

ENHANCING AGILITY **MAXIMISING EFFICIENCIES**

Annual Report
2019

AKSH OPTIFIBRE LIMITED



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Corporate Overview

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|--|--|--|
| <ul style="list-style-type: none"> ■ Chairman
Dr. Kailash S. Choudhari ■ Managing Director
Mr. Satyendra Gupta ■ Directors
Mr. B. R. Rakhecha
Ms. Devika Raveendran
Mr. Gauri Shankar ■ Chief-Corporate Affairs & Company Secretary
Mr. Gaurav Mehta ■ Chief Financial Officer
Mr. Pawan Kumar Gambhir | <ul style="list-style-type: none"> ■ Bankers
Union Bank of India
Punjab National Bank
HDFC Bank Limited ■ Auditors
B G G & Associates
Statutory Auditors

Sanjay Gupta & Associates
Cost Auditors

S. C. Kwatra & Co.
Internal Auditors

Himanshu Sharma & Associates
Secretarial Auditors | <ul style="list-style-type: none"> ■ Corporate Office
A-25, 2nd Floor,
Mohan Co-operative Industrial Estate
Mathura Road, New Delhi. India -110044.
Ph.: 011-49991700-710 ■ Registered Office

F-1080, RIICO Industrial Area, Phase –III
Bhiwadi, Rajasthan. India -301019.
Ph.: 01493-221333
www.akshoptifibre.com
CIN No. L24305RJ1986PLC016132 ■ Registrar and Share Transfer Agents
Karvy Fintech Private Limited,
Karvy Selenium, Tower-B, Plot no. 31-32,
Gachibowli, Financial District, Nanakramguda,
Hyderabad – 500032 |
|--|--|--|

Plant Locations :

Optical Fibre & Optical Fibre Cable Manufacturing Division, Bhiwadi, Rajasthan, India.

F-1075-1081, RIICO Industrial Area, Phase-III, Bhiwadi, Rajasthan. India – 301019

Ophthalmic Lens Production Division, Kahrani, Rajasthan India

A-56, Kahrani, Bhiwadi-301019, Rajasthan. India

FRP Manufacturing Division, Jafza, UAE.

Plot No. S10914, PO Box. 17267, Jebel Ali, Free Trade Zone, UAE

(Manufacturing division of AOL FZE, wholly owned subsidiary of Company)

FRP Manufacturing Division, Jiangsu, China

Factory No. 01, Machinery Industrial Park, The East of Bajing Road, Danyang Economic Development Zone.

Jiangsu Province China.

(Manufacturing division of AOL Composites (Jiangsu) Co. Ltd, wholly owned subsidiary of AOL FZE, Dubai, UAE)

FRP Manufacturing Division, Reengus, Rajasthan, India.

SP-47 Shree Khatu Shyamji Industrial Complex, Reengus, District Sikar, Rajasthan. India

FRP & Optical Fibre Cable Manufacturing Division, Silvassa, India.

Survey No.: 2/2/1, Village Karad, Madhuban Dam Road, Silvassa-396230, U. T. of Dadra & Nagar Haveli. India

(Manufacturing division of Aksh Composites Pvt. Ltd. Wholly owned subsidiary of the company)

Optical Fibre Cable Manufacturing Division, Mauritius.

Industrial Zone Trianon -1721-10, Mauritius

(Manufacturing division of Aksh Technologies (Mauritius) Ltd, Wholly owned subsidiary of company)

Optical Fibre Manufacturing Division

Plot No. S-30121B, Jabel Ali, Free Zone, Dubai (UAE)

(Manufacturing division of AOL Technologies FZE, wholly owned subsidiary of Company) (yet to be operational)

Service Division

1Stop Aksh Division & Network Operating Centre

The Diamond, 4th Floor, Urbana Jewels, Opp. SEZ Road, Muhana Terminal Market, Sanganer, Jaipur. India -302029

Enhancing our agility in a volatile sectoral phase

At Aksh, we believe that what we do with the glass pre-form coming into our factories separates the winners from the others.

