



german  
cooperation

DEUTSCHE ZUSAMMENARBEIT

Published by

**giz** Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ) GmbH

# Improvement of the Labour Market Information System (LMIS) in the State of Karnataka, India



---

## Imprint

### **Published by**

Deutsche Gesellschaft für  
Internationale Zusammenarbeit (GIZ) GmbH

Registered offices  
Bonn and Eschborn

Indo-German Programme for Vocational  
Education and Training (IGVET)  
B5/1, Safdarjung Enclave  
New Delhi, 110029, India  
T: +91 11 4949 5353  
F: +91 11 4949 5391  
E: [igvet@giz.de](mailto:igvet@giz.de)  
I: [www.giz.de](http://www.giz.de)

### **Person responsible for IGVET**

Mr Noor Naqschbandi  
Head of Programme  
Private Sector Development, GIZ India

### **Authors of the study**

Ms Eugenia Atin, Prospektiker – European Institute for Future Studies and Strategic Planning  
Mr Atif Khan, Association of Skill Training Providers (ASTP)

### **Design and layout**

EYES-OPEN, Germany

### **Photo credit**

© GIZ / Dirk Ostermeier

### **On behalf of the**

German Federal Ministry for Economic  
Cooperation and Development (BMZ)  
New Delhi, India

February 2019

---

# Acknowledgements

This report was developed and edited for the **Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), GmbH** by Eugenia Atin from **Prospektiker – European Institute for Future Studies and Strategic Planning** and Atif Khan from **Association of Skill Training Providers (ASTP)**.

The authors would like to express their gratitude to Mr Noor Naqschbandi from GIZ and Mr Navanit Samaiyar (CEO, ASTP) for their ideas, insights and guidance throughout the research and writing process. Many thanks also to Dr V.K. Saraswat, NITI Aayog Member, Mr Amlan Aditya Biswas, IAS, Secretary, Department of Labour, Department of Skill Development, Government of Karnataka,

Mr Anup K. Pujari, Chairman, Karnataka Skill Development Authority (KSDA), Ms V.V. Jyothsna, IAS, Mission Director, Skill Mission, Government of Karnataka, Dr G.K. Karanth, Director, Karnataka State Labour Institute, and Ms Sandhya Salwan, Director, National Skill Development Agency, for sharing their expertise on supporting Labour Market Information Systems (LMIS) in the state of Karnataka.

The authors also wish to warmly thank all the stakeholders interviewed for generously sharing their opinions for this study.

---

# Table of contents

List of tables and figures . . . . .	5
List of abbreviations . . . . .	6
<b>1. Introduction . . . . .</b>	<b>7</b>
<b>2. Understanding the Labour Market Information System (LMIS) . . . . .</b>	<b>8</b>
<b>3. Compilation of international standards and good practices . . . . .</b>	<b>9</b>
3.1. International standards. . . . .	9
3.2. International good practices. . . . .	10
<b>4. Current state of the LMIS in Karnataka . . . . .</b>	<b>13</b>
4.1. Salient features of Kaushalkar. . . . .	13
4.2. Compatibility with national LMIS . . . . .	13
4.3. Areas of improvement. . . . .	14
<b>5. Step by step guide . . . . .</b>	<b>17</b>
5.1. Recommendations . . . . .	17
5.2. The way forward . . . . .	21
References. . . . .	22
Annexure A: Methodology. . . . .	23
Annexure B: LMIS tools and portals. . . . .	24
Annexure C: Interviewees . . . . .	25

---

# List of tables and figures

## Tables

Table 1: Relevant modules and functionalities according to the conducted research . . . . . 10

Table 2: Suggested team structure for effective monitoring of Kaushalkar . . . . . 17

## Figures

Figure 1: Example of modules found in an advanced LMIS. . . . . 19

Figure 2: Summary of the major recommendations to improve LMIS in the state of Karnataka . . . . . 21

---

# List of abbreviations

<b>BCIC</b>	Bangalore Chamber of Industries and Commerce
<b>CEO</b>	Chief Executive Officer
<b>DGT</b>	Directorate General of Training
<b>FICCI</b>	Federation of Indian Chambers of Commerce and Industry
<b>GIZ</b>	Deutsche Gesellschaft für Internationale Zusammenarbeit
<b>HQ</b>	Head Quarter
<b>IAS</b>	Indian Administrative Service
<b>IGVET</b>	Indo-German Programme for Vocational Education and Training
<b>ILO</b>	International Labour Organisation
<b>IT</b>	Information Technology
<b>ITI</b>	Industrial Training Institute
<b>KASSIA</b>	Karnataka Small Scale Industry Association
<b>KILM</b>	Key Indicators of the Labour Market
<b>LMI</b>	Labour Market Information
<b>LMIS</b>	Labour Market Information System
<b>MHUPA</b>	Ministry of Housing and Urban Poverty Alleviation
<b>MSDE</b>	Ministry of Skill Development and Entrepreneurship
<b>MSME</b>	Micro, Small and Medium Enterprises
<b>NCVT</b>	National Council for Vocational Training
<b>NITI Aayog</b>	National Institution for Transforming India Aayog
<b>NSDA</b>	National Skill Development Agency
<b>NSDC</b>	National Skill Development Corporation
<b>NSRD</b>	National Skill Research Division
<b>NSTI</b>	National Skill Training Institute
<b>PMKVY</b>	Pradhan Mantri Kaushal Vikas Yojana (Prime Minister's Skill Development Scheme)
<b>SDIS</b>	Skill Development Initiative Scheme
<b>SDMS</b>	Skill Development Management System
<b>SSC</b>	Sector Skill Council
<b>UNDP</b>	United Nations Development Programme
<b>VET</b>	Vocational Education and Training

# 1. Introduction

While India's population growth has declined over the years, the Indian labour market is expecting to welcome more than 250 million young people in the next 15 years. India's ambition to become a globally leading manufacturing hub requires sufficient, qualified workers. To produce a workforce of adequate quality and quantity, the Government of India promotes the active involvement of private enterprises for establishing a demand-driven, workplace-based vocational education and training (VET) system. In line with this policy objective, the Ministry of Skill Development and Entrepreneurship (MSDE) has signed an implementation agreement with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, to jointly implement the Indo-German Programme for Vocational Education and Training (IGVET). Under the framework of the IGVET, the Government of Karnataka has requested technical support in improving its Labour Market Information System (LMIS).

