

# Bhopal Living Labs (as Atal Incubation Centre)

PROPOSAL TO NITI AYOOG



# Context and Contents



***Bhopal Smart City Development Corporation Limited (BSCDCL) is glad to submit proposal to Niti Aayog towards establishing Bhopal Living Lab as an Atal Incubation Centre.***

## Context

The Government of India has setup the Atal Innovation Mission (AIM) at NITI Aayog. The overarching purpose of this Mission is to promote a culture of innovation and entrepreneurship in India. The Government realizes that there is a need to create high class incubation facilities across various parts of India with suitable physical infrastructure in terms of capital equipment and operating facilities, coupled with the availability of sectoral experts for mentoring the start-ups.

Accordingly, AIM proposes to support establishment of Atal Incubation Centre (AICs) that would support innovators and start-up businesses in their pursuit to become successful entrepreneurs. The scheme would be known as Atal Incubation Centre scheme.

The objective of the scheme is to promote and establish incubation centres in India which would support and encourage start-ups in specific subjects/sectors such as manufacturing, transport, energy, health, education, agriculture, water and sanitation etc. and would provide them with necessary infrastructure facilities and other value added services. The scheme would also focus on establishment of AICs in underserved and unserved areas to support inclusive growth.

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# Key Concepts & Abbreviations



*These are some key terms used in the proposal.*

- **Living Lab:** A living lab is a user-centred, open-innovation ecosystem, often operating in a territorial context (e.g. city, agglomeration, region), integrating concurrent research and innovation processes within a public-private-people partnership. The concept is based on a systematic user co-creation approach integrating research and innovation processes. These are integrated through the co-creation, exploration, experimentation and evaluation of innovative ideas, scenarios, concepts and related technological artefacts in real life use cases. Such use cases involve user communities, not only as observed subjects but also as a source of creation. This approach allows all involved stakeholders to concurrently consider both the global performance of a product or service and its potential adoption by users. This consideration may be made at the earlier stage of research and development and through all elements of the product life-cycle, from design up to recycling.
- **Incubator:** a facility providing nurturing services to selected start-up and entrepreneurial groups in early-stage technology-related ventures, to help them scale-up laboratory pilot results, or their own innovations, and to develop viable businesses.
- **Incubatee:** the early-stage ventures in the incubator.
- **IoT:** IoT is a seamless connected network system of embedded objects/devices, with identifiers, in which communication without any human intervention is possible using standard and interoperable communication protocols. IoT involves three distinct stages (i) The sensors which collect data (including identification and addressing the sensor/device), (ii) A software application/programme/product which collects and analyses this data for further consolidation and (iii) decision making and the transmission of data to the decision making server, analytical engines, actuators and big data used for decision making process.

| Abbreviation | Full form   |
|--------------|---|
| BLL          | Bhopal Living Lab                                 |
| BSCDCL       | Bhopal Smart City Development Corporation Limited |
| IoT          | Internet of Things                                |
| IT           | Information Technology                            |
| M&E          | Monitoring & Evaluation                           |
| NITI         | National institution for Transforming India       |
| R&D          | Research & Development                            |

# A. EXECUTIVE SUMMARY

BSCDCL proposes to setup Bhopal Living Labs ... 21<sup>st</sup> century innovation to take India forward in latest technologies such as Internet of Things, Drones and Sensor Technologies.

# Executive Summary



*BSCDCL is in process to setup a living lab for Internet of Things and Sensor Technologies. The lab would be based in Bhopal and is in alignment with the Atal Innovation Mission.*

