CLIMATE TECHNOLOGY PROGRAM

Accelerating Innovation in the Development, Deployment and Transfer of Clean Technologies

Climate Innovation Center Business Plan: Kenya

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CLIMATE TECHNOLOGY PROGRAM

Structure

1. infoDev
2. Climate Innovation Centers (CICs)
3. Kenya CIC: Mission, Objectives and Impact
4. Stakeholder engagement process
5. Gap Analysis & Business Model
6. Implementation & Oversight
7. Financial Plan
8. Appendix

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*info*Dev

Innovate, Connect, Transform

Goal:

Demonstrate the link between technology and sustainable development

Build local capacity in developing countries to create and accelerate innovative technology SMEs.

Focus:

infoDev focuses on enterprises that use technology to deliver innovative solutions or to increase their competitiveness and market reach.

Foundation:

global network of 300+ business incubators in 80+ developing countries, 20,000 SMEs, 220,000 jobs

Donors and partners

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Climate Innovation Centers

Key Success Factors:

- A coordinated and holistic approach to innovation
- Based on local context, market needs and opportunities
- Aggregates existing country initiatives
- Leverages public-private partnerships and resources
- Networked nationally and internationally facilitating collaboration

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The Kenya CIC: Mission, Objectives and Impact

Mission

To provide an integrated set of services, activities and programs that leverage and expand existing innovation capacity and support the development and scale of climate technology SMEs in Kenya

Objectives

1. Providing access to flexible investment mechanisms that support enterprises at varying levels of innovation and scale

2. Building innovation capacity through the delivery of advice, assistance and educational products

3. Enabling local and regional collaboration that develops and supports an innovation ecosystem in east Africa

4. Identifying and unlocking new market opportunities through access to information and market intelligence

5. Facilitating access to facilities that support rapid technology design, adaptation, proto-typing, testing and manufacture

Impact

Environmental

- Mitigate 1.5m tons of CO_2
- Install 90MW of off-grid energy,
- Provide energy access to 1m Kenyans
- Provide access to clean water to 441,000 Kenyans
- Provide better/cheaper food to 43,000 households
- Improve the efficiency of 22,500 small-scale farms.

Financial

- Finance over 70 Kenyan climate technology ventures
- Achieve a survivability rate of 50% at the POC phase and 75% at the seed stage
- Achieve a 100% leverage ratio for 30% of investments
- Achieve overall 50% leverage of entire cost of the center via local cash and in-kind contributions

Social

- Generate over 930 direct jobs and 3700 indirect jobs at a cost of USD 3,200 per job
- Generating over 1,400 jobs for women
- Create over 24,000 high value jobs at USD 850 per job over 10 years.

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Feasibility study process

- Stakeholder identification and outreach
- Sector mapping: Main issues
- Workshop 1: Brainstorming and networking
- Follow up: Quantitative analysis
- Workshop 2: Model design and working groups
- Develop proposal with key stakeholders and government endorsement
- **Implementation**

- Stakeholders
- Technology prioritization
- Gaps analysis
- Workshops
- Surveys
- Model design
- Proposal

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Mapping Market Gaps to Center Business Model

Gaps	Needs	Solutions
Technology		Access to Finance
Finance		Advisory Services
Company		Enabling Environment
Market		Access to Information
Regulatory		Access to Facilities

Case Study: Market Gap

Nuru Light: Founded 2008

A key barrier for Nuru Light has been the limited knowledge of clean tech options among end consumers. For example, in some markets, the company found that most people assumed that kerosene was their only option for lighting. There is therefore need for extensive grassroots marketing to raise awareness on RE options among consumers.

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The Kenya CIC: Business Model

Finance

- Risk Capital Fund
  - Proof of Concept
  - Seed Investments
- Investment Facilitation
  - Syndication
  - Working capital & consumer finance facilitation

Advisory Services

- Business Training
  - Basic & advanced courses
  - Seminars and Events
  - Local bank training program
- Technical Training
  - Product design, & tech courses
- Advisory Service Fund
  - Packaged services
  - TA Fund

Enabling Ecosystem

- Policy Support
  - Advice and advocacy
- International Collaboration
  - CIC Network
  - Brokering of tech transfer and joint R&D
- Center Visibility

Access to Information

- Market Information
  - Market Intelligence Products
  - Competitive Landscape
- Technology Information
  - Tech quality & performance data
- Finance Information
  - Database