Indeed, an advanced LMIS could be a very powerful policy tool for the Government of Karnataka to help improve the conditions of the labour market and reduce its imperfections. Moreover, both job seekers and employers in need of hiring could benefit from having relevant, updated and timely information that supports them when taking decisions about their future. With more adequate information, students could better decide regarding their area of study and training providers could design their offer according to the needs of the employers.

Labour information has a direct impact on the time required to reduce unemployment and the speed to fill job vacancies. Although the unemployment rate in Karnataka is not considered to be a cause for

concern, an efficient LMIS helps in the creation of high quality employment, which is one of the main challenges in India today. An LMIS also acts positively on very important structural elements such as skills mismatch, informality, retention of talent, discrimination and inequality. It is also a key factor for people to adapt to the increasingly rapid changes in the labour market. In addition to collect quantitative and qualitative information, LMIS must comply with other functions such as analysis and market monitoring, research on labour issues, formulation of employment policy proposals and dissemination of products.

The state of Karnataka, has set up a well-functioning web portal, [www.kaushalkar.com](http://www.kaushalkar.com), for the registration of potential trainees, employers and training providers from the public and private sector, however, the portal is in need of new modules and functionalities to include descriptive and analysed information of the labour market. To ensure the success of the newly developed, cooperative VET models, an overhaul of the existing system is thus of crucial importance.

In this report, a mapping is done of the main characteristics of the international standards and examples of LMIS, followed by a state-of-the-situation in Karnataka, to finish with specific recommendations for the Government of Karnataka to take into account when remodeling the functionalities of Kaushalkar. The importance of moving forward is highlighted in order to come up with an integrated and updated LMIS in the state of Karnataka, with prospects for the long term.

## 2. Understanding the Labour Market Information System (LMIS)

The National Skill Development Agency (NSDA) of the Government of India understands a Labour Market Information System (LMIS) as ‘a labour market policy instrument to improve the information flow in the labour market. Increasingly the LMIS also provides tools and resources to help people decide on careers and find work.’ In addition, the NSDA defines the Labour Market Information (LMI) as ‘all the data, quantitative and qualitative which describes the labour market’.<sup>1</sup>

The training agents, both decision makers and training providers, recognise that there is a lack of adequate information concerning the real needs of employers for adapting training to the work demands. In order for training systems to deliver the right mix of skills both to meet student needs and to match the requirements of the labour market, appropriate LMI is needed. Skills mismatches in the labour market have been a growing concern in India and LMI can help to tackle the imbalance between the supply and demand of professional skilled workers in certain economic activities and sectors. Moreover, policy makers would be in a position to react if good LMI is provided.

An advanced LMIS should be a platform centralising Labour Market Information for 4 main types of stakeholders who are potential users of the information hosted in the system:

- Policy makers (LMI with a governance approach, supporting the policy making process)

- Jobseekers, students and training providers (LMI with a supply approach, assisting them to gain access to employment, allowing training centres to design courses adapted to the needs of the employers)
- Employers (LMI with a demand approach, helping employers to hire staff and train their workers)
- Researchers (LMI with an observation approach, providing enough data for their studies)

An efficient LMIS will gather all the LMI, analyse the data and disseminate it. First, the system should use reliable sources of data to guarantee that enough descriptive information is provided. A further step is needed though, in order to analyse the information or statistics and provide labour market knowledge or intelligence which will assist the four types of stakeholders in their respective duties and decisions.

In order for the LMIS to be suitable for the four target groups, it must provide a good number of online services or functionalities. The only way for the LMIS to become a sustainable system is by being useful for the stakeholders; when they find it efficient, more interconnections are created and more information is then collected and offered.

1 <https://www.lmis.gov.in/characteristics>



# 3. Compilation of international standards and good practices

## 3.1 International standards

For the purpose of applying a world-wide accepted framework and archetype, the definitions and standards provided by ILO (International Labour Organisation) will be utilised across the report<sup>2</sup>.

According to ILO (International Labour Organisation), Labour Market Information (LMI) is ‘any information concerning the size and composition of the labour market, the way it functions, its problems and opportunities and the employment-related intentions of those who are part of it.’ (Mangozho, 2003).

A Labour Market Information System (LMIS) ‘facilitates labour market analysis, provides the basis for monitoring and reporting on employment and labour policies, and constitutes a mechanism to exchange information or coordinate different actors and institutions that produce and utilise labour market information and analysis. The main purpose of LMIS is the production of information and analysis for policy-makers and other labour market stakeholders’.

ILO explains that LMIS consist of four main components:

1. collection and compilation of data and information,
2. repository of information,
3. analytical capacity and tools, and
4. institutional arrangements and networks.

LMIS must monitor a minimum number of indicators. The Key Indicators of the Labour Market (KILM) ‘constitute a subset of labour market indicators used to track new employment trends’. According to ILO, LMIS should aim at disseminating these KILM: labour force participation rate, employment to population ratio, status in employment, employment by sector, part-time workers, hours of work, employment in the informal economy, unemployment, youth employment, long-term unemployment, unemployment by educational attainment, time-related underemployment, inactivity rate, educational attainment and illiteracy, manufacturing wage indices (trends in average wages at the industry level), occupational wage and earning indices (by specific industry groups), hourly compensation costs, labour productivity and unit labour costs, employment elasticities (numerical measure of how employment growth varies with growth in economic output), and poverty and income distribution.

These indicators are the backbone and starting point for advanced LMIS, however, jobseekers, employers and policy makers are going to need more knowledge than just these macro indicators that might not provide them with enough practical and useful information.

<sup>2</sup> <https://www.ilo.org/global/topics/dw4sd/themes/lm-info-systems/lang--en/index.htm>

## 3.2. International good practices

There are as many LMIS in the world as countries or regions, and none of them follow the same structure or offer exactly the same functionalities. Since there is no universal solution, governments seeking to improve their monitoring systems, may look at reference examples to carry out a benchmarking activity that will help identify the good features that could be applicable in their countries.

For the development of this study, advanced tools exemplified by the LMIS in Australia, Canada, Czech Republic, Denmark, Europe (as a whole), Germany, Italy, Netherlands, Spain, United Kingdom and the United States have been examined in order to provide better recommendations so as to add functionalities to the existing LMIS in Karnataka.

