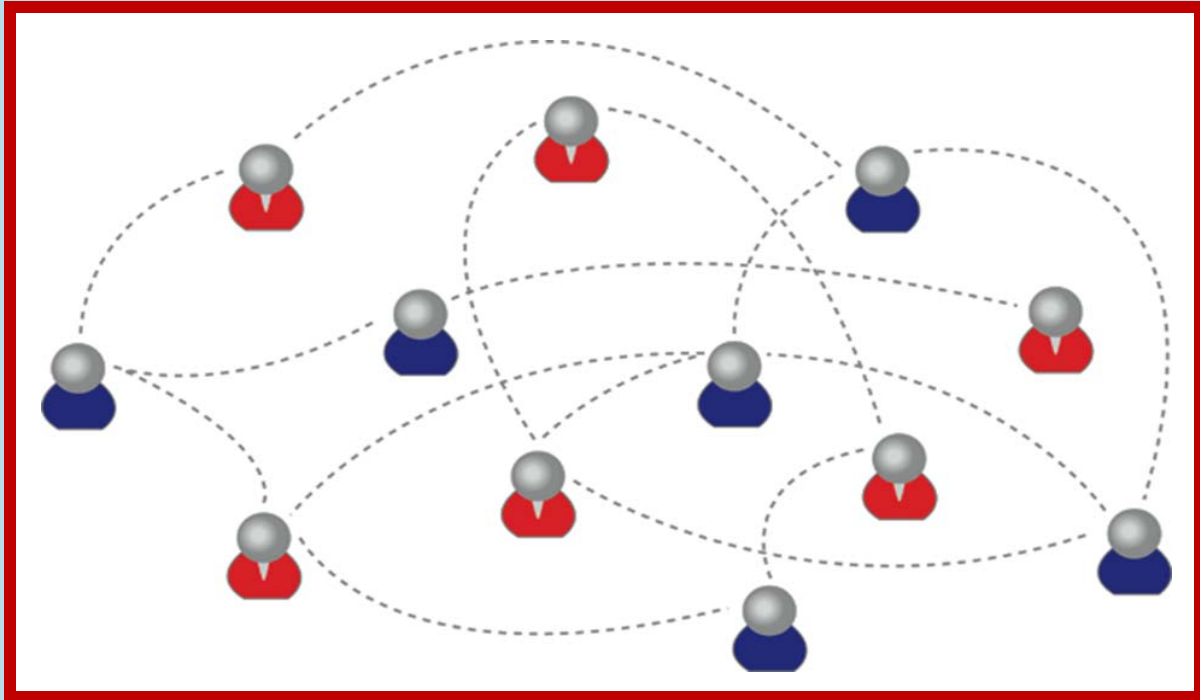# SIS Nationwide Network

Way Forward

Concept Paper

National Skill Information System (SIS) Network

Prepared by:
C3 GFA TVET Reform Support Programme

August 2013

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Abbreviations

TVET	Technical, Vocational Education and Training
NSS	National Skills Strategy
GIZ	Deutsche Gesellschaft fur International Zusammenarbeit (GIZ) GmbH
NAVTTC	National Vocational and Technical Training Commission
VC	Vocational Counselling
JP	Job Placement
LMI	Labour Market Information
LMIS	Labour Market Information System
SI	Skill Information
SIS	Skill Information System
HRD	Human Resource Development
CC	Career Counselling
KILM	Key Indicators of Labour Market
EU	European Union
PVTC	Punjab Vocational Training Council
TEVTA	Technical Education and Vocational Training Authority
TAG	Technical Advisory Group

Skill Information System (SIS) Nationwide Network

1. Labour Market Information Scenario

Labour Market Information (LMI) refers to a systematized and permanently evolving set of information relevant for undertaking employment counseling, vocational guidance, employment services and diagnosis of labour market - disaggregated to the extent necessary. This will require detailed information on size, structure and changes in the labour force and labour demand. It includes the information on skill requirements and availability in labour market. Information can be descriptive (qualitative) or statistical (quantitative). LMI provides "critical" information to the stakeholders on different Technical Vocational Education and Training (TVET) aspects – market needs, skill required, capacity of technical institutions, enrollments; pass outs, dropouts, acceptability of standard by public and private sector, school to work transition, time spent on getting employment, relevancy of work with skills acquired, unemployed, etc.

1. Availability of detailed and disaggregated LMI is a pre-requisite for: i) employment generating policies, Human Resource Development (HRD), education and TVET policy formulation and programme design, ii) undertaking Vocational Guidance (VG) and Career Counseling (CC), iii) Job Placement (JP), and iv) providing feedback to the education and TVET.

LMI is not just related to the demand side of the labour market, but extends also to the supply side in order to get insight into (potential) mismatches in the labour market, which can be measured in both qualitative and quantitative terms. Therefore, information on current and potential labour market discrepancies like vacancies/shortages, labour surplus, hidden and open unemployment, and various forms of under or over-employment is critical to design and deliver TVET as per the market needs.

In order to bridge the widening gaps in the required and available skill levels, it is pertinent to assess and evaluate the existing skill levels of the vast labour force in the country. This will facilitates the identification of key skill requirements across sectors, geographic etc.

The youth needs guidance and counseling to make informed choices with regard to selecting an education or TVET path that conforms to the labour

market needs. The graduates of education and TVET institutions need counseling in selecting their career and even help in job search and placement. Similarly, education and TVET institutions need sufficient LMI on the current labour market needs by occupations and future scenarios with regard to occupational and skill requirements.

Critical dependency on the information notwithstanding, the existing sources and institutional mechanism, as yet, have not been able to provide data needed. Information and analysis is needed especially on key Indicators of Labour Market (KILM) for gaining important insights and developing appropriate policies and programmes, such as of TVET, VC, CG and JP as well as remedial measures, if needed.

