

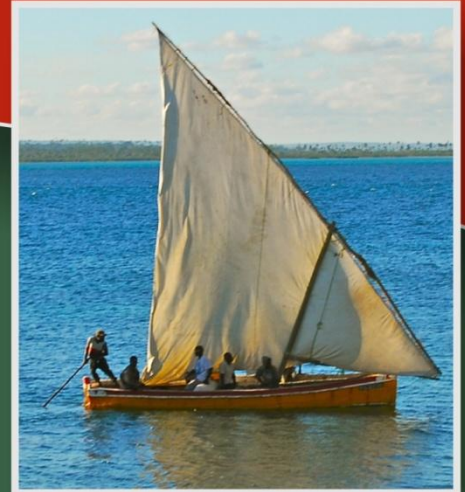
# RESPONDING TO CLIMATE CHANGE IN MOZAMBIQUE



REPUBLIC OF MOZAMBIQUE  
MINISTRY OF STATE ADMINISTRATION  
NATIONAL INSTITUTE OF DISASTER MANAGEMENT



Instituto Nacional de  
Gestão de Calamidades



National Institute for Disaster Management (INGC)  
PHASE II

## THEME 7 Preparing People

October 2012

McKinsey & Co.  
A. Mavume

THEME 7

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*Report to be referenced as:*

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*Report layout:*



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SLIDE 1



## INGC Phase II – “Preparing People”



Final Report  
August 2011

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### Executive summary

Input for the Knowledge Center: Terms of Reference, Stakeholder Consultations and Best Practices

Mission and vision for the Knowledge Center (**D1**-part 1)

Design of the Knowledge Center operational model (**D1**-part 2)

Financial plan for the Knowledge Center (**D1**-part 3 & **D2**)

Manual and implementation plan of the Knowledge Center (**D3** & **D4**)

Appendix – methodology and analysis

Best practice details

Survey details

Workshop details

Note: D1, D2, D3, and D4 are the 4 deliverables indicated in the terms of reference for Theme 7



## Context and Objectives for the Knowledge Center

### Context

- Phase I of the Climate Change Adaptation project identified several areas of vulnerability for Mozambique, namely
  - Over-exploited natural resources
  - Energy projects with significant environmental impacts
  - Urbanization process leading to half of the population living in areas lacking basic infrastructure
  - Increase in severity and frequency of natural disasters
- To promote climate change adaptation, it is becoming critical to prepare actors in Mozambican society to adopt appropriate behaviors, whether at the personal, company, institutional, or governmental organization level
- Existing knowledge on climate change is currently disseminated by a diverse set of institutions: MICOA, MCT, INAM, INGC, sectoral research organizations, national and international universities, etc.

### Objectives (ToR from INGC)

*The creation of a **Climate Change Knowledge Center in Mozambique**, which aims to strengthen the capacity of Mozambicans to deal with the risks and opportunities presented by climate change*

- *Providing **solid and science-based advice** to various target groups*
- ***Building capacity in Mozambique** to deal with climate change and producing a cadre of Mozambicans trained to manage the implications of climate change*

*The Center should be designed in such a way as to **guarantee its financial viability without government or donor support**, while at the same time guaranteeing high quality performance*



### The deliverables of Theme 7 are structured around a pyramidal blueprint for the Knowledge Center

#### Deliverables for Theme 7

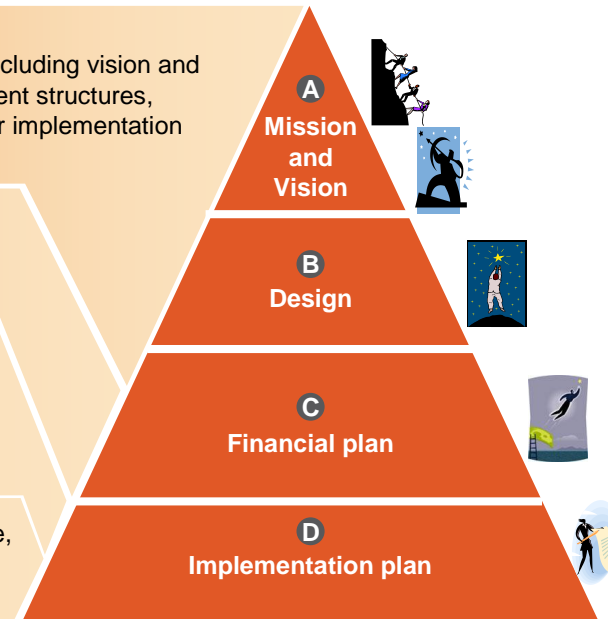
#### Knowledge Center blueprint

**D1** Business plan of Knowledge Center designed, including vision and Mission, physical, organizational, and management structures, teaching and research model, detailed budget for implementation

**D2** Financing structure after setup, to ensure the Knowledge Center becomes financially autonomous

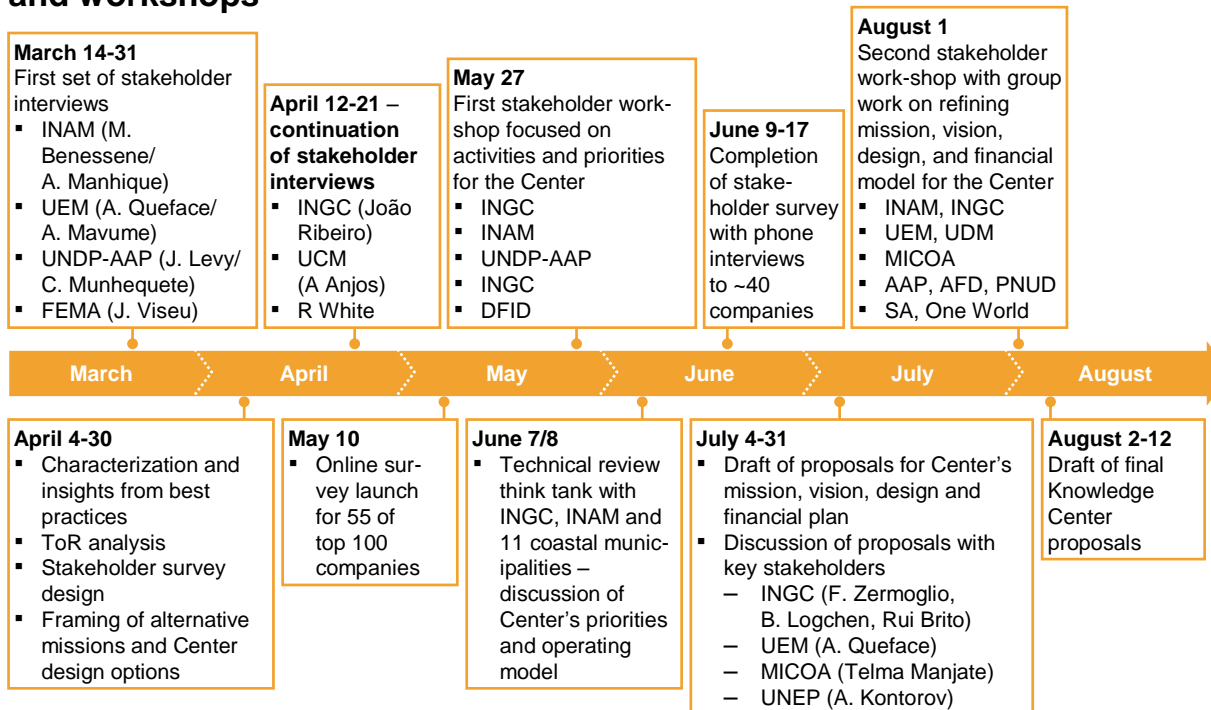
**D3** At least 3 curricula developed and 5 MoUs<sup>1</sup> with Centers of Excellence inside and outside Mozambique for cooperation in research and tuition to incorporate best practices into the Mozambican Knowledge Center

**D4** Manual of Knowledge Center setup and structure, implementation roadmap and list of potential partnerships with tailored approach established



<sup>1</sup> Memorandum of Understanding

**The Knowledge Center blueprint was developed leveraging best practice and extensive stakeholder consultations with interviews, surveys, and workshops**



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LIS-NGB001-20110805-HSDP

**On September 19 the key elements of the Knowledge Center were presented to the**

**Participants**

- CCGC
  - Prime Minister
  - Minister MAE
  - Minister MNEC
  - Minister MA
  - Minister MICOA
  - Minister MMAS
  - Minister MD
  - Minister MIC
  - Minister MI
  - Minister MOPH
  - Minister MPD
  - Minister MF
  - Minister MS
  - Minister MEDU
  - Minister MRM
  - Minister MCT
  - Vice Minister MTC
  - General Manger INGC
- Presidents of key universities (UEM, UP, ISRI, ISPU, UDM, USTM, ISTEG, ISAP, ISCISA)

**Content Presented**

- Context and status of the design of the Knowledge Center
- Key advantages and objectives for the Knowledge Center
- Overview of the Knowledge Center building blocks
  - Proposed Mission and Vision
  - Governance Model
  - Organization and high-level operating model
  - Estimated evolution of funding sources over time and expected setup costs
  - Key critical short term activities to launch the Knowledge Center

**Outcome**

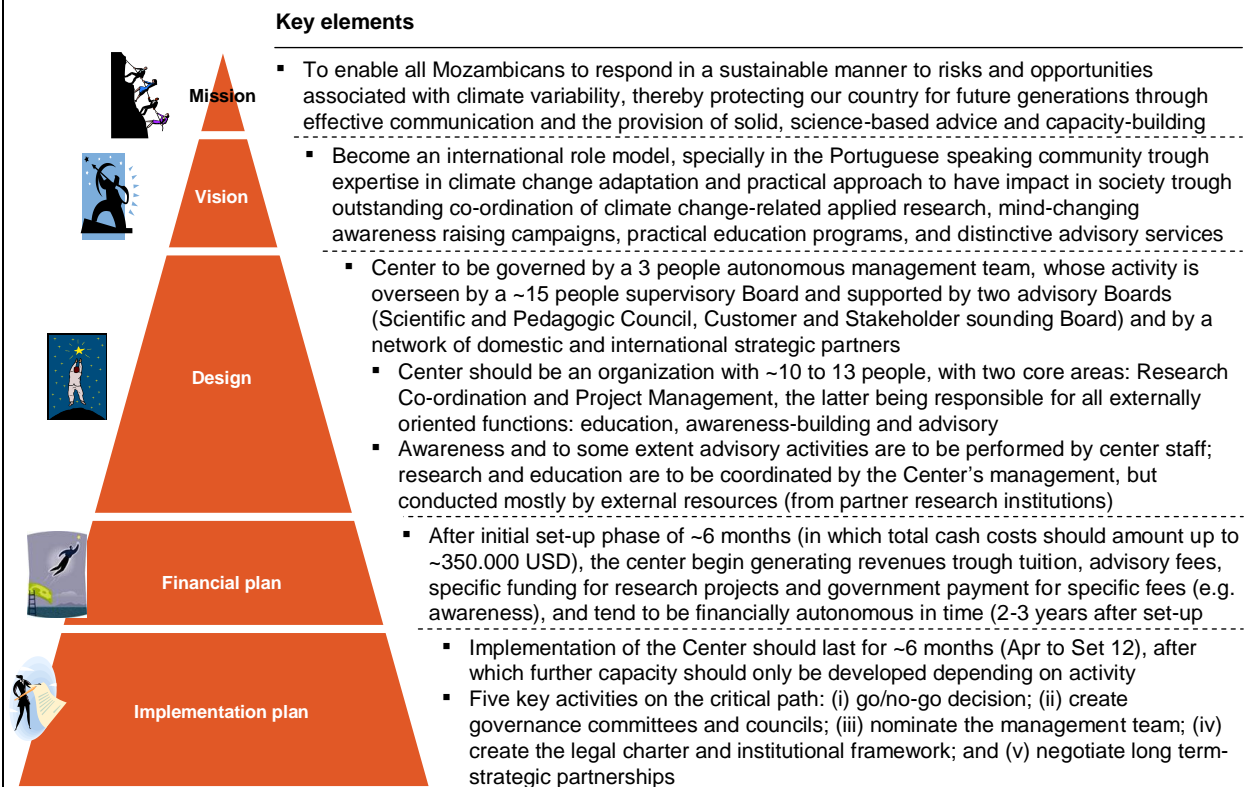
- Objective of “Preparing People” regarded as critical to achieve impact on adaptation measures as it all ends and begins on people
- Knowledge Center critical to achieve this goal, but needs to go beyond a “Research Center” and attain impact on its other dimensions, namely in building awareness by linking closely to primary school teachers and members of literacy efforts
- Legal charter should be compliant with rules for research centers, and be managed independently from the potential governmental “clients” (a transversal Ministry like MPD could be a good candidate for a facilitating role)

**A broad stakeholder group was involved in drafting the proposal,  
with 3 different degrees of involvement**

	Description	Government	Public institutions	Universities	Multilateral organizations and NGOs	Private sector
<b>Core working team</b>	<ul style="list-style-type: none"> <li>Working team responsible for analysis, input consolidation and final recommendations</li> </ul>	<ul style="list-style-type: none"> <li>N.a.</li> </ul>	<ul style="list-style-type: none"> <li>F. Zermoglio (INGC)</li> <li>B. Van Logchen (INGC)</li> <li>A. Manhique (INAM)</li> </ul>	<ul style="list-style-type: none"> <li>A. Queface (UEM)</li> </ul>	<ul style="list-style-type: none"> <li>C. Landeiro (UNDP-AAP)</li> </ul>	<ul style="list-style-type: none"> <li>N.a.</li> </ul>
<b>Stakeholder sounding board</b>	<ul style="list-style-type: none"> <li>Core stakeholder group involved through individual interviews and discussions as well as 2 workshops to debate Knowledge Center design</li> </ul>	<ul style="list-style-type: none"> <li>T. Malanje (MICOA)</li> <li>C. Pereira (MICOA)</li> <li>M. Wimbled (MICOA)</li> <li>F. Sambo (MICOA)</li> <li>G. Amurane (MICOA)</li> <li>R. Chadreque (MINED)</li> </ul>	<ul style="list-style-type: none"> <li>J. Ribeiro(INGC)</li> <li>R. Brito (INGC)</li> <li>M. Benassene (INAM)</li> </ul>	<ul style="list-style-type: none"> <li>A. Mavume (UEM)</li> <li>A. Narah (UEM)</li> <li>I. Pereira (UEM)</li> <li>Anjos (UEM)</li> <li>D. Navela (UCM)</li> <li>M. Carlos (UDM)</li> </ul>	<ul style="list-style-type: none"> <li>C. Munhequete (UNDP-AAP)</li> <li>J. Levy (UNDP-AAP)</li> <li>P. Nteza (UNDP-AAP)</li> <li>R. Zacarias (DFID)</li> <li>A. Ferreira (AFD)</li> <li>A. Koutonov (UNEP-CCAU)</li> <li>M. Ruas (One World)</li> <li>A. Lemos (JA)</li> <li>N. Mataval (JA)</li> </ul>	<ul style="list-style-type: none"> <li>J. Visco (FCMA)</li> </ul>
<b>Broad stakeholder group</b>	<ul style="list-style-type: none"> <li>Broader group of entities involved indirectly through surveys and technical think tank</li> </ul>	<ul style="list-style-type: none"> <li>Municipalities                             <ul style="list-style-type: none"> <li>Maputo</li> <li>Matola</li> <li>Beira</li> <li>Inhambane</li> <li>Xai-Xai</li> <li>Pemba</li> <li>Quelimane</li> </ul> </li> <li>MCT</li> <li>MOPH</li> <li>MAGR</li> </ul>	<ul style="list-style-type: none"> <li>...</li> </ul>	<ul style="list-style-type: none"> <li>...</li> </ul>	<ul style="list-style-type: none"> <li>UNIFEM</li> <li>UNRCO</li> <li>UNAIDS</li> <li>UNFPA</li> <li>UNHABITAT</li> <li>UNICEF</li> <li>WFP</li> <li>WHO</li> <li>FAO</li> </ul>	<ul style="list-style-type: none"> <li>Top 100 companies in the Mozambique</li> </ul>

Up to the completion of this report a General Manager for the Knowledge Center had not been designated

## Key design features for the Mozambican Knowledge Center



**There are 5 critical short-term actions to launch the Knowledge Center**

- 1** Go/no-go decision on Knowledge Center concept (Mission, Vision, Design and Financial Plan)
- 2** Create the key governance bodies is for the Knowledge Center – Supervisory Board, Academic and Pedagogic Council and Customer Management Advisory Board
- 3** Nominate the Knowledge Center Management Team – General Manager, Head of Science and Head of Services
- 4** Create the legal charter and institutional framework for the Knowledge Center
- 5** Negotiate long term partnerships with national and international partners according to MoU structure in this report

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Best practice details

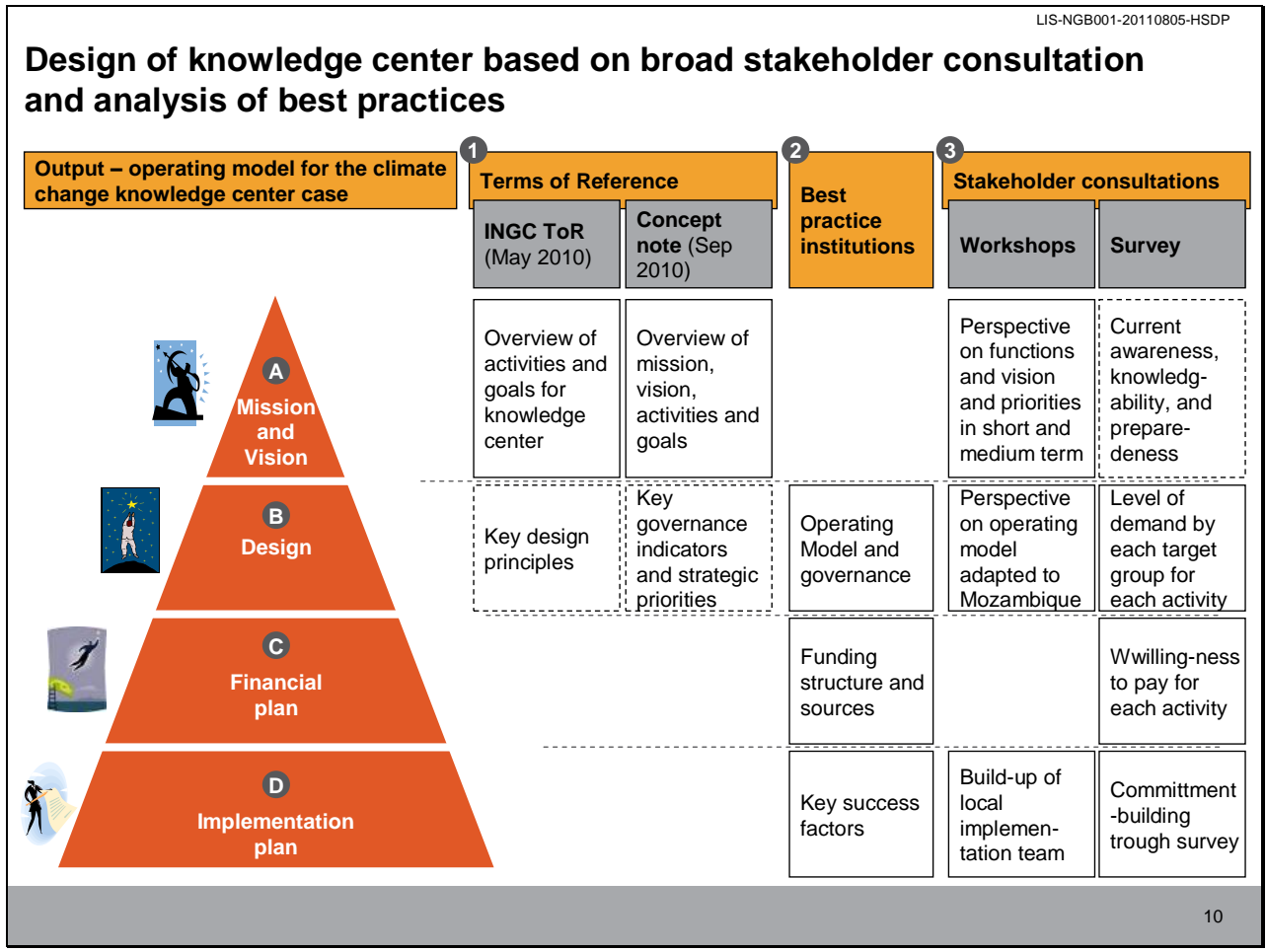
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SLIDE 11