Indeed, this analysis of advanced LMIS carried out at an international level has helped to identify the trends in LMIS and the components or applications that are currently being integrated by the systems.

LMIS may have only a statistical component, but the most advanced ones, also include the career guidance component and the labour intermediation services (job matching) as key functionalities. Through the international examples, it is learned that LMIS always integrate information from multiple sources. In addition, LMIS always adapt their products and services to the final users, who as previously mentioned, primarily include: policy makers and researchers (they need statistics), students, training providers, job-seekers and career advisors (they need career information, information about employments in demand and about job vacancies), and employers (they want information about the skilled workers).

In the table below, a description is provided of the most relevant modules or functionalities that the LMIS often contain, according to the conducted research.

**Table 1: Relevant modules and functionalities according to the conducted research**

LMIS Component	Existing Products	Origin
Job portal	<ul style="list-style-type: none"> <li>• Connection of job seekers with employers</li> <li>• List of job vacancies</li> <li>• Option to search for and apply for jobs with no need to be registered (although registering entitles you to more benefits)</li> <li>• Aggregator portal of online job vacancies through agreements with the major private job portals</li> </ul>	<ul style="list-style-type: none"> <li>• Examples from Australia, Canada, Spain, UK etc.</li> </ul> <p><a href="https://www.gov.uk/jobsearch">https://www.gov.uk/jobsearch</a>  <a href="https://www.jobbank.gc.ca/findajob">https://www.jobbank.gc.ca/findajob</a>  <a href="https://www.empleate.gob.es/empleo/#/">https://www.empleate.gob.es/empleo/#/</a></p>
Research and Statistics	<ul style="list-style-type: none"> <li>• Statistics for employment, training, demographics, skills, etc.</li> <li>• Sector-specific research and trends</li> <li>• Tailored employment statistics</li> </ul>	<ul style="list-style-type: none"> <li>• Examples from all</li> </ul>
Career counseling	<ul style="list-style-type: none"> <li>• Site to help decide on future career</li> <li>• Job outlook</li> <li>• Description of job roles, paths and prospects</li> </ul>	<ul style="list-style-type: none"> <li>• Examples from Australia, Ireland, Canada</li> </ul> <p><a href="https://joboutlook.gov.au/">https://joboutlook.gov.au/</a>  <a href="https://careersportal.ie/">https://careersportal.ie/</a></p>

LMIS Component	Existing Products	Origin
Forecasting	<ul style="list-style-type: none"> <li>• Projections of employment by economic sectors and by occupations</li> <li>• Projections of the potential supply of workers</li> <li>• Projections of future trends in the number of job openings and job seekers for occupational groupings</li> <li>• Labour shortage or labour surplus conditions until 2026, 2030 and so on.</li> </ul>	<ul style="list-style-type: none"> <li>• Examples from Canada, UK, Germany, Spain...</li> <li><a href="http://occupations.esdc.gc.ca/sppc-cops/w.2lc.4m.2@-eng.jsp">http://occupations.esdc.gc.ca/sppc-cops/w.2lc.4m.2@-eng.jsp</a></li> <li><a href="http://futurelan.eus/es/">http://futurelan.eus/es/</a></li> </ul>
Technical and soft skills demand	<ul style="list-style-type: none"> <li>• Technical skills and soft skills need by occupations and sectors</li> <li>• Standardised and occupation-specific descriptors by occupations</li> <li>• Trends for skills supply and demand</li> <li>• Possible skills mismatches</li> </ul>	<ul style="list-style-type: none"> <li>• Examples from Europe, USA,</li> <li><a href="http://skillspanorama.cedefop.europa.eu/en">http://skillspanorama.cedefop.europa.eu/en</a></li> <li><a href="https://www.onetonline.org/">https://www.onetonline.org/</a></li> </ul>
Real time analysis	<ul style="list-style-type: none"> <li>• Analysis of online job vacancies (through big data and semantic analysis technique) to determine the real time employment demand by sector, occupation, region etc.</li> <li>• Real time labour market reports</li> <li>• Real time skills demanded by employers</li> </ul>	<ul style="list-style-type: none"> <li>• Example from Italy</li> <li><a href="https://www.wollybi.com/en/">https://www.wollybi.com/en/</a></li> </ul>
Private involvement	<ul style="list-style-type: none"> <li>• Employers' surveys</li> <li>• Skills Networks and working groups to validate and test the forecasts and assumptions of the LMIS</li> <li>• Identification of early trends in labour markets and developments in qualification demands, through public-private collaboration: company panel, external experts and researchers.</li> <li>• Partnership with business, unions and government, to understand and rationalise the demand for skills</li> </ul>	<ul style="list-style-type: none"> <li>• Examples from UK, Czech Republic, Spain, Germany, Scotland</li> <li><a href="http://www.skillsdevelopmentscotland.co.uk/resources/skills-investment-plans/">http://www.skillsdevelopmentscotland.co.uk/resources/skills-investment-plans/</a></li> </ul>
Targeted observatories	<ul style="list-style-type: none"> <li>• Migration monitor – A web-based labour market monitoring system providing detailed information about migrants</li> <li>• Youth monitor, to improve existing data on several different topics</li> <li>• Learning and Skills Observatory to develop and exchange evidence-based policy and improved decision-making</li> </ul>	<ul style="list-style-type: none"> <li>• Examples from Germany, Wales, Netherlands</li> <li><a href="http://www.ioresearch.nl/home/expertise/jeugd-zorg-en-welzijn">http://www.ioresearch.nl/home/expertise/jeugd-zorg-en-welzijn</a></li> </ul>

From the observation and analysis of advanced LMIS in the 10 different countries, the following common characteristics were identified:

- The functionalities or different components of the LMIS are customised according to the target audience (job-seekers, students, employers, training providers, researchers, policy makers etc.), using even separate sections addressed to them so that it is easy to find what they need,
- LMIS also adapt their final products to users in terms of readability, attractiveness and free, open access with no need of registration,
- LMIS usually incorporates a job portal,
- LMIS centralises information from other sources and usually contain links to other sites of interest, highlighting the need of inter-department collaboration and partnerships,
- LMIS offer a breakdown of the information at a local, sectorial and occupational level, and
- Public-private collaboration is visible through the incorporation of LMI from the private sector as well as the listing of private online job vacancies.

The analysis is one of the most important elements of the international LMIS that have been examined. An LMIS that only provides statistics or lists of candidates or employers does not provide enough information for all the target groups. The information needs to be analysed in order to provide enough intelligence for all stakeholders.

