

## MANAGEMENT INFORMATION SYSTEM AND MODEL CAREER CENTERS IN HIMACHAL PRADESH

### A. Background

1. The Himachal Pradesh Skills Development Project (HPSDP) will support the Government of Himachal Pradesh in providing vocational training and livelihood development opportunities to around 65,000 needy youth over the period 2017–2022. It will expand the state’s annual technical and vocational education and training (TVET) capacity by 13,000 and extend the reach of quality training facilities and counselling services to underserved parts of the state. The project will fund a menu of short- and long-term training opportunities based on existing and projected market demand as shown in Table 1 below.

**Table 1: Trainings Aligned with the National Skills Qualifications Framework under the Himachal Pradesh Skills Development Project**

Program Component	Total Trainees
NSQF-aligned short-term trainings by Himachal Pradesh Kaushal Vikas Nigam	34,720
NSQF-aligned recognition of prior learning training	7,000
NSQF-aligned training for persons with disability students	2,000
NSQF-aligned training for graduate degree students in colleges	5,500
Industry-linked training under flexi memoranda of understanding	4,000
NSQF-aligned rural livelihood training at block level resource centers <sup>a</sup>	4,000
NSQF-aligned urban livelihood training at city livelihood centers	4,000
NSQF-aligned long-term degree courses in vocational streams (B.Voc.) in colleges	2,880
Women's polytechnic	900
<b>Total</b>	<b>65,000</b>

B.Voc = bachelor of vocational education, NSQF = National Skills Qualifications Framework.

<sup>a</sup> Also called rural livelihood centers.

Source: Asian Development Bank.

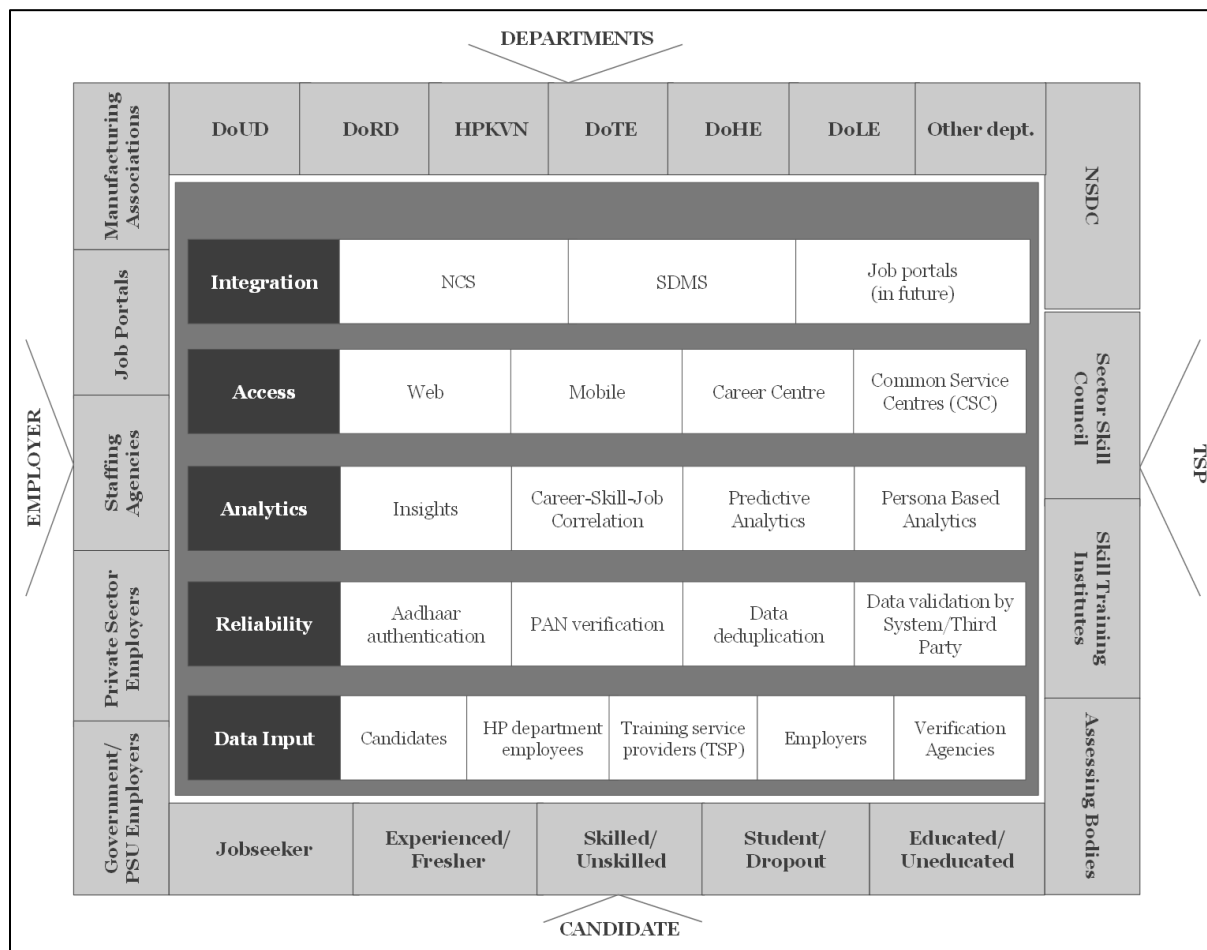
2. To track the implementation of the HPSPD in terms of outputs, outcomes, and key performance indicators (KPIs), it is necessary to establish a comprehensive management information system (MIS). The proposed HPSPD will assist the state government in designing and operationalizing such an MIS as elaborated below.

