access²innovation

Concept note
Waste management in Kasese
The search for better ideas

Access2Innovation offers your company the opportunity to enter an African growth market: Uganda. The Ugandan economy is among the fastest growing these years, with annual growth rates of more than 6 percent, a stark contrast to Denmark, which is dangerously close to having no growth at all.

If you think this is interesting then you probably want to keep reading this concept note.

You might be asking yourself: Why is this called a concept note? The answer is quite simple: Access2Innovation has already been to Uganda and identified multiple interesting business opportunities in coordination with NGOs and university communities. The business opportunity is summarized in this concept note. The reason that we are involved with NGOs and universities is that it enables us to create new markets, based on innovative commercial ideas that have the benefit of creating a social impact as well. We are looking for companies that are searching for better ways to do things, that want to embrace new ideas from people that they do not typically work with in countries and markets where they are not already represented.

In the access2innovation network we offer access to a range of talented partners; experts within their fields, that are ready to assist in developing and maturing business ideas. We also offer a very strong local network in Uganda; a network that spreads across sectors, from civil society organizations and high level political institutions to the different business communities.

All we need to get going is you.
Dealing with waste is a substantial problem for many townships and rural areas of East Africa. The environmental and health related consequences of waste problems are very much a cause for concern.

Technologies dealing with such issues are well-known to businesses and people in general in the European Economy, but in Uganda knowledge and awareness is slim.

Part of the challenge is also to secure a financial base and subsequent profits, which is why waste management solutions are closely related to how the waste is used for energy production etc.

Access2innovation and its partners are looking for Danish businesses to capture this Ugandan customer segment profitably. By succeeding in building a business case for waste management in the Kasese District in Uganda, opportunities await in nearby, as well as distant markets.
Market opportunities

The responsibility for waste management in Uganda lies with Urban Councils. However, in many cases services are poor or non-existent. Only a small fraction of Municipal Solid Waste (MSW) is collected. 93 percent of the waste is organic and 7 percent non-organic.

<table>
<thead>
<tr>
<th>Municipality</th>
<th>Total MSW Generated (Gg/Yr)</th>
<th>Fraction of MSW collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fort Portal</td>
<td>32.49</td>
<td>0.416</td>
</tr>
<tr>
<td>Jinja</td>
<td>87.24</td>
<td>0.418</td>
</tr>
<tr>
<td>Kabale</td>
<td>33.58</td>
<td>0.254</td>
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<tr>
<td>Kasese</td>
<td>83.99</td>
<td>0.180</td>
</tr>
<tr>
<td>Lira</td>
<td>72.77</td>
<td>0.347</td>
</tr>
<tr>
<td>Mbale</td>
<td>26.29</td>
<td>0.631</td>
</tr>
<tr>
<td>Kampala</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mbarara</td>
<td>79.57</td>
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<tr>
<td>Mukono</td>
<td>42.71</td>
<td>0.598</td>
</tr>
<tr>
<td>Soroti</td>
<td>35.08</td>
<td>0.300</td>
</tr>
</tbody>
</table>

The notion of turning waste into energy, which in turn could have tangible monetary value, is fully understood by the local authorities, but in general Uganda lacks the knowledge and know-how to utilize the potential resources at hand. This despite evident need for access to sustainable energy.

If a successful waste management solution and business model is devised, the potential for replication across Africa is very high, why WWF among others has set the focus on waste management with the *Kasese Green Energy Champion District*. This to demonstrate that it is possible to create a win-win scenario based on including human development and environmental protection.

In the partnership with access2innovation, the ambition is to demonstrate that business driven solutions can be the driving force for ensuring access to clean technologies to end-users by providing companies with an innovation platform that allows testing of products and business strategies that can be replicated throughout Uganda.

A developed platform that can provide Danish companies with the possibility to partner with WWF and Kasese Municipality to test and commercialise Danish experience with waste to energy solutions in a new emerging market.

