

2024 COMPANY SHOWCASE

www.manhattancorp.com



ABOUT US

As a world class mining and engineering company, Manhattan, in business since 1992, offers turnkey equipment, process plant and mine development solutions to the mining, processing and heavy industry markets. Manhattan employs a full spectrum of engineers, technical personnel and corporate professionals, offering its clients Best Value solutions.

Best Value
~(běst) (vǎl'yoo)

n. Manhattan's commitment to providing the correct equipment & turnkey project solutions at the lowest life cycle cost.

Manhattan has equipment alliances and an established presence on 4 continents, and in 29 countries. Its head office is based in the East Rand of Johannesburg.

Manhattan was nominated out of thousands of companies measuring corporate performance and exceptional contribution to the country's GDP, as one of South Africa's Top 500 Companies as well as being nominated on several occasions as one of the Top 5 Mining Service Companies in South Africa by Topco Media.



The Mining services division of Manhattan offers Turnkey Solutions to the mining and mineral processing industries. Manhattan has operated gold and diamond operations in South Africa. Its alluvial diamond mining operations, which were amongst South Africa's largest in the Northern Cape, had a peak installed capacity of over 20 million ROM tonnes per annum. Gravelotte Gold Mine, Manhattan's recently developed underground and surface gold operation in the famous East Rand Basin, is currently in ramp-up mode.



COMMODITIES

Gold and Silver

Platinum Group Metals

Coal

Diamonds and Gemstones

Spodumene and Lithium

Silver

Manganese

Zircon, Ilmenite, Rutile

Cobalt, Copper, Nickel

Uranium

Aluminium

Mineral Sands

Iron

Graphite





Global Presence

**With solutions generated for
80+ countries and 40+ mineral types**

Turnkey Solutions



At Manhattan, we offer comprehensive turnkey solutions that encompass every aspect of your project, ensuring a smooth and efficient process from start to finish. Our proven methodology offers you BEST VALUE solutions.

B

Balanced Cost-Effectiveness

Striking the perfect balance between capital cost & operating efficiency to deliver solutions that maximize value for your investment.

E

Efficiency in Execution

Ensuring that each phase of your project is executed with the utmost efficiency, minimizing time and resource wastage.

S

Strategic Technological Integration

Striking the perfect balance between cost and technology to deliver solutions that maximize value for your investment.

T

Tailored Solutions

Customizing our offerings to meet the unique requirements of your project, providing solutions that align perfectly with your goals.

VALUE

Best Value Solutions: Benefits

- **Excellent delivery lead times**
- **Cost effective project Capex**
- **Optimised & low life-cycle costs**
- **Improved ROI's, cash flows and NPV's**
- **One Source Mining Services Provider**



