

# **Good Broadband Pan India by Dec 2023 & Ending Poverty by 2030. Is this possible?**

## **Contents**

### **1. Why I wrote this whitepaper, Disclaimer, Media request?**

- 1.1 Measurable Timebound Real Outcomes in 2022 and 2023 are vital for 2024 – A Poll Slogan**
- 1.2 Good Broadband Pan India is Possible by Dec 2023**
- 1.3 Can we end and not just Alleviate Poverty by 2030?**

### **2. Executive Summary**

- 2.1 Summary of Recommendations**
- 2.2 Action Points for Stakeholders**

### **3. Changing the Lens**

- 3.1 Single Point Accountability**
- 3.2 The need for good Broadband and the cost of Delay**
- 3.3 Prioritize Access over Pricing and Convince Providers of Demand**
- 3.4 Who will pay the \$7 billion annual cost and how much will GDP go up?**
- 3.5 Collaborate instead of blocking**
- 3.6 Resolving contentious issues Security, Spectrum, Frequency**
- 3.7 From Hostile to Red Carpet**
- 3.8 An Indian Constellation**

### **4. Ending Poverty by 2030**

- 4.1 Cheap Credit Is Necessary and Possibly a \$1T Opportunity**
- 4.2 Working on this \$1T Opportunity**

# 1. Why I wrote this Whitepaper , Disclaimer, Media Request?

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## 1.1 Disclaimer & A Request to Media

I have written this paper as a retired free agent (64). I studied at IIT Mumbai, IIM Ahmedabad. Worked with TAS, Citibank and was on the founding team of PayPal, USA. I came back to India in 2004 to look after our aging parents and to give back to India. Money is no longer a motivator. Helping serve the underserved is. Nothing in this paper is meant to help or hinder Starlink, where I was the country director for three months, in any shape or form and I would humbly request media if they report on this whitepaper to not link it to my short tenure with Starlink. This whitepaper is not about me, Starlink or any other stakeholder. It is about provoking thinking to create a Resurgent India which can be the next growth engine the world needs with a blame no one inspire everyone lens. I would be delighted if the world realised that India was the next growth engine for the world and I played no role beyond this whitepaper. If I do play a role with any stakeholder it will be pro bono. India has so many bright and talented people. Maybe all it takes to build a resurgent India is to unleash this talent and provide them with enabling institutions and ecosystems.

## 1.2 Measurable Timebound Real Outcomes in 2022 and 2023 are vital for 2024 - A Poll Slogan

Over the last 17 years I have watched India grow rapidly but there are major areas of concern which need to be addressed and they can be if we change our lens and work together. Disruptive Innovation is critical and I have been a serial disruptive innovation practitioner. The next two years 2022 and 2023 are most critical for India. The next general election will be in 2024. I am a US Citizen who is an OCI so I do not have a vote and no political affiliation. I want to blame no one and inspire everyone which is what I am trying to do with this whitepaper. We hope that Indians will in the next general election elect Members of Parliament who have shown that they have delivered MeTRO's ( Measurable Timebound Real Outcomes) in 2022 and 2023 and that these leaders who they elect will continue to deliver when they serve as Members of Parliament from 2024-2029. Garibi Hatao, Bijli Sadak Pani, Roti Kapda Makan, Sabka Saath Sabka Vikas were poll slogans that we remember. Will a slogan like **Tez Broadband, Sabka Loan, Sabka Rozgar** resonate?

## 1.3 Good Broadband Pan India is Possible by Dec 2023

I have always been searching for ways to increase the impact I make as India progresses to become the next growth engine for the world. The National Digital Communications policy <https://bit.ly/NDCP2018> recognized the need for good broadband and set targets to be achieved by 2022. These targets seem very difficult to achieve in 2022 but they can be achieved by Dec 2023 if we **change our lens** and work together. My request to those who read this paper is to use whatever is useful and discard the rest.

## 1.4 Can we End and not just Alleviate Poverty by 2030?

This is a tougher question and in this whitepaper I want to share a link to a deck for a company that could help end poverty and not just alleviate it <https://bit.ly/EP2030>. This deck talks about how disruptive innovation thinking can make credit cheap which is a necessary but not sufficient condition to end poverty. Development, Jobs for All and SDG's are vital. To stimulate thinking I created a deck <https://bit.ly/TenUseCases> of ten use cases which could catalyse development (GDP, Jobs for All and SDG's).

