

**República de
Moçambique**

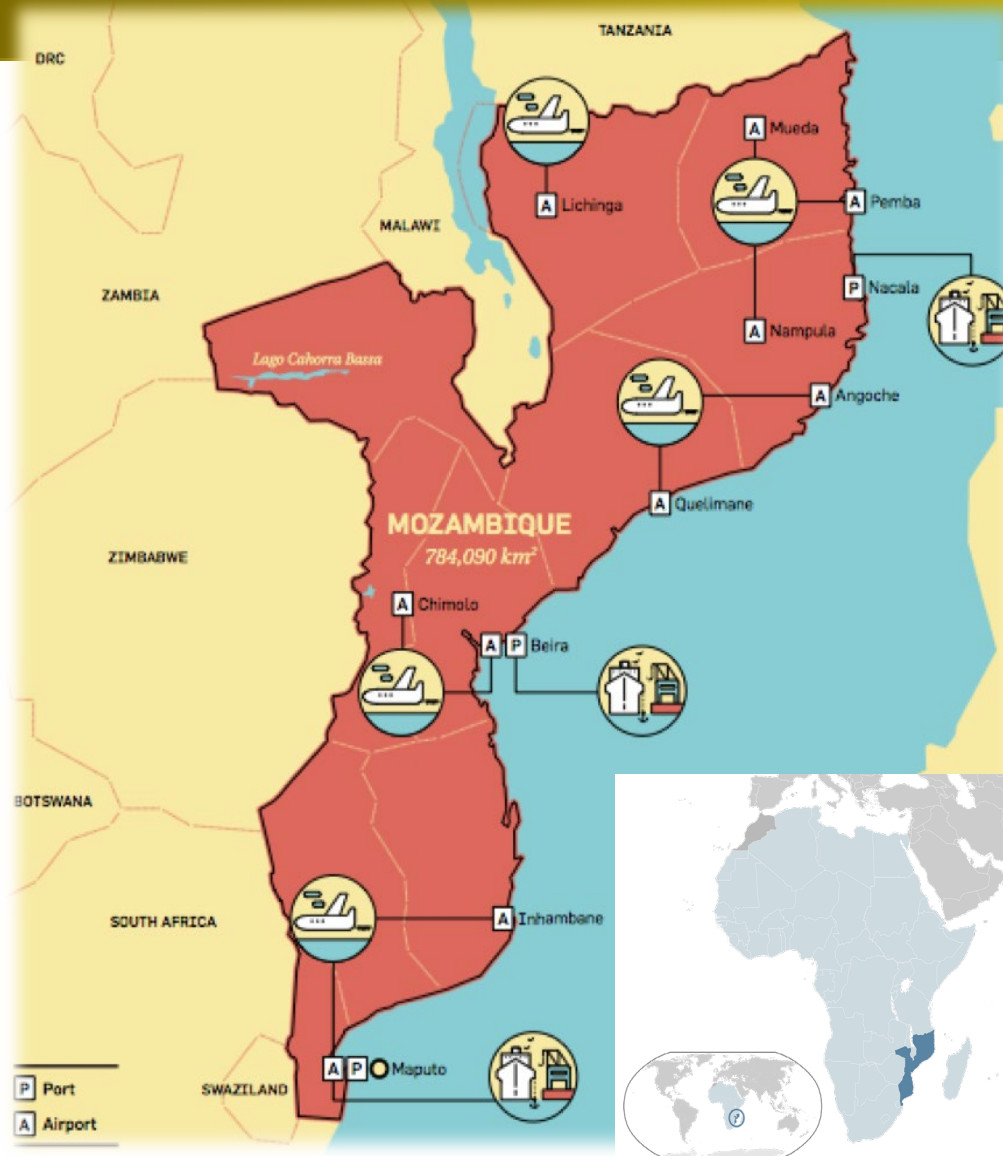


Report on Technical Cooperation Activities in Science, Technology, and Innovation (STI) Mozambique

Presenters:

