



DRDO- Industry Partnership

DRDO-Industry-Academia Conclave
20th February 2026

A collage of military equipment is shown at the bottom of the slide. On the left, a green and brown camouflaged tank is moving through a dusty environment. In the center, a large military truck with a large antenna is visible. On the right, another tank is shown. A circular inset in the center shows a red missile being launched from a blue launch tube.

Arun Chaudhary, ndc
Scientist G & Director
DIITM, DRDO HQrs



Agenda

- **Opportunities in Defence Sector**
- **Government Initiatives**
- **DRDO Initiatives – Industry Partnership**



Opportunities

Viksit Bharat@2047

India is among Top 5 Military Spender Globally

India is one of the Largest Importer of Defence Equipment /systems

Minimize Import – Net Exporter



Opportunities

- Defence Budget - Revenue & Capital Systems
- Capital Acquisition - Domestic Market
- MROs
- Armed Forces Modernization Plan
- MHA requirements
- Spin off Technologies – Civil Market
- Export
- Offsets
- International Crisis

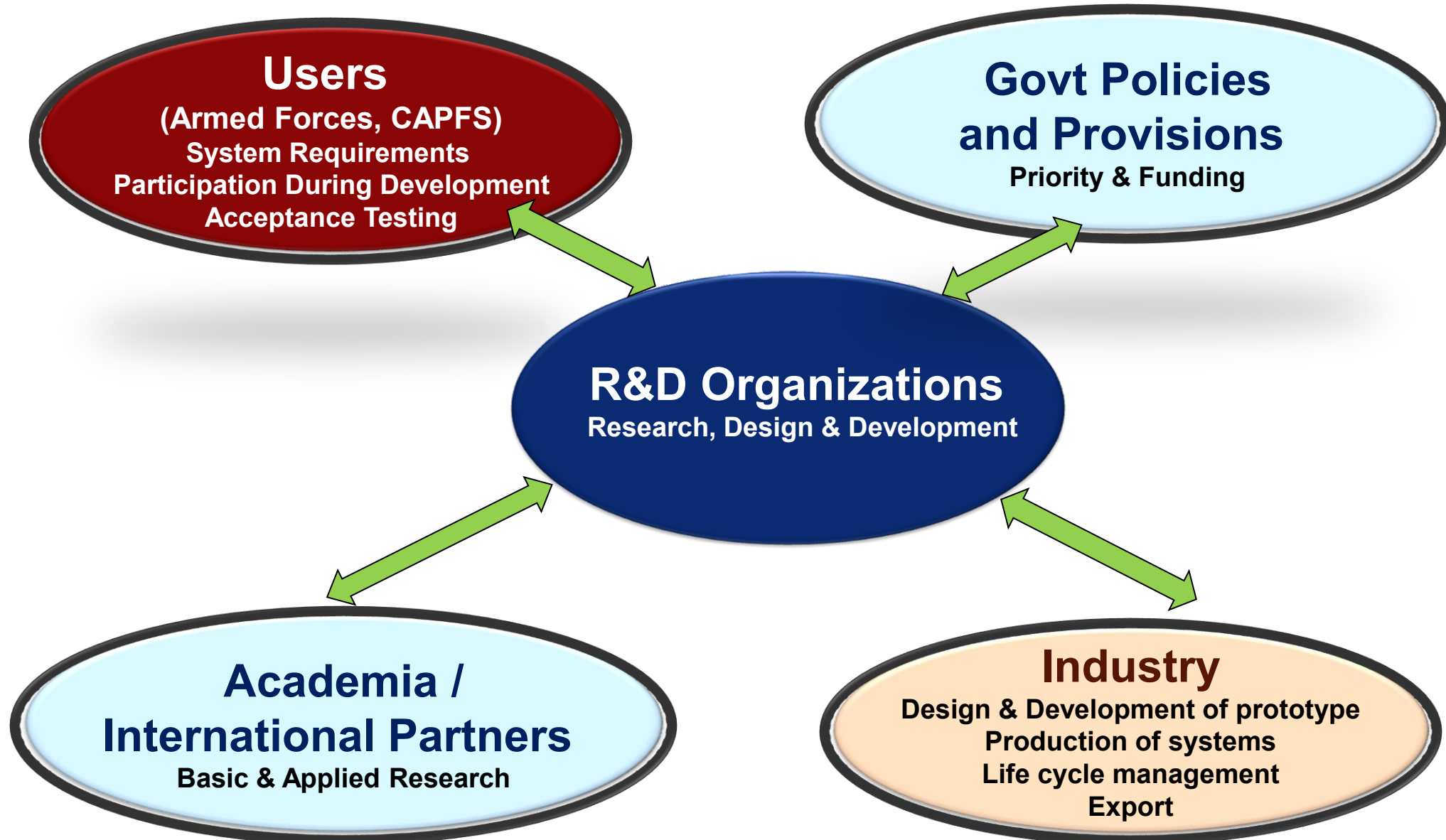


Challenges

- Complex Design and Long Project Cycle - Diverse Technologies
- Stringent QR&S Requirements
- Rapid Technology Evolution - Obsolescence Management
- Supply Chain Management
- Substantial Investment for R&D, Manufacturing
- Raw Materials – Unique Specifications



