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"Research, Development and Innovation (RDI) Fund" Scheme is aimed at accelerating private sector participation in research and development: Dr Jitendra Singh

"TDB-DST signs Agreements for Five High-Impact RDI Projects; First Fund Disbursement Released under National RDI Initiative by Minister Dr Jitendra Singh

Post-Quantum Cryptography and Quantum-Safe Infrastructure Essential for Long-Term National Security: Dr. Jitendra Singh

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Union Minister of State (Independent Charge) for Science & Technology; Earth Sciences and Minister of State for PMO, Personnel, Public Grievances and Pensions, Department of Atomic Energy and Department of Space, Dr. Jitendra Singh today said that quantum and Artificial Intelligence (AI) sovereignty, along with indigenous ecosystems will define India's next-generation growth.

The Minister said, India's future growth in deep-tech sectors will depend on the country's ability to adopt a trusted integrated approach. And this is precisely what prompted the launch of the "Research, Development and Innovation (RDI) Fund" Scheme, which is aimed at accelerating private sector participation in research and development.

Addressing a programme organised by the Technology Development Board (TDB), Department of Science & Technology, at Dr. Ambedkar International Centre, New Delhi, the Dr Jitendra Singh highlighted that India is moving towards a new phase of innovation-driven growth through coordinated initiatives in quantum technologies, deep-tech financing and industry-led research ecosystems.

During the programme, agreements for five projects under the RDI Fund Scheme were signed, the first electronic fund disbursement under the scheme was released, a compendium on the status report of the RDI Scheme was launched and a report on "Quantum-Safe Ecosystem in India" was formally released.

1. M/s e-TRNL Energy Pvt. Ltd., Maharashtra, signed an agreement for the development and manufacturing of advanced Lithium-ion battery cells based on its patented 3-Dimensional Electrode Architecture (3DEA) technology. The project aims to redefine multiple aspects of lithium-ion cell design and manufacturing, including materials processing, cell architecture, compact automated manufacturing systems, and cost-efficient battery production, thereby strengthening India's domestic battery manufacturing ecosystem.
2. M/s Dhruva Space Private Limited, Hyderabad, Telangana signed an agreement for "Project Garud" — an indigenous, modular, communication payload-agnostic 500 kg-class satellite platform designed for mass production and constellation-scale deployment. The project aims to establish India's capability in scalable, flat-pack, modular satellite systems that can support resilient communication networks for strategic, commercial, and scientific applications.
3. M/s Eyestem Research Private Limited, Bengaluru, Karnataka signed an agreement for the development of first-in-class cell therapies targeting two globally incurable diseases — Geographic Atrophy associated with Age-related Macular Degeneration and Idiopathic Pulmonary Fibrosis. The project represents a major advancement in regenerative medicine and indigenous cell therapy platforms aimed at addressing critical unmet healthcare needs.
4. M/s Noccarc Robotics Pvt. Ltd., Uttar Pradesh, signed an agreement for the development of the Intelligent Mobile Life Support System (iMLSS), a portable ICU-grade emergency and critical care platform designed specifically for Indian conditions. The system integrates advanced ventilator support, patient monitoring, AI-assisted clinical guidance, multilingual voice support, and connected healthcare capabilities to strengthen emergency and rural healthcare delivery.
5. M/s Endure Air Systems Private Limited, Noida, Uttar Pradesh signed an agreement for "Project Sabal-200," an indigenous unmanned helicopter platform capable of carrying payloads exceeding 200 kilograms. Designed for high-altitude and rugged operational environments, the system is expected to support logistics, disaster response, surveillance, and strategic applications through advanced propulsion and endurance technologies.

Marking another major milestone under the RDI framework, TDB also carried out the first electronic fund disbursement under the scheme. As part of the initial tranche release, ₹50 crore was electronically transferred to M/s Eyestem Research Private Limited to support the advancement and commercialization of its indigenous cell therapy platform.

A Compendium on the Status Report of Technology Development Board (TDB) as the Second Level Fund Manager (SLFM) under RDI Scheme till April 2026 was also released during the programme. The compendium presents the progress achieved by TDB in operationalizing the RDI Fund encompassing details of proposals received, sector-wise distribution, project evaluation and appraisal mechanisms, approved projects, funding trends, and the Board's sustained efforts towards enabling commercialization of high-impact cutting edge indigenous technologies across strategic sectors.

