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PLANNING FOR THE FUTURE
A demand and supply study on the Oil
and Gas sector in Uganda

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16 October 2014

The views expressed are those of the author and do not necessarily reflect the views of UNCTAD



PLANNING FOR THE FUTURE

A demand and supply study on the Oil and Gas sector in Uganda

1. INTRODUCTION

BY THE GENERAL MANAGERS



Dear Reader,

The three Joint Venture (JV) partners comprising CNOOC Uganda Limited, Total E&P Uganda and Tullow Uganda Operations Pty Ltd have over the years demonstrated their commitment to National Content development in Uganda. This has been accomplished by engaging with the local business community through supplier expansion and contracting activities and by employing and training Ugandans through scholarships for advanced level education and support to tertiary institutions. We have also invested in social investment programs.

To prepare for the implementation of the development phase of Ugandan's oil and gas project, we agreed on the need to determine and align the potential demand of the project for goods and services with the capacity of the Ugandan market to deliver them. Accordingly, an extensive Industrial Baseline Survey (IBS) was undertaken through detailed consultation within the Joint Venture technical teams, with Government counterparts, and with a survey of the private sector in the country. This survey assessed the quantity and quality of goods and services that will be required for the project we are undertaking as compared to the existing human and productive capacity of the Ugandan market.

This survey has been commissioned with a clear objective to promote national content as much as possible during the development and production phase of the project. We are proud to be pioneers in having launched such an industrial survey at this early stage of the project.

The results of the IBS reflected in this Communication Tool show the following key messages:

- The Lake Albert Basin Development Project will create between 100,000 to 150,000 jobs through direct, indirect and induced employment. As far as direct jobs are concerned (i.e. directly linked to

the oil project), most of the jobs will be at technician level and the number will be very limited with a range of 11,000 to 15,000 (indirect jobs can also be at technician level). A great majority of indirect and induced jobs will be created by other sectors which will benefit from the economic development triggered by the oil project.

- A major challenge relating to human resources will be in the number and level of certification of technicians to comply with oil and gas standards.
- Some industries will be able to absorb project demands while many will need to enhance their capacity in terms of production volumes and standards.
- For the business community to respond

effectively to the demands of the oil and gas development project, they will require more visibility and information about business opportunities and investment in technology and capacity.

To support the development of the required capacity, the survey recommends the following actions:

- Regular and sustained communication is established between the Joint Venture partners and the business community in Uganda to explain the available opportunities.
- Promote the development of Ugandan companies.
- Partner with the Uganda education system to produce qualified graduates for the industry.

All parameters towards making National Content in the oil and gas sector a success story are known. Government of Uganda, oil companies, development agencies and local service providers should work hand in hand with confidence toward this goal. It is now all about partnering in the most constructive and conducive manner to transform this aspiration into a grand reality for the Ugandan people, the Ugandan business community and the investors.

We will therefore engage with all stakeholders to implement the recommendations of the Industrial Baseline Survey and thereby support Uganda to realise its aspirations as an oil producing country.

We look forward to working with you all to achieve this noble objective.

Xiao Zongwei
President
CNOOC Uganda limited

Loïc Laurandel
General Manager
Total E&P Uganda

Jimmy D. Mugerwa
General Manager
Tullow Uganda Operations Pty Ltd

2. Used Methodology



Methodology

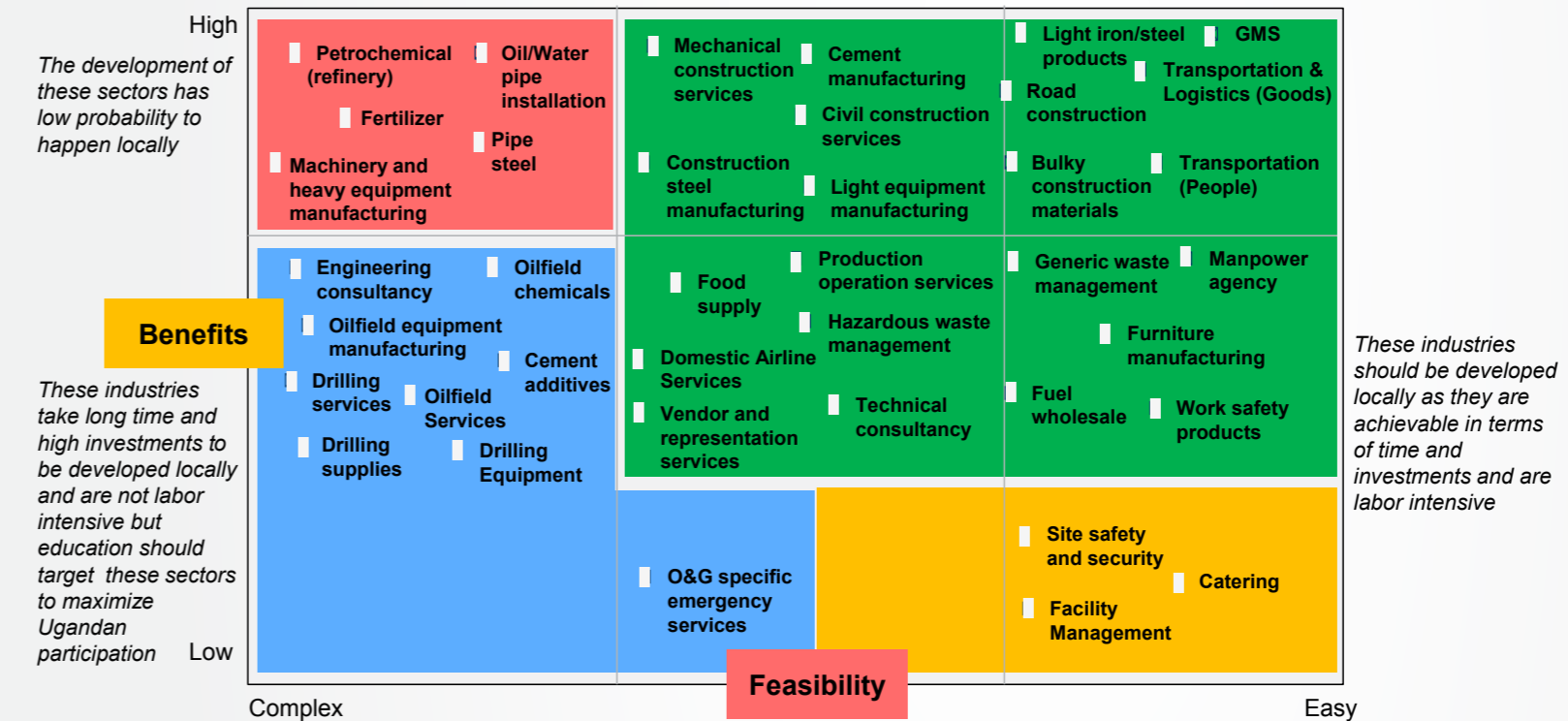
- The first step of the Industrial Baseline Survey was dedicated to identifying the industrial sectors likely to be directly or indirectly impacted by future oil and gas projects in Uganda.
- Among all sectors identified, 25 revealed a higher potential for local content based on an assessment of both their benefits to the country (number of jobs created and skill level of jobs) and feasibility (investment intensity and ramp up time required to reach oil and gas standards)
- The second step focused on the analysis of the supply and demand of the 25 selected industries and corresponding gaps.
- It also included the assessment of future manpower needs that will be generated by the Lake Albert project among several segments: number of people required by phase of the projects, by education background, by skill level, by function, by certification type...
- A manpower database has been designed to assess future manpower needs, listing approximately 400 positions required to build and operate Lake Albert oilfields. This database forms the basis of the manpower demand analysis.

2. Used Methodology



INDUSTRIES RELATED TO FUTURE OIL AND GAS PROJECTS DIRECTLY OR INDIRECTLY, CLASSIFIED IN TERMS OF POTENTIAL FOR LOCAL CONTENT DEVELOPMENT

