

Impact Assessment Report

Contribution to Society for Innovation and Entrepreneurship Support Start-up Incubation

A CSR initiative of ICICI Securities

During FY2021-22



Contents

Executive Sumr	mary	2
Milesto	ones Impact:	4
Chapter 1: ICIC	l Securities' CSR Project	7
1.1 About	the Project	8
1.1.1 lr	ncubator- SINE IIT Bombay	8
1.1.2 S	elected Startups	9
1.1.3 C	SR Initiative Activities	9
1.2 Need f	for the Project	10
Chapter 2: Imp	act Findings	11
2.1. lm	pact Analysis	12
2.1.1.	Evaluation Matrix	12
2.1.2.	Inclusiveness	13
2.1.3.	Relevance	16
2.1.4.	Milestones (Impact)	21
2.1.5.	Convergence	31
2.1.6.	Service Delivery	33
2.1.7.	Sustainability	35
Chapter 3: Imp	act Assessment Design & Approach	39
3.1 Impact	t Assessment Study Objectives	40
	ing Strategy	
3.2.1Q	uantitative Sampling	40
3.2.2Q	ualitative Sampling	41
3.3 Assess	ment Approach & Evaluation Framework	41
3.4 Theory	y of Change	42
Impact Stories	and Testimonials	44
Chapter 4: Con	clusion and Recommendations	49
Abbreviations.		51
Acknowledgem	nent	51
Disclaimer		51

Executive Summary



Background:

India is on a path of rapid development. One such development is encouraging incubators to support technology-enabled start-ups, thereby creating an entrepreneurial ecosystem that facilitates companies to utilise their Corporate Social Responsibility (CSR) funds to contribute to Government-funded incubators to support start-ups providing solutions leveraging technology and creating job opportunities too. The government has several initiatives like **Startup India**, **Make in India**, **Atal Innovation Mission**, etc. that are facilitating the creation of a start-up ecosystem to promote tech-based innovation.

ICICI Securities, through their CSR initiative during Financial Year (FY) 2021-2022, contributed to the Society for Innovation & Entrepreneurship (SINE) of the Indian Institute of Technology (IIT) Bombay, which used the funds to support **incubation of startups**.



Objective:

Through the CSR contribution to SINE-IIT Bombay, ICICI Securities supported startups in the **health-tech** domain that were working to provide innovative healthcare solutions.

Impact Highlights: Through this CSR contribution from ICICI Securities, the incubator SINE supported seven start-ups from various health tech domains working on solutions to provide better quality of life. The major impact areas that were assessed were inclusiveness, relevance, sustainability, milestones, convergence and service delivery. The highlights of the same are given below:

Inclusiveness- Social Impact

100% of all the seven start-ups supported provided innovative solutions, as given below. to treat or rehabilitate people suffering from severe health challenges or providing solutions to prevent illness;

- a. Parkinson's disease
- b. Blood cancer
- c. Arm amputation
- d. Testing kit for Malaria, Dengue and Chikungunya
- e. Screening new borns
- f. Upper limb injuries
- g. Access to clean drinking water

Relevance -

There was 100% relevance of the solutions that were developed by the start-ups supported through this CSR initiative of ICICI Securities of contribution to SINE. The details of the startups and their solutions are summarised below.

a. Parkinson's diseases - Lifespark Technologies

Their Product WALK is a wearable mobility aid that Provides sensory-cueing-based therapy to improve gait, reduce falls and improve movements in those having Parkinson's Disease

b. Blood cancer- Immunoadoptive Cell Therapy Private Limited

To cure certain types of cancer using Patented CAR-T Technology

c. Arm amputation- Robo Bionics

Developed Grippy, an advanced prosthetic limb designed, developed, manufactured, and made in India. Grippy reduces the learning time using Sense of Touch Technology which aids the patient in identifying different types of objects.

- d. Testing kit for Malaria, Dengue and Chikungunya- Ameliorate Biotech Pvt. Ltd.

 Single rapid detection kit for early detection of malaria, chikungunya, and dengue
- e. Screening newborn- Clarity BioSystems (India) Private Ltd.

Development, optimization, and validation of LC-MS/MS-based laboratory test for newborn screening.

f. Upper limb injuries – Cre AID Labs Private Ltd.

MITHIRL Splints, is an innovative product that allows custom thermoplastic splinting in an OPD/OT setting in under 10 minutes.

g. Clean drinking water- Emergy Enviro Private Ltd.

Had installed a Clean Drinking Water Treatment System at Group Gram Panchayat Dalkhan having a treatment capacity of 6.5 lakh litre per day.

Sustainability-

- The initiative was effective in supporting the following need based key stages for the startups:
 - Regulatory Approval Process
 - Testing Process
 - Manufacturing
 - Business tie-ups
 - Introducing new products in the market
- Lifespark Technologies Commencement of process for manufacturing license from CDSCO.
- Immunoadoptive Cell Therapy Private Limited- Entered MOU with specialised Oncology hospitals across the country for clinical trials.
- Robo Bionics Got a patent for their technology and was a winner at the National Start-up Awards.
- Ameliorate Biotech Pvt. Ltd- Ameliorate successfully received NOC to do clinical evaluation of "ASSURED" kits.
- Cre AID Labs Private Limited- Received ISO 13485 Certification and presence has now increased to 14 different cities across India.
- Emergy Enviro Private Ltd.- Had installed a Clean Drinking Water Treatment System at Group Gram Panchayat Dalkhan.

Milestones Impact:

This criterion measures the extent to which the startup incubation project had generated significant positive progress. **100% of the startups were successful in meeting the set milestones.**

Ameliorate Biotech

Target milestone: 'ASSURED' kits' clinical evaluation to be done through CRO

•Achieved Milestone: Clinical evaluation of 'ASSURED' kits done through CDSCO, preparation for clinical trials

Clarity Bio

Target milestone: Diagnostic tests to be developed for newborn screening

• Achieved milestone: Development and optimization of diagnostic tests for newborn screening

Cre-AID LABS

Target milestone: 100-150 MITHRIL splints to be given free of cost to patients

•Achieved milestone: ~128 MITHRIL splints and 5 exoskeleton given free of cost to patients from trusts/NGOs

ImmunoACT

Target milestone: Assistance in treatment of patients enrolled in Phase 1 trial

• Achieved milestone: Key machine and reagents procured for treatment of patients in Phase 1 trial

Lifespark Technologies

Target milestone: Production of WALK device and clinical trials

Achieved milestone: Production of WALK device and clinical trials on over 50 individuals

Robo Bionics

Target milestones: 12-15 beneficiaries to be fitted with GRIPPY device

- Achieved milestone: 12 beneficiaries fitted with GRIPPY device, from which 5 have gained employment.
- Future-proofing GRIPPY for compliance- the process has commenced

Emergy

Target milestone: Installation of Clean Drinking Water treatment unit at Dalkhan Gram Panchayat, Maharashtra

• Achieved milestone: Clean Drinking Water treatment unit of 6.5 lakh litre per day installed at Dalkhan Gram Panchayat, Maharashtra.

Convergence

• The project is in **100% alignment** with the mentioned National Priority Initiatives:



AatmaNirbhar Bharat Abhiyan





- The project is in 100% alignment with the mentioned United Nations Sustainable Development Goals (UN-SDGs): SDG 3 Good Health and Well-being and SDG 9 Industry, Innovation, and Infrastructure.
- **100**% alignment with Companies Act 2013, Section 135 (ix) (a) Contribution to incubators funded by Central Government or State Government or Public Sector Undertaking or any agency of the Central Government or State Government.
- 100% alignment with ESG principles 7 and 8.

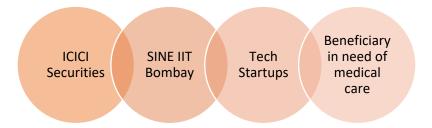
Service Delivery

- Needs assessment of the startups was conducted to release funds effectively under this programme.
- Concrete objectives were set throughout the delivery of programme and funds disbursal.
- Regular monitoring and progress checks were conducted by SINE IIT Team.
- 100% start-up founders agree that the CSR initiative fulfilled the milestones.
- 85% of founders agreed that CSR initiatives inculcated confidence to build business.
- 85% of founders agreed that CSR initiative educated them about importance of need analysis, compliances, and regulatory frameworks.
- **100**% of the start-ups supported under the CSR initiative are successfully contributing to boosting India's healthcare ecosystem.
- They had achieved the decided milestone and generated significant impact.
- The mentoring and financial assistance provided by the project helped **100%** of the start-ups to <u>move towards market entry</u>.

Chapter 1: ICICI Securities' CSR Project

1.1 About the Project

One of the **key areas of CSR intervention** for ICICI Securities Limited (ICICI Securities) is contribution to incubators to promote **entrepreneurship** and foster **innovation**. For this purpose, ICICI Securities collaborated with the Society for Innovation & Entrepreneurship (SINE) at IIT-Bombay on the "Tech startup incubation project." **Financial assistance** was provided to SINE, to support the startups with **innovative technology solutions in the field of healthcare and environment.** The various stakeholders for the CSR initiative were:



1.1.1 Incubator- SINE IIT Bombay

Society for Innovation and Entrepreneurship (SINE) is a technology business incubator (TBI) at IIT Bombay established in 2004 and is an umbrella organization for fostering entrepreneurship. SINE provides **start-to-scale up support** to early-stage startups.

