



**MANDELA MINING PRECINCT**  
MINDS FOR MINES

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## Mandela Mining Precinct

A programme of the Department of Science and Innovation and Minerals Council South Africa, hosted and managed by the CSIR and the Minerals Council.

### Expression of Interest (EOI)

For

### Identification of Research Partners for the SAMERDI RTIMS Research Programme

EOI No. 2021/07/02

**Date of Issue: 2 July 2021**

**Deadline of Submissions: 7 July 2021**

**Enquiries: [enquiries@mandelaminingprecinct.org.za](mailto:enquiries@mandelaminingprecinct.org.za)**

## TECHNICAL INFORMATION

### INTRODUCTION

The Mandela Mining Precinct is pleased to announce an **Expression of Interest Call** for the **Identification of additional Collaborative Research Partners for the SAMERDI RTIMS Programme** commencing in March 2021. Applicants are requested to familiarise themselves with the information provided in this Call as well as in the SAMERDI Strategy (2015-2025), before preparing an application. The SAMERDI Strategy is available online at <https://mandelaminingprecinct.org.za/>.

### BACKGROUND

The **Mandela Mining Precinct** is funded by the Department of Science and Innovation (DSI) and the Minerals Council South Africa, to maximise the sustainable returns of South Africa's mineral wealth through collaborative research, development, innovation and implementation of new mining technologies in a socially, environmentally and financially sustainable manner that is rooted in the local community and national economy. It was established to assist with and coordinate the implementation of the South African Mining Extraction Research, Development & Innovation strategy (SAMERDI).

The SAMERDI Strategy was adopted at the Mining Phakisa as a basis for the revitalisation of South Africa's mining R&D capability and capacity through **collaboration and support** from researchers, scientists and engineers. The strategy provides a roadmap on how to work collectively towards technological solutions that will enhance health & safety, increase productivity and reduce working costs to ultimately extend the life of mines and build the local mining supply chain.

The vision of the SAMERDI strategy is ***"to maximise the sustainable returns of South Africa's mineral wealth through collaborative research, development, innovation & implementation of mining technologies in a socially, environmentally and financially sustainable manner that is rooted in the local community and national economy."***

The SAMERDI implementation programme comprises the following five programmes:

- **Longevity of Current Mines (LoCM)** – Designed to increase the efficiency of ore reserve extraction, improvement in Occupational Health and Safety, extension of the life of mines and the reduction in costs of current conventional mining operations.
- **Mechanised Mining Systems (MMS)** – Aimed at providing sustainable mechanised drill, blast and mechanical rock breaking solutions in advancement to facilitate achieving zero harm, whilst maintaining and defending desired production rates at minimised costs, within the Au, and PGM mining industries.
- **Successful Application of Technologies Centred Around People (SATCAP)** - The aim of the SATCAP Programme is to understand the challenges, effects and impacts of mining modernisation on people in the minerals sector. Aligned to this aim, the SATCAP Programme has a journey map, which depicts the research plan, with phases, which is poised towards its 2030 vision.
- **Real Time Information Management Systems (RTIMS)** - Aims to develop and implement smart connected systems for mining from sensor to dashboard.
- **Advanced Orebody Knowledge (AOK)** – Aims to create the ultimate "Glass Rock" environment which includes improving geological confidence ahead of the working face, reduction or identification of risks associated with geology and ultimately to have timeous information.

These programmes contribute (collectively and individually) to the following criteria of:

- Increasing the competitiveness of the industry;

- Creating new industries; and
- Allowing for technology localisation.

The programmes operate in a collaborative way, utilizing the skills and expertise of a number of research partners that comprise universities and research institutions. The research conducted in each Programme is completed through projects that are undertaken collaboratively by teams of researchers, from the identified research partners. These projects are allocated to Research partners based on proposals submitted in response to a call for proposals under each programme. They are evaluated by a technical steering committee and then successful partners are approached to formally contract with the Precinct.

