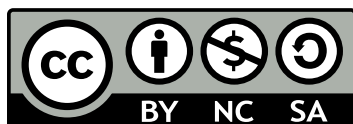# Community
NETWORKS

Documenting and Celebrating Wireless Barefoot Engineers

Asheef Iqubbal

Community Networks: Documenting and Celebrating Wireless Barefoot Engineers

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Author: **Asheef Iqubbal**

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Digital Empowerment Foundation (DEF) has been working on digital access, governance and information poverty by instrumentalising Information and Communication Technology (ICT) for decades now. As the governments continue to uncritically impose technology on poor and marginalised sections of the society, DEF continues to advocate access to all with almost 10,000+ teams and with a presence in more than 500 locations across 126+ districts of 23 Indian states and union territories. In line to this, DEF and the Internet Society (ISOC) together launched a joint project Wireless for Communities [W4C] to democratise access to the Internet. The aim was to provide a holistic, community-empowered approach for connecting rural communities to the Internet. W4C instrumentalises the unlicensed spectrum bands — 2.4 GHz and 5.8 GHz — to create community-operated wireless networks.

In order to achieve the goal, training was provided to hundreds of young men and women, most of them do not have any technical background; some of them even lack formal education, who become barefoot engineers and went to different parts of the country to connect the unconnected. The training and exposure at DEF yield multiple success stories in terms of economic opportunities and social change. Along with the Internet connectivity, these barefoot or wireless engineers contribute in bringing cultural and social diversity, help build the rural economy and connect the last unconnected. Not only connecting to the Internet but training them to grab the opportunities that the Internet has to offer. This book documents and celeberates barefoot engineers' success.

Community Networks: Documenting and Celebrating Wireless Barefoot Engineers

CHALLENGING PATRIARCHY IN STYLE

Read The Story of Naghma Khan

Twenty-five-year old Naghma Khan wanted to become an engineer during her early stages of studies but financial constraints forced her to leave her dream. Always curious to learn new things, Naghma first saw the computer when she was enrolled in Digital Empowerment Foundation's digital literacy programme. She said she was shocked to see what the Internet has to offer; the computer excited her. The excitement led her to learn wireless networking under DEF's Wireless for Communities [W4C] programme that aimed to democratise the Internet with the help of unlicensed 2.4 GHz and 5.8 GHz spectrum. DEF has been utilising these spectrums to provide information, media infrastructure, and connect underserved communities.

Naghma is now the go-to person for any trouble in wireless connectivity in her region. She has trained many people in her locality. She said, after learning about computers and what it has to offer as well as wireless networking, her dream of becoming an engineer came true. During initial days of working, as a woman in a country where patriarchy has deep roots, she faced multiple societal challenges. People taunted her for studying with boys, for working with men and what not. But, she did not double down under these conservative mindsets. She narrated how people used to tell her mother, a homemaker, that she should not allow her daughter to send for the studies and that too with boys.

Naghma convinced her mother to not worry about anything, as the people are just insecure who could not achieve anything in their lives. Along with the work, Naghma continued her studies and recently completed her Masters degree in social science. She said, without work she would not have continued her studies due to the financial condition of her family. Her father is an auto rickshaw driver, who struggles to secure food for them. There are still many parts of the country where information is not easily accessible, Naghma's dream is to serve those people by connecting them to the Internet. She said that in remote parts of the country, people do not know how important Internet connectivity is, so we must run awareness campaigns in such areas. The drive could only be successful if we involve more and more local people. We must take along every section of the society, especially women.

She remembers those days when the Internet connectivity was not stable in her locality. People were completely unaware of any such technology. But, now one can feel the change anywhere. Young girls and boys are learning computers and the Internet to explore new opportunities, to study online, to learn new things such as cooking and painting. Naghma recently got married in November. She said that she only married on the condition that the in-laws will allow her to do whatever she wants to do in her life. She believes, without financial independence, this would not have been possible. And, it is such a nice feeling. She wishes every woman in the society to achieve independence in every sense. She hopes technology will break all these barriers and democratise everything from information, rights to independence.