**Waste management as a potential business case**

An estimated 14,000 households exist in the Kasese Municipality with an average household of 5-6 people. Households alone generate 9 kg of solid waste per day, leading to a total of 126 tons per day - of which less than half is collected, and even less is utilised for beneficial value adding activities.
65 percent of the households have access to simple pit toilets that are either filled up and left or emptied into the nearby surroundings or emptied by a local sanitation company at differing intervals. Some wastage areas are collected several times a week, where others experience little or no collection. Garbage and organic waste is currently dumped at provided container sites, dumped in local pits or burned.

There are more than 1,000 businesses, shops, organisations, institutions, market places etc. leading to an even greater tonnage of waste, comprising both organic, mineral, non-renewables and others. However, the municipality of Kasese is only able to collect to around 40-50 metric tons per day.

Based on the preliminary research undertaken, the following intervention areas have been identified around developing:

- Bio gas
- Gasification
- Incineration
- Composting
- Waste transportation
- Spreading awareness about waste

These technologies require different resources as well as they serve different purposes. Danish businesses are asked to evaluate, which of these - or possibly other possibilities - would be relevant in case of Kasese.

Incineration technologies exist and are not purported to hold the solution for Uganda in the future, and will as such be valued lower than other greener technologies.

Prospects for companies:

- Private sectors businesses are invited to analyse, design and deliver waste management solutions in Kasese Town.
- Local councils of Uganda and elsewhere suffer from the same problems, of which they are completely aware. They will become potential customers when Kasese becomes a positive case on waste management.
- By partnering with different organisations (NGOs, Financial institutions, Researchers and others) to deliver a complete setup of waste management, including waste collection, sorting and handling, and doing so innovatively, will open up new market opportunities for the participating companies.
Framework

Kasese Municipality is aware of their waste challenges and are very receptive to learn of innovative ideas - especially those solutions that could generate value in other places (energy etc.). However in order for any viable solutions to become clear, further analysis is required, which is why businesses are invited to take a look by visiting the area.

The conditions are especially interesting in that there is a large amount of waste ready to be utilised, and that the district is ready to do something about it. Furthermore, a solution here would be replicable across many other districts and countries, and afford attending businesses great market opportunities.

During a visit to Kasese District it is recommended that the following be investigated:
• Amount, fluctuations, types of waste to establish the best treatment solution.
• Informal markets.
• Electricity grid expansion/improvement solutions.
• Collection and Transportation solutions

As a business there are many opportunities to exploit, and to learn which are potentially a match to current business activities, attend the workshop mentioned in a separate document.

Customer segments

Local municipalities in Uganda would benefit greatly from solving waste issues, and at the same time gain access to energy, compost or other. Danish companies that are able to provide both the technical and financial aspects of the solutions will have vast market opportunities. Municipalities and districts across Uganda are all interested in the Kasese efforts, and a lot of attention will be held on what takes place there.

In Kasese, a lot of waste is not utilised, and is principally discarded. The same can be said, with some confidence, about many other municipalities across Uganda, East Africa and the developing world at large.

As such, the potential customer base is very large.
Potential partners

In access2innovation there are partners with skills, knowledge and network to help companies conduct business in Uganda.

In Uganda there are already suppliers of various technologies. Finding the right set of partners is going to require a further analysis of how Kasese’s waste problems are to be solved.

The increase in power increases the potential for job creation and an expanding tax-base, infrastructure development, health improvement, social development, education and tourism.

Thus, the further stakeholders include councils, inhabitants, policy makers, companies, health activists, donors and many more. Mobilising these stakeholders will hold the key to success.

As the waste management and energy demands are evident, it is deemed a high probability for success if companies are to engage in partnerships to solve the challenges.

Essentially there are many actors already trying to change things, but in most cases they are doing so alone. If we combine the efforts of these many different initiatives, the industrial development is possible and new markets are formed for foreign businesses.

Next step

For further information of how to proceed from here, contact head of secretariat Jacob Ravn: jr@access2innovation.com

Access2innovation will be hosting seminars in October 2012 to open the dialogue with interested companies and researchers to further outline the upcoming business opportunities.

Sign up for the coming field visit to Uganda on December 4th -12th 2012

To apply for access2innovation funding, please visit the website www.access2innovation.com