### B. Management Information System Overview

3. The MIS will integrate information on all trainees who are covered under the various training programs funded under HPSPD. Since it will identify each trainee by a unique identification number (i.e., a system-generated identification validated and linked to the trainee’s *Aadhaar* number),<sup>1</sup> this will prevent candidates from enrolling in multiple training programs, thereby, weeding out non-serious trainees and reducing misuse of public funds. A centralized online portal will enable automatic tracking of all skilling interventions under HPSPD, and present a consolidated view that can be used for evidence-based reporting and planning. The MIS will be accessed by relevant stakeholders including trainees, the participating departments, private training service providers (TSPs), and employers (Figure 1). It will be linked to India’s National Career Service (NCS) portal and the skill development management system maintained by the National Skill Development Corporation (NSDC).

<sup>1</sup> *Aadhaar* is a unique, 16-digit identification number provided to all residents of India by the Unique Identification Authority of India. It can be verified and authenticated in an easy and cost-effective way.

**Figure 1: Functionality Provided to Various Stakeholders by Management Information System**



HPKVN = Himachal Pradesh Kaushal Vikas Nigam; DOTE = Department of Technical Education, Vocational and Industrial Training; DOHE = Department of Higher Education; DOLE = Department of Labor and Employment; DOUD = Department of Urban Development; DORD = Department of Rural Development, NCS = National Career Services portal; NSDC = National Skill Development Center; PAN = Permanent account number; SDMS = Skill development management system.

Source: Asian Development Bank.

4. The MIS is thus, being designed to capture data related to the entire skill development ecosystem of Himachal Pradesh.

### C. Functional Features

- (i) **Candidate life cycle.** Candidate data and progress details from the stage of registration until the postplacement monitoring period will be captured. The system will function as a self-service portal for candidates. The MIS will maintain data related to:
  - a. biometric-based identification authenticated through the *Aadhaar* number;
  - b. demographic profile (age, sex, urban and/or rural, caste, physically challenged);

- c. education details;
- d. training details (prior vocational training attended, choice of current skill development program);
- e. post-training assessment (employability and proficiency of the candidate in the selected trade); and
- f. placement details (job profile, compensation, and willingness to continue in the job).

(ii) **Training service provider life cycle.** TSP-related data will include

- a. statutory details such as bank details, and tax deduction and collection account number;
- b. candidate mobilization initiatives (mobilization camps, job fairs);
- c. contractual terms and conditions with HPKVN such as payment terms, KPIs, and infrastructure facilities to be created by the TSP;
- d. training details including data on batch creation, training calendar, assessment of trainers, training material;
- e. candidate assessments; and
- f. job fairs for skilled trainees.

(iii) **Quality assurance.** The MIS will capture quality parameters across different stages of training including:

- a. quality of training through audio and video recording of training sessions;
- b. infrastructure facilities with respect to agreed timelines;
- c. assessment of trainers and trainees;
- d. payment to TSP, linked with biometric-based attendance of candidates;
- e. third-party audit observations;
- f. successful placement of trained candidates; and
- g. assessment through feedback mechanism.

(iv) **Financial management.** The MIS design will also have provisions to capture and monitor financial transactions covering:

- a. charges collected from candidates;
- b. payment to TSPs based on common cost norms notified by the Government of India, and per achievement of predefined milestones;
- c. MIS integration with a payment gateway so that all transactions (payables and receivables) are available online, and monitored and tracked through an audit trail; and
- d. fund management (for example, ADB's financial assistance for HPSPD can be monitored through the MIS for utilization and progress).