**This EOI has a focus on *increasing this pool of research, service and solution partners* specifically in the RTIMS Programme.**

A separate call has been published for the other four Programmes namely AOK, MMS, LOCM and SATCAP.

### INVITATION FOR EXPRESION OF INTEREST

Expressions of interest are hereby invited from suitably qualified institutions to be registered on the Mandela Mining Precinct database, based on the evaluation criteria below. The aim is to increase the number of Research, Services and Solution Providers for collaboration in the SAMERDI programme and projects. Only institutions with relevant capacity, expertise, experience, resources and necessary facilities /equipment will be considered.

### EOI GENERAL SPECIFICATION

All applications are to be submitted in the format specified in this document. However, applicants are welcome to submit additional / alternative information over and above the originally specified format.

Providers must conform to the following criteria and provide proof thereof:

- *Organisation's relevant experience* - Years operating or conducting applied research in the mining-related industry, as well as the entire Digitalisation/Industrial Internet of Things stack/ICT know-how as applied to the mining environment.
- *Organisation's relevant skills, expertise and broad capabilities*; The size, nature and depth of the team consisting of at minimum, a contracts/project manager with at least 10 years' experience in the applied mining-related /digitalisation/Industrial Internet of Things/ICT discipline, as well as relevant technical resources in the relevant field.
- *Organisations record of accomplishment in relevant field*: i.e. list of previous projects in the mining-related industry, specifically focussed on digitalisation/Industrial Internet of Things/ICT know-how as it is applied to the mining environment would be beneficial.

### ELIGIBILITY

Researchers from South African Universities and Science Councils, and other public or private research institutions and equipment suppliers, working in relevant disciplines, are invited to submit an **Expression of Interest Proposal**. Investigators (PI)/Lead Experts must be qualified to do the proposed research and should be experts in the subject matter referenced in the SAMERDI strategy and RTIMS programme.

The evaluation of technical requirements of the EOI will be based on the requirements listed in the table below:

Requirement	Acceptance Criteria	Weight	Score	Weighted score Score*weight
Demonstrated relevant experience in the applied Mining related/ ICT/Digitalisation/IIoT domain and related services/products/solutions	>10 years mining/domain experience – 10 points. 8-10 years – 8 points 6-8 yrs.- 6 points 1-5 yrs. – 4 points	20%		
Relevant skills, expertise and broad capabilities (latter also includes facilities and equipment)	Full team clearly has the qualifications, skills, and capabilities aligned with Precinct’s Mining Research and Solutions requirements, including strong engineering skills 100% fit - 10 points 75% fit with requirements- 8 points 50% partial fit with requirements- 5 points Tenuous fit- 3 points	60%		
Record of accomplishment in relevant field - list of previous projects in the applied Mining related/ IT/digitalisation/IIoT domain	References and/or proof of relevant research expertise by providing a list of at least 3 similar projects in a similar field with a minimum of 3 contactable references has been provided, OR a minimum of 3 letters from clients (on their letterhead) stating that the organisation has performed work of this nature. 3-4 References and/or proof- 10 points < 1-2 References /proof – 5 points	20%		
TOTAL		100%	30	10 (max)

Expression of interest with functionality / technical points of less than the pre-determined minimum overall weighted percentage of **70 %** (i.e. 7/10) and less than **50 %** on any of the individual criteria will not be considered i.e. 5/10 per individual category)

#### ELIMINATION CRITERIA

Submissions will be eliminated under the following conditions:

- Submission after the deadline;
- Proposals submitted at incorrect Email address;
- Submission of incomplete documentation;

## TERMS AND CONDITIONS

### EXPRESSION OF INTEREST SUBMISSION

To be eligible for consideration, submissions must be submitted in MSWord or PDF format. All submissions must be submitted via email: **enquiries@mandelaminingprecinct.org.za** and **cc: [jjverhaeghe@mineralscouncil.org.za](mailto:jjverhaeghe@mineralscouncil.org.za)** no later than the closing date (see below). The business hours are between 08h00 and 16h30. Late submissions will not be considered.