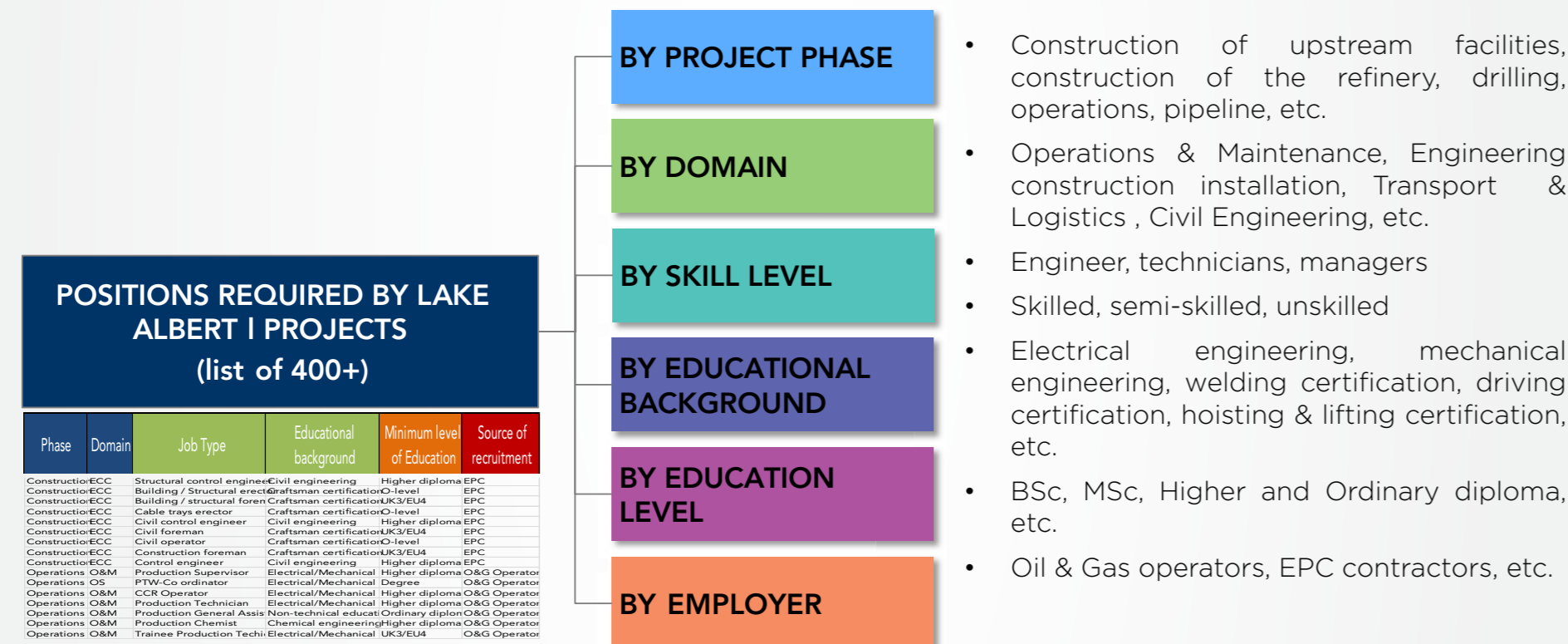
Mapping of selected industries according to benefits and feasibility





MANPOWER DEMAND OVER THE ENTIRE PERIOD OF LAKE ALBERT PROJECT WAS ANALYZED ALONG SEVERAL SEGMENTS

Assumptions on manpower segmentation



Manpower Demand

KEY MESSAGES ON FUTURE MANPOWER NEEDS

- The Lake Albert Basin Development projects will generate thousands direct jobs in Uganda, with a peak of about 13,000 workers in the construction phase and a plateau at 3,000 people in the operation phase.
- Out of total manpower required, 15% are engineers & managers, 60% are technicians and craftsmen and 25% are people without any educational background ('unskilled').
- Education focus should be on civil construction, electrical and mechanical fields
- Beyond direct jobs that will be created on site, Oil & Gas activity will also have a potential to generate 100,000 to 150,000 indirect and induced jobs
- Out of total newly created jobs, 80% will be short-term for the peak of construction and will have to be transferred

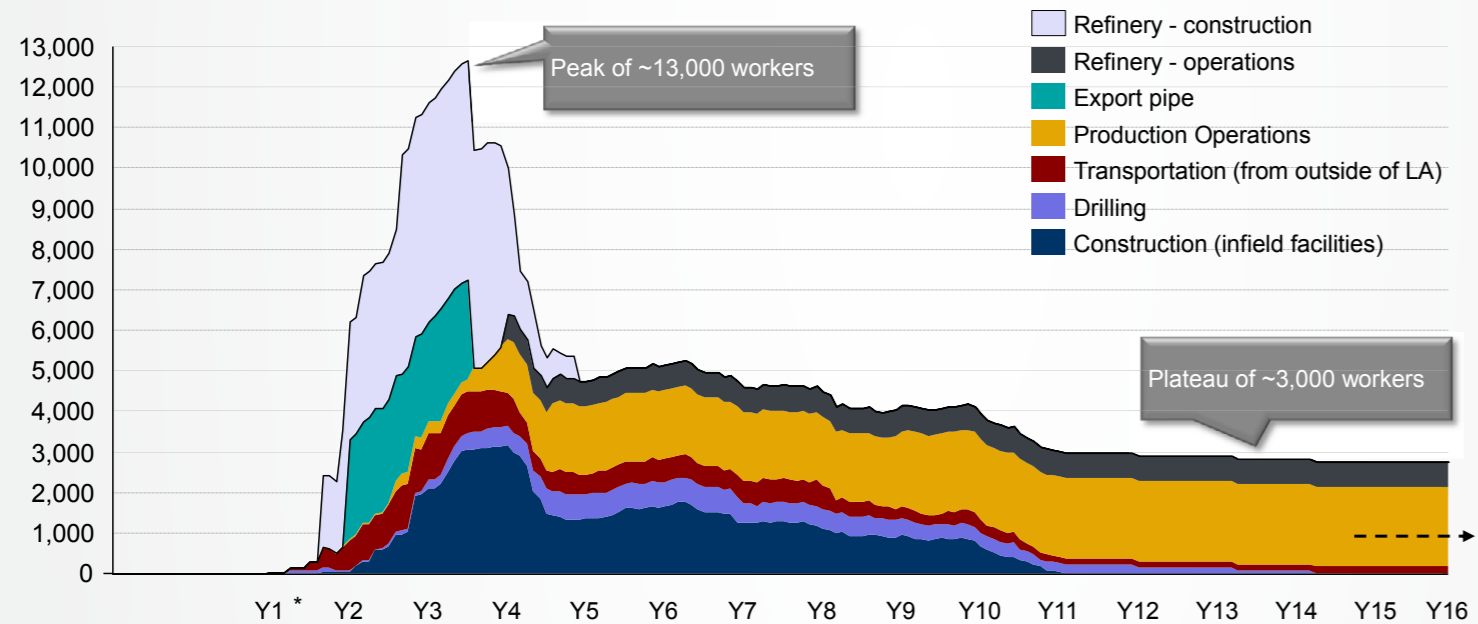


– Manpower Demand

THE LAKE ALBERT BASIN DEVELOPMENT PROJECTS WILL GENERATE THOUSANDS DIRECT JOBS IN UGANDA, WITH A PEAK OF ABOUT 13,000 WORKERS AND WILL PLATEAU AT 3,000 PEOPLE IN OPERATIONS

Manpower split by development phase, refinery included

Cumulative number of people required to build and operate LA projects on site



Source: SBC analysis; data from CNOOC, Total E&P, Tullow
 Note: Year 1 (Y1) represents the starting point of the Lake Albert project construction phase

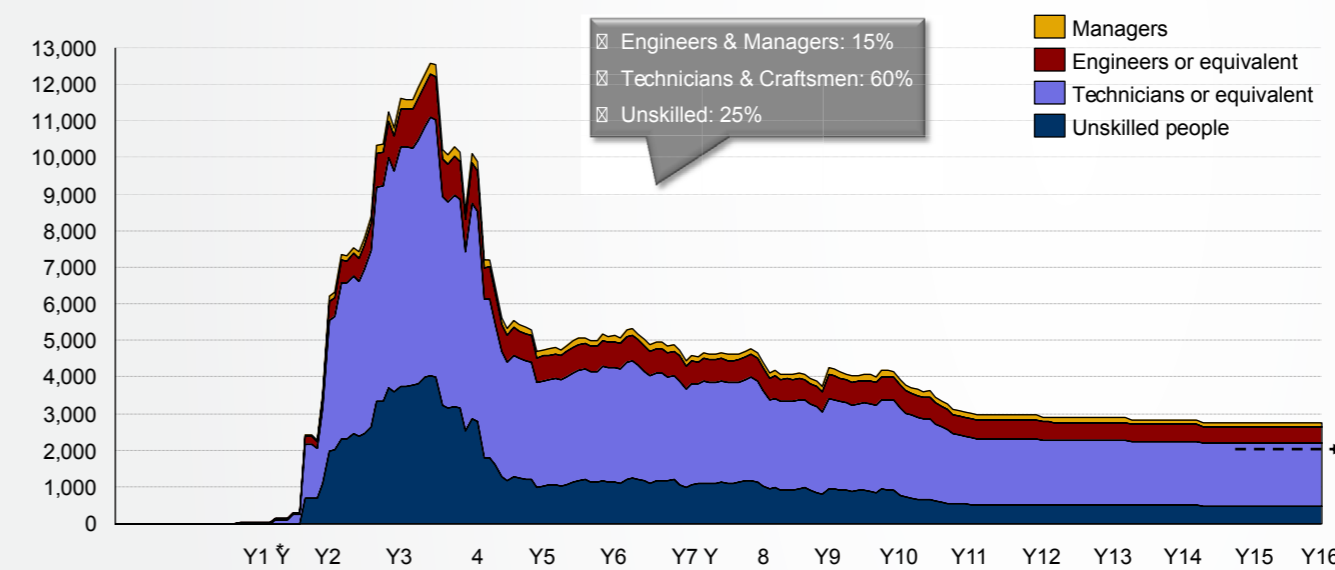


– Manpower Demand

OUT OF TOTAL MANPOWER REQUIRED, 15% ARE ENGINEERS & MANAGERS, 60% ARE TECHNICIANS AND CRAFTSMEN AND 25% ARE PEOPLE WITHOUT ANY EDUCATIONAL BACKGROUND ('UNSKILLED')

Manpower split by skill level

Cumulative number of people (FTE)



Source: SBC analysis; CNOOC; Total; Tullow
 Note: All manpower quantities were obtained under assumption of "stick built" approach to construction, as opposed to "modularization" approach
 Year 1 (Y1) represents the starting point of the Lake Albert project construction phase

