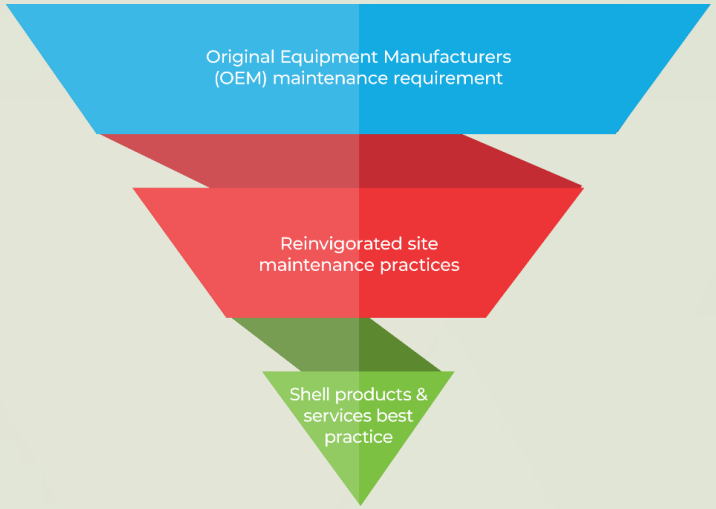
Vivo Energy Value Improvement Project Process

Agenda

1. What is a VIP
2. Approach to conducting the VIP
3. VIP Execution
4. Examples of VIP & Benefits



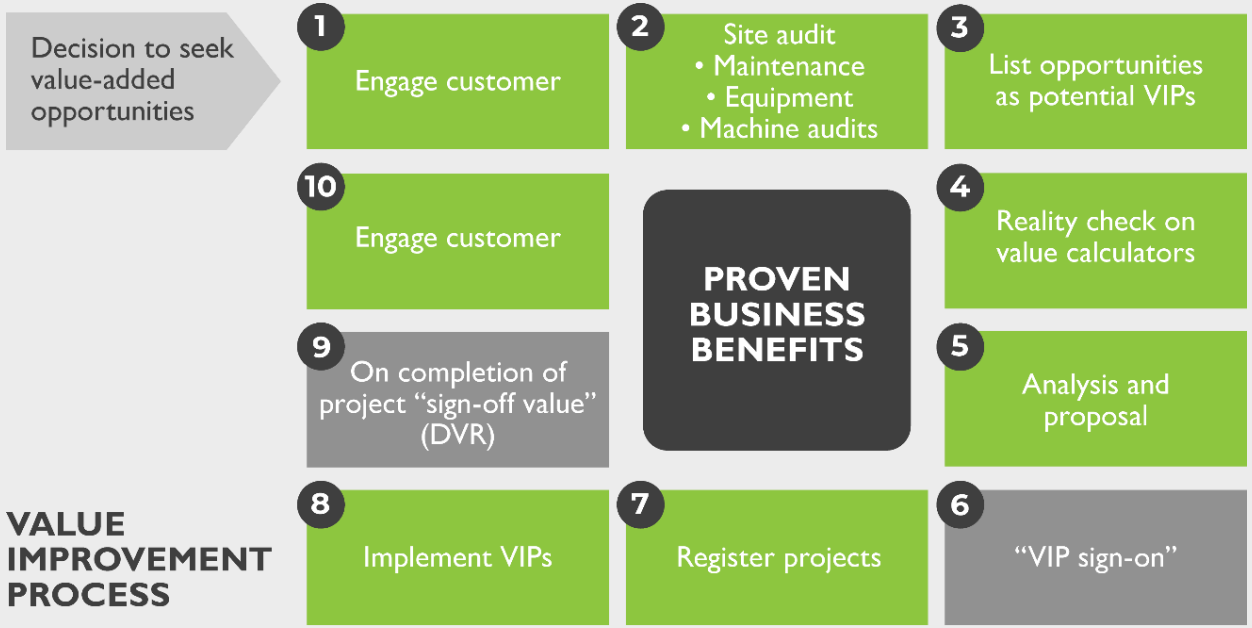
LOWERED TOTAL OPERATIONAL COST THROUGH:

- Improved equipment availability
- Longer equipment & component life
- Optimum lubricant consumption

WHAT IS VIP

What is the Vivo Energy

Value Improvement Process



When conducting the VIP audit we assess the interactions of :

- The Original Equipment Manufacturers (OEM) minimum requirements
- The current product and services offering from the lube supplier
- The site equipment maintenance practices

