



Concept Paper on Labour Market Information System

An Indian Perspective

July 2011

Table of Contents

Glossary.....	3
Executive Summary.....	6
1. Introduction.....	10
1.1 Indian Labour market scenario	10
1.2 Need for Labour market information system.....	11
1.3 About Labour market information system.....	11
1.4 About this Paper.....	14
2. Study of Leading Practices	17
2.1 International leading practices	17
2.2 Domestic initiatives.....	61
3. Stakeholders' Analysis.....	82
3.1 Background.....	82
3.2 Methodology.....	84
3.3 Stakeholder expectations and challenges	86
3.4 Key recommendations	94
4. Proposed Framework	98
4.1 LMIS utilities features.....	99
4.2 Proposed implementation plan	101
4.3 LMIS ICT framework.....	106
4.4 Governance mechanism.....	107
4.5 Resource requirement	108
4.6 Critical success factors.....	109
5. Way Forward.....	115
6. ANNEXURE	119
6.1 Leading LMIS web portal snapshots.....	119
6.2 Questionnaires for stakeholder interaction	124
6.3 Minutes of stakeholder interactions.....	127
6.4 LMIS output.....	137
6.5 Workshop Minutes	140
List of tables	142
List of figures.....	143
Key references	144

Glossary

Abbreviation	Definition
ABI	Annual Business Inquiry
APS	Annual Population Survey
BED	Business Employment Dynamics
BRES	Business Register and Employment Survey , UK
CES	Current Employment Statistics, USA
CFI	Construction Federation of India
CII	Confederation of Indian Industry
CITI	Confederation of Indian Textile Industry
CLE	Confederation of Leather Exports
CREDAI	Confederation of Real Estate Developers Association of India
CUR	Center for Urban Research
DEEWR	Department of Employment and Workplace Relations, Australia
DEST	Department of Education, Training and Youth Affairs , Australia
DEWR	Commonwealth Department of Employment and Workplace Relations ,
DGE&T	Directorate General of Employment and Training , Government of India
DECC	District Employment and Counseling Centers
DE & SE	Department of Employment and Self-Employment
DOT	Dictionary of Occupational Titles, USA
DPR	Detailed Project Report
EEA	European Economic Area
EMI	Employment Market Information
ESARS	Employment Service Automated Reporting System, Texas, USA
ESA	Employment Service Area Data, LMIP, Australia
EU	European Union
FICCI	Federation of Indian Chambers of Commerce and Industry
GDP	Gross Domestic Product
HOPAS	Haryana Overseas Placement Assistance Society
IICD	Indian Institute of Crafts and Design
ITI	Industrial Training Institutes
JSA	Job Services Australia
JTPA	Job Training Partnership Act, USA
KEC	Karnataka Employment Centre ,
KVTSDC	Karnataka Vocational Training & Skills Development Corporation
HRSDC	Human Resources and Skills Development Center Canada
LAUS	Local Area Unemployment Statistics
LFR	Labour Force Region Data, Australia
LMI	Labour Market Information
LMIP	Labour Market Information Portal

Abbreviation	Definition
LMIS	Labour Market Information System
MLE	Ministry of Labour and Employment, Government of India
MLS	Mass Layoff Statistics
NAICS	North American Industry Classification System
NSDC	National Skills Development Corporation
NES	National Employment Service
NOMIS	National Online Manpower Information System, UK
NSSO	National Sample Survey Organization
NYC	New York City
NYCLMIS	New York City Labour Market Information Service, USA
OES	Occupational Employment Statistics, USA
OLMIS	Oregon Labour Market Information System
ONS	Office of National Statistics , UK
OMCAP	Overseas Manpower Company of AP
PES	Public Employment Services, Europe
PPP	Public Private Partnership
QCEW	Quarterly Census of Employment and Wages
RFP	Request For Proposal
SPV	Special Purpose Vehicle
SSC	Sector Skill Council
SKEWPY	Sher-e-Kashmir Employment & Welfare Programme for the Youth
SOC	Standard Occupational Classification
UK	United Kingdom
UNDP	United Nations Development Programme
USA	United States of America
VET	Vocational Education and Training



Executive summary



Executive Summary

Indian economy is considered as one of the fastest growing economies globally with the projected GDP growth rate at 7% and above for the next few years. Further, India's demographic dividend is expected to increase with population growing from 1 billion in 2001 to 1.4 billion in 2026. 83% of this increase is estimated to be in the 15-59 age groups. If this dividend is harnessed by 2025, India will not only have 25% of the world's total workforce but India's per capita income will be \$4100, which currently staggers at around \$1,000. This should eventually rise to \$9802 in 2040 and \$20,836 in 2050.

The clear task ahead is then to harness the collective pool of knowledge & skill in industry and to find ways and avenues of rightfully deploying the potential workforce in years to come. Converting people into productive people requires radical reforms of the labour market ecosystem, which includes labour demand dynamics, labour supply dynamics, and labour laws. A prerequisite to any of these reforms will be a robust, reliable and comprehensive Labour Market Information System (LMIS) based on collaborative public-private partnership. This system, which captures raw labour market data, analyses the same into information and disseminates to target groups of stakeholders, will be the key tool to garner the potential of the expected labour force abundance.

The objective of this Concept Paper is conceptualization of a well-structured LMIS to assist planning and delivery of training for NSDC. The report is structured into following key sections which unfold the blueprint for building a customized and robust LMIS given the scenario in which the Indian labour market is currently in.

Study of Leading Practices

The outcome for this secondary research includes international leading practices and broad review of domestic initiatives focused on skill development & employment generation. The focus of understanding the international leading practices is geared towards deriving key points for building a robust structure for a comprehensive, user friendly and easily accessible system.

The countries/ continents included in the study were Australia, UK, USA, Singapore, Europe, Jamaica and Canada. Each country study has a dedicated sub-section in the detailed report, wherein the following parameters have been analyzed for each: LMIS overview, Geographic coverage, Codification, User access, Type of information generated and Key learnings. Further, unique features of the LMIS have also been studied to assess user friendliness of the system, accessibility, data sources etc.

The key leading practices across the globe include the following:

- ▶ Government ownership
- ▶ One-stop shop for all Users (European Union has one web-portal)
- ▶ User friendly features (for data input as well as information access)
- ▶ Efficient data management (data classification and collection)
- ▶ Easy accessibility (targeted dissemination)

To understand domestic initiative, State Governments' schemes and programs in India have been illustrated in the field of skill matching, vocational guidance and employment creation. States such as Gujarat and Maharashtra have shown exemplary performance and initiative in the field of skill development and employment generation through strategic public and private partnership. However, State level initiatives are not implemented in the space of LMIS and no State has undertaken any full-fledged exercise for developing an interactive LMIS in the State or any sector. States' key initiatives are more driven by the priorities as set by the

State Governments' individual line departments; hence, there is a need where all these initiatives could become a part of a unified LMIS to promote the State led programmes and schemes.

Stakeholders' Analysis

LMIS 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 was critical. For example, information from LMIS will aid the policy makers in identifying key gaps in the current labour market and developing solutions to bridge the skill demand-supply gap. Similarly, there are multiple stakeholders including Government, NGOs and Industry associations, Employers, Training/ Educational institutions and Students/ Job seekers/ Employees involved in the labour market ecosystem, which look ahead to such a mechanism.

To comprehend the needs of these labour market stakeholders, more than a dozen interviews were held with representative groups. Based on the understanding of their current expectations and challenges, the key recommendations for the LMIS include:

- ▶ Single window for all labour market information
- ▶ Frequently updating labour market statistics
- ▶ Ensure the reliability of information
- ▶ Comprehensive information
- ▶ Partnership between Educational & Training Institutions, Employers and the Government

Proposed Framework

The task in hand now is to integrate international leading practices and stakeholder needs in the proposed framework of LMIS. Following are the key aspects of the proposed framework:

- ▶ Other than the requirements of frequent updation, targeted analysis, convenient access etc., certain basic information fields should form output of this system. This information shall be classified into fields like Socio-demographic, Educational, Employment, Policies, Training programs and Labour market participants.
- ▶ Although the entire labour market for the purposes of LMIS should be considered one, it's important the specific sectors develop their own functionalities within the broad guidelines applicable to all. For example, the respective sectors might need to refine data sourcing mechanism, customize skill assessment parameters, modify information fields and relook at dissemination procedures. Hence, it is important that all the sector take ownership to delve into the details based on the framework suggested.
- ▶ ICT will be a key enabler in implementing this system. A web enabled system will allow authorized users, irrespective of their physical location, to access Intranet systems like servers, applications, databases etc at the Data Center. The existing infrastructure in the country like State Wide Area Network, National Knowledge Network could be used for connectivity purposes.
- ▶ While an ideal system is being envisaged, it's important for a central agency to promote as well as own it. Although the sector skill councils would be managing their respective systems, the planning, issuing of broad guidelines and providing the initial push would be required to ensure increased acceptance & consistency. Ideally, a dedicated department in Government or a Special Purpose Vehicle, with representation from Government, private sector players and sector skill councils, should be formed for these purposes.
- ▶ Another aspect to be considered while designing the framework is the manpower, infrastructure and finance resource requirement. The manpower requirement would include not the managerial & technical staff running the system but also the agencies outside which should be trained to avail the benefits of the

system, like employment agents, CSCs, educational & training institutions. Examining the infrastructure required is another dimension, wherein IT infrastructure like data centre and Physical infrastructure like administration office are important to support the system. The most important of all is a self-sustainable business model. Implementation of the system would require financial resources and although the seed money could be arranged through Government support, to ensure its eternity constant cash inflows need to be planned.

- ▶ Finally, as a part of this concept note, certain critical success factors have been defined. These include ensuring Key features like updated, researched, Wide stakeholder enrollment, Respective stakeholders' involvement as integrated approach, Comprehensive coverage of all sectors & regions and Risk & security management.

Way Forward

As a way forward to put the system in place, key action points are as follows:

- ▶ Acceptance of the conceptual plan by all key stakeholders
- ▶ Preparation of Detailed Project Report, including common functionalities and guidelines for sector specific LMIS
- ▶ Design & development of solution by external vendor
- ▶ Implementation and launch by Pilot sectors/ Regions
- ▶ Incorporate learning from pilot and Complete rollout of the entire system

As suggested earlier, there is an imminent need for a nodal agency to take this forward by crafting the umbrella under which individual sector skill councils could function.

To conclude, Labour Market Information System is a mechanism to manage all explicit as well as tacit information pertaining to the labour market, which helps stakeholders to take informed decisions. For a vast and fast growing economy like India, this system will be the starting point in the direction to realizing the true potential of its workforce.





1. Introduction



1. Introduction

1.1 Indian Labour market scenario

While India's population growth rate has declined over the years, the labour force is still projected to grow by close to 2 percent or some 7 million or more a year over the next few years. Majority of the economy and the population are still rooted in traditional activities and structures. The labour market in India is primarily spread across the agriculture sector, the urban informal (unorganized) sector and the organized sector. The percentage of the total labour force in agriculture has witnessed a decline over the last decade; however it still employs the highest percentage of the total labour force. As the workers migrate from the rural agricultural sector to other sectors; it is imperative to devise a strategy to effectively absorb this additional workforce to sustain India's current growth rate.

In order to bridge the widening gaps in the required and the available skill levels, it is pertinent to assess and evaluate the existing skill levels of the vast labour force in the country. This will facilitate the identification of key skill requirements across sectors, geographies etc. To achieve this objective, it is critical to conceptualize and develop a framework that encapsulates information about the different facets that define the labour market. It is imperative to integrate the information to provide a single window for all information on labour market to the different stakeholders.

LMIS will be 'one single source' of all information available on labour market. The information will be available across industry, trade, geography, timelines, skills, education etc. LMIS will support informed decision making by providing research authenticated reliable labour market information to all the stakeholders.

Ensuring reliable labour market information to every citizen has been an important and long-standing policy mandate of the Government of India. Sourcing, calibrating, processing and presenting such information on real time basis has been a challenge despite sustained efforts due to fragmented data gathering, inaccuracy of data gathered and lack of a comprehensive delivery model.

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 emerging requirements, both in high skill services and high technology industrial production. The skill development system will need to meet this challenge. It is crucial to invest in quality secondary and tertiary education and in Vocational Education and Training (VET) if India's economy is to develop and remain competitive in world markets.

In order to bridge the widening gaps in the required and the available skill levels, it is pertinent to assess and evaluate the existing skill levels of the vast labour force in the country. To achieve this objective, it is critical to conceptualize and develop a framework that encapsulates information about the different facets that define the labour market. It is imperative to integrate the information to provide a single source and a common window for all information on labour market to the different stakeholders.

The main stakeholders of this LMIS would be:

- ▶ Government
- ▶ Employers
- ▶ Job Seekers/ Employed
- ▶ Educational and Training Institutions
- ▶ Industry Associations and NGO's

1.2 Need for Labour market information system

As new policies and systems are to be developed to respond to the rapidly changing environment, there will be an increased need to rely on readily available information that can influence the decision-making process. 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 an omies Government would be able to take stock of their capacity to produce and use labour market information in the decision-making process at different levels. The main goals of the project will be to establish/enhance labour force and occupational wage surveys, explore the data potential of employment databases, update existing national classification of occupations, produce internationally-comparable labour market indicators and establish national labour market information libraries.

The labour market information produced, informs employers of sectoral human resource trends, and supports them in maximizing their business potential. LMI has positive effects on labour market adjustments for business and individuals.

- ▶ Nearly all industrialized countries recognize the need for government intervention in developing and disseminating LMI. The governmental role arises from theory, social policy, and the benefits of efficient market operations and transactions.
- ▶ The complexities of the labour market necessarily require large-scale activities and partnerships to develop and operate an optimal LMI system. Collaboration among government ministries, agencies, and private sector entities is probably necessary to building a robust LMI system.
- ▶ The range of potential users of LMI encompasses nearly all individuals, businesses, and educational institutions. Reviewing the range of users and their needs is an important aspect of building, revising, and operating an optimal LMI system.
- ▶ Intermediaries including counselors, career facilitators, front line employment office staff, and others should be considered an integral part of a comprehensive LMI system.

1.3 About Labour market information system

Labour market information refers to information about the market -where labour skills are exchanged for wages. Information can be descriptive (qualitative) or statistical (quantitative).

Figure 1.1: General Market Scenario: LMIS

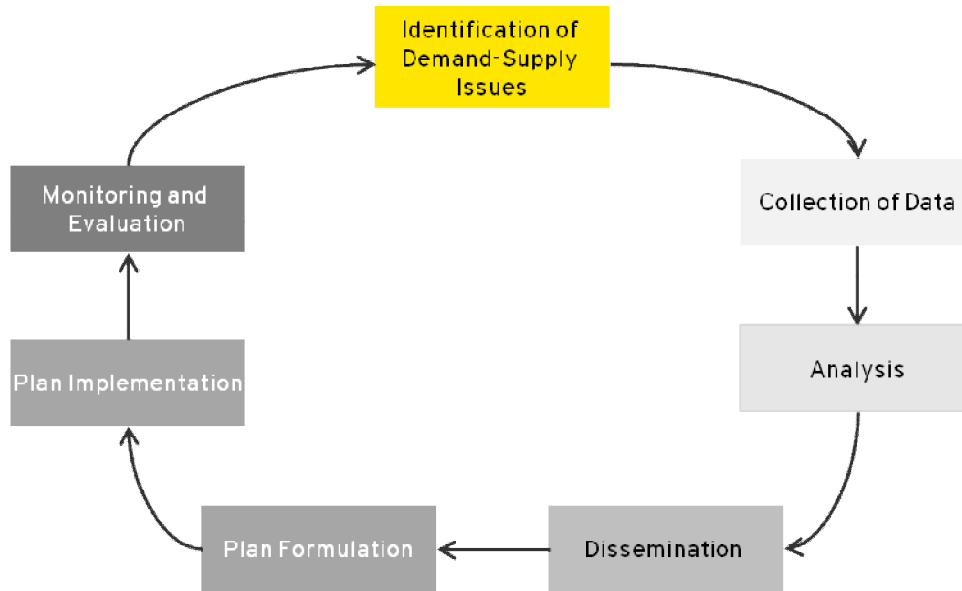
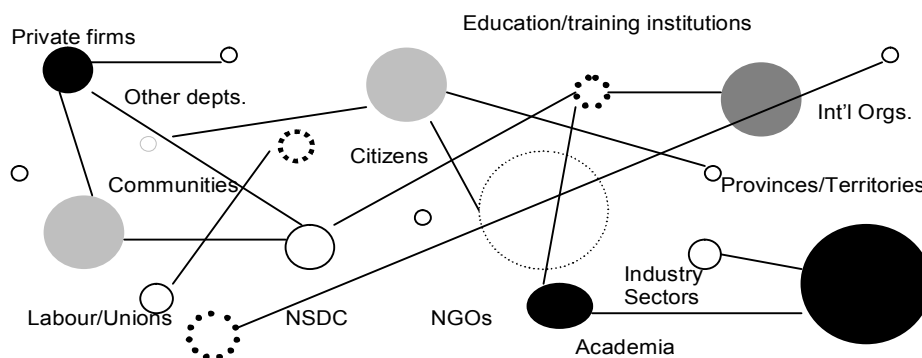


Figure above expresses the scenario in general market system. Labour market signals' are defined as 'discrete pieces of raw evidence, whether quantitative or qualitative', and 'labour market indicators' are defined as 'several signals, which, when processed together, imply a trend or direction'. Hence, labour market information can be defined as statistical and non-statistical information concerning labour market actors and their environment, as well as information concerning labour market institutions, policies and regulations that serves the needs of users and has been collected through the application of accepted methodologies and practice to the largest possible extent. It is the end product of needs assessment, preparation, collection, processing, dissemination and analysis of labour market and other data. The knowledge and information universe as depicted below in Figure 1.2 shows Government as only one of the many players. Here, it also signifies that in this ecosystem, no single player on its own will be able to make any sense, however, there is a need to develop broader coordinated framework to manage knowledge universe to work more efficiently.

Figure 1.2: LMIS Ecosystem



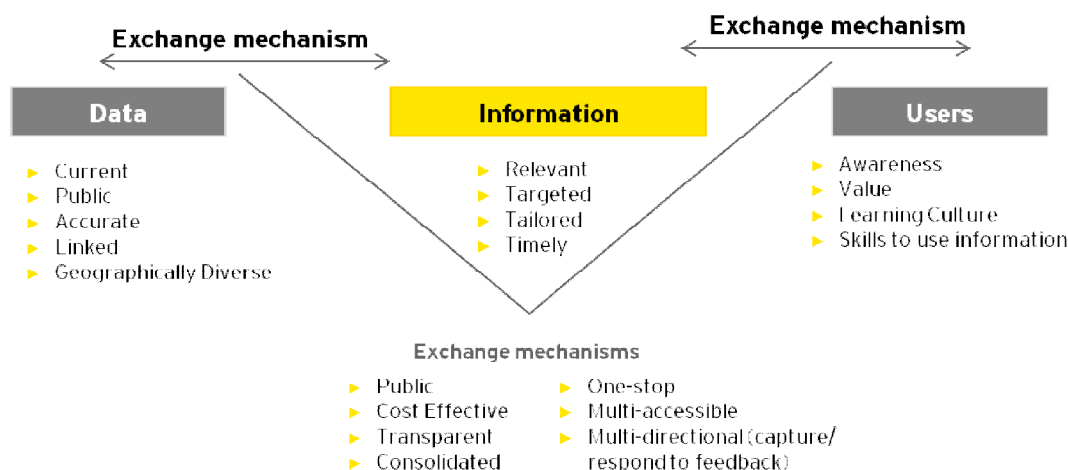
The ILO defines LMI as "any information concerning the size and composition of the labour market or any part of the labour market, the way it or any part of it functions, its problems, the opportunities which may be available to it, and the employment-related intentions or aspirations of those who are part of it."

As an illustration of the types of data that would be included in an optimal LMI system would include-:

- ▶ Labour market conditions data provide information on the overall structure and condition of the labour market, including its demographic composition, trends in employment and unemployment, labour turnover information, and information on labour force dynamics—the movement of people into and out of the labour force.
- ▶ Industry data organize employment, wages, and other information by the type of production processes used. Industry data also include information on job creation and destruction and the life cycle of business establishments.
- ▶ Occupational data organize employment, wages, and other information by the type of work performed and identifies the skill requirements and other occupational characteristics of workers and jobs.
- ▶ Labour market projections examine labour force, industry, and occupational trends and provide a picture of future employment and job openings based on assumptions about economic growth.
- ▶ Business establishment lists provide information about individual business establishments, such as name and address, industry, employment, and payroll. These lists also provide the sampling universe for business surveys.
- ▶ Labour market dynamics information examines the flows of workers into and out of employment, and the creation, expansion, contraction, and disappearance of businesses, and factors related to these dynamic changes.
- ▶ Current job vacancies information identifies job openings for which employers are actively seeking workers.
- ▶ Data on employment and unemployment include information on the employment, earnings, and other items for individual workers, information on individual job seekers contained in resume or applicant files, as well as program information on individuals in workforce training or other programs.
- ▶ Education and training resources information identifies education and training institutions, programs and courses, information on access to and the quality of these training sources, and information on financial assistance.

Figure 1.3 below shows the significance of data as key input which gets converted as information over a period of time based on the users' requirements. The exchange mechanism that attributes to this transition is also highlighted below.

Figure 1.2 : Data Exchange Mechanism



1.4 About this Paper

The objective of this concept paper is to provide concepts and framework that will assist in establishing information systems that meet the demand for information from policymakers as well as other users. This report is an effort to provide a framework which can further be used for designing the LMIS in the context of India. Most importantly, the aim of this paper is to facilitate the decision making process - at the policy level - by delineating, in lucid terms, the functional, technological, commercial and organizational requirements for setting up a Labour Market Information System.

Key sections of this paper will detail out the following:

Table 1.1: Chapter Summary

Chapter no.	Chapter name	Information covered
1.	Introduction	Includes a brief background on the need of creating an LMIS and understanding the meaning of this system. Small description on the structure of the report, approach and methodology adopted for conceptualizing the report.
2.	Study of Leading Practices	<ul style="list-style-type: none"> ▶ International: Key learning from the other countries where LMIS is running successfully. Process, Technology and Policy level interventions were studied to arrive at information which could well go in designing the LMIS in India ▶ Domestic : Covers various initiatives on collection and dissemination of employment and labour market information in States in India such as Gujarat and Maharashtra
3.	Stakeholders' Analysis	Comprises of the key expectations and challenges of key stakeholders whilst development of this Information system to ensure that the system conceptualized and developed is in compliance with the stakeholders'

Chapter no.	Chapter name	Information covered
		needs.
4.	Proposed Framework	LMIS features, Infrastructure, finance & manpower requirement details, Governance mechanism and Critical success factors to be adopted in the envisaged LMIS are discussed in the chapter.
5.	Way Forward	Key steps to be followed after the approval of the concept paper and further inputs required for decision making.

Interactions with the leading academicians, industry leaders and policy makers were held to provide a foundation for setting up an LMIS in the context of India. The study for creating a Labour Market Information System was conceptualized considering the usefulness of it and providing a common platform for accessing labour market related information. Detailed study was conducted which was well supported by the significant contributions made by stakeholders' inputs on the design and usability of the proposed system.



2. Study of Leading Practices



2. Study of Leading Practices

2.1 International leading practices

2.1.1 Background

In order to understand the framework for an optimal LMIS, it is imperative to understand the leading practices across the globe and derive the key points on building a robust structure for a comprehensive, user friendly and easily accessible system. Hence, a study of well established and most successful LMIS systems across the globe was conducted to understand the following:

- ▶ Detailed description of the environment in which LMIS works
- ▶ Stakeholders of LMIS
- ▶ Interpretation of data
- ▶ Definition of labour market
- ▶ Labour force demand and supply
- ▶ Reasons for implementing the LMIS
- ▶ Employment structure by industry and occupation
- ▶ Labour force demand and labour supply
- ▶ Local area unemployment
- ▶ Other demographic, geographic, and economic factors etc.

This Report presents a compilation of leading practices in dissemination of Labour Market Information (LMI).

As illustrated in the following sections of this report, there is no single set of data requirements or delivery approaches that characterizes an optimal LMI system. However, as per the best practices adopted globally, there are key features that should be considered in designing and implementing a world class LMI system. These features have been elaborated as Key Learning's later in this Chapter 9.

2.1.2 Methodology

The understanding of best practices with respect to flow of information from one stakeholder to other, systems and people capability of stakeholders as established in similar programs across the world is required to articulate the pillars of a successful, robust and strategically designed LMIS. Study of other LMIS initiatives carried out in other countries across the world can help identify how challenges especially related to skill development/ planning/ imparting training etc. have been addressed in the past.

As indicated below, the compilation of leading practices is based on multiple avenues of information gathering and assimilation. Well established and most successful LMIS system prevalent in sample countries such as, USA, Europe, and Australia were identified to understand the following:

- ▶ Detailed description of the LMIS environment
- ▶ Interpretation of data
- ▶ Definition of labour market
- ▶ Labour force demand and supply
- ▶ Reasons for implementing the LMIS
- ▶ Employment structure by industry and occupation
- ▶ Local area unemployment
- ▶ Other demographic, geographic, and economic factors etc.

Extensive secondary research of practices adopted across countries was undertaken to assess the LMIS framework adopted across different countries. The study on leading practices focused specially on the following evaluation parameters:

- ▶ Geographic coverage of the data and information and whether various levels from national , regional, local small areas and other defined boundaries have been covered to provide a cross sectional analysis
- ▶ Key sources of data and the reliability of these sources, public private partnership arrangements, involvement of other intermediaries such as research institutes, universities etc.
- ▶ User access and availability of extra helpful features such as Create Resume, Update Company Profile, receive Newsletter
- ▶ Type of information/ data generated and the ability to customize it
- ▶ Codification used to classify data on industries, occupation, skill set

Research on LMI portals across the globe was conducted using internet, internal databases, discussion with internal subject matter experts. A preliminary search was conducted on various countries from every continent. The countries were selected for the study based on the following criteria:

- ▶ Initiative taken by the Government and private players on labour market information system (and not just on the job portal)
- ▶ Online availability of data
- ▶ Uniqueness of initiative
- ▶ Coverage of our secondary research

Based on the aforementioned criteria, countries that were selected for the study have been mapped below.

Figure 2.1 Countries selected for the International Leading Practices Study



Based on the availability of information, the Labour Market Information Portal (LMIP) of the selected countries was evaluated on the following, though not limited to, parameters:

- ▶ LMI features such as Library, Frequently Asked Questions, Data Center, Quick Links, Customized Services
- ▶ User friendliness of LMIP indicated by ease of search, user category wise data availability, information on data resources
- ▶ Types of Users benefitting from LMIP and coverage of all user groups such as intermediaries like Counselors, Academicians
- ▶ Sources of data and reliability of sources
- ▶ Use of standardized codification/ classification of labour market data
- ▶ Type of information generated and ease of customization
- ▶ User access and availability of additional features for registered users such as Resume databank, 'How to create Resume', 'How to prepare for an interview' etc.

2.1.3 Study outcome¹

A. Australia²

A.1 Overview of Labour Market Information System

Australia's Labour Market Information Portal is operated by the Department of Education, Employment and Workplace Relations (DEEWR). DEEWR was formed after amalgamation of Department of Education, Training and Youth Affairs and Commonwealth Department of Employment and Workplace Relations (DEWR).

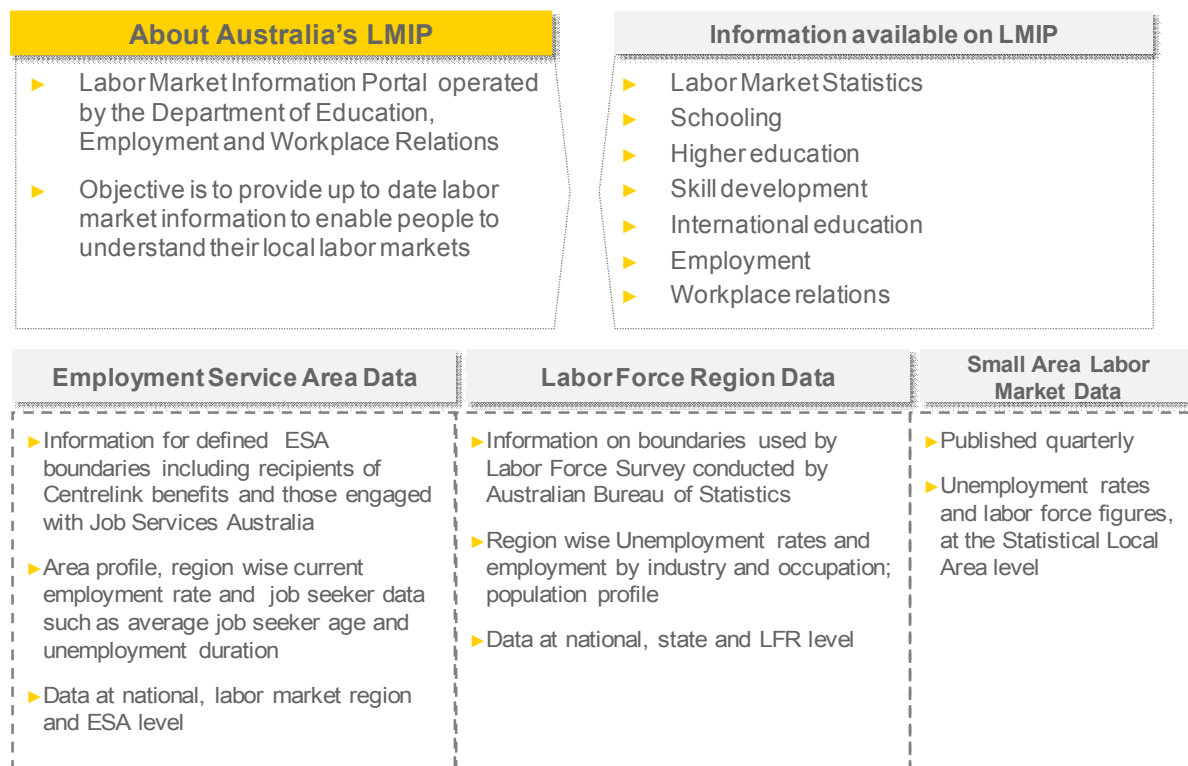
Apart from providing information related to the Labour Market, DEEWR's website provides wide ranging information related to schooling, higher education, skill development, international education, and employment and workplace relations.

LMIP has been developed by DEEWR as an online resource providing updated labour market information to enable people to understand their local labour markets. The DEEWR site also separately provides disability employment services data. The schematic below depicts the key characteristics of the Australian LMIP.

¹ Source : <http://www.deewr.gov.au/lmip/>

² Refer to Annexure for LMI snapshot

Figure 2.2: Key Characteristics of the Australian LMIP



A.2 Codification

Australian workforce is employed across 19 broad industries as per the Australian and New Zealand Standard Industrial Classification (ANZSIC) 2006. The statistics for each industry include employment size, average unemployment rate, employment rate (by gender), share of full time employees, median working earnings, employment growth projections and workforce ageing.

A.3 Geographical coverage

Employment Service Area (ESA) boundaries have been defined under the 2009-2012 Employment Services contract. It provides information for these boundaries including the number of people in receipt of Centrelink benefits, and the number engaged with Job Services Australia. This data is also available at the national, labour market region and ESA level. Each level of geography also includes area profile, which includes the current employment rate for the region and job seeker data such as average job seeker age and unemployment duration.

Labour Force Region (LFR) Data provides information on the basis of boundaries used by the Labour Force Survey conducted by the Australian Bureau of Statistics (ABS). It includes data points such as unemployment rates and employment by industry and occupation along with a population profile. Each area profile also consists of current unemployment, employment rate and participation rate for the region. Data is available at the national, state and LFR level.

Small Area Labour Markets (SALM) data: Published quarterly, this data provides unemployment rates and labour force figures, available at the Statistical Local Area (SLA) level.

A.4 Sources of data

Data on the website are available at the national, state, Labour Force Region, Employment Service Area and Statistical Local Area levels.

The Australian Bureau of Statistics (ABS) is Australia's official national statistical agency. Its mission is to assist and encourage informed decision making, research and discussion within governments and the community, by leading a high quality, objective and responsive national statistical service.

The parameters such as legislative framework, organizational structure, planning and quality management practices of a statistical agency affect the ability of a statistical program to meet user needs efficiently and effectively. The ABS operates within a framework that includes the Australian Bureau of Statistics Act 1975 and the Census and Statistics Act 1905.

ABS conducts the quinquennial Census of Population and Housing and the monthly Labour Force Market statistics.

- ▶ The Census of Population and Housing:
 - ▶ The Australian Census of Population and Housing is the official count of population and dwellings and collects details of age, sex and other characteristics of the population.
 - ▶ The Census of Population and Housing aims to accurately count the number of people in Australia, their key characteristics, and the dwellings in which they live.
 - ▶ During the Census every household and person in the country is required to answer specific questions on the paper form or through eCensus online.
- ▶ Labour Force Statistics
 - ▶ Statistics are compiled from the Labour Force Survey which is conducted each month throughout Australia as part of the Australian Bureau of Statistics (ABS) household survey program.
 - ▶ The Labour Force Survey provides monthly information about the labour market activity of Australia's resident civilian population aged 15 years and over. The Labour Force Survey is designed to primarily provide estimates of employment and unemployment for the whole of Australia and, secondarily, for each state and territory.
 - ▶ The Labour Force Survey enumeration begins on the Sunday between the 5th and 11th of the month, except for the Christmas and New Year holiday period. In December enumerations starts between the 3rd and 9th (4 weeks after November enumeration begins). In January enumeration starts between the 7th and 13th (5 weeks after December enumeration begins).
 - ▶ The Labour Force Survey is based on a sample of private dwellings (approximately 29,000 houses, flats etc) and non-private dwellings, such as hotels and motels. The sample covers about 0.33% of the Australian civilian population aged 15 years or over. The Labour Force Survey is designed primarily to provide estimates of key labour force statistics for the whole of Australia and, secondarily, for each state and territory.

LMIP data update schedule

- ▶ Employment Service Area (ESA) Data
 - ▶ Centrelink and Job Services Australia Data: Current data, December 2010. March 2011 data will be available in April 2011.
 - ▶ Employment Service Area and Labour Market Region Unemployment Rates: Current data, September 2010. December 2010 data will be available in March 2011.

- ▶ Demographics - Estimated Residential Population Data: Current data, June 2009. June 2010 data will be available in mid 2011.
- ▶ ABS Census of Population and Housing Data: Current data, 2006 ABS Census of Population and Housing. 2011 Census data will be available in late 2012.
- ▶ Labour Force Region Data
 - ▶ Industry, Occupation and Unemployment Duration Data
 - ▶ Current data, November 2010. February 2011 data will be available in March 2011.
 - ▶ All Other ABS Labour Force Data
 - ▶ Current data, January 2011. February 2011 data will be available in March 2011.
- ▶ Small Area Labour Markets (SALM) Data: Current data, September 2010. December 2010 data will be available in March 2011.

A.5 Type of Information Generated

Information provided on LMIP is broadly divided into three channels:

- ▶ ESA Data is mainly required by stakeholders such as Government Departments for policy making, formulation of regulations and guidelines, Research Institutes, Industry Associations and Intermediaries such as Career Counselors / Academicians / Universities. The data includes the following:
 - ▶ Unemployment rate (15+)
 - ▶ Job seekers (15+)
 - ▶ Average job seekers age
 - ▶ Average job seeker unemployment duration
 - ▶ Working age population (15-64)
 - ▶ 2006 Census of Population statistics
 - ▶ Number of people identified as indigenous
 - ▶ Indigenous employment rate
 - ▶ People born overseas
 - ▶ People born in Non English speaking countries
 - ▶ People employed
 - ▶ Employment rate
 - ▶ Employment rate for people born overseas in Non English speaking countries
 - ▶ Centrelink and Job Services Australia (JSA) customer populations: Job Services Australia is the Australian Governments' national employment services established with an aim of increasing employment participation, building skills and providing sustainable employment to individual job seekers.
 - ▶ JSA population by age
 - ▶ JSA disability support pension recipients by age
 - ▶ JSA disability support pension recipients by unemployment duration
 - ▶ JSA parenting payment recipients by Age

- ▶ JSA parenting payment recipients by unemployment duration
- ▶ JSA mature age job seekers by unemployment duration
- ▶ Employment by industry (ABS census 2006)
- ▶ Employment by occupation (ABS census 2006)
- ▶ Population by age group (ABS estimated residential population, June 2009)
- ▶ LFR data is largely used by employers and job seekers to gather immediate trends in the labour market. The data includes the following:
 - ▶ Working age population
 - ▶ Employment rate
 - ▶ Unemployment rate
 - ▶ Participation rate
 - ▶ Teenage full time UE rate
 - ▶ Teenage full time UE to population ratio
 - ▶ Population by age group
 - ▶ Population by Labour force status
 - ▶ Unemployment duration
 - ▶ Employment by industry or occupation; status (full time/ part time/ not in the labour force) and gender
 - ▶ Time series data for employment, unemployment and participation rate (State, Territory and National only)
 - ▶ Employment by industry
 - ▶ Employment by occupation
- ▶ SALM data includes the following :
 - ▶ Unemployment rate for most recent quarter and one year ago
 - ▶ Number of unemployed people for most recent quarter and one year ago
 - ▶ Number of people in the labour force in the most recent quarter
 - ▶ Maps of SLAs within a labour force

Other sources and types of labour market information are as follows:

- ▶ Data that is largely sought after by employers, job seekers , Industry Associations etc is also provided by :
 - ▶ ABS Labour Force: Monthly figures (trend and seasonally adjusted) of employed persons, unemployed persons, unemployment rate and participation rate
 - ▶ Australian Regional Labour Markets: Quarterly reports with statistics on employment, unemployment, the unemployment rate and the participation rate by ABS labour force region. The data is also presented by State/ Territory, and metropolitan and non-metropolitan regions.
 - ▶ SkillsInfo: The website provides comprehensive data on industry employment trends and industry prospects in Australia. It additionally provides information and links on Australian labour market, vacancy trends, skills shortages, regional employment and education and training.

