



जवाहरलाल नेहरू एल्युमीनियम अनुसंधान विकास एवं अभिकल्प केन्द्र नागपुर

JNARDDC

JAWAHARLAL NEHRU ALUMINIUM RESEARCH DEVELOPMENT & DESIGN CENTRE, NAGPUR

Autonomous Body, Ministry of Mines, Govt of India



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An ISO/IEC-17025:2017 & ISO-17034:2016 NABL accredited lab

Dated: 1st October 2024

ANNOUNCEMENT inviting proposals for funding from Start-ups, MSMEs and Individual Innovators under S&T PRISM Program of Ministry of Mines (PRISM 3.0)

Proposals are invited from Startups, MSMEs and Individual Innovators for up to 2 years duration, which have direct bearing on mineral and metal sector, applied and sustainable aspect of mining, metallurgy and industrial applications, for funding under “Promotion of Research and Innovation in Startups and MSMEs in Mining, Mineral Processing, Metallurgy and Recycling Sector (S&T-PRISM)” under Science and Technology Program of Ministry of Mines so as to enable them to graduate to a level where they will be able to raise investments from angel/Venture Capitalist or they will reach a position to seek loans from commercial banks/financial institutions. The funding is positioned to act as a bridge between development and commercialization of innovative technologies/products/services in a relatively hassle-free manner.

Funding support will be in the form of a grant of up to Rs. 50 lakhs for Startup, Rs. 1 Cr. for MSME and grant up to Rs. 2 Cr. may be considered for technology products requiring higher funding on the recommendation by TEC and approval by Apex Committee.

Special emphasis will be on Exploration of Critical Minerals / Mining / Extraction / Mineral processing, Metal / Alloy / Product Development, AI / ML / IoT / Software, Recycling / Waste Utilization.

The detailed advertisement with problem statements, link to submit application form and guidelines may be seen at website of Ministry of Mines (mines.gov.in), SATYABHAMA Portal (research.mines.gov.in) and JNARDDC’s website (<https://jnarddc.gov.in/Startup-India.aspx>).

The proposals must be submitted via the online form provided on the websites above, along with all necessary enclosures. Last date of submission of proposals is **31.10.2024**.

For further details, please contact the Implementing Agency for S&T-PRISM: Jawaharlal Nehru Aluminium Research Development & Design Center, Nagpur.: <https://jnarddc.gov.in> /E-mail: rnchouhan@jnarddc.gov.in & startups-mines@gov.in



Science and Technology Programme of Ministry of Mines –An Overview

Science and Technology Programme of Ministry of Mines has following three components

- 1 Research and Development (R&D) component :** Under this component, funds are released to Academic institutions, universities, national institutes and R&D institutions recognized with the Department of Scientific and Industrial Research, Government of India for undertaking research and development projects
- 2 Information Education and Communication (IEC) component :** Under this component, funds are released to Industry Associations, recognised Universities, recognized Academic and Research Bodies having at least three years' experience in the mining and mineral sector by organizing or being associated with promotional events
- 3 Promotion of Research and Innovation in Startups and MSMEs in Mining, Mineral Processing, Metallurgy and Recycling Sector (S&T-PRISM) component:** Under this component, funds are released to Startups/MSMEs to ensure timely availability of the seed support to the deserving startups / MSMEs/ individual innovators.

For further details,
please visit
SATYABHAMA Portal
of Ministry of Mines
(research.mines.gov.in).