SINE is one of the early incubators in academia with the potential to create startups focusing on economic growth, strategic value, and social relevance by leveraging its **17+ years of experience in incubation**. Startups incubated at SINE IIT Bombay have access to a range of resources and facilities, including mentorship and networking opportunities, to help them grow and succeed. The CSR collaboration of ICICI Securities with SINE took place after consideration of these factors.

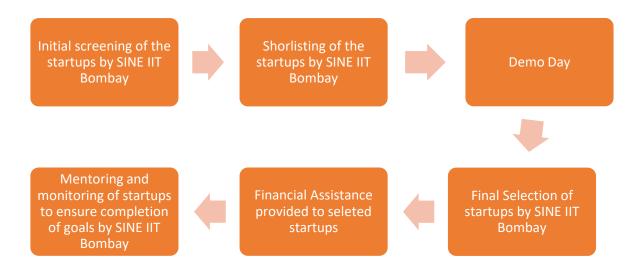


1.1.2 Selected Startups

The startups selected by SINE IITB under this CSR initiative and their areas of innovation are listed below:

Ameliorate	 3-in-1 Rapid diagnostic kit for accurate results and early detection of malaria, chikungunya and dengue
Clarity Bio	 Solution for early detection of 200+ metabolic disorders in newborns.
Cre-Aid	Custom Upper Limb Splints that are breathable, waterproof, lightweight, and made for children with developmental disabilities.
ImmunoAct	Patented technology (CAR T Therapy) to treat blood cancer
Lifespark	Wearable device that to help people with Parkinson's Disease who have gait difficulties to walk better.
Robo Bionic	 Affordable Prosthetic Hand that reduces the learning time using Sense of Touch Technology in an amputee's stump.
Emergy Enviro	 Installation of clean drinking water treatment unit for villages without access to clean drinking water

1.1.3 CSR Initiative Activities



1.2 Need for the Project

In recent years, the need for innovative healthcare products has increased which can provide solutions to some of the most persistent health challenges faced by the country. This CSR initiative fulfils the need to catalyse startup culture and build a strong and inclusive ecosystem for innovation and entrepreneurship in India.

India imported medical devices worth INR 63,200 crore in 2021-22 (41% more than 2020-21)

(Source: Union Burget 2023-24)

Access to funding is critical for the growth and success

of health startups in India. Although Indian Tech startups recorded Rs. 200 Cr. in funding in 2021¹, access to funding remains a challenge for many startups, particularly those in the early stages of their development.

Understanding the need to provide fostering support to the startups as a part of its CSR Project, ICICI Securities decided to extend its CSR support to **7 Tech startups in association with SINE IIT Bombay**.

 $^{^{1}\} https://inc42.com/features/healthtech-in-the-spotlight-with-4-unicorns-and-2-2-bn-in-investment-healthtech-funding-shoots-up/although a constraint of the constraint o$

Chapter 2: Impact Findings

2.1. Impact Analysis

This chapter documents the findings of the Impact Assessment study- specifically highlighting the role of the Tech Startup Incubation Project. The information provided in the following sections is based on the responses given during the interactions with key stakeholders and is presented through the IRECS-S framework.

2.1.1. Evaluation Matrix

The evaluation matrix is an essential tool for the assessment of impact in this study. The matrix is a simple representation of all findings of the study in a precise manner for each of the selected startups. The indicators of the matrix have been developed from secondary studies^{2,3,4,5,6} and understanding of the needs of the project.

Criteria	Ameliorate	Clarity Bio	Cre- Aid	Emergy Enviro	ImmunoAct	Lifespark	Robo Bionic
	Entrepreneurial skills						
Understanding of the	√	✓	√	✓	√	√	✓
Tech ecosystem							
Core team with subject	√	✓	√	✓	✓	✓	\
matter experts							
Collaboration with	✓	✓	✓	✓	✓	✓	✓
external subject-matter							
experts							
Networking with	✓	✓	✓	✓	✓	\checkmark	✓
industry stakeholders							
Market-based business	✓	✓	✓	\checkmark	✓	\checkmark	✓
model							
		Startu	p addr	essing key	healthcare pil	lars	
Relevance of the	✓	✓	✓	✓	✓	✓	✓
product							
Improving healthcare	✓	✓	✓		✓	✓	✓
access							
Quality Healthcare	✓	✓	\		✓	✓	✓
Diverse geographical	✓	✓	✓	✓	✓	✓	√
reach							
	Product						
Clear value proposition	✓	✓	√	✓	✓	✓	√

² https://www.researchgate.net/figure/Evaluation-items-and-criteria-for-medical-device-start-up-success_tbl1_332178173

³ https://healthtechchallengers.com/criteria/

 $^{^4\} https://www.morovisconti.com/wp/wp-content/uploads/2021/01/e-Health-Startups-REV2.pdf$

 $^{^{5}\} https://www.forbes.com/sites/forbestechcouncil/2023/03/23/how-to-evaluate-your-health tech-startup-in-2023/?sh=2e67a9dd1a2fforbestechcouncil/2023/03/23/how-to-evaluate-your-health tech-startup-in-2023/?sh=2e67a9dd1a2fforbestechcouncil/2023/03/how-to-evaluate-your-health tech-startup-in-2023/?sh=2e67a9dd1a2fforbestechcouncil/2023/how-to-evaluate-your-health tech-startup-in-2023/?sh=2e67a9dd1a2fforbestechcouncil/2023/how-to-evaluate-your-health tech-startup-in-2023/?sh=2e67a9dd1a2fforbestechcouncil/2023/how-to-evaluate-your-health tech-startup-in-2023/?sh=2e67a9dd1a2fforbestechcouncil/2023/how-to-evaluate-your-health tech-startup-in-2023/?sh=2e67a9dd1a2fforbestechcouncil/2023/how-to-evaluate-your-health tech-startup-in-2023/how-to-evaluate-your-health tech-startup-in-2023/how-to-evaluate-your-health tech-startup-in-2023/how-to-evaluate-your-health tech-startup-in-2023/how-to-evaluate-your-health tech-startup-in-2023/how-to-evaluate-your-health tech-startup-in-2023/how-to-evaluate-your-health tech-startup-in-2023/how-to-evaluate-your-health tech-startup-in-2023/how-how-health tech-startup-in-2023/how-how-health tech-startup-in-2023/how-how-health tech-startup-in-2023/how-how-h$

 $^{^{6}\} https://medium.com/@ecelliitroorkee/the-present-and-the-future-of-indian-healthtech-startups-b0a7d3d56bfd$

Customer focused	√	√	/	√	√	√	/	
solution	V	V	\ \ \	V	V			
Technology	✓	✓	√	✓	✓	✓	✓	
innovativeness								
Clinical Validation	✓	√	✓	✓	√	✓	✓	
Patented technology	✓	√	✓	✓	✓	✓	✓	
Clear Unique Selling	✓	✓	✓	✓	✓	✓	✓	
Point								
				Marketabi	lity			
Sustainable market size	√	√	√	✓	✓	√	✓	
of product								
Product	√	√	√	√	√	√	√	
competitiveness								
Scope for product	√	√	√	√	√	√	√	
profitability								
	Financial							
Sustainable financing		√	√	√	√	√		
plan								
At early revenue/			√	√		√	√	
revenue stage								
Potential of securing	√	√	√	✓	✓	√	√	
next investment								
				Future roa	dmap			
Other products in	√	✓	√	✓	✓		✓	
pipeline								
Geographical expansion	√	√	√	✓	✓	√	✓	
- India								
Geographical	√		√				√	
expansion-								
Robust future strategy	√	√	√	√	√	√	√	
and roadmap								
		Specific t	to ICICI	Securities	' Financial Assi	stance		
Complete utilization of	√	✓	✓	✓	√	✓	✓	
funds								
					•		•	

(√Completely Aligned, --- Partially Aligned)

2.1.2. Inclusiveness

The inclusiveness of the CSR initiative measures the social impact extent of equitable access to the benefits of the services delivered. It was assessed with respect to **2 key criteria**:

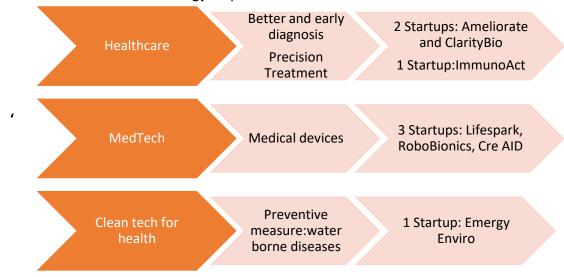
Inclusiveness in the variety of innovative startups supported by the programme

Inclusiveness of the startups in catering to diverse populations and all socio-economic groups

2.1.2.1. Inclusiveness of CSR initiative in selecting startups

The CSR initiative included seven start-ups **from various health domains** which needed priority solutions to provide better quality of life.

3 of the startups had healthcare-focused products. Their products were focused on better and early diagnosis of diseases, metabolic disorders, precision treatment of diseases, etc. The **3** of the other startups were focused on medical devices like splints, prosthetic limbs, etc. while **1** startup was focused on clean water technology for prevention of water-borne diseases.



The life-cycle of a Tech startup has broadly 3 key stages before the product is launched in the market. These stages are product development, clinical trials and processing for regulatory requirements. The CSR initiative supported startups across all these stages. Clarity Bio was supported for the development of its diagnostic test. Lifespark was assisted with product development and clinical trials. Ameliorate and ImmunoAct were provided support to successfully complete clinical trials. Whereas, Bionic Hope and Cre-AID were supported to complete clinical trials and subsequent, regulatory requirements to obtain certifications. Emergy was provided support for product development and execution.