- ▶ Labour market information: This section contains link to other sites providing labour market information for Australia
- ▶ Industry reports and charts: These are specific industry employment profiles containing information such as historical and projected employment growth, gender and FT/PT employment share, employment by region and occupation, workforce ageing, and workforce characteristics such as earnings and educational profile.
- ▶ Regional information: Provides links to LMIP where regional labour information can be sourced.
- ▶ Regional report and charts: Provides regions specific reports analyzing employment characteristics using the Census data.
- ▶ Skill shortage: Provides links to the state and territory skill shortage lists on DEEWR website. It also provides link to Skills Australia, an independent statutory body which advises Minister for Education, Employment and Workplace Relations on Australia's current, emerging and future workforce skills needs and workforce development needs.
- ▶ Education and training - This section provides useful information related to careers, apprenticeships, higher education, skills and vocational education and training in Australia.
- ▶ Skills Australia: Skills Australia is an independent statutory body, providing advice to the Minister for Tertiary Education, Skills, Jobs and Workplace Relations on Australia's current, emerging and future workforce skills needs and workforce development needs.
- ▶ Industry Skills Council: There are eleven industry skills councils which provide industry intelligence and advice to Skills Australia.
- ▶ Jobs Outlook: An initiative of DEEWR, it provides data on employment characteristics, trends and prospects for occupations. It also provides links to vacancies on Australian Job Search website, training courses on myfuture.com website.
- ▶ Australian Jobs: The Australian Jobs 2010 report provides up-to-date information about jobs, including a guide to the occupations and industries in which Australians work. It highlights jobs with good prospects and includes information at a State/Territory and regional labour markets level.
- ▶ Data that is mainly required by tourists, citizens in general and Government Departments is also provided by :
 - ▶ Department of Immigration and Citizenship: Provides information on visas, immigration, skilled migration and citizenship.

A.6 User Access

Access to Australia's LMIP does not require login and password. Statistical data on employment, unemployment, the unemployment rate and the participation, occupation and industry wise statistics etc is readily available online.

Publications such as New Jobs which provides an overview for all industries and Vacancy Reports, Industry Reports and Regional Reports are available online free of cost. The Reports cover a wide range of topics such as:

- ▶ Accommodation and Food Services
- ▶ Administrative and Support Services
- ▶ Agriculture, Forestry and Fishing
- ▶ Arts and Recreation Services

- ▶ Construction
- ▶ Education and Training
- ▶ Electricity, Gas, Water and Waste Services
- ▶ Financial and Insurance Services
- ▶ Health Care and Social Assistance
- ▶ Information Media and Telecommunications
- ▶ Manufacturing
- ▶ Mining
- ▶ Other Services
- ▶ Professional, Scientific and Technical Services
- ▶ Public Administration and Safety
- ▶ Rental, Hiring and Real Estate Services
- ▶ Retail Trade
- ▶ Transport, Postal and Warehousing

Job search sites which are Australian Government Initiative such as Job Outlook within LMIP do not require login and password and is accessible to all users. These sites offer following key features free of charge:

- ▶ DEEWR rates prospects for occupations as good, average or below average - this list provides links to occupations assessed as having good prospects.
- ▶ Career Quiz which will help jobseeker identify what types of work she/he will most like doing. It lists 15 questions for six tasks that people do. The user has to select the work that she/he enjoys doing most and can then select "See result" to view the occupations she/he is most likely to enjoy or be good at.
- ▶ Skill shortage research is undertaken by the Department of Education, Employment and Workplace Relations (DEEWR) using the Australian and New Zealand Standard Classification of Occupations (ANZSCO) to define occupations. The research focuses on professions, associate professions and trades, although a number of occupations in the management group are also included in the program.

A.7 Key Learnings

The key learning's from Australian LMIP are as elaborated below:

- ▶ Granular level of detailed information/ data easily accessible on portal :
 - ▶ Area/ Region wise profile which includes
 - ▶ Current unemployment rate for the region
 - ▶ Job seeker data, such as average job seeker age and unemployment duration
 - ▶ Industry and Region wise Reports Monthly Schedule for Labour Market Data Update
- ▶ Well illustrated features such as Frequently Asked Questions for Job Seekers (citizens and non-citizens), Guidance on Job Search , Training and Apprenticeship Programs, Career Counseling
- ▶ List of Useful Links and Resources for
 - ▶ Job Search
 - ▶ Department for Citizen Services / Immigration
 - ▶ Leading Economic Indications
 - ▶ Industry / Region wise Reports / Charts on Skill Development
 - ▶ Sector wise Skill Shortage Index

- ▶ **Governance and Cost-Effectiveness:** The Australian LMIP is a collaborative effort with strategic involvement of many different public and private organizations formally and informally in developing and delivering LMIP. This ensures a comprehensive databank of information which caters to wide ranging needs of the various stakeholders.
- ▶ **Informed and adequately trained Labour Market Analysts:** DEEWR has just over 6000 staff working across Australia and overseas to develop policy and advise government, deliver programs and services, and provide information and guidance on everything from early childhood education through to employment and workplace relations.
- ▶ **Intermediaries** such as career counselors, researchers etc can find relevant information on the portal

The LMIS web portal snapshots for Australian LMIS and many other exemplary initiatives, as explained below, are placed at Annexure 6.1.

B. United Kingdom³

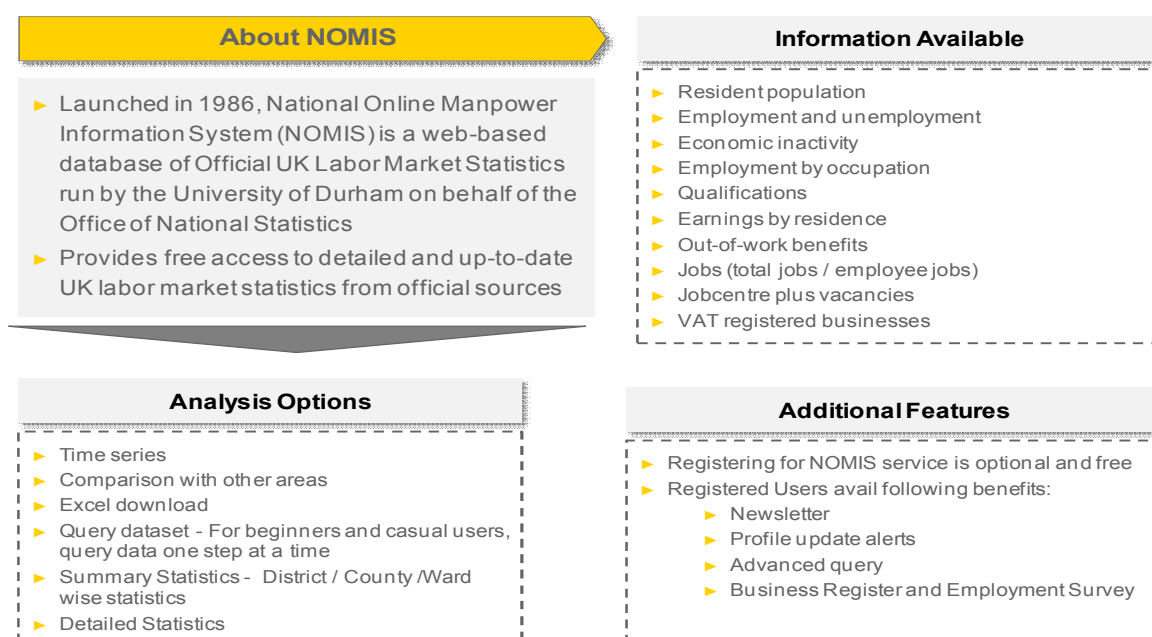
B.1 Overview of Labour Market Information System

Launched in 1986, National Online Manpower Information System (NOMIS) is a web-based database of Official United Kingdom (UK) Labour Market Statistics run by the University of Durham on behalf of the Office of National Statistics (ONS). NOMIS provides labour market profiles providing an overview of the key labour market information available at a range of geographic levels. The statistics are presented according to a framework of labour supply and demand known as the labour market accounting system:

- ▶ The supply side is represented by those people who supply (or potentially supply) their labour to employers, through employment, unemployment and inactivity.
- ▶ Demand is represented by the jobs offered by employers and job vacancies

The schematic below depicts the key characteristics of the UK LMIP.

Figure 2.3: Key Characteristics of the United Kingdom's LMIP



³ Source: www.nomisweb.co.uk/

B.2 Codification

NOMIS provides labour market profile of an area, classified on the basis of local authority, ward and 2010 Parliamentary Constituencies. Occupations are classified according to the Standard Occupation Classification 2000

B.3 Geographic Coverage

The labour market profiles in NOMIS use the most appropriate sources of statistics available at the different geographic levels. The data are taken directly from the main NOMIS database. The definitions and explanations section to the end of each profile explains the sources used and defines the variables included in the tables.

B.4 Sources of Data

Sources of labour market information and data include various surveys and offices such as:

- ▶ Labour supply data–Annual Population Survey (APS) regular household survey in the United Kingdom.
- ▶ Labour demand data-Annual Business Inquiry (ABI) - an employer survey conducted in December of each year
- ▶ Office of National Statistics
- ▶ Jobseekers Allowance claimants, Annual Survey of Hours and Earnings and VAT registrations.

B.5 Type of Information Generated

- ▶ Users of NOMIS include the following categories :
 - ▶ Central government
 - ▶ Local government
 - ▶ Commercial agencies
 - ▶ Academic research
 - ▶ Job seekers
 - ▶ Employers
 - ▶ Planners
 - ▶ Labour market analysts
 - ▶ Training specialists
- ▶ Information available on NOMIS covers the following areas and parameters:
 - ▶ Resident population
 - ▶ Employment and unemployment
 - ▶ Economic inactivity
 - ▶ Employment by occupation
 - ▶ Qualifications
 - ▶ Earnings by residence
 - ▶ Out-of-work benefits
 - ▶ Jobs (total jobs / employee jobs)
 - ▶ Jobcentre plus vacancies

- ▶ VAT registered businesses
- ▶ Analysis options for Users of NOMIS include:
 - ▶ Time series
 - ▶ Comparison with other areas
 - ▶ Excel download
 - ▶ Query dataset

B.6 User Access

Registering for the NOMIS service is optional and free. All of the data and standard features of the site, with the exception of detailed Business Register and Employment Survey (BRES) data, are accessible to non-registered users.

However, by registering the User will be able to:

- ▶ Receive Newsletter. Keep up-to-date with the latest data releases and site developments.
- ▶ Receive Profile Update alerts. Request an email alert when the data in a labour market profile are updated.
- ▶ Search for Advanced query. Take full advantage of the functionality in the advanced query facility. Regular users will benefit from being able to save queries and create user-defined selections (e.g. geographic areas, industries) for later re-use.
- ▶ Apply for Business Register and Employment Survey (BRES).access: Separate authorization (fee payable) is required to access the full BRES data sets; details are available from 'my account' section after registering.
- ▶ Manage own account - change password, update contact details, manage email alerts, book on training courses, apply for BRES access.
- ▶ Helpdesk support: Get enhanced support in case of any difficulties when downloading data.

B.7 Key Learning's

The key learning's from NOMIS are as below:

- ▶ Quick and easy one step online Registration on the portal for Users to avail of various customized features
- ▶ Registered Users avail following benefits:
 - ▶ Newsletter
 - ▶ Profile update alerts
 - ▶ Advanced query
 - ▶ Business Register and Employment Survey

C. United States of America⁴

C.1 Overview of Labour Market Information System

Labour market systems of the states were studied to understand the leading practices in United States of America (USA). These portals cater to regional labour market needs with focus on the city and its immediate neighborhood. LMIS of the following states have been studied:

1. New York City (NYC)
2. California⁵
3. Florida
4. Oregon

New York City Labour Market Information Service (NYCLMIS)

The New York City Labour Market Information Service (NYCLMIS) provides labour market analysis in New York City (NYC) for the public workforce system. NYCLMIS provides labour market analysis for the public workforce system. The NYCLMIS was formed in 2008 as a joint endeavor of the New York City Workforce Investment Board (WIB) and The City University of New York at the Center for Urban Research (CUR). NYCLMIS was established with the following objectives:

- ▶ Develop action-oriented research and information tools that will be used by workforce development providers and policy makers to improve their practice and strategic decision-making
- ▶ Be a portal for cutting-edge and timely labour market data about New York City
- ▶ Contribute to raising awareness of workforce development issues in New York City

The schematic below depicts the key characteristics of the NYCLMIS

Figure 2.4: Key Characteristics of the New York's LMIP



⁴Sources: <http://www.nyc.gov/html/sbs/wib/html/about/about.shtml>; <http://www.labourmarketinfo.com/index.html>; <http://www.qualityinfo.org/olmisj/OlmisZine>

⁵ Refer to Annexure for LMI snapshot

California Labour Market Information (LMI)

The Employment Development Department (EDD), California Government, is one of the largest state departments with employees at hundreds of service locations throughout the state. For more than 70 years, EDD has been involved in connecting millions of job seekers. The main web site of the EDD provides links to:

- ▶ An online job and résumé bank, CalJOBSSM, which contains thousands of job openings and the largest pool of candidates in the state
- ▶ Labour market tools designed to help make educated decisions
- ▶ Information on filing an Unemployment Insurance, Disability Insurance, or Paid Family Leave claim
- ▶ Payroll tax information and forms
- ▶ An array of employment and training services

The schematic below depicts the key characteristics of California's LMIP.

Figure 2.5: Key Characteristics of California's LMIP



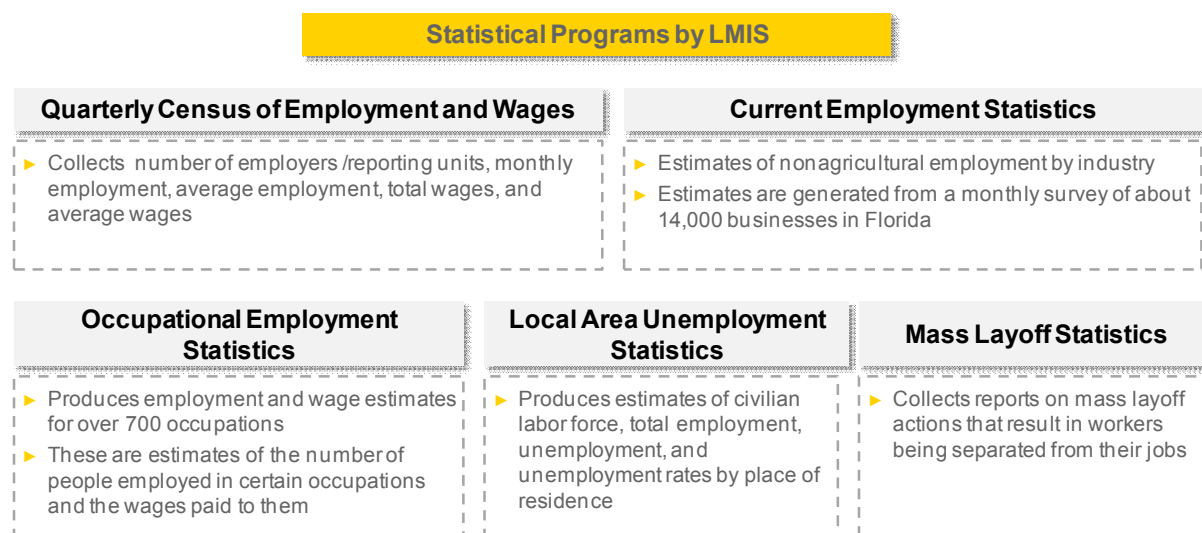
Florida Labour Market Statistics (LMS)

The Agency for Workforce Innovation is Florida's lead state workforce agency and directly administers the state's Labour Market Statistics program, Unemployment Compensation, Early Learning and various workforce development programs.

Labour Market Statistics Center in the Florida Agency for Workforce Innovation provides online labour market information for Florida. Labour Market Statistics' (LMS) mission is to produce, analyze, and deliver timely and reliable labour statistics to improve economic decision-making.

The schematic below depicts the key characteristics of Florida’s LMIP.

Figure 2.6: Key Characteristics of the Florida’s LMIP



Oregon Labour Market Information System (OLMIS)⁶

The Oregon Employment Department maintains the OLMIS with the following objective:

- ▶ Give high quality service to all customers - job seekers, claimants, businesses, and legislators; local, county, state and federal agencies, and co-workers
- ▶ Provide timely and accurate information on labour market
- ▶ Serve businesses by recruiting and referring the best qualified applicants to jobs, and provide resources to diverse job seekers in support of their employment needs.
- ▶ Develop and distribute quality workforce and economic information to promote informed decision making.

⁶ Refer to Annexure for LMI snapshot

The schematic below depicts the key characteristics of Oregon's LMIP.

Figure 2.7: Key Characteristics of the Oregon's LMIP



C.2 Codification

NYCLMIS

NYCLMIS uses the following codification:

- ▶ North American Industry Classification System (NAICS) - A standard numerical classification system used to group establishments
- ▶ Standard numerical classification system is used to group workers into occupational categories according to job, duties, skills, education, or experience

California LMI

The North American Industry Classification System, or NAICS, is used by Employment Development Department (EDD), California Government, to classify industries.

NAICS is the product of a cooperative effort on the part of the statistical agencies of the United States, Canada, and Mexico. Employers with similar production processes are classified in the same industry. NAICS focuses on how products and services are created, as opposed to SIC which focuses on what is produced. Using NAICS yields significantly different industry groupings than those produced using SIC. Due to these differences in NAICS and SIC structures, NAICS data will not be directly comparable to the SIC based data for earlier years.

Further , California LMI also uses the Classification of Instructional Programs (CIP) for categorizing instructional programs and currently has about 91 different classifications for instructional programs. The purpose of the CIP is to provide a taxonomic scheme that will support the accurate tracking, assessment, and

reporting of fields of study and program completions activity. CIP was originally developed by the U.S. Department of Education's National Center for Education Statistics (NCES) in 1980, with revisions occurring in 1985 and 1990. The 2000 edition (CIP-2000) is the third revision of the taxonomy and presents an updated taxonomy of instructional program classifications and descriptions.

Florida LMS

- ▶ The Quarterly Census of Employment and Wages (QCEW) use the 2007 North American Industry Classification System (NAICS) Revision. With the release of the 1st Quarter 2007 data, the QCEW program converted to the 2007 revision of the (NAICS). This conversion resulted in minor changes to the data and more accurately reflects the business activities in selected industries.
- ▶ The Current Employment Statistics program produces estimates of nonagricultural employment by industry by the North American Industry Classification System (NAICS).
- ▶ The May 2009 Occupational Employment Statistics (OES) program estimates are based on the Office of Management and Budget's 2000 Standard Occupational Classification (SOC) system. The OES survey categorizes workers into 801 detailed occupations. Together, these detailed occupations make up 22 of the 23 major occupational groups. Military specific occupations are not included in the OES survey.

OLMIS

Standard Occupational Classification (SOC) is used in the U.S. Bureau of Labour Statistics' Occupational Employment Survey, from which we obtain wage rates that employers are paying their Oregon workers. This classification system includes more than 750 separate occupations and is designed and reviewed by a national committee of experts from industry, government, and academia. Since the national wage survey uses the SOC, the Oregon Education Department uses the same when publishing wage data.

C.3 GEOGRAPHIC COVERAGE

NYCLMIS

The NYCLMIS provides current economic and workforce information for New York City. The Workforce Investment Board (WIB) frequently commissions original reports that provide valuable insights on New York City's workforce economy. Due to its size, New York City has a national impact on workforce development. Further, the City's workforce system has itself been the subject of additional reports.

California LMI

California LMI provides detailed information on counties / regions / areas in California. However, the LMI has useful links to nationwide statistics and also data for other states in USA.

Florida LMS

The Florida LMS has various statistical programs covering labour market data across regions:

- ▶ The QCEW program covers Statewide, Metropolitan Statistical Areas (MSAs), Counties, and Workforce Regions.
- ▶ The CES program covers Statewide and selected MSAs
- ▶ The Local Area Unemployment Statistics (LAUS) covers Statewide, all Metropolitan Statistical Areas (MSAs), all counties, and larger cities (those with populations over 25,000)
- ▶ The OES program covers Statewide and selected MSAs

OLMIS

OLMIS provides regularly updated labour market information, trends, and data for 13 regions within the state including employment and unemployment data for smaller / local areas.

C.4 Sources of Data

NYCLIMS

NYCLIMS uses the following sources of data:

- ▶ Bureau of Labour statistics–Current Employment Statistics (CES)
- ▶ Quarterly Census of Employment and Wages
- ▶ US Census Bureau

California LMI

Sources of data for Reports generated by LMI are California Employment Development Department, Labour Market Information Division and U.S. Bureau of Labour Statistics.

The Employment Development Department's Labour Market Information Division (LMID) regularly collects, analyzes, and publishes information about California's labour markets. These diverse markets are comprised of more than one million employers and a civilian labour force of more than 18 million individuals.

In addition to employment and unemployment data, LMID provides economic development and planning information; industry and occupational characteristics, trends, and wage information; and social and demographic information. Most of these data are available for the state and counties. Some data are available for other geographic regions as well. LMID also provides technical assistance and customized data services for state and sub-state geographic areas.

Florida LMS

Labour Market Statistics collects data under several federal/state cooperative statistical programs:

- ▶ QCEW program collects the number of employers or reporting units, monthly employment, average employment, total wages, and average wages by the North American Industry Classification System (NAICS). Tables are available by major industry or by detailed industry categories.
 - ▶ QCEW - summarizes industry employment and wage data for all employers covered by state Unemployment Insurance (UI) laws and federal workers covered by the Unemployment Compensation for Federal Employees (UCFE) program.
 - ▶ Business Employment Dynamics (BED) is a set of statistics generated from the Quarterly Census of Employment and Wages program. These quarterly data series consist of gross job gains and gross job losses for statewide private sector totals only, 1992 forward. These data are published approximately eight months after the end of the quarter.
 - ▶ Frequency of this program is Quarterly and Annually
- ▶ CES program produces estimates of nonagricultural employment by industry. These estimates represent jobs by place of work and are generated from a monthly survey of about 14,000 businesses in Florida. Monthly tables include estimates for the current month, previous month, and the current month a year ago, along with over-the-month and over-the-year changes.
 - ▶ Frequency of this program is Monthly and Annually
- ▶ The LAUS program produces estimates of civilian labour force, total employment, unemployment, and unemployment rates by place of residence.

- ▶ Monthly tables include estimates for the current month, previous month, and the current month a year ago.
- ▶ Annual tables include both monthly data and calendar year averages.
- ▶ Statewide data are available both seasonally adjusted and not seasonally adjusted. Sub-state areas are not seasonally adjusted.
- ▶ Frequency of this program is Monthly and Annually
- ▶ The Mass Layoff Statistics (MLS) program collects reports on mass layoff actions that result in workers being separated from their jobs. Monthly mass layoff numbers are from establishments which have at least 50 initial claims for unemployment insurance (UI) filed against them during a five-week period. Extended mass layoff numbers (issued quarterly) are from a subset of such establishments--where private sector nonfarm employers indicate that 50 or more workers were separated from their jobs for at least 31 days.
- ▶ The Occupational Employment Statistics (OES) program produces employment and wage estimates for over 700 occupations. These are estimates of the number of people employed in certain occupations and the wages paid to them.
 - ▶ This information is the result of an occupational employment and wage survey conducted by the Florida Agency for Workforce Innovation, Labour Market Statistics, in cooperation with the U.S. Department of Labour, Bureau of Labour Statistics.
 - ▶ Frequency of this program is Biannually (Employment) and Quarterly (Wages)

OLIMIS

Key sources of information are Quarterly Census of Employment and Wages section of the Oregon Employment Department and the U.S. Department of Labour, Bureau of Labour Statistics.

C.5 Type of Information Generated

NYCLMIS

- ▶ The NYCLMIS strives to create research and tools that are usable by a broad range of users in the workforce development world - including jobseekers, career advisors, account executives, researchers, agency staff and policy makers. The purpose of the tools is to help workforce development stakeholders to collect and use information in their day-to-day lives and strategic decision-making.
- ▶ NYCLMIS synthesizes, distills, and frames the volumes of available labour market and economic information and makes it accessible for use by the public workforce system's partners and stakeholders for their day-to-day operations and strategic decision-making.
- ▶ Apart from the online portal, NYCLMIS also conducts special studies for various stakeholders. For example: The "New York Green Jobs" study assesses the nature and extent of employer demand for green jobs and the supply of educational and training opportunities in New York City, Reports to highlight the occupations in demand.

California LMI

California LMID staff use data from a variety of administrative and survey sources and other agencies to study the labour market and develop:

- ▶ Estimates of the current labour force and industry employment
- ▶ Descriptive information about occupations including: duties, wages, benefits, employment outlook, training, education, skill, and licensing requirements
- ▶ Labour market demographics

- ▶ Nondiscrimination information for employer compliance purposes
- ▶ Special industry and occupational studies
- ▶ Special studies on pertinent topics such as health care and immigration
- ▶ Historical employment and unemployment data
- ▶ Projections of employment for occupations and industries by geographic area
- ▶ Industry growth and trends

California LMI recognizes the needs of different users and accordingly provides categorized information through "Customer Center" feature on the portal. As users have many different needs, experiences, and skill levels, special pages have been designed to provide quick links and answer the common questions for:

- ▶ **Business / Employers:** Information and data specifically for employers and business owners. There are links to wages, data for business plan, resources for employees etc such as
 - ▶ Unemployment data for Employers
 - ▶ Job description for recruitment or evaluation using the Occupation Profile
 - ▶ Data for the county wise labour market in county using the Local Area Profile
 - ▶ Change business information in the "Find an Employer" section
 - ▶ Request an industry code review for business
 - ▶ Payroll Taxes
 - ▶ Occupation wise Local Wages and Trends
 - ▶ Links to Employee Hiring and Development issues such as employing minors, hiring foreign workers etc
 - ▶ Links to information on permits, licenses, and registration
 - ▶ Resources when there is layoff
 - ▶ Resources for Investment
 - ▶ Employer - Employee Relations - FAQ, Data on Labour Unions
- ▶ **Economic Developers:** Information and data specifically for economic developers such as economic overview of an area - the industries and occupations already there, the possibilities for growth, etc. This section provides resources and links for :
 - ▶ Investment such as Investor Programs, Labour Surplus Areas, Business Investment Services, Small Business Opportunities
 - ▶ Local Area Profile
 - ▶ Monthly data on current unemployment rates and industry employment data
 - ▶ Wages by Occupation in local area
 - ▶ Projections for employment
 - ▶ Staffing Patterns by Occupation and Industry
 - ▶ Data by Industry - historical, detailed, projections, size of business
 - ▶ Layoffs in California - Worker Adjustment and Retraining Notification (WARN) program.
 - ▶ Data for Other States
 - ▶ Trends and information on Economic Development
 - ▶ Labour Market and Economic Analysis 2009 - "California Labour Market and Economic Analysis 2009," an economic scan of California's labour market, addresses five key questions related to California's economy.

- ▶ Business Employment Dynamics - track the growth and loss of employment through business expansions, openings, reductions, and closures.
- ▶ "California Economic Indicators" - a publication of the California Department of Finance
- ▶ "California Statistical Abstract" - also from the Department of Finance
- ▶ "The Geographic Distribution and Characteristics of Older Workers in California: 2004" - A report by the U.S. Census Bureau (January 2009)
- ▶ Useful Links such as
 - ▶ In California: California Association for Local Economic Development, Department of Finance, Research Economic Strategy Panel , Governor's Office of Economic Development
 - ▶ United States Government: Bureau of Economic Analysis , Bureau of Labour Statistics , Census Bureaus
- ▶ Educators / Trainers: Information and data for educators and training facility administrators to answer the question - what are the occupations and skills for which training should be provided. Links and resources include:
 - ▶ Training programs using the Occupation Profile to view wages, outlook, skills for selected occupations
 - ▶ Search for occupations in demand , projections of employment, Job Outlook for California Community College Occupational Education Programs
 - ▶ Wages by occupation in local area
 - ▶ Investigate labour market in the county using Local Area Profile
 - ▶ Investigate the labour market in my county
 - ▶ Add or change school's information in the online training provider database
 - ▶ Trends and information on Economic Development
 - ▶ Training Provider Database
- ▶ Workforce Partners: Workforce Partners are on the front-lines in the preparation of a skilled workforce and can seek information on occupations in demand, what skills are needed etc.
 - ▶ Assist clients with career exploration, assessment, job search using "Career Information" feature
 - ▶ Find information on Training and Apprenticeships in local area
 - ▶ LMI Help for Dislocated Workers
 - ▶ Workforce Program Planning Information
 - ▶ FAQ and Tips for Unemployed Workers
- ▶ Researchers: Researchers and consultants need a wide range of data and can find data on areas ranging from wages to projections of employment.
 - ▶ Monthly Data Release - current unemployment rates and industry employment data released each month
 - ▶ Data Library - Links to everything including data by industry and occupation, labour force and unemployment rates, economic indicators, and demographics
 - ▶ Data for Other States
 - ▶ Trends and Info for Researcher
 - ▶ Other Useful Links for Researchers
 - ▶ California Government: Board of Equalization, Department of Finance, Economic and Demographic Research, Department of Industrial Relations
 - ▶ United States Government: Bureau of Labour Statistics , Bureau of Economic Analysis , Census Bureau

- ▶ Employee Development Department (EDD) Staff:
 - ▶ Occupation Profile provides job description, wages, demand/outlook, licensing, job search (from JobCentral), possible employers, training providers etc
 - ▶ Hours and working conditions
 - ▶ Occupation licenses and certificates
 - ▶ Training Providers
 - ▶ Search for employers by geographic area, industry, name , occupation etc
 - ▶ Labour Law Directory
 - ▶ Transportation infrastructure
- ▶ Job seekers: “Career Information” feature on the LMI is useful for job seekers and provides the following databases and features:
 - ▶ For job seekers looking for work or seeking a career change, California Occupational Guides are available with local data
 - ▶ Search for jobs in local area with the Occupation Profile link
 - ▶ Job search tools and resume tips
 - ▶ Steps to the Best Career for the job seeker
 - ▶ Training information such Details of various Training Providers, links to Additional Training Resources, Training Classifications, Apprenticeships, Funding Training Programs

Florida LMS

Labour Market Statistics include a variety of labour market, economic, and demographic data such as:

- ▶ Employment and Wages - current employment, projections, and wages by industry and occupation, occupational profiles, and career information.
- ▶ Labour Force - labour force, employment, unemployment, and unemployment rates.
- ▶ Economic Indicators - Florida Price Level Index, Consumer Price Index, income, and unemployment claims data.
- ▶ Population - age, race, gender, and income, veteran's status, and education information.
- ▶ Data from LMS are provided via reports, publications, CDs, brochures, posters, and the Internet

Labour Market Statistics (LMS) provides users with an array of products and services, such as:

- ▶ Census Data - LMS distributes Census data throughout the state through the Florida Census Data Center.
- ▶ Systems - LMS provides users access to Internet systems for customized data requests.
- ▶ GIS Mapping - LMS provides labour market information in geographical maps of Florida and the workforce regions.
- ▶ Vacancy/Hiring Needs Surveys - LMS conducts surveys to assist with Workforce / Economic development program planning.
- ▶ Benefits Surveys - LMS provides data to enable employers and job seekers to fully understand compensation packages.
- ▶ Special Projects - LMS prepares reports and tables that analyze and customize labour market information to meet customer needs.
- ▶ Publications - LMS provides publications that are available in electronic format and, in some cases, hard copy.

- ▶ Training - LMS trains data users in understanding and delivering labour market statistics.
- ▶ Resources - LMS provides a comprehensive list of resources that can be used in conjunction with labour market information products and services.

OLMIS

- ▶ Business owner/employer
 - ▶ List a job opening
 - ▶ Talk to a Labour Market Specialist
 - ▶ Search for wage and other labour market information by occupation
 - ▶ Locate sales/ marketing contacts , customers, suppliers, competitors
 - ▶ Post a job description
 - ▶ Find graduates with required skills
- ▶ Counselor/ Educator
 - ▶ Help a student find school information , explore education and work options
 - ▶ Download lesson plans for career education
 - ▶ Read education news and find education resources
 - ▶ Download educational posters
 - ▶ Request publications and subscribe to periodicals
 - ▶ Register for job search assistance
 - ▶ Search job listings
- ▶ Job seeker
 - ▶ Find career and occupational information
 - ▶ Locate training providers
 - ▶ Create a resume
- ▶ Researcher / Analyst
 - ▶ Compare employment trends, payroll, industry mix
 - ▶ Look up occupational information
 - ▶ Find demographics, occupational and industry information by region
- ▶ Workforce Professional
 - ▶ Help a client improve job-hunting skills , explore new work options
 - ▶ Request a publication or subscribe to a periodical
 - ▶ Find contact information for Workforce Analysts and Regional Economists
 - ▶ Find occupational information , economic or demographic data
- ▶ Member of News Media
 - ▶ Read the latest Employment Department press release
 - ▶ See a list of press release dates
 - ▶ Contact an Employment Department economist or analyst
 - ▶ Search for articles on industries / economic events
- ▶ Student
 - ▶ Find information about Oregon for a school report
 - ▶ Choose a major or career field
 - ▶ Research occupations

C.6 User access

NYCLMIS

- ▶ Workforce and industry / occupation wise employment data is available online which can be accessed by all and no login and password is required for the same.
- ▶ The website also provides details of Workforce One Career Centers which connect employers to skilled job candidates and provides job placement services to New York City's workforce. Workforce1 Career Centers are located throughout the five boroughs and provide jobseekers with job matching, job preparation, and career advisement services. The User needs to become member of the Workforce Career Center in order to avail of the services offered such as counseling, training courses etc.
- ▶ Access to various links in the NYCLMIS does not require login and password and is available to all users.

California

Users of the California LMI do not require login and password and the features are available free of charge to all. A nominal fee is charged for customized data / reports and services.

Florida LMS

Users of the Florida LMS do not require login and password and the features are available free of charge to all. A nominal fee is charged for customized data / reports and services.

OLMIS

Users of the OLMIS do not require login and password and the features are available free of charge to all. A nominal fee is charged for customized data / reports and services.