Most of the LMIS integrate existing analysis of the economic context and the growth trends related to the sectors and skills in demand. Rather than creating content, it is more about disseminating existing content that unless published in the LMIS, wouldn't be easily accessible to the stakeholders.

As a rule, aggregated information is not very useful for the specific target groups. The examined international LMIS provide information by sectors, by occupations, by job roles, by regions, by districts, etc. In a state like Karnataka, for example, where mobility is not attractive for the people this is a very relevant feature that the LMIS should take into account. District level quantitative and qualitative information helps job-seekers as well as policy makers working for the local development and employment.

Another trend identified during the observation of advanced LMIS is that the public job portals are including job vacancies from the private sector intermediation services. The LMIS lists all vacancies indicating the source, and when clicked, the user is directed to the private job portal. In relation to the online job vacancies, big data and analytics is now allowing to study in detail the needs of the employer and this information is being used to identify in real time the skills that the candidates should be immediately trained on.

All of these features could fit very well in the Indian context and specifically in Karnataka. As it will be further described in the next sections, some of the services are already being delivered by the current LMIS but others could be improved or introduced as new features, dedicating more resources or in some cases subcontracting a whole application.

# 4. Current state of the LMIS in Karnataka

## 4.1. Salient features of Kaushalkar

The Government of Karnataka, in a bid to create Labour Market Information System, has developed a portal – [www.kaushalkar.com](http://www.kaushalkar.com) (hereafter referred to as ‘Kaushalkar’). It has been developed by the Department of Skill Development, Entrepreneurship and Livelihood. The Kaushalkar portal has some salient features with an objective to match demand and supply sides to enhance the skilling ecosystem. It has information pertaining to authority, institutes, schemes, initiatives, partners and skill mission. The centrepiece of the portal is the tab for ‘Registration’. To collect real time data, it has provision for registration of three categories, which are as follows:

1. Aspirants,
2. Training providers, and
3. Employers

Apart from this centerpiece, few basic features of Kaushalkar are:

- Bilingual platform
- Social media tabs
- Feedback provision
- Blogs and updates
  - Featured articles
  - Social media news
  - Latest articles
  - Monthly events calendar
  - Gallery
- Categories for
  - Guidelines
  - Sector job roles
  - Government orders

## 4.2. Compatibility with National LMIS

The national LMIS, [www.lmis.gov.in](http://www.lmis.gov.in), developed by the National Skill Development Agency (NSDA) has also been examined for a more comprehensive understanding of the state’s portal within the national context. The national portal has been conceived to bring together the sources of information into a single gateway linking users and suppliers of information across ministries, institutions and states.

Although the NSDA is currently developing new modules and functionalities, the portal today is focused on the supply side. The NSDA has developed

different registers (training providers, certified candidates, assessors, training centres, etc.) which are central to the operation of a VET system. The system is fed by different schemes and sources: SDIS, NCVT, SDMS, PMKVY, Ministry of MSME, Ministry of Tourism, MHUPA and Ministry of Minority Affairs, with the added accomplishment of standardising all databases.

The LMIS in India provides information about the top 10 sectors, states and districts with maximum certified candidates, in user friendly formats. It also

provides a complete list of candidates per state with the possibility to do an advanced search.

Kaushalkar being able to feed the national LMIS would significantly strengthen the national portal's accuracy and would simplify the process of standardisation of the fields of the different databases.

In addition to the NSDA's portal, the National Career Service, [www.ncs.gov.in](http://www.ncs.gov.in), offers a complete guidance offer for students and their parents for informed career choices. It is a job portal that contains career information of 52 sectors, and for each, a list of

occupations and details related to the job description, work environment, educational qualification and training, key competencies, desirable competencies, available skill training and learning institutions, available scholarships, career progression path, transfer option (India and abroad), expected earnings, required work experience, and probable employers.

Even if not adapted to the state of Karnataka, this intelligence is still very relevant and could be a part of the state's advanced information system.

### 4.3. Areas of improvement

An LMIS is an evolving process. In practice it can always be improved. A snapshot at any particular time can detect areas for improvement. Currently the areas that need improvement can be summarised under a number of headings.

#### 1. Concept building

The National Skill Development Agency (NSDA) describes an LMIS as 'an integrated set of institutional arrangements, procedures, mechanisms and data systems designed to produce labour market information as per global standards and best practices'.<sup>3</sup> The original data can be either quantitative (will eventually become statistics) or qualitative, but such raw data needs to be processed, analysed and transformed into an output that can serve as the labour market intelligence. Such intelligence can take the form of interactive media, reports, brochures or other type of outputs which can then be utilised by labour market stakeholders, essentially policy makers and industrial actors.

It has been found that, barring few, the core basis of LMIS is not understood among the stakeholders in the state of Karnataka. Kaushalkar has been perceived like an online tool for Employment Exchange. If one has to say in one word, Kaushalkar is a replacement of employment exchange in the state of Karnataka which itself is a good initiative to build a connection

among the employers, aspirants and training providers. However, the sole purpose of LMIS is currently not visible which is data analytics and information dissemination so as to assist the stakeholders in decision making.

#### 2. Awareness generation

The three main types of LMIS stakeholders, demand side, supply side and public authorities, do not seem to be aware of the functions and in some cases even the existence of the Kaushalkar portal. Although apparently, they have been informed, the stakeholders perceive that there hasn't been a communication to properly inform the stakeholders about the objectives of Kaushalkar, the services and the information provided by the portal. The promotion of Kaushalkar at job fairs, though being a good initiative is considered insufficient by the stakeholders.

The labour market information available hasn't been disseminated suitably and therefore it is not very likely to be used by the policy makers and other labour market practitioners who are unaware of its existence.

For any initiative, a marketing strategy is used by all types of institutions to make consumers aware of the features, specifications and benefits of the products and to encourage them to use those specific products

3 <https://www.nsda.gov.in/lmis.html>

and services. LMIS will not serve its purpose if it's not promoted at the grassroots level among all the stakeholders. This requires a strategic marketing plan and management which can be done via several ways like branding, advertisement, radio broadcasting, digital marketing, etc. It has been found in the study that only few stakeholders were aware about Kaushalkar because of weak marketing strategy adopted.