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Where we are



- **Location:** South-eastern coast of Africa
- **Total Area:** 799.380 Km²
- **Coastline:** 2.700km (Indian Ocean)
- **Population:** 33,7 Million
- **Capital:** Maputo
- **Nominal GDP:** US\$ 24B
- **GDP Per Capita:** US\$ 491,8
- **Arable land:** 36 million / hectar
- **Currency/exchange rate:** MZN
64,46/US\$

Overview of the National Science, Technology and Innovation System (SNCTI) (1)

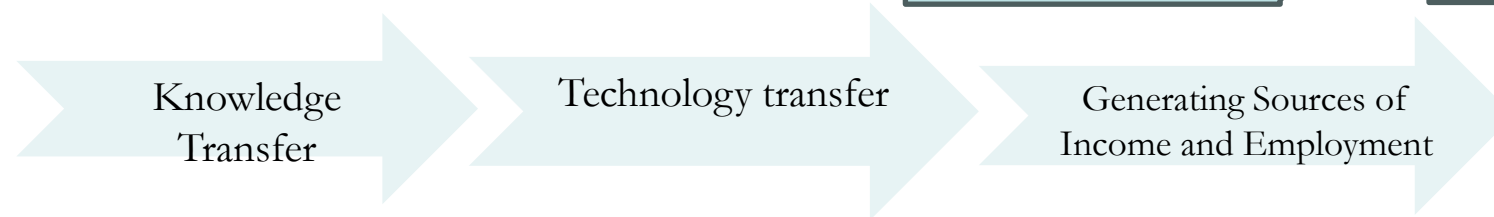
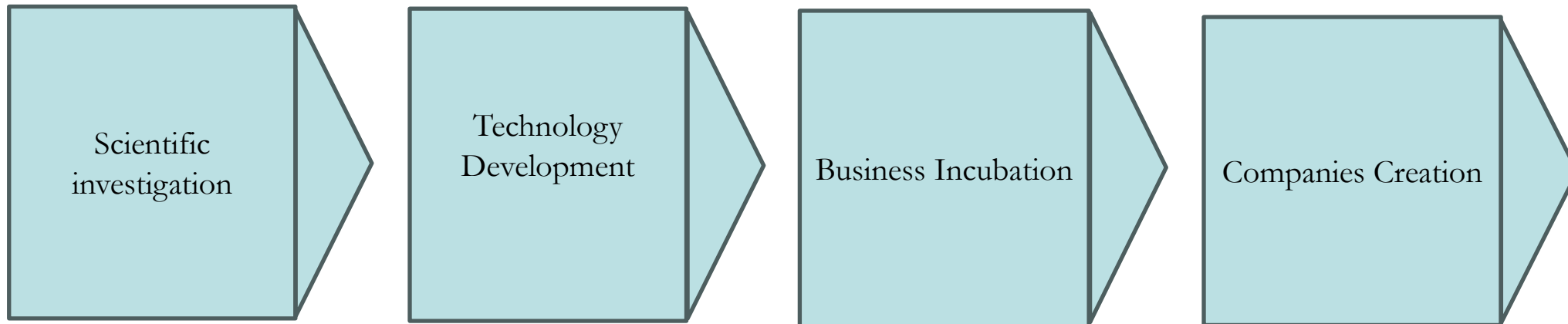


About the Model:

- Mozambique has adopted the Science, Technology and Innovation Parks model as a strategy to boost technological and economic development.
- The model consists of transforming research and innovation centers into regional hubs that integrate knowledge production and the development of new technologies.
- The initiative aims to reduce dependence on traditional sectors, promoting economic diversification and strengthening the country's innovative capacity.