C.7 Key Learning's

NYCLMIS

The key learning's from various NYCLMIS are as follows:

- ▶ The portal is user friendly and allows users can easily access popular useful reports such as
 - ▶ Jobs for the Future
 - ▶ Gauging Employment Prospects in NYC
 - ▶ Employment in NYC's Industry Group Profiles
 - ▶ In-demand Occupations
 - ▶ Sector wise Employment Scenario in NYC
 - ▶ Sub sector Reports
- ▶ The portal hosts a variety of helpful LMI tools such as
 - ▶ Business Savvy Tips for Business Growth
 - ▶ Key Terms and Definitions in Labour Market Analysis
 - ▶ How To Find and Download Business Lists
 - ▶ FAQ
 - ▶ Workforce Centers in NYC

California LMI

The key learning's from California LMIS are as follows:

- ▶ In "Career Information" link on the LMI, the following databases and features are available for job seekers
 - ▶ For job seekers looking for work or seeking a career change, California Occupational Guides are available with local data
 - ▶ Search for jobs in local area with the Occupation Profile link
 - ▶ Job search tools and resume tips
 - ▶ Steps to the Best Career for the job seeker
 - ▶ Training information such Details of various Training Providers, links to Additional Training Resources, Training Classifications, Apprenticeships, Funding Training Programs
- ▶ Information on the Intermediaries such as Industry Associations, Skills Councils, Researchers, Universities, Academicians, Local Government Bodies, general public
 - ▶ Local Area Profile
 - ▶ Analysis and Trends
 - ▶ Details about Regional Economy
 - ▶ "Ask an Economist"
 - ▶ Current Unemployment Rates
 - ▶ Industry Employment
 - ▶ Economic Indicators
- ▶ Data Library provides a gateway to detailed labour market information where users can search for data using following features
 - ▶ Data by Subject such as
 - ▶ Monthly Data Release: current unemployment rates, industry employment, and hours and earnings data released each month.
 - ▶ Occupations - wages, employment projections, staffing patterns, training etc.
 - ▶ Industries - employment (current, historical, and projections), size and number of businesses, data for "industry clusters" studies, and major employers by county
 - ▶ Unemployment Rate and Labour Force - labour force, employment, unemployment, and rates (current and historical). Data are by place of residence.
 - ▶ Economic Indicators - income, Consumer Price Index, taxable sales, median home price, layoff statistics etc.
 - ▶ Population and Census - decennial census data, commute patterns, population etc
 - ▶ Data by Geography
 - ▶ United States - www.usa.gov
 - ▶ California
 - ▶ Counties
 - ▶ Metropolitan Statistical Areas
 - ▶ Cities and Census Designated Places
 - ▶ Local Workforce Investment Areas
 - ▶ Data for Other States
 - ▶ Summary Data Profiles
 - ▶ Local Area Profile - Provides summary data on unemployment rates, industry employment, economic indicators, and more for the State or a county

- ▶ Occupation Profile - Provides summary data on wages, outlook, licensing, and more for a single occupation.
- ▶ Customized Services and Data
 - ▶ Customized data, services or maps, and confidential data (for authorized requesters) may be provided for a nominal fee

Florida LMS

The Florida LMIS is based on methodical conduct of statistical programs for periodic gathering local labour market information, data, news and trends.

OLMIS

The key learning's from various Oregon LMIS are as follows:

- ▶ "OLMIS Guide" features guide various types of Users to easily navigate and conduct quick, focused and methodical search for data / information
- ▶ "Main Menu" feature arranges information, resources and links based on the category of information. Example of categories and specific information :
 - ▶ Business - Union membership in Oregon
 - ▶ Careers - Projected Job Growth ,Oregon Statewide
 - ▶ Education - Enrollment Rate in Community Colleges
 - ▶ Industry Trends - Oregon's Energy Transmission Sector

D. Jamaica⁷

D.1 Overview of Labour Market Information System

Launched in January 2002, Jamaica Labour Market Information System is managed through the Ministry of Labour and Social Security's Planning and Monitoring Unit. The system represents an integrated and coordinated approach to the collection of information and facilitates collaboration between users and producers, thereby ensuring relevance of the information being produced and greater accessibility to information on the labour market.

The LMIS consists of three major components:

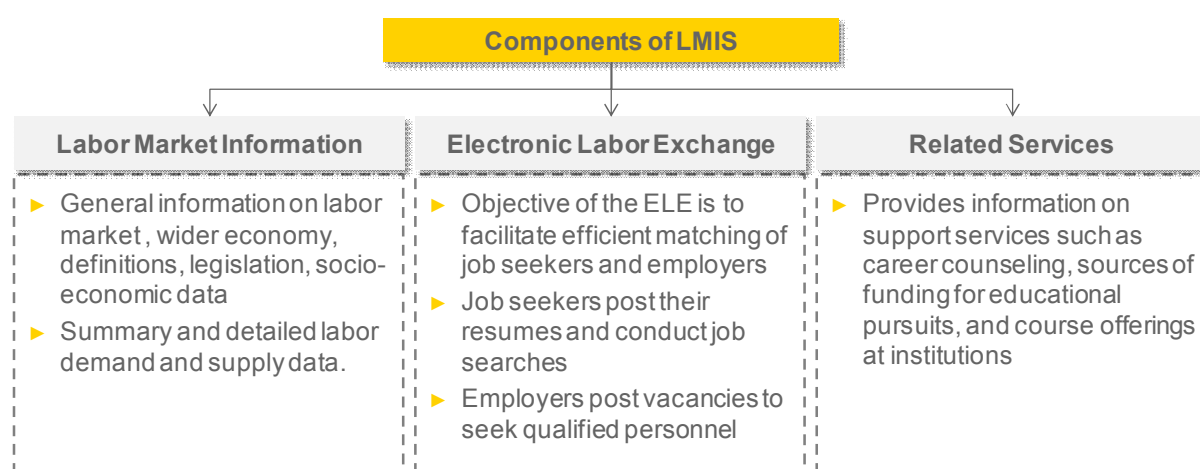
- ▶ Labour Market Information (LMI): General information in relation to the labour market and the wider economy, concerning definitions, legislation, broad socio-economic data, and a host of other relevant topics. It also provides summary and detailed labour demand and supply data.
- ▶ Electronic Labour Exchange (ELE): The objective of the ELE is to facilitate the efficient matching of job seekers and employers. Job seekers post their resumes and conduct job searches, while employers post vacancies to seek qualified personnel.
- ▶ Related Services: This component provides information on support services such as career counseling, sources of funding for educational pursuits, and course offerings at institutions.

⁷ Source: <http://www.lmis-ele.org.jm/home.aspx>

The schematic below depicts the key characteristics of the UK LMIP.

Figure 2.8: Key Characteristics of the Jamaica's LMIP

- ▶ Launched in January 2002, Jamaica Labor Market Information System is managed through the Planning and Monitoring Unit of Ministry of Labor and Social Security
- ▶ Key Users include :
 - ▶ Local and international investors
 - ▶ Employers
 - ▶ Workers' organizations
 - ▶ Government policymakers and planners
 - ▶ Guidance and career counselors
 - ▶ Planners and policymakers in education and training
 - ▶ Self-employed persons
 - ▶ Students



D.2 Codification

Jamaica Labour Market Information System follows standard codification for classification of sectors, industries etc.

D.3 Geographic Coverage

The LMIS covers data pertaining to the wider economy and geographical divisions in the country. The data analyzed includes concerning definitions, legislation, broad socio-economic parameters, and a host of other relevant topics.

D.4 Sources of Data

Sources of labour market information and data include studies and surveys conducted by various government bodies and departments such as:

- ▶ Statistical Institute of Jamaica which provides information on Labour Force, Employment & Earnings
- ▶ Ministry of Labour and Social Security
- ▶ Planning Institute of Jamaica which prepares Indicators for Population, Labour Force, Education, Training and Health for years 2003-2008
- ▶ Ministry of Education

D.5 Type of Information Generated

The data generated by LMIS takes the form of text, graphs, charts, and actual data sets. The system allows users to manipulate the data and generate reports, trend analysis, cross referencing and projections.

- ▶ Labour Market Indicators- Data on Economy, Population, Labour, Wages, and Industrial Relations.
- ▶ Employment levels
- ▶ Unemployment
- ▶ Educational levels of persons in the labour force
- ▶ Future projections and forecasts-Education and training required by the labour force in the future
- ▶ Industries that are growing and contracting

Jamaica's LMIS provides a one-stop data and information source, and as well as a job search and placement facility. Users include:

- ▶ Local and international investors who are seeking information on the availability of skills and other matters related to the local labour market
- ▶ Employers
- ▶ Workers' organizations
- ▶ Government policymakers and planners
- ▶ Planners and policymakers in education and training
- ▶ Self-employed persons
- ▶ Students
- ▶ Guidance and career counselors

D.6 USER ACCESS

No login and password by Users to access the website. However to avail of the many benefits of the Labour Exchange, the Job seeker / Employer is required to create own user account. The Job seeker can then create Resume, Skills Bank Account and Employer can create company account and can avail benefits of the Labour Exchange feature

D.7 Key Learning's

The key learning's from Jamaica's LMIS are as follows:

- ▶ Updated Labour Market Indicators such as Economic Statistics ; Remittances ; Population- by Age Group, Labour Force, Geography ; Employment ; Unemployment; Education Attainment; Wages Salaries; Industrial Relations
- ▶ Generate Forecasting Report for Parameter such as Remittances, Economic Statistics , Work Permits
- ▶ Economic Information such as Economic Overview ; Sector wise Progress Report
- ▶ Education and Training - Details of Government and Private Schools/ Institutes Government funded Youth Programs
- ▶ Interactive Features for Employers and Job seekers - post jobs , search for jobs, career counseling, training, technical / financial assistance
- ▶ Updated information on Labour Laws and Regulations

E. Canada⁸

E.1 Overview of Labour Market Information System

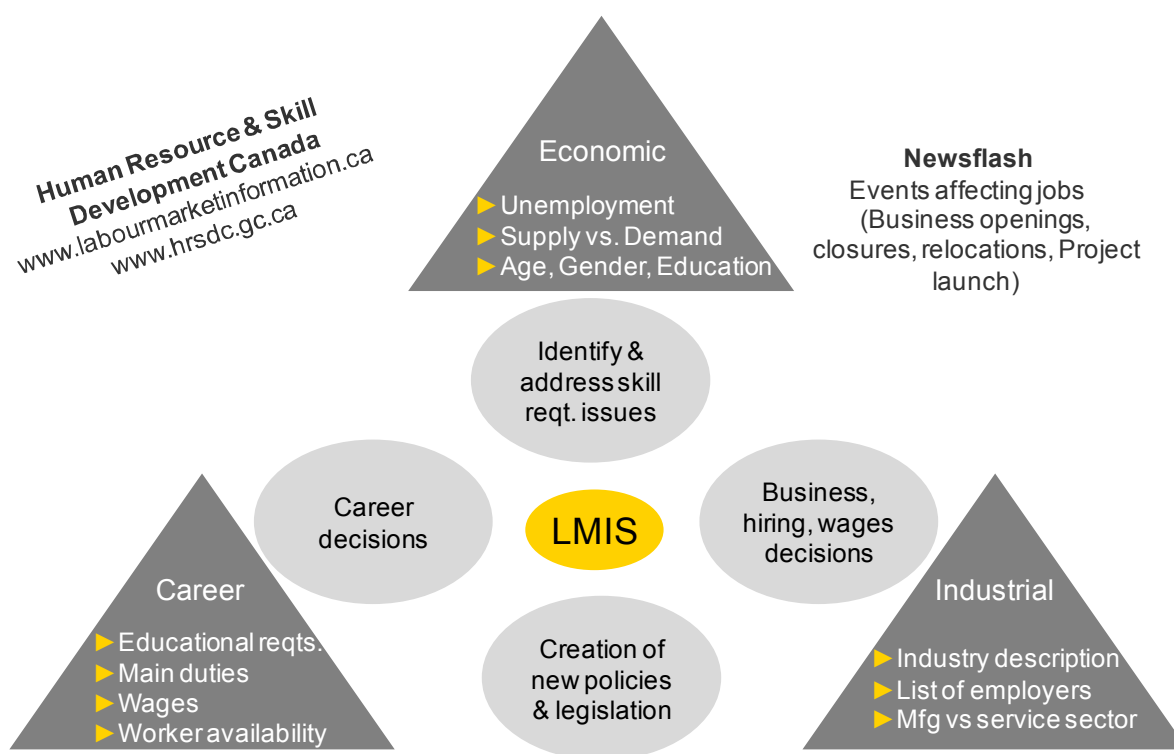
Service Canada and Human Resources and Skills Development Center Canada (HRSDC) offices, Government of Canada, provide labour market information and maintain the labour market information portal.

The LMI offers users, free and authoritative occupational and career information such as educational requirements, main duties, wage rates and salaries, current employment trends and outlooks.

The Labour Market Information Service: provides detailed labour market information at the local or community level analyses data and local events in order to identify community specific labour market trends and opportunities works with other labour market players, including businesses, educational institutions and local and provincial governments ensures people have access to quality labour market information.

The schematic below depicts the key characteristics of the Canada's LMIP.

Figure 2.9: Key Characteristics of Canada's LMIP



E.2 Codification

Labour market information is provided on the basis of the following standard classifications:

- ▶ North American Industry Classification System
- ▶ National Occupational Classification is used for classification of various occupations and providing data related to wages, duties etc.

⁸ Source: http://www.labourmarketinformation.ca/standard.aspx?pcode=lmiv_main&lcode=eng

E.3 Geographic Coverage

Labour market information is available for Provinces / Territories in Canada and also at local or community level

E.4 Sources of Data

- ▶ Surveys, Studies and Projections conducted by offices of Human Resources and Skills Development Canada and Service Canada
 - ▶ Labour Force Survey based on sample of households
 - ▶ Survey of Payroll, Employment and Hours

E.5 Type of Information Generated

The LMI generates various type of labour market related information such as the following:

- ▶ Occupational Profile
- ▶ Industrial Profiles
- ▶ Job Descriptions
- ▶ Job and Skill Requirements
- ▶ Employment Prospects
- ▶ Wages & Salaries
- ▶ Potential Employers
- ▶ Where to Get Training
- ▶ About the Local Labour Market
- ▶ Industrial Profiles

E.6 User Access

No login and password by Users to access the website and download relevant data, reports and information.

E.7 Key Learning's

The following are the key learning's from LMI system in Canada:

- ▶ "Newsflash" feature which provides updated information on events affecting jobs (Business openings, closures, relocations, Project launch)
- ▶ Information is easily accessible based on User needs such as
 - ▶ Career
 - ▶ Educational requirement.
 - ▶ Main duties
 - ▶ Wages
 - ▶ Worker availability
 - ▶ Industrial
 - ▶ Industry description
 - ▶ List of employers
 - ▶ Manufacturing versus service sector

- ▶ Economic
 - ▶ Unemployment
 - ▶ Supply vs. Demand
 - ▶ Age, Gender, Education

F. Europe⁹

F.1 Overview of Labour Market Information System

EURES is the job mobility portal which hosts information on job vacancies in 31 European countries, CVs from interested candidates, what Users need to know about living and working abroad. The purpose of EURES is to provide information, advice and recruitment/placement (job-matching) services for the benefit of workers and employers as well as any citizen wishing to benefit from the principle of the free movement of persons.

Set up in 1993, EURES is a co-operation network between the European Commission and the Public Employment Services of the European Economic Area (EEA) Member States (The European Union -EU - countries plus Norway, Iceland and Liechtenstein) and other partner organizations. Switzerland also takes part in EURES co-operation. The joint resources of the EURES member and partner organizations provide a solid basis for the EURES network to offer high quality services for both workers and employers.

EURES has a human network of more than 850 EURES advisers that are in daily contact with jobseeker and employers across Europe.

In European cross-border regions, EURES has an important role to play in providing information about and helping to solve all sorts of problems related to cross-border commuting that workers and employers may experience.

F.2 Codification

No information on codification / classification is available on the web portal.

F.3 Geographical coverage

EURES provides labour market information covering 31 European countries. EURES has a particularly important role to play in cross-border regions, areas in which there are significant levels of cross-border commuting.

More than 600 000 people who live in one EU country and work in another have to cope with different national practices and legal systems. They may come across administrative, legal or fiscal obstacles to mobility on a daily basis.

F.4 Sources of data

The Public Employment Services (PESs) of the European Union/European Economic Area provide services through a network of more than 5 000 local employment offices with more than 100.000 staff offering services to job-seekers and employers.

While PESs are structured differently in each country, all share the same basic task of contributing towards matching supply and demand on the labour market through the provision of information, placement and active support services.

⁹ Refer to Annexure for LMI snapshot

F.5 Type of information generated

Labour market related information is available on the LMI in Europe for users as elaborated below:

- ▶ Job seekers
 - ▶ Through the EURES portal job seekers will have access to relevant workers mobility information, a job search facility and a network of more than 800 EURES Advisers
 - ▶ By registering for free with "My EURES" , jobseekers can create own CV and make it available to both registered employers and to EURES Advisers helping employers to find suitable candidates
 - ▶ By accessing the section on "Living and Working", job seeker can seek information about the employment situation and living and working conditions in another EEA country.
 - ▶ By clicking on "Contact a EURES adviser" or by contacting a local or regional employment office, job seeker can have access to a range of information tools and can get advice on many practical, legal and administrative issues involved in finding and accepting a job abroad
- ▶ Employer
 - ▶ Consult the labour market information and statistics per country on the section "Living & Working"
 - ▶ Look for CVs of suitable candidates and get in touch with them easily by registering for free to "My EURES" for employers
 - ▶ Find out how to post jobs on the EURES portal by clicking on "Advertise a job"
 - ▶ Be aware of the steps to consider in the recruitment process by clicking on "Recruiting abroad"
 - ▶ Know of on-going EURES information & recruitment events in Europe by clicking on "Events calendar"
- ▶ The European Job Mobility Bulletin is focused on the analysis of vacancies posted on the EURES jobs portal by national public employment services
- ▶ The European Vacancy Monitor provides an overview of recent developments on the European job market. Data on job vacancies, job finders and hiring will inform about trends in occupational demand and skills requirements

F.6 User access

Access to information on website is free and no login and password is required. To avail of interactive features such as posting of CV or job advertisement, user login and password is required.

F.7 Key learning's

The following are the key learning's from LMI in Europe

- ▶ "Main Menu" feature arranges information, resources and links based on the category of information
 - ▶ Job vacancies in 31 European countries
 - ▶ CVs from interested candidates
 - ▶ All info about living and working abroad
- ▶ Create User account for Newsletters , make Events Calendar etc
- ▶ Information on living and working in any of the European countries

G. Singapore¹⁰

G.1 Overview of Labour Market Information System

The Ministry of Manpower under the Government of Singapore aims to achieve a globally competitive workforce and great workplace, for a cohesive society and a secure economic future for all Singaporeans. Keeping this objective in focus, the Ministry of Manpower (MOM) regularly releases statistics related to manpower resources and development in Singapore. It also publishes various reports, guidebooks and newsletters targeted at specific audiences. The Ministry of Manpower also maintains the portal on labour market information.

The schematic below depicts the key characteristics of the Singapore's LMIP.

Figure 2.11: Key Characteristics of the United Kingdom's LMIP



G.2 Codification

The labour market statistics produced by the Manpower Research and Statistics Department conforms to the international guidelines recommended by the International Labour Organization.

Statistical standards and classifications are based on Singapore Standard Industrial Classification 2010, Singapore Standard Occupational Classification 2010 and Singapore Standard Educational Classification 2010.

The release of key data like employment and unemployment follows the Special Data Dissemination Standards established by the International Monetary Fund.

¹⁰ Refer to Annexure for LMI snapshot

G.3 Geographic coverage

The surveys conducted by Government of Singapore cover labour market related parameters at national, regional and local levels. The key surveys cover the following levels:

- ▶ Labour Force Survey: The survey covers a sample of private households on the main island of Singapore. It excludes workers living in construction worksites, dormitories and workers' quarters at the workplace and persons commuting from abroad to work in Singapore. Estimates of the total labour force are derived by combining data on residents (also known as locals) obtained from the survey with foreign workforce data compiled from administrative records. This change was made to align with the methodology used in the General Household Survey, 2005 conducted by the Department of Statistics so as to improve the accuracy and comparability of the data.
- ▶ Administrative record is another source of data. The self-employed component is estimated from the Labour Force Survey. The employment data comprises all persons in employment, i.e. employees and the self-employed. However, it excludes males who are serving their 2-year full-time national service liability in the Singapore Armed Forces, Police and Civil Defense Forces.
- ▶ Data on the number of local employees are compiled from the Central Provident Fund (CPF) Board's administrative records of active contributors defined as local employees who have at least one CPF contribution paid for him/her. A local employee is any Singapore citizen or permanent resident who is employed by an employer under a contract of service or other agreement entered into in Singapore. Every local employee and his/her employer are required to make monthly contributions to the CPF which is a compulsory savings scheme to provide workers financial security in old age and helps meet the needs of healthcare, home-ownership, family protection, and asset enhancement.
- ▶ Data on foreigners working in Singapore are compiled from the stock of foreigners on valid work passes issued by the Ministry of Manpower. Foreigners can work in Singapore only if they have valid work passes issued by the Ministry of Manpower, upon application by their employers.
- ▶ The number of self-employed persons is estimated from the Labour Force Survey. The self-employed comprise of persons aged 15 years and over who perform some work for profit or family gain, in cash or in kind.

G.4 Sources of data

There are various periodic studies and surveys conducted by the Government of Singapore to collect labour market related information. The key surveys are:

- ▶ Labour Force Survey
- ▶ General Household Survey (last one conducted in 2005) and the Census of Population (last one conducted in 2000) by the Department of Statistics, Government of Singapore.

G.5 Type of information generated

The LMI portal provides labour market related information and data to various categories of users

- ▶ Employer and employee welfare.
 - ▶ Know your rights and obligations as an employee and as an employer.
 - ▶ Employment issues (leave , salary ,pension fund)
 - ▶ Fair Employment
 - ▶ Work-Life Harmony
- ▶ Employment Practices Skills, Training & Development Foreign Manpower Workplace Safety & Health
 - ▶ Skills upgrading is key to higher productivity
 - ▶ Build capabilities and gain a competitive edge.

- ▶ Continuing Education & Training and skills upgrading
- ▶ Productivity
- ▶ Skills in Demand
- ▶ Employment agencies directory
 - ▶ Report an incident
 - ▶ Make a claim for work injuries
 - ▶ Register workplace and equipment
 - ▶ Key Manpower Statistics available on the portal are :
 - ▶ Labour force data which includes time series data , statistical charts etc
 - ▶ Employment which includes time series data , statistical charts etc and provides data on year end employment sector wise and the change in employment quarter wise
 - ▶ Unemployment data which includes unemployment rate as annual average and seasonally adjusted for months, resident unemployment rate, resident unemployed persons, Resident Median Duration of Unemployment (Non-Seasonally Adjusted) and Resident Long-Term Unemployment rate
 - ▶ Job vacancy rates including annual average and monthly rates, Job Vacancy to Unemployed Person Ratio (Seasonally Adjusted and Labour turnover Average Monthly Recruitment Rate (%) Average Monthly Resignation Rate (%)
 - ▶ Hours worked including Average Weekly Paid Hours Worked Per Employee (Hours) and Average Weekly Paid Overtime Hours Worked Per Employee (Hours)
 - ▶ Retrenchment and Redundancy statistics
 - ▶ Re-employment Rate (%)
 - ▶ Average (Mean) Monthly Nominal Earnings

G.6 User access

Access to various features and services on the portal does not require user name and password and is available to all free of charge.

G.7 Key learning's

The key learning's from Singapore LMIS are as follows:

- ▶ User friendly tabs based on user needs and data / information required allowing for easy navigation through the web portal
- ▶ The portal provides a one-stop shop for all categories of users including intermediaries like safety professional, employment agent

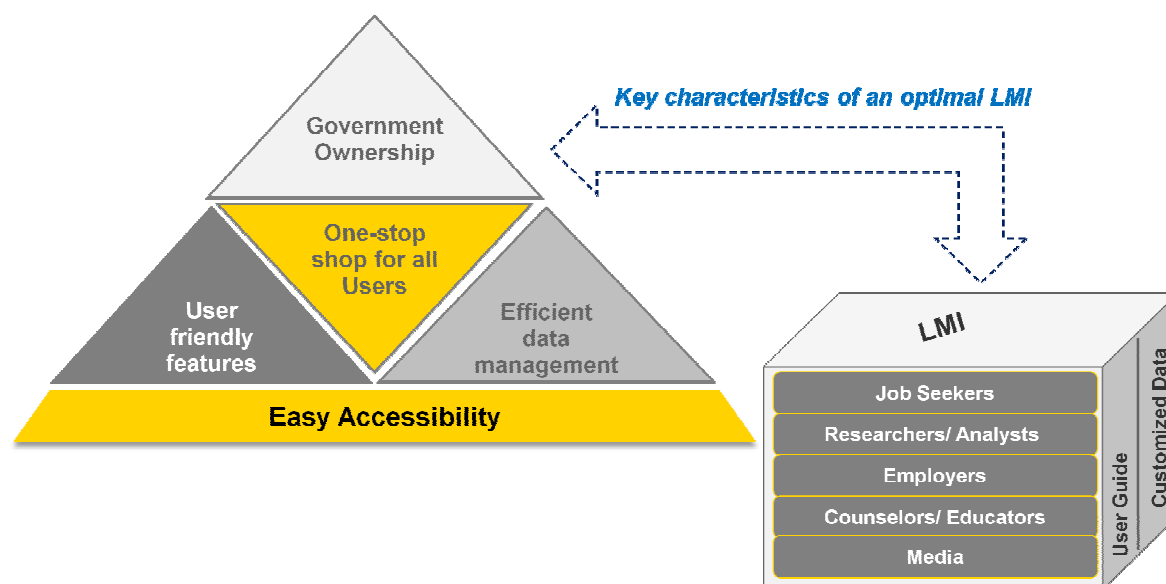
2.1.4 Conclusion

A. Summary of Key Learnings

The best practices range from ownership in the development and delivery of the LMIS to easy accessibility and user friendly features of the web portal. Further, there is no single set of data requirements or delivery approaches that characterizes an optimal LMI system. However, as per the best practices adopted globally,

there are key features that should be considered in designing and implementing a world class LMI system. These features have been elaborated in the Figure below.

Figure 2.12: International Leading Practices in LMIS



- ▶ Government Ownership
 - ▶ Active role of the Government in developing and disseminating LMI
 - ▶ Ensure collaboration among government ministries, agencies, and private sector to conduct large-scale activities such as surveys, focus groups
- ▶ One-stop shop for all Users
 - ▶ Data and information source, job search and placement features
 - ▶ Availability of information, data, resources and links based on varied needs of different Users
 - ▶ Intermediaries including counselors, career facilitators, and front line employment office staff considered an integral part of a comprehensive LMI system.
- ▶ User Friendly Features
 - ▶ Efficient search features such as “Library”, “User Guide” , User wise links
 - ▶ Comprehensive list of resources such as Labour Market Consultants , Career Centers that can be used in conjunction with labour market information products and services
 - ▶ Customized Data Requests and drill down facility such as “Advanced Query”
 - ▶ Generate Forecasting Report for labour market parameters such as Remittances, Economic Statistics , Work Permits
 - ▶ Map annual job growth for an industry over last year in local areas
 - ▶ Provide access to data at various levels - local, regional , national
 - ▶ LMIS to be interactive with its users through features such as Frequently Asked Questions link / Helpdesk / online Feedback forms. Further, this will provide crucial direction for in continuous and focused improvement through corrective action on feedback received from users.
- ▶ Efficient Data Management
 - ▶ Appropriate units of measurement , type and periodicity of study / surveys to be conducted
 - ▶ Standardized classification of data for occupations , industries etc to facilitate data development, presentation, comparisons, and interrelationships

- ▶ Reliable sources of data ensure consistency and reliability
- ▶ Data update schedule available on website
- ▶ Links and crosswalks among data sets
- ▶ Accessibility
 - ▶ Develop dissemination strategy to ensure that LMI is available to all , i.e. , how consumers can access the Internet, particularly those who may not have access at home
 - ▶ Libraries, one-stop employment centers, community and faith based organizations etc to offer access LMI as well as counseling and career development support
- ▶ Regional Integration - The example of LMIS initiatives by European Commission and US Federal Government indicates that LMIS is maximum usage when it covers a wide area/ region, especially when labour migration is an identified phenomenon. In the case under consideration, individual Indian States will certainly play an integral role in managing the labour market for their own State but overall there should be effort to integrate entire system into one. Further, an Asian level LMIS will really benefit not only the human resource market but also individual Governments & corporate to take informed decisions.

The following table highlights the key evaluation parameters for international leading practices. A representative sample of countries with best practices has been tabulated.



Table 2.1: Representative Sample of Best Practices in International LMIS

Parameters	Australia	Jamaica	California, USA	UK	Canada
Geographic Coverage	<ul style="list-style-type: none"> ▶ Employment Service Area boundaries ▶ Labour Force Region ▶ Small Area Labour Markets 	<ul style="list-style-type: none"> ▶ Wider economy and geographical divisions in the country 	<ul style="list-style-type: none"> ▶ Counties / regions / areas in California 	<ul style="list-style-type: none"> ▶ District , Local Authority, Ward 	<ul style="list-style-type: none"> ▶ Provinces / Territories in Canada ▶ Local or community level
Key Sources of Data	<ul style="list-style-type: none"> ▶ Australian Bureau of Statistics 	<ul style="list-style-type: none"> ▶ Statistical Institute of Jamaica ▶ Ministry of Labour and Social Security ▶ Planning Institute of Jamaica ▶ Ministry of Education 	<ul style="list-style-type: none"> ▶ California Employment Development Department ▶ Labour Market Information Division ▶ U.S. Bureau of Labour Statistics 	<ul style="list-style-type: none"> ▶ Annual Population Survey ▶ Annual Business Inquiry ▶ Office of National Statistics ▶ Annual Survey of Hours and Earnings ▶ VAT registrations 	<ul style="list-style-type: none"> ▶ Human Resources and Skills Development Canada ▶ Service Canada
User Access	<ul style="list-style-type: none"> ▶ No login and password by Users 	<ul style="list-style-type: none"> ▶ No login and password by Users ▶ Create own user / company account to avail special Labour Exchange features 	<ul style="list-style-type: none"> ▶ No login and password and for website ▶ Available free of charge to all. ▶ Nominal fee is charged for customized data / reports and services 	<ul style="list-style-type: none"> ▶ Registration is optional and free ▶ Newsletters ▶ Profile update alerts ▶ Apply for Business Register and Employment Survey 	<ul style="list-style-type: none"> ▶ No login and password by Users
Type of Information Generated	<ul style="list-style-type: none"> ▶ Unemployment rate ▶ Job seekers ▶ Working age population (15-64) ▶ Participation rate ▶ Population by age group ▶ Population by Labour force status 	<ul style="list-style-type: none"> ▶ Economic Statistics ▶ Employment levels ▶ Unemployment ▶ Educational levels of persons in the labour force ▶ Future projections and forecasts-Education and training required 	<ul style="list-style-type: none"> ▶ Current labour force and industry employment ▶ Occupations including, wages, training, education, skill, and licensing requirements ▶ Employer compliance ▶ Special Studies 	<ul style="list-style-type: none"> ▶ Resident population ▶ Employment and unemployment ▶ Economic inactivity ▶ Qualifications ▶ Earnings by residence ▶ Jobcentre plus vacancies ▶ VAT registered 	<ul style="list-style-type: none"> ▶ Occupational Profile ▶ Job Descriptions ▶ Job and Skill Requirements ▶ Employment Prospects ▶ Wages & Salaries ▶ Potential Employers ▶ Where to Get

Parameters	Australia	Jamaica	California, USA	UK	Canada
	<ul style="list-style-type: none"> ▶ Unemployment duration ▶ Employment by industry ▶ Employment by occupation 	<ul style="list-style-type: none"> by the labour force in the future ▶ Industries that are growing and contracting 	<ul style="list-style-type: none"> ▶ Historical data ▶ Projections ▶ Growth / trends 	<ul style="list-style-type: none"> businesses 	<ul style="list-style-type: none"> Training ▶ About the Local Labour Market ▶ Industrial Profiles
Codification	<ul style="list-style-type: none"> ▶ Australian and New Zealand Standard Industrial Classification 2006 	<ul style="list-style-type: none"> ▶ Standard codification for classification of sectors, industries etc 	<ul style="list-style-type: none"> ▶ North American Industry Classification System ▶ Classification of Instructional Programs 	<ul style="list-style-type: none"> ▶ Local authority, ward and 2010 Parliamentary Constituencies ▶ Standard Occupation Classification 	<ul style="list-style-type: none"> ▶ National Occupational Classification



Summary analysis of International Best Practices In LMIS¹¹

Based on the aforementioned schematic, the following matrix depicts features of an optimal LMIS framework and compares the achievement of the countries studied for international leading practices.

Table 2.2: Comparison Matrix of LMI

S.No.	Best Practice	Australia	Canada	United Kingdom	NYC, USA	California USA	Florida, USA	Oregon, USA	Singapore	Jamaica	Vietnam **	Europe	South Africa **
1	Effective Governance	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	X
2	One-stop shop for all Users	✓	✓	X	X	✓	X	✓	✓	✓	X	✓	X
3	User Friendly Features	✓	✓	✓	X	✓	X	✓	✓	✓	X	✓	X
4	Efficient Data Management	✓	NA	NA	NA	✓	✓	✓	✓	✓	X	✓	X
5	Easy Accessibility	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	X

* NA: Information Not Available

**LMIS in Vietnam and South Africa is in development phase

¹¹ For details , refer to respective country sub-section and annexure

2.1.5 Options for LMIS framework in the Indian context

The following schematic represents various options that the LMIS framework can be developed on.

Figure 2.13: Options for LMIS Framework

Parameters	Options for LMIS Framework
Ownership	<ul style="list-style-type: none"> ▶ LMIS is operated only at the national level by a Central Government Department ▶ Decentralized model where individual LMIS are maintained by various Sector Skills Council and are integrated at the national level by a Central Government Department ▶ Decentralized model where individual LMIS are maintained by various Sector Skills Council and by State Governments and are integrated at the national level by a Central Government Department
Data sourcing and management	<ul style="list-style-type: none"> ▶ Providers of LMIS focus on data from NSSO ▶ Providers of LMIS conduct primary surveys for data collection
Private sector involvement	<ul style="list-style-type: none"> ▶ Complete Government ownership of data collection, conduct of surveys , LMIS maintenance and development of LMI products ▶ Public private partnership
Dissemination of LMI	<ul style="list-style-type: none"> ▶ Dissemination strategy to be developed by providers of LMIS (central and state governments and sector skill councils) ▶ Dissemination options can include: <ul style="list-style-type: none"> ▶ Employment Exchanges ▶ Charity Organizations and Trusts ▶ Public Libraries ▶ Government Schools ▶ Involvement of Panchayats at the grass root level ▶ Involvement of private party in dissemination of LMI ▶ Delivery models can be based on various modes of communication such as radio, television, telephone , print etc
Hiring policies	<ul style="list-style-type: none"> ▶ Hiring of government employees only ▶ Hiring of professionals such as statisticians, mathematicians, economists from the open market ▶ Hiring of professionals on contract / project basis ▶ Hiring for voluntary work

1. Ownership

Labour market information is derived from a number of different sources, including surveys, administrative data and private sector sources. At present, LMI is collected by various Government departments and often the data is fragmented, outdated, inaccurate and incomparable across periods and regions.

Responsibility for LMI development may be decentralized among national, state, and local areas and further among Sector Skills Councils. This will enable data collection at the granular level and help provide useful information and convenient access to various users such as jobseekers, employers, career counselors, academicians and policymakers.

A decentralized and shared approach to a nationwide LMI system can be an effective means of building an optimal LMI system given the complexity of the labour market. A systematic approach to a nationwide LMI system should be adopted as a fundamental strategy to:

- ▶ Conceptualize and plan a “complete” LMI system with shared responsibilities and funding - Ministries and agencies working together can develop a more comprehensive approach to LMI than each department working in silo. Also, a joint effort may help the ministries justify an overall budget request for LMI-related efforts.
- ▶ Standardization - consistency and standardization of data elements, classification systems, and Methodologies is necessary to provide comparable information among different geographies. Responsibility for providing guidelines on the same and monitoring and evaluation should, however, reside with the Central Government
- ▶ Minimize duplication - Without a proactive partnership with clear demarcated approach, there is great potential for duplication of effort in development, analysis, and dissemination of information. Not only is this cost-ineffective, it can lead to confusion among users of information.
- ▶ Provide optimal coverage - A joint effort in planning an LMI system can help develop a comprehensive framework for an LMI system and set priorities for those features that can be funded and developed. Further, labour market related information at grass root level (for example: employment and unemployment rate and availability of skilled labour in remote areas such as Dausa or Sikhar in Rajasthan) as well as sector / industry wise can be captured, analyzed and made accessible to users.
- ▶ Effectively use limited resources and funding for LMI - This follows from the aforementioned factors which are minimizing duplicative efforts and optimizing the range of the system by directly involving interested ministries / departments / organizations. This is likely to lead to more effective use of funds and help in justifying funding for LMI.
- ▶ Promote the importance and use of LMI to:
 - ▶ Policy makers and how to effectively use LMI in policy and program design and, through its use in policy and operational capacities, make the case to Parliament and the administration for appropriate funding of the LMI system.
 - ▶ The public, businesses, education, and intermediaries as a resource for more effective searches for gainful employment, skill development and training, education, occupational details, economic scenario, labour laws etc
- ▶ Help devise dissemination strategies - Involvement of governments at various levels will ensure an effective and methodical approach in dissemination of information to all users. Often, users may be overwhelmed or unable to easily navigate through LMI resources - given their education, awareness and skill levels of users (example: an urban user may be more adept at use of internet than a user from rural area). Thinking through dissemination strategy in a decentralized system allows for flexibility and innovation across levels, keeping in mind the needs, limitations, awareness and computer literacy levels of various categories of users.
- ▶ Provide guidance and support to intermediaries, including labour market analysts, counselors, teachers, academicians and career facilitators to help support use of labour market information. Many users, especially from rural and backward areas, will require some degree of support from counselors and career facilitators to utilize the labour market information productively. A coordinated approach to the LMI system will assist such intermediaries to better use resources in supporting user needs.

