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National
Skill Development
Corporation



Executive Summary for the State of Maharashtra (2012-17, 2017-22)



DISTRICT WISE SKILL GAP STUDY FOR THE STATE OF MAHARASHTRA- EXECUTIVE SUMMARY

National Skill Development Corporation (NSDC) mandated ICRA Management Consulting Services (IMaCS) to conduct the District wise skill gap study for the State of Maharashtra for the period of 2012 to 2022. The study has been conducted in three phases: (1) Diagnostics; (2) Synthesis; and (3) Recommendations. The same has been achieved through a combination of primary and secondary survey. IMaCS met key Government officials to review the policy direction. It also interacted with industry representatives in the formal and informal sectors to understand human resource and skill requirements from a district, regional, state as well as cluster perspective.

Based on its research, IMaCS identified sectors which will be the development and employment growth engines in the districts in the next ten years and will have skill training requirements. It forecasted both the demand and supply side numbers for 2012 to 2022 for high growth sectors in each of the 35 districts of Maharashtra. The key results of the study are presented in this executive summary.

State overview

Maharashtra is the second largest State in India both in terms of population (9.3 per cent) and geographical area (9.3 per cent). It is better urbanised with 45 per cent people residing in urban areas, as compared to the India average of 31.2 per cent. It is bifurcated into six revenue divisions' viz. Konkan, Pune, Nashik, Aurangabad, Amravati and Nagpur.

Maharashtra's Gross State Domestic Product (GSDP) at current prices for 2011-12 is estimated at Rs. 11.99 lakh crore, contributing to 14.4 per cent of India's Gross Domestic Product (GDP). The GSDP at constant prices has increased at a CAGR of 8.1 per cent in the last five years (2006-07 to 2011-12) slightly higher than the GDP growth of India at 7.9 per cent.

Presently, industrial and services sector together contribute to about 87 per cent of GSDP, while agriculture and allied sector's contribution is about 13 per cent. The per capita income of the State at current prices is estimated at Rs.95,339 in the year 2011-12 –higher than the All-India average of Rs.60,972 per annum.

As of Census 2011, Maharashtra has a population of 11.23 crore persons. Of this, 59 per cent of the population is in working-age group, while only 45 per cent is in the labour force. As of 2011, the State's workforce is estimated at 4.94 crore persons. Majority of these are employed in agriculture at 55 per cent as either cultivators or agricultural labourers. The remaining 45 per cent are employed in non-agricultural activities.

The State Government has worked on building a good education infrastructure in the State over the last few years to ensure availability of qualified and skilled manpower in the State. Presently, the State has

19 universities, 3,277 general colleges, 1,004 engineering colleges, 508 MBA colleges and many other educational institutions for higher studies in different streams. At school level, the State has 75,695 primary schools and 21,357 secondary and higher secondary schools. For vocational education, the State has a total of 796 Industrial Training Institutes (ITI).

The Government has put in place an institutional structure for skill development in the State up to the district level. It mainly consists of 'Sectoral Skill Development Committees', which have been set up for 11 sectors so far – 1) Construction; 2) Production and manufacturing; 3) Textiles; 4) Automobile; 5) Hospitality; 6) Healthcare; 7) Banking, finance and insurance; 8) Retail; 9) Pharmaceuticals and chemicals; 10) IT & ITES; and 11) Agro processing.