> *It is not only the inadequacy of data with regard to different aspects of employment and labour market indicators, the capacity of various concerned departments is also lacking and incidentally demonstrating over-lap and duplications.*

2. **Need for Skill Information System (SIS) Nationwide Network**

The National Vocational and Technical Education Commission (NAVTTC) developed a policy document titled Skilling Pakistan: National Skills Strategy 2009 – 2013 (NSS). The strategy's fundamental aim is to reform the TVET system. The NSS envisions provision of relevant skills for industrial and economic development, improvement of access, equity and employability and assurance of quality through an integrated approach.

National and overseas employment demands are shifting towards higher skill categories. It is imperative for the vast labour force to move up the skill-ladder through advanced training programmes and higher education to cater to the emerging requirements, both in high skill services and high technology industrial production. It is crucial to invest in quality secondary and tertiary education and in TVET if economy is to develop and remain competitive in world markets.

As new policies and systems are to be developed to implement the NSS and respond to the rapidly changing environment, there is urgent need to rely on readily available information that can influence the decision–making process.

Skill/labour market information that is timely and relevant is thus increasingly important, particularly as the countries of the region move to increase their productivity and competitiveness and monitor the social and economic impact of globalization. With the establishment of SIS, government will be able to take stock of their capacity to produce and use skill information in decision-making process at different levels. The system will prove helpful to formulate policies to adjust the demand and supply of skills according to the requirement and to tackle the unemployment issue.

SIS should be 'one single source' of all information available on labour market. The information will be available across institutions, industry, disciplines, duration / timelines, trade, skills etc. SIS will support decision making by providing research authenticated reliable information to all stake holders.

Ensuring reliable information to every citizen has been an important and long-standing policy mandate of the government departments. Sourcing, calibrating, processing and presenting information on real-time basis has been a challenge despite sustained efforts due to fragmented data gathering, inaccuracy of data gathered and lack of comprehensive delivery model. It is imperative to integrate the information to provide a single source and a common window for all TVET-related information to the different stakeholders. The main stakeholders would be:

- Government
- Employers
- Job seekers/employed
- TVET institutions
- Industry/trade associations.
- International Institutions and NGOs

3. Leading Practices in the World

The international leading practices existing in the world (European Union [EU]), UK, Singapore, Sri Lanka etc) is geared towards deriving key points for building a resilient structures for a comprehensive, user-friendly and easy accessible system. There is no single set of data requirements or deliverables characterizes an optimal LMI/SI system. However, as per the best practices adopted globally there are key features that may be considered in designing and

implementing a word-class NSIS. The key practices across the world include the following:

- ➢ Government ownership
  - Active role of government in developing and disseminating Skill Information (SI)/LMI
  - Ensure collaboration among government ministries, agencies, and private sector to conduct large scale activities such as surveys focus group
  - One-window information for all users (EU offer one web – portal for all users)
  - Data and information sources, job search and placement features
  - Availability of information, data, resources and links based on varied needs of various users
  - Intermediaries including counselors, career facilitators, and frontline employment office staff considered an integral part of a comprehensive SI/LMI system.
- ➢ User-friendly data input as well as information access
  - Efficient search features such as "library", user-wise links
  - Comprehensive list of resources such as Labour Market Consultant, Career Centers that can be used in conjunction with skill/labour market information product and services.
  - Generate forecasting reports for market parameters
  - Map annual job growth for industry over last year
  - Provide access to data at various levels
  - System to be interactive with its users through features such as Frequently Asked Questions link/Helpdesk/Online Feedback forms. Further, this provides crucial direction for in continuous and focused improvement through corrective action on feedback received from users.
- ➢ Efficient Data Management
  - Appropriate units of measurement, type of periodicity of study/surveys to be conducted
  - Standardized classification of data for occupations, industries etc. to facilitate data development, presentation , comparisons, and interrelationship
  - Reliable sources of data to ensure consistency and reliability
  - Availability of data update schedule on website
  - Links and crosswalks among data sets

➢ Easy accessibility/targeted dissemination
- Develop dissemination strategy to ensure that information is available to all i.e. how consumer can access internet, particularly those who may not have access at home
- Libraries, one-stop employment centers, community and faith-based organizations etc. to offer access SI/LMI as well as counseling and career development support

4.   Current Situation in Pakistan

LMI/SI are derived from number of different sources, including censuses, surveys, administrative data and private sector. At present data is collected by various organizations / departments that may be of interest for the LMIS / SIS are able to be distinguished, all differing in nature, target, periodicity, coverage, and/or scope. To make all these sources more accessible, a structure need to be designed in which all sources are classified according to user's needs.

A systematic approach to a nationwide LMI/SI system should be adopted as a fundamental strategy to conceptualize and plan a complete system with shared responsibilities and funding. All stakeholders working together can develop a more comprehensive approach to LMI/SI system than working in isolation.

5.   Stakeholders Expectations and Challenges:

SIS will play a major role in providing critical information to the different stakeholders for different purposes and, therefore, understanding of stakeholder needs, expectations and issues are critical. For example, the information from the system will help the policy makers identify key gaps in the current labour market and taking steps/solutions to bridge the skill gap between supply and demand. Similarly, there are multiple stakeholders including government institutions, NGOs and industry associations, employers, public and private TVET institutions and students/job seekers/employees involved in labour market network and have their own priorities and requirements. To comprehend the needs of these labour market stakeholders and based on their expectations and challenges, the following main principles may be considered as base for SIS network.

- Single-window information for all stakeholders
- Regularly and instinctive updating information
- Ensure the reliability of information
- Comprehensive information/data analysis
- Partnership/ownership between all stakeholders
- Legal coverage

6. Proposed Framework

Following are the key aspects of the proposed SIS network:

i. Besides other requirements of frequent updating, targeted analysis, convenient access etc., certain basic fields should be form output of the system. This information may be classified into field like Socio-demographic, TVET, General education, Employment, Policies and labour market participants.
ii. All stakeholders should take ownership to explore into details.
iii. NAVTTC will be key enabler in implementing the network at federal level.
iv. A web-based network will be established.
v. Technical Advisory Group (TAG) [1] will be formed to propose/suggest the uniform data entry programme (back page) keeping in view the requirement of all stakeholders.
vi. TAG will also suggest the format of output (front page)

7. Objectives of SIS Network

a. **Connectivity and Communication:** Creation of cross province network to improve swift availability of TVET related statistics
b. **Data Sharing:** To facilitate all stakeholders to share the data with each other.
c. **Instant and Multiple Accesses:** To enhance the analytical capacity of analysts for analysis and interpretation of LMI data and present recommendations for the review of decision-makers.

