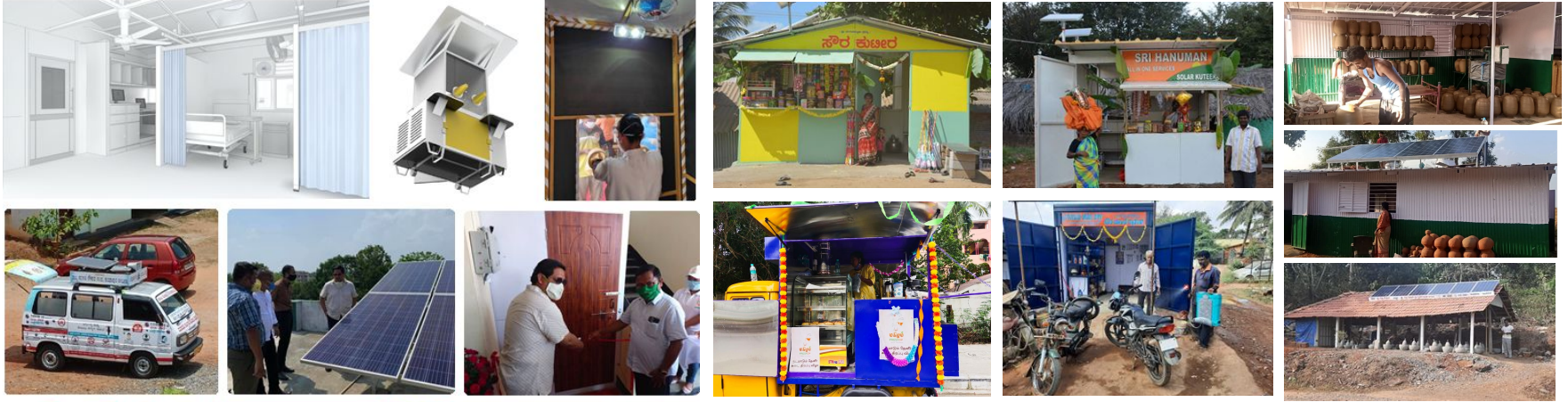


SDG7 and COVID-19 in India

Replicable solutions for livelihoods and healthcare



SELCO Foundation

Multifold challenges causing generational poverty...



- Returning Migrants
- Micro Enterprises in Crises
- No social security



- Supply chains severely affected
- Centralised dependencies of input and market linkages.



- Energy Enterprises are forced to rethink their businesses
- Uncertainty of the future



- Healthcare grossly overburdened
- On the verge of collapse.
- Rural areas stranded

Emergency Relief

Micro-enterprises and communities were consulted with to identify their most pressing needs -

- **Working Capital**
- **Access to Raw Materials**
- **Tide-over Cash Support**
- **EMI Moratoriums**
- **Food and Groceries**

Extremely vulnerable communities prioritised

- **Craftsmen**
- **Street Vendors**
- **Ragpickers**
- **Construction Labourers**

1000 families or 5000 individuals impacted
300 micro-businesses provided support



Gauging grassroots livelihood needs in the time of crises

Consultations with micro enterprises, NGOs, governmental officers and other institutional representatives across key livelihood value chains.

[Link to Main Document](#)

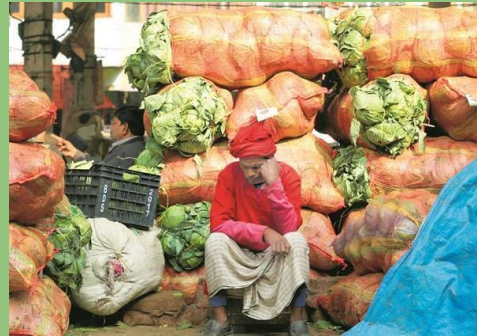


Key Findings -

Failing Backward Linkages



Collapsing Market Linkages



Need for Capacity Building



Livelihoods - Access to Basic Services

Deployed decentralised solutions were playing a substantial role in the rural economy.

Common use services, like rice or flour milling enabling livelihoods but also providing essential and accessible services.

Solar powered cold storages enabled farmers to avoid wastage and hold on to their produce.

Solar power and infrastructure for building resilience of micro-businesses

SELCO Foundation has initiated a scale strategy for specific prioritised scalable models and technologies.



