

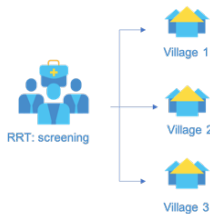
SOLAR POWERED CORONA RAPID RESPONSE SOLUTION

HIGH QUALITY OFF-GRID HEALTH SOLUTION MADE IN GERMANY

Based on the “WHO Operational Planning Guidelines to Support Country Preparedness and Response to COVID-19”, the project seeks to limit the impact of COVID-19 by reinforcing national public health capabilities and infrastructures, particularly of least developed countries, who dramatically lack the material and human resources to address the public health emergency.

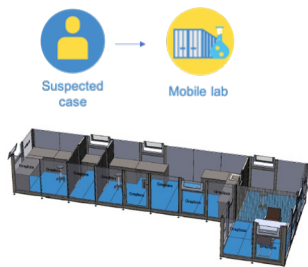
Three major packages – combined or single solutions

RAPID RESPONSE TEAMS (RRT'S) FOR SCREENING OF THE GENERAL POPULATION



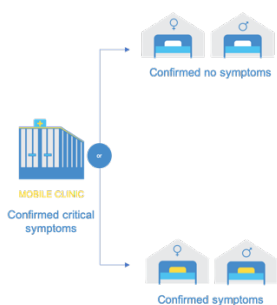
- RRT's are equipped with **emergency kits**, containing a Solarworx Solego battery based mobile solar home system including a solar panel, which can power the included non-contact infrared (IR) thermometer, UV sterilization light, stethoscope, oxygen density measurement, pulse measurement device, doppler, ventilator, security light, USB phone charging kit and a hand free headlamp.
- Training to personnel** of RRT's on investigation protocols and clustering.
- Suspected COVID-19 cases will be referred to mobile laboratories for testing.

MOBILE, SOLAR POWERED LABORATORIES TO TEST SUSPECTED COVID-19 CASES AND DIFFERENT PATHOGENS



- Mobile labs:** Based on Solarkiosk solar power integrated infrastructure, the E-HUBB. Solar power is being inverted into usable AC energy and stored into long life LiFePO₄ batteries for night-time usage with the BOS AG hybrid solar inverter & battery charging systems. Hot water for hygiene will be procured by PV powered Nexol boilers.
- The airconditioned modern lab **contains state of the art laboratory equipment** from Siemens Healthineers, enabling the users to establish with 100% certainty if a patient has been infected with the COVID-19 virus.
- Training to personnel** of mobile laboratories on standard procedures.
- Confirmed COVID-19 cases will be referred to available health facilities.

MOBILE, SOLAR POWERED CLINICS TO TREAT CONFIRMED COVID-19 PATIENTS WITH A CAPACITY OF 90 BEDS



- Mobile clinics** will take the form of tent structures. The energy is provided by a BOS AG hybrid energy system consisting of a solar power system that works with a required alternative source of energy such as grid electricity or a diesel generator. The solar power is being inverted into usable AC energy and stored into a battery bank for night-time usage. When there is not enough solar energy available, the batteries can be recharged with grid electricity or electricity from a diesel generator. The electricity is being used to power life saving equipment, such as ventilators, patient monitoring, X-Ray and other important medical devices to treat patients. Hot water for hygiene will be procured by PV powered Nexol boilers.
- The clinic will be divided in **3 levels; Intensive Care**, 10 beds (5 for females, 5 for males). **Patients with severe symptoms** but no need for intensive care, 40 beds (20 for females, 20 for males). **Patients with milder symptoms** 40 beds (20 for females, 20 for males).
- Training to personnel** of mobile clinics on Infection Prevention and Control (IPC) protocols.
- Training to medical / ambulatory teams** on management of severe acute respiratory infections and COVID-19-specific protocols.

Scope of delivery - lab and clinic

Turnkey mobile solar powered LABORATORY	
Construction	<ul style="list-style-type: none"> • E-HUBB container including PV equipment • BOS Smart Energy Storage System • Nexol water boiler
Lab equipment	<ul style="list-style-type: none"> • Equipment Lab e.g. Stratus® CS 200 Acute Care™ Analyzer, ADVIA 560 hematology system, DIMENSION EXL 200, RapidPoint 500e blood gaz analyser, PCR Workstation • Warranty on all equipment
Installation	<ul style="list-style-type: none"> • Installation of solar system • Commissioning of system and equipment

Mobile solar powered CLINIC	
Construction	<ul style="list-style-type: none"> • Fully Equipped ICU tent including PV equipment • 6 x easy-to-mount, fully equipped tents with a capacity of 90 beds • BOS Smart Energy Storage System • Nexol water boiler
Medical equipment	<ul style="list-style-type: none"> • Equipment clinic, e.g. Patient Monitor, Portable ultrasound, Breathing machine, Radiography portable, 12 leads ECG electrocardiogram • Warranty on all equipment
Installation	<ul style="list-style-type: none"> • Installation of solar system • Commissioning of system and equipment

- Training of personnel is not included. Training will be organized and executed by UNITAR in concordance with the client.
- Not all medical equipment is listed. Based on request, a complete overview can be provided.
- Individual packages can be worked out. Also, the installation in already existing buildings (e.g. health centers) is possible.
- Pricing will be provided upon request.

Benefits

- SPEED** Being a kit of parts, laboratory and clinic are easy to transport and very fast to implement anywhere.
- SIMPLICITY** Installation is easily done by small teams.
- FLEXIBILITY** Thanks to a modular approach, power and physical space can be added within very short timeframe.
- OPEX** Thanks to the integrated solar system and the BOS AG energy storage system, electrical power supply is secured for medical appliances.
- CONNECTIVITY** Through the connection to internet through GSM modem or satellite uplink, remote monitoring, training and dissemination of information are possible, as also online consultation.
- LONG LASTING SOLUTION** Laboratory and clinic can be used after the end of the Corona crisis, improving general health care for the population.