Market Entry

•Start-ups at this stage After intervention: Emergy, Cre AID, Robo Bionics

Regulatory requirements, certification, etc.,

•Start-ups at this stage After intervention: Lifespark

Clinical Trials

- •Start-ups at this stage Before intervention: Cre ADI, Robo Bionics
- •Start-ups at this stage After intervention: Ameliorate, Immuno Act, Clarity Bio

Permission and preparation for clinical trials

•Start-ups at this stage Before intervention: ImmunoAct, Ameliorate, Lifespark

Product development

•Start-ups at this stage Before intervention: Clarity Bio, Emergy

2.1.2.2. Inclusiveness of Startups in targeting customers

The inclusiveness of the CSR initiative has also been examined from the point of view of customers of

PATIENCE IS THE KEY

"Tech startups receive relatively less funding and support in comparison to other startups. This is due to the long gestation period of these startups, which subsequently delays the tangible outcomes. The programme supported startups at their product development or clinical trial phases. This allowed the startups to enter the market and bring results and impact numbers."

Ponyi Bhatt, Chief Executive Officer, SINE IIT Bombay

the startups. It was found that the startups were inclusive in product development and planning to cater to **beneficiaries of all ages and genders**. The selected startups were taking measures to make their products even more **accessible to the appropriate population**.

100% of all the seven start-ups had a good social impact as they supported Better Quality of life by providing innovative solutions to treat or rehabilitate people suffering from severe health challenges or preventing diseases. The solutions provided were for:

- a. Parkinson's disease
- b. Blood cancer
- c. Arm amputation
- d. Testing kit for Malaria, Dengue and Chikungunya
- e. Screening newborns
- f. Upper limb injuries
- g. Access to Clean drinking water

100% start-ups focussed on:

Children, Females,Males, 🚤 & Elders

- •All income groups
- All social groups
- Persons with disabilities
- Urban and Rural areas across tier 1,2,3 cities

BENEFITS FOR ALL

"During the pilot phase we gave 25 splints to children with congetinal anomalies. Our products are targeted for all age-groups and anyone can afford them as the prices are kept low. We have partnered with government hospitals, and NGOs".

Amartya Gupta, Founder, Cre-AID Labs Pvt. Ltd.

2.1.3. Relevance

The CSR initiative supported **7 indigenous Tech startups** working on health issues which are life-threatening or limit the daily activities of individuals like- cancer, tropical diseases (malaria, dengue etc.), child metabolic disorders, Parkinson's disease etc. The startups were **successful in developing innovative solutions**. Hence, the CSR initiative was **highly relevant** for startups and the Tech domain.

Relevance -

There was 100% relevance of the solutions that were developed by the start-ups supported through this CSR initiative of ICICI Securities of contribution to SINE. This section details the relevance of each start-up, with a brief introductory summary given below.

Introductory Summary:

a. Parkinson's diseases - Lifespark Technologies -

Their Product WALK is a wearable mobility aid that Provides sensory-cueing-based therapy to improve gait, reduce falls and improve movements in those having Parkinson's Disease

b. Blood cancer- Immunoadoptive Cell Therapy Private Ltd.-

To cure certain types of cancer using Patented CAR-T Technology

c. Arm amputation- Robo Bionics -

Developed Grippy, an advanced prosthetic limb designed, developed, manufactured, and made in India. Grippy reduces the learning time using Sense of Touch Technology which aids the patient in identifying different types of objects.

- d. Testing kit for Malaria, Dengue and Chikungunya- Ameliorate Biotech Pvt. Ltd.-Single rapid detection kit for early detection of malaria, chikungunya, and dengue
- e. Screening newborn- Clarity BioSystems (India) Private Ltd.-

Development, optimization, and validation of LC-MS/MS-based laboratory test for newborn screening.

f. Upper limb injuries – Cre AID Labs Private Ltd.-

MITHIRL Splints is an innovative product that allows custom thermoplastic splinting in an OPD/OT setting in under 10 minutes.

g. Clean drinking water- Emergy Enviro Private Ltd.-

Have installed a Clean Drinking Water Treatment System at Group Gram Panchayat Dalkhan having a treatment capacity of 6.5 lakh litre per day.

2.1.3.1. Innovation supported

This section will have details of the issues addressed by the startups and their products.

1. CRE-AID

MITHRIL BETTER THAN OLD SPLINTS

"My little finger was not bending without support. The Cre-AID team came home and provided a traditional splint. It was initially good but later became very inconvenient. Next, they brought the MITHRIL splint which was very comfortable. I have been using it for the last 2 months without any problems. It feels so light to use and is washable, so no hygiene issues".

Uday Kumar Singh, MITHRIL Splint User



Issue being addressed: Upper limb injuries or limb developmental issues, etc.

Traditional Solution

- Plaster of Paris casts
- •× Bulky
- •× Itchy
- •× Non-waterproof/dustproof
- •× Cause odor issues
- •× Needs re-application
- Custom thermoplastic splints
- × Require trained professionals for casting
- •x Intensive process requiring 45 minutes-1 hour
- •x Expensive
- •× Inaccessible to lower-income or vulnerable groups.

Startups' Solution

- •MITHRIL splints
- ✓ Patient-wise customizable within 5 minutes
- √ Light-weight
- ✓ Breathable
- ✓ Hygienic Washable
- ✓ Can be remoulded up to 10-15 reusable times
- ✓ Made of bio-plastic (made from fermented plant starch)
- ✓ Bio-compostable material
- ✓ Sustainable
- ✓ Cost starts from Rs 400
- ✓ Accessible to lower-income or vulnerable groups

2. ROBO BIONICS

Issue being addressed: In India, people with upper limb amputation lack access to affordable and efficient devices for rehabilitation.

Traditional Solution

- Electronic active prosthesis: High cost Rs 10 lakhs and above
- •x Imported technology
- × Heavy
- Cosmetic/Body-powered prosthesis
- •× Inefficient
- x Heavy
- Less ease of usage or movement of prosthetic arm

Startups' Solution

- •GRIPPY prosthesis
- √ GRIPPY (basic) cost- Rs 1.8 lakhs
- √ GRIPPY (advance) cost- Rs 2.2 lakhs
- √Hence, more affordable
- ✓ Made in India
- ✓ Light-weight and comfortable
- \sqrt{More natural movement of the prosthetic arm}
- ✓ Improved user experience due to reduced fatigue
- ✓ More accessible for end users

3. LIFESPARK

Issue being addressed: Limited solutions are available for people suffering from Parkinson's diseases causing uncontrolled movements, balance issues and walking difficulty.

Traditional Solution

- Medications
- X Not sufficient to control movements and falling
- Assistive Devices
- x Imported device
- × High cost Rs 50,00 and above
- × Restricted access for common masses

Startups' Solution

- WALK Device
- √Non-invasive device
- √ Made in India Cost Rs 20,000 (being optimized further)
- √Reduced risk of falling
- ✓Improved movement control
- ✓Better quality of life
- ✓ Accessible to a diverse population through partnerships with hospitals

4. AMELIORATE

Issue being addressed: Rapid Diagnosis of Malaria, Chikungunya, and Dengue - 3 most prevalent mosquito-borne diseases affecting large numbers of people every year.

Traditional Solution

- Rapid test kits
- × Separate devices for testing and diagnosis requiring blood samples to be drawn multiple times
- •× Equipment required mostly
- •x Co-infection gets undetected in the single-type testing kit
- •× Limited early-stage diagnostic kits

Startups' Solution

- ASSURE Kit Single device for detection of all 3 diseases
- ✓ No equipment required for testing
- ✓ Blood sample required once
- ✓ Increased accuracy of tests Results within 15 minutes
- ✓ Early detection (even on the first day of symptoms)
- √ Each patient will save ~Rs 3,500

ASSURED Diagnosis for everyone

"ASSURED is India's 1st multiplexing device. The testing requires no equipments and can be easily done through rural primary healthcare centres or small labs."

Dr Binita Srivastava Tunga, Founding Member, Ameliorate

5. IMMUNOACT

Startups' Solution

- ✓CAR-T Therapy Indigenously developed
- √Treatment costs around ~ Rs 30 lakhs (Around Rs 3-4 crore in USA/Europe - no existing facilities in India)
- ✓ Precision treatment with a very high success rate

Issue being addressed: Every year 40% of patients relapse from Blood Cancer. No medication or therapies work for such patients.⁷

80% response rate

"Research proves that CAR-T cells are highly effective compared to chemotherapy, biologics and bone marrow transplant. ImmunoAct is driving India's first CAR T cell therapy. This therapy will be able to save several lives."

Rajat Maheshwari, ImmunoAct

6. CLARITY BIO

Issue being addressed: Inborn errors of metabolism constitute a significant group of disorders complicating the normal development of an infant.