Access to Facilities

- In-sourced
  - Computer Animated Design
  - Rapid 3D prototyping
  - Office & networking space
- Outsourced
  - Testing and demo
  - Initial production

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Implementation and Oversight

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Oversight Board

Gov & Donor Partners

Private Sector Partners

Management Team

Investment Committee

Enabling Environment

Market Info

Access to Facilities

Advisory Services

Finance

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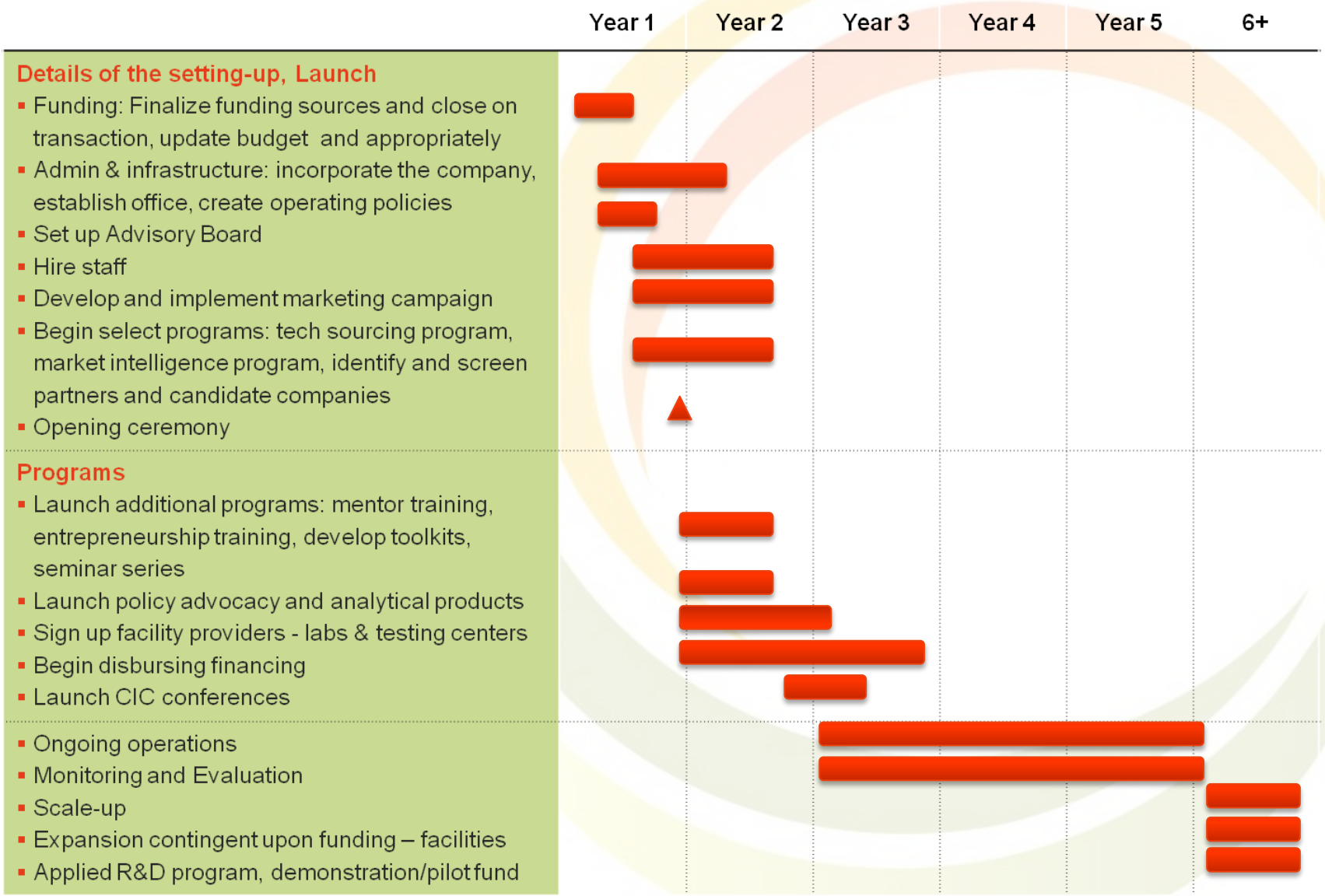
Implementation Timeline