Developmental concerns

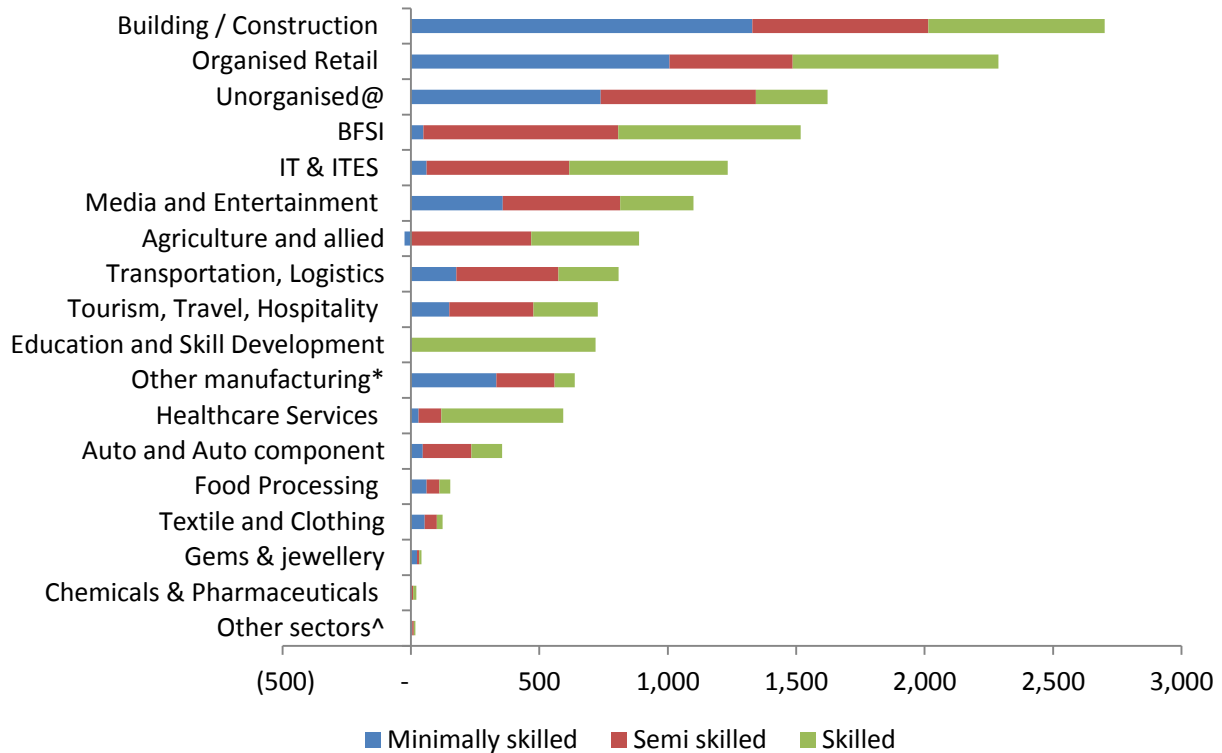
While the State is on the path of development and has also been taking several initiatives for skill development, there are certain developmental concerns which need attention. Based on the primary and secondary research, key developmental concerns which have been identified for the State are:

- Inequitable development of districts
- Better incentives offered to industry by other States
- Naxalism in many districts
- Water scarcity in many districts
- Inadequate infrastructure development in districts in remote areas
- Mismatch between educational curriculum and industry requirements
- Inadequate focus on soft skills and personality development of the students
- Low motivational levels in the youth and attitudinal issues
- Lack of skilled manpower in backward districts
- Low inclination for self-employment, and
- High degree of unionism

High growth sectors

Based on our forecasts, we estimate that between 2012 and 2022, an incremental demand (cumulative for 10 years) for 1.55 crore persons will be generated in the State of Maharashtra. Maximum demand will be generated from sectors such as 'building, construction and real estate', 'organised retail', and 'banking, financial services and insurance'. In the next ten years, maximum demand is expected to be for skilled workers at 37 per cent of the total incremental demand. This is expected to be followed by semi-skilled workers at 35 per cent, and minimally skilled workers at 28 per cent.

Figure 1: Incremental demand of human resources in Maharashtra, 2012-22, in thousands



Source: IMaCS Analysis; * Other manufacturing includes manufacturing of basic metals, fabricated metal products and other transport equipment (building of ships and boats, manufacture of railway locomotives and rolling stock, manufacture of air and spacecraft and related machinery, manufacture of military fighting vehicles etc.) ^ Other sectors include furniture and furnishings, electronics and IT hardware, and leather and leather products'. These do not have significant employment generation, but have scope for up-skilling. @ In unorganized sector, we have included domestic workers, handloom and handicrafts, facility management, security guards and beauticians.

