



GOVERNMENT OF INDIA
MINISTRY OF DEFENCE
DEPARTMENT OF DEFENCE PRODUCTION (DDP)
DEFENCE INNOVATION ORGANISATION (DIO)

ADITI

(**A**cing **D**evelopment of **I**nnovative **T**echnologies with **iDEX**)

**A Scheme under iDEX for Promoting Innovations in
Critical and Strategic Defence Technologies**

1. Background

- a. In 2021, the Department of Defence Production (DDP) had rolled out the Scheme for iDEX (Innovations for Defence Excellence) to reach out and engage with the startups/MSMEs and innovators, who have the competence, flexibility and adaptability to develop Def-Tech solutions and supply the Indian military with innovative and indigenous technological solutions. In order to operationalize and implement the iDEX framework, Defence Innovation Organisation (DIO) was set up as a Section 8 Company. iDEX was formally launched during DefExpo 2018 by the Hon'ble Prime Minister.
- b. SPARK - The Support for Prototype and Research Kickstart (in Defence) framework was launched by DIO that offers financial support in the form of innovation grants. The problem statements which are catered in the Scheme for iDEX are primarily based on enhancing the existing capabilities of Nodal agencies viz. Armed Forces, DPSUs and other stakeholders by developing innovative supporting systems/sub-systems and also new products, technologies which can be developed in the PDB (Product Development Budget) of about Rs. 3.0 Crore in case of Defence India Startup Challenge (DISC) & Open Challenge (OC).
- c. As an initial outcome of the iDEX Scheme, total 13 procurement contracts between the Armed Forces and iDEX winners have been inked with a cumulative worth of more than Rs 280 Crore. Also, within a short span of time, iDEX has been awarded the prestigious Prime Minister's Award for Public Policy in Innovation Category for the year 2021.
- d. In the existing scheme for iDEX, technologies/solutions around the ballpark figure of Rs. 3.0 Crore of development cost are catered. However, there are financial restrictions in the development of critical and advanced technologies which require high capital investment. At the same time, due to the change in the dynamics of modern warfare, it is imperative to develop the technologies, which are advanced, critical, and strategic from the perspective of future warfare.
- e. Accordingly, ADITI is a sub scheme of iDEX under DDP with budgetary support of Rs.750 Crore for the period from FY 2023-2024 to FY 2025-2026.

2. About ADITI scheme

2.1 Need for ADITI scheme

- a. As India is emerging as a global power in Defence, there is a need to support technologies which are futuristic as well as critical for the Indian Armed Forces. ADITI being a new scheme is an endeavour by the DDP to support the development and acceleration of innovation in critical and strategic technologies which are in the nascent stage of research & development in the country.
- b. During interaction with the stakeholders including the Indian Armed Forces, startups/MSMEs, incubators connected with the leading IITs & IIMs and the industry anchors, the requirement of higher funding for projects with critical and strategic technologies, was emphasized. The requirement of enhanced funding was also brought out during the "Chintan Shivir" of the Ministry of Defence, chaired by Hon'ble Raksha Mantri in July 2023.
- c. India may be a new entrant in the development and application of these critical emerging technologies, but now Indian Startups/MSMEs and Defence Innovation ecosystem as a whole are making steady and successful efforts to address the deficits.
- d. The technologies which are referred as "Critical and Strategic", primarily include design and development of satellite communication applications, advanced cyber technology, autonomous weapons, cyber weapons, nuclear technologies, advancement in semiconductor technology, Artificial Intelligence (AI), Quantum Technologies (QT), advanced underwater surveillance systems and others. It is also to mention that the concept of non-kinetic or contactless warfare has highlighted the necessity for advanced technologies in the defence sector and to counter the global threat.
- e. It is also pertinent to mention that, Indian Armed Forces are poised for major modernisation which involves not only upgrades of existing hardware and systems but also accelerate innovations in critical and strategic domains to enable capacity building in advanced technological areas to optimally structure,

weaponized and equip for achieving the desired combat potential.

