

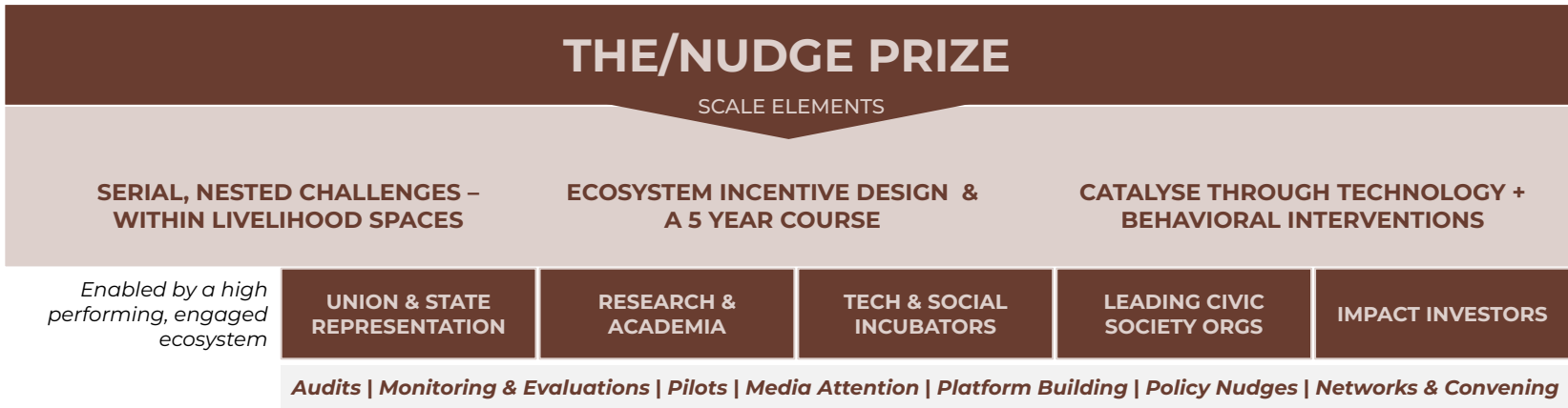
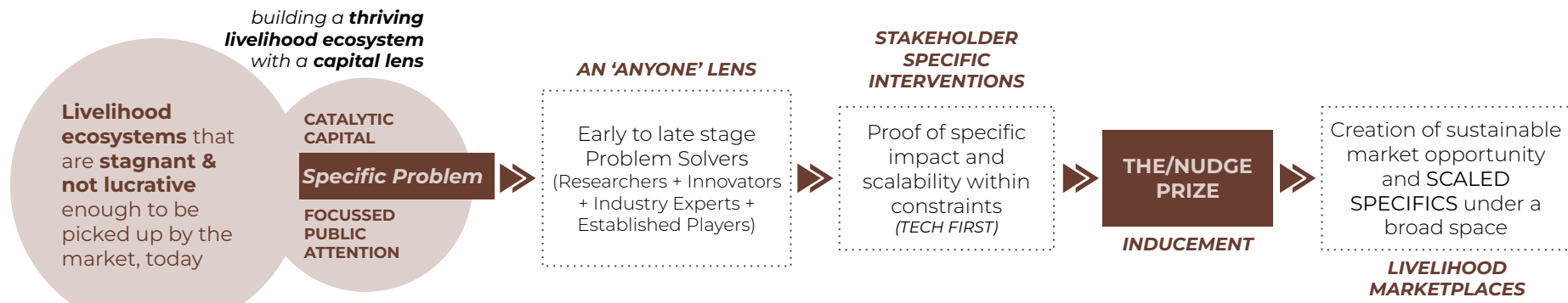
THE/NUDGE

INSTITUTE

“poverty-free India, within our lifetime”

*The/Nudge is an action institute working towards a poverty-free India, within our lifetime.
We partner with governments, markets and civil society to build resilient livelihoods for all.*

A framework to spark innovation at scale for livelihoods



THE/NUDGE Prize

ashirvad

by aliaxis

Ashirvad Water Challenge

Clean Drinking Water for All

in partnership with



Office of the
Principal Scientific Adviser
to the Government of India

Ashirvad Water Challenge: **Problem Statement**

Clean Drinking Water for All

Solutions including, but not limited to

- purification solutions to remove metal contamination and other impurities
- storage and distribution solutions ensuring sustained drinking water availability to communities
- recycling solutions like water source recharge, desalination, wastewater treatment to increase availability of drinking water in regions with water scarcity
- solutions for clean drinking water in difficult terrains and removing social barriers to access