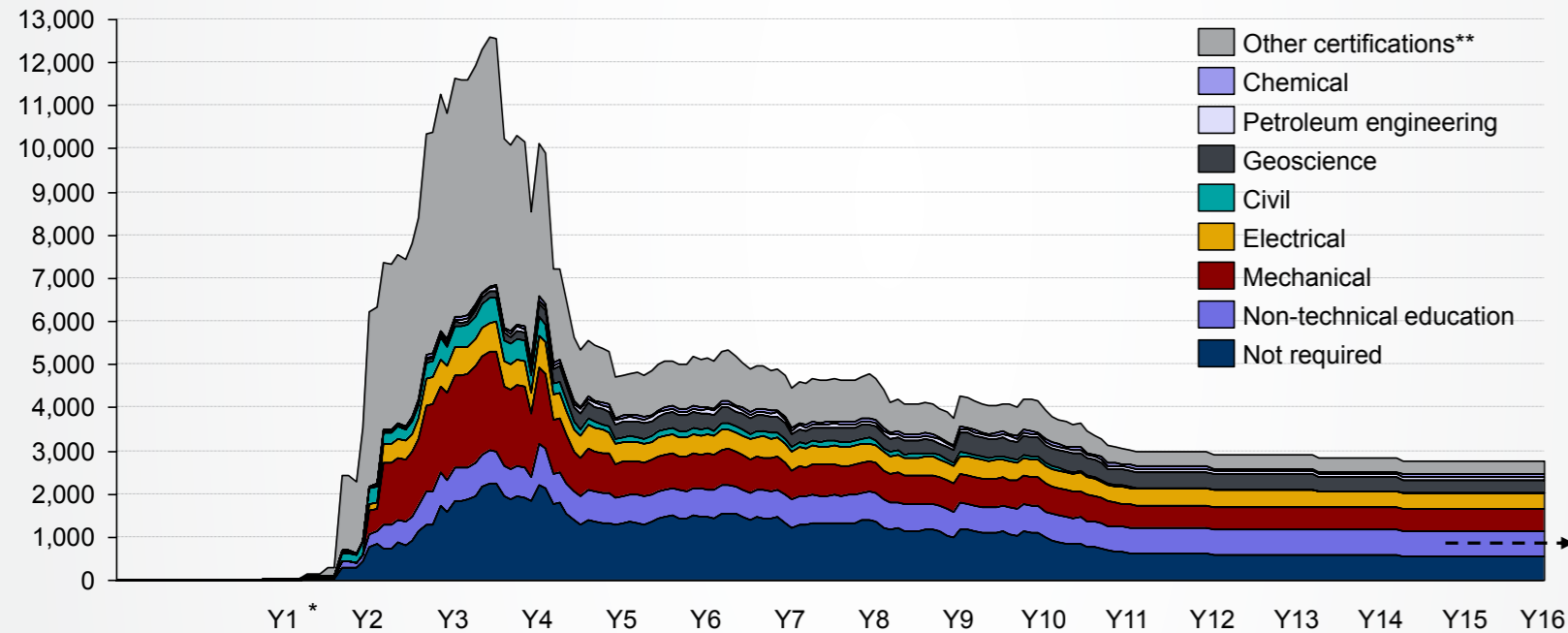


– Manpower Demand

EDUCATION FOCUS WILL HAVE TO BE ON CIVIL CONSTRUCTION, ELECTRICAL AND MECHANICAL FIELDS

Manpower split by broad education background

Cumulative number of people (FTE)



S source: S BC analysis; CNOOC; Total; Tullow
 N otes: * Year 1 (Y1) represents the starting point of the Lake Albert project construction phase
 ** Other certification includes driving (heavy duty and passengers trucks), welding (pipes), welding (plate), hoisting and lifting, machine operators.



– Manpower Demand

BEYOND DIRECT JOBS, THE INDUSTRIAL BASELINE SURVEY ALSO CONSIDERED INDIRECT AND INDUCED JOBS

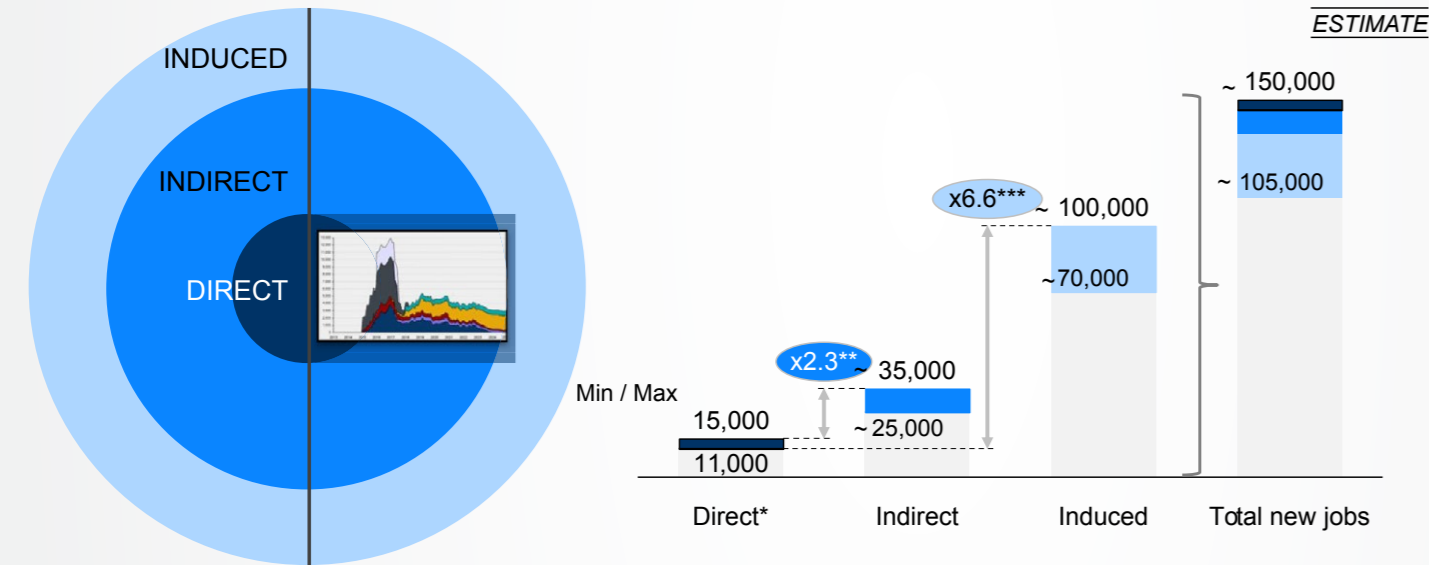
- Beyond the direct jobs generated by the construction and operation phases of the Lake Albert Basin Development projects, oil and gas activities will generate demand in other activities outside the strict boundaries of petroleum activities.
- An important number of industries will be boosted by oil and gas projects offsite, like environmental services, manpower agencies, construction materials, food industry, etc. Jobs generated by these activities qualify as indirect jobs.
- Beyond direct and indirect jobs, many jobs will be 'induced' by oil and gas activities. By 'induced', we refer to wealth generated through the redistribution of oil revenues in the local economy. This distribution happens either naturally through individuals spending the money earned through oil and gas projects or deliberately with the Government distributing oil revenues in other industrial projects like infrastructures. This re-investment of oil and gas revenues in the economy will induce jobs in sectors like hotels, banks, insurance companies, or even education system.
- The overall benefits for Uganda in terms of jobs generated directly, indirectly and in an induced manner from LA's oil and gas projects range of 100,000 to 150,000 jobs.
- 80% of future directly, indirect and induced jobs will be short-term for the peak of construction and will have to be transferred to other sectors of the industry or to the neighboring countries to remain sustainable.



– Manpower Demand

BEYOND DIRECT JOBS THAT WILL BE CREATED ON SITE, OIL & GAS ACTIVITY WILL ALSO HAVE A POTENTIAL TO GENERATE 100,000 TO 150,000 INDIRECT AND INDUCED JOBS

CONCEPTS OF DIRECT, INDIRECT AND INDUCED JOBS GENERATED BY OIL & GAS PROJECTS, REGARDLESS OF THE NATIONALITY OF THE PEOPLE