Problem statements – S&T PRISM

Exploration of Critical Minerals / Mining / Extraction / Mineral processing	Metal / Alloy / Product Development
<ul style="list-style-type: none"> • Extraction of Nickel and Vanadium from Chromite and Iron Ores • Gallium Extraction from Bayer Liquor • Germanium Extraction from Fly Ash • Production of Battery-Grade Manganese Dioxide • Extraction of Lithium, Cobalt, Rhenium, Tantalum, and Platinum from Superalloy Scraps • Extraction of Europium from Electronic Displays • Chemical Stabilizers for Jointed Rock in Surface Mines for Slope Stabilization • Abrasive waterjet cutting for cutting rocks/weakening hard rocks during mining • Recovery of antimony from lamp phosphor waste • Extraction of vanadium from mine tailings of bauxite • Enhancing Spectral-Induced Polarisation and Resistivity Methods for Accurate Detection of Copper and Other Mineral Deposits • Sustainable and green technologies like bioleaching of phosphate minerals for recovery of copper and rare earth elements • Sustainable recovery of niobium and tantalum from primary ores / secondary resources • Bulk utilisation of tool waste and BGML mill tailing dumps for efficient recovery of gold and tungsten • Technology for recovery of selenium and tellurium from copper anode slimes • Technology development for recovery of germanium from Pb-Zn circuit. • Recovery of indium from sphalerite ore • Advanced chemicals for ion-exchange columns with enhanced selectivity and separation efficiency for rare earth ion extraction • Advanced Techniques for Beneficiation of Lean bauxite ores • Technology for recovery of nickel from cyclone dust of steel recycling industry • Innovative Catalytic Processes for Carbon Capture and Sustainable Chemical Production for conversion of carbon dioxide into methanol and other organic compounds 	<ul style="list-style-type: none"> • Manufacturing of WC-Co, NiCr, NiCr-Cr₃C₂, and CoCrAlY Powders for Hard and Wear-Resistant Coatings on Mining Tools • Aluminium Seat Frames for Trains and Buses • Utilisation of extrusion die cleaning sludge for production of alumina • Replacement of cobalt with other abundant metals in batteries • New battery technologies such as sodium sulphur, aluminium- air batteries, iron-air batteries, lithium-independent solid-state batteries, magnesium batteries, and zinc air batteries, etc., to replace lithium-ion batteries • Enhancing the Durability of Silicon-Based Anodes: Addressing Volume Expansion and Electrode Degradation for High-Capacity Lithium-Ion Batteries • Low-cost online hydrogen analyser for molten aluminium • Low-cost offline metal cleanliness analyser for molten aluminium • Production of Synthetic Onyx-Grade White Alumina Trihydrate • Indigenous Production of Special Silica, High-Purity Alumina (HPA), and Specialty Chemicals

AI / ML / IoT / Software	Recycling / Waste Utilization / Mineral processing
<ul style="list-style-type: none"> • KPI reporting software solution to extract the critical performance parameters from IoT-based sensors using PLC or DCS (Distributed Control System) to analyse and improve the performance and technological processes in aluminium / copper sectors • Developing low cost hyperspectral cameras for non-ferrous mining sector • Autonomous platform for intelligent mapping of mine surface for identification and targeting of copper and aluminium bearing minerals • Cyber-physical systems for mine monitoring and productivity improvements for non-ferrous mining sector • Cordless seismic ground data collection for 2-D and 3-D seismic surveys 	<ul style="list-style-type: none"> • Solid state recycling of Aluminium Scrap • Production of Biodiesel / Biogas as Primary and Secondary fuel for oil-fired furnaces in recycling industry • Utilisation of ferro-chrome slag in road building and cement production • Utilization of non-ferrous metal overburden in Ballast, Road Construction, and Aggregates • Recovery of Zinc from Electric Arc Furnace (EAF) and Induction Furnace (IF) Dust • Utilisation of spent pot line for recovering carbon and refractory • Bulk utilisation of copper slag and mine tailings

SCIENCE AND TECHNOLOGY PROGRAMME OF MINISTRY OF MINES

**GUIDELINES FOR PROMOTION OF RESEARCH AND INNOVATION IN
STARTUPS AND MSMEs IN MINING, MINERAL PROCESSING, METALLURGY
AND RECYCLING SECTOR
(S&T-PRISM)**



सत्यमेव जयते

Government of India
Ministry of Mines
Shastri Bhawan, New Delhi 110001
(October 2024)

SCIENCE AND TECHNOLOGY PROGRAMME OF MINISTRY OF MINES

Background

The need for a strong Science and Technology (S&T) base for mining Research and Development (R&D) is well recognized. Research in Mines is an essential prerequisite for generating reliable data and new R&D knowledge relevant to Indian conditions for ensuring sustainable development. Since 1978, the Ministry of Mines has been funding research through grant-in-aid projects to many research institutions in different areas under the broad ambit of Mines protection and management. The Ministry has taken a number of new initiatives to strengthen scientific research in the area of mining sciences.

Recognizing the paramount importance of safety, economy, speed and the efficiency in extraction of mineral resources and in its convergence into viable economic alloys and metals, National Mineral Policy has accorded higher priority to Research and Development (R&D) programmes.