Scientific Knowledge Value Chain



Asking questions and seeking answers to create scientific knowledge	Use of scientific knowledge to create work methods and tools (technology)	Use of scientific knowledge and technology to create goods and services	Use of scientific knowledge and technology to create goods and services
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Science, Technology and Innovation Policy



- In July 2024, the Mozambican government **approved** the new Science, Technology and Innovation Policy, highlighting the importance of technological innovation for the country's sustainable development.
- The policy emphasizes the need to build capabilities in emerging technologies and strengthen the national innovation ecosystem

Strategic Pillars of the STI Policy



Strategic Pillars	Objective
Pillar 1: Strengthening the National Science, Technology and Innovation System	Strengthen the National STI System to make it more dynamic, resilient and productive, with a view to sustainable development
Pillar 2: Strengthening the ability to use cutting-edge technologies	Increase Mozambique's readiness to explore and use new technologies and scientific fields
Pillar 3: Promoting STI for the Digital Transformation of Society	Promote and guide the application of STI to respond to the country's social challenges and achieve the SDGs
Pillar 4: Strengthening the Innovation Ecosystem	Build and use Mozambique's innovation capacities to stimulate sustainable and inclusive industrialization in line with SDG 9
Pillar 5: Strengthening National Human Capital	Expand human capabilities for R&I and significantly increase researcher productivity
Pillar 6: Promoting International Partnerships in STI	Strengthen and use international partnerships (bilateral, regional, continental and global) in STI in order to develop Mozambique's SNCTI and harness STI for sustainable national development

Structure and Operation of Science, Technology and Innovation Parks

Before UNCTAD





Science and Technology Park of Maluana



NATIONAL SCIENCE AND TECHNOLOGY PARKS PROGRAM

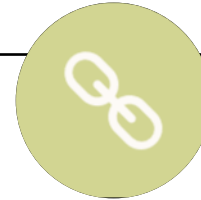


The government of Mozambique created a vehicle for the design, construction, exploration and management of Science and Technology Parks in Mozambique.



PROGRAMA DE PCT

The National Science and Technology Parks Program foresees the construction of 4 science and technology parks throughout the country

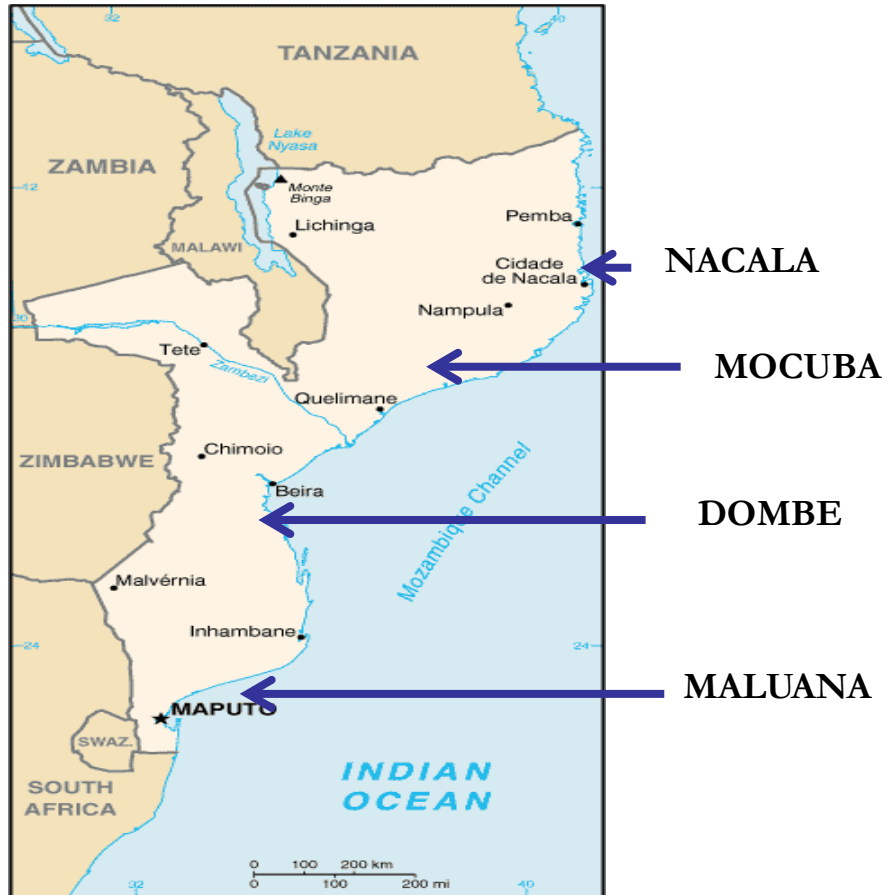


Benefits and Incentives
Customs
Exemption on import of equipment.