Defence D&D Ecosystem



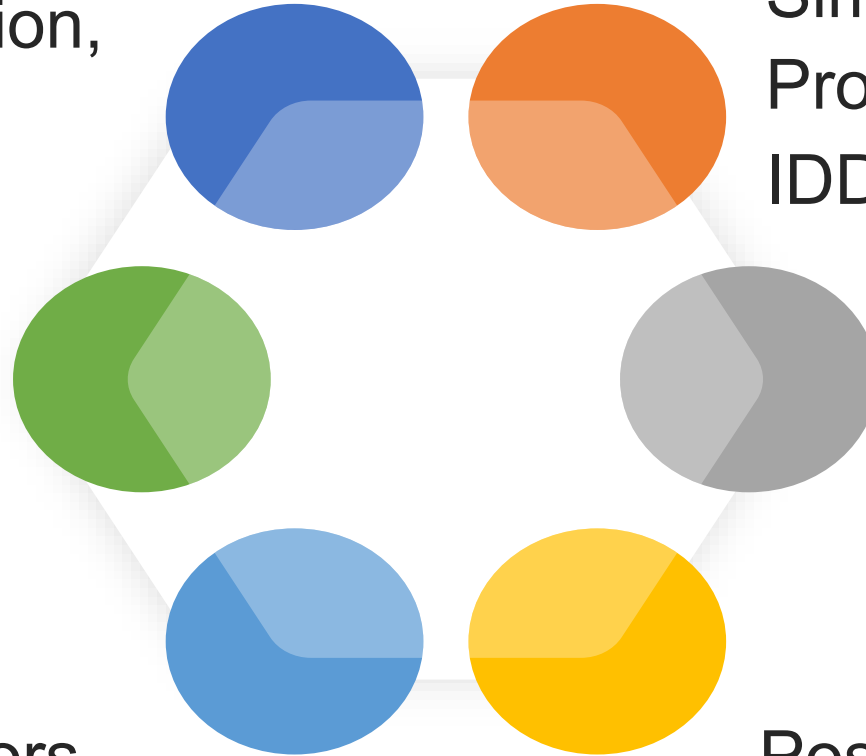


Govt Initiatives and Policies

Licensing, Export Promotion,
Test Facilities ...

iDEX, TDF, DcPP ,
Dare to Dream, DISK,
ADB

Defense Industrial Corridors
Defence Testing Infrastructure Scheme



Simplified Defense Acquisition
Procedure -
IDDM, Make -1, 2, 3, Trials ...

FDI Cap Increase,
Offsets ...

Positive Indigenisation List,
Products for R&D by Industry



Govt Initiatives and Policies

1. LRIs/ Sub-systems/
Assemblies/ Sub-
Assemblies / Components
(> 5000)

Positive Indigenization List	Year of Release	No. of Items
List 01	Dec 2021	2500 + 351
List 02	Mar 2022	107
List 03	Aug 2022	780
List 04	May 2023	928
List 05	July 2024	346

2. 'Positive Indigenization
list' of weapons/platforms
(> 500)

Positive Indigenization List	Year of Release	No. of Items
List 01	Aug 2020	101
List 02	May 2021	108
List 03	Apr 2022	101
List 04	Oct 2022	101
List 05	Oct 2023	98