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[1] ToRs for TAG are placed at Annexure III

    d. **Data Transmission:** Support NAVTTC & TVETA service providers with HR development and HR management in the field of LMI related to skills

    e. **Facilitation to Policymakers:** Recommendations to policymakers in identifying key gaps in LM and developing solutions to bridge the skill demand-supply gap.

    f. **Feedback to Multiple Stakeholders:** Data feedback on line to all multiple stakeholders including government, NGOs, industry associations, employers and their associations, training/educational institutions, students and job seekers, employees involved in LM system.

8.   Proposed Network

The following is the Web-based proposed structure of Nationwide SIS Network, indicating data sources, data producers/collector and beneficiaries. All stakeholders are involved in data collecting and dissemination activities and have their own web portal but not connected with other partners. However, data from these various sources are not comparable. Differing methods of collection and different concepts and definitions applied are largely attributed to this malaise. Time lags in data collection and compilation is also not an uncommon phenomenon. Moreover, data generated is, by and large, neither consolidated nor properly analyzed. In the absence of center of excellence, it is difficult to adopt uniformity in data collection and presentation. TAG will fill this gap.

Figure 1
Proposed Network
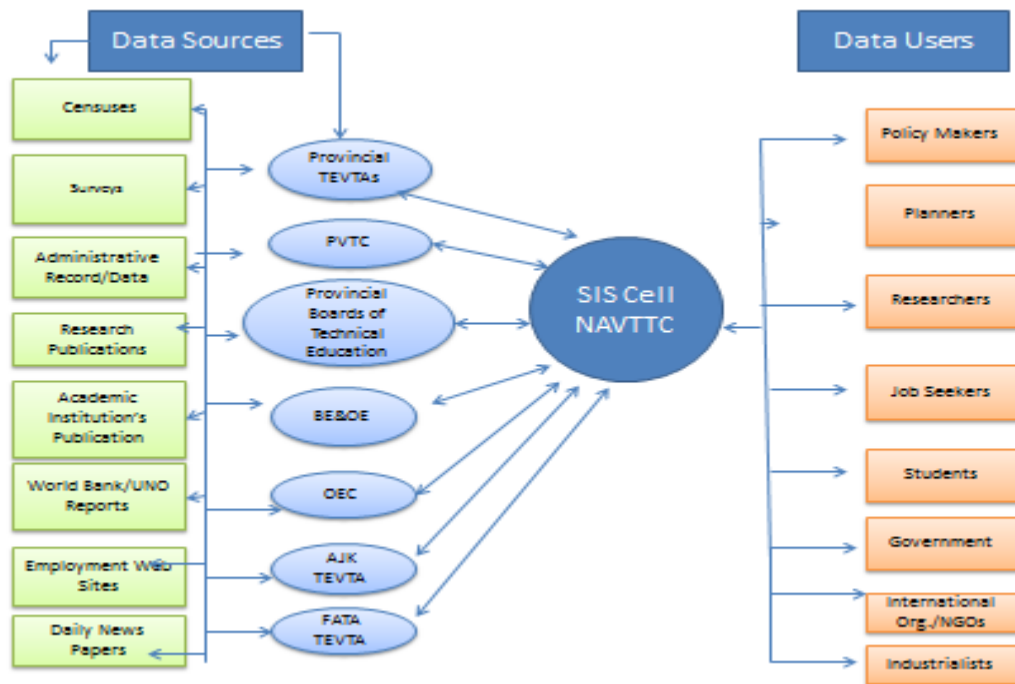
A presentation[2] based on above proposed structure was made to the fourth TWG meeting where all participants principally agreed to establish SIS network. It was decided that financial and manpower resources involved in it will be provided by all stakeholders and will be discussed in the next meeting.

9. Tentative Estimates

The estimates are worked out with the assumption that each stakeholder will establish its own SIS cell separately from MIS section/cell and will collect and enter the data in uniform data format as per agreed on the recommendation

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[2] The presentation made in the meeting is placed at Annexure I.

of TAG. Initially the estimates are for three years. Following are the summarized estimates. The detailed estimates are placed at Annexure II.

Estimates for Three Years

(Rs. In Million)

S.No	Name Of Organization	Estimates		
		Staff	Equipment/web programme	Total
1	NAVTTC	13.916	2.397	16.313
2	PVTC	12.012	2.397	14.409
3	TEVTA Punjab	12.012	2.397	14.409
4	TEVTA Sindh	12.012	2.397	14.409
5	TEVTA KPK	11.062	2.397	13.459
6	TEVTA Balochistan	11.062	2.397	13.459
7	TEVTA AJK	11.062	2.397	13.459
8	TEVTA GB	12.012	2.397	14.409
9	TEVTA FATA	12.012	2.397	14.409
	Total	107.162	21.573	128.735

Note: i)   The cost of Web developer is not included in it.
       ii)   Details of estimates of each office is at Annexure III

10. Way Forward

  i.   Acceptance of the Conceptual Plan by all key stakeholders
  ii.   Preparation of common functionalities and guidelines
  iii. Creation of SIS cell in each TEVTAs PVTC
  iv.   Harmony of information on provincial/regional websites
  v.   Interlinking all the cells with each other online
  vi.   Up gradation of websites
  vii. Accessibility to each cell without data changing rights
  viii. TWG should be playing central role

ix. Improved and coordinated flow of information between and among the provincial/regional websites and central website i.e. SIS cell NAVTTC

x. Include detailed information on key indicators for SIS Analysis

xi. Provision of basic requisite information for career guidance/job placement , industrialists and other stakeholders

Annexure I

SIS Network: A Way forward

Proposal to Establish
National Skill Information System (SIS) Network

Component 3 (LMIS)

Objectives :

- **Connectivity and Communication:** Creation of cross province network to improve swift availability of TVET related statistics
- **Data Sharing:** To facilitate all stake holders to share the data with each other.
- **Instant and Multiple Accesses:** To enhance the analytical capacity of analysts for analysis and interpretation of LMI data and present recommendations for the review of decision makers.
- **Data Transmission:** Support NAVTTC & TVETA service providers with HR development and HR management in the field of LMI related to Skills

(Contd..)

