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ज्ञान-विज्ञान विमुक्तये

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Broadband Connectivity in Rural India (A study of Rewari District)

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1. Broadband in Rural Areas

The broadband connectivity in rural area is a Digital India campaign launched by the Government of India to ensure that Government services are made available to citizens electronically by improved online infrastructure and by increasing Internet connectivity or by making the country digitally empowered in the field of technology. It was launched on 2 July 2015 by Prime Minister Narendra Modi. The initiative includes plans to connect rural areas with high-speed internet networks.

Because of relatively low population density, topographical barriers, and greater geographical distances, broadband service may be more difficult to obtain in some rural areas. In attempting to address these challenges, some rural communities have found it helpful to develop a strategic plan for broadband deployment that includes creating a comprehensive business proposal to broadband providers.

The unveiling of the annual budget this year brought along with it the announcement of PM Narendra Modi's government bringing high-speed affordable internet to 150,000 villages in the country. Keeping in tune with the same, the government has already expanded its budget to Rs 100 billion ($1.4 billion) and laid 155,000 km long optical fibre cable across the country.

Under the new initiative introduced in February 2017 and christened 'Digital Village', the Indian government aims to bring free Wi-Fi to 1050 villages in the next six months. The *Digi Gaon* programme as it is colloquially known, aims to provide telemedicine, education and skills through digital technology. With 2500 crore digital transactions targeted for FY 2018, the project falls under the larger head termed

Bharat Net Project with a massive allocation of Rs 10,000 crore.

2. Objectives:

- ❖ Provide widespread and non-discriminatory access to quality ICT services at affordable prices to people in rural and remote areas.
- ❖ Provide an effective and powerful linkage to the hinterland thereby mainstreaming the population of rural and remote parts of the country.
- ❖ Ensure that universal services are provided in an economically efficient manner.
- ❖ Ensure that by developing hitherto unconnected areas, the benefits of inclusive growth are reaped by our nation, bringing in its wake rapid socio-economic development and improved standards of living.
- ❖ People in rural and remote areas of the country where ICT services are not available due to commercial non-viability on account of various combinations of reasons such as:
  - Sparse population
  - Remoteness of areas
  - Absence of supporting infrastructure (power, road etc.)
  - Low income of inhabitants
  - Insurgency
  - Difficult terrain

It is here that USOF Administration steps in to provide subsidy support thereby incentivizing telecom service providers to venture forth and provide services to such target beneficiaries.

3. Why we do

- Market Gap/failure - At current competition/market maturity, ICT Services cannot be provided
- Access Gap - Prohibitive cost of service provision or Infeasibility due to society's expectations of 3A's (availability, accessibility & affordability) and 'Beyond 3A's i.e. fairness, equity
- To bridge Rural- Urban digital divide

- Socio-Exclusion & Economic-lag of rural citizens due to Market & Access Gap

- "Lack of a business case" for telecom companies- Higher capital cost of providing telecom services in rural and remote areas; these areas also generate lower revenue due to lower population density, low income and lack of commercial activity. Thus normal market forces alone would not direct the telecom sector to adequately serve backward and rural areas.

- Government's Constitutional Obligation to grant Services to every citizen irrespective of socio-economic considerations & geographical location

4. Why broadband Important

1. Countries have realized that Telecommunication and IT infrastructure boosts economic growth

2. Broadband contributes to the GDP.

3. Many countries have declared Broadband as a fundamental right.

4. Broadband contributes to the development of Science & Technology, social upliftment, help minimize the pollution, economic development and accelerates learning.

5. Implementation Status (Haryana)

DISTRICT	PlannedOLTS	Installed OLT (Optical line terminal)	Total GPs	ONTs installed	Lit GPs
Ambala	**12**	**12**	**401**	**338**	**248**
Bhiwani	**14**	**14**	**460**	**292**	**81**
Faridabad	**4**	**4**	**95**	**88**	**76**

Fatehabad	**9**	**9**	**245**	**174**	**97**
Gurgaon	**7**	**7**	**225**	**126**	**96**
Hisar	**13**	**13**	**305**	**222**	**88**
Jhajjar	**7**	**7**	**248**	**232**	**103**
Jind	**13**	**13**	**300**	**281**	**261**
Kaithal	**8**	**6**	**271**	**250**	**39**
Karnal	**10**	**9**	**373**	**268**	**102**
Kurkshetra	**8**	**8**	**382**	**313**	**48**
Mahendragarh	**10**	**8**	**338**	**256**	**223**
Mewat	**6**	**6**	**287**	**258**	**201**
Palwal	**7**	**6**	**252**	**220**	**160**
Panchkula	**4**	**2**	**70**	**59**	**33**
Panipat	**5**	**5**	**167**	**146**	**77**
Rewari	**8**	**8**	**351**	**243**	**176**
Rohtak	**7**	**7**	**141**	**78**	**30**
Sirsa	**9**	**9**	**334**	**323**	**94**
Sonipat	**8**	**8**	**323**	**235**	**208**
Yamunanagar	**11**	**11**	**439**	**342**	**155**

