



# Innovation for Social Impact – WIN Newsletter

March, 2020 Vol.1 No.1

Dear Friends,

We are pleased to release our first WIN Foundation newsletter.

WIN Foundation's vision is to support Innovations in the domains of (i) Water and Sanitation and (ii) Maternal and Child Health for sustainable and scalable social impact.

#### Contents:

- Latest Updates
- Project Spotlight
- Start-up Spotlight
- Start-up Support Program
- Publications

Since its formation 2 years back, WIN Foundation has supported reputed NGO's for innovative community projects, premier institutions for product/ technology/ process development and select technology startups for innovative products and business models for sustainable and scalable social impact. We have also supported social impact startup programs.

Our programs and outreach activities strive to bring diverse stakeholders together for fostering collaboration. Our recent Innovative product validation support program is pairing innovative startups with community partners to support product and market validation in the target communities and provide qualified feedback on the product.

Our recent Roundtables brought together action leaders from diverse groups including Government, Institutions, NGO's, Startups, Investors and other Social Innovation ecosystem partners to explore collaborative action.

In this issue, we cover the Model WATSAN project by CTARA, IIT Bombay under the Project Spotlight, Biosense under the Startup Spotlight, list of our projects, our startup support programs and publications.

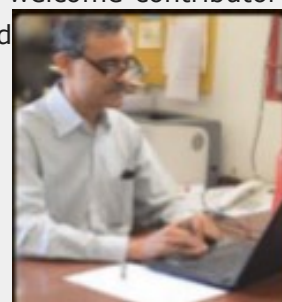
We look forward to your suggestions and support for our programs and activities. We also look forward to your feedback and suggestions for this newsletter.

To foster greater interaction among all social impact stakeholders, we welcome contributory articles for this newsletter, covering your organization initiatives and any inspiring stories.

With Warm Regards

Paresh Vora

Director – India Operations



## LATEST UPDATES

WIN Foundation continues to support several innovative projects. In Water and Sanitation, the projects include water security and conservation through community skilling and participation, water treatment technologies with much lower wastage than RO, water recycling, watsan systems planning and optimisation, sanitation, etc. In Maternal and Child Health, we have supported projects involving Women and Child Nutrition training, Child Nutrition Centre of excellence, a unique breakfast program for aanganwadi (pre-school) children, Health data study for a large population, etc.

We have also supported innovative startups to enable them to get their products validated among target social impact communities. The startups include Point of care diagnostics, pre-term baby support, low cost field level water and soil testing etc.

More information on projects and startups is available on our website at the following links:

Water and Sanitation: <https://winfoundations.org/water-and-sanitation/>

Maternal and Child Health: <https://winfoundations.org/maternal-and-child-health/>

In this issue, we cover one of the projects under our Project Spotlight, while one innovative startup is highlighted under Startup Spotlight. We will cover more projects and startups in our future issues.

## PROJECT SPOTLIGHT

**Title : Designing a Model WATSAN System for a Small Town and Developing a Design Tool for Wider Application- Case Study Approach**



### **Objectives:**

- Design a model WATSAN (water supply, sanitation/drainage, stormwater management and solid waste management) system for a town of 20,000 population based on available data and on-ground conditions.
- Convert this experience/process into an a state of the art IT-enabled design tool for wider application to other locations.

## **Work done and Outcomes :**

CTARA selected Vadgaon Maval and Faizpur towns in Maharashtra for the project. The work encompassed:

- Comprehensive survey of water supply using pipeline mapping, measurement of flow and pressure, and water quality, civil survey with elevations, using remote sensing/satellite data and mapping with open source GIS system.
- Social survey of 100% households including water connections, toilet positions with soak pits and septic tanks, willingness of household to join the sanitation programme and perception of residents towards current water supply.
- Using above inputs, the team then designed (i) a comprehensive WATSAN system including an appropriate water supply network, sewerage network, sanitation scheme, stormwater drainage network and solid waste management plan, using tools like hydraulic modeling, GIS etc., (ii) state of the art process and design tool set for wider application to other towns, (iii) training and other support modules to guide implementing agencies.

## **Future Scope:**

- CTARA is coordinating closely with Government authorities for implementation of the plans, including making final documents for tendering.
- Apply the process and tools to similar towns.
- Train consultants and local government officials to use the process and tools.

