueprint. The Ministry has received overwhelming support in such processes. Similarly, the MoLHR stands assured of continued support and cooperation from all stakeholders in implementation of the Blueprint.

I congratulate the Department of Human Resources for successfully developing the TVET Blueprint with support from the Royal Government of Bhutan. I am sure that this will be an important milestone in the TVET system. I thank the Japan Fund for Poverty Reduction (JFPR), Asian Development Bank for supporting this important process. I am confident that the Bhutan Education Blueprint, the National Workforce Plan and the TVET Blueprint will complement one another in bringing positive TVET reforms, thus fulfilling the vision of our past, present and future monarchs.

Tashi Delek!



Ngeema Sangay Tshempo

**MINISTER, MINISTRY OF LABOUR AND HUMAN RESOURCES**

# MESSAGE FROM THE DIRECTOR



Globally, Technical and Vocational Education and Training (TVET) is considered as one of the important tools to create jobs, improve livelihood, alleviate poverty and enhance economic productivity. On one hand, TVET is not considered as mainstream career choice by young people, job seekers and society at large. On the other hand, requirement of skilled workers is growing due to economic growth and rising youth unemployment. On June 2014, His Majesty the King Commanded the Department of Human Resources (DHR) to revamp the entire TVET system in Bhutan. This was the golden opportunity for the DHR to receive His Majesty's blessing and embark on TVET revamping process. In obedience to The Royal Command, the DHR then initiated development of two strategic documents: (1) TVET Blueprint (2016-2026) and (2) National Workforce Plan (2016-2022). Henceforth, these two document will guide in brining reform in the TVET system. We hope the TVET Blueprint will support and further strengthen the image, size of programmes, accessibility, relevancy and quality of TVET significantly in making TVET as the mainstream career choice of Bhutanese youth. We hope that TVET Blueprint will guide and benefit our TVET policy makers, providers, industries, students and stakeholders in planning, designing, delivery, partnership and usage. Through this, we offer our prayer with the hope that this humble attempt of DHR would play critical role in addressing His Majesty's vision of revamping the TVET system in Bhutan.

This Blueprint is also a gesture to pay tribute to Lyonchen Tshering Tobgay, the Honourable Prime Minister of Bhutan who laid the strong foundation for the TVET system in Bhutan. Under his leadership, many TVET reforms, strategies and institutions were developed and implemented to raise quality and quantity of skilled workforce requirement in the country from 1990 till 2008.

Finally, we would like to extend our sincere appreciation to ADB for timely assistance through its TA 8712-BHU - *Institutional Strengthening for Skills Development* in developing TVET Blueprint and also to those national and international consultants who were involved in its development. Personally, I would like to thank Ms. Karina S. Veal, Sr. Social Sector Specialist, (ADB), and Mr. Nidup Tshering, Project Consultant (ADB), of the ADB project for full support and participation in preparing this Blueprint. The Department would also like to acknowledge our TVET Blueprint Team – Sangay Dorji (ADB Project Manager), Wangchuk (OCPO, VETD), Tenzin Choden (OCPO,HRDD), Phuntsho Wangmo (former Program Officer of VETD) and others who made their contributions. Above all, special thanks goes to diverse stakeholders and colleagues from MoLHR who participated in the various consultation stages of the TVET Blueprint.

Tashi Delek



Kinley Wangdi

**DIRECTOR, DEPARTMENT OF HUMAN RESOURCES**

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## ACRONYMS

<b>BVQF</b>	—	Bhutan Vocational Qualification Framework
<b>DHR</b>	—	Department of Human Resources
<b>DoE</b>	—	Department of Employment
<b>DOS</b>	—	Department of Occupational Standards
<b>FYP</b>	—	Five Year Plan
<b>GDP</b>	—	Gross Domestic Product
<b>GSP</b>	—	Graduate Skills Programme
<b>ICT</b>	—	Information, Communication Technology
<b>ILPU</b>	—	Industry Liaison and Publicity Unit
<b>IMF</b>	—	International Monetary Fund
<b>IZC</b>	—	Institute of <i>Zorig Chusum</i>
<b>LFPR</b>	—	Labour Force Participation Rates
<b>LMIS</b>	—	Labour Market Information System
<b>MoLHR</b>	—	Ministry of Labour and Human Resources
<b>NGO</b>	—	Non-governmental Organisation
<b>NITE</b>	—	National Institute of Technical Education
<b>NTTA</b>	—	National Technical Training Authority
<b>RPL</b>	—	Recognition of Prior Learning
<b>SEED</b>	—	Skills for Employment and Entrepreneur Development
<b>SME</b>	—	Small and Medium Enterprise
<b>SSAB</b>	—	Sector Skills Advisory Boards
<b>SSC</b>	—	Sector Skills Committees
<b>STP</b>	—	Skills Training Programme
<b>ToR</b>	—	Terms of Reference
<b>TTI</b>	—	Technical Training Institute
<b>TVET</b>	—	Technical and Vocational Education and Training
<b>YES</b>	—	Youth Employment Skills



## EXECUTIVE SUMMARY

The Royal Government of Bhutan plans to diversify the country's narrow economic base by developing sectors other than hydropower. The private sector is expected to play a key role in this transformation process. A number of measures are being introduced to facilitate private sector expansion, including the setting up of a one-stop shop for business registration. As per the 11<sup>th</sup> Five Year Plan (FYP) an important priority is to support the socio-economic development of those living in rural areas. Around 70% of the population live in the rural areas. Additionally, 57.98% of the labour force are employed in the agriculture sector which contributes the least to the GDP. Productivity in other two major sectors is also low. In order to improve workforce productivity and economic competitiveness, a robust Technical and Vocational Education and Training (TVET) system must be put in place. An effective TVET system can facilitate development of the right skills to meet the socio-economic plans and aspirations of the country.

The government has made considerable progress towards setting up of a modern TVET system. A registration system has been developed for registration of private TVET providers. The government has also constructed six Technical Training Institutes (TTIs) and two Institute of *Zorig Chusum* (IZCs). As a result of these developments, the country now has 80 registered TVET providers and the capacity to train about 6,000 trainees.<sup>1</sup>

The government has established a Bhutan Vocational Qualification Framework (BVQF), a quality assurance system, and is moving towards developing a competency based training system. Extensive support has also been provided for the professional development of trainers. Around 200 trainers are now employed in the current TVET system. This provides a good foundation to build upon.

Despite tremendous progress made in the development of a modern TVET system there remain a number of challenges. Most significant problem existed or are expected to emerge in areas of access, quality, relevance and management of TVET, which must be addressed urgently to meet the expectation of the stakeholders and beneficiaries.

The TVET Blueprint provides a comprehensive and coherent framework for responding to these constraints, and ensures a coordinated transition towards a demand orientated TVET system. Various consultations and research took place over a year in drafting of the TVET Blueprint.

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<sup>1</sup>MoLHR Estimates 2015

A number of carefully planned and connected processes were undertaken to develop the TVET Blueprint; Extensive consultations within the Ministry of Labour and Human Resources ( MoLHR) other Ministries, TVET providers, private sector, civil society and others were carried out to seek initial directions and technical inputs to the Blueprint. In brief the development process consisted of following stages:

- An evaluation of the TVET system using the World Bank Systems Approach for Better Education Results (SABER) methodology: The SABER tool has specific criteria to measure the current skills development system against international benchmarks. This allowed an assessment to be made of the strategic framework for TVET and the TVET system, as well as delivery.
- Development of profile and assessment of the TVET system: This study was based on 3rd National HRD Advisory survey that provided an empirical base line of the TVET system in Bhutan. This was developed using a problem tree derived from the World Bank SABER study and also the TVET profile and assessment study.
- Multi-stakeholder Consultations: Initial consultations with different stakeholders were carried out to understand the sector objectives related to skills development. Also, a national consultative workshop with more than 100 participants from Government and non-Government agencies, training providers, development partners and civil society was organized. The consultative workshop provided initial directions and guidance for the MoLHR to develop the draft TVET Blueprint. The workshop was also able to outline the expectations of the stakeholders and solicit initial commitment to the proposed TVET Blueprint.
- The National Workforce Plan: A workforce plan was developed by the MoLHR to determine critical skill needs in Bhutan. This involved the implementation of three representative employer based surveys in the priority sectors of tourism and hospitality, construction and production. The Blueprint strategies were designed to address these skills needs highlighted in the workforce plan for the short and medium term.
- Establishing a framework for the TVET Blueprint: The next stage of the process involved the development of a framework to respond to the constraints identified earlier. The framework consisted of four pillars or drivers of reform. Each of these pillars contain strategies outlining actions for implementation.
- Sector Consultations: Once the framework for the TVET Blueprint was developed, the next stage involved sector wise consultation and confirmation through workshops with (a) employers and representatives from the private sector; (b) managers from TVET providers; (c) officials from the MoLHR, and (d) planners from other Ministries. The feedback from the four workshops provided the basis for the development of strategies and actions for implementation.

- **National Review:** A national review workshop was organized to present the long-term strategies that have been proposed in the draft TVET Blueprint. The review validated and ensured that sector specific policy advisories have been integrated in the Blueprint. Independent reviews were also carried out to seek assurance on the implementation arrangements proposed for different aspects of the Blueprint.

### The TVET Blueprint consists of two interrelated parts consisting of 7 sections:

- **Section 2:** Outlines the method and approach used to develop the TVET Blueprint. There were a number of interconnected stages and processes over a 12-month period. Extensive consultations took place with officials from different government ministries and a representative selection of stakeholders.
- **Section 3:** Provides a summary of key economic issues and labour market challenges that the TVET Blueprint must tackle. The government has identified a reform agenda for the economy especially around the need for diversification and productivity. The TVET system is expected to facilitate these changes. At the same time, the TVET system must respond to the large numbers of youth entering the labour market. This presents a new set of challenges for TVET.
- **Section 4:** Turns to processes for determining skills that are in demand. Unless valid and timely intelligence are provided on key areas of demand, required response from TVET providers cannot be expected. It is important to strategically understand key skills or occupations that will be in demand in the near future, especially in response to government policies and labour market changes. This section provides an understanding on priority areas for demand, at present and in the future.
- **Section 5:** Documents the development of the TVET system and what has been achieved. This looks at different government plans and specific components of the TVET system that are in place, as well as their limitations.
- **Section 6:** Provides a summary of key challenges facing TVET in Bhutan. A good foundation has been achieved for TVET, but there are a number of systemic constraints. A summary of these constraints is provided.
- **Section 7:** Presents the framework for reform. A total of four Pillars are presented. Within each Pillar, specific problems are outlined and followed by a general response. This is followed by discussion on individual Pillars and its strategies.
- **Section 8:** Covers practical action plans required implementing strategies proposed under Section 7. A total of 60 actions are presented.





# 1. INTRODUCTION

Skills and craftsmanship has been the foundation of Bhutan's socio-economic development for eons. In the 1616, after arrival of Zhabdrung Ngwang Nyamgyel in Bhutan, traditional skills were provided on-the-job and practiced through apprenticeship. All the thirteen traditional arts and craft flourished during that time. The dzongs, monasteries, and many artifacts seen today are manifestation of strong skilling and workmanship handed down from generation to generation in the country. However, contemporary TVET system was initiated in the mid-1960s with the advent of country into a modern era. Skills such as civil and electrical engineering were introduced in the first formal TVET institute established in the country. As of December 2015 there were 80 registered TVET providers operating in Bhutan. This includes public TVET providers (6 Technical Training Institutes and two Institutes for *Zorig Chusum*, 67 private TVET providers and 7 NGOs) involved in technical and vocational skills delivery.

The government has established the Bhutan Vocational Qualification Framework (BVQF), which sets a good foundation for quality assurance system and competency based training system. Extensive support has also been provided for the training of trainers. About 200 trainers are currently employed in the TVET system. This provides a solid foundation to build upon. **The TVET system faces two significant challenges.**

- The country has the dual challenge of **high youth unemployment over the years** and an **increasing number of youth coming into the labour market for the first time.**<sup>2</sup> Youth unemployment as of December 2015 was 10.7% and a large number of university graduates are unable to find employment. The projected number of job seekers expected to enter the labour market over the next 10 years will be about 200,000, and a significant proportion of them will require skilling.
- The TVET system is expected to **play a key role in providing a skilled workforce to meet the development aspirations of the country** thereby improving workforce productivity and economic competitiveness in the global economy. The government is committed to reduce dependency on hydropower and ensure that the private sector plays a more prominent role in driving development. There is also an increased emphasis on increasing productivity and tackling poverty, especially for those living in rural areas. Under these reforms, TVET is expected to play an important role in providing the appropriate types and levels of skills to facilitate such transition and transformation.

<sup>2</sup> Labour Force Survey Report, 2015

Despite progress being made, the TVET system will face difficulties in responding to these new challenges for a number of reasons. The TVET system will need to **expand in order to meet the demand of a large number of young people** coming into the labour market. Under this expansion plan, public and private TVET providers will have to play a key role.

**There are significant quality issues that must be addressed.** The competency of trainers and occupational standards in the current TVET system do not reflect the requirements of changing demand in the workplace. This is compounded by the fact that most TVET providers lack industry relevant equipment and have not embraced new teaching–learning techniques.

**Significant reforms are also required to make the TVET system more relevant.** Currently, TVET fails to respond to the needs of the labour market. It is recognised that poor alignments occur between government priorities for growth and the type of graduates coming out of the TVET system. Young people also lack employability skills and faces difficulty in finding productive employment in Bhutan or overseas. More skills training are also needed to improve the productivity of those engaged in livelihood activities in the agriculture and informal sectors.

In addition to the problems identified above, **difficulties are experienced with the management and coordination of the TVET system.** There is lack of valid information to support the TVET planning process, and limited mechanisms or structures exist to involve employers in the planning process. Management difficulties also exist at the provider level, with most failing to forge adequate links with employers or implement effective cost recovery strategies.

The *TVET Blueprint* provides a comprehensive and coherent framework for responding to the constraints identified above. There are two interrelated parts to the framework for the *TVET Blueprint*:

- The first part deals with the Pillars or broad strategic areas of reform. A total of four Pillars are identified, focusing on: i) Expansion, ii) Quality, iii) Relevance, and iv) Management. Within each Pillar there are a number of strategies that identify the nature and direction of the reform that will take place over the next 10 years.
- The second part presents the practical actions that are required for implementing each Pillar. A total of 60 actions are identified. Indicative time frames are also provided, ranging from short–term (2016 through 2018), medium–term (2019 through 2021), and long–term (2022 through 2026).



