



GLOBAL SUMMER INTERN PROGRAMME

May - Sep, 2017



Selected by Yourstory, the premier startup news agency, as among the 30 most promising tech startups in India in 2016



One of the only early stage startups invited to participate in "Start Up India, Stand Up India" at Vigyan Bhawan, New Delhi



Winner of "Waste to Energy" selected across global startups by the Ministry of Energy of Kazakhstan



Start Up Energy Transition

Top 3 in "Platform & Communities" selected from over 500 startups across 60 countries by Germany's Energy Agency



AN INVITATION FROM OUR FOUNDERS

May 1st, 2017

Dear Students,

Waste Management is fast becoming a key pain point for built environments and also an opportunity to demonstrate self-sufficiency, sustainability, and leadership with regards to social responsibility. While over 85% of India's waste can be recycled or repurposed to create energy, save water, and make production less demanding on the environment, over 90% of this waste sits idle in landfills and dumpsites. And we're not alone. There is no country in the world has a platform for recycling economies - to verify and control that the maximum amount of its waste is being reused or recycled, instead of burned or landfilled.

That is why we started Citizengage. We are tech startup building the world's first Waste-to-Resource Network that flips this reality by connecting the largest waste producers in a city, such as restaurants, hotels, malls, tech parks, and gated residential communities, to their collectors and processing facilities that are biogas plants, composting centres, piggeries, recycling facilities, and manufacturers as recyclable raw materials, rather than landfills. We manage the conversion of over 600 tons of waste into resources each month and the Network has diverted over 5,500 tons from landfills to date. We believe we are on the cusp of orchestrating a global revolution, one that requires your skills, talent, and passion, to reach the next level.

This summer, we are opening our recycled office, our company, and our hearts to engage with innovators and researchers from all over the world, providing you an unprecedented to make high-impact contributions to the waste-to-energy sector. We seek individuals who believe well designed technology matched with accurate and accessible data can solve wicked-hard civic challenges. Join us, work hard, break things, fix even bigger ones, and have an unforgettable summer filled with learning, contribution, and gratitude.

We can't wait to welcome you aboard!

Pronita Saxena
Founder & CEO



Ashish Malayil
Co-Founder & Director of
Network Management

About Citizengage

Citizengage is an early-stage tech startup based out of Bangalore focused on solving challenges in waste to resource management.

Vision

Our vision is to provide a platform for recycling economies through an intelligent network that manages the conversion of waste into energy and raw material for recycled products, in real-time.

An intelligent waste management network powering recycling economies

Mission

Citizengage customizes systems to help each customer “waste better.” This means we set up smarter waste management systems from the level at which waste is produced all the way to how it is disposed or recycled, contracting the right vendors to deal with each stream and monitoring their performance regularly so you not only know what is happening to your waste but control what it becomes. Therefore, we work with you to ensure the maximum amount of your waste is reused or recycled and can benchmark your performance and operational efficiency within your industry or neighborhood.

We are building technology and platforms for **Total Waste Control** by segregating at source, connecting with responsible collectors and processors, and tracking all your waste streams to ensure they stay away from the landfill.

The platform uses technology to not only integrate the informal sector that manages waste in India but to manage operations in real-time and generate data about the quantity and quality of waste produced at each transfer point.

The Programme

Join us for a minimum of 4 weeks and up to however many months you're available in Bangalore, INDIA on a customised project tailored to your research/learning goals and the Company's needs. We're opening up our offices, our team, our hearts, and our customers and partners to provide you a platform to explore, innovate, and contribute through a project that matters. Come armed with your passion, tenacity, grit, and inquisitiveness, ready to work hard, learn, break things, and find solutions to problems you couldn't fathom as you address some of the toughest challenges urban progress faces, in the middle of the world's largest democracy. This is your once-in-a-lifetime chance to snatch a seat on a rocketship that is building the world's first platform for recycling economies to thrive across the world. Are you onboard?

FUNDING + OTHER SUPPORT

Our most successful applicants will be able to secure their own funding to carry out independent research projects that assist in the completion of their degrees/theses and also assist with mission critical company priorities. This is why we suggest you apply early - so we can support your funding application processes and assist with other resources. In rare cases, where a student and her/his projects shows unique potential for scale within the Citizengage context, we may consider offering a stipend to support living expenses while in Bangalore. Travel expenses, including visa fees, must be handled by each applicant though Company support such as letters and other documentation will be provided. We will also be happy to assist you in finding suitable housing in the vicinity of the office or other sites in Bangalore where you will be working, though the student is responsible for bearing this cost. Please let us know if you have any questions in this regard.

To apply for any of the opportunities listed below, please refer to instructions on "How to Apply" and submit your applications by June 15th. Internships will be offered on a rolling basis.

Looking forward to hearing from you!
Team Citizengage



INTERNSHIP OPPORTUNITIES 2017

DESIGN



Service experience research: Understanding behaviors, motivations, needs, and pain-points of our users and designing new service experiences which make waste segregation effortless, easy, and fun.

Audio-Visual interfaces: Designing new and innovative audio-visual interfaces for semi and low literate users which help them leverage technology better.