Traditional Solution

- Newborn screening
- •× Indigenous tests lack specificity
- •× Additional confirmatory tests through imported kits required × Restricted access for common masses
- •× Costs higher than Rs 10,000
- •× Limited metabolic disorders screened

Startups' Solution

- Newborn screening
- ✓ High-accuracy indigenous device
- √ Cost less than Rs 4,000 (being optimized further to Rs 2,000)
- √ Can determine over 200 parameters simultaneously
- √ Uses very less blood sample
- ✓ Disorders detected right after birth Test result delivered within 24 hours

⁷ Source: ImmunoAct website

SAVING NEWBORN LIVES

"Although newborn screening is common outside India it is not done frequently in India because some of the hospitals are either not skilled enough to do the test or the cost of the test becomes too high. Also, another confirmatory test is required in most cases. Clarity Bio has developed the NBS which is a single test based on chromatographic separation and hence does not need a confirmatory test. The cost has also been optimzed from Rs 10,000 to Rs 4,000. The company is further working to bring down the cost to under Rs 2,000."

Ponyi Bhatt, Chief Executive Officer, SINE IIT Bombay

CLARITY on the future of newborns

"We have developed a newborn screening test that can be used to determine over 200 parameters that can cause metabolic disorders in newborn. The symptoms of metabolic disorders in newborn may appear 7-8 months later after the birth. However, by that time irreversible brain damage might occur and lead to infant mortality. The NBS test when done right after birth will lead to early detection and treatment of metabolic disorders and prevent infant mortality."

Dr Pramod P Wangikar, Founding Member, Clarity Bio

7. EMERGY ENVIRO

Issue being addressed: Consumption of unsafe drinking water leads to diarrhoea and other water-borne diseases, affecting large numbers of people every year.

Startups' Solution

- ✓ Customized clean drinking water unit
- ✓Simple to operate
- •Uses minimal energy lower footprint
- ✓ Usage of natural technology effectively
- filtration and adsorption system using sand and activated carbon
- √ Removal of 99% of suspended solids and turbidity



Did you know?

Waterborne diseases have an estimated economic burden of approximately 4,000 Cr. a year in India

(Source: UNICEF)



Did you know?

About **2,00,000** people die every year due to inadequate access to safe drinking water.

(Source: NITI Ayog - CWMI Report 2018)

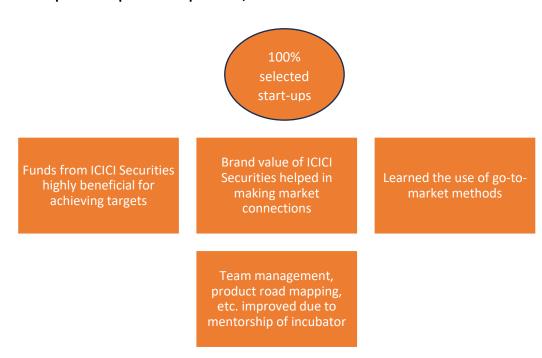
SPECIFIC problem statement

"Since independence, people at Group Gram Panchayat, Dalkhan, Maharashtra did not have any facility for water treatment and instances of water-borne diseases were high."

Indra kant Jha, Founding Member, Emergy Enviro

2.1.3.2. CSR initiative support for startups

The ICICI Securities "startup incubation project" helped **100% of the startups to move a step ahead to go-to market methods**. The startups understood the Tech ecosystem better. Mentoring sessions by industry experts and the SINE IIT Bombay team, one-on-one sessions, webinars etc. improved team management, product road mapping, understanding risks and developing a mitigation strategy, etc. The funds from ICICI Securities were **highly beneficial for achieving milestones** set by the startups. The brand value of SINE IITB also helped the startups in **making industry connections**- which helped them to **build partnerships for their products**, etc.



2.1.4. Milestones (Impact)

This criterion measures the extent to which the Tech startup incubation project had generated significant positive value, **100%** of the startups were successful in meeting the set milestones.

Ameliorate Biotech CRO Target milestone: 'ASSURED' kits' clinical evaluation to be done through

 Achieved Milestone: Clinical evaluation of 'ASSURED' kits done through CDSCO, preparation for clinical trials

Clarity Bio Target milestone: Diagnostic tests to be developed for newborn screening

• Achieved milestone: Development and optimization of diagnostic tests for newborn screening

Cre-AID LABS

Target milestone: 100-150 MITHRIL splints to be given free of cost to patients

•Achieved milestone: ~128 MITHRIL splints and 5 exoskeleton given free of cost to patients

ImmunoACT

Target milestone: Assistance in treatment of patients enrolled in Phase 1 trial

• Achieved milestone: Key machine and reagents procured for treatment of patients in Phase 1 trial

Lifespark Technologies

Target milestone: Production of WALK device and clinical trials

• Achieved milestone: Production of WALK device and clinical trials on over 50 individuals

Robo Bionics

Target milestone: 12-15 beneficiaries to be fitted with GRIPPY device

 Achieved milestone: 12 beneficiaries fitted with GRIPPY device Future-proofing GRIPPY for compliance

Emergy

Target milestone: Installation of Clean Drinking Water treatment unit at Dalkhan Gram Panchayat, Maharashtra

• Achieved milestone: Clean Drinking Water treatment unit of 6.5 lakh litre per day installed at Dalkhan Gram Panchayat, Maharashtra.

ASSURED kit by Ameliorate is a multiplexing kit that can detect malaria, dengue and chikungunya simultaneously using a single blood sample and without needing any additional equipment.

- To ensure the product's market launch meets regulatory requirements, Clarity Bio submitted
 a request to the CDSCO (Central Drugs Standard Control Organization) to conduct clinical trials
 in one government hospital. However, due to the unique nature of the multiplexing kit being
 a new type of device, the CDSCO recommended that the clinical trials be conducted at three
 different sites to gather comprehensive data.
- Ameliorate was able to select the 3 sites and train the principal investigators. Based on feedback during the training process, fresh ASSURED kits were prepared that made the assay protocol simpler. The revised protocols were then submitted to CDSCO, and approval was received. CTRI registration has been completed as well. However, the clinical trials had to be delayed since malaria, chikungunya, and dengue are seasonal diseases. The clinical trials are scheduled to commence in June 2023.



Number of confirmed cases (2021)

Dengue: 1,93,245 Malaria: 1,61,753 Chikungunya: 11,890



Target Stakeholders

Patients Doctors Pathlabs



Huge potential for testing during any fever

(Source: NCVBDC, MoHFW)

Projected Market

Government sector: 40 crore market (Price of kits Rs 200) Private sector: 120 crore market (Price of kits Rs 400)

(Source: Market survey by Ameliorate)

Huge benefits for Government- as these tests can be done at rural healthcare centres or small labs without any additional equipment. The cost is less and testing is easy. The tests will help in early detection and save hospitalization costs.



Karnataka Phase-I (product market launch)

Pan-India Phase-II (within 1 year of market launch)

Middle-east and African nations Phase-III

Scale up

THE TIMES OF INDIA

Bengaluru couple strikes gold for three-in-one diagnostic device

TNN | Feb 20, 2020, 09.09 PM IST



BENGALURU: A Bengaluru couple who has created a single device capable of detecting the three most prevalent mosquitoborne diseases — malaria, chikungunya and dengue — in early stages of infection are among winners of the Aarohan Social Innovation Awards (gold) instituted by Infosys Foundation. The award carries a cash prize of Rs 20 lakh.

While it usually costs over Rs 4,000 to get three separate tests done for the three infections, the device can help a patient can get diagnosis of all three at Rs 600.

Ameliorate has won several awards and recognition. The startup was one of the top 100 winners of Elevate by KBITS (Government of Karnataka). It also received a grant of 20 lakhs from the Department of Scientific and Industrial Research (Ministry of Science and Technology) under the PRISM scheme for validation of the ASSURED diagnostic kit.

Fulfilled Milestones in the face of odds

"We received financial assistance from SINE IITB for completing clinical evaluation of our ASSURED kit through a contract research organization. Due to the unavailability of testing equipments, the evaluation process was delayed. However, we successfully completed the evaluation around October/November 2021. The evaluation also helped us in improving our device even further. Currently we are waiting for the clinical trials to begin in the month of June, 2023."

Dr Rashbehari Tunga, Founding Member, Ameliorate

"AMELIORATE HAS DONE THAT"

"Tech startups have a long gestation period. Moreover, including the regulatory mechanisms, clinical trials and completion of certifications, a startup needs at least 15-18 months of contingency plan. The same happened with Ameliorate. The evaluation and approval from CDSCO was delayed due to a few practical challenges. This happens with Tech startups all the time. They need to navigate around these situations without being stuck to achieve their objectives. Ameliorate has done that."

Ponyi Bhatt, Chief Executive Officer, SINE IIT Bombay

The financial assistance provided by SINE IITB to Clarity Bio had helped the startup to develop and optimize the newborn screening test. The runtime of the test has been optimized from over 30 minutes to 15-17 minutes. The startup is further working to reduce the runtime to under 10 minutes. The cost of the screening test depends on the runtime of the test. With optimization of the runtime, the test cost was brought down to Rs 4,000. The software was developed and tested for the automation of data analysis of the tests. Phase 1 clinical trials had also been conducted on a cohort of 50 newborn. Currently, the startup is preparing to conduct Phase 2 clinical trials with 1000 newborns. They have also filed 1 patent and preparation for filing another patent is underway.