National SIS Network/Javaid/C3-GFA/ TWG
24 June 2013

Objectives :

- **Facilitation to Policy Makers: Recommendations** to policy makers in identifying key gaps in LM and developing solutions to bridge the skill demand-supply gap.

- **Feed Back to Multiple Stakeholders:** Data feed back on line to all multiple stakeholders including Government, NGOs, Industry Associations, Employers and their Associations, Training /Educational Institutions, Students and Job Seekers, Employees involved in LM ecosystem.

National SIS Network/Javaid/C3-GFA/ TWG
24 June 2013

SLM Stakeholders Expectations and Challenges:

- Single Window Information regarding SLM

- Frequently updating of Skill Labor Market Statistics

- Ensure the reliability of information

- Comprehensive data analysis

- Partnership between TVET service providers, Employers, Government organizations, all other stakeholders

National SIS Network/Javaid/C3-GFA/ TWG
24 June 2013

S. No	TVET Service Providers	Name of TEVTs Institutes	Locations	Names of Courses	Duration	Enrolments	Number of Passed Outs	Number of Drop Outs	Data for Historical Analysis
1	Punjab*	✓	✓	✓	✓	✓	X	X	X
2	Sindh	Icons for data are given but web site is not responding							X
3	KPK	✓	✓	✓	✓	X	X	X	X
4	Balochistan	✓	✓	✓	✓	X	X	X	X
5	AJK	✓	✓		✓	✓	Website not responding on rest of data		

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24 June 2013

Country	Website	Data Available	
		Demand Side	**Supply Side**
Sri Lanka	http://www.tvec.gov.lk/lmi	List of top ten demanded job	Percentage distribution of un-employment with level of education
		Sector and occupation wise list of Labour demand, which (2000 to 2006)	Distribution of unemployed population into two categories. First, who have vocational training, Second who do not have vocational training
		Statistics of Job Advertisements in local and foreign labour markets	List of passed outs (2002-2012) list is further categorized on the basis of type of occupation
			List of recruitments in TEVT Public sector institute and organization (2002-12

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24 June 2013

National SIS Network/Javaid/C3-GFA/ TWG
24 June 2013
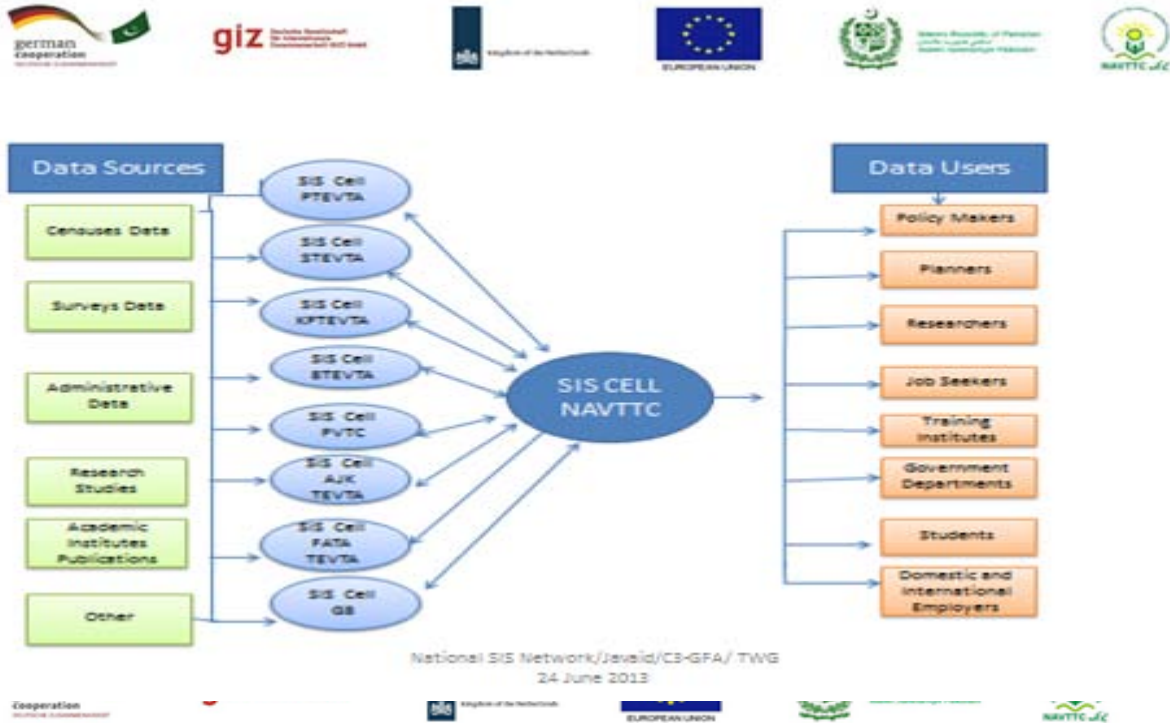
Deliverables

- Development of uniform Instruments
- Reliability of data collection
- Analysis and Interpretation of data
- Development of reports and recommendations

National SIS Network/Javaid/C3-GFA/ TWG
24 June 2013

Recommendations:

1. Acceptance of the Conceptual Plan by all Key stakeholders
2. Preparation of common functionalities and guidelines
3. Creation of SIS cell in each TEVTAs / PVTC
4. Harmony of information on provincial/regional websites
5. Interlink each cell with each other on line
6. Up gradation of Websites
7. Accessibility to each cell without data changing rights
8. TWG should be playing central role
9. Improved and coordinated flow of information between and among the provincial/regional websites and central website i-e SIS cell NAVTTC
10. Include detailed information on key indicators for SIS Analysis
11. Provision of basic requisite information for career guidance/ job placement , Industrialist and other stakeholders

National SIS Network/Javaid/C3-GFA/ TWG
24 June 2013

	NAVTTC										Annexure				
				Staff							Equipment				
S.No	Nomenclature	Nos	BPS	Pay & Allow-ences per Month (Rs)	Annual increase (Rs)	Cost Per Month (Rs)	Cost for 1st Year (Rs)	Cost for 2nd Year (Rs)	Cost for 3rd year (Rs)	Total cost (Rs In Millions)	Item	Nos	Cost per unit	Total	Grand Total (E+I)
1	LMI Specialist	1	19	72098	1600	72098	865176	884376	903576	2.653	Server	1	0.800	0.800	3.453
2	Data Analyst	2	18	48202	1500	96404	1156848	1192848	1228848	3.579	Laptop (HP Probook 4540s)	2	0.120	0.240	3.819
3	Data Manager	1	18	48202	1500	48202	578424	596424	614424	1.789	Desktop Computer System	8	0.060	0.480	2.269
4	System Administrator	1	18	48202	1500	48202	578424	596424	614424	1.789	Colour Printers	1	0.090	0.090	1.879
5	Web Developer/Manager	1	17	39036	1200	39036	468432	482832	497232	1.448	Printers	1	0.060	0.060	1.508
6	Network Support Engineer	1	16	25575	800	25575	306900	316500	326100	0.950	Network Printer	1	0.060	0.060	1.010
7	Computer Operator	2	12	16891	500	33782	405384	417384	429384	1.252	Scanner	1	0.060	0.060	1.312
8	Office Boy/NQ	1	1	12506	150	12506	150072	151872	153672	0.456	UPS device for each PC	8	0.050	0.400	0.856
											USB 32 GB	8	0.005	0.040	0.040
											Network Storage Device WD SENTINEL DX 4000	1	0.125	0.125	0.125
											External USB DVD Drive	1	0.012	0.012	0.012
											WiFi Device	1	0.030	0.030	0.030
	Total						4509660	4638660	4767660	13.916		34		2.397	16.313

NAVTTC contd...					
Summary					
S.No	Items	Cost 1st Year	Cost 2nd Year	Cost 3rd Year	Total Cost
	Staff	4.510	4.639	4.768	**13.916**
	Equipment	2.397			**2.397**
	Application Softwares				
	System Softwares				
	Total	6.91	4.639	4.768	**16.313**

Application Softwares				
Visual Studio (Latest Version)	1	0.07	0.07	
Database Softwares				
Original Antivirus				
System Softwares				
Original Operating System for server				
Original Operating System for Desktop Computers				
Boot CDs				

PVTC											Equipment				
	Staff														
S.No	Nomenclature	Nos	BPS	Pay & Allow-ences per Month (Rs)	Annual increase (Rs)	Cost Per Month (Rs)	Cost for 1st Year (Rs)	Cost for 2nd Year (Rs)	Cost for 3rd year (Rs)	Total cost (Rs In Millions)	Item	Nos	Cost per unit	Total	Grand Total (E+I)
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											Network Storage Device WD SENTINEL DX 4000	1	0.125	0.125	0.125
											External USB DVD Drive	1	0.012	0.012	0.012
											WiFi Device	1	0.030	0.030	0.030
	Total						4359588	4486788	4613988	13.460		34		2.397	15.857

	PVTC contd…				
	Summary				
S.No	Items	Cost 1st Year	Cost 2nd Year	Cost 3rd Year	Total Cost
	Staff	4.360	4.487	4.614	**13.460**
	Equipment	2.397			**2.397**
	Application Softwares				
	System Softwares				
	Total	6.76	4.487	4.614	**15.857**

Application Softwares				
Visual Studio (Latest Version)	1	0.07	0.07	
Database Softwares				
Original Antivirus				
System Softwares				
Original Operating System for server				
Original Operating System for Desktop Computers				
Boot CDs				

TEVTA (P)														
				Staff								**Equipment**		
S.No	Nomenclature	Nos	BPS	Pay & Allow-ences per Month (Rs)	Annual increase (Rs)	Cost Per Month (Rs)	Cost for 1st Year (Rs)	Cost for 2nd Year (Rs)	Cost for 3rd year (Rs)	Total cost (Rs In Millions)	Item	Nos	Cost per unit	Total	Grand Total (E+I)
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											External USB DVD Drive	1	0.012	0.012	0.012
											WiFi Device	1	0.030	0.030	0.030
	Total						4509660	4638660	4767660	13.916		34		2.397	16.313

TEVTA (P) Contd…					
Staff					

Summary

S.No	Items	Cost 1st Year	Cost 2nd Year	Cost 3rd Year	Total Cost
	Staff	4.510	4.639	4.768	**13.916**
	Equipment	2.397			**2.397**
	Application Softwares				
	System Softwares				
	Total	6.91	4.639	4.768	**16.313**

Equipment

Application Softwares				
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System Softwares				
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Summary					
S.No	Items	Cost 1st Year	Cost 2nd Year	Cost 3rd Year	Total Cost
	Staff	4.510	4.639	4.768	13.916
	Equipment	2.397			2.397
	Application Softwares				
	System Softwares				
	Total	6.91	4.639	4.768	16.313

Equipment				
Application Softwares				
Visual Studio (Latest Version)	1	0.07	0.07	
Database Softwares				
Original Antivirus				
System Softwares				
Original Operating System for server				
Original Operating System for Desktop Computers				
Boot CDs				

