

# Broadband for Primary Health Center

## E-HEALTH AND TELEMEDICINE FOR VILLAGE COMMUNITIES

- E-Health
- Solar Powered Solution
- Connectivity to PC's, Laptop and Smart Phones
- Solar Powered Refrigerator for Medicine
- Robust Solution requires near zero Maintenance
- No Need for Grid Power or Diesel Generators
- Lowest CAPEX & Near Zero OPEX





*Doctor Using Broadband in Primary Health Center*

## ICT FOR RURAL HEALTH CARE

Rural communities do not have timely and convenient access to health care as the nearest full-fledged hospital could be more than 10 kms away on an average. Even if hospitals/health clinics are constructed, there is always a shortage of trained doctors and specialists.

ICT has the potential to solve many problems in this field. The internet is a powerful tool to address the challenges of rural health care and improve the lives of people in rural communities. For example, an early diagnosis of symptoms can save a person's life. Rural e-health centres can transmit symptoms of a sick person to a centrally located hospital and provide a cure via the same medium to the person.

## PROBLEMS IN TRADITIONAL IMPLEMENTATION AND EXECUTION OF RURAL ICT PROJECTS

There are several gaps found in the execution of ICT projects for rural areas given the limitations of traditional technologies. Therefore addressing these limitations is critical while developing alternative approaches.

E-Health initiatives require dependable broadband connectivity. However traditional technology solutions have failed to provide cost effective and viable models of delivery. VNL has developed a sustainable World Broadband™ solution that is a powerful enabler for E-Health programs.

## VNL – THE ALTERNATE APPROACH

VNL's Rural Broadband Solution is a totally solar powered and standalone wireless broadband solution that can be deployed to provide seamless Wi-Fi coverage anywhere. The solution is based on VNL's unique innovative product design which combines Wi-Fi and backhaul in a single unit.

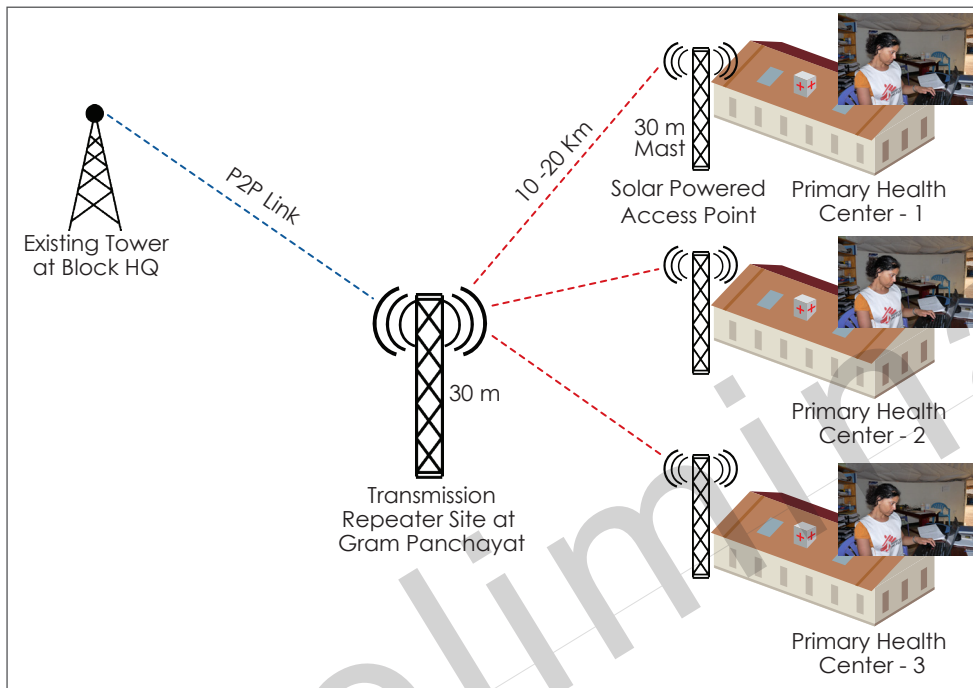
Integration of broadband into the everyday life of healthcare workers is becoming a reality in developing as well as developed countries. Internet enables online communication about medical issues and diagnosis of complicated diseases by linking medical practitioners who are separated geographically. They have the potential to change the delivery of healthcare services and patient care, as well as the management of health-care system.

