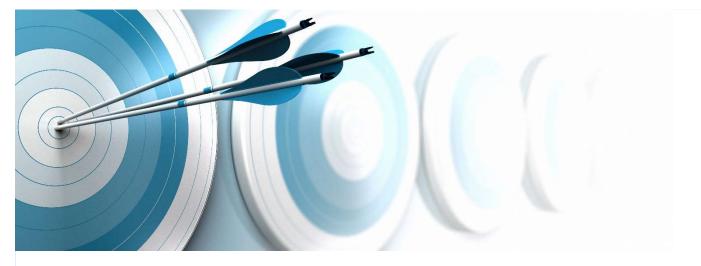


## AFRICA'S OIL & GAS POTENTIAL WHICH WAY FORWARD?

2019 ICPAK Annual Conference Mombasa, Kenya

## Agenda

- Introduction
- Petroleum Value Chain
- Uncertainty within the Value Chain
- Impact of Uncertainty on Objectives
- Risk Allocation
- Threats and Opportunities in Africa
- Managing Uncertainty and Adding Value
- The Role of Accounting in Converting Resources into Public Value



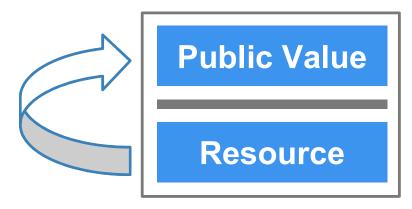
### **Aim**

To inspire a meaningful discussion on how accountancy can drive Africa's efficient use of petroleum resources going forward.

### Introduction

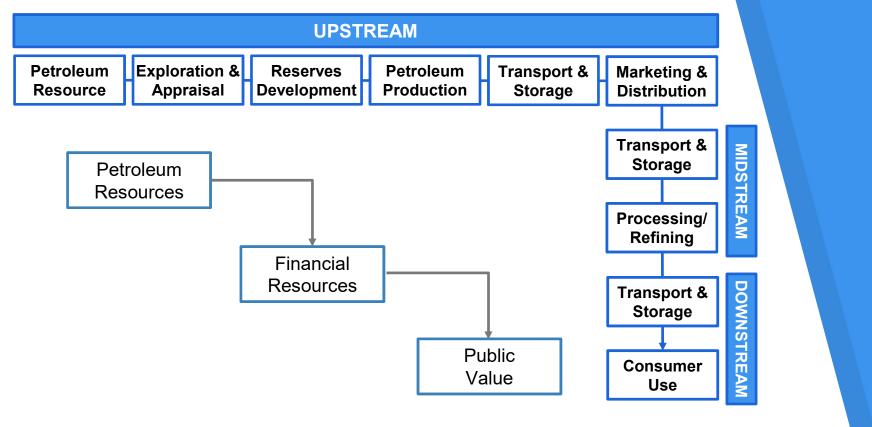
- ☐ Africa has significant volumes of oil and gas
- ☐ Oil and gas can be a blessing or a curse
- ☐ The petroleum industry is uncertain at every point
- ☐ Uncertainty creates risk to public value
- Outcomes are determined by the quality of risk management

# Objective: To convert petroleum resources into public value

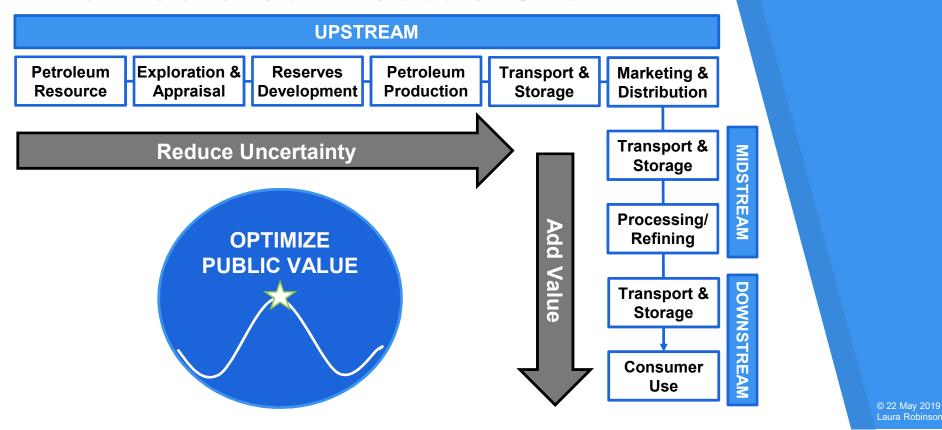


The understanding of UNCERTAINTY and the quality of RISK MANAGEMENT will drive Africa's ability to convert natural resources into public value