SLIDE 12

TERMS OF REFERENCE LIS-NGB001-20110805-HSDP

**1 The Terms of Reference indicate 4 building blocks**

<p><b>Awareness-raising</b></p> <ul style="list-style-type: none"> <li>Promote awareness of climate change through dissemination of data on opportunities, risks, scientific conclusions and specific national and provincial campaigns</li> <li>Maintain web portal of data on climate change</li> </ul>	<p><b>Scientific research</b></p> <ul style="list-style-type: none"> <li>Research and share climate change knowledge through references</li> <li>Research technical and scientific adaptation and mitigation measures</li> <li>Develop models to assess climate change impact</li> </ul>	<p><b>Design principles</b></p> <ul style="list-style-type: none"> <li>Public-Private Partnership or alternative sustainable (financial) model</li> <li>Open and begin developing capacity by the end of 2011</li> <li>Flexible and cost-efficient design with a significant “virtual” component</li> <li>Built around a nucleus of specialists and organizations</li> <li>Specific services provided by a network of partners</li> <li>Close relationship with INGC, CENOE, MCT, INAM, MICOA, MPD, among others</li> </ul>
<p><b>Training</b></p> <ul style="list-style-type: none"> <li>Provide graduate education on science, policy, and management of climate change</li> <li>Provide short-term training and research models in climate change</li> <li>Create interchange opportunities</li> </ul>	<p><b>Advisory Services</b></p> <ul style="list-style-type: none"> <li>Provide advice on climate change to planning and investment decision-weavers on urban, rural, and local areas</li> <li>Respond to information and advice requests from private and public sector, governmental entities, scientists and NGOs</li> </ul>	

SOURCE: INGC Terms of Reference from May 2010 11

SLIDE 13

TERMS OF REFERENCE LIS-NGB001-20110805-HSDP

**1 Stakeholder consultations revealed a strong focus so far on research**


■ High coverage  
■ Medium coverage

**Stakeholders:**

- UEM (A. Mavume)
- INAM (M. Benissene, A. Manhique)
- INGC (A. Queface)

**Outcome**

- Existing charter for knowledge center focused on scientific research, climate modeling and projection, and technical training



**Awareness-raising**

**Research**

- Promote scientific research in climate and earth science
- Develop technical solutions for data collection and transmission

**Training**

- Master's program in climate change and disaster risk management

**Advisory services**

- Specialized consulting in climate science and disaster risks management

Current concept should be expanded to achieve focus of broader terms of reference

SLIDE 14

BEST PRACTICES

LIS-NGB001-20110805-HSDP

**2** Best Practice institutions leverage three fundamental axis of distinctiveness

Key ingredient

Description

**Concentration of talented faculty**

- Faculty talented in teaching and research are the crucial building blocks of a great university without which the other input levers are ineffective
- Many of the levers should be used to attract talented faculty which will in turn attract more talented faculty, students and improve reputation
- Funding is an important requirement to attract faculty but it is not the only method; increased flexibility in teaching, state-of-the-art laboratories and increased control over inventions also attract talent

**Right governance structure with gifted leadership**

- Most successful university strive under strong top-down leadership
- President should set the strategy of the university while allowing academic freedom
- Government and large institutional funding politics should not interfere with university decision-making

**Intangibles (culture, history, reputation, environment)**

- Intangibles play a strong role in motivating students and faculty, improving satisfaction and reputation
- They should be used to fortify and expedite outcomes resulting from talented faculty and right governance

SOURCE: *The Challenge of Establishing World-Class Universities*, Jamil Salmi

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**BEST PRACTICES**  
**2 Specifically, 6 international Centers were analyzed**

LIS-NGB001-20110805-HSDP  
 DETAILED BEST PRACTICE PROFILES IN APPENDIX

**Kimatipassing**

Information center and portal for climate change adaptation under Danish Ministry of Climate and Energy that collects and makes information available through website

**ACCESS**

African Center for Climate and Earth System Science under CSIR in Cape Town, SA, that provides broad range of training and awareness-building programs

**SAEON**

South African public network focused on environmental research and observation, environmental information management and capacity development/training

**Fraunhofer**

German public-private research institute focused on applied research on specific issues relating to country needs

**Tyndall Centre**

UK climate change research center focusing on multidisciplinary adaptation research, external communication, and education (through partner universities) and influencing key decisions

**PARI**

Public affairs research institute sponsored by private companies and foundations that conducts research and advisory services on functioning of governmental institutions and agencies

**Awareness raising/information**      **Research**

**Training**      **Advisory**

SOURCE: Center reports and websites




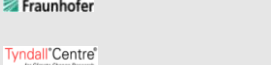

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**BEST PRACTICES**

**2** These institutions provide key learnings to design a Knowledge Center in Mozambique

Further detailed

	Key best practices	Examples
<b>Overall governance and organization</b>	<ul style="list-style-type: none"> <li>Independent management with supervision in strategic committees</li> <li>Management scrutiny by senior-level supervisory board and function-specific counseling groups/committees</li> <li>Organization with 2 core areas + administrative units, separating pure research from externally-oriented coordination unit</li> </ul>	
<b>Function-specific insights</b>		
<b>Awareness building</b>	<ul style="list-style-type: none"> <li>Emotional message appealing to target population "good instincts", complemented with appeal to individual self-interests</li> <li>Clear visual draw towards essential information in web portal (attracting occasional browsers), segmented approach for more technical data (individuals, business, and municipalities)</li> <li>Detailed climate data provided online</li> </ul>	
<b>Education</b>	<ul style="list-style-type: none"> <li>Wide range of programs from academic masters to short online courses</li> <li>Leverage on alumni network</li> </ul>	
<b>Research</b>	<ul style="list-style-type: none"> <li>Emphasis on applied research, addressing country needs with limited set of specific themes</li> <li>Research on end-to-end adaptation rather than generic climate sciences</li> </ul>	
<b>Advisory</b>	<ul style="list-style-type: none"> <li>Strong partnerships with strong "brands" in scientific community</li> <li>Involvement of private sector in research design and funding</li> <li>Low-cost advisory model with option to sell/publish reports</li> <li>Focus on building bridges between academia and businesses</li> </ul>	




SOURCE: Center reports and websites

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**BEST PRACTICES**

**2 SAEON, Tyndall, and Fraunhofer have independent management teams, supervised and supported by several boards**

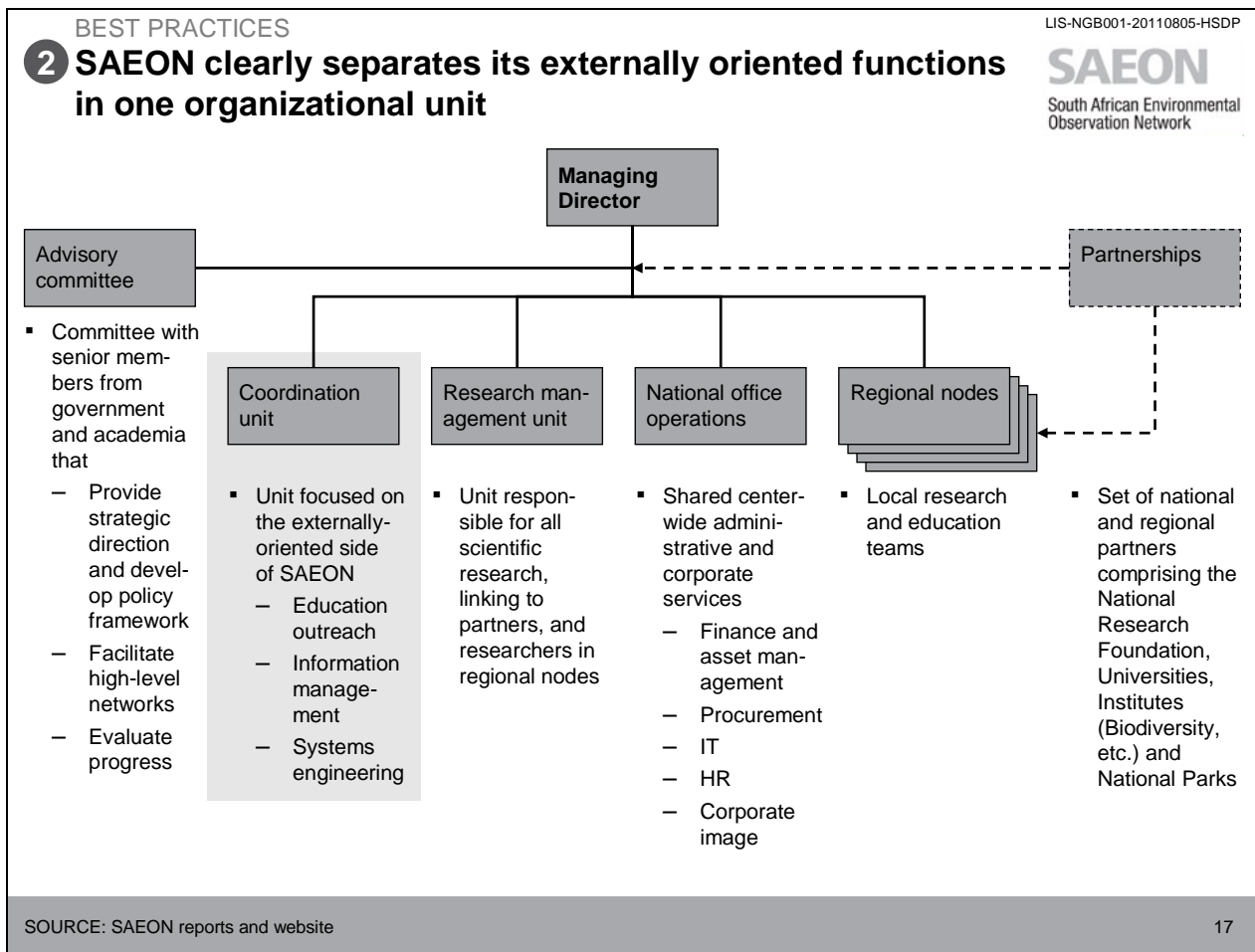
	 <small>South African Environmental Observation Network</small>	 <small>for Climate Change Research</small>	
<b>Supervisory</b>	<ul style="list-style-type: none"> <li>External board, composed of figures from academia, the private sector, and government; provides strategic guidance and evaluates progress towards goals</li> </ul>	<ul style="list-style-type: none"> <li>The Tyndall Council, composed of 22 representatives from the partner universities; establishes medium- and long-term policy</li> </ul>	<ul style="list-style-type: none"> <li>Senate, composed of 30 eminent figures from the worlds of science, business, industry, and government; appoints members of the Executive Board</li> </ul>
<b>Executive management</b>	<ul style="list-style-type: none"> <li>Managed by an Executive Director and 3 directors of the coordination, research, and operational units</li> </ul>	<ul style="list-style-type: none"> <li>Managed by an Executive Director and 3 Deputy Directors (for strategic development and international activities)</li> </ul>	<ul style="list-style-type: none"> <li>Executive Board, with a president and 3 vice-presidents, that manages day-to-day business and prepares budgets</li> </ul>
<b>Advisory</b>	<b>Scientific</b>	<ul style="list-style-type: none"> <li>Tyndall Assembly, composed of staff, students, and representatives from the main stakeholders; meets annually to provide scientific and academic guidance</li> </ul>	<ul style="list-style-type: none"> <li>Scientific &amp; Technical Board, comprised of scientific staff from the research institutes; advises the Executive Board on priority areas</li> </ul>
	<b>Academic</b>		
<b>Marketing</b>	<ul style="list-style-type: none"> <li>External consultants for marketing, branding, and corporate communication</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<b>Partnership</b>	<ul style="list-style-type: none"> <li>Strategic partnerships with 4 South African universities, the Department of Science and Technology, and CSIR</li> </ul>	<ul style="list-style-type: none"> <li>Strategic partnerships with 7 core universities in the UK</li> </ul>	<ul style="list-style-type: none"> <li>Each one of the ~60 Fraunhofer Institutes establishes strategic partnerships with local universities and associations</li> </ul>

SOURCE: Institution websites, interviews with staff and researchers

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SLIDE 18



BEST PRACTICES LIS-NGB001-20110805-HSDP

**2 ACCESS uses emotional messages to appeal to target audience**

*We, the **stewards of a most remarkable planet**, the only one known to have a **glorious diversity** of fauna and flora, have become so numerous and powerful that we are now interfering with the processes that make this a habitable planet. To be Earth's **responsible stewards** we need to understand how our planet functions, have to monitor the continually changing conditions in the air, on land and in the oceans, and have to anticipate future climate changes. (...)*



The screenshot shows the ACCESS website interface. The main content area features a news article titled "Africa Centre for Climate and Earth Systems Science" with a sub-header "ACCESS Calendar". The article text is highlighted in a callout box. The website layout includes a navigation menu (HOME, ABOUT, NEWS, RESEARCH, OPERATIONAL SYSTEMS, LINKS, EDUCATION, CONTACT), a search bar, and sections for "Latest News" and "Recent Documents".

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BEST PRACTICES LIS-NGB001-20110805-HSDP

**2 Klimatilpasning web portal: segmented approach, link to success stories. clear visual appeal to generic climate change data**

The screenshot shows the ClimateChangeAdaptation web portal. At the top, there is a search bar and a navigation menu with categories: Socio-economy, Research, International, Climate, Cases, and Newsletter. Below the menu is a 'Frontpage' section with a navigation bar for various sectors: Coast, Buildings, Water, Energy, Agriculture, Forest, Fisheries, Planning, Health, Preparedness, and Nature. A central banner features the text 'Climate change influences many areas of our lives. This portal contains knowledge about climate change and provides ideas on how we can adapt to it.' Below this, there are three main content areas: 'Citizens' (Are you ready for the impacts of climate change?), 'Municipalities' (Municipalities and climate change), and 'Businesses' (Businesses and climate change). To the right of these is a large graphic of a world map with clouds and a bar chart. Below the main content, there are four columns: 'Danish Strategy' (with links to Danish strategy, socio-economic screening, adaptation on the ground, and newsletter #3), 'Cases' (with links to new tourism concept, new education, and new forests), 'Climate change' (with a link to read about the future climate), and 'FAQ' (with questions about flooding, diseases, indoor climate, and forest adaptation). Red circles highlight the navigation menu and the 'Cases' section.

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BEST PRACTICES

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2 Fraunhofer conducts practice-oriented collaborative research,  
on clearly identified themes

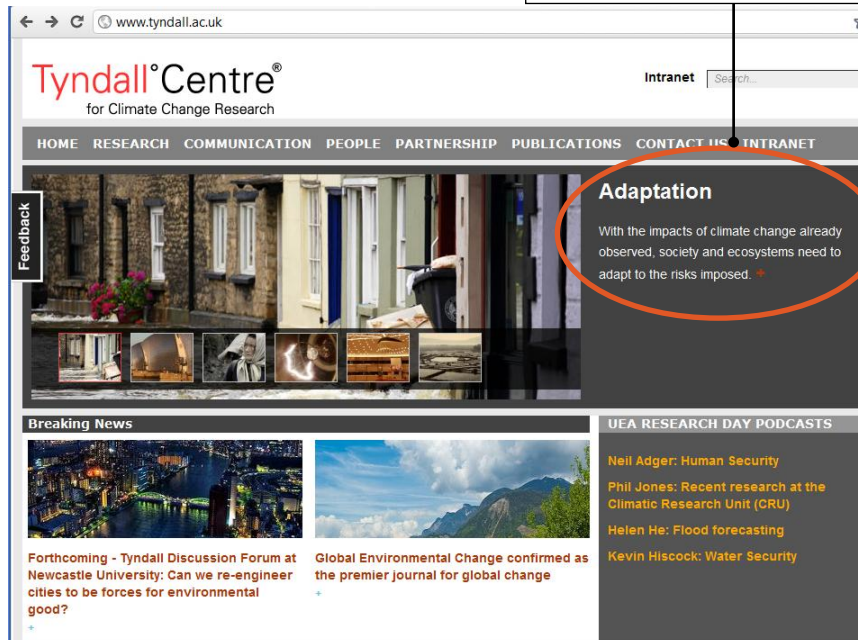
The screenshot shows the Fraunhofer website interface. On the left is a vertical navigation menu with the following items: About Fraunhofer, Range of Services, Research Topics (highlighted), Adaptronics, Construction Technology, Energy, Information and Communication Technology, Medical Engineering, Environmental and Health Research, Microelectronics, Nanotechnology, Surface Technology and Photonics, Production, Traffic Engineering and Logistics, Defense and Security, Materials and Components, Fraunhofer Frontline Themes, Institutes / Research Establishments, Press / Media, Jobs / Career, Publications, Events / Trade Fairs, and Contact. Below the menu is a 'Quick Links' section with links to 'Commercial Customers' and 'Scientists'. The main content area features a header 'Application-oriented research – research that can be put into practice' with the Fraunhofer logo. Below this is a text box stating: 'Fraunhofer has analyzed current macro trends and identified fields of research that will play a particularly important role in the future in meeting challenges such as climate change, dwindling resources and preventive healthcare.' followed by a 'more info' link. To the right of this text is a row of five small images. Below the images is another section titled 'Application-oriented research – research that can be put into practice' with a paragraph: 'The Fraunhofer-Gesellschaft carries out research in hundreds of technology fields and makes the results available as patents, licenses, further training opportunities, and particularly in the form of research projects commissioned by industry. Innovation is dynamic – topics and research areas continue to adapt to market requirements and technologies.' followed by a 'more info' link. At the bottom of the main content area is a section titled 'Collaborating with the Max Planck Society' with a paragraph: 'Collaborating with the Max Planck institutes helps to bridge the gap between applied and basic research. A range of interdisciplinary research projects are driving innovative developments forward.' followed by a 'more info' link. Two orange ovals are drawn on the page: one around the 'Research Topics' menu item and the 'Application-oriented research' header, and another around the 'Collaborating with the Max Planck Society' section.

BEST PRACTICES

LIS-NGB001-20110805-HSDP

2 Tyndall focuses all its activity on adaptation, rather than theoretical climate research

Focus on adaptation  
evident from home page



**Purpose**

To research, assess and communicate from a distinct trans-disciplinary perspective, the options to mitigate and the necessities to adapt to, climate change, and to integrate these into the global, UK and local contexts of sustainable development



### 3 Stakeholder workshops and interviews provided valuable insights for the Center

#### Key insights

Mission and Vision	<ul style="list-style-type: none"> <li>Focus on <b>applied research</b> – addressing specific government, companies and people needs – on end-to-end climate change adaptation solutions in Mozambique (from design to funding and implementation challenges), as well as future <b>climate-friendly development models</b></li> <li><b>Short-term focus on awareness and education</b>, to promote theme that is relatively new for Mozambican people and institutions</li> </ul>	
Priorities	Research	<ul style="list-style-type: none"> <li>Carefully listen to <b>each sector of the society</b> to understand needs before launching research projects</li> <li>Cover not only climate science, but <b>implementation aspects of adaptation</b> (engineering, economical capital prioritization, sociological studies of barriers due to people behavior)</li> </ul>
	Awareness	<ul style="list-style-type: none"> <li>Focus on climate change messages <b>appealing to people and companies individual interests</b> to gather interest</li> <li><b>Combine communication means</b>, leveraging informal networks to reach all stakeholders</li> </ul>
	Education	<ul style="list-style-type: none"> <li>Complement academic programs with <b>professional programs and volunteer-oriented reaction-focused short courses</b></li> </ul>
	Advisory	<ul style="list-style-type: none"> <li>Gradually <b>leverage results from applied research</b> and bring them to potential beneficiaries in the public and private sector</li> </ul>
Design	<ul style="list-style-type: none"> <li>Governance model including <b>all relevant stakeholders</b>, but ensuring <b>independence of executive decisions</b></li> <li><b>Key role in the function of the General Manager</b>, linking funding to projects</li> <li><b>Lean team</b>, focusing the Center resources on “market research and development” functions and leveraging existing and international scientific talent on a project-by-project basis</li> <li><b>Flexible organization</b>, to accommodate evolving priorities according to needs</li> </ul>	

SOURCE: May 27 Stakeholder Workshop; Personal stakeholder interviews

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STAKEHOLDER CONSULTATIONS - SURVEY

LIS-NGB001-20110805-HSDP

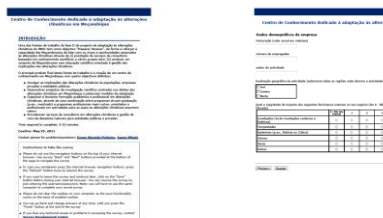
**3 Survey for top companies indicates reduced level of preparedness and demand for training and advisory services**

**Areas Covered**

- Awareness to climate change and natural disasters
- Impact of climate-change related disasters on business
- Interest in learning more about disaster risk management
- Willingness to pay for Knowledge Center services (education and consulting)

**Distribution lists**

- 55 of top 100 companies<sup>1</sup> (following phone interviews to understand better specific stakeholder and unit within each company)



**Status and preliminary results**

- 43 companies replied, 4 online, 39 through phone interviews
- Floods and storms on top of climate change-related concerns, with most companies claiming to understand effect on climate change on these areas
- Level of adaptation varies, with ~50% of companies with insurance, ~30% that protected their infrastructure, but very limited employee training or reaction plans
- Strong interest in hiring specialized employees and enrolling in training programs, focused on implementation of adaptation measures and understanding of business-specific climate change related risks