- f. Strategically advanced and critical technologies are still in the nascent stages of development, but now such technologies are gradually beginning to drive innovation strategies and the overall impact of these technologies is expected to deliver multi-fold yields over the coming years.

2.2 Guidelines for the ADITI scheme

- a. ADITI Scheme under DDP, to be implemented through DIO with budgetary support of Rs. 750 Crore within time frame from FY 2023-2024 to FY 2025-2026.
- b. Quantum of Grant up to 50% of product development budget (PDB) with maximum limit of Rs. 25 Crore, leading to a PDB around Rs. 50 Crore or beyond.
- c. Around 30 critical and advanced technologies which are critically required for national security and where the country does not have existing capabilities have been provisioned to be developed under ADITI. Such technologies shall have core Defence applications and may also have export potential.
- d. The problem statements launched under ADITI Scheme will be referred as ADITI challenges.
- e. Critical & advanced technologies under ADITI shall be boosted and complemented by spiral development and also spiral development of products/technologies developed under existing iDEX scheme. Also, ADITI scheme shall subsume iDEX Prime category of challenges launched after the date of approval of ADITI Scheme.
- f. ADITI also aims to create a "Technology Watch Tool" to bridge the gap between the expectations & requirements of the modern Armed Forces and the capabilities of the Defence innovation ecosystem. The "Technology Watch" not only enables development of domestic capabilities but also aids in consolidating a strategic policy with regular monitoring of the milestones achieved.

2.3 Objectives

The prime objectives of ADITI are as follows:

- a. Facilitate rapid development of strategically critical technologies which are sensitive and innovative from the Defence perspective and required by the country.
- b. Indigenisation of critical technologies and reduction of dependencies on foreign OEMs (Original Equipment Manufacturers) through future technological advancements, development, and indigenous innovations by Indian Startups/MSMEs & innovators with the support from industry and academic representatives.
- c. Spiral development within ADITI scheme and also spiral development of products developed under existing iDEX scheme.
- d. Build “Technology Watch Tool” and conduct technology foresight workshops to curate and launch relevant problem statements with assistance from Partner Incubators & other industry experts along with their network and outreach programs.
- e. Facilitating scale-up, indigenization and integration in manufacturing facilities for successfully piloted technologies.

3. Implementation of Scheme

- a. Support for upto two winners in each ADITI challenge has been provisioned. An applicant can be awarded only one ADITI challenge at a time. A fresh ADITI challenge will be considered only after closure of the previous ADITI challenge.
- b. Direct beneficiaries of this scheme will be startups, MSMEs and Partner Incubators, who will together create technologies, processes and products to strengthen India’s self-defence capabilities, as well as augment India’s defence exports. Individual innovators will also be eligible for this scheme; however, post selection individual innovators need to register as Startup/MSME.

- c. Development of about 30 high-end critical and strategic technologies in the proposed timeframe to be used by Indian Armed Forces.
- d. Network of about 10 Partner Incubators (with specialized expertise) will be developed over the period of the scheme and they will provide specialised support and business mentorship.
- e. Interfacing with the end user; military (Army/Navy/Airforce) top brass and other Govt agencies about the strategic & critical technology driven requirements and encouraging their adoption into the defence establishments.
- f. There is a thorough oversight mechanism to ensure that government funds are utilized properly. A detailed product-oriented grant management system including an IT platform and monitoring dashboard has been designed. Partner Incubators have been associated to ensure that grant recipients work at the former's premises if required and to ensure continuous work, close monitoring, and regular guidance on business strategies.
- g. Any other activity required to promote the core objectives of the scheme.