## 2. METHOD AND APPROACH FOR DEVELOPING THE TVET BLUEPRINT

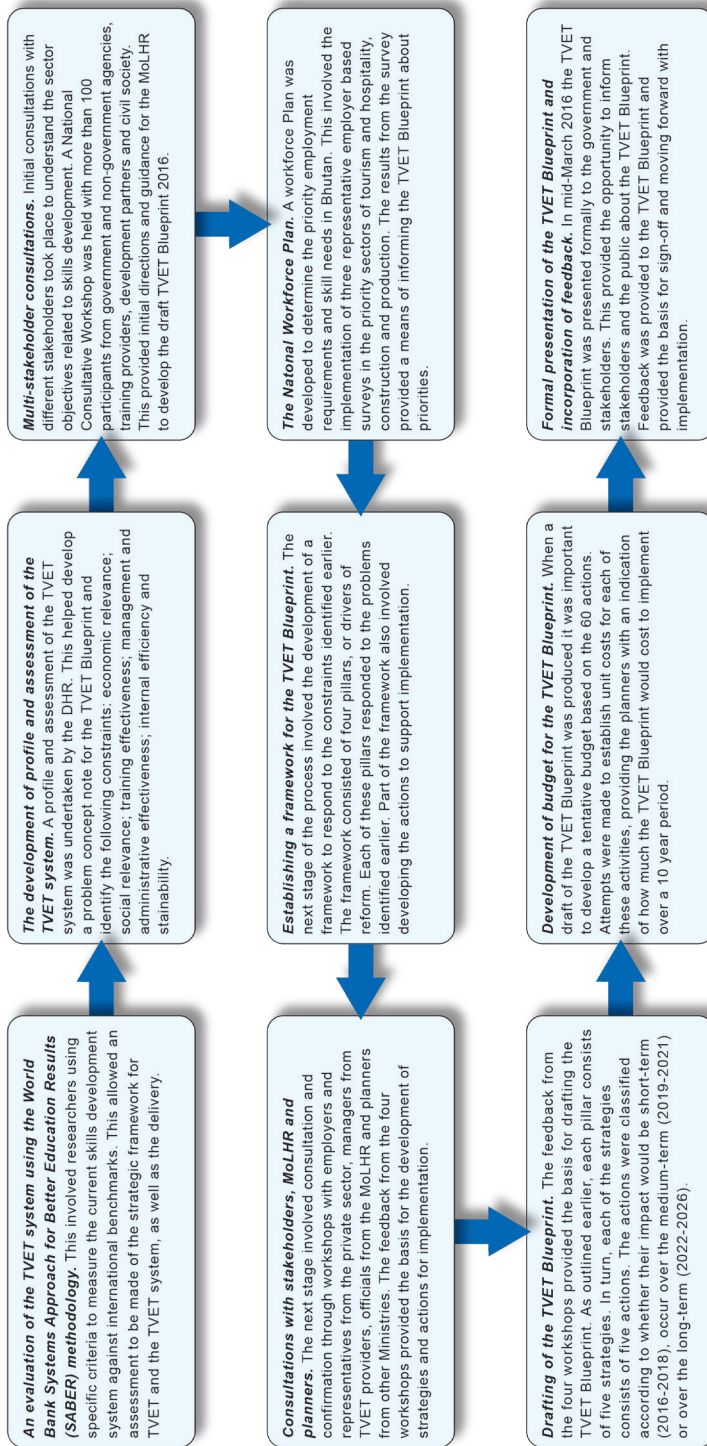
A number of carefully planned and connected processes and discussions facilitated the drafting of the *TVET Blueprint*. Extensive consultations took place with officials from the (MoLHR), other Ministries, Members of Parliament, as well as representatives from TVET providers, the private sector, and society at large. This consultative process ensured that agreement and consensus were reached on the structure and content of the *TVET Blueprint* (See Figure 1 for a visual description of this process).

In addition, separate studies and reviews were carried out to determine the profile and current status of the TVET sector, including issues and challenges. The studies and reviews included:

- TVET Profile and Sector Assessment
- World Bank SABER Workforce Development Country Report
- Bhutan's TVET System (Prospects & Challenges)

**These studies and reviews are provided in an Annex Publication titled “Bhutan TVET Sector Assessment, *Blueprint working papers.*”**

Figure 1 — Stages in developing the TVET Blueprint



## 3. THE ECONOMY AND THE LABOUR MARKET

The demand for skills is a derived demand influenced by multiple factors of the economy and the performance of the country's labour market. Bhutan is a small country and the number of people entering and leaving the labour market influences it to a great extent. Therefore, before assessing the skills that are in demand, it is important to set the scene for the *TVET Blueprint* by documenting trends in the economy and the major employment challenges.

### ECONOMY

Bhutan's rapid economic growth has been fuelled mainly by investments in hydropower. While the growth rate has averaged 7.9 percent in the last two decades, it has been highly unstable with the economy susceptible to volatilities and external shocks. Sustaining a stable growth path has been a major challenge. Another challenge has been to channel the revenue generated from hydropower to other viable avenues of growth.

There has been conscious efforts to diversify the economic base by investing and creating enabling environments in sectors that exhibit potential for growth. These interventions are listed as priority growth areas or the 'Five Jewels', namely 1) hydropower, 2) tourism, 3) agriculture, 4) small and medium enterprises (SMEs), and 5) mining.<sup>3</sup> In addition to growth and wealth creation, these areas have also been identified to create gainful employment. The government, in keeping with its objective of sustainable socio-economic development within the framework of Gross National Happiness (GNH), is dedicated to supporting these key areas. The National Human Resource Development Policy (2010), based on the Economic Development Policy (2010), recognises that despite the small size of local labour pool and limitations in terms of productivity, efficiency and management skills, human resource and labour skills development including TVET must be aligned with the national priority areas identified above.

### LABOUR MARKET

Bhutan is witnessing a gradual decline in overall labour force participation rates (LFPR). It fell by 6% from 68.6% in 2010 to 62.6% in 2014. In terms of gender, LFPRs for females are not only lower than males, but it is also declining at a faster rate. Male LFPRs declined from

<sup>3</sup>State of the Nation Address by the Prime Minister of Bhutan 2014.



73.6% in 2010 to 71% in 2014, whereas female LFPRs declined from 63.9% to 54.8% over the same period. Similarly, LFPRs of young people (between the ages of 15–24) decreased sharply by 13.5% from 40.4% in 2010 to 26.9% in 2014. Participation rates for young females were relatively higher than their male counterparts even though both sexes participated less in the labour force over the years. LFPRs for young males declined from 40.6% to 25.3% compared with a decline for young females from 40.2% to 28.4% from 2010 to 2014.

Youth unemployment continues to pose challenges despite concerted efforts to accelerate growth and enhance employment opportunities. Although the overall unemployment rate is low at 2.5% (2015), youth unemployment is comparably high at 10.7% (see Figure 2). The unemployment rate for young females is also steadily higher than for young males. In 2015, female youth unemployment rate was 12.7% and 8.2% for male youths.<sup>4</sup> Unemployment among the educated is also becoming a concern. As per the Labour Force Survey 2014, the unemployment rate was higher among job seekers with secondary and tertiary education compared with job seekers with primary and non-formal education. Jobseekers with tertiary level and secondary level education accounted for 34.7% and 31.9% respectively of the total unemployed.

Figure 2 — Youth unemployment rate, 2010–2014

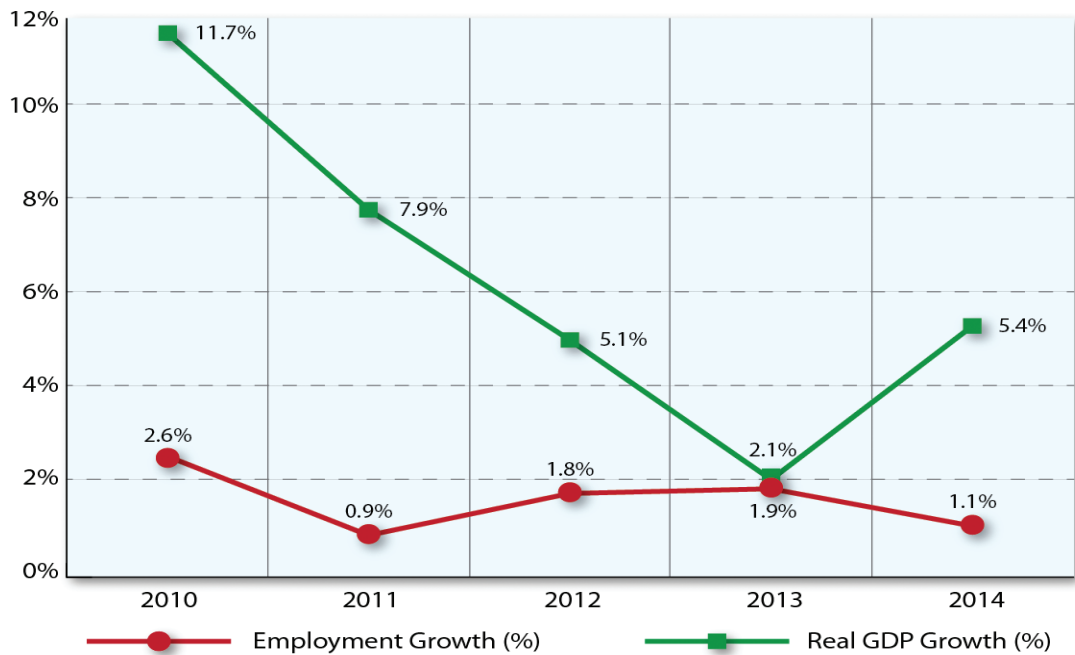


Source: Labour Force Survey 2010-2015

<sup>4</sup>Labour Force Survey Report, 2015

In addition to labour market indicators such as unemployment rates and labour force participation rates, Bhutan's 'employment intensity of growth' or elasticity of employment with respect to output (GDP) during 2010–2014 indicates that every 1 percentage point GDP growth is associated with just 0.26 percentage point of employment growth (see Figure 3). This is lower than the average 0.70 percentage point growth in employment associated with a 1 percentage point growth in GDP in other developing economies.<sup>5</sup> A number of reasons determine this fact. First, productivity and output in Bhutan's economy is primarily driven by capital-intensive hydropower, not labour. Second, most of the labour force (56.7 %) are employed in the primary sector, i.e., agriculture (and forestry). As of 2014, the sector, despite being the highest employer, contributed to 16.8% of the GDP, whereas industry and services made up to 40.5% and 42.7% respectively. The latter two sectors accounted for just 43.3% of overall employment.

Figure 3 — Real Gross Domestic Product and Employment Growth Rates



Source: Bhutan's TVET System: Prospects & Challenges, MoLHR, 2015/2016

More specifically, developments in the economy ultimately determine the numbers and the type of jobs being created. The growth in employment levels over the 1998 to 2014 period are shown in Figure 4. Overall, employment levels have risen by about 160,000 over the sixteen-year period, representing a growth of over 80%.

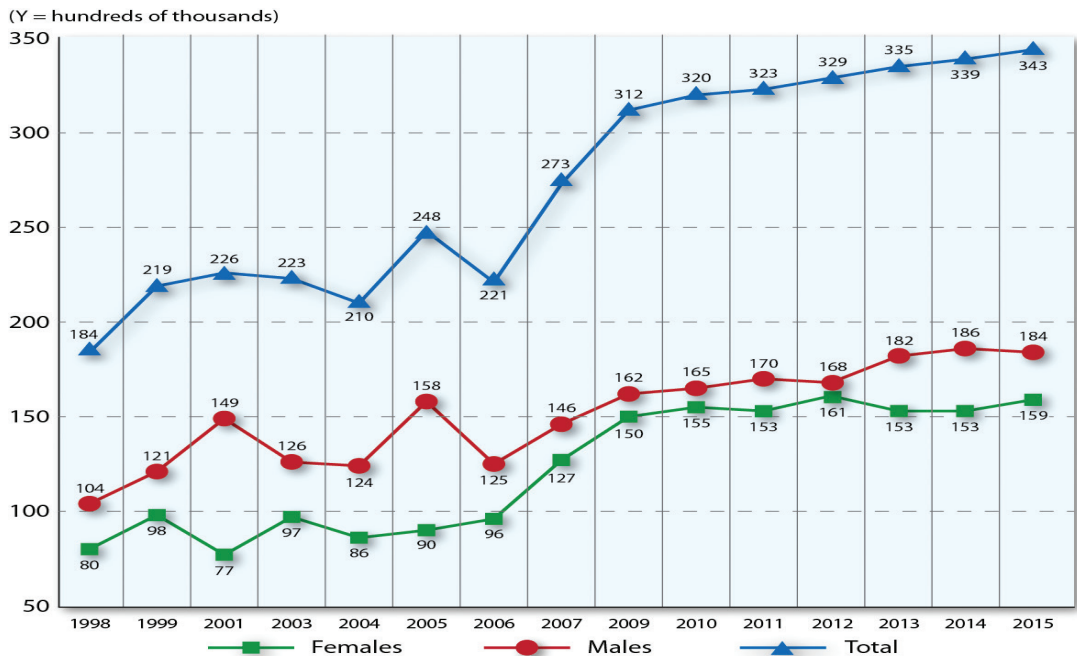
<sup>5</sup>Khan, A. 2001

The question facing policy makers is whether enough jobs can be created over the next 10 years to absorb the growing number of youths entering the labour market. Estimates based on the population census of 2006 show that, close to 200,000 young people will enter the labour market for the first time over this 10-year period.

The large numbers of youth coming into the labour market present a significant challenge. This is made worse by the increasing rate of unemployment among this group. The unemployment rate for youth is increasing. Youth unemployment was 9.4% in 2014 and has increased to 10.7% in 2015, compared to the overall unemployment rate of 2.6% in 2014 and 2.5% in 2015 respectively for the rest of the population. This is not significant by international standards, but over the years the figure has been on an increasing trend.

A number of initiatives have been taken by the MoLHR to address the youth unemployment issue. Most significant of which includes the Apprenticeship Training Programme (ATP), Youth Employment Skills (YES), the Graduate Skills Programme (GSP), Skills for Employment and Entrepreneur Development (SEED) and Guaranteed Employment Program (GEP). This is a good start, but more will need to be done to target the young demography of job seekers entering the labour market over the next 10 years.