3. 'Industry can do' list of
systems /subsystem

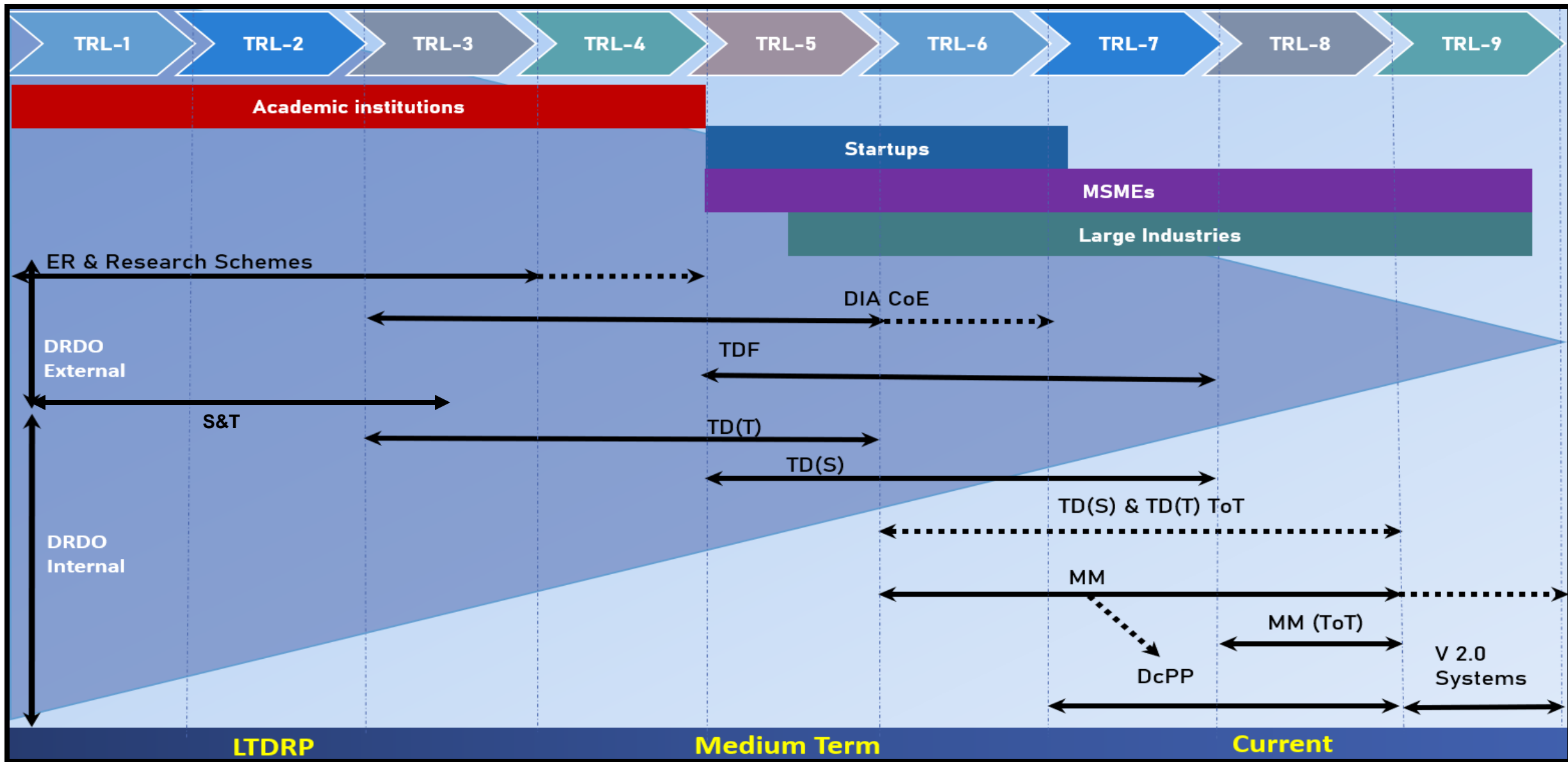
Positive Indigenization List	Year of Release	No. of Items
List 01	Aug 2020	108
List 02	July 2023	75