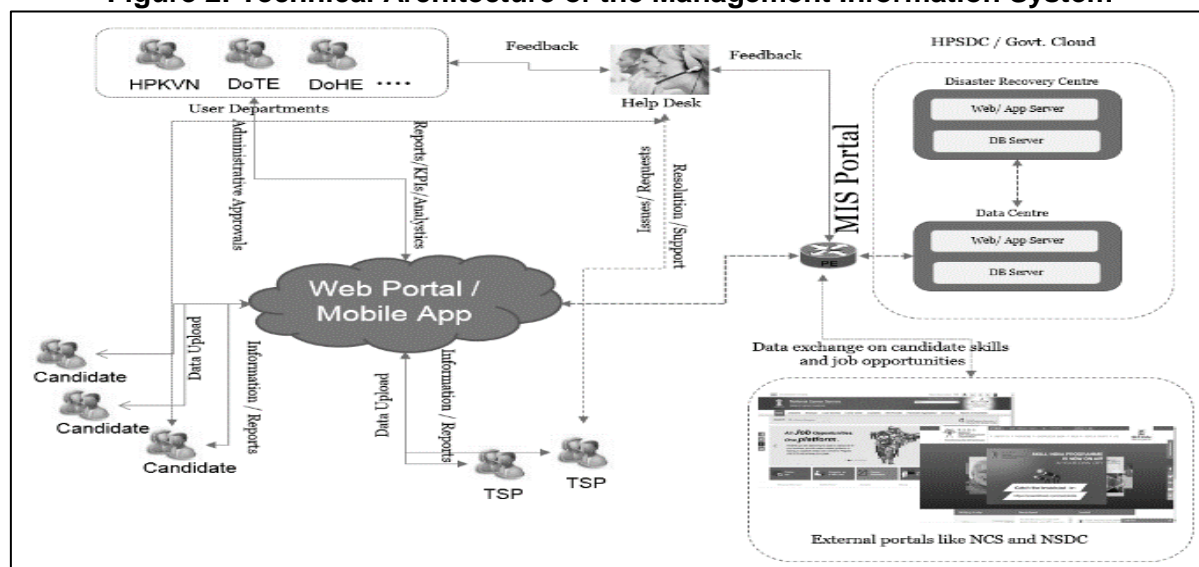
## D. Technical Features

- (i) The proposed MIS will be a centralized, web-based solution. Any candidate, TSP, potential employer, or government department can access the portal from anywhere using a terminal with internet connection.
- (ii) All users will be able to use the portal as per assigned roles.
- (iii) User manuals will be available on the portal for easy reference.

## E. Integration with External Information Systems

- (i) **Himachal Pradesh state agencies.** Several government departments including the Department of Technical Education, Vocational and Industrial Training (DOHE), the Department of Higher Education (DOHE), and the Himachal Pradesh Kaushal Vikas Nigam (HPKVN) are each administering their own skill development programs. The MIS is being designed as a comprehensive platform so that it can capture data on training enrolments and other KPIs from all these departments as well.
- (ii) **National level portals.** The MIS will be integrated with the skill development management system of NSDC (figure 2), and other relevant national portals.

**Figure 2: Technical Architecture of the Management Information System**



DOHE = Department of Technical Education, Vocational and Industrial Training; DOHE = Department of Higher Education; DOLE = Department of Labor and Employment; DOUD = Department of Urban Development; DORD = Department of Rural Development; HPKVN = Himachal Pradesh Kaushal Vikas Nigam; HPSDC = Himachal Pradesh Skills Development Center; MIS = management information system; NCS = National Career Services; NSDC = National Skill Development Center; PAN = Permanent Account Number; SDMS = Skill Development Management system; TSP = training service provider.

Source: Asian Development Bank.

## F. Benefits

5. Though data analytics, the MIS can be leveraged to generate reports for decision making and KPI monitoring. Benefits to stakeholders are as follows:

- (i) **Candidates.** All potential candidates and successfully skilled and certified trainees will have easy access to relevant information such as training programs, location, job opportunities, and potential compensation.
- (ii) **TSPs.** Training partners can upload training details on a real-time basis, get access to profiles of potential employers, raise or prepare invoices, and get paid in a transparent and convenient way.
- (iii) **Assessment agencies.** Since the data will be maintained on a centralized server with appropriate checks and balances, assessment agencies will have access to reliable information.

- (iv) **Recruiters.** Potential recruiters can access the portal for suitable candidates based on location, education, and skill levels.
- (v) **Funding agencies.** All data related to sources of funds and utilization will be maintained in the system. This will help funding agencies in monitoring fund utilization, progress, and benefits accrued.
- (vi) **Government of Himachal Pradesh and other departments.** The MIS can provide information on socioeconomic indicators among youth arising from skill development initiatives.
- (vii) **HPKVN.** As the nodal agency for skill development, HPKVN can have a holistic view of the entire ecosystem. This will not only help in monitoring activities, but also provide inputs for taking corrective actions, and planning and expanding the ecosystem.