|   |  |
|---|--|
| <b>Incubator:<br/>Bhopal<br/>Living Lab</b> | <ul style="list-style-type: none"><li>• <b>Domain Area:</b> Internet of Things, Drones &amp; Sensor technologies</li><li>• <b>Incubator Site:</b> An area of more than 10,000 sq. ft. within the Bhopal Smart City has already been identified. This also includes a testing ground area for IoT and Drone technologies.</li><li>• <b>Proximity to business centers:</b> Being part of Smart Cities brings significant advantage to the incubator of proximity to both supply and demand.</li></ul>  |
| <b>Business<br/>Model</b>                   | <ul style="list-style-type: none"><li>• <b>Services:</b> The incubator as a living lab would provide to support all services of start-ups and researchers that allow for co-creation approach integrating research and innovation processes. This would also include regular mentoring and connecting to industry for business pilots / growth of start-ups.</li><li>• <b>Linkages:</b> BSCDCL has already approached a number of stakeholders including technology companies, VCs, academic institutions and other incubators to partner for this initiatives.</li><li>• <b>Targets:</b> here is a quick snapshot of the target expected in 5 years:<ul style="list-style-type: none"><li>○ Number of incubatees to be admitted: 500+</li><li>○ Number of incubatees expected to graduate: 300+</li><li>○ Number of new products/technologies/innovations to be commercialized: 300+</li><li>○ Number of events related to entrepreneurship: 200+</li></ul></li></ul> |
| <b>Team</b>                                 | <ul style="list-style-type: none"><li>• <b>Board:</b> BSCDCL already has a Board of accomplished credentials in the industry</li><li>• <b>CEO:</b> Process for setting up an advisory board and recruitment of a full-time CEO is in progress.</li></ul>   |

## **B. INCUBATION STRATEGY AND BUSINESS MODEL**

With a mission to promote the new age cutting technologies, this incubator would be unique in its conceptualization as a living lab.



# Vision: Bhopal Living Lab



***While Smart Cities concept is now in implementation stage, there is a need for start-ups to support this initiatives and take the current technologies to new scale and solve problems with innovations.***

## Context

Bhopal Smart City Development Corporation Limited is a State Government company with a mandate to support Smart Cities initiatives in the State of Madhya Pradesh. While doing do, a need has been identified to encourage start-ups with innovative ideas to create an innovation ecosystem.

Given this context, the needs of such start-ups that work on advanced technologies (IoT, Sensor, Drone) are very different. They need an open area and equipment to test their products. Such an environment is not usually available.

To solve this problem, BSCDCL has decided to establish a living lab that functions as an incubator to transform latest research into start-ups.

## Vision: Bhopal Living Lab

*“To promote entrepreneurial spirit amongst youth, researchers, engineers and society at large by promoting cutting edge information technology start-ups which will lead to economic and social development of the country.”*

## Objectives

- To identify & support potential cutting edge information technology entrepreneurs with a viable business plan
- To provide technical assistance in the development of processes, technologies and products along with managed workspace
- To connect researchers and entrepreneurs to commercialize innovations
- To increase economic and social growth of the region as well as the country

# Envisaged Services to Incubatees



*A range of services would be offered to the incubatees of the lab. These services would be customized to the needs of the incubatees.*

**Managed office space** including offices or workshop space on an affordable basis.

**Business modelling** services to help incubatees make a business plan

**Financial advice services** related to funding and investments

**Advertising and marketing services** such as the provision of lists of potential suppliers, businesses, potential investors, and distributors

**Training services** providing insight into the principles of market economy, as well as upgraded professional and technical skills

**Legal and IPR advisory services** to help the incubatees through the legal processes linked to registrations as well as patents

**Industrial infrastructure** including roads, water, electricity, telecommunication, buildings and industrial machines can be provided to support testing of IoT technologies

**Network services** such as providing links and relationships with other organizations that can promote and sustain the interests of the incubatees

**After incubation support services** for successful companies that graduate from the incubator



# Strategic Implementation Elements



***Services to incubatees is not enough. The lab has to be responsible for creating a 360 degree ecosystem to become a successful incubator.***

1

***Domestic as well as International Partnerships***

BLL will seek partnerships and sign MoUs with:

- Technology companies
- Academic and Research Institutions
- State as well central governments across India and internationally
- Other Incubators
- VCs and Angel Funders
- Political Support
- Industry Associations

2

***Events: Workshops and Roadshows***

BLL will organize regular events to support the ecosystem. It would include:

- At least one workshop every week
- One large international event in a year
- One road show in a year

3

***Innovation Competitions***

BLL would organize large scale innovation competitions as well as small competitions such as hackathons to encourage participation.