DRDO Partners



DRDO- Partners

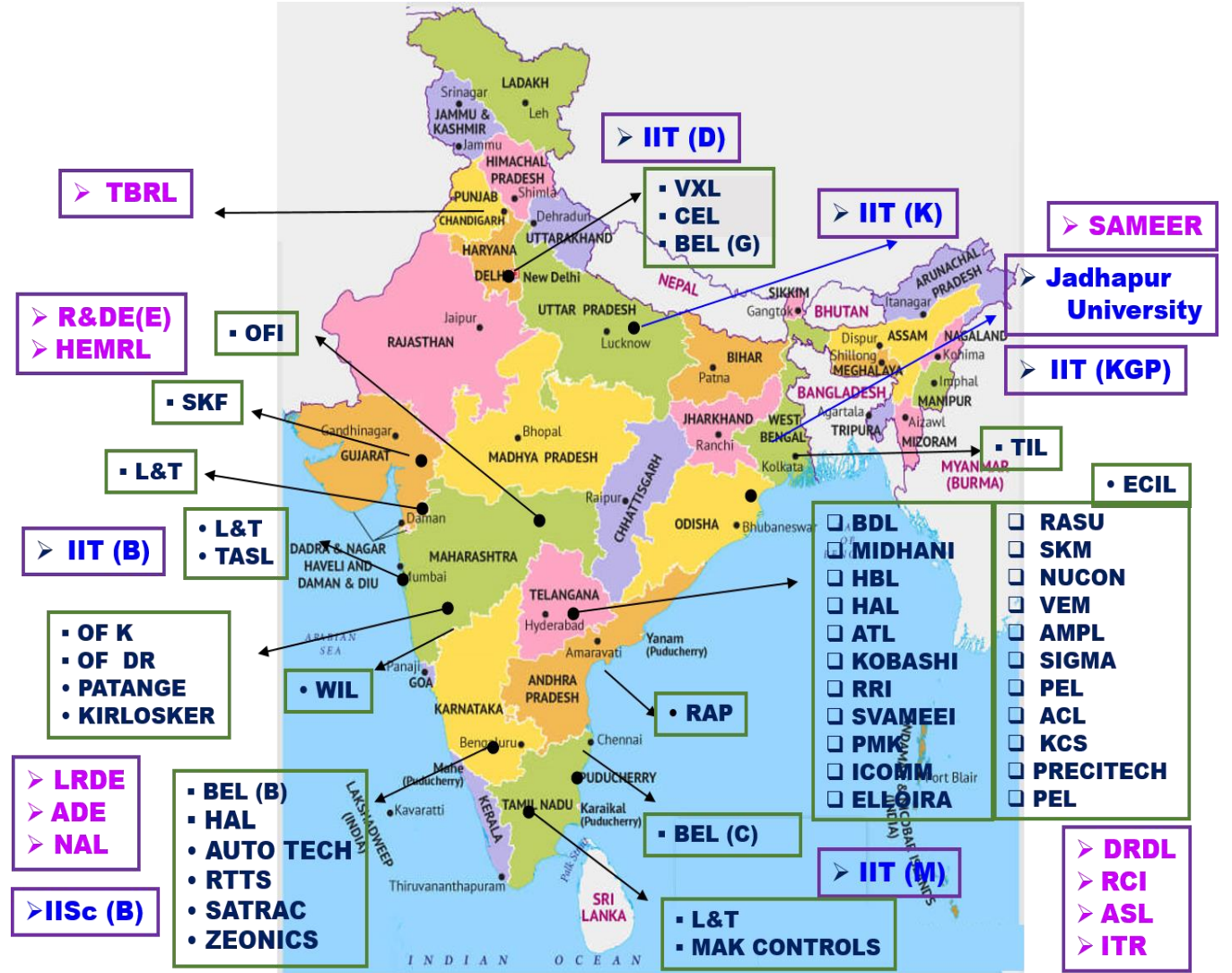




AKASH : D & D and Production Eco-System



- Order Worth > ₹ 34,000 Cr
- 2800 Missiles





DRDO Initiatives & Policies

- Transfer of Technology 2025
- Intellectual Property / Patents
- Development cum Production Partner (DcPP)
- Technology Development Fund (TDF)
- DRDO-Industry-Academia CoE
- Access to Test Facilities – DTP
- Certification and Evaluation
- Technical & Scientific Hand holding
- System for Advance Manufacturing and Rating (SAMAR)
- Defence Technology & Testing Center
- Procurement Manual 2025
- Export of Military System by Industry
- Production Coordination
- Creation of IIG at Labs & HQ



Transfer of Technology to Industry : Policy

Transfer of design, know-how, processes, products, subsystems, system whose IPR owned by DRDO

DRDO Guidelines for ToT
(Sep 2015)



DRDO Policy for ToT
(Aug 2019)



DRDO Procedures for ToT
(Sep 2019)



DRDO Policy for ToT
(2025)

Category A (Military Technologies)

- ToT Fee - 5% of the Development / Project Sanction cost
- 'NIL' TOT fee from DcPP/PA/ DP

Category B (Dual Use Spin Off)

- ToT fee is Highest of the following:
 - 20% of the Development / Project Sanction cost
 - Bid received from the Industries
 - Market Research Report

Royalty

- NIL' - Sale to Govt Agencies
- 2% -Sale to Non-Govt agencies & Exports



ToT Policy : Salient Features

- Technology Brief & Number of Licenses - DRDO website
- Non Exclusive ToT Licenses on Level Playing Field
- ToT License for same Technology could be held by Multiple Industries
- Single Industry can hold Multiple ToT Licenses
- ToT License for 10 Years
- Free Handholding of Industry up to 12 weeks
- Industry is Encouraged to develop variants – Exclusive Marketing Rights
- PESO & DPIIT license required – ToT of Explosives/High Energy Materials



ToT Policy : Salient Features

- Provision for ToT of Software Source Code
- Incentive to Micro, Small and startup Industries
- Estimation of ToT Fee for Cat 'B' Technologies
- No Lock-in period for Cat 'B' Technologies
- ToT for Technologies developed through Grant-in-Aid
- ToT of Products involving Biological Resources
- Government's March-in-Rights Post-License