Figure 4 — Employment growth trend



Source: Calculation based on Labour Force Survey Reports

There are other employment changes that will have implication for the country's labour market. One of the most influential is the numbers who will retire over the next 10 years. According to the Labour Force Survey 2015, about 55,000 employed people are over the age of 55 and can be expected to leave their jobs in the next 10 years. The question facing policy makers is how to ensure that young people can be directed into these positions, and provided with the appropriate skills and experience.

Another important dimension is the proportion of foreigners employed in Bhutan. In 2014 a total of 44,427 foreign workers were employed in Bhutan, representing about 13% of the country's total employment. Majority are employed in the growing construction and production sectors (88% are engaged in hydropower and other construction related work, 6% in the production sector)<sup>6</sup>. The issue of foreign workers in this sector will need to be approached carefully since Bhutanese youth are reluctant to work in the construction sector and prefer desk jobs.

The government faces a significant employment challenge. The number of jobs will have to increase significantly in order to cope with the large number of young people coming into the labour market over the next 10 years. Expanding the provision of skills is part of the solution to this problem. There is also a need to ensure that suitable employment, trade and investment strategies are in place. The quality and relevance of the skills must also improve in order to support the government's strategy of economic diversification and improving global competitiveness. It will be equally important that the government turns its attention to active labour market measures to support youth employment. The use of skills and active labour market measures are key parts forming the bedrock of this *TVET Blueprint*.

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<sup>6</sup>National Workforce Plan, 2016

## 4. DEMAND FOR SKILLS

Bhutan wants to develop a demand orientated TVET system that responds to the current and anticipated demands in the labour market. The starting point for moving towards a demand orientated system is to understand current and future demand.

### CURRENT DEMAND

The demand for jobs and skills is a derived demand determined by the structure of the economy and the type of jobs being created. Majority of people (about 77%) work in the informal sector, and of that most work in the agriculture sector (57.98%).<sup>7</sup> Those engaged in informal activities should have access to skills that are accredited and linked to the country's qualification framework.

In the formal sector, there is a considerable amount of evidence on the nature and extent of skills in demand. This is made easy by the small size of the country's population and the numbers in formal employment. The most significant sources of indicators are the enterprise surveys conducted in 2012, 2013 and 2014. These surveys measure employers' perceptions of demand and can determine priority areas of skills development. There is also administrative data produced by the Department of Employment (DoE) on vacancies. In 2014, the number of vacancies posted decreased to 3,859, compared to nearly 8,000 in the previous year.

The most recent employer survey (2014) found that 36% of establishments face difficulties in recruiting workers with the right type of skills. There is also evidence on the type of jobs that are in demand. Most studies indicate that the majority of employment opportunities are in the construction sector. Other significant employment opportunities were found in the production and tourism sectors.<sup>8</sup> TVET provision for the formal sector should be closely aligned to such opportunities.

Specific details on the degree of skills mismatch being experienced in the formal sector can be seen from the *National Workforce Plan (2016–2022)*. This is based on three priority sectors. The findings in Table 1 highlight varying degrees of demand for different occupations in the three sectors. It should be noted "hard to fill jobs" are positions that the employer find difficulty in finding people, "Critical jobs" are those occupations where there is critical shortage in the country and "mission critical jobs" are occupations that will be in demand as long as the industry develops and grows.

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<sup>7</sup>Labour Force Survey Report, 2015; <sup>8</sup> National Workforce Plan, 2016





Table 1 — Critical Skills Demand in three sectors<sup>9</sup>

Sector	Tourism	Construction	Production
Hard-to-fill jobs	Food & beverage, cook, marketing officer, facility care taker, manager, housekeeper, tour operator, helper, reservation & ticket officer, specialised guide, Chef	Electrician, manual labourer, plumber, mason, construction machine operator, site supervisor, construction carpenter, civil engineer, heavy vehicle driver, welder	Carpenter, farm caretaker, food processor, livestock caretaker, manager, manual worker, marketing officer, mechanic operators, mining engineering, product designer
Critical jobs	Cook, manager, food & beverage, chef, language guide, guide, housekeeper, customer care officer, marketing officer, reservation & ticket officer	Mason, carpenter, welder, manual worker, construction machine operators, solid waste plumber, civil engineer, site supervisor, construction manager, electrician, traditional structure/house builders/experts	Chemical engineer, metallurgist, chemist, fabricator, mining engineer, product designer, sawyer, marketing expert, carpenter, plant & machine operators, <i>Zorig</i> artisan
Mission critical jobs	Manager, cook, food & beverage, chef, housekeeper, customer care officer, ticketing & reservation officer, front desk, helper, guide	Mason, construction manager, site supervisor, plumber, manual worker, carpenter, electrician, civil engineer, welder, construction machine operator, traditional structure/house builders/experts	

Besides technical skills, different studies undertaken in Bhutan clearly spell out the importance of soft-skills in finding employment. According to the *National Workforce Plan*, employers have indicated that TVET graduates lack interpersonal and communication skills, as well as creativity and innovation skills.

For the informal sector, improved access to skills development should play a key role in helping to improve productivity, especially in agriculture. According to the International Monetary Fund (IMF), many people living in rural areas are unable to produce enough surplus goods for the market.<sup>10</sup> There is no doubt that this has an impact on their well-being and happiness. Emphasis of skills development should be targeted at those in the agricultural sector by providing them with off-farm income earning opportunities through basic skills. Other basic skills development efforts should also focus on urban areas, especially in craft related areas where the upgrading of skills could impact on productivity and happiness of the people.

<sup>9</sup> Ibid.

<sup>10</sup> IMF (2014) Bhutan: Selected Issues – IMF Country Report No. 14/1179



## FUTURE DEMAND

Part of moving towards a demand orientated TVET system is to identify skills that are in line with the development plan and aspiration of the country. It is impossible to look too far into the future due to the large number of unpredictable variables and events. Economists have recognised the futility of looking more than three to four years into the future. Instead, planners in most countries attempt to identify skills that are required to support the country's development plans.

Bhutan's five-year plans provide a good entry point for aligning development plans to skills development and job placements. As the country's economic activities, including the hydropower sector, are mainly driven by public expenditure, five-year plans indicate the investment plan of the government in advance. Hence, different ministries and agencies can determine skills requirement to undertake capital-intensive projects for the next five years.

Among the key government strategies or plans to be taken on board by the *TVET Blueprint* are, the *Economic Development Policy (EDP) 2010* and the *Bhutan Education Blueprint*, as well the development priorities identified in the Five Jewels.<sup>11</sup> Each of these plans will need to be studied, and their implications on skills development must be analysed. At this stage, it is clear that TVET areas will have to be aligned with greener forms of energy and those associated with waste management. The cultural industries will become increasingly important and have important linkages with other sectors. The latter could have important implications for the upgrading of skills in the informal sector.

Priority sectors for the country's future development were outlined by the Prime Minister in his State of the Nation Address of 2014. The Five Jewels are regarded as the five economic priority areas, which are vital for the country's future development. Economic decisions in these five areas will have far reaching implications for skills and employment as outlined in Table 2.

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<sup>11</sup> State of the Nation Address by the Prime Minister of Bhutan 2014



Table 2 — Implications of the Five Jewels on skills development and employment

Jewel and Importance to Development	Implications for Skills and Employment
<b>Hydropower:</b> A number of significant projects are on-going and others are about to be approved. This will impact on the construction and energy sectors.	Continued demand for construction related skills, as well as qualifications in areas of renewable energy, as well as maintenance and repair skills.
<b>Agriculture:</b> The government has decided to strengthen agriculture, including improved access and marketing. This will be accompanied by expansion of the road network.	Skills will be required for irrigation and agro-processing. Demand for road building skills will also increase.
<b>Tourism:</b> The number of tourists visiting Bhutan was 116,200 which contributed Nu. 16.2 billion to the economy, as well as providing 18,200 jobs. The government wants to expand both domestic tourism and international visitors.	Increased jobs can be expected in the number of tour guides, as well as waiters and cooks working in hotels. As the number of foreigner tourists' increase, demand for skilled workers will increase and the skills sets of workers in the sector will have to be expanded to cater to diverse needs of tourists.
<b>Small and Medium Enterprises:</b> Bhutan has about 13,000 cottage and small enterprises comprising 97% of all the businesses. The government is planning to double the number of small enterprises so that they contribute at least 10% to the GDP and create 21,000 additional jobs.	Increase in number of SMEs will require more basic skills training for the informal sector, especially around small business development and craft skills in targeted areas of demand.
<b>Mining:</b> A State Mining Corporation has been formed with the purpose of exporting minerals to India and Bangladesh.	The number of jobs to be created from this expansion will be very small. What is more significant are the down-stream industries that support mining, such as supplying of fuel or food for those working in the mines. This could provide opportunities for local communities.

Alignment between the *TVET Blueprint* and the *Bhutan Education Blueprint (2014–2024)* will be important. The *Bhutan Education Blueprint* states that 20% of those leaving the secondary schooling system must enter the TVET system by 2024, and the level must increase to 40% by 2034. As per existing data, the current capacity is about 6,000 seats, which includes private sector providers, many of whom provide only short courses in employability skills (soft-skills) or Information, Communication Technology (ICT) and other non technical courses. This means that the effective capacity to deliver programmes leading to award of formal qualifications under the BVQF is probably a quarter of the current capacity. Hence, the capacity of the TVET system will have to be increased in order to cater to the increasing number of youth coming out of the school system.



## 5. BACKGROUND OF THE TVET SYSTEM

Since the establishment of a dedicated agency (National Technical Training Authority–NTTA) to plan and administer TVET sector in 1999, there has been a number of significant reforms in the country's TVET system. In 2003, the functions of the NTTA were transferred to the newly established MoLHR, comprising the Department of Occupational Standards (DOS) and the Department of Human Resources (DHR). The DOS was mandated to develop a quality assurance system, improve commitments to national standards and set-up the BVQF. The DHR on the other hand was responsible for ensuring that the country has adequate human resources (both in terms of numbers and quality) to facilitate sustainable socio-economic development of the country.

The initial focus of the MoLHR was on setting up a public TVET system through the construction and equipping of six TTIs and two IZC. Providers under the purview of MoLHR, along with private providers, offer a variety of programmes ranging from civil to electrical engineering, automobile engineering, language, arts and music, to health sciences, media and communication, information technology, tourism and hospitality. According to a recent survey over 80% of these programmes are delivered at certificate level 1 or below.

More recently, in 2010 the government introduced the establishment regulation to help expand the number of private TVET providers. They were viewed as a key way of expanding provision. Under this reform licenses were provided to private TVET providers and by 2014 the numbers had risen to 73.<sup>12</sup>

Over the past five years, the MoLHR has also introduced a number of measures to improve the quality of TVET, including: (a) the establishment of a quality assurance system; (b) the setting up of the BVQF; and, (c) the development of national competency standards and recognition of prior learning. In relation to the development of national competency standards, a total of 60 standards have been developed.

Although progress in this area has been impressive, a review of the TVET system highlights a number of issues and constraints.<sup>13</sup> The quality assurance processes were designed to provide some form of consistency and ensure commitment to quality across providers. Unfortunately, only 34% of providers are registered with the BVQF, highlighting a lack of commitment to these standards. The occupations standards were also found to be very narrow and not responsive to the changing labour market needs.

Other important developments in the TVET system include extensive support for the training of trainers. The government recognised the importance of trainers as a means of delivering quality instruction. There are currently around 200 trainers employed by government providers. However, based on the trainer–trainee ratio for TVET, this number is far below the actual requirement. In addition, the competency of trainers is poor.<sup>14</sup>

Attempts have been made to give direction to the TVET system through the development of a TVET plan. This plan outlines some of the challenges facing the TVET system, and also provides a vision for TVET which includes the current *TVET Blueprint*.

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<sup>12</sup> 3rd National HRD Advisory report, 2015

<sup>13</sup> TVET Profile and Sector Assessment, 2015; World Bank SABER Country Report, 2015

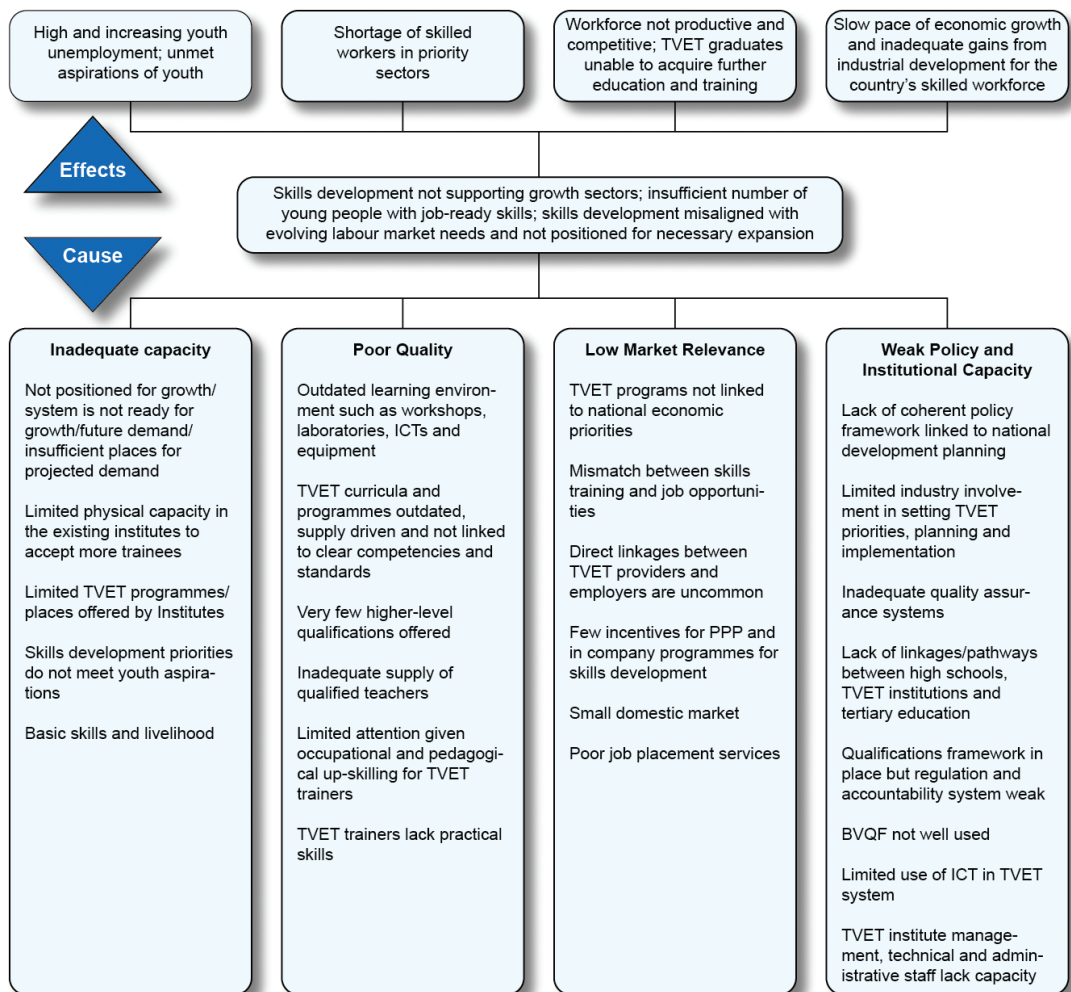
<sup>14</sup> 3rd National HRD Advisory report, 2015



## 6. MAJOR CHALLENGES FACING THE TVET SYSTEM

Many of the issues and challenges facing the TVET system have already been touched upon in the earlier section. The Bhutan TVET System Problem Tree presented in Figure 5 shows how the main problems have been categorised and analysed under four major headings: 1) inadequate capacity, 2) poor quality, 3) low market relevance, and 4) weak policy and institutional capacity.