## The Petroleum Value Chain

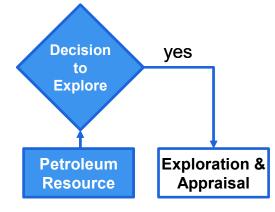


### The Petroleum Value Chain



## The Petroleum Value Chain Petroleum Resource

- □ Estimated existence
- □ Estimated location
- Estimated quantity
- Estimated quality
- Estimated commerciality



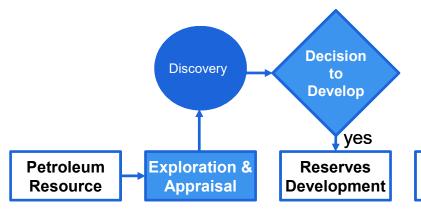
Reserves Development Petroleum Production

Transport & Storage

Marketing & Distribution

## The Petroleum Value Chain Exploration and Appraisal

- ☐ 2D seismic
- ☐ 3D seismic
- ☐ Exploration wells
- Studies
- Appraisal wells



Petroleum Production

~ Hundreds of Millions to Billions of USD

Transport & Storage

Marketing & Distribution

## The Petroleum Value Chain Reserves Development

- □ Production wells
- □ Collection lines
- Processing infrastructure
- ~ 3-5 years and billions (USD) in investment

- □ Storage
- ☐ Transportation infrastructure



Petroleum Production

Transport & Storage

Marketing & Distribution

## The Petroleum Value Chain Petroleum Production

- □ Revenue
- Operating costs
- ☐ Recovery of investment
- ☐ New information
- Declining volumes
- ☐ Improved recovery
- ☐ Enhanced recovery

~ 8-30 years and billions (USD) in project revenue



Transport & Storage

Marketing & Distribution

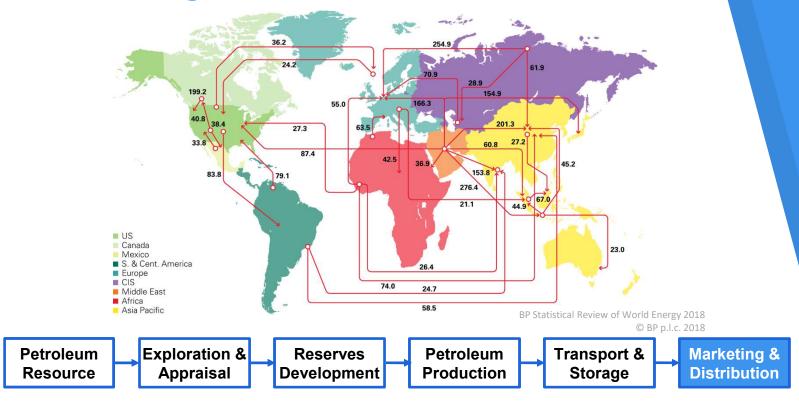
## The Petroleum Value Chain Transportation and Storage

- ☐ Crude and/or product
- ☐ Size is a constraint
- ☐ Transport costs determined by
  - Size
  - Distance
  - ☐ Elevation changes
  - ☐ Land acquisition costs



