

Capability Statement

Risk Management Process

Risk management is an iterative and forward looking process that identifies, assesses, and prioritises risks followed by coordinated and economical application of resources to minimise, monitor, and control the probability and/or impact of unfortunate events, or to maximise the realisation of opportunities.

Our Project Risk Framework

VBKOM's framework for project risk management takes a 10-step approach from strategic alignment to risk monitoring and control.

The risk management services we deliver, within this framework, are usually custom fit for the specific needs of the project.



Risk Identification

With risk identification, VBKOM typically uses a structured brainstorming format with a group of experts on the project team.

A project-specific risk breakdown structure, which represents a list of possible risk sources, is used as a check list to ensure no areas are overlooked. The risk breakdown structure and the knowledge and experience of the project team is reviewed to identify all potential risks.

Qualitative Risk Assessment

During a qualitative risk assessment VBKOM facilitates a work session with a project team to investigate the root cause of each risk before we determine how to best manage the risks.

The result of qualitative risk assessment is 'n Risk Register with risk , cause and consequence descriptions and ratings for the probability and impact of each risk consequence based on the client's own risk rating criteria.

Risk Response Planning

During risk response planning VBKOM facilitates group discussions to identify ideas for actions to manage the risk or prevent it from occurring. In other words, we look for ways to reduce the likelihood of the risk occurring or the impact of the risk if it did occur.

The outcome of risk response planning is an action plan with timelines and responsibilities allocated to the actions.

Quantitative Risk Assessment

A quantitative risk assessment evaluates schedule, estimate and discreet uncertainty and translates it into a monetary value for the project through Monte Carlo simulation modelling.

The elements of the risk model include:

- Project/discrete risks: uncertainties associated with discreet risk events that will have an impact on the project schedule and/or costs.
- Estimate: include uncertainty associated with cost items in the work breakdown structure and likely changes in quantities and/or rates of the estimate risk model.
- Schedule risks: include uncertainties associated with critical and near critical path activities.

The results of quantitative risk assessment combines the impact of all three of these elements.

The outcome of the quantitative risk assessment is typically a probability histogram and sensitivity analyses.



Severity \ Probability	Disaster	High	Medium	Minimal
Regularly	Critical	Critical	High	Medium
Probable	Critical	High	Medium	Medium
Occasional	Critical	High	Medium	Low

Technical Risk Assessment

VBKOM facilitates technical risk workshops according to the 6 HAZOP stages and incorporates technical specialists as required. The below outline illustrates the 6 HAZOP stages:

Hazard Study: Project Phase Key Focus Areas

No 1: Concept

Understanding project objectives, materials involved, identification of project discreet risks including environmental impact assessment (EIA) risks, establish a risk breakdown structure, cost estimate, design criteria and standards.

No 2: Pre-Feasibility

Identifying schedule-related risks against agreed milestones with emphasis on legislative and regulatory requirements; risk criteria; site establishment; procurement strategy; health, safety, and environmental (HSE) plans, design for safety, etcetera.

No 3: Feasibility

Reviewing the design/procedures to identify operational hazards (commonly called a hazard and operability (HAZOP) study) based on engineering drawings (P&ID and control loop) and diagrams as well as operating procedures. Identifying significant hazards provides the opportunity for their elimination. Emphasis on loss of containment scenarios and operational hazards.

No 4: Execution - Prior to Construction

Key focus on construction risks as well as verifying that the project will be built to the intended design. Checking if the outcomes of previous hazard studies are incorporated into the design.

No 5: Execution - Prior to Commissioning

Key focus on commissioning risks in addition to previous hazard studies to ensure compliance to company standards and legislative requirements, employee health and safety, emergency management systems, safety procedures, facility site/building location and commissioning procedures and/or practises.

No 6: Shut Down / Operations

Identifying hazards during the operation of an item. Reviewing the plan and ensuring the proper shut down of operations of the facility. Ensuring the shutdown is consistent with the design safety, health and environment compliance requirements.

VBKOM's approach is to facilitate work sessions with key project stakeholders to evaluate the technical deliverables of the project according to the focus of the specific hazard study objective.

The outcome of a technical risk assessment is a risk register and risk response plan.