Figure 5 — Bhutan TVET System Problem Tree



## 7. FRAMEWORK FOR REFORM

The purpose of the *TVET Blueprint* is to articulate a long-term strategic vision that will guide and influence reforms and development in TVET over the next 10 years (2016 to 2026). The **Blueprint specifies actions that are needed to maximise the impact of TVET on skilling people for Bhutan's greater socio-economic development.**

The work on the development of the *TVET Blueprint* commenced in May 2015 and was completed in May 2016. The *TVET Blueprint* is closely aligned with government policies and strategies and provides the basis for annual strategic plans for the skills development agenda of the MoLHR.

The *TVET Blueprint* ensures that MoLHR and relevant agencies have the technical expertise and resource endowment to provide quality TVET that remains relevant to the socio-economic development aspirations of the country. It outlines new directions, innovative approaches, and interventions in skills development to effectively address youth unemployment. The immediate challenge is to increase the quality and relevance of TVET and to communicate opportunities to youth in order to increase enrolments and effectiveness within currently underutilised institutes.

Specifically, there are two parts of this framework.

- The first part focuses upon the Pillars and strategies for reform. There are four Pillars within the *TVET Blueprint*. Each Pillar identifies the broad reform areas that respond to specific constraints facing the TVET system.<sup>15</sup> Under each pillar, four or five strategies have been identified for implementation.
- The second part addresses the practicalities to guide implementation. Actions required for implementation have been identified under different strategies. Timeframes to achieve expected outputs under different Pillars are specified as short-term (2016–2018), medium-term (2019–2022) and long-term (2023–2026).

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<sup>15</sup> The framework for the TVET Blueprint and each of the Pillars were agreed upon by the TVET Blueprint Working Group and other stakeholders.

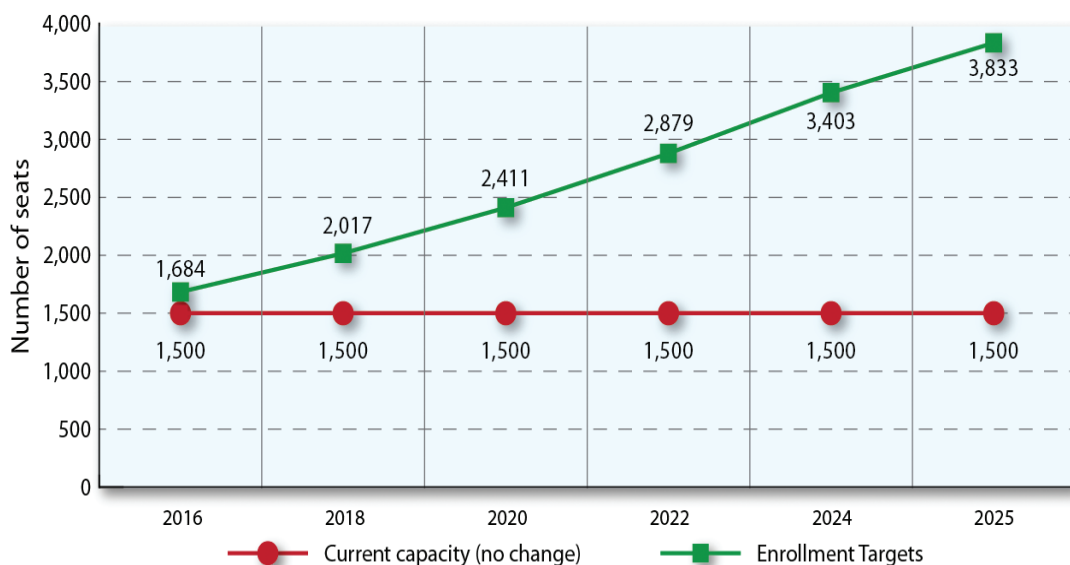
## PILLAR I: EXPAND TVET PROVISION

### What is the problem facing the sector?

Bhutan could face significant social and economic challenges with the large number of young people entering the labour market for the first time. Around 200,000 young people will enter the labour market over the next ten years and a high proportion will require skills or skill upgrading in order to find gainful employment, including self-employment opportunity.

The Bhutan Education Blueprint with its new education pathway expects the formal TVET system to absorb at least 20% of the students at the higher secondary level by 2024. The current capacity in the public TVET system (TTIs and IZCs) is around 1500 seats. Therefore, there will be a significant capacity gap of 2400 seats by end of 2025 if the current capacity within the public TVET system is not increased. Projected capacity gap by different years are illustrated in Figure 6 below. Furthermore, it is important to note that the projected capacity gap based on the Education Blueprint target is modest and the gap is even bigger as per estimates of the MoLHR. (Refer page 55)

Figure 6 — Projected capacity gap facing TVET



**Source:** Calculation based on education blueprint key simulation results and population projection 2005-30



The failure to respond to a widening enrolment gap could have serious implications for Bhutan. In a number of countries around the world, growing youth unemployment has resulted in social unrest (see Box 1).

### Box 1 — Timor–Leste, Youth Unemployment and Social Unrest

Timor–Leste obtained independence in 2002 and was faced with the dual challenge of a growing young population and lack of employment opportunities. Around 15,000 young people entered the labour market each year in search of work. However, limited skills training and corresponding lack of employment for youth were one of the causes behind the civil unrest that the country experienced in 2006. In response, significant reforms to the TVET system were carried out and funds were made available to facilitate youth employment, all of which helped tackle the problems of civil unrest.

### How can we respond to the problem?

- A number of complementary strategies must address the issue of the growing number of youth entering the labour market over the next 10 years.
- In the short-term (2016–2018), providers should use their facilities in a more effective manner. This must be accompanied by expansion of private TVET providers. A rapid response for expanding enrolment levels over the medium-term (2019–2022) will be implemented.
- Over the medium (2019–2021) to long-term (2022–2026), investments in buildings and equipment must take place, including the expansion of existing TTIs/IZCs and the setting up of a new vocational college to deliver national diploma programmes under the BVQF.
- Actions should be designed based on a baseline study for an effective gender mainstreaming and ensuring that those from disadvantaged groups are provided with improved access to skills development.



## Strategy 1: Expand capacity to meet future needs

Over the medium to long-term, the expansion of the TVET sector cannot take place without significant capital investments. The enrolment capacity of the public TVET providers will need to grow by at least two times over the next decade to cope with the large number of students leaving the secondary school system. In order to facilitate this expansion, significant investments will occur in physical infrastructure and equipment for TVET providers. New developments will include the construction of a vocational college and upgradation of current TTIs and IZCs.

The expansion will focus mainly on the construction of new buildings and premises at TTIs and IZCs. The nature and extent of this expansion will be determined by new occupational areas that must be developed in response to identified new demands—especially in higher skill areas and enrolment plans for new courses. This expansion will cover workshops, classrooms, equipment, dormitories and campus improvements. Developments will be guided by the existing capital and investment plan of the MoLHR.

### Box 2 — Capital Investment in TVET under the *TVET Blueprint*

In order to respond to the large numbers of young coming onto the labour market and ensure that 40% of youth can be enrolled in the TVET system, the MoLHR has developed a capital investment plan. Under the plan one new vocational college will be established. The other six TTIs and two IZCs will be upgraded through a combination of new workshops and accommodation blocks, as well as some being completely renovated.

Chumey, Khuruthang, and Rangjung TTIs and Trashiyangtse IZC will receive new workshops. Hostels will be constructed at Samthang TTI and also at the two IZCs. Accompanying this infrastructure development will be an expansion of professional staff to ensure that these providers can operate effectively.<sup>16</sup>

The total budget estimates for construction of the vocational college is Nu. 750 million and expansion of current facilities is Nu.413 million. This will increase current capacity from 1,500 to 3,900 seats. This investment will also enable the diversification of programmes on offer and support upskilling, as well as move to deliver national diploma and higher level certificate programmes in priority areas of demand.

## Strategy 2: Facilitate the expansion of private TVET providers

Private sector provision is one of the most effective ways to expand delivery over the short to medium-term. Currently, private providers are delivering 75% of existing TVET programmes, but the focus is mostly on school-to-work transition skills that can be

<sup>16</sup> Note: The full details of the investment plan and changes in professional staffing are outlined in MoLHR's investment plan.

delivered through short term skills programmes. These programmes generally don't require high capital investment in purchase of training equipment and machinery. This situation will be reversed through the provision of grants and tuition fees for trainees. Private TVET providers will compete for these funds and help to develop a more competitive market for TVET. In many countries private providers have played a key role in helping government in skills development (see Box 3). The private sector will also play a key role in the delivery of short term training programmes and those designed to meet the needs of employers. Therefore, the MoLHR will encourage and support the expansion of private providers to deliver higher-level technical programmes in areas of identified demand. This will be done on a competitive bases and exclude subjects such as accountancy, management, basic ICT and other generic skills.

### Box 3 — The role played by the private sector in skills development in Chile

Chile is a world leader in skills development and is referred as the Puma of Latin America. In contrast to most parts of Latin America, the private sector is used as the key vehicle for delivering skills. Private providers compete with public TVET institutions and NGOs in a competitive market for skills. The government encourages the demand for training through providing enterprises with a tax incentive if they undertake training at a registered provider. Under this approach, the government was able to expand training for employees from 17,000 to just over 110,000 in a four-year period. It also helped to create market for training and increased the number of private providers.

The private sector in Chile is also used as a means of supporting skills development for disadvantaged youth. Under a public-private sector programme (the Joven programme) disadvantaged youth are provided with basic skills training and on-the-job training in a private company for between 1 and 3 months. The objective of the programme is to increase employability of youth. Results show that this had a positive impact on participants' employment and wages. The success can be judged by the fact that the programme is now used across Latin America.

### Strategy 3: Improved utilisation of resources

TVET providers will make more effective use of their facilities. Many providers have spare capacity and will open up their facilities to trainees, helping to ensure improved access to skills development. Public TTIs and IZCs acknowledge that there is potential capacity, and will start to deliver their programmes in the evenings, on weekends, as well as during vacations.



Providers will sign Memorandums of Understanding (MoU) with employers or community groups to expand delivery of TVET. This will improve access to the work place for trainees and provide them with the opportunity to use technology, equipment and human resources. This will also help employers gain access to classrooms or other facilities at a TVET provider. With the increased emphasis on sustainable livelihoods, providers will work with community organisations to deliver basic skills training.

#### Strategy 4: Promoting Equity Enrolments

The expansion strategy will be complemented by development and implementation of mainstreaming strategies for gender and disadvantaged groups. Enrolment levels for males and females are similar. Unfortunately not much is known about those with disabilities or from disadvantaged groups. A base-line study will identify the type of constraints that these different groups face and what needs to be done to help improve access. Once the base-line study has been conducted, it will be possible to develop appropriate mainstreaming strategies for the different groups and the appointment of focal points who will be responsible for facilitating the development of mainstreaming strategies.

#### Strategy 5: Supporting positive images of TVET

Poor perception is one of the most significant constraints facing the expansion of TVET. Currently, TVET is viewed as a second option to be followed if a young person cannot pursue tertiary education. Understandably, the TVET system does not attract the most academically qualified youth into the sector. This situation will be reversed through the introduction of higher stipends for trainees enrolling in a TVET programme and improved formal pathways between the education and TVET systems. This will also be supported by more targeted support for career guidance and counselling, as well as advocacy programmes to promote TVET and technical and vocational jobs. A wage system set against national certificate levels will be implemented effectively.

##### **Expected Outputs for Pillar I: Expanding TVET Provision**

- Capacity of public TVET system expanded from 1,500 to 3,900 seats over the next 10 years.
- Existing physical facilities and equipment of TVET providers upgraded.
- A vocational college constructed with industry ready equipment.
- Role of private providers in delivering TVET programmes increased at all levels.
- Improved access to TVET for disadvantaged groups.
- TVET viewed as a preferred career path for young people.



## PILLAR II: IMPROVE QUALITY

### What is the problem?

The TVET system faces significant quality issue and is perceived negatively by employers and trainees. A number of factors contribute towards this situation, ranging from the poor quality of TVET trainers and unresponsive curriculum, to the way in which TVET is delivered and how TVET providers are managed.

Bhutan lacks a cohort of competent trainers. Around 50% of the country's trainers have a diploma level qualification or below.<sup>17</sup> What is more worrying is that a large number that have not attended a formal training of trainer's programme (see Figure 7). This means that providers cannot effectively deliver TVET programmes, especially at the higher certificate and national diploma levels. The situation is compounded by the fact that half of the country's trainers have received no formal instructor training. A significant proportion of trainers are also on short-term contracts and this acts as a disincentive for managers to support training. Under these circumstances, it is easy to see why people are not attracted into the profession.

The managerial capacity within the TVET providers is also a issue. Around 75% of principals in the public TVET providers have a diploma qualification or below. This lack of academic qualifications can be one of the main reasons why providers are experiencing difficulties introducing and managing organisational change or growth.