4

***Lab Human Resources***

BLL would be very strategic about recruitment for the BLL> Apart from CEO, a team of program managers would also be recruited to support the incubator. Entrepreneur-in-residence program will also be initiated.

5

***Revenue Streams***

BLL would rely on various revenue streams for running the incubator and make it self-sustainable in a period of 5 years. Some revenue streams may include:

- Charges from incubatees
- Equity in companies
- Licensing

6

***21<sup>st</sup> century Infrastructure***

The infrastructure for the lab would include number of latest equipment apart from regular needs like library, recreation area and cafeterias. A testing ground is critical for IoT start-ups.

# Implementation Plan



*A high-level implementation plan is as follows.*

| #  | Item  | Y1 (first half) | Y1 (Second half) | Y2 | Y3 | Y4 | Y5 |
|----|---|-----------------|------------------|----|----|----|----|
| 1  | Finalize goals and mission along with key partners, form SPV and appoint board of directors |                 |                  |    |    |    |    |
| 2  | Select and train a dynamic management team  |                 |                  |    |    |    |    |
| 3  | Create linkages to research, learning and professional communities                          |                 |                  |    |    |    |    |
| 4  | Leverage State and National policies to raise seed funding for incubator                    |                 |                  |    |    |    |    |
| 5  | Build creative physical infrastructure  |                 |                  |    |    |    |    |
| 6  | Invite applications and select a group of incubatees (repeat every year)                    |                 |                  |    |    |    |    |
| 7  | Carry out incubation program for (24 months program)  |                 |                  |    |    |    |    |
| 8  | International entrepreneurship event in Bhopal (year)                                       |                 |                  |    |    |    |    |
| 9  | Road Show (every year)  |                 |                  |    |    |    |    |
| 10 | Monitor the performance, assess effectiveness and expand impacts of incubatees              |                 |                  |    |    |    |    |

# Critical Success Factors

*Here are some factors that are critical to the success of the lab.*



## **C. ABOUT BSCDCL: LEGAL AND GOVERNANCE STRUCTURE**

Bhopal Living lab is proposed to be incorporated, as a separate not-for-profit Section 8 company. BSCDCL would hold majority shareholding in the company.

# Legal and Governance Structure



*Bhopal Smart City Development Corporation Limited is a Public incorporated company. It was incorporated on 14 March 2016. It is classified as State Govt company and is registered at Registrar of Companies, Gwalior. Its authorized share capital is Rs. 2,000,000,000 and its paid up capital is Rs. 201,000,000.*

## BSCDCL Board of Directors

| DIN      | Name                | Begin date | End date |
|----------|---------------------|------------|----------|
| 01121749 | CHANDRAMAULI SHUKLA | 26/04/2016 | -        |
| 05340409 | NISHANT WARWADE     | 14/03/2016 | -        |
| 06499360 | CHHAVI BHARDWAJ     | 26/04/2016 | -        |
| 07063233 | TEJASWI SUBRAY NAIK | 14/03/2016 | -        |

Bhopal Living lab is proposed to be incorporated. as a separate not-for-profit Section 8 company. BSCDCL would hold majority shareholding in the company.

Considerable care would be taken in selecting the management.

**Board of Directors:** A board would be selection comprising of people from different backgrounds to support the incubator.

**Advisory Board:** An advisory board comprising of entrepreneurs, VCs and technology thought leaders would be created to regularly advise the CEO and the Board of Directors on various matters. It will comprise of:

- Member from MP Government
- Member from NASSCOM
- Member from FICCI
- 3 Members from Technology firms

**CEO:** The CEO (Shri. Chandramauli Shukla) has a key role in the success of the incubator. The success or failure of an incubator may depend on the qualities and performance of its CEO and also the amount of time he or she is able to spend with client businesses. An full-time incubator CEO would be chosen especially for his or her ability to work with entrepreneurs and to help them grow their companies. The CEO should in particular be fully familiar with entrepreneurship and business development.

**Program Managers:** Program Management will be done by PwC.

## D. TARGETS

A carefully drafted monitoring and evaluation framework would be followed to measure the success of the incubatees as well as incubator.