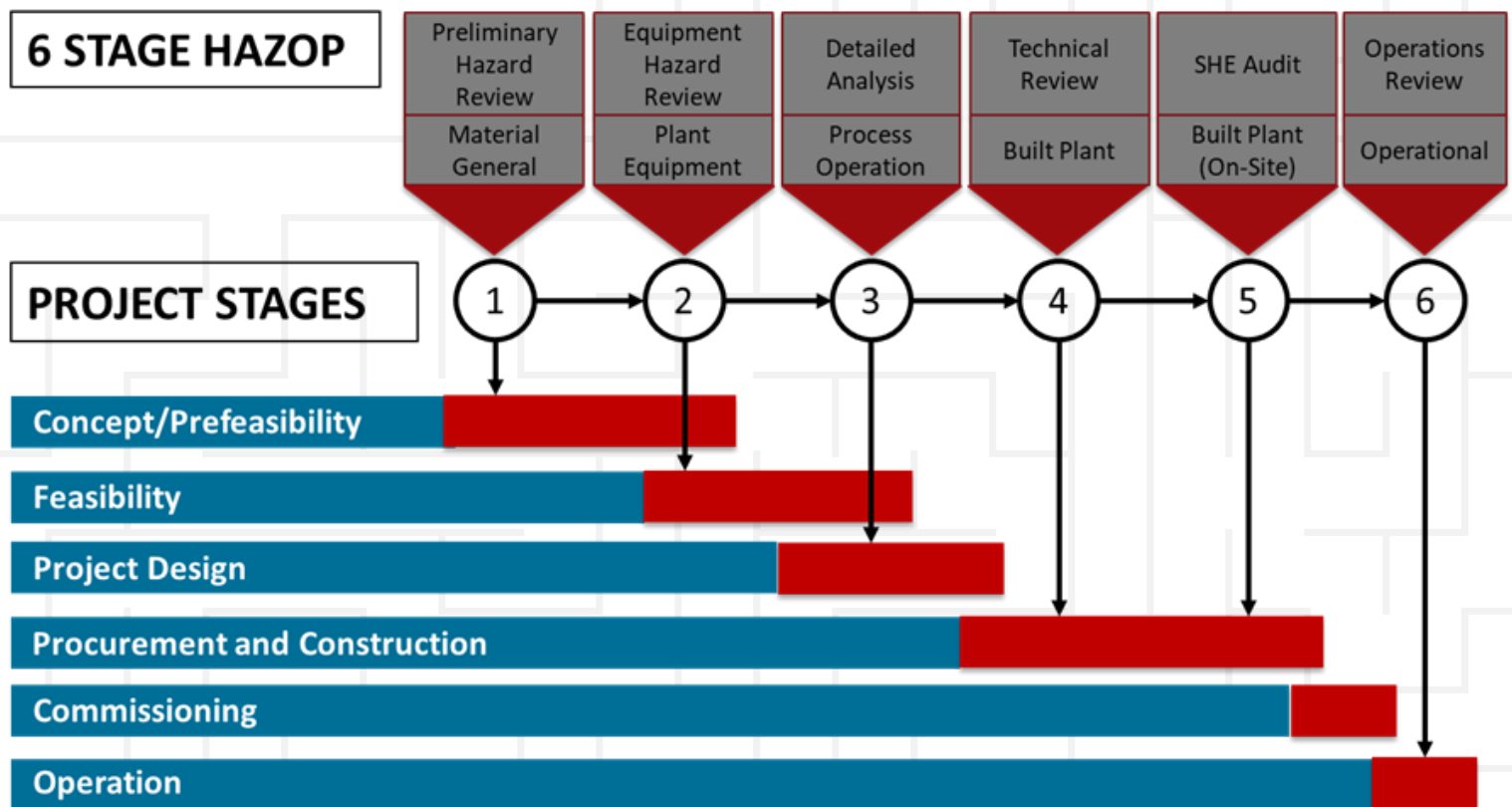
Our Workshop Approach

VBKOM follows a -three stage approach with the project (qualitative and quantitative) and technical risk assessment workshops. All facilitated workshop sessions are preceded by a preparation stage.

During workshop preparation a briefing document is prepared and distributed to all workshop participants, sufficiently in advance of the workshop, to ensure that all workshop participants are well informed and prepared.

A workshop is usually followed by a reporting phase during which the relevant documentation is prepared, reviewed and approved.

Hazard Study Workshop Phases



B-BBEE & ESG Commitments

VBKOM is a **B-BBEE Level 1** contributor and prides itself on the advancement of B-BBEE and ESG (Environment, Social, and Governance) goals, such as these recent initiatives in 2019 and 2020:

- As part of the Youth Employment Scheme (YES) Programme VBKOM has employed two (x2) graduates to help build their careers.
- VBKOM has concluded a joint-venture (JV) and formed Sehlare Sa Meetlwa, a local 51% black-owned company in the Northern Cape.
- VBKOM also contributes to the local community through charity organisations, i.e. CancerSA and Ki-Deo Children's Home

Please visit our sites to find out more:

VBKOM website:

<https://www.vbkom.com/>

LinkedIn:

<https://www.linkedin.com/company/vbkom-consulting-engineers/>

Facebook:

<https://www.facebook.com/VBKOM/>

ProjectPro website:

<https://projectpro.co.za/>

