

Innovation for Defence Excellence - iDEX

The iDEX stands for Innovation for Defence Excellence. It is an initiative by the Government of India to modernize the nation's Defense industry.

Innovation for Defense Excellence (iDEX)- Background

1. The very first aim of India as a nation since Independence has been to achieve self - reliance in the field of defence and defence production.
2. India is the world's largest defence equipment importer and is expected to spend around USD 220 Billion in the coming decade to modernize its armed forces.
3. Various initiatives in recent years by the Government of India like Make In India, Startup India, Atal Innovation Mission (AIM), etc. to encourage innovation and entrepreneurship in the Indian commercial ecosystem is an evident that achieving the goal of self - sufficiency for the Indian military will require a means to incorporate innovation rapidly in the weapons procurement process.
4. Thus, the Ministry of Defence aims to create an ecosystem which fosters innovation and encourages technology development in Defence by engaging Research & Development institutes, academia, industries, startups and even individual innovators.
5. National Defence cannot afford to be behind the country's potential adversaries in capabilities. A special effort is required to reach out and engage the smaller enterprises, start-ups, MSMEs, R&D institutes and innovators, to encourage development of innovative technologies for the defence sector as they have the flexibility and adaptability to supply the Indian military with innovative and ingenious technological solutions.

Innovation for Defense Excellence - Overview

1. To modernize the Defense Technology government of India took the iDEX initiative.
2. Government launched iDEX in April 2018.
3. iDEX aims at creation of an ecosystem to foster innovation and technology development in Defence and Aerospace by engaging Industries including MSMEs, start-ups, individual innovators, R&D institutes & academia.
4. iDEX will provide the engaging industries with grants, fundings and other support to carry out Research & Development.
5. iDEX will be funded and managed by the Defence Innovation Organization (DIO). DIO has been formed as a 'not for profit' company as per Section 8 of the Companies Act 2013 for this purpose, by the two founder members i.e. Defence Public Sector Undertakings (DPSUs) - HAL & BEL which are Navratna companies. Check out the [list of Navratna Companies in India](#) on the given link.
6. iDEX will function as the executive arm of DIO, carrying out all the required activities while DIO will provide high level policy guidance to iDEX.

7. The DIO with its iDEX team will enable creation of channels for innovators to engage and interact with the Indian defence production industry.

The main functions of the DIO will be:

- Receive periodic reports from iDEX team on the projects.
- Provide high level policy guidance regarding the effort's direction and execution.

Objectives of DIO- iDEX

The core objectives of setting up the Defence Innovation Fund are -

1. To Facilitate rapid development of new, indigenized, and innovative technologies for the Indian defence and aerospace sector so that the needs for these sectors are met in a shorter timelines
2. To Create a culture of engagement with innovative startups, to encourage co-creation for defence and aerospace sectors.
3. To Empower a culture of technology co-creation and co-innovation within the defence and aerospace sectors.
4. To frame 'corporate Venture Capital' models for the needs of defense and aerospace sectors thereby identifying emerging technologies, connecting innovators with military units, facilitating co-creation of new and appropriate technologies and so forth into weapon systems used by Indian Armed Services.
5. To deliver military-grade products by developing or applying advanced technologies so as to solve the critical needs of the sector.

Functions of Innovation for Defense Excellence

Adoption of innovation requires execution of three critical functions, they are -

1. Co-Innovation and co-creation - Discovery and exploration of existing technologies, or development of relevant technologies
2. Piloting of candidate technologies in important platforms, with quick feedback to the innovators
3. Indigenization of various defence and aerospace related platforms being manufactured in the country based on ToT.

The iDEX structure will need to perform all these three functions, in partnership with other competent stakeholders.

How does iDEX Works?

1. iDEX-DIO had launched the Defence India Startup Challenge (DISC) to address problems faced by the Armed Forces, DPSUs & OFB.
2. Start-ups or individual applications are invited to provide solutions to these problems and after rigorous evaluation of the applications, winners receive innovation grants in technological areas through the prototype funding guidelines called Support for Prototype and Research Kickstart (SPARK).
3. This entails provisioning of grants up to a maximum of Rs 1.5 crore to the Start-ups on the basis of milestones through multiple tranches, for prototype development.

Major Activities of iDEX

To execute the functions mentioned above, the iDEX team will need to undertake the following activities: -

1. Setting up and managing of the iDEX network in the form of Independent Defence Innovation Hubs.
2. Communicate with innovators and startups through the Defence Innovation Hubs regarding defence and aerospace needs.
3. Organizing various challenges and hackathons to shortlist potential technologies for defence and aerospace use.
4. Evaluate technologies and products coming from innovators and startups in terms of their utility and impact on the Indian defence and aerospace setup.
5. Enable and fund pilots, using innovation funds dedicated to the purpose.
6. Interface with the military top brass about key innovative technologies and encourage their adoption into the defence establishment with suitable assistance.
7. Facilitate scale-up, indigenization and integration in manufacturing facilities for successfully piloted technologies.

Composition of iDEX

This iDEX team would have the following composition:

1. Tech experts - The iDEX will create a roster of experts in core areas and engage them as per the requirement of Defence Innovation Hubs.
2. Tech deployment experts - Deployment of technologies is a growing discipline, with individuals who understand the dynamics of integrating tech in complex institutions and environments. These will include system integrators, user interface experts, design experts, etc.
3. Innovation stakeholders - Co-creation and adoption of innovation is now an advanced discipline and requires specialized skills. Experts with these skills will be an integral part of the team, to be able to successfully connect tech. innovators and users in the armed forces.

While iDEX will lead the overall effort to create an innovation ecosystem in the country, each Defence Innovation Hub would be an independent financial viable unit functioning with the help of assistance provided by DIO under the guidance of iDEX. Through the network of Defence Innovation Hubs throughout the country, the iDEX will underpin an ecosystem of defence tech. and innovation stakeholders.