## **Interview - Prof. Bakul Rao, Professor, CTARA, IITB (Project Head)**

### **What were the drivers for proposing this project?**

*Throughout my research in water and sanitation, following things emerged:*

- *There are no design examples available for small towns and large villages especially for sanitation and a one-size fits all designs applicable for large cities are being pushed.*
- *Small towns and large villages need simple systems which can be implemented and operationalized during the low capacity staff available with them.*
- *The engagement of the elected representatives and general public is necessary during the design rather than a consultancy mode where the general public is not aware of the design exercise being conducted.*



### **Major Highlights and Learning for the Project Team?**

- *People are aware of the geo-environmental problems existing in their town/village and if given a chance will voice it and the same can be incorporated into designs.*
- *Engagement with local elected representatives and local colleges enhances the commitment and*

*responsibility.*

## START-UP SPOTLIGHT

### **Venture Name : Biosense Technologies Pvt. Ltd**

Biosense is a point of care diagnostic company, with a major focus in manufacturing devices which are easy to handle and use. It has developed innovative devices like TouchHb, Sync, A1Chek and Lipocek, enabling on field, instant tests of Anaemia, blood glucose, HbA1C and lipid, with accurate results. This enables quick on field diagnosis and possible treatment or referral to further medical consultation.

The device software also enable digital reports, eliminating need for physical copies, and creating electronic medical record of each patient tested, which can be assessed anywhere, anytime in future.

### **Product : TouchHb (Non-invasive haemoglobin for anaemia screening)**

#### **Work done through WIN Support :**

Biosense Technologies Pvt. Ltd., with the help of WIN Foundation, partnered with Sevak Foundation. Through this over 20,000 women and children in remote areas of Gujarat were tested for haemoglobin and blood sugar, right in their villages. Thus partnership with WIN Foundation helped in reaching the areas, where people find difficult to reach out for the diagnosis and treatment of their problems.



#### **Venture Progress :**

Biosense has successfully developed and manufactured point of care diagnostic devices, and reached out pan India covering all major cities of India. Biosense has been able to test around 15 lakhs people for Anaemia, Blood glucose HbA1C and lipid parameters. Incorporated in the year 2008, we received good support from our investors like Menterra, Insitor fund SCA, etc. In Nov 2019, Biosense was acquired by Tulip Diagnostics Company, one of the leading diagnostic companies. We look forward to contribute more in our future. Biosense has presence in major cities of India like Delhi, Chandigarh, Jaipur, Shimla, Patna, Kanpur, Bhubaneswar, Lucknow, Bangalore, Hyderabad, Chennai, Mumbai, Nagpur, Pune and Surat, Valsad.

To know more, click here

<https://www.biosense.in/>



*"Biosense Technologies Pvt. Ltd with the prime focus on developing affordable devices has been successful in getting acceptance in the market due its accuracy of the reports, which has help many doctors in treating patient with an ease and their comfort. Major part of this was made possible by WIN foundation partnership, which helped us in reaching remote areas of Gujarat and eventually adding to the effort to meet our vision and building our confidence"*

*- Dr. Abhishek Sen, Inventor & Founder,  
Biosense Technologies Pvt.Ltd.,*

## START-UP SUPPORT PROGRAMS

### ***WIN Innovative Product Market Validation Support Program :***

This program supports startups in their critical stage for initial product prototype ->trial -> refinement stage and market validation with actual user communities, through our NGO partners who are in close touch with target communities. WIN will provide the support in terms of funding the product cost.






We have received very good responses from both start-ups and community partners. In the 1st round, we shortlisted 8 start-ups and connected them to NGO partners for support. Interested start-ups can apply for our 2nd round clicking [HERE \(GOOGLE FORM\)](#)

### ***National Bio Entrepreneurship Competition (NBEC) – 2019:***

WIN Foundation was a category partner for the domains of (1) Water and Sanitation and (2) Maternal and child health. This event was organised by C-CAMP on behalf of Department of Bio-Technology, Government of India.

The competition received nearly 3000 applications from across the country. Following the regional qualifiers, 67 business ideas were shortlisted for the Boot Camp held between 11-13 December in Bengaluru. The rigorous jury evaluations on 13th and 14th saw tough competition among promising startups leading to selection of final winners. As category partner for (i) Water and Sanitation and (ii) Maternal and Child Health, WIN Foundation participated in the preliminary evaluation and then the final jury rounds, and sponsored the category awards.

### ***NEBC – 2019 – PRIZE WINNERS :***

Domain	Water and Sanitation	Maternal and Child Health
Start-up	Alchemie Robotics	Blackfrog Technologies
Product	Robotic solution for homogenization of contents, intervention, and cleaning in septic tanks 	Portable Refrigerator for vaccine transport ( <a href="https://www.blackfrog.in">https://www.blackfrog.in</a> ) 
Founder/s	 Prof. Prabhu Rajagopal Professor, IIT Madras  Mr. Divanshu Kumar MTech-IIT Madras	 Mr. Mayur Shetty, CEO, Blackfrog Technologies

To know more ....[CLICK HERE](#)

### ***WIN-KPCSD Roundtable : Innovations to drive Social Change:***

Organized jointly by WIN Foundation and the Kiran C Patel Centre for Sustainable Development – IIT

Gandhinagar on 10th Jan 2020.

