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National Optical Fibre Network (NOFN)

Pilot Project Handover Guidelines



Department of Electronics & Information Technology (DeitY)

Ministry of Communications & Information Technology

Government of India

6, CGO Complex, New Delhi 110003

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Executive Summary

The National Optical Fibre Network (NOFN) scheme, as approved by the Government of India, envisions to bring broadband connectivity to each Gram Panchayat in the country, providing rural citizens the opportunity to reap the benefits of accessing ICT enabled services- public, private and social- ensuring inclusive economic and social growth.

During the pilot phase, DeitY provided necessary direction, financial assistance and handholding support to the pilot states for the period till 30th April 2014 for the implementation of NOFN pilot project in the three pilot locations. The pilot project has been successfully executed and implemented in pilot blocks. In order to ensure adequate adoption and sustainability of NOFN pilot project, States will have to take ownership of the NOFN project.

In this direction, it has been suggested that going forward from 1st May, 2014 States IT department will have to make the necessary arrangements and will bear the operational cost for continuing the provision of bandwidth for extending last mile connectivity to ensure delivery of services to the end users as well as deploying appropriate manpower.

The purpose of this document is to provide guidance to the officials of State IT Department (IT Secretary), District Administration (District Collectors, DIOs), Block Administration (BDOs) and Gram Panchayats (Gram Sewak, Field level officials) on various aspects of management and administration (as listed below) of hardware infrastructure deployed, broadband connectivity and range of services provisioned under the NOFN Pilot Project.

I. Hardware Infrastructure

The management of all hardware assets procured under NOFN pilot project will be the responsibility of respective institution. During the pilot phase, DeitY has paid the charges against the Annual maintenance of Contract (AMC) for desktops, Printers, UPS, LED, Webcam which includes repairs, maintenance and replacement of defective components to ensure trouble free and efficient service of equipment by the local vendors as per the terms and conditions given in the contract.

From 1st May, 2014 onwards, State IT Department shall bear the operational expenses towards the hardware maintenance and replacement.

II. Connectivity

During the pilot phase, free bandwidth was provisioned by BSNL as well as BBNL in all 59 Gram Panchayats and 195 institutions valid for the period till 30th April, 2014. From 1st May, 2014, the connectivity and operational expenses will be borne by the State IT Department from

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departmental funds. The broadband connectivity charges borne by DeitY for the period till 30th April 2014 are given in Annexure III.

III. Telemedicine Service

From 1st May, 2014, the State IT department will bear the expenses pertaining to connectivity charges and operational expenses towards hardware and software installed in selective PHCs/CHC and referral hospital in three pilot locations.

The management of all assets procured will be under the responsibility of concerned PHCs/CHC and referral hospital officials.

IV. Digital Knowledge Centres (DKCs)

During the pilot phase, free bandwidth was provisioned by BSNL as well as BBNL in all DKCs for the period upto 30th April, 2014. Thereafter, the connectivity and operational expenses will be borne by the State IT department from departmental funds. The DKCs will continue their operations as per the current guidelines of the CSC Scheme under the overall supervision of the states SDA for CSC scheme. DKCs will be managed by the respective Service Centre Agency, implementing the CSC scheme in the GP. The management of all assets deployed will be under the responsibility of the concerned DKC operator (VLE/SCA).

No additional revenue support shall be payable to the SCA/VLE for operating the DKC over and above the revenue support paid under the CSC scheme, if any.

CSC SPV will continue to provide necessary support and facilitation to SDA for service enablement and for skilling and education.

V. Manpower

From 1st May 2014 onwards, State IT department/ District Collector may continue the existing manpower support at block and panchayat level based on their assessment of the requirements. All subsequent expenses pertaining to manpower cost will be borne by the State IT department/State government. The detailed cost estimates on manpower support provided by DeitY in three pilot blocks is given in Annexure IV.

VI. Capacity Building

The State IT department along with the District administration may continue to conduct similar trainings for the government functionaries engaged in delivering services to the end users. All subsequent expenses pertaining to training and facilitation shall be funded by State IT department from the departmental funds.

1. Project Background

In October 2011, Government of India approved setting up of the National Optical Fibre Network (NOFN) to provide gigabit connectivity in each of the 2,50,000 Gram Panchayats (GPs) in the country. This network is expected to extend existing dark optical fibre to Gram Panchayats. The vision of NOFN is to:

- Provide 100 Mbps broadband connectivity to all the Gram Panchayats
- Provide B2B services in a non-discriminatory manner
- Facilitate proliferation of G2C, B2C and P2P broadband services in rural areas
- Catalyze broadband penetration in rural areas so as to foster overall socio-economic development

NOFN is a multi-stakeholder project, with a number of organizations including the Department of Telecommunications, the Department of Electronics and Information Technology, BBNL, BSNL, Railtel, Powergrid, C-DOT and NIC collaborating to ensure that broadband connectivity reaches every Gram Panchayat, enabling adoption by the public and private institutional users as well as the citizens.