### RESERVATIONS

The CSIR/ Minerals Council expressly reserves the following rights:

- To reject all or any submissions
- To waive any or all irregularities in the submissions submitted
- To retain the right not to select any application/s even if meeting all the requirements

### CONTRACT NEGOTIATIONS

**Note:** The Mandela Mining Precinct is not a legal entity and all appointments and contracting will be done through the Minerals Council South Africa (“Minerals Council”). The successful applicant/s will be required to enter into a written Agreement with the Minerals Council.

### CLOSING DATE AND SUBMISSION

Applications must be submitted electronically via email to [enquiries@mandelaminingprecinct.org.za](mailto:enquiries@mandelaminingprecinct.org.za), as well as [jjverhaeghe@mandelaminingprecinct.org.za](mailto:jjverhaeghe@mandelaminingprecinct.org.za) and [jjverhaeghe@mineralscouncil.org.za](mailto:jjverhaeghe@mineralscouncil.org.za). The deadline for the submission of expression of interest is **Wednesday, 7 July 2021 at 16:30**.

All applicants will be notified about the outcome of their applications before the **end of July 2021** to allow them to participate in the bids and proposal submissions associated with the contracts for 2021/22 financial year.

See below section ‘Guideline Format for Submission’.

### VALIDITY

All applications will be regarded as valid for 120 days from the submission date where after the CSIR/ Minerals Council may request an updated application, should this become necessary.

### DISCLAIMER

This EOI is an expression of interest only and not an offer document. Answers to this EOI must not be construed as acceptance of an offer or imply the existence of a contract between the parties. By submission of its proposal, tenderers shall be deemed to have satisfied themselves with and to have accepted all Terms & Conditions of this EOI. The CSIR/Minerals Council makes no representation, warranty, assurance, guarantee or endorsements to tenderer concerning the EOI, whether with regard to its accuracy, completeness or otherwise and the CSIR/ Minerals Council shall have no liability towards the tenderer or any other party in connection therewith.

## **SPECIFICITY OF SERVICE/SOLUTION**

**This EOI and future engagement relating hereto, specifically relates to engaging on:**

The industry's requirement to have an independent evaluation study/field work performed regarding underground communications systems/networks at the stope area (1-100m from stope face) at approximately 4-5 mine sites (gold, platinum, chrome etc).

The study encompasses evaluating proof of concepts and or operational systems based on (but not limited to) and consolidated into a matrix of technical, technology, regulatory, financial, interoperability, environmental, safety, scalability, mining method, life of mine, performance, applicability, and deployment aspects/specifications.

The systems and technologies are numerous, such as wifi, radio, leaky feeder/analogue, coax etc. and comprise varied configurations.

The expected output/result of this Requirement will consist of (but not limited to):

Detailed Report(s) to/for Industry stakeholders' perusal, inclusive of the Evaluation Results, Recommendations, Limitations, and other pertinent information to aid Decision-making by IT and Engineering Teams.

## GUIDELINE FORMAT FOR APPLICATION

- Name of institution/company and all relevant contact information
- Broad statement of capabilities that will enable the panel to determine level of fit with the **SAMERDI RTIMS programme**
- Comprehensive information on how the organisation meets stated requirements

Requirement	Information provided to substantiate requirement
<p>Demonstrated relevant experience in the Mining domain</p> <p><i>Years operating/conducting applied research in the Mining or mining-related/applied industry.</i></p>	
<p>Relevant capacity w.r.t skills, expertise and broad capabilities (latter also includes facilities and equipment)</p> <p><i>Give the size, nature and depth of the team; contracts/project manager with at least 10 years' experience in the mining discipline, as well as relevant technical resources in the relevant field related to the RTIMS programme.</i></p>	
<p>Record of accomplishment in relevant field - list of previous projects in the Mining or mining-related/applied industry.</p>	
<p>Submit any other additional / alternative information that you believe to be relevant</p>	