Tax - IRPC
Tax benefits provided for in investment laws.

Non-Tax
Favorable business environment;
Access to the road, railway network and the Port of Maputo;
Subsidized office space for start-ups within the incubator.

National Science and Technology Parks Program



The aim of choosing these 4 locations was to :

1. Privilege the three geographic regions that make up the country.
2. Install parks in development corridors established by the Government.
3. Take into account the economic potential of each region.



MALUANA SCIENCE AND TECHNOLOGY PARK

Business Incubator



Anchor projects foreseen in the Master Plan (1)

- **Technology and research area** (University of Science and Technology, residences for students and trainees, **Innovation and Technological Development Center, Government Data Center**, National Biotechnology Center, Astronomy Observatory and Laboratory, Hotel-School-Ministry of Tourism, Bank of Mozambique Data Center.
- **Business area** (services and offices, warehouses, 12-floor office tower)
- **Housing area** (detached houses, townhouses and collective housing buildings)
- **Logistics and industry area** (large industrial units and warehouses, commerce and restaurants.
- **Infrastructure area** (Maintenance and Security Center, daycare center, kindergarten, basic school and helipad.
- **At the end of the start-up phase:** it is expected to generate around 4,300 new direct jobs and retain around 2,000 residents and 2,000 students and trainees.



Research Centers

Biotechnology Center

- Genomics and Bioinformatics Laboratory
- Biophysics, Biochemistry and Proteomics Laboratory
- Microbiology Laboratory
- Molecular and Cellular Biology Laboratory
- Biological Systems Engineering Laboratory

Center for Materials Science and Engineering

- Materials Modeling and Synthesis Laboratory
- Materials Processing and Characterization Laboratory
- Materials Testing and Evaluation Laboratory



Research Centers

Water Research Center

- Physical-chemical Water Analysis Laboratory
- Toxicology and Water Treatment Laboratory
- Hydrology Laboratory

Ethnobotanical Research Center

- Botany, Phytopathology and Mycology Laboratory
- Plant Physics and Chemistry Laboratory
- Ecology and Pharmacology Laboratory



