NUTURING CENTRES OF EXCELLENCE

5TH ASIAHORC MEETING
BANGALORE, INDIA
27TH NOVEMBER 2011
CENTRES OF EXCELLENCE

Initiative carried by the Ministry of Higher Education:
Set up Higher Institution Centre of Excellence (HICoE)

Aim to set up about 20 HICoEs throughout the nation in various areas.
Currently there are 6 HiCoE (set-up in 2010)

1. Alternative Energy (UMPEDAC, University of Malaya)
2. Diagnostics (INFORMM, Universiti Sains Malaysia)
3. Drug Discovery (CDR, Universiti Sains Malaysia)
4. Cancer Registry (UMBI, National University of Malaysia)
5. Islamic Banking (UiTM)
6. Institute of Biological Sciences (UPM)
UNIVERSITI MALAYA’S EXPERIENCE
Vision & Mission

Vision

To be an internationally renowned institution of higher learning in research, innovation, publication and teaching

Mission

To advance knowledge and learning through quality research and education for the nation and for humanity
Essential Fundamentals

- UM Needs Excellent Brains to Succeed
- Staff Multinational Composition with Sole Focus on Academic Excellence
- World Class Academic Culture Breeds the Best
- Best Person for the Job in Management
- Success Breeds Success
- Innovativeness, Entrepreneurship, Risk-Taking and Hardwork is Crucial
- Always Believe In the Impossible
- Universities Must Change to Survive

..... For Research Excellence
Research Clusters:
To streamline research efforts & achieve better productivity through a multidisciplinary approach
CENTRES OF RESEARCH (COR) IN UM

About 50 CORs under various clusters

They fall into 3 categories:

1. Higher Institution Centre of Excellence (HICoE)
2. University’s COR
3. Cluster’s COR
Institution must achieve a minimum of 75% to be considered.
## Section A: Quantity and Quality of Researchers

<table>
<thead>
<tr>
<th>No.</th>
<th>Criteria</th>
<th>Unit for KPI</th>
<th>Unit</th>
<th>Weightage HICOE</th>
<th>Weightage UMMIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Critical Mass</td>
<td>Total number of academic staff involved as principal investigator of research grants (in reviewed and funded research projects)</td>
<td>%</td>
<td>7.5</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>a. University funded</td>
<td></td>
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<td></td>
<td></td>
<td>b. National grants</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>c. International grants</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2</td>
<td>PhD Qualification or Equivalent</td>
<td>a. Total number of staff with PhD/DSc, D.Eng</td>
<td>%</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Total number of staff with Professional Qualifications (such as medical, engineers, architects, accountants etc)</td>
<td></td>
<td></td>
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<tr>
<td>3</td>
<td>Research Experience</td>
<td>Total number of research experienced staffs:</td>
<td>%</td>
<td>7.5</td>
<td>9</td>
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<tr>
<td></td>
<td></td>
<td>(3 cohorts)</td>
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<tr>
<td></td>
<td></td>
<td>a) &gt;20 years experience</td>
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<td></td>
<td></td>
<td>b) 10 – 20 years experience</td>
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<td></td>
<td></td>
<td>c) &lt; 10 years experience</td>
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<tr>
<td>4</td>
<td>Awards/ stewardship conferred by national and international learned and professional bodies (100/ year)</td>
<td>a. Total number of awards conferred by national bodies</td>
<td>No of awards/year</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Total number of awards conferred by international bodies</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
## Criteria For Measurement

### SECTION B: Quantity and Quality of Research

<table>
<thead>
<tr>
<th>No.</th>
<th>Criteria</th>
<th>Unit for KPI</th>
<th>Unit</th>
<th>Weightage</th>
<th>Weightage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Publications (2 papers in national/international refereed and cited journals/staff/year or cumulative impact factor for the institution of not less than 500 or cumulative citations of not less than 10,000/yr.)</td>
<td>a. Total number of publications in citation-indexed journals including refereed proceedings</td>
<td></td>
<td>12.5</td>
<td>15</td>
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<tr>
<td></td>
<td></td>
<td>b. Cumulative impact factor of publications</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>c. Cumulative citation factor of publications</td>
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<td></td>
<td></td>
<td>d. Total number of chapters in books</td>
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<tr>
<td></td>
<td></td>
<td>e. Total number of chapters in books</td>
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<td></td>
<td></td>
<td>f. Other Publications that have created an impact to government/society/policy</td>
<td></td>
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</table>

