INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT
PROPOSED LOAN
IN THE AMOUNT OF US$ 40 MILLION
EQUIVALENT TO INDIA
FOR THE

Haryana Digital Empowerment and Services to Harness (DESH) Growth (P516517)

DIGITAL EMPOWERMENT AND SERVICES TO HARNESS GROWTH IN HARYANA AS PHASE 1 OF THE MULTI-PHASE PROGRAMMATIC APPROACH DIGITAL EMPOWERMENT AND SERVICES TO HARNESS GROWTH (DESH) MPA WITH AN OVERALL FINANCING ENVELOPE OF US$ 500 MILLION

ENVIRONMENT AND SOCIAL SYSTEMS ASSESSMENT (ESSA)

DRAFT

October-November 2026

Please send your feedback and comments to ARJUN Council SPV at arjun-spv@hry.gov.in or arjun.spvharyana@gmail.com

draft

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List of Abbreviations

AAS	Auto Appeal System
ADC	Additional District Commissioner
AI	Artificial Intelligence
ALC	Authorized Learning Centre
ARJUN	AI for Resilient Jobs, Urban Air Quality & Next-Gen Skills Council
ASK	Atal Seva Kendra
BC	Backward Classes
BEE	Bureau of Energy Efficiency
BPO	Business Process Outsourcing
CBDT	Central Board of Direct Taxes
CERT-In	Computer Emergency Response Team – India
CoE	Centre of Excellence
CPGRAMS	Centralized Public Grievance Redress and Monitoring System
CPCB	Central Pollution Control Board
CRID	Citizen Resource Information Department
CRS	Civil Registration System
CSC	Common Service Centre
C-DAC	Centre for Development of Advanced Computing
DCRIM	District Coordinator for Registration of Identification and Mapping
DESH	Digital Empowerment and Services to Harness Growth
DE&IT	Department of Electronics & Information Technology
DITECH	Department of Electronics & Information Technology (Haryana)
DLI	Disbursement-Linked Indicator
DPDP Act	Digital Personal Data Protection Act, 2023
DSS	Decision Support System
EPR	Extended Producer Responsibility
EPFO	Employees' Provident Fund Organisation
ESDM	Electronics System Design & Manufacturing
ESMF	Environment and Social Management Framework
ESMP	Environmental and Social Management Plan
ESSA	Environmental and Social Systems Assessment
EWS	Economically Weaker Sections
FIDR	Family Information Data Repository
G2C	Government-to-Citizen
GBV	Gender-Based Violence
GeM	Government e-Marketplace
GeSI	Global e-Sustainability Initiative
GIS	Geographic Information System
GoH	Government of Haryana
GPU	Graphics Processing Unit
GRM	Grievance Redress Mechanism
HAIDP	Haryana AI and Digital Programme
HARTRON	Haryana State Electronics Development Corporation
HKCL	Haryana Knowledge Corporation Limited
HKRN	Haryana Kaushal Rozgar Nigam
HPPA	Haryana Parivar Pehchan Authority
HEPC	Haryana Enterprises Promotion Centre
HSDC	Haryana State Data Centre

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HSDM	Haryana Skill Development Mission
HSPCB	Haryana State Pollution Control Board
HSWAN	Haryana Statewide Area Network
ICC	Internal Complaints Committee
ICT	Information and Communications Technology
ISMO	Institute for Smart Governance
ISO	International Organization for Standardization
IT	Information Technology
MeitY	Ministry of Electronics and Information Technology
MGNREGA	Mahatma Gandhi National Rural Employment Guarantee Act
MIS	Management Information System
MPA	Multi phased approach
MSME	Micro, Small and Medium Enterprise
NA	Not Applicable
NDSA	National Data Sharing and Accessibility Policy
NeGD	National e-Governance Division
NIC	National Informatics Centre
NKN	National Knowledge Network
NOC	No Objection Certificate
NSQF	National Skills Qualifications Framework
OHS	Occupational Health and Safety
OEM	Original Equipment Manufacturer
PforR	Program-for-Results
PMU	Project Management Unit
POSH Act	Sexual Harassment of Women at Workplace (Prevention, Prohibition & Redressal) Act, 2013
PPP	Parivar Pehchan Patra (Family ID)
PRI	Public Rural Infrastructure (lines)
PwD	Person with Disability
RFP	Request for Proposal
RoHS	Restriction of Hazardous Substances
RTI	Right to Information
SC	Scheduled Caste
SETC	State Eligibility Test in Computer Appreciation and Applications
SEA/SH	Sexual Exploitation and Abuse / Sexual Harassment
SoP	Standard Operating Procedure
SPOC	Single Point of Contact
SPMU	State Project Management Unit
SPV	Special Purpose Vehicle
STPI	Software Technology Parks of India
UDID	Unique Disability Identification
UPS	Uninterruptible Power Supply
WHH	Women-Headed Household
WBG	World Bank Group
ZCRIM	Zonal Coordinator for Registration (Identification and Mapping)

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EXECUTIVE SUMMARY

A. Overview

The **Haryana Digital Empowerment and Services to Harness (DESH) Growth Program** is a World Bank-supported Program-for-Results (PforR) operation proposed for the state of Haryana, India, with a total financing of US$ 40 million. The Program Development Objective (PDO) is to accelerate the responsible adoption of artificial intelligence in public service delivery, increase the use of digital services, and expand digitally enabled jobs in Haryana. The program is structured around three result areas: Result Area 1: Scaling Safe and Responsible AI for Public Service Delivery and Innovation; Result Area 2: Strengthening Digital Public Infrastructure for Improved Service Delivery; Result Area 3: Industry-Led Skilling for Digitally Enabled Jobs. Program outcomes will be measured through the number of people using digitally enabled services, digitally enabled jobs created, and number of AI use cases deployed in government departments. There are nine disbursement-linked indicators (DLIs) to measure the achievement of these results.

B. Institutional Arrangements

The Program will be implemented by multiple entities under the Government of Haryana, with the ARJUN (AI for Resilient Jobs, Urban Air Quality & Next-Gen Skills) Special Purpose Vehicle (SPV) serving as the nodal Program Implementing Agency. CRID serves as the IT department for the Government of Haryana, with multiple agencies including HARTRON (Haryana State Electronics Development Corporation), and HKCL (Haryana Knowledge Corporation Limited) operating as sub-entities under its oversight. Each of these entities will be responsible for implementing reforms and activities related to their respective Results Areas and DLIs, and will identify and organize technical assistance, knowledge sharing, and training as required. The IAs will be responsible, either directly or through coordination and oversight, for ensuring compliance with relevant fiduciary requirements, environmental and social (E&S) safeguards, procurement guidelines, and the norms and systems of the Government of Haryana during project implementation. These requirements and arrangements will be further detailed in the Program Operations Manual (POM) prepared by ARJUN SPV in consultation with the World Bank. The overall implementation and monitoring support arrangement will include an oversight mechanism led by a Sub-Committee of ARJUN's Governing Board, a Project Management Unit (PMU) housed within ARJUN SPV, and Project Implementation Units (PIUs) established within other participating IAs.

C. Beneficiaries

Direct beneficiaries of the operation include citizens of Haryana accessing services through SARAL 2.0 and HPPP enabled proactive delivery, particularly households that are currently excluded or face delays in corrections and grievance redressal. Students and jobseekers seeking opportunities in digital and AI roles, as well as government officials pursuing upskilling in AI foundations, will also directly benefit. In addition, researchers and academic institutions engaged through AI Centres of Excellence (CoEs), along with startups, founders, incubators, GCCs, and industry partners participating in the accelerator ecosystem, will be key beneficiaries

D. ESSA

This ESSA has been prepared in accordance with the World Bank's requirements for PforR operations. It assesses the potential E&S effects of the program, evaluates the adequacy of the Government of Haryana's legal, institutional, and operational capacity to manage those effects in line with the six PforR Core Principles, and identifies additional measures required for robust E&S risk management. The ESSA was prepared by a team of World Bank environmental and social specialists through a comprehensive literature review of applicable laws, policies, and regulations, supplemented by iterative consultations and group discussions with implementing agencies, service providers, trainers, vendors, and beneficiaries. The draft ESSA will be disclosed publicly, and a state-level disclosure workshop will be conducted to seek stakeholder feedback prior to finalization.

E. Environmental and Social Benefits

The program is expected to generate significant direct and indirect environmental co-benefits. Digitization of government services will reduce paper consumption, lower transportation-related emissions by enabling remote service access and optimizing government resource management. Indirect benefits include strengthened environmental governance through centralized data repositories, support for climate change mitigation and adaptation through digital early warning systems, and enablement of circular economy initiatives through e-governance platforms. The program will strengthen governance, transparency, and accountability in public service delivery. Improved data systems will enhance targeting of vulnerable households — including persons with disabilities, women-headed households, the elderly, and the urban poor — reducing errors of exclusion and lowering transaction costs for accessing entitlements. Support for digitally empowered micro-enterprises, particularly those run by women and marginalized groups, will expand economic empowerment. Development of citizen engagement platforms and grievance redress systems will improve government responsiveness. The project aims to reach 3.5 million people through its new platform for access to enhanced digital services and generate 100,000 digitally enabled jobs.

F. E&S Risks

The program's overall environmental and social risk is assessed as Moderate. This assessment reflects the program's digital character — the absence of large civil works, land acquisition, or activities in ecologically sensitive areas that substantially reduces its footprint compared to infrastructure-sector operations.

Across the three Results Areas, environmental risks are broadly Moderate. Result Area 2 has Moderate risks related to e-waste, data center energy use, and fire and chemical safety; water risk is limited because existing facilities are air-cooled, though baseline energy and water audits are recommended. Results Area 3 has Low-to-Moderate risks related to OHS and e-waste in training and AI facilities. Cross-cutting priorities are - authorized e-waste disposal and lifecycle management; energy efficiency and carbon reduction for AI computing; OHS controls for electrical, fire, battery, chemical, and ergonomic hazards; and equitable access to AI-enabled services in digitally underserved, environmentally stressed districts.

Social risks are identified as Moderate which include a) temporary inconvenience during any physical refurbishment or technological upgradation; b) inadequate communication for timely access to opportunities of skill development, jobs and entrepreneurial activities particularly for women, youth and vulnerable communities; c) irregular stakeholder and beneficiary consultation on accessibility and efficiency of digitally-delivered public services; d) potential threats of cyber security and online risks of GBV; e) weak grievance redressal systems including labor related complaints as well as internal complaints on Sexual Harassment at the Workplace and at training/learning centre.

The overall rating is calculated based on the nature of activities and corresponding risks associated with them as well as the current institutional capacities to map and manage them. The assessment shows that this is the first experience of several Implementing agencies with the World Bank Group. While ARJUN is the key implementing agency for externally aided projects in Haryana including the WB supported Haryana Clean Air Project for Sustainable Development Operation (P510686), and has disbursed $12.5 million, it’s institutional capacity is still being strengthened.

G. Recommendations

The following priority actions are recommended to strengthen E&S systems and outcomes under the program:

- **Institutional Strengthening:** Appoint dedicated E&S focal points in ARJUN SPV and all implementing agencies. Prepare an E&S Procedures Manual covering screening, ESMPs, and OHS protocols, before launch. The current HR manual for ARJUN SPV where under HAIDP team, there is provision for Environmental Specialist as well as Social - Gender Specialist. Correspondingly, the organogram and institutional design for entire program will build in E&S Focal points at each IA.
- **Capacity Development:** Train relevant staff on inclusion, digital accessibility, data privacy, citizen engagement, OHS, water and energy resource audits, gender, and GBV, with emphasis on vulnerable groups. An E&S PAP action is added for that.
- **Environmental Management:** Adopt standard operating procedures (SOPs) for energy and water efficiency standards, renewable energy targets, and BEE or ISO 50001 certification. Making the e-waste and battery waste SOPs a mandatory operational requirement for CRID, HARTRON, Software Technology Parks of India (STPI, Gurugram) and other program entities. Ensure compliant e-waste SoPs, include Extended Producer Responsibility and take-back clauses in all IT procurement templates before the first procurement under the program is initiated. Other recommendations are: PUE target of ≤1.5, facility OHS plans, safety assessments, fire NOCs, and quarterly incident reporting. All the standards will be in-built in the RFP. In addition, PAP action addresses Energy efficiency and Water Audit in Data centres.
- **Social Inclusion and Digital Equity:** Implement simplified assisted access, supported by inclusive outreach for women, vulnerable groups, and persons with disabilities. Gender disaggregated tracking is in place for: Access of digital services through SARAL 2.0, Availing of incubation and acceleration services, employment in digitally enabled jobs. SARAL 2.0 will also offer web, mobile and assisted/offline access channels, with proactive life-event-triggered delivery and outbound phone calls to beneficiaries to reach citizens (including the vulnerable) less likely to use online services.
- **Improve outreach and communication of training centres, entrepreneurial activities and information dissemination to prospective students/beneficiaries.** The project will create a network of volunteers on ground to map opportunities, spread awareness and motivate students and potential entrepreneurs to come together under one platform.
- **Grievance Redress:** Track GRM outreach, accessibility, use, response time, and resolution rates. The PAP action covers Program-level Grievance Redress Mechanism (GRM) accessible to all program beneficiaries, including women, marginalized communities, trainees, and gig/freelance workers will be developed within 6 months of effectiveness and tracked thereafter
- **Gender-Based Violence:** Maintain functional Internal Complaints Committees and ensure sensitization, confidential complaint handling, and referral services at training and learning centres. All agencies assessed have ICC in place. To improve the functioning, capacity development and sensitization included under PAP (E&S module for training for all IAs)
- **Monitoring and Reporting:** Integrate E&S screening throughout the project cycle and report half-yearly on inclusion, OHS protocols and incident reporting, e-waste and battery disposal, energy and water audit and GRM performance. PAP action on E&S Screening and monitoring for all project activities which allows to map the type of risk and the requirement of ESMPs followed by monitoring
- *Because the Program digitizes services, builds a State Data Exchange and deploys AI systems that handle large volumes of citizen data, data protection and cybersecurity capacity in the participating agencies needs attention. The Program builds on CERT-In's national guidelines and*

strengthens them at the state level, including through a State Security Operations Centre for continuous monitoring, threat detection and coordinated incident response. It will comply with the Digital Personal Data Protection Act, 2023 and its Rules by building consent management, data minimisation and purpose limitation into the State Data Exchange, aligning the State Data Policy and Safe AI Governance Framework with the Act, and training implementing agencies on data protection through the Program Action Plan

H. Program Action Plan

E&S PAPs

Action Description	Responsibility	Timing	Completion Measurement
E&S Screening and monitoring for all project activities. E&S screening allows to map the type of risk and the requirement of ESMPs	ARJUN in coordination with all IAs	Within 6 months of project effectiveness	Year 1: Screening list for all IAs prepared and adopted Year 2: Reports of activities screened provided in ISMs
E&S module for training for all IAs including OHS, Citizen engagement, GBV, Resource Efficiency (water and energy), and any other relevant areas	ARJUN in coordination with HKCL	Within six months of project effectiveness	Year 1: Training calendar prepared and curriculums developed Year 2: Reports of training completed provided in ISMs
Preparation of SOPs for e-waste and battery management, compliant disposal of used batteries and discarded IT equipment, OHS mandated for all activities and energy and water audits of data centers.	ARJUN in coordination with DITECH, CRID and HARTRON	Within six months of project effectiveness	Year 1: SoPs for E-waste management developed and adopted. SOPs for Energy and Water Audit Developed Year 2: Reports on Environmental Management covering Occupational Health and Safety, E-waste, Energy and Water audit provided in ISMs

Technical PAPs

Adopt the Program Operations Manual detailing implementation, fiduciary, E&S and verification arrangements	ARJUN SPV (PMU), in consultation with CRID and other participating Implementing Agencies, with clearance from the World Bank	Within three months of effectiveness	Program Operations Manual (POM) to be adopted by ARJUN SPV and cleared by the World Bank, covering roles and responsibilities of PMU and PIUs; fiduciary, procurement and financial management procedures; E&S requirements; and

			verification and reporting arrangements
Strengthen program implementation capacity within existing government institutions (CRID, HARTRON, HKCL, and ARJUN SPV) by designating focal points and staff responsible for technical, fiduciary, grievance redressal and E&S aspects of their respective Results Areas	ARJUN SPV in coordination with CRID (nodal IT department), HARTRON and HKCL	Before negotiation	Each IA has notified a PIU, comprising of the technical, fiduciary and E&S officers.
Program-level Grievance Redress Mechanism (GRM) accessible to all program beneficiaries, including women, marginalized communities, trainees, and gig/freelance workers	ARJUN SPV	Within 6 months of project effectiveness	Submission of feedback and grievance report by ARJUN SPV every six months from the third year of the project.