Evaluation criteria



Impact



Sustainability



Scalability

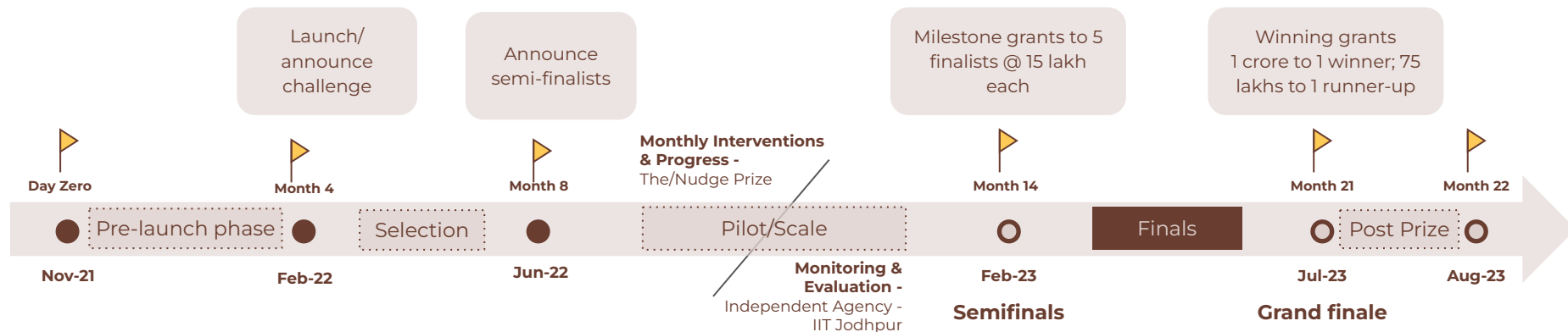
Long-term impact

Increase in access to clean drinking water for rural households, thereby improving health and hygiene in these communities

Ashirvad Water Challenge: **March 2022 – July 2023**

Provide 'Clean Drinking Water for All'

MILESTONES



JOURNEY



Ashirvad Water Challenge: **Semi-finalists** selection criteria

Selection across three stages

- 1

Checked 'relevance of the solution to clean water enablement' which resulted in shortlisting of 102 candidates for evaluation by an external water panel
- 2

Blind review of the shortlisted 102 solutions by an external water panel (leading water experts) across:

Depth and credentials of the team in Water	Innovation (including depth of research & proof of concept)	Extent of O&M in the solution	Total Addressable Market (TAM) - scalability	Technology enabled solution	Pricing & revenue models in place	Sustainability of the solution
--	---	-------------------------------	--	-----------------------------	-----------------------------------	--------------------------------
- 3

The/Nudge Prize team assimilated the scores, normalised for evaluator variability and created a top 35 contestant pack. Of these 35, solutions that met the following criteria were prioritized or given a slightly higher weightage:

 - the solution's scale of implementation or potential scalability,
 - on-ground proof of concept or implementation footprint, and
 - the solution's rural or urban low-income demographic focus