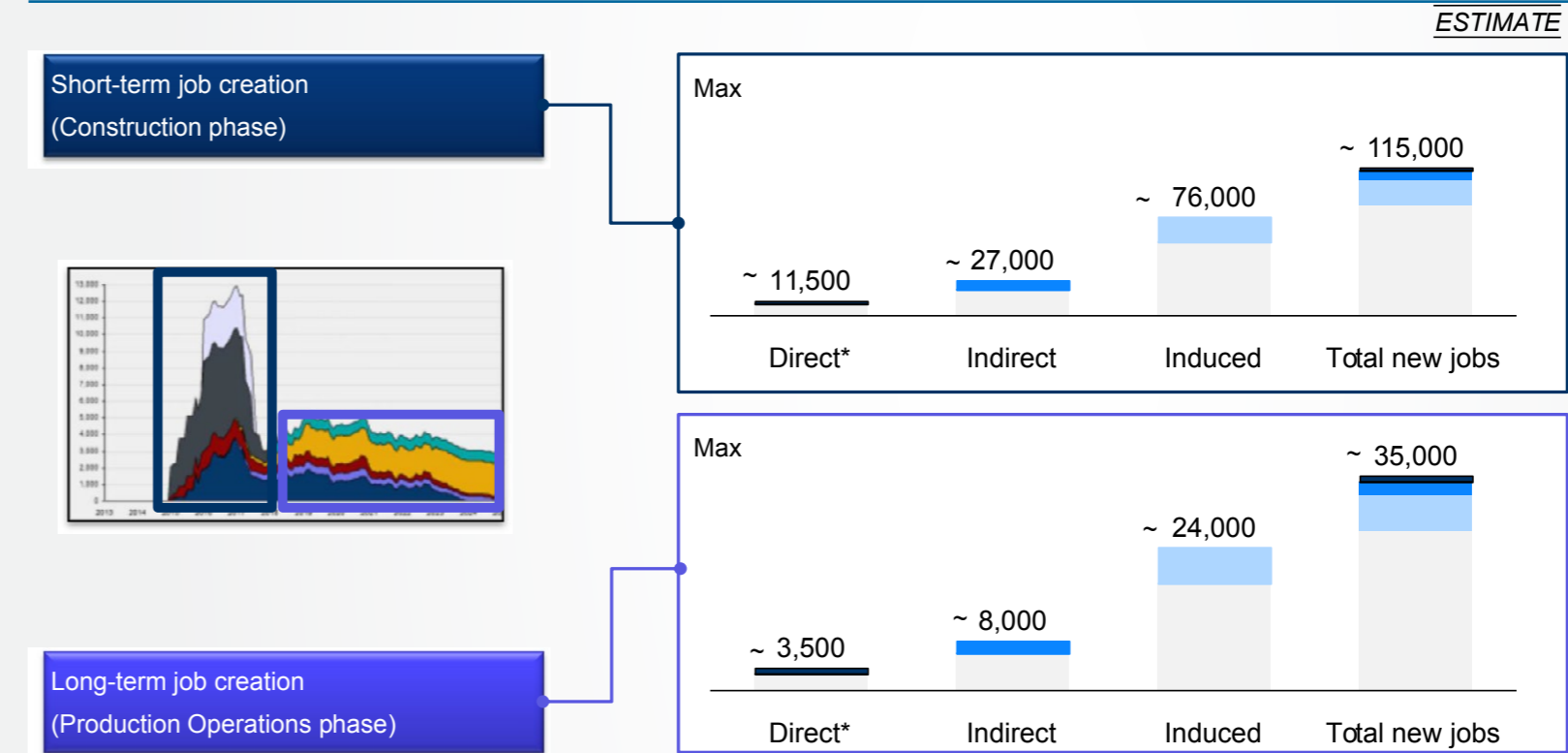


Source: SBC research on "Land and Air" and gas fields (Norway, Aberdeen - UK, Macaé - Brazil, Trinidad & Tobago)
 Note: * Number of jobs created was computed as peak of manpower (13,000) for LA projects. ±15% was added to account for uncertainty
 **Ratio direct to indirect varies in the range of 2.3 - 3.8 depending on geography
 ***Ratio direct to induced varies in the range of 6.6 - 8.4 depending on geography



– Manpower Demand

80% OF FUTURE DIRECTLY, INDIRECT AND INDUCED JOBS WILL BE SHORT-TERM FOR THE PEAK OF CONSTRUCTION AND WILL HAVE TO BE TRANSFERRED TO OTHER SECTORS OF THE INDUSTRY OR TO THE NEIGHBORING COUNTRIES TO REMAIN SUSTAINABLE





- Manpower Demand

MAIN INSIGHTS ON THE RISK OF FUTURE SHORTAGE OF MANPOWER

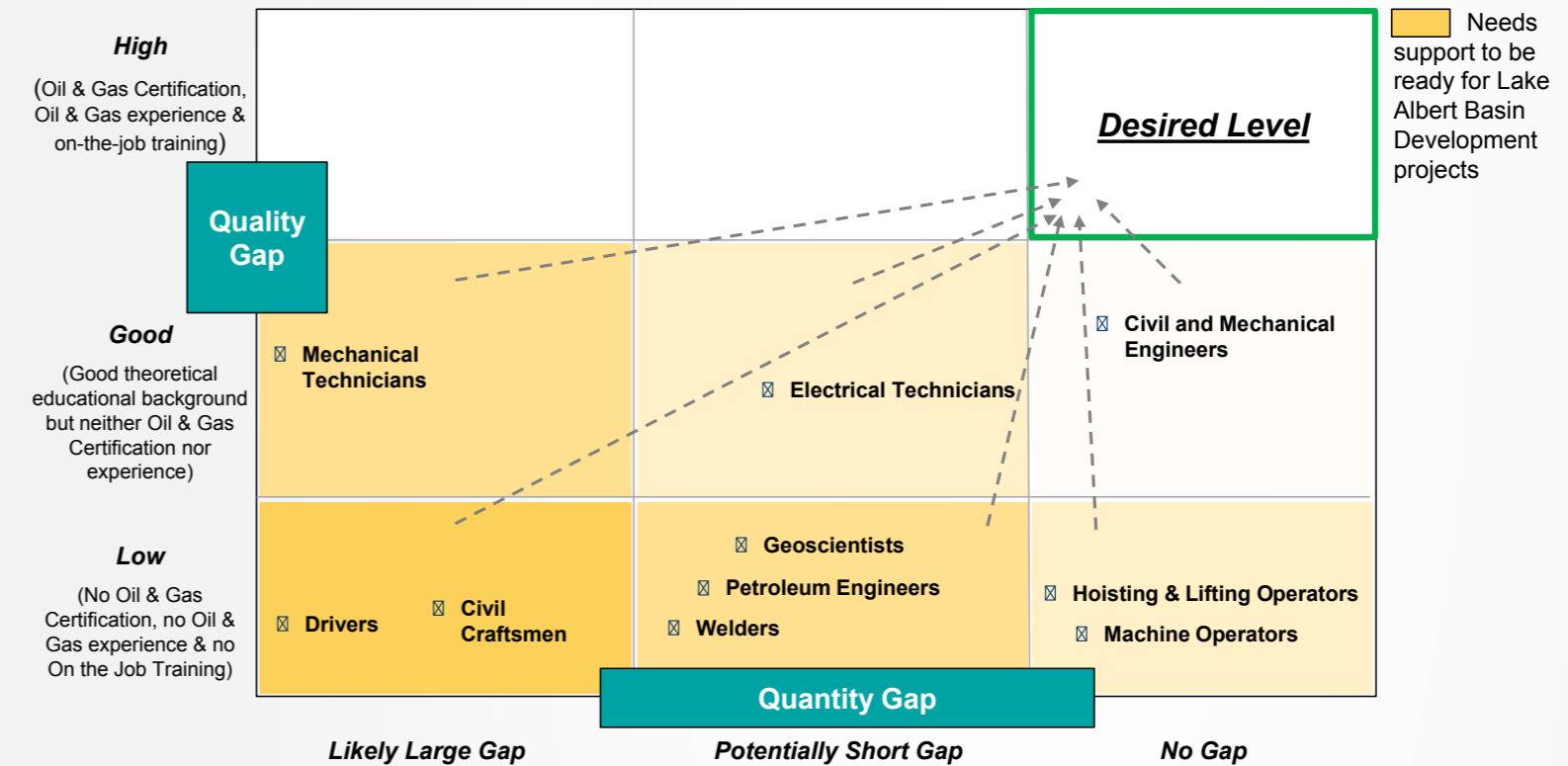
- The survey reveals that there will be a number of gaps in absolute values for certain jobs: civil craftsmen, drivers and mechanical technicians. For electrical technicians and welders, the main challenge will be to avoid 'drying out' the rest of the Uganda economy.
- Workers and engineers need to be certified in several disciplines, i.e. they need to receive an accreditation allowing them to work on an oilfield site.
- A major effort of certification will be required in the medium term to comply with oil and gas projects standards.



- Manpower Demand

THE SURVEY HIGHLIGHTS QUANTITATIVE AND QUALITATIVE GAPS TO COMPLY WITH OIL AND GAS REQUIREMENTS

**MAPPING OF MANPOWER REQUIRING FUTURE SUPPORT
Split by Skill Level**





- Industry Demand

KEY MESSAGES ON THE ANALYSIS OF INDUSTRY IN UGANDA

- The survey highlights industries whose capacity or compliance with Oil & Gas standards require future support in order to avoid massive imports.
- All sectors will need to upgrade the quality of their overall management standards and quality of delivery to align with oil and gas expectations.
- Some sectors will need a complete transformation to be able to cope with future needs as the gap between future demand and current supply is at the range of the multiplier, like transportation and logistics (goods) or hazardous waste management.
- Finally, the survey reveals that a few industries should be able to absorb the peak of demand, like cement or structural steel.



- Industry Demand

LIST OF THE 25 INDUSTRIES ANALYZED



- These 25 industries were analyzed in detail through a questionnaire sent to companies involved in the sectors concerned. The questionnaire was designed to be short and simple, with questions limited to production capacities of companies, number and profiles of employees.
- Questionnaires were sent to hundreds of companies. The 200 largest companies replied, representing the lion share of production capacities in the country. In addition to these data analyses, almost 100 physical meetings and interviews were held, including the 60 biggest industrial in the sectors analyzed. The objective of these meetings was to get a better view of the realities in Uganda, beyond the information collected through the questionnaires.