The following options can be evaluated from ownership point of view:

- ▶ LMIS is operated only at the national level by a Central Government Department
- ▶ Decentralized model where individual LMIS are maintained by various Sector Skills Council and are integrated at the national level by a Central Government Department
- ▶ Decentralized model where individual LMIS are maintained by various Sector Skills Council and by State Governments and are integrated at the national level by a Central Government Department

2. Data Sourcing and Management

An optimal LMI system relates quantitative labour demand and supply and presents qualitative analysis of supply/demand and other labour market relationships and trends.

The data sets included in the LMI system are the heart of the system. They define the types of and degree to which labour market-related planning, questions, and issues can potentially be addressed. In addition, an optimal system must provide for easy access to the information and provide support in using the information, to the extent possible. Hence, data sourcing and management is a critical responsibility and task in an optimal LMIS framework.

The most critical issues that must be considered in collecting and compiling labour market data are:

- ▶ Time period coverage of various surveys and sample surveys.
- ▶ Geographical coverage and detail of parameters evaluated such as employment rate, unemployment rate, surplus labour, seasonal / migratory labour.
- ▶ Measurement criteria and techniques / methods of sampling and testing with the use of advanced econometric models, linear programming and statistical techniques.
- ▶ Classification of data (industries, occupations, skill sets, training certifications).
- ▶ Timeliness and frequency of data updation.
- ▶ Accuracy of data and data collection / sampling methodology.
- ▶ Crosswalks/link: (the system must include tools to link or crosswalk data from different sources).
- ▶ Employment of multiple data development approaches in building LMI data bases and products, including provision of customized data on user request and at a nominal charge.

The following options can be evaluated from data sourcing and management point of view:

- ▶ Providers of LMIS focus on data from NSSO.
- ▶ Providers of LMIS conduct primary surveys for data collection.

3. Private Sector Involvement

Responsibility for maintenance of the LMIS can be based on partnerships between the government and the private sector, as is the case in Australia. This quasi-market arrangement can be based on private sector involvement which is funded by government on a competitive basis. However, this arrangement also includes some risk. The government should take actions to improve the quality of LMI provided by the private sector.

In fact, the use of Service Support model through Public Private Partnership such as "Rojgar Sahayak Kendra" in Gujarat has been very effective in rendering employment services. The Rojgar Sahay Kendras are an additional facilitator between the employers and the job seeker besides the present set up of Employment Exchanges with an objective of providing efficient collection of private sector's job vacancy data and offer

placement on those vacancies to the job seekers on the live register of the exchanges in a decentralized manner.

The following options can be evaluated from private sector involvement point of view:

- ▶ Complete Government ownership of data collection, conduct of surveys , LMIS maintenance and development of LMI products
- ▶ Public private partnership

4. Dissemination of LMI

An optimal LMIS must provide easily accessible and useful products and resources to the wide range of users and build awareness of these resources. It is important that the LMIS be marketed as a resource to assist business, education, job seekers, youth, and others in planning and making labour market-related decisions. Clearly, the Internet is the primary means of disseminating LMI. An optimal system must consider different means of providing access to LMI, such as encouraging Employment Exchanges, university / school campuses (including government schools such as Kendriya Vidyalays), community-based organizations, libraries, and other sites to provide Internet access to LMI Web sites.

Use of a multimedia publicity campaign to disseminate LMI can effectively encourage people to seek LMI. In particular, government providers should use this strategy to attract people of different ages and backgrounds. Additionally, LMIS providers devise dissemination strategies can combine radio, video, print, CDROM, telephone and the internet to disseminate LMI. The varied delivery formats ensures that LMI covers persons with different media preferences and located in different geographic regions.

The following options can be evaluated from private sector involvement point of view:

- ▶ Dissemination strategy to be developed by providers of LMIS (central and state governments and SSCs).
- ▶ Dissemination options can include:
 - ▶ Employment Exchanges
 - ▶ Charity Organizations and Trusts
 - ▶ Public Libraries
 - ▶ Government Schools
 - ▶ Involvement of Panchayats at the grass root level
 - ▶ Involvement of private party in dissemination of LMI
- ▶ Delivery models can be based on various modes of communication such as radio, television, telephone , print etc

5. Hiring Policies

Even though the focus of the LMIS is on the data and delivery components, importance of subject matter expertise in LMI is cannot be overlooked. Informed labour market analysts are critical components of an optimal system and are important in developing LMI, interpreting and analyzing information, providing qualitative information and serving as intelligence "agents," providing user support. Analysts are key to an optimal LMI system at the national, regional, and local levels. Further, as funding is often constrained and cost minimization is important, recruiting from open market is considered expensive and is often forgone resulting in not hiring of best available talent and thereby drastically reducing the effectiveness of the LMI system.

Analysts are critical players in the system for a number of reasons, including

- ▶ Supporting data development and compilation,
- ▶ Interpreting and analyzing the data serving as a source of qualitative information and part of an intelligence gathering system
- ▶ Providing user support.

Additionally, analysts can be hired at national, regional and sector levels to collect and analyze labour market related data at these levels. National analysts are important to provide interpretations and synthesis of information for policy determination, input to legislation, and information analyses that can impact on major business and stock investment decisions. Regional / Sector specific analysts typically will provide input to regional / sectoral planning and decision making and highlight different (or similar) trends across sectors and regions .

The following options can be evaluated from point of view of hiring policies are:

- ▶ Hiring of government employees only
- ▶ Hiring of professionals such as statisticians, mathematicians, economists from the open market
- ▶ Hiring of professionals on contract / project basis
- ▶ Hiring for voluntary work

2.2 Domestic initiatives

2.2.1 Context

Education and skill acquisition are important determinants of firm productivity. The wages of workers with qualifications beyond primary school have grown far more rapidly than those of workers with primary school or less; the greatest increases being for workers with tertiary qualifications. This movement in wages shows that education and skill acquisition are important determinants of job prospects.

Approach and methodology adopted here for studying the states' initiatives on developing a Labour Market Information System was primarily supported by desk research through information available on various State Government's portals, Central Ministries' websites etc.

Although productivity has been increasing and education levels rising, India still needs to improve education and training quality. While significant improvements will need to be made on quantitative indicators, little is known about qualitative indicators - e.g. because India does not participate in standardized international examinations, there are no good comparative measures of quality. Providing more education and skills cannot, by itself, be enough - quality and labour market relevance is crucial. The education and skills provided must be relevant to the labour market. Acquiring skills is essential, provided those skills are not out-dated or do not meet industry requirements. All this coupled with the labour market dynamics is the critical information which needs to be available in the public domain, where citizens of the country find it easy to source and take informed decisions. States across India have taken certain initiatives which work as a standalone support system for improving skills and enhancing the employability of the citizens.

Some of the key initiatives of the States focused on skill development and employment generation are discussed in sub-section below.

2.2.2 States' initiatives

- a. **State of Gujarat:** One of the initiatives where training of world class multi skilled workforce through Centre of Excellence. Transferring every challenge into opportunity, seizing every opportunity for achieving perfection for imparting vocational training, here, the Govt. of Gujarat proposes to excel by building close link between industries communities, Institutes and other training providers. Centre of Excellence will work as a hub to focus on specialist vocational training across a range of new and traditional occupation and will be innovative in delivering training so that employability including self employment will increase and simultaneously industries' needs will also be fulfilled. The main objective of the scheme is to upgrade existing ITIs into "Centre of Excellence" for producing multi-skilled workforce of world standard. The figure below donates another initiative where an IT approach was adopted by the State of Gujarat to collect the Employment Market Information (EMI):

Figure 2.14: IT Approach by Govt. of Gujarat



- b. **State of Maharashtra:** A web portal <http://ese.mah.nic.in> Rojgar Wahini has been developed for the Department of Employment and Self-Employment (DE & SE), Government of Maharashtra. DE & SE provides free services like vocational guidance, job opportunities and self-employment guidance to the job seekers. It also collects, compiles and provides the statistical information to the planning commission and other planning bodies to be used for manpower planning. The portal design has six major sub-sites:
- ▶ Candidates' Corner
 - ▶ Employers' Corner
 - ▶ Self-Employment
 - ▶ About Us
 - ▶ Right to Information (RTI)
 - ▶ Kamgar Katta.

It is a single point of contact for the services provided by the Department. The candidates' corner provides registration and update facilities to the job advertisements, departmental contact details, advice on possible jobs and occupations, special information for disabled persons. Candidates/registered youth can access references relevant to job, like coaching classes for competitive examinations, books, publications, newspapers, TV & radio programmes.

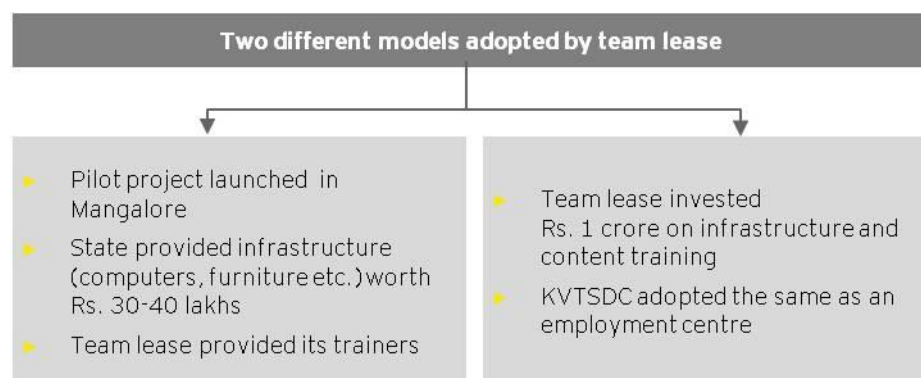
Figure 2.15: IT and BPR Approach by Govt. of Maharashtra



The Self-Employment sub-site covers the Self-Employment guidance activities of the Department of E&SE, providing information, guidance and advice to the unemployed youth regarding self-Employment schemes, small-scale businesses they can take up, and training details. The portal provides a comprehensive source of information covering all applicable schemes, businesses with their processes and details of documents, agencies involved with complete contact details. The Bankers' Corner gives advice on loans and related processes. Details of non-profit organizations working for Self-Employment; details of Seva Societies registered with the Department are also available. Kamgar Katta sub site similar to commercial job sites where workers like nurse, domestic helpers, drivers, and data entry operators can post their profiles and search for job providers. Job providers can post their requirements, e.g. requirement of a gardener, domestic helper, nurse, watchman etc and contact the job seekers. The data of service providers and seekers can be searched on the basis of location and skill set. The portal can be accessed from service delivery points in rural areas. It is simple, easy to use, graphical user interfaces in the local language to serve semi-literate and even illiterate people. Interaction with the portal is through the click of a mouse with minimal or little interaction with the keyboard. There is interactive guidance as a user navigates through the pages making them simple and quick in use. The graphical user interface of the portal is touch screen enabled to facilitate the viewers to access it through kiosks

- c. **State of Karnataka:** Karnataka Employment Centre (KEC) is the country's first employment exchange based on a public-private partnership. KEC was launched in July 2010 by TeamLease Staffing solutions and the Government of Karnataka to ensure successful access to the job market for youth of the State. The nodal partner agencies on the government side for this initiative are the Department of Employment & Training and Karnataka Vocational Training & Skills Development Corporation (KVTSDC). KVTSDC, a Government of Karnataka undertaking, was established in 2008 to provide training and employment to unemployed youth in the State. KEC provides vocational training and employment to school dropouts, unemployed youth, ITI graduates and existing workers. The initiative's aim is to empower all individuals through improved skills and knowledge, which would enable them to secure a bright future. It also addresses the skill gaps in the Industries & Service sector by providing them with trained youth. The figure below provides a brief on models adopted by Team Lease to provide services to the Government,

Figure 2.16: Models adopted by Government of Karnataka



- d. **Government of Jammu & Kashmir:** The state has launched a programme for the displaced youths of the State. The highlights of the programme are skill development, direct employment initiatives, improving skill sets through access to education and focused placement-linked, market-driven skilled training to 50,000 to 100,000 youth in the next three to five years. This will cost the government some Rs.260 crore and contains a special industry initiative for the state that will enhance the skills and employability of 40,000 youth in the next five years.

The initiative is proposed to be implemented under private-public partnership. The private sector would bear 50 percent of the training cost and the government will help with the balance expenses. Some top corporate houses have already agreed to help the state achieve this objective, according to the report. Sher-e-Kashmir Employment & Welfare Programme for the Youth (SKEWPY) for operationalizing the mechanism of data collection at the ground level, the government decided to revamp the erstwhile Employment Exchanges and enhance their role, both quantitatively and qualitatively. They have been renamed as District Employment and Counseling Centers (DECCs). These District Centers shall develop a reliable statistical base in the formats of skill inventory and skill deficiency mapping.

The number of such District Employment and Counseling Centers has been increased from 14 to 22 so that all districts have a well placed independent institutional arrangement for information generation on the subject. It shall be mandatory for all practical purposes for all the unemployed educated youth to get themselves registered with the concerned District Employment and Counseling Centre. Necessary format for registration shall be prepared by the Department of Economics and Statistics. The requisite software for on line digital format is being developed by the government through the Labour and Employment Department. The information collected by the District Employment and Counseling Centers shall be available online to the Divisional & State offices in the Directorate of Employment and to the relevant offices in the secretariat and shall be compiled in suitable formats from time to time.

- e. **Government of Haryana:** Haryana Overseas Placement Assistance Society (HOPAS), Promoted by the Govt. of Haryana with the prime objective of assisting the youth of the State in overseas employment. Society has been registered under the Societies Registration Act, 1860. Cater to the growing demands for skilled and unskilled Labour, technicians, IT professionals, engineers and doctors in foreign countries especially in Saudi Arabia, Bahrain, UAE, Kuwait, Oman, Qatar etc.

Key achievements of HOPAS

Ever since its inception, the Overseas Placement Bureau has placed 86 applicants in the Middle East. The Bureau received 3190 different type of vacancies from Canada and 70 vacancies of Physiotherapists for the USA through its Consultants.

- f. **Government of Andhra Pradesh:** State Ministry for Labour and Employment has taken up skill-building initiatives for persons seeking overseas employment in collaboration with foreign employers. The State government had set up in 2006 to improve skills of jobseekers overseas. About 1,800 workers were sent through Overseas Manpower Company Andhra Pradesh Limited (OMCAP) for foreign jobs and had trained 7,200 workers for improving their skills this year. Various issues relating to overseas employers, workers, prevailing practices, skill sets requirement, skill upgradation, testing and certification, employers' perspective of recruitment process, initiatives for welfare measure and others are been taken care in the programme.

OMCAP maintains Data Bank of Doctors, Engineers to skilled and unskilled workers and provides overseas employer the suited short listed candidates by screening from the data bank; if required candidates are not available from data bank OMCAP mobilizes them from Advertisement in Print and Electronic Media. Interviews to the candidates are arranged by OMCAP at its premises or any centre convenient to foreign employer. OMCAP slowly intending to become a recruiting global agency and in a period of one year it has supplied manpower to employers in Hong Kong, Middle East, and USA. OMCAP provides assistance to candidates after selection in Visa, Air Ticketing etc., through its good offices, quickens the visa and emigration formalities

Registration Procedure	<ul style="list-style-type: none"> ▶ Candidates who seek registration with OMCAP to possess at least 2 years experience in the relevant post for which he/she desires to be considered and should hold a valid passport. ▶ Candidates without experience to be registered as well, they are provided with guidance and counseling in their relevant field of interest and if required necessary capacity building and training services are provided. ▶ The registration is valid for 2 years, which is renewable. ▶ Registration fee of Rs. 750/- is collected from the candidate at the time of registration. Renewal fee of Rs.200/- is collected from the candidates after expiry of 2 years. A grace period of 2 months is given for renewal. ▶ Renewal has to be done every 2 years.
Data Bank	OMCAP maintains a computerized Data Bank of registrants. Details of data stored can even be analyzed with reference to certain parameters and provided to marketing agencies on a cost basis for promoting their products to the registrants.
Placement	Overseas Manpower Company Andhra Pradesh Limited (OMCAP) identifies the vacancies, Matching Job aspirants with Vacancies, Arranging interviews, selection, Documentation and placement orders. Placement fee Rupees 2,000 to 10,000/- is collected.
Capacity building & personality development:	<ul style="list-style-type: none"> ▶ Training is provided in Employability skills, Language Proficiency, Spoken/Written English and Foreign languages. ▶ Language proficiency Rs.500/- to Rs.1000/- is charged. ▶ Skill Development Rs. 1500/- to Rs.3000/- is charged.
Passport / VISA / Air ticket assistance:	<p>Overseas Manpower Company Andhra Pradesh Limited (OMCAP) is having liaison with Embassies, Travel Operators, and Passport Authorities. Passport, Visa, Air Ticketing Assistance is provided.</p> <ul style="list-style-type: none"> ▶ Visa clearance Assistance fee Rupees 500/- ▶ Air Ticketing Assistance fee Rs. 1000/- ▶ Medical Checkup fee Rs. 200/- ▶ Insurance fee Rs.5000/-

- g. **Government of Rajasthan:** Out of 87 training programmes proposed, 69 skill training programmes were approved for the year 2010-11. Out of 621 skill training programmes being conducted during the year 2009-10, 620 programmes have been completed. Proposals of 21 existing and new training providers were examined EMI has issued in-principle sanction to 233 training providers for 557 programmes. Further financial sanction is issued to 173 training providers for 303 programmes. EMI has sanctioned Rs. 296.29 lakhs and disbursed Rs. 232.41 lakhs from the unspent balance available with it. 58 skill training programmes have been started during the current financial year.

Small, tiny and cottage sector -The small, tiny and cottage sector in Rajasthan has been the principal source of industrial dispersal and employment in the manufacturing sector. Industry Associations will be encouraged to undertake commercially viable projects, for marketing, technological upgradation, supply of raw material etc.

Handicrafts - Indian Institute of Crafts and Design (IICD) has been set up by the State Government. IICD has entered into Memoranda of Undertaking with the National Institute of Design, Ahmadabad and the National Institute of Fashion Technology, New Delhi. Its mandate is to create a new cadre of highly skilled and motivated Design-Techno Managers who can contribute towards sustaining modernization and accelerating the growth of craft centers in the State. The Institute will offer training courses to craft persons both at its principal seat at Jaipur and outreaches in the districts. It will also provide important inputs by way of designs, technological improvements, market intelligence and product innovation.

- h. **Government of Assam:** Guwahati has enshrined its name as a centre of recruitment for overseas employment, not only for those creamy layers having bright academic background, but also for those matriculates skilled in different vocational trades. Till the other day most of the products of Industrial Training Institutes (ITI), barring a few privileged ones who found avenues into some industries and in the government sectors, had to settle for poorly paying jobs as mechanics in roadside motor garages, as daily wage earning plumbers, as underpaid electricians in electrical shops or contractors. Public Private Partnership (PPP) between the ITIs in Assam and some of the names in the corporate sector, a window of opportunity which includes overseas recruitment, has now opened up for the ITI graduates.

The Directorate of Employment and Craftsmen Training under the Labour and Employment Department in the state arranges for walk-in- interviews in Guwahati for 150 posts of Security Guards and House Keeping Attendants under a job order of EMRILL-LLC, Dubai, a multinational facility management company, in collaboration with Overseas Manpower Andhra Pradesh Ltd. of the Government of Andhra Pradesh. The recruits have been offered attractive salary packages that range between Rs.12, 000 to Rs.17, 000. The recruitment drive of the Department follows its earlier initiative for overseas placement in 2009, where altogether 11 ITI graduates found job opportunities in Australia through Bharadwaj and Company, one of the India's manpower consultants which are based in New Delhi. The PPP approach has also recently increased the rate of placement to 80 per cent from the earlier rate of 60 per cent.

2.2.3 Key learnings

The above discussed State level initiatives are not implemented in the space of LMIS and no State has taken any full-fledged exercise for developing an interactive LMIS in the State. States' key initiatives are more driven by the priorities as set by the State Governments' individual line departments; hence, there is a need where all these initiatives could become a part of the Central LMIS to promote the State led programmes and schemes.

Key learning from these States' initiatives is that at the implementation level programmes have been formulated, however, the information communication about the same across the geographies can be covered by way of making this information available and accessible to everyone through an interactive Labour Market Information System. Key Points include:

- ▶ Design stage can include the technology information about the various schemes and programmes
- ▶ Business process re-engineering exercise that these States took to integrate their data as information.
- ▶ Data collection techniques

- ▶ Activities undertaken by States to incentivize the citizens to participate in their schemes
- ▶ Techniques adopted to localize and customize the service offering

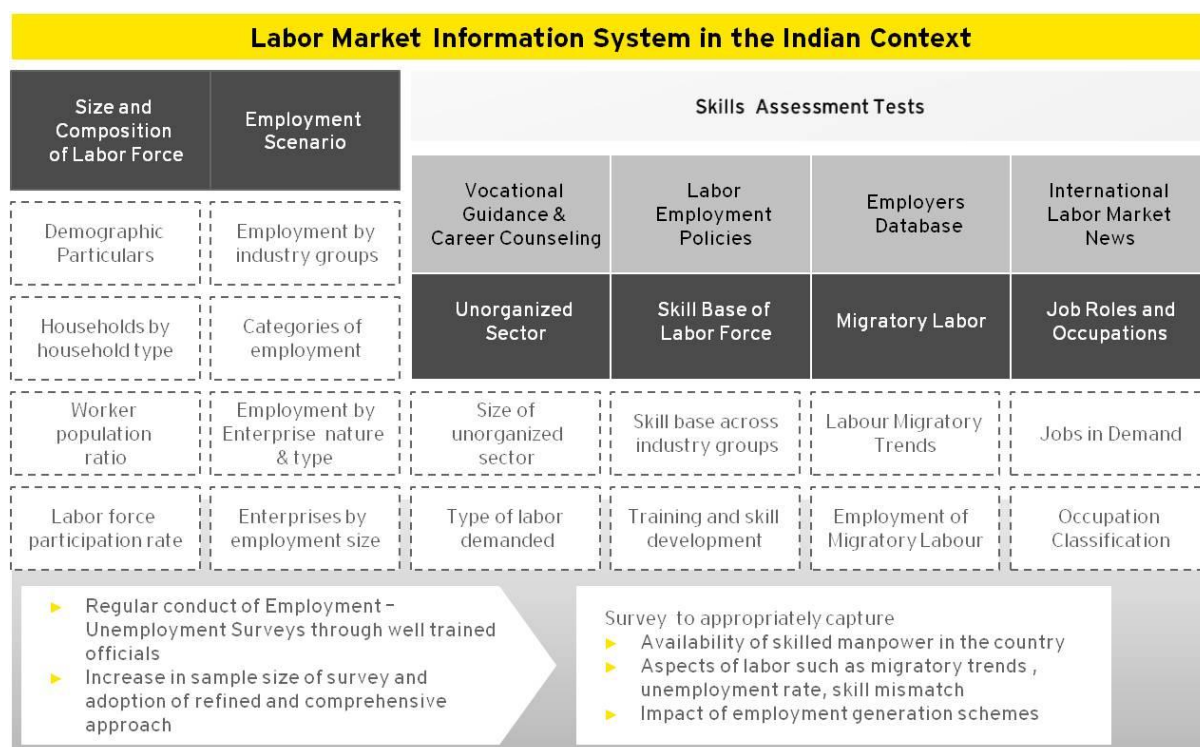
2.2.4 Indian labour market environment

High-quality, easily accessible LMIS is a fundamental feature of a well-functioning and competitive labour market. It can vastly improve both short- and long-term matches of labour supply and demand to ensure that individuals build and renew the skill sets required in the dynamic marketplace. Key components of an optimal LMI system include types of data, quality standards for data, level of detail, analytic enhancement of data, and information dissemination strategies and mechanisms adopted by Government. Equally important when considering an LMI system is the regular conduct of surveys for accurate data input and the roles of analysts and intermediaries in maintenance of the LMIS. These professionals are an essential part of an optimal system. Ultimately, LMIS users and their needs drive the design of an optimal system.

Hence, the proposed LMIS framework is to capture in detail, i.e. at national, regional and local levels, the employment scenario, labour force requirements given the present economic phase of the country and related information on skills development, training and certification.

The schematic below depicts the canvass on which LMIS framework shall be built. The

Figure 2.17: Building Blocks of the LMIS framework



Size and composition of labour force ¹²

Overview

In India, a stated objective of economic policy planning is achievement of high rates of growth of the economy and sustained improvement in the standards of living of people. A rapid growth in employment opportunities for all sections of the society, associated with rising GDP growth is essential to realize this objective as also to achieve the goal of Inclusive Growth.

Given this mandate, the Eleventh Five Year Plan (2007-2012) strategizes rapid growth in employment opportunities along with improvement in the quality of employment. It recognizes the need to increase the share of regular employment in total employment and a corresponding reduction in casual employment. The employment generation strategy of the Eleventh Five Year Plan has also envisaged reduction in underemployment and a movement of surplus low wage labour in agriculture sector to higher wage and more gainful employment in the non-agricultural sector.

However, despite impressive economic growth over the years, the situation on employment front leaves much to be desired.

Demographic particulars

As per the Employment-Unemployment survey (by the Labour Bureau) collected for the fixed reference period from 1.4.2009 to 31.3.2010, it is observed that the total estimated population of the 28 selected States/UTs, which is 1182 million, lives in 238 million households.

In rural areas, 872 million persons are living in 172 million households, whereas in urban areas

310 million persons reside in 66 million households. Per 1000 distribution of households indicates that 722 households are rural and the remaining 278 are urban. Average household size has been worked out to be 5.1 in rural areas, 4.7 in urban areas and 5.0 at overall level.

The NSSO estimates for average household size based on 2007-08 survey results shows the household size 4.5 at overall level with 4.7 in rural areas and 4.2 in the urban areas

Households by household type

Per 1000 distribution of households in rural areas by household type may be perused from Table below.

Table 2.3: Per thousand distributions of rural households by type of household

Household Type	Estimated Number of Households (in millions)	Per 1000 distribution of households
1. Self employed in agriculture	50	288
2. Self Employed in non-agriculture	24	139
Total self-employed	74	427
3. Agriculture Labour	38	223
4. Other Labour	32	189
Total Rural Labour	70	412
5. Other Households	28	161
Total Households	172	1000

¹² Source: Report on Unemployment Survey (2009-10), Ministry of Labour and Employment, Government of India

Per 1000 distribution of households in rural areas indicates that 288 are self-employed in agriculture and 139 are self-employed in non-agriculture taking the total number of self-employed households to 427. Total rural labour households are estimated to be 412 per 1000, of which 223 are agriculture labour households and 189 are other labour households. Number of other households works out to be 161 per 1000.

Table 2.4: Per thousand distribution of Urban Households by Household Type

Household Type	Estimated Number of Households (in millions)	Per 1000 distribution of households
Self employed	22	331
Regular wage	21	315
Casual Labour	13	205
Other Households	10	149
Total Households	66	1000

Per 1000 distribution of urban households presented in above Table indicates that 331 households belong to the self-employed category, 315 are regular wage households and 205 are casual labour households. Remaining 149 households have income sources other than those specified above as the major source of income.

Worker population ratio

At overall level of the States/UTs, 32.5 % of the population is employed. In absolute terms at overall level the employed persons are estimated to be 384 million. Further while analyzing sex wise worker population ratio, it is observed that per 1000 population, 495 males and 140 females are estimated to be employed at overall level. The sex ratio of the employed persons is 259 at overall level indicating that 259 females are employed for every 1000 employed males. In the rural and urban sector, the worker population ratio is estimated to be 329 and 314 respectively. The sex ratio of the employed persons is 278 and 204 respectively in rural and urban sector.

Labour force participation rate (LFPR)

The estimated LFPR in 2009-10 is 359 thereby implying that 359 persons are either employed or available for work per 1000 population. The LFPR of males and females is estimated to be at 538 and 163 persons respectively. The sex ratio of the labour force, at overall level is estimated to be 279.

In the rural and urban sectors, the LFPR is estimated at 365 and 340 respectively. The sex ratio of the labour force in rural sector is 299 at overall level whereas for the urban sector the same is 222.

b. Unemployment Scenario

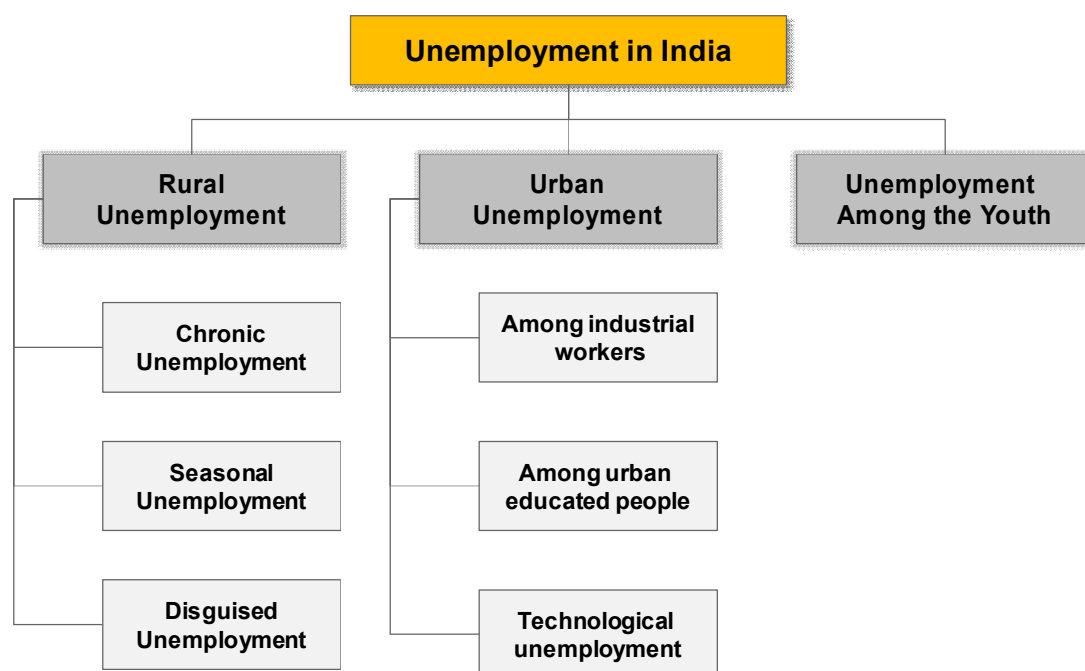
Types of unemployment that exist today are:

- ▶ Voluntary Unemployment refers to people who are unwilling to work at the prevailing wage rate and people who get a continuous flow of income from their property and other sources of income and need not work.
- ▶ Frictional unemployment refers to a temporary phenomenon which results from workers which are temporarily out of work while changing jobs or are suspended due to lock outs or strikes. Frictional unemployment is due to mismatch between workers and vacancies.

- ▶ Casual unemployment - In industries such as construction, catering, agriculture where workers are employed on a daily basis, casual unemployment occurs due to short term contracts which are terminable on short / no notice.
- ▶ Seasonal unemployment occurs in industries & occupations such as agriculture, where production activities are seasonal in nature offer employment only for a certain period of time in a year. People engaged in such type of work may remain unemployed during the off-season which is termed as seasonal unemployment.
- ▶ Structural unemployment arises due to change in demand patterns in the economy leading to changes in structure of production. Example: use of synthetic rubber is bound to reduce the demand for natural rubber and lead to unemployment in rubber plantation. The only way to remove such unemployment is to retrain the unemployed in new technologies so that they are absorbed in the expanding economic sectors.
- ▶ Cyclical unemployment is associated with cyclical fluctuations in economic activity, especially in recessionary/depressionary phases of trade cycle. To resolve this, the Government has to take corrective measures in the form of increased total expenditure to push up effective demand in the economy.
- ▶ Chronic unemployment refers to unemployment which tends to be a long-term feature of a country on account of vicious circle of poverty, lack of developed resources and their under-utilization, high population growth, low capital formation etc.
- ▶ Disguised unemployment refers to a position where people may be working and apparently employed yet their contribution to output / productivity is zero. This phenomenon largely occurs in agricultural sector and rural areas.
- ▶ Technological unemployment results from replacement of workers due to introduction of new machinery, improvement in methods of production, labour saving devices etc.

The schematic below depicts the types of unemployment in India.

Figure 2.18: Types of Unemployment in India



The unemployment rate is the ratio of the number of unemployed persons in the labour force per 1000 population. At overall level the unemployment rate is estimated at 94 out of 1000 persons in labour force, which implies that 9.4 % of the labour force is unemployed and looking for jobs. In absolute terms it is estimated that about 40 million persons are unemployed at overall level of the State/UTs. For male and female persons the unemployment rate at overall level is 80 and 146 respectively.

A majority of the estimated unemployed persons (80 %) is in the rural sector at overall level. While comparing the unemployment rate in the rural and the urban sectors at overall level, it is observed the same is higher in the higher in the former (101) as compared to the latter (73).

Key observation on unemployment scenario

- ▶ In the rural sector, the unemployment rate is estimated at 101 persons out of 1000 persons in the labour force. Similarly in the urban areas, the unemployment rate is 73 persons out of 1000 persons in the labour force.
- ▶ Among females, the unemployment rate is 146 out of 1000 females in the labour force at the overall level, whereas for male members the same is 80 per thousand males.
- ▶ The proportion unemployed is the number of unemployed persons per 1000 population. At the overall level, the proportion unemployed is estimated at 34 persons per 1000 population. While for male members, it is 43 and for females, it is 24 per 1000.
- ▶ In the working age population (i.e. 15-59 years of age), the proportion unemployed is 49 persons per 1000 persons.
- ▶ In rural areas, the proportion unemployed is estimated at 37 persons per 1000 population in these areas. Similarly, in urban areas, the proportion unemployed is 25 persons per 1000 population in these areas.

c. Employment scenario

Based on the data available from the 61st round of the quinquennial surveys conducted by NSSO, during 1999-2000 to 2004-05 about 47 million work opportunities were created as compared to only 24 million jobs created during the period 1993-94 to 1999-2000. Employment growth accelerated from 1.25 % per annum during 1993-94 to 1999-2000 to 2.62 % per annum during 1999-2000 to 2004-05. However, a higher labour force growth of 2.84 % per annum during 1999-2000 to 2004-05, which exceeded the growth in workforce of 2.62 % per annum, resulted in an increase in unemployment rate from 7.3 % in 1999-2000 to 8.3 % in 2004-05.

In recent years, the quality of employment created has also been a matter of concern as reflected in deceleration in organized sector employment and low share of regular employees in total employment indicating a process of casualisation of the workforce. During 1999-2000 to 2004-05, most of the growth of 4.7 % per annum in non agriculture employment, was in the unorganized sector.

According to data available from DGET, organized sector employment increased at a rate of 1.2 % per annum in the period 1983 to 1993-94 but declined at a rate of 0.03 % per annum in the period 1994-2007. This decline is attributed primarily to a decline in employment in PSUs.

At present, the main challenges on the employment front, therefore, are not only to ensure a rapid growth of employment creation but also improvement in the quality of employment created. These constitute the thrust of the employment strategy being adopted in the Eleventh Five Year Plan. The Eleventh Plan rightly emphasizes the need to achieve rapid growth of employment and to increase the number of regular wage employment opportunities through a process of inclusive growth.

Employment by industry groups

It is estimated that at the overall level (rural, urban and all States/UT's covered), out of 1000 employed persons, 455 are employed in agriculture, forestry and fishing group. In the manufacturing and construction sectors 89 and 75 persons out of 1000 persons respectively are found to be employed.

Majority of the employed persons in rural area (highlighted in blue in Table below) are in the agriculture, forestry and fishing related industry group (576 persons out of 1000 persons). This is followed by construction (72 persons), Manufacturing (67 persons) and Community Services (63 persons). In urban sector out of 1000 persons (highlighted in green in Table below), 173 persons are employed in the wholesale and retail trade etc industry group followed by 154 persons in the manufacturing industry, 146 persons in the community services etc.

Table 2.5: Per thousand distribution of employed persons by broad industry groups

Industrial classification	Rural	Urban
Agriculture, forestry & fishing	576	99
Mining & Quarrying	22	15
Manufacturing	67	154
Electricity etc	13	33
Construction	72	86
Wholesale, retail etc.	59	173
Transport, storage etc.	28	78
Financing, insurance etc	14	61
Community services etc.	63	146
Others	86	155
Total	1000	1000

Categories of employment by industry groups

The proportions of various categories of employment, namely self employed, regular wage/salaried person and casual labour are distributed into 9 broad industrial groups cited in the preceding table. Following are the key figures of category wise employment

Within the employed population, self employment is the dominant category. Out of 1000 persons employed, 439 persons are self employed, 168 persons are regular wage/salaried and the rest 393 persons are employed as casual labour at the overall level.