EXPERT
PANEL



Social Alpha
Innovations Team



Aavishkaar Capital
Innovations Team



IHE Delft, NL
Water Leads



Arghyam
Project Leadership



Imagine H2O Asia
Managing Director

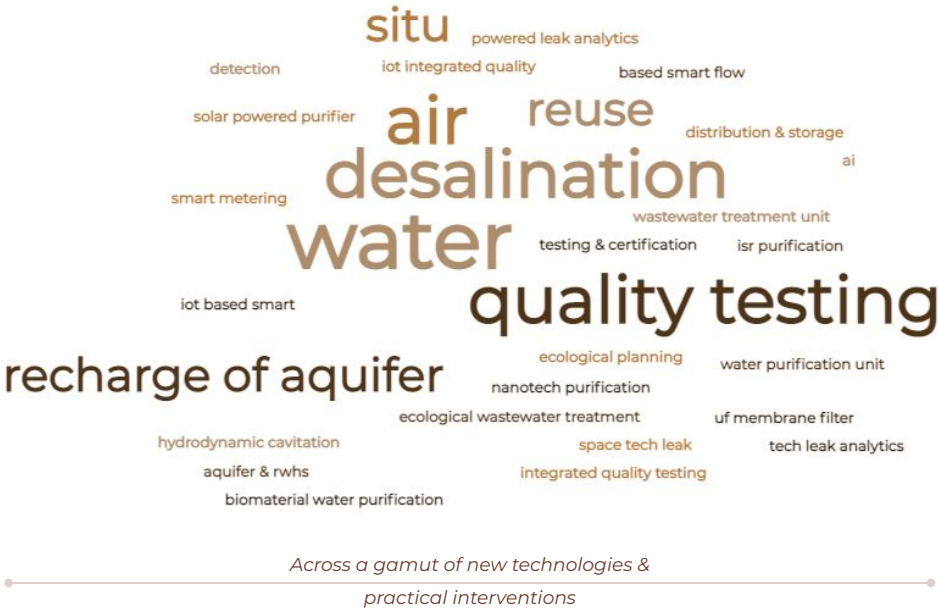
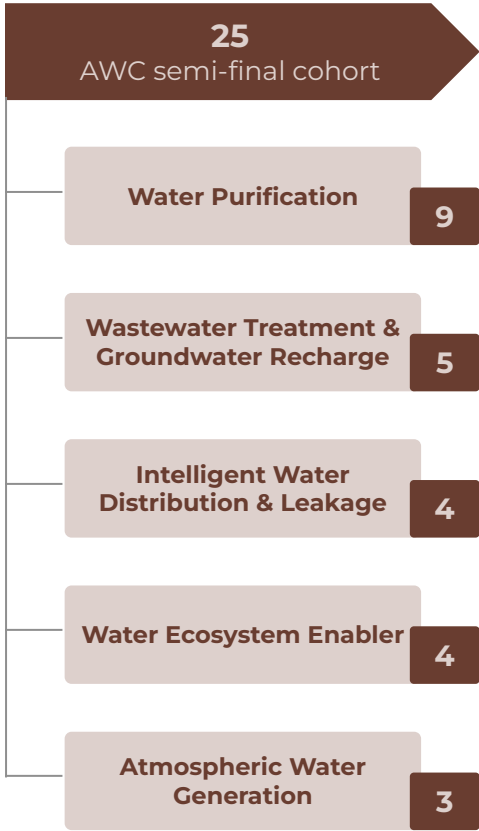