Transfer of Technology to Industry : Process

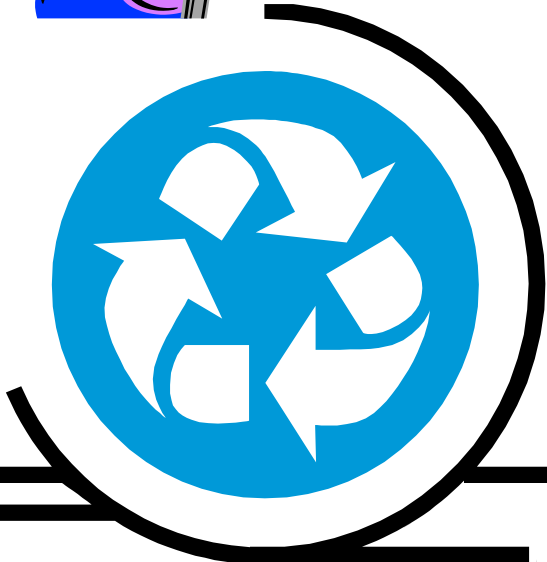
Initiation



Costing



Licensing/ ToT



Hosting



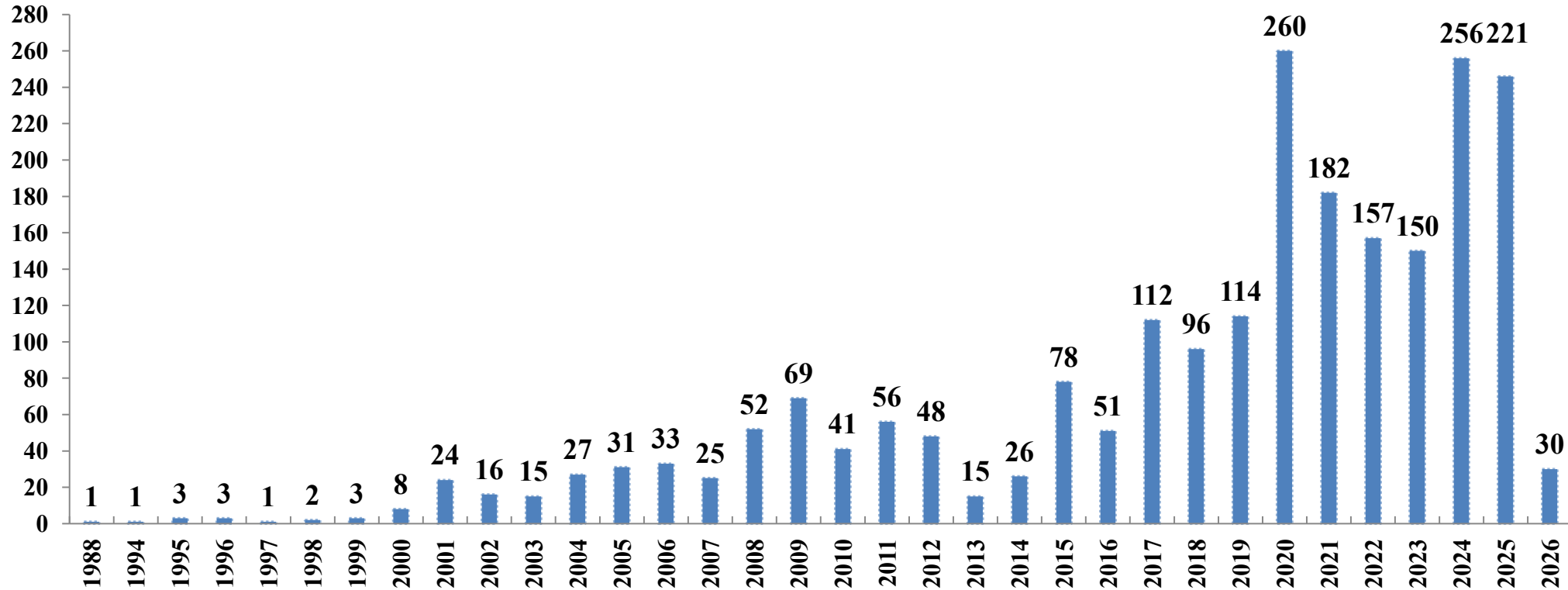
Payment



Assessment



Transfer of Technology to Industry



More than 2200 Technology Transfer Agreements Signed
>85% LAToTs signed with Private Industries



DRDO Patents for Industry

- All patents and relevant intellectual publications are available on DRDO website
- Industry to have the necessary capacity to absorb the patent protected technology
- Once an application for a license meets the eligibility criteria, a non-exclusive license is granted under a license agreement
- Use of patent granted on **zero license fees as well as zero royalty payment**
- DRDO Website: <https://drdo.gov.in/ipr>

Patents offered for Royalty Free Licensing > 750



Development Cum Production Partner (DcPP)

- Industry partners are involved right from the development phase
- LSI Supplies the system and also provides Life Cycle support
- Included in Chapter IV, Defence Acquisition Procedure – 2020
- Concurrent ToT
- ToT done to DcPP/ PA free of cost
- CEC and TAC are not required for ToT

Total DcPP/ PA identified: > 130



Technology Development Fund

- TDF scheme conceptualized in 2018
- Private Industry, MSMEs and Start-ups for R&D in Defence ecosystems towards “Atmanirbhar Bharat”
- Financial Grants-in-Aid with Funding up to 90% of Project Cost – 50 cr
- Handholding, Mentoring & Monitoring of Industries by DRDO
- DRDO provides testing & infrastructure facilities for testing and evaluation of technologies
- **500 Cr for Deep Tech**
- **DARE to DREAM – 5th Edition**

