

**UNCTAD OILGASMINE
Special Event
15-16 October 2014
Palais des Nations, Geneva**

**Initiatives/Policies to promote involvement
of indigenous service providers in Africa's
oil and gas industry**

**Mr. Etienne Hamman
Local Content Manager
Total E&P
France
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The views expressed are those of the author and do not necessarily reflect the views of UNCTAD

UNCTAD AFRICA OILGASMINE

Special Event 15-16 October 2014

Etienne Hammann – Head of Total E&P Local Content

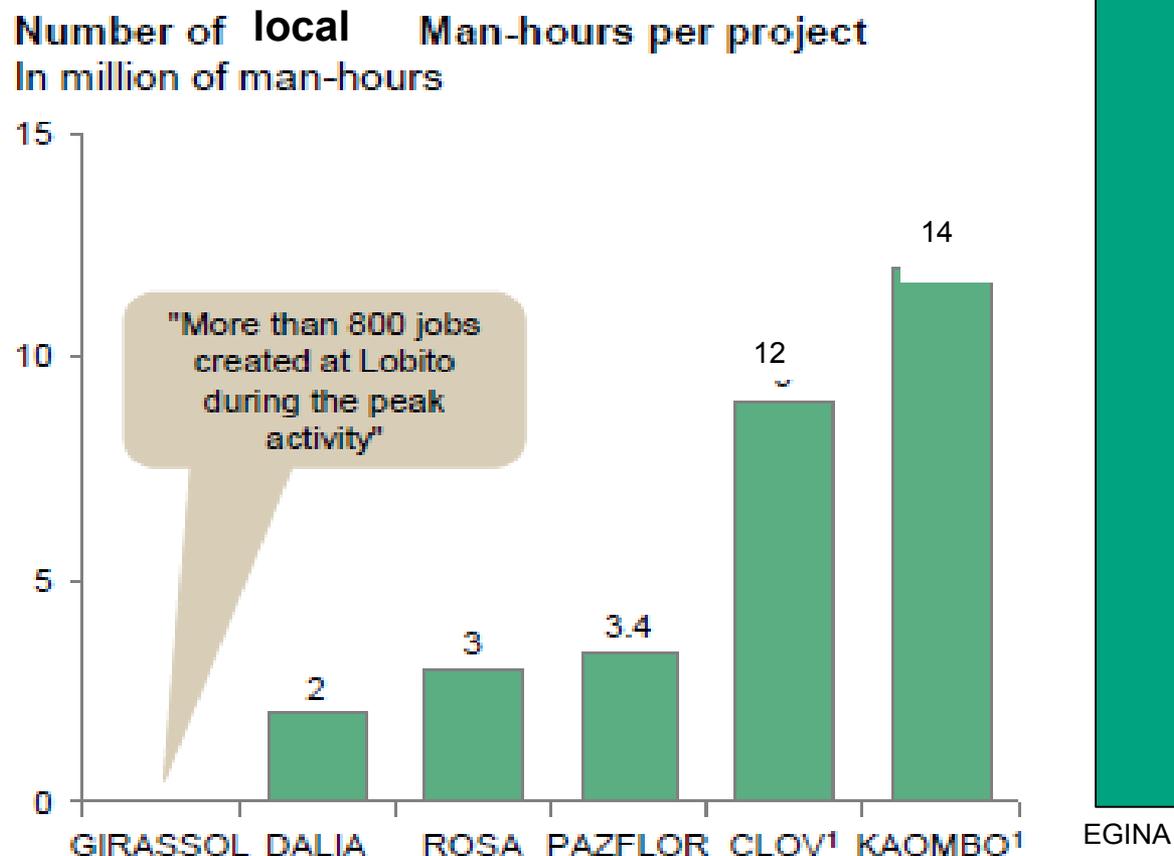
TOTAL E&P PAST ACHIEVEMENTS EXAMPLE OF ANGOLA