DEWATERING

Flocculation

- Preparation Tanks, Bulk Storage Tanks, Flocculator

Clarification

- Clarifier, Thickener, Settler

SEPARATION

Gravity

- Concentrators

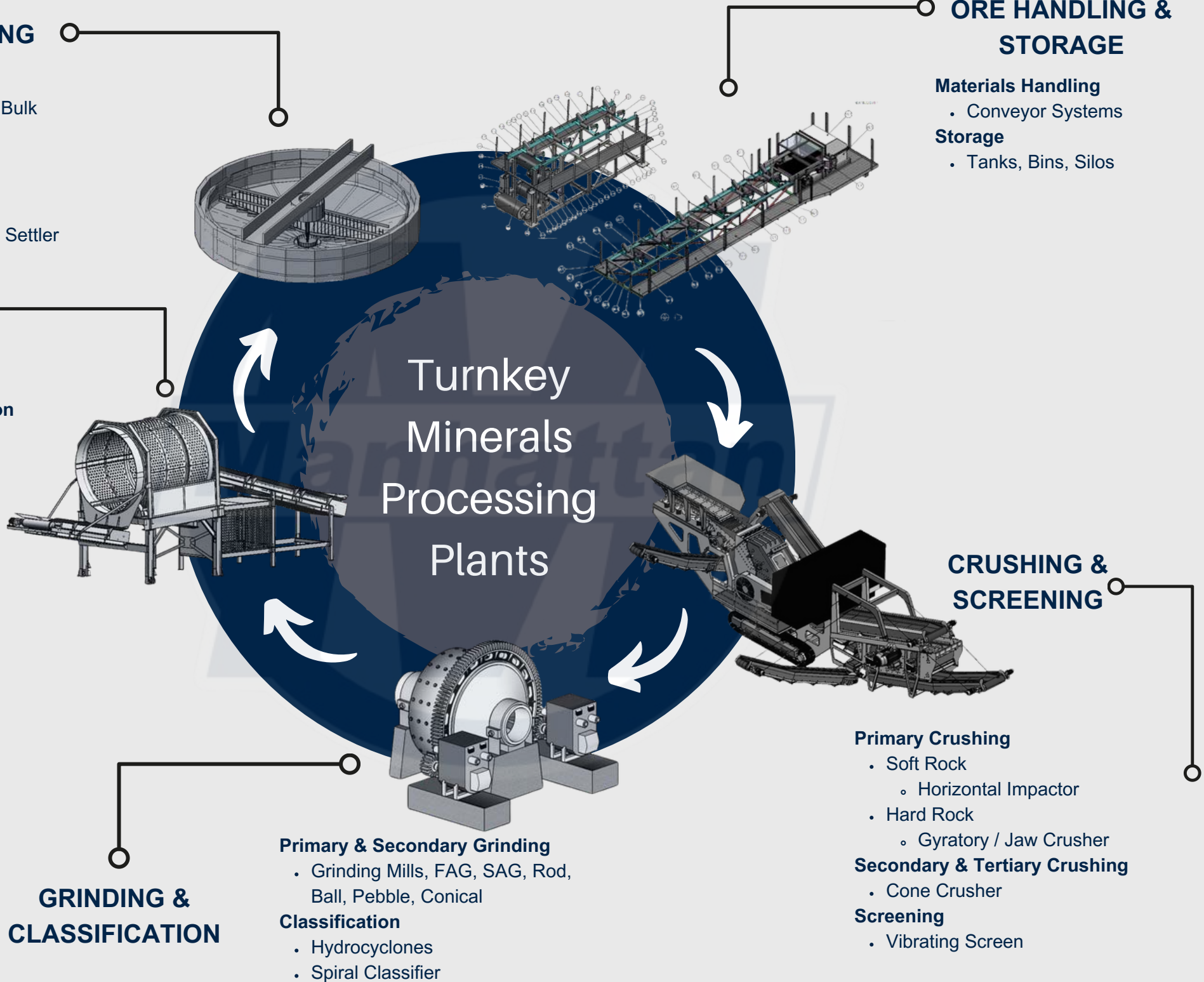
Dense Media Separation

- Drum Separators, Drewboy, Dyna whirlpool

Flotation

Magnetic

- Drum, belt



Turnkey Solutions

Our turnkey solutions process is a carefully orchestrated journey designed to guide you seamlessly from project initiation to successful completion. Our unique approach with over 30 years of expertise brings an unparalleled depth of knowledge to your project. With steps including prefeasibility, and feasibility studies, resource modelling and conceptual design, process engineering, manufacturing, project management, mechanical, electrical and civil engineering design as well as site construction, installation, commissioning and after sales support.



**Metallurgical
Testwork**



**Process
Design**



**Yellow
Fleet
Advisory**



**CAD Models of
the whole Project**



**Electrical &
Civil Design**



**Equipment
Selection &
Procurement**



**In-house Steel
Fabrication**



**Critical Spares
Supply**



**Installation
&
Commissioning**



**Operating &
Management
Systems**



**Site
Infrastructure &
Facilities**



**HR
Structures &
Development**



**Training &
Operations
Management**



TURNKEY SOLUTIONS



Process Design



Custom Tailored Solutions

Our experts collaborate with you to understand the unique requirements of your project. Tailoring process designs to match the specific characteristics of the minerals, geography, and operational goals.



Workflow Optimization

We conduct strategic mapping of every stage of your process to optimize workflow efficiency.



Design Flexibility

An iterative approach that adapts to changing project requirements for continuous refinement. Flexibility in process designs to accommodate future improvements and technological advancements.



Risk Mitigation Strategies

Identification and mitigation of potential risks embedded within the process design. Proactive measures to ensure a smooth implementation of the turnkey solution.



Continuous Improvement Culture

A commitment to ongoing improvement throughout the entire lifecycle of the mining project. Regular reviews and updates to process designs to ensure optimal performance and BEST VALUE solutions.

TURNKEY SOLUTIONS

Equipment List



Our commitment to delivering turnkey solutions of the highest caliber is exemplified in the careful selection and integration of equipment for your project. No two projects are alike, and neither are our Equipment Lists. We understand the unique demands of your project and tailor the selection to precisely match your operational goals.