– Industry Demand

SOME SECTORS WILL NEED A COMPLETE TRANSFORMATION TO BE ABLE TO COPE WITH FUTURE NEEDS, LIKE TRANSPORTATION & LOGISTICS (GOODS) INDUSTRY

Freight transport by road, warehousing and storage, lifting services, and other transportation support activities (clearing, customs, forwarding)



INDUSTRY DEMAND ANALYSIS



QUALITY

- ☑ O&G Producers Land transportation safety recommended practice: n° 365, revision 1.1+Guidance Note 6
- ☑ At least ISO 9001

ASSUMPTIONS ON DEMAND

- ☑ Trucks for bulky material capacity – 15m3
- ☑ Trailer for equipment capacity – 20 tons
- ☑ Truck for food – 20 tons
- ☑ Rotation time for Mombassa - 15 days, for Uganda – 7 days

Source: SBC analysis
Note: * Trucks include heavy duty vehicles required for transportation of equipment, raw bulky material and food & water.



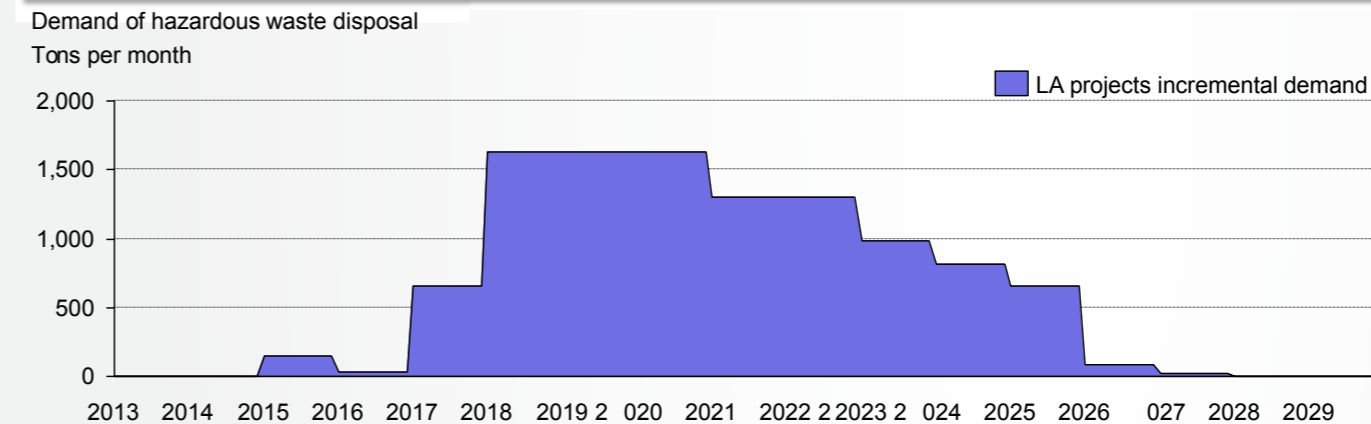
– Industry Demand

SOME SECTORS WILL NEED A COMPLETE TRANSFORMATION TO BE ABLE TO COPE WITH FUTURE NEEDS, LIKE HAZARDOUS WASTE DISPOSAL

Collection, transportation and storage of hazardous waste (bio-hazardous waste, used oils and batteries, etc.), and collection of oil based mud cuttings from drilling activities



INDUSTRY DEMAND ANALYSIS



QUALITY

- ☑ Compliance with Total's HQ standards and certifications on hazardous waste transportation and disposal

ASSUMPTIONS ON DEMAND

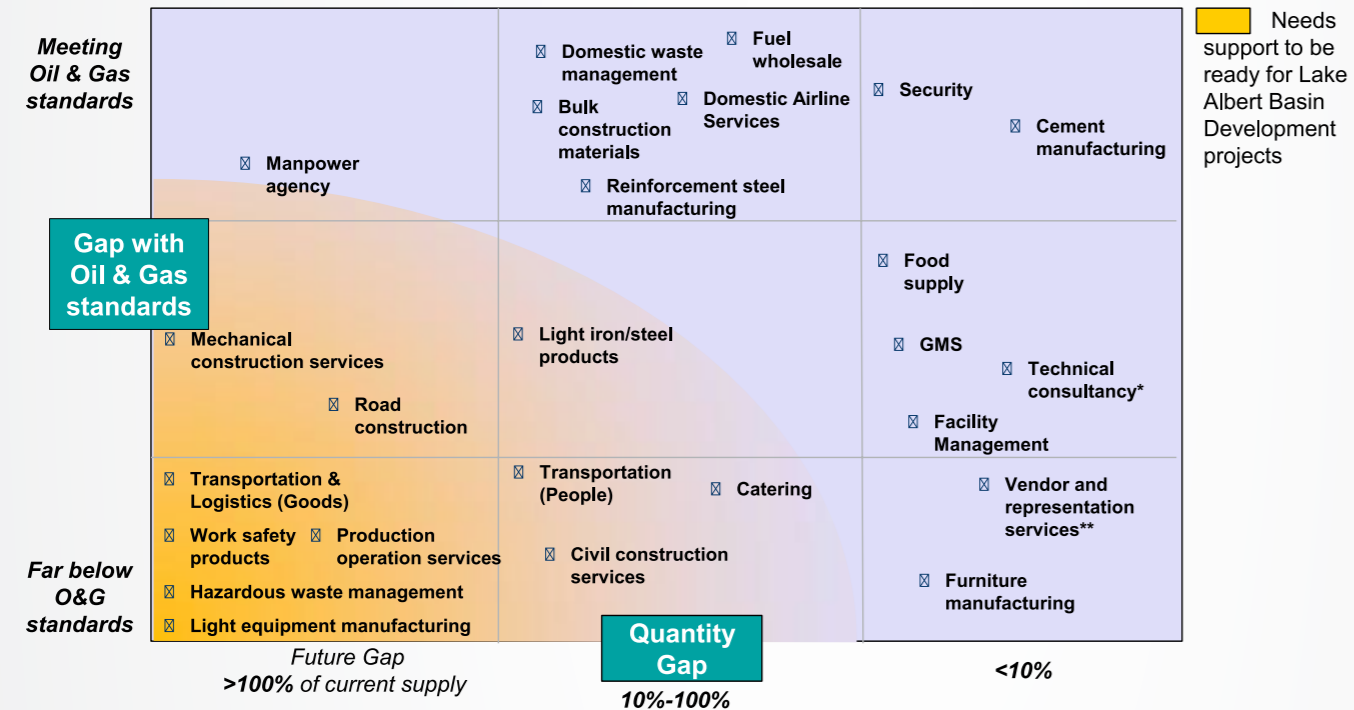
- ☑ Oil based mud cuttings constitute the vast majority of total hazardous waste
- ☑ Oil based mud cuttings per well - 70% of all cuttings
- ☑ 280 tons of cuttings per well

Source: SBC analysis

- Industry Demand

THE SURVEY HIGHLIGHTS INDUSTRIES WHOSE CAPACITY OR COMPLIANCE WITH OIL & GAS STANDARDS REQUIRE FUTURE SUPPORT IN ORDER TO AVOID MASSIVE IMPORTS

MAPPING OF INDUSTRIES REQUIRING FUTURE SUPPORT



- Main Issues

UGANDAN COMPANIES INTERVIEWED EXPRESSED THEIR CONCERNS

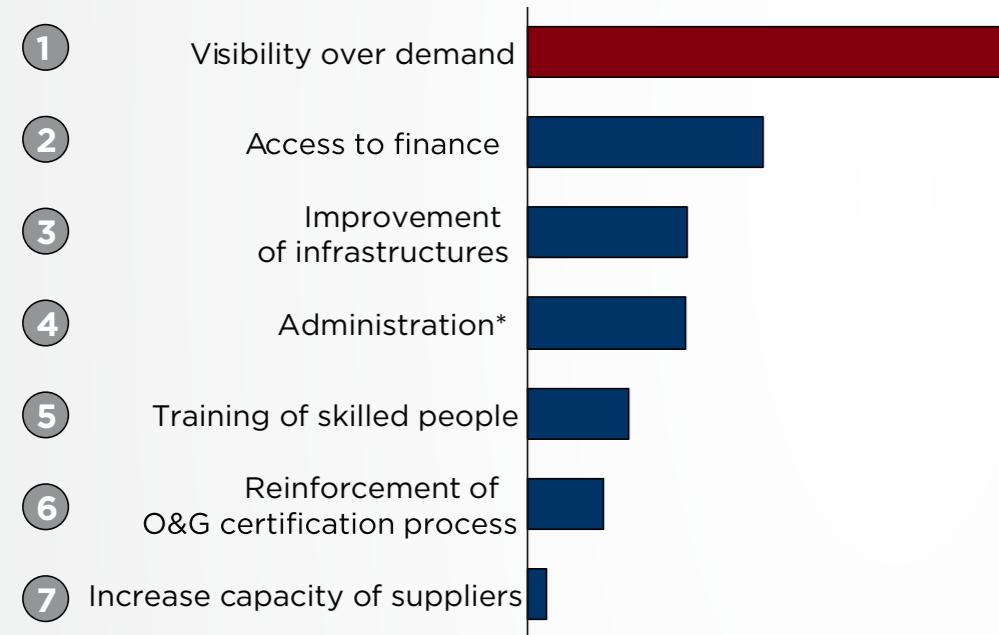
- Ugandan companies call for more visibility over the future needs of the oil and gas projects, clear and straightforward support from large companies, banks and public authorities to get ready for the start of the construction phase (access to credit, support to improve management standards, ...).
- The first barrier to development mentioned by suppliers in Uganda is the lack of visibility on future oil and gas projects. When will the needs start? What type of products and services will be required? At which standards? Timeline? Quantities...?
- The second barrier is the difficulty to access the capital required to invest and develop activities. Rates for loans in Uganda are extremely high making it nearly impossible for interested parties to develop any business.
- Other improvements expected to develop the economy relate to the quality of infrastructures (roads, power supply), a more efficient administration and higher level of skills among workers.