We have estimated that between 2012 and 2022 (cumulative / incremental), about 1.06 crore persons will join labour force and will be available in the job markets looking for jobs. These are the locals only. However, Maharashtra being a net employment generator, it attracts and will continue to attracts migrants from other States as well. When supply of net migrants from other States is also added, we see that the supply numbers swell up to 1.99 crore persons.

Supply of local labour force is split across different skill levels as: 37 per cent at minimally skilled, 40 per cent at semi-skilled, and 23 per cent at skilled. Looking at the skill profile of migrant workers, we see that most of the migrants are minimally-skilled only at 61 per cent and the remaining are semi-skilled and above.

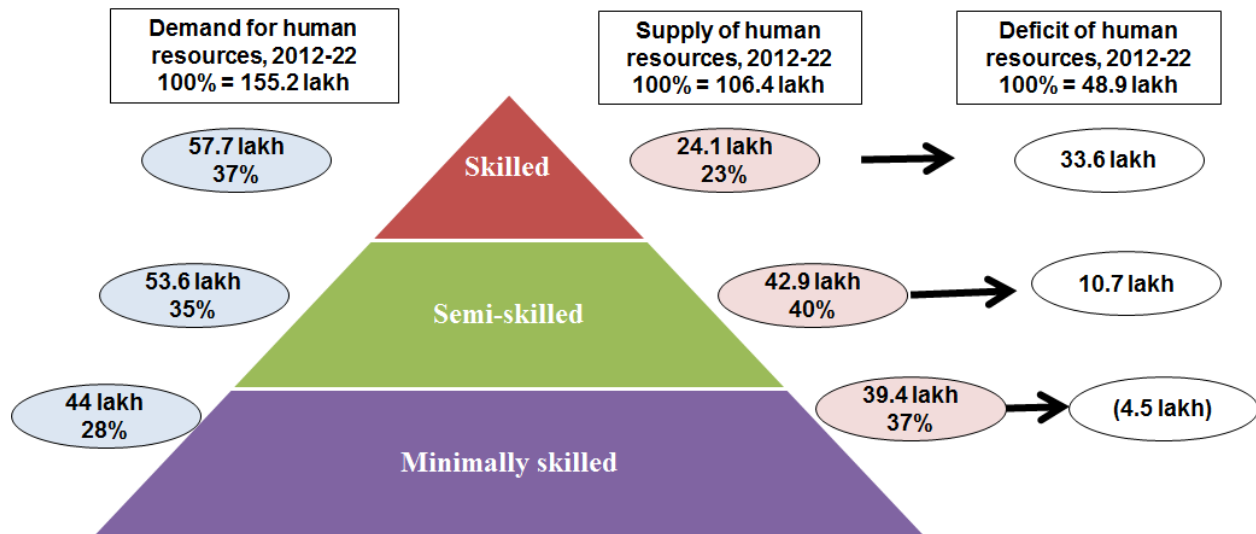
Table 1: Incremental supply in Maharashtra, 2012 to 2022

Skill levels	Incremental supply, 2012-22
Incremental supply of locals (adjusted for voluntary unemployment)	10,636,813
Migrant workers likely to be available for jobs in Maharashtra	9,282,841
Incremental supply inclusive of migrant workers	19,919,654

Source: IMaCS Analysis, Voluntary unemployment ratio derived from Census and NSSO round on Employment and Self-Employment; Migrant data derived from NSSO report on 'Migration in India'. Supply numbers for locals assume that additional capacity will be created in the State.

