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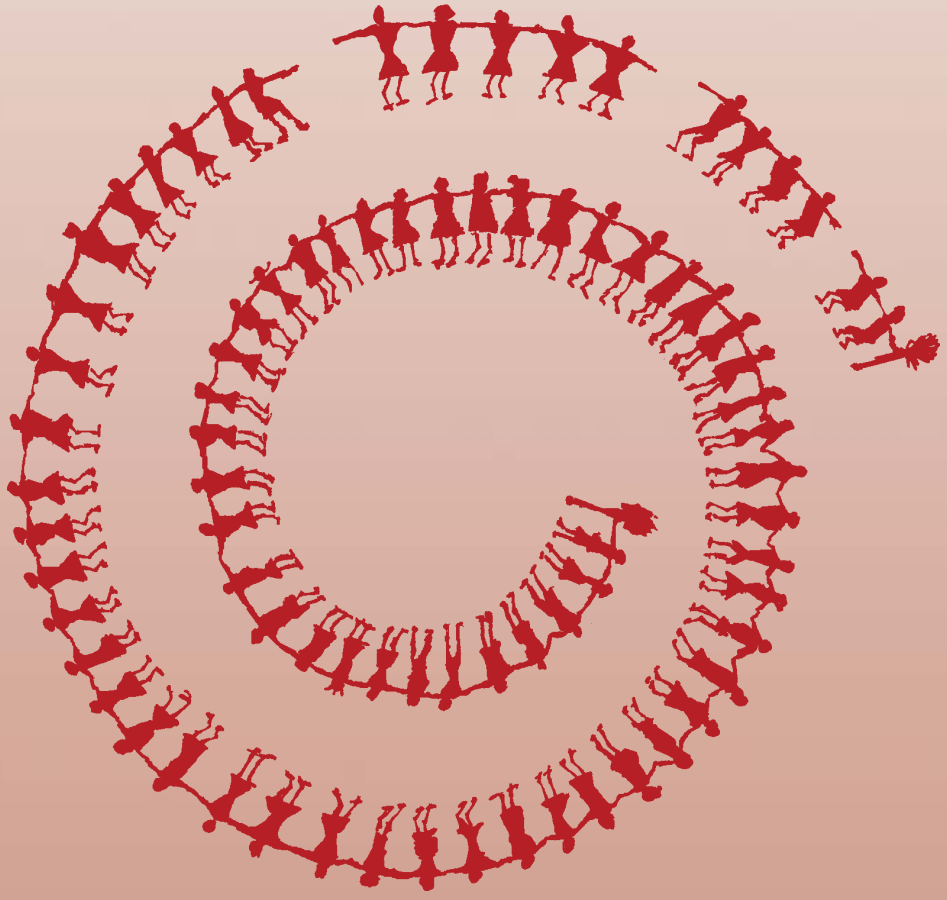
Report No. 85

South Asia Region, Education Global Practice

State Systems for Skill Development in India - A Study of Bihar, Gujarat, Rajasthan, and Maharashtra

December 2015



Discussion Paper Series

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State Systems for Skill Development in India – A Study of Bihar, Gujarat, Rajasthan, and Maharashtra

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Discussion Paper Series

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FOREWORD

At a time when the world's leading economies are rapidly greying, India is set to have the largest and youngest workforce the world has ever seen. Indeed, by 2020, when the global shortage of manpower soars to 57 million, India is expected to be the world's leading provider of human resources, with a surplus of 46 million working-age people. However, this window of opportunity will not just be rare, it will also be short-lived, since it is predicted to only last until 2040. It is in this context that Prime Minister Modi has made it a national priority to make India the skill capital of the world.

Today, about 12 million young people enter India's workforce every year and look for jobs in the rapidly changing workplace. To meet their rising aspirations, as well as the needs of the Make in India initiative, they need to be equipped with the skills required by today's business and industries, including by the diverse industries that make up the small scale sector and are one of the largest employers in India today. Women too, need to be more equitably represented in the workforce of the country. Towards this end, the National Skill Development Mission, launched in July 2015, aims to skill 400 million young people by 2022, emphasizing scale, speed, and adherence to standards.

The task is not easy. For any country as large as India, the resources required for developing the skills of such vast numbers of young people – the human, physical and financial resources - are enormous. Moreover, these resources are distributed across multiple players. Today, for instance, over 20 government ministries spend more than Rs.7,000 crore on implementing over 70 skill development programs, in addition to over 200 private training providers, with many private sector firms too entering the arena by spending their corporate social responsibility funds on education and skills development.

In this diverse scenario, the Ministry of Skill Development and Entrepreneurship has sought to chart a strategic way forward. At their request, therefore, the World Bank, together with the Boston Consulting Group, has conducted this study of four states - two states which see a large outmigration of labor - Bihar and Rajasthan - and two which receive a large number of migrants - Gujarat and Maharashtra.

A key lesson learnt is that skilling is a highly localized issue and needs to be adapted to specific target groups. Extrapolating from this, and by bringing in global experience from Australia, Germany, Japan and South Korea, the report endeavors to identify the institutional and systemic structures that will be needed to improve the effectiveness of skills training across India's states. The report also seeks to pinpoint innovative best practices and outline ways to scale them up throughout the country. We hope the reader will find the report useful as India defines its way forward on this critical plank of its development agenda.

Onno Ruhl
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ACKNOWLEDGEMENTS

The team would like to thank The Boston Consulting Group (Arindam Bhattacharya, Seema Bansal, Aditi Banerjee, Ashish Tyagi, Aditi Narain, Lav Kanoi) for their support in conducting research and drafting this report. Further, the team would like to thank officials of the Ministry of Skill Development and Entrepreneurship (MSDE), Government of India, especially Mr. Sunil Arora, Secretary MSDE, Mr. Rajesh Agrawal, Joint Secretary MSDE and Mr. Pawan Agarwal, Joint Secretary MSDE for their guidance and support in developing and refining the concept of resource optimization in skill development.

ABBREVIATION AND ACRONYMS

BA/BSc	Bachelor of arts/Bachelor of science
BFSI	Banking, financial services and insurance
BISAG	Bhaskaracharya institute for space applications and geo-informatics
BPO	Business process outsourcing
CAD-CAM	Computer aided design – Computer aided manufacturing
Capex	Capital expenditure
CEO	Chief executive officer
CNC	Computer numerical control
COO	Chief operating officer
CSR	Corporate social responsibility
DDU-GKY	Deen Dayal Upadhyaya Grameen Kaushalya Yojana
GCVT	Gujarat council of vocational training
GIZ-IS	German international services
ICT	Information and communication technology
IIT	Indian institute of technology
iKVK	Industrial kaushal vikas Kendra
INR	Indian rupee
IT	Information technology
ITC	Industrial training centre
ITES	Information technology enabled services
ITI	Industrial training institute
KGMSDC	Karnataka German multi skill development centre
KGTTI	Karnataka German technical training institute
KRIVET	Korea research institute for vocational education and training
LMIS	Labour Market Information System
MD	Managing director
MandE	Monitoring and evaluation
MES	Modular Employable Skills
MHRD	Ministry of Human Resource Development
MIDC	Maharashtra Industrial Development Corporation
MIS	Management Information System
MoLE	Ministry of Labour and Employment
MOOCs	Massive Open Online Courses
MoRD	Ministry of Rural Development
MoU	Memorandum of Understanding
MSDE	Ministry of skill development and entrepreneurship
MSME	Micro, small and medium enterprises
NCVT	National Council for Vocational Training
NGO	Non-government organization
NIT	National institute of technology
NSDA	National Skill Development Agency
NSDC	National skill development corporation
NSDM	National skill development mission

NSS	National service scheme
NUSSD	National university students skill development
Opex	Operating expenditure
PMKVY	Pradhan Mantri Kaushal Vikas Yojana
PPP	Public private partnership
PSU	Public sector unit
RPL	Recognition for prior learning
RSETI	Rural self-employment training institute
RSLDC	Rajasthan Skill and Livelihoods Development Corporation
SLT	Synchronous learning technology
SSCs	Sector skill councils
SSDM	State skill development mission
SC/ST	Scheduled Caste/Scheduled Tribe
SCVT	State Council of Vocational Training
SEZ	Special Economic Zone
TISS	Tata institute of social sciences
TPs	Training providers
WCSC	World class skill center
WIT	Work integrated training

EXECUTIVE SUMMARY

The challenge of skilling a large populace has been widely recognized in India over the last few years. To address this, multiple initiatives have been launched at central and state levels to not just fulfill the skilling requirement of the country (about 12 million people enter the workforce every year) but also to make India the skill capital of the world – a recent example being the launch of the "Skill India" Mission. However, despite these efforts, the current annual training capacity (of approximately 5 million per year) is not even half the required rate. Further, although a huge amount of money is being spent on skill development, the system is not able to reap the benefits of economies of scale while providing quality training and optimizing existing resources.

Therefore, it has become imperative to make skill development central to the growth agenda and make rapid strides in providing quality training at scale. This would be most effectively achieved by optimizing existing resources and partnerships to skill the Indian populace while creating jobs through initiatives such as Make in India, Digital India, and so on. The recently launched National Skill Development Mission (NSDM) aims to provide the necessary policy support, and its "mission mode" approach, through five (of seven) sub-missions – building institutional training capacity, infrastructure development, convergence of all stakeholders, knowledge and funds, building capacity and quantity of trainers, and leveraging existing public infrastructure as skill centers - is directly linked to achieving this purpose.

To attain high quality skill development in India, there is a need to clearly identify a few priority areas, and to detail out specific interventions to be undertaken within each area. With this objective, the World Bank sought, as part of its technical assistance to the Ministry of Skill Development and Entrepreneurship (GOI), to identify key implementation challenges at the state-level and to make high-level recommendations to improve the quality of training at the grassroots.

A mix of demand-driven and supply-driven states were identified mutually by the Ministry and the World Bank, viz. Rajasthan, Gujarat, Maharashtra and Bihar. The findings from these states can be extrapolated, lessons can be learnt and adapted to other states as well.

In India, as in any large country, the resources required for skill development (for example, infrastructure, content, trainers, finance and knowledge) are immense and usually distributed across multiple stakeholders (central ministries, state departments, district bodies, corporates, public sector undertakings and training providers, to name a few). This report endeavours to identify institutional and systemtic structures for the implementation of skilling activities in states, and to recommend potential additions and changes in order to effectively use resources (both human, physical and financial) for the purposes of skill development.

The report covers skill development institutional structures at the state level (in most cases, the State Skill Development Missions), economic zones and future high-growth industries in those zones, corporate engagement in skill development, and finally, innovation in skilling models by states and the corporate sector. These innovative models bring together key stakeholders in an optimum manner and/or leverage resources effectively. For instance, instead of building new infrastructure for skill training centers (which would require large amount of money, clearances and time), using existing infrastructure of colleges with unutilized seats.

In addition, the report also describes some best practices observed globally, especially from Australia, Germany, Japan and South Korea. These models cover three areas of resource optimization pertaining to increasing apprenticeships and industry participation, leveraging technology, and providing training at the grassroots. The key lesson learned is that skilling is a highly localized issue, and models need to be adapted to target groups rather than be force-fitted using a one-size-fits-all kind of approach. For example, in the case of technology enabled learning, Japan's colleges of technology, *Kosen*, and South Korea's technical schools provide highly customized trainings depending on economic structures and demand-supply gaps, leading to high seat utilization.

Finally, it must be pointed out that *high-level* recommendations have been provided to enhance the skill development landscape, particularly at the state level, from an institutional and systemic point of view. The rationale for this stems from the fact that skilling is a highly localized/regional issue, and each state must come up with its own institutional structures and implementation systems which suit its needs. The recommendations provided in this report will provide directional guidance to state leadership and to corporates on investing in the critical enablers required to improve the effectiveness of skill training in states, and on identifying and scaling innovative best practices throughout the country.

1. SKILL DEVELOPMENT IN INDIA – SETTING THE CONTEXT

Economic Development and the Need for Skills Training

The Indian economy is the world's seventh-largest by nominal Gross Domestic Product (GDP) and third-largest by purchasing power parity (PPP)[1] - taking into account the relative cost of local goods, services and inflation rates of the country. Between 2005 and 2010, India's share of global GDP increased from 1.8 percent to 2.7 percent, and 53 million people were lifted out of poverty. India's per capita income is USD 1,410 (2011). Progress on human development has been remarkable; life expectancy more than doubled from 31 years in 1947 to 65 years in 2012 and adult literacy more than quadrupled, from 18 percent in 1951 to 74 percent in 2011. India has already achieved the first Millennium Development Goal (MDG 1) by halving the proportion of people living on less than USD 1.25 a day: rural poverty has decreased by 14 percentage points. However, despite positive developments, challenges persist. About 50 percent of India's population lives in low-income and special category states[2] where poverty rates are close to 40 percent. Over 200 million of India's poor people (over 60 percent) reside in low-income states.

India has been experiencing average annual economic growth of approximately 5 percent in the last 3-4 years. Manufacturing has been the hardest hit in terms of growth rates[3] which has impacted job creation and employment. During this time, 3 percent[4] new jobs were being created in the economy and the average unemployment rate was at 8 percent.[5] The scenario has changed since last year and the economy is growing at a rate of 7 percent[6] annually. It is estimated that about 12 million[7] people enter the workforce every year who need jobs as well as require adequate skills for those jobs. Given

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[1] World Economic Outlook Database, October 2015 - Report for Selected Countries and Subjects. International Monetary Fund (IMF). Retrieved 6 October 2015.

[2] Low-income states are defined as those below US$494 GSDP per capita and Special Category States are mostly northern mountainous states, sparsely populated, and those with high transport costs leading to high delivery costs of public services. World Bank Group Country Partnership Strategy for India, :2013-17

[3] Vocational training industry in India – a report by Onicra Credit Rating Agency of India Ltd.

[4] http://www.hindustantimes.com/india-news/pace-of-job-creation-in-india-was-slowest-in-a-decade-a-meagre-2-2/article1-1184462.aspx

[5] http://www.tradingeconomics.com/india/unemployment-rate

[6] http://www.livemint.com/Politics/xziKtmtOxBJntZb41p2hDL/India-GDP-seen-surging-74-in-data-that-has-puzzled-economi.html

[7] 12th Five Year Plan – Report of the working group and Skill Development and Training

the thrust on manufacturing in India, particularly with initiatives like ***Make in India***, 3 million new jobs are expected to be created in 2015 alone.[8]

Beyond the national need of a skilled India, there are also **global opportunities for skilled labour**. The country is expected to have half of its population under 28 years by 2030. While the *ageing economy* phenomenon will globally create a shortage of skilled manpower of 57 million by 2020, India will have a surplus of 46 million working people. As a result, India has a huge demographic dividend. Owing to comparative cost advantage, due to its low dependency ratio, India can cater to a large part of this 57 million requirement.[9] The country's population pyramid is expected to bulge across the 15–59 age groups over the next decade. However, this demographic advantage is predicted to last only until 2040.[10] India, therefore, has a narrow time frame to harness its demographic dividend and to overcome its skill shortages.

Many initiatives are underway to skill the Indian populace. Over INR 6000 Crore is spent on skill development across 20 Ministries with over 70 programs and schemes (Annex 1 contains a list of all skill development programs and schemes being implemented by major Ministries in India) and the Ministry of Skill Development and Entrepreneurship (MSDE) was created in 2014 to coordinate all skill development related activities. At the state level, State Skill Development Missions (SSDMs) are expected to act as nodal bodies to coordinate with central ministries and state line departments, industry and private training organizations. Around 25 states and 4 union territories have set up SSDMs and some have begun putting together a skills strategy to equip millions of persons over the next few years.[11]

Further, multiple corporates have begun spending their **Corporate Social Responsibility** (CSR) funds on development issues like education and skill development. Over $500 Million was invested in CSR by top corporates in India (see figure below) – 44 of 100 companies analyzed invest in some form of skill development.[12]

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[8] BCG-CII Report – Make in India: Turning Vision into Reality

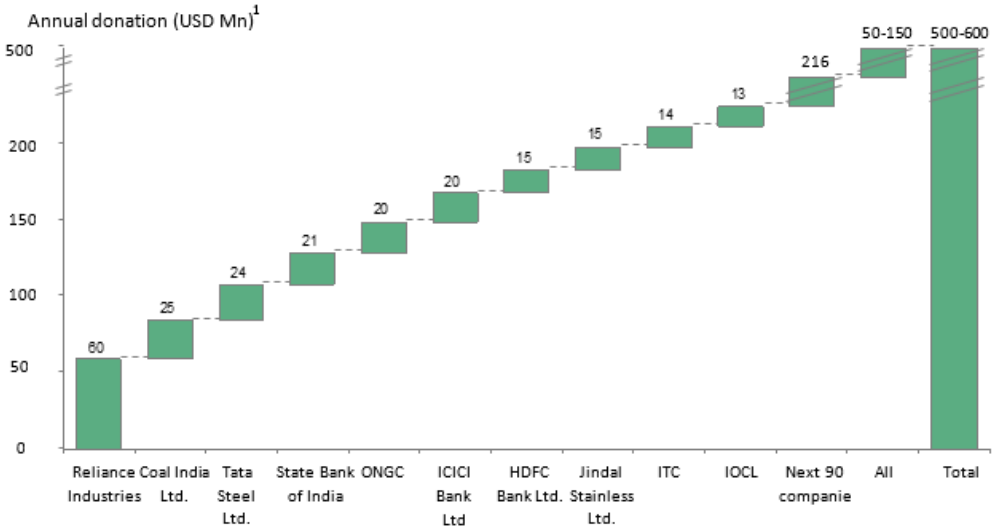
[9] Planning Commission Report

[10] Mehrotra, Gandhi and Sahoo (2013)

[11] Report of the Working Group on Skill Development – 12th Five Year Plan

[12] 'India CSR Report' by Socio Research and Reform Foundation, BCG analysis

Figure 1:1: Annual Donations (USD Mn)



1. Corporate data available for companies for either 2012-13 or 2011-12. Note: USD: INR conversion rate of 60 assumed.
Source: 'India CSR Report' by Socio Research and Reform Foundation, BCG analysis

However, **the current annual training capacity in India is less than half the required rate and stands at about 5 million persons being trained annually**. Despite over 12,000 Industrial Training Institutes (ITIs) run by the Government and by the private sector, and other privately run vocational training centers, access continues to be a challenge in rural areas and in difficult to reach geographic areas particularly in the North Eastern States. As a result, capacity utilization of training infrastructure is impacted and over 50 percent of training seats go unutilized annually. In addition, industry linkages are limited, in terms of contribution to content design or training delivery and even final placements.

National Skill Development Mission: Policy Priorities Going Forward

In order to consolidate and rapidly scale skill development efforts in India, while focusing on quality and outcomes, the Ministry of Skill Development and Entrepreneurship (MSDE) launched the ***National Skill Development Mission (NSDM)*** on July 15, 2015. According to the National Policy on Skills and Entrepreneurship, 2015, skilling capacity needs to *Scale-up* with *Speed* and *Standards* while optimizing on existing resources and collaborating with all stakeholders in order to provide skilling to over 400 million people; and the NSDM is expected to provide the overall institutional framework to enable this.

The Mission's *Framework for Implementation* is expected to provide strategic direction to state governments to establish a clear line of action to enable India to achieve its skilling targets. The framework outlines the overall vision and objectives of the Mission and its strategy (by focusing on the launch of its core sub-missions), specifies its institutional structure (at the national, state and district levels), and articulates its financial model.

The **Mission Statement** is:

To rapidly scale up skill development efforts in India, by creating an end-to-end, outcome-focused implementation framework, which aligns demands of the employers for a well-trained skilled workforce with aspirations of Indian citizens for sustainable livelihoods.

In order to achieve this vision, the Government has identified seven sub missions in priority areas into which all future programs/projects of skill development in India will be plugged. These have been laid out in Box 1 below.

Box 1: Sub-Missions relevant for Resource Optimization for Skill Development

Sub-Mission 1: Institutional Training

Under this sub-mission the key focus is to drive quantity, quality and reach of training provision and outcomes, and to change people's perceptions about vocational training and make skill development aspirational with opportunities for long-term career progression. It seeks to achieve this by setting up a number of branded skilling centers together with the private sector, in Public Private Partnership (PPP) mode. Toward this end, the National Skill Development Corporation (NSDC) has been catalyzing the private sector since 2009 – it has over 200 private training providers who are cumulatively expected to provide skills training to about 150 million people by 2022.

Sub-Mission 2: Infrastructure

This sub-mission targets building capacity and ensuring high quality skill development in infrastructure, including construction, to increase the productivity of workers in this sector through an emphasis on on-site training.

Sub-Mission 3: Convergence

This sub-mission seeks to ensure the convergence and co-ordination of skill development efforts by multiple stakeholders such as central and state ministries/departments, private training providers, assessment agencies, industry bodies, and workers. Key enablers to achieve this include opening Kaushal Vardhan Kendras (KVKs) to increase outreach and provide training that is linked to local needs.

Sub-Mission 4: Trainers

This sub-mission aims to improve the overall quality of instruction at training institutions across the country and ensure adequate availability of trainers in the skills space.

Sub-Mission 5: Overseas Employment

This sub- mission seeks to ensure that youth in India are trained as per the highest global standards in order to enable them to access employment opportunities abroad and to ensure the international mobility of skilled workers in the country.

Sub-Mission 6: Sustainable Livelihoods

Under this sub-mission, trainees will be empowered by providing them a pathway to access long-term sustainable livelihoods, helping them maximize the potential of their skill training. Support activities will include providing guidance counselling, mentorship and so on.

Sub-Mission 7: Leveraging Public Infrastructure

The objective of this sub-mission is to optimize the usage of existing public infrastructure to scale up skill development efforts across India. A detailed mapping of existing infrastructure is required in order to set up an implementation framework for this.

With the new National Skill Development Mission taking shape, the World Bank together with the Boston Consulting Group has prepared this report to assess the current implementation of skill development schemes/programs at the state level, and to design a preliminary hypothesis on effective ways to improve implementation by strengthening institutions, engaging corporates and scaling innovation.