# BLL: M&E indicators



| #                 | Indicator   | Year 1         | Year 2         | Year 3         | Year 4         | Year 5         |
|-------------------|---|----------------|----------------|----------------|----------------|----------------|
| <b>Setting up</b> |   |                |                |                |                |                |
| 1                 | Incubator Space   | 10,000 sq. ft. | 10,000 sq. ft. | 15,000 sq. ft. | 15,000 sq. ft. | 20,000 sq. ft. |
| 2                 | Number of Incubatees admitted per year  | 15             | 25             | 40             | 70             | 100            |
| 3                 | Proportion of revenue dependent on public subsidies                                       | 100%           | 90%            | 80%            | 50%            | 20%            |
| <b>Functions</b>  |   |                |                |                |                |                |
| 4                 | Number of Management Staff  | 4              | 6              | 7              | 8              | 9              |
| 5                 | Number of events related to entrepreneurship (including regular workshops for incubatees) | 20             | 50             | 100            | 100            | 100            |
| <b>Impact</b>     |   |                |                |                |                |                |
| 6                 | Number of Incubatees expected to graduate per year  | 0              | 10             | 20             | 40             | 60             |
| 7                 | Average growth in Incubatee turnover  | 20%            | 25%            | 30%            | 30%            | 30%            |
| 8                 | Average new jobs created per incubatees   | 3              | 5              | 7              | 9              | 10             |
| 9                 | Number of new products, innovation and research commercialized                            | 3              | 7              | 15             | 25             | 40             |
| 10                | Average funding raised per Incubatee in INR (during incubation)                           | 1 lacs         | 5 lacs         | 8 lacs         | 12 lacs        | 15 lacs        |

# E. SELECTION AND EXIT POLICY FOR INCUBATES

BLL would have a well-defined operations polict with regard to incubatees.





# Incubatees Selection & Exit Policy



*BLL would have a well-defined operations policy with regard to incubatees.*

|  |  |  |  |
|--|--|--|--|
| <p>Potential incubatees</p>              | <ul style="list-style-type: none"> <li>• University graduate students</li> <li>• Researchers</li> <li>• IT Industry Professionals</li> <li>• Start-ups / SMEs</li> <li>• Innovation branch of existing firms</li> </ul>  | <p>Broad criteria for the selection of entrepreneurs</p> | <p>Open invitation for applications would be released and potential incubatees would be requested to submit an application. Interview would be organized with shortlisted start-ups. Evaluation would be based on following key parameters:</p> <p><b>General</b></p> <ul style="list-style-type: none"> <li>• potential for business growth</li> <li>• ability to create jobs</li> <li>• ability to generate net profit</li> <li>• potential for social impact</li> <li>• potential to strengthen and diversify the economy</li> <li>• compatibility with incubator objectives and existing clients.</li> </ul> <p><b>Technical</b></p> <ul style="list-style-type: none"> <li>• value-added by innovation</li> <li>• core competence</li> <li>• time to market</li> <li>• patent situation</li> <li>• uniqueness of concept</li> <li>• access to external expertise/faculty/facilities.</li> </ul> <p><b>Business</b></p> <ul style="list-style-type: none"> <li>• market knowledge and focus on specific industry</li> <li>• dedicated team</li> <li>• integrity and capacity for hard work</li> <li>• ability to handle crisis and risk</li> </ul> |
| <p>Incubatees Qualification Criteria</p> | <ul style="list-style-type: none"> <li>• The incubation lab is open to all Indian nationals irrespective of the State.</li> <li>• In case of international teams, majority stake must be held by Indians.</li> </ul>   |  |  |
| <p>Exit Policy</p>                       | <p>An incubated company will leave the incubator under the following circumstances:</p> <ul style="list-style-type: none"> <li>• Completion of two years stay (if no extension granted; They may be granted maximum two extensions for 6 months each at a time at the sole discretion of the Incubator).</li> <li>• Underperformance or non-viability of business proposition as decided by BLL on case to case basis.</li> <li>• When the company enters in an acquisition, merger or amalgamation or reorganization deal resulting in a substantial change in the profile of the company, its promoters, directors, shareholders, products or business plan.</li> <li>• Any other reason for which BLL may find it necessary for an incubated company to leave.</li> </ul> |  |  |

# F. ANNEX: SUPPORT LETTERS FROM PARTNERS

BLL has already received extensive support commitment from the stakeholders.