I. Exclusion List

Under the Bank Policy on Program-for-Results Financing, activities likely to have significant adverse impacts that are sensitive, diverse, or unprecedented on the environment and/or affected people are not eligible for PforR financing and are excluded from the Program. These generally include power plants; major transport infrastructure, such as new highways, expressways, urban metro systems, railways, and ports; operations in mining and extractive industries; commercial logging or large-scale forest-products-processing operations; Large-scale water resource infrastructure (surface and groundwater), including large dams. This also covers activities that allocate or convey water, such as inter-basin transfers, or that significantly change water quality or availability; Manufacturing or industrial processing facilities. Under this program, apart from the above, other specific activities that will be excluded are:

- Any introduction of asbestos materials (AC roofing sheets, AC pipes, and so on)
- Any activity involving private land acquisition or government land acquisition with encumbrances
- Any activity that may require involuntary resettlement and forced eviction
- Any new Data centre or new training center will be constructed (no green field constructions)
- Any activity in closer proximity to National Parks and Wildlife Sanctuaries

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1. INTRODUCTION

1.1 Context

1. The proposed Digital Empowerment and Services to Harness Growth (DESH) Multi-phased program approach (MPA) will support an ambitious digital transformation agenda aligned with India's Viksit Bharat 2047 vision. Digitalization is a central pillar of Viksit Bharat, operationalized through the Government's Digital India 2.0 program. The MPA will operate at both the National and State levels, leveraging the Bank's strengths as a knowledge and financing institution. It will draw on global technical expertise, advisory support, and a flexible menu of interventions, aligned to program priorities. The approach is designed to enable coordinated action between the Center and States, leveraging national policy frameworks led by the Ministry of Electronics and Information Technology (MeitY). This will create a virtuous circle, feeding back lessons learnt from state-level activities to the Central government's policies. The design provides a menu of scalable solutions and enables tailored implementation to meet the state's needs and capacity. Accordingly, the MPA is structured around three pillars: (i) Quality Digital Infrastructure; (ii) DPI- and AI-enabled Service Delivery; and (iii) AI, Innovation, and Jobs.

2. **DESH for Haryana represents the first phase of the MPA, spanning all three pillars with a clear emphasis on AI-driven innovation, enhanced service delivery, and job creation.** The program is structured as a whole-of-government digital transformation to deliver measurable outcomes: strengthening core digital and data infrastructure; establishing data exchange and governance frameworks anchored in a state data policy to enable trusted data use; and upgrading public service delivery through DPI rails and AI-enabled analytics..

1.2 About the Program

3. The Program Development Objective (PDO) is 'to accelerate the responsible adoption of artificial intelligence (AI) in public service delivery, increase the use of digital services, and expand digitally enabled jobs in Haryana'.

PDO attributes	PDO indicators
Responsible adoption of AI in public service delivery accelerated	AI solutions deployed across government departments (Number)
Use of digital services by citizens and businesses increased	People using digitally enabled services — enhanced services (Number; gender and youth disaggregated)
AI- and digitally enabled jobs expanded	Digitally enabled jobs, self-employment and entrepreneurship opportunities (Number; gender and youth disaggregated)

4. **Each phase is implemented by the participating state through its own institutional arrangements, anchored in a set of common minimum requirements defined at the MPA level**. These include: (i) a designated nodal implementing agency supported by a Program Management Unit (PMU); (ii) independent verification arrangements for DLIs in results-based phases, potentially involving multiple verification agents depending on the nature of the DLI (e.g., IT/systems auditors for technical DLIs, third-party monitoring firms for employment outcomes, and financial due diligence firms for capital mobilization), with documented prior results verified directly by the Bank, while other indicators are reported through routine phase-level M&E systems; (iii) fiduciary and environmental and social (E&S) arrangements consistent with Bank policies; and (iv) M&E systems that track both phase-specific and MPA-level results. In Phase 1 (Haryana), ARJUN SPV and CRID will serve as nodal implementing agencies. The Bank team will maintain a consolidated MPA results database, conduct at least two implementation support missions per phase each year, and convene an annual cross-phase learning review.

5. The PforR Program supports specific activities under the government's larger digital transformation program over the period FY2027–FY2032, which are organized under three Results Areas and are broadly aligned with the three pillars of the DESH MPA.

Disbursement Linked Indicator	Key bottlenecks	Interventions	Loan Amount Allocated (USD million)
Results Area #1: Scaling Safe and Responsible AI for Public Service Delivery and Innovation			
DLI 1: State AI Strategy and Safe AI Governance Framework notified	Haryana has no notified AI strategy and no framework for assessing and managing the risks of AI used in government. AI use therefore carries the risk of algorithmic harm, data misuse, and weak public accountability across departments. The absence of clear rules also discourages private investment and AI providers from engaging with government.	The program supports the drafting, Cabinet approval, and notification of the State AI Strategy and the Haryana Safe AI Governance Framework. The Framework requires a risk assessment before any AI use case is deployed or scaled. It also sets requirements for algorithmic audit and accountability, data governance aligned with the State Data Policy, and redress for AI-related harms.	2.0
DLI 2: Number of AI solutions deployed across government departments	Government departments lack the capacity, tools and mechanisms to experiment with AI and to procure AI systems for deployment at scale. Pilots rarely move into live operations, and adoption of AI in government systems remains very limited.	The program will institutionalize the Haryana AI Sandbox, running structured annual departmental cohorts to identify, develop, and pilot AI use cases in priority sectors. Validated pilots are graduated into cross-departmental deployment through defined KPIs.	5.0
DLI 3: Number of AI start-ups completing incubation and acceleration services	Haryana's AI start-up ecosystem lacks structured access to markets, mentorship, and capital, which limits the flow of private venture capital into the state. Women founders face the added barriers of limited digital access, skills and mobility.	The program supports a zero-equity, performance-fee startup accelerator at the AI Centre of Excellence operated by a global expert partner with fees tied to the cohort to crowd in private capital for graduated AI startups.	5.0
Results Area #2: Strengthening DPI for Improved Service Delivery			
DLI 4: Modernization of the SARAL service delivery platform	The current service delivery platform SARAL is built on old architecture which is not integrable with payment gateways or digital ID authentication. Many services also are hosted outside SARAL, increasing friction and costs for government and citizens.	An as-is assessment of SARAL is conducted in Period 0 to identify integration bottlenecks and user experience friction, informing the design of SARAL 2.0. A vendor is onboarded to design and develop SARAL 2.0 with modern technical architecture, single sign-on, payment gateway integration, Aadhaar authentication, a mobile application, and proactive service delivery capability. Existing services are migrated to SARAL 2.0 in a phased manner, prioritizing high-volume services.	6.0
DLI 5: Launch and	No legal or institutional basis	The program supports the notification of	5.0

operationalization of State Data Exchange (HDeX)	for cross-departmental data sharing, preventing integrated service delivery and AI use case development	the State Data Policy through Cabinet approval, providing the governing foundation for cross-departmental data sharing. The HDeX platform is then procured and deployed. Government departments are onboarded progressively, with priority given to those whose data assets are most critical for proactive service delivery and AI use case development.	
DLI 6: Haryana PPP technical and governance architecture redesign and launch	The efficiency, user experience, and scope of PPP are constrained by opaque manual processes, limited integration with national DPI systems, and the absence of real-time data flows with other government platforms for proactive service delivery and eligibility determination.	An independent diagnostic study of HPPA informs the development and approval of a PPP 2.0 reference architecture and data standards document. The complete migration of citizen data to the new PPP 2.0 platform is carried out, with data integrity confirmed. The redesigned system is then integrated with UIDAI authentication services and NPCI payment systems, and subsequently with the SARAL 2.0 platform and HDeX, enabling PPP-based eligibility determination.	6.4
DLI 7: Government Departments onboarded on the new SDC (percent)	The existing State Data Center (SDC) requires technological and infrastructure upgrades to expand its data hosting capacity and strengthen operational resilience. Its performance against key energy efficiency, water efficiency, and resilience benchmarks has not been assessed, making it difficult to establish compliance with accepted standards.	The program will support an upgrade of the existing State Data Center (SDC) to expand hosting capacity, strengthen security, and enhance operational resilience. It will also facilitate the migration and onboarding of applications and workloads from government departments to the upgraded facility. The upgrade will adhere to prescribed standards for energy efficiency, water efficiency, and infrastructure resilience. Disbursements will be linked to the proportion of eligible government departments whose applications and workloads are successfully onboarded and operational on the upgraded SDC.	2.5
Results Area #3: Industry-led Skilling for More and Better Jobs			
DLI 8: Introduction of different employment-linked digital and AI skilling programs for digitally enabled jobs, self-employment and entrepreneurship opportunities	Haryana's state-driven digital and IT training institutions have no integrated skill development program linking training to employment. AS per existing data records, fewer than 5% of trained youth secure employment at program completion.	The program launches an integrated online skilling and employment-linked program at HKCL and HASC and establishes a government placement platform connecting graduates to MSMEs and local industry. A state-level data annotation skilling and employment program is institutionalized and piloted across existing government training centers. Industry-led AI skill labs are established for industry-led training. The integrated skilling program is subsequently scaled to 50 training centers statewide, and the placement platform is	5.0

		integrated with all HKCL and HARTRON institutions.	
DLI 9: People employed in digitally enabled jobs through newly institutionalized skilling and training programs	No systematic employment tracking or outcome verification mechanism exists for existing skilling programs. Existing programs measure enrollment and certification rather than verified employment, producing poor labor market outcomes.	The program tracks verified wage or self-employment achieved within 6 months of completion of newly introduced programs under DLI 7. The government placement platform tracks employment outcomes across all integrated training institutions, disaggregated by gender, district, and employment type.	3.0
Total DLI value			**39.9**
Front-end fees			**0.1**
Total financing			**40.00**

6. The linkages between the government program and DESH Haryana are given below:

	Government program	Program supported by the PforR (DESH for Haryana)	Reasons for non-alignment
Objective	Accelerate whole-of-government digital and AI transformation in Haryana	Accelerate responsible AI adoption in public service delivery, increase use of digital services, and expand AI and digitally enabled jobs	Aligned
Duration	FY2027-2032	FY2027-2032	Aligned
Geographic coverage	All of Haryana	All of Haryana	Aligned
Results areas	Comprehensive program spanning infrastructure, service delivery, AI, innovation, and skilling	RA1: AI for public service delivery and innovation; RA2: DPI for service delivery; RA3: Industry-led skilling and jobs	The government program is broader as it includes some infrastructure investments and activities financed through GoI schemes and also through departments other than CRID, outside the PforR boundary
Overall Financing	US$428.3 million	US$148.1 million (excludes 3 million of PCM)	Balance outside the PEF boundary from Government of Haryana counterpart financing and any Government of India financing.

7. **Program beneficiaries include citizens, government, and the private sector in participating states.** Citizens -particularly rural households, women, and youth, benefit from faster, proactive, and more inclusive service delivery and from accessible entry points into digital employment such as data annotation. Government departments benefit from secure data exchange, AI-ready data, modern service platforms, cybersecurity capacity, and grounded AI tools that transform internal workflows. Students, jobseekers, and existing workers benefit from industry-aligned skilling in data, AI, cybersecurity, data science, semiconductors/VLSI, robotics and adjacent domains. Startups, incubators, GCCs, and industry partners benefit from accelerator services, market access, and a deeper talent pool. Indirect beneficiaries include all users of state digital services as platforms and data infrastructure.

8. Implementing Agencies: ARJUN (program coordination), CRID (IT Department), HKCL (skilling, training, IT literacy and human resource), and HARTRON (Skills, Training, IT support & procurement)

9. The Program will be implemented by multiple entities under the Government of Haryana, with the ARJUN *(AI for Resilient Jobs, Urban Air Quality & Next-Gen Skills)* Special Purpose Vehicle (SPV) serving as the nodal Program Implementing Agency. CRID serves as the nodal IT department under the Government of Haryana, with multiple agencies including HARTRON, and HKCL operating as sub-entities under its oversight for the project activities. Each of these implementing entities will be responsible for implementing reforms and activities related to their respective Result Areas and DLIs, and will identify and organize technical assistance, knowledge sharing, and training as required. The IAs will be responsible, either directly or through coordination and oversight, for ensuring compliance with relevant fiduciary requirements, environmental and social (E&S) safeguards, procurement guidelines, and the norms and systems of the Government of Haryana during project implementation. These requirements and arrangements will be further detailed in the Program Operations Manual (POM) prepared by ARJUN SPV in consultation with the World Bank. The overall implementation and monitoring support arrangement will include an oversight mechanism led by a Sub-Committee of ARJUN's Governing Board, Project Management Unit (PMU) housed within ARJUN SPV, and Project Implementation Units (PIUs) established under other participating IAs.

10. A PMU will be set up within ARJUN SPV, with a designated Program Director, senior staff, and consultants. The PMU will have overall responsibility for program management, progress monitoring, and coordination of all activities across the three Result Areas, in collaboration with the PIUs set up under other participating IAs. It will organize a monthly review meeting on PforR implementation with the PIUs and share updates with the World Bank. It will facilitate periodic implementation review missions of the World Bank, organize quarterly review meetings, and provide implementation support across the results areas of the project. It will also support the implementation of the overall E&S action plan and the capacity building of the IAs and their PIUs. The PMU will appoint, monitor, and manage the Independent Verification Agency (IVA), and submit the Disbursement Letter to the World Bank upon achievement of the DLIs.

11. Each participating IA will set up its own PIU to support the technical and fiduciary aspects of the Program activities for which it is responsible. The PIUs will interact with the World Bank on all technical issues relevant to their Result Area, prepare annual expenditure plans and Procurement Plans, and undertake all procurement and contracting related to their activities. They will also support E&S capacity building and fiduciary requirements under the PforR operation within their respective institutions.

12. A Governing Board will be setup under ARJUN SPV to provide high-level strategic oversight and coordination across the multi-agency implementation structure. The Governing Board will convene at least semi-annually to review Program progress and provide guidance on priority reforms.

13. The implementation arrangements reflect lessons from successful World Bank-supported programs in India. The use of an SPV (ARJUN) as the primary nodal agency for RA1 and RA3 provides the institutional flexibility to hire market-relevant skills and maintain a focused team of professionals, while remaining accountable to the Government of Haryana. The centralization of PMU functions within ARJUN SPV — with PIUs in other participating IAs

maintaining fiduciary responsibility for their activities — replicates arrangements that have worked well in comparable multi-agency operations.

14. An Independent Verification Agency (IVA) will conduct assessments as and when a DLI is achieved and prepare a consolidated report containing evidence toward the achievement of the DLIs.

1.3 About the ESSA

15. This ESSA has been prepared as per World Bank's requirements for PforR operations to identify and manage potential E&S effects of the Program. It assesses the potential E&S effects, the adequacy of Government of Haryana (Borrower's) capacity (legal, institutional and operational) to manage those effects in line with the PforR core principles, identifies additional measures required to manage risks, exclusions and recommendations, including Program Actions, to enhance the client's E&S management systems and E&S outcomes of the Program.

1.4 Methodology for ESSA

16. This ESSA was prepared by a team of environmental and social specialists from the World Bank, in close consultation with the Borrower that will implement the program, and other participating institutions and regulatory bodies relevant to the operation. The preparation involved a comprehensive literature review of secondary literature and data including applicable Policies, Acts, Rules, Guidelines and Notifications, as well as studies and internal assessment based on the identified program boundaries 'P'. In addition, iterative discussions and group consultations were held with the institutional stakeholders (staff of implementing agencies, service providers, trainers, vendors, beneficiaries) to complement the desk review and validate the preliminary assessments. Details of the Meetings and Consultations undertaken are provided in Annex IV and V.

17. The ESSA draft will be disclosed to seek feedback from interested stakeholders, and a state level disclosure workshop will be organized to share the assessment with the state level stakeholders and seek their comments for finalization of the ESSA. The final ESSA will be disclosed on the website of ARJUN, GoH and World Bank portal.

2. E&S EFFECTS OF PROPOSED INVESTMENTS

2.1 E&S benefits

18. **Environmental Benefits**. Based on detailed scope of work and activities, following direct and indirect benefits can be summarized of the current program.

A. Direct Environmental Benefits

- **Reduction of Paper-Based Processes and Digital Transformation.** Transition from paper-based government services to digital platforms reduces demand for paper consumption, thereby it will help in: (a) Decreasing deforestation pressure from paper manufacturing, (b) Reducing chemicals used in paper bleaching and processing and (c) Lowering waste volumes in landfills.
- **Quantification Potential:** Estimate annual paper savings across participating government departments (baseline: current consumption vs. projected digital service usage)
- Controlled e-waste and battery disposal (registered recyclers, certified data destruction and a separate battery channel) reduces soil and groundwater contamination and worker exposure to hazardous materials

B. Reduction in Physical Travel and Transportation Emissions.
E-governance services reduce the need for citizens and government employees to travel to physical offices for service delivery. There by; (a) Citizens can access services remotely, reducing fuel consumption and vehicle emissions, (b) Government employee commute patterns may shift as remote work opportunities increase, (c) Reduced congestion in urban centres and associated air quality improvements. Thus, possible co benefits can be; Lower air pollution, improved public health outcomes, particularly in urban areas

C. Optimization of Government Operations. Digital systems enable better resource management and monitoring of government operations. It can further enhance environmental benefits if; (a)Real-time environmental monitoring systems can track pollution levels, water quality, and natural resource use, (b) Data-driven decision-making for environmental management and compliance be encouraged and (c) Integration of environmental considerations into administrative workflows may start flowing.