Over the years, the company invested in various initiatives directed at a singular objective: maximize efficiencies and minimise deviations.

The company addressed the variables affecting Optical Fibre Cable performance & quality with operational discipline.

The discipline of investing in cutting-edge technologies that would translate into a high plant uptime.

The discipline of training shopfloor workers in benchmarking operations around the highest efficiencies.

The discipline of progressive process automation, translating into fewer process variations.

The discipline of progressive debottlenecking, making it possible to sweat the overall system more effectively.

The discipline of manufacturing an end product around the highest quality standards .

The discipline of urgency, strengthening our responsiveness to sectoral and market place developments.

This mindset strengthened the company's positioning as an agile and responsive player when passing through a volatile sectoral phase.

Things you need to know about Aksh

1 Financial Highlights (Standalone)

- Rs 95.8 Crore Highest Ever EBITDA achieved, YoY growth of 29%
- Rs 52.5 Crore Highest Ever Cash Profit after tax Generated
- Successful implementation of SAP in almost all the business locations of AKSH
- Capex for Indian Operations completed in FY19

2 OF-OFC Highlights

- Highest ever Fibre production in FY 2018-19.
- Successful completion of OFC Plant modernization at Bhiwadi Unit.
- 20 New large private customers added to the OFC business
- Successful Execution of Ribbon Cable orders for BSNL within 3 months.
- ISO 45001 : 2018 Certification for OHSAS done & Its integration with ISO 14001:2015 at Bhiwadi Manufacturing Facility.

3 FRP Highlights

- Silvassa plant clocked its highest ever revenue in FY19.
- Developed Water Blocking FRP Rod which got approved by large international OFC players. Expecting big orders for the same in FY20.
- Developed Micro Flat FRP Rod which got approved by major OFC players also awaiting big orders of Micro Flat FRP for commercial production.
- AKSH's FRP Business Commands & maintains Significant global market share.

4 Services Highlights

- 5,077 kiosk added in last three years.
- Kiosk transactions increased by 58% in three years Span.
- Launched self service kiosks at various e-Mitra kiosk locations.
- Highest ever e-Mitra transaction achieved during the year.
- Launching of new services on e-Mitra for adding new department like: excise, co-operative etc.

5 Ophthalmic Lens Highlights

- Commissioned state of art manufacturing facility for ophthalmic lens in Kehrani, Rajasthan. India.
- End to End Massive production like this is being achieved for the first time in India with regular supply of premier quality lenses at affordable prices.
- Aksh also participated and showcased its Lens products at "Inoptics 2019" at Pragati Maidan, received outstanding response from bulk domestic & international customers.



From The Chairman's Desk

Dear Shareholders,

With an outset of new era and renewed enthusiasm, India has emerged as the fastest growing major economy in the world and is expected to be one of the top three economic powers of the world over the next 10-15 years, which is predominantly backed by its strong democracy and partnerships. As India continues to ascend in the rankings of the world's largest economies, its contribution to global GDP growth momentum will also increase. India attracted massive Foreign Direct Investment (FDI) equity inflows, with major contribution coming from sectors such as services, computer software and hardware, telecommunications, construction, trading and automobiles.

Numerous offshore business organizations are setting up their facilities in India on account of various government initiatives like Make in India and Digital India. After launching the Make in India initiative, The Honorable Prime Minister of India has significantly uplifted the manufacturing sector of Indian economy, alongside has also increased the purchasing power of an average Indian consumer, which has further boosted the domestic demand, and hence spurred the overall development in the economy. The Government of India, under the Make in India initiative, has done significant contribution towards the domestic manufacturing sector and aims to take it up to 25 per cent of the GDP from the current 17 per cent. Besides, the Government of India's Digital India initiative, which focused on three core components: creation of digital infrastructure, delivering services digitally and to increase the digital literacy augured well for the overall economy and demography. Under Bharat Net Initiative of the Government, till July 2019, 3,50,504 Kms of Optical Fibre Cable is already laid in 131,913 Gram Panchayats. The Government of India has also approved the National Policy on Software Products in 2019, to develop the country as a software hub, therefore a lot of impetus can be witnessed towards digital platform development during the second term of the current Government.