## FEATURES & BENEFITS

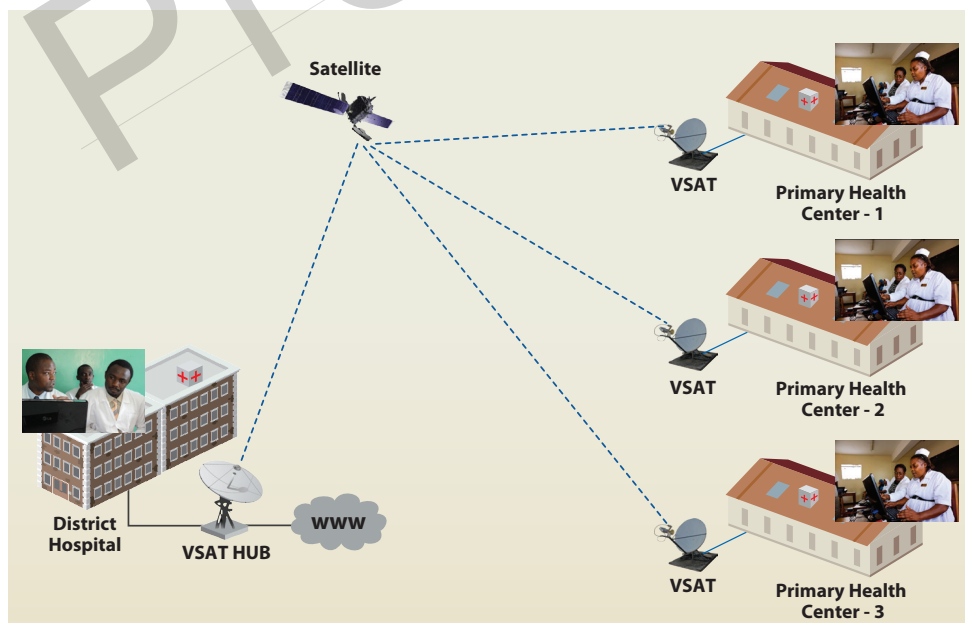
- *4-6 Laptops per PHC  
(Nos. depending upon the no. of wards in each health care centre )*
- *2 Laptops for office and Administration work*
- *Internet Connectivity via VSAT or Point-to-Point Radio from the nearest tower*
- *Spares for items at the PHC premises*
- *Training of Health staff in Operating the system*
- *2 Printer with Scanner & Photocopier*
- *Solar Powered Refrigerator*
- *Solar Power for the system*
- *RF ID & Biometric Reader*
- *30 meter Mast if needed*
- *Wi-Fi Access Point*
- *Video conference system*
- *Public Address System*
- *A reliable secure, professional system communication inside and between hospitals and PHC*