### 3. Participation of stakeholders at all levels

A robust LMIS seeks private sector employers actively contributing to the system along with the public actors. The participation can be realised in two stages: during the development of LMIS and at the implementation stage. When Kaushalkar was being developed, its developers insisted on private sector participation, yet no such evidence has been found in the interviews, even from the industry associations. The private sector, moreover, shows interest in actively contributing to the system.

Employers are among the target audience of the LMIS and have a vast knowledge of the labour market, being responsible for most of the jobs created. It is only fair and appropriate to involve them in the design of the solutions that are going to be integrated by the portal. A focus group with the stakeholders asking them about their needs and the characteristics of the services to be offered would be a simple way to involve them, although a periodic involvement is recommended.

Such a participatory framework shall permit a strategic long-term approach to the functioning of Kaushalkar.

### 4. Integrated approach

Based on the core set of functions it performs, LMIS can be classified into two categories:

1. Service-oriented LMIS: This provides information to aspirants, employees, employers, and training providers to enhance their efforts to accordingly benefit from the networked system. Such system is demand and supply oriented. It provides services to the stakeholders in terms of matching the

demand with supply. The objectives are to improve job placement and skill matching by helping job seekers to build their capacity on looking and applying for job positions and to assist them in designing their CV's.

2. Data-driven LMIS: This serves the purpose of producing information which describes the key trends in the labour market that are becoming widespread. This system is mostly intervention and observation oriented.

It is especially useful for policy makers aimed at improving the quality of labour market. It is structured on a set of macro-level labour market performance indicators including unemployment rates, new trends in job formation within the sector, information on labour market demographics, location-based availability of skills, etc.

The Kaushalkar portal shows the tendency of being the service-oriented LMIS that is meant to produce quantitative data based on real time registration process, while qualitative 'processed' data i.e. information dissemination is missing. Arguably, effective policy interventions should rely as much on qualitative outcomes as on quantitative data.

Since the Kaushalkar portal collects data by registration process, its ability to capture available data from different departments of Karnataka Government is limited in the sense that it targets only those stakeholders who are willing to register on the portal. Hence, the ability to integrate data from various departments of the Government is absent. The current process of data collection narrows down the base of data sources. National LMIS, under National Skill Development Agency (NSDA), has made an attempt to capture available data from different ministries/ departments of the Central and State Governments.

It is therefore crucial for Kaushalkar to count on descriptive information on the labour market so that corresponding analysis can be done and relevant services can be delivered to the final user.

### 5. Data analytics

As mentioned in previous sections, Kaushalkar does not yet analyse the LMI, transforming

the information into intelligence. Advanced LMIS provide a wide range of online products for employers, and also policy makers and job seekers. This is not the case, however, of Kaushalkar where a gap is identified specially concerning the analysis of the data and information on the demand and the governance level. The new technologies facilitate the process of analysing and sharing the information and the more data and services are used within the LMIS, the more stable and visible the LMIS becomes.

Kaushalkar is nowadays undergoing a complete transformation and the outputs seem very promising, however, the private sector representatives that were interviewed were critical when it came to assess the value provided by the current LMIS.

On the one hand, Kaushalkar does not identify or exploit the existing sources of labour market information. On the other hand, it does not analyse the economic context, competitiveness, and growth trends, not being able to identify the growing industries nor the types of training that are currently being over-supplied or in demand.

As observed in the international examples, advanced systems are incorporating forecasting tools in order to provide analytical highlights on the trends for the future, on the competencies and the abilities that employers are demanding in real time.

Moreover, stakeholders around India and Karnataka are carrying out extensive research and studies related to the labour market that could very well feed the LMIS in Karnataka. The research, in most cases surveys and reports, is currently not being exploited nor analysed by Kaushalkar.

## 6. Informal sector

With over 90% of the work force in India employed in the informal sector, it is not reliable to have a system which exclusively measures the formal sector. In fact, informality is one of the International Labour Organization (ILO)'s main concerns and research is

being conducted on new ways of measuring informality and progressing into the formal sector. Data collection strategies need to be restructured with a focus on measuring the initiatives taken to help informal workers and firms. For instance, the rates of transition into formality, the rates of skills endorsed or the competences recognised.

Kaushalkar, currently does not provide information on the informal sector, and therefore it is not taking into account the biggest source of employment in the country. Quantitative and qualitative information of the informal sector and the informal employment would significantly improve the labour market knowledge and would help determine the most adequate ways to facilitate a transition to formality. The use of surveys for the direct measurement of the informality offers reliable and detailed information, although it quickly becomes out-dated.

With an LMIS providing a more detailed picture of the informal sector, better macroeconomic research can be done and better policies can be designed regarding the creation of employment, the training of the youth, the allocation of financial resources, etc.

## 7. User-friendliness

Despite the user-friendly interface of Kaushalkar, gaps are identified regarding the access to the LMI. Unless registered, the user can only view certain sections as for example the description of the schemes and institutions. However, passwords should not be required except when registering personal data. Users should also be able to visualise and download the data in various formats, which is currently not the case for the LMIS of Karnataka.



# 5. Step by step guide

## 5.1. Recommendations

### 1. Building a conceptual approach towards common objectives of LMIS

The very first step should involve the concept building of LMIS. This can be done by conducting workshops with active participation from all the stakeholders – trainees, potential aspirants from educational institutions, training providers, employers, industry associations. The workshops must educate the stakeholders about the benefits of the system and must define a common objective. Such workshops can also pave the way for high-level participation of private sectors.

### 2. Identifying the dedicated teams for effective monitoring and implementation of Kaushalkar

Apart from the IT consultants involved with the development of Kaushalkar, what is required is to identify and create separate teams dedicatedly working for continuous functioning and monitoring of Kaushalkar, supervised by the Monitoring/Steering Committee.

**Table 2: Suggested team structure for effective monitoring of Kaushalkar**

#	Team Description	Number of Persons	Functions
	Monitoring/Steering Committee	X (Must be decided by Government body in consultation with private stakeholders)	This can be a decision-making steering committee with the involvement of senior bureaucrats and representation from private sectors (from demand and supply sides). The major role of this committee should be to supervise and monitor the overall functioning of Kaushalkar.
1.	Marketing and Public Relations	3	At least three persons can be dedicated for Marketing and Public Relations. Their task would be to implement the marketing strategy decided by the Monitoring committee. Their roles must also include 'generating awareness' using various means.
2.	Data Collection	This must be decided by the Monitoring/Steering Committee.	This team can be established temporarily until the available data from various departments of Karnataka Government is captured and then the task for continuously updating the data can be given to the 'Data Analysis Team' (Refer below).  (For integration of data, the decision is expected at the Government level.)
3.	Data Analysis and Intelligence	At least 4/5	This is the crucial team for analysing the raw data collected either from fresh registration process or integration of available data. The suggestion is to use technology platform with the help of IT consultants. This team should give the processed information to Marketing Team which should be responsible for its dissemination.