FY 2019 was a roller coaster year for Aksh. We grew our sales and profitability phenomenally during the first half of the year. During the second half of the year company faced certain industry headwinds concerning optical fibre prices tumbling down globally, alongside significant delays in receivables from a major customer BSNL. Although, we have been investing for growth through a combination of capacity expansions, strategic acquisitions, and innovations in our product lines. In early part of FY2019, we improved our financial performance and extended our leadership in all our businesses segments. Our execution was strong, and we expected our momentum to continue, but unfortunately industry headwinds entailed us to push breaks to our torrid growth during the second half of the year.

As we have expanded our capacities significantly, and are geared up to ride the next wave of buoyant optic fibre market, we remain committed to deliver our goals. We seek all our stakeholders confidence, and I believe we shall deliver our best, as we remain committed in continuing to deliver with our relentless focus, passion, and our drive towards success. I firmly believe that Aksh's future has never been brighter. We have multiple businesses segments which will propel our growth. We have unique capabilities that have become progressively more vital. We share warm relationships with industry leading customers that continue to entrust us with new opportunities. We look forward to delivering our goals, also unleashing new potential and capabilities in the years ahead, and sharing milestones along the way. Thank you for entrusting and accompanying us on this journey.

Yours Truly,

Dr. Kailash S. Choudhari

As we have expanded our capacities significantly, and are geared up to ride the next wave of buoyant optic fibre market, we remain committed to deliver our goals

Managing Director's Overview

Dear Shareholders,

FY 2019 was a roller coaster year for Aksh. We grew our sales and profitability phenomenally during the first half of the year. During the second half, company faced softening of optical fibre prices globally, alongside significant delays in receivables from a major customer. Notwithstanding, Company reported its highest ever EBITDA with a 29% increase from previous year, coupled with its highest ever fibre production. Company also successfully completed its OFC Plant modernization project resulting in enhancement of its OFC infrastructure capacity to 10.7 Mn FKM. We successfully added 20 New large private OFC customers to our portfolio. Although lower fibre realizations have driven down the expected profitability, but amidst the tough business environment we were able to sail successfully.

We seamlessly implemented warehousing model in our international markets for our FRP business, wherein we set up 6 international warehouses in various locations of our prominent customers in USA, Europe, and Asia. With our warehousing model we intend to provide just in time service to our customers which will help us bring down our receivable cycle significantly.

During the year company witnessed the launch of Aksh's Ophthalmic Lens to the bulk domestic & international customer. The company also participated and showcased its ophthalmic lens products at India's biggest eyewear exhibition 'Inoptics 2019' at Pragati Maidan, New Delhi, where it received good response.

On e-governance front Aksh achieved its highest ever e-Mitra transactions during the year. Company successfully added 5,077 kiosk in last three years, wherein the transactions at the kiosks increased by 58% during the span of three years. Facilitating the initiative to reduce manpower costs and less human interface at our kiosks, Aksh also launched self service kiosks at various e-Mitra kiosk locations.

Corporate social responsibility (CSR) is a self-regulating business model that helps us to be socially accountable to our-self, its stakeholders, and the public. Under its CSR program 'UPVAN' Aksh planted more than 22,600 saplings during the current financial year and 110,000 over the period of last five years under 'Clean & Green' drive in Bhiwadi Industrial Area. On the education front, under its initiative 'MUSKAAN' and 'SHIKSHA HAMARA SWABHIMAN' Aksh is relentlessly giving support to Government Schools situated in nearby Bhiwadi and Reengus Industrial Area. The drive aims to continuously improve the basic infrastructure of the Govt. Schools especially for girl child and those who are not able to join school due to the poor financial health of their families. For continuous efforts made by Aksh in past 5 years, your company has been bestowed with prestigious "BHAMASHAH AWARD" for fifth consecutive year on the occasion of Bhamashah Jayanti.