In the self employed person's category, maximum proportion of persons is engaged in agriculture, forestry & fishing group (572 out of 1000 persons) followed by wholesale and retail trade (135 out of 1000 persons) at overall level.

In the rural sector, 457 persons and 435 persons out of 1000 persons are in the categories of self employed and casual labour respectively. Rest 108 employed persons belong to regular wage/salaried class in the rural areas.

In the second employment category of regular wage/salaried person, maximum proportion of the employed is engaged in the community services (227 persons out of 1000 persons) followed by 153 in manufacturing industry.

In the third employment category i.e. casual labour; a majority of the persons are in the agriculture, forestry and fishing industry group (467 persons out of 1000 persons) followed by 148 in the construction sector.

Employment by enterprise type

Labour welfare issues such as labour laws and policies, working conditions, minimum wages, etc. are important indicators of the level of wellbeing derived by the employed person. Details of the type of enterprise in which the person is employed, nature of enterprise viz. perennial, seasonal or ad-hoc, whether person is getting paid leave, social security benefits etc. has also been elaborated below. The persons categorized as employed can be described in the following broad categories of enterprise type:

- ▶ Proprietary
- ▶ Partnership
- ▶ Government/Public sector
- ▶ Public/Private Limited Company.
- ▶ Co-operative society/trust/non-profit institution
- ▶ Employers households
- ▶ Other categories

At the level of rural (highlighted in blue) and urban sector (highlighted in green) majority of the workers are reportedly employed in the proprietary type of enterprises (517 persons and 428 persons respectively out of 1000 persons).

Table below gives a rural and urban break up of distribution of workers by type of enterprise

Table 2.6: Distribution of workers by type of enterprise

Type of Enterprise	Rural	Urban
Proprietary	517	428
Partnership	32	37
Govt./Public Sector	69	146
Public/Private Limited Company	77	168
Co-operative Society	12	19
Employer Household	28	26
Others	265	176
All	1000	1000

Enterprises wise employment by broad industry group

The persons treated as employed in various types of enterprises can be further classified into 9 broad industry groups.

It is estimated that out of the total persons employed in the proprietary type of enterprises a majority is employed in the agriculture, forestry and fisheries group (580 persons out of 1000 persons), followed by wholesale and retail trade group (120 persons out of 1000 persons) at overall level.

In the partnership type of enterprises also, maximum proportion of persons employed is in the agriculture, forestry and fisheries group (392 persons out of 1000 persons) followed by manufacturing group (147 persons out of 1000 persons) at overall level.

In the government/public sector type of enterprises, 340 out of 1000 persons are employed in the community services group at overall level.

In public/private Limited companies per 1000 persons employed, 244 persons are employed in the manufacturing sector followed by 179 persons in agriculture, forestry and fisheries group at overall level.

In the co-operative society/trust/other non-profit institution type of enterprises, for every thousand persons employed, 282 persons are employed in the community services group followed by 152 persons in agriculture, forestry & fisheries group at overall level.

Enterprises by employment size

The employed population estimated can be further classified into three broad categories based on the strength of the unit/enterprise in which they are working. These three broad categories are given below:

- ▶ Less than 10 workers
- ▶ 10-19 workers
- ▶ 20 or more workers
- ▶ Not reported/unknown

At overall level, per thousand employed persons, 658 persons are working in the units employing less than 10 workers. About one fourth of the employed persons were not able to report the number of workers employed in the enterprise in which they are working.

Table 2.7: Per thousand distributions of employed persons among units of different employment size

Employment size of the enterprise	Rural + Urban
Less than 10	658
10-19	32
20 & above	67
Not reported	243
All employment sizes	1000

Employment by nature of enterprise

The estimates of employed population can also be classified into three categories of enterprises based on their nature of working viz. perennial, seasonal and ad-hoc.

It may be seen from Table below that 564 persons out of 1000 persons have reported working in perennial type of enterprises at overall level. In seasonal and ad-hoc type of enterprises, 367 and 69 persons out of 1000 persons have respectively reported to be employed.

Table 2.8: Employed persons by type of enterprise

Enterprise type	Rural + Urban
Perennial	564
Seasonal	367
Ad-hoc	69
All Enterprises	1000

d. The large unorganized sector of our workforce¹³

India has witnessed increasing informalization of industrial labour since 1980s. This informalization has taken the form of

- ▶ Rising share of unorganized sector in total manufacturing employment, and ,
- ▶ Informalization of the organized manufacturing sector itself with greater use of subcontracting and increasing employment of contract and temporary workers.

Key facts about informal and unorganized labour force in our country¹⁴:

- ▶ Share of unorganized manufacturing in total manufacturing employment has seen a rise of about 5 % from 80.7% in 1983 to 85.0% in 2004-05.
- ▶ Workers employed through contractor (i.e., contract workers) as percentage of total workers employed in organized manufacturing has increased from 14% in 1995-96 to 29% in 2005-06.
- ▶ Share of informal sector in the manufacturing workforce increased from 78% in 1999-00 to 85% in 2004-05.
- ▶ About one third (35%) of casual labour in manufacturing in 2004-05 was in the organized manufacturing sector and two-thirds are in the unorganized manufacturing sector. Hence, creation of demand for casual labour can be viewed largely as an unorganized sector phenomenon. Employment of casual labour is also mainly concentrated in rural areas (64%) and among males (74%). Further, most (71.5%) of the casual workers in manufacturing are also found to be educated only up to the primary class as compared to 37% of the regular wage workers.

The nature of these structural changes in the labour market in India implies that the bulk of the new jobs created in the formal sector of Indian manufacturing in the recent years are of low quality and informal in nature (i.e., not requiring specialized skills and training). Thus, in terms of creation of specialized skilled labour jobs, India's organized manufacturing lags behind. The phenomenon of increasing informalization of industrial labour is a serious issue of concern because if industrialization does not create many good jobs for people to shift from low productivity occupations, it cannot make a big contribution to economic development and rise in standard of living.

e. Skill base of labour force¹⁵

The skill base of India's work force, in terms of education level and vocational training, is quite abysmal and there is a serious mismatch as regards the existing skill levels of the workers vis-à-vis the requirements in key growth sectors. Also, the profile of skills among workers varies considerably across regions and different sectors of the economy.

The overwhelming majority of the work force, not only in rural areas but also in urban areas, does not possess any identifiable marketable skill. In urban, only about 19.6% of male and 11.2% of female workers possessed marketable skills. Whereas, in rural areas only about 10% of male and 6.3% of female workers possessed marketable skills. Most of the job seekers (about 80%) in employment exchange are without any professional skill.

The basic educational levels across economic activities are alarmingly low (see Table below), and in sectors such as mining and quarrying, agriculture and construction, more than 50 % of the workers are illiterate. As far as employability of trained workers is concerned, a major chunk of activities in India are still managed without any marketable skill. Only around 12.2 % of all workers engaged in different kinds of industrial activities have education beyond high school standard and 2.8 % of workers have some technical skill.

¹³ Source: Informalization of Industrial Labour in India: Are labour market rigidities and growing import competition to blame? - Bishwanath Goldar and Suresh Chand Aggarwal (November 2010)

¹⁴ Estimates are based on Annual Survey of Industries (ASI) data

¹⁵ Source: EMPLOYMENT AND UNEMPLOYMENT SCENARIO IN INDIA - DGE&T , GOI

Table 2.9: Percentage of workers across major industrial categories as per educational attainment, 2004-2005

Industrial Category	Illiterate	Elementary	Secondary	High School & above	Total	% of workers with Technical Education
Agriculture	63	26.6	5.9	4.4	100	0.5
Mining & Quarrying	54.6	26.2	6.7	12.5	100	5.5
Manufacturing	37.7	38.2	10.9	13.3	100	4.3
Electricity, gas etc	12.3	27.5	22.1	38.1	100	17.5
Construction	50.7	36.8	6.6	5.9	100	2
Trade etc	27	35.6	16.4	21	100	3.1
Hotels & Restaurants	40.2	39.7	10.1	10.1	100	1.8
Transport , Storage etc	30	37.2	14.9	17.9	100	4.4
Finance , Business Service	1.6	13	12	73.4	100	12.8
Real Estate	9	17.4	11.9	61.7	100	23.4
Public Administration etc	11.3	20.5	17.1	51.1	100	9.7
Education	4.1	8.3	11.5	76.1	100	17.7
Health & Social work	10.8	16.7	15.7	56.8	100	35.1
Other services etc	44.9	32.8	10.2	12	100	2.6
Private households	65	27.9	4.6	2.5	100	0.2
Total	49.8	29.3	8.6	12.2	100	2.8

Source: National Commission for Enterprises in Unorganized Sector (NCEUS) Report, Gol, 2008

Training and skill development

With the opening up of the Indian economy to the world, the rapid changes witnessed in science and technology, the pressing need to improve quality of life and to reduce poverty, it becomes even more urgent that people acquire appropriate levels of education and skills. Considerations of quality of education at all levels, including at the elementary stage, continue to create a great sense of discomfort.

The problems created by the weak and lopsided Indian education system have been in public discourses in the recent years. The average rate of literacy, going by the Census, 2001, is still around 65 %. The female literacy rate stands at 54 % which goes down further to 47 % for the rural female. As per 61st round of NSS (2004-05), there were approximately 200 million children in the age group of 6-14 years. Out of these only 177 million were enrolled and the percentage of out-of-school children works out to be 11.5. National Commission for

Enterprises in the Unorganized Sector (NCEUS), using the same data source, estimates that out of a total of 252 million, in the 5-14 years age group, 45.2 million i.e. 17.9 % were out of school.

The expenditure on education, both at the level of states as well as the centre cannot be considered to be adequate. The expenditure (as percentage of GDP) pattern largely shows a declining trend and has been insufficient even for the provision of basic education. With regard to higher education as well, public provisioning has been inadequate and fluctuating. As against a meager 0.37 % share of GDP spending on higher education in India, the USA (1.41%), the UK (1.07 %) and even China (0.5 %) spend considerably more.

Despite having a range of training programmes offered through different schemes of Central and state governments, the nature and level of skill among workers are still grossly inadequate. Recent official estimates suggest that only a small proportion of the labour force is enrolled under different training programmes. For instance, in 2004-05 only around 8 % of the workforce reported to have received informal vocational training while the corresponding percentage for formal training was just about 3.8 % of the workforce. In all, a total of about 11.5 % of the youth reported to have had vocational training in 2004-05. Most of the vocational education programmes at the central level are administered by the DGE&T under the Ministry of Labour.

A number of important studies on behalf of the government, (e.g., Task Force on Employment Opportunities of the Planning Commission, 2001; the Second National Commission on Labour, 2002; the Approach Paper to the Eleventh Five Year Plan 2007 among others) have repeatedly emphasized that an acute skill deficit has been a major drag on the economy's performance. All these studies emphasize that existing capacity and infrastructure in the areas of skill development and training are inadequate; further the existing infrastructure suffers from serious problems.

Budgetary provisions from different ministries/ departments of the Central government towards skill development of workers, their retraining & redeployment etc., are inadequate. In 2007-08 and 2008-09 the relevant budgetary provisions from the Union Government were Rs. 23859.3 million and Rs. 35726.1 million respectively which are merely 0.34 and 0.48 % of the total expenditure of the Union Government, for the respective years; these figures take into account all itemized allocations on various skill development and training programmes.

It is important that in order to cope with the volatility of the economic activities in a globalised world, India's workforce is provided adequate support to acquire new skills at regular intervals and upgrade its skills periodically. Also, there is a strong case for better coordination and synergy between overall general education and specifically targeted programmes for vocational education, training etc.

f. The labour migratory trends¹⁶

Migration in India is mostly influenced by socio-economic patterns of development. The development policies by all the governments since independence have accelerated the process of migration. Uneven development is the main cause of labour migration. Added to it, are the disparities, inter regional and amongst different socio-economic classes. The landless poor who mostly belong to lower castes, indigenous communities and economically backward regions constitute the major portion of migrants. In the very large tribal regions (North Eastern region, Bihar, Jharkhand, Orissa etc) of India intrusion of outsiders, settlements by the outsiders displacing the local tribal people and deforestation also played a major role in migration.

The Indian daily Hindustan Times on 14th October 2007, revealed that according to a study by a Government Institute, 77% of the population, i.e. nearly 840 million, Indians live on less than Rs. 20 (40 cents) a day.

¹⁶ Sources: Employment Sector - Employment Working Paper No. 39 (The well-being of labour in contemporary Indian economy): What's active labour market policy got to do with it? - International Labour Organization ; Demographic ageing and employment in India - I LO Asia-Pacific Working Paper Series ; Migration in India , Trade Union Perspective in the Context of New-Liberal Globalization - Sudhershnan Rao Sarde, Regional Representative, IMF-SARO, New Delhi

Indian agriculture became non remunerative, taking the lives of 100,000 peasants during the period from 1996 to 2003, i.e., a suicide of an Indian peasant every 45 minutes. Hence, the rural people from the downtrodden and backward communities and backward regions such as Bihar, Orissa, Uttar Pradesh travel to far distances seeking employment at the lowest rungs in construction of roads, irrigation projects, commercial and residential complexes, in short, building the “Shining” India.

The pull factors of higher wages caused external migration to the middle-east countries by skilled and semiskilled workers. Migration of professionals such as Engineers, Medical Practitioners, Teachers and Managers to developed countries constitutes a small fraction of the total migrants.

Employment of migrant labour

In terms of employment, construction is the largest sector in India after agriculture. Most of the employment in construction is migrant labour. The working hours are from sunrise to sunset. The working day of women often stretches from 14 to 16 hours, combining house work and work at site. On the site, women are paid Rs. 60-70 a day while men are paid Rs.100-175. Masons earn up to Rs.175-250 a day. The work place is unsafe. The workers have no social security, compensation to injuries, access to drinking water, and healthcare. India has the world's highest accident rate among construction workers. A recent study by the International Labour Organization shows that 165 out of every 1,000 workers are injured on the job.

There are 20 million domestic workers mostly migrants from rural India. Regular streams of new migrants, leaving behind, scorched fields and emaciated families in the tribal belts of Bihar, Orissa, Chhattisgarh, Jharkhand, Assam, and Mizoram for Mumbai, Delhi and other Metros.

Table below illustrates that percentage of employment oriented migrants is quite high for migrants moving from urban areas. More than half of male migrants in the urban to rural streams have moved for work or business purposes.

Looking at the interstate streams of migration, nearly 41 % of migrants have stated work or business as their reasons of their move from urban to rural areas. Two-third of males from urban to rural areas have migrated for employment and related reasons.

Table 2.11: Percentage of employment oriented migrants by streams of migration

	Total	Male	Female
Rural to rural	4.9	25.3	1.3
Rural to urban	10.9	25.9	2.8
Urban to rural	28.3	55.2	4.1
Urban to urban	19.5	38.8	3.6

Interstate Migration

	Total	Male	Female
Rural to rural	17.4	51.3	4.1
Rural to urban	20.1	41.4	4.3
Urban to rural	40.8	66.6	5.0
Urban to urban	27.1	51.8	4.4

Source: Census 2001

g. job roles and occupations

Jobs in demand

The growth of, and investments in, sectors such as ITES-BPO, telecom, and, more recently, retail have radically altered the Indian business landscape, and have created huge opportunities as well as challenges. The boom in the telecom sector resulted in direct employment and creation of jobs through the spillover effect in terms of PCOs and cyber-kiosks. The optimism and buoyancy, however, fades if one looks at these opportunities, not merely in the context of the corporate business, but within the perspective of overall economy and state of the work-force. In contrast to these opportunities, as elaborated in previously, the profile and trends of Indian work-force shows a widening gap in the availability of requisite skills to leverage on the opportunities available in the service sector

As per forecast by ASSOCHAM (Associated Chambers of Commerce and Industry of India), a skills shortage predicted in Indian service sector. Services businesses are responsible for almost two-thirds of India's gross domestic product, with fields witnessing strong levels of growth including biotechnology, IT and academia. ASSOCHAM forecasts between ten and 15 million job positions will be generated by 2011, with 75 per cent requiring vocational training. If this is not achieved, ASSOCHAM advises, it could lead to an economic slowdown, as skilled workers are required in the IT, engineering, hospitality and insurance industries, among others.

Going forward the following sectors are expected to generate demand for skilled and specialized professionals:

- ▶ **Retail :** The vast middle class, strong income growth, favorable demographic patterns and organized retailing growth estimated at 40 per cent compounded annual growth rate (CAGR) over the next few years are some of the factors that will drive the retail boom.
 - ▶ Requirement will be for staffing workers in these retail chains which will include frontline sales staff and in retail-specific areas like visual merchandising, plannogramming (the science of maximizing space efficiency in the store and supply chain management. Retail management graduates and general MBAs will be wanted.
- ▶ **Real Estate/ Infrastructure:** Growth in infrastructure and real estate developments with gradual opening up of FDI in certain sub-sectors will be the main reasons for the boom.
 - ▶ Demand is likely to be for civil engineers and in other functions like residential and commercial real estate brokers, real estate appraisers, property managers and real estate consultants.
- ▶ **Healthcare/Pharma:** Hospital chains are expanding all over India, even in smaller towns.
 - ▶ Requirement is likely to be for specialty doctors, anesthetists, radiologists, gynecologists and surgeons, particularly neurosurgeons and people with a Masters in Hospital Administration (MHA)
 - ▶ In pharma, demand is likely to be created in research and development (R&D) for scientists and professionals trained in pharma regulation and documentation.
- ▶ **Financial services:** It is expected that there will be a lot of new entrants and existing players diversifying with new product lines in the space of banking and financial institutions and insurance services.
 - ▶ Requirement is likely to be for portfolio managers, fund managers and in sales and distribution in retail banking.
- ▶ **Hospitality/facilities management :** With hotel rooms being added across the country at a rapid rate to keep up with growing tourist inflow, hi-tech townships being developed and malls and multiplexes coming up at every corner, people will be needed to service and maintain them.
 - ▶ Requirement is likely to be for hotel-related such as food production, food and beverage services, housekeeping and front office operations , technical maintenance people who understand aspects such as provision of adequate power supply, safety issues, water supply, sanitation, signage etc
- ▶ **Consulting services:** With existing businesses growing more complex and numerous startups on the cards, there will be demand for business strategists and consultants specializing in human resources (HR) and startups.

- ▶ **Entertainment:** It is expected that new TV channels FM channels are added every year and demand increases for production people, anchors, technical and distribution sales professionals.
- ▶ **Information Technology:** It is expected that there will be increase in project-based or contractual hiring in IT sector which will increase demand for professionals who have a holistic knowledge and can do multitasking like coding, testing, designing and communicating with clients will be in demand.
- ▶ **Customer services:** Given the increasing competitive nature of consumer markets, companies are likely more and more stress on customer service to stay ahead of the competition. This is expected to lead to demand frontline technicians who have skills required to service and manage customers.
- ▶ **Telecom:** The telecom industry is growing faster in small towns and will also see a lot of organic growth. Jobs will also emerge in telecom when people employed here opt to shift to other emerging sectors. Jobs in demand are likely to be for telecom, mechanical, software and telecom test engineers, project managers, network security specialists and operation managers.

Occupation classification

The first effort in the direction of preparing an occupational classification system in India was made by the then Directorate General of Resettlement and Employment (now called the Directorate General of Employment and Training) in 1946 in bringing out a publication titled "Guide to Occupational Classification" primarily for the use by employment service for day-to-day work at the Employment Exchanges, such as: registration of applicants, documentation of vacancies, compilation of statistical data, etc. It was an industrially biased classification and was framed after the British pattern.

The Revised Indian National Classification of Occupations (NCO) - 2004 provides definitions for various divisions of occupation as follows:

- ▶ Division-1 Legislators, Senior Officials and Managers
- ▶ Division-2 Professionals
- ▶ Division-3 Technicians and Associate Professionals
- ▶ Division-4 Clerks
- ▶ Division-5 Service Workers and Shop & Market Sales Workers
- ▶ Division-6 Skilled Agricultural and Fishery Workers
- ▶ Division-7 Craft and Related Trades Workers
- ▶ Division-8 Plant and Machine Operators and Assemblers
- ▶ Division-9 Elementary Occupations
- ▶ Division-X Workers Not Classified By Occupations

In view of an LMIS set-up by many developed as well as developing countries and also to direct various Indian States' initiatives towards a country-wide LMIS, it is high time for the States to come together (central nodal agency to take lead) and conceptualize this concept. Indian LMIS will automatically address some of the labour market issues mentioned above, including skewed regional statistics, migration, low levels of vocational training.



3. Stakeholders' Analysis



3. Stakeholders' Analysis

3.1 Background

LMIS will play a major role in providing critical planning information to the different stakeholders. This information will aid the policy makers in identifying key gaps in the current labour market and developing solutions to bridge the supply - demand skill gap. There are multiple stakeholders involved in the labour market ecosystem:

- ▶ Government needs to cater to the growing needs for skilled manpower across sectors. In order to achieve this, the policy makers aim to bring policy changes in the existing system to bridge the widening gap between the supply and demand of skilled workforce.
- ▶ NGOs and Industry Associations work towards developing schemes/ training programmes for bridging the skill gaps in the respective sectors. These associations work with the government in advising them on the key policy issues
- ▶ Employers provide employment opportunities and training programmes to the workforce
- ▶ Training and Educational Institutions work at developing the curriculum and programmes aimed at up skilling large labour force by providing courses and vocational training programmes
- ▶ Students/ Job Seekers/ Employees form the vast pool of the skill sets available across different sectors including both employed and unemployed

Figure 3.1: LMIS Stakeholders Ecosystem



Each stakeholder in the LMIS ecosystem is involved at different point to fulfill the essential objective to up-skill the vast labour force across all sectors and provide employment. The skill development cycle consists of the following critical steps:

- i. Supply/Demand Analysis
- ii. Skill Requirement Analysis
- iii. Policy Formulation
- iv. Curriculum Development
- v. Training planning and delivery
- vi. Employment

The following table illustrates the involvement and contribution of each stakeholder in the skill development value chain:

Table 3.1: Stakeholder Roles and Responsibilities

Stakeholder Roles and Responsibilities Mapping						
Stakeholders	Supply/ Demand Analysis	Skill Requirement Analysis	Policy Formulation	Curriculum Development	Training delivery	Employment
Government	✓	✓	✓	✓	✓	✓
NGOs and Industry Associations	✓	✓			✓	✓
Employers	✓	✓		✓	✓	✓
Training and Educational Institutions				✓	✓	
Students/ Job Seekers/ Employees	✓	✓				✓

These stakeholders comprise the complete ecosystem of the labour market in India i.e. from policy development, curriculum development, training & skill development to employment. The report aims to provide an insight into the issues/ challenges faced by these stakeholders in obtaining key labour market information. It will identify the key lacunae in existing sources of information and simultaneously use the recommendations as part of the proposed solution.

It is essential to understand the key expectations and challenges of these stakeholders whilst articulation of the framework for the Labour Market Information System to ensure that the system is conceptualized and developed is in compliance with the stakeholder needs. The identification of the critical issues will help in strategically developing a concept framework which will assist in bridging the skill level gap thereby help in sustaining the steady economic growth the country has witnessed over the last years.

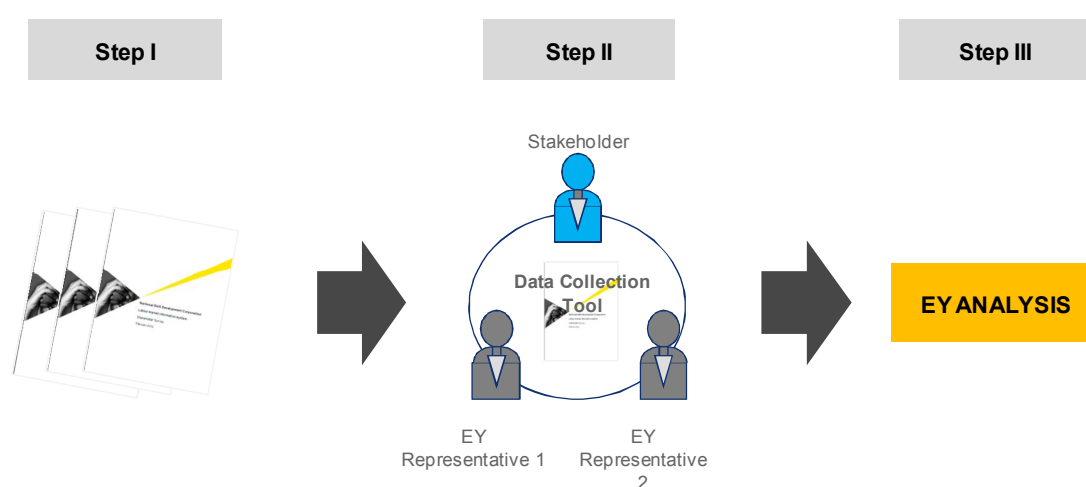
This chapter is divided into the following sub sections:

- ▶ Methodology: This section highlights the methodology adopted to map the key challenges and expectations of the various stakeholders with respect to labour market information
- ▶ Stakeholder Expectations and Challenges: This section highlights the key findings of the primary survey conducted with the key stakeholders across Government, Industry Associations and employers
- ▶ Key Recommendations

3.2 Methodology

A three step process was designed to map the key challenges of the different stakeholders with respect to the Labour Market Information. Primary research (Interviews) was conducted with the key stakeholders to understand the key expectations and challenges. The three step process has been illustrated in the diagram below:

Figure 3.1: Stakeholder Analysis



Step 1: Survey plan

In order to understand the issues/ challenges faced by the stakeholders; a Questionnaire was prepared to assist the interviewer with data collection. The questionnaire covered the following areas:

i. Information Requirements: Information Requirements from the labour market including:

- ▶ Employment Statistics
- ▶ Industry/ Sector specific Statistics
- ▶ Policy Information
- ▶ Job Seekers profile
- ▶ Frequency of updating the required information

ii. Key Information Sources

- ▶ Current sources of Information on labour market
- ▶ Assessment of the information available through the surveys, reports etc
- ▶ Gap analysis of the information requirement and the availability
- ▶ Issues and challenges of the Information Sources

iii. Key Challenges

- ▶ Challenges with the information available from various surveys/ reports on labour market:
 - ▶ Availability & reliability of information
 - ▶ Frequency
 - ▶ Usability
 - ▶ Real time analysis of labour market information
 - ▶ Skills availability gap
- iv. Others
- ▶ Availability and quality of specialized training programmes
 - ▶ Training Model - In-house/ Training Institutions
 - ▶ Recruitment methods employed in the sector/ organization
 - ▶ Key Expectations from LMIS

The detailed questionnaires for different stakeholders have been appended as Annexure 6.2.

Step 2: Interviews with Stakeholders

Detailed interviews were scheduled with the stakeholders. The stakeholders interviewed included representations from the following categories:

- ▶ Government
- ▶ Employers
- ▶ Industry Associations

The stakeholders were selected based on discussions with the NSDC. The interviewees had representations from the Government, Corporate and Industry Associations etc to get a complete synopsis of the needs and challenges faced by the stakeholders.

The key stakeholders interviewed include:

- ▶ AyurVAID Hospitals
- ▶ Builders Association of India
- ▶ Confederation of Indian Industry
- ▶ Confederation of Indian Textile Industry
- ▶ Construction Federation of India
- ▶ Confederation of Leather Exports
- ▶ Confederation of Real Estate Developers Association of India
- ▶ Federation of Indian Chambers of Commerce and Industry
- ▶ Gera Developments
- ▶ Ministry of Labour and Employment
- ▶ NASSCOM
- ▶ Reliance Industries Limited

- ▶ United Nations Development Programme

The key points discussed in the meetings with these stakeholders form part of Annexure 6.3.

Step 3: EY analysis

The inputs received from the various stakeholders were collated and analyzed. Based on the interviews with the stakeholders, the information requirements have been compiled. The next section details the key challenges, information requirements and expectations of the stakeholders from the LMIS. The key findings from the survey have been classified according to stakeholder group broadly in 3 categories:

- ▶ Government
- ▶ Employer
- ▶ Industry associations

The key requirements and the challenges identified from the Stakeholder survey were incorporated in the proposed solution to ensure that the proposed LMIS framework meets the stakeholder expectation

3.3 Stakeholder expectations and challenges

Based on the stakeholder survey conducted to understand the expectations and challenges on key information available on the labour market in India, the key findings from the same have been highlighted in the following section.

3.3.1 Government

Policy makers include various government and regulatory bodies that work together on policy issues pertaining to employment and skill development. These include:

- ▶ Central/ State government
- ▶ International Organizations

The policy makers in the country require updated information on the labour market to analyze the current situation vis-à-vis the forecast and bring about structural changes to resolve the most critical issues hindering the growth. Public policy is concerned with creating a fit between supply of skills and competencies by the education system and the demand for skilled manpower from the labour market. In order to achieve this objective it is imperative for the Government to undertake skill gap analysis and develop programmes to address the issue of lack of available skilled labour across sectors/ geographies. This requires research authenticated information on labour market which can work as a basis for developing key policy related matters.

A. Information mapping

The key information requirements of the Government/ policy makers are mapped to their current availability in the table below:-

Table 3.2: Information Mapping - Government and Policy makers

S.No	Parameters	Relevance to stakeholder	Information currently available	Frequency	Source
General Information - Sector Specific					

S.No	Parameters	Relevance to stakeholder	Information currently available	Frequency	Source
1	Total working population <ul style="list-style-type: none"> ▶ Age ▶ Gender ▶ Location (State/ District/ Village) ▶ Employment Status ▶ Skill Sets ▶ Wage rates 	High	Partially	5 years	NSSO
2	Employer Statistics <ul style="list-style-type: none"> ▶ Employment details of personnel employed ▶ Existing opportunities 	High	Partially	Yearly and Quarterly	EMI Programme
3	Educational and Training Institutes <ul style="list-style-type: none"> ▶ Available courses and programmes ▶ Accreditation ratings 	High	Partially	More than 5 years	NCERT Surveys
4	Industry Statistics <ul style="list-style-type: none"> ▶ Size ▶ Major players ▶ Best practices 	Medium	Partially	NA	Database, Journals etc
Job Seekers Profile					
1	Age, Location	Medium	Partially	NA	Employment Exchange
2	Employment Status	Medium	Partially	NA	Employment Exchange
3	Education Qualifications	Medium	Partially	NA	Employment Exchange
4	Existing skill sets	Medium	Partially	NA	Employment Exchange
5	Professional Background	Medium	Partially	NA	Employment Exchange
6	Trainings Attended	Medium	Partially	NA	Employment Exchange
7	Certifications	Medium	Partially	NA	Employment Exchange
8	Membership of Professional Institutions	Medium	Partially	NA	Employment Exchange
Policy Information					
1	Demand and Supply Analysis	High	Not Available	Not Available	Not Available
2	Employment Trends/ Forecasts across sectors	High	Not Available	Not Available	Not Available
3	Employment schemes running for unemployed	High	Not Available	Not Available	Not Available
4	Trends in wages	High	Not Available	Not Available	Not Available

B. Key challenges

- ▶ Lack of information: The employment / unemployment information is available at the state level. However to develop skill enhancement programmes it is essential to have information on skills availability and requirements at the district/ village level.
- ▶ Absence of a 'single window': There is an absence of a single window which provides information on all aspects related to labour market e.g. job opportunities, employment statistics, training courses etc. There are numerous government agencies e.g. Labour Bureau, National Sample Survey Organization, DGET etc undertaking several reports in this sector. Hence there is a need to integrate all this information onto one platform which can assist different stakeholders in developing a strategic plan for labour force skill development
- ▶ Outdated Information: The information available on labour market is not updated at regular intervals and is usually compiled over a period of 3-5 years. This leads to information being inaccurate and irrelevant
- ▶ Authenticity of Information: The data available through surveys does not represent the actual on ground situation and the data collection methodologies are an area of concern. Also the sample size of these surveys is very small and does not lead to true representation of the labour market scenario.

C. Key expectations

- ▶ LMIS needs to provide research authenticated information and a credible database available to different stakeholders to suffice the lack of information currently available on the labour market in India. The database should be updated on an annual basis and should be able to provide the likely demand/ forecast and trained manpower available in any particular sector
- ▶ The information available through LMIS should provide labour market information at the ground level i.e. district and village level. It is imperative to have this information to develop skill enhancement programmes according to the requirements of different sectors across geographies
- ▶ The information aggregated in the LMIS should be made available to the different stakeholders in the labour market ecosystem. This information can then be leveraged to develop specific skill sets that are currently unavailable.
- ▶ LMIS can be used for the following purposes:
 - ▶ Employers to identify available skill sets across sectors and geographies
 - ▶ Training providers to undertake a skill gap analysis and developing training programmes to address the current skill set gap
 - ▶ Academic institutions in curriculum development
 - ▶ Job Seekers in identifying potential employers
 - ▶ Policy makers and Research companies in providing credible research backed information on employment statistics
- ▶ It is imperative to assess and verify the labour market information to ensure the integrity and authenticity of the information on available workforce. SSCs have been instituted to develop skills in particular sector. These councils can be entrusted with the responsibility of evaluation and the assessment of the information provided by potential job seekers
- ▶ There is concern regarding the quality of the training programmes that are being conducted by various government and private institutions. It is important to develop a rating mechanism that can benchmark the quality and relevance of these courses. This initiative can be spearheaded by the SSCs.
- ▶ With the growing Indian population and limited employment opportunities, it is suggested that the LMIS should be extended to the other Asian countries in the next 5 years. This will assist the movement of

labour across regions and provide ample job opportunities to the youth outside the ambit of over saturated Indian job market

3.3.2 Employers

The employers constitute as one of the most critical stakeholders in the labour market ecosystem as they provide employment opportunities to both skilled and unskilled labour. The demand for the skilled labour has witnessed a steady increase lately. The corporate sector supports the skill development programme through several initiatives with the training institutes/ government to develop the required skill sets within a sector.

The employers require the information available from the LMIS for the following purposes:

- ▶ Identification of skilled workforce across different sectors/ geographies
- ▶ Identification of educational and training institutes providing requisite skills
- ▶ Partnering with the training institutes of for curriculum development and training programmes
- ▶ Development of long term strategy for manpower requirements and skills development

Key stakeholders interviewed include:

- ▶ AyurVAID Hospitals
- ▶ Reliance Industries Limited
- ▶ Gera Developments

A. Information Mapping

Table 3.3: Information Mapping - Employers

S.No	Parameters	Relevance to stakeholder	Information currently available	Frequency	Source
General Information - Sector Specific					
1	Total working population <ul style="list-style-type: none"> ▶ Age ▶ Gender ▶ Location (State/ District/ Village) ▶ Employment Status ▶ Skill Sets ▶ Wages 	High	Partially	5 years	NSSO Labour Bureau
2	Employer Statistics <ul style="list-style-type: none"> ▶ Employment details of personnel employed ▶ Existing opportunities 	High	Partially	Yearly and Quarterly	EMI Programme
3	Educational and Training Institutes <ul style="list-style-type: none"> ▶ Available courses and programmes 	High	Partially	More than 5 years	NCERT Surveys

S.No	Parameters	Relevance to stakeholder	Information currently available	Frequency	Source
	▶ Ratings				
4	Industry Statistics ▶ Size ▶ Major players ▶ Best practices	High	Partially	NA	Database, Journals etc
Job Seekers Profile					
1	Age, Location	High	Partially	NA	Employment Exchange
2	Employment Status	High	Partially	NA	Employment Exchange
3	Education Qualifications	High	Partially	NA	Employment Exchange
4	Existing skill sets	High	Partially	NA	Employment Exchange
5	Professional Background	High	Partially	NA	Employment Exchange
6	Trainings Attended	High	Partially	NA	Employment Exchange
7	Certifications	High	Partially	NA	Employment Exchange
8	Membership of Professional Institutions	High	Partially	NA	Employment Exchange
Policy Information					
1	Demand and Supply Analysis	High	Not Available	Not Available	Not Available
2	Employment Trends/ Forecasts across sectors	High	Not Available	Not Available	Not Available
3	Employment schemes running for unemployed	High	Not Available	Not Available	Not Available

B. Key challenges

- ▶ Shortage of Skilled Workforce: One of the most critical challenges faced by the organizations in the corporate environment is the shortage of adequate skilled workforce. For example in the healthcare segment, there are not enough training programmes available leading to a severe shortage of workforce with specialized skills e.g. Nursing staff, ambulance services etc.
- ▶ Absence of specialized Training Programmes: There is a lack of training programmes across all functions in a particular sector leading to lack of labour force with specialized skill sets
- ▶ Quality of Training Courses: There are concerns regarding the quality of the existing training programmes. The certifications are provided without an assessment of the skill levels.
- ▶ Lack of authentic information on labour market: Lack of information available in a particular sector with regards to the labour workforce, educational and training institutes etc. Also the frequency with which this information is updated and made available is a huge concern.

