



Everest Community Network

Improving Internet Connectivity for the Sherpas of Nepal

Oct 2023

Our Project Partners

The Sherpa people of Nepal have called the Himalayas home for hundreds of years.

In the villages of Khunde and Khumjung, a community of 1,700 people are working hard to make a living, raise their families, and maintain their way of life.

But climate change and digital isolation are threatening their sustainability.



Project Site: Khunde & Khumjung Villages



The villages of Khunde and Khumjung are 32 kilometers from the Mount Everest Base Camp

The Challenges

1) Reliance on the Climbing Industry

The primary source of income is tourism related to Everest climbing expeditions, which has some serious drawbacks:

- Tourists usually bypass the villages to go straight to the Everest base camp, so the local economy doesn't benefit as much as it could.
- Expeditions are hard and dangerous work. One third of deaths that occur on Everest expeditions are Sherpa.
- Climate change is making the climb even more dangerous, threatening climbers' safety and the industry at large.
- Reliance on the climbing industry leaves few employment options for local youth. The outmigration of young adults threatens the sustainability of Khunde and Khumjung and the Sherpa culture.



The Challenges

2) Remote Location

The villages' remote location and lack of infrastructure present real obstacles to opportunity and growth.

- The nearest road access is a two-week hike away. Goods must be brought in by donkey or helicopter at great expense.
- Communication with the outside world is difficult. Till last year, residents had limited mobile Internet access and had to travel some distance to get a mobile signal.
- Education, health care, and other digital opportunities are limited.



The Solution

Reliable and affordable high-speed Internet to open a world of opportunities for the people of Khunde and Khumjung. It can help them overcome challenges posed by their remote location, attract tourists to spend time in the villages (not just on Everest), and build new business models and sources of income.

The Internet can also improve the community's access to education, health care services, and more, making mountain living more sustainable.



Fiber deployment: 2023

In May 2023, we laid 8.3 kilometers of fiber optic cable from Syangboche to Khumjung and Khunde villages.

Everest Link, the local Sherpa-owned and operated Internet Service Provider, laid the cable in collaboration with village residents.

This 12-core fiber cable was laid underground through manual digging carried out by local villagers.



The deployment is true depiction of human power !!



Fiber deployment: 2023

The cable start point is this network operation center located over 4100m in Syangboche.

This network operation room is connected to a core backhaul that runs over a wireless network.

This operation center is connected to solar power and hosts network routers and servers.



Fiber deployment: 2023



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A team of four engineers performed the cable testing and splicing. None hold specialized training or certification in networking and have built their career mainly via YouTube videos and through the 'trial and error' method.

These individuals have deployed fiber cable up to the mount Everest base camp.



Fiber deployment: 2023



Fiber deployment: 2023

The network follows a GPON architecture, offering an aggregate bandwidth of 400 Mbps.

We connected the school, hospital, and local community clubs and collected interest in home connectivity through a local seven-member steering committee.

It has so far connected over a hundred local homes and lodges, offering 5mbps connectivity. The network will run on a non-profit basis in collaboration with the Everest Link.



Fiber deployment: 2023



Remaining Plan: 2023 and beyond

- General digital capacity building
- Technical workshops in network troubleshooting and maintenance
- Sherpa Home Stay Services startup
- Setting up a Sherpa community innovation lab
- Establishing a telehealth clinic at Khunde Hospital
- Providing supplementary STEM educational opportunities to students at Khumjung school
- Deploying an IP based security system so those who need to migrate from the area during winter can monitor their land and assets



Call for Support

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Thank

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