<sup>1</sup> According to a recent KPMG study

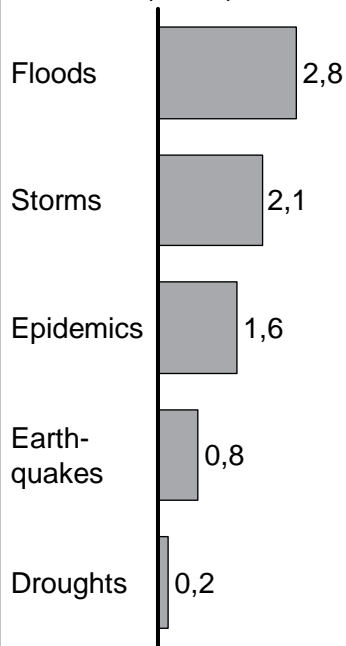


STAKEHOLDER CONSULTATIONS - SURVEY

LIS-NGB001-20110805-HSDP

**3** Floods and storms on top of concerns

*What impact do the following disasters have in your business (0 to 5)?*



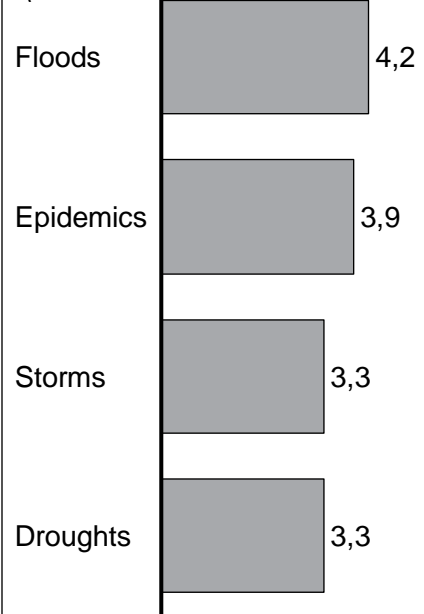
*What's your degree of familiarity with climate change in general (0 to 5)?*

**3,6**

*How many people in your company deal with climate-change issues?*

**2,9**

*How well do you understand the effect of climate change on the following disasters (0 to 5)?*



SOURCE: Survey replies online and trough phone from 43 of top 100 companies in Mozambique

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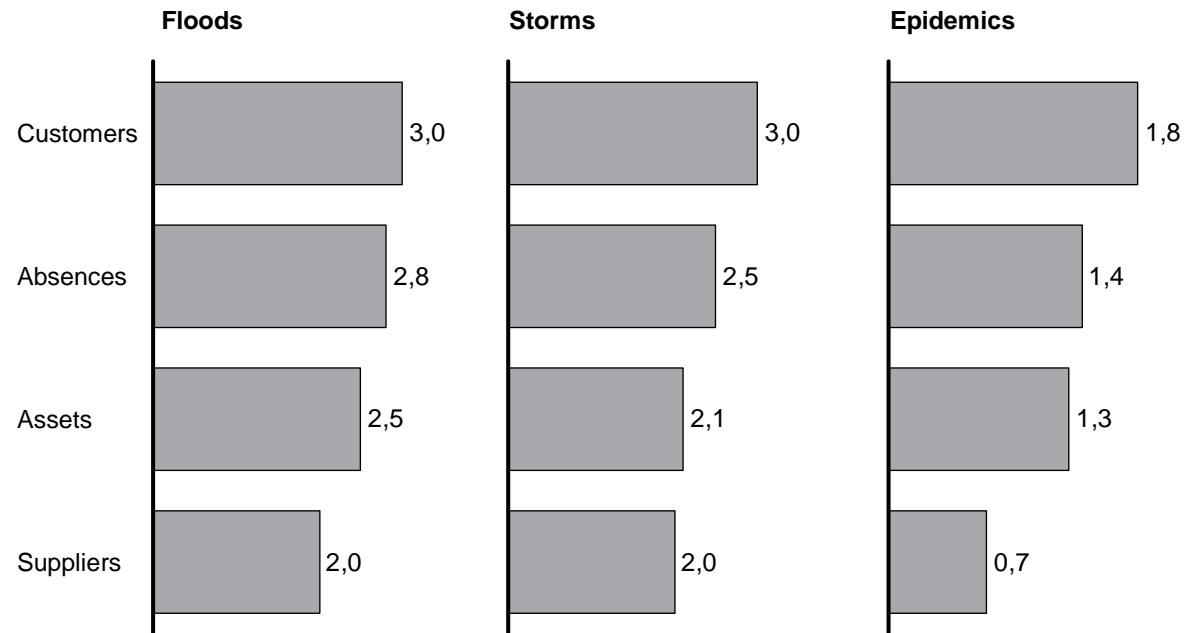
STAKEHOLDER CONSULTATIONS - SURVEY

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3 ...mainly due to impact in customers and employees

0 to 5

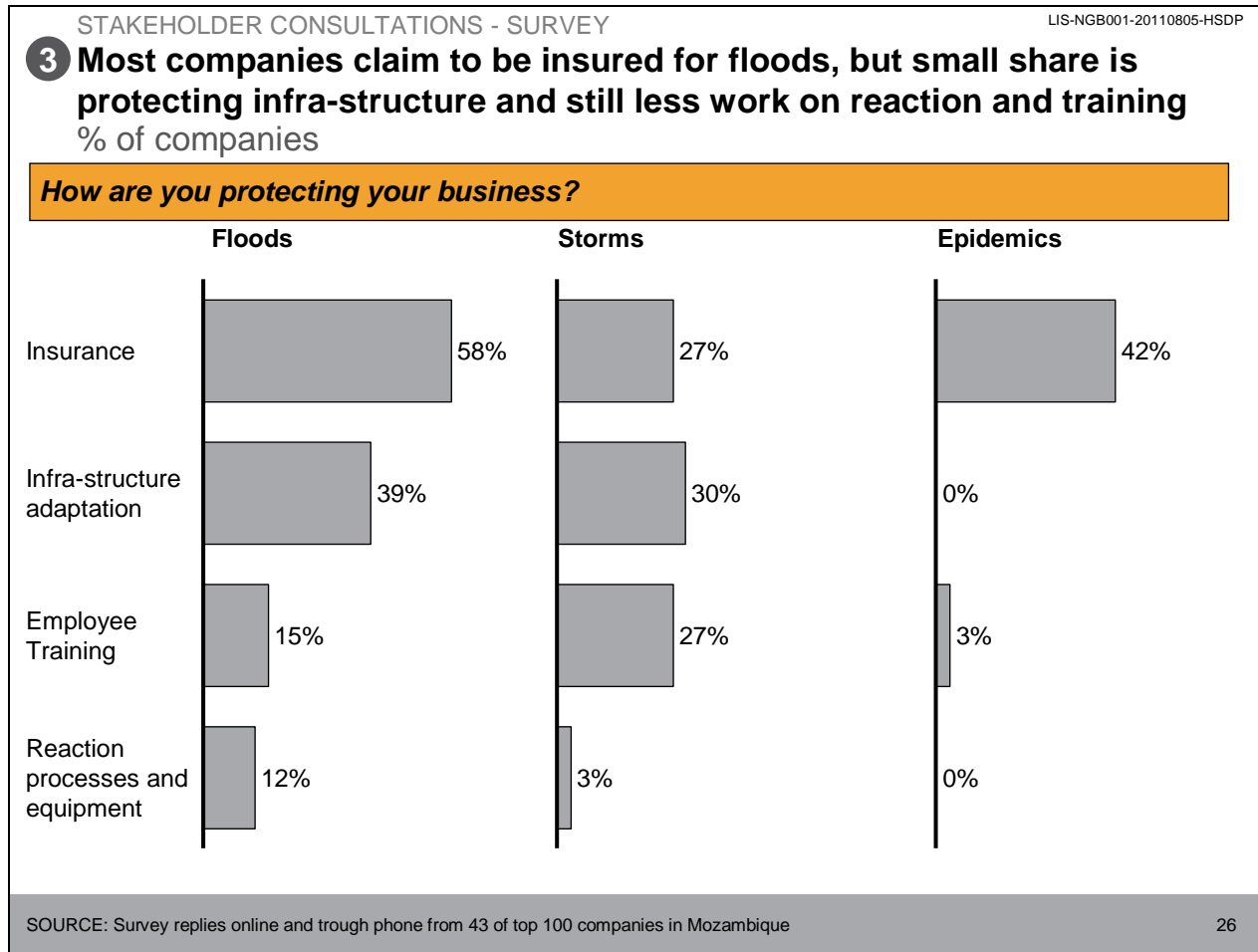
How is your company most affected by these hazards?

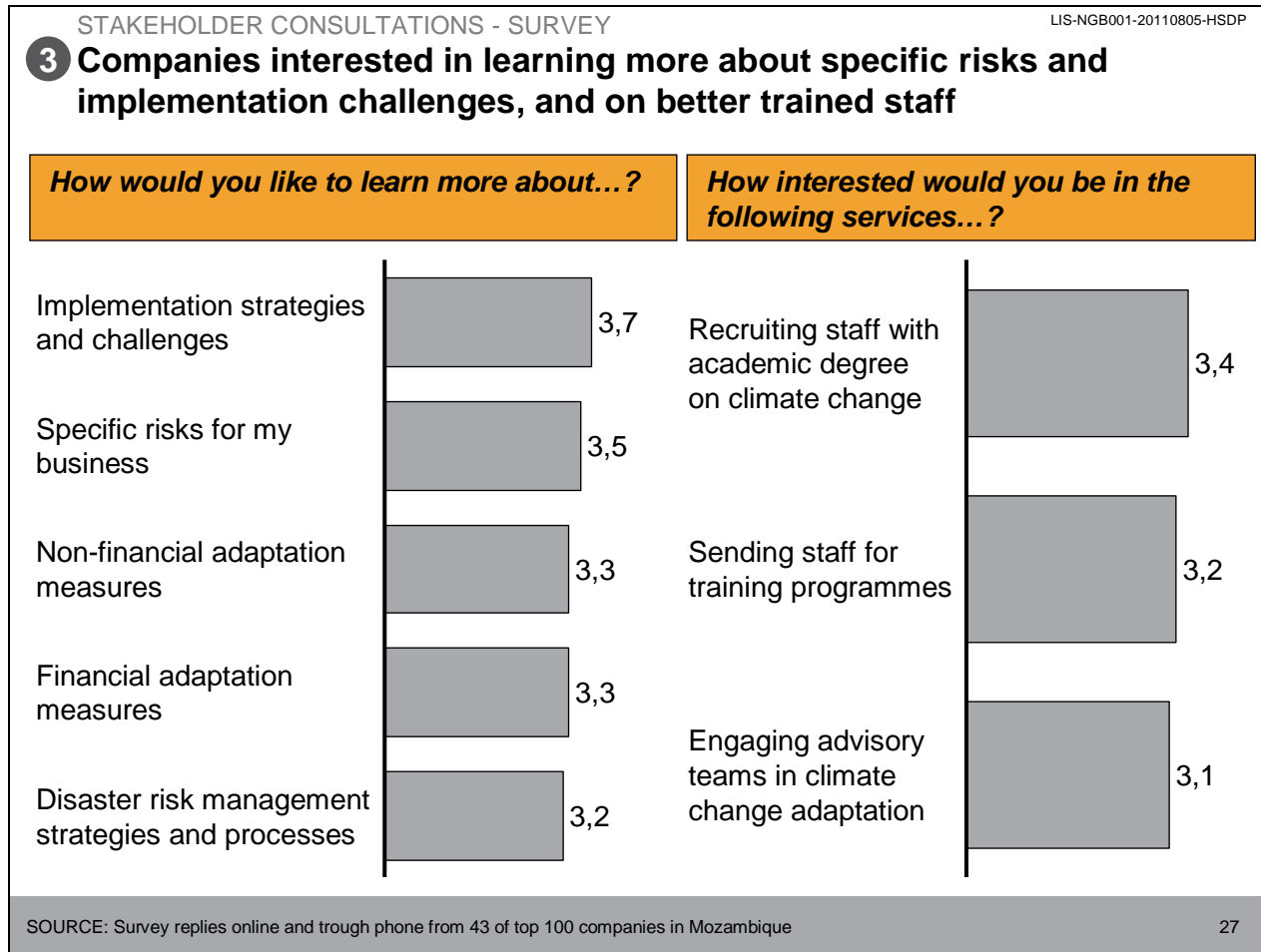


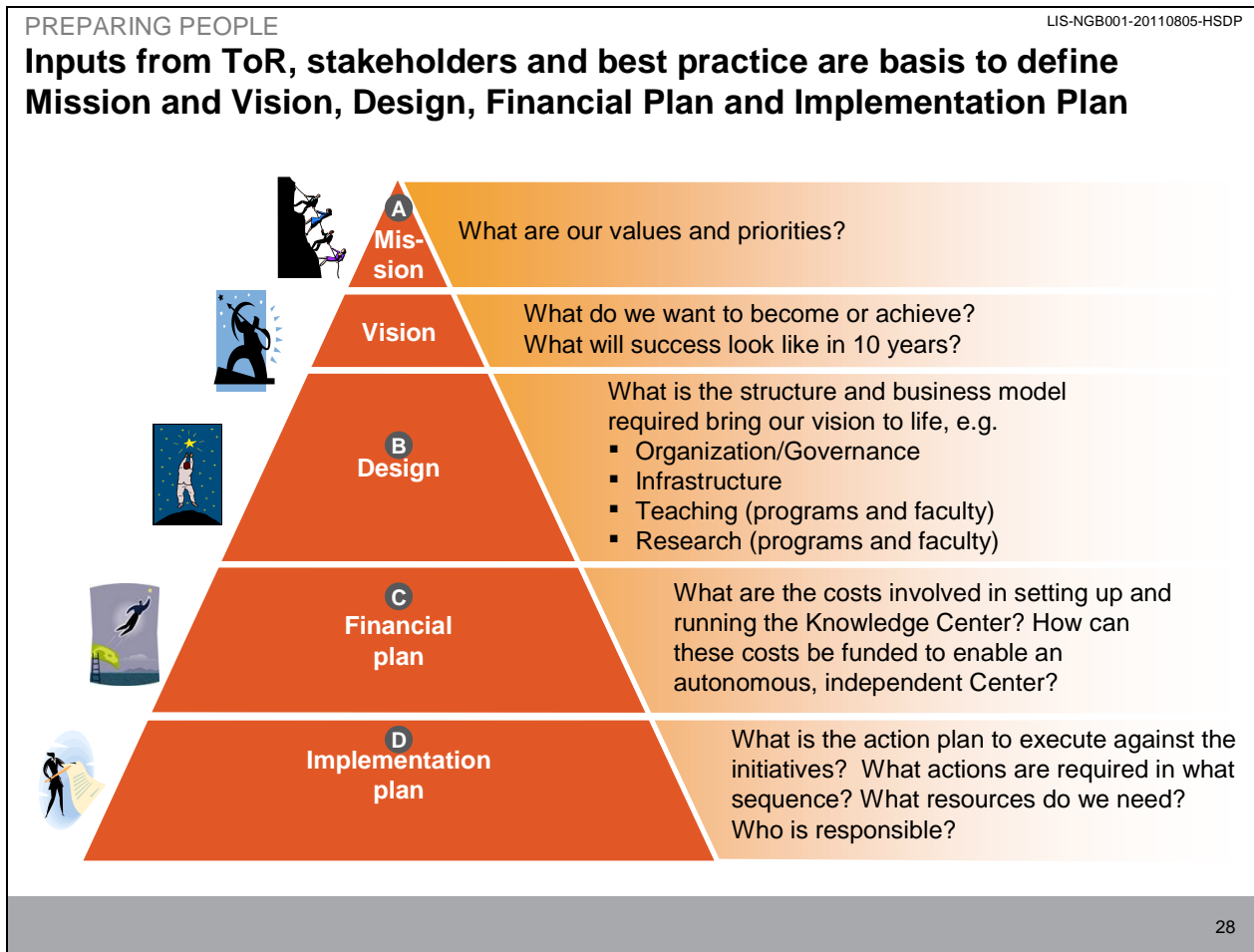
SOURCE: Survey replies online and trough phone from 43 of top 100 companies in Mozambique

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Workshop details




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- The current draft proposal was written taking into account the Terms of Reference, several shareholder perspectives and key learnings from best practice institutions, and was discussed among the team and in broader workshops. It is not, however, a final approved proposal for the Knowledge Center and is still meant for further stakeholder review and discussion by final decision makers
- This chapter addresses the mission, vision, and priorities for the Knowledge Center based on the abovementioned inputs. We expect, however, that the current proposals will still further be developed and refined during the decision and approval process, and after a management team is designated and takes ownership over the Center's implementation



### Key principles do design a Mission and Vision

	Mission	Vision
<b>Should...</b> 	<ul style="list-style-type: none"> <li>Be a concise description of the enduring purpose of the university</li> <li>Be timeless, memorable, and inspiring</li> <li>Distinguish the Center from similar institutions</li> </ul>	<ul style="list-style-type: none"> <li>Be an inspiring future state for the Center</li> <li>Be mid- to long-term (e.g., 5-10 years)</li> <li>Be grounded in the mission and values</li> <li>Be clear and compelling</li> <li>Represent a leadership choice (e.g., research vs. teaching)</li> </ul>
<b>Might...</b> 	<ul style="list-style-type: none"> <li>Explain what the Center is and what it does (i.e., ask a series of “why” questions to arrive at fundamental purpose)</li> </ul>	<ul style="list-style-type: none"> <li>Be either quantitative, qualitative, or role-model driven</li> <li>Include specific examples and analogies</li> <li>Explain why the vision is important</li> <li>Change every 5-10 years</li> </ul>
<b>Shouldn't...</b> 	<ul style="list-style-type: none"> <li>Be contingent on current conditions</li> <li>Change significantly in any plan refresh</li> </ul>	<ul style="list-style-type: none"> <li>Change every year</li> </ul>
<b>University Example</b>	<p><i>“To advance the well-being of people of this state and global community through the creation and dissemination of knowledge”</i></p>	<p><i>“This university will be among the world’s truly great universities and be the premier public university in the nation. This university will be recognized worldwide for the quality and impact of its research, teaching, and service...”</i></p>

The mission statement should be enduring and inspiring

Organization	Not enduring, uninspiring	Enduring and inspiring
 3M Worldwide	<ul style="list-style-type: none"> <li>To sell adhesives and abrasives</li> </ul>	<ul style="list-style-type: none"> <li>To solve unsolved problems innovatively</li> </ul>
	<ul style="list-style-type: none"> <li>To make cartoons</li> </ul>	<ul style="list-style-type: none"> <li>To make people happy</li> </ul>
	<ul style="list-style-type: none"> <li>To reduce poverty and suffering through an integrated set of emergency relief and development programs</li> </ul>	<ul style="list-style-type: none"> <li>To call people to a life-changing commitment to serve the poor in the name of Christ</li> </ul>
	<ul style="list-style-type: none"> <li>To eliminate starvation and provide universal access to basic medical care in the communities we serve</li> </ul>	<ul style="list-style-type: none"> <li>Oxfam works with others to overcome poverty and suffering</li> </ul>
	<ul style="list-style-type: none"> <li>To develop and implement innovative private-sector-oriented strategies to reduce poverty in New York</li> </ul>	<ul style="list-style-type: none"> <li>To end poverty in New York</li> </ul>

**Best practices have a clear definition of their mission, as well as an ambitious and measurable vision**

**Clear mission statement with specific priorities...**

*“Collect, store and assess appropriate longitudinal social, economic and environmental data to inform relevant research, policy, reporting and action.”*

SAEON

*“To research, assess and communicate from a distinct trans-disciplinary perspective, the options to mitigate, and the necessities to adapt to, climate change, and to integrate these into the global, UK and local contexts of sustainable development.”*

Tyndall Centre®

**...complemented with an ambitious and measurable vision**

*“A sustained, coordinated, responsive and comprehensive in situ South African Earth observation network that delivers long-term reliable data for scientific research and informs decision-making for a knowledge society and improved quality of life.”*

SAEON

*“To be an internationally recognised source of high quality and integrated climate-change research, and to exert a seminal influence on the design and achievability of the long-term strategic objectives of national and international climate policy.”*

Tyndall Centre®

## This chapter builds on the inputs analyzed to define the center's vision, mission, and priorities

### Core inputs to design the Knowledge Center Vision and Mission

- Terms of Reference pointing out to 4 different components – awareness building, research, education, and advisory
- Extensive shareholder discussions to identify center's priorities
  - Strong short-term focus on awareness building
  - Research focus on end-to-end, ready-to-implement adaptation solutions
  - Need for practical results addressing target group's self-interests to generate reputation
- Exercise to define mission in second shareholder workshop, August 1
- Learnings from best practices
  - Limited set of relevant priorities (Fraunhofer)
  - Emotional message (ACCESS)
  - Ambitious and measurable visions (Tyndall, SAEON)

1

#### Vision

- Ambition for the overall center and for each of its 4 functions
- Targets and performance indicators to achieve in the medium term

2

#### Mission

- Clear statement on what the center is all about
- Inspiring and ambitious, highlighting the root cause for the Center

3

#### Activities and priorities

- Core priorities in each of the 4 areas
- Key "wins" for the first year to set success stories going forward

VISION

LIS-NGB001-20110805-HSDP

**1 The Vision should set the medium-term ambition for the Center in its 4 building blocks**

**Illustration of stakeholders' perspective<sup>1</sup>**

*"Center of Excellence that provides the government with data for decision-making in issues involving climate"*

*"Leader in research, integration, advice, and dissemination of climate change knowledge in Mozambique"*