Quality & Reliability



**Cost-Effective
Optimization**

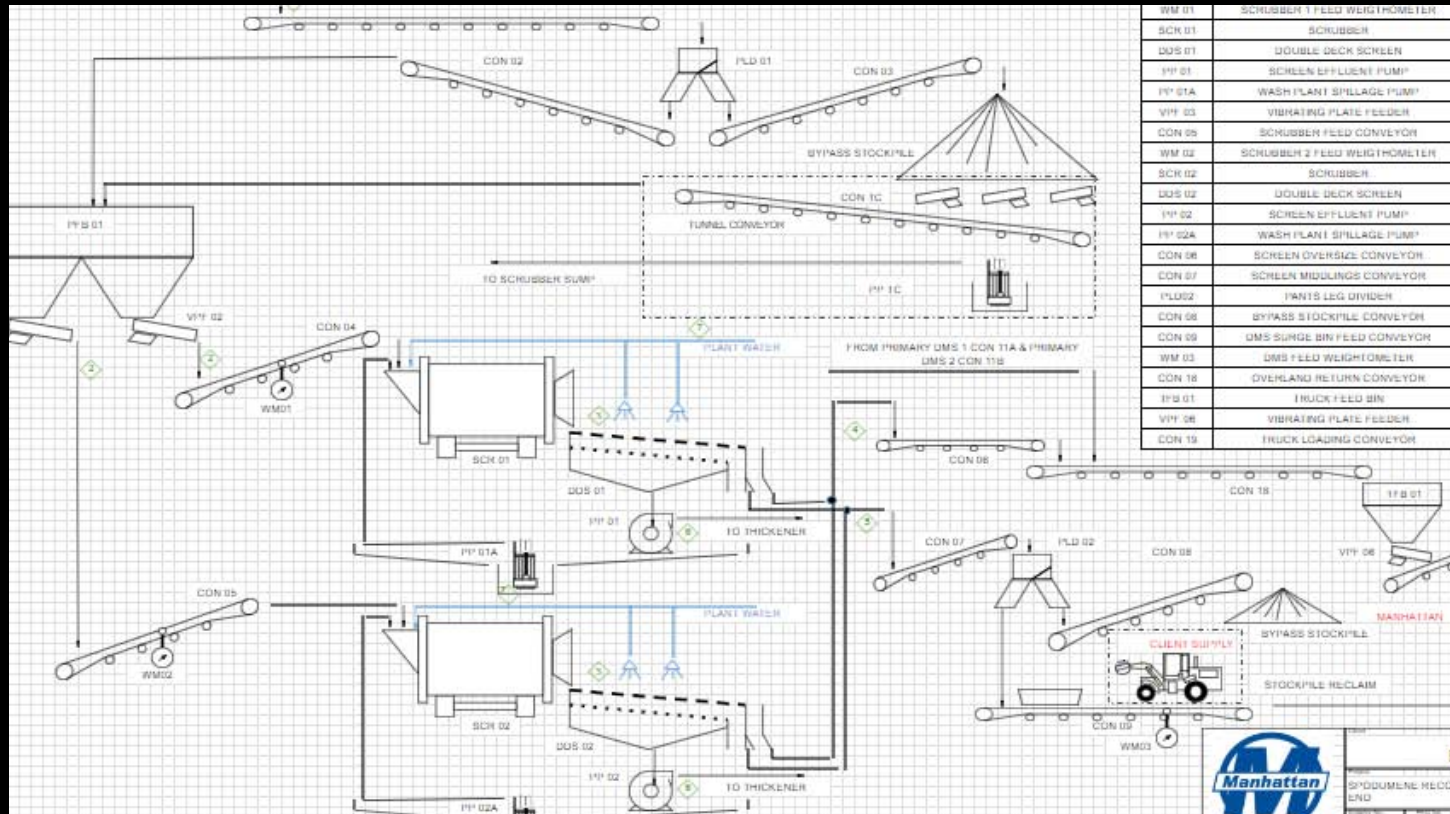


Integrated Design



TURNKEY SOLUTIONS

Process Design & 3D Modelling



TURNKEY SOLUTIONS

Detailed Engineering Design



Process Engineering

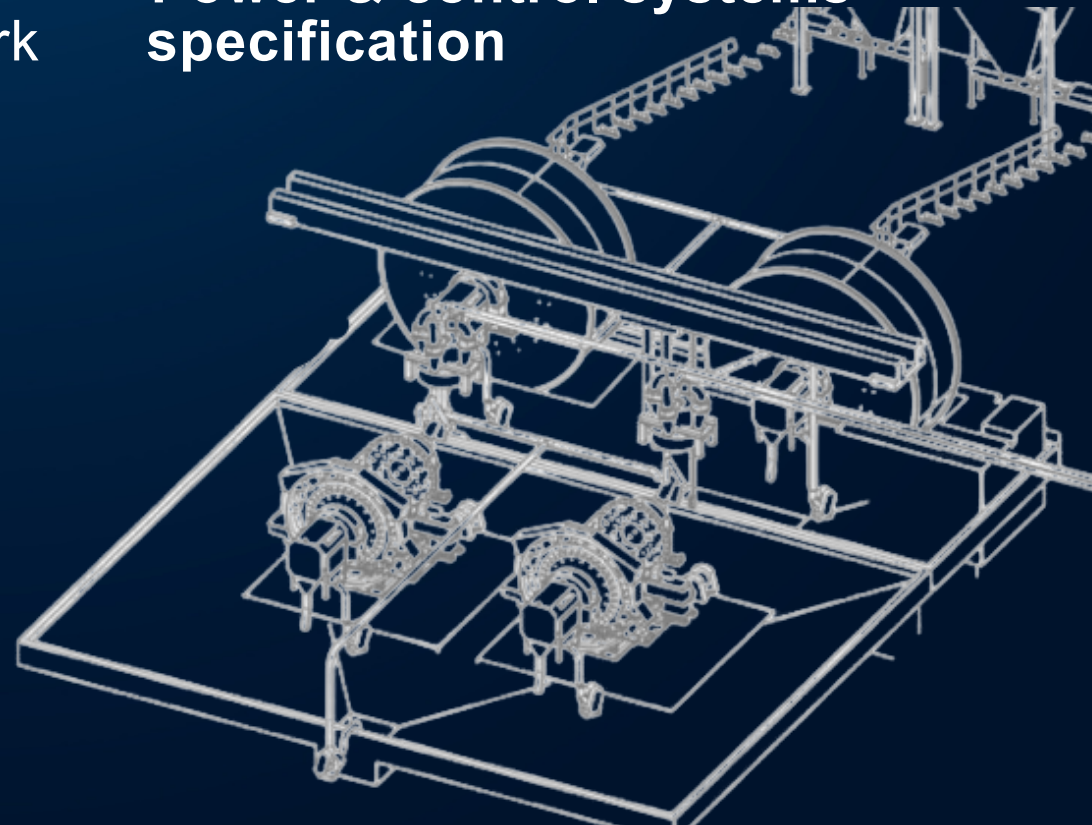
- Process selection from concept to final design
- Flow sheets: Mass & flow balance calculations, equipment specifications
- Management of laboratory scale test work
- Optimisation of design processes

Mechanical Engineering

- **Finite element analysis**
- **Structural analysis & mechanical design**
- **Equipment audits, failure analysis & replacement design**