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Governance

Staffing	• 7 staff in years 1 • 12 staff in years 2-5
Oversight Board	• 9 seats representing various industries/sectors • Rotation every 2-3 years • Ideally some sponsorship for board seats
Investment Committee	• 4-5 individuals • Experienced financiers
Incorporation and Ownership	• Non-profit entity: Either trust or private company • Charitable or institutional tax registration possible • Ownership managed by oversight board

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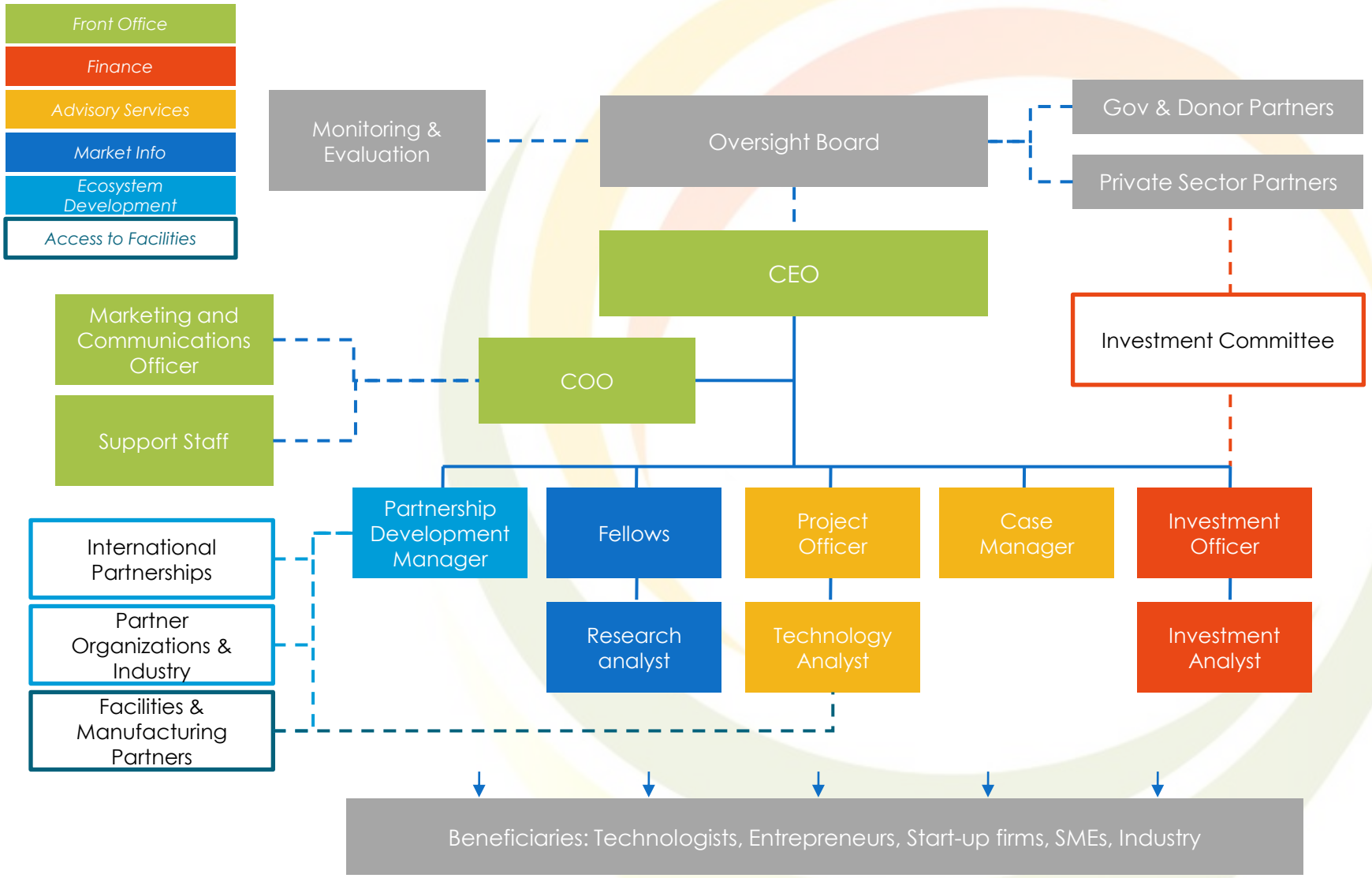
Organizational Structure



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Impact, M&E and Risks

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M&E

- Internal databases and data collection
- Yearly annual report
- Focus groups and stakeholder follow-up
- Surveys and other quantitative measurements where possible.