Indus Water
Founder

6

Ashirvad Water Challenge: **Snapshot of semi-finalists**

Access to innovative and focused solutions across priority areas



21 : 4
for profit : non profits

more than **60% have existing rural solutions**

8 : 15 : 2
deep tech : medium-low tech : non-tech

100% have verifiable on-ground projects

proven **water & technology credentials**

Ashirvad Water Challenge: **Building an ecosystem approach**

advisors



Prof Asit K. Biswas
Renowned Water Expert



VK Madhavan
CEO, WaterAid India



Vedika Bhandarkar
COO, Water.org

knowledge & immersion partners



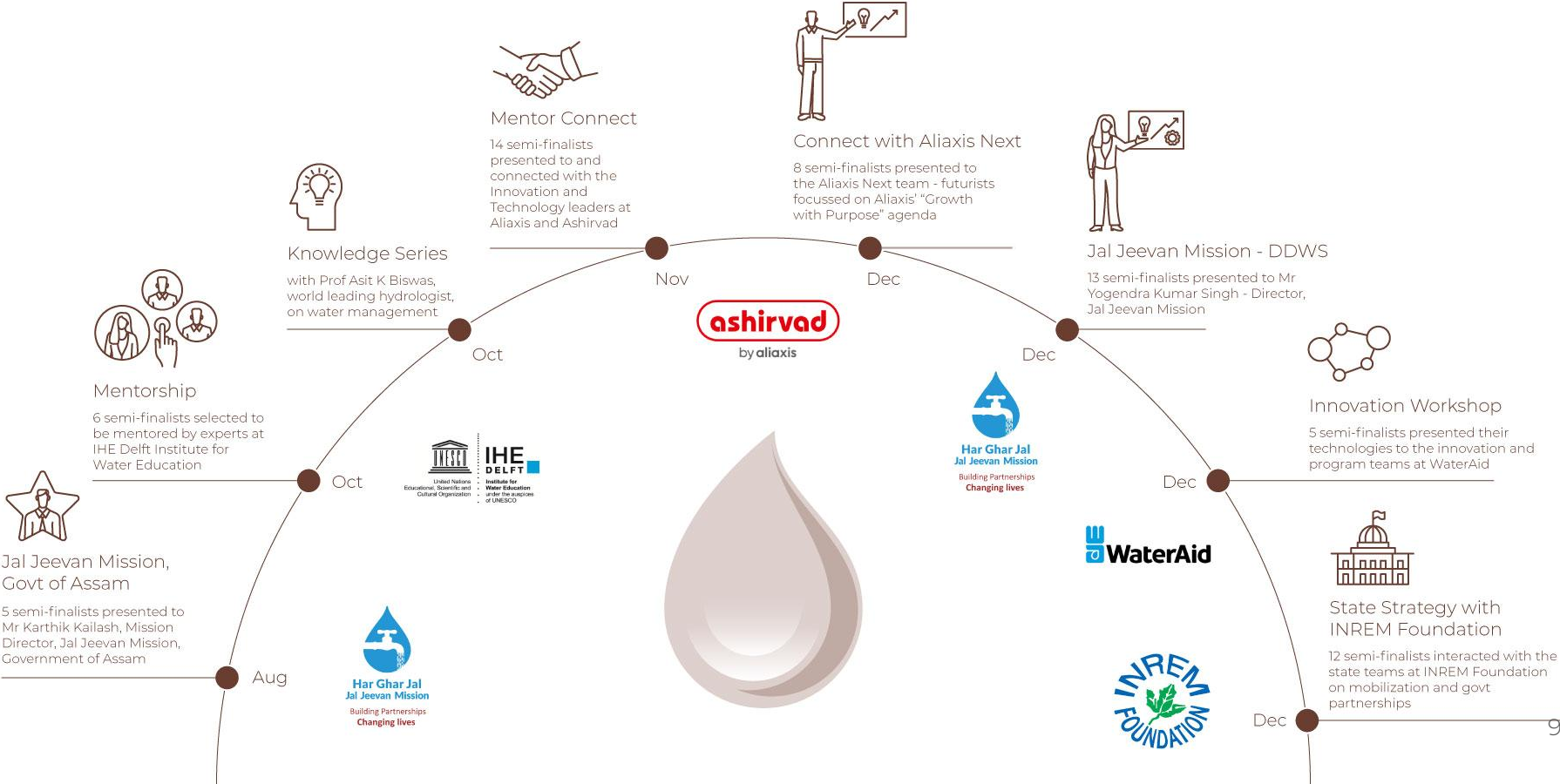
investors



incubators & accelerators

Ashirvad Water Challenge: **Interventions, before finalist selections**

Mentorship, pitch and innovation strategy workshops



Ashirvad Water Challenge: **Finalist** selection criteria

Selection across two stages

1

Independent evaluation by a team of chemical engineering and business experts from **IIT Jodhpur**
field evaluations + in-depth interviews led by Prof Pradeep Tewari, Professor Chair at the Jal Jeevan Mission, evaluated on

Scalability and replicability

Business model, technical readiness, capacity, ease of O&M, affordability

Economic Feasibility

demand, input availability, break even analysis, overall cost per liter-shadow price

Social Outcomes

lives impacted, livelihood generation, social technology transfer, environmental benefits, human devt

Targeted Water Quality

inlet & outlet water quality, clarity of problem and solution, target community

Environment & Sustainability

reduction in water waste, energy cost, source sustainability and recharge

Organizational Readiness

business plan, team capability, funding, evidence base, patents, accreditation

2

Jury selection by intellectuals, experts and practitioners in the water ecosystem

Scalability & Replicability

Innovation & replicability across India, esp rural challenges, time to maturity

Economic Feasibility

Product market fit, consumer segments, cost per ltr, ease of adaptability of solution

Social Outcomes

Alignment with national priorities, net positive impact on quantity of drinking water

Environment & Sustainability

Minimised externalities, improvement in water resources

Organizational Rigour

Capital unlocked, propensity of Prize grant in being catalytic in achieving goals

Jury Members



Yogendra Kumar Singh
Director JJM-VI, DDWS



Dr. Sapna Poti
Director Strategic Alliances, O/o
Principal Scientific Adviser to the Gol



Jayamala Subramaniam
CEO, Arghyam



Vishwanath S (Zenrainman)
Advisor, Arghyam & Trustee,
Biome Environmental Trust



Sunderrajan Krishnan
Executive Director,
INREM Foundation

THE/NUDGE Prize

ashirvad

by aliaxis

Ashirvad Water Challenge
FINALISTS

in partnership with



Office of the
Principal Scientific Adviser
to the Government of India

Aumsat

Estd. Aug 2019



Riddhish Soni

Impact

23,000

Liters of water saved per month

80%

Savings in survey costs



[Linkedin](#) [Website](#) [B Plan](#)
team@aumsat.com

Leak Analytics

Leak identification and waterways mapping using sensor, radar & optical satellite data

