

The background of the entire slide is a photograph of an oil pumpjack in silhouette. The pumpjack is positioned in the center-left of the frame, with its long arm extending towards the right. The sun is setting directly behind the pumpjack's central mechanism, creating a bright orange glow that illuminates the sky and the lower part of the pumpjack. The sky is a mix of orange, yellow, and dark blue, with some wispy clouds. The overall mood is industrial and dramatic.

KENYA

MAKING OF AN NDR

BY KATHLEEN ASENSA

NATIONAL OIL CORPORATION OF KENYA

16TH OCTOBER 2019

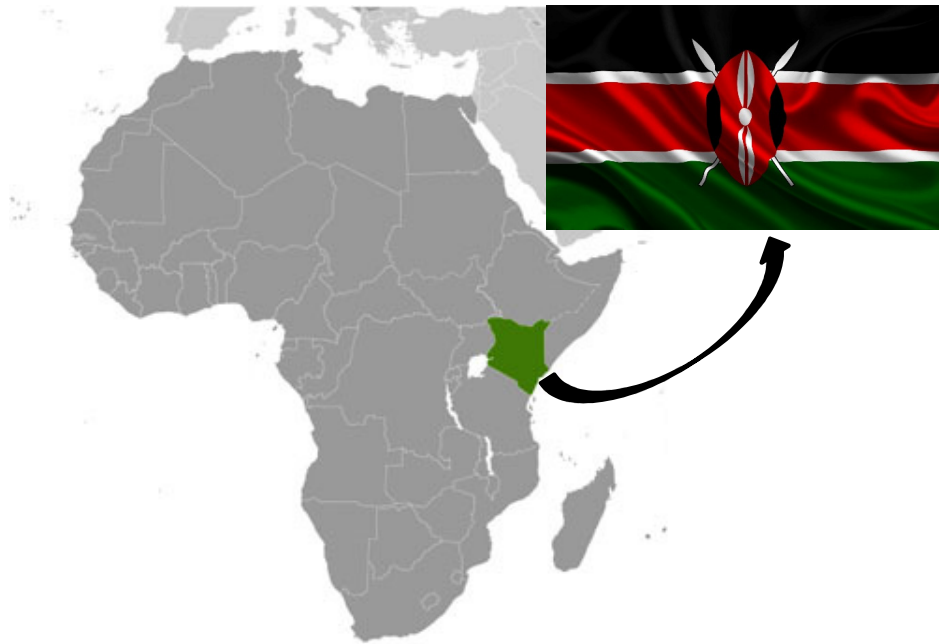
NDR2019



Presentation Outline

- Kenya at a glance
- Petroleum Activities
- DM Institutional framework
- The NDC Project Concept
- The Objectives of the Project
- Digitalization Challenges
- Future plans
- Conclusion

Kenya at a glance



Area: 580,367 sq. km

Population: 50 million

Capital: Nairobi

Languages: English and Kiswahili

GDP (PPP) \$192.338 billion

Per Capita \$3,896 (2018 est.)