Risk Management

- **Center Risks:** Finance, stakeholder support, management and staff, market demand
- **Market Risks:** Finance, market supply, market demand, regulatory environment, competition

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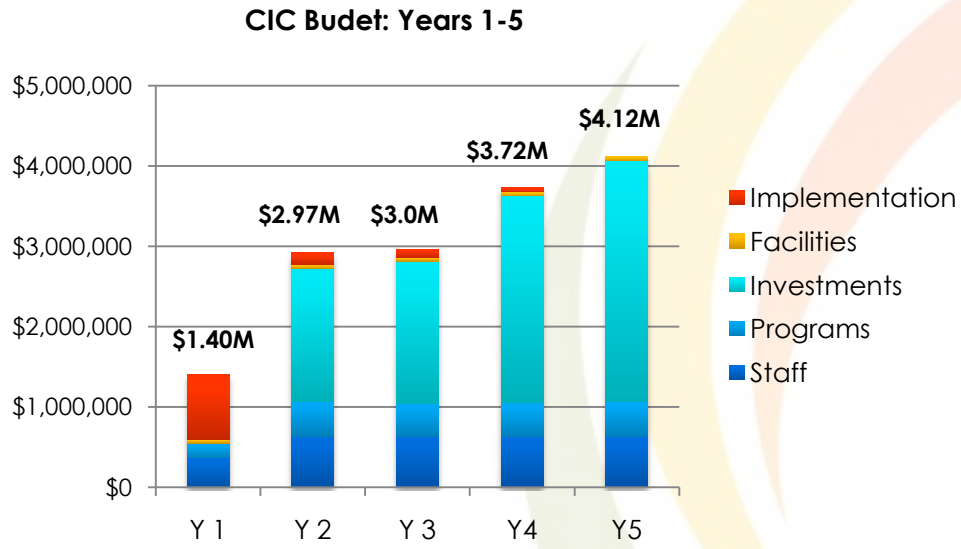
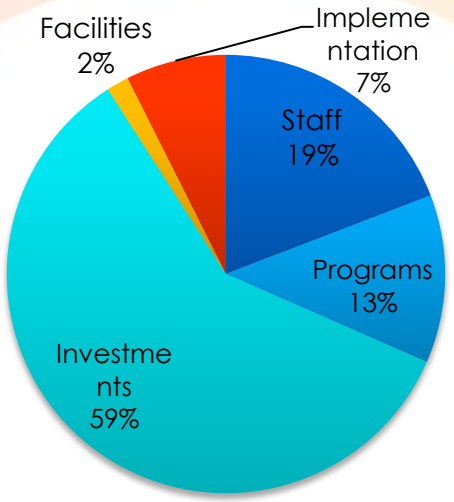
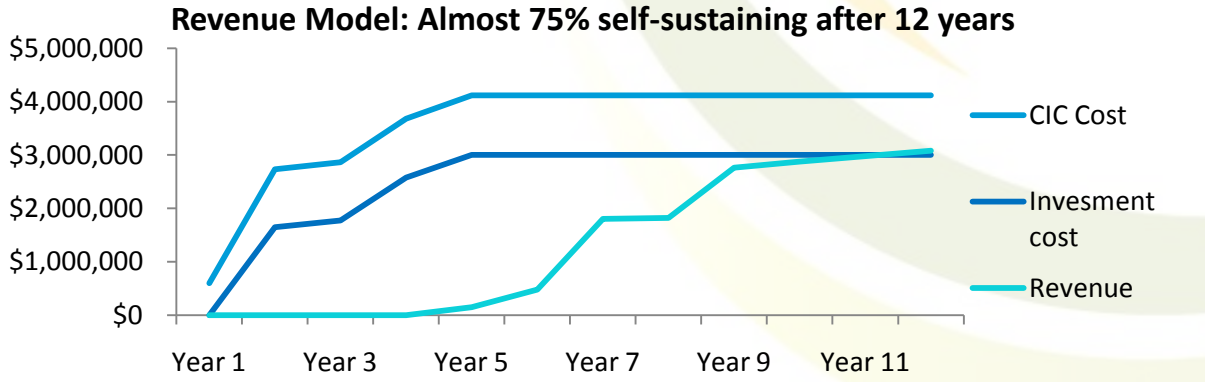
Financial Plan