All the three teams must work in close collaboration with each other and must regularly report the status of the work to the Monitoring/Steering Committee.

### 3. Awareness generation programmes

The next step is in the direction of generating awareness at the constitutional level. For Kaushalkar to achieve its defined objective, it is imperative for the stakeholders, at first, to know about the system and acknowledge its new functionalities.

In this sense, electronic dissemination is recommended at first followed by a face-to-face approach, which is especially useful in raising the awareness among labour market practitioners. Kaushalkar could be included as a regular agenda item at network meetings or at regular meetings. This also gives everyone the opportunity to discuss information that has been published on the website. Stakeholders can seek clarification or highlight their own information or intelligence.

Paper leaflets could be used in meetings in events, advertising Kaushalkar and its services for jobseekers, employers, policy makers and researchers. The use of videos and social media (LinkedIn, Facebook, Twitter etc.) would be relevant when trying to attract the younger audience.

Sending a regular newsletter by e-Mail to all government departments and agencies, training centres, sector skill councils, employers' associations, industrial associations, registered employers, certified candidates, assessors, etc. to inform them about the latest developments in the portal and the newest information they can access, is also considered a good practice.

Finally, bringing the LMIs into a job fair or an open forum will also give the opportunity to assess how well it is being assimilated and used.

### 4. Building a communication and marketing strategy

In line with the above, a communication strategy should be established in order to define the dissemination actions and channels, audiences, governance

structure and responsible agents and calendar for the implementation of the dissemination actions.

### 5. Expanding the functionalities of the Kaushalkar portal

Among the latest modules that are being developed, Kaushalkar will include a counseling module, an on-line version of the employment exchanges, mandatory registration of employers, virtual interviews conversations, a job fair module and an online training module – kaushal.tube.

These functionalities are very promising and will definitely improve the LMIS, providing the missing information of the demand side.

A recommendation is to insist on the importance of counting with an LMIS that not only intermediates between jobseekers and employers, but also delivers significant information that helps students decide on their careers, training providers to design their courses, government staff to make policy, researchers to download reliable data and employers to know where to look for the trained candidates. Of course the ultimate goal is to get the candidates employed but there are a number of stages in the process and LMIS should focus on all of them, not just the last one. An example of the products that could be offered is provided below (see page 19).

### 6. Integrating data from multiple sources

Transforming Kaushalkar into a website that centralises and disseminates all the existing LMI, would represent a great achievement. In the same way as the national LMIS is doing with various schemes and sources, Kaushalkar could also integrate the existing LMI coming from multiple sources. Administrative data springing from the different departments of the Government of Karnataka could be accessed and processed by Kaushalkar relatively easily (for example remotely through web services) in order for the LMIS to become an aggregator and facilitator of all relevant LMI.

The LMI in India and in Karnataka is available in a variety of formats, such as statistics, articles, studies,

reports, flyers, policy briefs or press releases. Today, these are easy to access because they are usually available in the internet or in databases, therefore, collecting the information and making it public may be just a matter of will.

Moreover, LMI from private institutions such as training providers and sectorial and employers'

associations, could also be taken into account by Kaushalkar's data analysts. Indeed most of the interviewed stakeholders acknowledged that they kept their records in databases and even web portals, and most of them did not reject the idea of sharing their data with the Government.

**Figure 1: Example of modules found in an advanced LMIS**



## 7. Including the informal sector in the LMIS

Policies are better informed when we understand the magnitude of informal employment as well as the conditions and causes of these employment patterns. In order to support the transition to the formal sector, it is necessary to count with quantitative and qualitative information of the informal labour market.

Apart from the existing national data, the ILO regularly publishes reports and guidelines that provide an overview of the informal economy. ILO discloses indicators for 100 countries including India and also provides qualitative information of the informal economy with a view to facilitate the transition. This kind of publications together with case studies or even videos, blogs or examples of training providers or associations that work every day with men and women in the informal sector, could also have a space in Kaushalkar.

## 8. Becoming future-oriented

As shown by the international examples, career guidance is one of the most important services offered by an advanced LMIS. It is therefore recommended to count on an accessible guidance system that provides the necessary information for students and jobseekers to make informed decisions for their future. The information provided by the National Career Service (NCS) would make an important component of the Kaushalkar portal. NCS provides career information, as well as a job portal and targeted intelligence such as specific job postings for women. The career guidance is provided by occupations in all sectors, contemplating therefore a very comprehensive and detailed description of the job, including the type of work performed by these occupations, the required skills, the available training and the main employers.

A second recommendation in order to become a more future-oriented LMIS would be to work on an economic model or tool that would allow to work with projections of employment by economic sectors and by occupations for example in a 10 to 15 years span. The tool could be subcontracted to experts and incorporated in the Kaushalkar portal.

Finally, and in line with the international trends, it would be remarkable have a skills section, where the user could see the trends for skills supply and demand and the specific technical skills and soft skills needs by occupations and sectors.

## 9. Making Kaushalkar user-friendly

The international practices demonstrate that it is no longer enough to show the data. Now, the user demands to interact with the data, being able to customise the visualisation. Access to information in user friendly formats depends on the source websites agreeing, at a minimum, to provide open access giving users the opportunity to design their own interactive tables and allowing them to download the data in formats which can be directly transported to spreadsheets for analysis and presentation.

It may not be feasible to present LMI in visual form to individuals, but where it is possible, it can help get across key messages, and can play a useful role in setting out the options clearly. For some individuals, it would be more appropriate to present LMI in the form of pie charts, bar charts or line or area graphs. Others may benefit more from detail, and be comfortable with looking at tables. It's important to keep information clear and simple to avoid confusion.