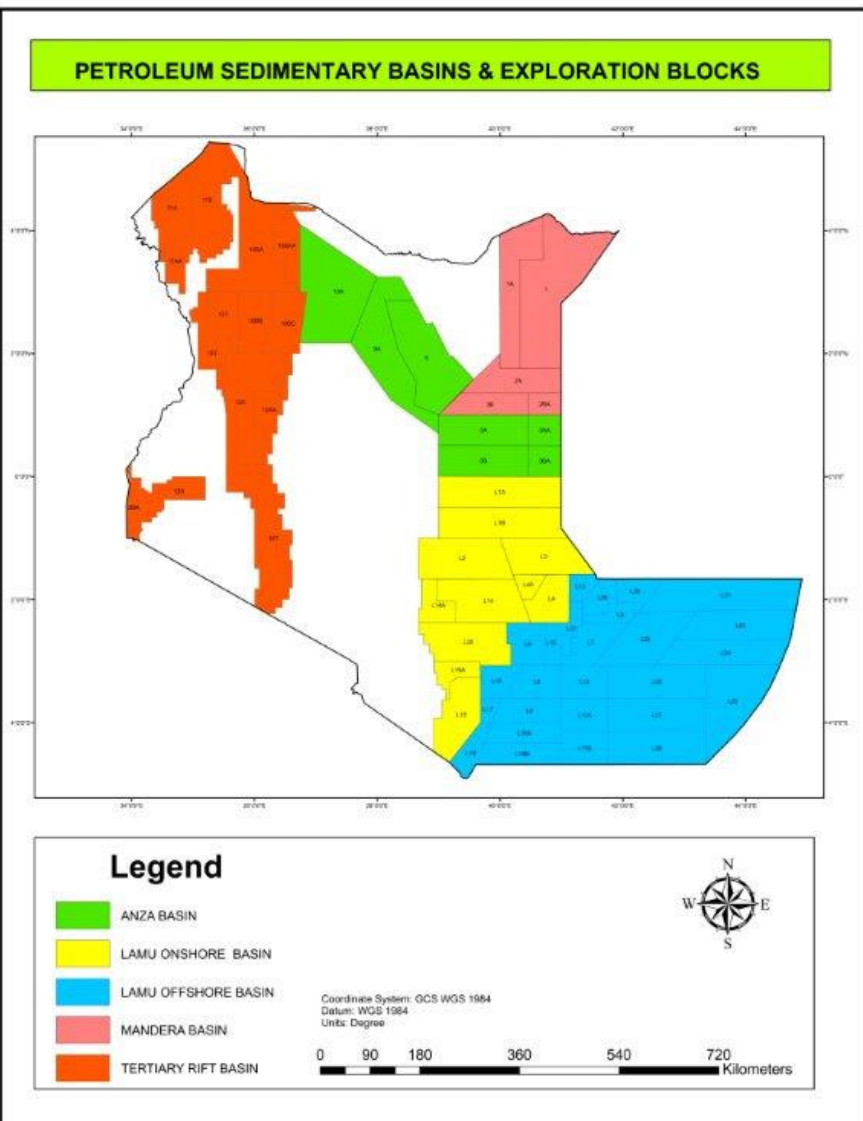
Ethnic Groups: 44 Tribes

Government: "Unitary
presidential constitutional
republic



Petroleum Activities *Exploration Region*

- 4 Sedimentary Basins
- 63 Petroleum Exploration Blocks
- Multiple ***play types***: Potential reservoirs which range in age from Permian to the Neogene-Cretaceous, Oligocene, Miocene
- Players