D. Indirect Environmental Benefits

- **Environmental Governance Strengthening.** DESH program can facilitate establishment of environmental data management and reporting systems. The key areas could be: (a) Centralized environmental data repositories for monitoring compliance with environmental laws and regulations, (b) Enhanced transparency in environmental permitting and monitoring processes, (c) Support for state-level environmental assessment and planning tools and (d) Integration of environmental indicators into state development planning systems. For instance, AI-guided farming can cut pesticide and other chemical use by 30% to 95% and reduce irrigation water, runoff and evaporation. That matters in Haryana, where groundwater is heavily over-exploited
- **Climate Change Mitigation and Adaptation.** Digital infrastructure can support climate action efforts. The PUE target of 1.5 or better for the SDC and HACF compares with a global average of about 1.8, and efficient facilities reach 1.2 or lower means less electricity and fewer emissions for the same computing work. Baseline and periodic energy and water audits, phased HACF capacity, and introducing renewable energy targets for data centre can bring reformistic benefits. Some possibilities include; (a) Development of early warning systems for natural disasters (floods, droughts) through digital platforms, (b) Climate data analysis and dissemination through digital platforms, (d) Support for renewable energy deployment tracking and grid management systems; and (d) Digital tools for carbon accounting and climate action planning at state and departmental levels
- Some environmental co-benefits could be Integration of Environmental Modules: if include environmental data modules within DESH to enable departments to track and report on environmental indicators, Green Office Standards: Implement green office practices in government facilities using digital tools (energy monitoring, water tracking, e-waste management) and Environmental Awareness: Use digital platforms for environmental education and public awareness campaigns
- **Circular Economy Enablement.** E-governance platforms can support circular economy initiatives like; (a) Digital platforms for waste management tracking and optimization, (b) E-commerce systems promoting sustainable consumption patterns and (c) Digital certification and verification systems for eco-labelled products

E. Biodiversity and Natural Resource Management. Digital systems can strengthen environmental monitoring and management; like; (a) Remote sensing and GIS technologies for forest cover monitoring and protection; (b) Digital systems for wildlife census and habitat

monitoring; (c) Real-time tracking of water resources (aquifer levels, river flows, groundwater quality and (d) Environmental compliance monitoring for industrial and agricultural operations

19. Social Benefits

A. **Governance, Transparency, and Accountability:** Investments in the adoption of a State Data Policy and State AI Strategy will enhance government accountability towards citizens, contributing to more efficient delivery. Investments in capacity-building of public officials on the use of digital technologies will further improve transparency and local accountability in the implementation of government schemes and programs.

B. **Data Systems, Decision-Making, and Targeting:** Improved data systems will strengthen decision-making and program management, leading to a better understanding of challenges and more positive development outcomes. Integrated and consent-based data sharing across core registries in priority sectors may improve access to entitlements and benefits through better targeting, by reducing errors of inclusion and exclusion.

C. **Access and Affordability for Poor and Vulnerable Households:** Seamless service delivery through digitally enabled platforms will improve access for poor and vulnerable households — including persons with disability, women-headed households, the elderly, women, and the urban poor — who critically depend on state-provided social protection. Efficient services with improved transparency will also reduce the direct and indirect transaction costs that poor and vulnerable households incur in accessing these services and entitlements.

D. **Economic Empowerment of Micro-Enterprises:** Support for digitally empowered micro-enterprises will help improve the efficiency and profitability of small enterprises, particularly those run by women and individuals from marginalized social groups.

E. **Digital Inclusion, Outreach, and Citizen Engagement:** The DESH Haryana Program embeds citizen engagement through several activities under all Result Areas. Under Results Area 1, citizen-facing AI use cases developed through the AI Sandbox will be tested with users before deployment. Services that use AI will inform citizens that AI is being used. Once deployed, citizen feedback on AI-enabled services will be collected through existing feedback and grievance channels and reviewed by the deploying department and ARJUN SPV to improve the service (PDO 1: Number of AI solutions deployed). Feedback from government officials using the enterprise AI tool will likewise inform its refinement before wider rollout. Under Results Area 2, SARAL 2.0 will be redesigned around user journeys and citizen experience. This will be done through a citizen feedback form available for all users available on the web portal, new mobile application, as well as through outbound calls made to beneficiaries from the third year of implementation (PDO 2: Users of enhanced digital services). Additionally, citizen interfaces for HPPP, including data corrections and grievances, will be designed from the findings of the independent assessment (DLI 6 - PPP 2.0 reference architecture and data standards document approved). Under Results Area 3, trainees, graduates and potential employers will provide feedback on training quality and placement outcomes of all the new skilling programs through the placement platform. Under PAP, a Program-level Grievance Redress Mechanism (GRM) accessible to all program beneficiaries, including women, marginalized communities, trainees, and gig/freelance workers will be developed within 6 months of effectiveness and tracked thereafter. The designated nodal agency, ARJUN SPV, will review all feedback and grievance data every six months, report it and use it to adjust service design and implementation.

F. **Gender:** The program specifically targets the gender gap by designing skilling and employment programs that address mobility constraints and have historically excluded women, especially in non-urban areas from Haryana's IT/ITeS growth story, concentrated as it is in Gurugram. The program interventions include a dedicated data annotation and data labelling program, which offers a low-barrier entry point into AI-related work that can be performed remotely or from community-based digital access points, without requiring

relocation or long commutes. Alongside this, the program will also support targeted digital entrepreneurship and employment initiatives for women, including incubator and accelerator programs for women-led startups. Progress on these interventions will be tracked on the indicator: AI and digitally enabled jobs, self-employment and entrepreneurship opportunities created with a total target of 30,000 female jobs created as part of the program.

G. **Skills and jobs** Under RA3: Industry-led Skilling for More and Better Jobs, DLI 7, the Program will support industry-led skilling, including co-funded skills labs (at least 2) with private-sector partners. This pathway is expected to mobilize US$1 million in qualifying private financing and will be tracked through IRIs measuring industry-led partnerships with private financing and the value of private capital mobilized (US$). The project is expected to support approximately 85,967 equivalent more and better-paid jobs (MBJ) through three different channels. First, the program will support the training and recruitment of data annotators to curate AI-ready datasets. This intervention will lead to 36,000 equivalent MBJ. Second, the startup acceleration and incubation activities will benefit 400 MSMEs ultimately leading to 11,975 equivalent MBJ. Finally, the Program will support short term, industry-led skilling and employability programs which will reach 125,000 beneficiaries, some including soft skills training and some with only technical training, contributing to 37,960 equivalent MBJ. Direct jobs will also be created related to the implementation of the program, with an equivalent MBJ of 31.

2.2 E&S Risks

20. The table below elaborates the environmental and social risks associated with the project components

Agency	Activities	Potential E&S Risks	Type of Risk
ARJUN	• Setting up AI Gurukul at HARTRON • Setting up Centre of Excellence (Gurgaon and Panchkula) for training and skilling for which ARJUN will provide backend hardware and refurbishment support • MIS for DESH Haryana • Hiring staff, consultants for the project	Weak E&S capacities and monitoring systems No standardized SOPs for environmental screening and risk management for OHS, electrical and fire safety and water and energy audit. Inadequate tracking and analysis of internal GRM, GBV related risks	Moderate
CRID	• Revamp Citizen Service delivery to SARAL 2.0 - a new digital platform where System Integrator will be hired for migrating 1000 G2C services • Revamp of existing State Data Centre (IT infra will get replaced and all obsolete equipment to be replaced as it is end of life) • Set up Security operating centre (SOP) for cyber threat management on OpEx model. Will be house din State Data Centre. • Haryana State Data Exchange- policy development and then platform to	DPDP Act Compliance Cyber security Weak SOPs for water and energy audits in data centers Missing procedures for vendor registration of institutions on e-waste and batteries and SOPs for disposal thereof in coordination with Haryana PCB	Moderate

	serve as a central repository for data which departments can access directly from the IT Department • Version 2.0 of Parivar Pehchan Patra which is the baseline for Saral 2.0 - 95% of population of Haryana is covered in this. Agency will be hired based on RFP to upgrade this.	Non-tracking and reporting of e-waste and battery waste Low capacities among implementing agencies may impact adoption, service delivery efficiency Risk of vulnerable HHs getting dropped/ excluded during the process of creating inter-operable registries and losing entitlements	
HARTRON	• AI gurukul will be housed in HARTRON Gurgram campus • A start up accelerator will be developed in Gurugram • Work with HKCL for skilling • IT Procurements in project – for SARAL and State data centre	Missing procedures for vendor registration of institutions on e-waste and batteries and SOPs for disposal thereof in coordination with Haryana PCB Non-tracking and reporting of e-waste and battery waste Exclusion of enterprises with low digital capabilities/ literacy GBV related risks at campus Inadequate tracking and analysis of grievance redressal	Moderate
HKCL	• Mobilization of candidates, facilitation of entrances, batch allocation, trainings, certification, placement assistance, monitoring of placements (Courses - AI, cyber security, accounts, social media, designing Autocad. Target - 1 lakh students in 5 years).	Exclusion of candidates from vulnerable communities or remote locations. Inadequate targeting and inclusion of females and persons with disabilities GBV related risks at learning centres Inadequate tracking and analysis of grievance redressal	Substantial

2.3 Overall Risks and Rating

- The proposed interventions would not result in any irreversible and adverse environmental and social impacts. The program's overall environmental and social risk is assessed as Moderate. This is owing to the absence of large civil works, land acquisition, or activities in ecologically sensitive areas which substantially reduces their social and environmental footprint.

- The Bank conducted an Environmental and Social Systems Assessment (ESSA) to (i) evaluate the government's policies, capacities and operational practices to manage E&S risks, (ii) map E&S risks of the proposed interventions and (iii) provide recommendations for the implementing agency for risk management, and E&S capacity development.

- Across the three Results Areas, risks remain broadly Moderate. Results Area 1 carries Moderate risk from the energy intensity of GPU workloads and e-waste from high-performance hardware. Results Area 2 also presents Moderate risk, mainly from hardware-related e-waste, fire and chemical safety, and data center energy use; water risk is limited because existing facilities are air-cooled, though baseline energy and water audits are recommended. Results Area 3 has Low-to-Moderate risk, primarily related to occupational health and safety (OHS) and e-waste in skill labs, AI Centres of Excellence, accelerators, and residential AI programs. Four cross-cutting risks require attention: systematic lifecycle management and authorized disposal of substantial e-waste; energy efficiency and carbon management for AI computing; OHS controls for electrical, fire, battery, chemical, and ergonomic hazards; and equitable rollout of AI-enabled services to digitally underserved districts that also face environmental stresses such as pesticide contamination, groundwater depletion, and poor air quality.

- Because the Program digitizes services, builds a State Data Exchange and deploys AI systems that handle large volumes of citizen data, data protection and cybersecurity capacity in the participating agencies needs attention. The Program builds on CERT-In's national guidelines and strengthens them at the state level, including through a State Security Operations Centre for continuous monitoring, threat detection and coordinated incident response. It will comply with the Digital Personal Data Protection Act, 2023 and its Rules by building consent management, data minimisation and purpose limitation into the State Data Exchange, aligning the State Data Policy and Safe AI Governance Framework with the Act, and training implementing agencies on data protection through the Program Action Plan

- Social risks are identified as “Moderate”. The risks include a) temporary inconvenience during any physical refurbishment or technological upgradation; b) inadequate communication for timely access to opportunities of skill development, jobs and entrepreneurial activities particularly for women, youth and vulnerable communities; c) irregular stakeholder and beneficiary consultation on accessibility and efficiency of digitally-delivered public services; d) potential threats of cyber security and online risks of GBV; e) weak grievance redressal systems including labor related complaints as well as internal complaints on Sexual Harassment at the Workplace and at training/learning centres

- The overall rating is calculated based on the nature of activities and corresponding risks associated with them as well as the current institutional capacities to map and manage them. The assessment shows that this is the first experience of several Implementing agencies with the World Bank Group. While ARJUN is the key implementing agency externally aided projects in Haryana including the WB supported Haryana Clean Air Project for Sustainable Development Operation (P510686), it is at a nascent stage and still in the process of setting up.

3. E&S Systems Assessment

3.1 Environment policies, laws and regulations

21. **National** Environmental **Laws and Regulations.** The DESH program operates within a well-established national environmental legal framework that is broadly adequate in principle, though its application to digital infrastructure programs requires deliberate attention. The

Environment (Protection) Act, 1986, provides the overarching regulatory foundation and serves as the primary screening threshold for any program activity that approaches civil work. The EIA Notification, 2006 (and its subsequent amendments), is the instrument through which environmental clearance obligations are triggered; while the program's exclusion of greenfield data center construction keeps most activities below clearance thresholds, the notification remains relevant as a screening reference for any facility expansion approaching Category B or A scales. The most directly applicable regulations for the DESH program's environmental footprint are those governing waste streams and resource use. The E-Waste (Management) Rules, 2022, are the primary instrument governing the program's most significant environmental risks, establishing Extended Producer Responsibility obligations and bulk consumer duties that apply directly to DITECH, CRID and HARTRON. The Battery Waste Management Rules, 2022, govern the disposal of lead-acid and lithium-ion batteries across all data center and skill lab facilities. The Hazardous and Other Wastes (Management and Transboundary Movement) Rules, 2016, cover hazardous components in IT hardware and cooling systems, including decommissioned equipment and refrigerant management. The Ozone Depleting Substances (Regulation and Control) Rules, 2000, are specifically relevant to the refrigerants used in data center cooling infrastructure at the HACF and SDC. On the energy side, the Energy Conservation Act, 2001 (as amended in 2022), provides the legal basis for Bureau of Energy Efficiency (BEE) standards applicable to large energy consumers, including data centers. The Water (Prevention and Control of Pollution) Act, 1974, is potentially applicable to cooling water discharge from data center operations, particularly cooling tower blowdown. The Public Liability Insurance Act, 1991, applies to facilities that handle hazardous chemicals such as cooling refrigerants and battery electrolytes. Finally, the National Building Code of India, 2016, sets the fire safety and structural standards applicable across all program facilities, including skill labs and computing centers.

22. Haryana State Level Framework. At the state level, the regulatory framework relevant to the DESH program is a combination of established laws, sector-specific rules, and policies that are still under development. The Haryana State IT Policy is the primary instrument governing procurement and operations of state IT infrastructure; however, it currently does not incorporate specific environmental sustainability requirements a gap that the program's procurement standards and the ESSA's recommended system-strengthening measures must compensate for. The Punjab Land Preservation Act (which continues to apply in Haryana) governs urban tree felling and land clearance and is relevant to any facility sitting or minor upgrade work that involves removal of green cover. The Haryana Fire Safety Rules apply to all program facilities and compliance with fire No-Objection Certificate (NOC) requirements from the relevant authorities is a mandatory pre-condition for occupying or upgrading computing and training facilities. The Haryana Groundwater (Regulation and Control of Development) Act, 2023 is a particularly important recent addition to the state framework: it requires permits for groundwater extraction above prescribed thresholds and is directly relevant where HACF or SDC cooling systems draw on borewell sources in Haryana's severely water-stressed districts. The Haryana E&IT Department notification of 06.10.2015 on procurement, replacement and disposal of IT and electronic items is the operative state instrument for e-waste handling by departments, with HARTRON as the central disposal agency; it requires alignment with the 2022 national Rules (see Section 4.1). Finally, the Haryana State Data Policy, currently in draft form, will govern data sharing, privacy, and AI deployment once notified making its timely finalization and operationalization a critical milestone for the program's AI governance objectives and a recommended condition in the Program Action Plan

23. International **Standards and Frameworks**. The DESH program's environmental management approach is informed by four internationally recognized standards. ISO 14001:2015

(Environmental Management Systems) provides a systematic framework for identifying, managing, and continuously improving environmental performance and is recommended for adoption across DESH data center operations—particularly the SDC and HACF to embed environmental responsibility into day-to-day facility management rather than treating it as a compliance afterthought. Complementing this, ISO 50001:2018 (Energy Management Systems) offers a structured methodology for monitoring, controlling, and reducing energy consumption in data centers and computing facilities; given the energy intensity of AI workloads at the HACF and GAIC, adoption of this standard provides both a credible performance framework and a basis for setting and verifying the PUE targets recommended in the ESSA. ISO/IEC 27001 (Information Security Management) is primarily a cybersecurity standard but carries direct environmental relevance for the DESH program: secure facility design requirements under this standard—including physical access controls, redundant power systems, and controlled cooling environments—must be planned in conjunction with, not in isolation from, the program's environmental efficiency objectives, ensuring that security and sustainability requirements are mutually reinforcing rather than in tension. Finally, the Global e-Sustainability Initiative (GeSI) Standards provide an internationally recognized framework for responsible sourcing of IT equipment and e-waste management across the technology supply chain; for the DESH program, these standards support the procurement due diligence requirements recommended in the E-Waste Management Plan, including vendor EPR compliance verification and the prohibition on informal recyclers in the disposal chain. Together, these four standards form a coherent international reference framework that complements India's national regulatory requirements and provides implementing agencies with recognized benchmarks against which environmental performance can be independently assessed.

3.2 Social Policies, Laws and Regulations

24. **Data Governance, Digital Infrastructure, and Inclusive Access:** A strong legislative framework underpins the project's data governance and digital infrastructure dimensions. The National IT Act 2000, Aadhaar Act 2016, and the Digital Personal Data Protection Act 2023 collectively establish rigorous standards for data privacy, consent, and accountability, granting individuals the right to be informed, to withdraw consent, and to seek redress through the Data Protection Board, with special protections for children and persons with disabilities. Complementing these, the National Data Sharing and Accessibility Policy and the National Digital Communications Policy 2018 promote open, interoperable, and privacy-respecting data ecosystems, while the Haryana State Data Centre Policy 2022 ensures sensitive data is stored and managed securely through energy-efficient infrastructure. The Haryana Communication and Connectivity Infrastructure Policy 2023 and the Access India Campaign 2015 further extend the project's reach by mandating equitable digital connectivity in rural and remote areas and ensuring that digital content and government services are accessible to persons with disabilities.