*"Strong involvement of private sector"*

*"Produces ready-to-implement solutions, addressing behavioral and financial implementation constraints"*

*"Truly applied research, addressing the specific needs of each target segment"*

*"Close cooperation with external research groups"*

*"Integration of currently scattered climate change knowledge"*

**Proposed high-level vision**

**Become an international role model, specially in the Portuguese speaking community, reputed for our expertise in climate change adaptation and practical approach to achieve impact:**

- **Outstanding coordination of climate-change- related applied research** in joint teams with international centers of excellence and national academia and community
- **Mind-changing awareness-raising campaigns** that shift behaviors of individuals, businesses, and public institutions, thus contributing to increased climate resilience
- **Practical education programs** that create a set of well-trained, high-performing practitioners at all levels of required expertise
- **Distinctive advisor for businesses and governmental agencies** that influences key decisions with a pragmatic approach that leads to material improvements in resilience
- **Visible impact** in the achievement of the **strategic objectives of the national climate policy**

<sup>1</sup> Based on interviews and workshops conducted

VISION LIS-NGB001-20110805-HSDP

**1 The Vision should be complemented with clear, measurable targets**

ILLUSTRATIVE – FOR DISCUSSION

<p><i>"Now I understand the climate change risk that Mozambique faces"</i></p> <p>- Member of general public</p>	<p><b>Awareness-raising</b></p> <ul style="list-style-type: none"> <li>Make 30% of population aware of 3 climate change consequences in 2 years</li> </ul>	<p><b>Research</b></p> <ul style="list-style-type: none"> <li>Generate 50 quotes to scientific articles in international climate change magazines in 5 years</li> </ul>	<p><i>"The Knowledge Center generates great climate change insights for Mozambique. I would love to work there"</i></p> <p>- Climate Scientist</p>
<p><i>"I feel capable of making climate change projections and conducting research"</i></p> <p>- Graduate student</p>	<p><b>Training</b></p> <ul style="list-style-type: none"> <li>Graduate ~30 new Master students in climate change issues in 5 years</li> <li>Provide more than 300 people with short training programs per year in 5 years</li> </ul>	<p><b>Advisory services</b></p> <ul style="list-style-type: none"> <li>Spend more than 30% of researchers time on advisory services</li> <li>Generate 50%+ of the center costs through advisory in 5 years</li> </ul>	<p><i>"They cracked our key climate-related problem and now we are ready to implement"</i></p> <p>- Development NGO program manager</p>
<p><i>"I feel well-equipped to help my government agency incorporate climate risks into our planning process"</i></p> <p>- Ministry employee</p>			

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MISSION

LIS-NGB001-20110805-HSDP

2 The Center's Mission should focus on its key goal – Preparing People - and reflect the full range of activities

Mission statement

To enable all Mozambicans to respond in a sustainable manner to risks and opportunities associated with climate variability, thereby protecting our country for future generations through effective communication and the provision of solid, science-based advice and capacity-building

Key goals for the Knowledge Center

Awareness building

- Progressively develop awareness to climate change and adaptation in public and private sectors as well as in the general public

Research

- Become the one-stop-shop for all data and research on climate change in Mozambique by analyzing and clarifying all existing data and studies
- Promote and develop research on end-to-end adaptation solutions, feasible on the Mozambican context, integrated within the national adaptation program, and based on clear needs of stakeholders

Education

- Develop a cadre of Mozambicans trained in climate change adaptation with a mix of academic and professional programs

Advisory

- Influence decisions that promote the country's adaptation to climate change in all sectors of the society

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MISSION

LIS-NGB001-20110805-HSDP

2 This Mission statement defines key elements for the center and sets the cause to develop each of its functions

Goal of “enabling Mozambicans” sets the geographic focus and the need for awareness building and training

Effective communication stresses our the externally-oriented

“To enable all Mozambicans to respond in a sustainable manner to risks and opportunities associated with climate variability, thereby protecting our country for future generations through effective communication and the provision of solid, science-based advice and capacity-building”

“Solid, science-based advice” stresses the need to gather and promote need-based scientific research, as well as influence key decisions with reliable advice



ACTIVITIES AND PRIORITIES

LIS-NGB001-20110805-HSDP

**3 The center should have clear goals in several dimensions**

Dimension	Knowledge Center Goals
Legal	<ul style="list-style-type: none"> <li>Promote sustainable laws and regulations through solid, science-based advice to law makers on regulatory issues affected by climate change such as construction codes, urban development plans, rural land usage plans or coastal occupation strategies</li> </ul>
Social	<ul style="list-style-type: none"> <li>Reduce inequality of exposure to climate-related hazards through awareness-building and training on adaptation measures to all Mozambicans on how to protect assets and people (e.g., construction areas, building adaptation techniques, etc.)</li> <li>Develop sense of belonging to National cause in large proportion of population (specially among the young) to constitute a volunteer force to react to climate-related hazards</li> </ul>
Technological	<ul style="list-style-type: none"> <li>Contribute to developing scientific basis for adaptation techniques in Mozambique in the fields of construction, agriculture, industry, coastal engineering and urban planning</li> <li>Develop a cadre Mozambican technicians trained in climate change adaptation to integrate key positions in the public and private sector</li> </ul>
Political	<ul style="list-style-type: none"> <li>Build awareness in the political decision making to the need for climate change mitigation and the advantages of climate change adaptation</li> </ul>
Physical	<ul style="list-style-type: none"> <li>Progressively promote full adaptation of Mozambican private and public assets to climate change and their protection against climate change related hazards</li> </ul>

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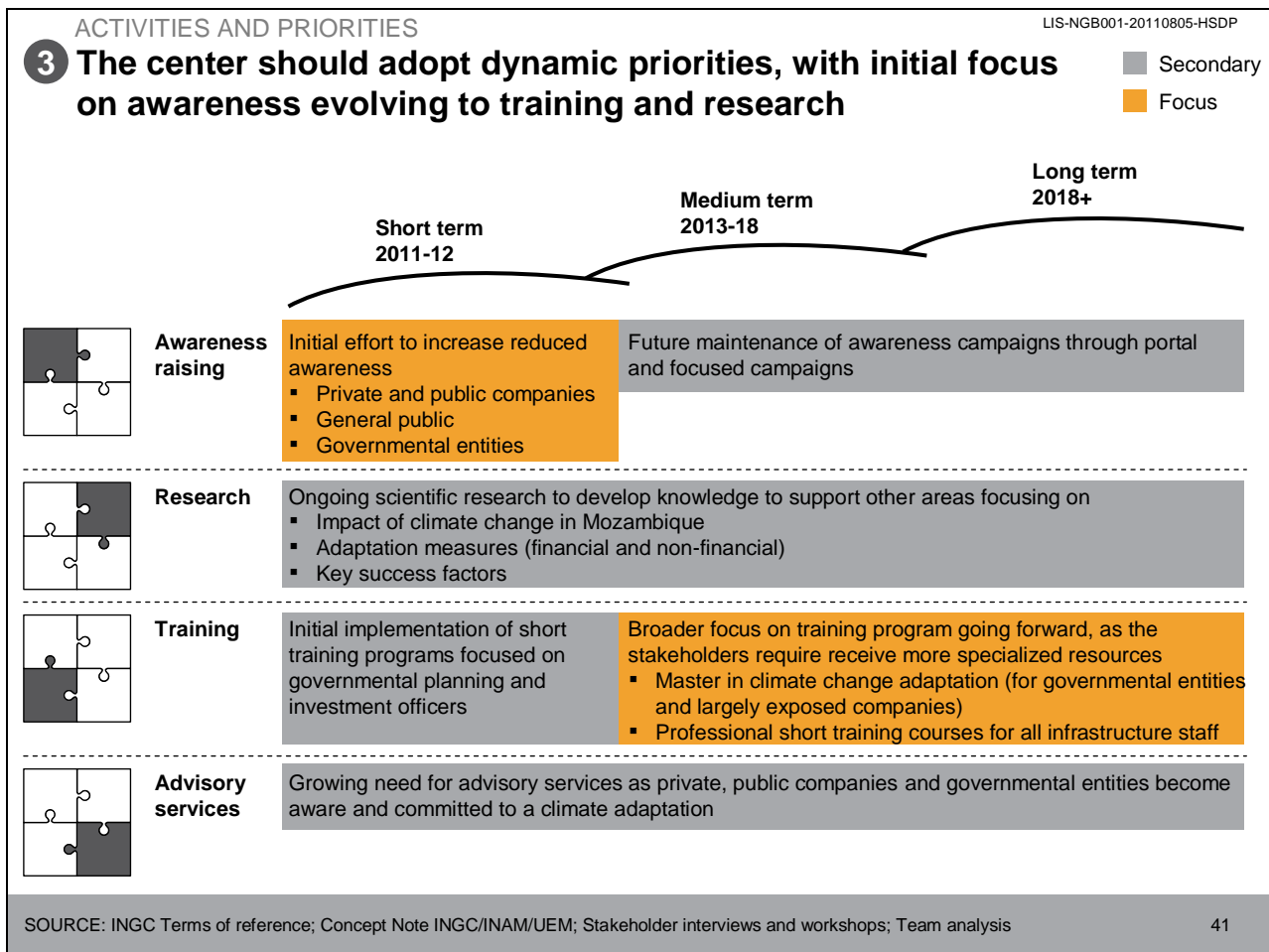
ACTIVITIES AND PRIORITIES LIS-NGB001-20110805-HSDP

**3 Stakeholder consultations evidence different priorities, suggesting need to differentiate long and short term**

Low  
 High

	Terms of Reference	Stakeholder consultations		Level of priority	
		Workshops	Survey	Short term	Long term
	<b>Awareness raising</b> Terms of Reference include all four building blocks in the Knowledge Center Mission	<ul style="list-style-type: none"> <li>Consultation point to very reduced awareness of general public and municipalities leading to undesired behaviors</li> </ul>	<ul style="list-style-type: none"> <li>Top companies managers claim to understand climate change implications</li> </ul>	●	●
	<b>Research</b>	<ul style="list-style-type: none"> <li>Academia and NGO stakeholders point the need to more applied research on design and implementation of adaptation solutions</li> </ul>	<ul style="list-style-type: none"> <li>Companies interested in learning more about implementation of adaptation measures and business-specific risks</li> </ul>	●	●
	<b>Training</b>	<ul style="list-style-type: none"> <li>Municipalities stressed need to have training for planning staff</li> <li>Academia committed to building a Masters program</li> </ul>	<ul style="list-style-type: none"> <li>Companies invest very little in disaster risk and reaction training and are interested to learn more, as well as recruiting Masters</li> </ul>	●	●
	<b>Advisory services</b>	<ul style="list-style-type: none"> <li>General understanding that advisory will need to prove itself worthy in the medium term, as applied research produces practical results</li> </ul>	<ul style="list-style-type: none"> <li>Companies claim to be moderately interested in advisory services</li> </ul>	●	●

SOURCE: INGC Terms of reference; Concept Note INGC/INAM/UEM; Stakeholder interviews and workshops; Team analysis 40



ACTIVITIES AND PRIORITIES

LIS-NGB001-20110805-HSDP

**3 This organization should launch key short-term priorities in each block**

**Awareness Building**

- Begin a multi-year nationwide public awareness campaign, starting with moist vulnerable cities focusing on impact of climate change for people, desired prevention and reaction behavior
- Meet with top 100 companies (prioritized by size and vulnerability) during the first year to bring key impacts of climate change for the specific company sector
- Launch online portal with simple messages and key climate-change related data

**Research**

- Launch multi-disciplinary research projects focused on end-to-end adaptation solutions by sector of the economy
- Order of approach to each sector should be based on relevance and vulnerability
- At least one research project for one sector should be launched in first year (chosen between municipalities, agriculture or energy)

**Education**

- Launch three professional programs on the first year
  - Training program for municipal planning staff
  - Training program for managers on agricultural sector
  - Cross-sector training on climate change on coastal and urban infra-structure protection
- Design Master on climate change adaptation during 1st year of knowledge center

**Advisory**

- On the short-term, build *ad-hoc* advisory teams on response to requests arising from awareness campaign

ACTIVITIES AND PRIORITIES

LIS-NGB001-20110805-HSDP

3 For the long term the focus should remain on end-to-end adaptation

**Awareness Building**

- **Focus for each segment:**
  - **Individuals:** Impact and desired adaptation behaviors, through media and informal network
  - **Companies:** Impact and alternatives to adapt/build resilience by sector, through personal contact
  - **Governmental entities:** Impact and implications for development model and planning
- **Online portal** with all information

**Research**

- Research themes based on **needs of key sectors of society**, identified through market research
- Projects developed with principle of **applied research**, with clear actionable deliverables
- Focus on **end-to-end adaptation measures**, from design to implementation

**Education**

- **Broad scope** of education alternatives:
  - **Short locally-delivered courses** on behaviors for **individuals**
  - **Short professional courses** for company executives (differentiated by sector), with **online option**
  - **Structured academic program** to develop researchers and specialists

**Advisory**

- **Not primary center focus on short term**, activity to develop as research produces results and awareness building creates interest in advisory services
- Advisor focused on **companies and governmental entities**, with studies supporting **key climate change adaptation issues** (e.g., urban plan design, crop selection, etc.)

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- The current draft proposal was written taking into account the Terms of Reference, several shareholder perspectives and key learnings from best practice institutions, and was discussed among the team and in broader workshops. It is not, however, a final approved proposal for the Knowledge Center and is still meant for further stakeholder review and discussion by final decision makers
- This chapter addresses the design of the Knowledge Center – governance, organization and operating model - based on the abovementioned inputs. We expect, however, that the current proposals will still further be developed and refined during the decision and approval process, and after a management team is designated and takes ownership over the Center's implementation

## Key principles to design the Center's organization and processes defined to deliver on the Center's mission in the most efficient way

### Key goals for the Knowledge Center

#### Awareness building

- Progressively develop awareness to climate change and adaptation in public and private sectors as well as in the general public

#### Research

- Become the one-stop-shop for all data and research on climate change in Mozambique by analyzing and clarifying all existing data and studies
- Promote and develop research on end-to-end adaptation solutions, feasible on the Mozambican context, integrated within the national adaptation program, and based on clear needs of stakeholders

#### Education

- Develop a cadre of Mozambicans trained in climate change adaptation with a mix of academic and professional programs

#### Advisory

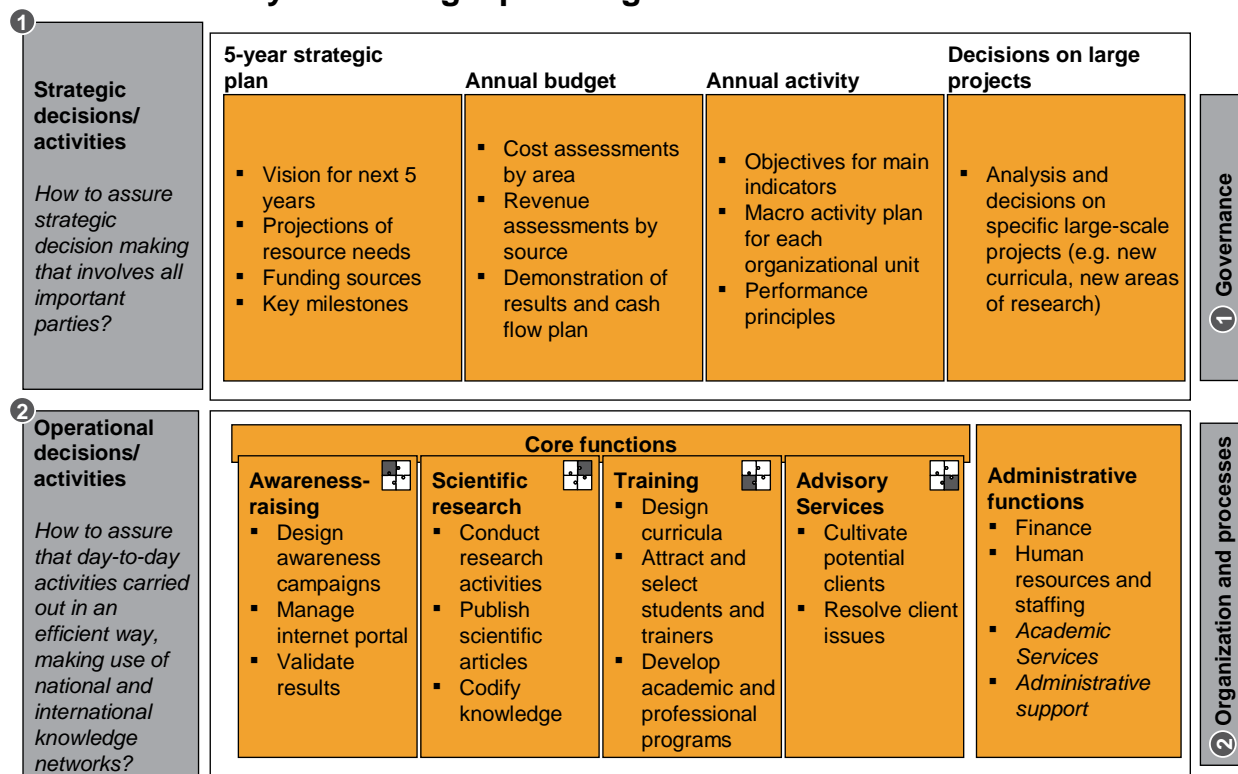
- Influence decisions that promote the country's adaptation to climate change in all sectors of the society

### How can the Center deliver these goals efficiently?

- Focus on **understanding country needs** to shape truly value-added programs that result in **self-funded projects**
- **Coordinate research and education projects** leveraging external resources (national and international) through virtual networks funding activity on a project-by-project basis
- **Build capacity progressively**, as new projects are approved and funded
- Nominate a management team with **seniority to establish interface between government, academia, private sector, and donors** at the most senior level



**Center's functions should be focused on 4 key operational areas, and based on multi-year strategic planning**



GOVERNANCE

LIS-NGB001-20110805-HSDP

1 Governance should ensure independent management team and broad stakeholder involvement

Current situation



- **Broad range of institutions** with relevant part in climate change knowledge building and dissemination
  - Ministries (MICOA, MPD, MOPH, MCT, etc.)
  - Local authorities
  - Public Institutes (INAM, INGC, etc.)
  - Universities (UEM, UCM, U. Ped., etc.)
  - Sector-wide Research Centers (Agriculture, Energy, etc.)
- Need to create **agile management team** to ensure strong results early on
- Current focus on climate change only visible on **public sector and international NGOs**
















Principles of governance

- Knowledge center should be **public** (at least initially), but **independent of any specific ministry or institute**
- **Key governance roles** should provide guidance for **strategic decisions**, through several roles
  - **Supervisory:** approval of management proposals for strategic decisions
  - **Executive Management:** preparation of proposals for strategic plans and direct decision on all operational matters
  - **Advisory:** pronouncement on technical decisions in each field (scientific, pedagogic and marketing)
  - **Partnership:** Direct allocation of resources to specific center projects

GOVERNANCE LIS-NGB001-20110805-HSDP

**1 The governance model should ensure participation of all relevant entities**

 Primary Role  
 Secondary role

		Entities						
Role description		Ministries (MAE, MICOA, MCT)	Institutes (INAM, INGC)	Universities (UEM, UCM, ...)	Civil Society <sup>1</sup>	Private Sector <sup>1</sup>	Internati onal R&D groups	
<b>1A</b>	<b>Supervision</b>	<ul style="list-style-type: none"> <li>Monitoring and approval of strategic decisions (annual budget and activity plan, major projects)</li> </ul>						
<b>1B</b>	<b>Executive Management</b>	<ul style="list-style-type: none"> <li>Daily decision making and definition of recommendations on strategic decisions (for Supervisory Board approval)</li> </ul>	<b>Management by independent team, to be nominated by Supervisory Board</b>					
<b>1C</b>	<b>Scientific and Pedagogic</b>	<ul style="list-style-type: none"> <li>Monitoring of research and teaching programs and advisory on educational curricula and research themes</li> </ul>						
	<b>Customer and Stakeholder</b>	<ul style="list-style-type: none"> <li>Advisory on center priorities (given national needs) and strategy for awareness-building and advisory projects</li> </ul>						
<b>1D</b>	<b>Partners</b>	<ul style="list-style-type: none"> <li>Direct participation in research and education programs, including interchange programs (for international partners)</li> </ul>						

<sup>1</sup> Through nominated representatives

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GOVERNANCE

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**1A The Supervisory Board should be the core body to oversee the Knowledge Center's activity**