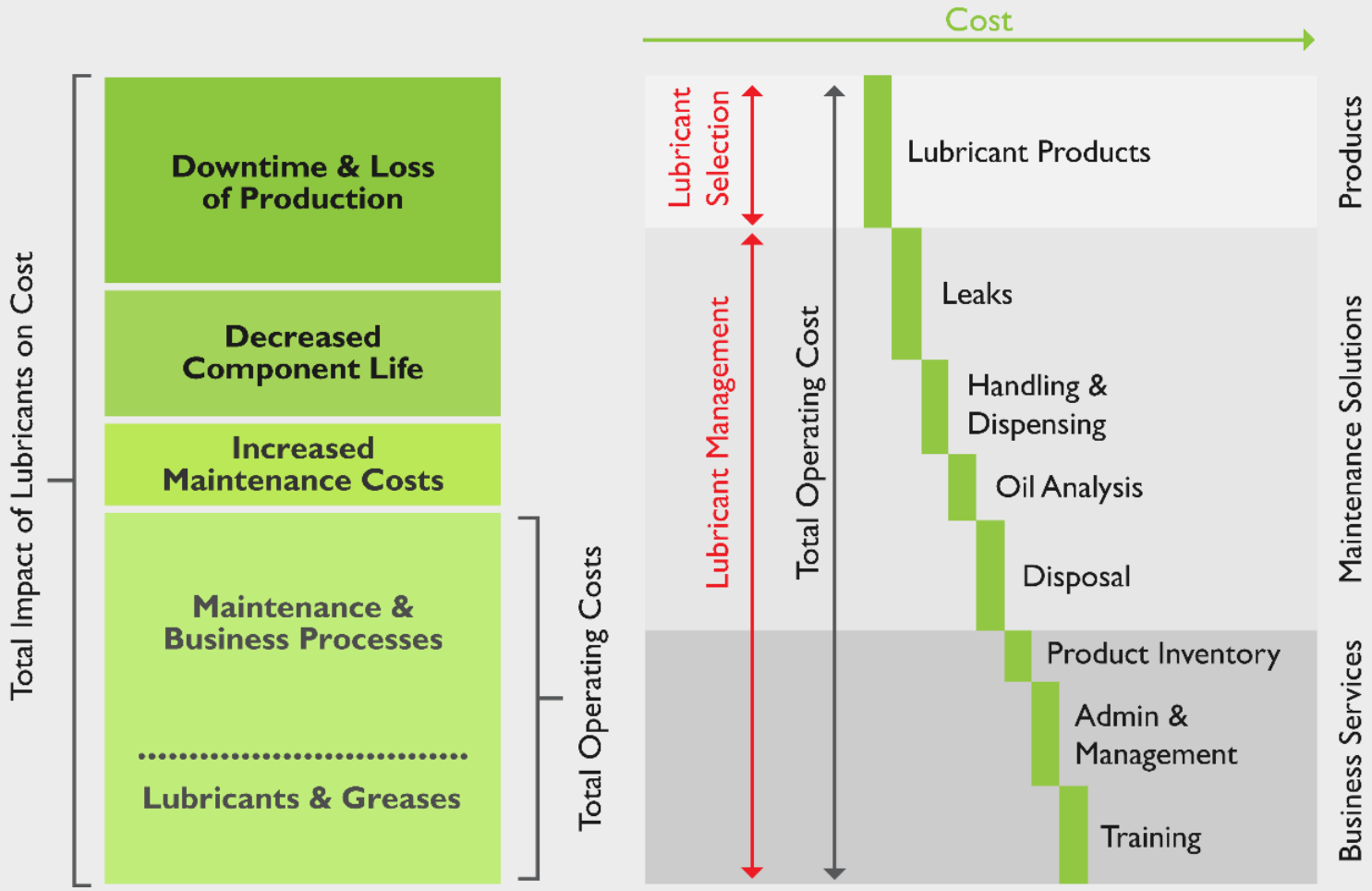
APPROACH TO CONDUCTING THE VIP

The Total Cost of Ownership (TCO)