25. **Inclusive Growth, Worker Protection, and Accountability**: The project is equally grounded in policies that promote inclusive economic participation and safeguard the rights of vulnerable groups. The Haryana State Startup Policy 2022 and the Haryana IT and ESDM Policy 2019 together create an enabling environment for entrepreneurship and MSMEs, with dedicated support mechanisms — including seed funding, incubation access, and skilling programs — designed to reduce entry barriers for women founders, though the latter's provision permitting women to work night shifts while reducing labor inspections warrants careful social monitoring. The Right to Information Act 2005 ensures transparency and citizen accountability

across all public authorities, providing a rights-based mechanism for communities to demand information on project-related decisions. The Sexual Harassment of Women at Workplace Act 2013 establishes mandatory institutional safeguards — including Internal Complaints Committees — to protect women workers from exploitation and abuse in all project-associated institutions, reinforcing the project's commitment to gender-safe and equitable workplaces.

3.3Adequacy of the national and state legal framework

26. **Adequacy of National and State Legal framework for Managing Social Risks**: The National and State level Laws and Policies analyzed above seem to provide adequate safeguards to manage social risks emerging from the program investments. Most National policies related to IT, digital connectivity, data sharing and start-up have specific and dedicated provisions to ensure inclusion of vulnerable groups, special incentives for women, and guardrails to prevent breaches in data privacy norms. State policies, mirroring the intent of the national policies, are aligned to address the issues of inclusion and encourage mainstreaming for creating better, efficient, transparent, and timely delivery of public services based on the principles of participation, equitable access, and benefit distribution. Thus, the policies are adequate to enable robust systems for social risk management, although enforcement challenges and gaps remain in implementing these laws and policies on the ground.

27. **Adequacy of National and State Legal Framework for Managing Environmental Risks.** India's national and Haryana's state-level legal frameworks together provide a broadly adequate foundation in principle for managing the environmental risks of the DESH program, though significant gaps in application and enforcement, particularly for government-operated digital infrastructure, must be addressed through deliberate system-strengthening. At the national level, the legislative architecture is comprehensive: the Environment (Protection) Act, 1986 establishes overarching regulatory authority; the E-Waste (Management) Rules, 2022 and Battery Waste Management Rules, 2022, directly govern the program's most material environmental risk; the Hazardous and Other Wastes Rules, 2016, and Ozone Depleting Substances Rules, 2000, cover hazardous components in IT hardware and cooling systems; the Energy Conservation Act, 2001, provides the legal basis for BEE energy efficiency standards applicable to data centers; and the National Building Code, 2016, sets mandatory facility safety requirements. The critical weakness lies not in the law itself but in its consistent application to government entities—implementing agencies such as DITECH, CRID and HARTRON are not registered as bulk consumers under the E-Waste Rules, and BEE energy efficiency guidelines, while legally grounded, have seen negligible enforcement in state government IT facilities. At the state level, the Haryana framework adds the Groundwater (Regulation and Control of Development) Act, 2023, and Fire Safety Rules as relevant instruments, while the Haryana State IT Policy remains silent on environmental sustainability requirements—a gap the program must compensate for through procurement standards. On water, since the existing state data centers operate on air-cooled technology, direct water consumption from cooling systems is not a primary risk; however, as AI workloads intensify and facility upgrades proceed, combined water and energy audits should be mandated as a baseline requirement in line with the Energy Conservation Act, BEE guidelines, and international standards, including ISO 50001:2018 and ISO 14001:2015. When benchmarked against this international framework—which also encompasses GeSI standards for responsible IT sourcing and ISO/IEC 27001 for secure facility design—the gap between legal obligation and operational compliance within government-run digital infrastructure is significant. In sum, the laws exist, and the obligations are defined, but

the institutional systems to translate them into practice must be built through the program's Program Action Plan as a deliberate and time-bound investment.

3.4 Institutional Assessment

28. Each phase is implemented by the participating state through its own institutional arrangements, anchored in a set of common minimum requirements defined at the MPA level. These include: (i) a designated nodal implementing agency supported by a Program Management Unit (PMU); (ii) independent verification arrangements for DLIs in results-based phases, potentially involving multiple verification agents depending on the nature of the DLI (e.g., IT/systems auditors for technical DLIs, third-party monitoring firms for employment outcomes, and financial due diligence firms for private capital mobilization), with prior results verified as per the Verification Protocol, while other indicators are reported through M&E systems; (iii) fiduciary and environmental and social (E&S) arrangements consistent with Bank policies; and (iv) M&E systems that track both phase-specific and MPA-level results. In Phase 1 (Haryana), ARJUN SPV and CRID will serve as nodal implementing agencies. The Bank team will maintain a consolidated MPA results database, conduct at least two implementation support missions per phase each year, and convene an annual cross-phase learning review.

29. Institutional Capacity for Implementation and Sustainability is assessed as Moderate, due to: (i) the multi-agency implementation structure spanning ARJUN SPV, CRID, HARTRON, HKCL, and HPPA, requiring strong coordination mechanisms and clearly defined inter se roles documented in the POM; (ii) ARJUN SPV's relative institutional setup as a newly created SPV, mitigated by the quality of its leadership, the technical depth of its partner ecosystem, and the Bank's track record of SPV-based implementation in India; (iii) the novelty of AI Sandbox institutionalization and HDeX operationalization at scale, mitigated by the implementation partner role and the DESH PASA's active knowledge exchange on comparable deployments in other states.

30. Technical Design Risk is assessed as Moderate, reflecting: (i) the complexity of integrating SARAL 2.0, enhanced PPP, and HDeX into a proactive service delivery architecture — mitigated by the sequenced design (State Data Policy before HDeX operationalization, PPP assessment before PPP enhancement, SARAL redesign informed by user journey analysis); (ii) employment verification challenges for gig and freelance placements under RA3 DLIs — mitigated by the MKCL integrated IT platform's verification capability, the third-party monitoring firm engagement, and the 3-month post-placement verification protocol.

ARJUN

31. Under the DESH for Haryana PforR, the Department of Electronics & Information Technology is the nodal department, with implementation responsibilities divided between the Department of Electronics & IT and ARJUN (*AI for Resilient Jobs, Urban Air Quality & Next-Gen Skills Council*)-SPV. The Project Management Unit (PMU) for DESH for Haryana will be housed within this SPV. Institutional Set-up ARJUN is a Section 8 company under the Government of Haryana. It was incorporated on 05.09.2025. It is the nodal, office-based coordinating body for two World Bank-supported programs: the Haryana Clean Air Project for Sustainable Development (HCAPSD) and DESH (HAIDP). A Governing Board chaired by the Chief Minister oversees it. The E&S specialists sit in the HCAPSD Project Management Unit (PMU). They report to the HCAPSD Project Lead, who reports to the CEO and Joint CEO.

- Environmental and Social (E&S) Capacity Summary:
  i. The Board-approved structure provides for an Environment Specialist and a Social and Gender Specialist. Recruitment is still in progress. Officials have been given interim charge as Environment Lead and Social Lead. The Environment Specialist will lead screening, exclusion of high-risk activities, mitigation and set-up of the grievance mechanism. The Social and Gender Specialist will develop social and gender screening tools, lead gender and citizen engagement actions, and oversee SEA/SH (sexual exploitation, abuse and harassment) processes.
  ii. Experience and Instruments HCAPSD is guided by the Environmental and Social Systems Assessment (ESSA), Program Action Plan, Environmental and Social Commitment Plan (ESCP), Stakeholder Engagement Plan (SEP) and Labour Management Procedures (LMP), all agreed in 2025. DESH (HAIDP) is still under preparation. ARJUN will adopt its ESSA and Program Action Plan once they are finalized. The agency is new, so its track record is limited.
- Screening and Compliance Monitoring Screening follows the SPV-ARJUN HR Manual (Version 5) and E&S checklists. Mitigation measures are agreed with implementing agencies before activities start. The SPV does not carry out civil works. Its specialists monitor contractors and implementing agencies and report to the Bank quarterly under the ESCP. The HCAPSD screening checklist is still to be finalized. E-waste disposal follows the E-Waste (Management) Rules, 2022. No disposal has taken place yet.
- Workplace Health, Safety and Conduct the SPV works from a single hired office in Panchkula. The building owner manages fire safety and emergency evacuation. An Internal Complaints Committee (ICC) under the Sexual Harassment of Women at Workplace Act, 2013 has not yet been constituted. The plan is for a woman Presiding Officer, at least 50% women members and one external member. A written internal grievance procedure with a right of appeal has also not yet been notified. For now the CEO decides on engagement matters.
- Grievance Redress, Data Privacy and Engagement: A digital grievance redress mechanism (web and mobile, in Hindi and English) is planned. It will have offline channels and an SEA/SH referral path. It has not yet been set up. The agency follows the IT Act, 2000 and the Digital Personal Data Protection Act, 2023. It holds no citizen database. Consultations with implementing agencies took place on 24.03.2026 and from 02.04.2026 to 13.04.2026. Wider outreach is planned through radio, print, village meetings and WhatsApp. The HCAPSD SEP and LMP are disclosed in Hindi and English. The SPV is a public authority under the RTI Act, 2005.
- Overall, the agency has the right structure and instruments on paper (unfilled E&S specialist posts, the grievance mechanism and standalone GRM charter, the internal grievance procedure, the ICC, and the screening checklist, dedicated E&S budget or a training plan) Much of its operational capacity is still to be put in place.

CRID

32. **Department of Electronics & Information Technology (DITECH)**[1]is responsible for driving the use of internet-based and digital technologies in the state to make interactions between citizens, businesses[2]efficient and transparent. It aims to improve service delivery and citizen's

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participation in governance through various e-governance and G2C initiatives. DITECH, in coordination with departments mandated to deliver public services, provides technical support for digitization of services, data and system security-integrity, improved information access to citizens through a seamless process.[3] The department works on Digital Infrastructure & Connectivity, Citizen e-Governance & Service Delivery, Digitalisation of Land & Revenue Records, Skill Development, Promotion of Start-Ups & Innovation and supports development and operation of various Government run Digital Platforms. To ensure outreach for G2C digital services, DITE CH also supports 18,552 Common Service Centres or Atal Seva Kendras (ASKs) that operate across the state (12,845 in rural areas and 5,707 in urban areas), apart from a wide array of services ranging from health insurance, crop information, government crop procurement to delivery of entitlements for poor households.[4]



33. The **Citizen Resource Information Department (CRID),** which is part of the DE&IT includes **Haryana Parivar Pehchan Authority (HPPA)** providing seamless access to various entitlements under one umbrella called (Beneficiary Portal). Citizens can view all PPP-related details pertaining to themselves and their families. They can also check the government services and schemes their family is currently availing. A key USP of the portal is its ability to highlight government schemes for which the citizen is eligible but has not yet availed. Additionally, the portal enables citizens to apply online for various government services as listed in the figure:



- **Institutional Capacity and Governance at CRID**[5]
  - i. **E&S Staffing**: CRID does not have any dedicated Environmental and Social officer or focal point. HARTRON acts as the state's nodal agency strictly for e-waste disposal.
  - ii. **Guiding Framework**: There is no standalone **Environment and Social Management Framework (ESMF)**. Existing policies focus on IT infrastructure, security, data exchange, and governance.

[3] Department Profile/ Introduction | Department of Information Technology Electronics & Communication, Haryana | India

[4] Mukhya Mantri Bagwani Bima Yojna (MMBBY), Meri Fasal Mera Bayora, E-Kharid and Workflow Based BPL Entitlement Portal respectively

[5] https://erpcrid.edisha.gov.in/

iii. **Activity Screening**: No formal E&S risk screening step exists in the project cycle. Screening is currently limited to technical, financial, and information security audits.
iv. **Environmental Compliance**: Compliance registers are not maintained. Office and data center environmental aspects (power, data center cooling) are handled indirectly through vendor contracts.
v. **E-Waste & Recycling**: No department-specific procedure is published. Disposals follow the **E-Waste (Management) Rules, 2022** via government write-off/auctions, GeM buy-back clauses, or HARTRON.
vi. **OHS & Safety**: Fire safety and evacuations are managed at the building level by the Haryana Civil Secretariat. The Haryana State Data Centre (HSDC) uses vendor-managed suppression and monitoring systems.
vii. **Social Inclusion & Equity**: Internal recruitment adheres to state reservation rules and the **POSH Act, 2013**. Externally, the **Parivar Pehchan Patra (PPP / Family ID)** serves as the primary inclusion tool to target and deliver welfare schemes to low-income and vulnerable households.
viii. **Grievance Redress Mechanisms (GRM)**: Multiple online and assisted offline channels exist (PPP modules, SARAL helplines, CM Window, Samadhan Shivirs). Offline channels support low digital literacy.
ix. **GRM Charter & Metrics**: No standalone GRM charter is published, but a statutory 30-day resolution timeline is mandated under the PPP Act. The CM Window reports a high resolution rate of **96.3%** (1,547,077 out of 1,606,260 complaints resolved).
x. **Internal Grievances**: Handled through standard administrative channels under state service rules or via public portals like the CM Window. An Internal Complaints Committee (ICC) is active per **Vishakha guidelines**.
xi. **Human Resources & Consultations**: Total staff includes **13 permanent employees** and over 120 contractual or consultant personnel. No external consultancy agencies have been hired.

- **Data Privacy, Security and Citizen Rights:** CRID collects and stores extensive family-level personal data (Aadhaar, income, caste, disability status, etc.) via the PPP database. Data security is legally protected under **Section 31 of the Haryana Parivar Pehchan Act, 2021**.
- **Labor and Working Conditions**
  i. **Worker Categories**: The workforce comprises regular government employees, contractual staff (via HKRN), project consultants, and vendor-contracted IT technicians.
  ii. **Labor Protections**: Regular and HKRN staff receive statutory protections. Vendor contracts mandate compliance with the **four Labour Codes (effective 21.11.2025)**. However, independent CSC operators lack employer-linked protections, marking an institutional gap.
  iii. **OHS Manuals & Inspections**: There is **no specific OHS policy, manual, or inspection history** published for CRID or its attached bodies.
- **Stakeholder Engagement and Citizen Participation**
  i. **Public Feedback**: Collected via physical camps (*Samadhan Shivirs*), helplines, and digital portals. Assisted channels ensure access for citizens with low digital literacy.
  ii. **Proactive Disclosure**: Partially executed via the department website under **Section 4(1)(b) of the RTI Act** (updated Jan 2026). Draft policies are sometimes shared for public feedback.
- **Environmental Compliance**

i. **Green Data Center Certification**: The HSDC is **not certified** under any energy efficiency or green standards (such as BEE Star Rating or ISO 50001).
ii. **Cooling & Water Use**: Employs air-cooled IN-ROW and Precision Air Conditioning.
iii. **Battery Disposal**: Data center UPS batteries are exclusively procured and disposed of using a **buy-back mode**.
iv. **Fire Safety Audit**: Regular mock drills are conducted at the building level, covering the data center. Compliance certificates are held at the building level rather than by the data center independently.

- **Digital Skills and Workforce Development**
  i. **Target Population**: CRID does not run mass public skilling programs. Training is narrow, focusing on **cyber-security and e-governance awareness** for government employees and IT staff.
  ii. **Curriculum & Access**: Course design is driven by external institutions (ISMO, NeGD) and not **community consultation**. Structural barriers, training accessibility, and post-training employment metrics are not tracked or documented.
- **Digital Entrepreneurship and Access to Finance**
  i. **Program Support**: CRID supports digital entrepreneurship **indirectly** through the state's Industries Department.
  ii. **Financial Guardrails**: CRID does not provide direct financial lending or grants. It provides infrastructure and data validation for other departments. Consequently, safeguards against over-indebtedness or exploitative financial practices are not directly managed by CRID.
  iii. **Accessibility Barriers**: Support hubs (like the APIARY CoE) are open to all, but there are **no targeted measures** to address structural barriers such as geographical concentration in Gurugram, English-language requirements, or digital access gaps. Outcome tracking for marginalized entrepreneurs is absent.

HARTRON

34. **HARTRON** is a State Government Corporation driving technological advancement and digital transformation in Haryana through a comprehensive suite of IT services. Its key functions include IT manpower deployment, hardware procurement and maintenance, software development, capacity-building programs, and scanning and digitization of legacy data for government departments. It manages the Voter Identity Cards Project — the largest database application in India, with 98% accuracy — and operates a 100-seat BPO Call Centre in Panchkula under MeitY's Digital India Programme, serving citizens across schemes such as Antyodaya SARAL, HEPC, and HSDM. HARTRON also manages the Haryana Statewide Area Network (HSWAN), connecting state headquarters, 120 blocks/tehsils, 1,150 field offices, and 1,250 VPN users through integration with the National Knowledge Network[6] (NKN). As the nodal agency for IT computerization and procurement for Haryana's government departments, boards, and corporations, HARTRON additionally conducts the State Eligibility Test in Computer Appreciation and Applications (SETC) on behalf of the State Government for newly recruited and promoted employees. It serves State Government institutions and Haryana's citizens across various schemes, including Antyodaya SARAL (528+ services across 38 departments), the

[6] The network supports data transfer, video conferencing, and application access, with its video conferencing facility integrated with NIC's setup to enable regular intra- and interstate sessions. Notably, HSWAN facilitates online court trials across Haryana's jails and courts — including high-profile cases and medico-legal evidence recording — and serves as the interface for departments to access applications hosted in the State Data Centre.