The Indian telecom sector is witnessing a radical transformation due to surge in mobile data usage and growing Smartphone adaptation. This increase in data demand has made it imperative for operators to establish high capacity optic fibre cable networks, both for the last mile and backhaul. India now contributes around 6% to the global fibre demand. The advent of new technologies like 5G and internet of things (IoT) is going to further fuel the demand for fibre in the country. Indian telecom industry stakeholders have started readying themselves for the 5G revolution while the Government is planning to hold 5G spectrum auctions in 2020. Fibre connectivity will play an essential role in creating high performing, dense urban networks that are able to sustain the high data growth resulting from 5G services. In the coming years, telecom infrastructure will comprise not just macro tower sites, but also small cells, fibre-to-the-home (FTTH) networks and Wi-Fi services. National Digital Communications Policy (NDCP), 2018 has set a target of increasing the level of tower fiberisation to 60% by fiscal year 2022 from the existing level of 25%. The second and the third phases of the world's largest rural fibre roll-out initiative through BharatNet project will continue boosting the country's fibre infrastructure. Meanwhile, development under the government's Smart Cities Mission hinges on a robust common digital infrastructure backbone that includes fibre as the core component.

I on behalf of my colleagues on the Board wish to express my earnest thanks to all stakeholders for believing in the Company. I would also take this opportunity to express my sincere gratitude to all my fellow colleagues at all levels for their dedicated efforts and hard work. We look forward to their continued support in the coming years.

With warm regards,
Satyendra Gupta



**At Aksh Optifibre,
we are prepared for volatile
sectoral cycles through
stronger operational
discipline**



Management Discussion And Analysis

Industry Structure and Developments

Global Perspective

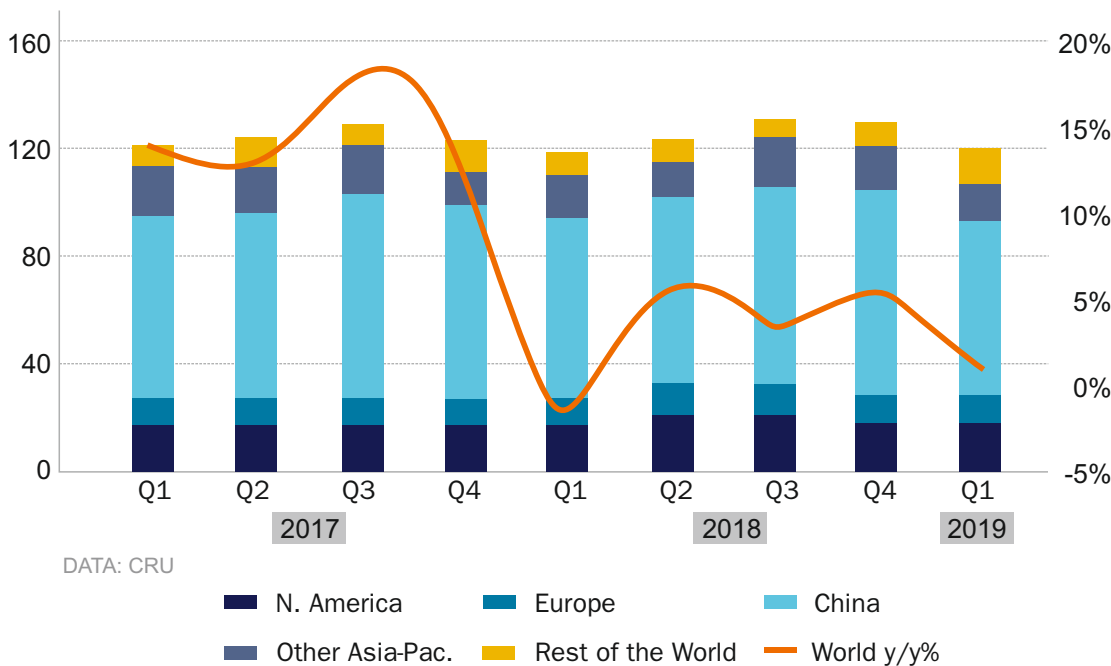
The Asia-Pacific region dominated the overall Optical Fibre market till 2017 primarily due to increase in penetration of optical fiber technologies in developing economies owing to numerous upcoming projects, such as smart cities. However, North America witnessed the highest growth rate during the period gone by in CY18. Widespread implementation of 5G, increase in adoption of fiber to the home (FTTH) connectivity, and emergence of internet of things (IoT) act as major drivers of the market. However, high installation cost & growth in the wireless communication systems are expected to hamper the global optical fiber market growth during the current period.