CONNECTING THE UNCONNECTED

Read The Story of Mudassir Ansari

In 2010, Mudassir Ansari, a vibrant and enterprising man in his early twenties, was running a telephone booth in Chanderi, a small town in Madhya Pradesh's Ashok Nagar district. Chanderi, a beautiful town surrounded by hundreds of monuments that also attracts tourists is known for its unique handicraft work which employs a large section of the population of the town. Mudassir also had a computer which he used in accessing emails and other work such as print outs and photos, but patchy internet connectivity was proving to be a hurdle all the time.

In 2009, when the Digital Empowerment Foundation was trying to establish its centre to provide digital literacy to the weaving communities, Mudassir got in touch with DEF. Initially, a little hesitant, Mudassir became curious about what all the Internet had to offer. A 12th grade passed, Mudassir remembers how Chanderi was not aware of the phenomenon called the Internet that was completely changing the order in other parts of the world.

In 2010, DEF and Internet Society launched 'Wireless for Communities [W4C]' programme in the region with an aim to make the Internet accessible for all. Mudassir joined its training session and went on to become one of the finest wireless engineers and led numerous programmes of wireless networking for DEF across multiple states of India. Mudassir learnt technicalities of wireless networking from configuring sight of line links to routers. Till date, he has trained more than 2500 people in wireless networking across the country.

Mudassir says, DEF and its wireless for communities programme has completely changed his life. Earlier, DEF helped him with setting up a cyber cafe in Chanderi, and Internet was provided through wireless connectivity that they set up in the region. The cyber cafe was instrumental in providing digital literacy in the town. Establishment of W4C democratised the information system. Young people flocked to DEF's Community Information Resource Center (CIRC) to learn computers, become digitally literate, gain vocational training in Information and Communication Technology (ICT), learn textile and apparel designs on computers, learn to use the digital drum printers for full-sized designs and digitalization of all historical patterns and designs.

DEF provided Internet in the entire town without charging for it. DEF provided the Internet in government offices, schools, and trading communities. People were able to access social welfare programmes through the Internet and do their business online. Now ideas are being exchanged, products are being sold online, and weaving communities of Chanderi found customers in every part of the world. It was all made possible due to better Internet connectivity and DEF's digital literacy programmes. Mudassir is working on multiple projects in South-Indian states such as Tamilnadu and Visakhapatnam. Accessibility of the Internet is a critical factor in deciding welfare schemes for marginalised sections of the society, so we must not leave anyone unconnected.

TUTORING WIRELESS

Read The Story of Fauziya Naseem

We have provided the Internet to the underserved population across the country, said Fuaziya Naseem, a Senior Network Engineer with Digital Empowerment Foundation. Twenty-eight-year old Fuaziya has been working with DEF since 2015. Currently, she is in-charge of Guna district of Madhya Pradesh. She also manages wireless connectivity of neighbouring district Shivpuri. Guna and Shivpuri are one of the most underdeveloped districts of the country which are dominated by Scheduled Castes and tribes. When DEF first went to the region, the region was not connected with the rest of the world; Internet connectivity was patchy; electricity supply was unstable.

Now, since the Internet connectivity has been improving, Fuaziya said that private internet service providers charge huge amounts of money which is not affordable for the people living in the rural areas. In this context, the role of DEF becomes important. DEF, through wireless connectivity, which is an inexpensive technology, has been bridging the connectivity gap in remote areas without any cost or minimal charges. A trained engineer in electronics and communication, Fauziya said that 2.4 GHz and 5.8 GHz frequency, which is generally a free spectrum and can be used without licence, have been instrumental in connecting unconnected communities with the rest of the world.