Petroleum Activities *Exploration History*



1954
Exploration in the
Lamu Embayment

1984
Petroleum
(Exploration
and
Production)
law enacted



2000~
Award for
offshore
PSCs



2012
Several 3D
surveys
carried out

2018
Development of
Ngamia and
Amosing fields



1960-84
Exploration
with 16
wells drilled



1993
15 wells
drilled by
various
companies



2012
Ngamia-1
well oil
discovery



2018
9 discovery
fields
92 wells

Petroleum Activities *Development and Production*

Discovery

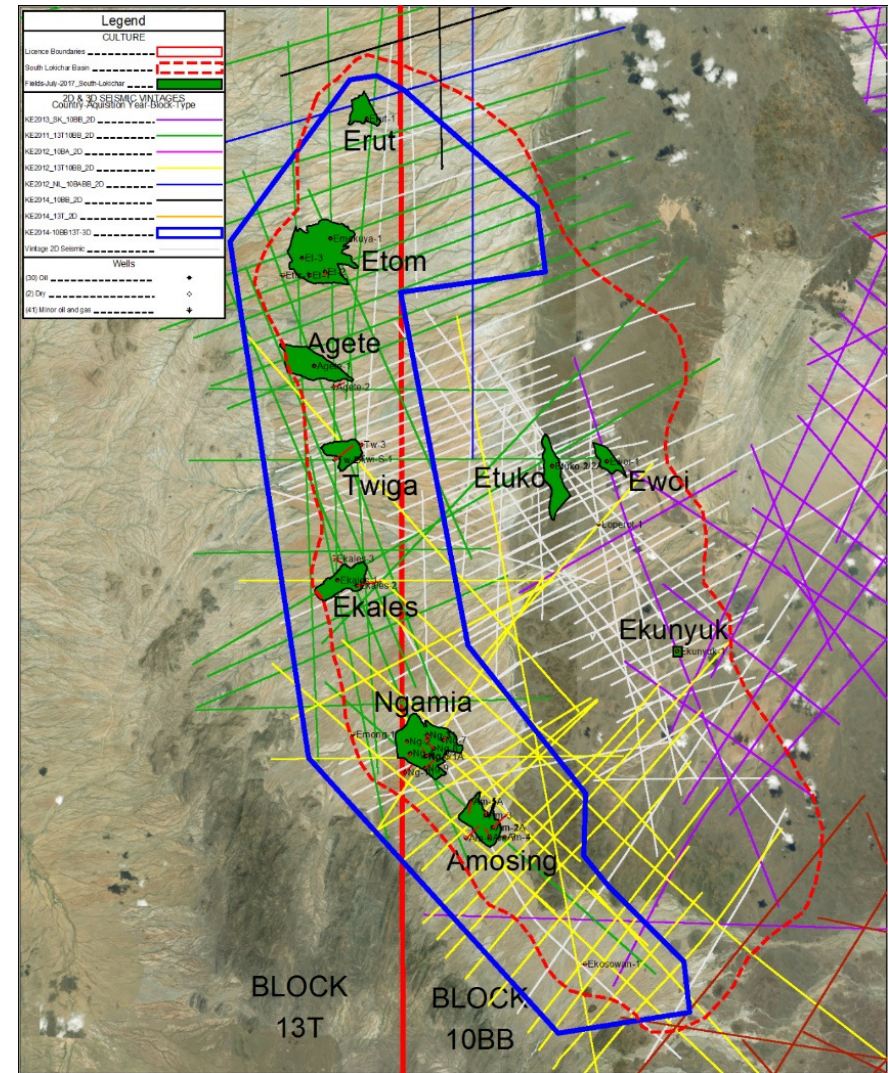
- STOIIP ~4 billion barrels in Tertiary Rift Basin
- Recovery oil ~564 million barrels of oil
- 240-564-1230mmbo as 1C-2C-3C estimates

Early Pilot Scheme (EOPS)

- 200,000 barrels of oil exported
- Oil produced from injection and production testing in 2 fields

Development

- Amosing, Ngamia and Twiga Fields will see initial development
- CPF of capacity of no more than 80,000 bopd
- Foundation stage targets volumes of 210 mmbo of the estimated 2C resources
- FID expected in 2020



DM Institutional framework

• *Ministry of Petroleum and Mining*

- **Policy framework** in the Petroleum Data Management
- **Facilitates NOC** in the fulfillment of its mandate especially in the upstream sector.
- **Stores the physical PSCs** and any correspondences from the IOCs

National Oil Corporation of Kenya

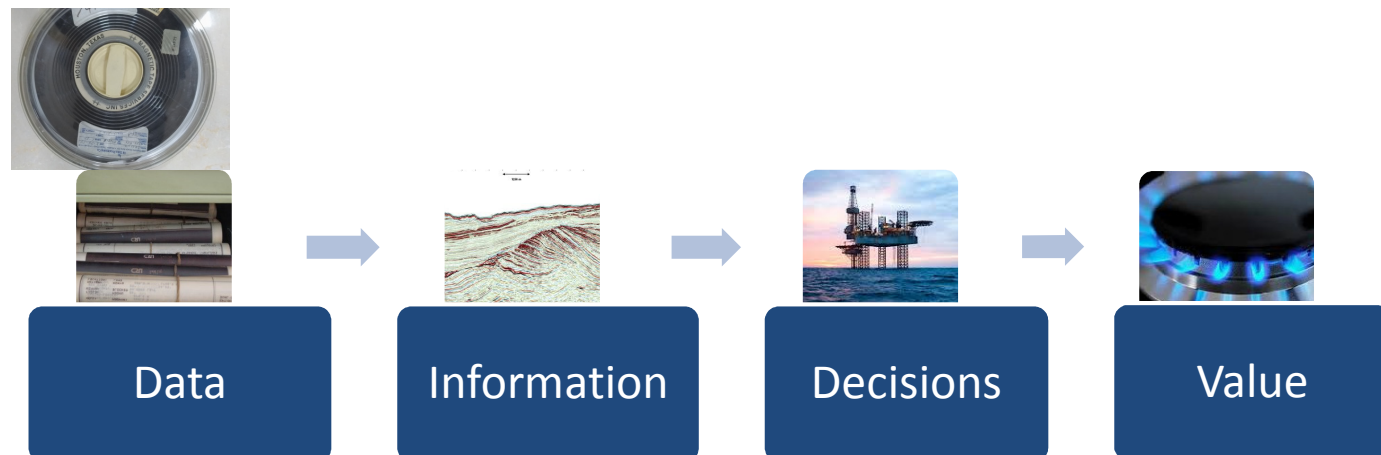
- NOC is the **commercial arm** of the Government in **Upstream** activities
- Houses and **manages** all Petroleum **Data**
- Data from the IOCs is received by the ministry and handed over to NOC for **storage**
- Makes the data **available** to those interested