The key components of Science and Technology Programme of Ministry of Mines are–

- (i) **Research and Development (R&D) component**
 - (ii) **Information Education and Communication (IEC) component**
 - (iii) **Promotion of Research and Innovation in Startups and MSMEs in Mining, Mineral Processing, Metallurgy and Recycling Sector (S&T-PRISM) component.**
-
- (i) **Research and Development (R&D) component** : Under this component, funds are released to Academic institutions, universities, national institutes and R&D institutions recognized with the Department of Scientific and Industrial Research, Government of India for undertaking research and development projects
 - (ii) **Information Education and Communication (IEC) component** : Under this component, funds are released to Industry Associations, recognised Universities, recognized Academic and Research Bodies having at least three years' experience in the mining and mineral sector by organizing or being associated with promotional events
 - (iii) **Promotion of Research and Innovation in Startups and MSMEs in Mining, Mineral Processing, Metallurgy and Recycling Sector (S&T-PRISM):** Under this component, funds are released to Startups to ensure timely availability of the seed support to the deserving startups.

GUIDELINES FOR FUNDING UNDER “PROMOTION OF RESEARCH AND INNOVATION IN STARTUPS AND MSMEs IN MINING, MINERAL PROCESSING, METALLURGY AND RECYCLING SECTOR (S&T-PRISM)” UNDER SCIENCE AND TECHNOLOGY PROGRAMME OF MINISTRY OF MINES

1.0 Introduction

Ministry of Mines (MoM) had organized 1st Mining Start-up Summit (MSS), in collaboration with Indian Institute of Technology, Bombay (IITB) on 29.05.2023 at IIT Bombay, to encourage startups in the mining sectors. One of the suggestions during 1st Mining Startup Summit is to explore possibility of making provision about funding the researches of the startups in the incubation centers at IITs/NITs/ other technical institutions relevant to mining and metal industry through R&D funds of the Ministry of Mines. Accordingly, these guidelines are being issued for funding startups or a consortium of startups under the Science and Technology Programme of Ministry of Mines that are working in areas that are critical for the growth of mining and metal industry.

2.0 The Need

Wide gap exists in financial support required by a technology driven Startup in its initial phase which are not being addressed properly. The basic idea of seed support is providing financial assistance to potential startups with promising ideas, innovations and technologies. This would enable some of these startups with innovative ideas/technologies to graduate to a level where they will be able to raise investments from angel/Venture Capitalist or they will reach a position to seek loans from commercial banks/financial institutions. Thus the proposed seed support disbursed to Startup is positioned to act as a bridge between development and commercialization of innovative technologies/products/services in a relatively hassle free manner.

3.0 Objectives: The objectives of S&T-PRISM under S&T programme are as under:

- a) To promote the ecosystem for research, design, development, proof of concept testing, IPR creation, pilot project and manufacturing i.e., complete value chain in mining, mineral processing, metallurgy and recycling sector.
- b) Bridge the gap between R&D and commercialization.
- c) To create synergies among the Academia, Research Institutes, Startups and Industry for capacity building and development of a balanced mining ecosystem by organizing workshops/ seminar / webinar, etc. for sharing their views, plan, expectations and concerns in a free and constructive manner

4.0 Focus Areas of the S&T-PRISM:

The S&T-PRISM will be focused mainly in the following areas:

- i. Prospecting/exploration for strategic rare and rare earth minerals.
- ii. Development of new technology for mineral exploration and mining on land and deep sea to locate and exploit new mineral resources.

- iii. Research in mining methods. This includes rock mechanics, mine designing, mining equipment, energy conservation, environmental protection and mine safety.
- iv. Improve efficiency in process, operations, recovery of by-products and reduction in specification and consumption norms.
- v. Research in metallurgy and mineral beneficiation techniques to utilize lower grade and finer size ores.
- vi. Extraction of value added products from mine waste, plant tailings etc.
- vii. Development of new alloys and metal related products, etc.
- viii. Evolve low capital and energy saving processing systems.
- ix. Production of materials of high purity.
- x. Decarbonisation and development of green technology in mineral based industries
- xi. R&D to establish circular economy and use of recycled materials in mineral based industry
- xii. Focus on extraction of strategic, critical and REE at elemental level

The main idea of the S&T-PRISM is translation of research into technology (product/process/services) but not to carry out open ended fundamental research. Investigations must lead to innovation or new product/process ready for demonstration or pilot scale deployment (not only publication/ patent).