Significant problems are also experienced with the quality of qualifications and the standards upon which they are based. A total of 60 occupational standards have been developed and only 10 have been utilised by providers. What is more significant is that only 34% of TVET providers in Bhutan are registered with the MoLHR to deliver programmes in line with the BVQF. The lack of commitment to occupational standards represents a real challenge in ensuring consistency and improving quality across Bhutan.

With the expansion of the TVET system over the next 10 years, more innovative forms of delivery will be required to ensure international standards are achieved and maintained. The TVET sector cannot rely on traditional classrooms and workshops to deliver quality training. Employers need to be partners in this process, and attention must turn to the role played by distance learning for supporting learning, as well as improved access to the latest technology.

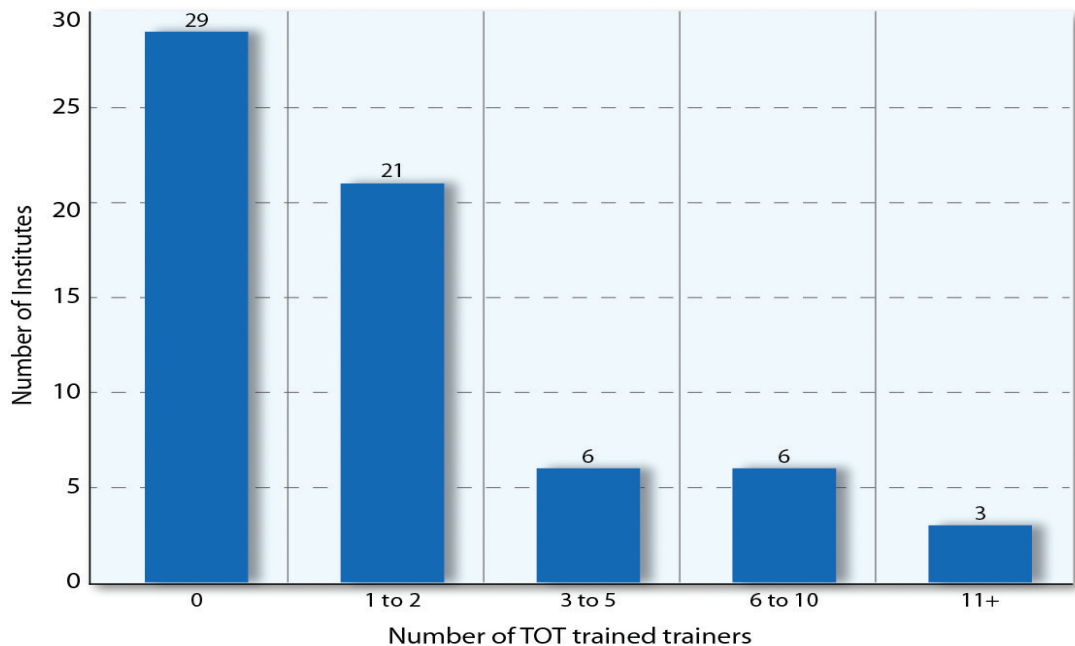
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<sup>17</sup> This data was obtained from the 3rd HRD Advisor Survey undertaken by DHR in 2014.



Finally, the way in which training is delivered can be improved. A significant proportion of TVET providers lack institutional or human capacity, all of which impacts negatively on the quality of learning. Providers also fail to forge effective links with industry and many experience significant problems in implementing effective quality assurance systems.

Figure 7 — Number of training providers with trainers who have attended TOT



Source: 3<sup>rd</sup> National HRD Advisory Report, 2015

## How can we respond to the problem?

- Improvement in quality should involve a number of strategies to help Bhutan achieve and maintain international standards.
- At the heart of the reform should be the creation of a competent cohort of trainers. This will be key to quality enhancement and delivery of improved standards. A closely connected reform must be the widespread commitment to occupational standards. An overarching quality enhancement programme will be introduced by DHR.
- More emphasis must be given to the training and development of principals. New qualified principals must be recruited based on a needs assessment. With the introduction of significant reforms into the TVET system, principals must be capable of supporting change and implementation, including commitment to improve quality.
- A centralised institute must be established to help drive the agenda for improved quality and standards. This must be done in a coordinated manner. Providers, as well as stakeholders, should obtain support for developing higher-level skills, access to work relevant technology and opportunities for overseas employment for their trainees.
- All of these reforms should be accompanied by better private sector engagement. They must play a key role in driving the quality agenda and ensuring that qualifications fit skills required in the job market.

### Strategy 1: Training of trainers

Before investing resources in capacity building, it is necessary to determine the nature and extent of demand for trainers in Bhutan, especially given proposals to expand TVET provision. Once this is understood, a concrete implementation plan and guidelines will be developed.



#### Box 4 — Developing a cohort of competent trainers for Bhutan

Measures will focus on the initial and the continual professional development of trainers. The initial development of trainers will also be undertaken through the National Institute of Technical Education (NITE) or by using existing facilities in College of Education for imparting pedagogy skills and technical instruction.

The continuing and professional development of existing trainers will be essential to deliver higher-level programmes. This must focus on upgrading their pedagogy, technical and industrial skills. The upgrading of pedagogy skills will also be undertaken by NITE or by using existing facilities of colleges of education. Where possible upgrading of technical and industrial skills will also be undertaken in Bhutan in partnership with an overseas provider (Action 18 under Pillar II).

Where Bhutan does not have the expertise or capacity to deliver higher-level diploma or degree programmes, linkages will be formed with an overseas provider. The overseas provider will work with DHR to train a cohort of master trainers. Successful trainers will be awarded with an overseas qualification.

A final measure will involve a review of the current terms and conditions for trainers. In order to attract and retain competent people into the profession it will be important that they are provided with an appropriate package, remuneration and designation.

#### Strategy 2: Improve the quality of TVET programmes

The development of new occupational standards will be based on skills identified by the national workforce plans. The development of standards will be accompanied by effective learning packages and good assessment tools. What is equally important is the commitment of providers to use these standards. Under future reforms, all providers will be required to use BVQF standards (and be mandated to do so) if they receive public funds. This will be strictly enforced, helping to ensure a greater commitment to BVQF standards across Bhutan.

Improved quality assurance processes and systems will be designed and implemented across all TVET providers. Institute based assessment will determine the nature and extent of quality constraints faced by TVET providers. This will be followed by capacity building and targeted support for TVET managers and lead assessors. Part of this process for improving quality will involve strengthening the Industry Liaison and Publicity Unit (ILPU) and identifying how employers can play an improved role at the provider level. In order to ensure that a comprehensive approach is followed, a Quality Enhancement Programme will be introduced by DHR (see Box 5).



### Box 5 — Introduction of a Quality Enhancement Programme

The starting point for an improved quality enhancement programme will be a review of existing approaches used at the national and provider levels, as well as how they interact. National conferences will be held to provide opportunity for TVET providers to share their implementation experiences, identifying what works and what does not work, in their approach to quality. The findings from the conference and evaluation will provide the basis for an on-going strategic enhancement of learning and assessment at the provider level. The processes outlined above will be supported by the DHR and will result in a five-year rolling plan, as well as institutional enhancement strategies. A final component of the quality enhancement programme will be capacity building for institutional managers and lead assessors.

### Strategy 3: Identify new and innovative forms of delivery

A key measure for facilitating innovation and improved quality will be the setting up of a TVET Resource Centre. The TVET Resource Centre will be equipped with state of the art industry ready technology and highly competent staff capable of delivering new services. Resource centres are commonly used in other countries to facilitate improved commitment to quality (see Box 6). Local capacity will be developed with assistance from established overseas expert groups like the Institute of Technical Education (ITE) in Singapore and Technical and Further Education (TAFE) institutions in Australia to support the TVET Resource Centre. Knowledge transfer to other TVET providers will be a key part of the process. The example of KIOSC illustrates how a TVET Resource Centre will work. The main functions of the TVET Resource Centre in Bhutan are described in Box 7.



### Box 6 — The Knox Innovation, Opportunity and Sustainability Centre (KIOSC)

KIOSC is a collaborative programme between Swinburne University and a number of secondary schools in the City of Knox, Victoria, Australia in the eastern suburbs of Melbourne. Formally launched in August 2015, the KIOSC is a stunning energy efficient building equipped with modern training equipment, an excellent industry standard laboratory, and a rich array of interactive and immersive technology.

The innovative programmes at KIOSC aspire to equip year 7–10 students with the green skills necessary for a sustainable future. It also provides a range of Vocational Education and Training in School (VETiS) courses that address local and national skills shortages. The Centre is equipped with a range of flexible learning spaces which not only maximise the student's potential but also broaden their career aspirations. A key focus of the KIOSC is to establish and maintain close alliances with local businesses and community groups. This alliance allows students to experience learning in the real world through a range of integrated programmes and also helps them build a professional network for their possible future careers.

### Box 7 — Main functions to be carried out by a TVET Resource Centre

- Provide improved access to advanced technology (i.e., CNC machines, total station IT and filmmaking studios, SME related production and manufacturing equipment etc.) for employers, providers and community groups. This gives learners an opportunity to gain work ready skills at a much higher-level than is currently available in Bhutan.
- Fast track the development of skills in high demand through the delivery of short courses. The Sector Skills Advisory Boards will provide signals on areas of demand.
- Facilitate delivery of higher-level TVET programmes at TTIs and support the move towards internationally recognised standards for TVET.
- Expand the delivery of skills through the use of electronic media and innovative distance learning techniques.

The setting up of a twinning arrangement between TVET providers in Bhutan and those overseas will play an important role in improving standards and quality. Under this reform, twinning arrangement will help deliver higher-level TVET programmes where Bhutan does not have technical expertise or experience. The choice of partner will be influenced by where Bhutanese TVET graduates could obtain employment overseas. Currently, no decision has been made where TVET graduates could obtain employment, but possible countries include Japan and Australia. The starting point for setting up such an arrangement will be feasibility study to determine the functions of such a twinning arrangement, including the potential costs and also the benefits. It is envisaged that the TVET Resource Centre will manage this process.



## Strategy 4: Ensure the private sector plays a key role in delivering TVET

The private sector will play a key role in improving quality and responsiveness of the TVET system. The challenge facing the country is how to improve linkages between public TVET providers and private enterprises.

The government will create an enabling environment in which improved engagement can occur between TVET providers and private enterprises. Formal regulations or guidelines will be developed and accompanied by the introduction of incentives. A regulatory framework will be developed to guide the operation of an apprenticeship programme, defining roles and responsibilities of each partner. While regulations will cover more voluntarily arrangements, the MoLHR will ensure that these regulations are monitored and enforced. Funds will be made available to facilitate such partnerships.

Industry–institution linkage will be strengthened at the decentralised levels between providers and employers. ILPUs will be strengthened by providing more human and financial resources to facilitate improved linkages with employers. An innovative approach to an apprenticeship can be found in Indonesia (see Box 8).

### Box 8 — Employer engagement: work experience programmes from Indonesia

At Polteck SAKTI in Surabaya, Indonesia they developed a work experience programme that attempts to achieve a match between the needs of the learner and those of the employer. This involves a placement officer making regular visits to employers to carefully define what employers require from their students in terms of skills, knowledge and attributes. In addition, the placement officer attempts to structure the placement around a specific project and to use the students as a form of “junior consultant”. Obviously, this process is resource intensive and students are provided with induction training, and are regularly monitored during their placement. At the end of their work experience the students have to present their project to a panel, consisting of lecturers and industrialists, and this forms part of their final qualification. According to the university lecturers, a significant proportion of those participating in the programme will obtain employment with the same company when they graduate.



### Expected Outputs for Pillar II: Improving Quality

- Collaboration between providers and employers established to deliver quality TVET in a cost effective manner.
- A cohort of competent trainers developed to deliver diploma and higher-level diploma programmes.
- Qualifications that are fit-for-purpose developed.
- Improved engagement between the public and private sector.
- A TVET Resource Centre established to facilitate commitment to international standards.
- Frame work for knowledge transfer between overseas and national providers developed and implemented.
- Institute-industry linkages strengthened.
- Qualified TVET managers and trainers recruited.
- NITE established/College of Education facilities used for imparting pedagogy skills in technical instruction.

## PILLAR III: IMPROVE RELEVANCE

### What is the problem?

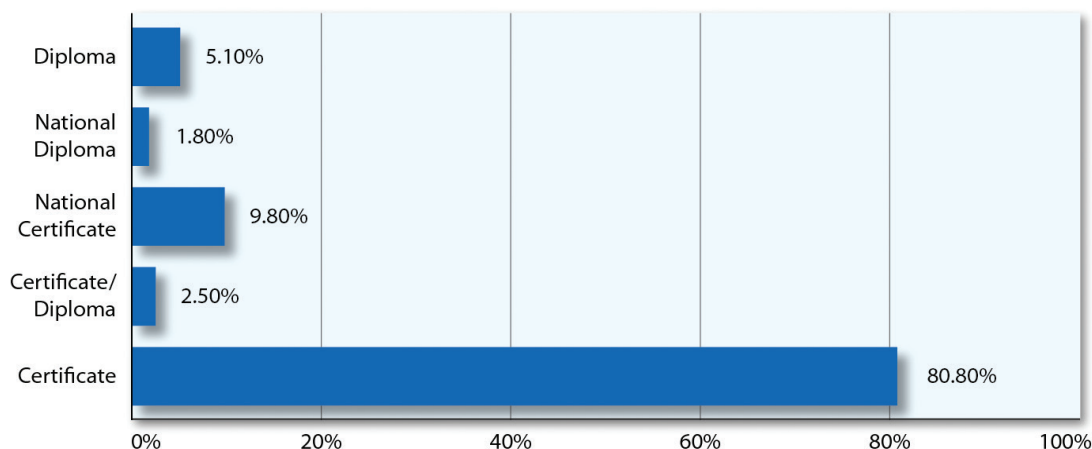
TVET is not responsive to current demands or aligned to prioritize government requirements. Evidence on relevance can be seen from the growing imbalances and skill mismatches in the labour market. Imbalances refer to the fact that the country is experiencing rising youth unemployment with growing number of industries not being able to find talent. Youth unemployment was at 9.4% in 2014 and has increased to 10.7% in 2015 while the country still experiences around 3,500 unfilled job vacancies. Evidence on hidden imbalances can also be seen by the number of foreign workers in the country.

There is also significant evidence on the growing skills gap facing Bhutan. The latest employers surveys conducted as part of National Workforce Plan 2016 highlighted that over 34% of enterprises experienced difficulties in recruiting people with the right skills. Evidence on the growing skills mismatch can also be seen by the large number of university graduates who are unable to find employment.