2018 witnessed Global demand de-growth : Slowed to 15 year low

As per the industry estimates The total of optical fibre cable installed worldwide in CY 2018 was 510 Mn FKM. The fibre demand was 4% higher than the 492 Mn FKM installed in CY 2017, witnessing the lowest year on-year growth rate in optical cable installations since 2003. Demand remained far lower than the demand CAGR for the last ten years which was 14%. The slower growth in 2018 was caused by a 1% downturn in Chinese fibre market. All other markets as a group showed a 10% increase in fibre deployments between 2017 and 2018. Wherein the non-China market fibre demand has had a 9% CAGR for the past ten years.

Global optical cable demand slowed to just 1.4%y/y in Q1 2019

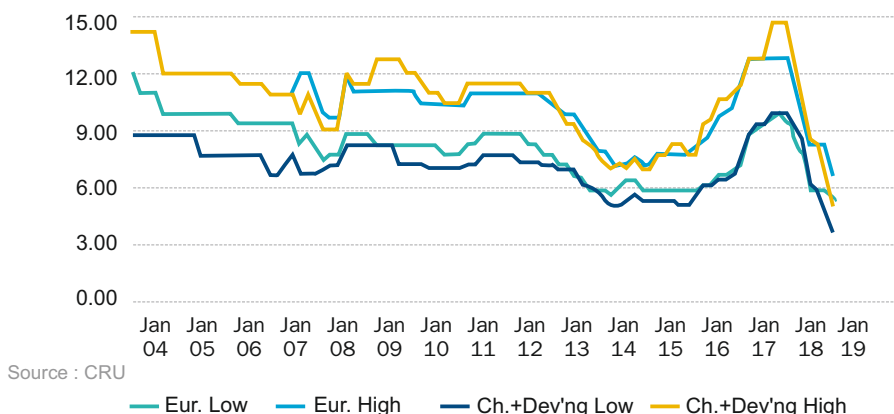
Optical cable demand M F-km



Fibre prices witnessed pressure Globally

Throughout 2019, prices in China have been under extreme pressure following a no significant global demand, which started late last year in 2018. This was further aggravated following the late release of the China Mobile 2019 tender, which marked a more than 50% decrease in fibre prices since the peak shortage prices of Q3 2018, falling to multi-year lows. Facing increasing pressure and competition from low-cost imports, fibre prices in Europe continued its downward trend. It was observed that the fibre price spread has once again narrowed down significantly, for the first time in last decade, standard loose-tube bare fibre prices have fallen below \$6.00 /F-Km on the lower-side.