5.0 Name of the Implementing Agency for S&T-PRISM: Jawaharlal Nehru Aluminium Research Development and Design Center, Nagpur.

6.0 Budgetary Outlay:

The requirement of funds under **S&T-PRISM COMPONENT** will be met from the budgetary support under the Science and Technology Programme of Ministry of Mines. The **S&T-PRISM** has following two sub components:

- (a) **Startups Funding** - For this the applicant showing capability, intent, and promise to be able to produce functional prototypes or to productize existing technologies will be awarded grants of up to Rs. 2 crore strictly based on a milestone basis.
- (b) **Setting up Incubation Centres** and strengthening them with grant up to Rs. 10 crore which will be disbursed based on the milestone of the centre.

7.0 Administrative set-up for implementation of S&T-PRISM:

(a) The S&T-PRISM will be implemented under the aegis of an Inter-Ministerial Apex Committee which will be reconstituted every 3 years. The Composition of the Inter-Ministerial Apex Committee will be as follows:-

i.	Secretary, Ministry of Mines	Chairperson
ii.	Additional Secretary, Ministry of Mines	Member
iii.	Joint Secretary / Economic Adviser, Ministry of Mines	Member

iv.	Joint Secretary and Financial Advisor, Ministry of Mines	Member
v.	One Member each from Industry and Academia to be opted by the Chair	Member
vi.	Representative from NITI Aayog	Member
vii.	Representative from Ministry of Earth Science	Member
viii.	Representative from Department of Science and Technology	Member
ix.	Director General, National Mineral Exploration Trust	Member
x.	Controller General, Indian Bureau of Mines	Member
xi.	Director General, Geological Survey of India	Member
xii.	Director, Jawaharlal Nehru Aluminium Research Development and Design Centre	Member Secretary
xiii.	Director, National Institute of Rock Mechanics	Member
xiv.	Director (Technical), Ministry of Mines	Member
xv.	DS / Director (Metal-IV), Ministry of Mines	Member
xvi.	Any other representative(s) from Central Government Ministry/ Department/ Organization may be co-opted with the approval of Chairperson	Members

8.0 Changes in the guidelines: Notwithstanding anything contained in the guidelines, any changes/deviation may be made in the guidelines with the approval of Secretary (Mines).

Enclosures:

1. Annexure-I Standard Operating Procedure for Grant.
2. Annexure-II Terms & Conditions for Grant-in-Aid.

STANDARD OPERATING PROCEDURE FOR GRANT UNDER S&T-PRISM

1. Implementation Mechanism & Scope of Implementing Agency

JNARDDC will implement the S&T-PRISM on behalf of the Ministry of Mines. The Implementing Agency will work under the overall supervision of the Apex Committee and guidelines issued by the Ministry of Mines.

2. Role and responsibility of the Implementing Agency

The role and responsibility of the of the Implementing Agency are as under:

2.1 Due Diligence

2.1.1 A Technical Expert Committee (TEC) consisting of following members will be constituted by the Implementing Agency to select beneficiaries, recommend release of grants/continuity/extension/short- close, periodically steer and review the technical and financial progress of the grant under S&T-PRISM, etc.:

i.	Director, Jawaharlal Nehru Aluminium Research Development and Design Centre (JNARDDC)	Chairperson
ii.	Director (OD), Indian Bureau of Mines	Member
iii.	DDG (RSAS), Geological Survey of India	Member
iv.	DDG (NMH-Mission 2), Geological Survey of India	Member
v.	Director, National Institute of Rock Mechanics	Member
vi.	Director, CSIR - Institute of Minerals and Materials Technology	Member
vii.	Director, CSIR - National Geophysical Research Institute	Member
viii.	Director, CSIR - National Environmental Engineering Research Institute	Member
ix.	Representative from IIT Bombay	Member
x.	Representative from IIT-ISM, Dhanbad	Member
xi.	Representative from HZL	Member
xii.	Representative from HINDALCO	Member
xiii.	Scientist from JNARDDC (to be nominated by Director, JNARDDC)	Member Secretary
xiv.	Eminent persons relevant to the field may be coopted by the Chairperson	Members

TEC will be reconstituted every 3 years in consultation with the Ministry of Mines.