Connectivity has enabled communities in accessing social welfare programmes and exploring new opportunities. Fauziya hails from Munger district of Bihar. She said, even in the twenty-first century there are many challenges that as women they have to face. Fuaziya has trained dozens of women and men in different parts of the country in wireless connectivity under DEF's programme –– Wireless for Communities [W4C]. People that are trained generally do not have any technical education or sometimes do not even have a formal education. DEF introduces them to wireless connectivity and various aspects of it like how to configure it, color coding, line of connectivity and so forth. Fauziya said that India is a diverse country, so the challenges are equally diverse such as languages and culture in training and connecting people.

She narrates that stepping outside the home and travelling is still a challenge for women. Women still need permission to go outside. Paternalistic attitudes are still prevalent in our society. Men of our society decide what women should do, what kind of education they should get. All these patriarchal attitudes have deep structural roots in our society. Not every woman, who we have trained, started to work but some did, which sparks some hope. Fauziya says that things are changing; despite the huge digital divide, the Internet connectivity is democratising the information system and she hopes it will shake the deep rooted patriarchy and paternalistic attitude of our society.

Community Networks: Documenting and Celebrating Wireless Barefoot Engineers

BORN INNOVATOR

Read The Story of Bablu Das

Thirty-two-year old Bablu Das is the solution for everything from patchy Internet connectivity to dying laptops and computers at Digital Empowerment Foundation's Head Office situated in New Delhi. Bablu has no formal education. Even though sometimes when he tries, says Bablu, but never really understood anything related to education, that does not mean it can stop him from learning anything new — from color coding of computers to any issues related to Internet connectivity. He joined DEF in 2011 as an office help, but soon he learnt new skills of installing computers, mobiles and printers, recycling and refurbishing them; ultimately earning the reputation of the most reliable and go-to man for all the problems in office.

Bablu came to Delhi from Murshidabad district of West Bengal when he was only eight, and started working in a tea shop to help his family. Since then he worked in multiple sectors and acquired different skills such as binding and wrapping. He says, when he had joined DEF, his curiosity to learn new things drew the attention of some members of DEF. Since that day, DEF has been giving him all the support and encouraging him to try new things. He learnt wireless networking and deployment of them in remote parts of the country. He cannot read texts, but now he communicates through voice messages. Technology has eased the lives of people like him who cannot read anything. 'I must say that education is vital to grow in life,' believes Bablu.

Bablu, father of a daughter, wants his daughter to study hard. He believes that what he has suffered due to lack of education, his daughter should not. His daughter, a student in fifth class, can read and speak English. When she tells him the meaning of an email or any text, it feels so good, said Bablu. She does her homework through the Internet. She reads and does so many things by instrumentalizing new technology like the Internet and smartphones. Bablu believes knowledge is meant to distribute, and he wants to impart his skills to anyone who is interested in learning wireless connectivity. Having worked everywhere from house cleaner to car washerman, Bablu said that it is important to help people who do not have skills. They can do wonders.

Bablu said that after working all these years in DEF, he has learnt that the internet has bridged the gap of information. When he looks back at his childhood, only a few people, socially and economically influential, had all the access to information. Now this order is crumbling. His daughter has access to all the information and can explore opportunities that modern education has to offer as well. Bablu hopes that these gaps of information shatters soon.

HOPEFULL JOURNEY OF CONNECTIVITY

Read The Story of Mukesh Chaudhry

Mukesh Chaudhry, 30, is a project manager at Barefoot College situated in Ajmer district of Rajasthan. He wants to connect villages with patchy electricity to the internet and solar energy system. Mukesh, a father of two children, believes that we must reduce our dependence on natural resources like water and move towards sustainable resources like solar energy. Mukesh is well trained in wireless networking. Mukesh's dream is to connect every school with solar systems and the Internet. He believes every child deserves equal opportunity.

He embarked on a new journey in 2012, when he met Osama Manzar, Co-founder and Director of Digital Empowerment Foundation (DEF), who was visiting Barefoot College and introduced him to wireless networking. He joined DEF's cohort of wireless engineers in Guna District of Madhya Pradesh, where he was trained by DEF. The training helped him to understand technicalities and practicalities of wireless networking. Mukesh is now familiar with geo specific locations and wifi routers. Besides, he also knows how to configure line of sight links and so on.