Problem

- Excess water wastage due to unidentified leakages
- Over INR 70,000 crore loss to the Indian economy caused due to non-revenue water

Solution

Use existing sensor data, user input, radar and optical satellites to

- map waterways and identify leaks,
- guide ground action teams to fix the leaks and add them to geo database

Objectives (Final Phase)

- Product efficiency - to increase the accuracy of the leak forecasting model and create more innovations in Robotic Technologies and Engineering Technologies for identifying Zones of pipeline failure for Advanced Leak Failure Forecasting

Locations

Mumbai, Hyderabad, Bangalore,
Singapore, Toulouse and across 100
smart cities in India

Customers

Hydropower corporations, municipalities,
SEZs

i47 Labs

Estd. 2019



[Sajin Kunhambu](#)



[Sini Mukundan](#)

Impact Created

50

Lakh liters saved

25k

Users



[Linkedin](#) [Website](#) [BPlan](#)
[k@saj.in](#)

Smart Metering

Monitoring & automation of water value chain to prevent wastage

Problem

Scarcity of water caused due to excessive water usage and water wastage (leakages) and lack of awareness.

Solution

Manage water consumption and reuse through Aegir

- *IoT meters - to measure water usage*
- *monitors - to track tank/sump water levels, STP quality, and automate water pumps and ST*

Objectives (Final Phase)

- *have active installations and team presence in at least 3 more cities*
- *prototype, build and field test an ultra-low power ultrasonic water meter that will live for 12+ years on a battery*

Locations

Bangalore, Thiruvananthapuram, Kochi,
Chennai, Hyderabad, Mumbai

Customers

Builders, factories, corporates, supply
companies, govt. bodies, residential
communities, individual houses

Ossus Bio

Estd. 2017



Suruchi Rao



Shantha Rao



Kamar Suhail
Basha

Impact Created

21 tons Hydrogen production/day

120L Water recycled



[Linkedin Website](#) [B Plan](#)
suruchisrao@ossusbio.com

Water Desalination

Bio-electrochemical demineralization of industrial effluents during production of biohydrogen gas

Problem

~ 600 million people across the globe are water-deprived and the ever increasing demand cannot be met by ground water or purifying surface water bodies

Solution

Hydro-electrochemical process to

- *desalinate seawater and reduce salt content by 90-95%*
- *simultaneously degrade organic waste effluents to produce green hydrogen*

Objectives (Final Phase)

- *Shift from indirect impact on freshwater resources for industrial consumption to direct impact on recycling and reuse of municipal sewage*
- *scale-up across Tier 3 cities and rural districts.*
- *Partner and process customers on-site municipal sewage, to test OB HydraCel*

Locations

Jamshedpur, Bangalore

Customers

B2B

Smarterra

Estd. Oct 2017



Gokul



Navaneethan



Giridharan

Impact Created

11

Invisible leaks identified

77%

Accuracy in localizing losses



[Linkedin](#) [Website](#) [B Plan](#)
gokul@smarterra.io

AI-powered Leak Analytics

AI powered analytics platform to monitor urban waterways and suspect meters

Problem

Expansion of water network with challenges such as low pressure in the as-built network, unmet demand, and crucially, bursts, leaks and illegal tapping

Solution

AI-based platform to monitor

- *urban waterways, with a focus on pipes that are likely to fail*
- *suspect meters*
- *Areas with suspect connections*

Objectives (Final Phase)

- *Identify, reach out to and finalize partnerships with 10-15 partners active in JJM and AMRUT projects*
- *Initiate pilots or contracts with 3-5 partners*

Location

Coimbatore, Kolkata, Pune, Bangalore, Philippines, Cambodia

Customers

Corporations, municipalities, large multi-cities, single cities

Solinas Integrity

Estd. 2018



Divanshu



Bhavesh



Linda



Moinak

Impact Created

40+

Contamination points identified

600K

Liters saved/day



[Linkedin B Plan Technology](#)
praba@solinas.in

Robotic Leak Analytics

Robotic solution to detect leaks and contamination in pipelines

Problem

>70% of treated water gets wasted and contaminated through pipeline distribution in India and over 38% of NRW is produced due to the lack of automation in the pipeline industry