Created Regulatory Authority

- **Monitor** and **regulate** upstream petroleum **operations**
- **Maintain** and **manage** upstream petroleum **data**
- Coordinate the development of upstream petroleum **infrastructure** and **promote capacity building** in upstream petroleum operations
- Assess **field development plans** and **decommission plans**

Digital Data management

- **Secure** petroleum exploration assets in digital format
- Implement **integrated data management** systems that support internal & external IT strategies
- Provide **global data access** to quality digital data.
- Attract oil and gas exploration **investment** globally.
- Improve overall **productivity**
- Mitigate the risk of **losing data**
- **Reduce** data management **costs**.



The NDC Project concept

Data Management Challenges

- Old Tape Cartridges/ Hard copy records
- Data Security and Preservation
- Data Access was limited and time consuming
- Limited space for tape storage
- Marketing & Resource Promotion
- Information and record management services
- Technical capacity

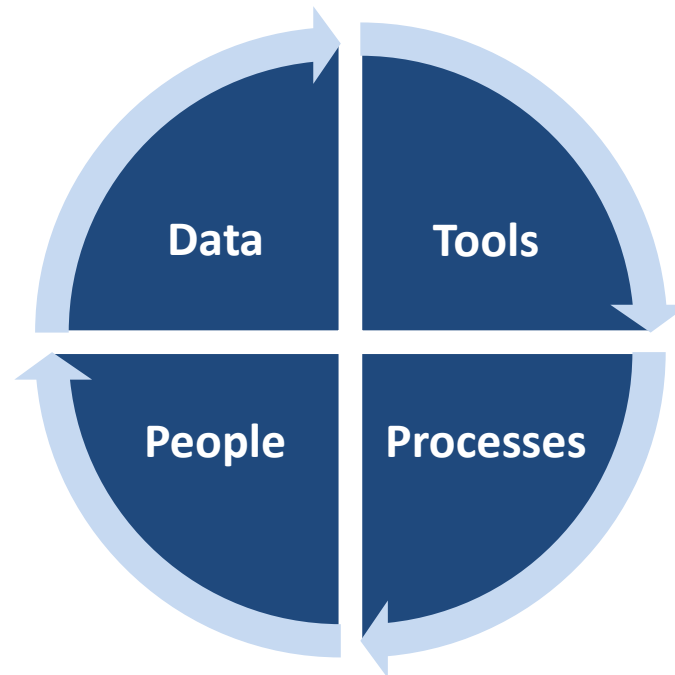


Activity plan



Strategy include DM in the Corporate /Organization Business strategy

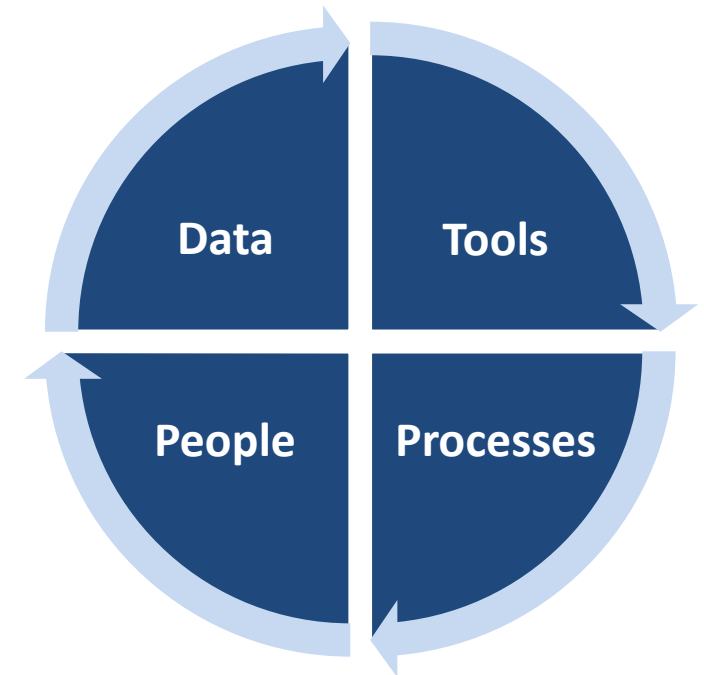
Elements required to implement the strategy include:



Status



- **Digitization** of documents at 99%
- **Online data access** with entitlements which differ depending on the users, who have varying levels of access to data. An NDA has to be signed before users access data.
- Improved ICT **infrastructure**
- Adequate **space**
- Data receipt, verification, loading and QC **procedures** have been implemented
- **Audit trails** monitor the usage of the system and records changes that have been made to data by user



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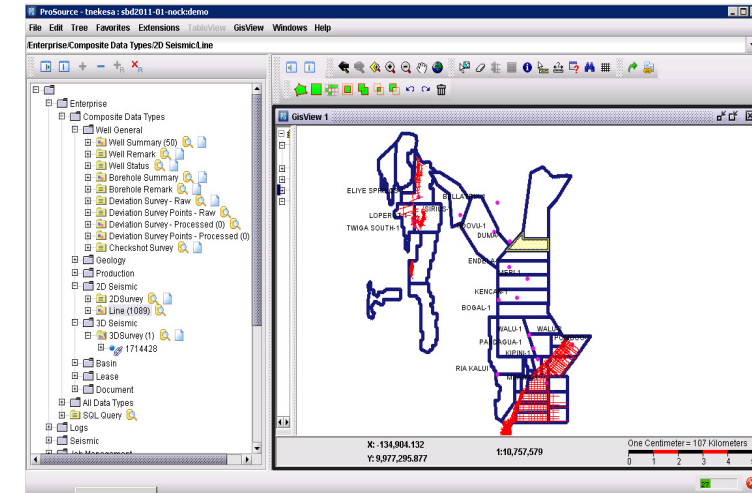
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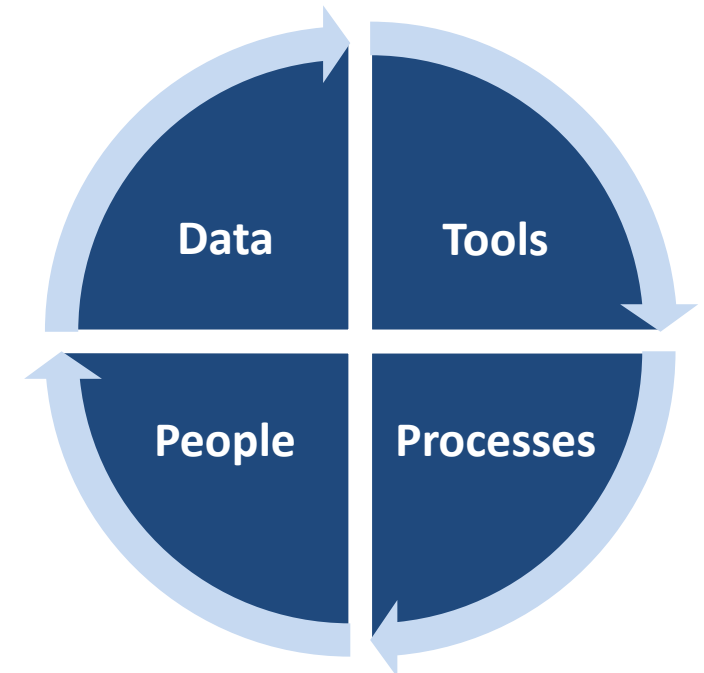
Kenya Exploration Data Access