2. FRAMEWORK FOR STATE LEVEL ASSESSMENT OF SKILL DEVELOPMENT

An assessment framework was developed to give structure to the analysis and recommendations, comprising key aspects impacting implementation at the state level. This included:

(i) Institutions: what governance structures would improve the efficiency of the state's implementation of skilling programs?

Institutions, both at the state level like the Department of Employment and Training (DET) as well those at the local/regional levels like the district/municipal offices, play an important role in setting policy for the state, identifying skilling needs, bringing together different stakeholders, as well managing human and financial resources for on- ground implementation.

Chapter 3 and 4 seek to identify the broad contours, in terms of roles and responsibilities, of such state level governance structures – in most cases, this would be the State Skill Development Missions (SSDMs). These SSDMs should, in principle, be aligned in their vision/mission with the National Skill Development Mission at the Center, with specific adaptations to their own state context when designing implementation mechanisms.

(ii) Economic Zones: how can demand (or industry needs) be better mapped to align with supply (or youth to be skilled) at the regional/local levels?

Different kinds of economic zones exist within each state which cater to different types of industries, and therefore different types of skills from prospective employees/workers are required. This alignment of demand and supply is critical to maximizing efficiencies in the skills landscape – be it in the form of resources invested in training for high-demand job roles or in the form of increased placements.

Chapter 3 and 4 lay out the different types of economic zones across India together with their mapping in some representative states. A broad framework has been developed to identify high growth industries and existing training centers which can be used by State Governments to bridge the current demand-supply gap by involving different stakeholders.

(iii) Industry/Private Sector Engagement: what are the different ways in which corporate engagement can be enhanced and convergence promoted at the state level?

Of the $500 million being invested in CSR in India today, only a small proportion is channeled to skill development. In addition, there are over 200 private training providers who are currently providing skills training in India. However, a large proportion of these are running financially

unviable models, at least in the short run, which reduces private sector incentive to provide such training going forward.

Subsequent chapters will look at different forms of engagements with the private sector, lay out some case studies from existing good practices in India, identify best practices from other countries, and suggest ways in which such engagement can be scaled in India.

(iv) Innovation: what is needed to scale some of the existing resource optimized models of skilling?

Given the National Mission's impetus on skilling at *scale*, with *speed*, and adhering to *standards*, there is a need to identify scalable models which are currently operating in India and abroad, and identifying appropriate resources and implementation models to scale these in order to meet the 400 million target.

Chapter 3 and 4 identify some innovative models – in India and in other countries – which optimize different kinds of resources, such as infrastructure, trainers or funds. There is also an indicative costing and an implementation roadmap on how states should think about identifying and scaling such models.

3. CURRENT STATUS OF STATE IMPLEMENTATION

While the policy and coordination of skill development schemes and programs is being managed by the MSDE at the national level, implementation at the regional/local levels are under state purview. No recommendation to improve the skills landscape would be complete without an understanding of how skill development schemes and programs will be communicated, comprehended and implemented at the State level.

It is essential to assess the current status of implementation in states prior to developing recommendations in order to make implementation most robust while keeping them sufficiently *high level* so states can adapt the recommendations to their own context. Four States were selected by the MSDE and the World Bank collaboratively – **Rajasthan, Gujarat, Maharashtra and Bihar** – which are a combination of demand and supply driven states.

The team used a three pronged approach to develop an understanding of state level implementation of skill development:

(a) Desk and Secondary Research

Multiple sources were used including national Government websites (like those of MSDE, DGET and NSDC), Industrial Development Corporation websites (like RIICO, GIDC, MIDC, BIADA)[13], state government websites for DET and SSDMs, as well as websites of corporates, foundations and NGOs, and statistics portals like IndiaStat. The team also engaged in a press/news search.

(b) Interviews with Stakeholders and Experts

Discussions were held with 100 stakeholders and experts including staff at MSDE, state government representatives (e.g. Principal Secretaries of Labour, heads of SSDMs), NSDC representatives, Industry Association representatives, international and national skills experts, private training providers (e.g. Centum Learning, ILandFS, Teamlease), corporate houses (e.g. Tatas, ICICI) and NGOs (e.g. Pratham). The team also met with multiple heads and staff of government and private vocational training institutes.

[13] Rajasthan State Industrial Development and Investment Corporation; Gujarat Industrial Development Corporation; Maharashtra Industrial Development Corporation; Bihar Industrial Area Development Authority.

(c) Data Analysis

Data was analyzed to understand 4 key issues: (i) NSDC empanelled partners and the different operating models being used by them; (ii) corporate engagement models for skilling (for example, funding dedicated to skilling through CSR engagements); (iii) innovative, scalable models in India with costs incurred; and (iv) identifying key economic zones in states and high growth industries.

Skill Development in Rajasthan

State Context:

Rajasthan, India's largest state by area, has a population of 73 million. Small scale industry forms the backbone of industrial activity and employment generation in Rajasthan. Moreover, the "Resurgent Rajasthan" initiative has brought significant investments into the state, and going forward, it is expected to drive activity and employment in the secondary and tertiary sectors.

(i) Institutions

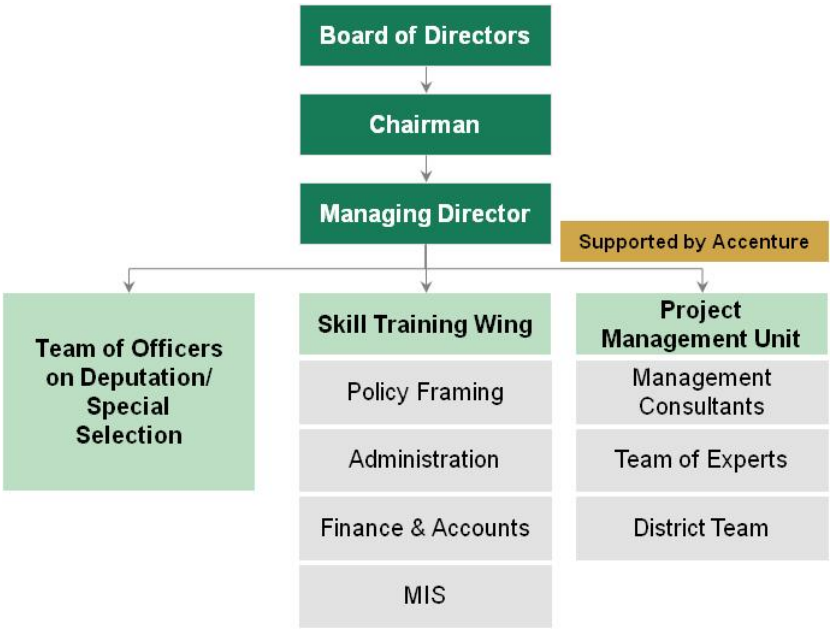
Rajasthan was the first state in the country to set up a state level body to coordinate skill development programs. The **Rajasthan Mission on Livelihoods (RMoL)** was set up in 2004, although a stand-alone "skilling" mandate was only introduced in 2010 when it was incorporated as a Section 25 company with the Chief Secretary as Chairman and renamed the **Rajasthan Skill and Livelihoods Development Corporation** (RSLDC). In 2014, there was a need felt to separate the implementation function from the policy one, and RMoL was reconstituted as a "policy making" body – with the Chief Minister as Head and the Secretary of the Ministry of Labour as the Deputy Head. RSLDC was reconstituted as the "executing body" with the Chief Secretary as the Head of the organization.

RSLDC's core mandate is to coordinate skilling programs and build capacity at the state level. Its functions include:

- Building and disseminating knowledge including identifying best practices and innovations;
- Policy reform and advocacy wherein it provides inputs to RMoL and communicates policy down the chain;
- Capacity building of organizations on administrative as well as thematic issues of skill development, human resource management etc.;
- Designing livelihood promotion strategies including analytics and data management;
- Implementing pilot programmes to test if strategies developed work on the ground and can be scaled; and
- Certification of trainees and providing a final quality check of all training programs

While RMoL consists of a Steering Committee of about 30 Ministers, representatives of industry associations, and other experts, the organization structure of RSLDC[14] is different (see figure 3.1 below) – with a large number of teams overseeing implementation at the local level. There are over 400 staff managing the Rajasthan skilling agenda (of which more than 300 work at the district level) and operate on a budget of approximately INR 100 Crores annually (outlay since 2012).[15]

Figure 3:1: Organization Structure of the Rajasthan Skill and Livelihoods Development Corporation (RSLDC)



RSLDC delegates the actual implementation of skilling programs to the respective Ministries responsible for their schemes/programs. For example, to implement the Ministry of Rural Development's Deen Dayal Upadhyaya Grameen Kaushalya Yojana[16] (DDU-GKY), RSLDC signs Memoranda of Understanding (MoUs) with Project Implementation Agencies (PIAs) which manage implementation at the block level. Similarly, for Ministry of Labour schemes (DGET's Skill Development Initiative, SDI), a Rajasthan Skill Development Initiative Society (RSDIS) has been constituted for management, implementation and for monitoring. All skill training institutions/agencies other than Industrial Training Institutes (both government and private) come

[14] The Consulting firm, Accenture, was on-boarded in July 2013 to support the Project Management Unit (PMU) and has set up district offices across all 33 districts

[15] Official Government website http://www.rajasthanlivelihoods.org/

[16] www.ddugky.gov.in

under the purview of RSDIS. ITIs are implemented by partner organizations but overseen/monitored by the state PMU through RSLDC's district teams.

Other schemes and programs being implemented in Rajasthan are listed in Table 3.1 below. A key feature of the state's skilling structure is its flagship program, **Employment Linked Skill Training Program** (ELSTP)**,** 2012, through which all other departments are routing their skill projects. This helps reduce implementation challenges and minimise confusion resulting from multiple programs running at the local level.

Table 3.1: Large schemes/programs on skill development implemented in Rajasthan[17]

	Funding authority	Numbers trained till 2014	Key trainings
Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU –GKY) - 2013 (MoRD)	Central and state funded (75:25)	~4500 (via 40 SDCs)	Medical and Nursing, Hospitality, Construction
Skill Development Initiative Scheme (MoLabor) – MES*	Centrally funded		Hospitality, Retail, etc. (MES course list as approved by NCVT)
Swarna Jayanti Shahari Rozgar Yojana (SJSRY) – replaced by NULM - (MoHUPA)	Centrally funded		Decided in participatory approach w/ community
Standard Training Assessment and Reward (STAR) – now PM-KVY (MoSE)	Centrally funded	89,500 (trained and certified)	All SSCs
Employment Linked Skill Training Program (ELSTP) - 2012	State funded (State Flagship)	~85,000 (via 50-100 SDCs)	Security, Retail, Automotive, ICT etc.
Regular Skill Development Training Program (RSTP) - 2005	State funded	93,000	Beauty Culture, Agriculture, Animal Husbandry, Garments

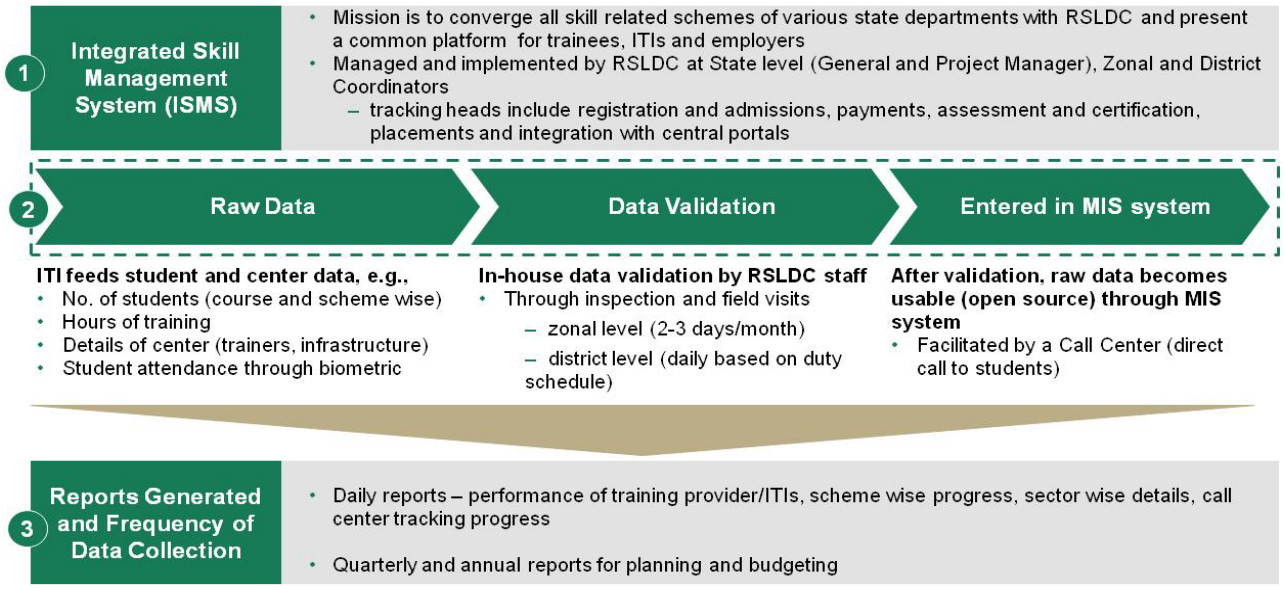
*Modular Employable Skills – short duration courses for short term skill development

[17] Official Govt. website http://www.rajasthanlivelihoods.org/ ; http://www.planning.rajasthan.gov.in/docs/926122014112859.pdf

RSLDC's training partner (TP) selection and monitoring model involves an Evaluation Committee which reviews each proposal based on specific criteria (for example, minimum 10 centers across 2 states, at least 750 workers previously trained and over 500 placed, guarantee at least 70 percent placement etc.), and centers are inspected for infrastructure and readiness prior to signing the MoU. Monitoring and evaluation (MandE) is carried out by district teams (one visit to each center every 2 weeks) to maintain accountability. The entire process, from "expressions of interest" to final payment post training completion, takes about 6-7 months – relatively less when compared with states like Bihar which takes over a year to process contracts.

Monitoring of training centers and tracking of employment is managed by an **Integrated Skill Management System (ISMS)** and a biometric attendance system. The ISMS tracks youth who have registered online, trades taught at the Skill Development Centers (SDCs), and placement rates for each SDC. It is being expanded to cover all skill training centers in the state – both government and private. Figure 3.2 gives an overview of the key features and processes of the ISMS.

Figure 3:2: Rajasthan's Integrated Skill Management System (ISMS)



Therefore, from an institutional point of view, the RSLDC (which substitutes the SSDM) acts as a good coordination platform for skill development activities in the state of Rajasthan. With tools like the flagship ELSTP program and the ISMS tracking and management system, the state seems to be creating a solid foundation for skill development.

Two areas where the Rajasthan Government can invest in order to improve performance of its skilling centers (government ITIs, for example, have about 1 in 2 seats unutilized) are:

(a) Monitoring and evaluation at the grassroots with a strong feedback loop

While district teams exist to manage implementation, a dedicated MandE team conducting regular checks at the field level, for both government and private skilling centers, will ensure greater accountability in the vocational system. In addition, on-ground challenges can be observed, discussed and dealt with in a decentralized and more efficient manner.

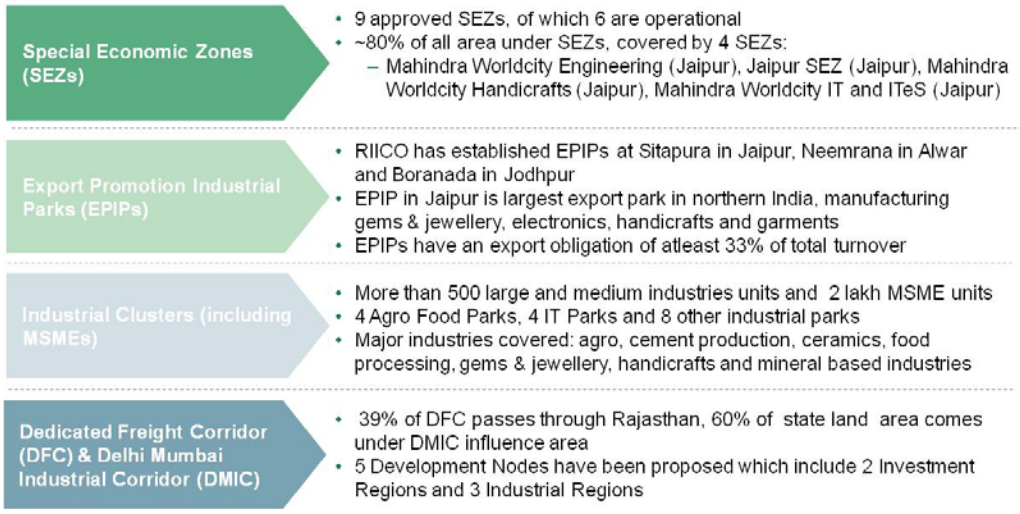
(b) Data collection on private sector engagement in state skill development activities

Collecting data on names of companies, their engagement models, the amount of funding being given for skill development etc., as part of the existing ISMS system, will help the RSLDC/Rajasthan Government understand trends in corporate and private sector engagement and design/adapt incentives to align with private sector interests. This will ensure a higher corporate participation rate which is expected to have multiple direct benefits like higher placements, greater aspiration for potential vocational trainees, and so on.

(ii) Economic Zones

62 percent of Rajasthan's Gross Domestic Product (GDP) comes from 12 districts (out of 33) – the large ones being Jaipur (15 percent), Alwar (6 percent), Jodhpur (6 percent), Ajmer (5 percent) and Bhilwara (4 percent). Specific details on the four major types of economic zones in Rajasthan are provided in Figure 3.3 below together with their geographic mapping in Figure 3.4 to show the spread of economic activity across the State[18].

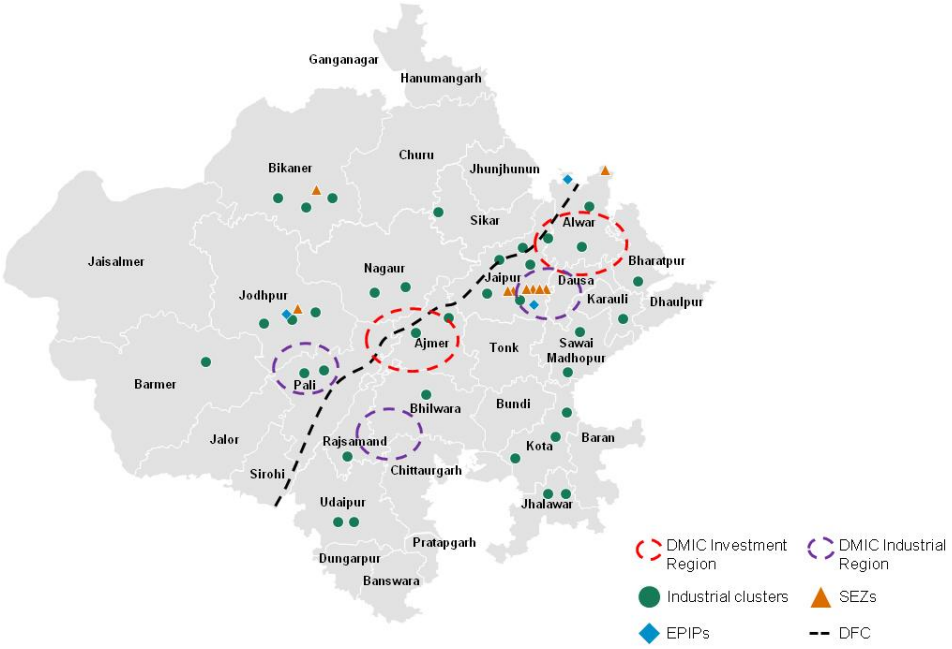
Figure 3:3: Details on Economic Zones in Rajasthan



[18] SEZ India, RIICO progress report, NSDC state report, web search, BCG analysis

Given that **almost 40 percent of the Dedicated Freight Corridor (DFC) passes through Rajasthan** and that 60 percent of the total land area in the state is part of the Delhi Mumbai Industrial Corridor (DMIC), the geographic areas surrounding the DFC/DMIC are expected to become a major site for employment. The objective of this national program (i.e. DMIC) is to expand India's manufacturing and services base and develop the designated region as a *Global Manufacturing and Trading Hub*. The program is expected to provide a major impetus to planned urbanization in India with manufacturing as the key driver. The figure below shows that the DMIC cuts through the state of Rajasthan covering some major cities like Jaipur, Alwar, Ajmer etc.

Figure 3:4: Geographic Mapping of Economic Centers across Rajasthan



While there are over 1500 Industrial Training Institutes (ITIs) in Rajasthan catering to the skilling needs of the populace and of industry, more than 90 percent of these are privately run. They are geographically spread across the state with a large concentration around the DMIC. Given the large opportunity in Rajasthan, particularly because of the advent of the DMIC, the Government/RSLDC will need to assess if:

a) The number of existing skill centers (with total number of seats available) and the trades taught are appropriate for the industries they are meant to cater to, and to identify if more skilling centers are needed;
b) Private ITIs/skill centers are providing the requisite support needed for the locality in which they operate (the state could use performance metrics based on placements and accordingly

grade these ITIs), and to determine if more Government ITIs are needed to match future industrial demand.

NSDC's Skill Gap Study for Rajasthan assessed the current sectors generating high employment and those that will in the future – see table 3.2 below.

Table 3.2: High employment industries: current and projected

Current sectors with high employment	Future growth sectors
• Agro Based Industries • Mineral Based Industries • Handicrafts • Textiles • Construction • Healthcare	• Retail • Tourism and Hospitality • Bio- technology • Auto Mechanics and Engineering • IT/ ITES • Gems and Jewellery

On a **deep dive into some industries currently operating in existing economic zones**, it was observed that companies are already being set up keeping in mind future growth sectors. The Mahindra World City (MWC) SEZ in Jaipur, for example, which is jointly promoted by the Mahindra Group and RIICO, employs over 1 lakh people and spans 3000 acres of land with modern infrastructure facilities. Keeping upcoming high demand industries in mind, MWC has set up separate sub SEZs for handicrafts, engineering, gems and jewellery, IT and logistics with some major companies including Genpact, Coca Cola and Infosys.