As discussed above, we have estimated that between 2012 and 2022, Maharashtra is likely to have an incremental demand for 1.55 crore persons and incremental supply (consisting of locals only) of 1.06 crore persons. This leads to a shortage of supply at 0.49 crore persons. The shortage is most acute at the skilled level, while there is a small surplus at the minimally skilled level.

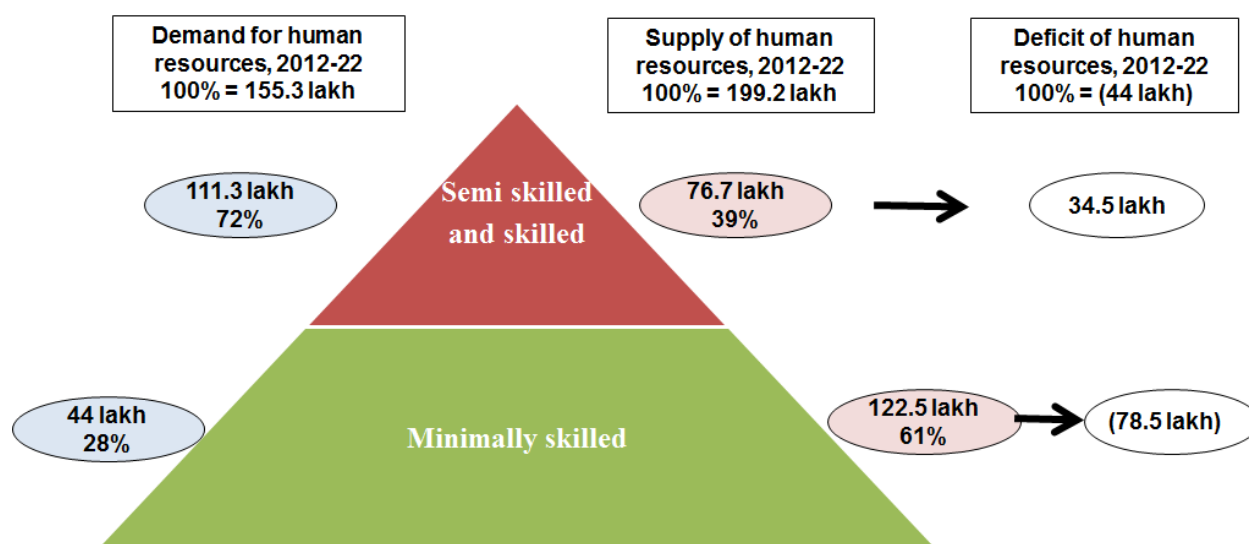
Figure 2: Demand-supply gap in Maharashtra, 2012 to 2022 (accounting for local labour force only)



Source: IMaCS Analysis

However, when we include the supply of migrants who are likely to enter Maharashtra looking for jobs, then the total supply (locals and migrants combined) is estimated to be greater than demand, leaving a supply surplus of 0.44 crore persons.

Figure 3: Demand-supply gap in Maharashtra, 2012 to 2022 (accounting for local labour force and migrants)



Source: IMaCS Analysis

Youth aspirations

As a part of the study, we held youth group discussions across the State to understand the youth aspirations and to capture whether they are in line with the high growth sectors in the State. The survey showed that sectors such as IT / ITES and organized retail are the high demand sectors both in terms of employment generation potential as well as youth aspirations. However, for sectors such as building and construction, where job growth potential is high, youth have very low aspirations to work in. Presently also, very few locals want to work in this industry. Most of the construction workers are brought from other States such as Uttar Pradesh, Bihar etc.

Some of the other preferred sectors by youth are 'food processing' and 'auto and auto components'. However, the employment generation potential of these sectors is relatively low, as going forward they are expected to become more technology intensive and will not generate as many jobs.

Recommendations

Recommendations have been proposed for the four stakeholders, namely – Government, Industry, Private training providers and NSDC. Summary of recommendations is presented in the tables below.