4. Quantum and Nature of Financial Assistance:

DDP will release the funds to DIO. The funds will be utilised by DIO as follows:

- a. Applicants showing capability, intent, and promise to be able to develop critical and advanced solutions for the defence sector will be awarded grant amount up to 50% of product development budget (PDB) with maximum limit of Rs. 25 Crore per applicant, on a milestone basis.
- b. The exact amount and mode of each grant shall be decided as per extant iDEX guidelines.
- c. The grant utilization and progress will be monitored by the DIO team through partner incubators to ensure regular guidance and adequate resources for oversight. The grant management system has been designed to ensure the following:

- i. At least 50% of the product development budget from the applicant, to deliver a completed, user- accepted product, and not just a project, with maximum limit of Rs 25 Crore from iDEX.
- ii. Focus on delivering a product, and not just meet the milestones for tranches, as is often seen in funded grant projects.
- d. There will be no establishment funding provided to any DIO-affiliated incubators.

5. Eligible Organisations/ Beneficiaries

5.1 To avail the grants under ADITI, the eligibility is as follows:

- a. Startups, as defined and recognized by Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry, Government of India.
- b. 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.
- c. Individual innovators are also encouraged to apply (research & academic institutions can use this category to apply). However, post-selection individual innovators need to register as Startup/MSME.

5.2 To avail the grants as iDEX Partner Incubators (PIs), the eligibility shall be as per extant guidelines. The eligibility criteria is as follows:

- a. The applicant technology business incubator should be registered in India as a legal entity in public, private or public – partnership mode, and should have received/ongoing grant support from Government of India Ministry/ Department. Preference would be given to self-sustainable incubation centers.
- b. The incubator must have been in operation for a minimum of 5 years before application for affiliation with DIO, and experience of having incubated/funded at least 10 Defence related startups.

- c. It should have incubated at least 5 startups in the past 3 years that are running as 'a going concern' as of the date of 'call for application' by DIO.
- d. It should have at least 25 mentors for startups affiliated with it, at least 5 of whom should be SMEs in defence or aerospace domain; and atleast 2 investment experts/investors.
- e. Experience of managing at least 2 batches of sector-focused accelerator programs (preferably Deep Tech, Defence, AI/ML, Cyber, etc.) within last 5 years from the date of application.
- f. The PIs should have adequate external support system viz. collaboration with industry, academia, and Government institutions to support ADITI winners.

6. Procedure for selection

- a. The framework for ADITI will call for proposals through challenges launched in the public domain and other means to address specific technological needs of the Indian Defence Establishments.
- b. Applicants showing capability, intent, and promise to be able to develop critical and advanced solutions for defence sector will be awarded maximum grant amount up to 50% of product development budget (PDB) with maximum limit of Rs. 25 Crore per winner, on a milestone basis.
- c. ADITI editions with problem statements pertaining to critical and strategic technologies from Armed Forces, Defence Establishments and from any other agency under MoU with DIO will be launched in collaboration with the Nodal agencies.
- d. The process for selection will be through the High-Power Selection Committee (HPSC) led by challenge owner, subject matter experts, representatives from Academia/Industry and other concerned stakeholders. The process for selection will be followed as per the extant iDEX guidelines.

- e. The disbursement of grants to the winners of iDEX challenges is based upon the set guidelines under iDEX. These guidelines stipulate payment in tranche based on milestones.
- f. The scheme will be continually monitored by DDP through the DIO team with the DIO Board chaired by Secretary (DP).
- g. Existing technology centres, tool rooms under the Ministry of MSME, any other existing Government testing and lab facilities could be leveraged for project/product development and rapid prototyping of the prototypes.

7. Scheme Components and Cost

7.1 Grant-in-Aid to ADITI winners

Grant amount up to 50% of product development budget (PDB) with maximum limit of Rs. 25 Crore per winner has been considered for the contracts to be signed. Adjusting for average disbursement of grant based on historical trend, the average cost may come little low. Thus, Rs. 705 Crore have been earmarked.

7.2 Grant-in-Aid to Partner Incubators (PIs):

The project is divided into 6 milestones and accordingly, the limit of payment amounting to Rs. 9 lakh per case i.e., Rs. 1,50,000 for each milestone is estimated to be provisioned for the PIs, based on facilitation/completion of each milestone of their associated challenge winner. Conclusively, total estimate of outgo for PI is about Rs. 3 Crore.