Self regulating JT cooler for missile seeker;
Composite material sea water pump; Fuel system
temperature transducer, Avionics antenna LRU,
Prussian Blue Drug Formulations

> 80 Projects Awarded , >300 cr, 100+ under Sanction



DRDO-Industry-Academia: Centers of Excellence

1	DIA-CoE, IIT Delhi
2	DIA-CoE, IIT Bombay
3	DIA-COE, University of Hyderabad
4	DIA-CoE, Mizoram University
5	DIA- Kalam CoE, Central University of Jammu
6	DIA- Raman CoE, IISc Bengaluru
7	DIA-CoE, Bharthiar University
8	DIA- Sardar Vallabh bhai Patel (SVP) COE, Gujrat University
9	DIA-Ramanujan CoE, IIT Madras
10	DIA-CoE, IIT Hyderabad
11	DIA-CoE, IIT BHU
12	DIA-CoE, IIT Jodhpur
13	DIA-CoE, IIT Kanpur
14	DIA-CoE, IIT Roorkee
15	DIA- JC Bose CoE, IIT Kharagpur

- Advanced Ballistic & Protection Technology
- Advanced Electromagnetic Devices & Terahertz Technologies
- Smart & Intelligent textile for tactical use
- Detonics, Plasmonics and Quantum Photonics
- Landslide, Snow and Avalanche Studies
- Cognitive Technologies and Cyber Physical Defence Systems
- Directed Energy Systems and Technologies
- Advanced Combat Vehicle Technologies
- Artificial Intelligence for Missiles and Missile Defence
- Artificial Intelligence and Robotics
- Futuristic Large Aero-Engines
- Additive Manufacturing
- Hypersonic Propulsion for Long Duration Flight
- Solid Propellant Combustion Modelling
- Naval Systems and Naval Technologies
- Printing of Flexible Electronics
- High Energy Materials
- High Temperature Materials for Hypersonics
- Technologies for HEMs Detection
- Computation Systems Security
- Cyber Security
- Quantum Technologies
- Environmental and Waste Management
- Desert Warfare Technologies

> 280 Projects , Cost > Rs 1000 Cr



Testing Support : Facilities

- DRDO supports industry during technology and product development by extending Test Facilities and Proof & Field Firing Ranges

- <https://drdo.gov.in/test-facilities> and <https://www.makeinindia.defence.gov.in>

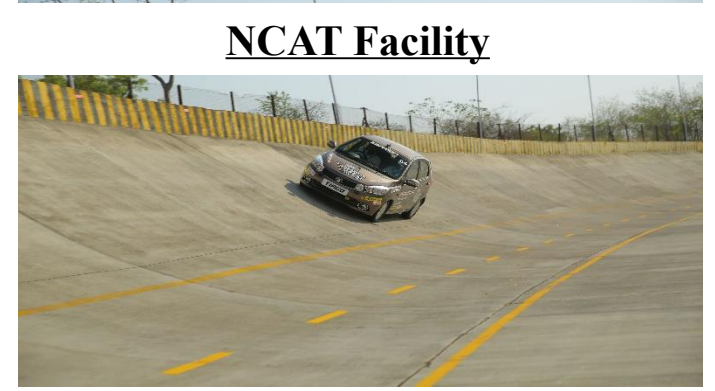
Aeronautical Test Range (ATR)



EMI/ EMC Test Facility



NCAT Facility



PXE Range



Seakeeping & Manoeuvring Basin



Extreme High Altitude Test Lab



DRDO facilitated > 1,500 Industries and 15,000 tests (Last 3 Yrs)



Testing Support : Salient Aspects

- Usage by Public & Pvt Industries for their defence R&D projects
- Defence Testing Portal – 26 Labs , 350+ facilities
- Industry reps may witness the tests and may opt for Govt authorized QA/certification agency rep participation
- Exports: Proof/ Test Ranges provided on priority for exports cases also test can be witnessed by foreign buyer reps
- Policies issued by MoD are being followed for allocation and Costing



Evaluation and Certification Support

- CEMILAC Bengaluru provides certification support to industry for military airworthiness.
 - *<https://drdo.gov.in/labs-and-establishments/centre-military-airworthiness-certification-cemilac>*
- SAG Delhi provides testing and certification for IT and Crypto products developed by industries on request of Services.
 - *<https://drdo.gov.in/labs-and-establishments/scientific-analysis-group-sag>*