➤ Government

Broad theme	Description	Implementation
Scaling up of State Skill Development Mission	<ul style="list-style-type: none"> Govt. of Maharashtra has been one of the pioneers in setting up an institutional mechanism for skill development. 	<ul style="list-style-type: none"> Based on the high growth sectors identified by us, we recommend that the sector skill development committees can be set up for the following sectors as well: <ol style="list-style-type: none"> Education and skill development

Broad theme	Description	Implementation
	<ul style="list-style-type: none"> It has set up sectoral skill development committees for 11 sectors, which includes high growth sectors such as construction, retail, BFSI and IT / ITES. 	<ul style="list-style-type: none"> b) Media and entertainment c) Unorganised sector (domestic workers, facility management and security guards) The sector skill development committees should also seamlessly align with national level Sector Skill Councils (SSCs) that have been set up by NSDC.
	<ul style="list-style-type: none"> The State has set up District level skill development executive committees which are run under the District Collector. Prime responsibility for the work is with the Employment Exchange Officer 	<ul style="list-style-type: none"> A separate 'skill development cell' can be set up in the Employment Exchange, which can be manned by a 'Skill Development Officer', who will be a dedicated person, assigned with the responsibility of skill development alone. The officer would report to the DC on a monthly basis on the progress achieved
Scaling up of State Skill Development Mission	<ul style="list-style-type: none"> The skill development committees set up by the Govt. have the responsibility for taking various initiatives 	<ul style="list-style-type: none"> The committees can look into various innovative models and study their feasibility for the State. One of such models is the 'skill voucher' model.
	<ul style="list-style-type: none"> Maharashtra State Skill Development Society has been established as a Single Nodal Agency for skill development initiative 	<ul style="list-style-type: none"> Wherever MIDC is providing infrastructure for industrial development, it can also earmark separate infrastructure for development of training infrastructure. The same can be used by the Maharashtra State Skill Development Society for meeting the training needs of the in-situ industrial units.
Leveraging LMIS set up by DE&SE	<ul style="list-style-type: none"> DE&SE has set up the Labour Market Information System (LMIS) in 2012-13. The system is currently running on a pilot basis and is expected to be inaugurated formally in June 2013. 	<ul style="list-style-type: none"> Introduction of 'internship module': Since LMIS will bring together both industry and students on the same platform, it can also become a platform where industry can directly get in touch with the students for providing internships and students can also apply online for the same. An 'internship module' can be introduced to facilitate this.
Leveraging LMIS set up by DE&SE	<ul style="list-style-type: none"> DE&SE has set up the Labour Market 	<ul style="list-style-type: none"> Regular real-time updation of LMIS <ul style="list-style-type: none"> Registration of vacancies by

Broad theme	Description	Implementation
	<p>Information System (LMIS) in 2012-13. The system is currently running on a pilot basis and is expected to be inaugurated formally in June 2013.</p>	<p>companies on the system under 'Compulsory Notification of Vacancies Act 1960' (already under implementation)</p> <ul style="list-style-type: none"> • To ensure 100% compliance, hold workshops at the industrial association levels in all districts • Registration of all job seekers enrolling with Govt education institutions such as ITI, polytechnics, CSCs etc. on the LMIS website. (on-going) • Ensure the same for school going children also (at least above 10th standard) and for private education institutions as well by making registration compulsory • Registration of all Govt education institutions is on-going. Make it compulsory for all private education institutions also • Update regular information on all skill development initiatives taken in the State both under different Central and State Govt schemes on the LMIS website – tool for information dissemination • Once fully developed, use LMIS as a tool for conducting real-time skill gap analysis – generate skill gap reports on quarterly or half-yearly basis and the same can be used for making policy level decisions about availability and development of education institutions.
<p>Introduction of Trade Specialisation Centres (TSCs)</p>	<p>The objective of this initiative is to develop TSCs at hubs around key centres of demand and this will enable students to work on latest machinery/equipment at the identified centres</p>	<ul style="list-style-type: none"> • Identifying ITI / ITCs, which can be called as 'Hub ITI / ITCs', to host highly specialised equipment relevant to high demand trades in the area • Identifying specialised equipment required for such trades • Such ITI / ITCs as well as equipment identification to be based on key demand areas / high growth sectors identified for a particular district • These ITI / ITCs would serve as 'hubs'