2.1.2 Due diligence of beneficiaries will be carried out by TEC.

2.1.3 The due diligence process involves: -

- Reconfirming eligibility
- Legal, technical & financial due diligence
- Confirming how the application has tied up all resources: space, equipment, manpower, advisors, incubation services, etc.
- Preference to Startup/MSMEs of North East Region and women led enterprises (5% of the budget of S&T-PRISM for each)
- Budget utilization plan (usually by providing quotations); other requirements if any
- Finalization of milestones, budget and payment schedule; defining clear milestone targets that are easy to track.

2.2 Signing Agreement

2.2.1 Final grant approval will be accorded by Apex Committee of the Ministry.

2.2.2 After the approval of the Apex Committee, an agreement will be signed between the implementing agency and the beneficiary, defining terms of association.

2.3 Fund disbursement

2.3.1 Fund will be released into the dedicated no lien account created by the beneficiary for the purpose.

2.3.2 Fund disbursement will commence as per the milestones stipulated at para 6.3.

2.4 Monitoring

Once the works as per the timeline begins, TEC will periodically monitor, at least once a quarter, progress of the Startup. Beneficiaries will submit periodic reports and utilization certificates in the prescribed format to the implementing agency.

3. Financial Support to Start-up and MSME

Under the S&T-PRISM, financial support will be provided to those projects/ideas who have reached at least "Proof of Concept (POC)" level. Financial support will be provided to the beneficiary in the form of grants. However, the implementing agency will work with other venture funds to get them more funding on mutually agreed entry-exit terms.

3.1 Eligible expenditures for funding:

Since the focus of S&T-PRISM is to facilitate creating of prototypes and bringing of products /technologies to market, applicants will be encouraged to spend on: -

- a) Research & Development (It includes the expenditure on manpower capitalized in the books of account for the development of product)
- b) Prototyping
- c) Testing, Trials and Piloting
- d) Commercialization

While, expenses on following are not permissible under the funding

- a) HR manpower expenses (Administrative expenses of Startups/MSMEs not included)
- b) Tools & Machineries
- c) Office expenses

4. Eligibility Criteria

4.1 Eligible Beneficiaries:

4.1.1 Startups, as defined and recognized by Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry, Government of India, working towards innovation, development or improvement of products or processes or services, or if it is a scalable business model with a high potential of employment generation or wealth creation.

4.1.2 Any Indian company incorporated under the Companies Act 1956/2013, primarily a Micro, Small and Medium Enterprises (MSME) as defined in the MSME Act, 2006 having over 51% stakes by the Indian Citizen / NRI / OCI and Head Quarter in India.

4.1.3 Individual Innovators will also be encouraged to apply (research & academic institutions can use this category to apply). However, release of the fund shall be subjected to compliance of eligibility conditions for either Startup or MSME before agreement signing.

4.2 More than one organization can jointly submit the application in partnership with consortium, registered societies & Academia

4.3 Collaboration with Academia / R&D Organization will be encouraged

4.4 Every proposal must clearly identify a Project Lead (PL) who will take responsibility for the technical and managerial aspects of the project execution. If an application is selected for funding support, then its Project Leader will be required to sign the project Agreement on behalf of the applicant(s).

5. Application Procedure

5.1 Online Application Submission, Project Status Tracking, Monitoring/Mentoring, Event Promotion, Partnership facilitation, Regulatory Information etc., will be done through SATYABHAMA Portal (research.mines.gov.in).

5.2 Ownership of any intellectual property generated by the participant will accrue solely to those participants. Ministry of Mines has the first right of refusal for preferential access to these technologies for product, go-to-market, and investment.

6. Implementation Methodology

6.1 Selection & Funding Process

6.1 .1 All applications will be Initially scrutinized for the Eligibility Check and completeness by the Implementing Agency.

6.1 .2 Eligible applicants will be shortlisted by the Implementing Agency.

6.1 .3 Shortlisted applicants will be called to give a detailed presentation to showcase their idea/product/solution to the TEC. TEC will recommend applications to the Implementing Agency for the approval of the Apex Committee.

6.1 .4 Recommended applicants by the TEC will undergo the due- diligence process as stipulated at para 2.1.

6.1 .5 After due diligence, the final grant proposal will be presented by the implementing agency to the Apex Committee for approval.

6.1.6 A funding agreement will be signed between the implementing agency and successful applicants.

6.1 .7 Fund will be released into the dedicated no lien account created by the successful applicants for the purpose of S&T-PRISM.