High and low range of G.652.D prices in Europe and developing telecom markets, US\$/km



Fibre prices corrected to a multi-year lows in 2019

Current Pre-form capacity overhang weighing down the Fibre market

The downtrend in Chinese fibre prices can be attributed to a key factor which is the recent over investment and rapid expansion of preform capacity (approx 90 M F-km additional preform capacity was brought online in China last year). This, however, is not just the case for China. As per estimates preform capacity expanded by 30M F-km in markets outside China also, bringing total global preform year on year capacity growth to 22% in 2018. Meanwhile, global fibre demand only expanded by 4% over the same period. Further expansions are penned for 2019, although the current market environment may delay or abandon such plans. As per current estimates preform capacity is 28% higher than fibre demand which is denting the current fibre market. Whereas a 10% excess is considered healthy for the industry, whereas an excess of 28% is highly detrimental to market conditions and pricing.

Future Market Outlook

Widespread implementation of 5G

The demand for more data and better coverage across the world is on the rise among consumers. The 5th generation wireless connection is expected to be the next leap in technology, as it can transmit more data while providing a more steady and reliable connection. The characteristics of 5G, such as high data speeds and throughputs, are greatly influenced by heavy-duty optical fiber backed networks that affect both the wireless side and wireline side of the infrastructure. Moreover, formidable network performance goals of 5G are heavily predicated on a massive availability of fiber connectivity. 5G is currently being tested in several markets and is expected to begin widespread implementation by 2020.

5G is currently being tested in several markets and is expected to begin widespread implementation by 2020.

5G network architecture will transform away from the traditional tower model

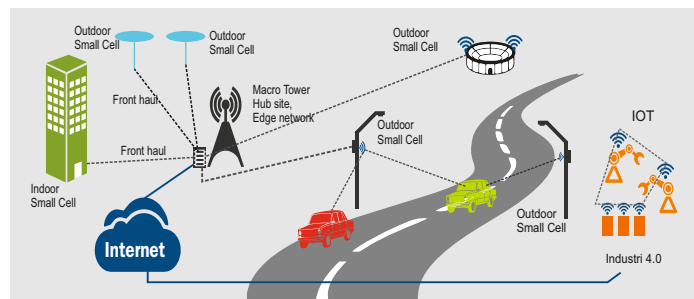
Macro tower model poised to change

The move towards 5G is often accompanied by expectations that significant investments will be made by telcos and this will result in a much improved demand for supply chain operators, which include infrastructure plays such as tower and optical fibre companies.

Market expects 5G networks in Asia to be rolled out in 2 phases.

Phase 1, which is under way in many markets, uses frequencies around 3.5-6GHz. The technical challenges of communications at this frequency are relatively low. Macro cells used in 3G and 4G networks can be replaced or upgraded to act as 5G base stations while the use case is mainly seen in the fixed wireless access.

Phase 2, which is expected to commence from 2022, will use high frequencies (millimeter wave bands) to achieve higher-speed, larger-capacity connections. (Business use cases for the phase 2 will be mainly in enterprise services where low latency and reliability will be the key. In order to service this, network architectures will evolve from the traditional macro tower-led model to a fiber and small cell-led heterogeneous network. Usage of the millimeter wave spectrum for the touted network capacities will require a much denser network given the low propagation and high attenuation of high frequency (low wavelength) bands.



Demand for end-to-end fiber infrastructure

We expect the end-to-end market for fiber as a natural beneficiary on the road to 5G services. Carriers around the world are more focused on deploying 5G at higher frequency bands than the spectrum used for traditional mobile services. More sites will thus be needed and the amount of data capacity that each can generate will encourage carriers to use fiber to connect those sites to their broader networks. Without sufficient fiber, carriers will be unable to support the projected last mile network performance for 5G.

Increase in adoption of fiber to the home (FTTH) connectivity



FTTH is a popular integrated communication technology that uses fiber optic technology to enable faster and more effective communication. The technology connects homes to the operator through optic fiber wires. It is the most advanced technology for building the next generation of communication networks. For instance, fiber connections are used by more than 130 million homes. Also, China was expected to have almost 100 million fiber subscribers. Moreover, European countries, such as Norway, Lithuania, Denmark, Sweden, and Latvia, have been approaching near universal access to fiber.

