



CPS Installation, Maintenance & Repair (IRM) Skills

A Knowledge Transfer Framework

October 2025

OUR PURPOSE, MISSION, VISION AND VALUE PROPOSITION



Purpose - Unleash Africa's potential

Our purpose is to unleash the true potential of African businesses, leaders and talent and help them step with confidence and dignity onto the world stage



Vision - Access to learning

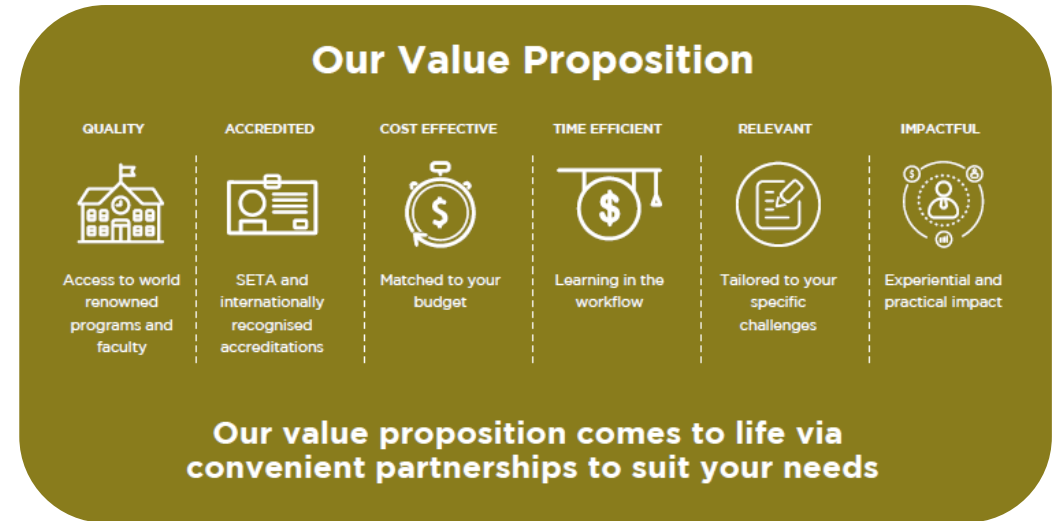
Our vision is that every adult in Africa is able to access the skills and learning they need, when they need them, in order to grow their career, enter the (local or global) economy and create a prosperous future



Mission - Be the partner of choice to bridge the skills gap

The IDM mission is two-fold;

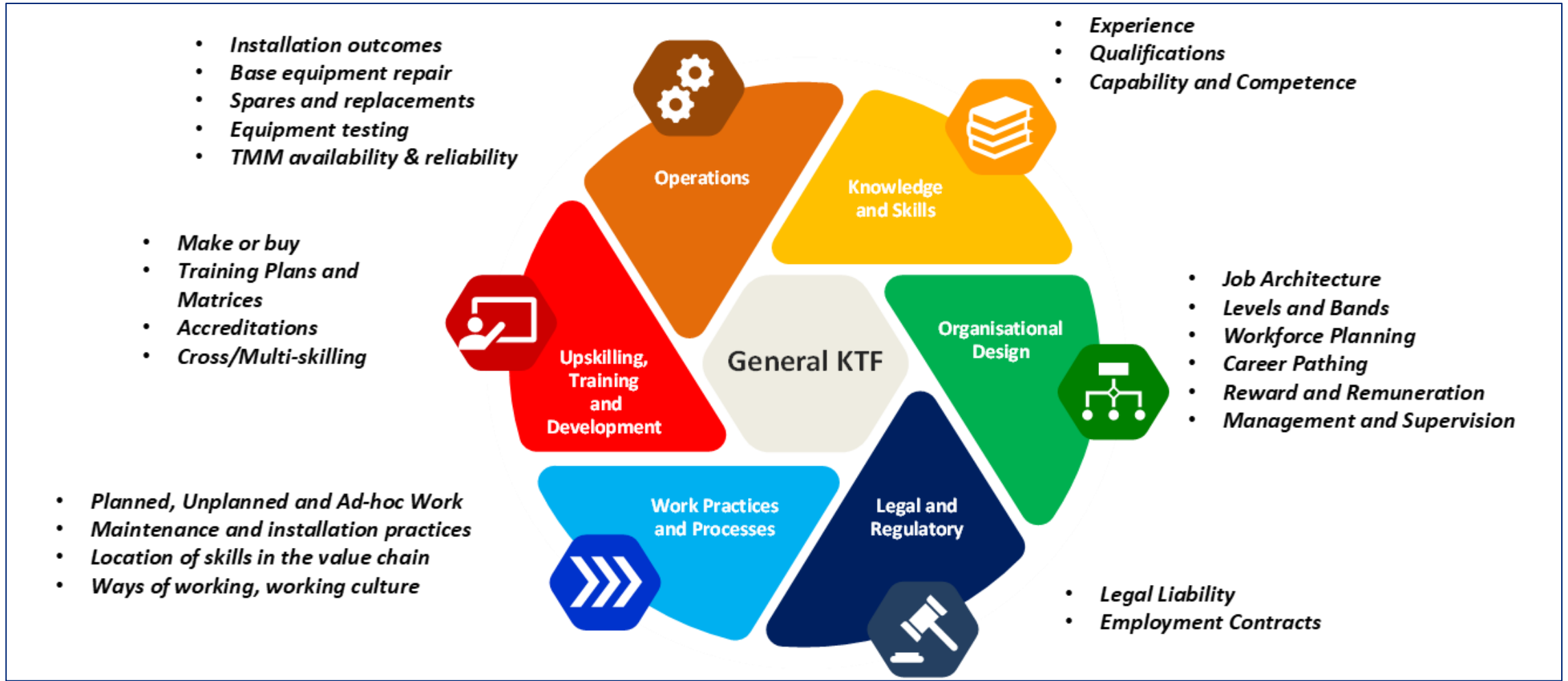
- be the business L&D partner of choice for entrepreneurs and companies operating across Africa to bridge the gap between the business skills and executive capabilities they have and those they need; and
- be the go-to platform of choice that Africans use to bridge the gap between the skills they have and the skills they need.