Results can be handed over in 24 hours										
Sample Collection	Sample Preparation	LCMS	Data Analysis and Results							
Dried blood sample collected from newborn	Needs 30 minutes Uses low end devices Can be automated	Expensive instrument Lesser runtime gives lesser costs Current runtime 15-17 minutes	Automated software for data analysis							
			Newborn screening test flow							

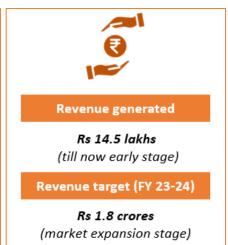
Reaching the target groups

"The governments of Goa and Maharashtra have similar testing plans. Once the price point of our product is further optimized, the product will become very attractive to governments. Our initial focal point will be Maharashtra. After that, we can scale up slowly. Blood samples for the test can be collected by any nurse or technician and couriered to our location in Mumbai. The samples are stable for 72 hours at room temperature, so shipping would not be an issue. We are also exploring partnerships with diagnostic labs like Sandor or Neogen which are dominant players in the NBS space, so that the **tests can reach a larger audience base**."

Dr Pramod P Wangikar, Founding Member, Clarity Biotemperature

cre-AID distributed 128 MITHRIL splints and 5 exoskeletons free of cost to children with congenital anomalies, patients with upper limb paralysis, etc. The distribution of these products was done in collaboration with Tamahar Trust (works with children with congenital anomalies) and Surehab Healthcare (distributor). The impact numbers and revenue generated till now by the startup have been shared below:









MITHRIL Splints by CRE-AID8



Cre-AID presented the MITHRIL splints to industry-leading P&O's and companies at the **26th National Conference of Orthotics & Prosthetics Association of India, 2022**. The startup also interacted with several renowned hand surgeons at the **ISSHCON 2022 by the Indian Society of Surgery of the Hand (ISSH)**. Such participation helped the startup to forge meaningful partnerships.

⁸ https://www.creaidlabs.com/

Expansion to more geographical locations

"The programme has enabled us to help children with congenital anomalies and adults with limb injuries from various financial backgrounds. We have provided 128 MITHRIL splints free of cost. We have also done the preliminary work for product Hexo (an upper limb exoskeleton) through the support provided by SINE IITB. The grant helped us in our time of need, and now we have expanded to over 14 different cities across India and partnered with several distributors, NGOs and orthopaedic surgeons. The largest requirement for our splints comes from reputed government hospitals like CMC Vellore, King Edward Memorial hospital, Mumbai, etc."

Amartya Gupta, Founding Member, Cre-AID

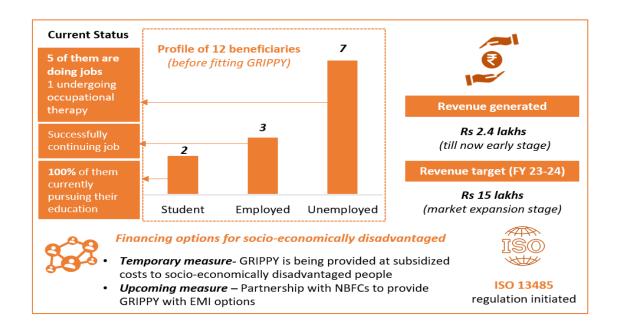


Back to Badminton Court

Harshita was injured during a badminton tournament and was wearing a traditional splint. However, the splint wasn't serving the purpose and was a bit painful. She then got a customized MITHRIL splint from Cre-AID. The splint supported her hand well, and she used it for more than 2 weeks. Her hand was back to normal. She could resume playing badminton and her daily activities. Harshita feels MITHRIL has a great potential to help other athletes with similar problems.

Harshita K.S., Student

Robo Bionics was successful in fitting 12 patients across Andhra Pradesh and Maharashtra with their GRIPPY device which helped beneficiaries regain their independence and perform two-handed tasks. The CSR initiative also helped Robo Bionics in improving their product to make it compliant with Indian as well as international certifications, to make the product export capable.



Good gets recognized

Chandrakanta Vaze had a left arm amputation since birth. He was fitted the GRIPPY arm by Robo Bionics through a limb-fitting centre in Virar, Mumbai called Omnify Prosthetics. When Mr. Vaze went back to his regular job as a meter reader in a private company, the officials took notice of the Grippy Device. Based on Vaze's positive feedback, the company then sponsored further improvement of the device for Mr. Vaze.





Maharashtra, Andhra Pradesh *Phase-I (currently)*

Karnataka, Bihar, Delhi Phase-II (within 6-8 months) Pan-India and Global Exports

Phase-III

Scale up

HOPE to lead a better life

"After receiving the financial assistance from SINE IITB, we partnered with an NGO in Andhra Pradesh called the Shri Gurudeva Charitable trust. It specializes in Disability Rehabilitation. We were able to identify 8 people with different amputation causes -electrocution, burns from accidents etc. We also partnered with a limb fitting centre in Mumbai to help 4 beneficiaries. The beneficiaries have been able to continue their education, employment and lead better lives.

Anil Nair, Founding Member, Robo Bionics



Robo Bionics won several awards and recognitions for their innovation. The following list illustrates the same:

- 1. Emerging Social Enterprise TiE Sustainability Summit (2021)
- Winner In Medical Devices Category National Startup Awards (2021)
- THIS MUMBAI-BASED STARTUP MAKES
 AFFORDABLE PROSTHETIC HANDS THAT HELP
 AMPUTEES WITH DAILY CHORES

 Mumbai-based startup Robo Bionics helps amputees get hands that can touch and feel and help in daily chores.
- 3. Top 3 in NXP Tech Startup Challenge (2022)
- 4. Awarded Most Prominent Contributors to Innovation at World Innovation Congress (2023)

Lifespark conducted the clinical trials of its WALK device aimed at helping patients with Parkinson's disease. 50 WALK devices were manufactured using the CSR initiative support, and 50 individuals

across 3 cities were helped. Moreover, the team also developed professional packaging, user manuals and documentation for regulatory purposes and commercialization using financial assistance.





Revenue generated

Rs 2.4 lakhs (till now early stage)

Revenue target (FY 23-24)

Rs 15 lakhs (market expansion stage)



Target 7-10 lakh individuals suffering from Parkinson's Disease



Partnership with National Institute of Mental Health and Neurosciences (NIMHANS), Bengaluru – a world-renowned neurosciences centre





WALK Device by Lifespark

CRUCIAL SUPPORT

"We were able to consult professionals specialising in ISO ad CE certifications due to programme support. Our internal hardware was updated based on these consultations and results from the field testing. We have completed the pre-compliance tests with ERTL Labs in Mumbai. SINE IITB has enabled us to start outreach efforts and directly connect with institutions to further develop and commercialize our product.

We are already in touch with a number of institutions such as NIMHANS, Fortis etc for further trials and pilots. We have also developed internal capacity due to the programme. Hence, we can focus of directly reaching individuals through support groups and medical establishments."

Amey Desai, Founding Member, Lifespark

Immuno Act completed the first phase of the human clinical trials using its patented technology (HCAR - CD-19) for the cure of DLBCL (Diffuse Large B Cell Lymphoma) in association with India's leading cancer research and treatment centre — Tata Memorial Hospital (TMH). The financial assistance provided by SINE IITB was used for procuring critical machines and reagents and treatment of patients (towards their hospitalization charges, consumables, medicines, etc.) who were enrolled for the trials.



Machine procured with

financial assistance



New Lab facility at Navi Mumbai



60 jobs created



Outreach Plan

Partnership with hospitals like Tata Memorial Hospital

Financing options for socio-economically disadvantaged
ImmunoAct Foundation to be established by mid-2024 to help
people avail treatment at low cost



f 1 Patent granted



Target Cost-effectiveness of the treatment can attract patients from neighboring countries for the treatment

Cancer treatment should reach all

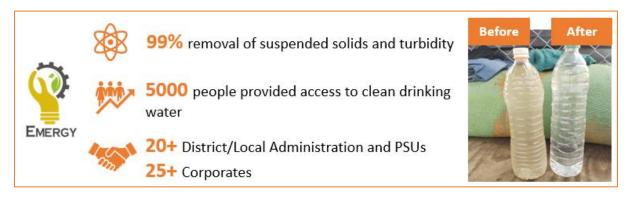
"We were able to complete the stage 1 of our clinical trials, because of the programme. The product should be available for patients by mid-2024.

We are already in touch with a number of cancer speciality hospitals for future treatments. Although, the cost of our innovation will be available at 1/10th of the global price, it might still not be affordable for several sections of the society. For the same reason, we are aiming to establish the ImmunoAct Foundation by next year, so that the benefits of this treatment can reach everyone. We will also look forward to explore CSR opportunities- so that disadvantaged communities can benefit. Lastly, we are aiming to attrat patients from the neighbouring countries for treatment."

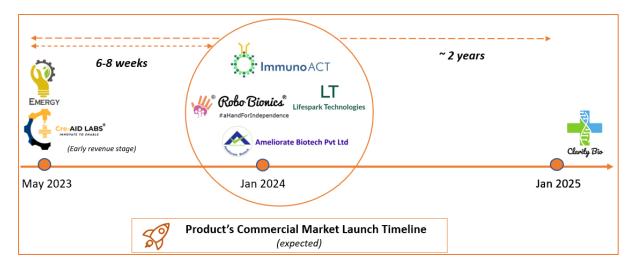
Dr. Rahul Purwar, Founding Member, ImmunoAct



Emergy Enviro successfully installed a clean drinking water unit at Group Gram Panchayat Dalkhan having a treatment capacity of 6.5 lakh litre per day. Filtration technology and adsorption system with the use of sand and activated carbon were used for the water treatment. Although the project was delayed due to extended monsoons and local gram panchayat elections, the implementation was completed.