## **G. Procurement Process**

6. There are three major components for the project:

- (i) procurement of MIS product, system integrator, and implementation support;
- (ii) centralized information technology server infrastructure to be provided by the Himachal Pradesh State Data Center; and
- (iii) end-user infrastructure such as desktops, laptops, network equipment, and connectivity to be provided by the respective user departments.

7. The entire development, configuration, and implementation of the MIS is expected to be completed within 18 months (**Appendix 1**). Subsequently, 3 years of post-implementation support will be provided by the server infrastructure.

## **H. Interim Management Information System**

8. Since the project's MIS development will take time, an interim MIS has been designed to assist HPKVN in tracking the implementation of its pilot training scheme covering 1,000 trainees across eight districts.<sup>2</sup> It will be used by the TSPs to fill in candidates' training records such as registration details, course, sector, daily attendance, assessment details, etc. Data captured at the TSP level will be collated at the HPKVN level for progress reporting on the pilot program. This web-based system will be hosted by the Himachal Pradesh Department of Information Technology.

9. The interim MIS help will capture basic data such as

- (i) profile of TSPs along with details of training centers,
- (ii) details of enrolled beneficiaries,
- (iii) batch initiation and progress status,
- (iv) student attendance records, and
- (v) student assessment and placement details.

10. The following reports will be available on the portal for monitoring by HPKVN:

- (i) district performance across training programs,
- (ii) comparative analysis of TSPs such as actual performance vis-à-vis targets,

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<sup>2</sup> See Appendix 2 for a screenshot of the interim MIS.

- (iii) TSP student details,
- (iv) training batch details, and
- (v) student attendance details and progress.

## I. Model Career Centers

11. The establishment of model career centers (MCCs) is an initiative of the Ministry of Labor and Employment (MOLE), Government of India under the National Career Service (NCS) programs. These career centers are expected to connect local youth and other job seekers with job opportunities in an effective and efficient manner using technology and through training and counselling. While all employment exchanges are being converted to career centers, the Government of India initially aimed to set up 100 MCCs throughout the country, of which two will be in Himachal Pradesh (Shimla and Una). These MCCs would set the benchmark in terms of services offered to both employers and job seekers, which could be emulated by other career centers. MOLE has additionally launched a scheme for young professionals who would be deputed in these MCCs for a period of 3 years, to enable integration and institutionalization of new processes.

12. The MCCs will connect local youth and other job-seekers with all possible job opportunities in a transparent and effective manner through the use of technology and through counseling and training. They will be staffed by motivated and competent personnel, enabled with necessary tools and infrastructure for:

- (i) effectively and continuously assessing demand of skills in labour markets within and outside Himachal Pradesh;
- (ii) guiding youth visiting the Centres or by outreach to schools/colleges and various training institutions about the training programs funded under HPSPDP, and scope for on-the-job training and placement;
- (iii) connecting youth and other job seekers with jobs through portal, job fairs and other possible interface with employees such as campus placements; and
- (iv) mobilizing employers and other placement agencies to connect to HPKVN and the MCCs for meeting their human resource requirements

13. Under HPSPDP, 11 employment exchanges will be upgraded into MCCs. As of end Feb 2017, the Department of Labor and Employment has identified three locations in Dharamsala, Hamirpur, and Nahan for MCCs. These MCCs will connect candidates to employers by providing candidate assessments through online tests, and will guide candidates to the right opportunity based on this assessment. MCCs in Himachal Pradesh will get access to career content information relating to 52 sectors and over 3,500 job codes that are currently available in the NCS.

14. For advanced counselling, there are over 800 registered counsellors on NCS from whom candidates can avail of counselling for a fee. In this way, a network of career counsellors will be available for candidates to receive career guidance and counselling, and information on vocational and skills training.

15. MCCs under the project will adopt the processes and functions as per policy guidance from MOLE,<sup>3</sup> Government of India as enumerated below:

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<sup>3</sup> National Career Service, Ministry of Labor and Employment, Government of India. *Policy Documents*. <https://www.ncs.gov.in/Pages/NCSPolicyDocuments.aspx>

- (i) guidelines for establishment of career centers released on 10 December 2014 and amended on 5 March 2015;
- (ii) guidelines for interlinking of employment exchanges released on May 2016;
- (iii) NCS onboarding policy released on January 2016; and
- (iv) NCS policy for empanelment of counsellors released on January 2016.

**J. Sample counselling material**

16. Under the project preparatory technical assistance, some sample counselling and communication material was prepared for use in the MCCs.<sup>4</sup> These will be refined further during the project implementation.

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<sup>4</sup> Counseling and Communication Modules (accessible from the list of linked documents in appendix 2 of the main text).