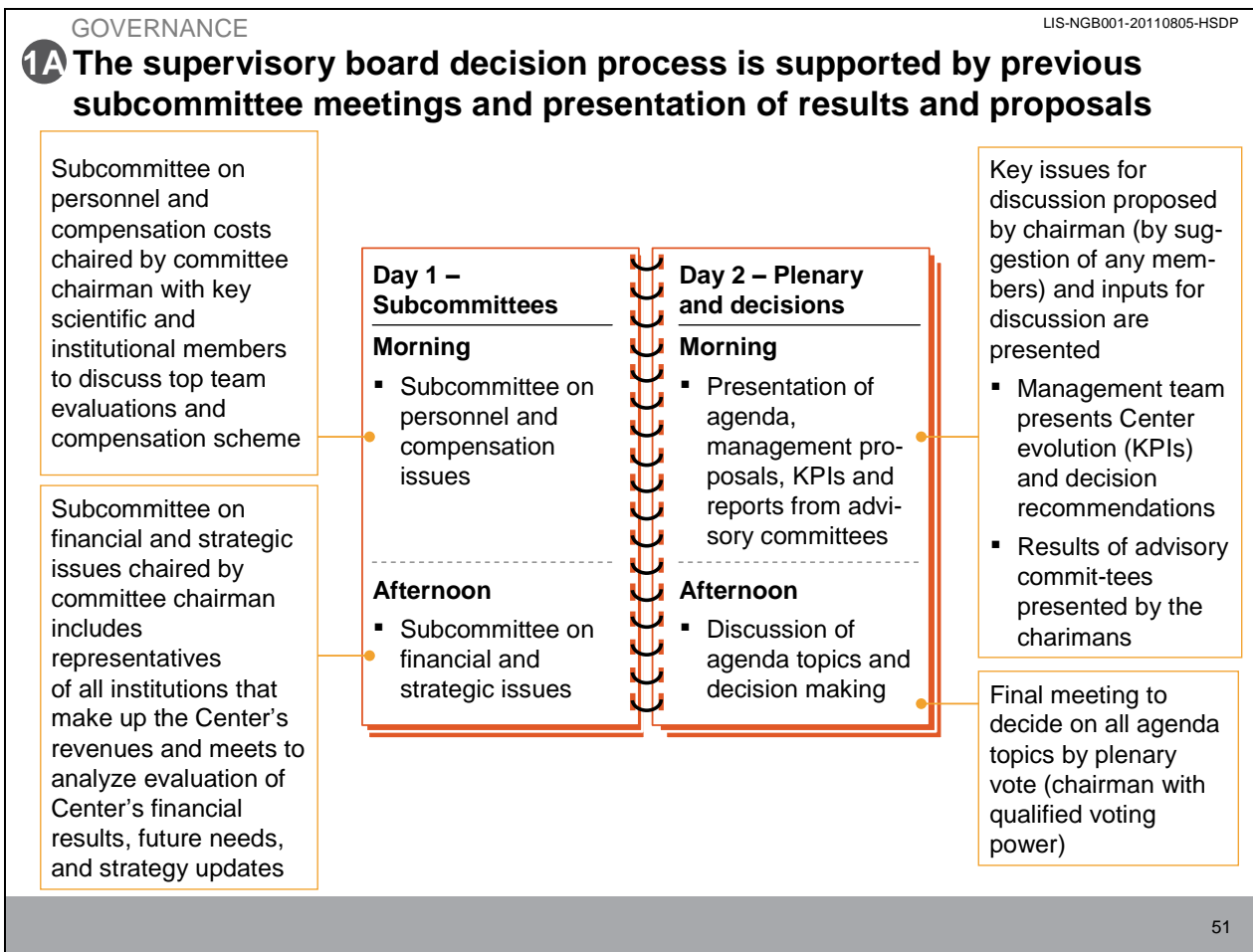
**Composition**

- Senior-level committee that convenes 2 times every year to review the Knowledge Center performance and provide strategic guidance
- Total of ~15 participants should include
  - Ministers
    - MPD (Planning and Development)
    - MICOA (Environment)
    - MCT (Science and Technology)
    - MINED (Education)
    - MF (Finance)
    - MS (Health)
  - General Managers of key public institutes
    - INAM
    - INGC
  - Senior representative of larger Universities
    - UEM
    - UDM
    - UCM

**Agreed/decisions**




- Provide strategic direction to the center's management team
- Promote access to high-level decision-makers
- Approve proposals and update for the center's key governing tools
  - Charter
  - 5-year strategic plan
  - Annual budget and plan of activities
- Decide on the launch of large projects
- Monitor the center's performance vs. approved plans and publish report
- Nominate, confirm and/or replace the center's management team
- Evaluate the 3 top managers (based on proposals from advisory committee) and decide compensation

**The center's Supervisory Committee can be created for this purpose only or be adapted from an existing senior committee (e.g., CONDES)**



GOVERNANCE LIS-NGB001-20110805-HSDP

### 1B The Center's management team should be independent, and staffed with high-performing individuals in their fields

<ul style="list-style-type: none"> <li>▪ Management team of 3 senior managers that oversee all operational decisions and are monitored by supervisory board bi-annually</li> <li>▪ Management supported by advisory boards for specific functional areas (Scientific and Pedagogic Committee and customer/target group management advisory board)</li> </ul>	<b>Functions</b>	<div style="text-align: center;">  <p><b>General manager</b></p> </div> <ul style="list-style-type: none"> <li>▪ Oversee the functioning of the whole center</li> <li>▪ Manage relationship with donors and other contributors</li> <li>▪ Ensure financial robustness of the center</li> <li>▪ Report to Supervisory Board</li> <li>▪ Evaluate performance of center staff (supported by the other few elements)</li> </ul>	<div style="text-align: center;">  <p><b>Head of science</b></p> </div> <ul style="list-style-type: none"> <li>▪ Design new research projects based on activity plan (define goals, approve methodology)</li> <li>▪ Link with General Manager to fund research projects</li> <li>▪ Staff research projects with research coordinator</li> <li>▪ Evaluate progress of research projects</li> </ul>	<div style="text-align: center;">  <p><b>Head of services</b></p> </div> <ul style="list-style-type: none"> <li>▪ Design awareness-building campaigns and education programs based on activity plan</li> <li>▪ Lead center staff and external resources dedicated to awareness, education and advisory</li> <li>▪ Develop advisory engagements with potential clients</li> <li>▪ Ensure quality of advisory work</li> </ul>
	<b>Profile</b>	<ul style="list-style-type: none"> <li>▪ Senior Mozambican executive with links to academia, donors, and climate change adaptation</li> <li>▪ Experience in fundraising</li> <li>▪ Strong leadership and drive</li> <li>▪ Commitment to the center's success</li> </ul>	<ul style="list-style-type: none"> <li>▪ Senior Mozambican researcher with multi-disciplinary perspective</li> <li>▪ Links with Mozambican and international academia working on climate change</li> <li>▪ Good leadership skills</li> </ul>	<ul style="list-style-type: none"> <li>▪ Mozambican professional with background on senior level advisory role</li> <li>▪ Good knowledge of Mozambican institutions</li> <li>▪ Scientifically literate (to link with research themes)</li> <li>▪ Leadership and entrepreneurship</li> </ul>

SOURCE: Stakeholder interviews and workshops; best practice 52

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**1C The advisory committees support the Center's activity and planning processes with technical counseling**

Body	Participants	Meeting frequency	Activities
<b>Scientific and Council</b>	<ul style="list-style-type: none"> <li>▪ Heads of relevant scientific areas in partner universities (direct sciences, geology, geography, agronomy, engineering, economy, sociology, law)</li> <li>▪ Senior representatives from partner research institutes abroad</li> <li>▪ Senior representatives of public institutes (INAM, INGC, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Once every 6 months</li> </ul>	<ul style="list-style-type: none"> <li>▪ Provide counsel on new research projects (go/no-go decision and potential changes)</li> <li>▪ Evaluate status of ongoing research projects</li> <li>▪ Facilitate networking with international scientific community</li> <li>▪ Council on content for new education curriculum</li> <li>▪ Evaluation of educational activities</li> <li>▪ Provide perspective on strategic plus (5-year and 1-year) for analysis in Supervisory Board</li> <li>▪ Provide input for evaluation of Head of Science in Supervisory Board</li> </ul>
<b>Customers and stakeholder Council</b>	<ul style="list-style-type: none"> <li>▪ Senior representatives of public institutes (INAM INGC, etc.)</li> <li>▪ Representatives of relevant civil society, groups (NGOs, associations, etc.)</li> <li>▪ Representatives of private sector associations from all relevant sectors</li> </ul>	<ul style="list-style-type: none"> <li>▪ Once every 3 months</li> </ul>	<ul style="list-style-type: none"> <li>▪ Review and complement regular assessment of needs in research, awareness, education, and advisory based on market research presented by Head of Services, and produce report to be used as input in strategic plan review</li> <li>▪ Provide perspective on every new research programs, awareness campaigns or educational curricula</li> <li>▪ Evaluate advisory projects for impact</li> <li>▪ Facilitate senior networking with all relevant sectors of the society</li> </ul>

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**1 To gain short-term momentum, the center should be initially built within an existing institution**

**Need for initial institutional framing...**

- Stakeholder consultation and best practice provided input to envision the Knowledge Center as an autonomous and independent Center to ensure adequate performance over cross-disciplinary and cross-functional activities
- In the short term, however, launching an autonomous team can limit the capacity and speed to be “up and running” (“lone team in the dark”) suggesting need for additional institutional framing, at least during the set-up phase
- The institutional framing should reflect the Center’s short term priorities

**...to select depending on initial focus**

Initial “sponsor”	Institutional setting	Favored short-term function
<b>INGC</b>	<ul style="list-style-type: none"> <li>▪ Closer to the populations</li> <li>▪ Focus on adaptation for climate-related hazards</li> </ul>	Public awareness raising
<b>INAM</b>	<ul style="list-style-type: none"> <li>▪ Closer to climate scientists and data</li> <li>▪ Focus on climate change research</li> </ul>	Climate change research
<b>MICOA</b>	<ul style="list-style-type: none"> <li>▪ Closer to environmental policymakers</li> <li>▪ Focus on nationwide mitigation and adaptation strategy</li> </ul>	Adaptation research
<b>MST</b>	<ul style="list-style-type: none"> <li>▪ Closer to nationwide scientific network</li> <li>▪ Focus on scientific research</li> </ul>	Cross-function research
<b>UEM</b>	<ul style="list-style-type: none"> <li>▪ Closer to specific academia and researchers</li> <li>▪ Focus on research and education</li> </ul>	Education

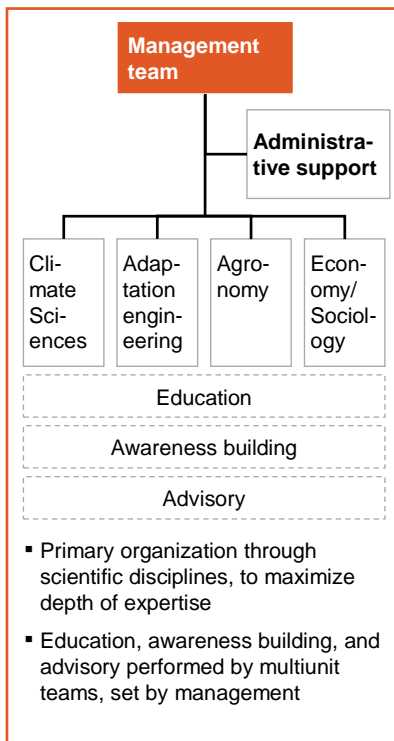


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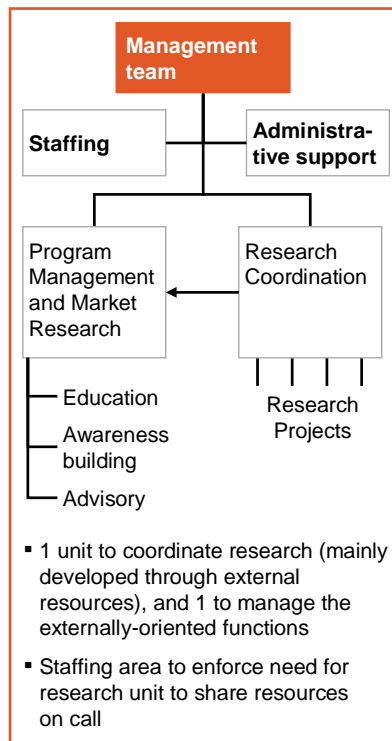
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2 There are 3 potential alternatives for the center's organization

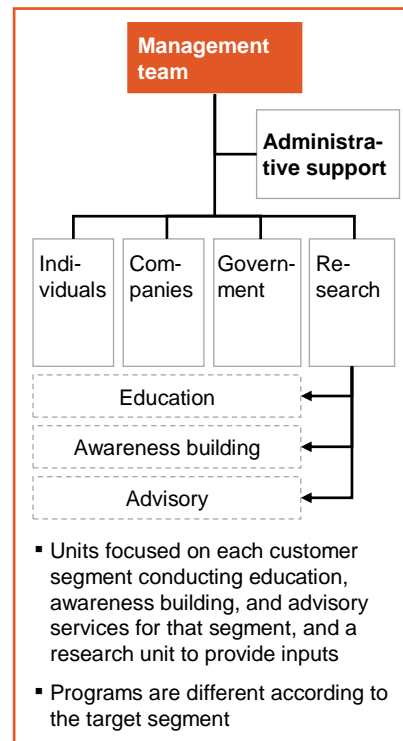
“University”



“Accelerator”



“Company”



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**2 ORGANIZATION AND PROCESSES**  
**The 3 alternative organizations result in different functions and overall dimension...**

	“University”	“Accelerator”	“Company”
<b>Management</b>	<p><b>General Manager:</b> Definition of overall strategy, stakeholder management, operations/project financing and team management</p> <p><b>Head of Science:</b> Recruiting and management of researchers, identification and launching of research projects, liaison with scientific and academic partners, academic program design</p> <p><b>Head of Services:</b> Leadership of market research, definition of research and awareness-raising priorities, leadership of awareness campaigns, relationship with clients, and professional training program design</p>		
<b>Operational team</b>	<p><b>For each scientific area</b></p> <ul style="list-style-type: none"> <li>▪ Team leader, PhD in scientific area with strong academic profile</li> <li>▪ 1-2 postgraduate researchers in the scientific area of the team</li> <li>▪ 1 member with professional experience (consulting or industry) in the scientific area of the team</li> </ul>	<ul style="list-style-type: none"> <li>▪ 1 responsible for resource allocation and coordination with Directors</li> <li>▪ 1 research project coordinator with strong ties to the academic community and experience with project management</li> <li>▪ 4 to 7 members with climate change knowledge and experience in:                             <ul style="list-style-type: none"> <li>– Marketing and market research (2-3 members)</li> <li>– Management of training programs (1-2 members)</li> <li>– Professional advisory services (1-2 members)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ 1 research project coordinator with strong ties to the academic community and project management experience</li> <li>▪ For each “client segment” team:                             <ul style="list-style-type: none"> <li>– 1 senior member to manage client relationships (professional background for companies, NGO background for government and individuals)</li> <li>– 1-2 junior members with relevant experience in climate change adaptation</li> </ul> </li> </ul>
	16-20 pax	10-13 pax	11-14 pax

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**2** The “Accelerator” model has a best fit with the center’s medium-term goals ■ Best fit with mission and design principles

	“University”	“Accelerator”	“Company”
<b>Advantages</b>	<ul style="list-style-type: none"> <li>+ Internal units aggregate people with similar profiles, facilitating deeper expertise (economies of skill)</li> </ul>	<ul style="list-style-type: none"> <li>+ Separated unit for external outreach functions</li> <li>+ Research unit flexible and scalable</li> </ul>	<ul style="list-style-type: none"> <li>+ Strong focus on “customer” group needs</li> </ul>
<b>Disadvantages</b>	<ul style="list-style-type: none"> <li>- Limits interdisciplinary communication</li> <li>- Cross-unit education, awareness building, and advisory programs may be logistically complex to set up</li> </ul>	<ul style="list-style-type: none"> <li>- Creates need for trade-offs in resource allocation between research and externally-oriented functions</li> </ul>	<ul style="list-style-type: none"> <li>- Several units develop similar activities (e.g., awareness for companies and government)</li> <li>- Research unit becomes pivotal to influence the Center’s activity as it provides each other unit’s key inputs</li> </ul>
<b>Applicability</b>	<ul style="list-style-type: none"> <li>▪ Preferred organization for institutions focusing on theoretical research, where deep expertise on topics is key</li> </ul>	<ul style="list-style-type: none"> <li>▪ Preferred model for externally-oriented groups that are technically leveraged with partners (e.g. SAEON)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Indicated for externally-oriented institutions where customer relations is key, with clearly distinct segments</li> </ul>
	<b>Less adequate model for knowledge center</b>	<b>Best fit with center mission and design principles</b>	<b>Potential long-term evolution with increasing scale</b>

SOURCE: Shareholder consultations; analysis of best practices 57

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ORGANIZATION AND PROCESSES

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**2** Key success factors for the “accelerator” model

1. Good HR coordination under the resource allocation executive to ensure adequate time-allocation from external resources and smooth relationship with internal executives
2. Strong institutional weight to be able to lock-in key external resources (researchers, advisors, etc.) for projects within extensive network of home institutions (universities, research centers, ministries, etc.)
3. Resident fundraising skills to be able to fund research and awareness camapaings on a project-by-project basis coninuously

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**2 Specific project activities may be performed by external resources**

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**NOT EXHAUSTIVE**  
Focus of following pages

<b>Overall management and coordination</b>	<ul style="list-style-type: none"> <li>Manage team (internal and external)</li> <li>Propose strategic plan and budget to governance committees</li> <li>Evaluate staff</li> <li>Establish partnerships</li> </ul>				
<b>Function-specific strategy</b>	<b>Externally-oriented functions</b>			<b>Research</b>	
	<b>Awareness raising</b>	<b>Education</b>	<b>Advisory</b>		
	<ul style="list-style-type: none"> <li>Define targets and contents</li> <li>Elect media and timings</li> </ul>	<ul style="list-style-type: none"> <li>Design new curricula</li> <li>Define target student groups</li> </ul>	<ul style="list-style-type: none"> <li>Acquire advisory clients</li> <li>Define "hot topics" for each segment/sector</li> </ul>	<ul style="list-style-type: none"> <li>Design new projects</li> <li>Counsel on new external research projects</li> </ul>	
<b>Conduction of functional projects</b>	<ul style="list-style-type: none"> <li>Prepare materials</li> <li>Conduct meetings</li> <li>Deliver content</li> </ul>	<ul style="list-style-type: none"> <li>Deliver training sessions and classes</li> <li>Evaluate students</li> <li>Prepare materials</li> </ul>	<ul style="list-style-type: none"> <li>Conduct advisory studies</li> <li>Prepare reports</li> <li>Communicate recommendations to clients</li> </ul>	<ul style="list-style-type: none"> <li>Conduct research projects</li> <li>Consolidate existing data and research initiatives</li> </ul>	<p>Specific project activities that may be conducted by internal staff or by external resources, coordinated by center management</p>
<b>Support functions</b>	<ul style="list-style-type: none"> <li>Finance</li> <li>HR</li> </ul>	<ul style="list-style-type: none"> <li>IT</li> <li>Staffing</li> </ul>	<ul style="list-style-type: none"> <li>Legal</li> <li>Image and communication</li> </ul>	<ul style="list-style-type: none"> <li>...</li> </ul>	<p>Administrative functions that should be in sourced or out-sourced depending on cost and availability of suppliers</p>

Core Knowledge Center strategic activities that should always be performed by internal staff, with support of partners, advisory, and supervisory boards

ORGANIZATION AND PROCESSES

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2 The center's staff should focus on awareness-raising and advisory, leveraging the national and international partners for research and education

● Yes  
○ No

	Multi-disciplinary?	Available/ existing	Operating model <sup>1</sup>		Description/rationale
			Outsourced <sup>1</sup>	Insourced <sup>1</sup>	
Awareness raising	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<ul style="list-style-type: none"> <li>Specific set of skills (mostly on communication) and lack of availability among local stakeholders makes awareness a key function to be ensured by the Center, leveraging existing networks (eg. INGC)</li> </ul>
Research	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<ul style="list-style-type: none"> <li>Academic researchers and teachers come from a wide range of profiles (thus being hard to insource) and are present in national and international partner centres, and thus actual research and teaching should be performed by external researchers coordinated by the center's head of research and research coordinator</li> </ul>
Education	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	
Advisory	<input type="radio"/>	<input type="radio"/>		<input type="radio"/>	<ul style="list-style-type: none"> <li>Although multidisciplinary by nature, people with advisory skills on end-to-end adaptation are limited and thus advisory teams should integrate specialized internal staff (consultants) with external researchers whose field of expertise is directly related to the advisory project)</li> </ul>

<sup>1</sup> Only refers to the activities to conduct projects; in all models projects are coordinated by center management

ORGANIZATION AND PROCESSES

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**2** Physically speaking, there are three alternatives for the center location and operating model

