

CALL FOR PROPOSALS

Design and development of technology, product and processing of composite material to support innovative solutions to mitigate erosion and corrosion within the mining ecosystem

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TABLE OF CONTENTS

1. INTRODUCTION	3
2. BACKGROUND	3
3. AIM	3
4. PROPOSAL SPECIFICATION	4
5. ASSESSMENT PROCESS	5
5.1 Applicant eligibility	5
Eligibility will be assessed based on the criteria outlined below:	5
5.1.1 <i>Company registration documentation</i>	5
5.1.2 <i>Tax and B-BBEE compliance requirements</i>	5
5.1.3 <i>National Treasury Central Supplier Database registration</i>	5
5.1.4 <i>Proposal and annexures</i>	5
5.1.5 <i>Timely submission</i>	5
Proposals submitted after the deadline or to an incorrect email address will not be considered. ...	5
5.2 Appointment of successful applicant	5
6. SPECIAL TERMS AND CONDITIONS	5
6.1 Reservations	6
6.2 Personal Information	6
6.3 Conflict of interests	6
6.4 Contractual arrangements	7
6.5 Collaboration	7
6.6 Intellectual property	7
6.7 Preparation costs and limitation of liability	7
6.8 Indemnity	7
6.9 Governing law	8
6.10 Confidentiality	8
6.11 Availability of funds	8
6.12 Disclaimer	8
7. ANNOUNCEMENT OF PROJECTS	8
8. SUBMISSION DETAILS	9

1. INTRODUCTION

This Call for Proposals (CFP) invites the submission of innovative solutions aimed at providing Design and development of technology, product and processing of composite material to support innovative solutions to mitigate erosion and corrosion within the mining ecosystem.

Applicants are expected to outline how their proposed solutions will contribute to more effective responses to the localisation development needs.

2. BACKGROUND

The Council for Scientific and Industrial Research (CSIR) is one of Africa's leading scientific research and technology development organisations. In partnership with national and international research and technology institutions, the CSIR conducts directed, multidisciplinary research and technology innovation aimed at improving the quality of life of South Africans. The organisation's main campus is located in Pretoria, with regional offices across other provinces in the country.

Erosion-corrosion is mainly observed in the pipelines and delivery systems used in the oil and gas industries, petroleum industries, mining industry, and marine equipment. Free-flowing water, containing different grades of particles at a very high velocity, adversely affects pipeline and delivery equipment within the mining sector. In the mining industry, the movement of foreign particles within water, often occurring in slurry pipelines, tailings management which involves the safe storage, monitoring and rehabilitation of mining waste (slurry of rock and water) or mine drainage, is primarily governed by the balance between fluid-driven forces and gravity. As water velocity increases, foreign particles transition through four distinct mechanical states: stationery (settled as a bed), rolling (contact transport), saltation (jumping/bouncing) and suspension (fully carried by turbulence).

The movement of foreign particles is highly abrasive. In the pipeline system, inclusive of pumps and hydro-cyclones, the trajectory and concentration of these particles lead to significant wear on impellers and internal linings, requiring the use of wear-resistant materials and optimised hydrodynamic design to mitigate damage.

These challenges primarily faced by the industry have led to facility degradation, increased maintenance costs and safety hazards. Tackling these challenges requires proactive measures to prevent, mitigate and manage erosion and corrosion.

Through this CFP, the CSIR invites South African institutions to submit technical proposals for projects that align with this challenge as well as the objective of advancing localisation.

3. AIM

The primary aim of this CFP is to support projects that contribute to the development of integrated solutions with practical applications that lead to measurable industrial impact.

Proposals are invited from companies that can provide product development support and innovation to manufacturing companies supporting the mining piping infrastructure and components targeted for localisation.

Responding organisations must demonstrate the capacity in the following areas:

- Product design, including proof of concept;
- Knowledge of manufacturing techniques related to manufacturing and engineered products and services;
- Have partnerships in place to perform testing to relevant standards and respective engineering codes to ensure product quality, safety and performance;
- Expertise in the planning for industrialisation of products for production, including the development of work instructions, standard operating practices and quality management systems;
- Demonstrate product performance using relevant analysis techniques;
- Proficiency in workflow and lean techniques for manufacturing and engineering; and
- Demonstrate potential commercial viability for the proposed product or services.

The successful bidder must provide evidence of a collaborative partnership in the respective sector with an academic institution. Both partners should be involved in the product development cycle, including knowledge and skills transfer processes.