Electrical Engineering

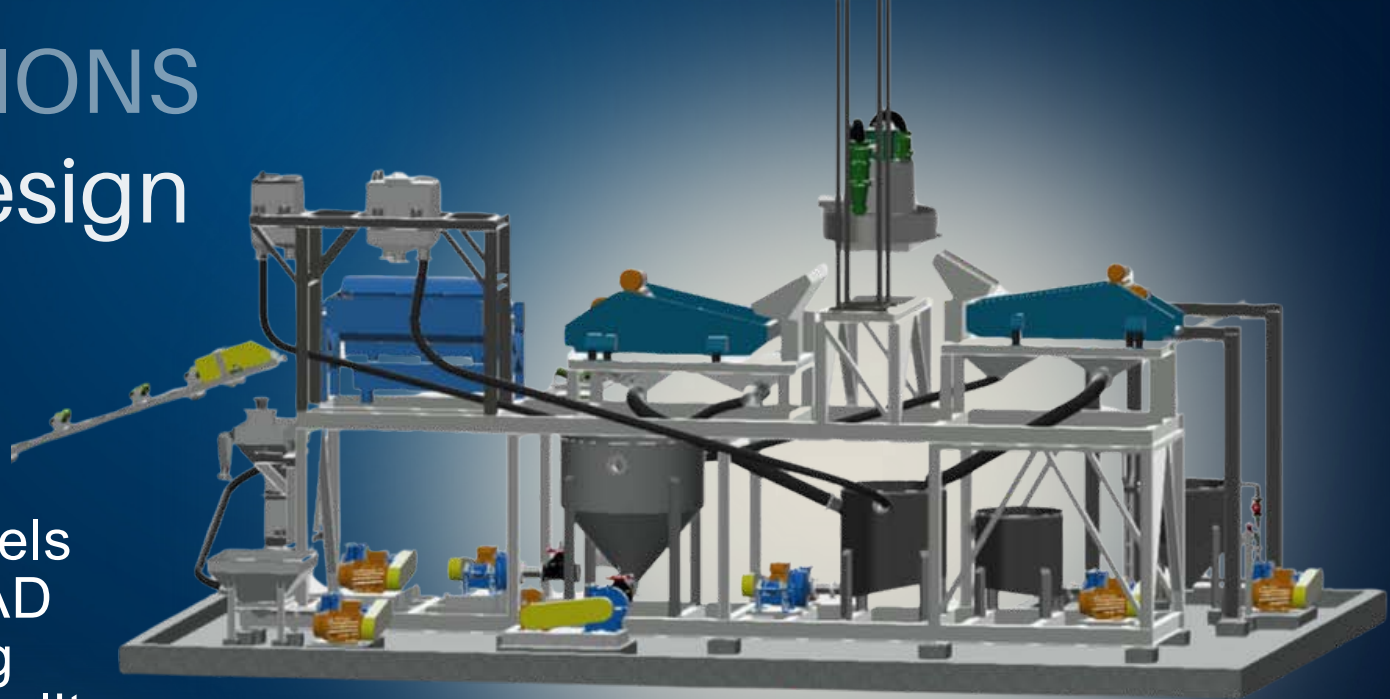
- **HT & LT distribution design**
- **Instrumentation and PLC control panel design**
- **Power & control systems specification**



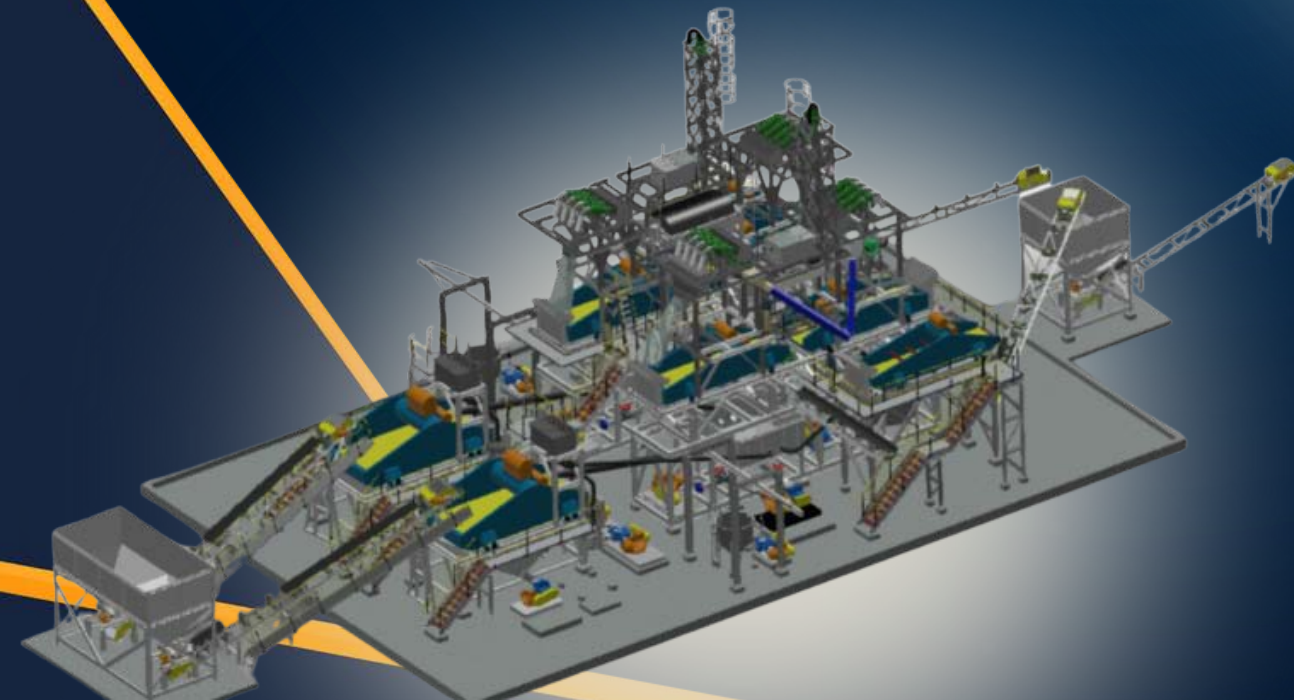
TURNKEY SOLUTIONS

CAD 3D Model Design

We create detailed 3D models using industry standard CAD design software, ensuring accuracy and optimal functionality.