The publication further highlights the emerging innovation landscape under the RDI initiative by showcasing projects spanning deep-tech, biotechnology, artificial intelligence, space technologies, healthcare, energy transition, climate technologies, and digital infrastructure, thereby reflecting the growing momentum of India's research-to-commercialization ecosystem.

Highlighting the importance of the RDI initiative, Dr. Jitendra Singh said that the Government, under the leadership of Prime Minister Shri Narendra Modi, has adopted several out-of-the-box approaches to strengthen India's innovation ecosystem and create enabling conditions for private investment in research and development. He noted that, unlike conventional models where governments expect industry participation independently, India has adopted a proactive approach by creating institutional and financial support mechanisms for private-sector-led innovation.

The Minister said the initiative reflects the Government's commitment to creating an ecosystem where startups, MSMEs and industry can emerge as long-term innovation partners. Referring to the broader reforms undertaken in sectors such as space and deep technology, he said the Government has consistently encouraged institutional openness and stakeholder participation. He noted that reforms in the space sector have demonstrated how strategic policy interventions can unlock innovation and public participation in advanced technology sectors.

Dr. Jitendra Singh also highlighted the growing significance of quantum technologies and said India is now among the select group of countries actively investing in quantum communication, quantum computing, quantum sensing and quantum materials under the National Quantum Mission. He noted that India had originally set a target of achieving 2,000 km quantum-secure communication capability in eight years, but the country has already achieved nearly half that target in less than four years, reflecting the pace of progress under the Mission.

Emphasising the importance of future cybersecurity preparedness, the Minister stated that emerging quantum computing capabilities may pose significant challenges to existing cryptographic systems currently used in banking, governance, telecom and strategic infrastructure. He noted that post-quantum cryptography, quantum key distribution and quantum-safe infrastructure will become critical for long-term national security and trusted digital governance. He also stressed the need to make technical knowledge more accessible through digital platforms, AI-enabled outreach tools and simplified communication formats for innovators and startups.

Principal Scientific Adviser to the Government of India, Prof. Ajay Kumar Sood, described the RDI Fund as a potentially transformative initiative capable of catalysing large-scale private investment in deep-tech research and innovation. He highlighted that the implementation of the initiative within a relatively short time reflects the Government's commitment to speed and scale in policy execution. Referring to the release of the "Quantum-Safe Ecosystem in India" report, he said the country must prepare proactively for the "Q-Day" scenario when current encryption systems could become vulnerable to quantum computing capabilities. He emphasised the need for national preparedness in post-quantum cryptography, quantum-safe communication systems and secure digital infrastructure across sectors such as finance, healthcare and governance.

Secretary, Department of Science & Technology and Chairperson, TDB, Prof. Abhay Karandikar, highlighted that the RDI initiative represents one of the most significant government interventions aimed at strengthening private-sector-led R&D in India. He said the implementation process involved extensive collaboration among experts, investment committees, scientific institutions and industry stakeholders working voluntarily over several months to operationalise the initiative. He expressed confidence that the RDI framework would help crowd in private capital investment, strengthen deep-tech innovation and support the development of globally competitive technologies and startups in the country.

Secretary, TDB, Shri Rajesh Kumar Pathak, highlighted the rapid operationalisation of the RDI initiative and stated that TDB became the first Second Level Fund Manager to launch project proposal calls, sign agreements and release funds under the scheme. He informed that the initiative received 124 project proposals within a short period, representing project demand worth more than ₹25,000 crore. He also noted that the selected projects span startups, MSMEs and listed companies across sectors including health, energy, quantum technologies and advanced manufacturing. "The 22 companies selected by TDB for funding under the Research Development and Innovation (RDI) Fund are some of the best startups in the country and some of them (15) have been selected through a nationwide search as part of the Bharat Innovates 2026, a global showcase of India's Technology Innovation, scheduled to be held in Nice, France in June," he added.

The programme also included the release of a compendium on the RDI Scheme status report and discussions on strengthening India's quantum-safe ecosystem through indigenous innovation, secure communication systems and collaborative technology development frameworks. The event concluded with a renewed commitment towards accelerating India's deep-tech innovation ecosystem in line with the vision of Atmanirbhar Bharat and Viksit Bharat 2047.

The event was attended by Principal Scientific Adviser to the Government of India, Prof. Ajay Kumar Sood; Secretary, Department of Science & Technology and Chairperson, TDB, Prof. Abhay Karandikar; Secretary, TDB, Shri Rajesh Kumar Pathak; senior officials, members of the TDB Board, investment committee members and representatives from industry, Startups and research institutions.





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