## TYPICAL DEPLOYMENT

### DEPLOYMENT TYPOLOGY - 1: VSAT & TERRESTRIAL CONNECTIVITY



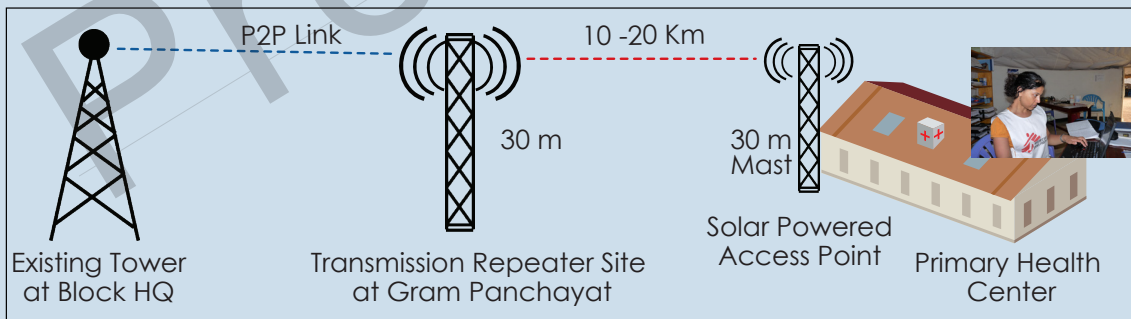
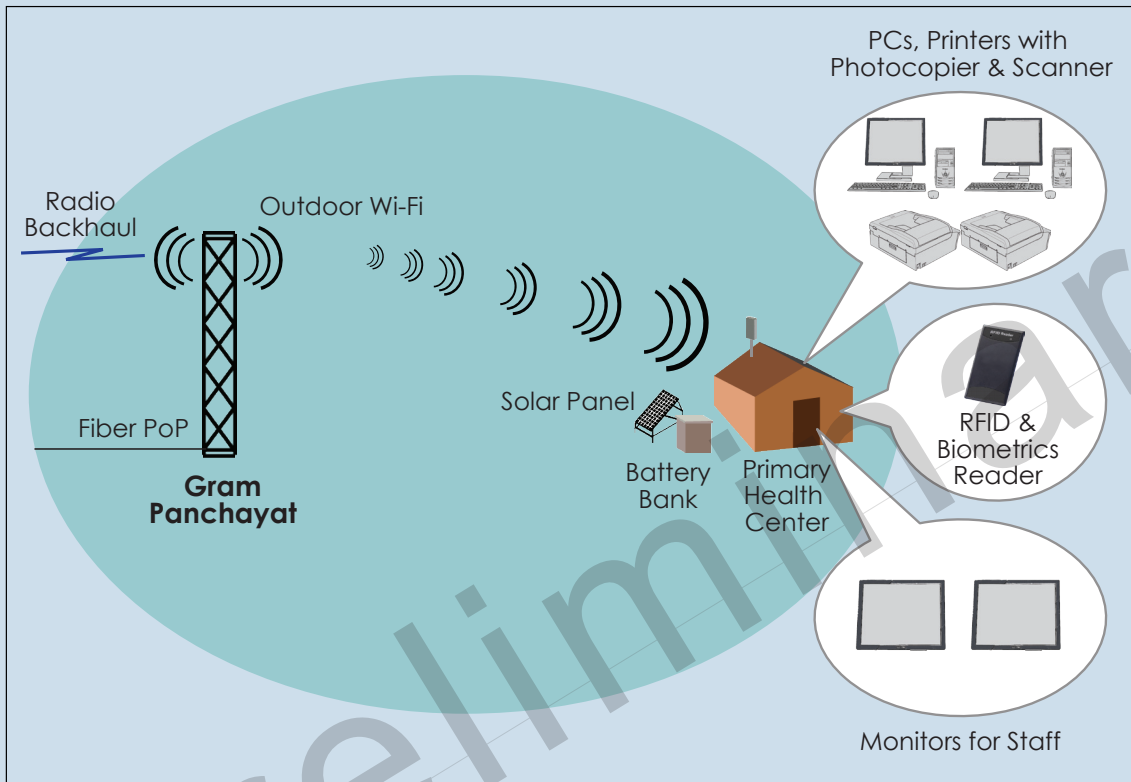
### DEPLOYMENT TYPOLOGY - 2: DIRECT VSAT CONNECTIVITY



The key elements in a Rural Broadband rollout are the:

- High speed, high capacity backhaul products for connecting remote locations such as schools and health centers through VSAT or Point-to-Point and Point-to-Multipoint links.
- Wi-Fi BTS to provide extensive 360° coverage.
- Solar powered low CAPEX and near zero OPEX solution that provides up to 72 hours of power backup.

## IMPLEMENTATION DETAIL



## ABOUT VNL

VNL makes World Broadband™, a complete end-to-end Broadband solution to reach rural markets. It is a completely managed solar powered solution optimized for remote and rural areas. For the first time, optimized broadband network can be cost effectively built and operated to serve remote and rural communities.

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