4. PROPOSAL SPECIFICATION

The objective of this initiative is to foster collaboration between industry, organised business and relevant academic institutions to address industry demands for localisation, product development and innovation. Consequently, proposed projects must incorporate the following elements:

- A clear link to an existing, quantifiable technology gap experienced by South African firms and/or industrial sectors;
- Demonstration of the level of innovation and technology transfer involved, particularly where contributions are sourced from industry partners;
- High potential to generate significant sectoral spill-overs and/or economic multipliers;
- Activities aimed at building technological capability;
- Active collaboration between industry (including organised business) and knowledge partners;
- Product design, including proof of concept;
- Knowledge of manufacturing techniques linked to engineered products or services;
- Understanding of product industrialisation processes for manufacturing, including the development of work instructions, standard operating practices and quality management systems; and
- Familiarity with manufacturing systems and compliance with relevant standards.

5. ASSESSMENT PROCESS

5.1 Applicant eligibility

Eligibility will be assessed based on the criteria outlined below:

5.1.1 Company registration documentation

Applicants must provide proof of company registration for the project lead, along with details of all co-applicants.

5.1.2 Tax and B-BBEE compliance requirements

Applicants must be fully compliant with all applicable tax laws, regulations and obligations as stipulated by the South African Revenue Services and must submit a Tax Compliance Certificate. In addition, applicants must comply with Broad-Based Black Economic Empowerment (B-BBEE) requirements and submit a valid B-BBEE certificate or sworn affidavit.

5.1.3 National Treasury Central Supplier Database registration

Applicants are required to be registered on the National Treasury's Central Supplier Database (CSD). To enable the CSIR to verify the information, applicants must provide their unique CSD registration reference number.

5.1.4 Proposal and annexures

All submissions must strictly adhere to the objectives and specifications of the CFP. Proposals must also include a detailed project description, objectives, methodology, expected outcomes and a comprehensive budget. Proposals must be submitted in Microsoft Word and PDF formats. All documents must be signed by the duly authorised Representative(s).

5.1.5 Timely submission

Proposals must be submitted to the following email address: Rnchabeleng@csir.co.za

The key dates for this CFP are as follows:

- Date of publication: CFP-HNP 001/06/2026
- Closing/submission date: 19 June 2026: 16:30

Proposals submitted after the deadline or to an incorrect email address will not be considered.

5.2 Appointment of successful applicant

5.2.1 The contract will be awarded to the applicant(s) recommended through the evaluation process, unless otherwise permitted by law.

5.2.2 Successful appointment as a lead institution will be subject to agreement on mutually acceptable contractual terms and conditions. Should the parties fail to reach an agreement by a mutually agreed deadline following the provisional appointment, the CSIR reserves the right to appoint an alternative entity or consortium or to make no appointment.

6. SPECIAL TERMS AND CONDITIONS

The following key principles outline the terms and conditions applicable to this CFP:

6.1 Reservations

The CSIR expressly reserves the right to:

- Reject all or any proposals submitted;
- Waive any or all irregularities in the proposals;
- Retain the right not to select any application(s), even if all requirements are met;
- Extend the closing date;
- Request additional documentary evidence regarding any aspect of a proposal;
- Appoint one or more entities, separately or jointly (regardless of whether a joint proposal was submitted);
- Award the CFP in whole or in part, or not at all; and
- Cancel or withdraw the CFP, in whole or in part.

6.2 Personal Information

Each party consents to the other party holding and processing their “personal information” (as defined in the Protection of Personal Information (POPI) Act, 2013) for legal, personnel, administrative and management purposes. This includes, where applicable, the processing of “special personal information” as defined in the POPI Act. Each party undertakes to comply with all relevant provisions of the POPI Act and any other applicable data protection laws. The applicant further agrees to comply with all CSIR’s internal governance requirements pertaining to data protection.

Each party consents to the other party making such information available to third parties that provide products or services to either party (including advisers, regulatory authorities, governmental or quasi-governmental organisations and potential purchasers of the party or any part of its business).

When performing any activity involving the handling of personal information as a “responsible party” (as defined in the POPI Act), each party undertakes to process such information strictly in accordance with the Act, the terms of this contract, and the other party’s instructions from time to time. Each party shall also implement appropriate operational and security measures to safeguard the data against unauthorised access.

Each party acknowledges that, in the course of conducting business with the other, it may maintain and process personal information about the other party in its internal database. By signing this contract, each party consents to the maintenance and processing of such personal information.

Where applicable, the applicant shall ensure that all of its personnel, agents, representatives, contractors, sub-contractors and mandataries comply with the provisions of this clause. The CSIR shall be entitled, on reasonable notice, to conduct an inspection or audit of the applicant’s compliance with the POPI Act and the required data protection safeguards.

6.3 Conflict of interests

Applicants must submit a signed copy of the attached Conflict of Interest Statement with their proposal and disclose any potential conflicts of interest involving team members, subcontractors or affiliated entities involved in the project.