**HICOE (25%)**

**UMMIS (30%)**
<table>
<thead>
<tr>
<th>Bil</th>
<th>Name of Centre</th>
<th>Head of Center</th>
<th>Section A</th>
<th>Section B</th>
<th>Section C</th>
<th>Section D</th>
<th>Section E</th>
<th>Section F</th>
<th>Section G</th>
<th>Upload Data</th>
<th>Overall Index 17-8-11</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Photonics Research Centre</td>
<td>Prof. Dr. Harith Ahmad</td>
<td>Index 30/30</td>
<td>Index 27/30</td>
<td>Index 10/10</td>
<td>Index 5/10</td>
<td>Index 10/10</td>
<td>Index 10/10</td>
<td>Index 10/10</td>
<td>with support document</td>
<td>92.00%</td>
</tr>
<tr>
<td>2</td>
<td>Centre of Advanced Manufacturing and Material Processing (AMMP)</td>
<td>Prof. Dr. Mohd Hamdi Abd Shukor</td>
<td>Index 24/30</td>
<td>Index 10/30</td>
<td>Index 10/10</td>
<td>Index 0/10</td>
<td>Index 3/10</td>
<td>Index 10/10</td>
<td>Index 10/10</td>
<td>with support document</td>
<td>50.10%</td>
</tr>
<tr>
<td>3</td>
<td>Centre for Separation Science &amp; Technology</td>
<td>Prof. Dr. Wan Mohd Ashri Wan Daud</td>
<td>Index 15/30</td>
<td>Index 23/30</td>
<td>Index 10/10</td>
<td>no data</td>
<td>index 10/10</td>
<td>index 10/10</td>
<td>index 10/10</td>
<td>with support document</td>
<td>68.60%</td>
</tr>
</tbody>
</table>
THANK YOU
Establishment of the NSRC

The intent of establishing NSRC highlighted in the recently published 10th Malaysia Plan Book

Institutional Structure Supporting Innovation and R & D

National Innovation Council (NIC)
- Chaired by PM
- Provide Strategic leadership
- Policy decision making

Innovation Malaysia, PM’s Department
- Provide policy input to NIC
- Oversee functioning of the NIS
- Undertake evaluation of policy instruments and programme
- Assess innovation outcome

Other ministries/agencies/univ /research institutions
- To support innovation activities in their respective areas

National Science & Research Council (NSRC)
- Set priorities for R&D investment
- Evaluate R&D programmes & monitor outcomes

MOSTI
- Secretariat to NIC
- Formulate policies for S & T development
- Oversee resource allocation for technological innovation

MITI
- Promote enterprises innovation
- Oversee resource allocation for non-technological innovation

MTDC
- Nurture Technology based enterprises
- Provide support services for commercialization

MPC
- Undertake productivity enhancement research & activities
- Advisory & training to enable enterprise innovation
Objectives

1. To develop National S&T Transformation Plan on the governance of S&T

2. To chart roadmaps, aligning S&T to the New Economic Model

3. To strengthen the role of S&T through assisting in an advisory capacity, the formulation of policies and national strategies for medium term and long term (forecasting and foresighting)

4. To monitor and evaluate the S&T capabilities of the country to meet challenges of national development through the relevant Ministries

5. To make Malaysia more visible and attractive as a global research partner for organisations, research teams and individuals by providing a coordinated approach and a single point of contact
1) The NSRC operates in an *inclusive, autonomous, transparent and consultative* manner;

2) The appointment of the Council members will be by the Hon. Prime Minister. The term of appointment is for 3 years, and renewable once;

3) The members of the Council are eminent personalities from the Government, Academia and the Private sector.

4) The Council members meet on a quarterly basis and/or upon appropriate needs;

5) The Council is assisted by Expert Working Groups in their strategic planning.

6) The Council is headed by the National Science Adviser assisted by a Secretariat; and

7) The operation of the NSRC is funded by annual government grant.
Chair: Science Advisor to the Prime Minister

9 Ex Officio
1. Treasury
2. Secretary General MOSTI
3. President of ASM
4. Director General, EPU
5. Director General, Dept. of Higher Education
6. President of ASSH
7. Chairman of University Vice-Chancellors’ Council
8. CEO AIM
9. Secretary to the National Defence Research Council

Government
Academia
Industry/Corporate
Eminent Persons

16
The Secretariat under the NSRC is a dedicated entity in MOSTI, assisting in the implementation and execution of the Council’s strategic plans and programmes across the relevant Ministries/Agencies.
1) Chair of EWGs are appointed by the Council based on their Expertise;

2) Relevant representatives from the Ministries and Research Agencies are also members of the EWGs;

3) The EWGs are tasked to come out with Roadmaps and Strategies according to their respective scope to be presented to the Council for due consideration and endorsement;

4) EWGS conduct evaluation of projects sent in by the respective Ministries; and

5) EWGS conduct monitoring and evaluation of approved projects for final feedback to the Council through the Secretariat.
The Implications and Outcomes

1) An established one stop center for R&D priority setting to set a common vision for the use of S&T for socio-economic development;

2) Streamlined mechanism to realign the research agenda in S&T organisations to reduce overlap with consolidated research effort.

3) Ability to properly monitor and evaluate in a timely manner the country’s knowledge, technology, and innovation and product portfolios.

4) Minimise inefficiencies in policy and programme implementation with more aligned and synchronised S&T focus for convergence;

5) Proper governance in assisting government to address current and on-going challenges on the use of S&T for national well-being as well as to provide a platform for long range scientific advice on issues of national importance (forecasting and foresighting); and

6) Ensure sustainable contribution of S&T for a resilient and competitive economic growth using the 1Malaysia concept premised on the meaningful inclusivity of the Rakyat.
THANK YOU