## 10. Public-private partnerships

Whether the source is private or public, labour market information will serve the public good and therefore, Kaushalkar should guarantee its adequate analysis and exploitation. Depending on the availability of resources, subcontracting or collaboration with private institutions could be a good option in order to extend the LMIS' services. By segmenting and sharing the tasks between different public and private agents, a better reach is achieved. Industrial associations such as FICCI or BICC are currently carrying out specialised research; however a systematised method or partnership could be agreed in order for these research institutions (and others) to become part of the monitoring system.

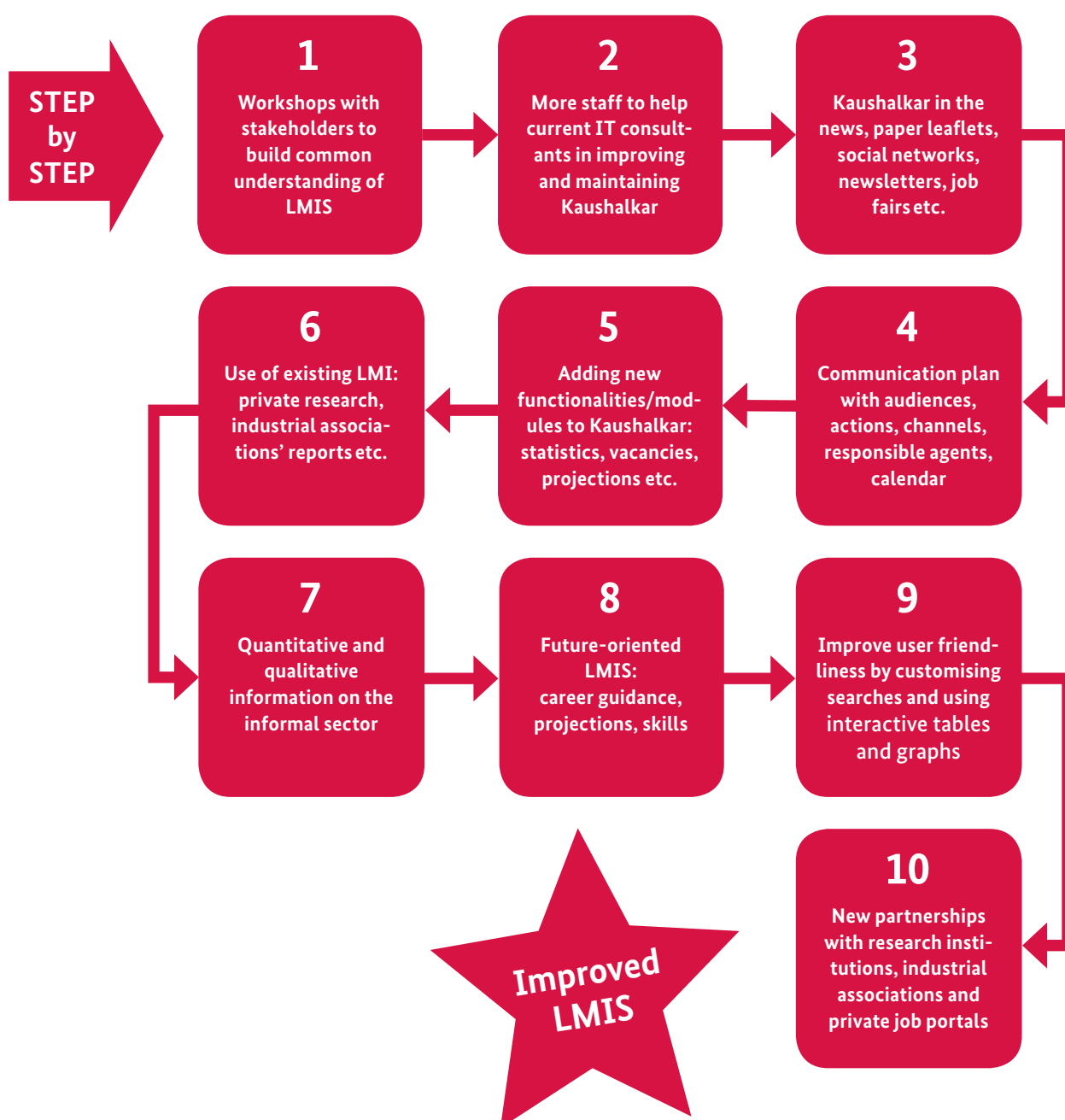
In the same way, collaboration with private job websites could enrich Kaushalkar as well. Indeed,

many job matching systems in advanced LMIS are now integrating the job vacancies of the private sector intermediation agencies, becoming therefore aggregators of online job vacancies that would automatically take the user to the agency's portal. This is

generally done through web scraping, web crawling or an application programming interface (API). The developers of Kaushalkar have already been in touch with the major job portals of India but apparently no agreement has yet been reached.

## 5.2. The way forward

**Figure 2: Summary of the major recommendations to improve LMIS in the state of Karnataka**



# References

Cedefop. 2016. Labour Market Information and Guidance. Luxembourg: Publications Office. Cedefop research paper; No 55. <http://dx.doi.org/10.2801/72440>

Department for Education and Skills, Learning+ Skills Council. 2004. LMI Matters! Understanding Labour Market Information. [https://warwick.ac.uk/fac/soc/ier/ngrf/effectiveguidance/improvingpractice/lmi/lmi\\_matters\\_lsc.pdf](https://warwick.ac.uk/fac/soc/ier/ngrf/effectiveguidance/improvingpractice/lmi/lmi_matters_lsc.pdf)

European Training Foundation. 2017. Labour Market Information Systems. [https://www.etf.europa.eu/sites/default/files/m/466C7A2340B3DAE0C12580E60049FC1D\\_LMIS.pdf](https://www.etf.europa.eu/sites/default/files/m/466C7A2340B3DAE0C12580E60049FC1D_LMIS.pdf)

European Training Foundation 2016. Using Labour Market Information. [http://www.cedefop.europa.eu/files/2215\\_en.pdf](http://www.cedefop.europa.eu/files/2215_en.pdf)

ILO DWT for South Asia & Country Office for India. 2013. Towards a More Effective Labour Market Information System in India. [https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new\\_delhi/documents/publication/wcms\\_229258.pdf](https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---sro-new_delhi/documents/publication/wcms_229258.pdf)

India EU – Skills Development Project. 2015. LMIS Concept Paper - A Labour Market Information System to Meet India's LMI Needs.

India EU – Skills Development Project. 2015. LMIS Web Portal Content India.

