"Re-defining the role of academic institutions in Utility performance improvement

Presented By: Mahmood Lutaaya
Regional Manager - NWSC
Africa Utility Week,
12-14 May, 2015, Cape Town, South Africa
Changing role of academic institutions

- It is changing and it is a good thing ..... 

- Academic institutions and industry are joining hands to explore the new horizons of opportunities through research and development. 

- This mutual relationship is a win-win; benefits and strengthens both institutions

_I became an academic to make a difference not build a career_, says **Alex Hope**, Nourthumbria University
Academic institutions and Industry are a perfect match

Industry and the academia might have different objectives;

- Companies always work toward advancing the interests of shareholders and profit/service
- academia focuses on developing the quality of education and research.

**Industry**
- Problems to solve (a “solutions deficit”)
- Technology and experience
- A need for qualified staff
- Budgets provisions

**Academic Institutions**
- A “problem deficit”
- Research expertise
- Training skills
- Well-qualified students looking for jobs
- Budget limitations

BUT
# Overview of NWSC

<table>
<thead>
<tr>
<th><strong>Type of organization</strong></th>
<th><strong>Public Parastatal</strong> - (100% Government owned est. 1972)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mandate</strong></td>
<td>Provide water and sewerage services in urban areas on <strong>commercial and financially viable basis</strong></td>
</tr>
<tr>
<td><strong>No. of towns served</strong></td>
<td><strong>97 Towns</strong></td>
</tr>
<tr>
<td><strong>Estimated Target</strong></td>
<td><strong>7.5 million people</strong></td>
</tr>
<tr>
<td><strong>Population in service area</strong></td>
<td><strong>79%</strong></td>
</tr>
<tr>
<td><strong>Water Service coverage</strong></td>
<td><strong>7%</strong></td>
</tr>
<tr>
<td><strong>Water mains</strong></td>
<td><strong>7,685 km</strong></td>
</tr>
<tr>
<td><strong>Sewerage Service Coverage</strong></td>
<td><strong>660 km</strong></td>
</tr>
<tr>
<td><strong>Customer Base</strong></td>
<td><strong>405,000 connections</strong></td>
</tr>
</tbody>
</table>
NWSC a learning organization

Strategic Reviews and Plans – 5 Yr Strategic Direction

Short-term high impact tactical programmes

Performance Management

Knowledge creation and management

Staff skills and professional Development

R&D department >100 M.Sc & PhDs (6 completed, 4 on-going)

External Services

• Strategic Interventions
• Reforms

Transformation of NWSC

• Knowledge and experience sharing
• South-south/North south Cooperation
• Advisory services, TA, capacity building

Partnerships and collaboration with academic institutions – redefining the role of academic institutions
NWSC collaboration with academia

- A well defined mutually beneficial operating framework – MOUs signed with over 20 academic institutions (clear roles and commitments)
NWSC collaboration with academia …

**Established Research Committee**

- Strengthening the link between the Corporation and academia
- **Review of research proposals and support the researches in the Corporation**
- Development research projects and programs – **Research Agenda**
- **Sponsors or reviewers of university research thesis**
- Ensure that research recommendations are implemented – **lunch time research presentations + incubation platform**
- **Management of the Research Budget**
NWSC Collaboration with academia …2

Value adding research – there is been a shift from basic research to applied research (Driven by NWSC & Academia research policies & agenda)

NWSC funds research projects at a number of research organizations that is related to its operations

>100 Msc theses by staff & over 100 by other University students

This is an effective way of knowledge transfer from the universities to companies
NWSC Collaboration with academia …3

Collaborative Research Projects - Development of joint research projects with participants from NWSC and Universities

- **Fingerponds (2001 – 2006)**
- **Performance Benchmarking and Incentives (2012 – 2014)**
- **Grey Water (2013 to date)**
NWSC Collaboration with academia ...3

- Co-publications resulting from joint research projects;
- More than 50 Co-publications in peer reviewed journals + Books
Joint training programmes – *linking academic knowledge with industrial application*

- Executive Masters Program with MUBs
- IEM-OPT - AgroParisTech

NWSC has an input in development of curriculum and providing resource persons

- Refresher training courses for NWSC staff
- Student attachment in NWSC operations

- Training of trainers programme to accredit NWSC staff as trainers + NWSC training programs
NWSC Collaboration with academia …4

Joint short-term consultancy services – knowledge management and conversation of research into products

- HWSSA, Ethiopia
- UN Habitat, LVWATSAN
- FDW, ATWASAN
- Chittagong Bangladesh
- EU – ACP, CAPIUWA
About – NWSC External Services Unit

What the ESU does

- Shares knowledge and expertise with the external market by utilizing in-house capabilities and expertise thus enhancing South-South as well as North-South Cooperation.

- Creates synergies within utility providers that result in an uplift of performance thereby providing the basis for sustainable operations in the long-term
ESU Partnerships
Some Perspectives on NWSC collaboration with Academia

- The **pace of change** is currently very rapid

- It is a **Brains Era**; Academic institutions – industry interaction and partnership is an imperative need for business sustenance & academic institutions relevance

- There is need to **enhance innovation** through leveraging the intellectual capital

- **Cultivating knowledge** and **integrating theory with practice** is imperative

- Academic institutions need to **actively engage & partner** with industry
Thank you for your attention