Last Mile Energy Enterprises

With supply chains broken, upcoming orders lost, unused stock and grave uncertainties of the future, enterprises had to learn how to pivot their businesses towards greater resilience to externalities.

Key Areas of Support

Immediate Cash Relief and Mentorship on Cash-flow Management



Negotiating with Suppliers and Financial Institutions



Identifying and enabling new channels for sales



Healthcare Response

Aligned with concurrent needs of health service delivery working in strong cohesion with healthcare NGOs and governments at the frontlines.

Key appliances needed within the COVID Value Chain were identified.
Vendors for various technologies were onboarded for quick deployments.



Testing - Development and Deployment of Swab Collection and RT-PCR Testing Kiosks, Mobile Vans and Centers in remote locations.



Quarantine and Isolation Centers - Solar energy and built environment in hospitals or make shift accommodations in schools, local government offices, cyclone shelters and hostels.

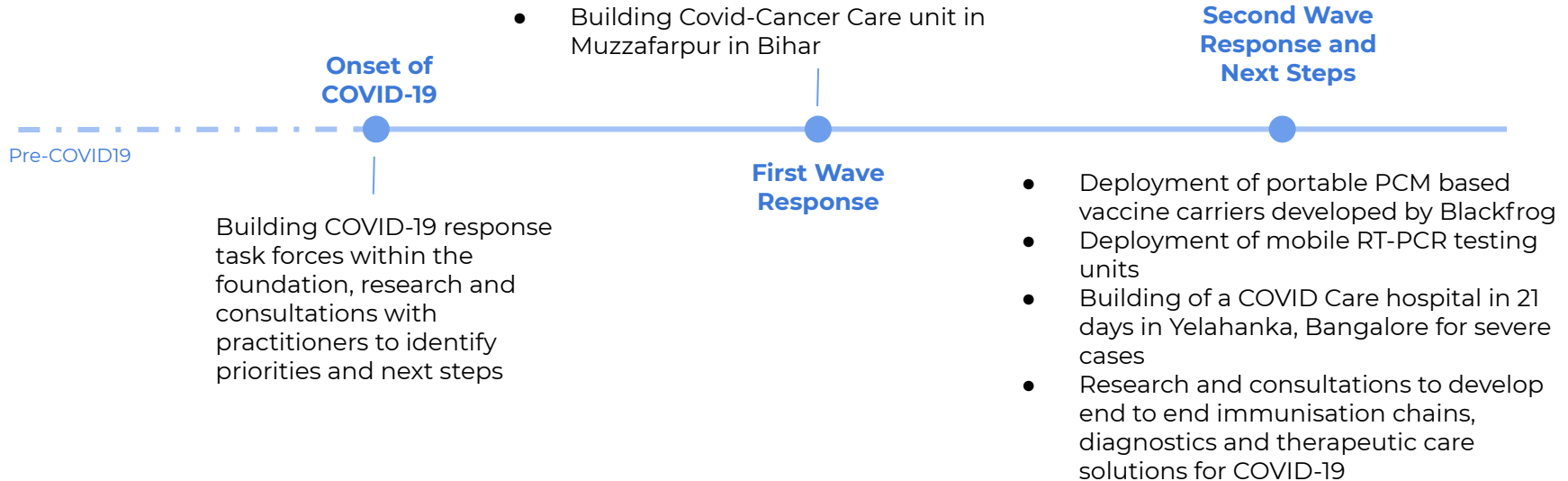


Therapeutic Care - Solar energy and built environment for treatment of COVID-19 patients.