6.1.8 Fund disbursement will commence against the milestones of the project as stipulated at para 6.3.

6.1.9 Beneficiaries will submit periodic reports and utilization certificates in the prescribed format to the implementing agency.

6.1.10 Implementing agency will Coach / Mentor the project during Project Completion and two years post completion through its Expert panel.

6.1.11 Implementing Agency will help beneficiaries in Piloting, Testing and Public Procurement. Further, Implementing agency will connect beneficiaries with PSUs/Academia or any other institute/organization where Ministry of Mines has funded for testing/pilots of technology/solutions developed.

6.2 Indicative Evaluation Criteria

The indicative evaluation criteria for applicants under S&T-PRISM are as follows:

S. No.	Criteria	Details	Indicative Weightage (%)
1	Technical Feasibility	Feasibility & reasonability of the technical claims, methodology used/to be used for validation, roadmap for technology development	20
2	Potential Impact	Environmental sustainability, Market size, customer demographic & the technology's effect on these	20
3	Novelty	USP(s) of the technology, associated with the technology, national importance if any	15
4	Commercialization Strategy	Utilization of technology to create a product/service, its positioning & value addition for the intended customers, plan forgo-to-market, challenges executed	25
5	Team	Technical & business expertise, mentors	20
Total			100%

Selected beneficiaries will be offered funding over a period of maximum 24 months in installments against agreed milestones.

6.3 Milestone based Fund releases

6.3.1 Successful applicants will be offered funding support in the form of a grant of up to Rs. 50 lakhs for Startup and Rs. 1 Cr. for MSME. However, the grant up to Rs. 2 Cr. may be considered for technology products requiring higher funding on the recommendation by TEC and approval by Apex Committee. The fund disbursement will be milestone-based and will be released in 4 installments:

Installment	Milestone	Release
1st Installment	Signing of Contract	40% of Total Grant
2nd Installment	Completion of 1st Milestone	20% of Total Grant
3rd Installment	Completion of 2nd Milestone	20% of Total Grant
4th Installment	Completion of project & submission of final report with prototype/product (focusing on Technology Completion of the project and outcome could be Technical Success or Failure	20% of Total Grant

6.3.2 Timelines for milestones of the project shall be decided between the beneficiary and Implementing Agency after due-diligence approval.

6.4 Monitoring

6.4.1 The TEC will ensure timely and proper implementation of the project without time and cost overruns.

6.4.2 The Implementing Agency shall ensure that the TEC shall meet as frequently as required but at least once in every quarter. Implementing Agency will submit its report duly signed by the Head of the implementing agency to Ministry of Mines. This report will be used to review the progress of utilization of the funds released and will also be taken into account while considering further release of funds by the department.

7. Fund Disbursement from Ministry of Mines to Implementing agency

7.1 Funding Pattern

7.1.1 The funds shall be released to the Implementing Agency for further release to beneficiaries based on the recommendation of TEC

7.1.2 The 1st installment will be released after approval is accorded to the projects by the Apex Committee. Further installments may be released based on the achievements of the set milestones and recommendation / ratification of TEC.

7.1.3 Release of further installments shall be subject to furnishing of complete Utilization Certificate, report of the TEC recommending the release and the proof of matching contribution of the funds having been invested by the Implementing Agency from its own or other sources as per the approved cost sharing.

7.1.4 Upon approval of projects by the Apex Committee, Implementing agency would communicate to the successful applicant and initiate the funding process.

7.1.5 First installment of payment to be made available to successful applicants within three weeks.

7.1.6 Technical Expert Committee of Implementing Agency would recommend each milestone payment to be made available to startup & MSME; Implementing agency to disburse the fund to beneficiaries.

7.1.7 Final Milestone Payment will be made after a 3rd party audit by an Expert assigned by Ministry of Mines..

7.1.8 Implementing agency will maintain a separate bank account for all activities related to the S&T-PRISM.

7.1.9 Implementing agency will submit a Statement of Expenditure (SE) on annual basis during the beginning of the Financial Year for the preceding year.

7.1.10 Implementing agency will submit a half-yearly progress report of fund disbursements in the month of April and October for preceding 6 months.

7.1.11 Ministry of Mines and Implementing agency will conduct an annual review of fund disbursement, other activities and deliverables to gauge output, and to approve activities for the forthcoming year.