Since then, he has been a part of DEF's ambition of taking the Internet to the remotest parts of the country. Mukesh was also a part of DEF's project in Kutch district of Gujarat, where he was instrumental in providing Internet to 30 schools. He was also a part of the team which was providing Internet connectivity at the School of Democracy in Rajsamand district of Rajasthan and multiple such projects. Mukesh believes: 'Every child deserves equal opportunities of learning'. He said that it is a fulfilling experience to provide basic facilities to the underserved populations.

He believes that DEF has created an environment for the free flow of information through Wireless for Communities (W4C) which is instrumental in alleviating poverty.

He said that he really enjoyed learning everything, from using computers to setting up DEF's Community Information Resource Center (CIRC) where children, especially girls, come to learn computers, basic services such as social media and messaging apps, and to become digitally literate.

Mukesh is now on a mission of taking society towards sustainable development and many people accompany him on this journey of hope. A hope for a better future. A sustainable future. Mukesh is currently working on multiple projects which aims to connect schools with the solar system and Internet in tribal and rural areas. He said that there are multiple challenges in this journey but any struggle can be won if we are persistent. And, we will.

EXPLORATION OF NEW BUSINESS AVENUES

Read The Story of Layek Ram

Layek Ram, a 27-year-old young man, took the charge of connecting his communities to the Internet in 2016. Internet connectivity was patchy, slow and irritable in Saidanpur, a village in Barabanki district of Uttar Pradesh. Saidanpur is known for its craft and handloom work. For livelihood, almost each house depends on the handlooms. Saidanpur was losing its shine of handloom due to low demand. The spaces where weavers could sell their products were contracting. Most weavers work under middlemen or small scale businessmen. Middlemen hire weavers on the basis of demand. Raw materials such as cotton, silk, zari, etc. are provided by the middlemen, and labor cost is determined by the amount of handiwork. The exploitation was rampant.

Layek, who holds a degree in business management, believes that the Internet can be instrumentalised to explore new avenues of business for the weaving communities. Bringing new avenues of business and connecting these weavers to the economy can only preserve the age-old crafts of hand work. After receiving training in Guna, a small town in Madhya Pradesh where DEF holds training in wireless networking regularly, Layek started working on the DEF's project 'Wireless for Communities [W4C]' that aims to connect the unconnected with the help of free spectrum. Layek worked tirelessly and set up the connectivity that provides unlimited data with minimum or no cost. Despite not having trained in the technical field, Layek learnt everything from configuration to line connectivity.

Layek says that they are currently engaged in multiple things such as digital literacy to information literacy. Merely connectivity will not bring the change. Everyone should be able to instrumentalise that connectivity to explore what the Internet has to offer. That is important. DEF's hard work is now starting to pay off, young folks continue to explore new worlds. They learn new designs that are effective in terms of cost, they sell their product on online platforms, and explore new career opportunities. The Internet is a double edged sword. On one hand it offers exciting opportunities to connect the world but on the other hand it also throws a serious challenge of misinformation and hatred. In the absence of formal employment and education, the Internet can accelerate the monster in society that has always been there. Layek is trying to help children understand the difference between sensational news and news that matters to the society. Along with connectivity, media literacy will be critical for an effective use of the Internet.

The Internet along with digital training and information literacy are changing the social outlook of society. Rural areas like Saidanpur is riddled with casteism, patriarchy, gender-based discrimination, religious hatred among others. Exposure to the world-view through the Internet is playing a crucial role in bringing change in society. Layek says that when he sees young children discussing caste, religion, gender, and employment with a progressive expressions, it really makes him happy. Layek said that he is planning to expand the connectivity among different nearby communities but stable electricity supply is a challenge. Sometimes electricity will not show up for 3-4 days and solar does not work during monsoon and winter. Layek hopes to resolve the electricity issue by taking help from the local administration.