## 2. Executive Summary

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This executive summary has two sections. The first is a recommendation section and the second is an action points section.

### 2.1 Recommendations

- 2.1.1 Single Point Accountability with one person for Good Broadband Pan India by 2023 and another person for Ending Poverty by 2030
- 2.1.2 Recognize the Need for Speed and the Cost of Delay
- 2.1.3 Attract capital by showcasing the opportunity
- 2.1.4 Rollout the red carpet for providers domestic and foreign without compromising **national security**
- 2.1.5 Do not allow incumbents to stifle innovation.
- 2.1.6 Take Ease of Business to a whole new level. Get rid of the Trust Deficit. Trust but Verify with very **heavy penalties for offenders**.
- 2.1.7 Have faith in the ability of India to get market share in world markets  
Open India market to foreign providers and **demand open markets for Indian providers**

### 2.2 Action points

- 2.2.1 **PM/PMO** – Find laterals for missions of national importance and appoint them with Cabinet Rank but with no burden of bureaucracy or politics. Set Measurable Timebound Real Outcome goals for them as defined By the Hon’ble Prime Minister.
- 2.2.2 **CM/Administrators** – Treat one or more districts as a small country and get them adopted by leading private sector companies or start-ups that want to use them as a lab. Create an enabling ecosystem and help the lab entrepreneurs get critical mass to set a base for global scaling.
- 2.2.3 **Citizens/MP** – Citizens should elect MP’s in 2024 who in 2022 and 2023 have started working on delivering or catalysing Measurable Timebound Real Outcomes and will continue on that track if elected from 2024-2029.
- 2.2.4 **Bureaucrats/ Regulators** – See how you can help make India the growth engine the world needs with minimal non-negotiable items like national sovereignty and security.
- 2.2.5 **Enable Unicorn Plus Builders** – Companies from these rural labs could become global. PE/VC/Large company incubators can provide capital
- 2.2.6 **Infrastructure Providers** – For broadband it is important to see how the infrastructure already built by BBNL, RailTel, PowerGrid, Cable operators, telecom service providers can be used. Roads, Energy, Water, Mobility are also critical.
- 2.2.7 **Industry Associations** – Focus on open markets and demand stimulation instead of protectionism and supply side incentives that are not production and/or employment linked

### 3. Changing the Lens

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In some sectors in India a “change in lens” like introducing production linked incentives have helped create rapid growth. In this section I have tried to outline a few suggestions where a “change of lens” may be needed for good Broadband Pan India. Please use whatever is useful and disregard the rest.

**3.1 Single Point Accountability** – The National Digital Communications policy 2018 calls for Universal Broadband connectivity at 50Mbps for every citizen and attracting \$100 Billion of investments in the Digital Communications sector. Targets to be met by 2022. Where are we on meeting these goals? The TRAI report on broadband of 31 Aug 2021 <https://bit.ly/TRAI31AUG2021> states on page 226 Table 6.5 that the total number of rural fixed line Broadband connections declined from 879079 to 764691 with the decline coming from BSNL. Only two private sector operators added connections. They were Reliance Jio with 10481 and GTPL Hathaway with 70474. Of the top 10 broadband providers in India six private sector players including Bharti Airtel had ZERO fixed line broadband connections in rural areas. A rough estimate is that we need 7 million points in Rural India which have high speed low latency broadband using 5G/satellite/Fibre connectivity by Dec 2023. At that level we will have 1.18 connection for every 100 people in Rural India. In developed countries the lowest number is 30 for every 100 people and the number for rural areas may be 10 so at 1.18 we will still have a lot of catching up to do but at least India will have made a good start. When we lost 114388 connections in FY 2020-21 how can we add 7 million in 2022 and 2023 is a key question that needs to be answered ?Is the picture better as far as FDI is concerned? From April 2018 to September 2021 the total FDI that came in to Telecom Sector was \$7.5 billion against the target by end 2022 to get \$100 billion. It is also interesting to note that since April 2000 to September 2021 the total FDI in Telecom was \$38 Billion so one can only wonder where the aspiration to get FDI of \$100 billion came from. Can we change our lens to attract \$30-\$40 billion in 2022/2023?