The timeline for the commercial launch of the products was assessed. As of May 2023, Cre-AID's product, MITHRIL splint was available in the market. Emergy's solution was available in the market as well. Currently, the startup is planning to expand geographically and reach more customers. Clarity Bio's product will be commercially available in the market in the year 2025. This wait of around 2 years is partly due to the fact that the second phase of the clinical trial is remaining. The rest of the startups have set their sights on a commercial product launch in early to mid-2024. The details are outlined below-

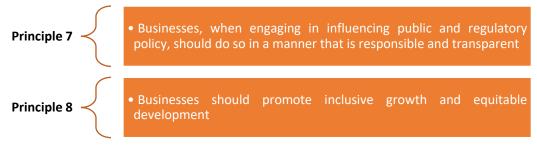


2.1.5. Convergence

This section of the report illustrates the compatibility of the CSR initiative with the sustainable development goals, existing policy frameworks, priorities of the country of intervention etc.

2.1.5.1. CSR Initiative Alignment with ESGs

According to the Business Responsibility & Sustainability Reporting Format (BRSR) shared by the Securities & Exchange Board of India (SEBI)⁹, the CSR initiative can be covered under the following principles:



CSR Initiative Alignment with SDGs 2.1.5.2.

A CSR initiative aligned with the SDGs contributes to a cohesive sustainable growth model and helps tackle sustainable development challenges¹⁰. To leverage these benefits, the SINE IIT Bombay CSR initiative was aligned with SDGs 3 and 9.

https://www.sebi.gov.in/legal/circulars/may-2021/business-responsibility-and-sustainability-reporting-by-listed-



2.1.5.3. CSR Initiative Alignment with CSR Policy

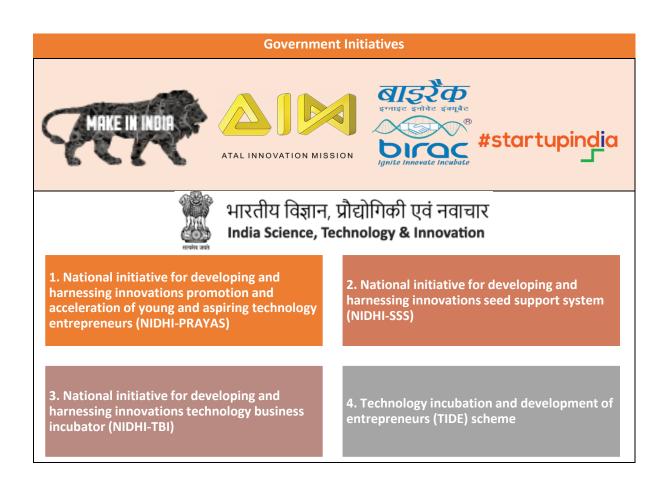
Schedule VII (Section 135) of the Companies Act 2013¹¹ specifies the list of activities that may be included by the company in its CSR Policy. The table below highlights the alignment of the CSR initiative by ICICI Securities with the MCA-approved activities.

Sub Section	Activities as per Schedule VII
(ix) (a)	Contribution to incubators or research and development projects in the field of science, technology, engineering, and medicine, funded by the Central Government or State Government or Public Sector Undertaking or any agency of the Central Government or State Government
(ix) (b)	Contributions to public-funded Universities; Indian Institute of Technology (IITs); National Laboratories and autonomous bodies established under the Department of Atomic Energy (DAE); Department of Biotechnology (DBT); Department of Science and Technology (DST); Department of Pharmaceuticals; Ministry of Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homoeopathy (AYUSH); Ministry of Electronics and Information Technology and other bodies, namely Defense Research and Development Organization (DRDO); Indian Council of Agricultural Research (ICAR); Indian Council of Medical Research (ICMR) and Council of Scientific and Industrial Research (CSIR), engaged in conducting research in science, technology, engineering and medicine aimed at promoting Sustainable Development Goals (SDGs)

¹¹ https://www.mca.gov.in/Ministry/pdf/InvitationOfPublicCommentsHLC_18012019.pdf

2.1.5.4. CSR Initiative Alignment with National Priority Initiatives

CSR initiatives should be aligned with National priorities, like policies, guidelines, or schemes. The CSR initiative is aligned with the objectives of the National Health Mission.



2.1.6. Service Delivery

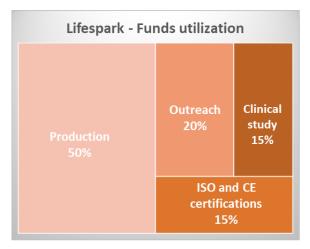
This section assesses the process of disbursal of funds and the utilization of the funds received.

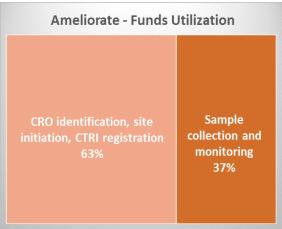
The amount of funds to be given to the startups was decided after a thorough needs assessment of the startups by SINE IITB. The process of disbursal was smooth as mentioned by both the SINE IIT Bombay team and the startups. The startups mentioned that the funds were released to them in a single tranche against some set objectives. The SINE IITB team regularly monitored the startups to check their progress and if the objectives were

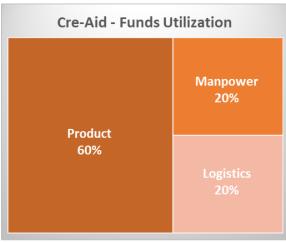


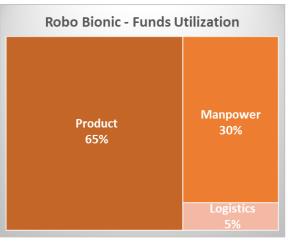
attained. The funds were released within 3 weeks of getting selected for the CSR initiative.

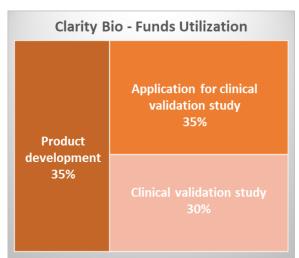
All selected startups mentioned that they had **utilized 100% of the funds** they had received through the CSR initiative. The funds were utilized towards attaining the set objectives.



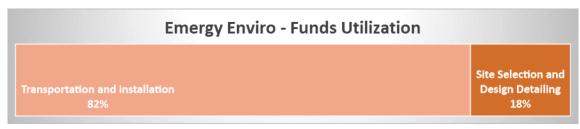












QUICK AND HASSLE-FREE DISBURSAL

"The overall process was hassle-free. The full amount was disbursed in a single tranche within 20 days of our selection into the programme. Thanks to SINE's decision, releasing the funds all at once was very helpful for us to kickstart manufacturing the product and clinical trials."

Amey Desai, Founder, Lifespark

The startups **highly rated** the CSR initiative in **fulfilling the milestones**. Most of the startups rated the CSR initiative aspects as "Excellent".

sta ind ini	artu cuba itiat	ation CSR		Amelio	orate	Clarity Bio	Cre- Aid	ImmunoAct	Emergy Enviro	Lifespark	Robo Bionic
Fulfilling the milestones of the startup		5		5	5	5	5	5	5		
Product and Product Roadmap		4		5	5	5	5	5	4		
5 Ex		cellent		4	Very G	ood	3	Good			

FEELING MORE CONFIDENT

"The programme provided us a platform with numerous opportunities. The financial and hand-holding assistance built our confidence. We can confidently pitch our product now and collaborate with experts without hesitation. If we cannot show confidence in our products, no one will. Hence, this is a very important aspect of building a business."

Amey Desai, Founding Member, Lifespark

MORE CLEAR ABOUT PRODUCT ROADMAP

"The financial assistance and the mentoring aspects of the programme was highly relevant. The future roadmap of our product is clearly chalked out now. Immense thanks to SINE IIT Bombay for this excellent programme."

Anil Nair, Founder Member, Robo Bionics

NO MORE STUCK IN COMPLIANCE ISSUES

"The support provided by the programme helped us in overcoming the regulatory issues we were stuck in. We were connected with experts who guided us throughout the intense regulatory processes. Our understanding of approaching compliances and regulations improved. We would rate the support as "Excellent".

Dr Rashbehari Tunga, Founder Member, Ameliorate

2.1.7. Sustainability

This section will assess the sustainability of the startups to understand if the **benefits of the CSR initiative will last**.

Ameliorate

- Financial plan: Received grant from India Health Fund in 2023 (Brand value! of ICICI Securities helped build credibility during due diligence process)
- Marketing strategy: Marketing team to visit doctors and advocate the product Marketing advantages of the product through social media
- Business tie-ups: Collaboration with hospitals, doctors and diagnostic labs for reaching a wider population
- Collaboration with government to increase presence in rural areas
- Risk-mitigation strategy: The product has a clear USP and is Patented In case of competition from similar products. Ameliorate has the advantage of a headstart.
- New product in pipeline: Self-testing multiplexing kit with a drop of blood from fingertip.