7.2 Administrative Expenses of Implementing Agency: The administrative expenses will be granted to Implementing Agency at the rate of 2% of cost of every project.

8 Assistance and Support

8.1 Incubation /Mentoring Support

Selected Startup and MSMEs will be provided mentorship or incubation support and technical advisory support during entire project development period and additionally for two years from the date of Technical Completion, by a Facilitation & Mentorship Team under the Implementing Agency Team along with panel of Experts consisting of Technical, Financial, Market Development, Legal & Compliance etc and with the use of various dedicated government portal such as MAARG Portal of Startup India, DPIIT . The objective of this coaching/mentorship is to create success stories in the mining, mineral processing, metallurgy and recycling sector by offering focused and detailed support individually to each selected projects. This incubation support shall be provided by Incubator Partners, Industry Partners, etc.

8.2 Scope of Mentoring Support

- a) **Advisory:** Strategic support for scaling up of operations & expansion in new geographies, and product building & enhancement.
- b) **Network:** Reach out to relevant individuals/entities to enable R&D, specialized mentorship, partnerships, marketing, etc.
- c) **Tapping Resources:** Enable startup's participation in grand challenges, Government. Schemes, incubation/acceleration programs, relevant events, etc.
- d) **Pilots:** Enabling pilots with corporate, Government, universities, etc.
- e) **Business Plan:** Guidance on raising capital
- f) **Funding Raising:** Startup can raise the fund from various sources depending on the nature of business, viz Grant from other Ministry/Dept, Conditional Grant, Award, Soft Loan, Loan etc.

Besides the above, to further strengthen innovation and entrepreneurial development, startup beneficiaries may also leverage the MAARG portal, the Startup India international bridges, Startup India's corporate programs and the Startup India Investor Connect Portal.

9. Success Metrics for the S&T-PRISM

Performance of the mentor will be judged on quarterly basis on clear tangible outcomes, such as:

- a) Jobs created

- b) Royalty Collection and Corpus Rebuilding
- c) Expansion of startup and MSME into new geographies
- d) Growth in userbase/clientele of startups and MSME
- e) Growth in startup and MSME revenue
- f) Capital raised (equity/debt/grant), as required
- g) Government incentives availed
- h) Mentorship hours for startup (external specialized mentor)
- i) Feedback of startup and MSME
- j) Pilots conducted
- k) Volume and value of sales

10. Pilot Opportunity

10.1 Piloting opportunity for supported Startup and MSME, shall be provided in the mining, mineral processing, metallurgy and recycling sector.

10.2 The pilot opportunities will be provided to startups and MSMEs in the following manner:

- a) Any Startup/ MSME desirous of availing the opportunity for pilot, shall be required to submit a detailed proposal outlining their requirements, scope of work, location for the pilot, timelines, potential impact, success metrics, etc.
- b) This proposal will be presented to Apex Committee for review & inputs.
- c) Apex Committee shall hold a one-on-one meeting with each interested team to discuss the proposal and finalize requirements.
- d) JNARDDC, NIRM and Startup India can provide strategic inputs in the Apex Committee evaluations and provide pilot opportunities to the shortlisted startups and MSME. R&D support from these organizations may be provided to shortlisted startups and MSME for at least 3 months to help these startups fine-tune their products and services,
- e) All finalized B2B proposals will be presented to a panel of corporate from mining, mineral processing, metallurgy and recycling sector on a 'Demo Day'. Apex Committee will facilitate all experimental licenses and other resources within 30 days of proposal review.

11. Procurement Opportunity

Implementing Agency shall make appropriate mechanisms to ensure that products/ services developed by startups/MSMEs funded under S&T-PRISM, find market and become financially viable over a period of time. Ministry of Mines shall try to work with PSUs for getting them educational orders and also make available and work with them for technology trials. As per the Public Procurement Policy for Micro and Small Enterprises (MSMEs) every Central Ministry/Department/PSU shall set an annual goal of minimum 25 percent of the total annual purchases from the products or services produced or rendered by MSMEs. Ministry of Mines will sensitize the concerned agencies about the products/services developed by startups/MSMEs and request for consideration of their proposals, submitted i.r.o. their tenders, as per due rules and procedures.

12. For Incubator Support

A grant up to Rs. 10 crores will be allotted for setting up each Incubation Centre and strengthening them based on the progress.