## APPENDIX 1

### MANAGEMENT INFORMATION SYSTEM FUNCTIONAL REQUIREMENT SPECIFICATIONS

S.No	Process Indicative	Functional Requirement Specifications
1	<b>Candidate life cycle</b>	<p><b>Candidate registration on MIS</b></p> <ul style="list-style-type: none"> <li>• Candidate will register on the MIS portal by filling in basic details like name, age, address, contact details, <i>Aadhaar</i> number, among others; and will authenticate mobile number and email address</li> </ul> <p><b>Candidate self-service</b></p> <ul style="list-style-type: none"> <li>• MIS will enable creation of login for candidates to access the MIS portal</li> <li>• MIS will enable access to information on training in various ministries and various schemes</li> <li>• MIS will enable access to information on available trainings and jobs relevant to current skills; information on job prospects after completion of particular training; and education requirement for available training</li> <li>• MIS will enable viewing of TSP details as to trainings (to be started, in process, or completed), and sector in which training is being imparted</li> <li>• MIS will enable upload of resume, profile update, and all related details about candidates</li> <li>• MIS will provide tools to candidates to improve their profiles like CV Builder, Career Action Plan, and Learning Record</li> <li>• MIS will enable viewing of latest jobs posted by employers, application to relevant jobs as per skill set, and checking of application status</li> <li>• MIS will enable assessment (online or physical) and viewing of results and certificate online</li> <li>• MIS will enable password retrieval through one's registered mobile number or email address</li> </ul> <p><b>Candidate registration for skill training</b></p> <ul style="list-style-type: none"> <li>• Candidates can choose desired training sector and district for training, and fill out the detailed forms containing personal information and education qualifications</li> </ul> <p><b>Digital locker</b></p> <ul style="list-style-type: none"> <li>• Digital Locker is a key initiative under the Digital India program and is aimed at minimizing the usage of physical documents and enabling e-sharing of documents across different agencies</li> <li>• The MIS should allow integration with Digital Locker so that all certificates in the digital locker can be assessed by candidates</li> <li>• The website of Digital Locker, Ministry of Electronics and Information Technology, may be referred to for further details<sup>a</sup></li> </ul>
2	<b>Training service providers life cycle</b>	<p><b>Training service providers registration</b></p> <ul style="list-style-type: none"> <li>• After selection of the TSP by the respective department, the TSP should register on the MIS portal. A TSP login is created and details related to profile and trainings are entered and updated.</li> <li>• TSP also enters its tax deduction and collection account number and bank details</li> <li>• TSP updates its terms and condition of the agreement with respective departments</li> </ul> <p><b>Mobilization of the candidate</b></p> <ul style="list-style-type: none"> <li>• The MIS should allow candidates to register for mobilization camps and job fairs</li> </ul>



S.No	Process Indicative	Functional Requirement Specifications
		<ul style="list-style-type: none"> <li>• TSP submits mobilization plan</li> <li>• Periodic information of each mobilization camp is recorded in the predefined format for future mobilization</li> </ul>
		<p><b>Training center creation</b></p> <ul style="list-style-type: none"> <li>• TSPs will establish training centers as per the guidelines of the skill training scheme</li> <li>• The MIS should capture all the infrastructure details regarding classroom, laboratory, washrooms, etc. as per the prescribed format</li> <li>• The MIS will enable center validation by the concerned center accreditation authorities like Quality Council of India, sector skills councils, and others</li> <li>• The MIS will enable center validation by the concerned authorities</li> <li>• The MIS will enable upload of the infrastructure approval documents for review of all the concerned users, and have provision to capture photographs of the infrastructure</li> <li>• The TSP will install a GPS-enabled biometrics system at the center. The MIS will ensure integration of a biometrics-linked system with <i>Aadhaar</i> to obtain real-time attendance of candidates. The MIS solution should have provisions to capture biometric data on a real-time basis as well as in batch mode for reporting and processing (e.g., invoice).</li> <li>• The MIS system should capture video recording information and maintain the same for trainings. The MIS solution should have provision to upload multiple media file formats such as audio, video, and photographs, and allow tagging of respective TSP details.</li> <li>• A residential facility registration system should allow for recording of infrastructure and other facilities of the training center as per the business requirements of the purchaser.</li> </ul> <p><b>Batch creation</b></p> <ul style="list-style-type: none"> <li>• A batch of students for training is created for each course, and a time is set for multiple batches to undergo a particular course. Student details for each batch should be available for viewing, and each student must register on <i>Aadhaar</i>-enabled biometric machines.</li> <li>• The MIS should allow for student verification against the list of candidates mobilized.</li> <li>• The list should be approved by the concerned authority for final batch freezing. Batch freezing means students are retained in a particular batch for more than 10 days, after which the first instalment will be released to the training service provider.</li> <li>• Students not part of the final list for training will be eliminated from the biometric system. The system should inform the TSP of the same.</li> </ul> <p><b>Training of trainer</b></p> <ul style="list-style-type: none"> <li>• Trainers for each course will be registered. All information pertaining to the trainer like educational background, professional experience, certification, contact details, proficiency (whether master trainer or trainer), among others, will be captured.</li> <li>• Information on trainers and the certification will be uploaded by the TSP onto the MIS.</li> <li>• The MIS will monitor quality assessment and performance of trainers.</li> </ul> <p><b>Training delivery</b></p> <ul style="list-style-type: none"> <li>• The MIS system should be able to accommodate different kinds of trainings. It should be comprehensive enough to accommodate the requirement of an</li> </ul>