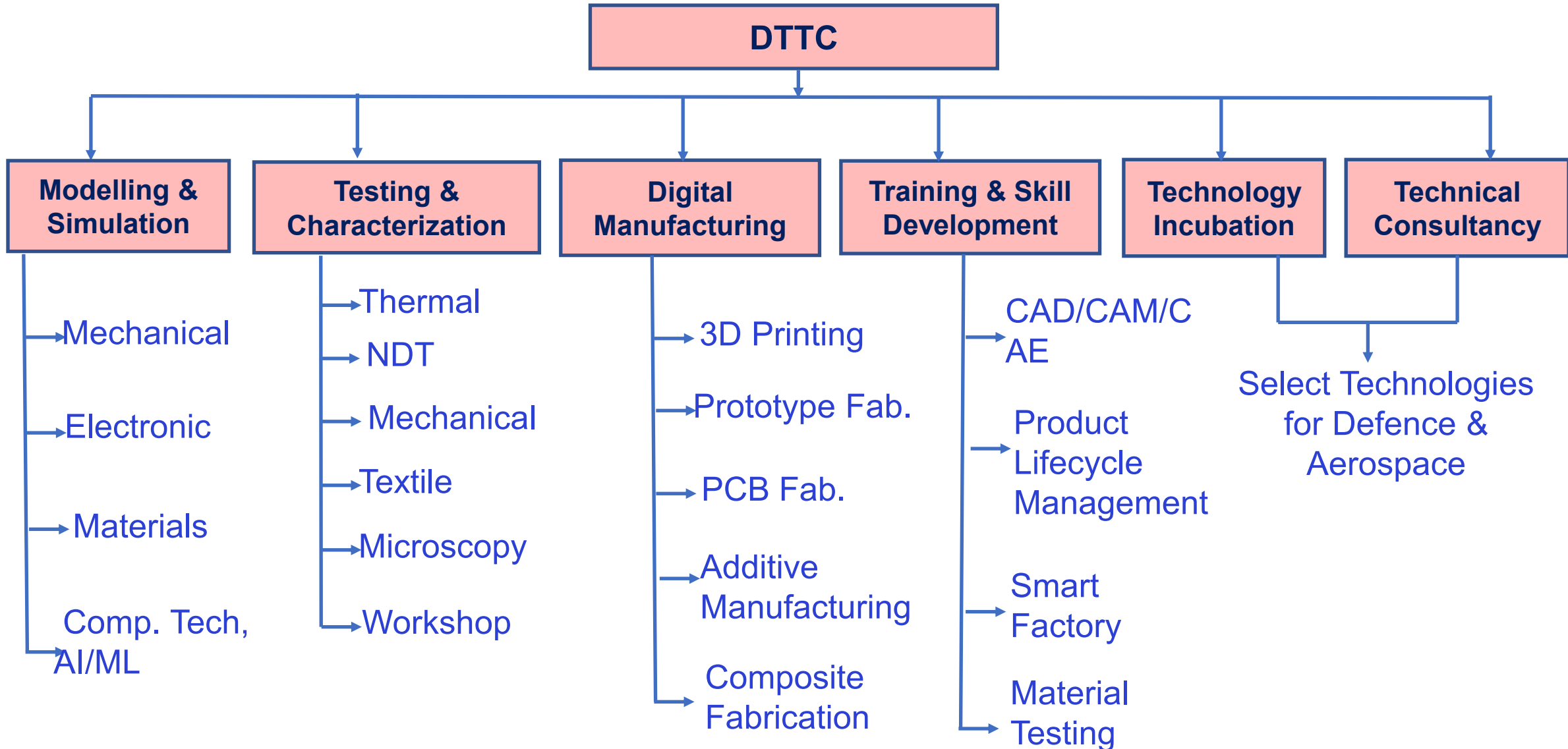
Defence Technology & Test Centre (DTTC)

- Establishment of modeling and simulation facilities for the optimized design of materials, mechanical and electronic systems, computation & AI enabled technologies
- Creation of industry friendly test and evaluation facilities for materials, components and sub-systems
- Institution of digital manufacturing facilities for rapid prototyping
- Setting up industry support center for training & skill development, technology incubation and technical consultancy





Defence Technology & Test Centre (DTTC)





System for Advance Manufacturing Assessment and Rating (SAMAR)

- SAMAR - A benchmark to measure the maturity of Defence manufacturing enterprise
- Applicable to all - Micro, Small, Medium and Large enterprises
- Enabling enterprises to benchmark their performance across a range of business capabilities to enhance quality, reliability and competitiveness
- Collaboration between DRDO and QCI
- Subsidy - 80 % to Micro and 50 % to Small Enterprise

2 Models

10 Disciplines

Parameters
(Large-45 MSME-
40)