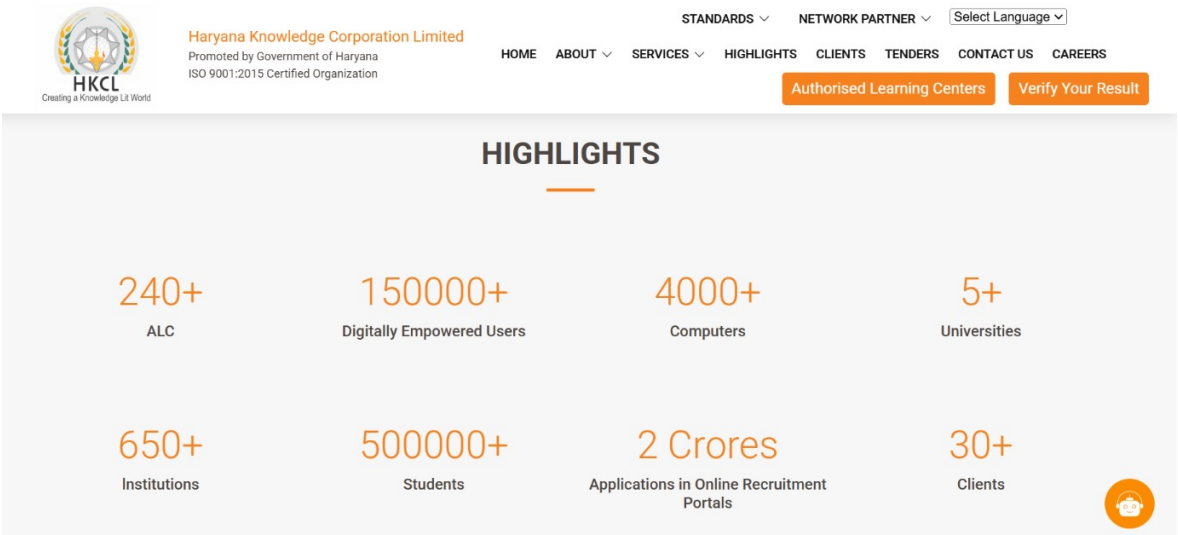
Haryana Enterprises Promotion Centre (HEPC), and the Haryana Skill Development Mission (HSDM).

- **Institutional Capacity and Governance**
  i. **E&S Staffing**: HARTRON does not currently have a dedicated E&S cadre. For the HAIDP project, it plans to designate an E&S Focal Point at the General Manager or Additional General Manager level, supported by nodal officers for OHS and training.
  ii. **Guiding Framework**: There is no standalone **Environment and Social Management Framework (ESMF)**. Risks are managed under standard statutory acts (E-Waste Rules, Fire Service Act, POSH Act, DPDP Act, and Labour Codes). A concise E&S Procedures Manual will be drafted specifically for HAIDP.
  iii. **Activity Screening**: No formal E&S screening checklist exists yet. Strategic technical/purchase committees currently handle procurement gatekeeping (BEE star ratings, RoHS compliance). A dedicated checklist will be introduced under HAIDP to evaluate high-density computing installations and civil upgrades beforehand.
  iv. **Environmental Compliance**: Operations are limited to headquarters and district offices; no manufacturing permits are required under the Air or Water Acts. Focus centers on authorized electronic waste management and energy-efficient procurement.
  v. **E-Waste & Recycling**: End-of-life IT assets are condemned by an internal committee and written off. Disposal is restricted strictly to recyclers authorized by the HSPCB or registered on the CPCB EPR portal. Procurement utilizes OEM buy-back or take-back options.
  vi. **OHS & Safety**: Headquarters utilizes standard extinguishers and alarms, while data centers/server rooms feature automated gaseous suppression systems (FM-200 / NOVEC) under operational contracts. Training lab OHS details are currently being compiled.
  vii. **Social Inclusion & Equity**: Recruitment strictly follows the State Government's reservation policies (SC, BC, EWS, PwD, and women). Skill training through the **Haryana Knowledge Corporation Limited (HKCL)** incorporates fee concessions and strategically located rural centers.
  viii. **Grievance Redress Mechanisms (GRM)**: Systems rely heavily on external state platforms like the CM Window (supporting local Hindi workflows), CPGRAMS, and Right to Service Act channels. Trainees utilize localized feedback registers and HKCL helplines. A project-specific HAIDP grievance register will be established.
  ix. **GRM Charter & Metrics**: No standalone corporation GRM charter is published. Instead, HARTRON relies on the general state CM Window guidelines. A dedicated HAIDP charter outlining concrete response timelines will be formulated. Resolution data across vendor, trainee, and public categories for the past year is currently being compiled.
  x. **Human Resources & Consultations**: The workforce includes regular employees under the 1998 Service Rules, contractual consultants, outsourced staff, and a distinct pool of IT professionals deployed externally across other state departments. Corporate consultancy usage is limited to pre-vetted empanelled rate contracts.
  xi. **Internal Grievances**: Handled sequentially via the Head of Division up to the GM (Administration) or Managing Director. A dedicated Manpower Cell oversees grievances from deployed external professionals.
  xii. **POSH & Gender Sensitization**: An Internal Committee is active under the **POSH Act, 2013**, chaired by a senior female officer. Student and faculty gender sensitization currently depends on basic batch inductions and code-of-conduct signage, but HAIDP will mandate standardized, tracked training modules across centers.

- **Data Privacy, Security and Citizen Rights:** Acts as a data controller for employee, bidder, and trainee data (including identity documents, certificates, and bank details). It acts as a data processor for state databases hosted at the State Data Centre. The entity is setting up an all-inclusive compliance rate contract under the Digital Personal Data Protection (DPDP) Act, 2023 and plans to appoint an internal Data Protection Officer.
- **Labour and Working Conditions**
  i. **Labor Protections**: Personnel fall under regular rules, direct corporate contracts, or government deployment policies. General Conditions of Contract (GCC) in tenders mandate vendor compliance with minimum wages, contract labor acts, and recent labor codes. Independent Common Service Centre (CSC) operators are not listed under direct protections.
  ii. **OHS Policy & Facilities**: A standalone OHS policy or manual is completely **absent**. A new policy covering corporate offices, data centers, and HKCL/partner training facilities is pending approval by the Board. Inspection checklists for safety compliance at district training centers are currently being gathered.
- **Stakeholder Engagement and Citizen Participation**
  i. **Public Feedback**: Feedback relies on tender pre-bid clarifications, digital application helpdesks, and training feedback sheets. Prescribed timelines follow the Right to Service Act.
  ii. **Proactive Disclosure**: Governed by Section 4 of the RTI Act via its online portals. Training details are distributed in Hindi and English. Under HAIDP, a screen-reader-accessible webpage will track and publish project activities.
- **Safety (Skill Labs & Data Centers)**
  i. **High-Density Computing Infrastructure**: While the primary State Data Centre features rigorous structural load and power grid assessments, training centers currently house only low-draw desktops. Under HAIDP, **mandatory site readiness reviews** (electrical load and fire safety) will be integrated directly into RFPs before setting up any intensive server racks or GPU clusters.
  ii. **Training Facility Compliance**: Fire safety compliance logs, building NOCs, and past OHS incident logs are currently **incomplete and actively being compiled** across the distributed network of training facilities.
- **Targeting and Inclusion**
  i. **Participant Profile**: Historical training numbers and learner demographics (age, gender, social categories, PwD status) are logged via the HKCL system but are currently waiting to be finalized in the report. Socio-economic metrics (like specific household income levels) are a gap and will be addressed by modifying enrollment forms.
  ii. **Vulnerable Outreach & Curriculum**: Targets for HAIDP will mirror the project's Results Framework. Outreach includes fee waivers, localized blok-level centers, and targeted coordination with the state's Parivar Pehchan Patra database. Courses are NSQF-aligned, delivered in Hindi and English, and provide self-paced digital tools with screen-reader compatibility. A formal needs assessment will guide curriculum updates at the project's launch.

Draft

HKCL



35. **HKCL:** A Public Limited Company promoted by the Government of Haryana to promote digital literacy, e-governance, and IT education across the state. With the prime agenda of skilling for 13 years, Haryana Knowledge Corporation Limited has also been undertaking e-governance projects and human resource outsourcing (Boards and Corporations). Offers programs like HS-CIT (Haryana Certificate in Information Technology) through authorized learning centers - 270 of them with an outreach of 55000 learners in the year 2025. They have 38 courses spread over 3 months, 6 months or one year and costs range from 4500 INR to 18000 INR. Majority of those who enroll are from class 8th to 12th students including girls.

- **Institutional Capacity and Governance**
  - i. **E&S Staffing**: HKCL has designated its **Head of Human Resources (HR)** as the Single Point of Contact (SPOC)/Focal Point for environmental and social matters. The HR Head oversees coordination, internal compliance tracking, and management reporting.
  - ii. **Guiding Framework**: There is **no separate, standalone Environment and Social Management Framework (ESMF)** in place. E&S matters are handled through existing workplace safety, HR, and administrative protocols.
  - iii. **Activity Screening**: No formal, separate E&S risk-screening checklist exists. New activities are checked informally by the HR Head alongside functional teams for statutory or safety risks
  - iv. **Environmental Compliance**: Oversight is embedded within the HR and Administration functions. Because HKCL focus areas are non-industrial (digital learning and software project management), its immediate footprint is limited, and compliance relies on basic administrative oversight.
  - v. **E-Waste & Recycling**: HKCL **has not generated or disposed of significant e-waste** to date due to its service-oriented, digital platform model. To establish permanent protocols, HKCL is currently adopting the E-Waste Management Policy and disposal frameworks implemented by HARTRON (the state nodal agency). A nodal officer will be appointed to manage future CPCB-compliant disposals.
  - vi. **OHS & Safety**: Staff safety is managed under ISO 9001:2015-certified quality and safety management guidelines. Basic fire-safety, first-aid, and safety training sessions have been conducted for employees.

vii. **Social Inclusion & Equity**: Internal operations follow equal opportunity and non-discrimination principles. Program delivery utilizes a network of **Authorized Learning Centres (ALCs)** to bridge geographical divides for women, rural youth, and disadvantaged groups.

viii. **Grievance Redress Mechanisms (GRM)**: Dedicated internal and external intake channels operate via phone, email, and localized coordinator networks. For marginalized communities with low digital access, physical grievance logging is supported directly through the nearest ALC.

ix. **GRM Charter & Metrics**: A formal Customer Grievance Redressal Policy is established. Complaints are routed to md@hkcl.in, acknowledged within 24 hours, and addressed within 7 working days. Escalations go to the Chief Grievance Redressal Officer (MD & CEO) for resolution within 30 days. HKCL reports **zero (Nil) grievances or complaints received** over the past year.

x. **Human Resources & Consultations**: The active workforce consists of **63 permanent and contractual employees** along with 4 consultants. Software development and technical consultation are sourced through empanelled IT agencies.

xi. **Internal Grievances & POSH**: Internal staff disputes are routed through standard HR management channels. An active **Internal Complaints Committee (ICC)** handles matters in strict compliance with the **POSH Act, 2013**, ensuring confidentiality and objective redressal.

xii. **Gender & Safe Space Sensitization**: Faculty and learners undergo baseline orientation regarding safe spaces. HKCL has integrated specialized digital course modules detailing appropriate workplace behavior, gender sensitivity, and POSH guidelines directly into its curriculum.

- **Data Privacy, Security and Citizen Rights:** HKCL collects and hosts voter/beneficiary metadata (names, contact details, educational tracking, photographs, and assessment scores). Data boundaries are governed by the **Information Technology Act, 2000** and the **Digital Personal Data Protection (DPDP) Act, 2023**, supplemented by client-mandated confidentiality agreements on government projects.
- **Labor and Working Conditions**

i. **Labor Protections**: Statutory protections (wages, working hours, statutory leave, and social security) cover all direct employees. Vendor and contractor agreements contain clauses transferring compliance accountability for minimum wages and labor protections to the respective service providers.

ii. **OHS Manuals & Facilities**: There is **no formal, standalone OHS Policy or Manual**. Emergency preparedness rests on general HR management. HKCL plans to draft a cohesive corporate OHS manual covering fire and electrical safety, emergency evacuations, and incident logging across its offices and centers.

- **Stakeholder Engagement and Citizen Participation**

i. **Public Feedback**: Feedback flows through helpline channels, helpdesks, and direct ALC communication. Verified insights are reviewed by program coordinators to drive operational improvements and course refinements.

ii. **Proactive Disclosure**: Program requirements, course options, schedules, and eligibility rules are shared publicly via web portals, brochures, and social media channels. Information is published in **English and Hindi** to be more inclusive.

- **Safety (Skill Labs & Training Ecosystem)**

i. **High-Density Computing Infrastructure**: Infrastructure requirements state that **the property owner holds ultimate responsibility** for electrical safety, grounding, and adequate grid power load. HKCL reviews these facilities prior to commissioning heavy IT systems, but does not manage the utilities directly.

ii. **Training Facility Compliance**: HKCL operates through **more than 270 Authorized Learning Centres (ALCs)** covering all 23 districts of Haryana. Standardized, documented fire safety blueprints are currently being upgraded across this network. Fire certificates are **partially available** (held by some active centers, while renewals or updates are underway for others).

iii. **Safety Log History**: HKCL reports **zero (Nil) occupational health or safety incidents** across all training facilities over the past 3 years.

- **Targeting and Inclusion**

i. **Participant Profile**: HKCL has trained **more than 200,000 learners** since inception. Women make up roughly **45% of all participants**. General cohorts consist of students, public sector employees, and rural job seekers. Detailed socio-economic attributes (such as household income) are only captured when mandated by a sponsoring government scheme.

ii. **Project Targets & Outreach**: Under the proposed project, HKCL targets training 1 lakh (1,00,000) candidates across Haryana over five years. Outreach strategies leverage local community mobilization, physical counseling setups at the village level, localized WhatsApp campaigns, and selective fee waivers to mitigate digital and socioeconomic barriers.

iii. **Curriculum Design**: Courses are structured to be learner-friendly, align with the National Skills Qualifications Framework (NSQF), and feature dual English/Hindi delivery. Self-paced training portals include accessibility integrations (such as screen reader support and closed-captioning) to accommodate learners with disabilities.

Additional Agency assessed: HPPA

36. The key department providing welfare-based entitlements in Haryana is the Department of Social Justice & Empowerment, Welfare of Scheduled Caste & Backward Classes and Antyodaya and is responsible for delivery of the main G2C service **Antyodaya-SARAL**. This is a single service delivery portal for citizens through which they can access various services and schemes that they are entitled to, for their timely delivery and is integrated with GoH's Parivar Pehchan Patra (PPP) registry for auto filling authentic and verified details of citizens/HHs. The portal provides comprehensive, end-to-end digital solution offering more than 1,000 different services spanning more than 70 Departments, Boards, and Corporations. HPPA operates as an integrated data validation and eligibility engine rather than a standalone program. It works extensively with the **SARAL Platform** and links with key administrative departments, including Food & Civil Supplies, Health (Ayushman Bharat), and SEWA. Its backend data network integrates with national databases, including CBDT, CRS, e-Shram, UDID, Vahan, MGNREGA, and EPFO. This one-stop portal also has an Auto Appeal System (AAS) under which the system automatically files an appeal on behalf of the applicant, if the competent authority fails to dispose of an application within the prescribed timelines under the State's Right to Service Act. This inclusive system helps avoid the complication and transaction costs for citizens related to filing grievances, following-up (digitally or physically) and seeking resolution.[7]

- **Institutional Capacity and Governance**

i. HPPA runs a highly integrated, multi-channel Grievance Redressal Mechanism (GRM) embedded directly into the Parivar Pehchan Patra (PPP) data architecture. Citizens can trigger grievances when verified data points in the Family Information Data Repository (FIDR) block access to welfare schemes. For populations lacking digital access, the agency utilizes offline channels, including walk-in desks at State and District Headquarters, field-

[7] e-Services (SARAL Haryana) | Haryana Government | India, Antyodaya SARAL Portal

level operators (ZCRIMs/DCRIMs), and major state platforms like the CM Window and Jan Samvad. The CM Window supports local Hindi workflows to accommodate low-literacy users, though a formal accessibility audit for persons with disabilities has not been documented.

ii. **Citizen Inflow**: Covers data corrections, eligibility disputes, and system errors. Local ZCRIMs and Field Coordinators act as the primary contact, while Additional District Commissioners (ADCs)-cum-DCRIOs oversee district-level resolutions. Policy or software-level failures are systematically escalated to State Headquarters.

iii. **Internal Inflow**: Staff track operational issues via the HPPA Ticketing Portal, official emails, and administrative reviews, using dashboard analytics to evaluate recurring bottlenecks. Internal administrative or technical matters are logged through the HPPA Ticketing Portal or settled via the standard service hierarchy. Disputed citizen data updates undergo strict electronic or physical verification protocols before records are updated in the core database.