Status



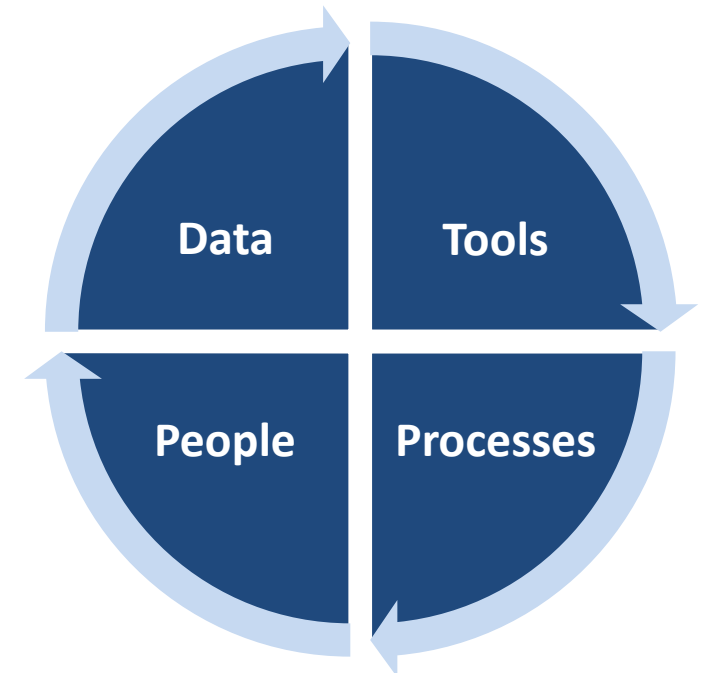
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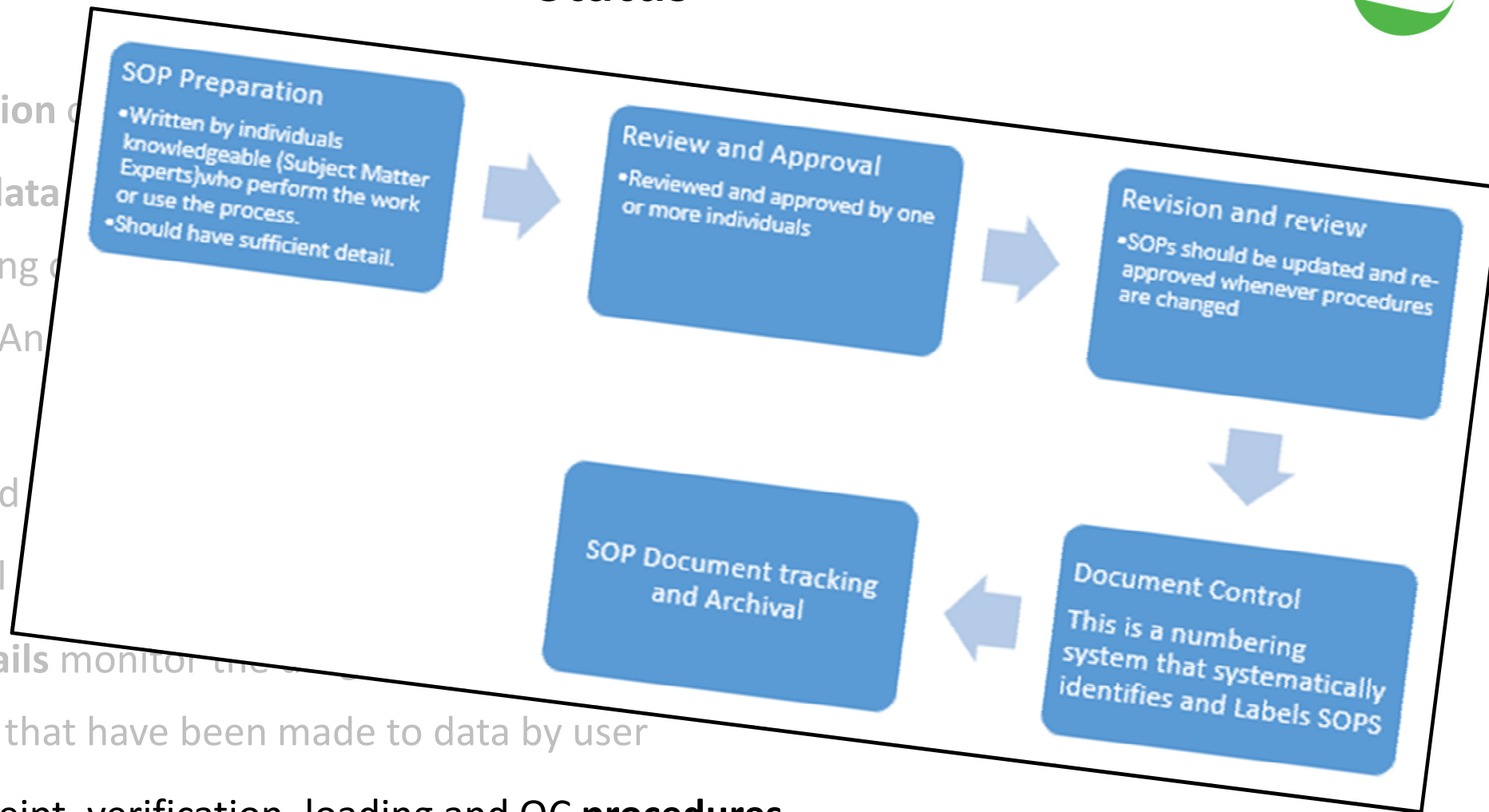
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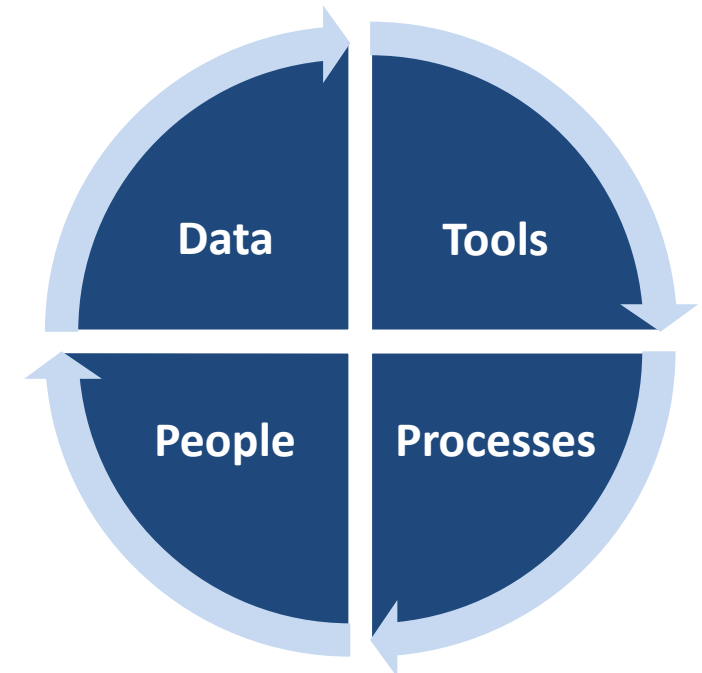