Department of Electronics and Information Technology (DeitY) has implemented a pilot project in 3 (three) blocks comprising 59 Gram Panchayats and 195 institutions-

- i. Arain Block (Ajmer District- Rajasthan)
- ii. Parwada Block (Vishakapatnam District- Andhra Pradesh)
- iii. Panisagar Block (North Tripura District- Tripura)

The pilot project envisaged to identify and fill the gaps in IT infrastructure, connectivity and applications that currently exist for delivery of services at the door step of the citizen. In line with its vision, the pilot project implementation has defined a number of objectives that includes:

- Ensuring 1Gbps vertical connectivity from Block to District, 100 Mbps from Block to Panchayat and 10 Mbps horizontal connectivity from GP to each user institutions, through a CUG
- Identifying connectivity gaps and preparing strategy for the resolution of these issues prior to national rollout
- Identify and fill hardware, manpower and infrastructure gaps at institutional being connected for delivery of services
- Delivery of Government and Business services to citizens through various institutions as well as G2G services to government institutions located in all 59 GPs in 3 pilot blocks
- Strengthening institutional capacity and piloting the use of NOFN for delivery of Government services, prior to national rollout.

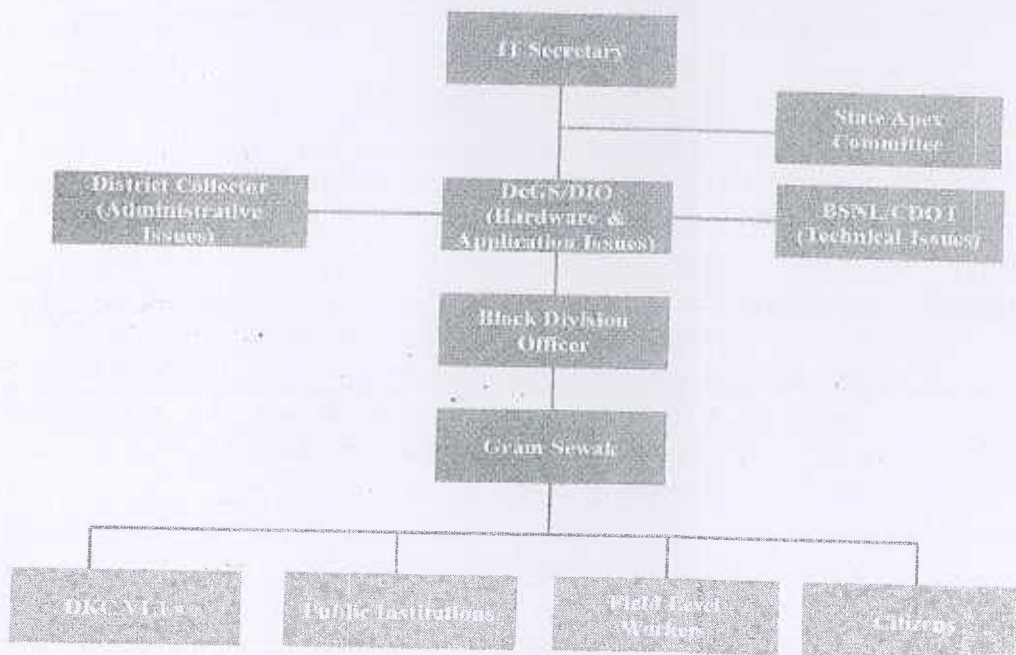
2. Purpose & Intended Audience

The purpose of this document is to provide guidance to the officials of State IT Department (IT Secretary), District Administration (District Collectors, DIOs), Block Administration (BDOs) and Gram Panchayats (Gram Sewak, Field level officials) on various aspects of management and administration of hardware infrastructure deployed, broadband connectivity and range of services provisioned under the NOFN Pilot Project.

3. Governance Framework

In this direction, DeitY has made suitable arrangements by proposing the Governance framework at state level to ensure provision of necessary financial support and direction to the key stakeholders to address operational issues related to bandwidth provisioning, service provisioning and problem resolution mechanisms.

In the proposed governance framework as depicted in the diagram below, States IT Department will be the nodal agency to provide strategic direction for continuing the provision of bandwidth for extending last mile connectivity in 195 institutions and will address policy level issues pertaining to hardware infrastructure, connectivity and manpower support.



Key Stakeholders	Management & Administration	Escalations
IT Secretary	<ul style="list-style-type: none"> • Provide necessary direction to the District Administration • Provide necessary financial support to officials at District, Block and panchayat level • Monitor and track the infrastructure utilization in Public institutions • Management & administration of hardware infrastructure, broadband connectivity and manpower deployed • Expanding the range of available e-services in coordination with line departments of the state government. • State IT Secretary will make presentation to State Apex committee to decide the management and administration aspect of the project • Asses the utilization of services by Institutions, Citizens and field workers 	<ul style="list-style-type: none"> • Report hardware related issues to local vendor for maintenance, repair or replacements • Report network related issues to BSNL & CDOT for immediate resolution
State Apex Committee	<ul style="list-style-type: none"> • CGM BSNL will be member of the State Apex Committee to address issues pertaining to network connectivity • Overall Co-ordination, monitoring and implementation of activities at District level • Handle matters pertaining to administration of hardware infrastructure, connectivity, manpower support and capacity building 	<ul style="list-style-type: none"> • CGM BSNL will address issues pertaining to network breakdown, downtime & maintenance
BSNL/CDOT Representatives	<ul style="list-style-type: none"> • Assess & monitor end to end QOS along with throughput of all the pilot sites • Monitor Network Availability, Uptime, Downtime • Ensure adequate maintenance of network comprising of Optical Network elements like GPON OLT, ONT, and Fibre commissioned & installed in pilot locations. 	<ul style="list-style-type: none"> • BSNL & CDOT will address issues pertaining to network breakdown, downtime & maintenance
District Collector	<ul style="list-style-type: none"> • Provide necessary funding for conducting workshops & trainings for Government functionaries • Escalate issues pertaining to network downtime, Fibre cut or power related issues • Monitor and track the infrastructure utilization in Public institutions • Supervise and monitor the utilization of services provisioned • Provide necessary facilitation & support to BDOs, 	<ul style="list-style-type: none"> • Report issues pertaining to hardware breakdown or maintenance to local vendor • Report Issues on network breakdown to BSNL & CDOT for immediate resolution.