iv. The authority bridges digital gaps using a multi-channel safety net, including a 20-seater helpdesk with dedicated PRI lines, automated ticketing trackers, and automated chatbots for FAQ triage. The deployment of physical and electronic verification teams allows data discrepancies to be resolved outside a purely online interface. HPPA provides completely offline, assisted grievance intake and registration through its network of district offices, walk-in desks, and field functionaries.

v. HPPA managed **77,812 total complaints** across its distinct entry portals. Of these, **68,370 cases were resolved (87.9%)**, leaving 9,442 applications pending. Portal specific performance includes:

- **CM Window**: 58,955 received; 51,935 disposed; 7,020 pending.
- **Jan Samvad**: 14,579 received; 13,052 disposed; 1,527 pending.
- **PG Portal**: 4,204 received; 3,344 disposed; 860 pending.
- **Samadhan at HQ**: 74 received; 39 disposed; 35 pending.

vi. An Internal Complaints Committee (ICC) was formally established under the **POSH Act on October 18, 2024**

vii. **Total Staff strength (permanent and consultant):** The active personnel count stands at **101 staff members**. The governing organogram features a dual structure: (i) **Chairperson & Ex-Officio Board**: Headed by the Honorable Chief Minister (Chairperson), Dr. B.K. Gairola (Deputy Chairperson), the Chief Secretary, and Administrative Secretaries across critical line portfolios (CRID, Finance, Revenue & Disaster Management, Agriculture, and Urban Local Bodies). (ii) **Expert Advisory Members**: Includes institutional leaders such as Dr. Rajat Moona (Ex-DG C-DAC), Dr. Gulshan Rai (Ex-DG CERT-In), Sh. Bhaskar Pramanik (Ex-Chairman Microsoft India), and Dr. Y.K. Sharma (Ex-DG NIC), with the CEO of HPPA acting as Member-Secretary.

viii. Block-level ZCRIMs and field officials undergo technical digital literacy and hands-on portal training. This is paired with behavioral and citizen-interaction training to ensure staff can communicate clearly in simple language and assist hesitant or confused citizens. Refresher courses are also conducted periodically to update staff on new system changes and features.

ix. HPPA leverages two prominent consulting entities to execute public sector transformation and digital strategic planning: (i) **Grant Thornton Bharat LLP**: Hired for management consulting, public sector advisory, data analytics, and process re-engineering. (ii) **Primus Partners Pvt. Ltd.**: Engaged for public policy strategy, identity management systems, digital service delivery, and financial modeling.

x. Significant scope for improvement in occupational health and safety, fire safety plans, and emergency evacuation plans as well as regular reporting on the same.

xi. **Data Privacy, Security and Citizen Rights:** HPPA collects and processes family and member-level demographic datasets (age, relationship status, residence, caste, income, and disability status) to form the **Family Information Data Repository (FIDR)**. This data structure is protected by **Section 31 of the Haryana Parivar Pehchan Act, 2021**, which mandates strict data security, confidentiality, and protection against unauthorized disclosure. Operations are also governed by the **Digital Personal Data Protection (DPDP) Act, 2023** and the **Information Technology Act, 2000**.

xii. **Access and Inclusion:** While the demographic attributes themselves are stored within the core repository, usage tracking for digital channels by age, language preference, or user ability is not actively performed. Instead, the agency relies on field staff to provide manual, localized assistance based on individual citizen needs. Feedback is gathered primarily through direct field interactions, including review meetings with ADCs and district authorities, walk-in desks, and field visits by ZCRIMs/DCRIMs who directly assist citizens

37. Summary of the assessment of implementing agencies:

Organization	E&S staffing and screening	Environmental management	Workplace safety and POSH	Grievance redress	Stakeholder engagement
ARJUN	E&S specialist posts are approved but unfilled; officials hold interim responsibility. Its screening checklist is not yet finalized.	E-waste procedures refer to the 2022 rules, but no disposal has occurred.	Office fire safety rests with the building owner.	A bilingual digital mechanism, with offline access including SEASH referral path, is planned but not operational. The Internal Complaints Committee (ICC) and written internal grievance procedure are not yet in place	Structure exists on paper, but operational E&S capacity remains to be established.
CRID	No dedicated E&S officer, standalone framework, or formal E&S screening step.	E-waste is handled through government processes or HARTRON; no department-specific procedure or compliance register is reported.	Building-level fire arrangements exist; no CRID-specific occupational health and safety (OHS) manual or inspection history is reported.	Multiple digital and assisted offline channels operate, with a statutory 30-day timeline; no standalone grievance charter is published. An ICC is active.	The PPP system supports welfare targeting, while assisted channels help users with low digital literacy. CRID holds extensive sensitive family data under statutory protections.
HARTRON	No dedicated E&S cadre or formal checklist yet. A focal point, procedures manual, and	Uses authorized e-waste recyclers and equipment take-back options; energy efficiency is	A standalone OHS policy is pending, and training center safety records are incomplete.	Relies on state platforms and training feedback channels; a project-specific register and charter are planned. An ICC is	Reservation policies and rural training centres support access.

	screening checklist are planned for HAIDP.	considered in procurement.		active.	
HKCL	The HR Head is the E&S focal point. Reviews are informal; there is no standalone E&S framework or screening checklist.	An e-waste protocol is being adopted by HARTRON; significant disposal has not occurred to date.	Basic safety training and a standalone OHS manual and consistent fire documentation across learning centres remain gaps.	A formal grievance policy provides phone, email, and physical channels, with stated acknowledgement and escalation timelines. An active ICC in place	Local centres, fee waivers, bilingual courses, and accessibility features support learners. HKCL holds learner and beneficiary data subject to privacy requirements.

4. ASSESSMENT VIS-À-VIS PFORR CORE PRINCIPLES

Core Principle #1: Program E&S management systems are designed to (a) promote E&S sustainability in the Program design; (b) avoid, minimize, or mitigate adverse impacts; and (c) promote informed decision-making relating to a Program's E&S effects

38. Most of the activities proposed under DESH for Haryana are related to system strengthening, re-engineering of processes and strategic reforms, and as assessed in the risk screening, not expected to carry any activities with high environmental and social risks. The national and state legal- policy environment was found to be adequate at the system level in addressing environmental and social risks related to exclusion, ethical use of AI, data privacy, cyber security, and resource efficiency However, the capacities, prioritization, procedures and monitoring is weak for which the program has provided several entry points to strengthen institutional capacities including staff, SoPs, reporting mechanisms.

39. The program is likely to contribute towards social sustainability and improve social performance of the existing public services offered through the digital platforms. The public grievance redressal systems available in the state will be strengthened through the creation of project specific GRM and awareness campaigns around its availability and access.

40. Currently, none of the of the implementing agencies — ARJUN SPV, CRID, HARTRON, , HKCL have any established social and environmental management system for digital infrastructure operations. Similarly, there are no designated staff, or risk screening procedures for new activities entering the program boundary. There are no social or environmental key performance indicators, monitoring or reporting framework. The program's digital character does not exempt it from these requirements, and building this system from inception is built in the design — through the PAP actions, DLIs, Results Framework, and the Program Operations Manual.

41. Additionally, with upgradation of state data centres and AI centres of excellence, water use efficiency, energy audit, e- and battery waste and occupational health and safety are some

other areas where the state must now enhance sustainable efforts. Data centres use water in two ways; (a) directly through cooling systems and (b) indirectly the thermal power plants that generates most of the state's energy. Therefore, upgradation of data centres and related infrastructure requires design and operation controls for efficiency both for water and energy. Commissioning of energy and water audit of existing and upgraded data centres requirement, exploring renewable energy options for Haryana advanced computing facilities (HACF), SOPs for collection and disposal of outdated and used batteries and IT equipment and aligning on e-waste and battery-waste including consent to operate from State Pollution Control Board could bring better Environmental management.

42. In addition, Data privacy and AI ethics are built in through the State Data Policy aligned with the DPDP Act (DLI 5), consent management and data minimization protocols in HDeX, and the Safe AI Governance Framework (DLI 1). The Program builds on CERT-In's national guidelines and strengthens them at the state level, including through a State Security Operations Centre for continuous monitoring, threat detection and coordinated incident response. It will comply with the Digital Personal Data Protection Act, 2023 and its Rules by building consent management, data minimisation and purpose limitation into the State Data Exchange, aligning the State Data Policy and Safe AI Governance Framework with the Act, and training implementing agencies on data protection through the Program Action Plan.

Core Principle #2: Program E&S management systems are designed to avoid, minimize, or mitigate adverse impacts on natural habitats and physical cultural resources resulting from the Program. Program activities that involve the significant conversion or degradation of critical natural habitats or critical physical, cultural heritage are not eligible for PforR financing.

43. The program investments are not likely to have adverse impacts on such habitats and resources. The World Bank requires that programs avoid or minimize adverse impacts on natural habitats and physical cultural resources and that systematic screening for proximity to sensitive sites is in place. For the DESH program, direct risks to natural habitats are low given the absence of large civil works. However, no systematic geographic screening process exists for facility siting decisions meaning that skill lab locations, AI Centres of Excellence, and computing facility upgrades are currently selected without verified assessment of proximity to Haryana's eco-sensitive zones, including the Aravalli notification area, Sultanpur National Park, and Kalesar National Park. The Forest Department has not been engaged in the program's design. Closing this gap requires the inclusion of a geographic exclusion criterion in the program's activity screening checklist and a one-time verification of proposed facility sites against notified eco-sensitive zone boundaries.

Core Principle #3: Program E&S management systems are designed to protect public and worker safety against the potential risks associated with (a) the construction and/or operation of facilities or other operational practices under the Program; (b) exposure to toxic chemicals, hazardous wastes, and otherwise dangerous materials under the Program; and (c) reconstruction or rehabilitation of infrastructure located in areas prone to natural hazards.

44. The PforR boundary explicitly excludes 'large civil works for greenfield data centers' and will likely fund policy formulation, guidelines, strategy development, IT and digital system strengthening that typically do not carry any occupation health and safety (OHS) risks for the workers. Workers engaged in data centres will need to be provided safety trainings for working around ICT hardware, storage batteries and its safety maintenance and upkeep. Any minor civil works like refurbishment of existing buildings, will need to ensure that all OHS measures are in place and workers/ contractors trained/ skilled on preventive and safety measures. This

principle requires that the program's systems protect workers and communities from OHS risks and ensure the sound management of hazardous materials and waste. This is the area of most substantive concern for the DESH program. While India's E-Waste (Management) Rules, 2022 and Battery Waste Management Rules, 2022 provide an adequate legal framework in principle, compliance among government bulk consumers including CRID and HARTRON is effectively absent: neither agency is registered as a bulk consumer, disposal channels are unverified, and informal e-waste recycling is the de facto practice. No OHS framework exists for government IT training facilities, and the National Building Code, while applicable, is not being applied systematically to buildings being repurposed for high-density computing use. Fire safety audits of data center and skill lab facilities have not been conducted. Addressing this principle requires the most extensive set of PAP actions: e-waste SOP issuance, bulk consumer registration, mandatory OHS plans for all facilities, and fire and electrical safety audits before equipment procurement commences.

Core Principle #4: Program E&S systems manage land acquisition and loss of access to natural resources in a way that avoids or minimizes displacement and assists affected people in improving, or at the minimum restoring, their livelihoods and living standards.

45. The operation is not expected to undertake land acquisition or lead to involuntary resettlement or any direct or indirect impacts associated with it.

Core Principle #5: Program E&S systems give due consideration to the cultural appropriateness of, and equitable access to, Program benefits, giving special attention to the rights and interests of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, and to the needs or concerns of Vulnerable Groups.

46. The program is likely to ensure inclusion of people belonging to vulnerable and marginalized groups and benefit their access to government schemes and entitlements and contribute to their well-being. The program is aimed seamless and efficient delivery of social safety schemes for the most vulnerable households, (people with disability/WHH/elderly/single women/ urban poor} who depend on state for such support. Digital delivery of services is likely to improve access to diverse services owing to interoperability across systems and improved data governance and hence reduce the onus of beneficiaries to establish eligibility for entitlements and hence reduce their transaction costs for availing them. There is, however, risk of exclusion of those with low digital and overall literacy or of vulnerable households/ people being excluded during integration of various social registries. Capacities of implementing agencies, including technical cadres, will need to be improved to strengthen implementation, prevent digital exclusion and to understand the social complexities of public services delivery, so that the system can handle them efficiently during roll-out and implementation.

Core Principle #6: Program E&S systems avoid exacerbating social conflict, especially in fragile states, post-conflict areas, or areas subject to territorial disputes.

47. The program support for improving digital systems and their efficiency across different the government including re-engineering of business processes is not likely to have any adverse impact related to this core principle.

5. STAKEHOLDER MAPPING, CONSULATIONS and DISCLOSURE

48. The following are the key Project Stakeholders:

Supply Side Stakeholders	Demand Side Stakeholders
I. Staff of ARJUN SPV, Planning Department (Implementing Agency) II. Staff of CRID, nodal IT department III. (Implementing Agency) IV. Staff of HPPA (Haryana Parivar Pehchan Patra Authority) V. Staff of HARTRON (Implementing Agency) VI. Staff of HKCL (Implementing Agency) VII. Staff of HASC VIII. Governing Board of the Program IX. Specialists and Consultants in the PMU (ARJUN SPV) and PIUs X. Staff at State Data Center and SDC operator XI. Staff of State Security Operations Centre (SOC) XII. SARAL and HDeX administration teams (CRID) XIII. Staff of State Departments offering public services to be covered under the program XIV. Staff of departments piloting and deploying AI use cases through the AI Sandbox XV. Staff of data-owning departments onboarding to HDeX XVI. Staff of GAIC, Gurugram and HACF, Panchkula (AI Centres of Excellence) XVII. State Based Training Institutions (HARTRON and HKCL centres, government skilling centres) XVIII. Haryana State Startup Mission XIX. Finance Department, Government of Haryana XX. Ministry of Finance (GoI), CAAA and RBI XXI. State Cabinet, Government of Haryana XXII. Haryana State Pollution Control Board	A. Citizens accessing public services B. Families registered on PPP C. Women, rural households and marginalized communities D. Youth (15–29 years) E. Students and jobseekers, including engineering graduates F. Data annotators, gig and freelance workers G. Graduates of new skilling programs using the placement platform H. Owners of micro-enterprises using digital solutions I. Staff of micro-enterprises using digital solutions J. MSMEs recruiting through the placement platform K. AI startups and founders, including women-led startups L. Haryana based digital enterprises, GCCs and IT/ITeS firms M. Employees working in Digital, Data, AI space in the state N. Government officials using the enterprise AI tool and receiving AI upskilling O. Government departments using HDeX, the upgraded SDC and SOC P. Researchers and academic institutions engaged through the CoEs

49. Key partners and their roles are:

Partners	Nature of Involvement
MKCL (Maharashtra Knowledge Corporation Ltd)	Design and implementation of employment-linked skilling; trainee tracking platform
STPI (Software Technology Parks of India)	Operations of HACF, Panchkula
NASSCOM	Operations of GAIC, Gurugram
IISc Bangalore	Privacy-preserving datasets, AI Sandbox operationalization, HDeX
MeitY	National digital and AI frameworks; MPA learning agenda
IndiaAI Mission	AIKosh dataset contributions; Strategic Alignment
Accelerator / incubator operator (to be	Zero-equity, success-fee startup program at the CoEs

procured)	
AI Sandbox implementation partner (to be procured)	Runs annual departmental AI cohorts
Skilling implementation partners	Program delivery and placement outcomes
Technology vendors (SARAL 2.0, HDeX, SDC, SOC)	Platform design, development and operation
Industry partners co-funding skill labs	At least 2 labs; US$1M private investment
Private investors (VCs, angel investors)	US$2M expected capital for program-supported startups
State Industry Associations & State startup mission	Signal skills demand, shape curricula, mobilize employers, entrepreneurship support
Independent Verification Agency and third-party monitoring firm	DLI verification and employment beneficiary surveys

50. In the month of November 2026, this ESSA draft will be disclosed to seek feedback from interested stakeholders, and a state level disclosure workshop will be organized to share the assessment with the state level stakeholders and seek their comments for finalization of the ESSA. The final ESSA will be disclosed on the website of ARJUN, GoH and World Bank portal.