Rising investments in IoT (Internet of Things) infrastructure

The growth of 5G is expected to be fueled by the hike in consumer data and the explosion of internet of things (IoT) devices. According to the International Telecommunications Union (ITU), the market for IoT devices is estimated to generate over \$1.7 trillion by 2019. Also, owing to these developments, investments on fiber infrastructure are expected to surpass \$144.2 billion by 2019. Moreover, numerous countries have invested in optical fiber deployments, which is creating opportunities for the market. For instance, the U.S. needs significantly more fiber-optic infrastructure over the next five to seven years to support upcoming 5G wireless as well as broadband competition and rural broadband coverage that is expected to deploy fiber cable of around \$130 billion to \$150 billion.

Opportunities and threats

STRENGTHS

- Globally Recognized Optical fibre Player
- Vertically Integrated Manufacturing Facilities
- Global Market Presence
- Quality Product range
- Strong Management Vision
- Formidable e-Governance Presence

OPPORTUNITIES

- Global Data consumption expansion
- Expansion in the global Fibre market for expansion of 4G Network Backhaul.
- Initiation of Fibre backhaul for upcoming 5G network globally
- Upcoming Large Smart city projects domestically
- Digital India Programme: Bharat Net- Phase 3.

India Perspective

India optical fiber cables (OFC) market stood at \$ 881.5 million in 2019 and is projected to grow at a CAGR of 19.7% to reach \$ 2.1 billion by 2024. Growth in the market is led by rising investments in OFC network infrastructure by the Indian government to increase internet penetration across the country, which is in line with government initiatives such as Smart Cities Vision and Digital India. Moreover, growing demand for OFC from IT & telecom sector, rising number of mobile devices, increasing adoption of FTTH (Fiber to the Home) connectivity and surging number of data centers are further anticipated to fuel optical fiber cables market in India over the coming years.

Regionally, India's optical fiber cable market is gaining traction and expanding to various regions in the country. In 2018, West was at the forefront of India's optical fiber cable market, however south region is anticipated to grow at the highest CAGR on account of presence of major IT players and growing number of small and medium enterprises (SMEs) in the region.

Bharat Net Update

Bharat Net is the world's largest rural broadband initiative undertaken by the Government of India (GOI). The project includes provision for on-demand affordable broadband connectivity of 2 Mbps to 20 Mbps for all households and on-demand capacity to all institutions. It is a part of the Digital India vision implemented through a partnership with states and the private sector.

The implementation of this project is taking place under three phases :-

Phase I: This phase included connecting over 1 lakh gram panchayats across India through BSNL, RAILTEL and PGCIL. Around 32,000 km of Optical Fibre (OF) cable of BSNL is being replaced by new OF cable. High-speed broadband service is provided to 2.5 lakh villages benefitting 20 crore rural Indians. This phase was successfully completed by December 31, 2017.

Phase II: Under this phase, additional 1.5 lakh gram panchayats would be connected. The target date fixed for completion of this phase was March 31, 2019. Till March 17, 2019, 125,196 gram panchayats were laid with OF cables and 117,552 gram panchayats were laid with OFC with the installation of equipment. Also, 564 gram panchayats were commissioned through satellite.

Phase III: This phase is expected to begin in 2019 and shall get completed by 2023. It will include setting up fibre networks between districts and blocks. Bharat Broadband Network Limited (BBNL) will place massive orders for implementation of this project to domestic optical fibre cable companies.

WEAKNESSES

- Global Logistics & Freight Challenges
- Dearth of Cheap Availability of Glass Pre-form (Primary Raw material for Optical Fibre)
- Risk Averseness towards mega EPC projects

THREATS

- Optic Fibre production over Capacity in China
- Political, economic and Technological tussle between Worlds major economies
- Lack of availability of Glass Preform provided by handful number of pre-form producers globally.