Robo Bionics

- Financial plan: Grants received from Adani Foundation for product development. Requirement of funds to be met through grants (for market expansion).
- Marketing strategy: Connections with hospitals and doctors who will refer the product to the patients. Social media outreach.
- Business tie-ups: Collaboration with NBFCs to give out product on EMI-based costing. Collaboration with the government of Bihar and Bombay municipal corporation (pilot orders).
- Risk-mitigation strategy: Product does not have a silicon cover and hence does not look like a real arm causing acceptance issues (to be mitigated through counselling currently-product to come with silicon covers in future).
- Building the brand image of the company through rigorous digital marketing (to increase acceptance). Filed for 3 patents, 1 granted, filed for design registration of brand. Certain products are being outsourced-hence inventory is maintained to deal with supply chain issues in case of unavailability. Alternate suppliers have been identified as well.

Emergy Enviro

- Business tie-ups: Collaboration with local and district governments,
 PSUs Collaboration with corporates
 MoU signed with Jeonjin Entech Ltd., Republic of Korea
- Other products:Integrated Wasteland technology
 In-situ Nallah Treatment Technology
 Indoor Air Quality Control Technology
- Target: Reaching 50,000 villages who do not have access to clean drinking water
- •Sustainability: Natural technology, less energy consumption Lower footprint, sustainable for communities to operate in long-run

Cre AID

- Financial plan: Raised 1.5 crores (through seed-funding and private placement rounds). Working to secure BIRAC PIPP and CSR grants (for market expansion).
- Business tie-ups: Collaboration with governments hospitals and NGOs.
- Risk-mitigation strategy: Working on behaviour change of patients to shift from plaster of paris to MITHRIL .
- Application for patent completed design to be registered Regulatory risks have been mitigated (granted manufacturing license).
- Sustainability: Bio-compostable product made from bio-plastic.
- New product in pipeline: MITHRIL splints for lower limbs.

Clarity Bio

- Financial plan: Future requirements of funds to be met through grants (till revenue generation)
- Marketing strategy: Marketing team to visit doctors and advocate the product. Marketing advantages of the product through social media.
- Business tie-ups: Collaboration with governments (initially Goa and Maharashtra). Collaboration with hospitals and diagnostic labs like Neogen and Sandor Labs.
- •Risk-mitigation strategy: The product has a price advantage and other technical advantages. Application for patent has been made.
- Advantage: High interest from neonatology experts in conducting screening studies on a larger scale.

Immuno Act

- Financial plan: Future requirements of funds to be met through grants (till revenue generation).
- •Business tie-ups: Backed by Laurus Labs (a leading pharmaceutical and biotech company). Collaboration with Tata Memorial Hospital-Mumbai.
- Marketing strategy: Marketing advantages of the therapy through results from clinical I trials and success stories (Increased association with hospitals).
- •Risk-mitigation strategy: Identified risk- unsatisfactory results from clinical trials.

 However, favourable balance shown between efficacy and toxicity (Source: ImmunoAct website).
- •New product in pipeline: Therapies for breast cancer, brain cancer, etc.

Lifespark

- Financial plan: Requirement of funds to be met through grants (for market expansion).
- Business tie-ups: Collaboration with hospitals (currently NIMHANS, Bengaluru and Deenanath Mangeshkar Hospital, Pune) and physiotherapy chains.
- Marketing strategy:Product advocacy to doctors, hospitals, and clinics.
 Marketing advantages and success stories of the product through social media.
 Attending conferences to showcase the product and build connections.
- Risk-mitigation strategy: No similar indigenous device strategy.

 Cost advantage and efficacy of product can help retain market (in case of competition).
- •Advantages: ~80% efficacy of the product.
 Artificial Intelligence incorporated to improve movement control.

ALMOST SUSTAINABLE

"Immuno Act and Lifespark are almost there in terms of sustainability. Immuno Act currently operates from its own laboratory in Navi Mumbai and the team has a clear business roadmap. Same can be said for Lifespark. Their products are adding value to the Tech domain."

Ponyi Bhatt, Chief Executive Officer, SINE IIT Bombay

Overall Sustainability

- The initiative was effective in defining the following for Tech startups:
 - o Financial Plan
 - Marketing Strategy
 - o Business tie-ups
 - Risk-mitigation strategy
 - Introducing new products in the market
- Lifespark Technologies Commencement of process for manufacturing license from CDSCO
- Immunoadoptive Cell Therapy Private Ltd.- Entered MOU with Oncology specialized hospitals across the country for clinical trials.
- Robo Bionics Got a patent for their technology and was a winner at the National Start-up Awards.
- Ameliorate Biotech Pvt. Ltd.- Ameliorate successfully received clinical evaluation of "ASSURED" kits done through CDSCO.
- Cre AID Labs Private Ltd.- Received ISO 13485 Certification and presence has now increased to 14 different cities across India.
- Emergy Enviro Private Ltd.- Has installed a Clean Drinking Water Treatment System at Group Gram Panchayat Dalkhan.

	a a		
Impact Assessment	Study: Startup	Incubation	Project

Chapter 3: Impact Assessment Design & Approach

3.1 Impact Assessment Study Objectives

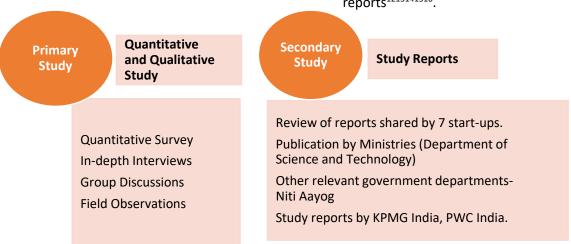
CSRBOX undertook this study to assess the following:



3.2 Sampling Strategy

For the assessment, **a two-pronged approach** has been selected for data collection. The primary data has been obtained through a combination of qualitative and quantitative data collection methods through interaction with the startup's founders and incubator- SINE IIT Bombay.

The Secondary data has been gathered from a thorough literature review and benchmark reports 1213141516.



3.2.1Quantitative Sampling

Quantitative interactions were organized with the founders/co-founders of the 7 startups based on a structured survey questionnaire.

¹² <u>https://pib.gov.in/PressReleasePage.aspx?PRID=1991614</u>

¹³ https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10391423/#R30

¹⁴ https://assets.kpmg.com/content/dam/kpmg/in/pdf/2023/10/from-volume-to-value.pdf

¹⁵ https://www.niti.gov.in/sites/default/files/2021-03/InvestmentOpportunities HealthcareSector 0.pdf

¹⁶ https://www.pwc.in/assets/pdfs/industries/healthcare/a-new-healthcare-era.pdf

Stakeholder	Sample Universe Selected Method of Data Collection		
Startup Founder/ Co-founder	7	7	Survey Questionnaire

3.2.2Qualitative Sampling

In-depth interviews (IDI) will be conducted with the following stakeholders:

Stakeholders	Mode of Data Collection	Number of Interactions	
Startup Founders	IDI		7
SINE IIT Bombay Team	IDI		4
ICICI Securities Team	IDI		1
Total Ir	teractions		12

CSR initiative's impact was captured, and case studies and testimonials were developed.

Qualitative interactions with the startups helped in **understanding the market needs** and the following:



3.3 Assessment Approach & Evaluation Framework

To determine the inclusiveness, relevance, coherence, impact potential, and efficiency of the CSR initiative, the evaluation used the **IRECS Framework**. Using the IRECS framework, the evaluation was able to assess ICICI Securities' CSR contribution to the results while keeping in mind the multiplicity of factors affecting the overall outcome. The social impact assessment hinges on the following pillars:

Inclusiveness

• The extent to which beneficiaries equitably access the benefits of the assets created and services delivered.

Revelance

• The extent to which the project is geared to respond to the 'felt' needs of the beneficiaries.

Expectations

• The extent of intended and unintended positive (benefits), socioeconomic and cultural changes have accrued for beneficiaries.

Convergence

• Judging the degree of convergence with government/other partners; the degree of stakeholder buy-in achieved.

Service Delivery

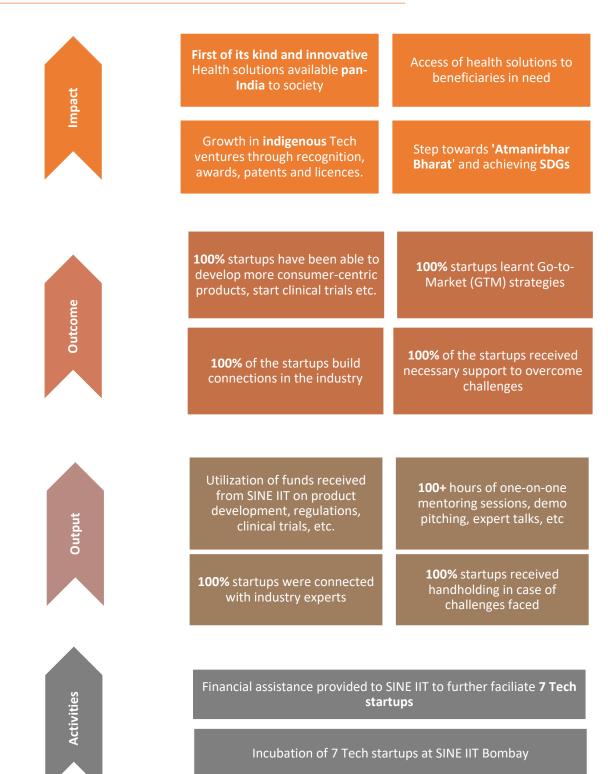
• Extent to which cost-efficient and time-efficient methods and processes were used to achieve the results and accessibility.

Sustainability

• Extent to which net benefits of the intervention are likely to continue.

3.4 Theory of Change

The Theory of Change framework indicates the activities, output and impact created by the project with respect to the underlined project objectives. The Theory of Change has been drawn on a causal analysis based on available evidence.