Ministry of Statistics and Programme Implementation Sardar Patel Bhawan, Sansad Marg, NSDC. 2011. Concept Paper on Labour Market Information System, An Indian Perspective. [http://www.cgsc.in/Concept\\_Paper\\_LMIS.pdf](http://www.cgsc.in/Concept_Paper_LMIS.pdf)

Nicholas Mangozho. International Labour Office (ILO). 2003. InFocus Programme on Skills, Knowledge and Employability. Working paper No. 13. Current Practices in Labour Market Information Systems Development for Human Resources Development Planning in Developed, Developing and Transition Economies.

United States Agency for International Development. 2016. A Roadmap for the Development of Labour Market Information Systems. <https://www.fhi360.org/sites/default/files/media/documents/resource-lmis-system-roadmap.pdf>

Woods, James F., and Christopher J. O'Leary. 2006. Conceptual Framework for an Optimal Labour Market Information System: Final Report. Upjohn Institute Technical Report No. 07-022. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research. <https://doi.org/10.17848/tr07-022>

---

# Annexure A: Methodology

This report was compiled between October and December 2018 and constitutes a set of specific recommendations for the Government of Karnataka to take into account while optimising the LMIS.

In the preparation of the report, different research techniques were used in order to compile the overview of international standards and best practices and to inspect the current state of the LMIS in Karnataka. Thorough desk research has been carried out in order to provide the most suitable recommendations for

further development and improvement of the LMIS in Karnataka.

Qualitative research was also carried out between 12 – 17 November, 2018, through interviews with 29 different institutions and departments from the state government and the national government, training centres, industrial associations, and other practitioners of the labour market in the state of Karnataka.

# Annexure B:

## LMIS tools and portals

- <http://www.apprenticeship.gov.in/Pages/Apprenticeship/Home.aspx>
- <https://careersportal.ie/>
- <https://www.empleate.gob.es/empleo/#/>
- <http://futurelan.eus/es/>
- <https://www.gov.uk/jobsearch>
- <http://www.ioresearch.nl/home/expertise/jeugd-zorg-en-welzijn>
- <https://www.jobbank.gc.ca/home>
- <https://joboutlook.gov.au/>
- <http://www.kaushalkar.com/>
- <https://www.lmis.gov.in/>
- <https://www.ncs.gov.in/Pages/default.aspx>
- <http://occupations.esdc.gc.ca/sppc-cops/w.2lc.4m.2@-eng.jsp>
- <https://www.onetonline.org/>
- <http://pmkvyofficial.org/Index.aspx>
- <http://www.skillsdevelopmentscotland.co.uk/resources/skills-investment-plans/>
- <http://skillspanorama.cedefop.europa.eu/en>
- <https://www.wollybi.com/en/>



# Annexure C:

## Interviewees

The objectives of the interviews were to:

- Inspect the conceptual understanding of LMIS among the stakeholders in Karnataka,
- Analyse the current state of the LMIS in Karnataka,
- Assess the awareness and participation level of the stakeholders,
- Obtain the opinions of the stakeholders on areas of improvement in current LMIS, and
- Obtain the recommendations for further development and improvement of the LMIS in Karnataka.

In order to accomplish the above objectives, face to face interviews were conducted with the stakeholders listed below:

Sl No.	Name of Stakeholders	Department
1	Dr V.K. Saraswat, Member	NITI Aayog
2	Mr Amlan Aditya Biswas, IAS, Secretary	Department of Labour, Department of Skill Development, Government of Karnataka
3	Mr Anup K. Pujari, Chairman	Karnataka Skill Development Authority (KSDA)
4	Ms V.V. Jyothsna, IAS, Mission Director	Skill Mission, Government of Karnataka
5	Dr G.K. Karanth, Director	Karnataka State Labour Institute
6	Dr G. Manjunath, Joint Secretary, I/C	Department of Labour, Government of Karnataka
7	Dr M. Jayaprakasan, I.S.D.S., Joint Director/ Head IT Cell	DGT, MSDE
8	Mr Senthil Kumar, Director	NSTI HQ, DGT
9	Ms Sandhya Salwan, Director	NSDA
10	Ms Tanavi Singh, Consultant	NSDA
11	Mr Manish Tiwari	NSRD
12	Mr Govind Dewegowda, Joint Director (Employment)	Department of Employment & Training, Government of Karnataka

Sl No.	Name of Stakeholders	Department
13	Mr Venugopal, Deputy Director (Employment)	Department of Employment & Training, Government of Karnataka
14	Mr Kaustav Nath, State Engagement Officer	Karnataka & Goa, State Governments & Citizen Engagements (South)
15	Dr Mukund Raj P.K., IT Consultant	Dept of Skill Development, Government of Karnataka
16	Mr Jeya Chandran. G, State Project Officer	UNDP
17	Dr Roopak Vasishtha, CEO & Director General	Apparel Made-ups & Home Furnishing SSC
18	Ms Smritee Dwivedi, Director	Operations, Apparel Made-ups & Home Furnishing SSC
19	Ms Soma Sharma, Deputy Head	Market Analytics, NSDC
20	Ms Shobha Mishra Ghosh, Assistant Secretary General	FICCI
21	Mr Shiv Kumar Shukla, Senior Assistant Director	FICCI
22	Mr Prithvi K. K., Secretary	Bangalore Chamber of Industry and Commerce (BCIC)
23	Mr Shriyans Kumar Jain, Chairman	Sub Committee, Skill Development, Karnataka Small Scale Industries Association (KASSIA), Bengaluru
24	Ms Shanthi, Director & Principal	NSTI for Women, Bengaluru
25	Mr Rajiv Sharma, MD	Empower Pragati, New Delhi
26	Ms Jalajakshi	LabourNet, Bengaluru
27	Mr Jayanth, Deputy General Manager	Rooman Technologies, Bengaluru
28	Ms Ayesha Sultana, Principal	Ghousia Polytechnic for Women, Bengaluru
29	Mr Naveed Ahmed, Placement Officer	Ghousia ITI, Bengaluru

Deutsche Gesellschaft für  
Internationale Zusammenarbeit (GIZ) GmbH  
B 5/1, Safdarjung Enclave  
New Delhi, 110029, India  
T: +91 11 49495353  
F: +91 11 49495391  
W: [www.giz.de/India](http://www.giz.de/India)