Approach in Conducting VIPs

When conducting VIPs, we use the TCO approach

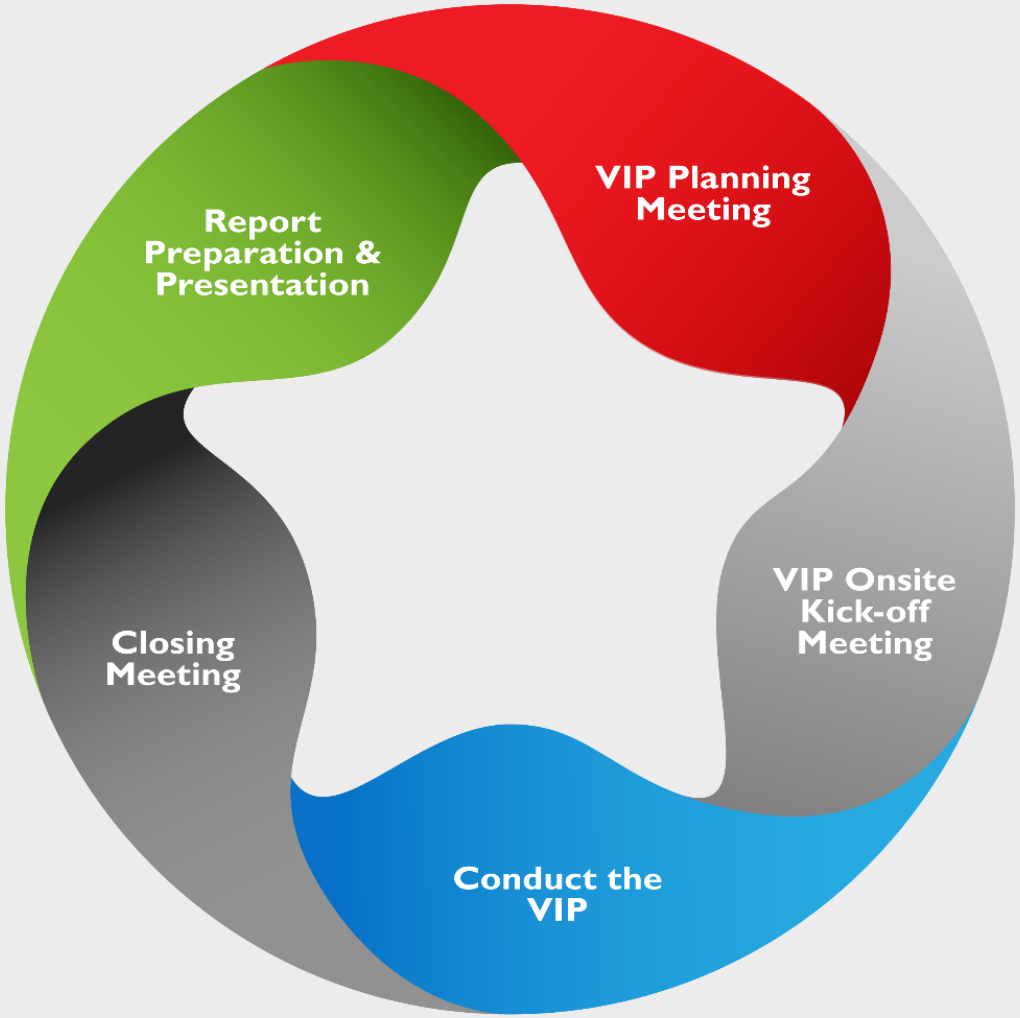
- Look beyond the cost of product
- Look at the total impact of the lubrication and services and their contribution to the TCO
- We lay emphasis on the 20/80 rule, i.e. the 20% of the products that account for the 80% volume (and likely costs)



VIP EXECUTION

VIP Execution:

Keys to Conducting a successful VIP



VIP Scope

The key areas of the Value Improvement process:

Heavy Mining Equipment (HME) Lubrication (and fuelling)

Process plant equipment lubrication

Product receipt, storage, handling, and dispensing equipment

Spill control and environmental protection structures

Waste oil handling and safe disposal

Stock Management process

Examples & Benefits of VIP

Example of a machine inspection in the VIP

- Lubricants in use for each equipment/ compartment:
  - Must meet the minimum Original Equipment Manufacturers (OEM) specification
  - Should be changed at the right time, with respect to the viability of the oil rather than the machine hours
- Are the fitted automatic lubrication systems delivering the right amount of lubricant, at the right interval as recommended by the OEM or industry best practice?
- Are the key components of the production equipment reaching/ exceeding the expected lifespans as advised by the OEMs or against the best industry practice?

Automatic grease lubrication system

Leaking grease injectors

Review Product Receipt, Storage, Handling & Dispensing

The whole system from receipt to dispensing should preserve product quality and prevent contamination.

- The product received at site should meet the minimum quality specification.
- The storage facilities should provide adequate capacity and protect the product from contamination.
- The handling system should ensure the integrity of the product quality before dispensing into the equipment.
- The dispensing system should ensure that the right product and amount is delivered to the equipment free of contamination
- The whole system design should also prevent environmental contamination.

Lube dispensing systems

Self-bunded tanks

Bulk product storage

Benefits of Conducting a VIP

1. We have a clear understanding of the customer operation and challenges, providing practical solutions with tangible monetary and process improvement benefits.

2. We provide the opportunity to demonstrate the superior performance of our products and services

   a. Develop Demonstrated Value Records (DVRs) that back up the performance of our products

   b. Demonstrate some of the unique services that we can offer to our customers

Sample VIP Benefits

1

Company:
IAM GOLD ESSAKANE

Country:
Burkina Faso

Application:
SAG Mills & Ball Mills

Key edges:
introduction of Shell Gadus S4 OG Clear 20 000,Vivo Energy LubeExpert

Outcome:
A grease consumption reduction by 45%

Total annual savings:
US$279,260

2

Company:
TROLLOPE MINING SERVICES BOTSWANA (PTY) LTD

Country:
Botswana

Application:
All equipment forming part of the oil Condition Monitoring regime.

Key Edge:
Lube Analyst (Oil Analysis Lab) on site

Outcome:
Reduce the sample turn-around-time from 21 days to within half an hour

Total annual savings:
US$15 900.34

3

Company:
ANGLO AMERICAN

Country:
South Africa

Application:
Underground mining (hard rock)

Key edges:
Shell Rockdrill Grease

Outcome:
Reduction in product consumption from two 500g grease sachets per shift to one sachet of 334g

Total annual savings:
US$8,100

THANK YOU