Marketing & Distribution

## The Petroleum Value Chain Marketing and Distribution



## Uncertainty within the Value Chain

#### **UPSTREAM**

Petroleum Resource Exploration & Appraisal

Reserves Development Petroleum Production

Transport & Storage

Marketing & Distribution

Existence

Success

Cost

Volume

Volume

Price

Location

Cost

Time

Time

Profit

Volume

Quantity

Time

Production

Costs

Quality

Commerciality

Commerciality

**Reduce Uncertainty** 

### **Uncertainty in Petroleum**

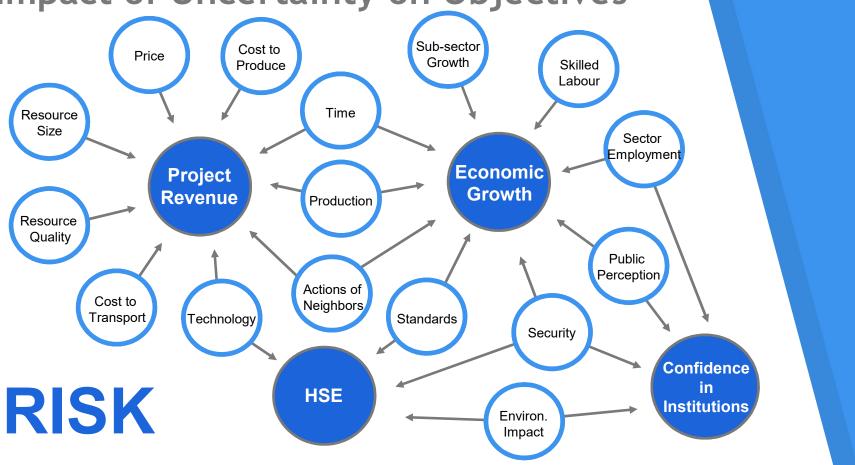
The impact of uncertainty in petroleum can be:

Positive or Negative

**Extraordinarily Significant** 

**Long Lasting** 

## Impact of Uncertainty on Objectives



### Risk Allocation

- ☐ Each entity must decide whether to transfer, terminate, tolerate, or treat risk.
- ☐ Formally or informally, all parties evaluate risk prior to engaging in petroleum exploration and development.
- ☐ These decisions determine positive or negative outcomes.
- ☐ Risk allocation between Government and Oil and Gas companies through:
  - Laws
  - Regulations
  - □ Contracts
- Once the risk has been allocated, there is significant opportunity to treat through risk management practices.

When countries have new discoveries of petroleum resources, uncertainty is significant and many existing governance mechanisms will require adjustment.

A risk management approach allows for the development of integrated governance mechanisms to address the effect of uncertainty on the objective of public value

### Public Value & Uncertainty in Petroleum

#### **Key Public Value Components**

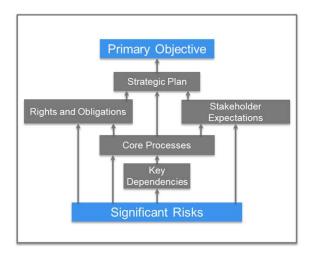
- ☐ Government Revenue
- ☐ Economic Growth
- ☐ Health, Safety & Environment
- ☐ Confidence in Institutions



#### **High-Impact Uncertainties**

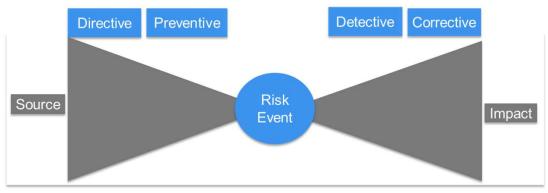
- Resource Size
- □ Production Volumes
- ☐ Commodity Price
- Environmental Impact
- Political Influence
- Public Perception
- Sector Employment
- Security
- Available Technology
- Actions of Neighbors

## Risk Management Approach



## **Identify** Risk

Control Risk



### Role of the Accounting Profession

- ☐ Understand the value chain
- ☐ Collect, create and communicate relevant, reliable and timely information
- ☐ Provide information to decision makers
- ☐ Create, assess, improve, and validate processes to reduce uncertainty and add value
- ☐ Create and maintain confidence in the institutions

The accounting profession
is capable and positioned perfectly to
improve risk management,
foster confidence in institutions, and
drive positive outcomes
from the oil and gas industry in Africa
and in Kenya

### Conclusion

- ☐ Africa has significant volumes of oil and gas
- ☐ Oil and gas can be a blessing
- Outcomes are determined by the quality of risk management
- ☐ Confidence in institutions to manage risk is essential
- ☐ The accountancy profession has a critical role to play in determining the outcome of Africa's oil and gas story
- ☐ Which way from here?

**Straight** to Work



## Thank you for your attention

Questions?

You can find me at Laura.Robinson@SwaleHP.com