	TEVTA (KPK)														
	Staff										**Equipment**				
S. No	Nomenclature	Nos	BPS	Pay & Allow-ences per Month (Rs)	Annual increase (Rs)	Cost Per Month (Rs)	Cost for 1st Year (Rs)	Cost for 2nd Year (Rs)	Cost for 3rd year (Rs)	Total cost (Rs In Millions)	Item	Nos	Cost per unit	Total	Grand Total (E+I)
1	LMI Specialist	1	19	72098	1600	72098	865176	884376	903576	2.653	Server	1	0.800	0.800	3.453
2	Data Analyst	2	18	48202	1500	96404	1156848	1192848	1228848	3.579	Laptop (HP Probook 4540s)	2	0.120	0.240	3.819
3	Data Manager	1	18	48202	1500	48202	578424	596424	614424	1.789	Desktop Computer System	8	0.060	0.480	2.269
4	System Administrator	1	18	48202	1500	48202	578424	596424	614424	1.789	Colour Printers	1	0.090	0.090	1.879
5	Web Developer/Manager	1	17	39036	1200	39036	468432	482832	497232	1.448	Printers	1	0.060	0.060	1.508
6	Network Support Engineer	1	16	25575	800	25575	306900	316500	326100	0.950	Network Printer	1	0.060	0.060	1.010
7	Computer Operator	2	12	16891	500	33782	405384	417384	429384	1.252	Scanner	1	0.060	0.060	1.312
	Office Boy/NQ	1	1	12506	150	12506	150072	151872	153672	0.456	UPS device for each PC	8	0.050	0.400	0.856
											USB 32 GB	8	0.005	0.040	0.040
											Network Storage Device WD SENTINEL DX 4000	1	0.125	0.125	0.125
											External USB DVD Drive	1	0.012	0.012	0.012
											WiFi Device	1	0.030	0.030	0.030
	Total						4509660	4638660	4767660	13.916		34		2.397	16.313

TEVTA (KPK) Contd...

	Staff						Equipment				
	Summary						**Application Softwares**				
S. No	Items	Cost 1st Year	Cost 2nd Year	Cost 3rd Year	Total Cost						
	Staff	4.510	4.639	4.768	**13.916**		Visual Studio (Latest Version)	1	0.07	0.07	
	Equipment	2.397			**2.397**		Database Softwares				
	Application Softwares						Original Antivirus				
	System Softwares										
							System Softwares				
	Total	6.91	4.639	4.768	**16.313**		Original Operating System for server				
							Original Operating System for Desktop Computers				
							Boot CDs				

TEVTA (B)

S.No	Nomenclature	Nos	BPS	Pay & Allowences per Month (Rs)	Annual increase (Rs)	Cost Per Month (Rs)	Cost for 1st Year (Rs)	Cost for 2nd Year (Rs)	Cost for 3rd year (Rs)	Total cost (Rs In Millions)	Item	Nos	Cost per unit	Total	Grand Total (E+I)
					Staff							Equipment			
1	LMI Specialist	1	19	72098	1600	72098	865176	884376	903576	2.653	Server	1	0.800	0.800	3.453
2	Data Analyst	2	18	48202	1500	96404	1156848	1192848	1228848	3.579	Laptop (HP Probook 4540s)	2	0.120	0.240	3.819
3	Data Manager	1	18	48202	1500	48202	578424	596424	614424	1.789	Desktop Computer System	8	0.060	0.480	2.269
4	System Administrator	1	18	48202	1500	48202	578424	596424	614424	1.789	Colour Printers	1	0.090	0.090	1.879
5	Web Developer Manager	1	17	39036	1200	39036	468432	482832	497232	1.448	Printers	1	0.060	0.060	1.508
6	Network Support Engineer	1	16	25575	800	25575	306900	316500	326100	0.950	Network Printer	1	0.060	0.060	1.010
7	Computer Operator	2	12	16891	500	33782	405384	417384	429384	1.252	Scanner	1	0.060	0.060	1.312
	Office Boy/NQ	1	1	12506	150	12506	150072	151872	153672	0.456	UPS device for each PC	8	0.050	0.400	0.856
											USB 32 GB	8	0.005	0.040	0.040
											Network Storage Device WD SENTINEL DX 4000	1	0.125	0.125	0.125
											External USB DVD Drive	1	0.012	0.012	0.012
											WiFi Device	1	0.030	0.030	0.030
	Total						4509660	4638660	4767660	13.916		34		2.397	16.313

TEVTA (B) contd...

	Staff					Equipment				
Summary						**Application Softwares**				
S.No	Items	Cost 1st Year	Cost 2nd Year	Cost 3rd Year	Total Cost	Visual Studio (Latest Version)	1	0.07	0.07	
	Staff	4.510	4.639	4.768	**13.916**	Database Softwares				
	Equipment	2.397			**2.397**	Original Antivirus				
	Application Softwares									
	System Softwares					**System Softwares**				
						Original Operating System for server				
	Total	6.91	4.639	4.768	**16.313**	Original Operating System for Desktop Computers				
						Boot CDs				

TEVTA (AJK)														
		Staff								Equipment				
S.No	Nomenclature	Nos	BPS	Pay & Allow-ences per Month (Rs)	Annual increase (Rs)	Cost Per Month (Rs)	Cost for 1st Year (Rs)	Cost for 2nd Year (Rs)	Cost for 3rd year (Rs)	Total cost (Rs In Millions)	Item	Nos	Cost per unit	Total	Grand Total (E+I)
1	LMI Specialist	1	19	72098	1600	72098	865176	884376	903576	2.653	Server	1	0.800	0.800	3.453
2	Data Analyst	2	18	48202	1500	96404	1156848	1192848	1228848	3.579	Laptop (HP Probook 4540s)	2	0.120	0.240	3.819
3	Data Manager	1	18	48202	1500	48202	578424	596424	614424	1.789	Desktop Computer System	8	0.060	0.480	2.269
4	System Administrator	1	18	48202	1500	48202	578424	596424	614424	1.789	Colour Printers	1	0.090	0.090	1.879
5	Web Developer/Manager	1	17	39036	1200	39036	468432	482832	497232	1.448	Printers	1	0.060	0.060	1.508
6	Network Support Engineer	1	16	25575	800	25575	306900	316500	326100	0.950	Network Printer	1	0.060	0.060	1.010
7	Computer Operator	2	12	16891	500	33782	405384	417384	429384	1.252	Scanner	1	0.060	0.060	1.312
	Office Boy/NQ	1	1	12506	150	12506	150072	151872	153672	0.456	UPS device for each PC	8	0.050	0.400	0.856
											USB 32 GB	8	0.005	0.040	0.040
											Network Storage Device WD SENTINEL DX 4000	1	0.125	0.125	0.125
											External USB DVD Drive	1	0.012	0.012	0.012
											WiFi Device	1	0.030	0.030	0.030
	Total						4509660	4638660	4767660	13.916		34		2.397	16.313

TEVTA (AJK)   Contd..