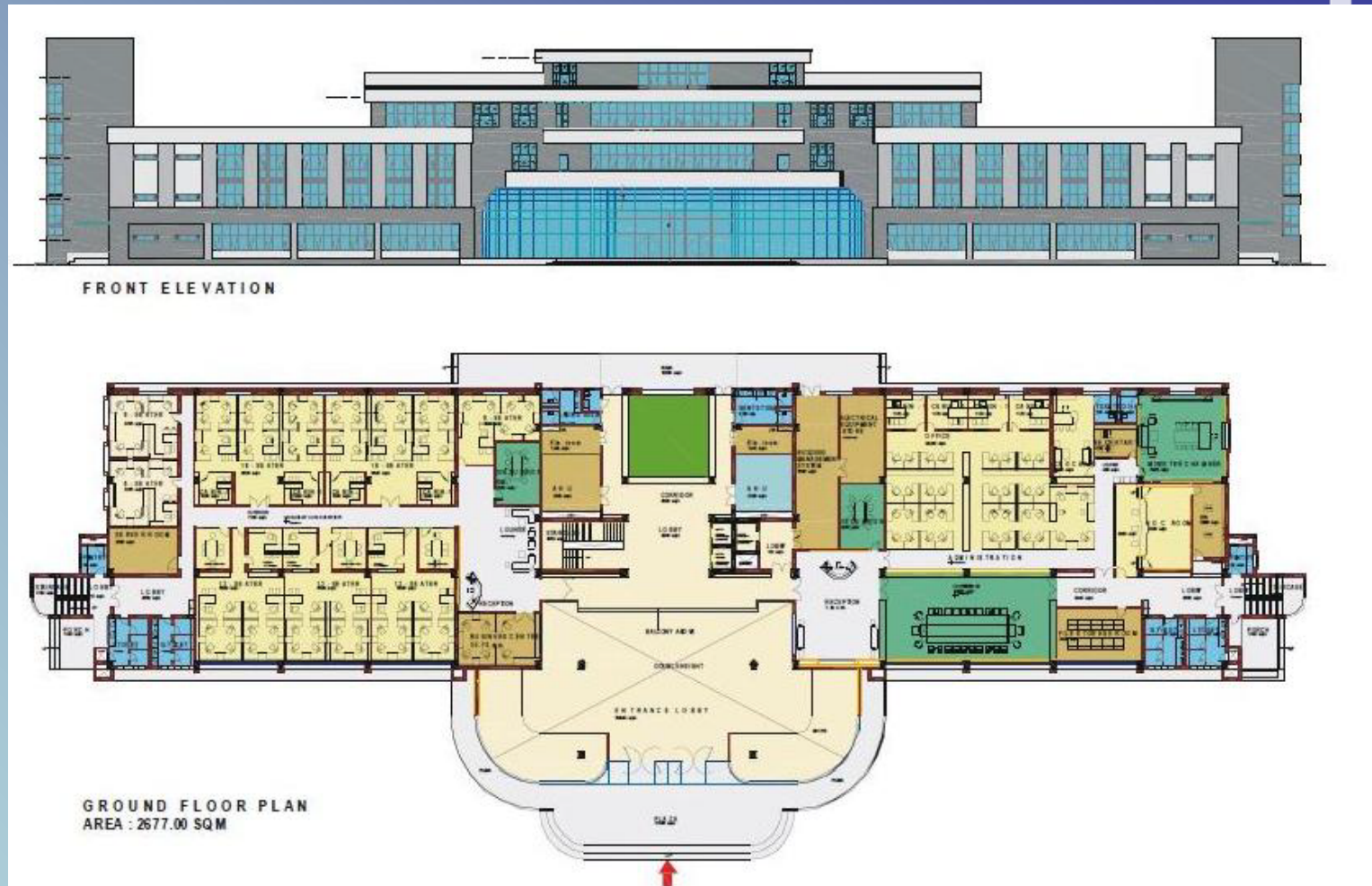
Master plan (360 ha)

■	Área de tecnologia e investigação	(19%)
■	área de negócio	(16%)
■	Area residencial	(29%)
■	Área logística e industrial	(26%)
■	Área comercial	(5%)
■	área de infra-estruturas de uso públic	(16%)
■	lago artificial	(13%)
	Área verde	(13%)
	Passarelas de pedestres e ciclovias	(13%)