REDEFINING THE DEVELOPMENT

Read The Story of Raghav & Kiran

38-year-old Raghav Mahto has been using his creativity to disseminate information much before Facebook and Twitter was founded. Raghav created a broadcasting service in 2000 by using locally available transmitters which covered a 20 kilometers radius of Mansoorpur, a small village in Vaishali district of Bihar. His broadcasting service Raghav Radio, where he used to disseminate information/updates to the villages, was shut down in 2005 by the government authorities due to licencing issues. In the same year, his father also passed away due to prolonged illness. Raghav joined Digital Empowerment Foundation [DEF] in the same year as he was looking for some livelihood opportunities. At DEF, he got the training in wireless networking in Guna. Initially he was hesitant as he lacked formal education and everything written on devices like routers was either in Chinese or English. Raghav says it was scary.

After living in Guna for one and a half years, Raghav met lots and lots of people who were experts in wireless networking. Gradually, he learnt everything from configuring routers and signal devices. Raghav learnt to assemble computers, he can now repair any electronic or computer device; also learnt how to build wireless networks and wifi hotspots. Due to family issues, he came back to his home in Bihar where with help of DEF, he started a Community Information Resource Centres [CIRC] which aims at livelihood generation, education improvement, health focus, and rural development, all through Information and Communication Technology [ICT] tools, particularly targeting marginalised groups such as children, youths and women. When he started the centre there were many structural challenges such as patchy or slow internet connectivity and irregular electricity supply. He used devices like wifi hotspot and solar to tackle these challenges.

Raghav said that he does not remember exactly how many people have received the training from CIRC but the number must be more than 4000. Many of them are working nearby and set up Common Service Centres [CSC]. They are instrumental in taking government schemes to the villages. Since the government is pushing digitisation in everything from food ration, pension to scholarship, it is important to make people aware about these services and how they can avail it. Raghave said that one living in the cities cannot imagine the situation in villages, people do not know what One Time Password [OTP] or Aadhar Card number means, but the government has uncritically imposed these technologies on them. In a country like ours welfare schemes are instrumental in fighting hunger. Government and people working in air conditioned rooms and shaping the policies must acknowledge that.

Raghav believes there should be a mass digital literacy programme to make people aware about their rights. Along with his wife Kiran, Raghav started a school in Mansoorpur, where they are combining traditional education with digital literacy to reduce information poverty. Raghav and his wife's vision for reducing unequal distribution of information and education goes back to when they first met and fell in love with each other. The couple has been discussing these issues as a daily conversation. When they thought of marrying, society was there to dictate terms but they left the village and got married. Like their struggle of reaching out to the last person of the society, their personal struggle was not easy either. They faced everything from threat to anger but the couple refused to double down.

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Raghav said that elected representatives are not even aware of these technologies that are being deployed. This is opening new ways of exploitation. For a small thing like a correction in an Aadhar Card or Ration Card people are being charged 500 to 1000 rupees. Raghav believes that this is not merely social or administrative issues but politics has a role to play in it. Kiran, Raghav's wife, is hoping to contest election this year for Mukhiya [Elected representative at panchayat-level]. He said that we must get into politics to shake the chained systems who do not listen to the marginalised and poors. Politics is a tool of social change and we must instrumentalise it whether it is social, economical or digital. Long battle awaits for Kiran and Raghav. Our DEF team is wishing them best wishes!

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Community Networks: Documenting and Celebrating Wireless Barefoot Engineers

ERADICATING DIGITAL BARRIERS

Read The Story of Manoj Ojha

Manoj Ojha, a young man in his late twenties, is on a mission to eradicate digital barriers. Manoj who hails from Guna district of Madhya Pradesh, one of the most backward states of India, believes that the Internet is a critical force in deciding access to social security programmes. The government is increasingly digitising social welfare programmes with no consideration of positionality and accessibility of the Internet. Villages are still unconnected. People do not know where to go in order to link Aadhar Card, a 12 digit unique ID card mandated for accessing social welfare programmes, or for applying for a birth certificate. Attempt of delivering government services to the villages directly through Information and Communication Technology seems half-hearted. There are multiple structural issues such as slow Internet connectivity, and low literacy level gripping rural India.