	Staff						Equipment				
Summary							**Application Softwares**				
S.No	Items	Cost 1st Year	Cost 2nd Year	Cost 3rd Year	Total Cost		Visual Studio (Latest Version)	1	0.07	0.07	
	Staff	4.510	4.639	4.768	**13.916**		Database Softwares				
	Equipment	2.397			**2.397**		Original Antivirus				
	Application Softwares										
	System Softwares						**System Softwares**				
							Original Operating System for server				
	Total	6.91	4.639	4.768	**16.313**		Original Operating System for Desktop Computers				
							Boot CDs				

S.No	Nomenclature	Nos	BPS	Pay & Allow-ences per Month (Rs)	Annual increase (Rs)	Cost Per Month (Rs)	Cost for 1st Year (Rs)	Cost for 2nd Year (Rs)	Cost for 3rd year (Rs)	Total cost (Rs In Millions)	Item	Nos	Cost per unit	Total	Grand Total (E+I)
	TEVTA (GB)														
					Staff								Equipment		
1	LMI Specialist	1	19	72098	1600	72098	865176	884376	903576	2.653	Server	1	0.800	0.800	3.453
2	Data Analyst	2	18	48202	1500	96404	1156848	1192848	1228848	3.579	Laptop (HP Probook 4540s)	2	0.120	0.240	3.819
3	Data Manager	1	18	48202	1500	48202	578424	596424	614424	1.789	Desktop Computer System	8	0.060	0.480	2.269
4	System Administrator	1	18	48202	1500	48202	578424	596424	614424	1.789	Colour Printers	1	0.090	0.090	1.879
5	Web Developer/Manager	1	17	39036	1200	39036	468432	482832	497232	1.448	Printers	1	0.060	0.060	1.508
6	Network Support Engineer	1	16	25575	800	25575	306900	316500	326100	0.950	Network Printer	1	0.060	0.060	1.010
7	Computer Operator	2	12	16891	500	33782	405384	417384	429384	1.252	Scanner	1	0.060	0.060	1.312
	Office Boy/NQ	1	1	12506	150	12506	150072	151872	153672	0.456	UPS device for each PC	8	0.050	0.400	0.856
											USB 32 GB	8	0.005	0.040	0.040
											Network Storage Device WD SENTINEL DX 4000	1	0.125	0.125	0.125
											External USB DVD Drive	1	0.012	0.012	0.012
											WiFi Device	1	0.030	0.030	0.030
	Total						4509660	4638660	4767660	13.916		34		2.397	16.313

TEVTA (GB) Contd..

Staff						Equipment				
Summary						**Application Softwares**				
S.No	Items	Cost 1st Year	Cost 2nd Year	Cost 3rd Year	Total Cost	Visual Studio (Latest Version)	1	0.07	0.07	
	Staff	4.510	4.639	4.768	**13.916**	Database Softwares				
	Equipment	2.397			**2.397**	Original Antivirus				
	Application Softwares									
	System Softwares					**System Softwares**				
						Original Operating System for server				
	Total	6.91	4.639	4.768	**16.313**	Original Operating System for Desktop Computers				
						Boot CDs				

TEVTA (FATA)

S.No	Nomenclature	Nos	BPS	Pay & Allow-ences per Month (Rs)	Annual increase (Rs)	Cost Per Month (Rs)	Cost for 1st Year (Rs)	Cost for 2nd Year (Rs)	Cost for 3rd year (Rs)	Total cost (Rs In Millions)	Item	Nos	Cost per unit	Total	Grand Total (E+I)
					Staff						Equipment				
1	LMI Specialist	1	19	72098	1600	72098	865176	884376	903576	2.653	Server	1	0.800	0.800	3.453
2	Data Analyst	2	18	48202	1500	96404	1156848	1192848	1228848	3.579	Laptop (HP Probook 4540s)	2	0.120	0.240	3.819
3	Data Manager	1	18	48202	1500	48202	578424	596424	614424	1.789	Desktop Computer System	8	0.060	0.480	2.269
4	System Administrator	1	18	48202	1500	48202	578424	596424	614424	1.789	Colour Printers	1	0.090	0.090	1.879
5	Web Developer/Manager	1	17	39036	1200	39036	468432	482832	497232	1.448	Printers	1	0.060	0.060	1.508
6	Network Support Engineer	1	16	25575	800	25575	306900	316500	326100	0.950	Network Printer	1	0.060	0.060	1.010
7	Computer Operator	2	12	16891	500	33782	405384	417384	429384	1.252	Scanner	1	0.060	0.060	1.312
	Office Boy/NQ	1	1	12506	150	12506	150072	151872	153672	0.456	UPS device for each PC	8	0.050	0.400	0.856
											USB 32 GB	8	0.005	0.040	0.040
											Network Storage Device WD SENTINEL DX 4000	1	0.125	0.125	0.125
											External USB DVD Drive	1	0.012	0.012	0.012
											WiFi Device	1	0.030	0.030	0.030
	Total						4509660	4638660	4767660	13.916		34		2.397	16.313

TEVTA (FATA) Contd...