Broad theme	Description	Implementation
		<p>whereas other ITI / ITCs in the region ('Spokes', located around the hub ITI / ITCs) would be able to make use of such equipment for lab-work and modules requiring exposure to such specialised equipment</p> <ul style="list-style-type: none"> • These specialised equipment can also be shared with neighbouring small/medium industries for a) trials and testing, and b) training on a rental/'fee-per-use' basis, thereby making such Hub/TSC self-sustaining and revenue-generating. • The initial funding for the project can be arranged by the Government alone or in collaboration / PPP with leading industrial units. • List of sectors and locations, where TSCs can be set up are given on the next slide.
Introduction of sandwich programme for practical exposure	<ul style="list-style-type: none"> • Currently, the focus of educational system is on theoretical knowledge, which doesn't reflect industry needs. • Some degree of industry exposure is in place only in some engineering courses, where students are given industry exposure in one semester and in ITI courses, where apprenticeship system is in place. • Most of the other colleges, many engineering and polytechnic courses, other training institutions do not follow this system. 	<ul style="list-style-type: none"> • DTE, DirHE and DVET need to change the course curriculums to incorporate higher industry exposure. This can be incorporated through the 'sandwich system', wherein the theoretical learning in institutes is sandwiched between 'industry visits' (for instance one semester in college, followed by one semester in industry and so on). • Sectors where this system is especially required are: <ol style="list-style-type: none"> a. Auto & auto components b. Building & construction c. Chemicals & pharmaceuticals d. Food processing e. Healthcare f. IT & ITES g. Textiles & clothing h. Tourism and hospitality
Inclusion of guest lecturers from industry	<ul style="list-style-type: none"> • There is a need to apprise the students of the latest technology / applications used in 	<ul style="list-style-type: none"> • Can be achieved by greater integration of the industry on the Sectoral Skill Development Committees of the State. The industry members on the committees

Broad theme	Description	Implementation
	<p>different sectors, which can be done through guest lecturers from industry.</p> <ul style="list-style-type: none"> • Currently, being practiced in few institutions only. 	<p>can be assigned an additional responsibility of being part time guest faculty on Universities.</p>
Tie-ups between Government and industry	<ul style="list-style-type: none"> • Many ITI in Maharashtra have been upgraded under the scheme of adoption of ITI or turning ITI as Centre of Excellence 	<ul style="list-style-type: none"> • Close monitoring to be conducted by DVET of the ITI which have been adopted and whether any results have been achieved or not • Based on success rates, more ITI can be put up for adoption – with focus on tribal and naxalite areas where availability of good training infrastructure is less
Recognising informal on-the-job training	<ul style="list-style-type: none"> • Many workers acquire skills on-the-job and not by learning them in institutes. However, currently such skills are not recognised. 	<ul style="list-style-type: none"> • DVET can introduce certification examinations, wherein such workers can sit for examinations (with greater focus on practicals) and get certified for their skills, if they pass the exam.
Incentivising private training in priority sectors	<ul style="list-style-type: none"> • The high growth sectors in the State (such as building and construction, organised retail, BFSI, unorganised sectors) need intensive training and the same cannot be met by Government machinery alone. Private training providers need to be party to the same. 	<ul style="list-style-type: none"> • Private training can be incentivised by way of: <ol style="list-style-type: none"> a) Assistance with the initial seed capital b) Financial assistance for the first few years c) Making Government education infrastructure available for private training (such as in ITI / colleges / schools etc., wherein such infrastructure is not used for second shift etc.). • List of priority sectors where more focus is required are given on the next slide.