5. RECOMMENDATIONS AND PROPOSED ACTIONS

51. The following priority actions are recommended to strengthen E&S systems and outcomes under the program:

- **Institutional Strengthening:** Designate dedicated E&S Focal Points within ARJUN SPV and all implementing agencies. Develop a concise E&S Procedures Manual, including activity screening checklists for E&S risk assessment, SoPs for management of e-waste, battery waste in all implementing agencies, water audit and energy audits of data centers and Occupational Health and Safety (OHS) for developing integrated Environmental and Social Management Plans (ESMPs), and a prior to program launch. *The current HR manual for ARJUN SPV where under HAIDP team, there is provision for Environmental Specialist as well as Social - Gender Specialist. Correspondingly, the organogram and institutional design for entire program will build in E&S Focal points at each IA*
- **Capacity Development:** Conduct intensive E&S capacity-building for all staff of the nodal department and implementing agencies, covering inclusion, digital accessibility, data privacy, OHS, e-waste and battery waste management, water and energy audits around data centers, and citizen engagement. Sensitize technical cadres on the social complexities of public service delivery, particularly for vulnerable and marginalized groups, inclusion, gender and GBV. *An E&S PAP action is added to address this gap and fulfil the recommendation.*
- **Environmental Management:** Implement renewable energy mandates and water & energy efficiency standards for data center operations; pursue BEE Star Rating or ISO 50001 certification for the Haryana State Data Centre (HSDC). Establish department-specific e-waste and battery waste management SoPs in line with E-Waste (Management) Rules, 2022, with authorized Haryana State Pollution Control Board (HSPCBE), establish EPR accounts, and incorporate e-waste take-back and authorized disposal clauses into every IT procurement contract issued under the program registered recyclers.
    - On energy, upgrade procurement for the SDC or HACF should proceed with a prior independent energy audit establishing a consumption baseline; all upgrade specifications must embed a PUE target of ≤1.5 and mandatory compliance with BEE data center energy efficiency guidelines as contractual requirements rather than advisory standards.

- Renewable energy options, including rooftop solar and open-access power purchase agreements through HAREDA, must be actively pursued with a minimum 20% renewable target by Year 3 of operations.
- On occupational health and safety, facility-level OHS plans are a precondition and not an afterthought for all skill labs and AI Centres of Excellence: no grant agreement or MOU with an implementing partner should be signed without a compliant OHS plan covering electrical safety, fire suppression, chemical storage, ergonomics, and emergency evacuation. Structural and electrical capacity assessments of every building proposed for computing use must be completed before equipment is ordered, fire NOC compliance with the National Building Code must be enforced as a hard precondition for equipment procurement. OHS incident reporting must be built into the program's monitoring architecture from effectiveness, with quarterly reporting to ARJUN SPV creating the accountability chain needed to sustain compliance across a geographically dispersed network of facilities.

All the standards will be in-built in the RFP. In addition, PAP action addresses Energy efficiency and Water Audit in Data centres

- **Social Inclusion and Digital Equity:** Develop and implement a digital inclusion strategy with simplified processes, offline access pathways, and assisted service channels for populations with low digital and financial literacy. Ensure communications and outreach strategies explicitly assess and address the needs of vulnerable groups, women, and persons with disabilities. *Gender disaggregated tracking is proposed for: Access of digital services through SARAL 2.0, Availing of incubation and acceleration services, employment in digitally enabled jobs. SARAL 2.0 will also offer web, mobile and assisted/offline access channels, with proactive life-event-triggered delivery and outbound phone calls to beneficiaries to reach citizens (including the vulnerable) less likely to use online services.*
- **Grievance Redress:** Monitor the progress against GRM performance indicators covering outreach, accessibility, use, and resolution rates. *The PAP action covers Program-level Grievance Redress Mechanism (GRM) accessible to all program beneficiaries, including women, marginalized communities, trainees, and gig/freelance workers will be developed within 6 months of effectiveness and tracked thereafter*
- **Improve outreach and communication of training centres, entrepreneurial activities and information dissemination to prospective students/beneficiaries.** *The program will strengthen outreach and communication strategy to identify and enroll interested students, with particular attention to women, rural youth and others who currently have limited access to training. A facilitator program will be introduced in all participating training centers to guide students. An on-ground network of volunteers will map local opportunities, spread awareness and source employment openings from local industry and MSMEs. The MSME placement platform will connect graduates and students with these local employment opportunities, bringing demand from employers and the supply of skilled graduates together on one platform and closing the loop between skilling and jobs.*
- **Gender based violence:** Ensure functional Internal Complaint Committees at all implementing agencies, sensitization and complaint handling at training and learning centres including referral services. *All agencies assessed have ICC in place. To improve the functioning, capacity development and sensitization included under PAP (E&S module for training for all IAs)*
- **Monitoring and Reporting:** Integrate E&S screening into the project cycle for all program activities through ARJUN in coordination with implementing agencies. Establish half-yearly E&S progress reporting, including tracking of inclusion indicators, OHS incidents, e-waste disposal records, and GRM metrics. *PAP action on E&S Screening and monitoring for all project*

activities which allows to map the type of risk and the requirement of ESMPs followed by monitoring

- Because the Program digitizes services, builds a State Data Exchange and deploys AI systems that handle large volumes of citizen data, data protection and cybersecurity capacity in the participating agencies needs attention. The Program builds on CERT-In's national guidelines and strengthens them at the state level, including through a State Security Operations Centre for continuous monitoring, threat detection and coordinated incident response. It will comply with the Digital Personal Data Protection Act, 2023 and its Rules by building consent management, data minimisation and purpose limitation into the State Data Exchange, aligning the State Data Policy and Safe AI Governance Framework with the Act, and training implementing agencies on data protection through the Program Action Plan

52. The key risk mitigation of the program's primary environmental risks is anchored in three operational commitments embedded from program effectiveness. On e-waste—(i) a mandatory SOP for CRID and HARTRON covering Haryana SPCB bulk consumer registration, EPR account establishment, e-waste take-back clauses in all IT procurement contracts, prohibition of informal recyclers in disposal chains, and annual third-party verification—with volume of authorized e-waste disposal tracked as a program KPI; (ii) on energy efficiency, all SDC and HACF upgrade procurement must be preceded by an independent energy audit; specifications must contractually embed a PUE target of ≤1.5 and BEE compliance; (iii) HACF capacity must scale incrementally against verified demand; and a minimum 20% renewable energy target must be pursued through HAREDA. (iv) On occupational health and safety, compliant facility-level OHS plans covering electrical safety, fire suppression, chemical storage, ergonomics, and emergency evacuation are a precondition for signing any grant agreement or MOU; structural and electrical capacity assessments must precede equipment procurement; fire NOC compliance with the National Building Code is mandatory; and OHS incident reporting must feed into the program's monitoring system with quarterly reporting to ARJUN SPV.

53. Environmental and social risks will be managed through an integrated set of system-level actions. Environmental and social screening, SOPs for ESMPs, and monitoring protocols covering OHS, inclusion, and water and energy efficiency in data centers must be operationalized within the PMU to ensure risks are identified and addressed proactively. Physical refurbishment and technological upgradation of existing facilities must be managed through phased scheduling and advanced community communication to minimize disruption. Clear and targeted outreach on skill development, employment, and entrepreneurship opportunities—with specific provisions for women, youth, and vulnerable communities—must be delivered through accessible, multi-channel platforms. Regular stakeholder and beneficiary consultations on digitally delivered public services will be institutionalized as a structured feedback mechanism. Cybersecurity safeguards and protections against online gender-based violence must be embedded in platform governance frameworks and enforced under the Haryana AI Governance Framework. Finally, the Grievance Redress Mechanism must be actively monitored for efficiency and coverage, encompassing environmental complaints, labor grievances, and internal complaints on sexual harassment at the workplace and GBV sensitization and complaint management at training and learning centers ensuring accessible and timely recourse for all program beneficiaries regardless of location or connectivity.

54. Program Action Plan

E&S PAPs

Action Description	Responsibility	Timing	Completion Measurement
E&S Screening and monitoring for all project activities. E&S screening allows to map the type of risk and the requirement of ESMPs	ARJUN in coordination with all IAs	Within 6 months of project effectiveness	Year 1: Screening list for all IAs prepared and adopted Year 2: Reports of activities screened provided in ISMs
E&S module for training for all IAs including OHS, Citizen engagement, GBV, Resource Efficiency (water and energy), and any other relevant areas	ARJUN in coordination with HKCL	Within six months of project effectiveness	Year 1: Training calendar prepared and curriculums developed Year 2: Reports of training completed provided in ISMs
Preparation of SOPs e-waste and battery management, compliant disposal of used batteries and discarded IT equipment, OHS mandated for all activities and energy and water audits of data centers.	ARJUN in coordination with CRID and HARTRON	Within six months of project effectiveness	Year 1: SoPs for E-waste management and Energy and water audit developed and adopted. Year 2: Reports on Environmental Management covering Occupational Health and Safety, E-waste, Energy and Water audit provided in ISMs

Technical PAPs

Adopt the Program Operations Manual (POM) detailing implementation, fiduciary, E&S and verification arrangements	ARJUN SPV (PMU), in consultation with CRID and other participating Implementing Agencies, with clearance from the World Bank	Within three months of effectiveness	Program Operations Manual (POM) to be adopted by ARJUN SPV and cleared by the World Bank, covering roles and responsibilities of PMU and PIUs; fiduciary, procurement and financial management procedures; E&S requirements; and verification and reporting arrangements
Strengthen program implementation capacity within existing government institutions (CRID, HARTRON, HKCL, and ARJUN SPV) by designating focal points and staff responsible for technical, fiduciary, grievance redressal and E&S aspects of	ARJUN SPV in coordination with CRID (nodal IT department), HARTRON and HKCL	Before negotiation	Each IA has notified a PIU, comprising of the technical, fiduciary and E&S officers.

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their respective Results Areas			
Program-level Grievance Redress Mechanism (GRM) accessible to all program beneficiaries, including women, marginalized communities, trainees, and gig/freelance workers	ARJUN SPV	Within 6 months of project effectiveness	Submission of feedback and grievance report by Arjun SPV every six months from the third year of the project.

55. Exclusion list

Under the Bank Policy on Program-for-Results Financing, activities judged likely to have significant adverse impacts that are sensitive, diverse, or unprecedented on the environment and/or affected people are not eligible for PforR financing and are excluded from the Program. These generally include Power plants; Major transport infrastructure, such as new highways, expressways, urban metro systems, railways, and ports; Operations in mining and extractive industries; Commercial logging or large-scale forest-products-processing operations; Large-scale water resource infrastructure (surface and groundwater), including large dams. This also covers activities that allocate or convey water, such as inter-basin transfers, or that significantly change water quality or availability; Manufacturing or industrial processing facilities. Under this program, apart from the above, other specific activities that will be excluded are:

- Any introduction of asbestos materials (AC roofing sheets, AC pipes, and so on)
- Any activity involving private land acquisition or government land acquisition with encumbrances
- Any activity that may require involuntary resettlement and forced eviction
- Any new Data centre or new training center will be constructed (no green field constructions)
- Any activity in closer proximity to National Parks and Wildlife Sanctuaries

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Annex I: List of References

- National Digital Communications Policy, 2018.
- Access India Policy / Campaign, 2015.
- Haryana State Environment Policy, 2017.
- Haryana State IT Policy. [Year and exact title not specified; relationship to the IT & ESDM Policy below to be confirmed.]
- Haryana IT & ESDM Policy, revised 2019.
- Haryana State Startup Policy, 2022.
- Haryana State Data Centre Policy, 2022.
- Haryana Communication & Connectivity Infrastructure Policy, 2023.
- Haryana Groundwater (Regulation and Control of Development) Act, 2023.
- Haryana Parivar Pehchan Act, 2021, including Section 31.
- Haryana E&IT Department notification dated 6 October 2015 on procurement, replacement and disposal of IT and electronic items.
- HARTRON Service Rules, 1998.
- National Building Code of India, 2016.
- National Skills Qualifications Framework (NSQF) - https://www.nqr.gov.in/nsqf
- GRIHA - https://www.grihaindia.org/griha-rating
- Haryana Clean Air Project for Sustainable Development (HCAPSD; P510686).
- Haryana State Pollution Control Board https://hspcb.org.in/
- Haryana E-waste Management Rules, 2016
- Haryana Battery Handling and Management Rules— https://hspcb.org.in/viewall/battery-waste-management-rules
- National development and digital-policy frameworks: Viksit Bharat 2047 and Digital India 2.0. - https://www.meity.gov.in/static/uploads/2024/03/Running-single-file.pdf
- National E-waste Management Rules, 2022. https://cpcb.gov.in/uploads/Projects/E-Waste/e-waste_rules_2022.pdf
- National Battery Waste Management Rules, 2022.
- National digital and AI frameworks associated with MeitY and the IndiaAI Mission. - https://static.pib.gov.in/WriteReadData/specificdocs/documents/2025/nov/doc2025115685601.pdf
- Haryana Parivar Pehchan Authority. Beneficiary Portal
- Exact notification references for the Aravalli notification area and relevant eco-sensitive zone boundaries. - https://hspcb.org.in/page/aravali-notification

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Annex II: Applicable laws and policies

Environment:

National-Level Environmental Laws

Policy/Law	Applicability to DESH	Key Requirements
Environment Protection Act, 1986	Applicable	Sets overarching framework for environmental protection; requires compliance with environmental standards and procedures
Water (Prevention and Control of Pollution) Act, 1974	Applicable	Regulates water pollution; requires consent for water use and discharge; relevant for data center cooling water management
Air (Prevention and Control of Pollution) Act, 1981	Applicable	Regulates air emissions; relevant for diesel backup generators and cooling systems in data centers
Hazardous Waste Management Rules, 2016	Applicable	Governs handling, treatment, and disposal of hazardous waste; relevant for electronic equipment maintenance and decommissioning
E-Waste Management Rules, 2022	Highly Applicable	Mandates proper management of electronic waste; establishes Extended Producer Responsibility (EPR) for IT equipment manufacturers; relevant for equipment decommissioning and recycling
National Green Tribunal Act, 2010	Applicable	Provides mechanism for enforcement of environmental rights and resolution of environmental disputes
Energy Conservation Act, 2001	Applicable	Mandates energy efficiency standards; relevant for data center operations and government building operations
Plastic Waste Management Rules, 2016	Applicable	Restricts single-use plastics; relevant for packaging of IT equipment and office operations

State-Level Environmental Policies and Regulations (Haryana)

Policy/Regulation	Key Relevance to DESH
Haryana State Environment Policy, 2017	Provides state-level framework for sustainable development; promotes renewable energy and waste management; relevant for integrating environmental considerations into DESH operations
Haryana Building Code	Includes sustainability requirements for buildings hosting data centers and IT infrastructure
Haryana Water Policy	Governs water allocation and management; relevant for water use in data centers and office facilities
State Action Plan on Climate Change	DESH can support state climate mitigation and adaptation goals through digital enablement of environmental monitoring and management
Haryana Renewable Energy Policy	Encourages renewable energy adoption; provides incentives for solar and wind energy installations for data centers
State Pollution Control Board (HSPCB) Standards	Enforce air, water, and noise quality standards; relevant for data center operations and office facilities

International Standards and Frameworks

Standard/Framework	Application
ISO 14001:2015 (Environmental Management Systems)	Recommended for adoption in DESH data center operations for systematic environmental management
ISO 50001:2018 (Energy Management Systems)	Recommended for energy efficiency management in data centers and facilities

ISO/IEC 27001 (Information Security Management)	Relevant for secure data management with environmental considerations for secure facilities
Global e-Sustainability Initiative (GeSI) Standards	For responsible sourcing of IT equipment and e-waste management

Social:

Name of law/policy	Relevant provisions of the Act/ Policy	Relevance for Social Management
National IT Act 2000 and Aadhaar Act 2016	Spells out the duty of governments not to publish the personal identity, information, Aadhaar number, financial information, demographic details of citizens either offline or online and makes those violating this liable to compensate the impacted persons; ask for strict adherence to the data sharing guidelines under both the Acts;	Secures data privacy by providing for penal provision for violating data sharing guidelines
Digital Personal Data Protection Act, 2023 (DPDP Act)	The Act is aimed at protecting and regulating the processing of digital personal data, ensuring that individuals can protect their personal information while allowing lawful processing by organizations for legitimate purposes. It builds on the Supreme Court of India's recognition of the Right to Privacy as a fundamental right.	It grants individuals rights, including, Right to be informed about purpose of data collection; Right to consent or withdraw consent; Right to correction, erasure, and grievance redress through Data Protection Board; Special protections for children & PwDs, including verifiable parental/ guardian consent
Haryana State Startup Policy 2022	It aims to create a robust ecosystem for startups in Haryana by encouraging innovation, entrepreneurship and job creation through financial support and incentives to startups, setting up of incubation centres and innovation hubs and encouraging collaboration between academia, industry, and government.	Offers dedicated support programs, priority access to incubation centres & innovation hubs, special grants/ seed funding, subsidized loans, relaxed eligibility norms and tailored training, skilling to reduce entry barriers for women founders.
Haryana State Data Centre Policy 2022:	It establishes a framework for modern, secure, and efficient data centres in Haryana to support e-governance, digital services, and IT infrastructure to ensure sensitive data is stored and managed securely through promotion of energy-efficient and eco-friendly data centre operations.	It aims to create a skilled workforce for data center operations with special provisions to encourage Women & MSMEs
Haryana Communication & Connectivity Infrastructure Policy -2023	It aims to simplify permissions, encourage use of modern telecom and ensure equitable digital access across the state through strengthened and shared telecom infrastructure for better e-governance and citizen services and inclusive growth by extending connectivity to remote areas.	The policy envisions digital connectivity in rural and remote areas, encourages adoption of digital literacy and e-learning platforms, facilitates e-governance services and offers mechanism for citizen complaints related to telecom infrastructure.
Haryana IT & ESDM Policy,	It aims to make Information Technology (IT) and Electronics System Design & Manufacturing (ESDM) twin pillars of	The revised policy offers equitable growth across

Name of law/policy	Relevant provisions of the Act/ Policy	Relevance for Social Management
Revised 2019	Haryana's economy, driving socio-economic progress, innovation, and employment.	regions through promotion of MSMEs as growth engines, use of technology for efficient service delivery. However, it affects workers safety by permitting women to work night shifts in IT/ESDM units while reducing labor inspections.
Access India Policy/ Campaign 2015	Provides guidelines for development, management and maintenance of govt websites, mobile and web-based apps to offer content in a format which it is accessible to Persons with Disabilities (PwDs) and designation of an officer in each department to monitor compliance with its provisions	Ensures access to digital content for those with disabilities and making digital services inclusive.
National Data Sharing and Accessibility (NDSA) Policy	It requires that data be made accessible based on principles of Openness, Flexibility, Inter-operability, Transparency, Accountability, Sustainability and Privacy to maximize equitable access and use of data for community benefits. It requires every state to enact its Data Policy following protocols defined by Ministry of Science & Technology.	Leads to greater accountability and better decision making for improved social outcomes and provides for data privacy.
National Digital Communications Policy 2018	This is a national blueprint for building resilient, affordable, and inclusive digital communications infrastructure, with the goal to ensure universal access to broadband services across the country.	It establishes a robust regime safeguarding data privacy, autonomy, provides Right of Way through collaboration between Centre, States & Local Bodies.
Right to Information Act, 2005	Empowers citizens to demand information on functioning of public systems if it impacts their lives or is of public interest. Offers rights-based framework for citizens to demand accountability from all/any public authorities; designates a Public Information Officer in all public offices and creates State /Central Information Commissions (statutory) for appeals regarding unsatisfactory information access.	Ensures transparency and accountability in the govt operations and citizen's access to public information.
Sexual Harassment of Women at Workplace (Prevention, Prohibition, & Redressal) Act 2013	Protects women workers from sexual harassment and abuse of power at their workplace and provides for constituting Internal Complaints Committee in organization employing 10 or more workers, including women, to look into complaints of sexual harassment. Provides guidance on redressal against such complaints, including timebound investigation.	Recognizes the need for legal protection of women workers against abuse, exploitation in all public institutions.