# Notes for Proposed Budget Sheet



| Component  | Note   |
|--|--|
| <b>Capital Expenditure</b>   |  |
| Design & Development of the Bhopal Living Labs Technology Infra (for the center as well as buget provision for incubatees) | Designing of the 10,000 Sqft area into a worldclass incubation + experience center; expansion expected in Y3 and Y5 and hence additional expenditure taken   |
| Furnishings (Furniture, cubicles etc)  | Technology equipment purchase like touchscreen collaboration screens, software, drones, testing tools etc. Additional budget provisioned for the incubatees  |
| Living Labs Extensions in Engg Colleges  | Living labs centers in collaboration with 1 enggineering college/incubator YoY   |
| <b>Operational Costs</b>   |  |
| Manpower and Staff (5 Senior staff and admin support)  | 1 CEO, 1 Chief Innovation Officer, 1 Center In-Charge and 2 Tech Specialists   |
| Utility and maintenance (including Rent)   | Rent of the area including water & electricity costs   |
| Conferences, Competitions and Promotion  | Budget provisioning to organise 1 start-up competition per year and related PR/Conferences   |
| Training & Consultancy Services  | Business Consultancy Support Services including evaluation of proposals, projects, mentoring, M&E, training and capacity development   |
| Licensing & cloud services   | The incubation center will tie-up with a cloud services provider for all hosting requirements  |
| Miscellenous expenses (incl consumables, housekeeping, security)   | consumables & O&M of equipment   |
| Legal & IP Support   | Support to incubatees  |
| <b>Sources of Finance</b>  |  |
| Grant proposed from AIM  | Grant from Central Government  |
| Convergence of Pan City Project Technology -Capex (one-time) & Operational Support (Rent & Manpower) from BSCDCL           | Convergence of BSCDCL Pan City Project of Command Center Deployment Technology Deployment as a one-time capex for this center; Annual Operational Expenses w.r.t. Rent, Electricity and other charges  |
| Madhya Pradesh State Support   | MP Government in tie-up with SIDBI has been supporting Start-ups, SPV to identify various states schemes to apply and get the grant-in-aid   |
| Annual Gap Support from BSCDCL   | Any revenue gap to be financed by the SPV parent - BSCDCL  |
| Any other source of income (CSR, Events, Consultancy, Workshops)   | The SPV is expected to work with the technology firms to generate projects that can be delivered by the incubatees. It also plans to earn a modest fees from various trainings, consultancy, workshops |

# Industry Support



*BSCDCL will be provided support from the various Industry Partners*



**FICCI**  
Federation of Indian Chambers  
of Commerce and Industry

Established in 1927, FICCI is the largest and oldest apex business organisation in India. Its history is closely interwoven with India's struggle for independence, its industrialization, and its emergence as one of the most rapidly growing global economies. A non-government, not-for-profit organisation, FICCI is the voice of India's business and industry. BSCDCL has signed MoU with FICCI, please find enclosed the same.



**CISCO**

Cisco is the worldwide leader in IT that helps companies seize the opportunities of tomorrow by proving that amazing things can happen when you connect the previously unconnected. Cisco brings a wealth of management talent and experience to its executive thought leadership efforts. CISCO has taken up Golden Mile project for BSCDCL, which will support the Incubation Center Initiative eventually. CISCO is supporting in this, please find enclosed the letter for the same.