In 2018 the Cabinet in its wisdom approved the National Digital Communication Policy and most likely there was some thought as to how the vision would be realized or was it one of those lofty dreams like Mumbai will be like Shanghai or that in five years India will be slum free. When I say Indian can have 7 million broadband points in rural India and attract as much FDI as it did in the last twenty years in two years am I also guilty of building castles in the air or can a person with Single Point Accountability, a lateral hire with a Cabinet Rank , assisted by a top notch bureaucrat (remember Nandan Nilekani and Ram Sevak Sharma for UIDAI) actually make the Measurable Timebound Real Outcomes defined in NDCP 2018 happen.

### 3.2 The need for good broadband and the cost of delay

In 2018 based on PM Modi’s vision of digital India the cabinet approved the National Digital Communication policy because maybe the cabinet realised that good broadband could awaken rural India and significantly increase GDP, Jobs for All and SDG’s. The cost of delay in providing good broadband in terms of improving lives and saving lives is so high that it is not even worth trying to quantify it. It is intuitively obvious that good broadband is just as important as good roads, good energy, good water, good mobility and all these are necessary for rapid development. The debate should be on what new lens can we use to meet the need on or before 2023.

### **3.3 Prioritize Access over Pricing and Convince Providers of Demand**

The cost of providing access in rural areas differs from point to point depending on the technology used, # of subscribers, topography, shared or individual use, need for high speed/low latency to name just a few.

I have made an assumption that the investment required for 7 million points will be around \$5000 per point or \$35 Billion and the average cost that the user will pay will be around \$1000 per annum. As long as these assumptions are not way off the mark the preciseness of the assumptions does not matter. At \$1000 per annum the rural market in India would be \$7 Billion revenue per annum. If providers are convinced the demand is real, they are welcomed and there is ease of doing business they will come. They will also need assurances that pricing will not be controlled and that competition will be the force that drives down prices ( This assumes enough providers who do not form a cartel) .

### **3.4 Who will pay the \$7 billion annual cost and how much will GDP go up?**

Can we assume that 70% of the points will be paid by the private sector of which 50% will be GDP accretive? These users will mostly be MSME ( Micro, Small, Medium, Entrepreneurs) who use the broadband to grow their business. If this is correct and on an average each point produces \$4000 of incremental GDP then the 3.5 million points will produce \$14 billion of incremental GDP. The other 20% of the points could be used to power ATM's , provide connectivity and business continuity to large companies which may not have much impact on GDP. The 30% that the government has to pay for is \$2.1 billion to ensure that all government institutions including schools, healthcare, police, courts etc. have the connectivity they need. The USOF (Universal Services Obligation Fund) fund can pay a good chunk of this and the balance can come from state budgets. With creative fund raising there may be companies who want to adopt districts and use them as an R&D lab for their solutions. CSR, foundations, wealthy individuals (including diaspora) can all chip in. Maybe states can get all the benefits of good broadband with minimal spend.

### **3.5 Collaborate instead of blocking?**

Domestic providers are reluctant to serve rural areas as the data clearly shows and seem bent on cut-throat competition in urban areas plus mobile broadband in rural areas with possibly low cost smartphones. There is an argument that the rural masses do not need more than this but I do not subscribe to that view and neither did the cabinet at least in 2018. The key for the government is to be technology agnostic and get providers to collaborate in the national interest and not try and block each other. In financial services there are many common utilities that are owned and run by providers and they are also subject to priority lending targets. The providers should set up the shared utilities that are required and the government should enable instead of the government setting up the shared utilities. Citizens being deprived of good broadband should not be an option that is on the table. Should competition be encouraged so that market share of each player gets automatically limited? Should goals on % of revenue from rural areas be set for providers with a system like carbon credits if they fail to meet these goals? Those providers who exceed the rural revenue % goal could sell credits to those who do not at a price determined by a formula which is set by the regulator.

### **3.6 Resolving contentious issues - Security, Spectrum, Frequency**

Issues such as spectrum should be sorted out using inputs from providers and from data from other countries but this should be done fast. There could be a marketplace for spectrum where you can buy and sell spectrum where DOT ( Department of Telecommunications) is the market maker. Any disputes should be resolved first by providers reaching a settlement and if that does not work then by arbitration. Each day of delay in providing reasonable certainty to providers is very costly and reduces the likelihood that substantial capital will be invested in India. National security is super important. How can India think innovatively of getting enforceable undertakings from providers with tools such as ethical hacking to see if the providers are meeting the undertakings.