S.No	Process Indicative	Functional Requirement Specifications
		<p>ever-changing skilling ecosystem, and should be able to integrate future skill schemes.</p> <ul style="list-style-type: none"> <li>• TSP should be able to upload the curriculum for each of the training courses</li> <li>• TSP to should be able to upload its training delivery plan</li> <li>• TSP should be able to upload its training calendar</li> <li>• TSP should upload the participants' handbook relevant to the program proposed in digital form</li> <li>• TSP should upload the trainers' handbook relevant to the program proposed</li> <li>• Both the documents in clause 2.6.3 and 2.6.4 should conform to the format given by NSDC<sup>b</sup></li> <li>• The MIS should enable upload of all reading material for the reference of trainees</li> <li>• The MIS should capture the attendance of the all trainees in a particular course through <i>Aadhaar</i>-authenticated biometrics, and a geo-tagged, time stamped system in each center on the same day</li> <li>• The MIS has to capture on video the training delivery for each day, and TSP should be able to upload the video record on the MIS portal</li> <li>• The MIS should allow on-the-job (OJT) plan submission</li> <li>• For students undergoing OJT, information to be captured are organization details, contact number, training hours, record of attendance, feedback from students about the employer, and OJT certification with the organization. Student feedback will be captured via student login only.</li> <li>• For feedback on training by the student, employer, and trainer: <ul style="list-style-type: none"> <li>– students will give feedback on training, trainer, and employer through the student login portal;</li> <li>– trainers will give feedback on the student; and</li> <li>– employers will give feedback on the student and training via an offline mode.</li> </ul> </li> <li>• Objective reasons for rating the following entities will be based on <ul style="list-style-type: none"> <li>– TSPs,</li> <li>– training centers,</li> <li>– employers, and</li> <li>– trainers</li> </ul> </li> </ul> <p><b>Assessment and certification</b></p> <ul style="list-style-type: none"> <li>• After completion of the training, candidates will undergo the assessment process. The assessment should be done within 5 days of completion of training.</li> <li>• Before completion of the training, the MIS should ensure that regular reminders are sent to the TSP regarding the assessment process.</li> <li>• The MIS should generate the list of the candidates from each batch undergoing training whose attendance is more than 70%.</li> <li>• The assessment process results are to be uploaded on the MIS in the predefined format per SOP.</li> <li>• The MIS should generate the list of passed and failed candidates.</li> <li>• The TSP will also upload a list of candidates from the failed category applying for reassessment.</li> <li>• Results of the successfully trained students are announced and notified on their respective student login with a copy of certification.</li> <li>• Empanelment of assessment agencies with provision for approval, delisting, change request, and allocation on MIS.</li> <li>• Empanelment of assessors with provision for approval, delisting, change request, and allocation on MIS.</li> </ul>