TOTAL HAS ACHIEVED MAJOR TECHNOLOGY TRANSFERS IN ANGOLA

		Specific Item	GIRASSOL	DALIA	ROSA	PAZFLOR	CLOV	KAOMBO
Exploration & Appraisal		LC Exploration is delegated to service companies and seismic companies						
Drilling & completion		LC Drilling & completion is delegated to service companies						
Wells / SPS	X-mas trees		Storage, test and maintenance				Test	100% Assembly and test
	Manifolds		Supports and assembly			Most manifolds produced	Most produced locally	All produced locally
	Well Jumper		Production			Mostly produced locally	All produced locally	All produced locally
SURF	Riser Towers	Assembly				Riser protection	Riser protection & integration	Produced locally
	Pipelines		production of sub-sea injection and production pipeline			All produced locally	All produced locally	All produced locally
	Umbilicals / Flowlines	Assembly of flowline bundles	Production of most static production and injection umbilicals				Most produced locally	All produced locally
FPSO	Buoy	Fabrication of loading buoys	Production			Production (4)	All produced locally	All produced in Angola
	Anchors	Fabrication of suction anchors	Production of 12 anchors			Mooring production	All produced locally	All produced locally
	Modules				Installation of heavy modules in between existing facilities		Water treatment module Lay down area module	Production of 6 modules and integration

WITH ASSOCIATED EMPLOYMENT (DEEPWATER PROJECTS IN THE GULF OF GUINEA)

Constant increase in the number of local man-hours...