**HPE**

HPE is in the Acceleration Business. HPE help customers use technology to slash the time it takes to turn ideas into value. In turn, they transform industries, markets and lives. Some of HPE customers run traditional IT environments. Most are transitioning to a secure, cloud-enabled, mobile-friendly infrastructure. Many rely on a combination of both. Wherever they are in that journey, we provide the technology and solutions to help them succeed. HPE is providing support for this initiative, please find enclosed the support letter for the same



**ERICSSON**

Ericsson strive to connect everyone, wherever they may be. Because by being connected, people can take part in the emerging global collaboration that is the Networked Society in which every person and every industry is empowered to reach their full potential. Their services, software and infrastructure - especially in mobility, broadband and the cloud - are enabling the communications industry and other sectors to do better business, increase efficiency, improve their users' experience and capture new opportunities. HPE is providing support for this initiative, please find enclosed the support letter for the same



**WRI**

WRI India's Sustainable Cities program catalyzes environmentally and financially sustainable transport solutions to improve quality of life in cities. EMBARQ is the sustainable urban mobility initiative of WRI India. EMBARQ catalyzes sustainable solutions to the problems of urban mobility, actively working in four strategic areas – Integrated Urban Transport, Urban Development & Accessibility, Transport and Climate, and Health and Road Safety. WRI is providing support for this initiative, please find enclosed the support letter for the same.

# Educational Institute Support



*BSCDCL will be provided support from the various Educational Institutes*



## Maulana Azad National Institute of Technology

Maulana Azad National Institute of Technology Bhopal (MANIT/MACT), also known as National Institute of Technology, Bhopal (NIT Bhopal), formerly Maulana Azad College of Technology (MACT), is an Institute of National Importance under the NIT Act in Bhopal, Madhya Pradesh, India. It is part of the group of publicly funded institutions in India known as National Institute of Technology.

MANIT is providing support, please find enclosed the letter of support for the same

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## TRUBA

Truba Group of Institutes at Bhopal, Madhya Pradesh, India is a group of two engineering institutes and one pharmacy institute. All institutes are approved by AICTE and affiliated to Rajiv Gandhi Technical University, Bhopal.

Truba is providing support, please find enclosed the letter of support for the same



# Government Support



*BSCDCL will be provided support from the Madhya Pradesh State Electronics Development Corporation Ltd.*



## MPSEDC

Madhya Pradesh State  
Electronic Development  
Corporation Ltd.

To promote use of IT and ITES in various Departments, Corporations, Companies, Societies, Boards etc. of Government of Madhya Pradesh. The scope would include Consultancy, Software Development, Hardware/Software procurement, Training, Testing, Networking, Recruitment of IT professionals and development of specified areas as Hardware and Software Technology Parks. The Corporation shall also involve itself in emerging areas in the field of Information Technology.

Presently MPSEDC have been entrusted with the responsibility as nodal agency for implementation of various prestigious IT projects of GOI & GOMP in Madhya Pradesh viz development of IT PARKS, EMCs, infrastructure development for BPO UNITS, SWAN, CSC, SDC, SSDG etc which are in progress.

MPSEDC is providing support, please find enclosed the letter of support for the same

# Business Consulting Support



*BSCDCL will be provided support from the PwC*



PwC is one of India's largest and oldest professional services firms with a history of over 130 years. We're part of the PwC network of firms with a widespread global reach and professionals committed to delivering quality in Business Consulting, Assurance, Tax and Advisory services.

PwC has an industry-leading competency in Innovation Strategy and a long history of successful consulting engagements with clients around the world and in virtually every industry.

This Summary aims to profile the practitioner's guide of Leading Practices for Breakthrough Innovation. These practices have been consolidated and synthesized based on a wide range of sources.

## **Sudhir Singh Dungarpur from PwC, Partner**

Sudhir has 20 years global experience working in both start-ups as well as large multinational corporations in the areas of technology, education and consulting. Sudhir's strength lies in developing new businesses. He has successfully built new divisions and businesses in highly competitive environments. Creating strong relationships & networks, a clear control on market dynamics and bringing the best teams has ensured Sudhir delivered consistent results in growth, revenue, operational performance and profitability.



## **Neel Ratan from PwC, Partner**

Neel has over 28 years of experience working with PwC. He has extensive experience of consulting assignments for various Central and State Government / PSU bodies. Creating strong relationships & networks, a clear control on market dynamics and bringing the best teams has ensured Neel delivered consistent results in growth, revenue, operational performance and profitability.





**THANK YOU**