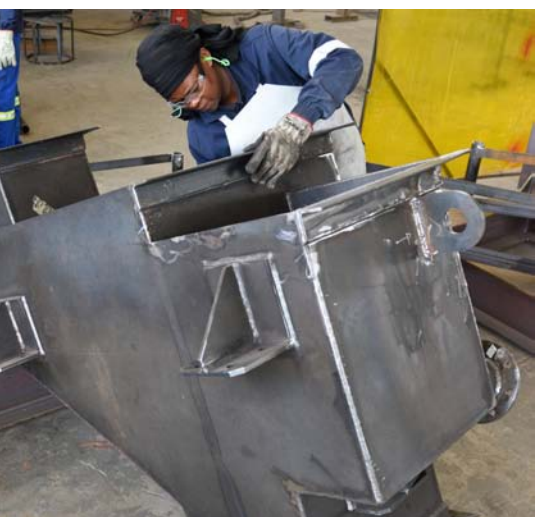
- ▶▶ Comprehensive equipment representation
- ▶▶ Spatial Optimization
- ▶▶ Interactive Design Review
- ▶▶ Process Visualization

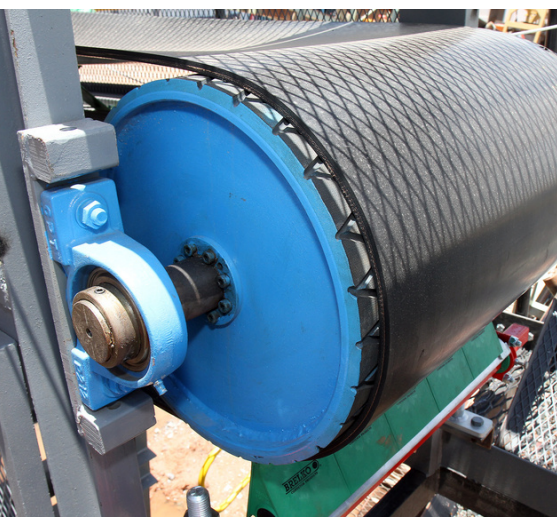


TURNKEY SOLUTIONS Fabrication



Manhattan offers cost saving by utilizing its own 240,000 sqm fabrication and engineering facility. Our workshop staff and established network of niche support firms allow us to approach any project with confidence. Our engineering complex which includes advanced sandblasting and paint bay infrastructure, forms the foundation to enable us to deliver excellence for our customers. Our manufacturing facility incorporates 50 tonnes of installed overhead lift capacity.





TURNKEY SOLUTIONS

Equipment Selection & Acquisition

Guided by our commitment to precision, our experts meticulously select the equipment lineup for your project, ensuring optimal performance, reliability, and longevity.

Critical Spares Requirement

The Critical Spares Requirements step is a key thread woven with precision and foresight. Our commitment to uninterrupted operations is underscored by strategic planning, ensuring that essential spare parts are readily available to safeguard against unforeseen challenges.



ID CODE	DESCRIPTION	SIZE	KW
VFF 01	VIBRATING PLATE FEEDER x 3	1500 x 600	1.7 x 3
CON 01	OVERLAND RETURN CONVEYOR	600 x 50m	30
PLD 01	PANTS LEG DIVIDER	75 DTV	15
CON 02	FLD 01		
CON 03	CONVEYOR OR STOCKPILE		
ID CODE	DESCRIPTION	SIZE	KW
PLD 03	PANTS LEG DIVIDER	600 x 3 way	
CON 20	DMS TAILINGS STOCKPILE CONVEYOR	600 x 20	7.5
FB 01	IN FIELD FEED BIN w/ STATIC GRIZZLY	130t	
VFF 01	VIBRATING PLATE FEEDER	2000 X 900	3.2
CON 01	OVERLAND RETURN CONVEYOR	600 X 120m	30
PLD 01	PANTS LEG DIVIDER		
CON 02	FLD 01		
CON 03	CONVEYOR OR STOCKPILE		
FFB 01	FROM PRIMARY DMS 1 CON 11A & PRIMARY DMS 1 CON 11B		
VFF 02	VIBRATING PLATE FEEDER		
CON 04	CONVEYOR		
WM 01	WASH PLANT SPILLAGE PUMP	75 DTV	15
SCR 01	SCREEN OVERSIZE CONVEYOR	600 X 18m	5.5
DDS 01	DOUBLE DECK SCREEN	2.4 X 4.8	22
PP 01	SCREEN EFFLUENT PUMP	6/4 AH-WRT	13
PP 01A	WASH PLANT SPILLAGE PUMP	75 DTV	15
VFF 03	VIBRATING PLATE FEEDER	1500 X 600	1.7
CON 05	SCRUBBER FEED CONVEYOR	600 X 12m	5.5
WM 02	SCRUBBER 2 FEED WEIGH TROMETER	600mm	
SCR 02	SCRUBBER	1.8 X 3.6	37
DDS 02	DOUBLE DECK SCREEN	2.4 X 4.8	22
PP 02	SCREEN EFFLUENT PUMP	6/4 AH-WRT	13
PP 02A	WASH PLANT SPILLAGE PUMP	75 DTV	15
CON 06	SCREEN OVERSIZE CONVEYOR	600 X 18m	5.5
CON 07	SCREEN MIDDINGS CONVEYOR	600 X 15m	
PLD 02	PANTS LEG DIVIDER	600 x 3 way	
CON 08	BYPASS STOCKPILE CONVEYOR	600 X 25m	7.5
CON 09	DMS SURGE BIN FEED CONVEYOR	600 X 25m	7.5
WM 03	DMS FEED WEIGH TROMETER	600mm	
CON 18	OVERLAND RETURN CONVEYOR	600 x 120m	30
TFB 01	TRUCK FEED BIN	100t	
VFF 06	VIBRATING PLATE FEEDER	2000 x 900	3.2
CON 19	TRUCK LOADING CONVEYOR	900 x 15m	22
	TOTAL KW		