It is equally important to think about future imbalances and skill needs (and how to respond appropriately). It is estimated that 25% of the workforce will retire over the next 10 years and they will need to be replaced. There are also the skill requirements associated with economic development plans and policies of the government.

Evidence on the lack of relevance can also be seen by reference to the type of qualifications developed in Bhutan. The types of standards developed don't reflect the changing demands in the workplace or the demand for higher-level skills. In Bhutan 80% of programmes delivered lead only to qualifications at certificate level 1 or lower (see Figure 8). The failure to respond to the medium and higher skills in demand shows the weakness of the current system.

Figure 8 — Levels of TVET programmes in Bhutan



Source: 3<sup>rd</sup> National HRD Advisory Report, 2015

### How do we respond to this problem?

- Government and stakeholders need to obtain a much better understanding of what priority occupations should be supported by TVET. DHR must develop a list of priority occupational areas that have high demand.
- Measures must be introduced to ensure that better alignment is achieved between the supply and demand for skills. Employers should play a role in driving the TVET system, and providers must be committed to use occupational standards developed by the BVQF.
- Youth will have to be given employability skills, and existing programmes will be expanded to ensure that they can access the labour market. New programmes must be introduced to support employment overseas.
- Targeted support must be provided for those engaged in sustainable livelihoods, ensuring that productivity and income levels are raised in rural areas.



## Strategy 1: Improve intelligence on skills in demand

Intelligence will be required on what skills are in high demand. Intelligence on the labour market will be collected on government priorities and employer's needs. The collection and analysis of this intelligence will be disseminated as widely as possible so that people can make informed decisions about skills development.

The current priorities, areas and sectors for Bhutan's future growth are spelt out in the country's economic development policies and plans. However, the precise implications of changes in these priorities are not known. A dynamic system will be developed to track changes in demand and to ensure that signals on the skill requirements as per economic priority areas are identified.

It will also be equally important to obtain intelligence on specific skill areas and shortages faced in the workplace. This intelligence can be obtained directly from employers, and forums providing information on key occupational areas in high demand. Responsibility for facilitating this process would rest with the individual Sector Skills Advisory Boards (SSABs).

The DHR will have to compile a list of key occupations or skills in high demand based on the intelligence from the economic development plans, the SSABs, as well as labour market data from different sources. This would result in a list of occupations in high demand. Information on occupations in high demand will be disseminated as widely as possible so that planners, trainees and stakeholders can make more informed decisions about skills development. This dissemination will need to take place using different outlets such as mass media, interpersonal and social media according to the audience being targeted. The example from South Africa shows how this can be done (see Box 9)

### Box 9 — List of occupations in high demand: The experience of South Africa

South Africa has experienced significant skill shortages since the end of apartheid. This reflects the new growth patterns of the country and the fact that a significant majority were excluded from the training system. Given this situation, the government needed to identify in which occupational areas demand exceeded supply. A comprehensive methodology for collecting and analysing data was developed. This involved official survey data from the government statistical department, administrative data from the labour exchange centres, and labour market data produced by research organisations. Data was analysed by the Department of Higher Education and Training to determine the country's top 100 occupations in demand. This list provided the basis for awarding scholarships for learners. In addition, the list also provided the basis for providers to determine what type of TVET programmes to develop and deliver.



## Strategy 2: Align TVET programme to the needs of the labour market

For companies to improve productivity and compete effectively in global markets qualifications must be in line with job market demands and graduates must meet international standards. A number of measures are required within the TVET system to help improve quality and relevance of qualifications.

Improved employer engagement is key to improving the relevance of qualifications. SSABs will be established in priority sectors and continued support will be given in development and approval of occupational standards, as well as their assessment. The SSABs will also help to improve engagement between providers and enterprises for the delivery of apprenticeships, internships, etc.

Another complementary measure will be the setting up of an independent qualification authority. Currently, the body responsible for quality assurance and provision operate under the same Ministry. This reform will result in a separation between quality assurance and provision, helping to provide more legitimacy for BVQF.

This will be accompanied by increased utilisation of approved occupational standards. TVET providers who receive public funds will be required to use BVQF standards. The expansion of Recognition of Prior Learning (RPL) will also help expand utilisation of standards. RPL will be targeted at those in the informal sector who don't have qualifications.

A final measure for ensuring relevance will be the expansion of occupational standards in response to changing needs. Emphasis will be given to developing national diploma programmes (under BVQF) in identified areas of high demand. This process will be supported by the TVET Resource Centre.

## Strategy 3: Ensure youth develop more employability skills

Youth are one of the key target groups for the *TVET Blueprint*. They will be provided with the right skills and support to gain employment in Bhutan or overseas. Emphasis must also be given to young people who want to work for themselves, especially those living in rural areas. Different skills development interventions will be targeted towards achieving the goal of "One Youth with One Skill will lead to Zero Dependence" (1+1=0)



The starting point will be the expansion of existing measures, most significant of which is the Skills Training Programme (STP), comprising GSP, SEED and YES. One of the key shortcomings of the STP is the lack of industry specific knowledge. Programmes operating under the STP will provide young people with the opportunity to gain such skills.

Finding employment overseas will become increasingly important for youth due to the small number of formal employment opportunities in Bhutan. Targeted countries for employment will be identified, and suitable TVET graduates will be prepared for working overseas with appropriate cultural training including, if necessary, language training. Policy guidelines will be developed to support these processes.

Employability “soft skills” will be developed among young people. As indicated by industry, soft skills include: creativity/innovativeness, teamwork skills, passion/commitment/attitude, interpersonal and communication skills, leadership skills, knowledge of industry, emotional intelligence, entrepreneurship skills, and analytical skills.<sup>18</sup> It is envisaged that private TVET providers will be responsible for delivering these skills, leaving TTIs and IZCs to focus on their core business of delivering technical programmes. Business incubation units will be established in all public TTIs and IZCs, such as the one established in Chumey TTI.

#### Strategy 4: Improve skills levels for sustainable livelihoods

Support for basic skills development, training for SMEs and sustainable livelihoods through the current Village Skills Development Programme and Special Skills Development Programme, will be an important focus for MoLHR over the next 10 years. This will improve productivity of those living in rural areas and raise their income through non-farming activities or the sale of surplus produce in the market (see Box 10.)

##### Box 10 — Improving skills for sustainable livelihoods in Bhutan

There is a limited understanding of what skills are required to support productivity or raise incomes. Therefore, the starting point will be to undertake research on identifying the target groups, where they are located and what their skill needs are. The result of this research will provide the basis for developing a skills strategy for sustainable livelihoods. It is anticipated that emphasis must be given to technical skills, and how to establish and grow a business.

The DHR must work with other government departments to implement this strategy. This will ensure that a more integrated government approach is taken for SME development. Skills development is only one of the components required for SME development. It is also important that potential SMEs have access to other services, such as funds and marketing advice. Adopting such an approach will ensure a sustainable approach to SME development. Finally, it will be important that training for the informal sector are also accredited in future.





### Expected Outputs for Pillar III: Improving Relevance

- Improved match between TVET qualifications and the needs of the labour market.
- Skills development aligned to economic priorities.
- Skills gap identified by the MoLHR
- Skills training for informal sector and livelihoods activities improved.
- Employers involved in the development of qualifications.
- Employment opportunities for youth increased in Bhutan and overseas.

## PILLAR IV: STRENGTHEN MANAGEMENT SYSTEMS

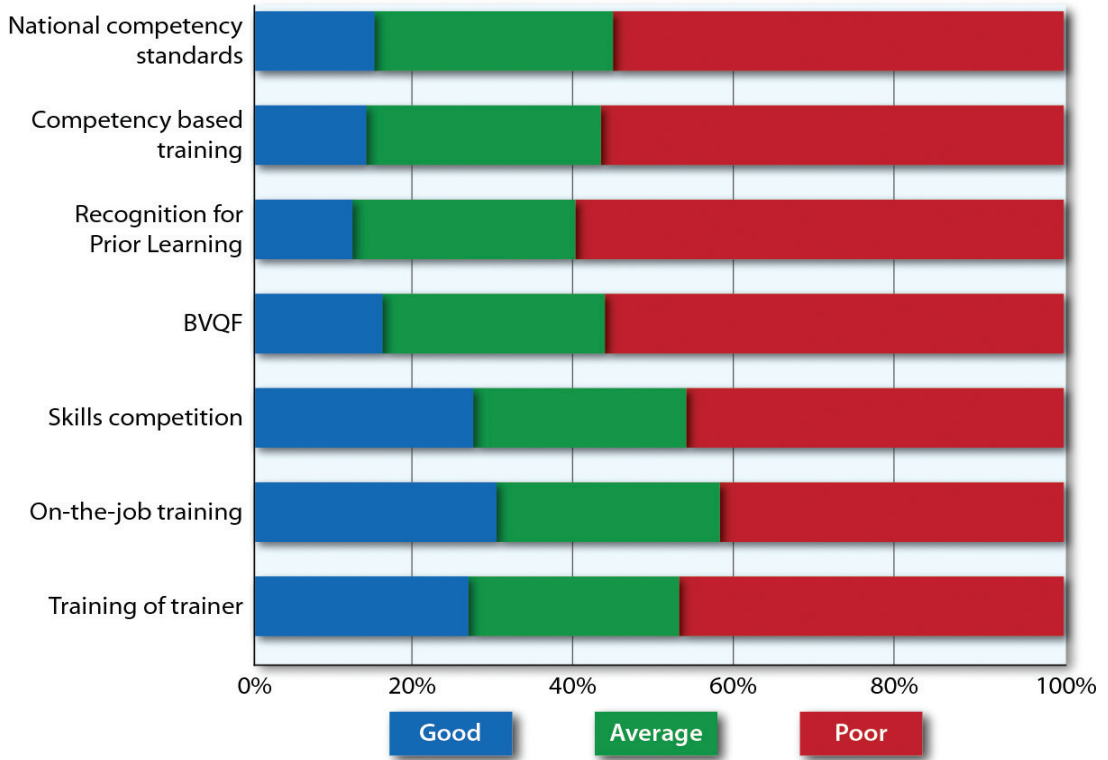
### What is the problem?

The management of the TVET system is characterised by structural weaknesses. MoLHR does not have a coherent labour market information system to guide decision making. Information is collected in an ad-hoc manner and based on individual surveys or studies. As the TVET system expands, it will be important to ensure that more data is collected to understand the labour market and guide decisions on how resources are allocated for TVET.

There is also limited engagement of the private sector in the planning or implementation process. At the national level no formalised structures exist to involve employers or stakeholders in decision making about TVET or skills development. Structures have been established at the provider level, i.e., Industry Liaison and Publicity Units. However, they have not operated effectively due to resource and capacity constraints. As a consequence, industries' knowledge or understanding on the type of programmes or TVET initiatives provided by the MoLHR is very low (see Figure 9).



Figure 9 — Industries awareness of TVET programmes or initiatives



Source: 3<sup>rd</sup> National HRD Advisory Report, 2015

The DHR has limited capacity to measure progress or the impact that certain interventions have on skills development or employment. As more resources are invested in the TVET system, the DHR will need to have a better understanding of what outcomes are being achieved, including at the national and provider levels.

### How do we respond to this problem?

- DHR must assist in establishing a coherent and comprehensive Labour Market Information System to understand priority areas for supporting skills development.
- SSABs must be set-up to bring together employers in specific sectors. The SSABs should play an active role in determining skill needs in priority sectors.
- Employers should work more effectively with public TVET providers to support delivery. This will be facilitated through building the capacity of the Industry Liaison and Publicity Unit.
- Finally, it will be important that DHR develops a performance based policy system for TVET. This will take time and cannot be done overnight. It will be vital that DHR, along with stakeholders, have a much clearer understanding of how the TVET sector is performing, how much it costs, and what monitoring system must be strengthened to track progress.

### Strategy 1: Setting up of a coherent and strategic information systems

The DHR will collaborate with the DoE in the collection and analysis of data by the LMIS. It will be critical that DHR and DoE manage the LMIS so that specific skills development indicators are obtained. The data collection strategy should cover what formalised surveys will need to be conducted and what intelligence should be collected from other government departments, as well as perception of employers through the SSABs. It will be important that the LMIS also tracks overseas demand and help identify where employment opportunities may exist for Bhutanese.

In middle income countries, LMIS plays an important role in ensuring that the labour market operates effectively. The outcomes from the LMIS will provide signals on where changes are occurring in the labour market, helping policy makers determine investments in TVET sector. At the same time, valid information systems will also provide information for young people about their career choice.



## Strategy 2: Strengthening the management and coordination of TVET

In a modern TVET system employers play a key role in ensuring that provision is demand orientated and responsive to the changing needs of the labour market. Employers will play an important role in helping planners to understand the priority demand and also develop occupational standards. This will be achieved through the setting up of a national TVET coordination committee comprising of all government secretaries and chaired by the Minister of MoLHR. Further sector specific SSABs will be established (see Box 11).

### Box 11 — Establishment of improved employer engagement through setting up SSABs

The key to moving forward with employer engagement will be the setting up of SSABs in priority sectors. It is anticipated that they would be established for the following sectors: tourism, construction, manufacturing. These sectors provide a representative coverage of the priority sectors and occupations defined in the Five Jewels. The SSABs will require a mandate to guide the structure and functions of these boards. The SSABs will also have representatives from the MoLHR and providers. The functions will include identifying the key changes in the sector and how they impact on skills development. The SSABs will advise the MoLHR and national bodies on important sector trends, especially where there are important implications for growth and employment.

There will be a number of stages in moving forward with the SSABs. The first stage in establishing the SSABs will be to pilot the approach in one sector. This will involve appointment of members, setting up of executive structures, developing the mandate, undertaking research, determining needs in the sector and supporting the development of occupational standards. The pilot will help resolve difficulties and determine the way forward for a national rollout.

## Strategy 3: Ensuring the private sector plays a key role in delivering TVET

The private sector will be one of the key players for moving towards a more responsive and demand driven system. Appropriate structures, regulatory frameworks and incentives will be introduced to facilitate linkages between providers and employers.

Responsibility for forging links with employers at the provider level rests with the Industry Liaison and Publicity Units. These units will play a key role in helping to expand provision through forging links with employers. Future partnerships are expected to cover a variety of issues ranging from the use of facilities or equipment, to the provision of grants or technical expertise. Funds will be made available to expand partnership and establish a culture of working together between the public and private sectors.