➤ **Industry**

Broad theme	Description	Implementation
Support in setting up of State level SSCs	<ul style="list-style-type: none"> • Govt. of Maharashtra has set up Sector Skill Committees for 11 sectors. The work done 	<ul style="list-style-type: none"> • To collaborate on the following SSCs <ol style="list-style-type: none"> a) Construction b) Production & manufacturing c) Textile

Broad theme	Description	Implementation
	by the committees is in preliminary stages and there is a need on the part of the industry to support these committees.	<ul style="list-style-type: none"> d) Automobile e) Hospitality f) Healthcare g) BFSI h) Organised retail i) Pharmaceutical and chemicals j) IT & ITES k) Agro processing <ul style="list-style-type: none"> • Support in terms of setting up of skill standards as members of the skill committees
Adoption of ITI	<ul style="list-style-type: none"> • Many ITI in Maharashtra have already been upgraded by the Government in collaboration with the industry. 	<ul style="list-style-type: none"> • Greater collaboration in terms of setting up of COEs, installation of new machinery and equipment, and provision of guest faculty from the industry.
Partnering in community colleges	<ul style="list-style-type: none"> • India is planning to introduce community colleges in all States wherein there will be greater community engagement in terms of collaboration between the students, industry and the colleges. The programme needs close industry participation for it to be a success. 	<ul style="list-style-type: none"> • Industries especially in the following sectors need to collaborate on this scheme (as this is where maximum skill shortage is being faced): • Building, construction and real estate • Food processing (unorganised sector) • Gems & jewellery • Tourism and hospitality • Unorganised sector (domestic workers, facility management, security guards) • BFSI (especially sales personnel) • Organised retail (especially sales personnel)
Providing guest faculty in Universities	<ul style="list-style-type: none"> • Currently industry participation as guest lecturers in colleges / VTPs is limited and there is a scope to improve it further. 	<ul style="list-style-type: none"> • Specially pertinent to engineering and other technical courses. • Be more open to the idea of collaboration with the educational institutions and help them bridge skill gaps which will ultimately benefit the industry only. • To start with, industries that have placement linkages with colleges can initiate this as a part of overall collaboration.
Partnering with private training	<ul style="list-style-type: none"> • Industry can collaborate with private and 	<ul style="list-style-type: none"> • Partnering could be in form of : <ul style="list-style-type: none"> a) Providing help in framing

Broad theme	Description	Implementation
providers and Government departments	Government training providers in multiple ways.	<p>curriculum as per industry needs: actively participate in sectoral skill committees for the same; partner with Govt bodies responsible for framing curriculums</p> <p>b) Funding the training programmes: several sectors need skilled resources, but the trainees are not able to pay for training. Such trainings can be sponsored by the industry</p> <p>c) Providing placement linkages: once collaboration has been established in terms of providing financial assistance to training programmes, it will be easier to establish placement linkages also to absorb the trained manpower</p>
Continuous on-the-job training	<ul style="list-style-type: none"> Taking place in the current scenario also as the students passing out from institutes are not considered job ready 	<ul style="list-style-type: none"> Continued focus especially on the following sectors: auto & auto components, building and construction, chemicals and pharmaceuticals, food processing (mainly large / organised), healthcare services, IT / ITES, organised retail, textiles and clothing (mainly in garmenting), and hospitality.
Higher focus on training as part of CSR initiatives	<ul style="list-style-type: none"> Currently, training is provided by some of the companies as a part of their CSR initiatives as well. For instance, Raymond Industries provides skill development programmes in the interior districts of Maharashtra under the umbrella of J.K. Trust. 	<ul style="list-style-type: none"> Training as a part of CSR initiatives to be made compulsory, especially in rural areas (more focus of this on tribal and naxal areas in Maharashtra). Focus sectors: <ol style="list-style-type: none"> Agriculture Animal husbandry Poultry Fishing Honey extraction Handloom and powerloom Handicrafts: articles made of bamboo, idol making, pottery making etc. Food processing using local produce like cashew, oranges,

Broad theme	Description	Implementation
		bananas, pomegranate, raisins etc. i) Basic construction activity j) Basic furniture making k) Training youth to work in unorganised sectors in the cities such as domestic workers, security guards, facility management personnel etc.