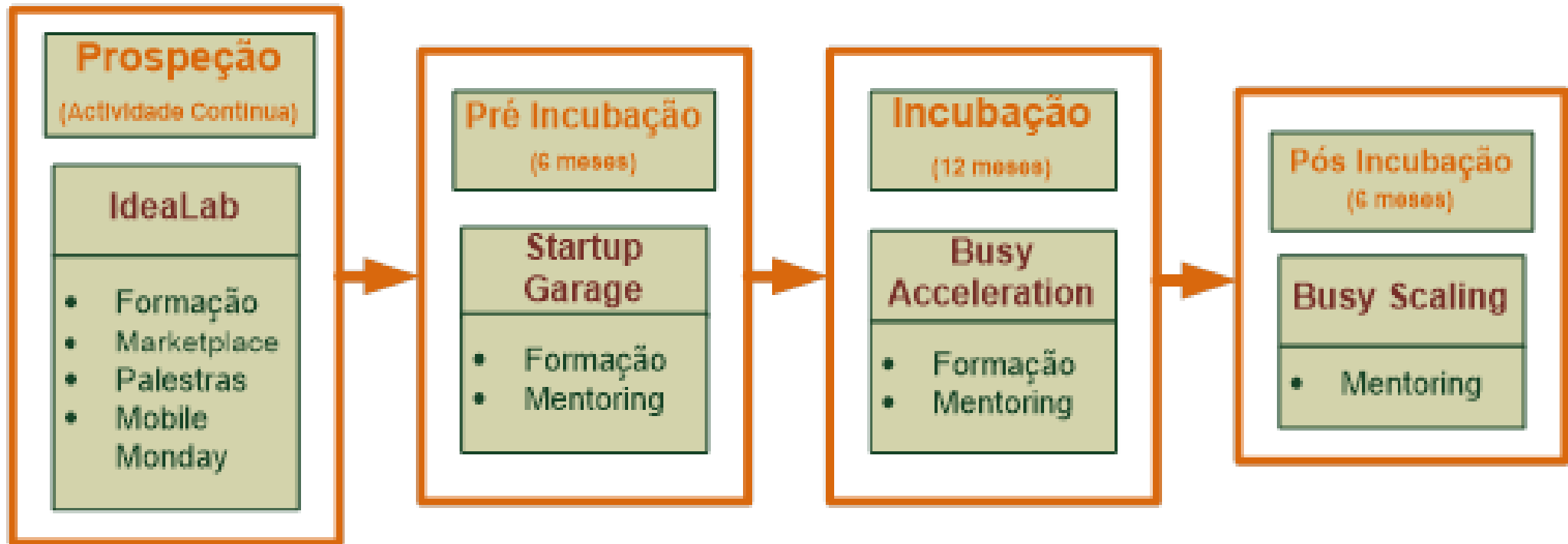
Business Incubator







Business Incubator Incubation Model





Our Challenges are Our Opportunities

- Obsolete equipment (ICT, rolling stock);
- Modern infrastructure decaying and empty;
- Revitalization of the technology incubation program;
- Requalification and certification: training center and center for prometric exams;
- Manpower: Given the competition, human resources left the incubator;
- Insufficient funding for activities of a social nature and implementation of the National Science and Technology Parks Program.
- Connectivity: Low Internet Bandwidth.

Strategic Partnerships with UNCTAD



- The United Nations Conference on Trade and Development (UNCTAD) is implementing the "Science, Technology and Innovation Parks for Sustainable Development" project in Mozambique.
- The project aims to strengthen the country's innovation ecosystem through the development and optimization of science, technology and innovation parks, promoting the link between scientific research and the market, and driving sustainable economic growth.
- The project is carried out in collaboration with the Ministry of Communications and Digital Transformation (Ministry of Science, Technology and Higher Education) and the National Company of Science and Technology Parks, EP (ENPCT, EP). ENPCT, EP, created in 2012, is responsible for the design, construction, operation and management of science and technology parks in Mozambique, serving as a vital link between academia and industry.

Strategic Partnerships with UNCTAD



Challenges Identified

Despite significant potential, the innovation ecosystem in Mozambique faces challenges such as:

- Lack of effective synergies between universities and industries (practical examples, success stories and connections with universities and companies are almost non-existent).
- Inadequate infrastructure and limited funding for innovation projects.
- Need to improve coordination between the different actors in the innovation system.

These issues were highlighted in a UNCTAD report that assessed the innovation ecosystem, science and technology parks programme in Mozambique, including the Maluana Science and Technology Park



- Public-Private Partnerships (PPP) for financing.
- Strengthen connections between parks and universities.
- Tax incentives for investment in R&D.
- Training in park management and innovation.

Progress on UNCTAD Recommendations





- 2 Mozambican delegations trained in China (Wuhan and Shenzhen).
- Workshop in Maputo with more than 30 participants from the public and private sectors, academia.

Workshop in Maputo (Details)



Objectives:

- Consolidate the Science, Technology and Innovation ecosystem.
- Exchange of best practices.

Results:

- Collaborative dialogue.
- Platforms for future partnerships.

International Training



- Training in China:
 - Management of Science, Technology and Innovation parks.
 - Innovation models (e.g. Shenzhen).
- Impact: Adapting good practices to the Mozambican context.

Implementation of Public-Private Partnership (PPP)



- Examples:
 - Partnerships with companies for hosting/incubation at PCT Maluana (IdeaLab, MozParques, Renew Capital, AURUM, etc.).
 - Ongoing discussions to attract private investors.