Similarly, the Bhiwadi-Neemrana Industrial Area (including the Japanese Zone at Neemrana), spread over 545 acres, is reserved for Japanese investment, particularly for those companies which cater to the automobile/ auto components industry. Almost 30 Japanese companies, including Nissin Brakes, Toyota Gosei and Nippon, have invested about INR 2,5000 Crores in this industrial area.

(iii) Industry/Private Sector Engagement

Given the large presence of industry/corporates in any state, whether in established economic zones or beyond, and the important role they play on the demand side of skills as prospective employers, their engagement in the entire skill development process becomes equally important.

In this section, private sector engagement in the skill development space references two different agents: one, private training providers who provide skills-related training and two,

corporates/industry which invest in skill development either through their Corporate Social Responsibility (CSR) mandate or through up-skilling/training of their existing employees.

In Rajasthan, although some large training providers like ILandFS, B-Able, and Dr. Reddy's Foundation have started operations, their centers are primarily located around Jaipur, Jodhpur, Udaipur or other relatively major towns. With greater institutional support being provided by the Government and the higher demand for skills training, this trend is changing for the better. B-Able is a case in point which has recently expanded to 24 districts (of 33 in Rajasthan) with centers in each of them.

However, the trend in the type of skills training being provided is yet to change. **Almost all programmes focus on the service industry (retail, hospitality) with very limited investment in *hard* skills like construction or auto** etc. Given that skills training in these areas will be needed to gear the workforce for future growth sectors in Rajasthan, the Government will need to invest in training centers which can provide such training (for example, at the ITIs) although it may require higher capex, as well as to incentivize training providers to provide high capex trainings.

The corporate sector, especially those companies which have large employment numbers, invests heavily in education and skill development activities around their areas of operation. For example, **Mahindra World City in Jaipur** organizes training programs for school dropouts and unemployed youth. It has partnered with NGOs to conduct skill up-gradation cum entrepreneurship development programs for electricians, plumbers, electronic technicians, security guards, computer operators, beauticians, and spoken English courses among others. In addition, a large skill development campus for Polytechnics has been constructed in MWC, which is equipped with requisite machines and facilities to impart six to nine months training to unskilled workers who are already employed in the machining industry. The training courses are focused on imparting practical skills together with trade-related theoretical education.

Similarly, **Honda** recently got an approval from the Foreign Investment Promotion Board (FIPB) to set up a vocational training institute (with an initial investment of INR 5 Crores) next to its upcoming Tapukara plant, where it will conduct short-term modular courses in the field of manufacturing and automobiles.

JCB India Limited, a large construction company, runs a world-class welding training school in Jaipur which delivers a detailed 16-week induction program to train fresh graduates. As part of the skilling initiatives, JCB also has Operator Training Centers that provide training to youth on safely and productively operating JCB machines. They have successfully trained over 22,000 youth till date (since 2010) in 14 centres across India.

Engaging corporate houses in the skill development of local communities leads to a *win-win* situation. If skills-related training is provided by prospective employers, then trainees will understand company needs better, and the likelihood of their getting placed within the company increases. On the other side, transaction costs involved in sourcing and recruiting labour is minimized for the company. For example, when operating at full capacity, the Jaipur factory of JCB India will employ around 1000 people; a large part of this manpower is expected to be recruited locally from nearby Government polytechnics / ITIs and other private polytechnics.

A list of skill-related activities by select companies across multiple industries in Rajasthan is provided in Annexure 2.

(iv) Innovation

Innovation is key to disrupt the existing skill development landscape and to increasing efficiencies in the existing system. At the national and state levels, it is critical that innovative practices and systems are identified, whether by a state, training provider or corporate, understood, adapted and finally, implemented based on state and local population needs.

Innovation by Rajasthan Government:

One of the key areas in which the state of Rajasthan is seeking innovation is to target youth in lagging regions. It started a project in 2007 called the ***Expansion of Technical Vocation Institutes in Lagging Areas (by private partners)***[19] wherein multiple incentives are provided to the private sector (for example, land leased free of cost for 25 years, and if it's a polytechnic college for women, the Government will also reimburse cost of constructing the building, and provide free consultancy services on any issue related to establishment of institute etc.). Rajasthan also very clearly set the definition of *lagging regions* (i.e. a district that does not have even 1 engineering or polytechnic college) in order to minimize any miscommunication.

Some of the key lessons learned from this project/scheme are:

[19] FICCI Knowledge paper on skill development in India: Learner first, 2012

- Clear targeting of "lagging zones" leads to less confusion in design and in implementation for partners and for the Government;
- Incentives provided to private sector are in line with their needs (for example, no land purchase/rent issues) resulting in over 50 such institutes being set up under this scheme in Rajasthan;
- States should design easy to understand and replicable models which can be used by other states and partners, adapted to specific state needs.

Innovation by the corporate sector:

In smaller towns and rural areas, the need for skilling is often fragmented, and is too low to scale for any skill. There are about 45,000 villages in Rajasthan with small target populations of 10-15 thousand people. The challenge intensifies when setting up high capex centers for training in high-skill trades (such as high end manufacturing). In addition, it is difficult to find good quality trainers and assessors at the grassroots level. In effect, it becomes economically unviable to set up skill centers from scratch.

In this context, when the **ICICI Foundation** took over some government banks in Udaipur and Jodhpur, they were also asked to adopt two Rural Self Employment Training Institutes (RSETIs). The Foundation decided to try out a **hub and spoke model** in order to reach the interiors of Rajasthan[20].

Key features of the model

- RSETIs are hubs with spokes (or satellite centers) in 13 villages
- There are residential facilities at hubs (students from the spokes visit the hub monthly for on-the-job trainings and placement support)
- Trainers are trained by ICICI and are accountable to the Foundation for placements
- Certification and placement is guaranteed by ICICI (making the training attractive and even aspirational for potential trainees)

Given the large number of small villages in the state, the scope is large to replicate this model. Some key lessons learned to enable scaling up include:

[20] http://statistics.rajasthan.gov.in/socio_Rajasthan.aspx; Visit to ICICI RSETI in Udaipur

- Existing schools, block resource centers and other government buildings can be leveraged after operational hours as hubs/spokes to optimize infrastructural resources. The cost of refurbishment would be approximately INR 2 lacs/room.
- In addition, existing Information and Communication Technology (ICT) networks in these institutions can be used for technology-enabled learning – similar to the two-way BISAG[21] for teacher training in Gujarat which uses existing networks in each school.
- The government will need to focus on advocating the cause; it will first have to create similar models and then, showcase their success

Summary

Rajasthan has strong institutional structures which manage the state skilling agenda. While the RSLDC itself is a lean organization headquartered at Jaipur, it has a presence at the district level given a large implementation team. With a management information system in place, data tracking is possible at all levels. Going forward, creating dedicated monitoring and evaluation teams at the grassroots with a strong feedback loop, and including private skilling centers/partners in the monitoring framework, would enable greater accountability in the state skills mission.

Given the thrust of the state on economic growth (particularly because of the DMIC), there will be significant demand for skill training going forward. The RSLDC/Government will need to assess if the existing number of skilling centers (both government and private) are sufficient to meet the expected industry demand, especially in the manufacturing sector.

While some innovation and corporate partnerships have been seen, there is scope for more of such engagements. The state will need to provide targeted incentives to engage private players in the skills space and promote public private partnership (PPP) models. It will also be critical to advance scalable innovative models while encouraging the convergence of multiple stakeholders.

[21] http://www.bisag.gujarat.gov.in/Traning.htm

Skill Development in Gujarat

State Context

With a population of over 60 million people, Gujarat is one of the largest industrial hubs in India. The state has seen a high average annual growth of 9 percent in the agricultural sector, whereas the rest of India has an annual growth rate of around 3 percent. Tourism is also an important sector with an annual tourist footfall of over 20 million.

(i) Institutions

The **Gujarat Skill Development Mission (GSDM)** was set up by a State Government Resolution in 2009 as policy body to be led by the Education Department. The GSDM has a lean organization structure (see Figure 3.5 below) with agencies set up by different Ministries managing the implementation of skilling programs, and GSDM managing their overall coordination. Currently, the **Mission Director is the Director of Training and Employment at the Ministry of Labour**, which assures a strong partnership between the Departments of Education and of Labour.

Figure 3:5: Organization Structure of the Gujarat Skill Development Mission

As a *non-delivery* entity with a mandate to coordinate and strategize, the **GSDM has four key functions**:

a) Developing an integrated skilling and employment strategy for youth in Gujarat;
b) Undertaking surveys/research to identify existing skill gaps and opportunities in the state;
c) Coordinating with other skill departments, for example, Labour and Employment, Education Department, Urban Development etc. to ensure optimization of resources and to streamline programs;
d) Monitoring performance of schemes to measure impact and track targets.

Different agencies under various ministries manage the implementation of skills-related schemes at the district and block levels. For example, the Development Support Agency of Gujarat (D-SAG),[22] an autonomous society set up by the Tribal Development Department (TDD), manages skill-related schemes for the Department. Its overall responsibility spans all aspects of the skilling ecosystem from training and placement to monitoring and reporting. The actual implementation is sub-contracted to training partners (using government and private ITIs as venues).

Over 20 Ministries are involved in Gujarat's skill development initiatives, although some large national schemes are managed by the Ministry of Labour and Employment. These schemes include the Craftsman Training Scheme (CTS), Apprenticeship Training Scheme (ATS), eMPOWER, and Kaushalya Vardhan Kendras (KVKs). The KVKs in particular target rural youth through Kaushalya Sabhas/Skill centers in villages with a population that is greater 5000. These KVKs provide targeted trainings and incentives to SCs, STs, Women, and BPLand handicapped individuals. Over 500 of such KVKs have been established, and have trained 12 lakh individuals, of which 7.28 lakh are women trainees. (i.e. 62 percent).

In order to create appropriate skilling opportunities for its population and adapt skill training to industry demand, Gujarat has also implemented its own **state level schemes for skilling**. Some popular ones are UMEED, Society for Creation of Opportunity through Proficiency in English (SCOPE), and Superior Training Institutes– a short description of these is provided in Table 3.3 below.

Table 3.3: State-Level Skilling Schemes in Gujarat

No.	Schemes	Department/ Ministry	Description
1	UMEED	GUDM, Gujarat Municipal Finance Board, Urban Development Department	Part of the 13,000 crore Garib Samruddhi Yojana of the Gujarat Government. This is a market-driven, aptitude-based skill-upgradation scheme of marginalized sections, for the gainful employment and self-employment of the urban poor in the 18-35 age group.
2	Society For Creation of Opportunity through	Education Department	Launched in 2007 in PPP mode, there is now an established network of 630 centers through five Zonal Training Partners (ZTPs). SCOPE has trained over 3,00,000 people since 2007

[22] http://dsag.gujarat.gov.in/high-quality-skill-training

No.	Schemes	Department/ Ministry	Description
	Proficiency in English (SCOPE)		
3	Swami Vivekananda Superior Technology Training Institutes	Chief Minister	To encourage skill, research and development via technology amongst youth in sectors like CNC, Chemicals, Automobile Engineering, Automation, and Solar and other sources of renewable energy.
4	Swami Vivekananda Rojgar Bharti Mela	Commisioner, Employment and Training	Organizes industrial job fairs wit the participation of private sector employers in the industrial estates of Gujarat. 2,53,007 candidates have been given employment/apprenticeship in 4 rounds of the fair from April 2012-Feb 2014
5	PRIDE	Jointly developed by Gujarat Livelihood Promotion Company Ltd. and NIC Gujarat State Centre	An online portal for Skill Training placement initiatives (captures all details of placements generated through government sponsored skill and training program, avoiding duplication of trained and placed candidates)

Between central and state sponsored schemes, over 1 lakh people are trained every year. However, given industry needs and available supply of labor, there is a requirement and scope to do more. In particular, to make Gujarat skill development initiatives more robust, two actions need to be immediately taken:

(a) Creating a stand-alone State Skill Development Mission (SSDM)

Given the current arrangement of sharing responsibilities between the Department of Employment and Training (DET) and the SSDM, there is an overlapping of resources (both human and financial), and no clear demarcation of roles and responsibilities. A stand-alone SSDM with earmarked funds and personnel will lead to increased ownership, defined accountability, and clear monitoring/mentoring activities at the ground level.

(b) Establishing a robust Monitoring and Evaluation (MandE) system

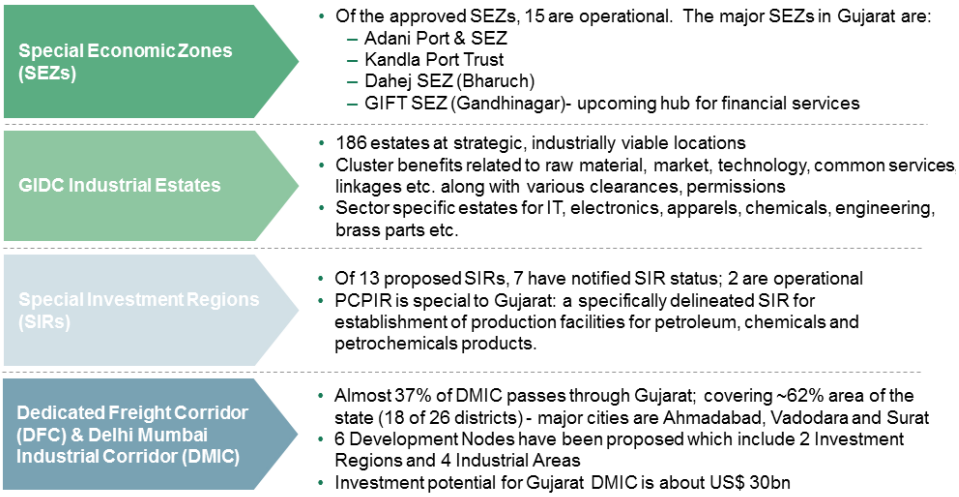
This would entail allocating a portion of the skills budget to MandE activities, employing 2-3 staff at the state level and 2-3 in each district (number of staff based on number of skilling centres in each district), who could be attached to DIETs or district collector offices. In other words, given 33 districts in Gujarat, a total of about 60-70 staff would be required, who would be responsible for overseeing the implementation of skill-related schemes, the quality of training being imparted at centres, and for supporting/reporting any challenges being faced in the field. Further, the

increased frequency of field visits would not only increase the accountability of skilling centres but also reduce inefficiencies in the system due to unclear processes at the ground level.

(ii) Economic Zones

Special Economic Zones (SEZs) in Gujarat constitute approximately 50 percent of the total area under SEZs in India. Specific details on the four major types of economic zones in Gujarat are provided in Figure 3.6, and their geographic mapping to show the spread of economic activity across the State is shown in Figure Y below.

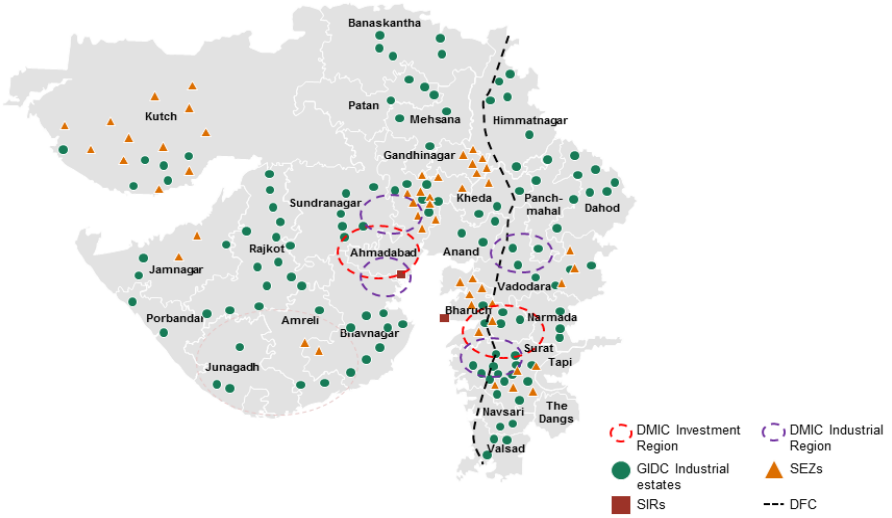
Figure 3:6: Details on Economic Zones in Gujarat



A large part of the Delhi-Mumbai Industrial Corridor (almost 37 percent) passes through Gujarat, covering about 62 percent of the area of the state,and 18 of 26 districts. This, taken together with an investment potential of about USD 30 Billion[23] in this area, makes for huge employment opportunities in Gujarat.

[23] http://www.vibrantgujarat.com/delhi-mumbai-industrial-corridor.htm

Figure 3:7: Geographic Mapping of Economic Centres across Gujarat



Gujarat trains less than 1 lakh people annually through its government skills training system in Industrial Training Institutes (ITIs). While government ITIs train more people than private ITIs, the number of government ITIs (156 in all) is about two-thirds the number of private ones (220 in number). Given the impending demand for labour in the state, state leadership will need to decide on the number of additional training centers/institutes needed by trade. In this regard, it can also inventorize existing, but unutilized, infrastructure – for example, engineering colleges with vacant seats but with available classrooms, technology and labs – to optimize on resources.

NSDC's Skill Gap Study conducted an assessment of current sectors with high employment and those that will generate high employment in the future – see Table 3.4 below.

Table 3.4: High employment industries: current and projected[24]

Current industries with large employment numbers	Gujarat's future high growth sectors (according to NSDC's skill gap study)
• Agriculture, hunting and forestry • Wholesale and retail trade • Petroleum and Petroleum Products • Basic Metal Industries • Electrical and Electronics • Glass, Ceramic and Cement	• IT/ ITES • Transport and Logistics • Plastic and rubber products • Fabricated metal products • Auto and auto components • Gems and Jewellery

[24] NSDC Skill Gap reports, http://www.gujaratindia.com/business/major-indus.htm ; BCG Analysis

Current industries with large employment numbers	Gujarat's future high growth sectors (according to NSDC's skill gap study)
• Textiles • Chemical and Chemical Products • Drugs and Pharmaceuticals • Machinery and Equipment	• Energy(Conventional/Green) • Non-metallic mineral based products • Banking and Financial Services • Hospitality and Tourism

A deep dive into some of these industries and Gujarat's economic zones showcases the fact that the **state already houses a large number of corporates in diverse industries/sectors**. The largest SEZ for example – the **Mundra Port SEZ** (Adani Power) in Kutch – given its effective access to major international sea ports, caters to multiproduct industries from Alstom, Bharat Forge, Hindustan Petroleum, Maruti Suzuki and Oriental Carbon and Chemicals Limited (OCCL).

The **Gujarat International Finance Tech (GIFT) City SEZ** in Gandhinagar is India's first globally benchmarked SEZ for financial services with the status of an *International Financial Service Centre*. With a projected employment (at full capacity) in direct and indirect services pegged at 1 million, this SEZ aspires to capture approximaterly 10 percent of Financial Services and Information Technology (IT/ITES) sectors.

Some of the other large economic zones cater to petroleum chemicals and petro-chemical industries, and include the **PCPIR, Bharuch (including Dahej SEZ)** as well as the **Vadodara Ankleshwar GIDC estates** (the Ankleshwar industrial estate is one of the largest chemical clusters in India). Some large companies operate out of these zones including Reliance Petrochemical, Petronet, ABG Shipyard, ONGC, Hindalco etc. with projected direct and indirect employment at over 1.5 million persons.

As some of the largest production sites in India are in Gujarat, and as an increasing number of corporates are setting up industrial bases in the state, the Gujarat Government will need to increasingly emphasise on setting up good quality skilling institutes as well as on ensuring high quality and industry relavant training in existing ones.

(iii) Industry/Private Sector Engagement

Gujarat has about five large private training providers: TeamLease, Larsen and Tubro, Bosch India Foundation, AISECT and Infrastructure Leasing and Financial Services (ILandFS). AISECT has by far the largest presence in terms of reach with about 250 established training centres. Bosch and LandT provide skills training as part of their CSR initiatives – making skilling one of three-four priority areas (other priority areas typically include environment and education).

Private sector involvement in skill development is mostly through CSR engagement in the State. Each company tends to identify priority areas for skilling such as training for women, for rural youth, and so on. For example, **Essel Foundation** extends support to an Apparel Manufacturing Centre in Jamnagar which trains local women in tailoring and stitching, and creates new business for them by establishing linkages with markets. It has also set up its own Advanced Welding Centre in partnership with the Government which enables candidates to get a certificate from ESAB[25] (a high end welding institute), greatly helping employability.

Reliance Industries Limited (RIL) which employs about 24 lakh people in the State, spends over INR 700 Crore in CSR annually (pan India). In Gujarat, it invests in several skill up-gradation and vocational training programmes for unemployed youth of villages around Reliance units to enhance their employability. RIL has developed its own network of 12 schools in and around the manufacturing units of the company at Jamnagar, Surat, Vadodara, Patalganga, Nagothane and Nagpur, benefitting more than 15,000 students. To-date, about 62 percent of RIL's permanent workforce and 49.5 percent of its permanent women employees has received safety and skill upgradation trainings through classroom as well as web-based training programmes.

Similarly, the **Bank of Baroda** which employs about 50,000 people in Gujarat spends approximately INR 7 Crores in skilling activities through its CSR programme. The Bank has established *Baroda Swarozgar Vikas Sansthans* for imparting training to unemployed youth, free of cost, towards gainful self-employment and entrepreneurship skill development. This helps such youth improve their economic status and also gives a boost to various regional economies in rural and semi-urban areas.

In order to maximize scale of such operations and increase efficiencies in the skilling system (currently, several piecemeal efforts are on-going in the State), the Gujarat government will need to collate all these various activities conducted by the corporate sector as well as under different government schemes. Based on stakeholder consultations, it can then be decided which trades, sections of the population and type of skilling engagement should be carried out by which entity. For example, if rural youth in a particular geographic zone can be better reached through an existing company in the area (through CSR or private training provision), then the Government need not set up an ITI in that area, but can instead discuss ways to support corporate efforts to continue/expand its training operations.

[25] Elektriska Svetsnings-Aktiebolaget, is a Swedish industrial company

A list of skill-related activities by select companies across multiple industries in Gujarat is provided in Annexure 3.