Key Stakeholders	Management & Administration	Escalations
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DeGS/ DIO	<p>DIOs</p> <ul style="list-style-type: none"> • DeGS/DIOs will provide close tie-ups with all the stakeholders in the Project at field level • Provide overall guidance to Operations Manager at Block level IT Operators at Panchayat level • Coordinate, manage & monitor the activities performed by the officials at Block and panchayat level 	<ul style="list-style-type: none"> • Ensure timely resolution of issues by escalating the matter to the concerned authorities
Block Division Officer	<ul style="list-style-type: none"> • Assess & Communicate Training needs to DC • Conduct workshops & trainings for Government functionaries • Ensure broadband adoption & usage • Supervise Operations Managers & Block Managers Performance 	<ul style="list-style-type: none"> • For any technical issues BDO will escalate the matter to DC/DIOs for immediate attention
Gram Sewak	<ul style="list-style-type: none"> • Management & administration of hardware infrastructure deployed in institutions • Ensure adequate adoption of services by end users • Monitor Network Availability, Uptime, Downtime • Escalate issues pertaining to network breakdown to network Service Provider • Provide necessary support to District Administration & BDOs 	<ul style="list-style-type: none"> • Report issues pertaining to hardware breakdown or maintenance to local vendor • Report Issues on network breakdown to BSNL & CDOT for immediate resolution.
Operations Manager- Block level	<ul style="list-style-type: none"> • Monitoring the performance of Network Service Provider • Monitor Network Availability, Uptime, Downtime • Escalate issues pertaining to network breakdown to network Service Provider • Provide necessary support to BDOs, DIOs 	<ul style="list-style-type: none"> • For any technical issues Operations Manager will escalate the matter to BDO for immediate attention
IT Operator- Panchayat level	<ul style="list-style-type: none"> • Monitoring the performance of Network Service Provider • Monitor Network Availability, Uptime, Downtime • Escalate issues pertaining to network breakdown to network Service Provider • Provide necessary support to Operation Managers & DIOs 	<ul style="list-style-type: none"> • For any technical issues Block Manager will escalate the matter to BDO for immediate attention

3.1 Hardware Infrastructure

The Pilot Project envisioned filling the infrastructural gaps in 59 panchayats and 195 institutions in pilot blocks. These 195 public institutions identified by the State Governments were provisioned with necessary hardware infrastructure comprising of (1 PC, 1 UPS, 1 Printer/MFD, 1 LED, 1 WebCam) in each institution for delivery of G2C services at the door step of the citizen.

The Public institutions covered included Gram Panchayats, Block Office, RGSK, Tehsils, Schools, Agriculture, Veterinary, PHC/CHC, Hostels, Colleges, Police Stations and Banks. These institutions were enabled with the required IT infrastructure to act as the access points for availing various G2G and G2C services.

The details of **hardware infrastructure installed under NOFN** are:

Hardware Infrastructure Deployed						
Blocks	Total No. of Institutions	PCs	UPS	Printer/MFD	WebCam	LED
Arain	78	129	82	78	78	38
Parwada	63	139	77	63	63	54
Panisagar	54	160	66	54	54	30
Total	195	428	225	195	195	122

The stock entries on the above hardware components installed in vertical and horizontal institutions have been recorded in Block Stock Register maintained by the BDO in the respective blocks.

The details pertaining to the hardware warranty and escalation matrix are enclosed in Annexure II.

In addition to the above, the State Governments provisioned for electrical fittings, earthing, furniture, 1 KVA Generator, Diesel / Petrol in panchayat bhawans for the delivery of G2G and G2C services in all these Gram Panchayats.