- Main Issues

UGANDAN COMPANIES CALL FOR MORE VISIBILITY OVER THE FUTURE NEEDS OF THE OIL AND GAS PROJECTS AND SUPPORT FROM LARGE COMPANIES, BANKS AND PUBLIC AUTHORITIES

MAIN ISSUES TO BE ADDRESSED FOR ENHANCEMENT OF CAPACITY BUILDING IN UGANDA
Descending order as per suppliers' answers



Source: S BC analysis; Supply survey of Ugandan companies, 2013
Note: * Process of obtaining required approvals (safety, environmental, electricity installation, investment, etc.) from the public administration

4. LC measures proposed



PROPOSED ACTIONS TO DEVELOP LOCAL CONTENT IN UGANDA

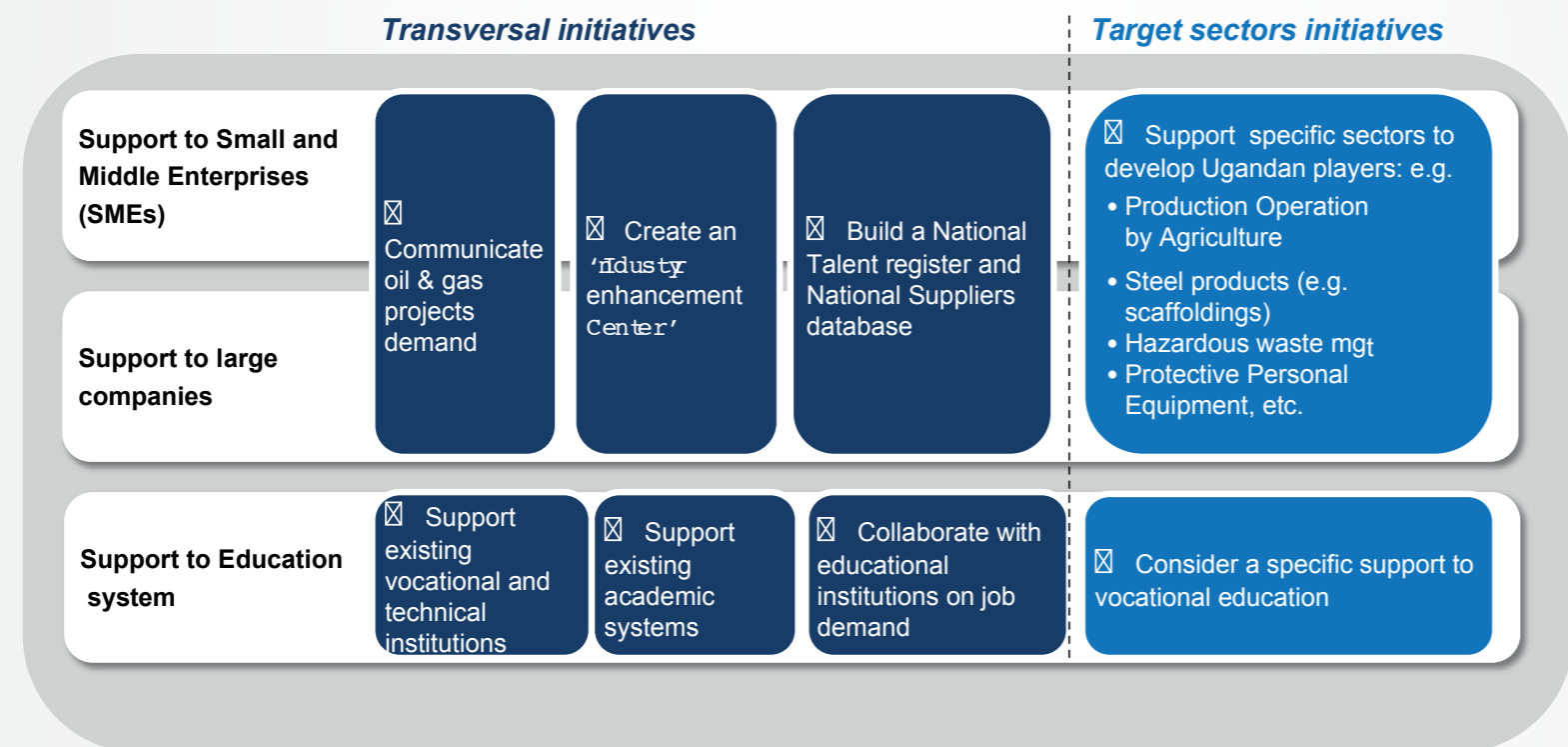
MAIN ISSUES TO BE ADDRESSED FOR ENHANCEMENT OF CAPACITY BUILDING IN UGANDA
Descending order as per suppliers' answers

- If no support action is taken to support Ugandan companies, most sectors will be subject to import.
- On the basis of the results of the Industrial Baseline Survey (IBS), the three operators have proposed a series of initiatives to develop the industrial capabilities of Ugandan companies and Ugandan professionals.
- These recommendations relate to three main objectives:
 1. Bridging the communication gap between oil & gas companies and Ugandan industrials by initiating a regular and supervised dialogue;
 2. Providing assistance to Ugandan companies by creating an 'Industry Enhancement Center' and offering appropriate support to specific sectors;
 3. Supporting the educational system by reinforcing the best academic institutions already in place and by founding a training center to develop qualified technicians.
- Some actions are transversal and address the overall industry in general, while other actions are meant to target specific industries.



RECOMMENDATIONS / PROPOSED MEASURES TO SUPPORT THE INDUSTRIAL DEVELOPMENT IN UGANDA

HIGH LEVEL VIEW OF NATIONAL CONTENT INITIATIVES



Source: SBC analysis; Supply survey of Ugandan companies, 2013
 Note: *Process of obtaining required approvals (safety, environmental, electricity installation, investment, etc.) from the public administration

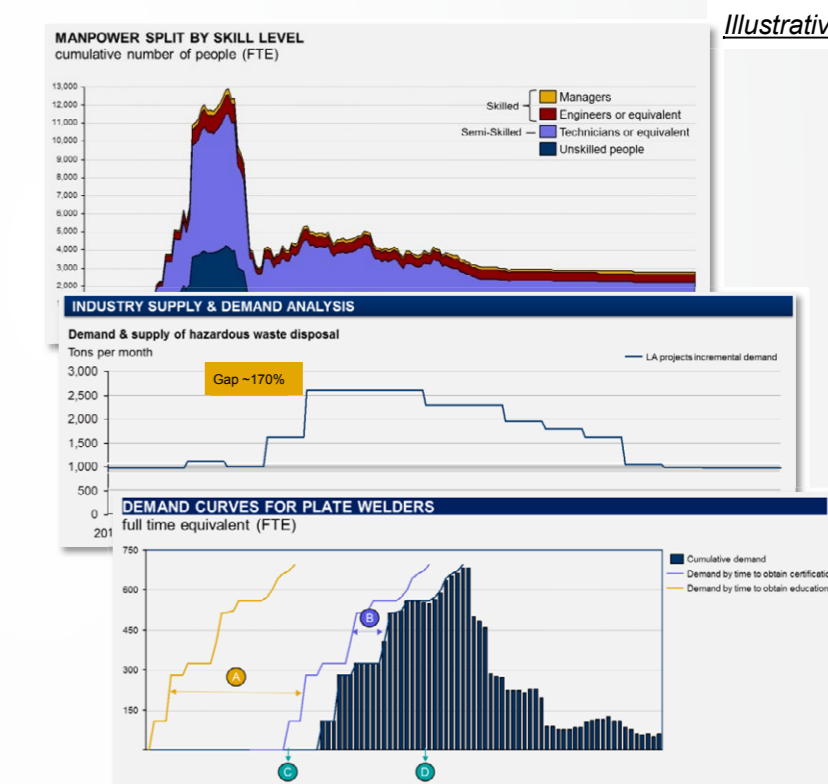


Initiative 1: Communicate oil & gas projects demand

LAKE ALBERT PROJECT'S FUTURE REQUIREMENTS IN MANPOWER AND EQUIPMENT SHOULD BE COMMUNICATED BETTER TO UGANDA COMPANIES

- The lack of information from Oil and Gas operators and public authorities to Ugandan industrial players is highly expected and is considered as the first pitfall by local businesses in their development. Potential suppliers are frustrated by the lack of visibility on future demand and timelines.
- To address this lack of communication, the three oil and gas partners have decided to communicate better during the preparatory period, i.e. before the construction phase starts.
- The information shared will be future manpower needs, future demand of equipment and raw materials demand, explanations on oil and gas specifications for certain goods and services, and projects timelines.
- Communication will be performed through a variety of channels to be determined like large dedicated forum, regular topical meetings focused on specific sectors (e.g.: transportation, catering, steel...), or dedicated website to update demand levels and project timeline when required.