(iv) Innovation

Innovation by Gujarat Government

One of the key innovations being by the Gujarat Government is the **skill voucher system**[26] wherein funds allocated for training reach actual beneficiaries who have the freedom to select the course and institute of their choice, thereby incentivizing the supply side of skilling. The scheme is still in the works and is expected to take off later in the year. Pre-paid vouchers would be purchased by trainees from the GSDM. Therefore, the argument is that market forces would ensure that trainees either get a certificate in the course of his/her choice, or the money would go back to the funding entity if the voucher is not utilised. This, when implemented, will also ensure that accountability and performance of each institute will increase.

Another innovation of the Government is the **Flexi-MoU** system which gives companies the flexibility to tailor training programs at ITIs to meet their specific needs.[27] For example, the Gujarat Industrial Power Company has adopted two ITIs in the tribal-dominated areas of Gujarat where it will provide train candidates to become instrument mechanics (power plant) or electricians (power plant), creating a *win-win* situation for the company, the Government as well as the trainee. 32 flex-i MoUs have been signed to date.[28]

The third type of innovation being implemented in the State are the **Skill Upgradation Centres – SUCs**. These are outreach centres for bringing unorganized labour into the skilling framework. These SUCs typically follow a PPP model where the infrastructure is provided by the Government

[26] FICCI Knowledge paper on skill development in India: Learner first, 2012

[27] http://www.business-standard.com/article/companies/everonn-to-set-up-training-centres-for-itis-polytechnics-109072700060_1.html

[28] http://www.thehindubusinessline.com/economy/labour-ministry-pact-with-flipkart/article6295708.ece

and the content and training are provided by the private partner. These short-term certificate courses go on for about three months. Approximately, 300 such SUCs were set up by 2013.[29]

Innovation by the corporate sector: Industrial KVKs (iKVKs)

The Industrial Kaushal Vikas Kendras (iKVKs) were launched in 2014 in Gujarat, with a mission of skilling ***in industry by industry for industry*** – akin to apprenticeships but shorter duration of training. Currently, there are 47 functional i-KVKs and 62 additional coming up in 2015-16. Skilling programs are industry run within company premises using own shop floors and approval of syllabus is decentralized – 136 course modules in 22 sectors are prepared with industry consultation by different companies. The course length varies between 1-3 months.

Trainees are from local neighborhood and top performers are recruited by companies after trainees sit for assessment at the end of training and certified by company as well as Gujarat Council for Vocational Training (GCVT) on clearing exam. State Government provides approximately INR 25 per trainee per hour – as part of the iKVK state scheme - all else is borne by the company.

Key aspects of the model

- Resources are optimized as infrastructure and training equipment already exist with company

- A mutually beneficial model as training is on industry standards and company retains top talent. Therefore, this model is best replicated in States with high industrial growth given high ownership of companies and training on their shop floors for high capex trades.

In order to scale such a model, it will be important to advocate benefits of iKVKs to states, corporates and PSUs. Existing repository of content will need to be created and shared by corporates for different trades – adapted to context of stakeholder – and trainers. Further, based on the costs of

[29] http://www.vibrantgujarat.com/images/pdf/vg-newswire-june-july-21102014.pdf

trades and sectors, funding will be required wherein a proportion of required capex could be financed[30].

Summary

Gujarat is in the process of setting up good institutional systems for skill development. A key step in the right direction will be the creation of a stand-alone SSDM with dedicated funding and personnel. A robust MandE system – disaggregated to the district levels – will ensure on-ground implementation with a strong feedback loop and greater accountability of involved stakeholders.

Given the presence of a large number of corporates and industrial houses, and their existing engagement in the skills space, Gujarat would benefit from coordinating these efforts and optimizing resources (especially in terms of funds allocated to skill development). In addition, such coordination would also provide learning lessons from existing best practices of implementation.

Building on the success of PPP arrangements like SUCs, the Government should identify other incentives to the private sector (similar to "Flexi MoUs) which would encourage their participation in the skills space. Expected benefits include not just increased allocation of funds for skilling, but also support in skilling implementation in hard-to-access areas or for certain marginalised communities (like tribal groups, women, rural youth and so on).

[30] Indicative costs are approximately 1-2 Cr. for high capex sector/trade and about 15-20 lacs for low capex sector/trade and opex of about 10-15K per trainee.

Skill Development in Maharashtra

State Context

Maharashtra, the world's second-most populous sub-national entity, has over 112 million residents,[31] which is 9.3 percent of the total population of India. The state is highly urbanised with 45.2 percent of its population residing in urban areas. Maharashtra has 36 districts which are divided into six revenue divisions for administrative ease given the large geographical area i.e. Konkan, Pune, Nashik, Aurangabad, Amravati and Nagpur.[32] This state contributes about 25 percent of the country's industrial output and over 13 percent of its GDP. The service sector dominates the economy of Maharashtra, accounting for 61.4 percent of the value addition and 69.3 percent of the value of output in the country.[33] The state's per-capita income is 40 pecent higher than the all-India average.[34]

(i) Institutions

While the **Maharashtra State Skill Development Society/Mission (MSSDS)**[35] was established in 2011, skill development activities in the state have been on-going for over a decade. MSSDS was set up as the state nodal agency to facilitate planning, execution and monitoring of the State Skill Development Plan. Its **vision is to equip 45 million people with employable skills by 2022**, i.e. about 45 lakh skilled workers per year -- the number is derived based on the state's contribution to the Gross National Domestic Product (approximately 13 percent) and its share of the national population (approximately 9 percent). The Maharashtra Government has also recently set up a Department for Skill Development and Entrepreneurship, similar to the Ministry at the Center. However, inter-linkages between the Department and MSSDS are yet to be systematized.

Ten key departments within the State Government have been identified to provide skill development related trainings with annual targets set for each.[36] The Higher and Technical Education Department (HTED), Rural Development Department and the Industries Department are mandated with delivering the highest number of annual trainings – at 10 lakh people to be trained per year. Other departments include the Social Justice Department, the Tribal Development Department etc.

The **MSSDS has a comprehensive mandate** which includes:

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[31] Census 2011

[32] https://www.maharashtra.gov.in/Site/upload/WhatsNew/Economic%20Survey%20of%20Maharashtra...pdf

[33] "Maharashtra Judicial Academy" www.csi-sigegov.org Computer Society of India. Retrieved 5 August 2014.

[34] "Economic Survey". Government of Maharashtra. Retrieved 7 September 2014.

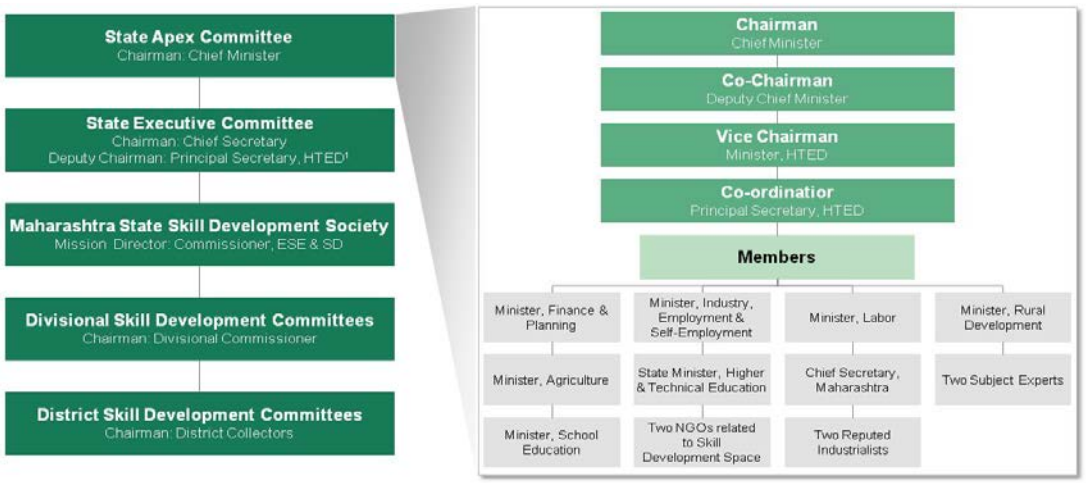
[35] https://mahakaushalya.com/ - official website of MSSDS

[36] http://planningcommission.nic.in/reports/genrep/reginal_conf2/Maharashtra/maha_govt.pdf

- *Converging and coordinating all stakeholders* including corporates, government departments, divisional and district level committees and so on
- *Managing State Skill Gap Assessment Studies* which are led by the industry, and setting up sector skill committees for high growth sectors (11 set up to date, of which 9 have prepared skill gap reports[37])
- *Providing and overseeing skilling targets of state departments* which need to manage central and state schemes as well as optimize the utilization of their existing education and training infrastructure
- *Creating training infrastructure* and *accreditation, assessment and certification*, and ensuring better utilization of existing infrastructure both in public and private sectors
- *Ensuring the availability of qualified trainers*
- *Maintaining a dynamic LMIS and State Web Portal* in order to store and manage real time skilling data
- *Managing industry participation* and designing incentives to engage them effectively

Given its large mandate and scope of work, the MSSDS becomes an important organisation. Hence, at the highest level, the **MSSDS is led by the Chief Minister and the Mission Director is the Commissioner of Employment, Self Employment and Skill Development** (ESEandSD) – see Figure 3.8 below.

Figure 3:8: Organization Structure of the Maharashtra State Skill Development Society/Mission[38] (MSSDS)



[37] Construction, Production and Manufacturing, Textile, Automobile, Hospitality, Health care, Retail, IT and ITes and Agro Processing

[38] http://www.skillconindia.in/skillcon2013_presentations/DAY_1_12_03_2012/CSRSD/drswatimajumdarSkillCon.pdf

1. Higher and Technical Education Department

While policy and overall structure to the skilling agenda in the state is provided by the State Apex Committee (structure shown on the right side of the figure above), the **implementation of skilling projects is managed by divisional and district level teams** through vocational training providers and the Industrial Training Institutes (ITIs). These divisional and district teams provide monitoring and guidance support at the regional and sub-regional levels. The Government of Maharashtra provides MSSDS with approximately INR 10-15 Crores to implement and oversee that these skilling targets are met, and requires that each Department put aside 1 percent of their annual budget for skill development activities.[39]

In terms of **central initiatives, Maharashtra implements three key schemes**: the Modular Employable Scheme (MES) managed by the Directorate General of Employment and Training (DGET), Ministry of Labour and Employment; the National Urban Livelihood Mission (NULM) scheme managed by the Ministry of Housing and Urban Poverty Alleviation; and the Hunar Se Rojgar Tak (HSRT) scheme, managed by the Ministry of Tourism. While funding is provided from the central government for these schemes, the MSSDS/state is responsible for their implementation: from registration of vocational training providers and re-imbursement of training costs and assessment fees to the issuance of fund utilization certificate to DGET, entailing, inspection, monitoring and supervision.

Maharashtra also implements some state level schemes catering to the state's priority sectors. These include the Pramod Mahajan Skill Development scheme, Lok Seva Kendra Yojana, Magel Tayala Vivasay Prashikshan Yojana for scheduled castes and the Manav Vikas scheme.

In 2015, the state launched a *Maharojgar and Mahakaushalya (MandM) portal*[40] which will house a database of, and act as an interface between, students, training providers and industry. The portal includes a dashboard for job seekers and employers with real time data being generated.

Therefore, from an institutional point of view, the state of Maharashtra has made some important strides. Two key recommendations to further strengthen the skills ecosystem would be:

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[39] National Skill Development Agency, Report on Maharashtra 2014 https://c27web2.saas.talismaonline.com/NSDA/Maharashtra__31jan14_V0.2.pdf

[40] https://www.maharojgar.gov.in

(a) Identify, communicate and streamline the interlinkages between the Department for Skill Development and Entrepreneurship and the MSSDS

The roles and responsibilities, together with budget and personnel allocations, need to be clearly defined for both entities. A reporting mechanism needs to be established to ensure smooth functioning of activities for the Department as well as for the MSSDS. Communication down the ladder is as important as setting up structures and processes to enable efficient implementation and reduce leakages (of information, funds and time) in the system.

(b) Promote the MandM portal, especially among industry partners

The digital portal uses multiple data analytics tools and big data and, therefore, could provide a useful basis to understand region-specific demand and supply nexuses. Industry engagement will need to be promoted through discussions and incentives as this platform serves to be a "win-win" for both industry and for the student. The platform will help identify workforce availability for industry while informing students of employment opportunities (by trade and job roles).

(ii) Economic Zones

Akin to *Make in India*, the Maharashtra Government launched the ***Make in Maharashtra*** campaign[41] in 2014, in order to facilitate ease of doing business and generate employment. Currently, the state estimates an ingress of INR 5 lakh crore in industrial investment (USD 84 Billion) and the creation of over 2 million jobs between 2014 and 2019.[42].

Most of this investment and employment will be happen in the economic zones spread across the state. The **Mumbai- Pune-Thane belt is the largest zone**, accounting for almost 60 percent of the state's industrial output. Around 26 per cent of the state's population comes under the corridor that covers eight districts - Thane, Raigad, Pune, Dhule, Nandurbar, Nashik, Ahmednagar and Aurangabad.

Specific details on the four major types of economic zones in Maharashtra are provided in Figure 3.9 below together with their geographic mapping in Figure 3.10 to show the spread of economic activity across the State[43].

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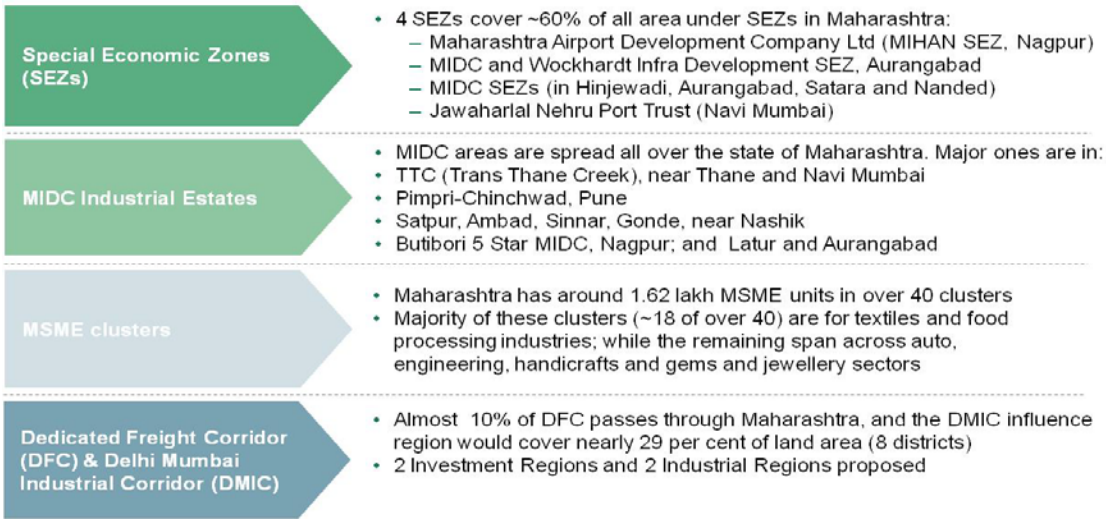
[41] http://www.business-standard.com/article/politics/fadnavis-seeks-industry-s-help-for-success-of-make-in-maharashtra-114111701237_1.html

[42] KPMG Study, 2015, Empowering Maharashtra by Skilling Youth

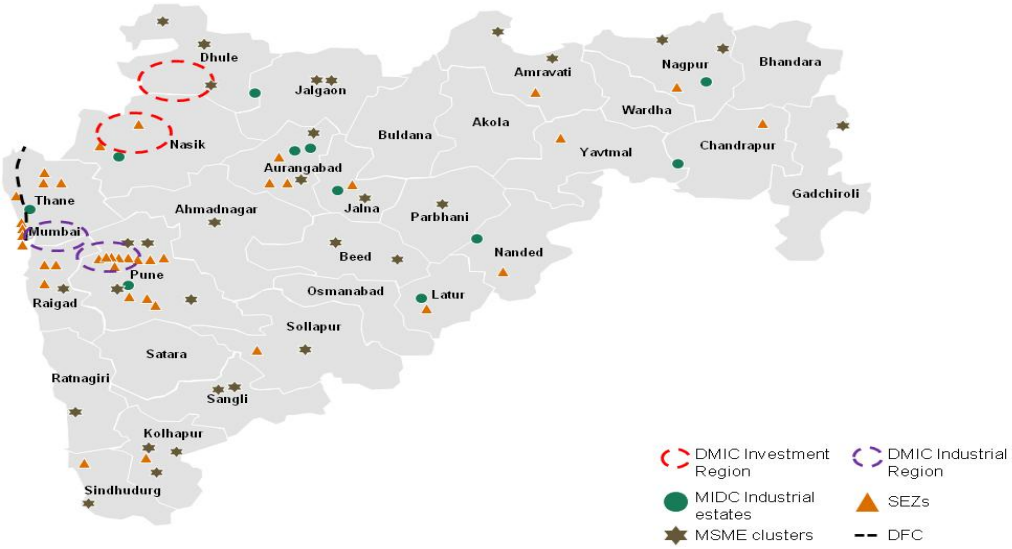
[43] SEZ India, RIICO progress report, NSDC state report, web search, BCG analysis

Figure 3:9: Details on Economic Zones in Maharashtra



The **Maharashtra Industrial Development Corporation (MIDC)** is a project of the government of Maharashtra which provides infrastructure such as land (open plot or built-up spaces), roads, water supply, drainage facilities and street lights to business. The MIDC is spread all over the state with earmarked industrial areas, IT parks, wine and chemical parks, and accounts for the majority of employment opportunities for the population.

Figure 3:10: Geographic Mapping of Economic Centers across Maharashtra



With almost 1,000 ITIs in the state (equal numbers run by the government and by private training providers), skill training is provided to over 2.5 lakh people annually. Maharashtra has a government ITI in every block, which makes skill training highly accessible to its population. Given the existing

networks of ITIs and other training institutes in the State, the MSSDS/Department of Skill Development and Entrepreneurship will need to determine:

a) Processes which can assess (on a regular basis) the type of trades being taught in specific economic zones, and ensure that they align with industry demand – this could be part of an annual assessment conducted at the district level and collated at the state level;

b) The type of employment and entrepreneurship opportunities which need to be generated for zones which are not covered by major economic activities, and provide support accordingly to that end.

NSDC's Skill Gap Study for Maharashtra conducts an assessment of the current sectors generating high employment and those that will in the future – see Table 3.5 below.

Table 3.5: High employment industries: current and projected[44]

Current industries with large employment numbers	Maharashtra's future high growth sectors (according to NSDC's skill gap study)
• Auto and auto components • Banking, financial services and insurance (BFSI) • Building, construction and real estate • Chemicals and pharmaceuticals • Fishery • Textiles • IT/ITES	• Building, Construction industry and Real Estate • Organized Retail • Transportation, Logistics, Warehousing and Packaging • Tourism, Travel, Hospitality and Trade • Healthcare Services

On a deep dive into some industries currently operating in existing economic zones, it was observed that companies cover a spectrum of industries. In the last financial year, almost 29 percent of the total Foreign Direct Investment (FDI) which came into India was invested in Maharashtra.[45] For example, the Maharashtra Airport Development Company Ltd. (in the **Mihan SEZ in Nagpur**) was the location for India's first Boeing airbus factory. Today, it is a major IT hub,

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[44] NSDC Skill Gap reports, www.pn.camcom.it/uploads/media/Maharashtra_Presentation ; Maharashtra_Industrial_Development_Corporation

[45] June 2015 report on FDI released by the Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry.

housing over 15 companies like Infosys, and Tata Consultancy Services. Its projected direct and indirect employment numbers stand at 1.2 million and 10 million persons, respectively.

Similarly, the **Sangli- Kohlapur MSME clusters** (for Micro, Small and Medium Enterprises) are sites of large scale growth of textile industries, and are expected to provide high employment in the future (currently, about 40,000 people are employed). These MSME clusters are mostly located in rural or semi-rural areas and form a large part of the informal sector in India.

(iii) Industry/Private Sector Engagement

Given the large presence of the private sector in Maharashtra, industry and private training providers are quite active in the skills space. Some of the large private training providers include Pratham which has 39 centers across the state, with key a presence in Aurangabad, Pune, Nashik, Mumbai, Raigad and Latur. They primarily cater to eight *future growth sectors* including hospitality, construction, auto and healthcare.

Another large organization is the **Kherwadi Social Welfare Association**, which is seeking to train about 10 lakh youth in the state through its Yuva Parivartan model. 80 percent of their program focuses on out-of-school youth, on providing livelihoods and creating opportunities in the organised sector through placement support, and on setting up a Rural Employment Exchange to aggregate job opportunities in the unorganised sector. It also provides training for farm based occupations through Self-Help Groups (SHGs), drawing on schemes catering to the rural populace like the Integrated Rural Development Program.

Corporate engagement in skilling is primarily driven by CSR activities. **Mahindra and Mahindra**,[46] one of the key auto companies of Maharashtra, provides livelihood training to youth from socially disadvantaged sections of society through the Mahindra Pride Schools. Almost 4,000 such students have been provided training at the 3 Mahindra Pride Schools in Pune, Chennai and Patna. The Company also implements the *SMART* (Skills-for-Market Training) Project, wherein it imparts training to youth in Information Technology (IT), Accounting, Hospitality, Business Process Outsourcing (BPO), Retail and Sales, and Nursing – all of which are key employment sectors. The company projects 50 such centers to be set up by 2015 with a training capacity of 10,000 youth.

Similarly, **Bajaj Auto**[47] has undertaken the upgradation of 4 Industrial Training Institutes (ITIs) - two in Pune, one in Aurangabad and one in Pantnagar - under a PPP arrangement. The company also

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[46] http://www.mahindra.com/How-We-Help/Environment/Sustainability-Reports

[47] http://www.bajajauto.com/report/bal_2014_for_web1.pdf ; India CSR Report 2014

has a partnership with the Ministry of Small and Medium Enterprises (MSME) for conducting vocational training programmes, particularly in dairy, poultry, tailoring, fashion designing and so on for rural youth and women. About 1,000 people are trained through these programs annually.