5-Year Budget: USD 15.2





Sustainability Model: 70% costs covered in 10th year



Other opportunities for revenue:

- Carbon Credits
- Financial advisory services
- Facilities leasing
- Sponsorship
- Tailored Training
- Brokered technology transfer
- Consulting work

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Appendix

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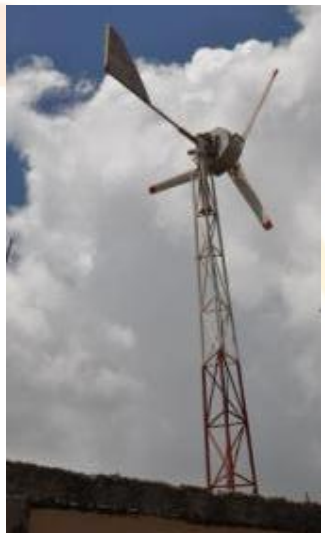
Beneficiaries: Building a Pipeline of New Ventures

- Country: Kenya
- Company: Craftskillz
- Entrepreneur: Simon Mwachiro
- Clean Technology: Small Wind
- Current capacity: 10 to 20 turbines a year.
- Employees: Between 3-20



Barriers	Solutions
Lack of risk capital	Center could offer start up risk funding. Simon is looking for approx USD100k
Standardization	Center could offer standards for various tech
Policy	Center could act as an "Industry Association"
Business support	Center could provide business training, market data etc.
Equipment and tools	Center could provide facilities where entrepreneurs could prototype their innovations and produce initial products for proving the market.

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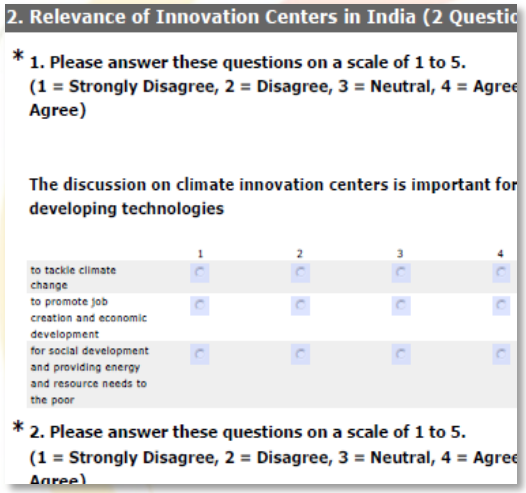
Technology Priorities of CIC

Evaluation Criteria

TR	Technology Readiness
MD	Market Demand
AF	Availability of Funding
RS	Clear, Ready Stakeholders
BM	Business Model
IR	Leverage of Indigenous Resources
EC	Entrepreneurial Capacity
WF	Workforce
PO	Policy
EI	Economic Impact
GI	GHG Impact
SI	Social Impact
AT	Already on Track

Stakeholder Feedback


2. Relevance of Innovation Centers in India (2 Questic

* 1. Please answer these questions on a scale of 1 to 5. (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree Agree)

The discussion on climate innovation centers is important for developing technologies

	1	2	3	4
to tackle climate change				
to promote job creation and economic development				
for social development and providing energy and resource needs to the poor				

* 2. Please answer these questions on a scale of 1 to 5. (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree Agree)

Prioritized Technologies

1. **Off-grid Technologies**
2. **Water**
3. **Micro-hydro**
4. **Tech for adaptation**
5. **Agriculture**
6. **Bio-energy**

Priority 1: Off-grid Technologies

Score: 4.1/5.0

Main technologies: Solar PV, CPV, Bio-Gas, Biomass, Wind.
Example business models: Off-grid/distributed solar PV, off-grid/distributed CPV, distributed bio-gas, distributed biomass generated power, off-grid/ distributed wind kW, Distributed energy from hybrid power systems (e.g Wind-solar-diesel hybrid systems).

	TR	MD	AF	RS	BM	IR	EC	WF	PO	EI	GI	SI	AT
Off-grid	M	M	L	M	M	M	M	M	M	H	H	H	M