**IN ORDER TO IMPROVE, WE WANT TO
FOCUS MORE ON PLANNING**

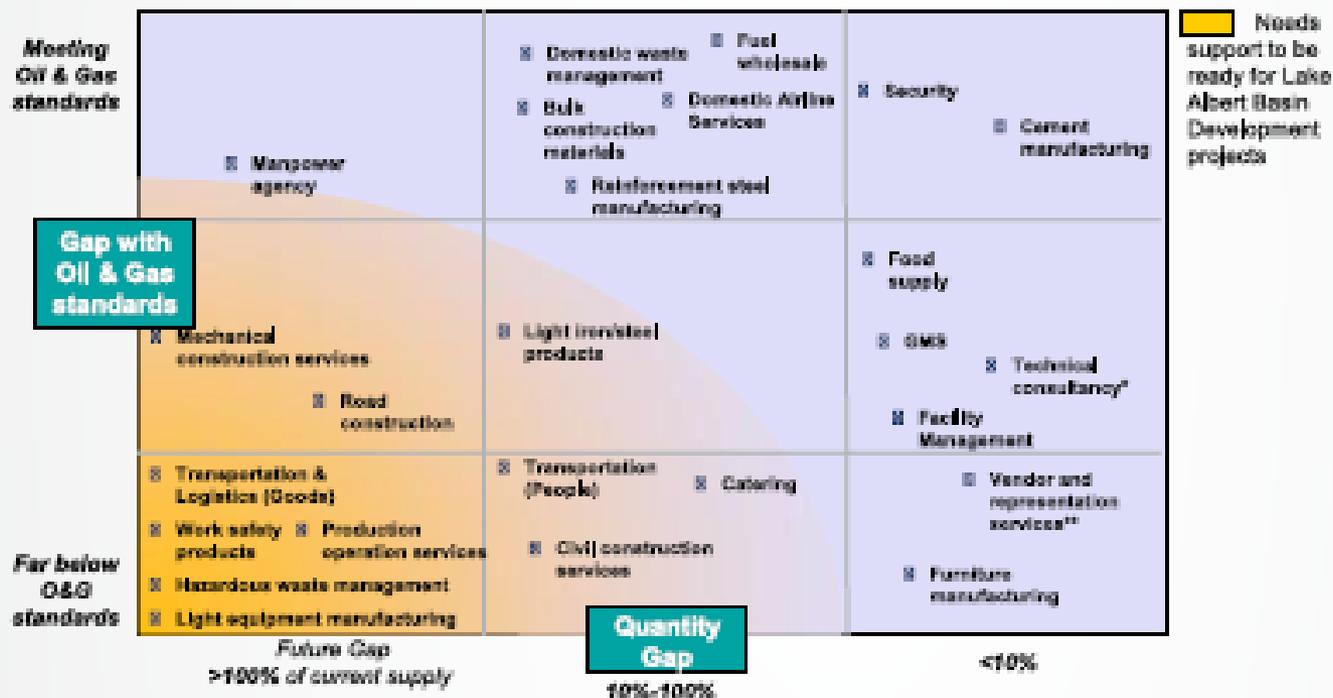
**EXAMPLE OF UGANDA INDUSTRIAL
SURVEY**

INDUSTRIAL SURVEY UGANDA

- 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



INDUSTRIAL SURVEY UGANDA

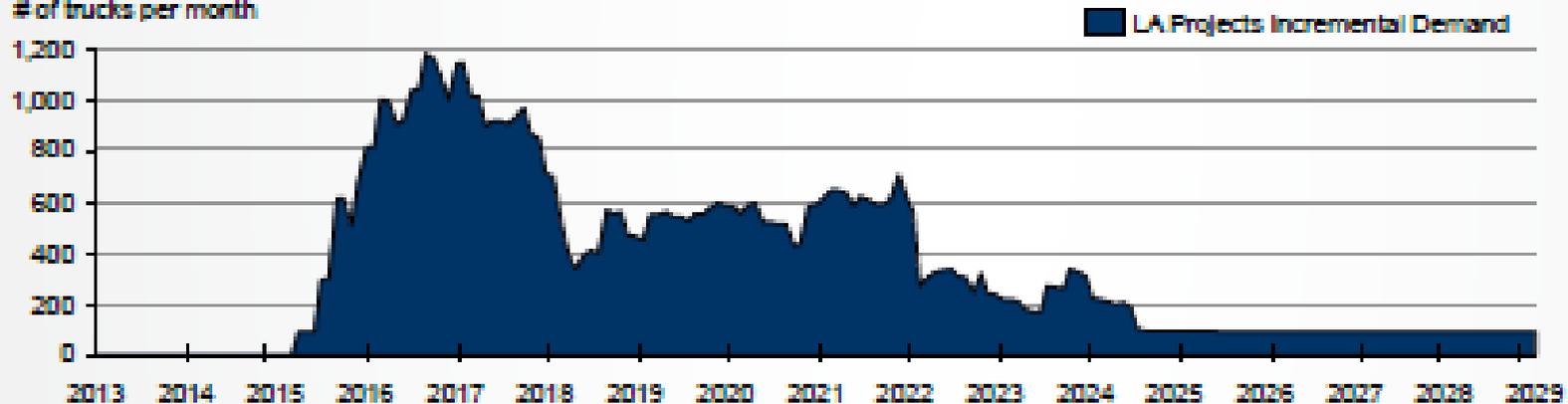
SOME SECTORS WILL NEED A COMPLETE TRANSFORMATION TO BE ABLE TO COPE WITH FUTURE NEEDS, LIKE TRANSPORTATION & LOGISTICS (GOODS) INDUSTRY

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

INDUSTRY DEMAND ANALYSIS

Demand of trucks *

of trucks per month



QUALITY

- ☑ C&C 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 Mombasa - 15 days, for Uganda = 7 days

Source: SEC analysis

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

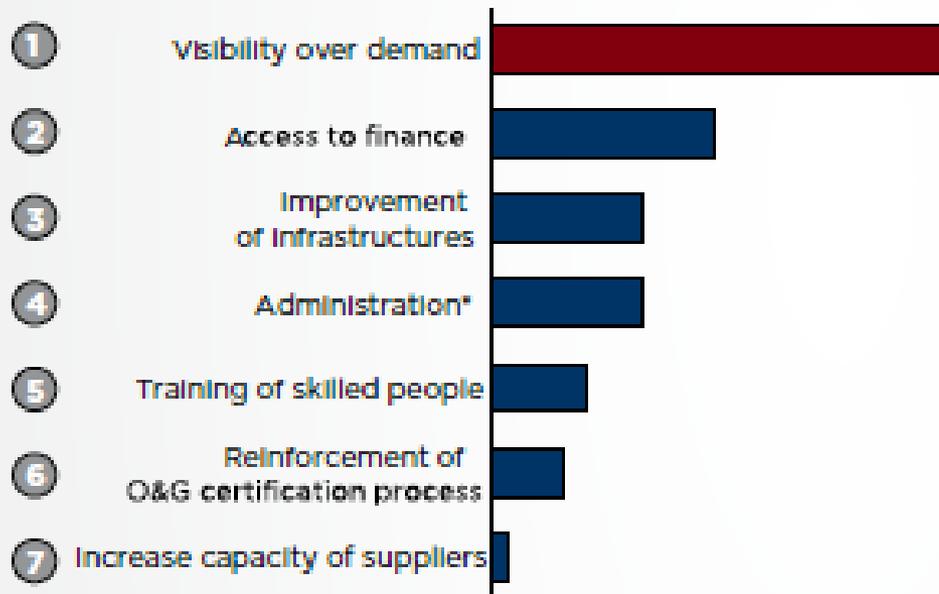
INDUSTRIAL SURVEY UGANDA

- 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. DC analysis, Supply survey of Ugandan companies, 2012.