In order for partnership between public TVET providers and the private sector to operate effectively, there will be a need to establish an appropriate regulatory framework. This regulatory framework must be accompanied by appropriate incentives. The incentives will mainly consist of funds allocated to specific interventions in a certain sector and a TVET provider. The SSABs will play a key role in facilitating these relationships. The vehicle for implementation will be apprenticeship program, on the job training, industrial attachment, resource sharing and outsourcing of training programs. An example from Singapore demonstrates how employers can play an important role in influencing the planning and management of programmes at the institutional level, provided that the appropriate regulations are in place (see Box 12).

### Box 12 — Employer Engagement in Polytechnics — the case of Singapore

Employers play an important role in driving polytechnic education in Singapore. At the national level the government, together with representatives from employer and union bodies, determine the priority sectors and occupations that Singapore needs to develop over the medium and long-term. These priorities influence funding priorities and correspondingly the type of programme delivered by polytechnics. The government has also introduced a charter to ensure employers have a strong involvement at the institutional level. Under this charter the governing bodies at polytechnics are responsible for the awarding of their qualifications and for the management of their own resources. The representation on this board includes employers, stakeholders and academic members of the polytechnic appointed by the Education Minister. This helps to ensure that industry has an important input into the five-year strategic plans developed by each of the country's five polytechnics. Subsequently, within each polytechnic there are a series of advisory councils at the school level. These are formal structures in which employers have a mandate to influence the design and content of diploma level programmes, including the assessment processes and learning outcomes. Representation on each board is determined by the type of programme. Normally they meet every six months to monitor progress at the school level.



## Strategy 4: Moving towards a performance based policy system

With the expansion of the TVET system MoLHR must have the capacity to measure performance and ensure resources are being used in a cost-effective manner. This will require the setting up of a performance based system.

There are different levels for measuring performance which must occur at the national, sector and provider levels. It will be necessary to understand progress towards performance at the different levels. There are different components to setting up a performance based system, ranging from the identification of targets, to the monitoring of progress and the implementation of a reward system.

The setting up of a performance based system will take time. It will be important that the government takes incremental steps to ensure that foundations are in place before a comprehensive results-based system can be introduced.

### **Expected Outputs for Pillar IV: Strengthening Management Systems**

- Improved management and coordination of TVET.
- Sector Skills Advisory Boards established.
- Regulatory framework for private sector engagement implemented.
- An information system established.
- A performance based planning system introduced.
- Provider level management and capacity strengthened.

## 8. MOVING FORWARD WITH THE TRANSFORMATION OF THE TVET SYSTEM

The Pillars and Strategies guiding the transformation process have been outlined in preceding sections. The second part of the framework identifies how to move forward with implementation and what actions are required to tackle the challenges facing Bhutan's TVET system. Indicative cost estimates to support the actions given in Appendix 1.

The relationship between the Pillars, Strategies and Actions are shown in Table 3. This is followed by a separate section elucidating actions that are needed to support effective implementation over a 10 year period. This time period is divided into separate implementation periods according to how long the action will take to implement. The first period is the short-term, lasting between 2 years. The second is the medium-term, covering a period of three years. Finally, the long-term covers a period of 4 years.

Actions in the table are plotted within the three time periods based on Figure 10, Action Priority Matrix. Given the timeframe of ten years for implementation, actions which fall in the category of "Quick Wins" and "Major Projects" have been considered to achieve the objectives of the *TVET Blueprint*.

Quick Wins (High Impact, Low Effort): These are the most attractive projects, with good return for relatively little effort. Major Projects (High Impact, High Effort): While these give good returns, they also take a long time to complete and require huge investment. Most of the capital intensive projects such as new construction fall in this category.

Figure 10 — Action Priority Matrix



Source: Time management tools from mindtools.com



Table 3 — Implementation Plan for Blueprint Pillars

Pillar I — Action Plan			Medium-Term 2019–2021	Long-Term 2022–2026
Year	Short-Term 2016–2018	Medium-Term 2019–2021	Long-Term 2022–2026	
Strategy 1: Expand Capacity to meet future needs		Action 1: Construction and equipping of a vocational college	Operationalisation of the vocational college (electrical and civil)	
	Action 3: Building of new premises at TTIs/IZC			
Strategy 2: Facilitate the expansion of private TVET providers	Action 5: Development of guidelines for TVET competitive fund	Action 4: Utilisation of new facilities at TTIs and IZCs		
	Action 6: Setting up of TVET competitive fund for providers			
Strategy 3: Improve utilisation of existing resources	Action 8: Improve utilisation of existing resources	Action 7: Disbursement of funds & expand provision		
		Action 9: Forge partnership with private sector partners to deliver TVET		
Strategy 4: Promoting equity enhancements		Action 10: Undertake baseline study		
		Action 11: Appoint gender focal points		
Strategy 5: Developing positive images of TVET		Action 12: Implementation of mainstream strategies		
		Action 13: Incentivise TVET enrolment through provision of increased stipends		
		Action 14: Improve career guidance		
		Action 15: Develop and implement marketing campaign for TVET promotion		





Pillar II — Action Plan			
Year	Short-Term 2016–2018	Medium-Term 2019–2021	Long-Term 2022–2026
Strategy 1: Training of trainers	Action 16: Develop HRD masterplan for TVET trainers	Action 17: Training of existing and new trainers in better pedagogy and technical skills Action 18: Establish linkages with overseas providers	
	Action 17: Training of existing and new trainers in better pedagogy and technical skills		
	Action 18: Establish linkages with overseas providers		
Strategy 2: Improve the relevance and quality of TVET programmes	Action 19: Develop higher-level TVET programmes and support their delivery	Action 20: Encourage diversification in the types of TVET programmes on offer Action 21: Support the increased utilisation of BVQF qualifications Action 22: Recruit qualified TVET managers and trainers	
	Action 20: Encourage diversification in the types of TVET programmes on offer		
	Action 21: Support the increased utilisation of BVQF qualifications		
	Action 22: Recruit qualified TVET managers and trainers		
	Action 23: Improve quality assurance process for providers (quality enhancement programme)		
Strategy 3: Deliver TVET using Innovative learning methods	Action 26: Establish twinning arrangements with overseas providers	Action 24: Ensure industry plays an improved role in delivering programmes	
		Action 25: Establish a monitoring & reporting structure	
		Action 27: Establish a TVET Resource Centre; NITE/College of Education facilities used for imparting pedagogy skills in technical instruction	
Strategy 4: Improve planning and sustainability of TVET providers	Action 28: Enhance capacity of managers	Action 29: Develop HRD plans for providers levels base on action 16	Action :30 Develop and implement cost recovery strategies
		Action 29: Develop HRD plans for providers levels base on action 16	
		Action :30 Develop and implement cost recovery strategies	



Pillar III — Action Plan			
Year	Short-Term 2016–2018	Medium-Term 2019–2021	Long-Term 2022–2026
Strategy 1: Improve intelligence on demand	Action 31: Synergize TVET programs with economic development plans		
		Action 32: Ensure regular feed-back on workplace demand	
		Action 33: Develop a list of occupations in high demand	
		Action 34: Dissemination of intelligence	
Strategy 2: Align TVET programmes to the needs of the labour market	Action 35: Set up an independent qualification authority		
		Action 36: Improve employer's participation in TVET	
		Action 37: Facilitate the use of competency standards	
Strategy 3: Support employability among youth		Action 38: Support the implementation of education path ways as per the Education Blueprint and BQF	
		Action 39: Fast track skills training for critical job demand	
	Action 40: Improve & expand existing programmes		
	Action 41: Develop employability skills (soft skills)		
Strategy 4: Improving support for livelihoods	Action 42: Support overseas employment	Action 43: Design skills certification for bridging courses	
	Action 44: Develop basic and livelihood skills development strategy	Action 45: Develop targeted skills training for SME development	
		Action 46: Accreditation of basic and livelihood skills training	

Pillar IV — Action Plan			
Year	Short-Term 2016–2018	Medium-Term 2019–2021	Long-Term 2022–2026
Strategy 1: Establish coherent and strategic information systems	Action 47: Undertake assessment of existing information system		
		Action 48: Determine key labour market indicators	
		Action 49: Develop and implement data collection and analysis framework	
Strategy 2: Improved engagement of stakeholders in the planning and management of the TVET system at the sector level		Action 50: Develop and implement dissemination strategy	
		Action 51: Develop mandate and ToRs for Sector Skill Advisory Boards	
		Action 52: Pilot SSABs in tourism and construction Action 53: Establish and operationalise SSABs across priority sectors	
Strategy 3: Facilitate Private Sector Engagement in TVET delivery		Action 54: Develop links between private sector providers and employers	
		Action 55: Establish regulatory framework for apprenticeship and internship programmes	
		Action 56: Expand internship/ apprenticeship programmes	
Strategy 4: Moving towards a performance based policy system		Action 57: Setting up of performance based targets for TVET at the national level	
		Action 58: Support the move towards a unit cost model	
	Action 59: Restructuring and strengthening management capacity of TTIs and IZCs		Action 60: Develop a performance based model for TVET providers



## SALIENT FEATURES OF PILLAR-I ACTION PLAN

The first strategy focuses on expanding access through the capital investment plan of the MoLHR. Specific actions focus on the construction and equipping of a new vocational college (offering national diploma in electrical and civil engineering) and also the expansion of existing TTIs and IZCs. Capital investment takes a long time and will begin in the short-term and finish in the medium-term. The vocational college will become operational in the medium term.

The second strategy under Pillar I is to facilitate private sector participation in TVET provision. The first action is to establish a TVET competitive fund so that private providers can compete for equipment funding and for training of youth. Funds will be apportioned based on capacity of providers. The focus of training will be guided by labour market needs and the critical skills demand as indicated by the *National Workforce Plan*. While modality and guidelines for the competitive fund will be developed and established in the short-term, disbursements are expected in the medium-term.

The third strategy for expansion is improving utilisation of existing resources. Actions range from the provision of evening programmes, to the delivery of programmes on the weekend and during vacations. While evening programs in TTIs/IZCs will take place over the short-term, DHR will facilitate the TVET providers to work with employers and community groups to expand the delivery of programmes in the medium-term.

The final strategy under Pillar I focuses on advocacy for equity enhancement and developing positive images of TVET and TVET occupations. Most of the actions under this pillar will be dependent on quality enhancement programmes. A base-line survey will be carried out to identify the barriers to equity enrolment (both gender and disability). Based on the baseline survey, long-term equity enhancement programs will be proposed and implemented. In terms of building a positive image of TVET and technical jobs, multi-pronged actions will be implemented focusing on improving career guidance services in the schools and TVET institutes, providing higher stipends to attract more talented learners into the TVET system in the medium term. Also TVET promotion and advocacy strategy that includes key messages for delineated audiences, media and communication channels, dissemination platforms, etc. will be developed and implemented in the medium to long term.

## SALIENT FEATURES OF PILLAR-II ACTION PLAN

Improving quality involves a number of complementary strategies and actions thereof. The first strategy under Pillar II focuses on developing a cohort of competent trainers. Before investing any resources in capacity development of trainers, A HRD master plan for the TVET sector will be developed to determine requirement of trainers disaggregated by technical areas and academic qualifications. Subsequent actions will focus on the initial training of instructors entering the profession, and professional development of those already in the profession. As outlined previously, this will involve using the facilities at NITE or the colleges of education. At the higher level, a twinning arrangement with an overseas provider will be used to support the development and delivery of higher-level programmes for trainers. All of these actions will start in the immediate to short-term.

A number of different actions are identified to implement the strategy focused on improving relevance and quality of TVET programmes. Most of the actions will start in the immediate to short-term and finish in the medium-term. The first action involves the development of diploma and higher level diploma programmes, as well as a diversification of existing programmes. Strong linkages will be forged with overseas TVET providers to facilitate delivery of joint programs targeted at organized overseas employment.

The third quality strategy deals with expanding BVQF qualifications. The first action requires changes to funding arrangements to ensure that any provider who receives MoLHR funds must use BVQF approved qualifications. This will also be implemented over the immediate to short-term, and continued into the medium-term. A final action over the medium term will be the quality enhancement programme.

A penultimate set of actions will support the innovative learning strategy. The key action will involve the setting up of a TVET Resource Centre. This will help other providers to deliver higher level and more diverse TVET programmes, as well as support access to advanced technical equipment for industry and community groups. The setting up of the Resource Centre will begin in the immediate-term and will be facilitated by a twinning arrangement with an overseas provider. Initially, operation of the Resource Centre will depend on an overseas providers until national capacity has been developed.

At the provider level actions will focus on building the capacity of the ILPU. This will continue into the long-term since this cannot be done quickly and will take time to develop a culture of working with the private sector.



The final strategy tackles how to improve the planning and sustainability of providers. The first action will involve undertaking a capacity assessment of managers to determine their suitability and training requirements (in the light of changing job descriptions). This will provide the basis for a training plan, most of which will occur on the job. Where necessary, overseas training/attachment will be implemented. Other actions will occur in the medium-term once managers have been trained. These actions focus on developing an HRD plan for providers and the implementation of cost recovery strategies. The trained managers will play a key role in facilitating the implementation of these actions over the medium to long-term.

## SALIENT FEATURES OF PILLAR-III ACTION PLAN

There are four strategies under Pillar III. The first strategy focuses on aligning TVET to the needs of the labour market. A number of actions are necessary to achieve this strategy. The first will begin immediately by setting up of an independent qualification authority. This must be done to help separate provision and regulation of the TVET. Other actions for aligning TVET to the needs of the labour market include improving employer participation, facilitating the use of competency standards, and earnestly implementing the proposed education pathway in the *Education Blueprint*.

The objective of the second strategy is to improve collection of labour market intelligence in collaboration with the DoE. The first action is scheduled in the short-term and involves determining skill requirements in the labour market, based mainly on development plans (guided by Five Jewels). The second action focuses on obtaining feed-back from employers on critical skills in demand. This will be implemented in the short to medium-term. These two actions will collectively enable the MoLHR to develop a list of occupations in demand over the medium-term and disseminate this intelligence in the long-term. It will take time before the systems are in place to collect, analyse and produce such intelligence.

The third strategy focuses on supporting employability among youth. The first action that will be implemented over the medium-term is the fast tracking of skills in high demand. Under this action, DHR will develop and impart short skills programmes to meet the short-term critical job demand indicated by the National Workforce 2016. They will also work with private providers to deliver these short programmes to facilitate youth employment. Once established, the TVET Resource Centre will take up the task of developing and imparting skills programmes for the long-term critical job demand.