Operations and Management

The management of all hardware assets procured under NOFN pilot project will be the responsibility of respective institution. All issues pertaining to hardware breakdown or

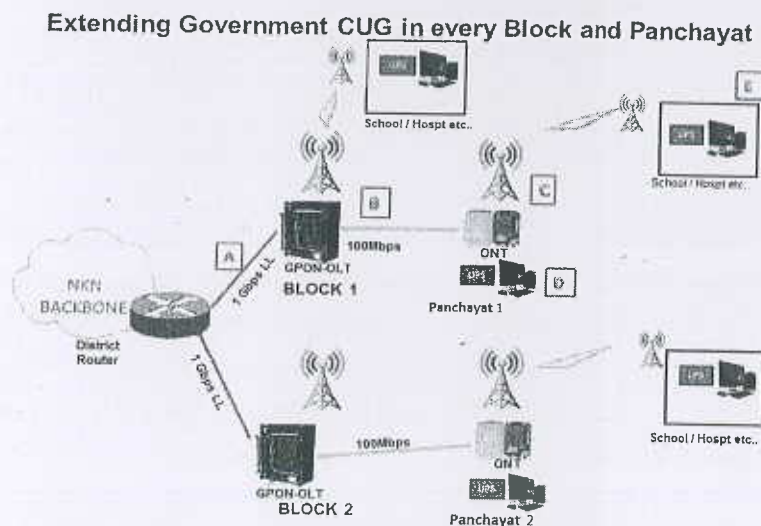
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maintenance may be reported to the concerned local vendor (contact details given in Annexure II).

During the pilot phase, DeitY has paid the charges against the Annual maintenance of Contract (AMC) for desktops, Printers, UPS, LED, Webcam which includes repairs, maintenance and replacement of defective components to ensure trouble free and efficient service of equipment by the local vendors as per the terms and conditions given in the contract.

From 1st May, 2014 onwards, State IT Department shall bear the operational expenses towards the hardware maintenance and replacement.

3.2 Connectivity

The implementation of NOFN Pilot project work was allocated to three CPSUs namely BSNL, POWERGRID and Railtel. BSNL has laid the underground incremental fibre at Arain, POWERGRID has laid the incremental underground OFC at Parvada and Railtel has executed the pilot at Panisagar by laying Aerial OFC. GPON (Gigabit Passive Optical Network) technology has been used for the implementation of NOFN Project. The main components of GPON technology are OLT, ONT/ONU, Splitters, OF cables etc. An OLT equipment is placed at each block headquarter and ONTs are placed at each of the Gram Panchayats (GPs). BSNL has used BBWT equipment supplied by CDOT as access points to reach the last mile in pilot locations. The overall technical architecture for the NOFN pilot, as approved by DeitY is as follows:



Vertical connectivity of 1Gbps has been provided from District to Block, total four OLT links has been commissioned including two in Arain block and one link each in Parwada and Panisagar block. Vertical connectivity of 100Mbps ONT link has been provided by BSNL in total 62 institutions including 59 GPs and 3 blocks.

Vertical & Horizontal Connectivity					
Block	Institution	1 Gbps Connectivity	100 Mbps Connectivity	10 Mbps Connectivity-Hub	10 Mbps Connectivity Client
Arain	78	2	31	30	41
Parwada	63	1	16	11	35
Panisagar	54	1	15	13	38
Total	195	4	62	54	114

Out of 195 institutions, 10 Mbps Horizontal Connectivity from Panchayat to user institutions has been provisioned in total 114 institutions through wireless masts in each Panchayat using C-DOT equipment through BSNL.

Currently, all 59 gram panchayats in the Pilot blocks have been provided with 100 Mbps connectivity by BBNL and 195 public institutions have been provided 10 Mbps broadband connectivity by BSNL.

NIC has established a real time web based monitoring system for testing the Quality of network connectivity in pilot locations which can be tracked on <http://vidcon.nic.in>. The tool is designed to monitor the resources including PCs installed in GPs, ONT device through PC, Wireless transmission devices installed for vertical and horizontal nodes and Digital knowledge Centres.

Operations and Management

During the pilot phase, free bandwidth was provisioned by BSNL as well as BBNL in all 59 Gram Panchayats and 195 institutions valid for the period till 30th April, 2014. From 1st May, 2014, the connectivity and operational expenses will be borne by the State IT Department from departmental funds. The broadband connectivity charges borne by DeitY for the period till 30th April 2014 are given in Annexure III.

All issues pertaining to network downtime, maintenance and upgradation should be escalated to the local Service providers BSNL/CDOT with the intervention of District and Block Administration for issue resolution.

3.3 Services Portfolio

During the pilot phase, the State Governments were approached to identify the portfolio of services to be provisioned through NOFN connectivity. For on-boarding of wide range of services, DeitY liaised with Ministry of Rural Development, Ministry of Health & Family Welfare, Ministry of Human Resource Development and Ministry of Panchayati Raj Institutions.. Further, all Central Ministries and line departments have been approached to provide appropriate additional services leveraging the high bandwidth to be made available through NOFN. The detailed list of services provisioned through NOFN connectivity is enclosed in Annexure I.

Currently all services applications are live, bringing information and services at the doorstep of the citizen. The transactional data pertaining to services is published in e-Taal portal (<http://etaal.gov.in/etaal>) reflecting the status of actual utilization of various applications enabled through NOFN connectivity on a real time basis. However, certain services including skilling and education, health and agriculture are in category of non-transactional services wherein the transactions are being captured in offline mode and are recorded in an independent web application.