Larsen and Tubro supports vocational training institutes through multiple means[48] – from upgrading the infrastructure of the institutions to developing curriculum. In FY12, 27 ITIs were supported across the country by the company, in addition to 8 Construction Skills Training Institutes (CSTI) that were established by them in India. In PPP mode, the building and land infrastructure is provided by the government and LandT acts as the knowledge provider and training partner.

A list of skill-related activities by select companies across multiple industries in Maharashtra is provided in Annexure 4.

(iv) Innovation

Two innovative models adopted by the **Tata Institute of Social Sciences** (TISS) are discussed in this section, both of which are practiced in Maharashtra and are being expanded to other states.

(a) Providing Medium Term Training

Context: Very few medium term (9-12 months) training courses are provided in India (most last for 3months or for 2 years). This type of trainings is critical for certain trades/sectors like architectural assistants, surveyors for construction etc.

TISS Model:[49] The objective is to skill about 50,000 National Service Scheme (NSS) students between 2013 and 2016-17 (together with the Ministry of Youth Affairs and Sports) and help them gain a diploma in specific skills/competencies in addition to a bachelor's degree. Using a hub and spoke model (the spokes being about 13 universities across 9 states), students undergo training in 6-7 foundational courses (such as personality development, financial literacy and so on) and in 1 core domain (such as agriculture, water and sanitation, entrepreneurship etc.) as part of the requirements of an existing 3 year bachelor's degree . On completion, they earn either a Diploma (40 Credits) or a Certificate (20 Credits) in addition to a Bachelors of Arts or Science.

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[48] LandT Sustainability Update Report, http://www.larsentoubro.com/corporate/sustainability/updates-from-csr/

[49] http://nussd.tiss.edu/about-us

Given the large scope for resource optimization in this model, **some key lessons learned to enable scaling up** include:

- Using existing infrastructure of universities and other colleges which have classrooms and other facilities in place;
- Targeting a catchment of students (in this case, NSS), i.e. no separate mobilization of students is needed;
- Leveraging existing pool of trainers/experts for training delivery and of NGOs to facilitate field training, drawing on the core competencies of all stakeholders involved.

(b) Providing Work Integrated Training (WIT) or Earn while you Learn Training

Context: Work Integrated Training is for up-skilling people who are already employed and who can continue to work and earn while enhancing their skills. Courses typically cover a spectrum from Banking, Financial services and Insurance (BFSI), hospitality to industrial tool manufacturing (e.g., computer-aided design and computer-aided manufacturing – CAD-CAM). These courses have a duration of less than 6 months (from 60-180 hours, 1 day of training per week), at the end of which trainees are provided a certificate. The concept is similar to Work Integrated Learning (WIL) being practiced globally as well as in engineering colleges in India.

TISS Model: The key objective of this model is to support industries in upgrading the skills of its blue collar workforce. The TISS model uses a Hub and spoke delivery mechanism (similar to the medium-term training model described above) with classroom-based training at the hub and on-the-job training at spokes. This model, if scaled, will especially benefit the MSME sector and help bring those engaged informally into formal employment structures.

Summary

Maharashtra – with the presence of both a Department for Skill Development as well as a Skill Development Mission – is laying strong institutional foundations to build the skilling policy structure in the state. With teams disaggregated at the regional and sub-regional levels, it is also building a ground-level implementation structure. Going forward, it will need to align the mandates and roles

and responsibilities of different stakeholders, especially of the Department and of MSSDS, to ensure the smooth functioning of systems and processes. In addition, mass communication around the MandM portal is needed to engage industry more actively on the platform.

While over 1,000 ITIs are operational in the state, with at least 1 government ITI in each block, it is essential to map these training institutes against the predominant economic activity of the region. This will ensure streamlined demand and supply for skills and training as per industry requirements.

Finally, Maharashtra dominates other states in India in terms of FDI ingress, and with the push created by *Make in Maharashtra*, even more industries are setting up base in the state. While this may mean an increase in CSR investment in the skills space, it also provides an opportunity for the state leadership to bring companies together into a more holistic engagement with skill development.

Skill Development in Bihar

State Context

Bihar is the third largest state in India by population. It has a per capita income of USD 360 a year against India's average of USD 1265. 30.6 percent of the state's population lives below the poverty line against India's average of 22.15 percent.[50] The economy of Bihar is largely service-oriented, but it also has a significant agricultural base. The state also has a small industrial sector, with manufacturing growing at an average growth rate of 0.38 percent compared to India's 7.8 percent.[51] As of 2012, agriculture accounts for 22 percent, industry for 5 percent, and service for 73 percent of the economy of the state. Bihar is divided into nine divisions and 38 districts for administrative purposes.

(i) Institutions

The **Bihar Skill Development Mission (BSDM)**[52] was set up in 2012 under the Society's Act. Its vision is to *increase capacity and capability of the system to deliver quality skill training and professional knowledge to youth to enhance employability and bridge the skill deficit while meeting market demand for skilled manpower*. The BSDM aims to equip 1 crore people with employable skills by 2017, with about 100K being trained annually in long duration trainings and 500K annually in short duration ones.

BSDM's mandate, including 28 objectives listed in an MoU, is primarily to provide guidance and support for efficient planning and implementation, monitoringand evaluation of professional, technical, vocational education, and of skill development and upgradation in Bihar. In addition, it also seeks to

- Document and promote latest innovations and technology
- Facilitate public-private partnerships
- Establish task forces for the implementation of schemes and delegation of powers
- Involve academic and research institutions, training institutes and other institutes working on skilling
- Oversee existing training venues and setting up new ones
- Advise the governing council on new schemes required in Bihar
- Facilitate knowledge transfer (organize conferences etc.)

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[50] Ministry of Statistics and Programme Implementation, http://mospi.nic.in/6_gsdp_cur_9394ser.htm

[51] http://industries.bih.nic.in/Slides01/Presentation.pdf

[52] BSDM MoU details: http://labour.bih.nic.in/docs/Bihar-Skill-Development-Mission.pdf

Given this all encompassing mandate, the **Governing Council is headed by the Chief Minister** (and in his/her absence, the Chief Secretary), with the **Development Commissioner as the Secretary**. Principal Secretaries of about 12 departments are part of the BSDM's Executive Committee (see Figure 3.11 below for more details). Similar to some other State Skill Development Missions, **implementation of skilling projects is managed by district teams** which are overseen by the BSDM

Figure 3:11: Organization Structure of the Bihar Skill Development Mission (BSDM) [53]

The BSDM has a budget of INR 65 crores and a target of training 1 Crore people by 2017-18. It has set out the mandate and department-wise annual targets for 17 key departments in the state, which are listed in Table 3.6 below. The Department of Labour Resources is responsible for the highest numbers to be trained, followed by the Departments of Agriculture and Rural Development.

Table 3.6: Department-wise annual targets for the State of Bihar[54]

Bihar Skill Development Mission
Year wise Physical Target (No. in Lakhs)

Sl.No	Departments	2013-14	2014-15	2015-16	2016-17	2017-18	TOTAL
1	Labour Resource	3.25	3.66	4.27	4.47	4.67	20.31
2	Information Technology	1	1.13	1.31	1.38	1.44	6.25
3	Rural Development	2	2.25	2.63	2.75	2.88	12.5
4	Agriculture	3	3.38	3.94	4.13	4.31	18.75
5	Health	0.2	0.23	0.26	0.28	0.29	1.25
6	Science & Technology	0.5	0.56	0.66	0.69	0.72	3.13
7a	Animal Husbandry Directorate	0.5	0.56	0.66	0.69	0.72	3.13
7b	Fisheries Directorate	0.1	0.11	0.13	0.14	0.14	0.63
7c	Daily Directorate Including COMFED	0.25	0.28	0.33	0.34	0.36	1.56
8	Minority Welfare	0.25	0.28	0.33	0.34	0.36	1.56
9	Urban Development & Housing	0.5	0.56	0.66	0.69	0.72	3.13
10	Education	1.5	1.69	1.97	2.06	2.16	9.38
11	Social Welfare	1.4	1.58	1.84	1.93	2.01	8.75
12	SC/ST Welfare	0.6	0.68	0.79	0.83	0.86	3.75
13	Industry	0.8	0.9	1.05	1.1	1.15	5
14	Tourism	0.15	0.17	0.2	0.21	0.22	0.94
15	Home (jail)	0.12	0.12	0.12	0.12	0.12	0.12
16	Energy	NA	NA	NA	NA	NA	NA
17	OBC Welfare	NA	NA	NA	NA	NA	NA
	Total	16	18	21	22	23	100

[53] http://www.skillconindia.in/skillcon2013_presentations/DAY_1_12_03_2012/CSRSD/drswatimajumdarSkillCon.pdf

[54] Department of Labour Resources, Government of Bihar

Key central schemes being implemented in the state include the Apprenticeship Training Scheme (ATS), Craftsman Training Scheme (CTS), Up-gradation of ITIs under Public-Private-Partnership (PPP), Centre of Excellence (CoE), Skill Development based on Modular Employable Skills (MES), and Skill Development of Youth in 34 districts affected by Left Wing Extremism (LWE).

To strengthen skill development institutional structures in Bihar, two key activities are imminent:

(a) Streamline operations of the Department of Labour Employment and Training and of the BSDM

The challenge is due to the overlapping mandates and unclear division of roles and responsibilities between these two organisations. Therefore, mandates need to be aligned, and work plans and inter-dependencies need to be clearly identified which will ensure the smooth functioning of processes and systems, and reduce issues in implementation at the ground level.

(b) Develop an MIS system for job seekers and employers

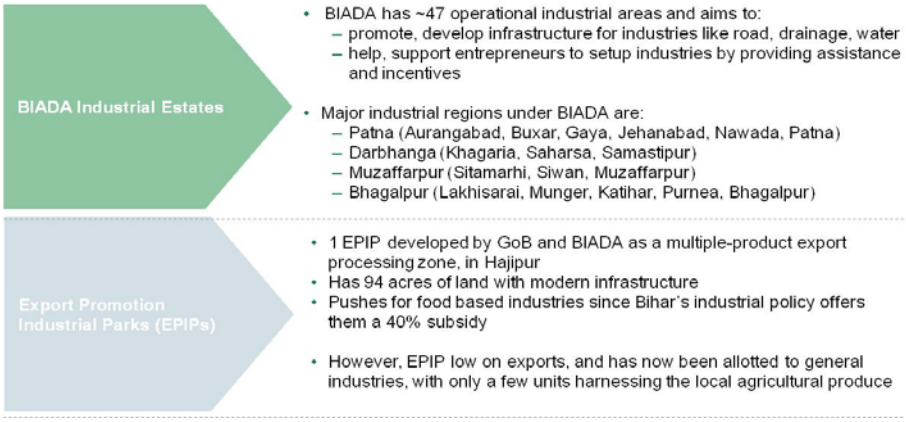
A robust MIS system at the BSDM level, with access rights down the hierarchy, is needed that will be a one-stop platform for all information on skill related activities in the state. This will facilitate data-driven decision making for all stakeholders. The BSDM and its implementation teams can track quality of training, placements etc.; potential trainees can decide which training institutes are best suited to their trade needs/interests; job seekers can track job openings with listed job profiles and companies; and employers can identify desired candidates based on their profiles. The MIS system can further be used as a tool to design incentives into the system and create a structure for performance based awards and recognition.

(ii) Economic Zones

Given that **less than 1 percent of India's industrial output comes from Bihar**, there is much scope for the expansion of economic zones across the state. The key driver of economic activity is the **Bihar Industrial Area Development Authority** (BIADA), established under the BIADA Act, 1974 with an objective to promote and facilitate industrialization in the State. BIADA is a statutory body which receives directions and instructions from the government in accordance with the provisions under the Act. The state government acquires land under the relevant provisions of Land Acquisition Act, transfers the same to BIADA for industrialization, which further allots it to entrepreneurs and companies.

Specific details on the two major types of economic zones in Bihar are provided in Figure 3.12 below together with their geographic mapping in Figure 3.13 to show the spread of economic activity across the State[55].

Figure 3:12: Details on Economic Zones in Bihar



While most districts seem to have 1 BIADA industrial estate, there is a **concentration of economic activity around Patna – the state capital**. The **Hajipur Export Promotion Industrial Park (EPIP)** in the Patna region, for example, is a hub for food processing and for biscuit factories. Built over 94 acres of land, it provides a 40 percent subsidy to food-based industries. Some large companies which have invested in this economic zone include PepsiCo, Britannia Biscuits, and Anmol biscuits.

Two other large zones concentrated around Patna are the **Fatuha and Patliputra Industrial Areas**. While Fatuha is known for small industries, especially handlooms, Patliputra is a multiproduct zone catering to glass, steel, plastics, and gems and jewellery.

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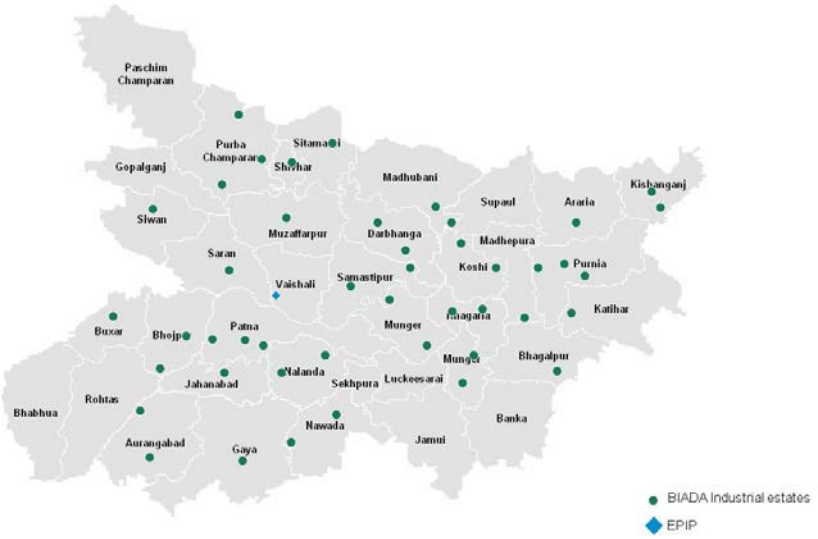
55 http://www.udyogmitrabihar.com/resources/industrial-areas-biada/; http://industries.bih.nic.in/Ppts/PS-01-13-01-2011.pdf

Figure 3:13: Geographic Mapping of Economic Centers across Bihar



There are over 700 training institutes (both government and private ITIs) which provide skill development trainings in Bihar. Most of these (almost 90 percent) are privately managed and train on courses decided at the national level by the National Council for Vocational Training (NCVT); very few training courses and related curriculum are developed at the state level.

NSDC's Skill Gap Study for Bihar assessed the current sectors generating high employment and those that will in the future – see Table 3.7 below.

Table 3.7: High employment industries: current and projected

Current industries with large employment numbers	Future growth sectors
• Agriculture and forestry (including the sugar industry) • Food processing • Textiles: Handloom, Silk and Jute • Leather and tanning • Mining and Minerals	• IT/ ITES and Communication • Energy and Power • Hospitality and Tourism • Plastics and chemicals

Going forward, the state will need to:

a) Identify trades and relevant training courses to align with high growth sectors in the state (especially agriculture and allied activities), develop associated curriculum and courseware, and implement them in the ITIs, polytechnics etc.

b) Develop a robust MandE system to monitor and mentor training institutes (both government and private) so that they implement good quality training. However, the state should not interfere in the operational functioning of the private entities, but it should hold them accountable to standards and measurable outcomes (such as placements).

(iii) Industry/Private Sector Engagement

Most non-state training partners have recently started operations in Bihar over the last 2-3 years. Some of the large private sector training providers include ILandFS, DataPro, B-ABLE, Premier Shield and Shriram New Horizons. Given market demand and shorter course lengths, six industry sectors dominate the training sector: construction, tourism, banking, hospitality, IT and computers.[56]

Some large corporates/industries have their production plants and operations in Bihar. Typically, most corporates engage in some kind of skill development activity for local youth and forwomen in the neighborhood/village where the production plant is housed. In addition, they invest funds through their CSR initiatives.

For example, **ITC's Agarbatti Production Project**[57] in Bihar is part of its Women's Economic Empowerment Program, and is aimed primarily at women from poor households. The company provides end-to-end production support to these women and handles Agarbatti marketing through its nationwide marketing network. The requisite training is provided by ITC, and is focused on building a comprehensive set of skills covering production, packaging ,dispatch, quality control, inventory management, documentation and process efficiencies so that the end result is a competitive and world-class product. ITC provides the training at its network of centers and sub-centers that it operates in partnership with NGOs. In addition to serving as training centers, these units serve as hubs for raw material distribution, finished product collection, quality control, and packaging and dispatch.

Such engagements, however, are few in number. The state will need to identify specific sectors where it needs corporate support in skill development, and to create incentives and an enabling environment in order to engage corporates actively.

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[56] Web searches, BCG analysis

[57] http://ruralinnovations.gov.in/itc-ltd.htm; http://www.itcportal.com/sustainability/images/ITC-CSR-Booklet-PDF.pdf

A list of skill-related activities by select companies across multiple industries in Bihar is provided in Annexure 5. While most of these companies are engaged in skill development activities pan India, currently their engagement in Bihar is limited.

(iv) Innovation

Innovation by the Bihar Government:"Jeevika"

An innovative skilling and livelihoods program running in Bihar is **Jeevika** – funded by the World Bank, Government of India and the Government of Bihar. With an outlay of over INR 9,200 Crores, this Bihar Rural Livelihood Project has been in operation for 6 years. The project structure is laid out in Figure 3.14 below.[58]

Figure 3:14: Jeevika's Project Structure and Targets

With its presence in all 534 blocks of Bihar, the project has ***Skill and Placement*** as a key pillar of its program, (linked to the initiative on *Economic Capital Development*) and ensures placements in high end companies like Vardhman Rayons, LandT, Construction Industry Development Council (CIDC), and so on. Through this project over 46,000 rural youth have been trained at the Rural Self Employment Training Institutes (R-SETI). In order to tackle the issues related to migration and associated skills training, the project enabled the opening of the first Migration Resource Centre (MRC) in Gurgaon in 2014. Through this center, which provides key information on health,

[58] http://www.biharinnovationforum.in/pages.php?pid=10

education and remittance services, emphasis is placed on monitoring post placement progress of youth and on identifying specific skills/trainings needed by migrant workers[59].

Summary

With the creation of the Bihar Skill Development Mission and annual skilling targets set for each responsible department, the state is investing in making skill development a priority. Given the large number of stakeholders in the skills landscape (particularly with 17 departments engaged in skills training, and with the Department of Labour Employment and Training playing an active role in implementing key central schemes), it is imperative to create and communicate clear mandates and reporting mechanisms and to identify any overlaps and possibilities of collaboration. This would increase efficiencies within the governing and the implementation system.

According to the 2015 Ease of Doing Business Report of the World Bank, Bihar ranks at number 21 of thirty-two states assessed, and falls in the *Jump Start Needed* category of states.[60] Going forward, the state will need to align with *Make in India*, *Digital India* and other such national level programs and create the necessary infrastructure and investment climate for industries to invest in high employment generating sectors. This, coupled with high quality skill training institutes, will ensure a higher return on investment for businesses.

Few companies and non-state partners are currently engaged in skill related trainings in Bihar. The state will first need to prioritize creating the enabling environment for companies to increase investments in Bihar, followed by identifying critical areas of support that the private sector can provide to the state in its specific skill-development value chain.

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[59] Annual Report on Bihar Rural Livelihood Project, Jeevika http://www.brlp.in/skill_and_placement.php; http://brlp.in/admin/Files/Annual%20Report%2013-14.pdf

[60] Assessment of State Implementation of Business Reforms, September 2015, http://dipp.nic.in/English/Investor/Ease_DoingBusiness/StateAssessmentReport_14September2015.pdf

4. RECOMMENDATIONS AND WAY FORWARD

The previous chapters covered four key aspects of skill development at the state level: institutional set up; presence of economic zones and matching skill development training to requirements in the respective zones; role of non-state partners (both private training providers and corporates engaged in skill development through their CSR initiatives or otherwise); and any innovative practices/models being implemented by the state government and/or corporates in specific states.

While state specific recommendations have been captured in Chapter 3 for each relevant state, this section provides high-level design solutions which can be adapted to any state in the country.

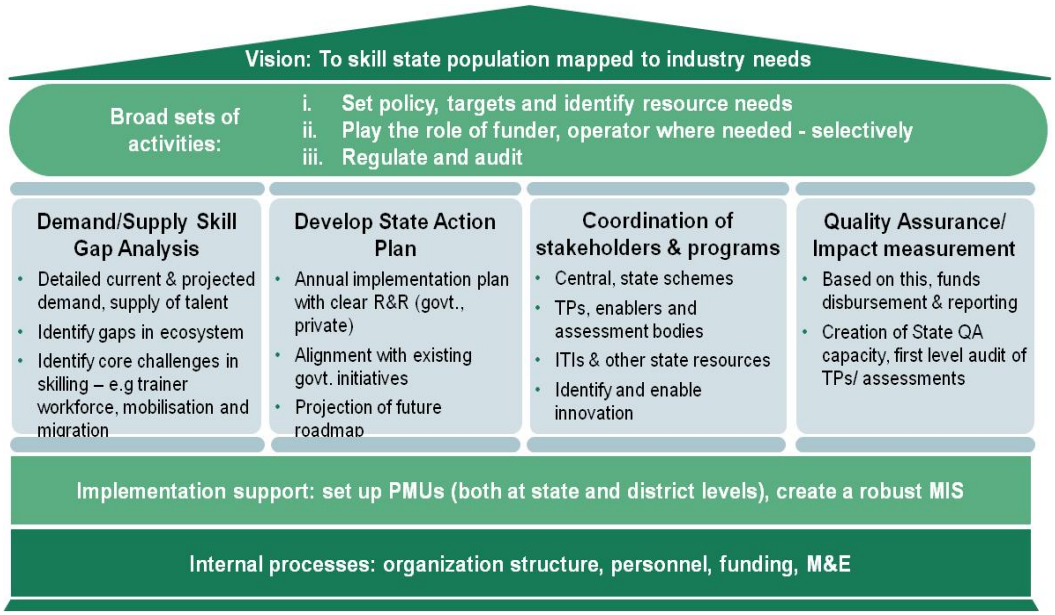
(i) Strengthening State Skill Development Missions

Most SSDMs have broad, comprehensive mandates that are very similar to each other. However, in reality, **SSDMs have grown organically, and what they actually do and how they function is very different from other SSDMs**. The majority of the work of SSDMs seems to be focused on the implementation of skilling schemes (both central and state specific), rather than on state-level strategic thinking, analysis, planning and monitoring.