- Digitization of
- Online data
- depending on
- to data. And
- data.
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- Financial
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Future plans

- Data **quality control** of loaded data
- Data receipt and dissemination
 - Initiate **data subscriptions**
 - **Online** data delivery and submissions
- **Packaging data** for anticipated licensing rounds
- **Data standards** draft awaiting departmental review and expert approval
- Draft of **business case value of data** and data management activities in Kenya is in progress
- Developing a **new functionality** to load magnetic, gravimetric information and topographic maps
- **Core data management**
Mitigating risks of contaminating core samples

Challenges



Management Challenges

- Documents/Records are
 - Very old >50 years
 - Some are poor quality and fade
 - Torn
- Data Security and preservation- manual , disaster recovery, data quality, etc.
- Data Access:
 - By visiting NOCK data center – expensive to Oil Exploration investors
 - Doc retrieval and dissemination is time consuming.
- Limited and expensive office space available for document storage
- Marketing & Resource Promotion
- Information and record management services
 - Long lead times
 - Information enhancement



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Lessons learnt

- Improve ***access*** to Seismic data
- Have ***well documented*** work and QC ***procedures*** as well as establishing ***Standards*** for incoming data
- Consistency in ***format*** of stored data
- Commence on ***processing*** of data stored in raw format
- Align data management ***project*** with company ***strategy***
- Align ***personnel*** to fit the processes
- Get Technical ***Assistance*** from experienced firms

The background of the slide is a photograph of an oil pumpjack in silhouette against a sunset sky. The sun is a bright orange circle on the horizon, partially obscured by the pumpjack's structure. The sky transitions from a deep orange near the horizon to a dark blue at the top. The pumpjack is a large, complex mechanical structure with a long walking beam and a counterweight. To the left of the pumpjack, there is a tall, thin pole with a light fixture. To the right, there is another smaller structure, possibly a wellhead or another pumpjack component. The overall mood is industrial and serene.

THANK YOU
QUESTIONS?

16TH OCT 2019

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