S.No	Process Indicative	Functional Requirement Specifications
3	Project management and quality assurance	<ul style="list-style-type: none"> <li>• Integration with SSC and other certifying agencies.</li> <li>• Integration with NSDC, DGET, and other agencies.</li> </ul> <p><b>Placement management</b></p> <ul style="list-style-type: none"> <li>• The MIS should capture the following under placement management: <ul style="list-style-type: none"> <li>– employer database;</li> <li>– student placement details;</li> <li>– student self-employment details;</li> <li>– self-employed student database with information on name of organization, registration details, funding source, sector, and number of employees; and</li> <li>– retention of students, with monthly updates and documentation.</li> </ul> </li> </ul> <p><b>Placement tracking</b></p> <ul style="list-style-type: none"> <li>• Placement tracking of candidates will be for a period of 12 months from date of placement. Each month's data will record the following: <ul style="list-style-type: none"> <li>– name of the organization,</li> <li>– wage, and</li> <li>– progress of candidates over a period of time.</li> </ul> </li> </ul> <hr/> <p><b>TSP monitoring and quality check</b></p> <ul style="list-style-type: none"> <li>• The HPSDP will be monitored at two levels—field level monitoring by the HPKVN district team; and at the state level, where HPKVN will monitor program implementation quality in terms of physical and financial achievements of targets and quality of delivery of training.</li> <li>• The TSPs will upload on the MIS of information such as attendance of students, trainer, and center manager; and photographs of the training at the center.</li> <li>• There will be surprise visits to check adherence to training guidelines, curriculum, delivery plan, attendance, and trainer quality, as per the format given in the SOP. These will be made available on the MIS.</li> <li>• The MIS should report training centers facing constant low attendance and dropout issues.</li> </ul> <p><b>Reporting of data by TSP</b></p> <ul style="list-style-type: none"> <li>• The TSP should report on the MIS all the data for compliance as per the standard format developed in the SOP.</li> <li>• The SOP can be amended from time to time and the changes will have to be incorporated in the MIS.</li> </ul> <p><b>Audit observation by the QA team</b></p> <ul style="list-style-type: none"> <li>• The QA team will upload data mentioned below, among others. Formats are provided in the SOP manual: <ul style="list-style-type: none"> <li>– training center infrastructure details</li> <li>– training center observations and recommendations</li> <li>– trainers' quality</li> <li>– observations on trainers' quality and certification</li> <li>– batch size as per space availability</li> <li>– surprise visit reports</li> <li>– attendance of students</li> <li>– delivery of training as per the session plan, SSC curriculum, and training calendar</li> </ul> </li> <li>• Monitoring will have to integrate with location component of GIS-based geotagging and biometric-based beneficiary tagging.</li> </ul> <p><b>Approval and sanctions</b></p> <ul style="list-style-type: none"> <li>• The TSP will have to seek multiple levels of approval for imparting the skill</li> </ul>

S.No	Process Indicative	Functional Requirement Specifications
		<p>training and meet the required compliance. Broadly, the approval will be required for the following modules, and will have to be complied with in the MIS portal:</p> <ul style="list-style-type: none"> <li>- TSP registration</li> <li>- candidate registration</li> <li>- batch approval</li> <li>- training center registration</li> <li>- training center approval</li> <li>- training delivery</li> <li>- assessment and certification</li> <li>- placement</li> <li>- placement tracking</li> </ul> <ul style="list-style-type: none"> <li>• Further descriptions related to each module and process owner are mentioned in the SOP document.</li> </ul>
4	Financial Management	<p><b>Invoicing and payment approval</b></p> <ul style="list-style-type: none"> <li>• Payment in most of the skill training programs is milestone-based and follow common cost norms notified by the Government of India in 2014.c</li> <li>• The TSP will prepare an invoice at each milestone through the MIS system. The invoicing will be based on different scenarios—based on purchase order, based on training hours and attendance calculation, or based on boarding and lodging, among others.</li> <li>• The MIS system will have to track the current milestone and status of fund utilization, trigger alerts for fund release in escalating frequency, and generate utilization certificates and statements of account for each project.</li> <li>• The TSP will also invoice for pass-through payment as per common cost norms notified by the Government of India on the MIS portal. Over-and-above payments will include: <ul style="list-style-type: none"> <li>- transportation cost</li> <li>- boarding and lodging cost</li> <li>- special area allowance</li> <li>- postplacement support</li> <li>- extra cost paid over and above base cost for candidates who are persons with disability and others as notified from time to time</li> </ul> </li> <li>• The system should have a mechanism through which candidates enrolled for training can submit the fee directly to the TSP account, with corresponding receipt generated.</li> </ul> <p><b>Payment through gateways</b></p> <ul style="list-style-type: none"> <li>• The invoice will be verified by the concerned agency, and the payment will be done through the MIS portal using the payment gateway directly to TSP's account.</li> <li>• The MIS system will integrate with the public finance management system and other FMS. The MIS will also support or facilitate the transition from one FMS to another. The project financial management system is an online fund management, fund release, reconciliation system used by various government agencies. It enables transfer of funds to various agencies and to beneficiary accounts, and is interlinked with the core banking system of over 90 banks across India.</li> <li>• The receipt of the transaction will be generated and the same will be accessible from the MIS for future reference.</li> </ul> <p><b>Fund management</b></p> <ul style="list-style-type: none"> <li>• HPKVN is the nodal agency for skilling in the state and will receive funds from other departments, donor agencies, state government, central government, and even from private players, which will be managed through</li> </ul>