3.4 Telemedicine Service

Under the NOFN pilot project phase,

Telemedicine Service		
Block	PHC/CHC	Referral Hospital
Arain	PHC Fatehgarh	JLN Medical College, Ajmer
Parwada	PHC Vada Cheepurupalli	King George Hospital, Visakhapatnam
Panisagar	CHC-Panisagar	G B Pant Hospital, Agartala

The identified PHC and the corresponding referral hospitals have been equipped with the required hardware infrastructure comprising of 1 PC, 1 UPS, 1 Printer/MFD, 1 LED, 1 WebCam, 1 Additional Monitor along with 10 Mbps broadband connectivity by BSNL as well as the e-Sanjeevani software along with necessary medical equipment's comprising of 1 ECG Machine, 1 A3 Scanner, 1 BP Meter, 1 Blood Glucometer, 1 DSLR Camera. The required hands on training have been provided by C-DAC, Mohali to healthcare workers to use this software application for the implementation of Telemedicine Service.

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The e-Sanjeevani software, a web-based comprehensive telemedicine solution designed and implemented by C-DAC, Mohali has been utilized in the pilot project in selective PHCs/CHC and referral hospital in three pilot locations to make healthcare services equitable by bridging the digital divide that exists in remote locations.

The contact details for C-DAC Mohali is provided in Annexure V.

Operations and Management

During the pilot phase, free bandwidth was provisioned by BSNL as well as BBNL in all PHCs and referral hospitals for the period till 30th April, 2014. From 1st May, 2014 the connectivity charges and operational expenses pertaining to hardware and software maintenance will be borne by the State IT department from departmental funds.

The management of all assets procured will be under the responsibility of concerned PHCs/CHC and referral hospital officials.

In order to ensure the optimum utilization of hardware and software infrastructure provisioned under the pilot phase, the District Administration will publish the Telemedicine Consultation schedule giving details of specialty wise Doctor's availability with appropriate date and time in all health centres for conducting Telemedicine Consultations by using e-Sanjeevani Software. The transactional data under Telemedicine service should be frequently monitored by the State Government and District Administration.

All issues pertaining to software application may be escalated to C-DAC, Mohali for timely resolution.

3.5 Digital Knowledge Centres (DKCs)

In order to optimize utilization of infrastructure and bandwidth provisioned for digitally empowered community, 21 Digital Knowledge Centers (DKCs) have been established as hubs for dissemination of digital literacy courses and vocational skills training to the rural population. DeitY has collaborated with various agencies like NASSCOM, Azim Premji Foundation, IL&FS, Amrita University Skills Development, etc. to make e-learning content available to end users.

Each DKC is equipped with 10 Mbps broadband connectivity along with ICT infrastructure including PC, printer, Scanner etc. DKCs are envisaged to offer online G2C, banking and other financial services, e-learning, skills development, capacity building and digital literacy courses, as well as other B2C services.

Operations and Maintenance

During the pilot phase, free bandwidth was provisioned by BSNL as well as BBNL in all DKCs for the period upto 30th April, 2014. Thereafter, the connectivity and operational expenses will be borne by the State IT department from departmental funds. The DKCs will continue their operations as per the current guidelines of the CSC Scheme under the overall supervision of the states SDA for CSC scheme. DKCs will be managed by the respective Service Centre Agency, implementing the CSC scheme in the GP. The management of all assets deployed will be under the responsibility of the concerned DKC operator (VLE/SCA).

No additional revenue support shall be payable to the SCA/VLE for operating the DKC over and above the revenue support paid under the CSC scheme, if any.

CSC SPV will continue to provide necessary support and facilitation to SDA for service enablement and for skilling and education.

3.6 Manpower

Under the NOFN pilot project, specialized IT manpower is deployed including three Operation Managers at Block level and 59 IT Managers at Panchayat Level hired by NIC for overall pilot project implementation, monitoring and support for the period till 30th April 2014.

Manpower Deployed			
Block	Institution	Operations Manager Deployed at Block office	IT Manager Deployed at each Gram Panchayats
Arain	78	1	30
Parwada	63	1	15
Panisagar	54	1	14
Total	195	3	59

Operations and Maintenance

From 1st May 2014 onwards, State IT department/ District Collector may continue the existing manpower support at block and panchayat level based on their assessment of the requirements. All subsequent expenses pertaining to manpower cost will be borne by the State IT department/State government. The detailed cost estimates on manpower support provided by DeitY in three pilot blocks is given in Annexure IV.

3.7 Capacity Building

As part of NOFN pilot project, DeitY funded IT training programs for strengthening of intuitional capacity of Government functionaries at Block and Panchayat level to generate pilot project awareness and the services provisioned for the benefit of the end user. Various IT training programs were delivered on Microsoft Office 2010, Skype, Social media and Internet tools to Government functionaries comprising Gram Sewaks, Panchayat functionaries, teachers, health workers, police and other government functionaries in DKCs in three pilot blocks.

The State IT department along with the District administration may continue to conduct similar trainings for the government functionaries engaged in delivering services to the end users. All subsequent expenses pertaining to training and facilitation shall be funded by State IT department from the departmental funds.