	Central location	Hub and spokes	Scattered
<b>Description</b>	<ul style="list-style-type: none"> <li>Full center team located within common physical space in Maputo (either autonomous or within partner institution existing premises)</li> </ul>	<ul style="list-style-type: none"> <li>Central office for mangement team, other teams in different provinces, sharing room with partner institutions (INGC, MICOA or Universities), divided according to functions (e.g. awareness rasing team sitting together)</li> </ul>	<ul style="list-style-type: none"> <li>Team scattered troughout the country independently of function, working from partner intitution premises (INGC, MICOA or universities)</li> </ul>
<b>Physical needs</b>	<ul style="list-style-type: none"> <li>Office space for the full team</li> <li>Frequent travel troughout the country on awareness raising, training and advisory missions</li> </ul>	<ul style="list-style-type: none"> <li>4 rooms (mangement team in Maputo, other three teams in other cities)</li> <li>Frequent travel troughout the country</li> </ul>	<ul style="list-style-type: none"> <li>Separate office space to all staff members</li> <li>Less travel (increased geographic coverage)</li> </ul>
<b>ICT impact</b>	<ul style="list-style-type: none"> <li>Need for fixed IT infrastructure (PCs, email and website host server, fast fixed internet connection)</li> </ul>	<ul style="list-style-type: none"> <li>Need for fixed email and website host server and mobile laptops and broadband access (for connectivity)</li> </ul>	<ul style="list-style-type: none"> <li>Email and website host server shared with partner institution</li> </ul>
<b>Advantages</b>	<ul style="list-style-type: none"> <li>+ Closer proximity among all members and increased learning curve</li> <li>- May be exclusive of non-Maputo based partners (e.g. Universities)</li> </ul>	<ul style="list-style-type: none"> <li>+ Intra-function proximity promoting learning</li> </ul>	<ul style="list-style-type: none"> <li>+ Increased geographic coverage</li> <li>- Decreased functional expertise (staff members are geographic "do it all")</li> </ul>

**2 In the short to medium term the Knowledge center can be located with UEM, provided the team structure enables geographic and scientific independence**

**Context**

UEM is currently in a position to host and lead the knowledge center in terms of physical premises and leadership profile, ensuring a fast set-up

**Implications for the Knowledge Center in the short-medium term**

- The Knowledge Center can be run by UEM leadership and locate on UEM premises in the short to medium term, until full viability as a totally independent institution is attained with the development of its four core functions
- This solution provides immediate leaderships and premises to the center, thus accelerating the time to market and reducing the set-up and first years cost base (e.g., less senior profile required for the general manager, with UEM leadership ensuring institutional connections and senior direction)
- To ensure compliance with Terms of reference and best practices in terms of geographic and scientific independence, however, two factors are critical:
  - Focus on hiring independent head of science and head of services
  - Quickly build-up proposed governance structure to broaden the reporting lines of the Center



## Table of contents

Executive summary

Input for the Knowledge Center: Terms of Reference, Stakeholder Consultations and Best Practices

Mission and vision for the Knowledge Center (D1-part 1)

Design of the Knowledge Center operational model (D1-part 2)

**Financial plan for the Knowledge Center (D1-part 3 & D2)**

Manual and implementation plan of the Knowledge Center (D3 & D4)

Appendix – detailed methodology and analysis

Best practices

Survey results

Note: D1, D2, D3 and D4 are the 4 deliverables indicated in the terms of reference Theme 7

### Preliminary note

- The current draft proposal was written taking into account the Terms of Reference, several shareholder perspectives and key learnings from best practice institutions, and was discussed among the team and in broader workshops. It is not, however, a final approved proposal for the Knowledge Center and is still meant for further stakeholder review and discussion by final decision makers
- This chapter addresses the financial plan of the Knowledge Center based on the abovementioned inputs. We expect, however, that the current proposals will still further be developed and refined during the decision and approval process, and after a management team is designated and takes ownership over the Center's implementation
- Moreover this chapter contains several estimates for the Center's cost and revenue components and their evolution under different scenarios for the Center's future activities. While all estimates were defined accounting for the local Mozambican context, they are subject to further review and adjustment, whereas all future prediction are naturally contingent upon the level of activity to be adopted by the Center, which may differ from that presented due to later decisions by the Center's governance bodies

**While a setup investment may be necessary, the center should tend to become a financially autonomous, not-for-profit institution**

Detailed on the following pages

**Principles**

- Not-for-profit institution under the public sphere, but with close links with private sector
- Ideally, financially autonomous, not requiring direct government funding (although there may be government revenues from specific public services such as awareness or advisory services to government institutions)

**A Costs**

- Personell costs
- Non-personell costs
  - External people retained for projects/programs
  - Project specific costs (e.g., travel)
  - General administrative costs

**B Revenues**

- Donations from multilateral organizations and NGOs
- Private sector for services and/or membership
- Public institutions, fees for services
- Tuition
- Private donations

**Implementation**

- Center setup costs
- Counseling services to design and implement (e.g., legal, communication)
  - Infrastructure costs
  - Recruiting costs
  - Internal cost of management team

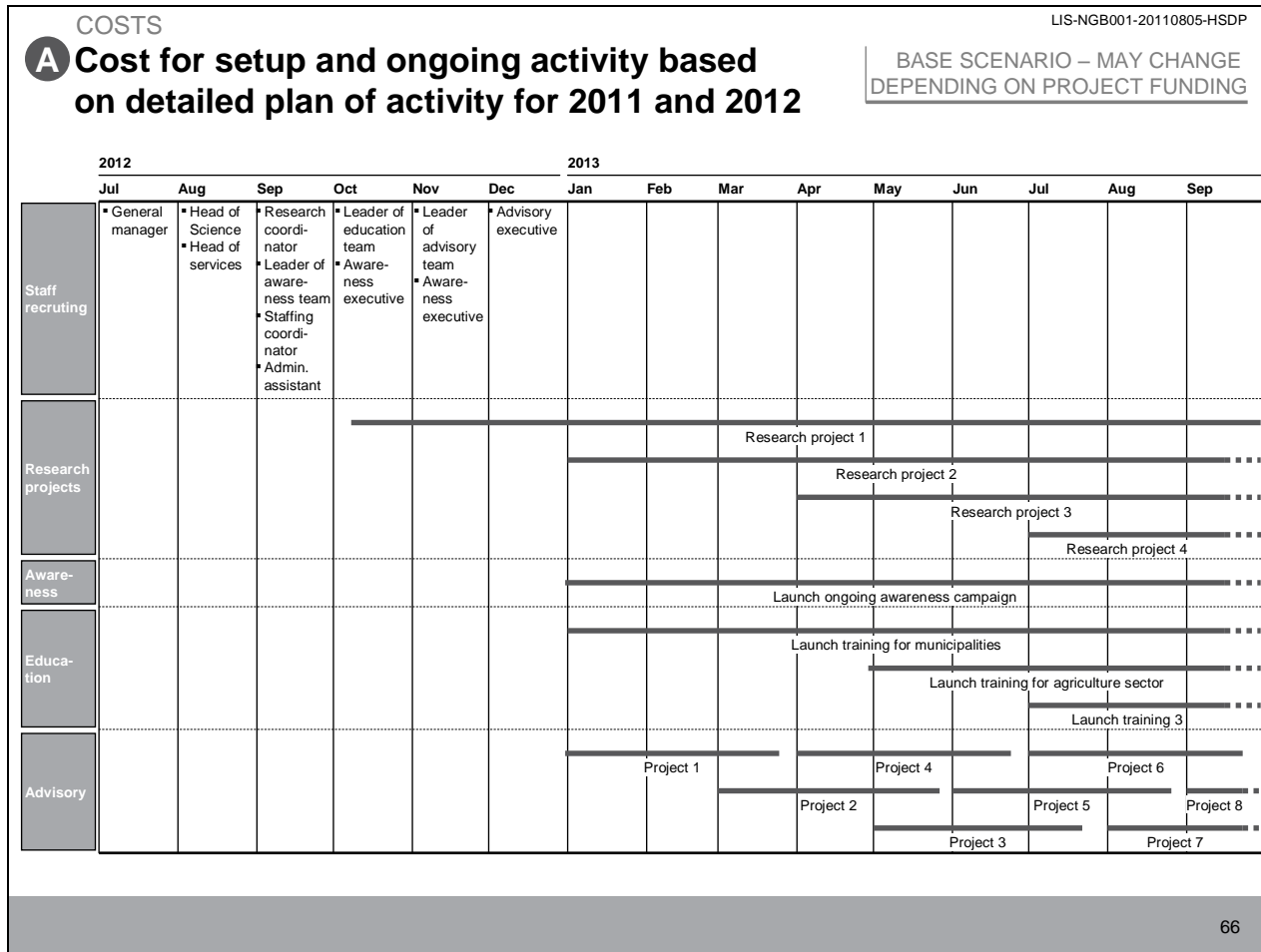
Setup costs to be covered mostly with donations and investments from multilateral funds

**Ongoing financials**

- Costs to conduct center activity
- Fixed costs to operate center
  - Variable, project-related costs

Ongoing revenues to be directly related to ongoing projects, paid according to nature of the project

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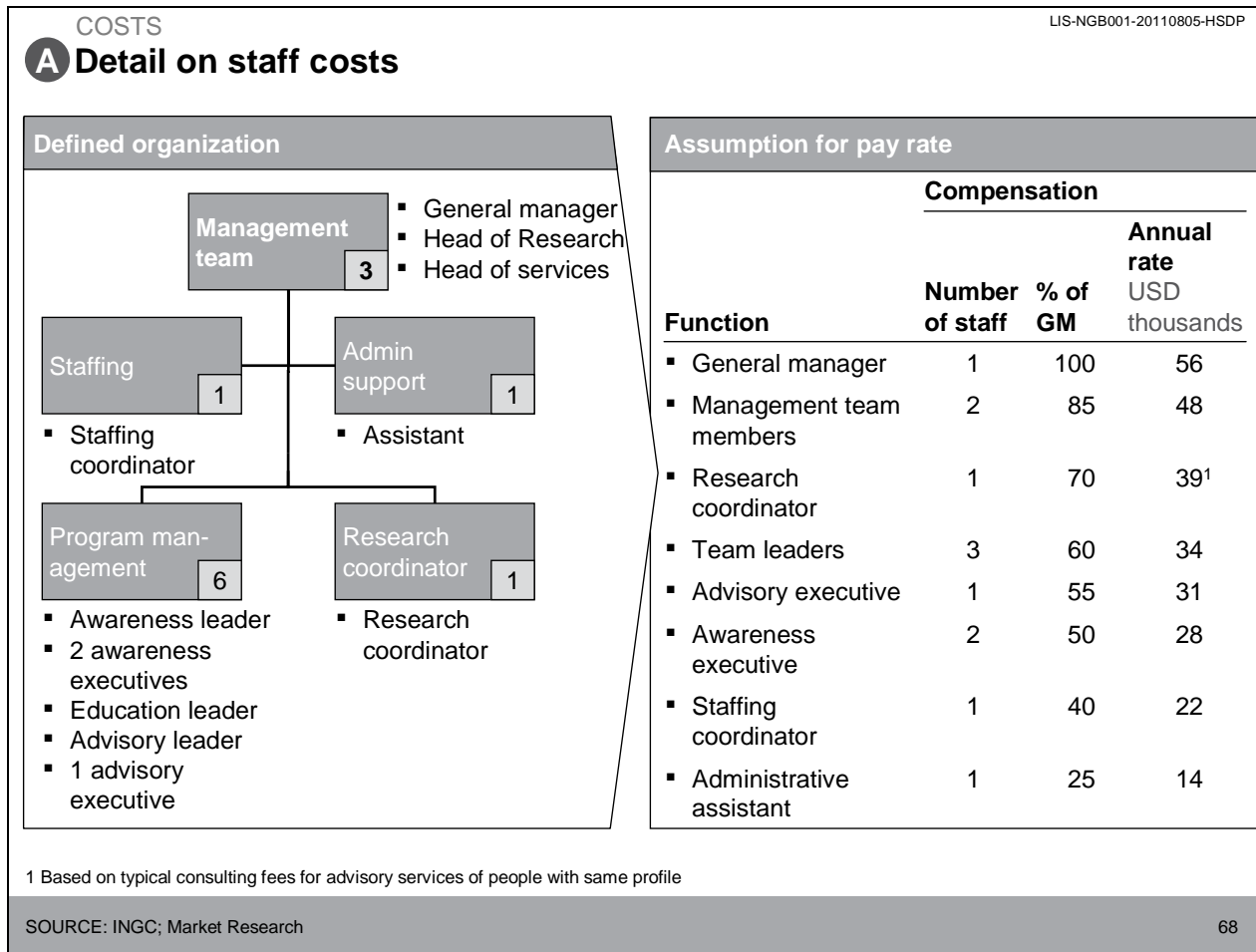
**A COSTS**  Further detailed **ESTIMATES**

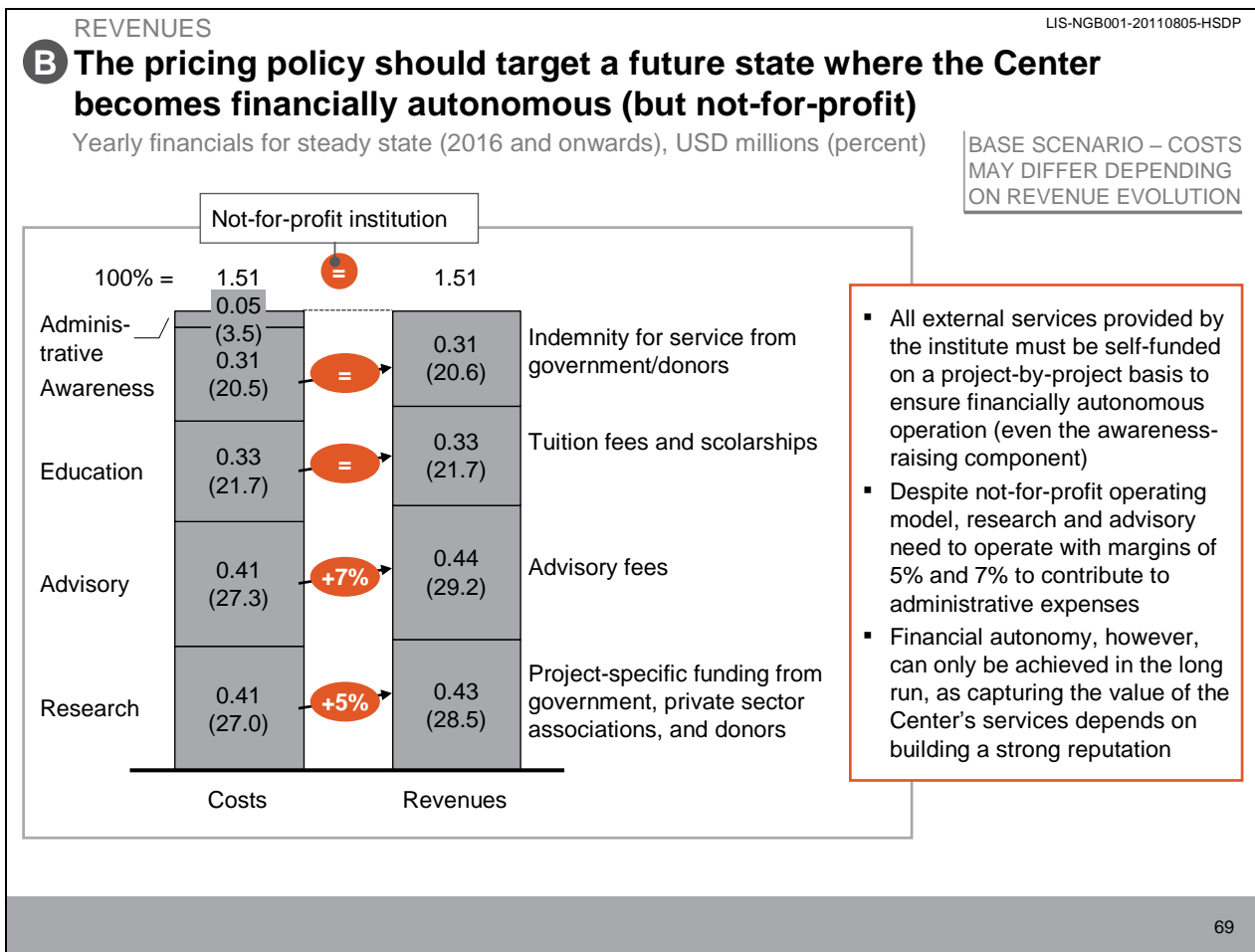
**Costs were estimated based on local references and best practices**

Type of cost	Description	Assumptions	Value USD thousands	
			Setup (Jul-Dec)	Ongoing Annual
Ongoing direct center costs	Staff costs	<ul style="list-style-type: none"> <li>Salary for research coordinator according to consultancy fee of people with similar profile ~USD 200/day</li> <li>Remaining salaries according to best-practice structure (see next page)</li> </ul>	131	409
	Staff-related costs	<ul style="list-style-type: none"> <li>Total equipment (laptop, phone) of USD 1,200, lifetime of 3 years</li> <li>Ongoing cost of USD 250/month per staff (supplies, water, energy, etc.)</li> </ul>	25	36
	Infrastructure costs (rent and maintenance)	<ul style="list-style-type: none"> <li>Market value for a 270 m<sup>2</sup> apartment in Central Maputo (22.5 m<sup>2</sup>/employee, on the upper range of best practices due to need for class room for ~30 people)</li> <li>Includes cleaning and maintenance</li> </ul>	26	49
Ongoing costs of projects	Research projects	<ul style="list-style-type: none"> <li>4 ongoing research projects in the future</li> <li>Each project lasts ~1 year and includes 300 man days</li> <li>1st project to launch Jan 2012, 1 new project every 3 months afterwards</li> </ul>	19	300
	Education programs	<ul style="list-style-type: none"> <li>3 professional training courses to launch in 2012 and 1 Masters program to launch in Jan 2013</li> <li>Training programs to reach ~1,000 people per year, Master class of 20 people</li> </ul>	0	253
	Awareness campaigns	<ul style="list-style-type: none"> <li>Each member of awareness team spends 120 days per year in ~24 trips out of town (daily cost ~USD 160 and air travel USD 400/travel)</li> <li>Investments in materials (brochures, posters, etc.) and advertising of ~USD 70/year</li> </ul>	0	156
	Advisory projects	<ul style="list-style-type: none"> <li>Total ongoing value of 3 projects, 1st in April 2012</li> <li>1 external resource per project costing USD 300/day</li> <li>30% costs in expenses</li> </ul>	0	390
Initial (one-off) setup costs	Administrative staff hiring costs	<ul style="list-style-type: none"> <li>USD 300/new staff (legal, HR agencies, etc.)</li> </ul>	4	N/A
	Initial construction/building adaptation works	<ul style="list-style-type: none"> <li>USD 50,000 to prepare flat</li> </ul>	50	N/A
	Institutional set-up	<ul style="list-style-type: none"> <li>Legal fees to define Center charter of USD 10,000</li> <li>Administrative fees to register USD 5,000</li> <li>Consulting fees for branding and web site design of USD 8,000</li> <li>Library acquisition of USD 10,000</li> </ul>	33	N/A

SOURCE: INGC; Architectural norms; 67

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**B The funding model should encompass a significant number of entities and involve the private sector as a much as possible**

Function	Costs involved	% of Center costs	Potential funders
<b>Management</b>	<ul style="list-style-type: none"> <li>Executive Director and administrative support</li> </ul>	4%	<ul style="list-style-type: none"> <li>Government</li> <li>International NGOs focused on climate change research</li> </ul>
<b>Research</b>	<ul style="list-style-type: none"> <li>Direct project coordination costs</li> <li>Costs for contracted researchers</li> </ul>	27%	<ul style="list-style-type: none"> <li>Government</li> <li>International NGOs</li> <li>Private sector (for concrete projects)</li> <li>Advisory services fees</li> </ul>
<b>Awareness-raising</b>	<ul style="list-style-type: none"> <li>Costs for the team responsible for awareness campaigns (including director)</li> </ul>	21%	<ul style="list-style-type: none"> <li>Government</li> <li>Domestic and international NGOs</li> <li>Private sector (CSR area)</li> </ul>
<b>Training</b>	<ul style="list-style-type: none"> <li>Costs for program management team</li> <li>Costs for contracted professors and trainers</li> </ul>	22%	<ul style="list-style-type: none"> <li>Tuition for courses</li> <li>Government (for public programs)</li> <li>NGOs (for public awareness)</li> </ul>
<b>Advisory services</b>	<ul style="list-style-type: none"> <li>Costs of advisory team</li> <li>Costs for contracted project staff</li> </ul>	27%	<ul style="list-style-type: none"> <li>Fees for advisory services</li> </ul>

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**B** Key success factors for receiving funding INDICATIVE