C. Key expectations

- ▶ LMIS will be used to develop a long term strategy for manpower requirements of an organization. This information will be very beneficial in assessing:
- ▶ Developing tailored training programmes according to the needs of a particular organization
- ▶ Assessing the availability of manpower across geographies and functions/ roles
- ▶ Entering into partnerships with Educational Institutions/ Certification programmes to directly source skilled workforce
- ▶ LMIS should include information on:
 - ▶ Education Level
 - ▶ 10th / 12th / Graduate/ Post Graduate/ Any Specialization
 - ▶ Training/ Certification
 - ▶ Specific qualification in retail
 - ▶ Any additional qualification
 - ▶ Function wise details (Retail Sector - Illustrative)
 - ▶ Store Operations
 - ▶ Supply Chain
 - ▶ Merchandising
 - ▶ Finance Function
 - ▶ IT/ Regulatory
 - ▶ Category (Retail Sector - Illustrative)
 - ▶ Multi brand retail/ single brand retail
 - ▶ Food/ grocery
 - ▶ Apparel
 - ▶ Electronic goods
 - ▶ The information from the LMIS will be utilized for the identification of:
 - ▶ Workforce with requisite:
 - ▶ Skill set
 - ▶ Educational and professional background
 - ▶ Training Certifications
 - ▶ Training/ Educational Institutes providing programmes relevant to the particular sector
 - ▶ Workforce within the geographical scope
 - ▶ Workforce across all functions in the sector
- ▶ LMIS should operate as an intelligent system providing real time analysis of the labour market data. In absence of this LMIS will merely act as a database of all information on labour market. Insights reports should be published at shorter intervals which can be used by the stakeholders to gain strategic insights onto the labour market and revise their strategies accordingly
- ▶ There is a need to provide ratings to the training institute to ascertain the quality of education/ skills being imparted through these courses. This systemized approach will help in determining the correct wage rates etc.
- ▶ LMIS should map the workforce based on skills sets. This will help in mobilizing workforce from across the sectors with similar skill competencies

- ▶ LMIS should provide easy access to information on regulatory requirements in a particular sector. In the organized sector it is critical to maintain compliance to all the regulatory requirements.
- ▶ LMIS should provide a complete listing of information on Educational and Training Institutions providing courses relevant to a particular sector

3.3.3 Industry associations

Industry Associations work to create and sustain an environment that is conducive for the growth of a particular industry in the country. These entities are industry led and industry managed, playing a proactive role in the development process. These associations work closely with the government on policy issues, enhancing efficiency, competitiveness and expanding business opportunities for industry through a range of specialized services and global linkages.

The associations need this information for broadly two purposes:

- ▶ Policy changes to develop skills in the sector
- ▶ Partner with educational institutes/ training institutes to develop programmes suited for the sector
- ▶ Partner with private sector organizations to develop training programmes to up skill the labour force

Key stakeholders interviewed:

- ▶ Confederation of Indian Textile Industry
- ▶ Confederation of Indian Industry
- ▶ Council for Leather exports
- ▶ Confederation of Real estate Developers of India
- ▶ NASSCOM
- ▶ Construction Federation of India
- ▶ Builders Association of India

A. Information mapping

Table 3.4: Information Mapping - Industry Associations

S.No	Parameters	Relevance to stakeholder	Information currently available	Frequency	Source
General Information - Sector Specific					
1	Total working population <ul style="list-style-type: none"> ▶ Age ▶ Gender ▶ Location (State/ District/ Village) ▶ Employment Status ▶ Skill Sets ▶ Wages 	High	Partially	5 years	NSSO Labour Bureau
2	Employer Statistics <ul style="list-style-type: none"> ▶ Employment details of personnel employed ▶ Existing opportunities 	High	Partially	Yearly and Quarterly	EMI Programme

S.No	Parameters	Relevance to stakeholder	Information currently available	Frequency	Source
3	Educational and Training Institutes <ul style="list-style-type: none"> ▶ Available courses and programmes ▶ Ratings 	High	Partially	More than 5 years	NCERT Surveys
4	Industry Statistics <ul style="list-style-type: none"> ▶ Size ▶ Major players ▶ Best practices 	High	Partially	NA	Database, Journals etc
Job Seekers Profile					
1	Age, Location	High	Partially	NA	Employment Exchange
2	Employment Status	High	Partially	NA	Employment Exchange
3	Education Qualifications	High	Partially	NA	Employment Exchange
4	Existing skill sets	High	Partially	NA	Employment Exchange
5	Professional Background	High	Partially	NA	Employment Exchange
6	Trainings Attended	High	Partially	NA	Employment Exchange
7	Certifications	High	Partially	NA	Employment Exchange
8	Membership of Professional Institutions	High	Partially	NA	Employment Exchange
Policy Information					
1	Demand and Supply Analysis	High	Not Available	Not Available	Not Available
2	Employment Trends/ Forecasts across sectors	High	Not Available	Not Available	Not Available
3	Employment schemes running for unemployed	High	Not Available	Not Available	Not Available

B. Key challenges

- ▶ Lack of Skilled workforce: There is an acute shortage of labour force across geographies Rural agricultural income has gone up and more and more workers are shifting towards the same resulting in a huge supply gap
- ▶ Lack of private sector participation: Lack of participation from the private sector in developing training programmes to up skill the vast labour force. However in some sectors there is an increase in private sector participation lately. Larsen & Toubro has developed the training content for a training programmes in association with Builders Association of India
- ▶ Lack of Information on Labour market: Lack of information on the availability of skilled workforce across geographies. Also the information is outdated and the unreliable.

C. Key expectations

- ▶ The LMIS should provide sufficient data to the industry policy makers to enable them to supplement the already existing efforts made by the government to bridge the demand and supply gap with respect to the skill levels, employment opportunities etc
- ▶ The expectations of the from the Labour Management Information system (LMIS)
- ▶ Information on the existing labour force across different geographies
- ▶ Information on the international best practices. For Instance, countries like Bangladesh, Vietnam and Indonesia have surpassed India in exports which can be attributed to the labour policies of these countries
- ▶ Identification of opportunities to partner with educational institutions/ training programmes/ corporate to develop programmes aimed at up skilling the vast labour force
- ▶ LMIS should also supplement the labour market information with key industry statistics like size, key players, regulatory requirements & compliances etc

3.4 Key recommendations

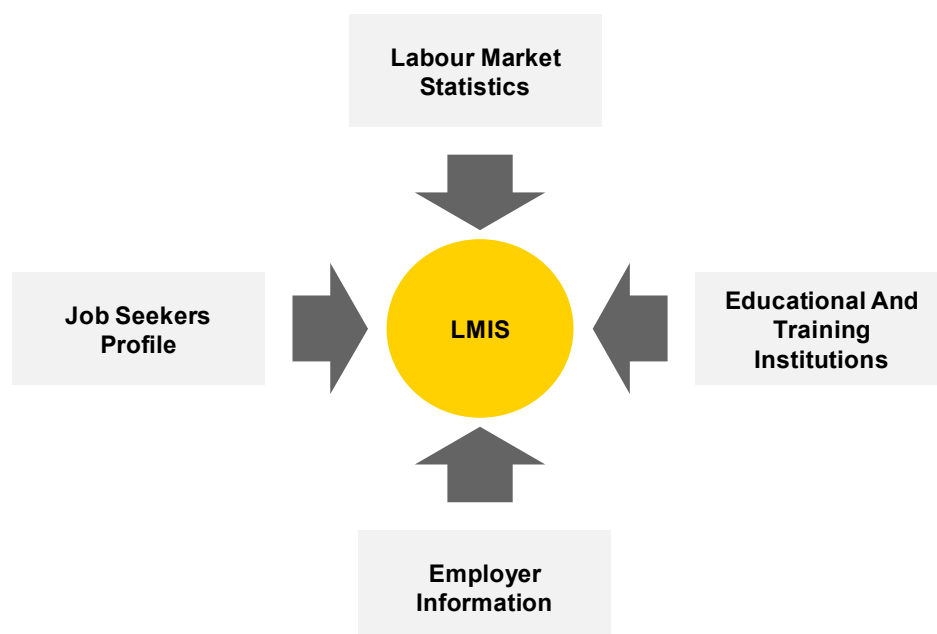
Based on the understanding of the current expectations and challenges of the various stakeholders, the key recommendations for the LMIS include:

- A. Single window for all labour market information: The information on labour market is spread across multiple reports generated by different agencies i.e. NSSO, Employment Exchange Surveys, Labour bureau surveys. It is imperative to have a 'single window' for all labour market information to provide easy access to the users and correlate the information available through all the sources
- B. Frequently updating labour market statistics: The current information is not updated on a regular basis. The NSSO survey providing critical information on all labour market parameters is undertaken once in 5 years. It is imperative to update the statistics yearly / quarterly to provide current information to all the stakeholders to facilitate intelligent and responsive decision making.
- C. Ensure the reliability of information: The information supplied into the system about the supply/ demand of labour force should be authenticated to ensure that the same is reliable. The sample surveys undertaken are based on a relative small sample size and the reliability of the information available is questionable. Also the information collection procedures are not very satisfactory. Hence it is important to have a procedure of data collection that is reliable.
- D. Comprehensive information: Currently information available on the Labour market is not comprehensive and does not provide details on the skill levels, academic and professional experience. Also there is a lack of information available across different geographies i.e. district and the village. With the non availability of this critical information it is difficult to develop tailored solutions for developing skill sets at the grass root level
- E. Partnership between Educational & Training Institutions, Employers and the Government: These three stakeholders in the labour market ecosystem need to work closely to identify the key skill gaps and develop programmes/ courses aimed at bridging the same. The information on Educational and Vocational institutions, courses and training should be amalgamated with the LMIS to assist the employers and the job seekers/ students/ employees etc
- F. Information Sharing: To ensure the usability and the reliability of information it is imperative that there is active information sharing between the different stakeholders. For instance employers need to provide

employment related information on an ongoing basis to make the system reliable and usable. Also the job seekers need to provide authentic employment information.

- G. Key Information requirements of the stakeholders: The information requirements can be classified into three broad categories
- ▶ Labour Market Statistics
 - ▶ Job Seekers Profile
 - ▶ Employer Information
 - ▶ Educational And Training Institutions

Figure 3.3: LMIS Information Universe



- ▶ Labour Market Statistics: This includes statistical information on the labour market including:
 - ▶ Total working population
 - ▶ Age
 - ▶ Gender
 - ▶ Location (State/ District/ Village)
 - ▶ Employment Status
 - ▶ Skill Sets
 - ▶ Wages
 - ▶ Industry Statistics
 - ▶ Size, Key Players, Best Practices
 - ▶ Regulatory and compliance information
 - ▶ Government policies
 - ▶ Statistical Analysis

- ▶ Demand and Supply Analysis
- ▶ Employment Trends/ Forecasts across sectors & regions
- ▶ Employment schemes running for unemployed
- ▶ Job Seekers Profile
 - ▶ Age, Location
 - ▶ Education Qualifications
 - ▶ Existing skill sets
 - ▶ Professional Background
 - ▶ Trainings Attended
 - ▶ Certifications
 - ▶ Membership of Professional Institutions
- ▶ Employer information
 - ▶ Employment opportunities
 - ▶ Skill set requirements across regions in future
 - ▶ Training partnerships (if any)
- ▶ Educational and Training Institutions
 - ▶ Vocational and Training courses
 - ▶ Accreditation of the available courses





4. Proposed Framework



4. Proposed Framework

There is a compelling need for integrating, automating and presenting the labour market information available electronically to every stakeholder on real time basis. It is also relevant to mention how the data currently available through standalone platforms has not been able to serve as input information for various stakeholders for decision making. The sustainability of an information system is dependent on its relevance, and is also related to other criteria such as the efficiency and effectiveness of the system. It has been argued that labour market information systems can only be relevant if they are an integrated part of the institutional structure for labour and employment policy development.

The contents of the system, the labour market information, should thus be defined to serve its users, in particular policymakers. Labour market information should provide a solid basis for the formulation, monitoring and evaluation of policies, while feedback mechanisms should be in place to assess the contents of the information that is collected.

No single set of data requirements or delivery approaches characterizes an optimal LMI system. However, as summarized in this chapter, there are key features that should be considered in designing and implementing an optimal LMI system.

The schematic below depicts the framework of an optimal LMIS.

Figure 4.1: Optimal Labour Market Information System - Coverage



As elaborated in Figure 4.1, the pillars of an LMIS are:

- ▶ Labour related information which depicts the characteristic of labour employed, demanded, supplied and anticipated. This should be provided for various sectors, occupations, grades of expertise, region wise etc.
- ▶ Market related information includes the value of labour available in terms of wages and compensation across industries, seasonality of labour which effects demand and supply of labour, training and skill development aspects etc
- ▶ Information provided needs to be easily accessible, updated , reliable and comprehensive
- ▶ System refers to the delivery mechanism of information in a formal, transparent, secure and timely manner to all stakeholders.

Now that we have discussed the concept of an LMIS in detail, we need to shed some light on the key features and parameters, role of Information Communication Technology (ICT) as an enabler, governance mechanism for implementation and resource requirements. Critical Success Factors for an optimal LMIS have been discussed later in this chapter.

Accordingly, the subsequent sections elaborate the following

- ▶ LMIS Features
- ▶ Proposed Implementation Plan
- ▶ LMIS ICT Framework
- ▶ Governance Mechanism
- ▶ Resource Requirement
- ▶ Critical Success Factors

4.1 LMIS utilities features

LMIS features

The key requirements for building a robust LMIS framework span areas such as geographic coverage, data classification, user accessibility and type of information generated. Features of an optimal LMIS have been elaborated below.

Based on our study of international leading practices, the important features of an optimal LMIS include the following:

- ▶ Government/ Central Ownership
 - ▶ Active role of the Government in developing and disseminating LMI
 - ▶ Ensure collaboration among government ministries, agencies, and private sector to conduct large-scale activities such as surveys, focus groups
- ▶ One-stop shop for all Users
 - ▶ Data and information source , job search and placement features
 - ▶ Availability of information , data, resources and links based on varied needs of different Users
 - ▶ Intermediaries including counselors, career facilitators, and front line employment office staff considered an integral part of a comprehensive LMI system.
- ▶ User Friendly Features
 - ▶ Efficient search features such as “Library”, “User Guide” , User wise links
 - ▶ Comprehensive list of resources such as Labour Market Consultants , Career Centers that can be used in conjunction with labour market information products and services

- ▶ Customized Data Requests and drill down facility such as “Advanced Query”
- ▶ Generate Forecasting Report for labour market parameters such as Remittances, Economic Statistics, Work Permits
- ▶ Map annual job growth for an industry over last year in local areas
- ▶ Provide access to data at various levels - local, regional , national
- ▶ Frequently Asked Questions link/ Helpdesk/ online Feedback forms to ensure continuous improvement through feedback and corrective action.
- ▶ Efficient Data Management
 - ▶ Appropriate units of measurement, type and periodicity of study/ surveys to be conducted
 - ▶ Standardized classification of data for occupations, industries etc to facilitate data development, presentation, comparisons, and interrelationships
 - ▶ Reliable sources of data ensure consistency and reliability
 - ▶ Data update schedule available on website
 - ▶ Links and crosswalks among data sets
- ▶ Accessibility
 - ▶ Develop dissemination strategy to ensure that LMI is available to all, i.e. , how consumers can access the Internet, particularly those who may not have access at home
 - ▶ Libraries, one-stop employment centers, community and faith based organizations etc to offer access LMI as well as counseling and career development support

Further, based on the understanding of the current expectations and challenges of the various stakeholders, the key recommendations for the LMIS include:

- ▶ Single window for all labour market information
- ▶ Frequently updating labour market statistics
- ▶ Ensure the reliability of information
- ▶ Comprehensive information
- ▶ Partnership between Educational & Training Institutions, Employers and the Government:
- ▶ Information Sharing
- ▶ Key Information requirements of the stakeholders can be classified into three broad categories
 - ▶ Labour Market Statistics
 - ▶ Job Seekers Profile
 - ▶ Employer Information
 - ▶ Educational And Training Institutions

LMIS output

All SSCs as well as Users will require processed data on labour market dynamics. LMIS, at a very basic level, should include the following information¹⁷:

- a. Socio-demographic Data
- b. Educational Data
- c. Employment and Labour Market Information
- d. Analysis of Labour Market Policies

¹⁷ Refer to Annexure 6.4 for Details

- e. Analysis of Training Policies and Programmes
- f. Content and Quality of Training Programmes and Facilities
- g. Training System Costs and Financing
- h. Assessment of Training Response to Employment Needs
- i. Measurements of effectiveness (relationship of outputs to objectives): output of successful graduates by training programme numbers of graduates finding paid employment
- j. Measurement of efficiency (relationship of inputs to outputs):

From the delivery perspective, various ways are discussed below for LMI dissemination:

- ▶ Web-based systems are likely to be the major means of disseminating LMI, but it is important to consider how access to such systems can be expanded to consumers who may not have easy access to the Internet, for example through libraries, one-stop centers, and community- or faith-based organizations.
- ▶ Some of the Web-based delivery system types are identified and discussed, each of which is valuable in an optimal LMI system:
 - ▶ Clearinghouse/ data repositories—typically such a system provides easy access to specific types of data without necessarily organizing information for specific uses.
 - ▶ Customized and tailored applications—generally such Web sites are designed for a specific application or related applications, such as career information delivery systems, economic development systems, or front line decisions support systems. Such systems must include logical processes and connections to navigate through the information in the context of specific user needs.
 - ▶ Multiple applications—such Web sites may be designed to meet the needs of several different consumers and include a variety of tailored paths through the system.
 - ▶ Hard-copy reports remain an important way of reaching users through schools, employment centers, and newspapers. Hard-copy products should be designed to complement Internet-based and other computerized systems.

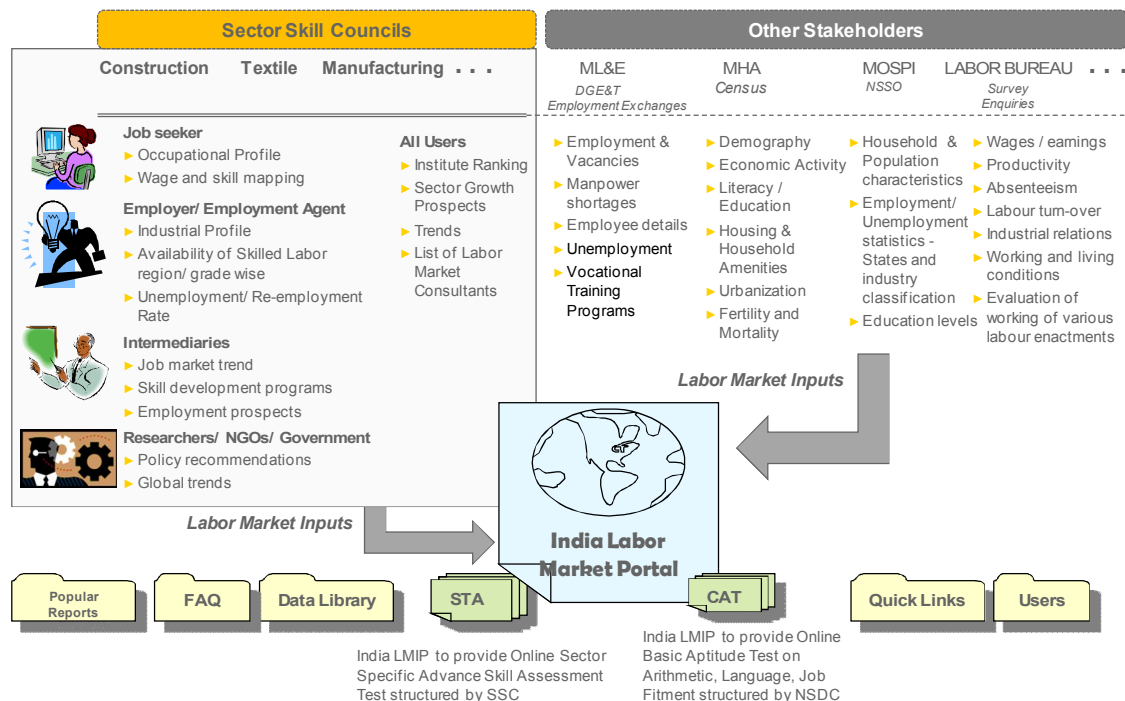
4.2 Proposed implementation plan

Now that the LMIS features, stakeholder expectations and output have been elaborated upon, this sub-section will expand on the proposed implementation plan of the LMIS.

The Central Body (which could be NSDC) will issue guidelines on various aspects of the LMIS such as data features, sources of data, data dissemination. The Sector Skill Councils (SSCs) that shall be formed shall conduct operations based on these guidelines as mandate by the central body.

Each industry has certain labour market characteristic and peculiarities such as seasonality of demand and supply of labour, wages, regulatory aspects, grades of labour and workers, current mode of hiring. SSCs aim to capture vagaries and peculiarities of key industries in the country. Ideally, the proposed SSCs should be based on industries which are representative of one or more of labour market characteristics such as labour intensity, employment generation, skill intensity etc. As depicted in Figure 4.2 below, it is proposed that sector specific LMIS can be developed by SSCs for sector specific labour market information and these LMIS shall feed into the Master LMIS at the national level (these concepts have been detailed in the subsequent Chapter).

Figure 4.2: Sector Specific to Master LMIS

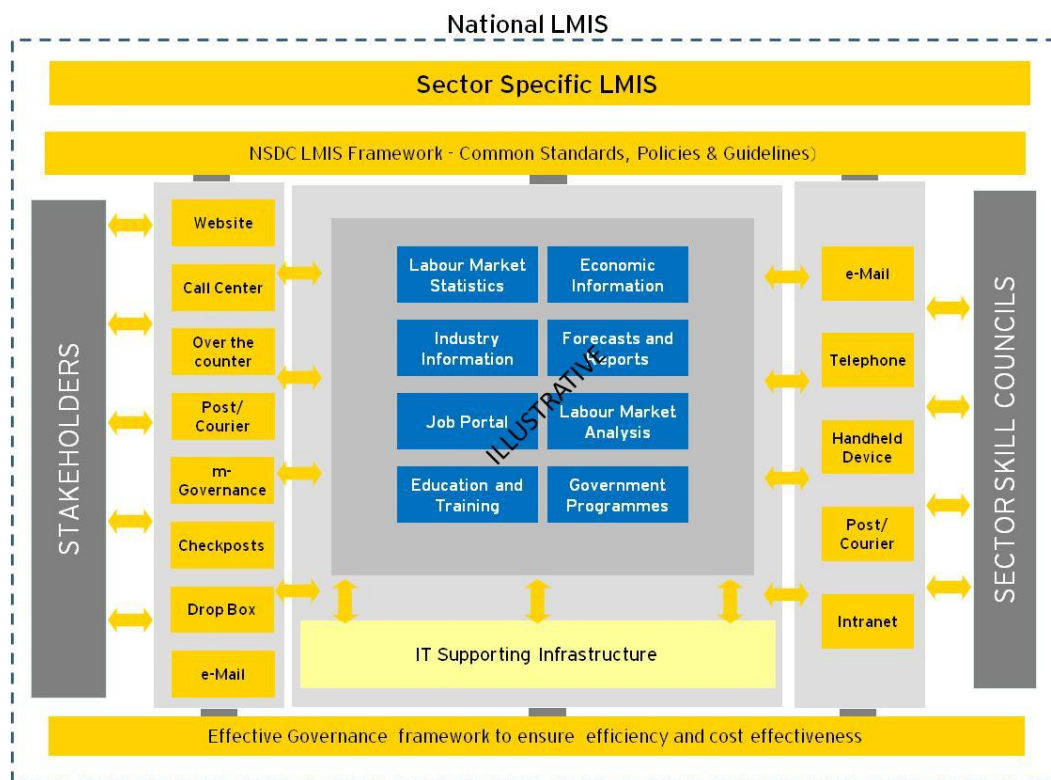


SSCs shall be entrusted with the responsibility of developing LMIS for their respective sector. The information from the sector specific LMIS will be integrated into a single overarching national LMIS. Sector Specific LMIS will be developed under the broad spectrum of framework, guidelines and structure defined by NSDC. The four broad parameters for the sector specific LMIS will include:

1. Input
 - a. Data: The key data parameters will be defined by NSDC. SSCs can evaluate the same and suggest recommendations if required depending on the specific needs of a particular sector
 - b. Key information Sources: SSCs will identify the following:
 - i. Key sources of data - Surveys, reports, primary research etc
 - ii. Frequency of data update
2. Output
 - a. Information: SSCs will perform the requisite data processing through intelligent system analytics to transform the data into useful information for the different stakeholders
 - b. Key Stakeholders: Sector skills will identify the different stakeholders for the information and will define the usage/ access/ security rights for these groups.

Figure 4.3 highlights the broad framework with stakeholders as the end user and the SSCs at system owners.

Figure 4.3: Sector Specific LMIS Framework



- ▶ NSDC will develop the overall framework for the sector LMIS defining the key parameters to ensure uniformity across all sectors.
- ▶ Based on the overall framework and key guidelines provided by NSDC, SSCs will develop its sector specific LMIS
- ▶ SSCs will identify the following:
 - ▶ Data Sources - NSSO, Surveys, Primary Research etc
 - ▶ Frequency of updating information into the system to ensure reliability and cost effectiveness of the system
 - ▶ Key Stakeholders of the LMIS
 - ▶ Information available to different stakeholders
 - ▶ Data Security and policy framework for accessing information
 - ▶ Data analysis requirements
- ▶ The sector specific LMIS will be integrated into a single overarching National LMIS. The national LMIS web portal will integrate the sector specific LMIS.
- ▶ The sector specific LMIS will incorporate feedback from the users and conduct quarterly and yearly reviews to incorporate suggestions into the system making the system flexible and responsive to the end users.

Three industries i.e. Construction, Textile and manufacturing have been analyzed in the subsequent section. The following schematics (Figure 4.4, 4.5 and 4.6) illustrate the following key aspects of three labour intensive industries in India:

- ▶ Labour characteristics of the industry refers to type and quality of labour demanded / supplied, labour intensity and employment generation capacity of the industry going forward , training needs etc
- ▶ Need for LMIS in the specific sector highlights the urgency and type of information required by employers and job seekers
- ▶ Labour skill set and selection refers to current mode of acquiring labour related information, hiring mechanisms, availability of regional surplus labour , seasonal migration trend
- ▶ Skill Assessment Test for job seekers is considered an effective way of certifying labour grades, assuring a minimum level of expertise / quality / skills and encouraging the use of an LMIS. Further, going forward, it is likely to serve the dual purpose making demand and supply converge in the long run by encouraging job seekers to take the standardized and accredited certification test and employers to indicate preference for job seekers who have cleared the same.
- ▶ Initiatives in labour hiring policies refer to employer incentives and action plans geared towards hiring of certified labour and accessing information on skilled labour

Figure 4.4: LMIS Aspects - Construction Sector

Construction Industry

Labor Characteristics of Industry	Need for LMIS
<ul style="list-style-type: none"> ▶ Every INR 1 Crore, investment on construction project, generates employments of 22,000 unskilled man-days, 23,000 skilled or semiskilled man-days and 9,000 managerial and technical man-days approximately ▶ Only 3% of total teaching in the country addressing direct needs of construction engineering and management aspects 	<ul style="list-style-type: none"> ▶ Employers require real time information on demand, supply and wage rate to define terms of labor contracts ▶ Data requirement includes <ul style="list-style-type: none"> ▶ Trend in wages of various categories of labor ▶ Demand and supply trends of various categories of labor ▶ Data on available skill sets of labor and demand for skill set
Labor Skill Set and Selection	Skill Assessment Test
<ul style="list-style-type: none"> ▶ Key employers are Real Estate Developers , Contractors and Sub-contractors ▶ Only informal sources currently available for labor selection such as information from sub-contractor ▶ No organized source for benchmarking or doing a comparative analysis of wages for different types of laborers across time period 	<ul style="list-style-type: none"> ▶ Mason grading system ▶ Labor to be ranked based on skill level and a rate to be assigned to specific skill level ▶ Based on site specifications, define number of workers required of each level and rate to be charged by the worker
Initiatives in Labor / Hiring Policy	
<ul style="list-style-type: none"> ▶ Mechanism will help to ensure quality of work for the Developer ▶ Smart Card for laborers which gives information on identification, experience , qualification / skill set or skill level of laborer . ▶ Information should be linked to online system ▶ Avoid mismatch between Contractor goal of maximizing productivity from worker and Developer goal focused on ensure quality through adequate certification 	

Figure 4.5: LMIS Aspects - Textile Sector

Textile Industry

Labor Characteristics of Industry	Need for LMIS
<ul style="list-style-type: none"> ▶ Second largest employment generator after agriculture ▶ Abundant availability to cheap labor ▶ Key players are small scale companies lacking technical advancement ▶ Need more institutes to provide specialized textile research courses / vocational training programs through public-private partnership 	<ul style="list-style-type: none"> ▶ Information on existing labour force across different geographies ▶ Mapping of labour force availability according to seasons , specific clusters and regions ▶ Information on labor policies and international best practices
Labor Skill Set and Selection	Skill Assessment Test
<ul style="list-style-type: none"> ▶ Employment creation in agricultural, industrial, organized and decentralized sectors & rural and urban areas, particularly for women and disadvantaged. ▶ Acute shortage of labour force ▶ Local hiring close to production houses ▶ Hiring from training institutes ▶ Lack of updated and accurate information on HR requirements and available labor force 	<ul style="list-style-type: none"> ▶ Skill based test by production companies ▶ Sector wise technical expertise such as processes in <ul style="list-style-type: none"> ▶ Cotton / man made fiber / filament / yarn ▶ Handloom ▶ Knitting ▶ Woollen ▶ Sericulture
Initiatives in Labor / Hiring Policy	
<ul style="list-style-type: none"> ▶ Confederation of Indian Textile Industry making efforts to increase manpower supply <ul style="list-style-type: none"> ▶ Proposal to tie up with NGOs in rural areas to hire and train people ▶ Proposal to set up of a Special Purpose Vehicle with stakeholders from private sector (Vardhman, Spandex, Winsome Group, Arvind Mills etc) to hire and train ▶ Labour laws to be modified to allow contract labour given seasonal nature of industry ▶ Employers to set preference for certified workers / jobseekers 	

Figure 4.6: LMIS Aspects - Manufacturing Sector

Manufacturing Industry

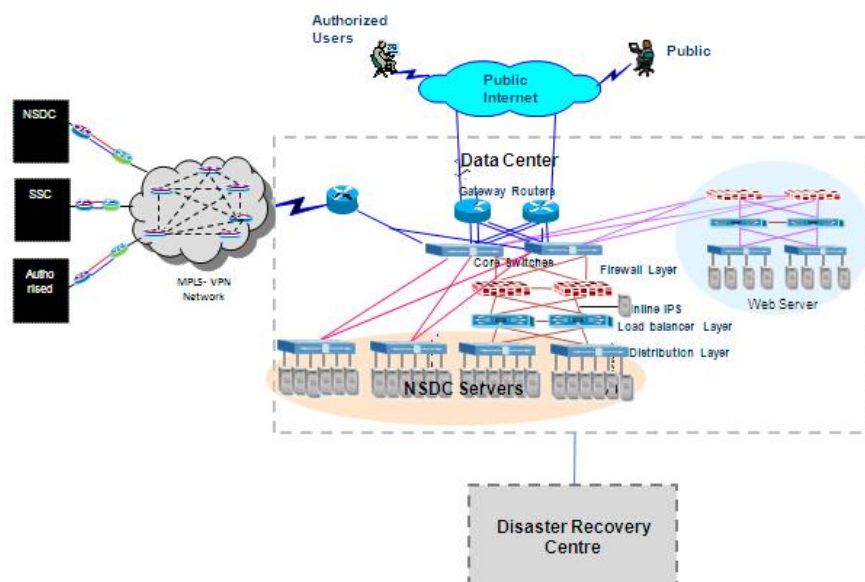
Labor Characteristics of Industry	Need for LMIS
<ul style="list-style-type: none"> ▶ One of the world's top ten countries in industrial production ▶ 39% growth in "excellent category" - air conditioners, natural gas, tractors, nitrogen fertilizers, ball bearings, electrical and cable wires, auto components, construction equipment, electric fans and tyre industry ▶ Talent pool of scientists, researchers, and engineers, together with its English-speaking workforce 	<ul style="list-style-type: none"> ▶ Employment/ unemployment rate ▶ Demographics ▶ Employment information by sector/ industry / regions ▶ Job seekers profile including skill set ▶ Trends in wages by sectors, regions ▶ Map workforce based on skills across sector ▶ Provide ratings to ITI to ascertain the quality of education / skills being imparted through these courses
Labor Skill Set and Selection	Skill Assessment Test
<ul style="list-style-type: none"> ▶ Employment Exchange / Job Fairs ▶ Employment Counselors/ Consultants ▶ Industrial Training Institutes (ITIs) ▶ Job portals/ Newspapers/ Journals etc ▶ Referrals ▶ Training required to enhance the skills of labor 	<ul style="list-style-type: none"> ▶ Skill intensive tests (process, product and capital engineering) ▶ Tests for managerial , supervisory and below ▶ Can be based on Vocational Training Programs in ITIs by EICHER , TOYOTA etc
Initiatives in Labor / Hiring Policy	
<ul style="list-style-type: none"> ▶ Employers to demonstrate preference for certified workers / jobseekers ▶ Wage and compensation to be made attractive as per level of skill certification ▶ Factory workers (engineers, supervisors etc) encouraged to go through Orientation Program to ensure safety standards adhered to ▶ With increasing focus on skill – intensive manufacturing, employers to focus on on - the - job opportunities for acquisition of skills 	

4.3 LMIS ICT framework

A web enabled system will allow authorized users to access Intranet Systems like servers, applications, databases etc at the Data Center. This is very useful as it will permit NSDC to store information pertaining to the labour market centrally and access it from anywhere in the system. The web enabled services model also allows the job seekers/ students etc to better participate in updating their information on the portal. Also it enables easier access to information, transparent administration and faster response times.

This Preliminary Physical System Architecture is a guideline or input for constructing final systems architecture for the NSDC.

Figure 4.7: Preliminary LMIS Physical System Architecture¹⁸



Data Center is the focal point of NSDC’s ICT infrastructure for critical IT systems. Data Center hosts core application, main servers, backup network, security infrastructure and storage infrastructure. It acts as a central hub for internal NSDC connection between regional NSDC and SSC offices as well as connection to external institutions and community via MPLS VPN. Disaster recovery refers to the process, policies and procedures related to preparing for recovery or continuation of technology infrastructure critical to an organization after a natural or human-induced disaster. Non availability of Disaster Recovery (‘DR’) Site can expose NSDC to risks of large-scale disaster, such as a building fire, prolonged power grid failure, earthquake, catastrophic flood and IT Continuity threats like establishing recovery point objectives, recovery time objectives. Hence there is a need for NSDC to identify and implement a DR site which consists of a replica/ critical infrastructure of the primary system, placed at a different seismic zone, and kept in readiness to take up the work of the primary system in the event of a disaster.

There are numerous data flows between NSDC, SSC officials and locations. To accommodate this movement of information, the NSDC need to envisage using a Wide Area Network (‘WAN’) that will integrate systems. The infrastructure of the State Wide Area Network can be used for network connectivity within a state. In case SWAN cannot be utilized, alternate connectivity options such as leased lines, MPLS VPN, ISDN, VSAT, DSL

¹⁸ The framework is suggested based on the industry best practices. However to develop a detailed ICT framework detailed discussions with NSDC are required to understand the current ICT infrastructure and future requirements

broadband etc. are to be explored based on techno-commercial feasibility, bandwidth requirements, data size, frequency of access etc.