More than 70 Participants from diverse stakeholders including NGOs, Institutions, Foundations, Independent professionals, Innovation Ecosystem players and Start-ups, actively participated in the roundtable, shared their perspectives and initiatives, exchanged ideas and collaboration opportunities, and offered their support in innovations and initiatives to drive and bring social change in our focused domains of (i) Water and Sanitation and (ii) Maternal and Child health.



## SCHOLARLY PUBLICATIONS FROM WIN SPONSORED PROJECTS

### Water and Sanitation :

- **Manish Kumar\***, R. Goswami, A.K. Patel, M. Srivastava, N. Das. (2020) "Scenario, Perspective and Mechanism of Arsenic and Fluoride Co-occurrence in the groundwater: A critical Review" **Chemosphere, Vol 249** <https://doi.org/10.1016/j.chemosphere.2020.12612>
- K. Taki, S. Choudhary, S. Gupta and **Manish Kumar\*** (2020). Evaln of Geotech. Prop. of Municipal Sewage Sludge for Sust. Utilizn, **Jrnl. of Cleaner Prodn.Vol 251** <https://doi.org/10.1016/j.jclepro.2019.119723>
- S. Mukherjee, N. Raval, S.P. Sahoo, **Manish Kumar\*** (2019) Alginate beads and Oleic coated Iron nanoparticles mediated Arsenic removal from aqueous solution: A Groundwater *in-situ* remediation perspective, **AGU Fall Meeting in San Francisco, California. USA 9<sup>th</sup>-13<sup>th</sup> Dec 2019. (Oral Presentation)**
- Thakur A, Mukherjee S, **Manish Kumar**, (2019) Adsorption of As, Pb and Cd on functionalized silica: A low cost ecofriendly approach for agro wastewater treatment, **Water and Devlp. Congress and Exhibition (IWA 2019), 1<sup>st</sup> - 5<sup>th</sup> Dec. 2019, Colombo, Sri Lanka. (Poster Presentation)**
- **Mankad, Jaivik; Borse, Dinesh; Das,**
- **Dr. Jadeja Y., Dr. Bhimani S., Karithiya G.**, Kankavati Sandstone Aquifer Mapping and Attempts on Water Scarcity -A Case Study on Groundwater Management in Kutch Dist, Gujarat, **National Conf. and Field Workshop on 'Recent Studies on The Geology of Kachchh Basin'** organized by Dept of Earth and Envir. Sci., K.S.K.V. Kachchh Univ., Bhuj, Dec 2018.
- **Dr. Bhimani, S,<sup>1</sup> Dr. Jadeja, Y. <sup>2</sup>, Mr. Karthiya**, Water Security through Participatory Groundwater Management in Mundra-Mandvi Block, Kutch District, **7<sup>th</sup> Intl. Groundwater Conf. on Groundwater vision-2030, New Delhi, Dec 2017, Organized by: National Institute of Hydrology, Roorkee and Central Groundwater Board, India, with Asscn. of Global Groundwater Scientists, and Texas A & M Univ., USA**
- **Bakul Rao**, (2020), "Need for integrated planning of envir. services for small town- a case study" **Ist Intl. Conf. on Urban Science and Engg. held at IIT Bombay, 28<sup>th</sup>- 29<sup>th</sup> Feb, 2020 (Poster and abstract)**
- **Bakul Rao (2020)**, "Exploring the facts associated with semi urban areas of India by household social survey – a case study, **35<sup>th</sup> Intl. conf. on Solid Waste at Annapolis (MD), Washington titled. (Oral and Poster presentation)/ Paper being published in**

**Laya; Padhiyar, Nitin and Srinivasan, Babji**, "Devlp. of operational resilience metrics for Water Distribn. systems", in *Resilience, Response, and Risk in Water Systems: Shifting Mgmt. and Natural Forcings paradigms*, Switzerland: Springer Nature, 2020. <https://legacy.iitgn.ac.in/publication.htm>

- **Rahul M., Sai, M., Joshi, A., Das, L, Mohapatra M. and Babji Srinivasan**, Sensor placement for Leak Localization in Water Distribn. Networks using Machine Learning accepted for presentation in *IEEE sponsored NCON 2020 conf. in Pattaya Thailand, Mar 11-14, 2020*, <https://icdamt.ict.up.ac.th/>

## **Maternal and Child Health :**

- **Kranti Vora** (2019), "Ideas and Innovations in Technology, Methodology of a large Maternal and Child Health Demographic Surveillance System (MCHDSS) in marginalized communities", *Intl. Jnl. of Advance Res.*, ISSN: 2454-132X (V5,Issue-4) 2019 <https://www.ijariit.com/manuscripts/v5i4/V5I4-1142.pdf>
- **Kranti Vora (2020):** "Population Characteristics of Maternal and Child Health Demographic Survey (MCHDS) Gujarat 2019", *Asian Journal of Pregnancy and Childbirth*, Vol 3(1): 10-19, 2020; <http://www.journalajpcb.com/index.php/AJPCB/article/view/3010>

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