TURNKEY SOLUTIONS Installation & Commissioning

Installation and Commissioning marks the culmination of meticulous planning and execution. Our commitment to precision extends to the final stages, ensuring that every component seamlessly integrates into the mining project for optimal performance and efficiency.



TURNKEY SOLUTIONS

Operating & Management Systems



- **Online databases to ensure effective management of quality, pricing and timeous delivery**
- **Cost control, time management**
- **Project tracking, stock control**
- **Financial management systems**
- **State of the Art drawing & design software**

TURNKEY SOLUTIONS

Site Infrastructure & Facilities



TURNKEY SOLUTIONS

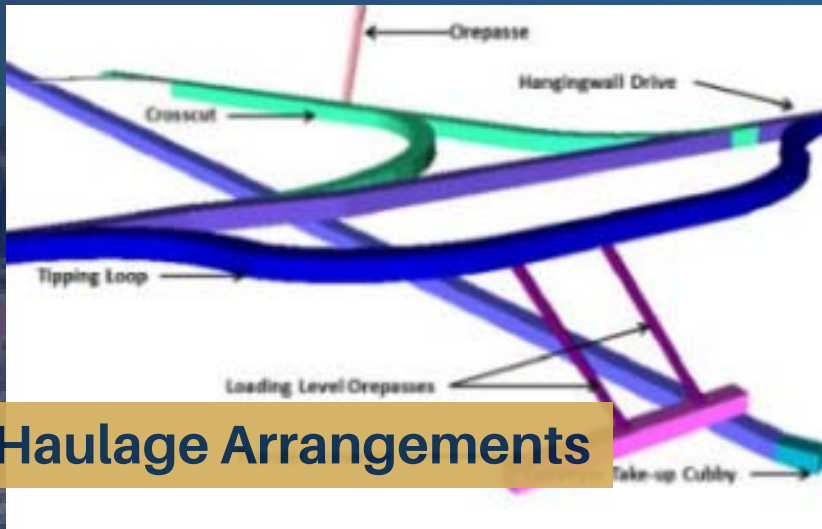


▶▶ **Training & Operational
Management**

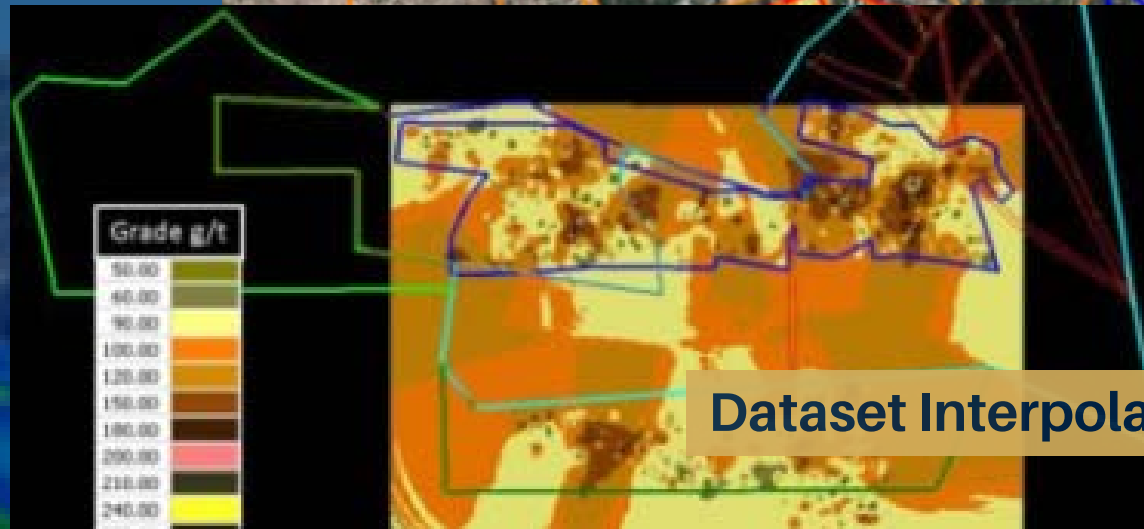
▶▶ **HR Structure & Development**

OUR SERVICES

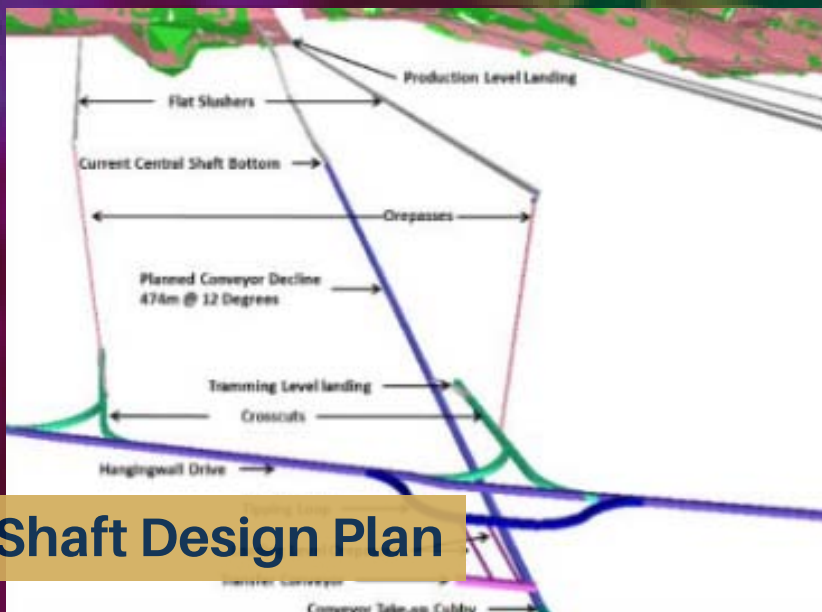
Mine Planning and Design



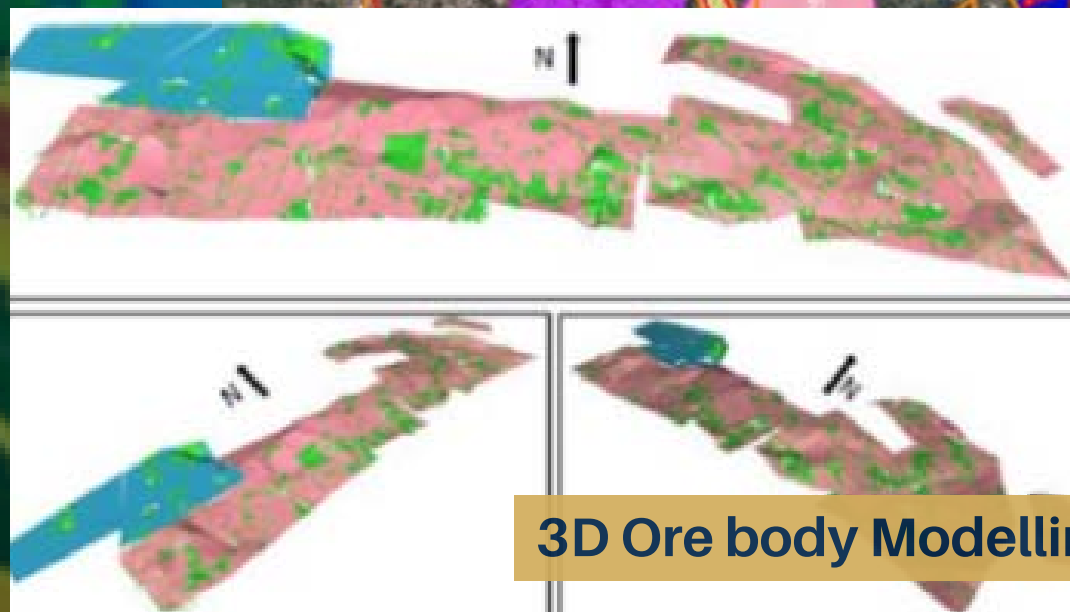
Haulage Arrangements



Dataset Interpolation



Shaft Design Plan



3D Ore body Modelling



Manhattan

PAST PROJECT SHOWCASE

OUR PROJECTS: PROCESSING PLANTS