Annexure I: List of Institutions & Portfolio of Services enabled

The list of 195 institutions (including range of services offered) in 59 Gram Panchayats under 3 Pilot Blocks provisioned with hardware infrastructure and broadband connectivity under NOFN Pilot Project is given as below:

Institution Type wise Service Portfolio – Arain, Rajasthan			
Sl	Type of Institution	Total No. of Institutions	Services Provided by this institution type
1	BDO Office	1	Discharging functional and administrative facilities to employees
2	Gram Panchayat	30	PRIYASOFT software package, E-Sugam, Telemedicine (in Fathegarh GP Only), Mandi Bhav, Cause List
	Rajiv Gandhi Seva Kendra (RGSK)	31	PRIYASOFT , Birth and Death Registration , Land records, Individual Beneficiary Schemes , Online BPL/APL Status G2C - RPSC fee collection and application filling, Digital Bonafide Residence Certificate, Digital Caste Certificate (General, OBC, SBC, SC, ST), Copy of record of rights, Utility Bills Payment
3	PHC/ CHC	8	e-Aushadhi modules, Immunization & Ante Natal Care (ANC) Schedule
4	Police Station	1	CCTNS and other services of Police Department
5	Arian Sub Tehsil	1	Discharging functional and administrative facilities to employees
6	Digital Knowledge Centres	5	Banking Correspondent-BOI,SBBJ, LIC Insurance; Western Union- International Money Transfer; Aadhar Enrolments; NIELIT (WDLP); LIQVID, PAN application form, Medanta Telemedicine Consultation, Electoral Services; BSNL, IDEA, Airtel, Tata Indicom and Vodafone mobile bill; BSNL & MTS Telephone Bill; DISH TV Services
7	Telemedicine Centre	1	Telemedicine Service
	Total	78	

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Institution Type wise Service Portfolio – Parwada, Andhra Pradesh			
Sl	Type of Institution	Total no. of Institutions	Services Provided by this institution type
1	Educational	21	Computer Literacy , eLearning
2	PHCs, Veterinary Hospital	4	eHealth Services(PHC Parwada), Animal Husbandry Services(Veterinary Hospital Parwada and Veterinary Hospital Vadacheepurapalli), Telemedicine Services(PHC Vadacheepurapalli)
3	Indira Kranthi Pathakam (IKP) Parwada	1	Mee Seva Services (Registration +Revenue)
4	Govt Office	4	ePanchayat Agricultural Services(Agricultural Office Parwada), Mee Seva Services (Registration +Revenue)(IKP Parwada and Post Office Parwada), TBD (RECS Parwada)
5	Govt Bank	1	
6	Gram Panchayats	15	
7	Digital Knowledge Centres	15	Banking Correspondent-BOI, Union Bank; LIC Insurance; NPS; Western Union- International Money Transfer; Aadhar Enrolements; NIELIT (WDLP); LIQVID, PAN application form, Medanta Telemedicine Consultation, Electoral Services; BSNL, IDEA, Airtel, Tata Indicom and Vodafone mobile bill; BSNL & MTS Telephone Bill; DISH TV Services; Farmer Facilitation Program
8	BDO	1	Computer Literacy, eLearning
9	Telemedicine Centre	1	Telemedicine Service
	Total	63	

Institution Type wise Service Portfolio – Panisagar, Tripura			
Sl	Type of Institution	Total no of Institutions	Services Provided by this institution type
1	Educational	12	Tele-education, e-Book, e-Journals etc.
2	Dept of Animal Resource Dvlp (ARDD)	8	National Animal Disease Reporting System (NADRS)
3	Govt. Office	6	Technology Mission, Records of Rights/Land Mutation Status, Integrated Child Development System (ICDS), Electricity Billing
4	PHCs	2	Mother and Child Tracking System (MCTS)
5	Agriculture Dept., Krishi Vigyan Kendra	2	Agmarket
6	Tripura Gramteen Bank, Tripura State Co-operative bank	2	Electronic Fund Management/Direct Cash Transfer
7	Police	2	CCTNS
8	Administrative	2	e-Subidha service, Birth Certificate, Copy of Register of Ordinary Residence etc.
9	Post Office	1	e-MO, Speedpost etc.
10	Digital Knowledge Centres	1	Banking Correspondent-SBI; LIC Insurance; NPS; Western Union-International Money Transfer; Aadhar Enrolements; NIELIT (WDLP); LIQVID, PAN application form, Medanta Telemedicine Consultation, Electoral Services; Utility based Services
11	GPs	14	
12	BDO	1	Records of Rights / Land Mutation Status
13	Telemedicine Centre	1	Telemedicine Service
	Total	54	

Annexure II: Hardware Deployment

The details regarding IT hardware installed in 195 institutions in three pilot blocks by local vendors (ACER, HCL, Computer Ware, Tritronics, M Intergraph) is given in the table below.

Hardware Infrastructure Deployed in Arain					
Hardware Components	Vendor Name	Qty.	Last date of Delivery	Warranty	Warranty Expiry date
Desktop PC	ACER	31	27th Apr,2013	3years	26th Apr,2016
	HCL	62	2nd March,2013	3years	1st Mar,2016
	HCL	36	30th Mar,2013	3years	29th Mar,2016
	Total	129			
TFT Monitor	ACER	31	27th Apr,2013	3years	26th Apr,2016
	HCL	7	30th Mar,2013	3years	29th Mar,2016
	Total	38			
LED Monitor 32"	Computer Ware	31	27th Apr,2013	3years	26th Apr,2016
		7	30th Mar,2013	3years	29th Mar,2016
	Total	38			
Web Camera	Computer Ware	31	9th Feb,2013	1Years	8th Feb,2014
		47	15th Mar,2103	1Years	14th Mar,2014
	Total	78			
2KVA Online UPS	Tritronics	31	14th Feb,2013	1Years	13th Feb,2014
		51	15th Mar,2013	1Years	14th Mar,2014
	Total	82			
MFP Printer Laser Printer PRO	M Intergraph	31	14th Feb,2013	1Years	13th Feb,2014
		47	20th Mar,2013	3years	19th Mar,2016
	Grand Total	78			