Solution

- Robot(Endobot) to navigate through water and sewer pipelines for leak detection & data collection
- Data is further assessed on cloud-based dashboard - Swasth

Objectives (Final Phase)

- Planned number of users - 8(5 recurring & 3 New)
- Deploying new version of SWASTH software solution with additional features like Inspection Management Tool, MIS, Laser Profile Analysis and Swasth AI on its own cloud platform
- Deploying Solinas's 1st Sewer Robot
- Length of pipeline inspection - 7000 mts

Locations

Chennai, Bhubaneshwar, Coimbatore, Ulhas Nagar, Jamshedpur, Nagpur, Trichy, Bangalore, Cochin, Trivandrum

Customers

B2G and B2B

Urdhvam

Estd. Oct 2017



Rahul Bakare



Vinit Phadnis

Impact Created

1850 borewells recharged

3398 Direct & indirect beneficiaries



[LinkedIn](#) [Website](#) [B Plan Technology](#)
rahul@urdhvam.com

Aquifer Recharge

Groundwater recharge through geological mapping and tapping into unconfined aquifers

Problem

Over-exploitation of groundwater causing dried borewells, affecting farm productivity, quality of produce & source sustainability

Solution

- *Geological mapping of old and new borewells to identify water levels*
- *Artificial recharge of depleted borewells by tapping into the unconfined aquifer, using BoreCharger*

Objectives (Final Phase)

- *Franchising of BoreCharger*
- *Develop groundwater simulator & develop simplified groundwater training material*
- *Train Para-Hydrogeologists & pilot geophysical investigations through Para-Hydrogeologists*
- *Develop Automation and Productization of BoreCharger*
- *Pilot Groundwater Monitoring Sensors*

Locations

*Rajasthan, Maharashtra, Gujarat,
Telangana, Karnataka, Tamil Nadu,
Madhya Pradesh, Benin, West Africa*

Customers

B2C, B2B2C, B2B and B2G

* Wild card entrant - in the running for the Grand Prize, but are not eligible for the milestone prize.

Vas Bros*

Estd. 2012



Saket Kumar



Apurv Gupta

Impact Created

20+

Critical water quality habitats covered

3

States covered so far



[LinkedIn](#) [Website](#) [B Plan Technology](#)
saket.kgp@gmail.com

Water Purification Unit

Sustainable Arsenic-mitigation and clean water solution

Problem

Rapid increase in the contamination levels of arsenic and other heavy metals, causing Arsenicosis.

Solution

Set up community water treatment plants across critical habitats using OáS Technology to

- *remove heavy metals from water while maintaining alkalinity, at a low cost per litre,*
- *purify water without use of electricity and with negligible water wastage*

Objectives (Final Phase)

- *Set-up new manufacturing unit to manufacture OAS Media*
- *Develop first model of BarterWATER in at least one Panchayat suffering from critical water quality issue*
- *Roll out the retail sales of OAS Well - domestic drinking water purifier*
- *Streamlining the Operation & maintenance of existing installations*
- *Field trials of TAP@APP*

Location

Jharkhand, Bihar, Uttar Pradesh, Assam, Kolkata, Guwahati

Customers

B2C, B2B and B2G

* Wild card entrant - in the running for the Grand Prize, but are not eligible for the milestone prize.

Ashirvad Water Challenge: Features

IN THE NEWS

Entrepreneur
INDIA

The/Nudge Prize | Ashirvad Water Challenge Harnesses the Power Of Social Entrepreneurship To Provide Clean Drinking Water For All



THE HINDU

Seven finalists identified for Ashirvad Water Challenge

They were shortlisted out of 140 applicants whose innovations included solutions to water leakage and distribution, wastewater treatment, water purification, atmospheric generation of water, and enabling water ecosystems

mid-day

Tech entrepreneurs, investors on hurdles affecting aid for Maharashtra's rural water crisis