* Administration: Process of obtaining required approvals (policy, environmental, electricity installation, investment, etc.) from the public administration.

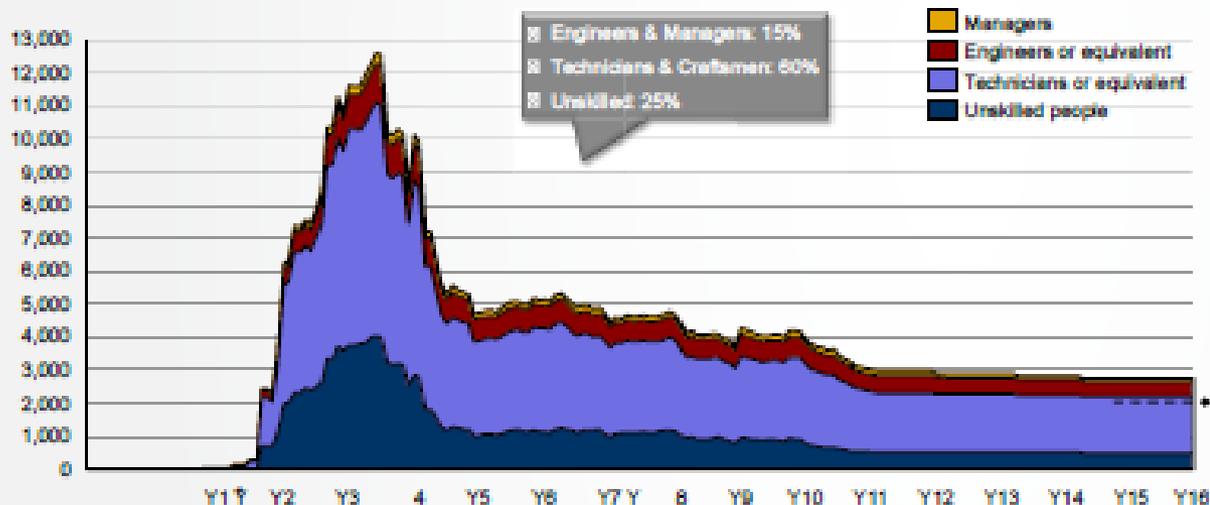
INDUSTRIAL SURVEY UGANDA

– 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: SDC analysis, ONDCG, Total, Tullow
Note: 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