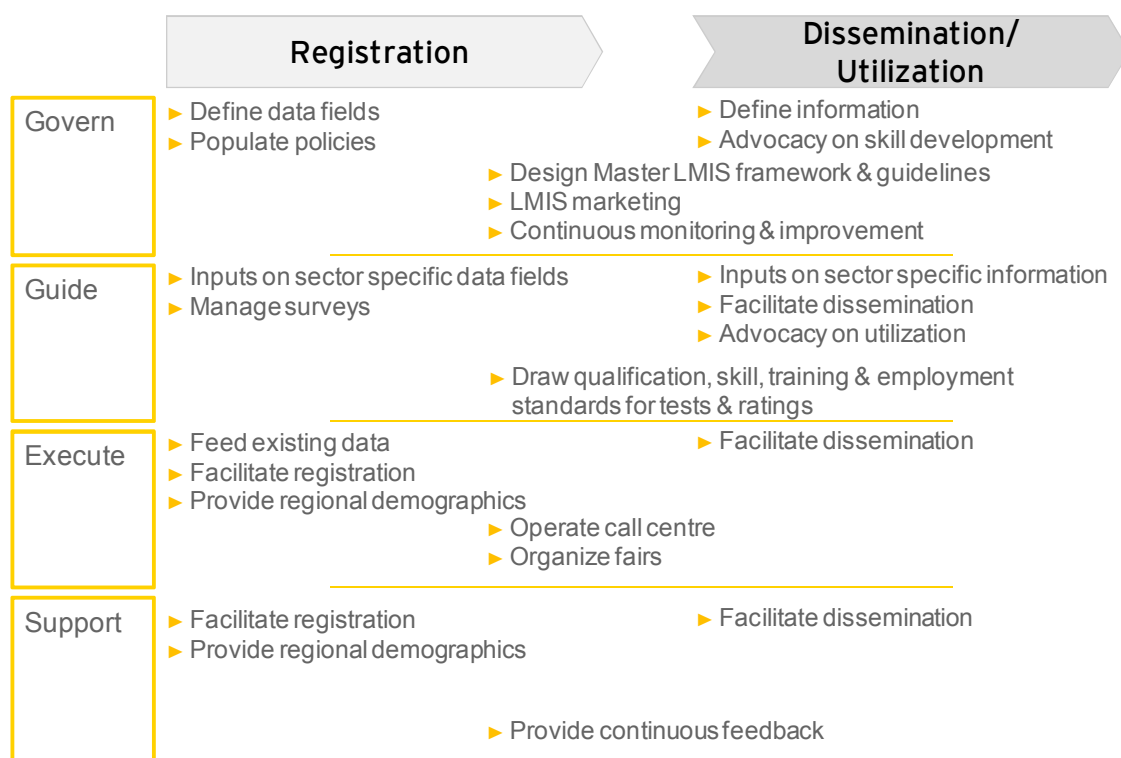
Developing a robust policy framework for managing the role of the different stakeholders accessing the information is of critical importance to ensure security and minimization of risks. Policies need to be defined by the SSCs to regulate the usage of information. This will include policies like (Illustrative):

- ▶ Access Policy
- ▶ Acceptable Use policy
- ▶ Security Policy
- ▶ Charging policy

4.4 Governance mechanism

Government mechanism for any programme would comprise the plan for not only governing the activities but also executing the plan through. Here, the responsibilities for set-up and operation of LMIS have been classified in four groups, viz. Govern, Guide, Execute and Support. While Governance to start with would comprise policy formulation and monitoring, Support is basically on-ground dealings with the human resource. Between these activities, the roles of guiding the plan through and executing or managing the support will be required. The following schematic depicts the proposed Governance mechanism framework wherein the responsibilities, required to be taken-up at both the phases, Registration & Dissemination, have been defined.

Figure 4.8: Governance Mechanism Framework



4.5 Resource requirement

A key aspect for any program or project to be designed and implemented, the resource requirement needs to be mapped and planned for accordingly. In this case of LMIS, the resource requirement has been categorized into three main heads, viz. manpower, infrastructure and finance. Each of these categories have been explained below, the details for which need to be worked on after clarity on implementation plan.

4.5.1 Manpower

The manpower requirement would include not only the managerial & technical staff running the system but also the agencies outside which should be trained to avail the benefits of the system, like employment agents, non-profit organizations, CSCs, educational & training institutions.

It is crucial that an LMI system takes into account the needs of intermediaries and consider the role of intermediaries as part of the overall design of the system, regardless of the environment of these intermediary services, e.g., in public employment offices, private employment services, counseling services in educational and training institutions, economic development planning, human resource specialists and consultants, etc. While the Internet has dramatically increased our ability to organize and provide information to customers, for many individuals at some point of their career planning or job search experiences they will need assistance from counselors and career facilitators. The LMI system products and tools must not only take into account how to best provide information to intermediaries but recognize that such persons and the services they provide are fundamental to an optimal LMI system.

Preparing a blueprint for future resource allocation, and design of adequate supporting policies is required to ensure success of an LMIS. A shared approach to resource planning governance for many reasons is essential. Highlighted below are the core requirements:

- ▶ Internal manpower: Managerial as well as Technical staff at SPV and SSCs (central and regional)
- ▶ External dependencies such as collaborating with outside agencies which should be trained to avail the benefits of the LMIS, like employment agents, non-profit organizations, CSCs, Industrial Training Institutes (ITIs) educational & training institutions

Involvement of private players through a PPP model or even outsourcing can be considered for marketing, web design, survey, advisory, Monitoring & Evaluation and program management

4.5.2 Infrastructure

Another component of building the LMIS is the planning of infrastructure requirement wherein IT infrastructure like data centre and physical infrastructure like administration office are important to support the system. Office space for the monitoring unit (SPV), data center and the IT system shall need to be considered as well.

The physical infrastructure requirements should consider the following aspects:

- ▶ Amenities for staff and visitors (air cooling/ water/ sitting space)
- ▶ Power back-up
- ▶ Facilities of conducting audio-video conferencing with stakeholders such as SSCs
- ▶ Communication facilities (setting up of fax machines, telephone lines, printers, Photostat machine etc):
- ▶ Availability of sufficient stationery at all times

Efforts should be made to utilize the existing infrastructure to the extent possible. For example, school building after school timings could be used to operate a centre for enrolments in LMIS. State Wide Area Network could be used for connecting this web application throughout the State.

4.5.3 Financial resources

Apart from the delineated physical infrastructure requirements, one of the most important aspects to be considered is a self-sustainability of the proposed business model. Implementation of the system would require financial resources and although the seed money could be arranged through Government support, to ensure its eternity constant cash inflows need to be planned.

While the cost heads would include web application development, manpower, infrastructure, various sources of revenue and cash may be considered to ensure financial feasibility of this project. Few options which can be considered are:

- ▶ Customized services (such as special reports , data analysis)
- ▶ Sale of publications
- ▶ Charge from employers on recruitment of candidate through the LMIS job portal
- ▶ Vocational guidance sessions
- ▶ Conduct of Skill Assessment Test

Options for financial sustainability will need to be debated upon in detail among the stakeholders of the LMIS.

4.6 Critical success factors

Critical success factors for an optimal LMIS entailing a robust framework and delivery mechanism have been detailed below:

4.6.1 Features of an optimal LMIS

It is imperative that all the important features like periodic update of labour market information, easy accessibility (physical access as well as local language) to all stakeholders, researched & analyzed labour market data and information are integrated in the system to maximize effectiveness of LMIS.

Labour market related information needs to be presented in a graphical, well analyzed and user friendly manner. Hence, data sets included in the system must be considered against several dimensions, most significantly: time period, geographical detail, measurement criteria and methods, classification of data, timeliness, accuracy, interrelationships of data sets, and establishment of data standards. Multiple data development approaches need to be considered in an optimal system, including the use of informal data.

4.6.2 Stakeholder enrolment

For LMIS to be useful to every user, it is important that all the relevant stakeholders are identified & enrolled into the system. For example, the demand-supply statistics will be credible only if significant, if not all, number of labourers and employers are registered in the system. The first step would anyway be digitizing the currently available data with a credible source. Government would certainly be the biggest contributor for such data but other organizations like political parties may also be convinced into sharing their database.

Ideally, since LMIS is a web application, anybody can access it from anywhere and get enrollment. With a passage of time, mobile solutions could also be offered for enrolment & updation on mobile phones. This

enrollment could also be done through surveys and employment fairs. However, an effective mode for stakeholder enrolment, and updation as well, is to attract the stakeholder to the system.

For creating this pull by the users, the strategy for setting-up the LMIS needs to ensure that the target human resource are first informed about this system and its benefits. This is envisaged through effective and far-reaching advertising strategy through various modes of communication targeted towards correctly identified audience. Trade unions could be involved and educated to address the concerns of their members. For continued communication, a help desk facility should also be provided. A focus on such push will be required initially. Subsequently, people are involved through offering them to map/ relate their qualifications, skills and career options. Finally, incentives could be provided to the enrolling person in the form of access to certain classified information and allowing taking skill assessment tests. These skills assessment tests will help not only the candidate identify his/ her potential but also employers to compare two candidates objectively. The stakeholders enabling these registrations could also be incentivized suitably, like Panchayats could be paid a part of the salary of a placed candidate through LMIS. The below diagram depicts this pull strategy to make the users come to the system more than the system reaching-out to the users.

Figure 4.9: Pull Strategy to Stakeholder enrolment



Since updation of data is as important as the first time enrolment, various steps would need to take in that regard too. It could be made mandatory for each and every employer to file periodic (say quarterly) returns in the system. Suitable carrot and stick approach may be adopted to ensure compliance to such policy. Skill assessment tests could be mandatory for applying to a Government job or for a promotion. These tests could also be on similar lines as job placement tests or higher education entrance tests. Any change in user information, made known through means like ration card, election ID, passport, driving license, provident fund, should be first reported in the system. Each and every higher education/ training institution should be required to file annual return for details of graduates. Only by taking these steps the data in LMIS can provide updated information, despite labour migratory trends or attainment of further qualifications.

To give a detailed example in an unorganized sector like construction industry, there should be push as well as pull strategy adopted to capture the worker in the system. In the push part, either the survey reaches the

worker or the construction contract, through voluntary or mandatory requirement, registers the worker in the system. In regard to the pull approach, various mechanisms like labourer seeking employment under NREGA, approaches educational/ training institution for masonry certification, registers himself/ herself in employment exchange for getting a job in a construction project or simply goes to the nearest post office or bank branch for enquiry, could ensure that system enrolls users at their convenience. However, it is important to mention in each of these scenarios, the other stakeholder involved should also be equally willing and informed about the system. The construction contractor should have clear visibility and contract terms to employ a specific number of labourers with a particular skill set. The Government needs to integrate NREGA with LMIS. The educational/ training institutions should have the bandwidth to register each and every of their students. The post master of cooperative bank manager should himself/ herself be convinced about the benefits and knowhow of enrolment in LMIS. This takes us to another critical success factor of importance of contribution by each stakeholder, explained in detail below.

4.6.3 Stakeholders' contribution as Integrated approach

Currently in India, in regard to input for any form of labour market information system, it derives from a number of different sources, including surveys, administrative data and private sector sources. Information is generated by a few stakeholders and that solves the purpose of only a handful. Following is a justification on why an integrated, not such stand alone, efforts are required to put optimal LMIS in place.

- a. Conceptualize and plan a "complete" LMI system with shared responsibilities and funding—ministries and agencies working together can develop a more comprehensive approach to LMI than each department going on its own. Also, a joint effort may help the ministries justify an overall budget request for LMI-related efforts.
- b. Standardization—consistency and standardization of data elements, classification systems, and methodologies is necessary to provide comparable information among different geographies.
- c. Minimize duplication—without a proactive partnership, there is great potential for duplication of effort in development, analysis, and dissemination of information. Not only is this cost-ineffective, it can lead to confusion among users of information.
- d. Provide optimal coverage—the converse of duplication; a joint effort in planning an LMI system can help develop a comprehensive framework for an LMI system and set priorities for those features that can be funded and developed.
- e. Effectively use limited resources and funding for LMI—this follows from the above factors; minimizing duplicative efforts and optimizing the range of the system by directly involving interested ministries can lead to more effective use of funds and help in justifying funding for LMI.
- f. Promote the importance of LMI to:
 - i. Governmental policy makers and how to effectively use LMI in policy and program design and, through its use in policy and operational capacities, make the case to parliament and the administration for appropriate funding of the LMI system.
 - ii. The public, businesses, education, and intermediaries as a resource for more effective job, education, workplace, and economic development, planning and decisions making.
- g. Effectively disseminate information to all citizens, businesses, education, governmental officials and other users. This is the level at which users may be overwhelmed or unable to easily navigate through LMI resources if each ministry or state "goes it alone." Thinking through dissemination in a decentralized system allows for flexibility and innovation across agencies and provinces, while at the same time providing a means for individuals to easily move within or across different sites.
- h. Efficiently use intermediaries, including labour market analysts, counselors, career facilitators to support customers' use of labour market information. Many users will require some degree of support from

counselors and career facilitators. A coordinated approach to the LMI system will assist such intermediaries to better use resources in supporting their customer needs.

Hence, as explained in the previous section, different responsibilities of governing, guiding, executing and supporting, should be taken-up by respective stakeholders as a part of a systematic approach. The capability to manage a particular responsibility should be the criterion used for this division of work. At the very least, linkages are required between government departments responsible for various policies affecting the labour market on the one hand, and statistical agencies on the other. The use of innovative methods to collect labour market information, however, may necessitate more extensive institutional collaboration and co-operation. All other stakeholders also have a key role to play in the system, whether it is change in hiring policies by the employers or technical guidance & marketing by SSCs or commitment to reach-out to people from Panchayats. This division of work has been proposed in further detail in the implementation framework in the next chapter.

4.6.4 Wide coverage

LMIS should have countrywide and all sector coverage to allow for granularity and multidimensional view of labour market scenario at any given point in time. Leaving out region, defined smaller area or sector, reduces the usefulness of the system. A particular human resource might be equipped to take-up a job in carpentry but in case only retail sector is covered, the skills go unutilized. Similarly, an employer might be seeking cookery skills (which are available in Rajasthan) for a restaurant in Delhi and if LMIS does not cover Rajasthan, the demand-supply gap will remain. It is also important to mention here that coverage of unorganized sectors is most critical, as the labour dynamics need more attention there, as compared to in organized sector. This could be related to the effort of US authorities and European commission, wherein all the States/ Countries have come together for a master LMIS and at the same time their individual LMIS under the master umbrella.

4.6.5 Risk and security management

Risk management refers to the systematic identification and mitigation of risks, which could cause a project to fail in achieving its objectives within the stipulated time or cost. Examples of typical risks associated while designing the LMIS, which can be envisaged at the conceptual level (which is the scope of this paper), are as follows:

- ▶ Technical Inadequacy - LMIS team not able to ensure integration of Master LMIS with LMIS of SSCs.
- ▶ Financial Viability of the Business Model - Stakeholders may not be able to sustain operational costs after central funding stops.
- ▶ Inability to meet user requirements - User needs can vary from a simple report on availability of skilled labour in a specific sector to "Heat Maps" for a region depicting trends on labour migration.
- ▶ Inadequate manpower - The team responsible for upkeep of the LMIS is critical for the success of the system and hence hiring of specialists (such as analysts, statisticians, mathematicians and economists) fields is essential.
- ▶ Organization level risks - This will entail designing of a well defined organizational structure which clearly delineates the roles and responsibilities of the stakeholders as well as monitoring and evaluation process for the entities involved in the dissemination of the LMI.
- ▶ Operational risks - Certain stakeholders (such as SSCs) may not agree to follow the plan/ initiative. This may lead to inaccurate/ outdated data on labour market and can even lead to failure of the delivery model.
- ▶ Security risks - These risks could be in regard to unauthorized access to the system or fake user enrollments. This could be managed through strict user access policies and coupling enrollment with unique identification check, respectively.

Apart from the aforementioned mentioned examples, there is another key issue which needs to be addressed. LMIS that are focused exclusively on the technical aspects of data collection, risk providing information that nobody will use, thus jeopardizing the sustainability of the information system. Resources will be cut sooner

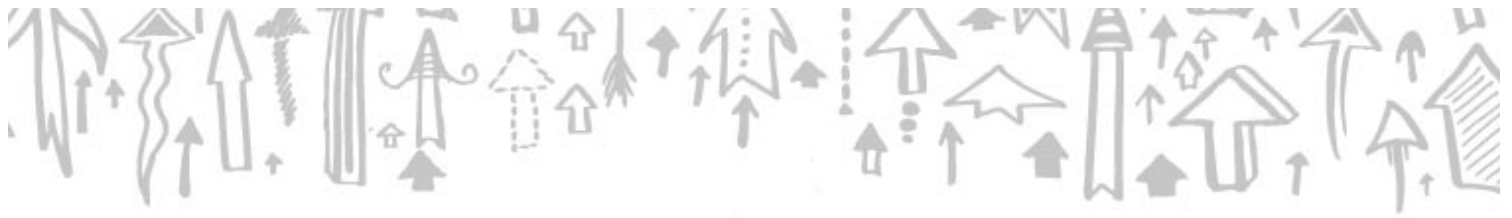
rather than later if potential users are not convinced of the relevance of the data collected. In addition to this, the use of spreadsheets as databases however has a number of well-known disadvantages, for example in terms of ease of retrieval, and risk of duplication, inconsistency and redundancy of data might happen. Hence, it is essential to prepare a risk mitigation plan which could be based on the following principles:

- ▶ Divide project into manageable pieces,
- ▶ Keep the solution simple,
- ▶ Develop a satisfactory support base,
- ▶ Meet user needs and institutionalize the system.





5. Way Forward



5. Way Forward

It has been recognized at various levels that the efficiency and performance of an LMIS would depend on a lot of factors that need to be enhanced radically. The solution proposed in this concept paper has been initiated not only to enhance the efficiency but also the effectiveness, transparency and responsiveness of the LMIS by way of needs analysis of the user and application of ICT as appropriate.

This study also examines the critical need for Governmental intervention to build and maintain an optimal LMI system. Research suggests that markets themselves might generate information sufficient for effective decisions, but the complexities of the market make it nearly impossible for all or even the most relevant information to be generated and made available through normal market transactions. Government must play a major role to ensure there is a public LMI system, which produces reliable and relevant information, and that LMI is disseminated in user friendly ways to increase the likelihood of improving the efficiency of markets. In addition to assembling relevant data, public agencies have a key role in transforming facts about economic activity into useful labour market intelligence.

For such countrywide program, the implementation becomes as critical as the plan. The success of LMIS primarily depends upon its reach. Higher the number and type of stakeholders enrolled in the system, greater will be data relevance and usage. The following four levels have been proposed to ensure that the plan at the centre reaches the on-ground human resource seeking LMI.

1. Special Purpose Vehicle (with mandate from Government of India) for Administration and Technical (LMIS) support
2. Sector skill councils or Industry associations for technical (sector or industry specific) support
3. State Government for managerial support
4. Block/ Villages (Panchayats) for operational support

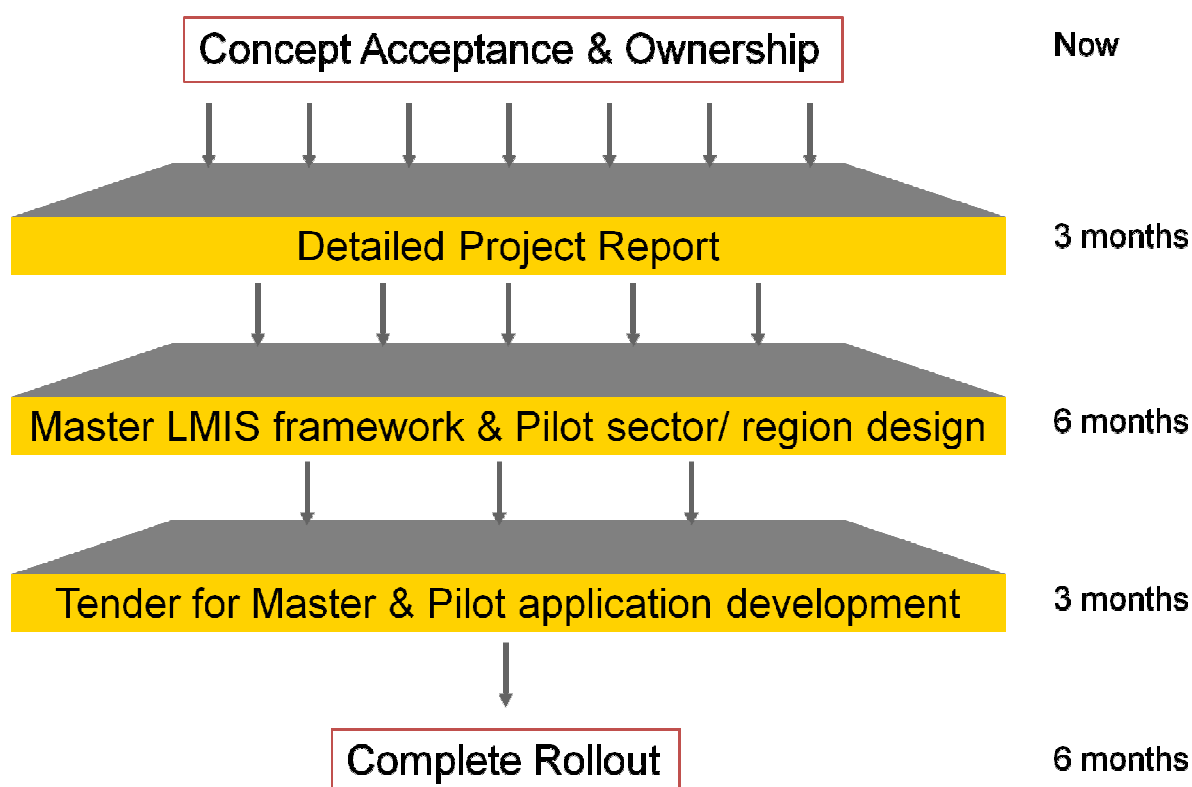
India boasts of nearly 265,000 Panchayats and its time to partner with these local institutions to reach-out to the grass-root level. This approach has the benefit of not only Panchayats having a highly extensive coverage across the country but also the trust a local person would have in them and the understanding these institutions have about the on-ground peculiarities. There is an option to collaborate with other set-ups also like Post offices (155,333), State Bank of India branches (16,000), with the prime objective of making it convenient for a labourer to access the system. Under the National eGovernance Plan, 100,000 Common Service Centres have already been set-up in villages across India and there is a plan to increase this number multifold. LMIS should be one of the services which these centres will carry, such that it becomes another of Government's established systems like birth/ death certificates or voter registration. Efforts should also be made to capture all the information required from a Indian citizen for LMIS through the Unique Identification Number initiative of the Government of India. The broad implementation framework is shown in the diagram below.

Figure 5.1: Implementation Framework



Once the implementation plan is finalized and the roles & responsibilities are defined, the actual execution is taken-up. The schematic below depicts the key steps to setting up and delivery of an LMIS starting from approval of the Conceptual Plan. The Conceptual Plan will be the blueprint for the proposed model and will require detailed review by key stakeholders. Upon approval of the Conceptual Plan, a comprehensive Detailed Project Report (DPR) will be prepared to assess the overall project cost to the Government for developing an interactive LMIS. This DPR should include detailed study of how Employment Exchanges can be involved, current job portal sites operating successfully in India and one or two systems established in a foreign but similar a country with labour market dynamics. The time span for these complete set of activities is presumed to be spreading out over 18 months after the project approval.

Figure 5.2: Way forward steps



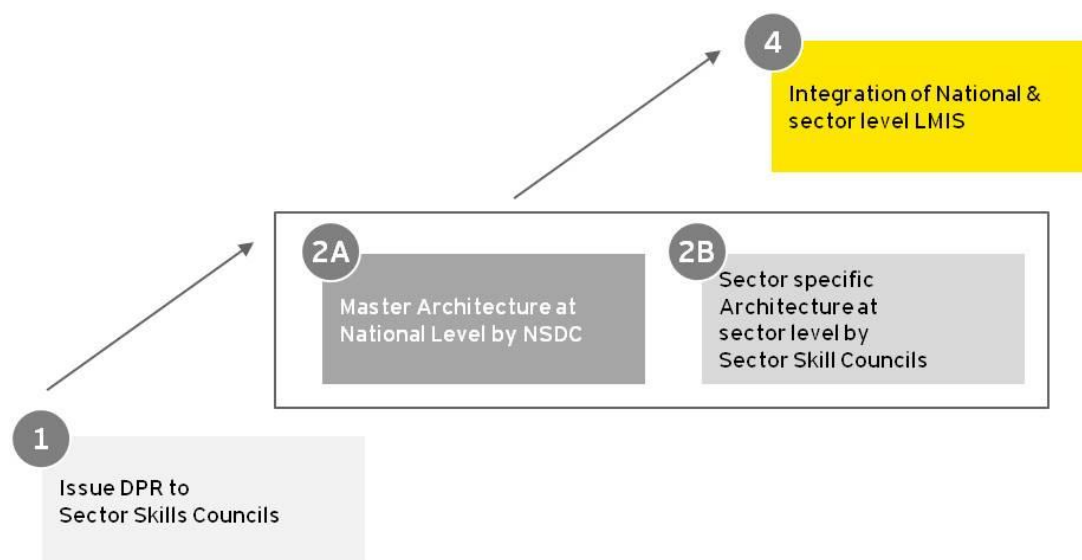
Subsequent to the DPR, Tender/ RFP will be rolled out for pilot testing this concept in sample sectors and regions. Based on the impact and response the detailed work plan will be discussed and complete implementation rollout plan will be made.

As emphasized in the preceding sections, the generic LMIS model presented above does not serve as a final operational system, but it does provide a direction to highlight major points to be considered in building an optimal delivery process. While the databases provide the foundation for the system, ultimately the success of the system shall depend on the standards set for quality, relevant and accuracy of data, user interface and ease of access for the users.

LMI collection and delivery in India shall have characteristics of both centralized and decentralized systems with information developed and disseminated at the National, State, and local levels. Further, the Central as well as State Governments need to take some role of the other in the entire process of governing, managing,

executing and supporting the project. The schematic below illustrates the key steps in establishing individual sector-specific regional LMIS' under the master LMIS umbrella.

Figure 5.3: Proposed LMIS Architecture



The above schematic depicts the following key steps:

- ▶ **Step 1:** Issue of DPR to SSCs (SSC) which shall individually collect, collate, analyze and disseminate sector specific labour market data. The data will include granular detail such as employment / unemployment rate, regional wise labour availability / surplus, seasonality of occupation, occupation profile, skills grades, certifications required, worker grades etc.
- ▶ **Step 2:** The SSC shall be responsible for maintaining the sector specific LMIS. The sector specific LMIS shall then feed into national level LMIS maintained by the central agency. The SSC should aim to provide labour market related information in various regional/ local languages and can also have strategic tie-ups with local panchayats, employment exchanges, ITI etc. This therefore would require complete support from the State Governments.
- ▶ **Step 3:** The LMIS viewable to all Users shall be the integrated web portal at the national level.

As suggested earlier, there is an imminent need for a nodal agency to take this forward by crafting the umbrella under which individual sector skill councils could function. With the purpose of brainstorming on the various thoughts, especially on the authority (SPV) which needs to take charge for this proposed exercise, in this concept paper, NSDC organized a workshop with participation from all stakeholders. The response in terms of attendance as well as active participation was overwhelming and at the same time this conceptual plan was appreciated by all. A few additional thoughts like capturing migrant labour information, involving trade unions came-up during the workshop. Brief minutes of this workshop form part of Annexure 6.5.

To conclude, the LMIS is a mechanism to manage all explicit as well as tacit information pertaining to the labour market, which helps stakeholders to take informed decisions. For a vast and fast growing economy like India, this system will be the starting point in the direction to realizing the true potential of its workforce.



6. Annexure

6. ANNEXURE

6.1 Leading LMIS web portal snapshots

Australia's Labour Market Information Portal

- **Granular level of Detail :** Area / Region wise profile which includes the current unemployment rate for the region and job seeker data, such as average job seeker age and unemployment duration.
- Industry and Region wise Reports
- Monthly Schedule for Labor Market Data Update

- **Detailed Frequently Asked Questions for Job Seekers (citizens and non-citizens).** Guidance on Job Search , Training and Apprenticeship Programs, Career Counseling

- **List of Useful Links / Resources** for Job Search , Department for Citizen Services / Immigration , Leading Economic Indications, Industry /Region Reports/ Charts , Skill Development , Sector wise Skill Shortage Index

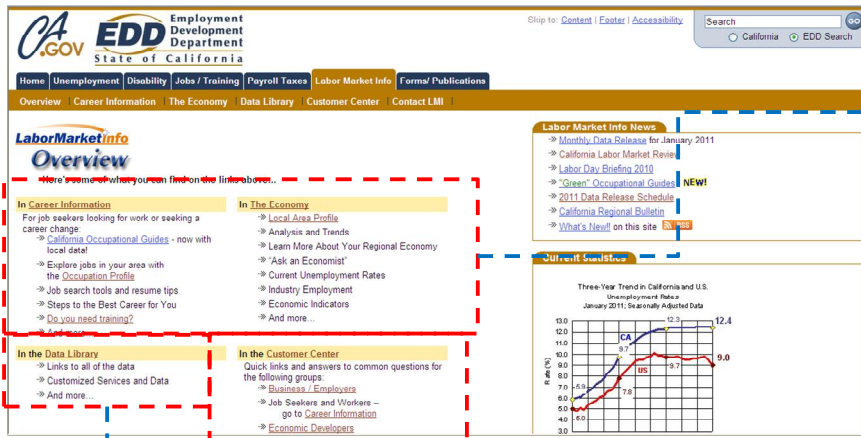
United Kingdom's Labour Market Information Portal

- **Quick and easy one step online Registration**
- Registered Users avail following benefits:
 - Newsletter
 - Profile update alerts
 - Advanced query
 - Business Register and Employment Survey

- **Direct Links to National Statistics**
- Based on themes such as Agriculture and Environment; Business and Energy; Children , Education and Skills; Crime and Justice

- **Basic guide for first time users**
- **Latest News releases on Labor Market related areas**

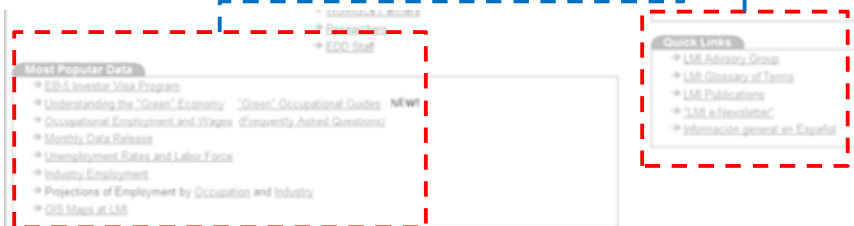
California's Labour Market Information Portal



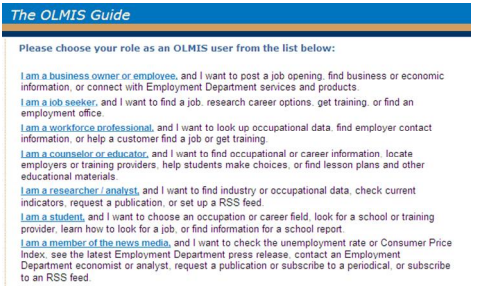
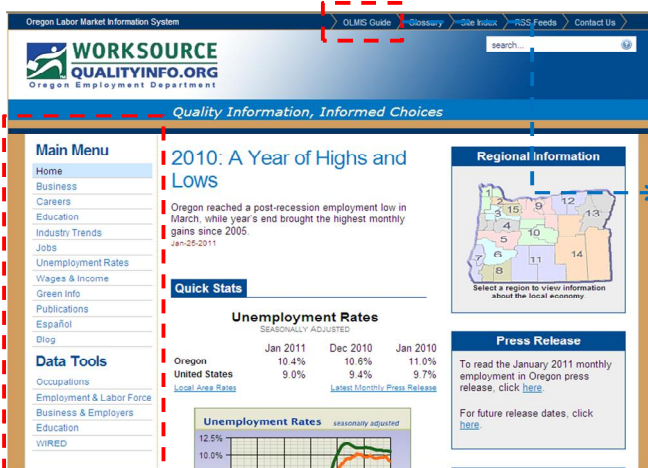
- **“Customer Center”**, **“In Career”**, **“In Economy”** features which clearly segregates section based on User category and type of information required
- **Users are able to navigate through the site with ease**

- **“Most Popular”** feature for quick search of popular reports / data
- **“Quick Links”** feature directly connects Users to LMI Publications, Glossary of Terms, News Letters

- **“Data Library”** feature provides one stop shop for all types of data / reports required
- **“Customer Service”** provides customized reports for a nominal fee
- **Users are able to navigate through the site with ease**



Oregon's Labour Market Information Portal



- **“OLMIS Guide”** features guides various types of Users to conduct quick, focused and methodical search for data / information

- **“Main Menu”** features arranges information, resources and links based on the category of information. Example of categories and specific information :
 - Business – Union membership in Oregon
 - Careers – Projected Job Growth ,Oregon Statewide
 - Education – Enrollment Rate in Community Colleges
 - Industry Trends – Oregon's Energy Transmission Sector

Jamaica's Labour Market Information Portal

- Updated Labor Market Indicators such as Economic Statistics ; Remittances ; Population-by Age Group, Labor Force, Geography ; Employment ; Unemployment; Education Attainment; Wages Salaries; Industrial Relations
- **Generate Forecasting Report for Parameter such as Remittances, Economic Statistics, Work Permits**
- Economic Information such as Economic Overview ; Sector wise Progress Report
- Education and Training – Details of Government and Private Schools/ Institutes
- Government funded Youth Programs



- **Interactive Features for Employers and Job seekers** - post jobs , search for jobs, career counseling, training, technical / financial assistance
- Information on Labor Laws and Regulations

Europe's Labour Market Information Portal

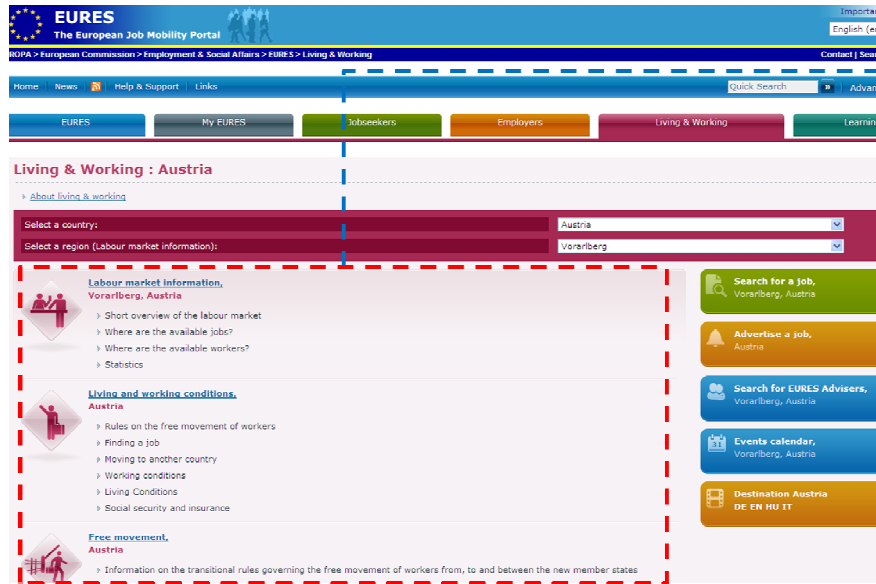


- **“Main Menu” features arranges information, resources and links based on the category of Information**
- Job vacancies in 31 European countries
- CVs from interested candidates
- All info about living and working abroad

- **Create User account for Newsletters, make Events Calendar etc**

- **Information on living and working in any of the European countries**

Europe's Labour Market Information Portal - Country Details

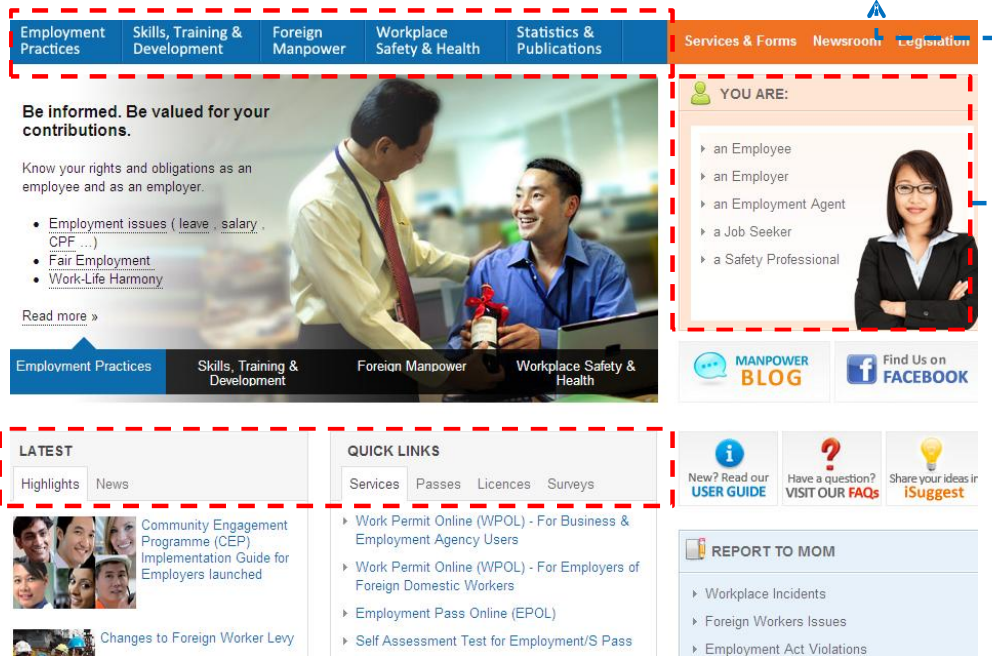


Details for living and working in a European country

- Labor market information,
- Living and working conditions
- Free movement

Singapore's Labour Market Information Portal

- Userfriendly tabs based on user needs and data / information required



- Links to latest labor market related news and quick search for popular information

Vietnam's Labour Market Information Portal

Vietnamese Government is in the process of setting up framework for a comprehensive LMIS.