- Actions:
- Joint programs with UEM (e.g. hackathons).
- Commercialization of biotechnology/agriculture research

Tax Incentives



Progress:

- Tax exemptions for companies in the Maluana PCT (under review), with the involvement of APIEX
- Proposals for R&D benefits.

Inclusivity and Gender



Programs :

- Orange Corners (IdeiaLab) for women entrepreneurs.
- Goal: 30% of startups led by women in the Maluana PCT

Persistent Challenges



- **Funding:** Dependence on donors.
- **Infrastructure:** Need to strengthen and expand the Maluana Science and Technology Park.
- **Coordination:** Improve coordination between the Ministry of Communications and Digital Transformation, the National Company of Science and Technology Parks and the private sector.

Lessons Learned



1. Capacity building is critical for sustainability.
2. International partnerships accelerate learning.
3. Private sector involvement needs clear incentives

Next Steps Towards Compliance with UNCTAD Recommendations



Next Steps (1)



- Expand the infrastructure of the Maluana Science and Technology Park
- Create innovation fund with government/donor support.
- STI Policy: Implementation after approval

Next Steps (2)



1. Technical Assistance and Capacity Building

UNCTAD can support:

- **Institutional capacity building:** Strengthening the governance of the National Science, Technology and Innovation Policy and the management bodies of the Maluana Science and Technology Park, with training in park management, technology transfer, and innovation policies.
- **Business and Technology Skills Development:** Training programs for entrepreneurs, researchers and technology startups, including topics such as technology commercialization, intellectual property management and business incubation.
- **Improving the regulatory environment:** Support in the creation of policies and regulations that favor innovation, intellectual property and technological investment.

Next Steps (3)



2. Investment Promotion and Partnerships

- **Attracting Foreign Direct Investment (FDI):** UNCTAD, through its innovation investment promotion programme, can help structure value propositions to attract international investors and partners to the PCTM.
- **Establishment of South-South partnerships:** Facilitation of cooperation with countries with experience in technology parks (e.g. China, India, Brazil, Malaysia), through technical missions, exchanges and joint ventures.
- Mapping technology-based business opportunities, focusing on strategic sectors such as smart agriculture, renewable energy and digitalization.

Next Steps (4)



3. Support for the **Digital Transformation and Industrialization Strategy**

- **Integration with industrial development policy:** UNCTAD can help align the National Science, Technology and Innovation Policy with the country's industrialization strategy, promoting value chains based on technology and innovation.
- **Promotion of digital Startups and SMEs:** Support for the creation of a vibrant ecosystem in the Maluana Science and Technology Park, including incubators, accelerators and digital hubs, with links to national and international markets.

Next Steps (5)



4. Strategic Studies and Analysis

- **Innovation and technology diagnostics:** UNCTAD can conduct studies on the state of the national innovation ecosystem, identify priority areas for investment and propose strategic interventions.
- **Impact assessment:** Support the monitoring and evaluation of the impact of technology parks on economic development, job creation and social inclusion.

Next Steps (6)



5. Support for Regional and Global Integration

- **Connection with international networks:** Inclusion of the Maluana Science and Technology Park in global networks of technology parks, such as the World Alliance of Technology Parks and Innovation Areas (IASP).
- **Promoting technology-based exports:** Enabling companies to access regional and global markets with innovative products and services.

In summary



UNCTAD can be a strategic partner for:

- . Strengthening capabilities;
- . Attracting investment;
- . Developing the innovation ecosystem;
- . Aligning national policies with global trends.

Conclusion



- Moderate progress on UNCTAD recommendations.
- **Opportunities:** Alignment of the National Science, Technology and Innovation Policy with Agenda 2063.
- **Recommendation:** Accelerate PPPs and fundraising.



شكراً جزيلاً على اهتمامكم

非常感谢您的关注

Thank you very much for your attention

Merci beaucoup de votre attention

Большое спасибо за ваше внимание

Muchas gracias por su atención

Muito Obrigado Pela vossa Atenção