In 2016, Manoj joined Digital Empowerment Foundation [DEF] for a training session on Wireless for Communities programme (W4C). He was taken by surprise by the phenomenon called the Internet. He showed huge interest in learning about setting up wireless networks due to the potential it has to offer in terms of economic opportunities. He learnt the details of deploying community networks and travelled to multiple states inIndia to work on connecting the unconnected. Travelling to different parts of the country exposed him to the diversity of the country and layers of problems faced by people living in different parts of the country. His motivation came from travelling as he saw people are being excluded from the architecture of social security due to skewed Internet connectivity. He said that DEF's model was simple -- using the free bandwidth to connect rural India. When Manoj joined, DEF was already a force in taking digital governance to rural India through its many flagship programmes such SmartPur. Manoj said that his aim was to instrumentalise these centres in providing Internet services to the villages.

Manoj said that mobile Internet data is not only sometimes costly but the connectivity is patchy as well. In this context wireless connectivity becomes critical to democratise connectivity, also revenue generation is something that needs to be considered. Alternate revenue generation should be developed as there are still many villages in the hilly areas where the Internet has not reached. Along with the Internet, Manoj believes digital literacy is critical in providing access to government services. Manoj, after taking a long pause, said that the experience as a barefoot engineer till now has been satisfying as he has witnessed crucial changes in multiple areas where he has worked. To see people using Information and Communication Technology to demand accountability, rights and equal opportunities was overwhelming for him. Manoj, who was once forced to leave his studies, is currently working as server manager for a Bhubaneswar-based Internet Service Provider (ISP). He said all this was not possible without the support of DEF.

"*Manoj Ojha, a young man in his late twenties, is on a mission to eradicate digital barriers. Manoj who hails from Guna district of Madhya Pradesh, one of the most backward states of India, believes that the Internet is a critical force in deciding access to social security programmes. The government is increasingly digitising social welfare programmes with no consideration of positionality and accessibility of the Internet.*"

DEMOCRATISING DIGITAL GOVERNANCE
Read The Story of Ravikant Prajapati

Ravikant Prajapati's voice breaks when he speaks over a phone call about connectivity and digital governance. He said: "I am pretty confident that my voice must not be clearly audible to you because of the poor network connectivity. So you can imagine the speed of the Internet in the locality." Ravikant, in his early twenties runs a Common Service Centre [CSC], aiming to take digital governance in remote parts of the country, such as Bodupura, which is a small village situated 70 kilometers away from its district town Guna, Madhya Pradesh. Ravikant said that those who are trying to provide access to digital governance in rural India are facing difficulty due to poor connectivity of the Internet, at least in his area it is quite evident. Ravikant, a graduate in social science, embarked on his digital journey in 2019 when he came in touch with Digital Empowerment Foundation.

Ravikant took the training of wireless networking under DEF's flagship programme Wireless for Communities [W4C]. During his 28 days training he learnt how to deploy the Internet by utilising the unlicensed spectrum bands — 2.4 GHz and 5.8 GHz — to create community-based and community-operated wireless networks in rural and remote locations of India to democratise access of the Internet. Working as a wireless engineer, Ravikant became the expert of configuring line-of-sight and low-cost Wi-Fi equipment. Ravikant not only learnt wireless networking but also learnt the art of communicating while working with communities. After closely working on the Internet, he decided to work on accessible digital governance in his locality. Ravikant is putting all efforts to democratise the access of digital governance for the last unconnected people but poor connectivity is proving to be one of the biggest bottlenecks.