Other more immediate actions to facilitate youth employment include the expansion of existing programmes, and helping young people to gain overseas employment. Existing programmes will be improved through the incorporation of a module on work ready skills allowing young people to have a better understanding of the workplace. Support for overseas employment will involve the DHR forging political links with selected countries. Work on these actions will start immediately. A final action will involve a certification course for a bridging training programme to improve employment opportunities for youth. This will start in the medium-term.

A final strategy for aligning and linking TVET with the labour market focuses on skills for livelihoods. The first action will be the development of strategy in the short-term. This is important for ensuring a more collaborative approach of different government agencies towards basic skills and livelihoods development especially for the labour force in the agriculture sector. Once the strategy is developed, it is possible to support implementation and accreditation of those who have received training. Both of these actions will take place over the medium-term.

## SALIENT FEATURES OF PILLAR-IV ACTION PLAN

The first strategy for strengthening the management system focuses on setting up a strategic and coherent information system. A number of related actions are required. The first action involves an assessment, carried out in the short-term, to determine the capacity and suitability of existing information systems to support management and planning. This will be followed by the development of a data collection and analysis framework, and dissemination strategy. The data collection segment of the strategy will look at the type of data to be collected. The data analysis segment will determine how the indicators are produced and what analysis must take place. The dissemination segment will identify how to distribute intelligence so that improved decision making can take place.

The second strategy focuses on how to improve employer engagement in the planning and management of the TVET system. The key mechanism for ensuring such engagement will be the setting up of SSABs. Therefore, the first action over the short-term will be the development of mandate and detailed terms of reference (ToRs) for SSABs. This will require consultation with employers and other partners regarding the functions of the SSABs. Once the mandate and ToRs have been developed, the first action (in the medium-term) will be to pilot one or two SSABs in priority sectors such as Tourism and Construction. Only then will it be possible to roll out a national system of SSABs over the medium to long-term.



The third strategy is to facilitate private sector engagement at the provider level. All of these actions are complementary and will begin by strengthening the capacity of the ILPU of TVET providers. Another significant action will involve the introduction of a regulatory framework and development of guidelines for employers, providers and learners for an improved apprenticeship and internship programmes. The guidelines will spell out the responsibilities of each partner. The SSABs will play a key role in facilitating this process, especially coordination between employers and TVET providers.

The final strategy will support the move towards a performance-based system. A number of actions will have to be accomplished successfully. The starting point for moving in this direction will be the identification of national targets for TVET, particularly around enrolment targets and job placements. Consultations with stakeholders will be carried out and agreements reached before transitioning to a performance based system in the medium-term. A costing exercise will be carried out to determine unit costs of skills training for different occupations and qualification levels to support implementation of the system. This can help planners determine the cost of upgrading and expanding TVET. Over the long-term, plans can be made for developing a performance based policy system.



Appendix 1: Indicative Cost Estimation for Implementation of TVET Blueprint.

Pillars & Strategies	Action plan	Cost estimates (in million Nu.)	Strategy Cost (in million Nu.)	Remarks
<b>Pillar 1: Expand TVET Provision</b>				
Strategy 1: Expand Capacity to meet future needs	Action 1: The construction of vocational college	750.00		Based on Dekling TTI, which has capacity of 500 and was completed in 2014. Inflation and cost index incorporated. Capacity of new college 1,000.
	Action 2: The operationalization of vocational college (electrical and civil)	100.00		Tools and equipment for new college
	Action 3: The building of new premises at TTIs	413.00	3,663.00	Based on expansion plan of Ministry (Sept.2015). Inflation and cost index incorporated.
	Action 4: The utilization of new facilities at TTIs and IZCs	2,400.00		Cost of training about 27,000 students in the TTIs and IZCs taking into account the expansion and new construction. Per head cost 90,000 per head
	Action 5: Development of guidelines for competitive funds	0.50		Consultancy work
	Action 6: Setting up of competitive fund for providers	1,662.00	1,662.50	For skilling about 33000 at approximate cost of Nu. 50,000 per head trained
	Action 7: Disbursement of funds & expand provision	-		Cost estimated in Action 6
	Action 8: Improved utilization of existing resources	-		Cost saving
	Action 9: Work with partners to deliver TVET	512.00	512.00	Cost for SSDP and VSDP - skilling of about 33,000 at per head cost of Nu. 15,400/- per head trained
	Action 10: Undertake baseline study	3.25		Cost of consultancy services to carry out the base-line survey
	Action 11: Appointed gender focal point	-	3.25	Cost not anticipated
	Action 12: Implementation of mainstream strategies	-		Cost not anticipated
	Action 13: Attract more talented young people into TVET through stipends	670.00		Additional cost of stipend increase from 1500 to 3000 per month accounted for about 63,800 to be skilled from 2020 to 2024 under both formal and alternative mode
	Action 14: Improved Career guidance	15.00	690.96	Costing based on recommendation from career guidance expert (capacity development, streamline career counseling, developing web base portal, advocacy materials)
	Action 15: Develop improved marketing campaign for TVET	5.96		Workshop, curriculum review, teacher training
<b>Cost of Pillar 1</b>		<b>6,531.71</b>		



Pillars & Strategies	Action plan	Cost estimates (in million Nu.)	Strategy Cost (in million Nu.)	Remarks
<b>Pillar II: Improve Quality</b>				
Strategy 1: Training of trainers	Action 16: Develop HRD masterplan for TVET trainers	1.00	131.00	Dev. national strategy/guidelines to determine nature & extend of instructors required etc.
	Action 17: Training for the provision of existing and new trainers	100.00		Cost of implementation of the HRD masterplan for TVET trainers
	Action 18: Establish linkages with overseas providers	30.00		
Strategy 2: Improve the relevance and quality of TVET programmes	Action 19: Develop higher-level TVET programmes and support their delivery	1.00	27.00	Cost estimate already done under Action 17
	Action 20: Encourage diversification in the types of TVET programmes on offer	20.00		cost of about 50 new curricullums
	Action 21: Support the increased utilization of BVQF qualifications	5.00		enforcement of BVQF
	Action 22: Recruit qualified TVET managers and trainers	-		no cost
	Action 23: Improve quality assurance process for providers (quality enhancement programme)	1.00		Revision of existing and development of QMS manuals, workshops/meetings
Strategy 3: Deliver TVET using Innovative learning methods	Action 24: Ensure industry plays an improved role in deliv- ering of programmes	1.00	732.00	Meeting, workshops, feedback mechanism developed
	Action 25: Establish a monitoring & reporting structure	1.00		
	Action 26: Establish twinning arrangements with overseas providers	100.00		TVET providers providing higher standard course
	Action 27: Establish a TVET Resource Centre & NITE/ College of Education facilities used for imparting pedagogy skills in technical instruction.	630.00		Construction of Resource Centre and buying tools and equipment
	Action 28: Enhance capacity of managers	3.00		
Strategy 4: Improve planning and sustainability of TVET providers	Action 29: Develop HRD plans at providers level based on action 16	8.00	11.00	Develop regulation and guidelines and HRD plans at provider level
	Action 30: Ensure recovery strategies are in place	-		Cost not anticipated
	<b>Cost of Pillar II</b>	<b>901.00</b>		

Pillars & Strategies	Action plan	Cost estimates (in million Nu.)	Strategy Cost (in million Nu.)	Remarks
<b>Pillar III: Improve relevance</b>				
Strategy 1: Improve intelligence on demand	Action 31: Synergize TVET programs with economic development plans	-		Cost not anticipated
	Action 32: Ensure regular feed-back on workplace demand	0.70		
	Action 33: Develop a list of occupations in high demand	-	4.10	Cost not anticipated
	Action 34: Dissemination of intelligence	3.40		
Strategy 1: Align TVET to the needs of the labour market	Action 35: Set up an independent qualification authority	0.50		Bhutan Qualification Authority being set up as per the OD directive
	Action 36: Improve employer's participation in TVET	1.00		Minimal cost on workshops and meeting
	Action 37: Facilitate the use of competency standards	1.00	8.46	
	Action 38: Support the implementation of education pathways as per the Education Blueprint and BQF	5.96		Workshop and teacher trainings
	Action 39: Fast track training for critical job demand	-		Cost not anticipated
	Action 40: Improvements & expansion of existing programmes	2.00		
Strategy 3: Support employability among youth	Action 41: Develop employability skills	10.00		
	Action 42: Support overseas employment	-	12.00	Cost estimates done in Action 25
	Action 43: Design skills certification for bridging courses for job seekers	-		Cost estimates covered in other activities and action 6
	Action 44: Develop a basic and livelihood skills development strategy	1.00		For consultancy and development of strategy
Strategy 4: Improving support for livelihoods	Action 45: Develop targeted skills training for SME development	-	2.00	Cost estimates done in Action 6 and Action 9
	Action 46: Accreditation of any basic and livelihood skills training	1.00		
<b>Cost of Pillar III</b>		<b>26.56</b>		



Pillars & Strategies	Action plan	Cost estimates (in million Nu.)	Strategy Cost (in million Nu.)	Remarks
<b>Pillar IV: Strengthen Management Systems</b>				
Strategy 1: Establish coherent and strategic information systems	Action 47: Undertake a feasibility study	1.00		Consultancy, meeting and workshop cost
	Action 48: Determine indicators	-	3.00	
Strategy 2: Improved engagement of stakeholders in the planning and management of the TVET system at the sector level	Action 49: Develop data collection strategy	1.00		Develop web base portal
	Action 50: Develop dissemination strategy	1.00		Cost for consultancy work
	Action 51: Develop mandate for Sector Skill Advisory Boards	-		Cost not anticipated
	Action 52: Pilot SSAB	1.00	6.00	
	Action 53: Establish SSABs across priority sectors and implement	5.00		
	Action 54: Develop links between providers and employers	2.50		
Strategy 3: Facilitate Private Sector Engagement in TVET delivery	Action 55: Establish regulatory framework for apprenticeship programme	1.60		Workshops and stakeholder meetings
	Action 56: Expand apprenticeship programme	442.00	446.10	A total of 16,617 will be trained through ATP (per head cost BTN. 26,600)
Strategy 4: Moving towards a performance based policy system	Action 57: Setting up of a performance based targets at the national level	1.00		Development of funding guidelines or regulation
	Action 58: Support the move towards a unit cost model	-		No cost anticipated
	Action 59: Restructuring and strengthening management capacity of TTIs and IZCs	2.00	3.00	
	Action 60: Develop a performance based model for TVET providers			Cost estimate done in Action 56
	<b>Cost of Pillar IV</b>	<b>458.10</b>		
	<b>TOTAL COST (in million Nu.)</b>	<b>7,913.27</b>		

## Key Cost Simulation Indicators

Key Cost Simulation Indicators - Projection for Skills Development (2017 to 2025)											
Qualification	2017	2018	2019	2020	2021	2022	2023	2024	2025	TOTAL	TOTAL
Class X	3250	3314	3449	3445	3454	3373	2866	3160	3124	29,435	29,435
Class XII	5964	5740	6191	6155	6580	6356	6495	6671	6786	56,937	56,937
University Graduates	1794	2041	2199	2402	2604	2785	2988	3184	3380	23,378	23,378
<b>Total Individuals to be Skilled:</b>	<b>11008</b>	<b>11095</b>	<b>11839</b>	<b>12002</b>	<b>12638</b>	<b>12514</b>	<b>12349</b>	<b>13015</b>	<b>13289</b>	<b>109750</b>	<b>109750</b>
TTI/IZC (current)	1500	1680	1882	2107	2360	2644	2961	3316	3714	22,163	22,163
New construction (TTI)				500	1000	1000	1000	1000	1000	4,500	4,500
<b>Total of Government TTIs/IZC</b>	<b>1500</b>	<b>1680</b>	<b>1882</b>	<b>2107</b>	<b>2860</b>	<b>3644</b>	<b>3961</b>	<b>4316</b>	<b>4714</b>	<b>26,663</b>	<b>26,663</b>
<b>Alternative mode of TVET program</b>	<b>9508</b>	<b>9415</b>	<b>9958</b>	<b>9895</b>	<b>9778</b>	<b>8871</b>	<b>8388</b>	<b>8699</b>	<b>8575</b>	<b>83,086</b>	<b>83,086</b>
1. ATP	1902	1883	1992	1979	1956	1774	1678	1740	1715	16,617	16,617
2. SSDP	1902	1883	1992	1979	1956	1774	1678	1740	1715	16,617	16,617
3. VSDP	1902	1883	1992	1979	1956	1774	1678	1740	1715	16,617	16,617
4. STP (private providers)	3803	3766	3983	3958	3911	3548	3355	3480	3430	33,235	33,235
<b>Note:</b>											
1. Source: National Workforce Plan 2012-22 for class X, XII and 40% university graduates											
2. Annual expansion of 12% accounted in existing TTIs and IZCs											
3. Alternative mode of TVET delivery distribution: ATP = 20%, SSDP = 20%, VSDP = 20% and STP = 40% of the individuals requiring skilling											
Cost Simulation for Skills Development Programs ( 2017-2025)											
	2017	2018	2019	2020	2021	2022	2023	2024	2025	TOTAL Cost	TOTAL Cost
Government TTIs/IZC	135,000,000	151,200,000	169,344,000	189,665,280	257,425,114	327,916,127	356,466,062	388,441,990	424,255,029	2,399,713,602	2,399,713,602
Alternative mode of TVET program:											
1. ATP	50,584,688	50,086,736	52,974,432	52,639,315	52,019,604	47,192,057	44,625,575	46,279,170	45,617,584	442,019,161	442,019,161
2. SSDP	29,285,872	28,997,584	30,669,408	30,475,393	30,116,613	27,321,717	25,835,859	26,793,204	26,410,180	255,905,830	255,905,830
3. VSDP	29,285,872	28,997,584	30,669,408	30,475,393	30,116,613	27,321,717	25,835,859	26,793,204	26,410,180	255,905,830	255,905,830
4. STP (private providers)	190,168,000	188,296,000	199,152,000	197,892,160	195,562,419	177,413,750	167,765,319	173,981,843	171,494,676	1,661,726,168	1,661,726,168
<b>Note:</b>											
1. Unit cost of training in TTIs/IZCs = Nu. 90,000											
2. Unit cost for STP = 50000, ATP = 26600, SSDP/VSDP = 15400											