S.No	Process Indicative	Functional Requirement Specifications
5	Business intelligence and dashboard	<p>the MIS system.</p> <ul style="list-style-type: none"> <li>• The MIS will contain funding agencies' details.</li> <li>• The MIS will show the fund flow mechanism between departments as per ADB norms.</li> <li>• The MIS will specify terms and conditions for fund transfer, loan, or grant.</li> <li>• The MIS will reflect payment, utilization, and auditing norms.</li> <li>• The MIS will enable real-time reporting of accounts.</li> </ul> <p><b>Accounting</b></p> <ul style="list-style-type: none"> <li>• HPKVN will account for all funds received from various sources under accounts receivable section.</li> <li>• HPKVN will account for timely payment and utilization of these funds.</li> <li>• The MIS should generate proper profit and loss statements along with balance sheets for audit reporting.</li> </ul> <hr/> <p><b>Standard reporting</b></p> <ul style="list-style-type: none"> <li>• The MIS should be able to produce standard reports like <ul style="list-style-type: none"> <li>- placement record,</li> <li>- placement tracking record,</li> <li>- number of batches running in each sector or district, and</li> <li>- number of training centers with specific course and others.</li> </ul> </li> </ul> <p><b>Dynamic Reporting</b></p> <ul style="list-style-type: none"> <li>• The MIS should be able to generate some of the dynamic reports based on the requirement of the different users and stakeholders.</li> </ul> <p><b>Dashboards</b></p> <ul style="list-style-type: none"> <li>• The MIS should be able to provide different dashboard views for different users, such as the public, students, different departments, funding agencies, and others.</li> <li>• The MIS should also be able to give a dashboard view of different schemes run by different departments.</li> <li>• The MIS should have provisions to define KPIs for respective processes of user departments, and generate dynamic reports related to KPIs through multiple graphs, charts, data tables, etc.</li> </ul> <p><b>Business analytics</b></p> <ul style="list-style-type: none"> <li>• Details on business analytics will be finalized during submission of requirements by the selected bidder. The MIS should be able to give some business insights like effort estimation and cost-benefit analysis</li> </ul>
6	Integration (bidder to provide APIs)	<p><b>District and sector industrial data</b></p> <ul style="list-style-type: none"> <li>• The MIS will be integrated with the Department of Economics and Statistics for supply of industrial data on Himachal Pradesh, and census data on state industries.</li> </ul> <p><b>Employment and job posting</b></p> <ul style="list-style-type: none"> <li>• The MIS will provide the following to employers: <ul style="list-style-type: none"> <li>- employer login for submission of information related to job requirements in the organization;</li> <li>- option for viewing lists of candidate for relevant job openings; and</li> <li>- option for submitting requests to conduct interviews or recruitment.</li> </ul> </li> </ul> <p><b>MIS integration with other external systems or portals</b></p> <ul style="list-style-type: none"> <li>• Other external systems with which the system should be integrated are: <ul style="list-style-type: none"> <li>- Labor market information system of the National Skill Development Agency,</li> <li>- Directorate General of Employment and Training, National Council of</li> </ul> </li> </ul>

S.No	Process Indicative	Functional Requirement Specifications
		Vocational Training's MIS portal, – Ministry of Overseas Indian Affairs (for validation), – Unique Identification Authority of India – SMS gateways, – payment gateways  <b>Integration with various state portals</b> <ul style="list-style-type: none"> <li>• Industries Department</li> <li>• Rural Development Department</li> <li>• Urban Development Department</li> <li>• Directorate of Technical Education</li> <li>• Department of Labor and Employment</li> <li>• Department of Higher Education and others as required during the convergence of the skilling efforts</li> <li>• Integration of MIS with the Department of Rural Development to prepare a youth database at the <i>panchayat</i> level for a ready listing during mobilization activities</li> </ul>

ADB = Asian Development Bank, DGET = Directorate General of Employment and Training, FMS = financial management system, HPKVN = Himachal Pradesh Kaushal Vikas Nigam, KPI = key performance indicator, MIS = management information system, NSDC = National Skill Development Corporation, QA = quality assurance, SMS = short message service, SOP = standard operating procedure, SSC = sector skills council, TAN = tax deduction and collection account number, TSP = training service provider.

<sup>a</sup> Department of Electronics and Information Technology, Government of Himachal Pradesh. 2016. *Save to Locker API Specification Version 1.0*. <https://digilocker.gov.in/assets/img/DigiLocker-Save-To-Locker-API-Specification-v1.0.pdf>

<sup>b</sup> National Skill Development Corporation. 2012. *Quality Guidelines for Training Content*. <http://www.nsdcindia.org/standards-and-quality-assurance>

<sup>c</sup> Ministry of Skill Development and Entrepreneurship, Government of India. 2016. Common Norms Notification with Amendments. <http://msde.gov.in/notification.html>

Source: Asian Development Bank.

## APPENDIX 2 SCREENSHOT OF INTERIM MANAGEMENT INFORMATION SYSTEM