BACKGROUND INFORMATION & CONTEXT

The Challenge	What did we do?
• The TMM regulations will be lifted by the end of 2023 • Many mining houses are not sufficiently prepared for the implementation of CPS. • The cost of CPS is significant • Therefore, how can the MCSA enable its member firms with the ability to bring the required skills to install, repair and maintain CPS for TMM in-house. In a manner that is cost effective and safe.	✓ Through thorough research developed a theoretical framework that provides universal guidance to mining operations to ensure a holistic approach to knowledge transfer ✓ Explored the practical lesson learned from the experience of a few mining operations that have already walked a long journey in terms of CPS adoption of their TMM. ✓ Developed a practical step-by-step guide that mining houses can use to ensure effective knowledge transfer of IRM for CPS.

KNOWLEDGE TRANSFER FRAMEWORK

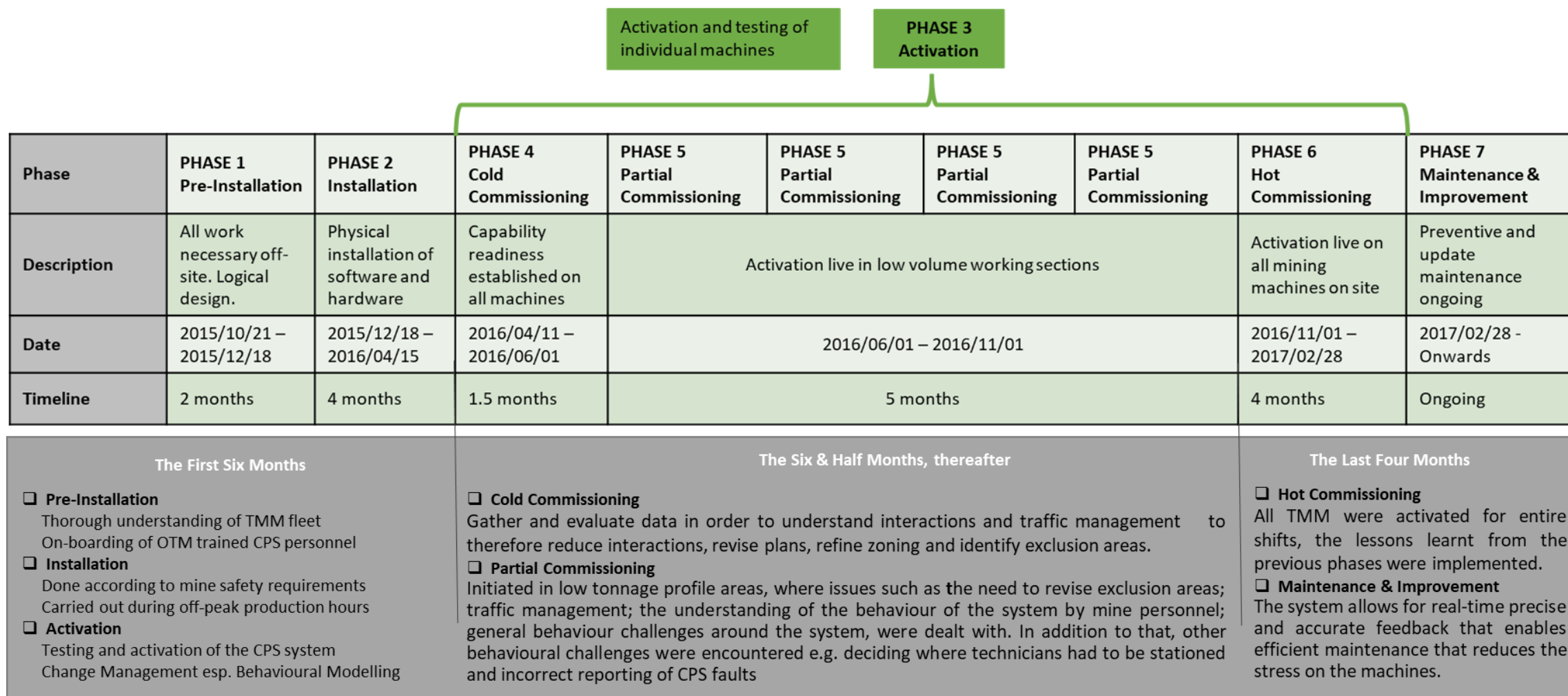


The following key findings were identified while researching cases where CPS has been implemented on TMM:

- Plan at least 16 months for CPS rollout.
- Define IRM processes and roles before implementation.
- Clarify the accountability for IRM between operations, TMM suppliers and CPS suppliers.
- Ensure clear routines, accountability and teamwork to ensure effective cooperation
- Training on IRM needs to be done by the supplier
- Theoretical and practical training needs to be supported by ongoing coaching and refresher training
- Trainee competence needs to be certified by the CPS supplier.

A SEVEN PHASE APPROACH

The seven-phase approach was adopted by an Underground Chrome Mine from October 2015 to February 2017. A detailed understanding of this process is clearly explained in a white paper written by the University of Pretoria in June 2018.



KEY LESSONS

Key Lesson	Relevant KTF Dimension
All IRM components to be in place before CPS implementation	Work Practices and Processes
	Operations
Spares management and availability is key to minimise downtime	Operations
Real time data should be monitored and analysed to ensure continuous improvement	Knowledge and Skills
Create an environment in which teams are working towards a common goal	Knowledge and Skills
	Work Practices and Processes
The adoption of change by mine personnel has been reported as a significant challenge	Knowledge and Skills
	Work Practices and Processes
The CPS should be fully activated and trialled well in advance of operation	Operations