TOTAL	**180**	**172**	**6007**	**4744**	**2596**

6. Status of Broadband in Rewari District: The statuses of broadband connectivity are as under:

S.No	District	Block	GPs	PLB laying completed	OFC laying completed	Fibre tested E2E & terminated at GP	Service Ready GPs	GP Lit
1	REWARI	BAWAL	93	93	93	93	80	49
2	REWARI	JATUSANA	64	64	64	64	64	55
3	REWARI	KHOL	57	57	57	57	57	52
4	REWARI	NAHAR	46	46	46	46	42	19
5	REWARI	REWARI	91	91	91	91	63	24
Total			**351**	**351**	**351**	**351**	**306**	**199**

Data as on 15.11.2017

Number of Gram Panchayat = 351

Number of duct laying Gram Panchayat= 351

Number of OFC laying completed =351

Number of E2E Gram Panchayat connected on OFC=351

Number of service ready gram Panchayat=306

Number of Gram Panchayat Lit= 199

7. Key challenges of NOFN implementation

NOFN was launched in 2011 to connect 2,50,000 gram panchayats through broadband with the goal of providing these villages with the facilities of e-education, e-health services, delivery of government to citizen services etc. For implementation of NOFN, a special purpose vehicle (SPV), BBNL was created with BSNL, RailTel and GailTel as to be the deployment agency. Pilot project by BBNL in 3 blocks in 3 different states of Tripura, Rajasthan and Andhra Pradesh was successful in laying down the infrastructure. This convinced 22 more states who agreed to take more pro-active support in project. Leaving apart pilot projects, NOFN faced many challenges and its implementation has been tardy.

1. Lack of coordination between implementing agency and lack of timely fund release by government has obstructed the process largely.
2. Delay in the implementation has to rise in cost by multiple times.
3. Even where infrastructure is ready, it is not met with the demand side requirement. For this there is lack of National Capacity building plan in this direction as well as lack of incentives till now for service providers.
4. The framework for integration with National Knowledge Network and State Wide Area Network is still lacking, which has potential to accelerate the implementation.
5. While NOFN is need of the hour as well as core of government's Digital India, there is serious problem in its implementation. Delay, lack of coordination and focus are just increasing the cost of the project and depriving the rural people benefit of its access.
6. Trained manpower

8. Project implementation Constraints

- Project is of a mega nature widely dispersed across the country and to reach fiber to the unreached areas, which are rural and remote. 6 Lakh

Km of OFC to be laid. (Biggest Optical Fibre (FTTH) project i.e. 2 Lakh Km in Australia took 10 years to complete).

- Highly challenging project involving multiple agencies DOT, BBNL, CPSUs / Central / State Agencies / contractors etc.
- Challenges faced in awarding contracts because of various reasons viz. difficult areas (Hilly/Rocky/LWE), limited no of Trenching & laying contractors, Schedule of Rates (SoR) of BSNL, High rates quoted by contractors.
- Lengthy & cumbersome procedures for ROW permission from NHAI, Forest, Oil & Gas companies etc.
- ROW permission from forest department (state) take unduly long time.
- State PWD in HP, Mizoram permitted free ROW after prolonged persuasion.
- Unavailability of Gram Panchayat(alternate Govt.) building in some states.
- Progress hampers due to :
    a. Monsoon season & subsequent water logging.
    b. R & B department insisting for laying OFC beyond Centre of road (not possible being private land / encroached land.
    c. No information about utility services like water & drainage piping line in village.

9. Other Observations:

1. Majority of gram panchayat do not have a building available to house necessary equipment needed to provide access to users.
2. Delayed/no permission from local civic authorities to dig trenches and lay cables have slowed down the pace of work.

3. Lack of interest shown by private players towards investing in the project.

4. Laying of underground cable is slow and tardy

5. No proper support by villagers and District Administration

6. Proper space is not provided by the sarpanch

7. Electricity problem

10. Outcomes:

The availability of a robust and reliable broadband connectivity is most critical for the successful implementation of some of the key social sector schemes and programmes in rural areas by the Central and State governments on e-governance, education, health, employment and financial inclusion. CSC e-governance Services India limited installed Wi-Fi access point in the villages. Some of the villagers are using Wi-Fi services for browsing Internet-mail, social sites and filling online forms. The internet services are paid. The Villagers also getting birth certificate, board mark-sheets and JeevanPramaan from CSC centers.

The better G2C (Government to Citizens) and C2B (Citizen to Business) interactions will enable better services and socio-economic opportunities for the rural people. Internet connectivity is imperative for the various financial reach initiatives – whether para-banking or micro-financing or the Jan DhanYojana.

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