DECCAN HERALD

Water challenge attracts tech to plug leakages, augment supply

TV Panels

THE/NUDGE Prize **ashirvad** by allians

Ashirvad Water Challenge
Clean Drinking Water for All

Prof K Vijay Bhargava
Principal Scientific Advisor,
Govt of India

Deepak Mehrotra
Managing Director,
Ashirvad Pipes

Sanku Chhabra
CEO, TechSolv
Centre for Social Innovation

Prof Ash K. Bhatia
National Water Academy

Sandeep Bhatnagar
CEO, Bhatnagar

W. Madhavan
CEO, WaterAid India

watch them
on 22nd March at 7pm

newsX
NEWS NETWORK

Office of the Principal Scientific Advisor to the Government of India

THE/NUDGE Prize **ashirvad** by allians

newsX **World Water Day Special: Challenge to Change**
Tech Innovators Solving India's Water Crisis

fireside chat **Deepak Mehrotra**
MD, Ashirvad Pipes
"dare, care & deliver"

in conversation with **Atul Satija**
Founder,
The/Nudge Institute

Water Management
Sanku Chhabra, Co-founder, TechSolv
Moinak Banerjee, Solinas Integrity

Water Measurement**Biddhish Soni**
Aurnsat

Water Infrastructure**Saket Kumar**
Organic Aqua Solutions

22 MARCH - 10:00 PM | NEWSX
FINALISTS OF THE/NUDGE PRIZE - ASHIRVAD WATER CHALLENGE

Office of the Principal Scientific Advisor to the Government of India

JURY & SEMI-FINALISTS ON LINKEDIN

THE/NUDGE Prize **ashirvad** by allians

Ashirvad Water Challenge
Clean Drinking Water for All

Meet the Semi-Finalists

Impact Stream: Water Ecosystem Enabler

TARUN BHARAT SANGH
Rural community mobilisation for rainwater harvesting and other tech first thinking with natural so

Rajendra Singh
Waterman of India
Founder

Maulik Sisodia
Executive Director

The/Nudge Centre for Social Innovation
16,781 followers
2w • 5

My interest in creating technology that addresses social strong. When my family and I repeatedly experienced pollution during my school years, it inspired me to find solutions to address the concerns of water scarcity and experience eventually gave birth to Solinas Integrity. - Moinak

THE/NUDGE Prize **ashirvad** by allians

Ashirvad Water Challenge
Clean Drinking Water for All

S. Vishwanath

Dr. Sapna Poti

Director, Strategic Alliances,
Office of PSA, Government of India

- PhD from IIT Madras & Chevening
- Awardee 2015
- 30 years of experience in Government, Industry & Consulting
- Member of Niti Aayog Skill development of Mountain states, USAID Samridhi, CIZ MSME

Office of the Principal Scientific Advisor to the Government of India

THE/NUDGE Prize **ashirvad** by allians

Ashirvad Water Challenge
Clean Drinking Water for All

Meet the Semi-Finalists

SOLINAS **Impact Stream: Smart Water Distribution & Leakage**

Remotely operated pipeline crawler to detect leaks, contamination, etc., & assess the condition of the pipeline network

Divanshu
Co-founder, ELQ

Bhavesh
Co-Founder & Product Head (Sanitation)

Linda
Co-Founder & Project Manager

Moinak
Co-Founder & Product Head (Water)

#WaterChallenges #CleanDrinkingWater #WaterManagement #Innovation #AWC

Office of the Principal Scientific Advisor to the Government of India

Ashirvad Water Challenge: **The/Nudge Team**



Atul Satija
Founder
atul@thenudge.org



Sudha Srinivasan
CEO - Centre of Social Innovation
sudha@thenudge.org

The/Nudge Prize Team



Kanishka Chatterjee
Director - The/Nudge Prize
kanishka.chatterjee@thenudge.org



Sakshi Jain
Lead - Ashirvad Water Challenge
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Arushi Choudhary
Lead - Challenge with DCM Shriram Fdn
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Sravya Jandhyala
Associate, The/Nudge Prize
sravya.jandhyala@thenudge.org

Appendix

Snapshots of Interventions with the Ecosystem


Knowledge Series with **Prof Asit K Biswas & INREM Foundation**

expert sessions on topics of common relevance

THE/NUDGE Prize

Ashirvad Water Challenge
Clean Drinking Water for All

ashirvad
by allaxis



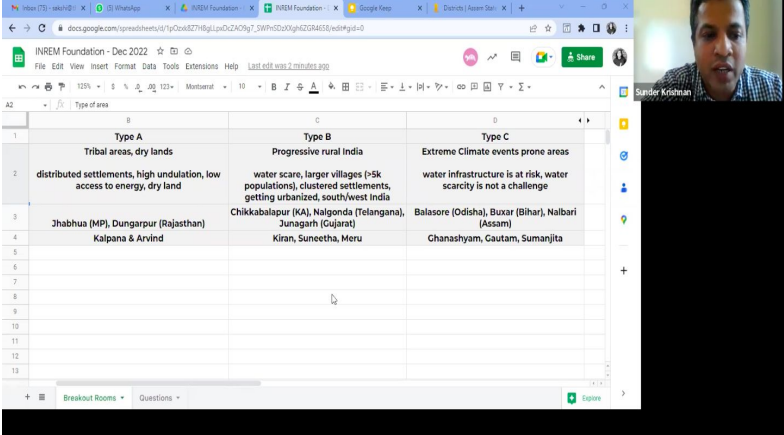
Prof. Asit K Biswas,
Renowned water expert

Water becomes a political priority only
when there is a flood or drought.