Hardware Infrastructure Deployment for Parwada

Hardware Components	Vendor Name	Qty	Last date of Delivery	Warranty	Warranty Expiry date
Desktop PC	ACER	16	27th Apr,2013	3years	26th Apr,2016
	HCL	32	2nd March,2013	3years	1st Mar,2016
	HCL	91	30th Mar,2013	3years	29th Mar,2016
	Total	139			
TFT Monitor	ACER	16	27th Apr,2013	3years	26th Apr,2016
	HCL	38	30th Mar,2013	3years	29th Mar,2016
	Total	54			
LED Monitor 32"	Computer Ware	16	1st Mar,2013	3years	28th Feb,2016
		38	30th Mar,2013	3years	29th Mar,2016
	Total	54			
Web Camera	Computer Ware	16	9th Feb,2013	1Years	8th Feb,2014
		47	15th Mar,2103	1Years	14th Mar,2014
	Total	63			
2KVA Online UPS	Tritronics	16	14th Feb,2013	1Years	13th Feb,2014
		61	15th Mar,2013	1Years	14th Mar,2014
	Total	77			
MFP Printer Laser Printer PRO	M Intergraph	16	14th Feb,2013	1Years	13th Feb,2014
		47	20th Mar,2013	3years	19th Mar,2016
	Grand Total	63			

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Hardware Infrastructure Deployed in Panisagar

Hardware Components	Vendor Name	Qty	Last date of Delivery	Warranty	Warranty Expiry date
Desktop PC	ACER	15	12th May,2013	3years	11th May,2013
	HCL	30	17th Mar,2013	3years	16th Mar,2016
	HCL	115	14th Apr,2013	3years	13th Apr,2016
	Total	160			
TFT Monitor	ACER	15	12th May,2013	3years	11th May,2013
	HCL	15	17th Mar,2013	3years	16th Mar,2016
	Total	30			
LED Monitor 32"	Computer Ware	15	16th Mar,2013	3years	15th Mar,2013
	Computer Ware	15	14th Apr,2013	3years	13th Apr,2016
	Total	30			
Web Camera	Computer Ware	39	30th Mar,2013	1Years	29th Mar,2014
	Computer Ware	15	24th Feb,2013	1Years	23rd Feb,2014
	Total	54			
2KVA Online UPS	Tritronics	15	24th Feb,2013	1Years	23rd Feb,2014
	Tritronics	51	29th Mar,2013	1Years	28th Mar,2014
	Total	66			
MFP Printer Laser Printer PRO	M Intergraph	15	28th Feb,2013	1Years	27th Feb,2014
	M Intergraph	39	3rd Apr,2013	3years	2nd Apr,2013
	Total	54			

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All issues pertaining to hardware breakdown or maintenance should be informed to the respective local vendor for maintenance or replacement. The contact details of the concerned local vendors are given in the table below. If Level I officer fails to resolve the issue, then the issue may be forwarded to Level II officer. If the issue is not resolved by Level II officer, then the issue may be forwarded to Level III officer.

Escalation Matrix - Hardware Dependent (ARAIN)				
Company	Details	Level I	LEVEL II	Level III
Desktop PC - TFT Monitor/HCL	Contact Person		Mr. Naveen nayak	Mr. Zakir Miyan
	Telephone No.	1860-1801-425 (Toll free)	9799102444	9829069027
	Email ID	usd.p@hcl.com	naveen.nayak@hcl.com	zakir.miyah@hcl.com
Desktop PC - TFT Monitor/Acer	Contact Person	Sharad Dubey	Sharad Dubey	
	Telephone No.	9309018611	9309018611	
	Email ID	sharad_dubey@acer.co.in	sharad_dubey@acer.co.in	
Web Camera/ Computer ware	Contact Person	Call Center	National Centralized Helpdesk	
	Telephone No.	8006001133	011-30715414	
	Email ID		helpdesk@computerware.in	
I.T.D / Computer ware	Contact Person	call Center	National Centralized Helpdesk	
	Telephone No.	1800110011	011-30715414	
	Email ID		helpdesk@computerware.in	
Printer/ M Intergraph	Contact Person	Hitesh Kumar	Anil Verma	Ashu Jain
	Telephone No.	9313626641	989913953	989980237
	Email ID	Hitesh.kumar@mintergraph.com	anil.verma@mintergraph.com	ashu.jain@mintergraph.com
UPS/ Tritronics	Contact Person	Veerl Singh	G.L.GAUTAM	J.N.Kishor
	Telephone No.	2620341/4020341	9829155237	8826097324
	Email ID	jaipur@tritronicsindia.com	jaipur@tritronicsindia.com	ssd-c@tritronicsindia.com

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Escalation Matrix - Hardware Deployed (Parwada)