CPS must be wired and installed as per the specific wiring requirements of the TMM	Operations
Supplier relationship must be strong as they bear a reputational risk	Legal and regulatory
On-the-job training was shown to be the most effective approach	Knowledge and Skills
Quality of maintenance is of a higher standard when performed by CPS technicians	Work Practices and Processes
The transfer of skills must be accompanied by an associated transfer of accountability	Work Practices and Processes

SO BASED ON WHAT WE HAVE
LEARNED, HOW DO WE ENSURE
EFFECTIVE SKILLS READINESS?

ENSURE THE FOLLOWING MINIMUM STANDARDS ARE IN PLACE?

Relevant to	Element	Output
CPS Technician	Qualifications	N4 electrical engineering qualification with trade test
	Experience	2 - 3 years mining experience
	Training	- CPS specific training provided by relevant CPS Supplier - On-the-job coaching from an CPS Supplier technician
Mine Management	Maintenance Schedule	- Daily inspections and tests - Daily safe declaration - Weekly routine maintenance
	Technicians per mine	5 total artisans per production section – 1 artisan available per 12-hour shift which rotates across 4 shift every 48 hours (1 relief artisan available to cover for sick leave.

ENABLE COMPETENCE THROUGH THE FOLLOWING CURRICULUM

Company Specific Training	Product Specific Training	Practical Training	Ongoing
Risk Propensity Assessment and Training	System Introduction	Diagnostics	Annual / Bi-Annual Refreshers
	Component Overview		
The MHSA	Installation & Configuration	System Checks	Competency Assessments
Health & Safety system	Operation	Lamp Room Checks	
	Geofences & Zone Adjustments	Fault Finding	Technical Reviews
Policies & Procedures	Exclusion Zones	Replacement	
	Security Features		Product Specialist Meetings
Codes of Practice	Maintenance	Software Uploads	
	Troubleshooting		
Standard Operating Procedures	Technical Specifications	Data Downloads and Analysis	

HIGH LEVEL SKILLS READINESS PLAN

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- Appoint steering and tender committee**
 - Conduct as-is analysis**
 - Select and contract with an appropriate supplier**
 - Appoint implementation team**
 - Implementation Plans agreed and committed to by suppliers and steering committee**
 - Implement, monitor and assess IRM operations in-house**
 - Conduct post-installation planning**

THANK YOU

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