Sponsored by **ATI** **NITI Aayog** **ATIL INNOVATION MISSION**

Office of the
Principal Scientific Advisor
to the Government of India

Prof Asit K Biswas, world leading hydrologist spoke about issues in water management and his experience over the years with water ecosystems around the globe



	Type A	Type B	Type C
1	Tribal areas, dry lands	Progressive rural India	Extreme Climate events prone areas
2	distributed settlements, high undulation, low access to energy, dry land	water scare, larger villages (>5k populations), clustered settlements, getting urbanized, south/west India	water infrastructure is at risk, water scarcity is not a challenge
3	Jhabhua (MP), Dungarpur (Rajasthan)	Chikkaballapur (KA), Nalgonda (Telangana), Junagarh (Gujarat)	Balasore (Odisha), Buxar (Bihar), Nalbari (Assam)
4	Kaipana & Arvind	Kiran, Suneetha, Meru	Chanashyam, Gautam, Sumanjita
5			
6			
7			
8			
9			
10			
11			
12			
13			

State teams from INREM Foundation engaged with semi-finalists on their state specific strategies, bringing expertise on mobilization & govt partnerships

Mentorship with **Ashirvad Pipes & Aliaxis leadership**

pitch days with the objective of accessing tech and business mentorship



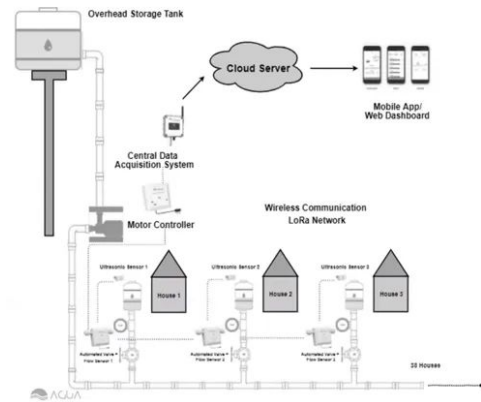
Mentor Connect : 14 semi-finalists presented to and connected with the Innovation and Technology leaders at Aliaxis and Ashirvad Pipes



8 semi-finalists presented to Aliaxis Next - futurists focussed on Aliaxis' "Growth with Purpose" agenda - at their Research & Technology Centre in Bengaluru

Presentations to **Directors** at **Jal Jeevan Mission** *understanding state and central government priorities*

Case Study 1 - Agua Smart Water Distribution



Project details (*All charges exclude GST)	
Project Name	Village Level Distribution, Odisha
Number of Houses	38 Households
Agua Devices	38x Automated Valves + Flow sensors, 38x Ultrasonic Tank Level Sensors, 1x Motor Controller
Water consumption before Agua	3.05 ML annually
Savings after Agua (Leakage Detection)	1.07 ML annually
Potential Annual Electricity Savings	35% reduction in water pump usage
Project Payback Period	4.4 years
Qualitative Advantage	Quota Based distribution, Remote Monitoring, Leakage Detection

Stage of Development: Technology has been field tested. Ready for Scale



5 semi-finalists presented to Mr Karthik Kailash, Mission Director, Jal Jeevan Mission, Government of Assam, with solutions focussed on Intelligent Water Systems and Ecosystem Enablers

12 semi-finalists presented to Mr Yogendra Kumar Singh - Director, Jal Jeevan Mission, and received 1:1 feedback on their technologies and business models

Technical mentorship and pilot **opportunities**

with global institutions with technical expertise and strong community presence



United Nations
Educational, Scientific and
Cultural Organization



6 semi-finalists selected to be mentored by business and technical experts at IHE Delft Institute for Water Education, the world's largest international graduate water education facility

5 semi-finalists presented their technologies to the innovation and program teams at WaterAid. If selected, the technologies will be piloted in geographies served by WaterAid teams