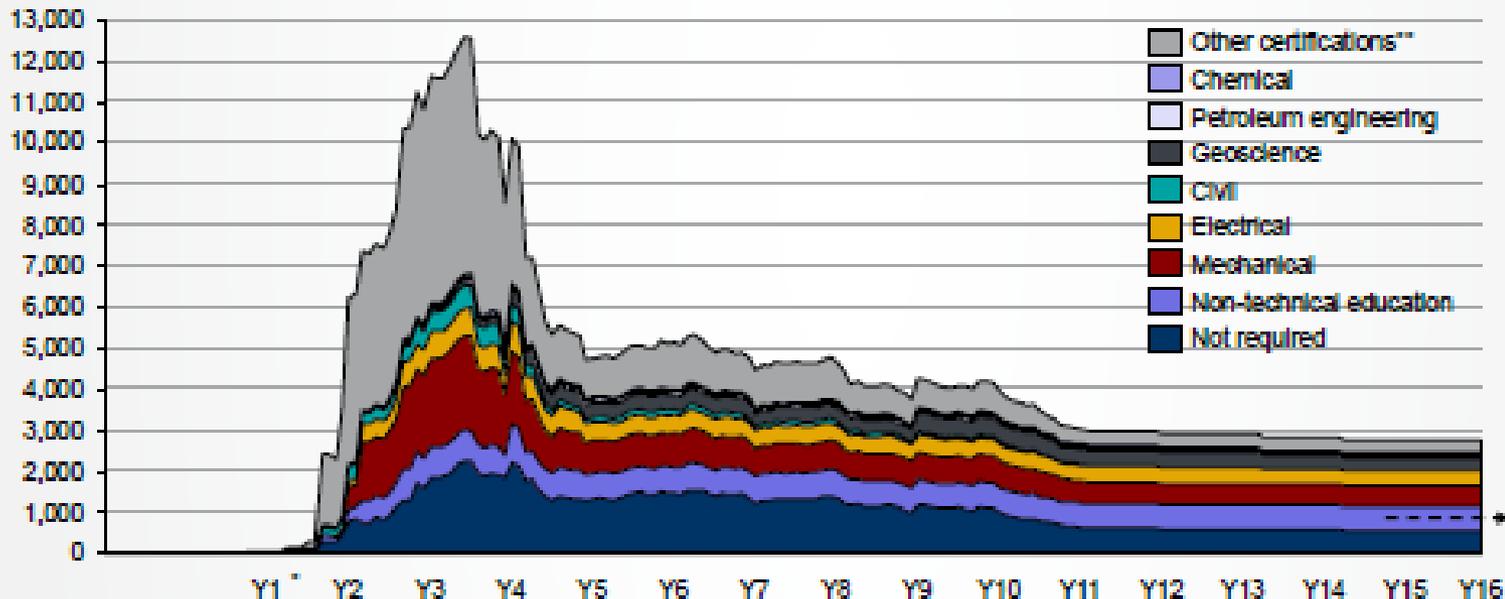
INDUSTRIAL SURVEY UGANDA

– 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)



Source: IBC analysis, ENDOC, Total, Tullow
* Year 1 (Y1) represents the starting point of the Lake Albert project construction phase
** Other certifications includes diving (heavy duty and passenger boats), welding (pipes), welding (plate), loading and lifting, machine operators.

TOTAL WANTS TO PROGRESS MORE THROUGH INNOVATION

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- INDUSTRIAL SURVEY
 - CONCEPT TESTED – BEING IMPLEMENTED
- E LEARNING THROUGH TABLETS PILOT TEST TO ENHANCE ACADEMIC LEVEL AT TECHNICAL HIGH SCHOOL ADMISSION.
 - PILOT SHOULD START SEPT 2015
- AGREGATION OF A DATABASE OF O&G QUALIFIED SUPPLIERS ABLE TO ESTABLISH TECHNICAL TRANSFER PARTNERSHIPS X
 - GO LIVE SCHEDULED SUMMER 2015
- SPONSORSHIP OF A DOCTORATE DESIGNED TO MEASURE VALUE CREATION THRU LOCAL CONTENT
 - THESIS STARTED Oct 2014.

WHAT MAKES A GREAT O&G PRODUCING NATION

WHAT MAKES A GREAT OIL PRODUCING NATION 1/2

- REQUEST IOCs TO PRODUCE FIELD DEVELOPMENT MANPOWER CURVES BY JOB TRADE AND SKILL LEVEL AT PRE-FEED STAGE
- DEVELOP TECHNICAL COLLEGE TO O&G INTERNATIONAL STANDARDS ACCORDINGLY FOR LOCAL WORKFORCE TO PARTICIPATE. FOCUS ON SKILLED TECHNICIANS
- REQUEST IOCs TO PRODUCE INDUSTRIAL DEMAND AT PRE-FEED STAGE AND PUBLISH IT.
- DEVELOP LESS SOPHISTICATED INDUSTRY SEGMENTS FIRST (MAYBE AGRICULTURE FOR CATERING)
- PROMOTE DFI: ALLOW FOR O&G DEVELOPMENT AREAS WITH
 - CHEAP AND ABUNDANT LABOR
 - TRAINING INFRASTRUCTURES
 - INFRASTRUCTURES, IN PARTICULAR POWER

WHAT MAKES A GREAT OIL PRODUCING NATION 2/2

- PROVIDE FOR DOMESTIC GAS (IF APPLICABLE) AND POWER GENERATION (IF APPLICABLE) IN THE PSC / MINING LEASE

WHEN SPECIFYING LOCAL CONTENT

- ACCEPT TO BROADEN THE LOCAL CONTENT CONCEPT TO LOCAL VALUE CONCEPT (POWER GENERATION, LOCAL INFRASTRUCTURES, TRAINING, INDUSTRIAL PARKS,...) LEVERAGING SYNERGIES WITH THE PROJECT.
- BE OPEN TO TRADE OFFS OFFERED BY IOCs FROM ONE REQUIREMENT TO ANOTHER OFFERING MORE VALUE
- SPECIFY WORK TO BE PERFORMED IN-COUNTRY RATHER THAN BY COMPANIES OWNED BY LOCALS.
- SET UP A LOCAL CONTENT MEASUREMENT METHOD CONSISTENT WITH THE COUNTRY DEVELOPMENT STRATEGY