Ravikant narrates an incident that occurred just before the call, an online transaction failed due to the slow speed of the Internet and the amount had been deducted. Now the problem is people in the villages cannot wait for 10-15 days to get back their hard earned money. He went on to describe further that due to poor Internet connectivity people have to keep visiting CSC for small works such as correction in Aadhar Card, Ration Card, and financial transactions. All of these have economic costs for the marginalised sections of the society. People living in the cities do not understand these things and implement policies in the name of improving government services. Ravikant is trying to work on deploying a wireless network in Bodupura through DEF. Hebelieves that a faster Internet would change the lives of the marginalised people in his locality.

> **"** *Ravikant narrates an incident that occurred just before the call, an online transaction failed due to the slow speed of the Internet and the amount had been deducted. He went on to describe further that due to poor Internet connectivity people have to keep visiting CSC for small works such as correction in Aadhar Card, Ration Card, and financial transactions. All of these have economic costs for the marginalised sections of the society.* **"**

DREAM OF AFFORDABLE INTERNET FOR EVERYONE

Read The Story of Manoj

Manoj Lodha is currently working in Choutuppal of Andhra Pradesh where Internet connection was damaged due to heavy rainfall. The moment Manoj received the information about damaged connectivity, he took the next train all the way from Guna, Madhya Pradesh to fix it. Since 2018, when he joined the Digital Empowerment Foundation [DEF], Manoj has been known for his commitment to the work. After being trained for a week and practicing for years, Manoj has become an expert in configuring line of connectivity, devices, routers, desktops. He has been working in different parts of the country on DEF's flagship programmes -- Wireless For Communities and SmartPur. He is a go to person for anything from the broken Internet connectivity to fractured electricity.
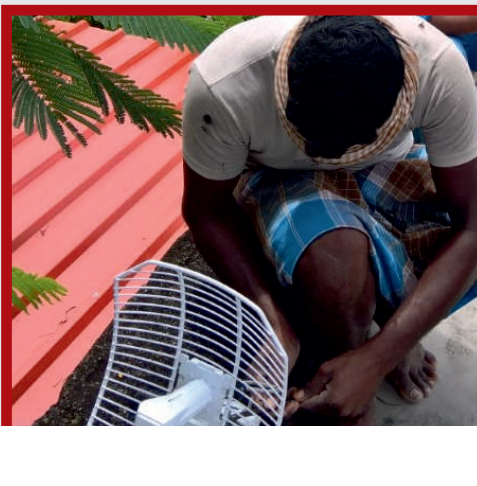
Manoj's journey is nothing but the story of a broken or rather failed system. He lost his sister due to a prolonged illness. Not having enough resources to provide even basic treatment to his sister frustrated him and shattered all his dreams. He was forced to leave his studies in second year of graduation due to financial stress. Before landing-up in DEF, he did everything from being a salesman to working as a daily labourer for the sustenance. At DEF, he was exposed to a different world. He enjoyed learning wireless connectivity. Manoj said that a government which cannot ensure food for its people, ensuring smooth connectivity is a distant dream. Private companies are indeed providing Internet connectivity to rural areas but affordability is an issue that cannot be sidelined. Limited available mobile data to run a desktop or laptop is neither sustainable nor affordable .

Manoj believes that the limited affordability of Internet connectivity ultimately leads to an economic cost and further gives rise to a fractured digital governance infrastructure,

excluding the poor and marginalised. In a country where almost every third household is living below the poverty line, uncritical digitisation of everything has serious consequences in terms of survival. People are not able to apply for ration cards, information about multiple social security programs are not reaching the otherwise eligible population. Children have not been able to study and explore their full potentials and to withdraw or deposit money people have to wait for hours in the bank. All these hardships, Manoj says, are being forced on the people due to the hastily designed policies. Manoj said that DEF is trying its best to fill that gap but the gap is too big. With an affordable Internet, Manoj hopes to bring a change in a world where the digital divide is increasingly becoming a barrier.

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