Stakeholders

- ▶ Policy makers
- ▶ Employment service centers
- ▶ Employment agents
- ▶ Training institutions
- ▶ Workers
- ▶ Employers

Challenges

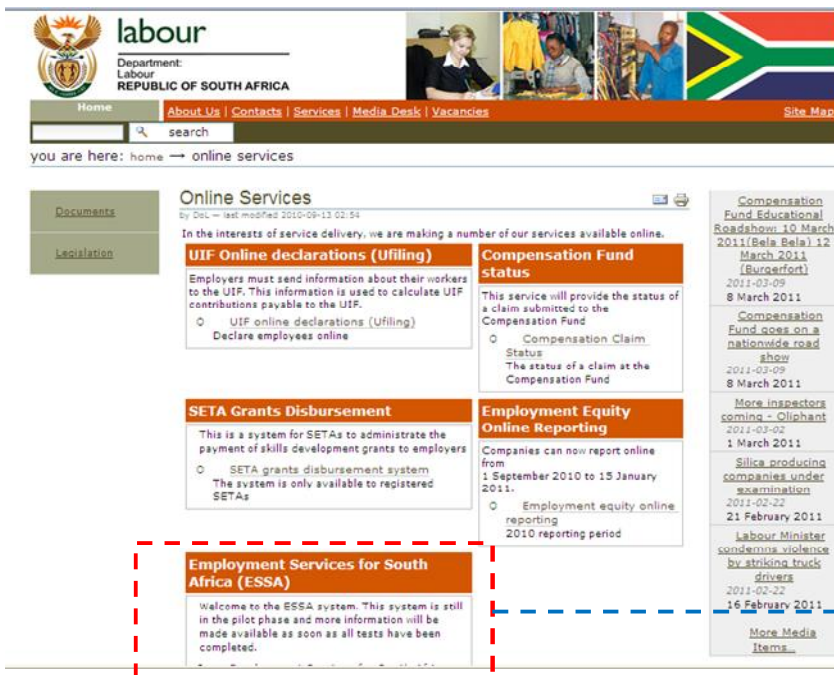
- ▶ Info scattered & fragmented
- ▶ Costly & difficult management
- ▶ Manual processing
- ▶ Limited users & interaction
- ▶ Closed systems
- ▶ Ineffective support to staff

Objectives

- ▶ Improve effectiveness of centers
- ▶ Link info on labor, employment & training
- ▶ Setup centralized database
- ▶ Single info gateway for managing
- ▶ Expand users and interaction
- ▶ Improve IT applicability by staff

South Africa's Labour Market Information Portal

Data on South Africa's LMIS was unavailable as the site is currently under construction.



Employment Services for South Africa

This system is still in the pilot phase and is not available currently

6.2 Questionnaires for stakeholder interaction

Questions common to all stakeholders

- ▶ What is the information that the stakeholder is currently looking for with respect to the labour market?
 - ▶ Employment/ unemployment rate (Sector specific)
 - ▶ Demographics [Location, Age, Working Population, Education level etc]
 - ▶ Employment information by sector/ industry, regions etc
 - ▶ Policy Information
 - ▶ Types of Schemes running for Unemployed
 - ▶ Various Government vacancies
 - ▶ Various Grants for Self-employed
 - ▶ Key Economic variables and Statistical figures
 - ▶ Job seekers profile
 - ▶ Previous employment information
 - ▶ Educational qualification
 - ▶ Existing Skill sets, Membership of Professional institutions
 - ▶ Training Programmes attended
 - ▶ Labour market information analysis -
 - ▶ Supply/ Demand information and corresponding gap analysis
 - ▶ Explicating the employment trends in terms of sectors, regions and industries
 - ▶ Form and structure of unemployment/ under-employment
 - ▶ Employment trends in sector, regions etc
 - ▶ Trends in wages by sectors, regions
- ▶ What is the primary usage of this information for the stakeholder?
 - ▶ Identification of skilled workforce
 - ▶ Workforce with requisite skill set and educational background
 - ▶ Workforce with relevant professional background
 - ▶ Workforce within the geographical scope
 - ▶ Workforce with adequate training certifications
 - ▶ Information on policy matters
 - ▶ Any Other
- ▶ Do you have easy access to the information? Yes/ No
- ▶ What are the current sources of information for this information?
 - ▶ Sample Surveys by National Sample Survey Organization
 - ▶ Population Census by Registrar General's Office
 - ▶ Employment market Information Programme of DGET
 - ▶ Annual Surveys of Industries and Factory by Labour Bureau
 - ▶ Educational Surveys by National Council Of Educational Research and Training
 - ▶ Occupational Wage Surveys by Labour Bureau
 - ▶ Any Other

- ▶ What are the key challenges currently faced by the stakeholders with regards to the information available on labour market?
 - ▶ Reliability and completeness of the information
 - ▶ Usability of information - format/ quality etc
 - ▶ Frequency at which the information is collated and made available
 - ▶ Non availability of certain information
 - ▶ Any Other

Questions related to Trade Bodies/ Corporate

- ▶ Is there adequate information available on the labour market in the particular sector/ industry? Yes/ No [List is Illustrative]
 - ▶ Size of the labour market in the specific sector
 - ▶ Employment / unemployment rate
 - ▶ Skill sets of the existing workforce
 - ▶ Geographic spread of the existing workforce
 - ▶ IF NOT: What is the information that is currently unavailable?
- ▶ Currently, what are the various methods adopted by the sector/ company to hire the required workforce? How do you rate them?
 - ▶ Employment Exchange
 - ▶ Employment Counselors/ Consultants
 - ▶ Education and Training Institutes
 - ▶ Job portals/ Newspapers/ Journals etc
 - ▶ Referrals
 - ▶ Any Other
- ▶ Does the current workforce have the required skill sets? Is there a gap between the available skill set and the required skill set?
- ▶ What are the different options currently being explored to provide adequate training to the workforce?
 - ▶ Hiring from specific institutes that provide skill based training - training/ vocational institutes.
 - ▶ Which are these institutes?
 - ▶ Is the curriculum apt?
 - ▶ Providing in-house training to the workforce
 - ▶ Partnering with institutes/ government programmes to provide requisite training
 - ▶ Any other
 - ▶ Any existing partnerships to provide training/ vocational courses with institute or government programmes? Yes/ No
 - ▶ If YES - Please elaborate
 - ▶ If NOT - Future plans if any
- ▶ Is there a supply/ demand mismatch and how does the Industry (sector) foresee bridging this gap in the near future?
- ▶ What are your key expectations from the Labour Management Information System? What are the key characteristics the system should entail to be able to provide substantial improvement over the current framework

Questions related to current system (Perspective of a Policy Maker/ Government Agency)

- ▶ Do you think people have easy access to employment/employer related information? What are the various sources of this information?
- ▶ What are the initiatives taken to increase the awareness and user friendliness of the employment opportunities across the country?
- ▶ What are the various cooperative measures with national and international agencies/countries to develop the employment market in our country through training and other programmes?
- ▶ Is there any process of Accreditation/Validation of various Educational Courses, Training Institutes, Skill Training Institutes and Vocational Counselors currently in place? If Yes, Briefly explain
- ▶ What are the important Social Security Measures introduced by government? Please specify the initiatives planned in the near term.
 - ▶ In organized Sector
 - ▶ In un-organized Sector
- ▶ Is there any information on Industry Specific Job absorption available through any information centers? Please provide suggestions for improvement.
- ▶ Suggest various measures to improve the Labour Market Assessment?
- ▶ Please provide suggestions to capture and diffuse Labour market information across the country?

6.3 Minutes of stakeholder interactions

Interview with AyurVAID Hospitals, Mr. Rajiv Vasudevan

Attendees:

Name	Designation
Rajiv Vasudevan	CEO, AyurVAID Hospitals
Abhishek Gupta	Manager, Ernst & Young
Puja Kuhar	Consultant, Ernst & Young
Anubhav Mishra	Consultant, Ernst & Young

Points of discussion:

From the health care sector perspective, the stakeholder is looking at the following information and also the projections to develop a long term strategy for manpower requirements

- ▶ Employment/ unemployment rate
- ▶ Demographics [Location, Age, Working Population, Education level etc]
- ▶ Employment information by sector/ industry, regions etc
- ▶ Job seekers profile
- ▶ Previous employment information
- ▶ Educational qualification
- ▶ Existing Skill sets, Membership of Professional institutions
- ▶ Training Programmes attended
- ▶ Labour market information analysis -
- ▶ Supply/ Demand information and corresponding gap analysis
- ▶ Explicating the employment trends in terms of sectors, regions and industries
- ▶ Form and structure of unemployment/ under-employment
- ▶ Employment trends in sector, regions etc
- ▶ Trends in wages by sectors, regions

The primary usage of this information will be for hiring

- ▶ Workforce with requisite skill set and educational background
- ▶ Workforce with relevant professional background
- ▶ Workforce within the geographical scope
- ▶ Workforce with adequate training certifications
- ▶ Workforce along the entire value chain of healthcare services - Nursing staff, ambulance drivers etc

The current sources of information are the studies conducted by the various agencies like NSSO, Labour Bureau, DGET, NCERT etc. The common problem encountered remains the quality of information available. The information is not updated at regular intervals of time and hence constraints the usability of the same. Also the information is fragmented and there is not one consolidated source of the same. Also for certain niche segments like Ayurveda there is very little information available.

The current methods of employment in the healthcare sector include:

- ▶ Employment Exchange
- ▶ Employment Counselors/ Consultants
- ▶ Education and Training Institutes
- ▶ Job portals/ Newspapers/ Journals etc
- ▶ Referrals

There are several institutes providing training and certifications in the healthcare sector. However the quality of these training programmes is of huge concern. Also the number of training institutes are far less than the requirement and even less for specialized skills e.g. Ayurveda.

Currently in-house training is provided to train the workforce. However partnerships with various institutes can be evaluated to bridge the gap between the available skills and the required skills

Suggestions for LMIS

- ▶ LMIS should map the workforce based on skills across sector. This will help in mobilizing workforce from across the sectors with similar skill competencies
- ▶ There is a need to provide ratings to the training institute to ascertain the quality of education/ skills being imparted through these courses. This systemized approach will help in determining the correct wage rates etc.
- ▶ Provision of functional role competencies across the different levels to develop specialized competencies e.g. Nursing, Ambulance services etc. Also there is a need to develop competencies for specialized skills like Ayurveda etc.

Interview with Confederation of Indian Industry, Mr. Sougata Roy Choudhary

Attendees:

Name	Designation
Sougata Roy Choudhary	Director, Skills & affirmative Action
Abhishek Gupta	Manager, Ernst & Young
Puja Kuhar	Consultant, Ernst & Young

Points of discussion:

- ▶ CII undertakes a number of surveys to understand the manpower mix across different geographies. These surveys are conducted on a small sample size and are accessible to all the member firms. These surveys provide information of the demographic profile of the workforce across sectors.
- ▶ The information the stakeholder is currently looking for from the LMIS is:
 - ▶ Employment/ Unemployment statistics
 - ▶ Demographic information (Gender, Age, Location Education level etc)
 - ▶ Job Seekers Profile
 - ▶ Labour market information analysis
- ▶ The information from the LMIS is required for:
 - ▶ Identification of skilled workforce

- ▶ Information on policy matters
- ▶ Planning new programmes

Currently the above mentioned information is not easily accessible. The information currently available on the labour market is not updated and hence not very reliable for any planning and skill development purposes.

The current sources of information include:

- ▶ Sample surveys by NSSO
- ▶ Labour Ministry site for all labour related information
- ▶ Other Government reports - Population census, Labour bureau etc
- ▶ Currently the methods adopted by the member firms include: (in the order of priority)
- ▶ Employment Counselors/ Consultants
- ▶ Job portals/ Newspapers/ Journals etc
- ▶ Education and Training Institutions
- ▶ Referrals
- ▶ Employment Exchanges

Several partnerships are being explored to develop training programmes to bridge the skill gaps across sectors. SSCs/ sectoral associations are looking at developing tailored solutions to provide requisite skills to the workforce

Interview with CITI, Mr. Shaju Mangalam

Attendees:

Name	Designation
Shaju Mangalam	Secretary, Confederation of Indian Textile Industry (CITI)
Puja Kuhar	Consultant, Ernst & Young

Points of discussion:

The textile industry is facing acute shortage of labour force due to decrease in the supply of skilled/ unskilled manpower. Rural agricultural income has gone up and more and more workers are shifting towards the same resulting in a decrease in the available labour force for the textile industry.

- ▶ In an effort to increase the manpower supply, CITI is working on a proposal to tie up with the NGOs working in the rural areas to hire and train people to bridge the gap between the demand and supply. CITI is proposing setting up of a Special Purpose Vehicle with stakeholders from the private sector (Vardhman, Spandex, Winsome Group, Arvind Mills etc) to hire and provide adequate training to meet the rising demand of skilled labour over the next 5 years in the textile industry.
- ▶ There are a few training institutes (e.g. The South India Textile Research Institute, Northern India Textile research Association etc) that are in place currently providing research and training, These institutes receive funding from the Government, however the number of such institutes is very less and form a miniscule of the total labour force required currently by the industry.
- ▶ The expectations of CITI from the Labour Management Information system (LMIS)
- ▶ Information on the existing labour force across different geographies

- ▶ Mapping of labour force available in the textile industry according to the specific clusters the industry is segregated into with respect to the regions
- ▶ Information on the international best practices. Countries like Bangladesh, Vietnam and Indonesia have surpassed India in exports which can be attributed to the labour policies of these countries
- ▶ The primary usage of the information available from the LMIS is to determine the availability of the workforce across different geographical clusters the textile industry is segregated into. In textile industry skill based training is provided in-house by the production companies. The availability of the labour force is the primary and the most critical area of concern.
- ▶ The current sources of information include the report published by the Textile Commissioner of India highlighting the HR requirements and the available labour force. However the information is not updated yearly and hence the accuracy of the same is a concern.
- ▶ The current mode of employment for the sector includes:
 - ▶ Local hiring close to the production houses
 - ▶ Hiring from the training institutes
 - ▶ Currently training is being provided through training programmes conducted in-house by the production houses and hence the quality is adequate. However there is a need for more institutes to provide specialized textile research courses. The same is currently undertaken only by the Indian Institute of Technology

Interview with Construction Federation of India, Mr. Siddharth Singh

Attendees:

Name	Designation
Siddharth Singh	Secretary General, CFI
Puja Kuhar	Consultant, Ernst & Young

Points of discussion:

- ▶ There is no track of information on the Construction workers in the country
- ▶ The information that is available is based on reasoned guesses and is not very reliable and does not provide a dynamic picture of the current situation
- ▶ There is a growing shortage of workforce in the construction sector and the demand in the sector is varying and is dependent on the projects
- ▶ The hiring for the workforce is done by the following two methods:
 - ▶ Subcontractor hires the workforce locally
 - ▶ Hiring from the training and vocational institutes
- ▶ The estimation of supply and demand in the construction sector is difficult as:
 - ▶ There is lack of information available on the workers in the construction sector as most of the workers are employed by the subcontractors. There is no reliable information on the labour force availability across different geographies
 - ▶ Estimation of the supply of employment opportunities is also varying and the landscape is continuously changing

- ▶ There is a need for the government to develop specialized training programmes in the construction sector. It is imperative for the government to develop programmes to up skill the labour force whilst ensuring the safety at the site of work

Interview with Confederation of Real Estate Developers Association of India, Mr. GP Savlani

Attendees:

Name	Designation
G P Savlani	Resident Director, CREDAI
DL Desai (Shankar Bhai)	Builders Association of India
Puja Kuhar	Consultant, Ernst & Young

Points of discussion:

- ▶ There is lack of information available on the real estate/ construction sector. The current sources of information do not provide reliable, accurate information on this sector.
- ▶ There is no permanent employment and each worker is hired on a contract basis. The labour surplus from the agriculture sector comprises the labour force in the construction sector
- ▶ There is a shortage of skilled/ unskilled workforce in the Construction sector
- ▶ In the construction industry, the estimation of the demand is a tricky process as there are no permanent projects and the landscape keeps changing continuously
- ▶ The Real estate developers subcontract the work and the subcontractor hires the labour locally or sources cheap labour from the rural areas
- ▶ There is lack of training institutes providing specialized courses in the construction agency. There are no certification agencies providing certifications for complex jobs like operating concrete compressors, cranes etc. This leads to a situation where most of the work is performed by the unskilled labour leading to safety hazards.
- ▶ Training is a difficult task in the construction sector as most of the labour force is based out of the rural areas and is migratory. Few initiatives have been taken by BAI and private organizations like Larsen & Toubro to develop training programmes for the workers in the construction
- ▶ Builders Association of India and Ramakrishna mission Vidyalaya Coimbatore are working together to provide training courses to the workers in the construction sector
- ▶ Larsen & Toubro is carrying out various programmes to provide training to the workers in the construction sector

Interview with FICCI, Mr. Rajan Kohli

Attendees:

Name	Designation
Rajan Kohli	Advisor, FICCI
Abhishek Gupta	Manager, Ernst & Young

Puja Kuhar	Consultant, Ernst & Young
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Points of discussion:

- ▶ The basic aim of developing an LMIS is to develop a research authenticated and a credible database available to different stakeholders. The database should be updated on an annual basis and should be able to provide the likely demand/ forecast and trained manpower available in any particular sector. It was suggested that the database should be an online portal.
- ▶ The various usage of LMIS will be:-
- ▶ LMIS should provide complete labour market information across all sectors
- ▶ Updated labour market information across sectors/ geographies and the demand forecast
- ▶ Training Providers/ Certification Agencies: The information available through LMIS will assist them to ascertain the skill gap and the demand in any particular sector
- ▶ Policy Makers/ Research companies on demand supply analysis
- ▶ Assisting International bodies/ Academics institutions in curriculum development
- ▶ Providing the potential employers with information on the available skills across sectors and geographies
- ▶ It was suggested that the evaluation and the authentication of the information provided by the individuals should be undertaken by the SSCs. SSCs can further outsource the same to a private agency.
- ▶ The training institutes/ accreditation centers should be provided with ratings so that the quality of these programmes can be ascertained. This will eventually benefit the job seekers and also the employers. The sector councils can undertake the responsibility of rating the training programmes
- ▶ It was suggested that in the next 5 years the LMIS should be extended to the entire Asia. This will help in the movement of labour across regions and provide ample job opportunities in the over saturated Indian job market
- ▶ Several partnerships can be established internationally to provide training programmes in niche areas which are not currently available in India

Interview with Gera Developers, Mr. Rohit Gera

Attendees:

Name	Designation
Rohit Gera	MD, Gera Developers
Abhishek Gupta	Manager, Ernst & Young
Shivanjali Sharma	Consultant, Ernst & Young

Points of discussion:

As a developer, information required from an optimal LMIS:

- ▶ Trend in wages of various categories of labour
- ▶ Demand and supply trends of various categories of labour
- ▶ Data on available skill sets of labour and demand for skill set
- ▶ Current sources
- ▶ Only informal sources such as information from sub-contractor

- ▶ There is no organized source for benchmarking or doing a comparative analysis of wages for different types of labourers across time period
- ▶ This information is important to define terms of labour contracts with Contractors
- ▶ Smart Card for labourers is required which gives information on identification, experience, qualification / skill set or skill level of labourer. This information should be linked to online system
- ▶ This mechanism will help to ensure quality of work for the Developer
- ▶ There is a mismatch between Contractor goal which is to maximize productivity from worker and Developer goal which is to ensure quality
- ▶ A mason grading system will help avoid this mismatch
- ▶ Labour should be ranked based on skill level and a rate should be assigned to specific skill level
- ▶ Based on site specifications, it should then be easy to define number of workers required of each level and the rate to be charged by the worker
- ▶ Even the lowest level f worker needs to have certification / undergo orientation to ensure efficiency and avoid injury and damage / loss of material
- ▶ Further , a basic degree of orientation is important for the Developer and Contractor to ensure safety standards and quality standards can be ensure at construction site

Interview with Ministry of Labour and Employment, Mr. R.L. Singh

Attendees:

Name	Designation
R L Singh	Director - Training, MLE
Puja Kuhar	Consultant, Ernst & Young

Points of discussion:

- ▶ The information from the LMIS will be utilized in developing policy related to skill development and identification of training programmes
- ▶ The key information required from LMIS includes:
- ▶ Key Labour market Statistics across geographies and sectors. The information is required at the district and village level to develop focused training programmes depending on the current skill levels and the skill set requirements
- ▶ LMI information across all social groups - SC/ ST/ Minority etc
- ▶ Employment status and progression over the years
- ▶ Educational background Information
- ▶ The current sources of information are
- ▶ National Sample Survey
- ▶ Surveys conducted by the Ministry of Labour and Employment
- ▶ Labour Bureau reports
- ▶ There are concerns with the respect to the information available through the aforementioned sources:
- ▶ The data collection is not reliable and is not an authentic representation of the employment/ unemployment status

- ▶ The projects are not accurate
- ▶ Information is not updated on an ongoing basis and is obsolete and non reliable
- ▶ From the current sources, there is lack of localized data. Information s available at an aggregate state level and needs to be more localized i.e. district and village level
- ▶ The demand and the supply of labour in the country is cluster based and is localized. It is a challenge to map the supply of labour with the requirements with the migration of labour.

Interview with NASSCOM, Ms. Sandhya Chintala

Attendees:

Name	Designation
Sandhya Chintala	NASSCOM
Anubhav Mishra	Consultant, Ernst & Young
Shivanjali Sharma	Consultant, Ernst & Young

Points of discussion:

LMIS should try to adopt a broad based approach where each occupation in each sector, which could be from organized or un-organized sector be well defined.

While designing LMIS should consider the following:

- ▶ Analysis of the demand side of the employers
- ▶ Information on the 3rd party programme providers on training
- ▶ How can LMIS cover information on the industry, different career path, and assessment of skills required is not known to the user
- ▶ Information on the college associations with the banks, collaterals
- ▶ LMIS link to the telephone. Where people can also call for quick information seeking
- ▶ There should be a full proof monitoring system, accreditation and Independent regulators/SSCs to monitor the LMIS
- ▶ LMIS should be built on the International standards with International Parity
- ▶ Model could be adopted on GRE/GMAT kind of database
- ▶ All content to be built on a virtual model. Please read through the best practices for e-content like freeware.
- ▶ Expectations from LMIS
- ▶ Government
- ▶ Making the present education system credit centric (number of credit evolved - MHRD)

Academia

- ▶ Formalizing the courses for credits. Standard credit which could be accepted by academia across the world
- ▶ Industry must be a part of the academia

Industry

- ▶ Be more articulate about the career opportunities
- ▶ Base requirement clearly and update the requirements on real time basis

Interview with Reliance Industries Limited, Mr. Prashant Deshpande

Attendees:

Name	Designation
Prashant Deshpande	Head - HR Strategy & Planning, RIL
Puja Kuhar	Consultant, Ernst & Young

Points of discussion:

- ▶ The information available on the labour market is not up to the satisfactory level in the retail sector. The information available through reports by private market research/ consultancy firm's and surveys is based on assumptions and does not present a true picture of the ground realities. The information is not reliable.
- ▶ The information is not updated frequently. The last NSSO survey was done before recession and the numbers cannot be used in the current environment. Hence it is imperative to update this information on a yearly / two yearly basis to ensure that the information is reliable
- ▶ There are also concerns regarding the authenticity of the information available through different surveys. The methodology and the data collection mechanism are an area of concern. There is a general lack of confidence while using these numbers for any analysis or planning needs
- ▶ Industry statistics should also be incorporated as part of the LMIS. It should provide information about India and the other global markets.

LMIS should include information on:

- ▶ Education Level
- ▶ 10th / 12th / Graduate/ Post Graduate/ Any Specialization
- ▶ Training/ Certification
- ▶ Specific qualification in retail
- ▶ Any additional qualification
- ▶ Function wise details
- ▶ Store Operations
- ▶ Supply Chain
- ▶ Merchandising
- ▶ Finance Function
- ▶ IT/ Regulatory

Category

- ▶ Multi brand retail/ single brand retail

- ▶ Food/ grocery
- ▶ Apparel
- ▶ Electronic goods
- ▶ The information currently available through surveys is at a very high level and an aggregate level
- ▶ There is a need for easy access to the updated regulatory requirements in a particular sector. In the organized sector it is critical to maintain compliance to all the requirements. LMIS should provide updated information on all regulatory compliances for a particular sector
- ▶ LMIS should operate as an intelligent system providing real time analysis of the labour market data. In absence of this LMIS will just act as a dump of all information on labour market. Insights reports should be published at shorter intervals which can be used by the stakeholders to gain strategic insights onto the labour market and revise their strategies accordingly
- ▶ LMIS should provide a complete listing of information on Educational and Training Institutions providing courses relevant to a particular sector

Interview with United Nations Development Programme, Mr. Alok Kumar

Attendees:

Name	Designation
Alok Kumar	UNDP
Puja Kuhar	Consultant, Ernst & Young

Points of discussion:

- ▶ The information available on labour market is available at the state level and not at district and village level.
- ▶ In order to develop skill development programmes in districts and villages it is important to have adequate information on:
 - ▶ Existing skill sets of the workforce in the region
 - ▶ Skill requirements in the region in the next years
 - ▶ This information is critical in developing skill development programmes for specific regions

Challenges with the current information:

- ▶ Data collection and data entry mechanisms are not reliable
- ▶ Inadequate information available through current sources of information available
- ▶ The information is outdated and is not updated periodically
- ▶ The current sources of information are
 - ▶ National Sample Surveys
 - ▶ Statistics published by the Ministry of Labour and Employment

6.4 LMIS output

All SSCs as well as Users will require processed data on labour market dynamics. LMIS , at a very basic level , should include the following information¹⁹:

k. Socio-demographic Data

- ▶ Population over time by age and gender
- ▶ Population distribution by region
- ▶ Literacy rates by gender, age and region
- ▶ Migration patterns
- ▶ Main social/ethnic groupings by size and location

Other data may be added as a more detailed system develops, particularly information relating to health, wealth and social groupings.

l. Educational Data

- ▶ Enrolments by gender in primary, secondary and tertiary levels
- ▶ Numbers completing each level by age and gender, and as a proportion of enrolments
- ▶ Educational attainments by qualification and gender
- ▶ Regional variations of above

m. Employment and Labour Market Information

- ▶ Macro level economic trends showing projected growth of various sectors (inclusive of informal sector), disaggregated by region
- ▶ Size of labour force and its projected growth, overall and by sectors
- ▶ Size of any migrant labour groups and their origins, by region
- ▶ Distribution of workers between modern wage employment (formal and informal) and its projected growth
- ▶ Growth or contraction of wage employment by occupational sector
- ▶ Skill level of workers by occupation/sector
- ▶ Levels of unemployment and under-employment by age groupings and gender, by sector and educational/training attainment, disaggregated by region
- ▶ Levels of youth unemployment and under-employment by gender and region
- ▶ Identification of training needs as reported by sector

n. Analysis of Labour Market Policies

- ▶ Identified sources and methods of collecting LMI
- ▶ Policies on remuneration and social benefits in public/private sectors
- ▶ Government industrial investment and promotion policies and their effects on employment and the demand for skills, by sector and employment category
- ▶ Policies relating to economic liberalisation and the structural adjustment of the labour market
- ▶ Policies relating to technological development and their effect on employment by category and gender
- ▶ Policies relating to unemployment subsidies and work creation

¹⁹ Refer to Annexure for Details

- ▶ Policies to promote the employment of special groups (women, school dropouts, illiterates, unemployed youth, ethnic minorities, disabled)
- ▶ Trends in the labour market and the impact on future demands for skills, knowledge and their effect on gender employment

o. Analysis of Training Policies and Programmes

- ▶ The main features of the education and training system, its co-ordination, inter-relationships, and the balance of public and private sector provision
- ▶ Details of staffing at training institutions - qualifications (technical, pedagogical, industrial experience), staff/trainee ratios, opportunities for staff development, staff turnover
- ▶ Training policies relating to equity, gender, role of private sector, and role of employers
- ▶ Training responsibility: numbers disaggregated by public/private institutions and in-plant training
- ▶ Apprenticeship, duration, numbers by sector, gender and region
- ▶ Available programmes by vocational fields/trades, duration and qualification
- ▶ Capacity and numbers enrolled in each category of training by gender and region
- ▶ Trainee performance, pass-rates, repetitions and drop-outs, by type of programme, region, and gender
- ▶ Provisions of career guidance/counselling and job placement services
- ▶ Results of tracer studies showing training relevance to future employment
- ▶ Capacity of training systems to undertake evaluation and research
- ▶ Available evaluative studies of training system's effectiveness and responsiveness

p. Content and Quality of Training Programmes and Facilities

- ▶ Subject distribution and balance of practical and theory elements
- ▶ Contributions of government agencies, employers, labour organisations and training institutions to curriculum development
- ▶ Processes of curriculum review, evaluation and reform
- ▶ Quality of instructional methods, media, learning materials, assessment
- ▶ Quality of facilities and equipment in terms of new technologies, relevance to world of work, curriculum standards, safety
- ▶ Effectiveness of standard settings, testing and certification

q. Training System Costs and Financing

- ▶ Unit costs of formal training at all levels, by public sector, private institutions, and by private sector (in-plant)
- ▶ Analysis of costs with regard to capital costs, other fixed costs (insurance, calculated interest/opportunity costs), variable costs/recurrent expenditures, by sector and region
- ▶ Actual or potential income from income generating activities (training-cum-production) in public/private institutions
- ▶ Extent to which income from self-financing activities can be retained by training institutions
- ▶ Sources of funding by type of establishment like government, student fees, enterprise levy, etc.
- ▶ Scope for resource bargaining by training providers
- ▶ Planned future investment in training by sector

r. Assessment of Training Response to Employment Needs

- ▶ Extent of fiscal contribution or other allocation by employers in support of training system
- ▶ Recruitment of training graduates by employers, immediately after training, within six months, after one year
- ▶ Quality of graduates, training standards vs. employers' stated requirements
- ▶ Relevance of curriculum and/or standards as evidenced by extent of subsequent on-job training
- ▶ Formal linkages between employers and training system/institutions, including attendance of enterprise representatives on training committees, participation of employers in industry placements and curriculum review
- ▶ Numbers of training graduates entering self-employment, by gender and sector, and those successful after one year, three years
- ▶ Measurements of effectiveness (relationship of outputs to objectives): output of successful graduates by training programme numbers of graduates finding paid employment
 - ▶ continuity of graduates in original employment and/or trade
 - ▶ unemployed graduates compared with unemployed youth without training
 - ▶ excess or shortfall of training places compared to demand
 - ▶ numbers of graduates found jobs through institutional placement services
 - ▶ extent of satisfaction expressed by employers
- ▶ Measurement of efficiency (relationship of inputs to outputs):
 - ▶ Student/teacher ratios
 - ▶ Utilization of facilities (equipment, workshops) by numbers and time
 - ▶ Scope for cost reduction (higher student/staff ratios, better utilization of facilities, economies of scale)
 - ▶ Ratio of qualifications achieved, completions, repetitions to enrolments

6.5 Workshop Minutes

Date	10 June 2011		
Meeting & Location	Workshop on Labor Market Information System at India Habitat Center, New Delhi		
Participants	DGET	Everonn	Tata Motors
	World Bank	IL&FS	Power Energy
	NASSCOM	IBM	Hydrocarbons Education
	ARUNIM	Tanjun Associate	FICCI
	Indian Foundrymen	iStar	GRAS Education
Key Discussion Points	<ol style="list-style-type: none"> 1. The Workshop began with a Welcome address/ Introduction by Mr. Dilip Chenoy and Dr. Sharda Prasad. 2. In his address, Dr. Sharda Prasad raised the following concerns in the Indian labor market today: <ol style="list-style-type: none"> a. Even though frequent Labor surveys are carried out, these are mainly for export oriented sectors only (about 8 of them). b. The current regulations do not penalize the employers for non-compliance to submission of Employment Returns. Efforts are now being made to revise the Act and allow online submission mandatory. c. 1100 EEs across the country have potential to contribute to the LMIS but require complete overhaul in terms of processes reengineering, people training and technology deployment. 3. Consultants from Ernst & Young were then invited to give a presentation on the conceptual framework for LMIS, which was based on the recently concluded consulting assignment. Following are the broad areas covered in the presentation: <ol style="list-style-type: none"> i. Context ii. Leading practices (International + Domestic) iii. Stakeholder survey iv. Proposed framework v. Way forward 4. Subsequent to the presentation, following key questions from the participants were noted, which were attended during the brainstorming session. <ol style="list-style-type: none"> a. How can we analyze the international leading practices and customize them to develop an LMIS for the Indian labor market - given the typical government, geo-political, demographic landscape of the country? b. How can we make LMIS model self sustainable in the long run? c. How can we structure the LMIS such that data gets captured at the Panchayat level? d. What role can the existing EEs play in the entire scheme of things? 5. After the Q&A round, a briefing on Brainstorming was given to the participants, divided in 3 groups, which was followed by brainstorming and presentations. The groups deliberated on the matters like data sources for LMIS, governance mechanism, skill assessment tests and business model. Although most of the thoughts were in-sync with the conceptual brief prepared by NSDC already, following are a few additional points which emerged from the presentations: <ul style="list-style-type: none"> • There should be a provision in LMIS for regular data updation, especially in case 		

	<p>of labor migratory trends</p> <ul style="list-style-type: none">• The exhaustive databases maintained by the political parties for vote assessment could also be utilized as a data source in LMIS.• Institutional stakeholders like employers, training institutions, should be required under a statute to feed data into the system regularly.• Trade unions should be involved in the process to reach out to laborers, as input to the system.• In regard to managing the entire system, Central Government should be at the helm of affairs, such that the required policy & regulatory changes could be made and other support (seed funding etc.) could be sought. <p>6. The Workshop ended with a Vote of thanks from NSDC.</p>
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List of tables

S.no.	Table name
Table 1.1	Chapter Summary
Table 2.1	Representative Sample of Best Practices in International LMIS
Table 2.2	Comparison Matrix of LMI
Table 2.3	Per thousand distribution of rural households by type of household
Table 2.4	Per thousand distribution of Urban Households by Household Type
Table 2.5	Per thousand distribution of employed persons by broad industry groups
Table 2.6	Distribution of workers by type of enterprise
Table 2.7	Per thousand distributions of employed persons among units of different employment size
Table 2.8	Employed persons by type of enterprise
Table 2.9	Percentage of workers across major industrial categories as per educational attainment, 2004-2005
Table 2.11	Table 2.11: Percentage of employment oriented migrants by streams of migration
Table 3.1	Stakeholder Roles and Responsibilities
Table 3.2	Information Mapping - Government and Policy Makers
Table 3.3	Information Mapping - Employers
Table 3.4	Information Mapping - Industry Associations

List of figures

S.no.	Figure name
Figure 1.1	General Market Scenario: LMIS
Figure 1.2	LMIS ecosystem
Figure 1.3	Data Exchange Mechanism
Figure 2.1	Countries selected for the International Leading Practices Study
Figure 2.2	Key Characteristics of the Australian LMIP
Figure 2.3	Key Characteristics of the United Kingdom's LMIP
Figure 2.4	Key Characteristics of New York's LMIP
Figure 2.5	Key Characteristics of California's LMIP
Figure 2.6	Key Characteristics of the Florida's LMIP
Figure 2.7:	Key Characteristics of the Oregon's LMIP
Figure 2.8	Key Characteristics of the Jamaica's LMIP
Figure 2.9	Key Characteristics of Canada's LMIP
Figure 2.11	Key Characteristics of Singapore's LMIP
Figure 2.12	Comparative Analysis
Figure 2.13	Options for LMIS Framework
Figure 2.14	IT Approach by Govt. of Gujarat
Figure 2.15	IT and BPR Approach by Govt. of Maharashtra
Figure 2.16	Models adopted by Govt. of Karnataka
Figure 2.17	Building Blocks of the LMIS Framework
Figure 2.18	Types of Unemployment in India
Figure 3.1	LMIS Stakeholder Ecosystem
Figure 3.2	Stakeholder Analysis
Figure 3.3	LMIS Information Universe
Figure 4.1	Optimal Labour Market Information System- Coverage
Figure 4.2	Sector Specific to Master LMIS
Figure 4.3	Sector Specific LMIS Framework
Figure 4.4	LMIS Aspects - Construction Sector
Figure 4.5	LMIS Aspects - Textile Sector
Figure 4.6	LMIS Aspects - Manufacturing Sector
Figure 4.7	Preliminary LMIS Physical System Architecture
Figure 4.8	Governance Mechanism Framework
Figure 4.9	Pull Strategy to Stakeholder enrolment
Figure 5.1	Implementation Framework
Figure 5.2	Way forward steps
Figure 5.3	Proposed LMIS Architecture

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