INFORMATION TO COMMUNICATE



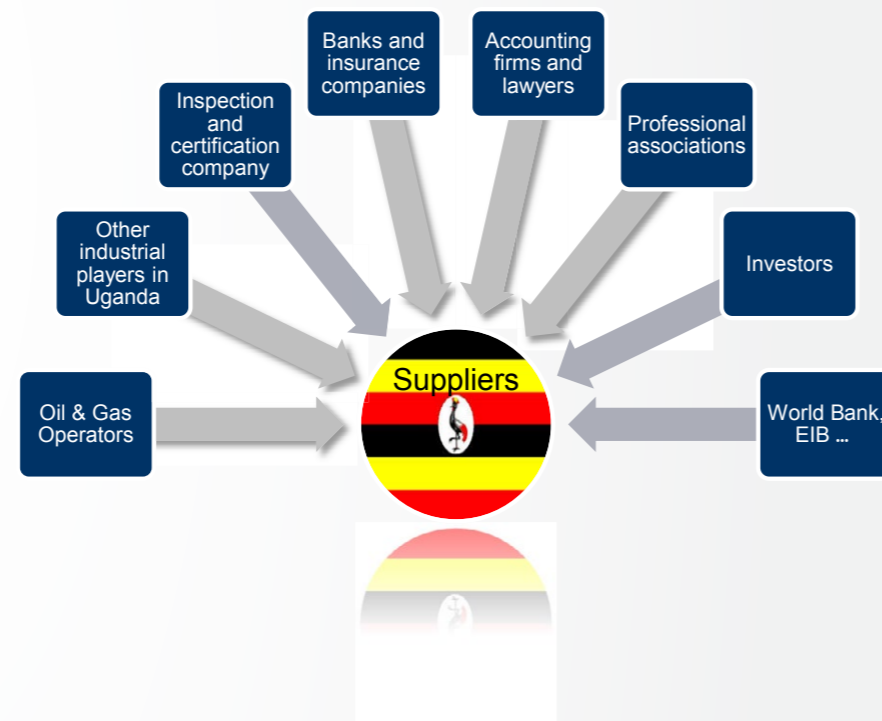


Initiative 2: Create an 'Enterprise Enhancement Center'

AN ENTERPRISE ENHANCEMENT CENTER SHOULD ASSIST SUPPLIERS GET READY FOR THE CONSTRUCTION PHASE AND PREPARE THE AFTER-PEAK PERIOD

- The center based in Kampala would have double objective: raise the management standards of Ugandan companies to ease their participation to the construction phase, and anticipate the post peak period, i.e. the transfer of people and suppliers to other sectors or regions.
- This center would provide trainings such as answering to a tender, understanding the general terms and conditions of an international contract, or the mandatory safety and environment standards of oil and gas operations.
- This center would also be space for developing relationships between Ugandan entrepreneurs and national or international investors and donors.
- After the peak of the construction phase, the center would focus on identifying possible transfers of workers (mechanical technicians, electricians ...) trained to high level standards to other industrial sectors in Uganda (e.g. dam, road, ...) or export Lake Albert experience in the region (Tanzania, Kenya...).

- In terms of governance, the center should be composed of the various actors of the Ugandan economy under the supervision of the three oil and gas operators.



Initiative 3: Build a National Talent Register and National Suppliers Database

TESTED SUPPLIERS AND TRAINED WORKERS THAT WILL HAVE PARTICIPATED TO THE CONSTRUCTION PHASE SHOULD BE REGISTERED IN A DATABASE

- Lake Albert project will develop Ugandan industry and thousands of Ugandans, from engineers to craftsmen, will be trained and receive valuable experience. This national value added must be leveraged and capitalized for other sectors in the country or in the region.
- A 'National Suppliers Database' would be useful for the industry in Uganda beyond the oil and gas sector. In the very short term, such a database would be highly valuable for future Engineering, Procurement and Construction (EPC) contactors upon their arrival. The 'National Talents Register' would list all the engineers, technicians and skilled workers trained over the different phases of oil and gas projects.
- After the construction phase, such databases will facilitate the sourcing of identified suppliers or the recruitment of trained workers.

SOURCES OF INFORMATION

- Oil and gas partners
 - Industrial Baseline Survey
 - Existing pre-qualified suppliers lists
- Future EPC contractors
- Ugandan authorities and professional associations
 - URA, UIAFUE, PFSU, ...



FINAL USERS





Initiative 4: Support specific sectors to develop Ugandan players

SOME SPECIFIC SECTORS SHOULD BE SUPPORTED BY OIL AND GAS PARTNERS IN UGANDA

- Some goods and services are likely to be imported due to large quality or quantity gaps while they could be produced in the country with relatively small efforts.
- The local establishment of one to several new industries will benefit Ugandan economy in a sustainable way, i.e. beyond the duration of oil and gas projects.
- In terms of support, the role of the three operators would be to ‘coach’ the selected companies, help them find investors, provide technical assistance (standards, certification, expertise), and give clear visibility over future demand.

SPECIFIC INDUSTRIES TO SUPPORT

Hazardous waste management	
Operations and maintenance services	
Metal scaffolding	
Work safety products (PPE)	
Road safety	
Agriculture	
Light equipment manufacturing	



Initiative 5, 6, 7 & 8: Support to Education system

THE EXISTING EDUCATION SYSTEM NEED TO BE SUPPORTED AND THE CREATION OF A NEW VOCATIONAL CENTER MAY BE ENVISAGED

- The Government of Uganda and the oil and gas operators need to support the educational system in Uganda since most institutions are too far from international oil and gas standards in terms of skills required.
- Oil and gas operators should target their support to the best existing institutions in Uganda.
- Actions could be financing equipment for practical trainings, providing data sets for geological case studies and training professors in technical disciplines. In addition, stakeholders should envisage the creation of a new vocational center in order to address strong manpower demand for craftsmen (civil) and technicians (mechanical and electrical) during the construction and operation phases.
- Considering the poor dialogue between universities and private employers and the lack of appetite for technical disciplines in Uganda, it is important to put in place regular meeting like career fairs where the three operators will explain what job they need to recruit for them or for their contractors.



5. FAQs



IBS Objectives

1 WHAT IS THE INDUSTRIAL BASELINE SURVEY (IBS) ALL ABOUT?

The IBS is an initiative that was done as a partnership between the 3 oil operators in Uganda CNOOC, Total E&P Uganda and Tullow Oil, to assess the sector as it stands today and assess the needs of the industry for the next period of years of operation and the potential solution to these needs.

The objectives of the IBS were:

- i) To assess and analyze the demand and supply needs within the industry, for example manpower and equipment.
- ii) To identify opportunities for maximum national participation in the oil and gas sector

The ultimate goal of this survey is to promote as much as possible national content during the development and the production phases of the project.

2 IS THE SURVEY CONFIDENTIAL?

The results of the survey are being shared with relevant stakeholders, i.e. GoU, the business community, professional associations and development agencies with whom joint efforts will be undertaken to ensure that concrete and appropriate measures are taken to enable the recourse to national talents/service providers during the key phases of the project.

IBS methodology

3 WHO CARRIED OUT THE SURVEY? WHY DIDN'T YOU USE A UGANDAN CONSULTANT?

The survey was conducted by an international consultancy firm (Schlumberger consulting) which is specialized in the oil and gas sector and particularly in exploration and production. This consulting firm has conducted the survey with the active support of a member of Makerere University. Uganda being a nascent oil nation, did not have the skills base for such a comprehensive survey of this sector's needs.

4 WHO TOOK PART IN THE SURVEY?

The survey was cross cutting and involved all stakeholders in all sectors related to the oil sector and the planned development over the coming years, from the authorities to private sector, professional associations and service providers.

5 WHAT METHODOLOGY WAS USED WHEN CONDUCTING THE SURVEY?

The methodology used was based on:

1. Building an exhaustive segment list for entire value chain (in terms of Services, Goods, Raw materials)
 - a. Define segment with the highest impact on National Content
2. Performing demand and supply forecast for chosen segments
 - a. Conduct gap analysis
3. Developing strategic recommendations to bridge the gap

6 WHO WERE INTERVIEWED FOR THIS SURVEY? / WERE LOCAL SERVICE PROVIDERS INTERVIEWED DURING THE SURVEY?

A wide range of service providers were interviewed including the following; more than 800 questionnaires were answered by a various stakeholders including companies, associations related to employment and manufacturing, educational institutions, oil companies, embassies, international organizations and government bodies.

- Private Sector Foundation of Uganda (PSFU)
- Association of Uganda Oil and Gas Service Providers (AUOGS)
- Uganda Manufacturers Association (UMA)
- Uganda Small Scale Industries Association (USSIA)
- Uganda National Association of Building and Civil Engineering Contractors (UNABCEC)
- Ugandan Bureau of Standards (UBOS)
- Federation of Uganda Employers (FUE)
- Ugandan Insurers Association

7 WHAT ISSUES DID THE LOCAL SERVICE PROVIDERS BRING UP DURING THE SURVEY?

Among the issues, the local service providers brought up the following;

- 1- Lack of access to finance
- 2- Lack of information regarding the oil and gas business opportunities and low visibility over the demand
- 3- Lack of proper infrastructure to make their work easier
- 4- Bureaucracy and administration loopholes
- 5- And lack of capacity among the service providers and inadequate training

8 HOW IS THE DATA ACQUIRED FROM THE SURVEY BENEFICIAL FOR THE GOVERNMENT AND UGANDANS?

It is the first time that oil companies carry out such an in-depth survey well before the

beginning of the construction phase of the project in order to ensure as maximum national content as possible during the development phase of the project. Therefore, the results from the survey are beneficial to the public as a whole because they set out to clearly show the critical areas of attention. They also go further to propose the best solutions as a way of making oil and gas project opportunities available both for the private sector and Ugandans. The data can also be used by the Government in its endeavor to plan for participation of Ugandans in the oil and sector.