Data Protection and Privacy Laws

Law	Applicability
Digital Personal Data Protection Act, 2023	Governs handling of personal data in digital systems; requires secure data management with environmental implications for data storage and backup systems
Information Technology Act, 2000	Provides framework for digital transactions and cybersecurity; relevant for IT infrastructure security standards

Aadhaar Act, 2016	Governs use of biometric data; relevant if DESH integrates with Aadhaar-based systems

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Annex III: Checklists

E&S checklist for ARJUN SPV

Section 1: Institutional Capacity and Governance

1. Does the agency have a dedicated environmental and social staff/focal point.
2. If so, where does it sit in the organizational structure?
3. Is there an existing Environment and Social Management Framework (ESMF) or equivalent guiding the program's E&S risk management?
4. How are new activities screened from E&S risk perspective?
5. How are the environmental compliances managed?
6. What are procedures adopted for E-waste and recycling?
7. How are OHS and other safety issues like fire safety and emergency evacuations handled?
8. How do policies or strategies on social inclusion, gender equity, or non-discrimination apply internally and to programs and to beneficiaries?
9. Does the agency have grievance redress mechanisms? How accessible are these mechanisms for vulnerable or marginalized groups?
10. Share the charter for GRM
11. Share the number of complaints received, resolved in last one year
12. Total Staff strength (permanent and consultant)
13. Organogram
14. Names of agencies hired for consultation services along with their weblinks, expertise etc.
15. Names of government departments/government programs/schemes that you work with/on?
16. How are internal grievances in the organizations handled?
17. Is there an ICC as per Vishakha guidelines.

18. Do the offices/ centers/ training facility operated by you have facilities for occupational health and safety, fire safety plans, and emergency evacuation plan?

Section 2: Data Privacy, Security and Citizen Rights

19. What personal data does the agency collect, process, and store? What legal framework governs data collection and use (national data protection law, regulations)?

Section 3: Stakeholder Engagement and Citizen Participation

20. How does the agency receive and respond to feedback from beneficiaries and the public? Are feedback channels accessible to people with low digital literacy or without internet access?
21. Does the agency disclose project information proactively and in accessible formats?

E&S checklist for HARTRON

Section 1: Institutional Capacity and Governance

1. Does the agency have a dedicated environmental and social staff/focal point.
2. If so, where does it sit in the organizational structure?
3. Is there an existing Environment and Social Management Framework (ESMF) or equivalent guiding the program's E&S risk management?

4. How are new activities screened from E&S risk perspective?
5. How are the environmental compliances managed?
6. What are procedures adopted for E-waste and recycling?
7. How are OHS and other safety issues like fire safety and emergency evacuations handled?
8. How do policies or strategies on social inclusion, gender equity, or non-discrimination apply internally and to programs and to beneficiaries?
9. Does the agency have grievance redress mechanisms? How accessible are these mechanisms for vulnerable or marginalized groups?
10. Share the charter for GRM
11. Share the number of complaints received, resolved in last one year
12. Total Staff strength (permanent and consultant)
13. Organogram
14. Names of agencies hired for consultation services along with their weblinks, expertise etc.
15. Names of government departments/government programs/schemes that you work with/on?
16. How are internal grievances handled?
17. Is there an ICC as per Vishakha guidelines?
18. How are students and faculty sensitized on gender and safe spaces?

Section 2: Data Privacy, Security and Citizen Rights

19. What personal data does the agency collect, process, and store? What legal framework governs data collection and use (national data protection law, regulations)?

Section 3: Labor and Working Conditions

20. Are all categories covered by labor protections?
21. Do the offices/ centers/ training facility operated by you have facilities for occupational health and safety, fire safety plans, and emergency evacuation plan?
22. Is there any OHS policy or manual?

Section 4: Stakeholder Engagement and Citizen Participation

23. How does the agency receive and respond to feedback from beneficiaries and the public?
24. Does the agency disclose project information proactively and in accessible formats?

Section 5: Safety

25. How many skill lab and training facilities are currently operated by HARTRON/HKCL across Haryana? In which districts?
26. Are facility buildings assessed for electrical load capacity before installation of high-density computing equipment (GPU clusters, server racks)?
27. Do training facilities have documented fire safety plans, emergency evacuation procedures, and fire suppression systems? When were these last inspected?
28. Is there an Occupational Health and Safety (OHS) policy or manual applicable to HARTRON/HKCL facilities and staff?

Data Point**:**

- Fire safety compliance certificates for all active training facilities
- Records of OHS incidents in training facilities — last 3 years
- IT asset disposal records and e-waste certificates — last 3 years

Section 6: Targeting and inclusion

29. How many students/persons have you reached so far?
30. What is the participant profile: age, gender, socio-economic disaggregated.
31. How many do you target under the project?
32. How do you intend to reach the vulnerable population?
33. How are curriculums or courses or entrepreneurship platforms designed to meet the needs and adaptability of the vulnerable?

E&S Checklist for CRID

Section 1: Institutional Capacity and Governance

1. Does the agency have a dedicated environmental and social staff/focal point.
2. If so, where does it sit in the organizational structure?
3. Is there an existing Environment and Social Management Framework (ESMF) or equivalent guiding the program's E&S risk management?
4. How are new activities screened from E&S risk perspective?
5. How are the environmental compliances managed?
6. What are procedures adopted for E-waste and recycling?
7. How are OHS and other safety issues like fire safety and emergency evacuations handled?
8. How do policies or strategies on social inclusion, gender equity, or non-discrimination apply internally and to programs and to beneficiaries?
9. Does the agency have grievance redress mechanisms? How accessible are these mechanisms for vulnerable or marginalized groups?
10. Share the charter for GRM
11. Share the number of complaints received, resolved in last one year
12. Total Staff strength (permanent and consultant)
13. Organogram
14. Names of agencies hired for consultation services along with their weblinks, expertise etc.
15. Names of government departments/government programs/schemes that you work with/on?
16. How are internal grievances in the organizations handled?
17. Is there an ICC as per Vishakha guidelines.

Section 2: Data Privacy, Security and Citizen Rights

18. What personal data does the agency collect, process, and store? What legal framework governs data collection and use (national data protection law, regulations)?

Section 3: Labor and Working Conditions

19. What categories of workers are employed or engaged through the agency's programs (direct staff, contracted technology workers, gig economy workers, platform workers, trainees)?
20. Are all categories covered by labor protections?
21. Do the offices/ centers/ training facility operated by you have facilities for occupational health and safety, fire safety plans, and emergency evacuation plan?
22. Is there any OHS policy or manual?
23. When was the last inspection carried out, please share inspection reports?

Section 4: Stakeholder Engagement and Citizen Participation

24. How does the agency receive and respond to feedback from beneficiaries and the public? Are feedback channels accessible to people with low digital literacy or without internet access?
25. Does the agency disclose project information proactively and in accessible formats?

Section 5: Environmental Compliance

26. Is the existing State Data Center certified or assessed under any energy efficiency or green data center standard (BEE Star Rating, ISO 50001, GRIHA)?
27. What is the installed cooling system type (air-cooled, water-cooled, free cooling)? Is water consumption tracked?
28. What is the installed cooling system type (air-cooled, water-cooled, free cooling)? Is water consumption tracked?
29. What is the process for disposal of UPS batteries and backup power systems? Are these handled through authorized battery recyclers under the Battery Waste Management Rules, 2022?
30. What is the process for disposal of UPS batteries and backup power systems? Are these handled through authorized battery recyclers under the Battery Waste Management Rules, 2022?
31. Whether you undergo a fire safety audit? Is there a documented emergency response plan for fire or chemical release?

Data Point:

- Copies of e-waste or battery disposal certificates from authorized recyclers
- State Data Center fire safety compliance certificate and last fire audit report
- State Data Center fire safety compliance certificate and last fire audit report

Section 6: Digital Skills and Workforce Development

32. Who are the primary target populations for the agency's digital skills programs? Are there specific cohorts targeted for equity reasons (women, youth, persons with disabilities, rural populations, unemployed)?
33. How is curriculum designed and updated — is there a process to consult with beneficiary communities, particularly underrepresented groups, about their learning needs and barriers?
34. Are training programs accessible in terms of location, timing, language, format, and affordability? Are childcare or mobility barriers addressed?
35. Does the agency track post-training employment, earnings, or entrepreneurship outcomes, disaggregated by gender, age, and disability status?

Section 7: Digital Entrepreneurship and Access to Finance

36. Does the agency support digital entrepreneurship programs? Who has access — and are there active measures to include women, youth, persons with disabilities, and entrepreneurs from disadvantaged communities?
37. Are there any financial products or services (grants, loans, guarantees) linked to the agency's entrepreneurship programs? What social and financial inclusion safeguards apply?

38. Does the agency work with financial institutions or fintech platforms? If so, how are risks of over-indebtedness, exclusion, or exploitative practices managed?
39. Are business development services (mentoring, networking, market access) equally accessible to all entrepreneur segments, or do structural barriers favor certain groups?
40. How does the agency measure and report on outcomes for marginalized entrepreneurs — not just registration or enrolment numbers?

E&S checklist for HKCL

Section 1: Institutional Capacity and Governance

1. Does the agency have a dedicated environmental and social staff/focal point.
2. If so, where does it sit in the organizational structure?
3. Is there an existing Environment and Social Management Framework (ESMF) or equivalent guiding the program's E&S risk management?
4. How are new activities screened from E&S risk perspective?
5. How are the environmental compliances managed?
6. What are procedures adopted for E-waste and recycling?
7. How are OHS and other safety issues like fire safety and emergency evacuations handled?
8. How do policies or strategies on social inclusion, gender equity, or non-discrimination apply internally and to programs and to beneficiaries?
9. Does the agency have grievance redress mechanisms? How accessible are these mechanisms for vulnerable or marginalized groups?
10. Share the charter for GRM
11. Share the number of complaints received, resolved in last one year
12. Total Staff strength (permanent and consultant)
13. Organogram
14. Names of agencies hired for consultation services along with their weblinks, expertise etc.
15. Names of government departments/government programs/schemes that you work with/on?
16. How are internal grievances handled?
17. Is there an ICC as per Vishakha guidelines?
18. How are students and faculty sensitized on gender and safe spaces?

Section 2: Data Privacy, Security and Citizen Rights

19. What personal data does the agency collect, process, and store? What legal framework governs data collection and use (national data protection law, regulations)?

Section 3: Labor and Working Conditions

20. Are all categories covered by labor protections?
21. Do the offices/ centers/ training facility operated by you have facilities for occupational health and safety, fire safety plans, and emergency evacuation plan?
22. Is there any OHS policy or manual?

Section 4: Stakeholder Engagement and Citizen Participation

23. How does the agency receive and respond to feedback from beneficiaries and the public?
24. Does the agency disclose project information proactively and in accessible formats?

Section 5: Safety

25. How many skill lab and training facilities are currently operated by HARTRON/HKCL across Haryana? In which districts?
26. Are facility buildings assessed for electrical load capacity before installation of high-density computing equipment (GPU clusters, server racks)?
27. Do training facilities have documented fire safety plans, emergency evacuation procedures, and fire suppression systems? When were these last inspected?
28. Is there an Occupational Health and Safety (OHS) policy or manual applicable to HARTRON/HKCL facilities and staff?
29. Data Point**:**

- Fire safety compliance certificates for all active training facilities
- Records of OHS incidents in training facilities — last 3 years
- IT asset disposal records and e-waste certificates — last 3 years

Section 6: Targeting and inclusion

30. How many students/persons have you reached so far?
31. What is the participant profile: age, gender, socio-economic disaggregated.
32. How many do you target under the project?
33. How do you intend to reach the vulnerable population?
34. How are curriculums or courses or opportunities designed to meet the needs and adaptability of the vulnerable?

E&S checklist for HPPA

Section 1: Institutional Capacity and Governance

1. Does the agency have grievance redress mechanisms? How accessible are these mechanisms for vulnerable or marginalized groups?
2. Share the charter for GRM
3. Share the number of complaints received, resolved in last one year
4. Total Staff strength (permanent and consultant)
5. Organogram
6. Names of agencies hired for consultation services along with their weblinks, expertise etc.
7. Names of government departments/government programs/schemes that you work with/on?
8. How are internal grievances handled?
9. Is there an ICC as per Vishakha guidelines?

10. Do the offices/ centers/ training facility operated by you have facilities for occupational health and safety, fire safety plans, and emergency evacuation plan?

Section 2: Data Privacy, Security and Citizen Rights

11. What personal data does the agency collect, process, and store? What legal framework governs data collection and use (national data protection law, regulations)?

Section 3: Access and inclusion

12. Do you track who is using your digital services by age, language, and ability,
13. Where do you observe data gaps and problems in citizen interface?
14. What regular ways do you use to hear from people who struggle to use your digital tools?
15. What other choices do you give to people who do not have a smartphone, a computer, or reliable internet?
16. How do support staff get trained to help people who feel confused or scared by digital forms?

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Annex IV: Meetings and Consultations

2026

S.No	Date	Person/Agency	Remarks
1	15th July	Online meeting with SPV ARJUN	ESSA requirements and key milestones
2	4th August	Meeting at Saral Kendra with all Implementing Agencies (SPV ARJUN, HARTRON, HKCL, HPPA, CRID)	ESSA requirements, Initial findings, Risk rating and risks identified. Discussion on customized checklists.
3	5th August	Site visit to DATA CENTRE, Sector 17, Chandigarh (Joint CTO and team) that provides services to 24 districts, 1200 websites, 50 departments and VC services.	Discussion on infrastructure, hardware, software, security, fire suppression systems, BMS, cooling efficiency, battery e-waste disposal, limitations on solar
4	5th August	Meeting at HARTRON office, Sector 2 (Panchkula) met the GM and his team.	Discussion on the extent (83 centres and RFP for new centres issued), courses offered, targeting, enrolment, gender balance, vulnerable communities, fee, syllabus, infrastructure, certification, employment.
5	5th August	Visit to HARTRON SKILL CENTRE (Sector 1, Panchkula) established since 2000 offering 2-hour courses with average of 300 students enrolled at any given time.	Located in the main market so strategic but on the first floor without lift so accessibility issues. They have 15:1 student faculty ratio. Financially weaker sections are provided flexibility on payments. The girl boy ratio is 60:40.
6	5th August	Meeting at HKCL office with the Company Secretary to understand the courses offered.	Last years average showed 55000 students enrolled across 38 courses ranging from 3 months to 6 months to 1 year. There is tie up with MSMEs for recruitment. LMS includes a complaint system. Some case by case support is given to candidates with special needs.
7	5th August	Visit to HKCL training centre (Techsters Web Private Limited) operational since 2017	Operational for 12 hours with 250 students enrolled largely from rural areas like Barwala and Pinjore.
8	5th August	Meeting with SARAL team at HPPA	Single e-governance delivery platform offering 944 online services for 74 departments, boards and corporations. Robust GRM.
9	23rd Sept	Meeting with ARJUN Council SPV Joint CEO	Timelines and completion of checklists. Initial thinking on PAPs.
10	6th Oct	Half day consultation with all IAs (SPV ARJUN, HARTRON, HKCL, HPPA, CRID)	Clarifications to fill missing information, Sharing ESSA findings and PAPs
11	4th Nov	Meeting with all IAs (SPV ARJUN, HARTRON, HKCL, HPPA, CRID)	Disclosure and ESSA consultation

Annex V: State level multi-stakeholder ESSA Consultation

(to be added by November end)

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