Company Name	Contact Details	Level I	LEVEL II	Level III
Desktop PC - TFT Monitor/HCL	Contact Person	Toll Free No	Mr. YRKN Rao	Mr. RK Choudary
	Telephone No.	1860-425-1801	7893957979	9849490131
	Email ID	usd.p@hcl.com	yrknrao@hcl.com	rkc@hcl.com
Desktop PC - TFT Monitor/Acer	Contact Person	Vinoda Jaina	C.K. Rao	
	Telephone No.	040-39156803	9849422129	
	Email ID	vinoda_jaina@acer.co.in	ck_rao@acer.co.in	
Web Camera/ Computer ware	Contact Person	Call Center	National Centralized Helpdesk	
	Telephone No.	8006001133	011-30715414	
	Email ID		helpdesk@computerware.in	
LED /Computer ware	Contact Person	call Center	National Centralized Helpdesk	
	Telephone No.	1800110011	011-30715414	
	Email ID		helpdesk@computerware.in	
Printer/M Intergraph	Contact Person	Amar Prakash	Anil Verma	Ashu Jain
	Telephone No.	9301530202	989913953	9899980237
	Email ID	amar.prakash@mintergraph.com	anil.verma@mintergraph.com	ashu.jain@mintergraph.com
UPS/ Tritronics	Contact Person	R.Raju	N.K.Prasad	J.N.Kishor
	Telephone No.	040-64508866	9347596706	8826097324
	Email ID	hyderabad@tritronicsindia.com	hyderabad@tritronicsindia.com	ssd-c@tritronicsindia.com

Escalation Matrix- Hardware Deployed (Pansagar)

Company	Details	Level 1	LEVEL II	Level III
Desktop PC - TFT Monitor/HCL	Contact Person	Toll Free No	Mr. Nabendu Dutta	Mr. Biswajit Singha
	Telephone No.	1860-425-1801	9612050281	9678085543
	Email ID	usd.p@hcl.com	nabendu.dutta@hcl.com	biswajit.singha@hcl.com
Desktop PC - TFT Monitor/Acer	Contact Person	Nirmali Burman	Bichitra Chetia	
	Telephone No.	0361-2344556	9678048658	
	Email ID	nirmali_burman@acer.co.in	bichitra_chetia@acer.co.in	
Web Camera/ Computer ware	Contact Person	Call Center	National Centralized Helpdesk	
	Telephone No.	8006001133	011-30715414	
	Email ID		helpdesk@computerware.in	
LED /Computer ware	Contact Person	call Center	National Centralized Helpdesk	
	Telephone No.	1800110011	011-30715414	
	Email ID		helpdesk@computerware.in	
Printer/M Intergraph	Contact Person	Amar Prakash	Anil Verma	Ashu Jain
	Telephone No.	9301530202	989913953	9899980237
	Email ID	amar.prakash@mintergraph.com	anil.verma@mintergraph.com	ashu.jain@mintergraph.com
UPS/ Tritronics	Contact Person	Ashim Pathak	R.A.Prasad	J.N.Kishor
	Telephone No.	9707023206	9007461730	8826097324
	Email ID	guwahati@tritronicsindia.com	kolkata@tritronicsindia.com	ssd-c@tritronicsindia.com

Annexure III: Connectivity Charges

During the pilot phase, BBNL/BSNL provisioned free broadband connectivity in all 59 Gram panchayats and 195 institutions for the period till 30th April 2014. The detailed cost estimates on broadband connectivity provisioned in three pilot blocks is presented in the table below.

Broadband Connectivity by BSNL in Pilot locations								
Blocks	1 Gbps		100 Mbps		10 mbps		10 mbps	
	1 Gbps Links	Total Cost (INR)	100 Mbps	Total Cost (INR)	Hub Locations	Total Cost (INR)	Client Locations	Total Cost (INR)
Arain	2	67,42,842	31	33,09,002	30	40,69,230	41	33,69,062
Parwada	1	33,71,421	16	17,07,872	11	14,92,051	35	28,76,028
Panisagar	1	33,71,421	15	16,01,131	13	17,63,333	38	31,22,545
Total Installed	4	1,34,85,684	62	66,18,005	54	73,24,614	114	93,67,635

For issues pertaining to network breakdown, downtime & maintenance should be informed to the respective BSNL/CDOT representative for issue resolution.

BSNL: Shri.Rajesh Singh, Contact number:9868244055, email address: singhrajesh33@gmail.com

CDOT: Shri. Ravinder Ambardar, email address: ravinder.ambardar@gmail.com

Annexure IV: Manpower Charges

The manpower cost incurred by DeitY is given in the below table.

Resource Type	Manpower Deployed in Pilot Blocks			Cost Including Service Tax
	No. of Resources	Cost Per Resource (Rs)	Total Cost (Rs)	
Operations Manager - Block level	3	10,500	9,90,000	11,12,364
IT Operator – Panchayat Level	59	22,000	92,92,500	1,04,41,053

Annexure V: Contact Details for Telemedicine (C-DAC, Mohali)

Shri. Rajesh Kumar, Technical Officer
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Health Informatics and Electronics Division

Centre for Development of Advanced Computing (C-DAC)
(A Scientific Society Under Department of Electronics & Information Technology, Ministry of
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