IBS findings

9. WHAT WERE THE RESULTS OF THE SURVEY IN REGARD TO JOBS?

The survey revealed many findings regarding the sector at the moment including:

- 1- There are going to be many jobs created over the coming years and there will be a great need for the training of people who will work in areas directly related to the oil operations.



- 2- Total new jobs generated by oil projects may be in the range of 100,000- 150,000, including indirect and induced jobs. This will be dependent on how effective the Ugandan private sector are ready to embrace the opportunities outside the oil project.
- 3- This figure includes approximately 13,000 direct jobs.
- 4- The survey also articulated the major areas that need immediate attention and support. These include: technical training, transport and logistics, work safety products, waste management, light equipment and production and operation services.

10 HOW ARE THE RESULTS OF THE SURVEY GOING TO BE USED?

- To match demand and supply of skilled workers
- To Identify the needs, the gaps and bridges to enable Ugandan companies to meet standards and benefit from the business opportunities
- To facilitate the sourcing of identified suppliers

- To encourage business connections between Ugandan companies and between foreign and Ugandan companies to ensure transfer of knowledge

11 WHO WILL BE RESPONSIBLE FOR WHAT?

CNOOC, Total E&P Uganda and Tullow oil are going to work closely with the Government of Uganda, Uganda's development partners and Uganda's private sector to plan for local capacity building against identified needs and to explore re-employment possibilities for trained Ugandans after the construction period is complete. We will maximize Ugandan participation wherever possible.

- Direct jobs are generated by companies developing and supporting oil and gas projects development on site like well services, seismic studies, drilling, O&G project construction: Mechanical, civil and electrical engineering, freight services, upstream production activities: production & maintenance, site safety & security etc
- Indirect jobs are generated by companies supporting oil and gas projects offsite like mechanical engineering, freight services, cement manufacturing, electrical engineering, civil engineering, Construction material...

- Induced jobs are both direct and indirect jobs generated by the spending of oil and gas industry revenues once re-invested in the economy like catering, medical, hotel, IT & communication, education, banking, insurance among others

Therefore 100,000 to 150,000 jobs will be dependent on how effective the Ugandan private sector are ready to embrace the opportunities outside the oil project.

12 WHAT QUALIFICATIONS WILL BE REQUIRED?

There are over 400 job types that serve the oil and gas industry. Basing on the jobs above, jobs shall require vast qualifications ranging from arts to science courses undertaken to casual labour that may not require formal training. But all these jobs will need to meet international oil and gas standards.

13 IS THE UGANDAN EDUCATION SYSTEM INSUFFICIENT TO TRAIN YOUNG TALENTS?

Uganda is a nascent oil nation therefore, the education system needs to be strengthened in terms of compliance to oil and gas certification requirements and on-the-job practical training. The existing institutions need to be more oriented on O&G qualifications in order to match the Oil industries requirements. Focus shall be given to the technicians and not the engineers available in number.

14 WHAT PLANS DO CNOOC, TOTAL E&P UGANDA AND TULLOW HAVE FOR TRAINING / INTERNSHIP?

The oil operators are mandated to train their employees, they offer scholarships as well as internship programs for students and newly graduated professionals with no work experience.

15 HOW WILL YOU ENSURE THAT UGANDANS ARE RECRUITED AND NOT FOREIGNERS?

The oil operators can only benefit from the employment of Ugandans. We will ensure that there is a fair selection process for opportunities where Ugandans can participate in.

16 WILL JOB SEEKERS NEED TO LEARN CHINESE OR FRENCH TO GET A JOB?

No, that will not be necessary. The operating language for Uganda's oil industry is English.

17 WHEN WILL THE JOBS BECOME AVAILABLE?

A number of Ugandans have already been employed in the oil and gas sector and more are yet to join since the sector is growing in Uganda. Currently, within CNOOC, Total E&P Uganda and Tullow national staff represent more than 60% of their respective staff.

Assuming no major delays in project execution, within approximately 3 years.

18 WHAT WILL THESE EMPLOYEES DO AFTER THE PEAK OF ACTIVITIES?

All the skills used for the oil and gas construction phase are transferable to other sectors of the economy as well as other countries that have oil and gas operations. In addition, with the upcoming issuance of another round of licenses and the new players will require the use the same skills. The workforce will be able to apply the acquired skills in other businesses like welders, engineers, builders, drivers, machine operators etc.

IBS business opportunities for Ugandan companies

19 HOW LOCAL WILL BE THE NATIONAL CONTENT?

Whereas most jobs will be acquired on a competitive basis to benefit all relevant Ugandan service providers and individuals, priority will be given to local residents for causal and unskilled jobs.



20 HOW WILL YOU ENSURE THAT BUSINESS OPPORTUNITIES ARE GIVEN TO UGANDAN COMPANIES?

The demand for the project detailing the requirements of the oil & gas sector will be communicated to the relevant business associations and relevant stakeholders that are mandated to take advantage of the opportunities. In addition supplier development programs and the creation of the Enhancement Centre will go a long way to up skill Ugandan service providers to allow them fully participate and win contracts in their relevant areas of operation.

21 WHAT STANDARDS WILL BE USED IN THE CONTRACTUAL FRAMEWORK TO BE DEVELOPED BY OIL COMPANIES?

UNBOS is working on creating the Oil & Gas standards that will be applicable to the Oil & Gas sector. These will not be different but will be harmonized with the oil & gas international standards.

22 HOW CAN I PARTICIPATE IN SERVICE DELIVERY?

The survey covers several areas and sectors that anyone can get involved in directly or indirectly in regard to service delivery. For example, the survey mentions avenues like agriculture, catering, hotels, waste management, transportation but you can also be subcontracted by those industries or be an outgrower supplying goods and services to a contracted person or company.

23 HOW WILL LOCAL SERVICE PROVIDERS BE SELECTED TO PARTICIPATE?

The awarding of contracts is carried out via a competitive, robust and fair tendering. It will be a process detailed by the companies needing the services. However it is worth noting that the standards of the service providers must be in line with international standards set for the sector. The oil industry is a very standards-intensive industry and requires that the service providers operate at the standards required of them.

24 HOW ARE YOU GOING TO ENSURE THAT INFORMATION IS PROPERLY SPREAD TO THE UGANDAN BUSINESS COMMUNITY?

Oil companies believe that an enhancement centre dedicated to provide information about the tenders, the standards required for specific services and able to help strengthening service providers capacity would be the best option to ensure that business opportunities and requirements are spread to the Ugandan business community.

IBS recommendations

25 WHAT ARE THE RECOMMENDATIONS OF THE IBS?

The IBS recommends:

- i) The need to communicate oil & gas projects demand
- ii) Enhance business relations i.e National Talent register and National suppliers database

- iii) Create an 'Industry enhancement Center
- iv) Support existing vocational and technical institutions
- v) Collaborate with educational institutions on job demand

26 HOW ARE YOU GOING TO ENSURE THAT INFORMATION IS PROPERLY SPREAD TO THE UGANDAN BUSINESS COMMUNITY?

Meeting with Key stakeholders are going to be held and the findings of the survey shall be communicated. They will then communicate the information to various groups. The media (including radio, TV and newspapers) as a key stakeholder shall be invited for a press conference and they shall communicate the IBS.

IBS Implementation / Timeline

27 WHAT IS THE IMPLEMENTATION STRATEGY FOR LOCAL CAPACITY BUILDING IN RESPECT OF SKILLS AND STANDARDS AND FINANCING ISSUES?

The implementation plan is going to be worked out over the next 6 months together with the relevant authorities and development agencies in the framework of a collaborative effort to ensure promotion of national content.

28 ARE YOU WORKING WITH THE GOU?

Yes, we are working with different ministries that represent the Government like Ministry of Energy and Mineral Development, Ministry of Tourism, Ministry of Trade, Ministry of Finance, Planning and Economic Development, Ministry of Water & Environment, Ministry of Education and Sports, Uganda National Roads Authority (UNRA), UBOS.

29 WHEN IS THE CONSTRUCTION PHASE GOING TO START?

After the final investment decision is mad, i.e. after the project conceptualization is completed, necessary approvals are given by GoU and financing is secured.

30 IS THERE A WAY TO ENSURE THAT CONSTRUCTION PHASE STARTS EARLIER?

No. The Oil & Gas production has to go through a cycle of processes and these have to be chronologically followed and many of them have long timeframes. However, this timeline gives the opportunity to service providers to prepare themselves in terms of meeting the required standards for instance to be ready when construction phase starts.





31 WHAT WOULD BE THE IMPACT ON THE PROJECT IF THE MEASURES ARE NOT IMPLEMENTED? ON THE NATIONAL CONTENT COMPONENT OF THE PROJECT?

It is our wish that government and the private sector embrace the findings of the industrial baseline survey and also act on them. Left on their own, the country and the private sector players will miss out on these opportunities and there would be a higher reliance on international suppliers and expatriate skilled workers.