13. Recall of the Central Grant

13.1 The Implementing Agency has to abide by Terms & Conditions for Grant-in-Aid as per **Annexure II**.

13.2 Apex committee retains the right to curtail/ recall the central grant along with applicable interest calculated at 3 years SBI MCLR prevailing on the date of disbursement in case of unsatisfactory use of the grant including compromise with the quality envisaged, or partial/incomplete implementation of the project.

Terms & Conditions for Grant-in-Aid

The grant is for the specific project as approved by the Ministry of Mines. It shall be subjected to the conditions listed below. The proposal originating industry and implementing agency shall give an undertaking that they agree to be governed by these conditions.

1. The grant amount shall be i) spent for the head for which it has been released within the specified time; and ii) Any portion of the grant, which is not ultimately required for expenditure for the approved purposes, shall be duly surrendered to Ministry of Mines;
2. The implementing agency should adhere to GFR guidelines while incurring expenditures out of Ministry of Mines' grant under the project. The Implementing Agency shall be responsible for ensuring that all procurement of goods, equipments and services, including works, are through a transparent and competitive bidding process as per the applicable government rules / guidelines;
3. The implementing agency shall maintain an audited record in the form of a register in the prescribed proforma for permanent, semi-permanent assets acquired as solely or mainly out of Ministry of Mines grant;
4. The assets referred to in (3) above will be property of Ministry of Mines and should not, without prior sanction of Ministry of Mines, be disposed off or encumbered or utilized for the purposes other than those for which the grant has been sanctioned;
5. In addition to the ownership of the facility created, preparation and approval of the DPR, the Implementing Agency shall also be responsible for obtaining all necessary statutory approvals/clearances including those for environmental compliance and quality standards as applicable;
6. The implementing agency shall furnish Utilization Certificate (UC) along with its request for next release of Grant in Aid certifying that the fund released to them for which UC has been furnished is as per the objective of S&T-PRISM;
7. The implementing agency shall render progress-cum-achievement reports at interval of not exceeding six months on the progress made on all aspects of the project including expenditure incurred on various approved items during the period;
8. The implementing agency shall render an audited statement of accounts to Ministry of Mines.
9. The audited statement of accounts relating to grants given during financial year together with the comments of the auditor regarding the observance of the conditions governing the grant should be forwarded to the Ministry of Mines within six months following the end of the relevant financial year;

10. The utilization of grant for the intended purposes will be looked into by the Auditor of implementing agency according to the directives issued by the Government of India from time to time and the specific mention about it will be made in the audit report;
11. Ministry of Mines or its nominee(s) will have the right of access to the books and accounts of the implementing agency for which a reasonable prior notice would be given;
12. The implementing agency should maintain separate audited account for the project. If it is found expedient to keep a part or whole of the grant in a bank account earning interest, the interest, thus earned should be reported to this department. All interest against Grant-in-aid should be mandatorily remitted to the Consolidated Fund of India immediately after finalization of the accounts. Such advances should not be allowed to be adjusted against future releases;
13. Institutes may retain the sale proceeds of prototypes, etc fabricated as a result of the development of the project arising directly from funds granted by the department. The Institute may use funds thus generated for furtherance of project objectives;
14. The Intellectual property and the rights associated with it shall be agreed between the participating organizations before the start of the project. The Industry/ Industry Consortium/ Institution(s) will make all efforts to protect intellectual property generated out of the project. The institution(s)/ industry would submit the periodic report to Ministry of Mines for a period of minimum 1 year on the status of IPRs created/ commercialization under the project. Furthermore, IPR must also reside in India so that India has access and complete control to these rights in times of emergency to protect our national interest. Ministry of Mines shall have first right of refusal to such IPR.
15. Application by implementing agency for any other financial assistance or receipt of grant/ loan from any other Agency/ Ministry/ Department for this project should have the prior approval of Ministry of Mines;
16. The Implementing agency(s) is not allowed to entrust the implementation of this project for which grant-in-aid is received to another institution and to divert the grant-in-aid received from Ministry of Mines as assistance to the later institution;
17. In case of any dispute on any matter, related to the Startup during the course of its implementation, the decision of the Secretary, Ministry of Mines, shall be final and binding on the proposal originating industry/ industry consortium and grantee institute;
18. The financial assistance given under S&T-PRISM shall be subject to audit by the CAG of India;