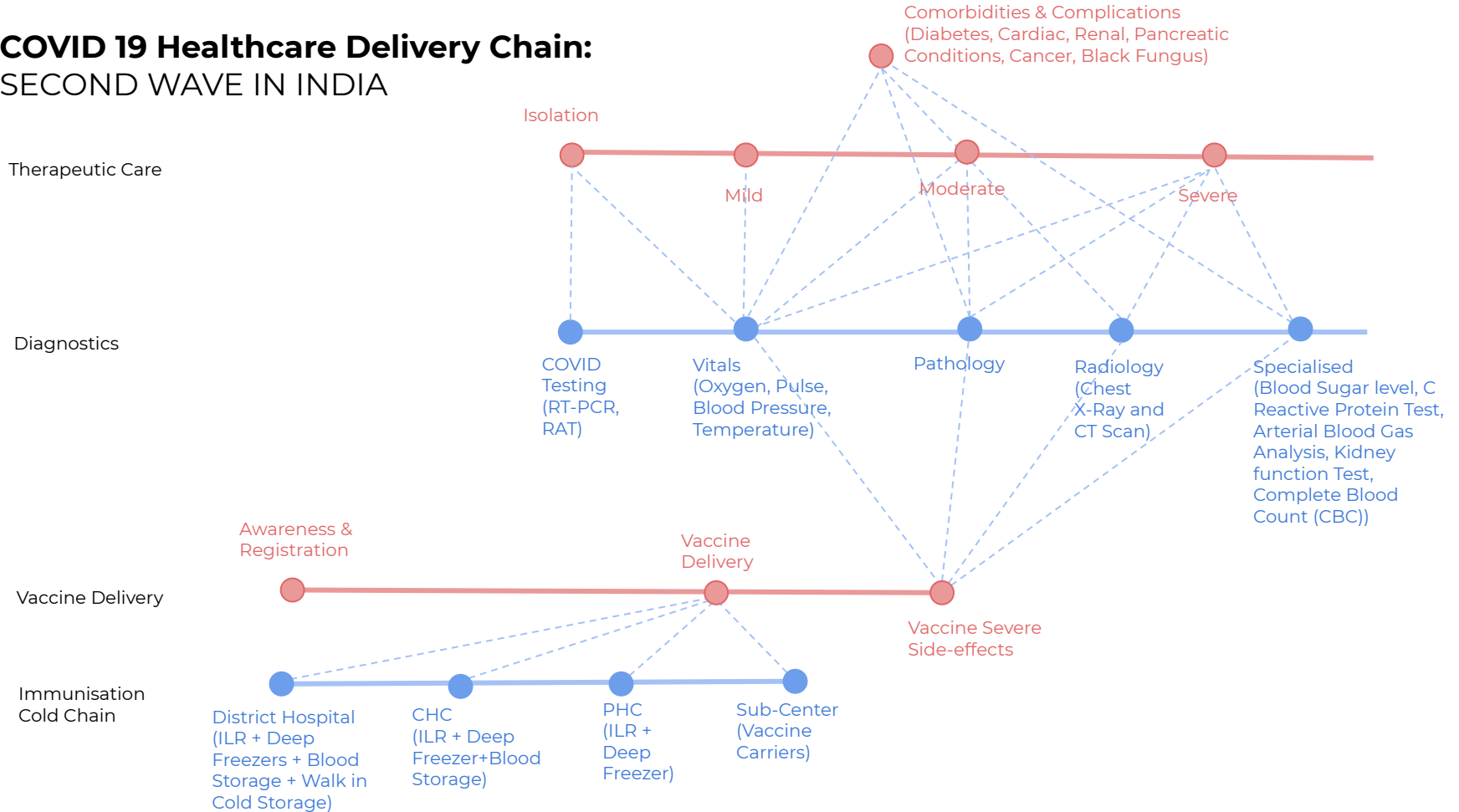
SELCO Foundation and COVID 19 - Timeline of Energy-Health Interventions

Solar energy systems, efficient appliances and sustainable built environments
Solutions across 800 health centres with 50 national and international partners

- Deployment of solar powered swab collection kiosks.
- Building and solar powering new and existing isolation centres (Like schools, disaster shelters, PHCs, SHCs)
- Powering district hospitals, community health centres for COVID response.
- Building the Vistex Hospital with Agri Stubble Panels in Bihar
- Building Covid-Cancer Care unit in Muzzafarpur in Bihar



COVID 19 Healthcare Delivery Chain: SECOND WAVE IN INDIA



Solutions **Piloted** and **Identified** Across the Value Chain

Therapeutic Care	Diagnostics	Immunisation	
Mild		Awareness	
<ul style="list-style-type: none"> Solar power for lights, fans and mobile charging Built Up temporary structures as extensions to hospitals 	<ul style="list-style-type: none"> Pulse Oxy-meters, Blood Pressure Apparatus, Digital Thermometers RT-PCR Testing, Swab Collection Units 	<ul style="list-style-type: none"> Projectors and Television Sets 	<ul style="list-style-type: none"> Digital Equipment - Laptops, Printers, etc.
Moderate		Vaccine Delivery	
<ul style="list-style-type: none"> Oxygen Concentrators, Generators & Cylinders Built Up temporary structures as extensions to hospitals 	CT Scans and X-Ray Machines	<ul style="list-style-type: none"> Small phase change material based vaccine carriers Medium scaled (<50L) Solar Direct Drive Vaccine Storage Ice Lined Refrigerators and Deep Freezers 	Walk in Cold Storage (WIC) and Walk in Freezers (WIF) for Vaccines Refrigerated and/or Insulated Trucks and Vans for Vaccine Transportation
Severe and Comorbidities		Vaccine Complications	
<ul style="list-style-type: none"> BiPAP Machines Oxygen Concentrators, Generators & Cylinders Built Up temporary structures as extensions to hospitals 	Blood Sugar level, Complete Blood Count (CBC), C Reactive Protein Test, Arterial Blood Gas Analysis, Kidney Function Test	To be Identified	