Even for implementation of large national schemes (details in Annexure 1), **roll-out models at the state level varies**. For example, while the Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) is implemented through Project Implementation Agencies (PIAs) across states, the Ministry of Rural Development shares a different relationship with different states in terms of disbursement of funds and monitoring/supervision control. For some states, funds are directly disbursed to PIAs and monitoring is managed by the MoRD; for other states, funds are disbursed to the Department of Rural Development at the state level which also manages monitoring and supervision.In addition, SSDMs have been set up as different organization types in different states (for example, Rajasthan has set it up as a Corporation, Maharashtra as a Society, and Gujarat and Bihar as a Mission), with varying organization structures (heavy vs. lean staff structures) and different budget amounts.

It is therefore important to look at the SSDM mandate and functions afresh, keeping in mind existing organizations and institutions that are already implementing skilling activities in their respective states. A **preliminary hypothesis about the role of State Skill Development Missions covering a range of functions is provided** in Figure 4.1 below. From this, the center can decide on the minimum functions which an SSDM should carry out or manage, and the states can adapt the remaining to their own context.

Figure 4:1: Framework for Roles and Functions of a State Skill Development Mission



The broad assumption made in the framework above is that the SSDM should primarily focus on setting policy and targets at the highest levels, and ensure monitoring/mentoring to achieve those targets. It should get involved in implementation and funding only where necessary.

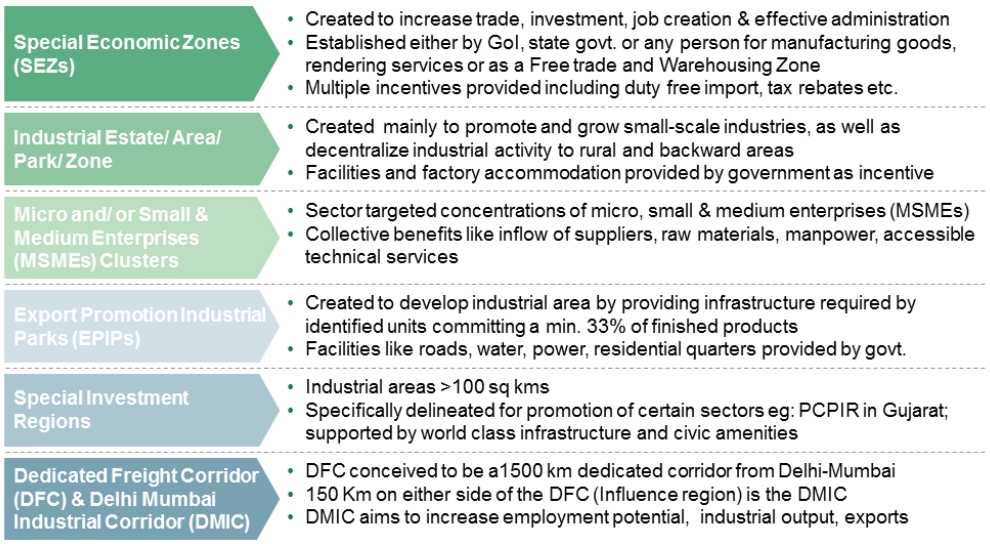
Thus, four key activities of an SSDM's work plan could include:

- Assessing the skill demand and supply gap for the state;
- Developing an action plan (annually and five-yearly) to manage the skill gap;
- Coordinating stakeholders and skilling schemes to ensure alignment with the state action plan;
- Assuring quality, and measuring impact of implementation.

(ii) Regional Mapping of Economic Zones

Across India, there are typically six types of economic zones catering to different priorities with different types of incentives given to industry to participate in each. A list and description of these zones is provided in Figure 4.2 below.

Figure 4:2: Economic Zones in India



Given the importance of economic zones in creating employment opportunities, one way for states to create a demand-supply nexus is based on economic zone mapping. This activity would fall within the ambit of the SSDM and a potential approach is provided below.

1. Identification of economic zones and industries in each state through

- Desk and secondary research, telephonic interviews with experts and analysis
- Mapping of zones geographically on state maps
- Identification of high and future growth industries in these zones

2. Identification of Corporates in economic zones by

- Means of secondary research and through conversations with Industry Associations
- Identifying 10-12 corporates in each state mapped by high growth industries
- Documenting current and projected employment numbers (where available)

3. And finally, mapping of skill centers to zones

- Listing skill centers (government and private ITIs etc.) in each state
- Matching courses taught in and seating capacity of centers to needs of corporates in those economic zones
- Identifying gaps and recommending locations and courses for new skill centers (decide on government vs. private centers needed for this expansion).

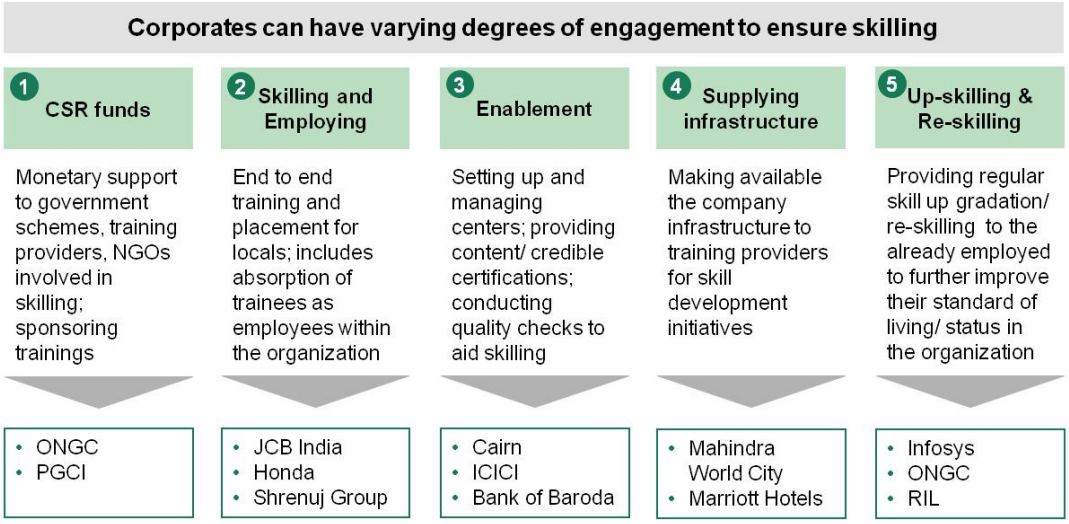
(iii) Facilitating Convergence of Private Sector in Skills Training

Non-state players (or the private sector) typically play one of three roles in the skilling space:

a) That of a **training provider,** which primarily focus on mobilization, trainer capacity creation, content creation and implementation of training programs;
b) That of an **enabler,** like a public sector undertaking or a Foundation, whic provides financial assistance to training providers or students, and support for evaluation, market linkages, apprenticeships, advocacy, infrastructure and placement;
c) That of a **hybrid,** which acts as both a training provider, managing implementation, and as an enabler supporting evaluation, infrastructure and placements.

Corporates contribute in multiple ways to the skilling agenda in India. Figure 4.3 below provides a framework capturing the key pillars of engagement used for the private sector.

Figure 4:3: Framework for Corporate Engagement in Skill Development in India



Different skills, trades and job roles require different kinds of engagement with industry. For example, an ordinary gas welder for the SME sector will require minimal intervention with basic training aids to support the learning; however, when the same welder moves up the value chain to be trained in arc welding or in an even more complex skill of deep sea welding for the oil exploration industry, the pedagogy as well as training aids will need refinement and be best provided by the industry.

In order to engage with industry in the most impactful manner, the government will need to prioritize those skills and job roles for which industry engagement is critical and design targeted intervention models. Incentives, both financial and non-financial, will form a big part of this collaboration. Financial incentives could be in the form of investments in infrastructure, operational expenses like fees to trainers and expendables, tax holidays and other subsidies; non-financial incentives could include accessibility to good quality trainers and assessors.

There is significant scope to bring corporates into the fold to improve the relevance and viability of private skilling players. **Indian corporates have donated approximately $0.5 – 0.6 Billion[61] in 2013[62]** (majority from some big names like Reliance, TATA, ITC, ONGC etc.), and of the top 100 donors, 44 percent support skill development and about 80 percent of those donate to NGOs to ensure on-ground implementation.[63] If this money could be pooled and pushed towards developing innovative and scalable resource-optimized models of skilling, the impact would be much more pronounced.

(iv) Identifying and Scaling Innovative Models

About 8-10 models (suggested by the Ministry of Skill Development and Entrepreneurship and select Foundations) were studied in detail to understand operating models and cost structures. Each model seeks to mitigate challenges in a particular area. For example, to improve content and create effective classroom formats for pedagogy, training providers like I-Saksham and LabourNet are producing digital content and interactive Learning Kits, a GTT-Cisco collaboration[64] is facilitating technology enabled training with two way video and voice communication, and Skillveri is installing simulators to increase accuracy and reduce costs over time.

Multiple innovative models are underway in States, particularly by corporates and private training providers but none at scale yet. A 3 step process to identify and scale innovative models at State level is provided below.

Step 1: Design district-level skill gap studies and identify existing innovative models which could support district-level gaps

Step 2: Take a deep dive into the details of the model and the resources needed to scale (costs, staffing etc.). For the models studied, tentative costs have been provided in the Table 4.1 below. These costs have been derived based on discussions with training providers, corporates and other key stakeholders.

Step 3: Design implementation plans and create buy-in of all stakeholders

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[61] Corporate data available for companies for either 2012-13 or 2011-12. Note: USD:INR conversion rate of 60 assumed

[62] 'India CSR Report' by Socio Research and Reform Foundation, BCG analysis

[63] India CSR report 2013 by Socio Research and Reform foundation, BCG database of top 25 companies by CSR budget

[64] This model is being practiced in Kerala ITIs with Cisco and Global Talent Tracker (GTT)

Table 4.1: Tentative costs for select innovative models

Model	Costs
Technology-enabled Hub and Spoke Model	• **Capex** - INR 2 lakhs / room • **Opex** - INR ~3.5 lakhs / year
iKVKs	• **Capex** - INR 1-2 crores for high capex sectors, and INR 15-20 lakhs for low capex sectors • **Opex** - INR ~10-15 thousands / trainee
Mobile Skill Centers	• **Capex** - INR 7-10 lakhs / container for low-mid capex sectors • **Opex** - INR 6 thousands / trainee
World Class Skill Centers	• **Capex** - INR 3-8 crores for low-high capex sectors (high end machinery, equipment etc.) • **Opex** - INR ~10-15 thousands / trainee
Grassroots Training (Short Term)	• **Capex** - INR ~2 lakhs / room • **Opex** - INR ~3.5 lakhs / year
Engineering Colleges etc. (Medium Term Training)	• **Capex** - INR 1-2 lakhs / room • **Opex** - INR ~3.5 lakhs / year

One of the most efficient and effective ways of reaching inaccessible areas while reducing set-up and implementation costs, is through **technology enabled learning**. The Indian masses are still warming up to the idea of learning through technology, particularly in the higher education and vocational space, but the proportion of those willing to do so is steadily increasing. In higher education, for example, Indian enrollments account for about 8 percent of worldwide activity in **Coursera** and 12 percent in **edX**, the two leading providers of massive open online courses (MOOCs). Even India's own top-tier technical universities have created free videotaped lectures of more than 700 courses, particularly for students at regional colleges.

In the vocational space, there is much scope for expansion using technology tools. While some models are already being tried out (for example, the recent AISECT and ALISON collaboration),[65] impact and success is yet to be measured for blue collar jobs. Given the existing appetite in the

[65] AISECT, has partnered with online learning platform, ALISON, to provide skills-based learning to rural and semi-urban populations. Under the partnership, ALISON (already with a 500,000 Indian student user base) and AISECT will provide a free e-learning platform to students offering internationally recognized vocational courses, which will be free of charge and open to all. http://thepienews.com/news/india-leading-vet-chain-pairs-with-mooc-platform/

population for imbibing technology solutions, the Indian Government will now need to learn lessons from global best practices and players already operating in India to develop scalable models around technology.

Annex 1: List of central and state schemes related to skill development

Central Schemes on Skill Development by various Ministries[66]

Ministry/ Department	Schemes/ Programmes/ Institutions for Vocational Education and Training	Target Group
Agriculture	• Training in Agricultural Extension • Training in use of Agricultural Implements and machinery • Soil Conservation Training Centre • Cooperative Education and Training	Person engaged in Agricultural institutions and support services, members of cooperatives and Farmers
	• Need based training programmes in State Agricultural University or ICAR Institutes	Individual/group of scientists
	• CIFNET – Regular courses / Refresher courses	10th Std students / Lecturers
Food Processing Industries	• Grants were provided to NGOs for setting up Food Processing and Training Centres	Rural populaces with preference to women, SC, ST etc.
	• Various institutions are also running training courses	Mainly persons in Food Processing Industry
	• Programmes for development of HR in food processing, testing, training etc	Managers, technician aspirants
Health and Family Welfare	• Basic Training of multipurpose health worker through training centres and schools	Minimum 10th pass
	• Promotional training of Female Health Assistant in training centres and hospitals	Persons working in Health and family Welfare programme
Heavy Industries and Public Enterprises	• Counselling, Retraining and Redeployment of Rationalized Workers of CPSEs (Formerly NRF)	Workers who opt for voluntary retirement, rendered surplus or retrenched from CPSEs
Information Technology	• NIELIT's capacity enhancement plan on skill development (erstwhile DOEACC)	Students or working persons with 10+2 pass
	• CEDTI - Courses in the field of Electronics, Telecommunications, IT, Process Control and Instrumentation • Setting up of Electronics and ICT Academies in various states in existing IITs / IIITs/ NITs	

[66] National Skill Development Policy, CII Report on "Unlocking the Potential : Skilling for Employability and Growth", 2014

Ministry/ Department	Schemes/ Programmes/ Institutions for Vocational Education and Training	Target Group
Human Resource Development	• Vocationalisation of Secondary Education • Polytechnics, Institutions for diploma in pharmacy, hotel management, architecture	Student having passed 10th
	• Community Polytechnic Scheme	Poorer sections of society
	• Jan Shikshan Sansthan - Vocational Training Centres run by NGOs	Disadvantaged groups of adults
	• Support For Distance Education and Web Based Learning	Engineering, physical sciences graduates, faculties
	• National Institute of Open Schooling - Distance Vocational Education Programmes - Practical training through Accredited Vocational Institutes (AVIs)	School leavers with 5th, 7th,,8th and 10th pass
	• Apprenticeship Training for student of +2 Vocational stream	Students passing out of +2 Vocational stream
Skill Develop and Entrepreneurship (DGET)	• Craftsmen Training Scheme • Apprenticeship Training Scheme • Model Training Institutes and Model Industrial Training Institutes.	School leavers with 8th, 10th, 12th pass or National Trade Certificate Holder
	• Modular Employable Skills – Skill Development Initiatives Scheme (MES-SDIS)	Drop outs, unorganized sector workers
	• Crafts Instructor Training Scheme	Instructors of ITIs/ITCs
	• Advanced Vocational Training Scheme and Hi-tech Training Scheme	Industrial Workers/ Technicians
	• Supervisory Training	Supervisors from Industry
	• Women Training Institutes	School leavers, Instructors
	• Central Staff Training and Research Institute	Training Executives, Principals
Rural Development	• National Institute of Rural Development (NIRD) conducts programmes • RUDSETIS train about 1.25 Lakh per annum • Skill development of BPL @50000 per annum	Practicing Manager in rural development
	• Swarnjayanti Gram Swarozgar Yojana (SGSY)	BPL in rural poor

Ministry/ Department	Schemes/ Programmes/ Institutions for Vocational Education and Training	Target Group
	• Ajeevika (now renamed as DDU-GKY)	
MSME	• Entrepreneurship Development Programme, Skill Development Programme (SDP), Management Development Programme	Workers, Educated unemployed youth, Entrepreneurs
Khadi and Village Industries Commission	• 51 Training Centres run 35 types of programmes	Unemployed rural youth, In-job Artisans/Supervisors
Social Justice and Empowerment	• Institutes and schemes for the differently abled, scavengers and their dependents, SCs, STs	Disadvantaged and marginalized sections of the society
Textiles	• Training Programme, Weavers' Service Centres, Cooperative Training, Training Centres for Handicrafts, Handicrafts and Handlooms development Corporation	Skill upgradation of Workers in textile industry
	• Apparel Export Promotion Council (AEPC)	Workers in Garment Industry
Tourism	• Food Craft Institutes under State Governments • Hunar Se Rozgar	10th Pass 8th pass; 18-28 year olds
Tribal Affairs	• Vocational Training Centres (VTC) in Tribal Areas	Unemployed Tribal youth
Housing and Urban Poverty alleviation	• Urban Self Employment Programme under Swarna Jayanti Shahari Rozgar Yojana – replaced by National Urban Livelihoods Mission (NULM)	Urban unemployed or underemployed poor below poverty line
HUDCO and others in Construction sector	• Building Centres (HUDCO) • Company run schools (NBCC HCC, LandT, ECC etc.) and association etc.	Persons engaged in Construction Industry
	• Construction Industry Development Council (CIDC) and others	Workerand Supervisor having qualification of V to XII Std
Women and Child Development	• Support to Training and Employment Programme for Women (STEP)	Poor and asset-less women
	• Training in home scale preservation of fruits and vegetables	Housewives and adolescent girls

Ministry/ Department	Schemes/ Programmes/ Institutions for Vocational Education and Training	Target Group
	• Central Social Welfare Board (programmes organised by voluntary organisations) to train women in marketable trades	
	• Women Empowerment Programme in collaboration with IGNOU	
	• Kishori Shakti Yojana to train and equip girls to improve home based, vocational skills	Adolescent girls
	• Other programmes like UDISHA, SABLA, Training of Anganwadi Workers etc.	
Chemicals and Fertilizers	• Support to Central Institutes of Plastics Engineering and Technology (CIPET)	5th pass, 12th pass, Graduates
Commerce and Industry	• Sub-schemes to the Integrated Leather Development Programme like Placement Linked Skill development Programme and support to Artisans Scheme	Unemployed youth, existing workers in formal and informal leather sector
Home Affairs	• Border Area Development Programs	People residing in border areas as defined by MHA
Minority Affairs	• 10% of funds under MSDP used for funding individual trainees (minorities) • Seekho Aur Kamaao • Training by National Minorities Development and Finance Corporation	Minority youth 5th pass
Power	• National Power Training Institute (NPTI)	12th pass
Youth Affairs and Sports	• Skill Up-gradation Training Programme for Women in 200 Border/Tribal/Backward Districts (SUTP) • Skill Development Training Programme (SDTP) under NCVT in 100 Districts • Scheme of Youth Employability Skill (YES)	33 selected states and UTs with backward districts YES in 59 Districts across 8 North Eastern States

NSDC's Schemes[67]

Name of Scheme	Details	Target Group
Standard Training Assessment and Reward **(STAR) (Phase I)**	• Provides monetary incentives (average monetary reward of ₹ 10,000 per candidate) for successful completion of market-driven skill training • Overall program aim to benefit 10 lakh youth at total cost of ₹ 1,000 crores • Monetary reward wholly funded by Ministry of Finance, GoI, and NSDC implementing agency (₹205.75 crores spent up to Oct 2014)	Youth; Special emphasis to economically backward sections Covers limited high-market-demand job roles
Pradhan Mantri Kaushal Vikas Yojana (PMKVY) **(STAR Phase II)**	• Skilling needs identified on basis of skill gap studies conducted by NSDC • Specifically for inducting into 4 GoI projects - Make in India, Digital India, National Solar Mission and Swachh Bharat Abhiyan	First time entrants to labour market; Class 10 and Class 12 drop outs
UDAAN	• JandK specific scheme that aims to provide skills to 40,000 youth over a period of 5 years in high growth sectors • Partnership between NSDC and corporates to provide skill and exposure (₹ 42.7 crores of NSDC funding till Dec 2014)	Youth of JandK, specifically graduates and postgraduates Focus on small towns in JandK

[67] www.nsdcindia.org; PWC Report on National Skill Development Programs System and Processes Study, Dec 2014; http://www.britishcouncil.in/sites/britishcouncil.in2/files/ilo_british_council_skill_assessment_in_india.pdf

Annex 2: Companies engaged in skill development in Rajasthan

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
Shree cement	9.28	SCL contributes in the area of education, skill development of people in the local communities - Household Fitting and Appliances: Around 25 unemployed youth benefitted by the SCL's vocational training on household wiring and repairing of equipment. The vocational training included repairing of coolers, fans, press, mixer grinder and other household tools. -Mobile Repairing: Around 25 unemployed youth were benefitted by the initiative; -Beauty Parlour: Around 45 women were benefitted by the initiative; -Stitching Course: Around 30 women were trained on stitching in the reporting period.
Ultratech cement	43.40	At the skill development centres pan India (at Hirmi, Sambhupura, Kharia Khangar, Khor, Rawan, Awarpur and Malkhed). 1112 youngsters received training in electrical repair, photography, videography, motor driving, food processing, sewing and dressmaking. -A training course on basic tailoring was imparted to 2,032 women (at Tadipatri, Hirmi, Reddipalyam, Khor, Sambhupura, Malkhed, Arakkonam and Rawan). -To promote sustainable agriculture, organic farming units have been set up by 115 farmers from Ratnagiri and Jaffrabad.
JCB India Ltd.	NA	JCB India Ltd inaugurated its newest facility at Jaipur in November 2014, the company's single largest manufacturing footprint in India. -The company has committed to investing in training programmes to make candidates employable by imparting them with the right skill sets. - JCB Jaipur also runs a world-class welding training school which implements a detailed 16-week induction programme to train fresh graduates. - JCB management and staff have benefitted from the company's skilling and training initiatives and are now working in the world class facility at Jaipur. -As part of the skilling initiatives, JCB also has Operator Training Centres that provide training to youth on how to operate JCB machines safely and productively. The 14 centres across India have successfully trained over 22,000 youth till date.
Larsen and	70.00	At LandT, Institutes are supported through multiple means – from upgrading the infrastructure of the institutions to developing curriculum to ensuring training quality. In FY12, 27 ITls were supported across the