➤ **Private training providers**

Broad theme	Description
Focus on training in English as well as local languages	<ul style="list-style-type: none"> English training mainly in Mumbai, Mumbai Suburban, Thane, Nagpur, Nashik, Pune and Aurangabad Training in local languages mainly in smaller districts; English language to be gradually introduced
Communication skills and soft skills	<ul style="list-style-type: none"> Relevant for all types of courses and in all districts Sectors where this is a must: auto & auto components; BFSI; chemicals & pharmaceuticals; education & skill development; food processing (in large organised units); healthcare; IT & ITES; organised retail; and tourism and hospitality
Industry exposure	<ul style="list-style-type: none"> Industry exposure in form of industry visits / internship with the industry needs to become a compulsory part of every training program
Proper placement linkages	<ul style="list-style-type: none"> Key for student mobilisation
Collaboration with Government Departments	<ul style="list-style-type: none"> For assistance in Government run training programmes in sectors such as: Agriculture & allied; Food processing; Textiles & clothing, and Tourism & hospitality
Collaboration with NSDC	<ul style="list-style-type: none"> Certification of training programmes in collaboration with NSDC Affiliation to the respective SSCs set up by NSDC
Collaboration with industry	<ul style="list-style-type: none"> Having the industry fund the training programmes Partner with industry players to develop trade / skill specific courses Partner with local industry associations

➤ **NSDC**

Sector	Focus districts
High priority	
Building & construction	All districts
Organised retail	Aurangabad, Mumbai, Mumbai Suburban, Pune, Nashik, Nagpur, Thane
Unorganised sector (domestic workers, beauty culture, security guards, facility management)	Ahmednagar, Aurangabad, Kolhapur, Mumbai, Mumbai Suburban, Pune, Nagpur, Nashik, Raigad, Thane
BFSI	All districts
IT & ITES	Mumbai, Mumbai Suburban, Pune, Nashik, Nagpur, Thane
Media & entertainment	Mumbai, Mumbai Suburban, Pune, Nagpur
Medium priority	
Agriculture & allied (including dairy, fishery, animal husbandry, poultry etc.)	All districts except Mumbai
Transportation, logistics, warehousing & packaging	All districts
Tourism, travel & hospitality	Mumbai, Raigad, Ratnagiri, Sindhudurg, Pune, Satara, Kolhapur, Nashik, Ahmednagar, Aurangabad, Jalgaon, Osmanabad, Nanded, Nagpur, Chandrapur
Education & skill development	All districts
Other manufacturing (basic metals, fabricated metals and transport equipment)	Thane, Pune, Kolhapur, Aurangabad, Jalgaon, Nashik, Raigad, Solapur
Healthcare services	All districts
Low priority	
Auto & auto components	Aurangabad, Pune, Akola, Mumbai, Thane, Nashik, Satara,
Food processing) cashew, raisins, grapes, oranges, banana, pomegranate etc.)	Ahmednagar, Gondia, Amravati, Bhandara, Beed, Buldhana, Chandrapur, Gadchiroli, Hingoli, Jalgaon, Jalna, Kolhapur, Latur, Nanded, Nandurbar, Osmanabad, Ratnagiri, Sangli, Satara, Solapur, Yavatmal
Textiles & clothing (mainly cotton ginning, pressing, spinning and weaving)	Akola, Buldhana, Dhule, Hingoli, Kolhapur, Latur, Osmanabad, Parbhani, Raigad, Wardha, Mumbai, Thane, Pune
Gems & jewellery (gold, diamond, silver and artificial)	Mumbai, Jalgaon, Kolhapur
Chemicals & pharmaceuticals	Raigad, Thane

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