3 600 000 TPA DIAMOND OPERATION

- ZAR 300 000 000 Diamond Mine
- 6 x Rotary Pan Plants
- 50 tph Dense Medium Separation Plant
- Modular X-Ray Recovery Plant



4 800 000 TPA ALLUVIAL DIAMOND MINE - RSA

- ZAR 300 000 000 Process Plant and Mining Operation, 13 Rotary Pan Plants
- Trommel Screens, De-sander Units, Mobile Screens DMS Plant & Modular X-Ray Plant



2 400 000 TPA DIAMOND MINE - RSA

- ZAR 170 000 000 Diamond Operation
- Trommel Screens, De-sander Units, Mobile In-Pit Screens. Rotary Pan Plants
- Yellow Fleet



876 000 TPA DIAMOND PROCESS PLANT - TANZANIA

- Diamond Process Plant
- Design, Construction, Shipment and Implementation.
- Mobile Rotary Pan and Screening Plants. Logistics Support, and Management Infrastructure



2 300 000 TPA TURNKEY DIAMOND PROCESSING PLANT

- Design, Manufacture, Installation & Commissioning



600 000 TPA PLATINUM PROCESSING PLANT

- Equipment Sizing, Procurement & Refurbishment
- Installation, Project Management & After Sales Support



PROCESS SOLUTION - URANIUM AFRICA

- Ball Mill to Process Pyrolusite
- Turnkey Supply & Refurbishment
- Installed & Commissioned