### **3.7 From Hostile to Red Carpet**

Many global providers of 5G, Fibre, Satellite operate in multiple countries. Should these companies be allowed immediate limited commercial rollout and unlimited commercial rollout within 30 days if they meet a simple checklist, invest enough capital and can demonstrate that they are acting in national interest? I leave this for the policy makers and regulators to decide with inputs from influential people who have read this whitepaper.

TRAI has issued an ease of doing business consultation paper on which responses are due soon. Ease of business is just not licensing. It is getting right of way to lay fibre and facilitating best practices in laying fibre. For 5G providers it may be the ability to set up base stations quickly. For satellite providers it may involve permitting for gateway sites. Many small details which are often easy in other countries can become pretty complex in India. Once you are ready for commercial rollout then ease of business is the ease of providing great service where the regulatory framework is based on principles based regulation which means moving away from reliance on detailed prescriptive rules and relying more on high level broadly stated rules or principles to set the standards by which regulated firms must conduct business. Many processes in India are such that they place a burden on the business and on honest users and at the same time do not catch the crooks because they know how to bypass them.

### **3.8 An Indian Constellation**

Currently there is no Indian constellation that can provide good broadband using satellites. Most people believe that satellite broadband is an important technology for the future and there is little doubt that a big country like India should have its own constellation. This will be an expensive and long process but it should start as soon as possible and maybe the private sector should play a leading role. I have little doubt that with Indian ingenuity and cost advantages the Indian constellation will be cheaper and better. It will probably be one of the best in the world, if not the best.

## 4. Ending and not just Alleviating Poverty by 2030

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It is surprising that humans who are now thinking of becoming interplanetary and AI cannot end poverty on earth. I have been thinking a lot about this problem and would like to present a construct as a starting point to find a solution. See these two decks <https://bit.ly/EP2030> and <https://bit.ly/TenUseCases>. A very large part of India is not as productive as it could be. Women and girls across India , Rural men and youth need to be empowered. Broadband can be an important catalyst for Jobs for All and cheap credit especially for women and girls. Can **Tez Broadband, Sabka Loan, Sabka Rozgar** be the slogan for 2024 elections with the work to make that slogan a reality starting on our 73rd Republic Day - 26, January 2022 .

**Ending and not just Alleviating Poverty** and achieving the \$5 Trillion GDP target set by the Hon'ble Prime Minister will be a challenge that can be compared to the challenge set by JFK of landing a man on the moon.

### 4.1 Cheap Credit Is Necessary and Possibly a \$1T Opportunity

As a member of the founding team of PayPal I had a front row seat to watch PayPal disrupt the payment industry by making payments cheap, enabling everybody to be a merchant and by solving the infinity equation (get your customers to tend to infinity and your costs to tend to zero).

The first rule of credit is to make your borrower successful. If they are successful you will get paid back. With high interest rates your borrowers will have a tough time paying you back and you may be hit with adverse selection so that you never get paid back.

Whoever solves cheap credit in a globally scalable way will do a lot of good and probably build a \$1T company in 10-20 years. Good Broadband is an important disruptor to make cheap credit possible just as internet was a key disruptor which helped PayPal disrupts payments and become a global \$200 billion plus company.

I was one of the early thinkers of the idea that became PayPal and I now have a strong feeling that cheap credit is possible with innovative thinking and good broadband. Will I be right again is a question that time will answer.

### 4.2 Working on this \$1T Opportunity

We need to inspire many teams headed by two kick ass entrepreneurs each (one business, one tech), who will build prototypes, convince a Chief Minister of a state to endorse their solutions and get the regulators to allow them to operate without a license in the pilot phase. In parallel the regulators will need to work out the license that players in the space would need. The companies will need to raise money from deep pocketed persons or VC/PE who have name recognition. With PayPal I was tracking 70 competitors. All except PayPal failed.

I can help the entrepreneurs political leaders , bureaucracy, regulators and judiciary pro bono if they need my inputs. The entrepreneurs that I agree to help pro bono will need to convince me that they have what it takes before I help them. To start a discussion they can fill this form <http://bit.ly/Upbdd>.