IOT/ Wearables: Designing propositions which help make the technology invisible in our services.

Data design : Using data as a medium to create immersive and rich experiences.

Print/ Communication design: Design solutions to create awareness and mobilize citizens and businesses via offline and online media.

Photography, Film, and Animation: Produce compelling media (photo essays, videos and animations) which help us spread the story of the company, its customers, its values and its impact.

Game / New media design: Build compelling experiences using digital media and storytelling to create rich and new experiences (video games, interactive installations, virtual reality) around the theme of civic engagement.



MANUFACTURING & PRODUCTION



Materials research: Research and innovate on repurposing reject wastes. Requires understanding the synthesis, processing, and properties from the microscale to the bulk.

Fabrication: Design and manufacturing of repurposed waste materials.

Production: Design efficient production processes for repurposing reject wastes with a focus on manufacturing management, materials management, production planning, and operations research.



TECHNOLOGY



Build IoT Projects Environment Sensing, Bots (AI), Data Visualization and Communication for better optimization and efficiency

Data analytics and machine learning, image processing, cognitive computing applications for effective dashboards

Delving into **optimization problems**, especially with regard to routing, Traveling Salesman problems, and related areas of multivariate modeling and statistics

Visual 3-D mapping of physical urban spaces and infrastructure

Build intelligent systems that can compute, direct, monitor and help make the right decisions

Connect to various dumb machines in a factory, recycle plant, bio gas plants etc., and gather information that can help track, control and monitor important work flow needed to produce business critical data and usable resources

Work with distinct layers of the value cycle and supply chain within the waste management ecosystem and **construct a real time market-place and trading platforms**

Develop **real time monitoring tools** from tracking vehicles, dispatching intelligent tasks to creating smart computing applications



Build **task management systems** that are smart, autonomous, and platform agnostic to solve operational problems

Build **financial, loyalty, feedback systems, and billing solutions** for a large industry



ROBOTICS/ INDUSTRIAL PRODUCTION/ MECHATRONICS



Portable compacting machine for dry waste

Smart tools and machines that facilitate waste management (forklift, weighing scales, wearables etc.)

Material handling devices

Sensors to capture data from untapped machines and resources to optimise handling procedures and enable real-time adjustment



BUSINESS AND OPERATIONS



Value-mapping for waste-to-value conversion: analyze cost-benefits of recycling or repurposing waste material into new products

Real-time **supply chain management** and operational support

Customer training campaigns and support throughout Sales, Onboarding, and Coaching phases

Development of **rating systems and gamification** across behaviour, compliance, and environmental impact

Research **waste management models globally** and develop strategic city plans

Research **business sustainability and financing options** for waste management micro-entrepreneurs

New ideas on Sales Campaigns for viral publicity(like FreshDesk, Innerchef), Lead Gen and Field work.

Research **financing mechanisms** for projects and programs including grants, micro-finance, crowdfunding etc.



PUBLIC POLICY & STANDARDS



Projects to take ownership of industry white papers, policy drafts and associated **legislative strategy**, and general **case study circulation**

Ownership over standards development and certification submissions, including working with the highest level standards bodies in the country

Research on how to set **global standards around data management, standardisation, and benchmarking** related to waste management and recycling processes across industries

Evaluation tools for **Impact Assessment** of the Network and its various strategies and campaigns, including implementation of RCTs, if applicable



ENVIRONMENTAL ENGINEERING/ IMPACT ASSESSMENT



Environmental risk assessment and management

Life cycle assessment and environmental management systems

Environmental chemicals - Chemical speciation

Atmospheric chemistry: structure of atmosphere, chemical and photochemical reactions in the atmosphere - Greenhouse effect/global warming, greenhouse gases, effects, CO₂ emissions



ANALYTICS



Algorithmic development of pricing, prediction, and optimisation applications

Automation of impact assessment and LCA models

Instrumentation and real-time monitoring of environmental data, including data originating from biogas plants, reactors, garbage bins, transportation vehicles, and other sites where conversion occurs

Remote sensing and GIS application to assist with route optimisation and other sub-categorisation to increase the efficiency and recycling potential of operations



Training and Capacity Development



Adult Learning, Livelihood Skills Training incorporating literacy instruction

Soft skills curation sessions for the field team which comprises of local members

Development of the **workshop plans** for different levels of training - internal and external

Standardization of the training process and its incorporation into the platform's brand recognition (unique selling point)

Use of props and collaterals during delivery of the training (ideas from the pre-flight instructions given by air hostess)



Content and Social Media



Increasing traffic to our digital platforms and fostering interaction with the targeted users through well-executed social media and content marketing campaigns

Maximise Website traffic, User engagement and Consumer action through a blend of creative content and effective social media messaging.

Implementing **SEO best practices** and increasing the conversion of inbound marketing leads



How To Apply

- 1) Visit <http://citizengage.co/internship.html>
- 2) Fill in the following mandatory fields (Applications with the below fields missing shall not be considered for review)-
 - Full Name
 - Email ID
 - Which category are you applying for:
 - Projects that you are interested in:
 - What makes you a great fit for Citizengage?:
 - CV
- 3) Click on "Submit" to finish the submission