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
Toubro Ltd.		country. -LandT Construction as part of its skills building strategy has established 8 Construction Skills Training Institutes (CSTI) in India. Typically, the building and land infrastructure is provided by the govt. and LandT is the knowledge provider and training partner. -The institute will train and provide employment in the construction sector to youth from the economically weaker and socially backward sections of the society.
Mahindra World City (Jaipur) Limited	NA	Mahindra World City, Jaipur organizes training programmes for school dropouts/ unemployed youth. -It has partnered with NGO's like TBI to conduct skill up gradation cum entrepreneurship development programs for electricians, plumbers, electronic technicians, security guards, computer operators, beauticians, English speaking and more. - Swiss Skill Development Center at MWC, Jaipur: A skill development campus for Polytechnics will soon come up in MWC, Jaipur equipped with all machines and facilities required to impart six to nine months training to unskilled workers who are already employed in machining industry. The training courses are focused on practical skills combined with trade-related theoretical education. The campus shall accommodate the necessary buildings which will include not only workshops but also auditorium, lecture rooms, appliance stores, wardrobes, teacher's offices, canteen, library and hostel.
Manipal Hospital	NA	Fellowships/ certifications/ advanced training courses given free of charge via Manipal University (candidates have min. eligibility criteria like MD/ MBBS/ MS/ DNB)
Honda Motors	NA	Honda recently got an approval from the Foreign Investment Promotion Board (FIPB) to set up a vocational training institute with an initial investment of Rs. 5 crore -Based on discussions with Rajasthan Government, Honda Vocational Training Institute (HVTI) will introduce short term modular courses in the field of manufacturing and automobiles -The institute will come up in an area of 10 acres which has been earmarked for HVTI in adjacent to Honda's upcoming Tapukara plant. -It is part of Honda's CSR initiative which was also requested by the Rajasthan government- and is a not for profit institute. -The basic objective of HVTI is to improve employability of youth so as to help them gain useful employment opportunities across the Auto Value Chain, esp. at its own ventures

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
		2) Vocational Training Centre In order to help local rural people, especially women, Hero Honda has set up a Vocational Training Centre. So far 26 batches comprising of nearly 625 women have been trained in tailoring, embroidery and knitting. The Company has helped women trained at this centre to set up a production unit to stitch uniforms for Hero Honda employees.
Toyota Kirloskar Motor	60.34	Toyota Technical Education- Provides Employment Enhancing Vocational Skills pan India -Spent 18 crores out of a budget of 21.29 crores for this initiative
ITC-Sheraton	106.60	Under ITC's CSR policy, the company aids the communities residing in close proximity of production units, whose full potential cannot be realized due to poor social infrastructure in the areas of education, skill enhancement, health and sanitation. -More than 2,400 youths were covered this year by the skill development initiatives, of which 38% belonged to the SC/ST communities -ITC encourages local employment in its hotels, depending on the availability of requisite skills. It has also partnered with agencies that impart vocational training on skills related to sales and distribution, hospitality with an objective of enhancing the employability of youth from disadvantaged sections of society.
Marriott	NA	NOT in Rajasthan- However, Marriott hotels in Pune, Chennai and Chandigarh have partnered with the Mahindra Pride Schools. The program helps transform the lives of youth from socially and economically disadvantaged communities by providing access to skills that empower them to earn a livelihood. - Marriot provides six months of “on the job” hospitality training to the students and a stipend to sustain them during this period. Graduates are considered for job openings at the hotels. In the last 18 months 37 students have been trained and hired in India - Marriot Chandigarh's vocational training program, “Stitch a Living,” produces hand-stitched bags and other accessories sold at the hotel.
Infosys	240.00	Infosys' Education and Research group anchors the Infosys Extension Program (IEP), which consists of the Infosys Fellowship Program, Rural Reach program, Catch Them Young and Train the Trainer. Infosys focuses on training underprivileged students at its development centers. - It has also expanded its CSR activities in the U.S. to focus on making quality computer science education widely available. The initiatives will be carried out by its philanthropic arm Infosys foundation, USA.

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
Genpact	NA	Education and Employability is Genpact's primary pillar for CSR activities. NOT in Rajasthan, however, 3 programs running for Promotion of education, Employment enhancing and vocational skills: 1) Reach Higher program in partnership with Nasscom Foundation/Nasscom SSC in WB 2) Nasscom Social Innovation Forum in partnership with Nasscom Foundation Pan India 3) Don Bosco Rescue and Rehab Street Kids in partnership with Don Bosco in AP - Genpact has also Imparted soft skills and communication skills training to 40 colleges and 100 teachers in multiple Indian states
Lafarge	NA	Lafarge India Mason Training Program at Chittorgarh: Mason Development program in collaboration with ILandFS. The 'Certificate Program for Assistant Mason,' will help prepare prospective apprentices for the trade and in turn, help bolster the economy. This program aims to train youths from under privileged background in masonry work and various construction development practices. The first batch of candidates will undergo a one month program to learn the details of safe construction practices and also receive technical training and soft skills development. -In Jamshedpur, Lafarge India through it's foundation NIDHEE launched a programme on employability training called "Ek Mouka" in partnership with CAP Foundation. The programme focuses on developing skills of rural unemployed and underprivileged youths, and linking them to employment opportunitiesin nearby areas. 106 unemployed youths were covered under the programme.
Hindustan Zinc (Vedanta)	NA	Vedanta's Self Help Group (SHG) programme aims to empowering women through financial independence and livelihood generation. -Currently 27,100 women are enrolled in 2,050 SHGs. Approximately 40% of these groups are linked to various enterprises like mushroom cultivation, poultry, goatry, puffed rice processing, vermi-composting, leaf plate-making, fish-farming and other initiatives. -Vedanta also has 37 adult education centres and skill-based training activities that benefit 140,000 children, young people and adults. - Hindustan Zinc received the ASSOCHAM CSR Excellence Award, 2011-12, for promoting sustainable development in remote rural villages in the state of Rajasthan.
Cairn (processing)	NA	The CAIRN ENTERPRISE CENTRE (CEC) has been created to be the hub of Cairn's employment enhancing CSR initiatives for the people of Barmer. CEC and satellite centers provide employment linked training

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
		for local youth; 750 individuals are trained annually; they have achieved 75% employment; CEC functions in partnership with DTE and is linked to ITI. - The Cairn Center of Excellence, Jodhpur, has been set up to provide advanced vocational skill trainings in various industrial trades. The Centre is expected to begin operations in the second half of 2014-15, and will train over 3,000 rural youth over the next five years. - Cairn is also in the process of implementing an income generation and enhancement program through improved practices in agriculture and livestock farming. Focus is on creating access to better technologies and market linkages for farmers. The program is expected to positively impact over 20,000 farmers over the next five years. - Cairn India also set up a tailoring unit in the village where women would be trained and develop skills. Today, more than 150 women from the village have completed the course successfully and are now using the skill professionally.

Annex 3: Companies engaged in skill development in Gujarat

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
Essar Projects (India) Ltd.	3.93	Essar Foundation extends support to an Apparel Manufacturing Center in Jamnagar, Gujarat. The center develops the skills of local women in tailoring and stitching and creates new business markets for them by establishing linkages. - Essar Industrial Training Centre: The Foundation has joined hands with the DA in Chandigarh to set up an Advanced Welding Centre imparting advanced welding skills. It is a p'ship with the govt. which enables candidates to get a certificate from ESAB (a top notch welding institute), greatly helping employability. - Ajeevika Project for Youth Employability- Essar foundation supports another project to enhance employability. -The Foundation has also initiated a livelihood promotion project in Durgapur, WB, to impart training of Zardosi embroidery to women and girls. It facilitates skill up gradation by giving inputs from NIT and NIFT for design training; and then creates linkages with the govt.
JMC Projects (India) Ltd.	NA	The company focuses on conducting employability and training programmes for locals (details not given)
Adani Logistics Ltd	8.90	With an objective to improve the quality of education in the Govt. Primary schools of Mundra Taluka, Adani Foundation provides Material support, Infrastructure support and Programme support. Functioning through Educational Volunteers appointed at schools more than 17000 children are covered under various activities/ programs with guidance from UNICEF.
Reliance Industries Ltd.	712.28	Various skill up gradation programmes and vocational training programmes have been imparted to unemployed youth of villages around Reliance units to enhance their employability. -RIL has developed its own network of 12 schools in and around the manufacturing units of the company at Jamnagar, Surat, Vadodara, Patalganga, Nagothane and Nagpur benefitting more than 15,000 students. -62.05% of RIL's permanent workforce and 49.5% of the permanent women employees received safety and skill up gradation trainings through classroom as well as web-based training programmes
GAIL India Ltd.	54.00	GAIL Utkarsh programme: Skill Training programmes to the disadvantaged youth in areas of Guna (M. P.), Dediapada (Gujarat) and Tandur (Andhra Pradesh) -Taking cognizance of the changing need of the industry to engage

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
		qualified personnel suitably equipped with knowledge, skills, attitude and a practical exposure to the highly specialized jobs; GAIL Training Institutes (GTIs) in Jaipur and Noida have been organizing various training programs focusing on building operational and managerial capabilities working towards development of Human Capital of the Organization. - The company is also exploring the possibility of forming Special Purpose Vehicles (SPVs) with strategic partners to provide adequate training in the CGD operations under the skill development programme. Not in Gujarat; Focused more on education than skilling: -GAIL's initiative "Padhoaur Badho" in collaboration with NGO AROH, aims at providing education to children residing in urban slums in Delhi. More than 11,000 students have benefitted in the last 2 years from GAIL's education related programs. -E-Shiksha program: computer labs in self-sustained power-equipped mobile vehicles set up with qualified instructors and teaching aids. The program enables students to accomplish their computer related school curriculum through the mobile computer aided lab and makes computer education accessible to government schools in remote areas. Vehicles are also available to the villagers of Pata and Vijaipur (in UP and MP), for adults to take up courses in typing and basic computer literacy.
ONGC	341.30	ONGC has extended support of Rs 91 million towards the project Udaan (by Min of Home Affairs and NSDC). Not in Gujarat; but active in skilling in Assam: - ONGC-NSTFDC Hathkargha Prashikshan: The CSR project was aimed at economically empowering the women tribal handloom artisans in Assam to facilitate cluster development for economically marginalized tribal populations. In 2011-12, around 100 tribal handloom artisans were provided on-the-job training in improvised looms by master craftsmen - Project Utkarsh-Livelihood Project in Sibasagar, Assam: Initiated in 2011-12, the company partnered with an NGO to expand livelihood opportunities for 400 households in one year through training of women in skills like tailoring, soft toy making etc. with linkages for income generation as well as training the elderly in vocations like goatery, piggery, mushroom cultivation etc. -Apparel training programme in Chhindwara (MP): This project in association with Apparel Training and Design Centre (ATDC), Gurgaon, aims to train 180 boys and girls of poor families located in tribal areas of Chhindwara district, M.P, to conduct Six Diploma/ Certified training

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
		courses, which shall be sponsored by ONGC at a cost of Rs. 5 million. The project guarantees at least 70% placements
Arvind Ltd.	NA	Arvind Mills has helped in the establishment of the IIMA, ATIRA, and The Kasturbhai Lalbhai Textile Training Centre in Ahmedabad to develop and enhance the skills of textile workers. -It has established the Sharda Trust, which collaborated with the National Institute of Fashion Technology (NIFT), Gandhinagar, and helped the urban poor to train in the area of sewing machine operation. The Trust also organized placement activity with the local garment manufacturers and has so far trained and placed over 300 persons in Ahmedabad. -Training programmes were conducted for women and men in Khedbrahma taluka, Gujarat. 25 women participated in tailoring training and 13 men each participated in motor cycle repairing training, electric wiring training. -It established the Narottambhai Lalbhai Rural Development Fund and The Lalbhai Group Rural Development Fund for the benefit and education of the weaker sections of the society.
Welspun Textiles	25.33	Welspun pioneered Mission Mangalam Scheme with the Gujarat Government. Currently there are three Sakhi Swarnim Centers being run in Varsamedi, Dudhai and Bhadreshwar. This initiative widens their livelihood options by building capacities and providing training to rural women. - EMPOWERMENT program: Welspun sets up a vocational training center for cutting and stitching in their community, which is run like a professional enterprise by the CSR Team. Efficiency is monitored and daily guidance is provided to the women. Welspun offers employment to these women at their Textile plants. They have trained 610 women across 8 training centers so far.
ICICI Bank Ltd.	164.00	Not in Gujarat yet but potential to expand to state - During fiscal 2014, ICICI Foundation set up the ICICI Academy for Skills which focuses on providing skill training to the youth. Nine centres were opened across the country during the year with around 1,015 students completing their training during the year. - ICICI Foundation has taken over RSETIs at Udaipur and Jodhpur districts since 2010, offering short-term intensive vocational training programmes to rural marginalized youth. Other services under this domain include placement support to persons who have undergone training under this programme. The programme includes training in mobile repairing; shuttering / carpentry, plumbing and a course to run a beauty parlour. Awareness programmes for local self help groups too are organized on a regular basis.

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
		-Another initiative is the introduction of Satellite Centres which brings 'training-at-doorstep' model to the youth. -ICICI Fellows is a pioneering youth leadership programme which aims to create socially responsible leaders with a passion for development. The programme includes a mix of classroom training and on-the job project internship with NGOs working in rural areas.
Bank Of Baroda	6.99	Spent majority of CSR (ie, 6.42 crores) on Livelihood Promotion and Technical training -Bank has established Baroda Swarozgar Vikas Sansthan for imparting training to unemployed youth-free of cost, for gainful self employment and entrepreneurship skill development which helps them improve their family economic status and also gives boost to various regional economies in rural andsemi-urban areas' 47 Districts have Baroda Rural Self Employment Training Institute (R-SETI)
Axis Bank Ltd.	42.42	ABF focuses on developing and facilitating sustainable livelihood, which covers 40 Programs in 19 States (163 Districts) and 68846 Beneficiaries, in association with Kherwadi Social Welfare Association (KSWA). It provides vocational training under various trades to the unmotivated school dropouts and underprivileged youth under their "Yuva Parivartan (YP)" initiative.
IBM	NA	Economic Development and Skill Development is one of the anchors of IBM citizenship initiatives. -Present in Maharashtra/ Odisha/UP/ West Bengal, IBM gives a training on Entrepreneurship Skills development for early stage entrepreneurs along with SME Tool Kit - A rural entrepreneurs' information hub equipped with WiFi and IT infrastructure has been set up in five villages across India by IBM. Agri-business advisory services, as well as basic computer training and other appropriate skills training, has been conducted.

Annex 4: Companies engaged in skill development in Maharashtra

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
Allcargo Logistics Ltd.	NA	One of the CSR mandates in Women Empowerment; which includes providing a platform for all women across the varied sections of the society for making a better living through education, skills development and employment programs across all company locations.
Larsen and Toubro Ltd.	70.00	At LandT, Institutes are supported through multiple means – from upgrading the infrastructure of the institutions to developing curriculum to ensuring training quality. In FY12, 27 ITls were supported across the country. -LandT Construction as part of its skills building strategy has established 8 Construction Skills Training Institutes (CSTI) in India. Typically, the building and land infrastructure is provided by the govt. and LandT is the knowledge provider and training partner. -The institute will train and provide employment in the construction sector to youth from the economically weaker and socially backward sections of the society.
Jindal Steel and Power	NA	Not in Maharashtra yet but active in skilling in Orissa, Jharkhand and Chhattisgarh. -The Company has set up educational and vocational training institutions under the banner of O.P. Jindal Institute of Technology and Skills (OPJITS) at Angul, Patratu and Godda. These institutions impart competence-based skill-oriented technical and vocational training in multiple trades, such as, electrical work, welding, carpentry, plumbing, fitting, computer operations, cutting and tailoring, motor mechanic, masonry - O.P. Jindal Community Colleges (OPJCC), established at Angul and Barbil (Odisha), Godda and Patratu (Jharkhand), and Punjipathra (Chhattisgarh), are providing technical courses duly recognized by NCVT and IGNOU. OPJCC emphasizes employability as well as educational and economic mobility. - The Jindal Institute of Technology (JIT), Raigarh is affiliated to the Chhattisgarh Swami Vivekanada Technical University, Bhilai and is recognized by AICTE. The Institute offers 4-year undergraduate engineering programmes in mechanical, electrical, electronics, civil and metallurgy courses.
Punj Lloyd Ltd.	1.00	One of the mandates is skill development, though details are not available. The company makes efforts to enhance the lives of the local community start at all project sites, with recruitment and training of the local community, empowering them with specialized skills and

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
		improving their employment potential. -Wherever possible, these opportunities are opened to the womenfolk.
Tata Consultancy Services Ltd.	93.58	Adult Literacy Programme (ALP) , a Computer Based Functional Literacy Programme has reached 1,93,625 beneficiaries. In fiscal 2013, literacy was imparted to 11,125 people. - BPS Employability Program: Skill development with a focus on promoting IT/ITES employability has been a principal area of engagement. employability training program for marginalised youth across India. This Employability Training Program comprises 80 to 100 hours of powerful interactive content designed to develop skills that increase their chances of finding employment. The training provides an effective platform for the development of communication skills, corporate etiquette, interview skills, resume building and basic computer knowledge. In 2013-14, 12,117 beneficiaries underwent training in 15 Indian states, 632 beneficiaries successfully joined TCS. -EMPOWER, training programme for vendors- The programme provides training to support service staff of vendors deployed in TCS. The training aims at building capability in spoken English, operating computers and building other soft skills. In FY13, the programme reached 131 beneficiaries. -Advanced Computer Training Center (ACTC) ACTC was set up with the objective of providing computer training and personality development to enhance the employability of individuals with visual impairment. The programme also seeks to create employment opportunities for them. Since 2008, TCS trained 117 visually impaired under the scheme and facilitated employment of 70.
Infosys	240.00	Infosys' Education and Research group anchors the Infosys Extension Program (IEP), which consists of the Infosys Fellowship Program, Rural Reach program, Catch Them Young and Train the Trainer. Infosys focuses on training underprivileged students at its development centers. - It has also expanded its CSR activities in the U.S. to focus on making quality computer science education widely available. The initiatives will be carried out by its philanthropic arm Infosys foundation, USA.
Taj Group of Hotels	NA	Vocational Skill Development Programs are one of the key CSR mandates for Taj Group of Hotels. Under this, the group does the following: -Support partner NGOs and other partner Tata Companies' CSR programmes to provide hospitality and service industry relevant skill trainings to youth from rural, less-privileged, Scheduled Caste/Scheduled Tribe and differently abled backgrounds -Over 30 such skill training partnerships are already in progress across

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
		the country and can be further strengthened to be more impactful and efficient -Facilitate personality development, character building and grooming to ensure work readiness and job placements for certified youth
Mahindra Holidays and Resorts India Ltd.	NA	The company regularly nominates executives to participate in development programmes and workshops to enhance and upgrade their skills. Specific c activities and programmes are undertaken to align the employees with the culture and business goals of the organization and increase their personal development.
IDBI Bank Ltd.	NA	With effect from October 31, 2011 the Rural Self Employment Training Institute (IDBI-RSETI) commenced conducting free residential training programs for rural unemployed youth in Maharashtra -IDBI-RSETI has conducted eight training programmes for 224 youth in 2011-12. -Bank has established a network of officers under a dedicated 'Agri Business Group' across the country to provide knowledge-based credit to the farming community to improve farm productivity and quality of life of the rural population.
ICICI Bank Ltd.	164.00	During fiscal 2014, ICICI Foundation set up the ICICI Academy for Skills which focuses on providing skill training to the youth. Nine centres were opened across the country during the year with around 1,015 students completing their training during the year. - ICICI Foundation has taken over RSETIs at Udaipur and Jodhpur districts since 2010, offering short-term intensive vocational training programmes to rural marginalized youth. Other services under this domain include placement support to persons who have undergone training under this programme. The programme includes training in mobile repairing; shuttering / carpentry, plumbing and a course to run a beauty parlour. Awareness programmes for local self help groups too are organized on a regular basis. -Another initiative is the introduction of Satellite Centres which brings 'training-at-doorstep' model to the youth. -ICICI Fellows is a pioneering youth leadership programme which aims to create socially responsible leaders with a passion for development. The programme includes a mix of classroom training and on-the job project internship with NGOs working in rural areas.
Future Retail Ltd.	NA	Future Group and NSDC have a joint initiative for skilling called Future Sharp Skills. They provide vocational education to young people in India, helping them gain employment with top Indian companies.