Impact Stories and Testimonials

Lifespark:

Kiran gains back control of his life

Kiran Sardeshpande, residence of Mumbai is 66-years old and suffering from Parkinson's Disease since 2008. He started facing difficulties in walking since 2017. He used to find it difficult to walk in confined or cluttered spaces and felt afraid of falling down. On trying the WALK device made by **Lifespark**, Kiran felt his fear of falling had reduced. The device was giving him additional support and control over his movements. The WALK device has helped him gain back control of his life.





(Photos: WALK devices by Lifespark helping patients with Parkinson's disease overcome their walking difficulties)

Robobionics

GRIPPY transformed Murli's life

Murli, a resident of Andhra Pradesh, lost both of his hands in a train accident. He could not carry out any chore by himself and was also left without any means of livelihood. He was in great despair, when he was fitted with the GRIPPY arm by **Robo Bionics**. Soon Murli became able to carry out household chores independently. Seeing his indominatable spirit, was was also employed by an NGO and now have a means of livelihood.



(Photo: Murli lifting weight without any support with his GRIPPY arm)

Salim fights back

Salim, a resident of Maharashtra, had his hand amputated in an unfortunate accident. It impaired his daily life. However, he did not lose hope and decided to take action to change his condition. He visited Omnify Prosthetics where the Doctor recommended him GRIPPY device by **Robo Bionics**. Salim learned to use the GRIPPY device easily in a day. With the device, Salim is now on his road to empowerment.





(Photo: Salim learning to use the GRIPPY device – left, Ekta being fitted the GRIPPY device - right)

Ekta's journey in the face of all odds

Ekta Davane, lost her right hand in a train accident. She could not perform household chores independently and was unemployed. With the GRIPPY device by **Robo Bionics**. she can independently do day-to-day activities. She has also ound a job in a local pharmacy and lives and empowered life irrespective of all odds.

Ameliorate:

ASSURED kits are urgently needed in the market

"Ameliorate's multiplexing kits are urgently needed. The product has the potential to completely alter the market. Whole blood is used for testing, which facilitates quicker and simpler diagnosis."

Dr. Dilip Kadam, Consultant

Care multi-specialty Hospital Wagholi Pune

Ameliorate's product is a great combined testing device

"Early diagnosis of Malaria, Dengue and Chikungunya can save patients from hospitalization costs and health risks. During testing for any one of these diseases, the other coinfection threats goes undiagnosed. This can put the life of a patient at risk. **Ameliorate** has built a single testing kit for all of these 3 diseases. Now co-infections can get diagnosed within 10 minutes."

Dr. Nanda Kishore Alva, Professor of Pathology,

Ramaiah Medical College



(Photo: ASSURED kit by Ameliorate showing detection of Chikungunya and Dengue in a patient)

ASSURED kits are multiple-diagnosis capable

"The demand for the multiplexing kit is high as it will significantly reduce the patient's recovery time. The ability to identify co-infection is an additional benefit. **Ameoliorate**'s ASSURED kit has the potential to revolutionize the game if sensitivity and specificity are strong. The kit will enable multiple, quicker, and simpler diagnosis."

Dr. Jayaprakash S. Appajigol, MD.,

KLE's Dr. Prabhakar Kore Hospital and Medical Research Center, Belgaum, Karnataka

Cre-AID MITHRIL splints

Highly recommend MITHRIL

"I am an orthopaedic surgeon and I have used MITHRIL splints on my patients. I thank Cre-AID team to come up with these products which I was looking for long time. Highly recommend."

Dr. Priyadarshi Amit Amrita Hospital,Faridabad



MITHRIL better than Plaster of Paris

"I was diagnosed with a hairline fracture on my right wrist. My hand was immobilized using a plaster of paris cast which limited my abilities to do simple activities like taking a bath. The MITHRIL splint by **Cre-AID** was a much more comfortable alternative. Not only was MITHRIL lightweight and breathable, but it was also robust. I am very happy with the product and the service that Cre-AID Labs provided."

Prashant Kumar Associate Business Analyst, Merkie Sokrati



Highly recommend MITHRIL

"I was having a non-displaced lunate fracture along with radio ulnar triangular ligament injury which required resting my hand. My MITHRIL Splint by **Cre-AID** has helped me easily flex the elbow. I could easily remove and wear it during activities like bathing which wouldn't have been possible with Plaster of Paris. I'm very impressed with the service as all my calls and queries were answered in appropriate time".

Dr. Naga Seshu Kumari Vasantha Asst. Prof, Sri Devraj Academy of Higher Education



"The CSR start-up incubation initiative supported us in clinical trials of our devic. Clinical trials are a critical and essential part of any new medical equipment. We were planning our clinical trials and figuring a support mechanism for helping us producing sufficient number of for this programme, we were able to manufacture the products and timely conduct the clinical trials."

Amey Desai, Founding Member, Lifespark

" The brand value of contributing parties helped us in our broader objectives "

"The support provided by **SINE IITB** towards our product was very crucial for us. Not only did it help us with clinical evaluation of our product but also in securing further support from funders and experts. During the initial due dilligence discussions with India Health Fund (IHF), they had asked us about the agencies we had collaborated with. Association with the programme was an added bonus as it authenticated our product and helped us in securing the funding."

Dr Binita Srivastava Tunga, Founding Member, Ameliorate

" SINE IITB propelled us towards our ultimate objective"

"We submitted our application and fortunately got selected for the pitching round. SINE helped us with their inputs to improve our pitch. During the demo day with ICICI Securities, we proposed the objectives we wanted to accomplish and the budget for that. The financial assistance from the programme propelled us towards our ultimate objective of running our business successfully. Our team is immensely grateful for the assistance provided to us."

Anil Nair, Founding Member, Robo Bionics

"Stepping up "

"Medical device development is a very challenging space. The startups require continuous hand-holding and assistance till certification or commercial phase, especially in the form of funding. This is because there are so many stages that involve high expenditure like development cycle, clinical trial, regulatory requirements, registrations, certifications etc. This whole cycle is very long for startups and in the initial phases, Venture capital funding is rarely available. So the supports from CSR grants are much needed. Understanding the challenge and the necessity, ICICI Securities stepped up and financially assistance 7 early stage startups. We appreciate ICICI Securities for this initiative."

Ponyi Bhatt, Chief Executive Officer, SINE IIT Bombay

Impact Assessment Study	v. Startun	Incubation	Project
iiiibact Assessiiieiit stuu	y. Jiai tup	IIICUDALIOII	1 101661

Chapter 4: Conclusion and Recommendations

Conclusion:

- **100**% of the start-ups supported under the CSR initiative are successfully contributing to boosting India's healthcare ecosystem.
- They had achieved the decided milestone and generated significant impact.

The mentoring and financial assistance provided by the project helped **100**% of the start-ups to <u>move towards market entry.</u>

Recommendations:

The startups can be more proactive and systematic in documenting the various milestones accomplished and impact generated by their businesses and communicating the same to stakeholders. This will help them gain more traction.

Abbreviations

Abbreviation	Meaning
ASSURED	Affordable Sensitive Specific User-friendly rapid/robust
	equipment-free device
BIRAC	Biotechnology Industry Research Assistance Council
CAR-T	Chimeric antigen receptor T-cell
CDSCO	Central Drugs Standard Control Organization
CSR	Corporate Social Responsibility
CRO	Contract Research Organization
DST	Department of Science and Technology
ESG	Environmental, Social and Governance
FGD	Focused Group Discussion
GOI	Government of India
IDI	In-depth Interview
IITB	Indian Institute of Technology, Bombay
KII	Key Informant Interview
NBS	Newborn screening
NIMHANS	National Institute of Mental Health and Neurosciences
Prosus (SICA) award	Prosus Social Impact Challenge for Accessibility
SDGs	Sustainable Development Goals
SINE	Society for Innovation and Entrepreneurship

Acknowledgement

We express our gratitude to ICICI Securities for the opportunity to conduct the Impact Assessment for the 'Contribution to Incubator = Startup Incubation Project', a CSR project of the Company.

We are grateful for the support from the Society for Innovation and Entrepreneurship, Indian Institute of Technology Bombay (SINE IITB) team during the course of this Impact Assessment. Lastly, we are thankful to all the founders and team members of the seven selected startups for their cooperation and time. We appreciate the valuable insights shared by each stakeholder of this project and would like to thank them all for their support.

Disclaimer

The report has been prepared pursuant to the Companies (Corporate Social Responsibility Policy) Amendment Rules, 2021, notification dated 22nd January 2021, by Renalysis Consultants Pvt. Ltd. (CSRBOX). This impact assessment study report is prepared for the Contribution to Incubator- Startup Incubation Project in which SINE, IITB (Society for Innovation and Entrepreneurship, Indian Institute of Technology Bombay) played the role of the incubator. This CSR project tenure was during FY2021-22, and the impact assessment was undertaken after one year, i.e. FY2023-24. The values indicated in

anywhere on this report are as indicated by the startup, during the assessment. All images and case studies in this report have been provided by the startups for use in this report.

This report contains an analysis by CSRBOX considering the publications available from secondary sources and primary data gathered through interactions with the leadership team of ICICI Securities, project beneficiaries, and implementation partner.

The premise of the impact assessment is to meet the regulatory requirements set out by the Ministry of Corporate Affairs (MCA), Government of India.