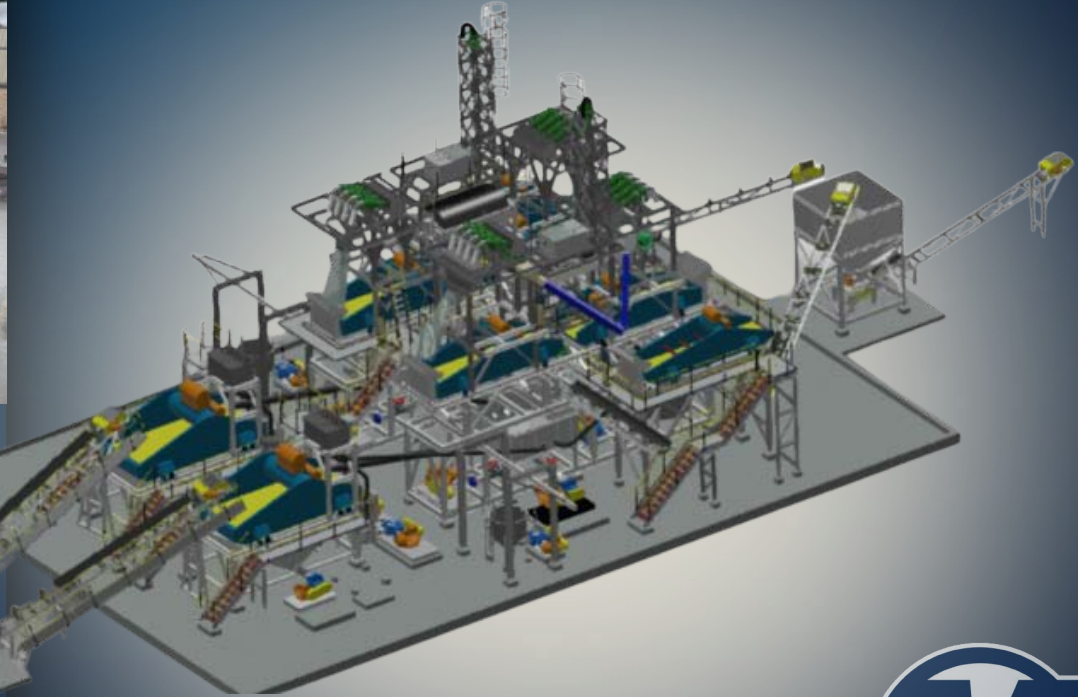


MODULAR X-RAY PLANT- DIAMONDS - AFRICA

- Design, Manufacture, Installation and Commissioning
- Includes: High Tech Security System

PROJECT FEATURE

300TPH Frontend
150TPH DMS
Spodumene Plant

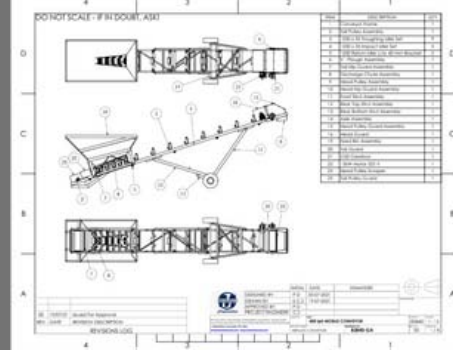


OUR PROJECTS: MATERIALS HANDLING



Stockpile Conveyor

- Capacity: 400 tph
- Size: 27m x 1200mm
- Feed Conveyor, hopper & chute



400TPH Conveyor

- Capacity: 400 tph
- Size: 14m x 1050mm
- Wheel mount, towable system



Overland Conveyor

- System Capacity: 1200 tph
- Radial Stacker: Unique center drive to reduce overhanging head weight



300 TPH Coal Conveyor

- Capacity: 300TPH
- Hydraulically Adjustable
- 33m x 900mm Belt



Overland Ash Dump Modular Conveyor System

- Capacity: 1000 tph
- Length of conveyor 700m
- CO2 Welding: + 10kms
- Steel Material: +250t
- Sand Blasting & Painting: +4000m2



300TPH Conveyor

- 16m long stringer conveyor with receiver chute at tail end, heavy duty to cater for 300mm rocks.
- Conveyor 2; 21m long stringer conveyor with receiver chute at tail end



100TPH Conveyor

- Grasshopper Conveyor: 10 units: 13m long x 600mm wide.
- Spreader Conveyor: 30m long x 600mm wide

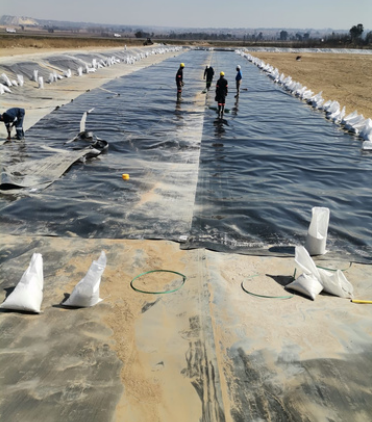


Main Conveyor Extension

- Extended main conveyor and supplied: 3x Off grasshopper type conveyors 750mm wide by 20m long and 1x Off stacker conveyor 750mm

PROJECT FEATURE

Tailings Storage Facility Slimes Dam



OO HUAWEI P40 lite



OUR PROJECTS: PROCESSING PLANTS



864 000 TPA CRUSHING AND DMS PLANT - AFRICA

- Turnkey Supply and Refurbishment
- Installed and Commissioned



7 000 000 TPA SCREENING PLANT - AFRICA

- Designed, Manufactured, Installed & Commissioned



4MVA COPPER SMELTING PLANT

- Turnkey Supply, Design, Manufacture, Installation and Commissioning



MANGANESE PLANT

- Turnkey Supply, Design, Manufacture, Installation and Commissioning



PROCESS SOLUTION - PLATINUM RSA

- Ball Mill: 1 500kW
- Turnkey Supply
- Installed and Commissioned



ALLUVIAL GOLD PROCESSING PLANT - WEST AFRICA

- 300 000 TPA Gold Plant
- Turnkey Supply: Including Design and Manufacture
- Installation and Commissioning



350 000 TPA DMS PLANT - GOLD RSA

- New Plant, Designed, Manufactured
- Installation and Commissioning



CRUSHING PLANT - DIAMONDS, ZIMBABWE

- Design and Manufacture
- Project Management
- Logistics, Installation and Commissioning

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CONTACT US

Tel: +27 (0) 11 748 8800

Fax: +27 (0) 11 748 8898

Email: info@manhattancorp.com