		Staff					Equipment				
Summary							Application Softwares				
S.No	Items	Cost 1st Year	Cost 2nd Year	Cost 3rd Year	Total Cost		Visual Studio (Latest Version)	1	0.07	0.07	
	Staff	4.510	4.639	4.768	13.916		Database Softwares				
	Equipment	2.397			2.397		Original Antivirus				
	Application Softwares										
	System Softwares						System Softwares				
							Original Operating System for server				
	Total	6.91	4.639	4.768	16.313		Original Operating System for Desktop Computers				
							Boot CDs				

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Annexure III
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Terms of Reference
Technical Advisory Group (TAG)
on
National Skill Information System (NSIS)

Background

Skill Information System has been recognized as most important tool for the human resource development. Skill Market Information (SMI) refers to a systematized and permanently evolving set of information relevant for undertaking employment counseling, vocational guidance, employment services and diagnosis of skill market - disaggregated to the extent necessary. This also requires detailed information on size, structure and changes in the human resource and skills demand. SMI provides "critical" information to the stakeholders on different TVET aspects – available supply of skills, market needs, skill required, capacity of technical institutions, enrollments; pass outs, drop outs, acceptability of standard by public and private sector, school to work transition, time spent on getting employment, relevancy of work with skills acquired, unemployed, etc.

Availability of detailed and disaggregated SMI is a pre-requisite for: i) employment generating policies, human resource development (HRD), education and TVET policy formulation and programme design, ii) undertaking Vocational Guidance (VG) and Career Counseling (CC), iii) Job Placement (JP), and iv) Optimal utilization of available skills

The TVET Reform Support Programmes is assisting the National Vocational and Technical Training Commission (NAVTTC) as well as the provincial Technical Education and Vocational Training Authorities (TEVTAs) to establish and improve their capacity for managing and analysing Skill Market Information and data in order that they can develop policies and national and/or sector skills plans that are more responsive to the skills needs of the labour market and in line with the National Skills Strategy (NSS) 2009-2013. The government of Pakistan has developed the National Skills Strategy (NSS) 2009-2013 aims at providing relevant skills for industrial and economic development, assuring quality of training and improving access, equity and employability of youth.

The TVET reform support programme aiming to provide support to implement the NSS and to improve access, equity and relevance of TVET in Pakistan. The Programme is co-funded by the European Union, the Kingdom of the Netherlands and the Federal Republic of Germany and implemented by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. The programme aiming to improve has also integrated SMI as an important part the reform programme.

The programme is structured across three components: C1 - TVET Governance and Management; C2 - Vocational Qualifications Framework and Human Resource Development; and C3 - Effective and Innovative Training Delivery and Labour Market Information and Services.

Under Component 3, the TVET Reform Support Programme is assisting to establish a National Skill Information System (NSIS) and improve the capacity for managing and analysing SMI and data in order to develop policies and national and/or sector skills plans responsive to the skills needs of the labour market.

C3 GFA prepared a proposal to establish a web based National Skill Information System (NSIS) to provide a compatible and reliable data to the all stakeholders concerned with TVET sectors. The same was presented in 4th and 5th TWG meetings, which was principally accepted by all stakeholders. In the proposal a Technical Advisory Group was proposed to prepare prerequisites report and develop harmonization in data collection and presentation.

Objectives

The purpose of the TAG is to assist in establishing the NSIS and prepare the report to harmonize the data entry format and output of the all data producing organization. The group will review the all existing data entries formats, definition, reference period, methodology of collection, compilation and dissemination process etc. and will prepare recommendation to establish integrated data producing and dissemination system in the country.

The specific objective /task of the assignment include:

- Identifying the purpose and use of data and scope of collection (data item and providers)
- Review of existing data entry formats of all TVET related data producing organization to sort out the significant variables required for the policies and planning and implementation these.
- Finalize the recommendations on data requirement worked out by the stakeholders.
- Design the uniform data entry format   keeping in view the requirements of all stakeholders and users (Government, Employers, Employees, Job seekers, Students, Planners and Policy Makers, local and Overseas Recruiting Agencies, etc.)
- Design web data output format for all possible users.
- Design the national and provincial/regional formats for periodical release of data in soft form as well as in hard form.
- Recommendations on concepts and definitions to be used in web based NSIS.
- Explore and provide recommendations on technical issues related to the establish the NSIS
- Elaborate the road map to functionalize the NIS.
- Recommendation on the role and responsibilities of each partner.

Outputs

The **outputs** of the TAG will be:

- Prerequisites report for the NSIS, including uniform data entry format (Back Page of Web).
- Report on concepts and definitions being used in NISS.
- Report on output structure (Front pages of web)
- Minutes of meetings

Membership

TAG shall comprise one member from each stakeholder, who shall serve in his personal capacity and represent his organization.

TAG members shall be acknowledged experts from stakeholder organization in the fields of Statistics, IT oriented, understanding in research and data analysis.

Additional experts may be invited to TAG meetings as may be deemed appropriate to further contribute to specific agenda items.

The membership of TAG shall seek to reflect a representation of:

(1) Professional affiliation (i.e. Statistical work, Tabulation of data, TVET concept and definitions, NSS):

(2) Major areas of interest (e.g. policy and planning in TVET sector, Desegregation of TVET related statistics, vision of future requirements.); and

(3) four major strategic areas of TVET work relating to increasing coverage, accelerating innovation, ensuring quality and reliability, and integrating with other LMI).

Membership in TAG may be suspended for any of the following reasons:

(1) failure to attend two consecutive TAG meetings;

(2) change in affiliation resulting in a conflict of interest; and

(3) a lack of professionalism involving,

Terms and Conditions

Travel costs and daily subsistence allowance will be paid to TAG members attending a meeting of the TAG in accordance with GIZ rules and regulations.

Methodologies and reports developed and delivered under TAG remains exclusively the property of the C3 GFA Secretariat, and shall not be divulged and /or used without prior written authorization of the C3 GFA secretariat.

The Technical Advisory Group Will Meet as Often as Required.

No Direct Decision-making Authority

Recommendations Developed Through Group Consensus/majority