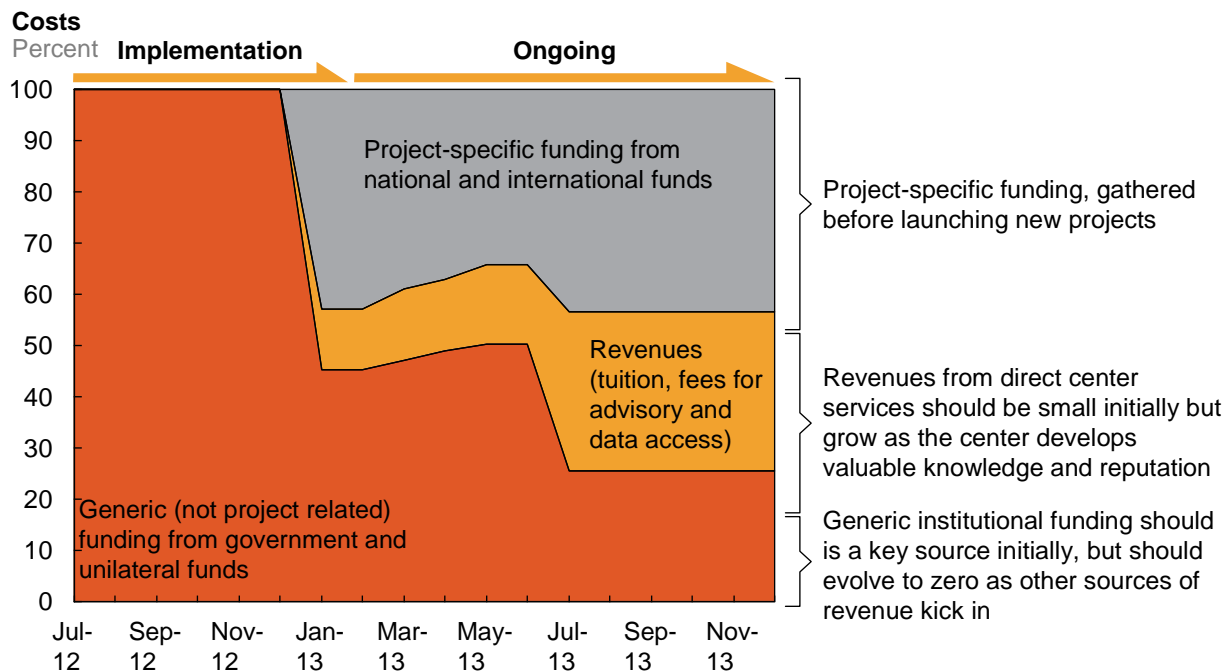
<b>Government</b>	<ul style="list-style-type: none"> <li>▪ Base contribution to cover (part) of cost base or specific contributions to basic research, awareness and educational activities</li> <li>▪ Alignment with and contribution to broader government agenda</li> </ul>	<p><b>Common themes</b></p> <ul style="list-style-type: none"> <li>▪ Alignment of activities with own agenda and priorities</li> <li>▪ Clear owner and responsibilities to deliver results</li> </ul>
<b>Private Sector</b>	<ul style="list-style-type: none"> <li>▪ Specific cash or in-kind contributions to applied research, awareness and educational activities</li> <li>▪ Link to CSR or broader business agenda; clear responsibilities and accountabilities to achieve objectives</li> </ul>	
<b>NGOs</b>	<ul style="list-style-type: none"> <li>▪ Specific contributions to applied research, awareness and educational activities</li> <li>▪ Clear contribution to country strategy / priorities; clear responsibility and accountability to achieve objectives</li> </ul>	
<b>Users</b>	<ul style="list-style-type: none"> <li>▪ Tuition or fees for educational or advisory service</li> <li>▪ Clear and differentiating 'value proposition' tailored to target groups</li> <li>▪ (Emerging) image or reputation to deliver on value proposition</li> </ul>	

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After an initial setup phase funded by generic sources, the Center should become financially sustainable with project funding and direct revenues from services

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**Proforma P&L Statement**

ESTIMATES

<b>P&amp;L Statement (thousand USD)</b>	2012	2013	2014	2015	2016
<b>Revenues</b>					
<b>Project Specific Funding</b>					
Research	~30	~188	~400	~430	~430
Awareness	~60	~258	~310	~310	~310
<b>Direct Revenues</b>					
Tuition	~15	~120	~308	~330	~330
Advisory Fees	~33	~198	~410	~440	~440
<b>Generic Funding</b>	~205	~400	~75	~0	~0
<b>TOTAL REVENUES</b>	<b>~343</b>	<b>~1.163</b>	<b>~1.503</b>	<b>~1.510</b>	<b>~1.510</b>
<b>Costs</b>					
Personnel Costs	~140	~400	~403	~410	~410
Rent, utilities and equipment	~45	~100	~100	~100	~100
Project-related costs (travel, etc.)	~30	~130	~160	~160	~160
External staff	~105	~525	~840	~840	~840
Other setup costs	~23	~8	~0	~0	~0
<b>TOTAL COSTS</b>	<b>~343</b>	<b>~1.163</b>	<b>~1.503</b>	<b>~1.510</b>	<b>~1.510</b>
<b>NET PROFIT/LOSS</b>	<b>~0</b>	<b>~0</b>	<b>~0</b>	<b>~0</b>	<b>~0</b>

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The level of activity may differ according to demand and available funding, and so the cost structure may need to be adapted ESTIMATES

Scenarios	Level of ongoing activity		Education programs in place	P&L account in 2013 <sup>3</sup> USD thousands			Cost adjustment vs. base scenario
	Number of research projects	Number of on-going advisory studies		Revenues	Costs	Gross result <sup>2</sup>	
<b>Slower evolution</b>	<ul style="list-style-type: none"> <li>3 large projects<sup>1</sup></li> <li>4 small projects<sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>3 ongoing 3-month studies</li> </ul>	<ul style="list-style-type: none"> <li>800 people attending 1-week professional programs</li> <li>Master class of 20 people</li> </ul>	~1,255	~1,313	~-58	<ul style="list-style-type: none"> <li>Reduction in external staff retained</li> </ul>
<b>Base scenario</b>	<ul style="list-style-type: none"> <li>4 large projects<sup>1</sup></li> <li>6 small projects<sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>4 ongoing 3-month studies</li> </ul>	<ul style="list-style-type: none"> <li>~1,000 people attending 1-week professional programs</li> <li>Master class of 20 people</li> </ul>	~1,500	1,500	~0	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<b>Accelerated evolution</b>	<ul style="list-style-type: none"> <li>5 large projects<sup>1</sup></li> <li>8 small projects<sup>1</sup></li> </ul>	<ul style="list-style-type: none"> <li>5 ongoing 3-month studies</li> </ul>	<ul style="list-style-type: none"> <li>~1,000 people attending 1-week professional programs</li> <li>Master class of 40 people</li> </ul>	~1,845	~1,771	~74	<ul style="list-style-type: none"> <li>More external staff retained</li> <li>Additional staffing of advisory team</li> </ul>

<sup>1</sup> Large projects of ~600 man-days; small projects of ~300 man-days

<sup>2</sup> To be supplemented by generic funding from donors and government or applied in reducing fees for public services such as awareness campaigns

<sup>3</sup> First stable year on the Profit and Loss Statement

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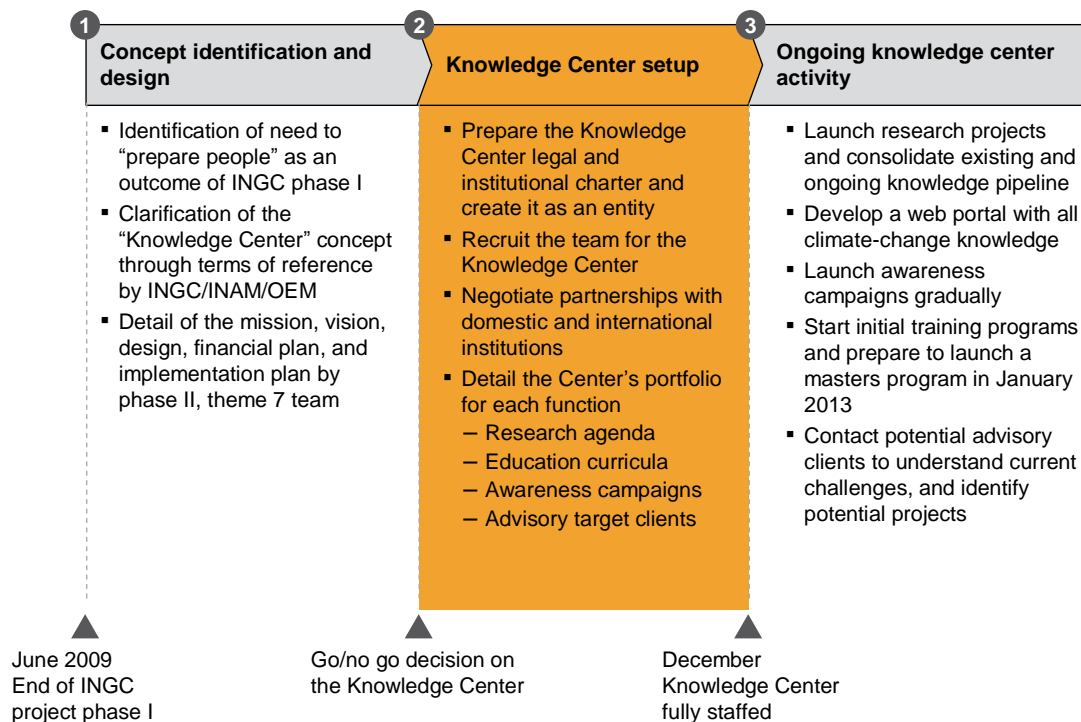
Note: D1, D2, D3, and D4 are the 4 deliverables indicated in the terms of reference for Theme 7

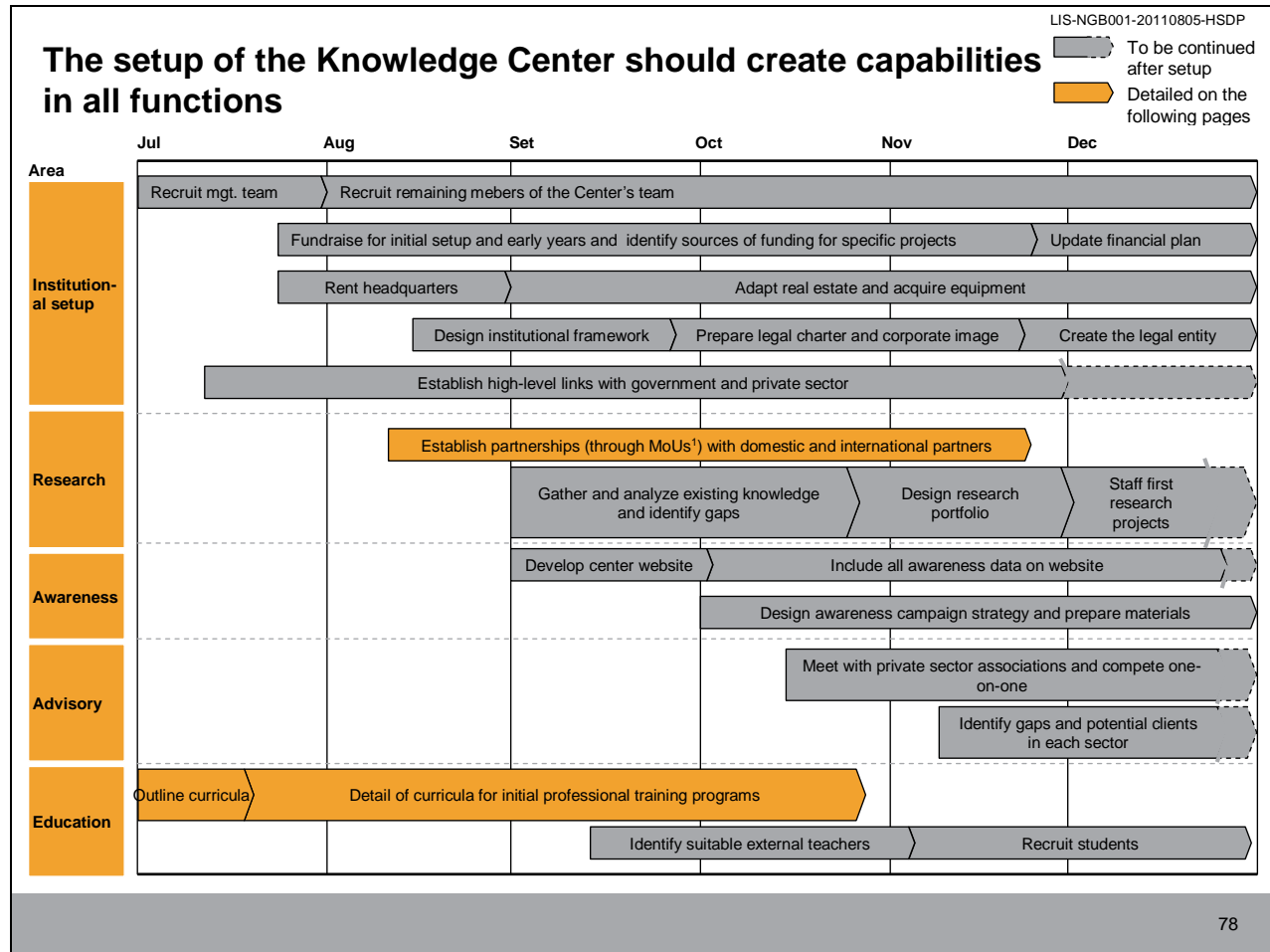
### Preliminary note

- The current draft proposal was written taking into account the Terms of Reference, several shareholder perspectives and key learnings from best practice institutions, and was discussed among the team and in broader workshops. It is not, however, a final approved proposal for the Knowledge Center and is still meant for further stakeholder review and discussion by final decision makers
- This chapter addresses the implementation plan of the Knowledge Center – including calendar for implementation, and content for the initial partnerships, education programs and awareness campaigns - based on the abovementioned inputs. Both the actual implementation plan, and the final configuration of partnerships, curricula and campaigns will, however, be subject to further stakeholder review and scrutiny by the future management team and thus may differ from this report

**The concept presented in this report should be the basis to set up the Knowledge Center after a go/no go decision**

Focus of this chapter







PARTNERSHIPS

LIS-NGB001-20110805-HSDP

**The Knowledge Center should establish partnerships with domestic and international partners**

**Target partners**

**International**

Foreign research centers and universities with reputation for excellence in relevant areas for the Center (including, at least, the climate-focused examples in the best practice section<sup>1</sup>)

- Scientific reputation in climatology, adaptation engineering, sociology, etc.
- Knowledge of local/african conditions
- Established credibility with climate adaptation funding organizations

**Domestic**

- All universities with productive scientific groups overlapping with the Centre's priorities (climate sciences, geography, agronomy, engineering, economy, GIS, sociology)
- All functional research centers in Mozambique (e.g. agronomy, epidemics)

**Structure for the Memoranda of Understanding**

**Partnership overview**

- Joint statement on commitment to collaborate in achieving each Center's objectives, highlighting areas of focus for partnership

**Data sharing**

- Agreement on full disclosure of research results and definition of preferred conditions of access to proprietary raw and processed climate and adaptation related data (e.g., rainfall or temperature data)

**Resource sharing**

- Commitment to allocate resources to each others projects within the scope of general agreement and definition of an objective, a priori financial compensation table for resource allocation (e.g. cost of partner resources if allocated to Mozambican Center projects)

**Rotation and education programs**

- Agreement on cross-effort to develop staff skills rotation programs ranging from interchange in managers to discounted Masters and PhD programs

<sup>1</sup> Kilmaitilpassning, ACCESS, SAEON and Tyndall Centre

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EDUCATION PROGRAMS LIS-NGB001-20110805-HSDP

**Three short-term training courses should be launched in the first year of operation**

	Climate change in municipal planning	Resilient agriculture strategy	Climate-proof building
<b>Target</b>	<ul style="list-style-type: none"> <li>Municipal planning officials (city councilors and staff)</li> </ul>	<ul style="list-style-type: none"> <li>Self-employed and decision-making staff in agriculture firms</li> </ul>	<ul style="list-style-type: none"> <li>Construction workers team leaders and technical engineers</li> </ul>
<b>Duration</b>	<ul style="list-style-type: none"> <li>4.5 days</li> </ul>	<ul style="list-style-type: none"> <li>2 days</li> </ul>	<ul style="list-style-type: none"> <li>4 days</li> </ul>
<b>Class size</b>	<ul style="list-style-type: none"> <li>10</li> </ul>	<ul style="list-style-type: none"> <li>30 (from same region)</li> </ul>	<ul style="list-style-type: none"> <li>10</li> </ul>
<b>Sessions</b>	<ul style="list-style-type: none"> <li>Climate change impact in cities through case study (4h)                             <ul style="list-style-type: none"> <li>Disaster risk effects (floods, cyclones)</li> <li>Danger to water supplies</li> <li>Epidemics</li> </ul> </li> <li>Vulnerability and risk assessment tools with practical exercise (4h)</li> <li>Adaptation measures per type of risk including insurance (8h)</li> <li>Prioritization techniques with exercise (4h)</li> <li>Implementation challenges and strategies (e.g. social behavior)</li> <li>Funding strategies and external fund applications (4h)</li> <li>City strategy and integration in urban planning including analysis of current plans (8h)</li> </ul>	<ul style="list-style-type: none"> <li>Climate change effect in crop yields (4h)</li> <li>Crop adaptation techniques (4h)</li> <li>Climate-proof crops (draught and/or flood resistant) and expected yields (4h)</li> <li>Financial measures to reduce risk, e.g., community insurance and price hedging strategies (4h)</li> </ul>	<ul style="list-style-type: none"> <li>Climate change impact on natural disasters (flood, wind, epidemics) with case study (4h)</li> <li>Climatologic study of vulnerability in each area with exercise (8h)</li> <li>Principles of climate-proof construction, e.g., key design features for new buildings                             <ul style="list-style-type: none"> <li>Flood protection (4h)</li> <li>Wind protection (2h)</li> <li>Epidemics protection (2h)</li> </ul> </li> <li>Strategies for adaptation/rehabilitation of existing buildings (8h)</li> <li>Economics of climate-proof construction: "Why does it pay off?" (4h)</li> </ul>

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**There are 5 critical short-term actions to launch the Knowledge Center**

- 1** Approve the Knowledge Center concept – Mission, Vision, Design and Financial Plan
- 2** Create the key governance bodies is for the Knowledge Center – Supervisory Board, Academic and Pedagogic Council and Customer Management Advisory Board
- 3** Nominate the Knowledge Center Management Team – General Manager, Head of Science and Head of Services
- 4** Create the legal charter and institutional framework for the Knowledge Center
- 5** Negotiate long term partnerships with national and international partners according to MoU structure in this report

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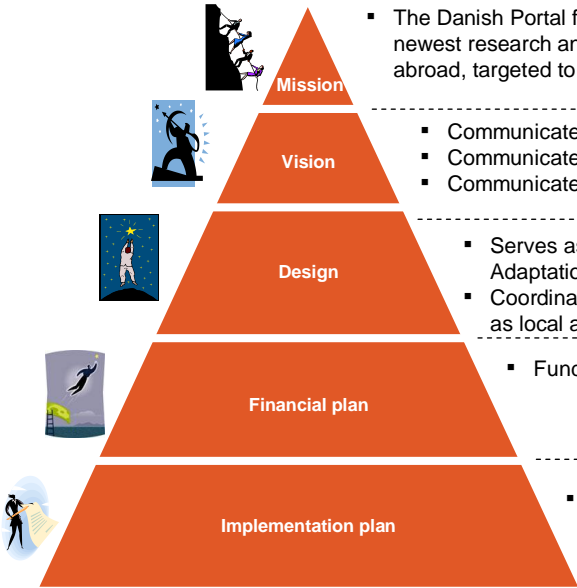
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BEST PRACTICES


**2 Best practice institution profile: Klimatilpasning**

LIS-NGB001-20110805-HSDP







**Awareness raising**

- 


**Mission**

  - The Danish Portal for Adaptation to Climate Change presents information on the newest research and developments within climate change adaptation in Denmark and abroad, targeted to individuals, municipalities and businesses
- 


**Vision**

  - Communicates government's climate adaptation strategy
  - Communicates general knowledge about climate change adaptation
  - Communicates general research results on climate change adaptation
- 

**Design**

  - Serves as the secretariat for the Coordination Forum for Climate Change Adaptation, chaired by the Danish Ministry of Climate and Energy
  - Coordination Forum consists of representatives from nine ministries as well as local and national government from Denmark and the Danish regions
- 

**Financial plan**

  - Funded by Danish Ministry of Climate and Energy, starting in 2008
- 

**Implementation plan**



  - No information available

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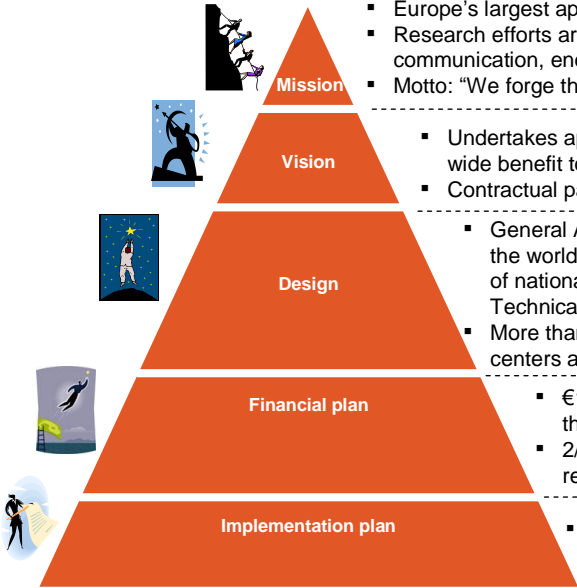
BEST PRACTICES