6.4 Contractual arrangements

Successful applicant(s) will be required to enter into a written agreement with the CSIR.

6.5 Collaboration

Collaboration between organisations, community members, institutions and companies to jointly deliver a project is encouraged. Only the project lead applicant may submit the application form and enter into the project agreement with the CSIR. The application must identify all other members of the proposed group and include a letter of support from each project partner. Each letter of support should include:

- Details of the project partner;
- An overview of how the project partner will collaborate with the lead applicant and other partners to complete the project;
- An outline of the relevant experience and/or expertise the project partner will bring to the group; and
- The roles and responsibilities the project partner will undertake, as well as any resources it will contribute (if any).

It is the responsibility of the lead applicant to ensure that all formal arrangements are in place with all participating parties.

6.6 Intellectual property

Intellectual property will be managed in accordance with the Intellectual Property Rights from the Publicly Financed Research and Development Act, 2008.

6.7 Preparation costs and limitation of liability

The applicant will bear all costs associated with preparing, submitting and presenting any response to this CFP, as well as all other costs incurred throughout the CFP process. No statement in this CFP shall be construed as placing the CSIR, its employees or agents under any obligation whatsoever, including with respect to costs, expenses or losses incurred by the applicant in preparing their response.

Participation in this CFP process is entirely at the applicant's own risk and cost. The CSIR shall not be liable for any compensation, on any grounds whatsoever, for costs incurred or damages suffered by the applicant as a result of their participation in this CFP process.

6.8 Indemnity

Should an applicant breach any condition of this CFP and, as a result, the CSIR incurs costs or suffers damages (including, but not limited to, the cost of any investigations, procedural impairment, the repetition of all or part of the CFP process or the enforcement of intellectual property rights or confidentiality obligations), the applicant agrees to indemnify and hold the CSIR harmless against all such costs, damages or losses.

6.9 Governing law

This CFP and the related response process shall be governed by the laws of South Africa. The applicant agrees to submit to the exclusive jurisdiction of the South African courts in the event of any dispute arising from or in connection with this CFP or any related matters.

6.10 Confidentiality

Except as required by law, a court order or a regulatory authority with appropriate jurisdiction, no information contained in or relating to this CFP or an applicant's response(s) may be disclosed by any applicant or any person not officially involved in the CSIR's evaluation of the proposal.

No part of this CFP may be distributed, reproduced, stored or transmitted – whether electronically, by photocopying, recording or any other means – except for the purpose of preparing a proposal. This CFP and any accompanying documentation remain the property of the CSIR and must be returned upon request, along with all copies, electronic versions, excerpts, summaries or derivative works.

Throughout this CFP process and thereafter, applicants must obtain written approval from the CSIR before releasing any information that pertains to (i) the potential work or activities covered by this CFP; or (ii) the CFP process itself. Failure to adhere to this requirement may result in disqualification from the CFP process and may give rise to civil action.

6.11 Availability of funds

Should funds no longer be available to support the execution of this CFP, the CSIR reserves the right to terminate the agreement at its sole discretion or to temporarily suspend all or part of the services by providing notice to the successful applicant. Upon receiving such notice, the applicant shall immediately take steps to cease the performance of services and minimise further expenditure. Provided that, in such circumstances, the successful applicant shall be entitled to full payment for services rendered up to the date of cancellation or suspension.

6.12 Disclaimer

This CFP is a request for proposals only and does not constitute an offer document. Responses to this CFP must not be construed as an acceptance of an offer or as creating a binding agreement between the parties. By submitting a proposal, applicants are deemed to have read, understood and accepted all Terms and Conditions set out in this CFP. The CSIR makes no representations, warranties, assurances, guarantees or endorsements concerning the CFP, including its accuracy or completeness and shall not be held liable to any applicant or other party in connection with this CFP.

7. ANNOUNCEMENT OF PROJECTS

The CSIR may publish non-sensitive details of successful projects on its platforms, unless prohibited by law. This information may include:

- The name and logo of the company or organisation;
- The project title;
- A description of the project and its objectives; and
- The project's benefits and outcomes.

Project highlights may also be shared through the CSIR's official communication channels, including its website and social media platforms.

8. SUBMISSION DETAILS

- **Submission deadline:** Friday, 19 June 2026, 16:30

Contact: For all enquiries and correspondence related to submission, please contact Rector Nchabeleng at RNchabeleng@csir.co.za, using the subject line: "CFP No: CPF-HNP 001/06/2026. Please note that only written queries submitted via email will be acknowledged and responded to. All documentation submitted in response to this CFP must be in English, unless otherwise indicated.