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
		- Future sharp not only provides customized skilling programmes for industry-specific staffing needs, but also re-skills a company's existing staff. Programmes like the latter ones help create new learning opportunities, thus motivating employees in the company. - The initiative has multiple skilling programs running. ~80% of their placement is outside of Future group, while ~20% are absorbed within the company, primarily in retail roles.
Mahindra and Mahindra Ltd.	22.00	Company continues to support the Government mandate for affirmative action by providing youth from socially disadvantaged section of society with livelihood training through the Mahindra Pride Schools. -3,830 students from socially disadvantaged sections of the society have been provided training at the 3 Mahindra Pride School in Pune, Chennai and Patna. - one of the CSR mandates is to Enable Employability by driving skill development / up gradation programmes -SMART (Skills-for-Market Training) Project: It imparts training to the youth in the field of Information Technology (IT), Accounting, Hospitality, Business Process Outsourcing (BPO), Retail and Sales and Nursing. This flagship vocational training programme of TMF began in 2012-13 with 3 SMART centres and today has expanded to 25 centres operating across the country, training over 4800 youth. The plan is to raise the number of centres to 50 by 2014- 15 and train 10,000 youth.
Tata Motors Ltd.	17.33	Tata Motors Grihini Social Welfare Society, which employs more than 1000 women, now has a turnover of over Rs.13 crores. - Jaguar Land Rover with Birmingham Metropolitan College forged a partnership to deliver Interactive Learning Programmes for schools and colleges -The Company believes in continual learning of its employees and has institutionalized a continual learning model for skill up gradation, especially at the shop-floor level. The learning and development needs of management cadre employees are met through the Company's LandD structure which includes various training delivery mechanisms.
Bajaj Auto Ltd.	NA	Under Public Private Partnership (PPP), the Company has undertaken to upgrade 4 Industrial Training Institutes (ITI) - two in Pune, one in Aurangabad and one in Pantnagar. -In academic year 2012-13, 403 students from 27 different schools of Wardha benefited from the Bajaj Science Education Centre. In addition, 106 students were coached at the Centre for various competitive examinations. 880 students appeared for Entrance examination held on 4

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
		March 2013, for the 218 fresh intake capacity of the Centre, which reflects the recognition of its quality. -In Kasika bas village of Sikar district, a revolving fund of Rs.123,500 created by JBGVS has helped 32 SHGs to get Rs.1,923,000 loan from bank to start income generation activities like goatry, dairy, small enterprises, etc. -In Wardha, JBGVS has been working in partnership with Ministry of Small and Medium Enterprises (MSME) for conducting vocational training programmes. -JBGVS also organized 36 vocational training programmes in many areas, particularly in dairy, poultry, goatery and non–farm areas like tailoring, fashion designing, etc. A total of 520 youth participated in these training programmes.

Annex 5: Companies engaged in skill development in Bihar

Most companies listed below have pan India presence currently with potential to expand in Bihar.

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
Oudh Sugar Mills Ltd.	NA	The Group is one of the largest industrial employers in Bihar. The Group has invested substantially in providing functional and behavioral training to enhance competence. (details not given)
PepsiCo India Holdings Pvt Ltd	NA	Pan India: The company undertakes capacity building of the communities. The training modules for the members are designed in a manner so as to provide comprehensive information about watershed development, and focus on skill development. For the interventions, they have monitoring mechanisms to assess impacts on environment and socio-economic dimensions: 1) "Project Funnel": This is a skill development and recruitment drive targeted at economically disadvantaged sections of the society. The intent is to create the right talent pipeline for Pepsi's sales and operations teams, thereby supporting sustainable livelihood for people at the bottom of pyramid and to ensure sustainable business. Project Funnel is an initiative to leverage the Indian National Skills Mission which aims to proactively bridge the skill gap in the Indian Workforce. This project involves working through the government and non-government agencies in India in mobilizing talent at the grass root level and making them PepsiCo India ready. These agencies work with Pepsi aligned with Government of India's charter of creating employability, and mobilizing and training youth from disadvantaged sections. 22 agencies having pan-India reach were identified as part of the project and candidates have been hired by Pepsi through this program. 2) Tailoring training provided based on the interest of beneficiaries (10 persons received skill development program on tailoring in FY12)
ITC Ltd.	106.63	Pan India: 1) ITC supported an employability programme where students across various locations were trained in FMCG sales and distribution skills. Successful students were certified by the National Skill Development Corporation, securing jobs in the FMCG sector. In addition, 2,443 youth were covered this year by the skills development initiative, of which 38% belonged to the SC/ST communities. 2) ITC's Vocational Training Initiative: ITC's skilling initiative for boys and girls focuses on employability and employment linkages with the larger purpose of empowering rural communities by creating sustainable livelihood opportunities. The

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
		initiative offers training in technical skills for the hospitality, automotive, electrical, computer and construction sectors as well as in a range of trades – tailoring, beautician, bedside nursing, security. Courses run for 4 to 12 weeks, ending on the skill. Through this initiative, ITC plans to train 10,000 youth year-over-year.
Coca-Cola India Pvt Ltd	NA	Not in Bihar, but active in skilling: 1) A joint initiative of Hindustan Coca-Cola Beverages Pvt. Ltd (HCCBPL), NIIT Foundation and Gram Niyojan Kendra, Career Development Centre (CDC) is aimed at bringing job oriented vocational training program within the easy reach of the educated, unemployed and undertrained youth of the area. The centre is equipped with modern training facilities where NIIT certified trainers impart training. The center became operational in January 2011 and offers job oriented training courses in Basic IT, Service Industry and soft skills. In the first year alone, over 158 students were successfully placed in suitable jobs, after completing the training at CDC. Some of the prominent employers seeking trained students are – EasyDay, Big Bazaar, McDonalds and KFC. 2) Recognizing the need to build the capacity of Kirana retail owners in the country, The Coca-Cola University (CCU) developed the 'Parivartan' program (the Hindi word 'parivartan' translates as change towards the better). The program aims to spread knowledge of best practices and equip traditional retailers with the right skills, tools and techniques necessary for them to grow their businesses sustainably. The program aims to build business skills in 4 key areas of retail: Shop management, Stock management, Customer management and Financial management Multiple other activities. 40% of the seats are offered to girl students and those from economically weaker sections of the society.
Bata India Ltd.	NA	One of the thrust areas in the CSR policy is stated to be "Vocational Training programmes to enhance the employability skills of the beneficiaries". However, details of activities are not given.
Indian Oil Corporation Ltd.	84.23	Not in Bihar, but active in skilling in Assam and other parts of India: 1) Assam Oil School of Nursing, Digboi: Established in 1986. It offers professional nursing/midwifery courses to unemployed girls of the North East. The school offers 4 year Diploma in General Nursing and Midwifery. 20 girls are selected on merit every year through a written test. The students are paid monthly stipend and uniform and free accommodations are also provided. Till March 2013, 316 students have successfully completed the course and the placement record is 100%. 2) Industrial Training Centre at Indian Oil (AOD)-Digboi, under the aegis

Name of the Company	Total CSR spend (INR cr)	Type of skilling engagement
		of National Council for Vocational Training (NCVT), offers 68 seats in various Industrial Trade disciplines. It offers a 3-year fresher trade course and specialization in fitter, electrician, turner, mechanic jobs. After completion of training, students become eligible to appear in All India Trade Test conducted by NCVT. Since inception, 1126 students have successfully completed various courses at this centre and have been absorbed in various Public and Private sector organizations.
NTPC Ltd.	NA	Not in Bihar, but active in skilling in other parts of India: 1) Setting-up Solapur Power Training Institute. 2) Sponsorship to villagers for ITI training. 3) Vocational training to BPL candidates at Apparel Training and Design C entre, Chhindwara. 4) Educational and developmental workshop for Kashmiri migrant children and youth in Jammu. 5) Skill upgradation programs for women, to promote self-employment, include tailoring and providing sewing machines. All these activities have benefitted around 3,000 individuals during 2011-12. 6) Up-gradation of the ITIs under a Public-Private Partnership model (PPP). In addition to the adoption of ITIs in the PPP scheme, NTPC has also entered into a MoA with the State Governments of Haryana and Uttar Pradesh for the up-gradation of ITIs at Faridabad and Dadri respectively. NTPC has adopted 17 ITIs as well as constructing 9 new ones at various locations to bridge the skill gap; creating 1530 seats in them. The new ITIs are being set up at Chatra, Salakati, Solapur,Balouda, Chorbhatti, Naktu, Barkagaon, Salhawas and Nabinagar. New trades relevant to the local industry are being added in most of the adopted ITIs. The instructors have been provided with superior training to ensure qualitative teaching by them. Its salient features include a makeover for the classrooms and the institute buildings, upgrading the libraries and new machinery for the workshops and laboratories.
Bajaj Electricals Ltd.	NA	Pan India: Employment, enhancing vocational skills and livelihoods is a key mandate of the company in community development. It aims to: -Support technical and vocational programmes to generate employment -Support social enterprises to enhance livelihoods, to reach the last mile who can have access to quality products and services
Shrenuj and Company Ltd.	NA	Company opened a diamond cutting and polishing unit at Patliputra Industrial Area in March. 550 residents of Bihar were trained to cut and polish diamonds and subsequently hired by The Shrenuj Group. The final strength of the unit would be 1,400 to 1,500. The company has provided requisite training and employment to the locals.

Annex 6: Global best practices and scaling them in India

Globally, many techniques in skill development have been tried and tested. Some have stood the test of time and have consistently shown results superior to those achieved by other means. Below are some such models from which lessons can be learned and then adapted and replicated in the Indian context.

We have considered three key areas of innovation when benchmarking – increasing apprenticeships and industry participation, leveraging technology for providing training and short term trainings provided at the last mile i.e. at the grassroots level. For each of these, we have provided a short description on how it is currently implemented in the country, followed by identifying key aspects of innovation and finally providing some suggestions on what it would take to replicate these models in India.

A6.1 Increasing Apprenticeships and Industry Participation	
Germany[68]	**Background** • Dual system of apprenticeship (financed by private sector) and government funded part-time vocational training. Two thirds of the total German workforce holds a vocational degree. • In a typical year, 1.5 million apprentices are in-training with 90 percent successfully completing their apprenticeships. 50-60 percent of apprentices stay on with the company they originally trained with – as against 1.94 percent in India. • Company trainers teach trainees three to four days per week, while vocational school trainers teach them for one to two days. • Blue-collar jobs (i.e. construction, manufacturing, mechanics, and automotive) are traditionally the most high in demand industries • Private worker unions have good relations with the companies which have ensured relatively high wages for blue collar jobs – this attracts educated Germans who might otherwise have opted for more professional jobs – and also increases the "skills premium" for blue-collar skills.

[68] http://cep.lse.ac.uk/pubs/download/special/cepsp22.pdf, http://www.bibb.de/en/, http://siteresources.worldbank.org/EXTNWDR2013/Resources/8258024-1320950747192/8260293-1320956712276/8261091-1348683883703/WDR2013_bp_Youth_Unemployment.pdf

A6.1 Increasing Apprenticeships and Industry Participation	
	• Costs private industry roughly 15 billion Euros a year - however a high youth employment rate and productivity makes up for these costs. The Government spends a third of this cost at about 5 billion Euros. **Aspects of Innovation** • Convergence of stakeholders: Companies, trade unions, and the Government collectively draw up uniform qualification standards, exam requirements, content guidelines, and other regulations for apprenticeship – increasing ownership of all parties. • Convergence of funds: Government funds training at the vocational school while the private sector bears majority of costs • Built in "trainer" model optimizing on infrastructure, time, funding: For apprentices interested in becoming trainers, the same program doubles up with additional teacher training modules
South Korea[69]	**Background** • Similar to Germany, South Korea has a dual system of Government run "Meister Schools" and private junior training colleges. Meister schools primarily teach secondary school graduates (in ship building mechanical engineering, semiconductor manufacturing etc.) • Over 80 percent of junior college graduates find employment after finishing their combined school-apprenticeship work **Aspects of Innovation** • Convergence of stakeholders: Industry works closely with many Meister schools providing equipment, facilities, scholarships, mentoring and work placement opportunities; KRIVET, a government supported research center helped design the curriculum of the schools in collaboration with multiple industry partners • Convergence of funds: Meister schools receive more funding from the Government than most other schools, the Government also partially covers the overall costs of workplace training and specialized equipment at private junior colleges. The balance is paid by the employer.

[69] http://unesdoc.unesco.org/images/0010/001049/104966E.pdf, http://siteresources.worldbank.org/SOCIALPROTECTION/Resources/SP-Discussion-papers/Labor-Market-DP/0921.pdf, http://www.forbes.com/sites/michaelhorn/2014/03/14/meister-of-korean-school-reform-a-conversation-with-lee-ju-ho/

A6.1 Increasing Apprenticeships and Industry Participation	
Japan[70]	**Background** • Around 290,000 trainees put in private industry workplaces each year, split into regular vocational training and "Kosen" colleges • Kosen, a hybrid between high school and university, established in response to a strong demand for engineers, 5-6 year training with 4th year spent at a private company **Aspects of Innovation** • Convergence of stakeholders: Strong industry involvement in curriculum design, assessment, knowledge sharing and research both in Kosen and regular vocational training, use of industry's full time employees as trainers • Convergence of funds: Government funds Kosen (80 percent of the cost) through subsidies, balance by private sector
Australia[71]	**Background** • 41 percent of secondary school graduates take on vocational routes • 30 percent of all Australian employers offer apprenticeships with about 470,000 apprentices in-training (in 2012). Completion rates hover between 50-60%. Service sector occupations are very popular. • Australian Government provides multiple forms of financial support – (a) wage subsidies given to disadvantaged groups like disabled, Australian Aborigines; (b) incentives to private companies in the form of payments for apprentices – 2/3rd of payment made on completion of program; (c) 1/3rd of all Government funding goes to private companies working in areas with *skill shortages* • Non -financial support is provided by "Group Thinking Organisations" and a network of Australian Apprenticeship centers across the country which refer prospective apprentices to employers. • Finally for MSMEs, which cannot afford apprentices in a stand-alone manner, groups are made and apprentices rotated within to optimize on costs and other resources.

70 http://www.tandfonline.com/doi/abs/10.1080/0305006850210106?journalCode=cced20and#.Vd1FniTFEdU

71 http://www.australianapprenticeships.gov.au, http://eric.ed.gov/?id=ED462613, http://www.australianapprenticeships.gov.au/publications/ncver-report-1-overview-australian-apprenticeship-and-traineeship-system

A6.1 Increasing Apprenticeships and Industry Participation	
	Aspects of Innovation • Similar to other models on convergence of stakeholders and funds
How can these be replicated in India?	• Given that only 3 percent of the Indian labor force goes through apprenticeships annually, i.e. approximately 300,000 of a 12 Million total labor force, apprenticeships are the need of the hour particularly for the MSME sector catering to over 93 percent of the labor (informal) • Like in Australia, the Government could select 2-3 high growth sectors in manufacturing (e.g. from Make in India) and incentivize industry partners together with Sector Skill Councils to hire apprentices (similar to interns in private companies) based on their own requirements as long as certain minimum qualifications are met (these could be collectively designed by MSDE and SSCs) • Like in Germany, an arrangement can be worked out where 1-2 days/week are spent in pre-selected ITIs/ITCs and the remaining time spent in the company – giving the trainee a good mix of theory and practical and keeping their skills market relevant for employment post completion of the apprenticeship. • Like in Korea and Japan, some of the existing ITIs (near industry clusters and catchment areas) could be converted to world class skill centers (much like the Meister schools and Kosens) with foreign and key industry collaboration • Apprenticeship Centers could be set up (similar to Australia) which could map prospective apprentices to employers – an Aggregator Platform or MIS at the MSDE level could facilitate this • MSME clusters which exist in India (http://www.clusterobservatory.in/clustermap.php#) could be grouped to provide combined apprentices who could be rotated internally.

A6.2 Leveraging Technology To Enable Skill Development	
Japan[72]	**Background** • Kosens promote technology based education and training (i.e. IT, engineering/manufacturing, biotechnology/materials science as well as technological skills such as metalworking, technical operating of machinery etc.) • Japan has a high focus on technology industries and therefore, related trainings begin through dedicated hours in the school education system (secondary level) **Aspects of Innovation** • Convergence on content: Industry and Government together develop technology enabled content for multiple courses/skills especially for chemical, mechanical and electric engineering. • Convergence of stakeholders: Firms and Kosens collaborate to ensure that programs and trainers are up-to-date with constantly-changing industry requirements.
South Korea[73]	**Background** • Technical schools, junior and polytechnic colleges provide technological training overseen by the Ministry of Education, Science and Technology – with a heavy focus on manufacturing occupations, thus industrial machinery (e.g. mechanical tools, welding machines) is often utilized along with technology related trainings **Aspects of Innovation** • Convergence of infrastructure: Universities with focus on Science, Technology, Engineering, and Math act as hubs and spokes are technical schools, thereby leveraging existing land/buildings. Support centers are set up in existing private industrial zones to serve as on-site experience for trainees in the technical schools • Convergence of stakeholders: Given that industry is most updated with new technological innovations, sometimes companies use their own

[72] http://www.washingtonpost.com/local/education/with-workplace-training-japans-kosen-colleges-bridge-skills-gap/2011/10/03/gIQAF0gmjL_story.html, http://www.tandfonline.com/doi/abs/10.1080/0305006850210106?journalCode=cced20and#.Vd1FniTFEdU

[73] http://daejeon.kopo.ac.kr/lang_eng/CDA/main.asp, http://siteresources.worldbank.org/SOCIALPROTECTION/Resources/SP-Discussion-papers/Labor-Market-DP/0921.pdf

A6.2 Leveraging Technology To Enable Skill Development	
	employees to train the trainees and certain private firms offer specialized trainings in technological training (e.g. a training program on using welding machines)
How can these be replicated in India?	• Leveraging technology for enabling training will serve two purposes in the Indian context: (a) it can be used to create access in hard to reach destinations using a hub and spoke model and (b) it will help trainees be updated on new technologies in the market which could result in higher chances of employment • The Government could identify high growth technology based sectors/trades (aligned to Digital India) and create content to facilitate trainings together with identifying geographies (mapped to economic zones) and industries which could support in this (through on-site training and content development) • Hubs and spokes will need to be identified for optimizing on infrastructure since hubs like engineering colleges, institutes/universities of technical education (like IITs, NITs) etc. would already have computer labs to stream these trainings and trainers trained on providing one and two way trainings to trainees in spokes • Based on geographies, trades taught through this medium and other such parameters, funding may need to be provided for capex and opex.

A6.3 Grassroots Training To Increase Accessibility of Skill Development	
Australia[74]	**Background** • Christian colleges and churches provide grassroots trainings through accredited training programs developed by Government and local communities • Colleges are bound together in Australian College of Ministries training network and their training courses are nationally-accredited • Typically offers training to local people who either cannot or are unwilling to join the joint government-private apprenticeship system • Focus is on group training - group studies, practical skills exercises, group discussions etc. – and can be finished in 1-year of full-time work or in 2 years or more of part-time work. On completion, college awards certificates which are nationally recognized. **Aspects of Innovation** • Convergence of infrastructure: Colleges and Churches in local areas • Use of technology: Handbooks, notes, and other relevant course material accessible online • Convergence of trainers: Separate guidelines for trainers based on locality needs but some basic common norms (e.g., should be IT literate, know adult teaching techniques etc.). Trainers are fungible and can move between colleges.
How can this be replicated in India?	• Given the large magnitude of Indian populations which are in rural settings and the large network of existing infrastructure available (both public and private), reaching the grassroots level is critical and possible. • A block by block mapping and inventorization of available infrastructure (schools, community centers, colleges etc.) will need to be conducted to identify *usable* resources together with deciding on which skills can be imparted at the grassroots levels (this would differ by States and proximity to economic zones and should be a decision taken at the SSDM/State Government level). • Some of these grassroots centers could also be used as spokes in a technology enabled training model.

[74] http://www.grassroots.edu.au/about/grassroots-training-options/

A6.4 Summary Takeaways for Indian Government

While we have laid out specific ways in which each of the models above can be replicated in India, below we present a few key takeaways from the studied global best practices for the Indian Government (and other stakeholders) which are broad based and will facilitate impactful demand-supply interactions – some of these have been covered in the main report as well.

A6.4.1 Recognize critical role of industry, identify skills in which they can have the most impact and create targeted incentives to increase their engagement

Different skills, trades and job roles require different and varying levels and types of engagement by industry. For example, an ordinary gas welder for the SME sector will require minimal intervention with basic training aids to support the learning; however, when the same welder moves up the value chain to be skilled on arc welding or a more complex skill of deep sea welding for the oil exploration industry, the pedagogy as well as training aids will need refinement which is best provided by industry.

In order to engage with industry in the most impactful manner, the Government (MSDE) will need to prioritize those skills and job roles for which industry engagement is critical and design targeted intervention models. Incentives, both financial and non-financial, will form a big part of this collaboration. Financial incentives could be in the form of investments in infrastructure, operational expenses like fees to trainers and expendables, tax holidays and other subsidies and some forms of non-financial incentives could include accessibility to good quality trainers and assessors.

A6.4.2 Raise aspiration for vocational education and apprenticeships among trainees and prospective employers

Currently, perhaps due to cultural and economic reasons, vocational education and training in India is perceived to be a "last resort" option. Low wage premium attached to job roles post vocational training also adds to this perception. In order to raise aspirations for vocational training, it is critical to put policies in place and increase communication around the relevance and value (both intrinsic and external) of such training.

In order to operationalize this, a major step can be to provide social respectability to skill training by providing an educational equivalence to certification of skills at various levels of the NSQF – in line with global best practices. In addition, if avenues are provided for equity in qualifications which can facilitate international placements of skilled workers from India, the respectability and the economic stature of such skills will enhance (also aligned with the *overseas employment* sub mission). Case to point is the nursing profession in India which received a fillip due to international recognition of nurses being trained in the Indian system.

A6.4.3 Promote incentives for workforce certification

Global best practices indicate that while industry plays a seminal role in quality assuring skilling initiatives, they are also expected to place a premium on certified skilled workers. This premium could be in the form of giving preference to certified workers over others for employment or providing higher wages to those with certification over others for the same job roles.

Similar initiatives can be planned by the Government in consultation with the industry.

A6.4.4 Prioritize technology enabled learning and create platforms to enable scale

Explained in detail in Chapter 4 (page 60).

A6.4.5 Create rosters and exchange platforms for critical assets like trainers, assessors, content etc.

There is currently a large gap in quantitative capacity of critical assets in the vocational training segment – from content, training aids etc. to actual delivery agents like trainers and assessors. To put this in perspective, in the Government run Industrial Training Institutes (ITIs) alone there is a need for 20,000[75] instructors to annually join the sector – four times more than the current 5,000[76] who are new entrants.

While building such capacity through increased trainings and content creation is important, it will take time. In the near term, it becomes equally important is to optimize on the existing asset base and provide opportunities for exchange of such resources (sometime idle) among stakeholders. For example, in the Centrally Sponsored Scheme for Vocationalization of Secondary Education , the paucity of vocational trainers in the government school system across most states was offset by utilizing private trainers from the NSDC ecosystem (i.e. from the existing database of training partners). A roster for trainers, assessors etc. at the MSDE level will create a marketplace and allow for transferability of resources for optimal utilization as well as capacity utilization.

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[75] Twelfth Five Year Plan

[76] DGET website accessed in July 2015