Case Studies - Immunisation

Solar Powered Vaccine Storage at District Hospitals



Solar powering of larger scale cold storage for vaccines, blood and other needs.

Reduced diesel expenditures and improved quality of healthcare delivery.

Ice Lined Refrigerators and Deep Freezers at Community and Primary Health Centres



Solar powering of medium scaled solar direct drive vaccine storage units. These have significantly reduced costs from energy expenditures and at the same time reduce wastage of vaccines.

Vaccine Carriers for Last Mile Delivery with Mobile Medical Units and Community Health Workers



Solar power at nodal centres for charging Phase Change Material based vaccine carriers. Vaccination along with other last mile health-care needs in remote tribal areas are addressed via mobile medical units.

Vaccine Cold Storage on Boat Clinics for Last Mile Delivery for Islands



Solar power for boat clinics operating in the char areas of Assam's Bhramaputra River. Boats travel to islands for extended periods of time relying solely on diesel. Solar power for vaccine storage and other staff needs on the boat significantly reduce diesel expenditures, vaccine wastage and transaction costs for delivering health services.

Case Studies - COVID Therapeutic Care

Solar Powered Isolation and COVID Care Centers for Mild Cases



Solar powered of lights, fans and mobile charging for newly built and existing/converted buildings as COVID-19 isolation centres.

Institutions like cyclone disaster shelters, schools, Panchayat buildings mapped and powered

Solar Powered COVID Care Centres for Moderate and Severe Cases



Need based solar power systems have been designed and implemented with hospitals in multiple states.

Modular solar energy systems for provided backup or complete solar powering for ICUs, Oxygen Concentrators, Laboratories, etc.

Backup systems completely reduce diesel reliance providing large savings to hospitals

Built Up Temporary and Semi-Permanent Extension Health Facilities for COVID Care



Built up prefabricated hospital for moderate and severe patients using a variety of available materials - like bison boards, agri stubble panels etc.

Solar energy systems provide back-up or complete solar powerign for therapeutic care needs of moderate to severe patients in ICUs

Specialised Facilities for Comorbidities - Cancer Care Unit



Built up prefabricated extension units for treating patients with cancer and COVID-19.

Solar powering of essential cancer treating therapeutic equipment along with basic needs like lights, fans.

Case Studies - Diagnostics

Solar Powered Pathology Labs at District Hospitals



Solar powering of existing pathology lab set-ups in hospitals including - Microscopes, Slide Warmers, Digital Equipment, etc. Piloted with District Hospitals, Primary and Community Health Centers with unreliable electricity, diesel reliance and high energy costs.

Specialised Testing Needs and Radiology Diagnosis needs for COVID 19 complexities, as well as comorbidities to be further identified and piloted

Solar Powered Pathology Labs at Community Health Centres and Primary Health Centres



Basic Diagnostics at all levels including for last mile healthcare delivery



Solar powered battery packs for small portable equipment like Blood Pressure Apparatus, Blood Glucose Monitoring, etc.

Devices and battery packs are integrated into ergonomic kits and backpacks for easy mobility.

Piloted with community health workers and ASHA workers as well as sub centers at the last mile.

Mobile RT-PCR Testing Vans and Swab collection kiosks for COVID-19 testing at the last mile



Portable kiosks with basic fittings like lights, fans and mobile charging. These avoid reliance on PPE suits are comfortable and secure for health care workers to take swabs easily.

RT-PCR Analysers for last mile COVID-19 testing.

Can be also fit into vehicles for swab collections and RT-PCR testing at the last mile

For more information,
Please get in touch!

info@selcofoundation.org
www.selcofoundation.org



SDG7 Solutions for COVID 19

SELCO Foundation

May 2021