2 Best practice institution profile: Fraunhofer

LIS-NGB001-20110805-HSDP

**Research**





- Mission**
  - Europe's largest application-oriented research organization, based in Germany
  - Research efforts are geared entirely to people's needs: health, security, communication, energy and the environment.
  - Motto: "We forge the future"
- Vision**
  - Undertakes applied research of direct utility to private and public enterprise and of wide benefit to society
  - Contractual partners include industry, the service sector, and public administration
- Design**
  - General Assembly elects Senate members, made up of eminent figures from the world of science, business, industry, and public life, plus representatives of national and regional government, and members of the Scientific and Technical Council
  - More than 80 research units at different locations in Germany and research centers and representative offices in Europe, US, Asia, and the Middle East
- Financial plan**
  - €1.65 billion annual research budget, of which €1.4 billion generated through contract research
  - 2/3 of contract research revenue from industry and publicly-financed research projects, 1/3 from German federal institutional funding
- Implementation plan**
  - n/a (has been in existence since 1949)

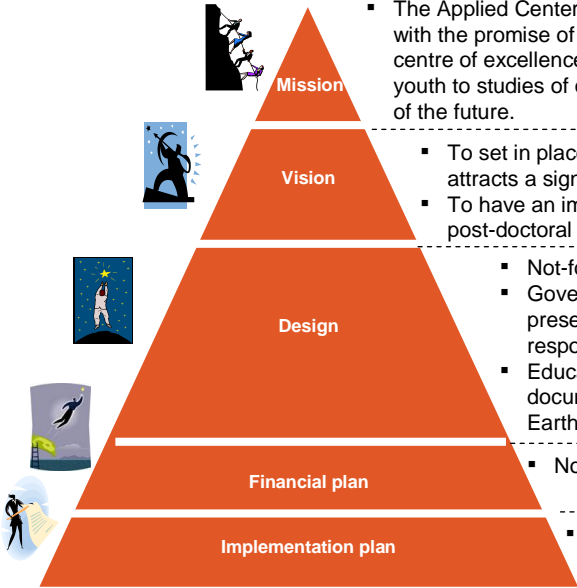
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BEST PRACTICES

2 Best practice institution profile: ACCESS

LIS-NGB001-20110805-HSDP



**Training**

- The Applied Center for Climate and Earth System Studies seeks to inspire optimism with the promise of a better future, to provide educational opportunities, and to be a centre of excellence that warrants international recognition, and that draws the African youth to studies of our planet and its management and produces the decision makers of the future.
- To set in place an internationally recognized educational programme which attracts a significant cohort of African and international students
- To have an impact at all levels of education - from primary school through to post-doctoral programmes to in-service training for professionals.
- Not-for-profit centre under the CSIR<sup>1</sup>, supervised by Parliament
- Governance Board has overall responsibility for the annual budget presented by the ACCESS Research Director, who acts as the responsible chief financial officer of the Board
- Education programs include broad range of options, including e-courses, documentaries, short-courses and workshops and the Master program in Earth Systems Science
- No information available
- No information available

**Mission**

**Vision**

**Design**

**Financial plan**

**Implementation plan**



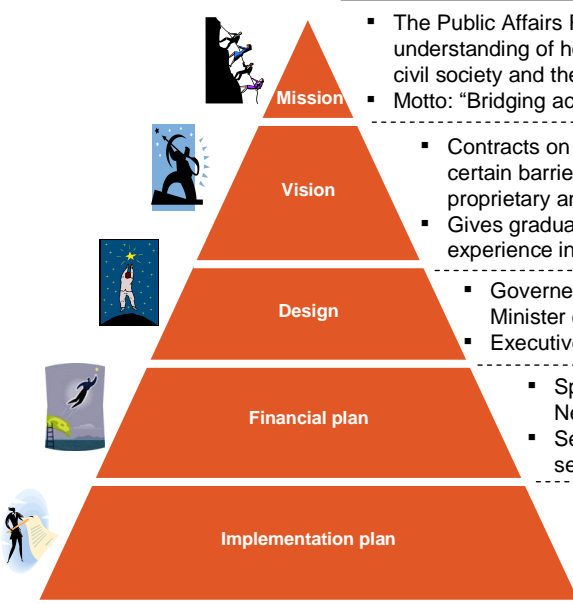
<sup>1</sup> Council for Scientific and Industrial Research, large South African public research organization focused on economic growth

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BEST PRACTICES

2 Best practice institution profile: PARI

LIS-NGB001-20110805-HSDP

**Advisory services**

- Mission**
  - The Public Affairs Research Institute in Johannesburg seeks to develop a deep understanding of how government institutions and agencies function, their relations to civil society and their 'embeddedness' in social and political networks.
  - Motto: "Bridging academic and applied research"
- Vision**
  - Contracts on behalf of clients to assist them in understanding and/or overcoming certain barriers to performance with relatively cheap services (results are not proprietary and are made public at the end of studies)
  - Gives graduate students, at Masters and PhD level, opportunities to acquire experience in the field by placing them in long-term research projects.
- Design**
  - Governed by board of 6 members of government and academia (including Minister of Economic Planning, Basic Education, Office of the President)
  - Executive director + 6 research fellows/associates
- Financial plan**
  - Sponsored by Ford Foundation, Standard Bank, Liberty Life, Nedbank, FirstRand foundation
  - Self sustained in revenues from both sponsorships and advisory services
- Implementation plan**

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MELHORES PRÁTICAS

**2 Best practice institution profile: South African Environmental Observation Network (SAEON)**

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**SAEON**  
South African Environmental Observation Network

**Research and Awareness-Raising**

- Mission**
  - To collect, store and assess appropriate longitudinal social, economic and environmental data to inform relevant research, policy, reporting and action
  - Responsibilities rest on three mandates: environmental observation, development of information systems, and education outreach (e.g. empowering secondary school math/science teachers, boosting the number of environmental science PhDs)
- Vision**
  - A sustained, coordinated, responsive and comprehensive in situ South African Earth observation network that delivers long-term reliable data for scientific research and informs decision-making for a knowledge society and improved quality of life
- Design**
  - Governed by Advisory Board comprised of leaders from government, private sector, and academia that provides strategic direction, facilitates high-level networking, evaluates progress, and advises the CEO/President
  - National office in Pretoria houses three units:
    - Coordination unit:** coordinates education outreach, information management, and systems engineering
    - Research management unit:** includes Chief Scientist and Research Administrator
    - National office operations:** shared administrative services including financial, procurement, payroll, communication, marketing, and branding
- Financial plan**
  - Core annual long-term funding provided by the South African Department of Science and Technology
- Implementation plan**
  - Established in 2002 after a process of deliberation within the research community.
  - Department of Science and Technology (DST) took the lead by mandating and funding the National Research Foundation

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MELHORES PRÁTICAS

2 Best practice institution profile: Tyndall Center for Climate Change Research

Tyndall Centre<sup>®</sup>  
for Climate Change Research

LIS-NGB001-20110805-HSDP

**Research and Awareness-Raising**

- Mission**
  - To **research**, assess and communicate from a distinct trans-disciplinary perspective, the options to mitigate, and the necessities to adapt to, climate change, and to integrate these into the global, UK and local contexts of sustainable development
  - To bring together scientists, economists, engineers and social scientists who are working to develop sustainable responses to climate change
- Vision**
  - To be an internationally recognized source of high quality and integrated climate-change research, and to exert a seminal influence on the design and achievability of the long-term strategic objectives of national and international climate policy.
- Design**
  - Governed by the Tyndall Council which is responsible for medium and long term policy and strategy
  - Tyndall Assembly is a consultative annual forum of all Tyndall Center staff, students, stakeholders associated with Tyndall, as well as Research Council representatives
  - Supervisory Board in the process of being formed
    - Supervisory Board in the process of being formed
  - Seven core partners universities: the University of East Anglia, University of Manchester, University of Southampton, University of Oxford, University of Cambridge, University of Newcastle, and the University of Sussex
- Financial plan**
  - Funding is provided by:
    - The Natural Environment Research Council
    - the Economic and Social Research Council
    - the Engineering and Physical Sciences Research Council.
- Implementation plan**
  - Founded in 2000
  - No further information available

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## Companies target in survey

Rank	Nome	Sector	Volume Negócios	Rank	Nome	Sector	Volume Negócios
1	Mozaal	Industria	1.353.961	51	ENOP	Construção	15.751
2	Moçambique Celular	Comunicações	277.869	52	Pescamar	Pescas	15.524
3	Petromoc- Petroleos de Moçambique	Energia	277.038	53	Agrifocus	Comércio	15.373
4	Hidroelectrica de Cabora Bassa	Energia	239.320	54	Televisa	Serviços	13.977
5	BP Moçambique	Energia	186.353	55	Banco Procredit	Banca e Leasing	13.159
6	EDM-electricidade de Moçambique E.P.	Energia	180.119	56	Mercury Comercial	Comércio	12.770
7	Cervejas de moçambique	Alimentação e Bebidas	169.961	57	Ferpinta Moçambique	Indústria	12.544
8	Motraco, Sarl	Energia	163.059	58	TV CABO	Comunicações	12.452
9	BIM- Banco Internacional de Moçambique, E.P.	Banca e Leasing	162.112	59	Higest Moçambique	Indústria	11.988
10	Sasol Petroleum Temane, Lda	Energia	129.801	60	Subrita	Construção	11.869
11	Mozambique Leaf Tobacc, Ida	Agricultura	125.686	61	Emocil	Construção	10.684
12	TDM- Telecomunicações de Moçambique	Comunicações	109.437	62	Efripel	Pescas	10.133
13	LAM- Linhas aéreas de Moçambique	Transportes	105.492	63	MEX	Transportes	10.044
14	Cimentos de Moçambique, sarl	Industria	102.677	64	Académica	Indústria	9.725
15	C.M.C. Africa Austral, Lda	construção	93.001	65	CIMBETÃO	Indústria	9.433
16	CFM- Portos e Caminhos de Ferro de Moçambique	Transportes	87.412	66	Lalgy Truck Sales	Comércio	9.389
17	Coca-Cola Sabco (Moçambique), Sarl	Alimentação e Bebidas	79.922	67	TVM - Televisão de Moçambique	Comunicações	9.059
18	BCI- Banco Comercial e de Investimentos, SARL	Banca e Leasing	75.569	68	Polana Serena Hotel	Hotelaria e Turismo	8.965
19	Standard Bank, SARL	Banca e Leasing	73.723	69	Grupo Moçfer	Agricultura	8.843
20	Mocargo- Empresa Moçambicana de Cargas, SARL	Transportes	71.725	70	FNB	Banca e Leasing	8.796
21	Manica Freight Services, SARL	Transportes	70.109	71	African Banking Corporation	Banca e Leasing	8.796
22	Petrogal Moçambique, Lda	Energia	68.667	72	Home Center	Comércio	8.235
23	Companhia Moçambicana de Hidrocarbonetos, S. A.	Energia	52.925	73	Socremo	Banca e Leasing	8.030
24	Petromoc e Sasol, Sarl	Energia	50.345	74	Tecnel Service	Serviços	7.946
25	Cornelder de Moçambique, Sarl	Transportes	45.130	75	Salvor Hotéis Moçambique	Hotelaria e Turismo	7.569
26	SIM- Seguradora Internacional de Moçambique, SARL	Seguros	44.667	76	Avis	Hotelaria e Turismo	7.542
27	BAT- British American Tobacco Mozambique	Indústria	44.078	77	Sociedade do Notícias	Comunicações	7.529
28	Toyota deMoçambique, Sarl	Comércio	43.212	78	S.E Ginwala & Filhos Lda	Alimentação e Bebidas	7.300
29	Barclays Bank Moçambique, Lda	Banca e Leasing	40.965	79	Aberdare Intelec	Indústria	7.176
30	CETA- Construções e Serviços, SARL	Construção	39.449	80	Turvisa	Hotelaria e Turismo	7.054
31	Entrepoto Comercial de Moçambique	Comércio	35.647	81	KPMG	Serviços	6.900
32	MPDC- Sociedade de Desenvolvimento do Porto de Maputo, SARL	Transportes	35.259	82	Lusovinhos	Alimentação e Bebidas	6.891
33	Construa, Lda	Comércio	35.186	83	Grupo Madal	Indústria	6.627
34	Emose, Sarl	Seguros	29.330	84	Transportes Carlos Mesquita	Transportes	6.579
35	Conduril- Construtora Durience Delegação de Moçambique, SA	Construção	33.013	85	Alif Química Industrial	Indústria	6.526
36	Unicom Moçambique , Lda	Comércio	31.368	86	A & L Enterprises	Alimentação e Bebidas	6.411
37	Intelec Holdings, Lda	Energia	25.255	87	Dataserv	Comércio	6.286
38	Holland Seguros, SARL	Seguros	24.772	88	DHL Moçambique	Transportes	6.275
39	MIPS- Serviço Internacional de Portos de Moçambique	Transportes	24.137	89	Electrotec	Energia	6.192
40	CDN- Corredor de Desenvolvimento do Norte, SARL	Transportes	23.896	90	TPM	Transportes	6.045
41	GAME Discount World Moçambique, SARL	Comércio	23.765	91	Listas Telefónicas de Moz.	Comunicações	6.020
42	Global Alliance CGSM Seguros, SARL	Seguros	23.069	92	Mafua Comercial	Comércio	5.849
43	Gani Comercial,Lda	Comércio	22.564	93	Matola Cargo Terminal	Transportes	5.686
44	Kangela Comercial, Lda	Comércio	21.582	94	GOLO - Agência de Publicidade	Serviços	5.567
45	Aeroportos de Moçambique, E.P.	Transportes	20.588	95	NBC Representações	Comércio	5.550
46	Águas de Moçambique, SARL	Alimentação e Bebidas	19.725	96	Topack Moçambique	Indústria	5.409
47	Mega- Distribuição de Moçambique, Lda	Comércio	18.322	97	STV - Soico Televisão	Comunicações	5.393
48	Transportes Lalgy, Lda	Transportes	17.755	98	Hidroafrica	Serviços	5.133
49	Ronil, Lda	Comércio	17.173	99	Sodial	Comércio	5.122
50	Ferro Moçambique, Lda	Comércio	16.737	100	The Mauritius Commercial Bank	Banca e Leasing	5.059

## Survey questionnaire

### Understanding the demand for a climate change adaptation Knowledge Center in Mozambique through a stakeholder survey

#### TARGET

- 100 top companies according to KPMG survey
- Industry associations of all sectors
- Key public companies to be indentified by INGC

#### Questions

- Demographic information of company (revenues, number of employees, business sector, geographic location of business activity (south, middle, north; multiple answer possible)
- How strongly is your business impacted by the following events? (from 0 – no impact to 5 – strong impact)
  - Floods (includes coastal and inland floods)
  - Storms
  - Epidemic diseases (e.g. Malaria or Cholera)
  - Earthquakes
  - Other: please state
- What are the most important impacts of these events on your business? (by event; from 0 – Not important to 5 – Very important)
  - Destruction of physical assets
    - ... Impact on workforce (absenteeism, etc.)
    - ... Impact on supply chains
    - ... Impact on customers
    - ... Other: please state
  - Other: please state
- What type of measures are you taking to protect our business against the impact of the aforementioned events? (by event; Yes/No; if yes, textbox)
  - Infrastructural improvements
  - Emergency reaction equipment
  - Employee training
  - Insurance schemes
  - Other: please state
- How many people in your business are dealing with these topics? Please list whether they deal with these topics on part- or full-time basis and in what department they work.

- How familiar are you with the concept of climate change in general? (from 0 – I don't know/understand to 5 – I know/understand in detail)
- How well do you understand the effect of climate change on the following events (by event; from 0 – I don't understand to 5 – I know the effect of climate change in detail)
  - How interested are you in better understanding the effect of climate change on your business? (from 0 – not interested to 5 – Very interested)
- What specific areas would you be interested in understanding better? (Rate each area from 0 – not interested to 5 – Very interested)
  - Better understanding of risk that your business faces
  - Better understanding of potential non-financial measures to protect your business
  - Better understanding of potential financial measures (e.g. insurance)
  - Better understanding of proper risk management strategies and processes
  - Better understanding of implementation challenges and success factors
  - Other: please state
- How interested are you in a professional training program for your staff on these topics? (0 – not interested to 5 – Very interested)
- How many staff people would you send to such a training program per year? (less than 1, 1-2, 3-5,6-10, more than 10)
- How much would be affordable to pay for the training program per participant and week? (open box)
- How valuable is a formal qualification (Degree in Climate Change and Disaster Risk Management) for your employees who are tasked to deal with these topics? (From 0 - Not valuable to 5 – Very valuable)
- How many new hires with these qualifications will you need per year? (less than 1, 1-2, 3-5,6-10, more than 10)
- How interested are you in receiving professional advice on these topics? (0 – not interested to 5 – Very interested)
- How much would be affordable to pay for the professional advice? (open box)
- If access to this type of knowledge depended on belonging to an association, what yearly membership fee would you be willing to pay? (Open box)

## Table of contents

Executive summary

Input for the Knowledge Center: Terms of Reference, Stakeholder Consultations and Best Practices

Mission and vision for the Knowledge Center (D1-part 1)

Design of the Knowledge Center operational model (D1-part 2)

Financial plan for the Knowledge Center (D1-part 3 & D2)

Manual and implementation plan of the Knowledge Center (D3 & D4)

### Appendix – methodology and analysis

Best practice details

Survey details

**Workshop details**

Note: D1, D2, D3, and D4 are the 4 deliverables indicated in the terms of reference for Theme 7

### First Workshop – May 27, 2011

#### Participants

- DFID
  - Rita Zacarias
- INAM
  - Atanásio Manhuique
  - Berino Silinto (INAM)
  - Hipólito Cardoso
- MICOA
  - Francisco Sambo
- UEM
  - Alberto Mavume
  - Inocência Pereira
  - Amino Narah
  - António Queface
- UNDP – AAP
  - Carmen Munhequete
  - Clara Landeiro
- WFP
  - Raúl Cumba

#### Objectives

- Describe context for Knowledge Center
- Review international examples of Knowledge Centers and identify key learnings for Mozambique
- Identify key questions for the design of the Knowledge Center
- Reflect on key alternatives for the Mission, Vision and activities to be developed by the Knowledge Center
- Analyze the implications of choices for the type of organization to be built

#### Agenda

- Introduction
- Presentation of international examples
- Discussion of the Mission and Vision
- Discussion of the governance and operating model
- Synthesis of discussions and next steps

#### Key takeaways

- Focus on applied research on end-to-end climate change adaptation solutions in Mozambique, as well as future climate-friendly development models
- Short-term focus on awareness and education, to promote relatively new theme
- Cover not only climate science, but implementation aspects of adaptation (engineering, economical capital prioritization, sociological studies of barriers due to people behavior)
- Key role in the function of the General Manager, linking funding to projects
- Flexible organization, to accommodate evolving priorities according to needs

### Technical Review Discussion – June 8th 2011

#### Participants

- Representatives of 7 municipalities
  - Maputo
  - Matola
  - Beira
  - Inhambane
  - Xai-Xai
  - Pemba
  - Quelimane
- Central and regional representatives of INGC
- Representatives of INAM
- Representatives of key universities
- Representatives of key Ministries

#### Methodology

- Plenary presentation of Knowledge Center design principles, best practices, alternative organization models and potential funding issues
- Plenary discussion of governance and organization for the Knowledge Center
- Four 1-hour discussions in smaller groups on usefulness of the Knowledge Center and key national and regional priorities

#### Key takeaways

- Climate change related issues rarely taken into account into municipal planning processes
- Municipality staff aware of climate change but unprepared to deal with its effects – Knowledge Center should provide training specifically dedicated to municipalities
- People behavior is a typical barrier to adaptation measures such as zoning or building codes – awareness building activities key to have impact in such measures
- Both municipalities and the INGC have widespread networks that are able to reach most of the population, and should be leveraged on awareness-building initiatives



## Second workshop -

### Participants

- 5 MICOA representatives (Carla Maria Pereira, Francisco Sambo, Felizarda Mangoele, Malene Wiinblad, Guilhermina Amurane)
- 1 MINED representative (Rafael Chadreque)
- 2 INAM representatives (Atanásio Manhique, Berino Silinio)
- 4 UEM representatives (António Queface, Ataíde Sacramento, Inocêncio Pereira, João Alberto Mugabe)
- 1 UDM representative (Mário Jorge Carlos)
- 6 UNDP representatives (Cristophe Charbon, José Levy, Paul Nteza, Carmen Munhequete, Clara Landeiro, João Carlos)
- 1 AFD representative (Adelaide Ferreira)
- 2 JA representatives (Anabela Lemos, Nilza Mataval)
- 1 One World representative (Manuel Ruas)

### Objectives

- Develop a common understanding on the starting point to develop the Knowledge Center
- Discuss the key elements to define the Knowledge Center based on the team's proposal
- Promote the Knowledge Center concept among the participants to start building the local knowledge network that will be the basis of the Center's activity

### Methodology

- Presentation by the project team of the input elements for the design of the Knowledge Center (Terms of Reference, international best practices and stakeholder consultations – including survey)
- Small group discussion of each design element following brief presentation of the project team's proposal
  - Mission and Vision
  - Design alternatives
  - Fundign sources

### Outcome

- Discussion of five alternative Mission statements for the Center and convergence along some core ideas
- Consensus on high-level organization for the Center
- Consensus on research model, leveraging existing resources in partner universities and research groups
- Alignment on need for initial period of generic funding