

6. Department Of Scientific and Industrial Research – S & T

At the 42nd Foundation Day of the Department of Scientific and Industrial Research (DSIR), Union Minister Dr. Jitendra Singh announced Relaxation of DSIR Funding Norms for Deep-Tech Start-ups. DSIR provides financial assistance under Industrial Research and Development Promotion Programme (IRDPP) to promote industrial research and development.

Department of Scientific and Industrial Research (DSIR)

Establishment and Legal Basis– The Department of Scientific and Industrial Research was established through a Presidential Notification dated 4 January 1985. It was created under the 164th Amendment of the Government of India (Allocation of Business) Rules, 1961. The department functions as a specialised institutional mechanism to strengthen the interface between science, technology, and industry.

Nodal Ministry – DSIR operates under the Ministry of Science and Technology. Within the ministry, DSIR focuses specifically on industrial R&D and technology commercialisation, distinguishing it from purely academic research bodies.

Core Mandate and Objectives of DSIR

Promotion of Indigenous Technology – Promote indigenous development, utilisation, and absorption of technology. Reduce dependence on imported technologies by strengthening domestic innovation ecosystems.

Industrial R&D Enablement – Encourage industrial research and development across sectors, including manufacturing, electronics, chemicals, pharmaceuticals, biotechnology, and engineering. Support MSMEs and start-ups in developing globally competitive and scalable technologies.

Bridging Science and Industry – DSIR acts as a bridge between publicly funded scientific laboratories and private industry, ensuring that research outcomes are commercially deployed.

Key institutional linkages include

1. National Research Development Corporation – facilitates technology transfer, licensing, and commercialisation of publicly funded research.
2. Central Electronics Limited – supports R&D-led manufacturing and technology deployment, particularly in electronics and strategic sectors.

Industrial R&D Promotion Programme (IRDPP)

Programme Overview – IRDPP is a flagship Research and Development (R&D) programme implemented by DSIR. It is designed to strengthen India's industrial innovation base by incentivising structured R&D investments in industry and recognised research organisations.

Objectives – Promote a stronger focus on in-house R&D within Indian industry. Strengthen R&D infrastructure in

1. Industrial units
2. Scientific & Industrial Research Organisations (SIROs)

Encourage industry-led and SIRO-led innovation, rather than dependence on external or imported technologies.

Align industrial R&D with national priorities, such as

1. Self-reliance (Atmanirbhar Bharat)
2. Strategic technologies
3. Sustainable and inclusive growth

Focus Areas under IRDPP

1. Engineering Sciences

2. Environmental Sciences
3. Natural and Applied Sciences
4. Agricultural Sciences
5. Medical and Health Sciences
6. Social Sciences (where linked to industrial or technological applications)

Funding and Implementing Agency

Funding Agency– Department of Scientific and Industrial Research (DSIR). Financial support is provided based on

1. Technical merit
2. Innovation potential
3. Technology readiness and scalability

Eligibility Criteria for Companies and R&D Units

Corporate Eligibility – Applicant must be a company registered under the Companies Act, 1956 or 2013. Must normally have

1. Completed at least three financial years since incorporation
2. A regular source of income for at least the previous two years

Companies seeking RDI (Research, Development and Innovation) recognition should be engaged in

1. Manufacturing
2. Production
3. Technical or engineering services

R&D Infrastructure Requirements

R&D units must

1. Be located in authorised non-residential premises
2. Possess independent R&D infrastructure
3. Employ qualified scientific and technical manpower

The R&D unit must be

1. Functional at the time of application
2. Supported by clearly defined, time-bound R&D programmes
3. Oriented towards developing innovative products, processes, or technologies

Recent Policy Changes Announced by DSIR

Removal of Three-Year Viability Criterion – The mandatory three-year minimum existence/viability requirement has been removed for deep-tech start-ups. This reform recognises that innovation potential is not always linked to company age.

Enhanced Funding Support – Eligible start-ups can now avail financial assistance up to ₹1 crore. The support is aimed at

1. Prototype development
2. Technology validation
3. Early-stage commercial readiness

Safeguards and Evaluation Standards

Technology Maturity Assessment – Despite relaxation in age criteria, start-ups must satisfy

1. Technology readiness levels (TRLs)
2. Robust technical and scientific evaluation benchmarks

Emphasis is placed on innovation depth, feasibility, and scalability.

Quality Control and Due Diligence – The reform does not dilute scrutiny or accountability. Evaluation focus has shifted from Age based eligibility to Technology maturity, innovation potential, and national relevance

Rationale Behind the Reform

Early-Stage Innovation Support – Deep-tech innovation typically involves

1. Long gestation periods
2. High R&D risk
3. Delayed revenue generation

Early financial support helps innovators cross the “valley of death” between idea and commercialisation.

Faster Scaling of Innovation – Enables start-ups to scale technologies rapidly, even before achieving financial stability. Reduces reliance on foreign capital and imported technologies.

Encouraging Deep-Tech and Strategic Sectors– Particularly beneficial for sectors such as

1. Semiconductors
2. Advanced materials
3. Biotechnology
4. Clean energy
5. Defence and space technologies

Conclusion

DSIR plays a strategic role in India’s innovation architecture by linking science with industry. Through programmes like IRDPP and recent policy reforms, DSIR is shifting India’s R&D ecosystem towards

1. Early-stage support
2. Deep-tech innovation
3. Technology-led industrial growth

These measures are critical for achieving technological self-reliance, global competitiveness, and sustainable economic development.

Source- <https://www.pib.gov.in/PressReleasePage.aspx?PRID=2211282®=3&lang=1>