Additionally, activity wise amount on requirement basis will be given to PIs for the activities mentioned below:

- a. Building pipeline for Defence needs by locating startups/MSMEs which can address the technological needs of India's Armed Forces.
- b. Facilitating technical/financial due diligence, incubation and mentorship support through academia, industry and R&D to the challenge winners on milestone basis.
- c. Strengthening the innovation ecosystem by undertaking initiatives to reach out, spread awareness and promote innovations for defence among students/ researchers at all levels in academia through outreach sessions, hackathons and other initiatives.

The quantum of grant and mode of payments will be as per the extant guidelines.

7.3 Operational Expenses:

Operational expenses are considered around a total of 3% of the grant commitment to ADITI winners & PIs. It includes expense towards Salary & Wages, travelling expenses and other miscellaneous expenses.

7.4 Technology Watch:

Cost estimation for Technology watch is considered as around 3% of the Grant-in-Aid amount, estimated for challenge winners & PIs because specialized services from external agencies and subject matter experts will be required for curation, evaluation of the critical, deep-tech and high-cost technologies. Under technology watch tool, technology foresight workshops will be conducted and it will be ensured that there is no technology overlap.

With the rising demand of critical technologies in the Defence sector, existing defence industry may focus on merely emulating existing technologies, without intent to significantly enhance the same. Therefore, it is essential that advanced technologies are identified at the right stage and are pro-actively taken up for development with adequate resources and collaborative efforts, to stay ahead of the curve.

The inputs derived from the technology watch tool shall also help to make better and more informed decisions regarding the need of advanced technologies for the Armed Forces and stay ahead of the curve in developing innovative next-gen defence systems.

7.5 Year-wise and component-wise committed cost (approx.) details are mentioned below. The costing mentioned are based on the quantum of startups/MSMEs to be selected.

Edition	Minimum winners	Budget Required for winners (Rs Cr)	Budget required for Partner Incubators (PIs) (Rs Cr)	Budget required for DIO internal Operations (3%) (approx) (Rs Cr)	Budget required for Technology watch (3%) (approx) (Rs Cr)	Total Budget required (Rs Cr)
(a)	(b)	(c)	(d)	(e)	(f)	(g)=(c)+(d)+(e)+(f)
1	15	352.50	1.50	10.50	10.50	375
2	15	352.50	1.50	10.50	10.50	375
Total	30	705	3	21	21	750

8. Financial projections:

iDEX will operate through the budgetary support from the Department of Defence Production, Ministry of Defence. The iDEX processes as per the existing iDEX guidelines will be followed. To oversee the utilization of funds by DIO, guidelines will be continually updated by DIO as per the need to bring more stringency in due-diligence and financial compliance.

The year wise proposed earmarking from FY 2023-24 to FY 2025-26 is as follows:

Financial Year	Budget Amount required each year (Rs. in Crore)	Remarks
2023-24	-	Budgeted amount will be sought as per requirement of the respective year.
2024-25	400	
2025-26	350	
Total for 3 years	750	

9. Expected outcomes:

Following outcomes are expected and would be used as measurable indicators to evaluate the performance of ADITI periodically.

- (i) The scheme provisions for the development of about 30 high-end critical and strategic technologies in the proposed timeframe to be used by Indian Armed Forces.
- (ii) It is also estimated that 20% of the critical and advanced technologies proposed to be developed under ADITI will reach the stage of Productionization by creating a linkage between the Startup/MSMEs and the industry, including both in public as well as private sector.
- (iii) It is also provisioned that under ADITI, a network of about 10 Partner Incubators (with specialized expertise) will be developed over the period of the scheme.

10. Monitoring & evaluation:

DIO as a Company was incorporated under section 8 of the Companies Act 2013. Accounts of DIO are subject to CAG audit. All the compliance and audit requirements will be arranged as per laid down rules, policies and procedures of the Indian Companies Act 2013, Income Tax Act and other statutory laws as applicable from time to time.

Evaluation by a third party would be arranged in FY 2025-26 before fresh appraisal/revision for continuation.