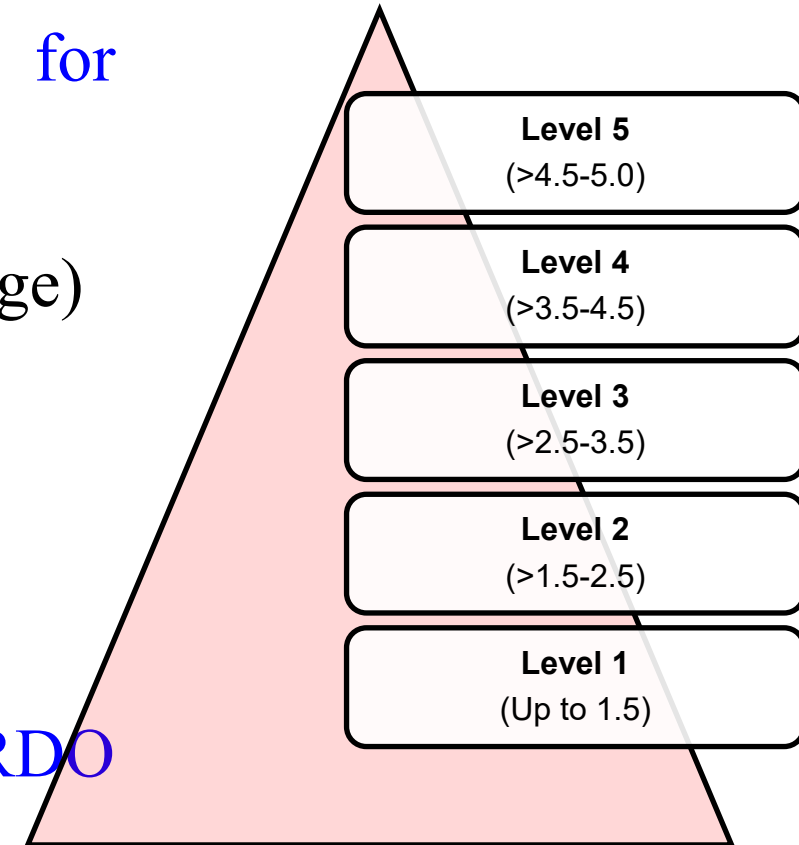
5 Maturity Levels



SAMAR: Model

- Assessment through geo tagged Mobile app for objectivity and transparency
- Rating based on quantitative score (weighed average)
- **Validity of Rating: 2 Years**
- End-to End online system
- **SAMAR assessment will be mandatory for DRDO**

Industry partners wef 01 May 2027





D W Policy: Scientific and Technological Support

- Design Consultancy
- Development/ Fabrication
- Design Audit
- Development of Software



Enabling Defence Export by Industry

- Export Compendium with 256 products
- SOP to Hand hold industries to execute exports
- Export of DRDO Products ~ Rs 15000 Crs

Indigenously developed Systems already exported



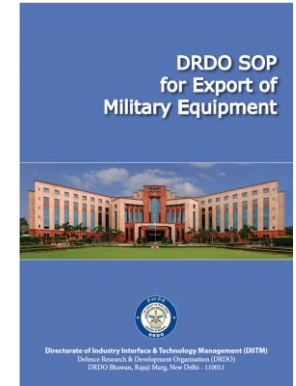
Hull Mounted Sonar



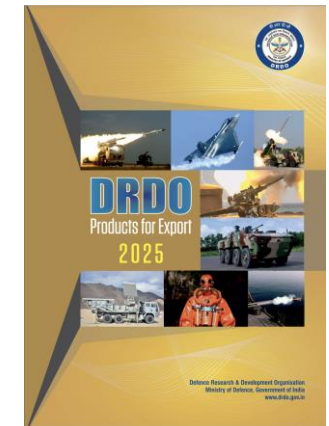
Light Weight Torpedo



Weapon Locating Radar



DRDO SOP
for Export



DRDO Products
for Export

DRDO facilitated > 1000 export requests



Industry Interaction Group (IIG)

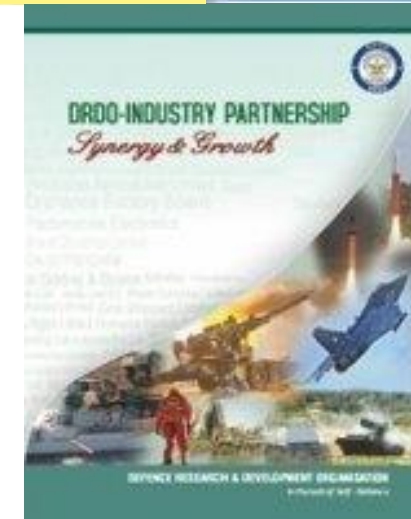
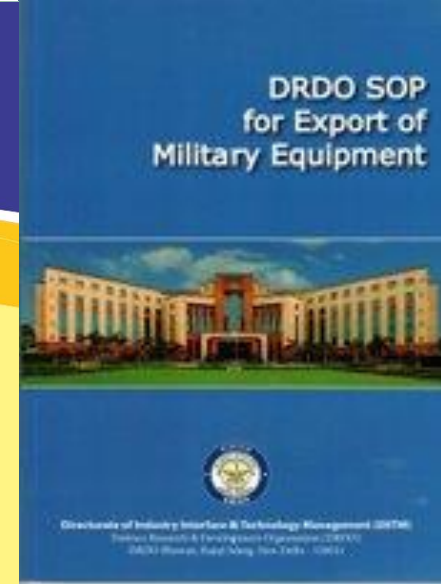
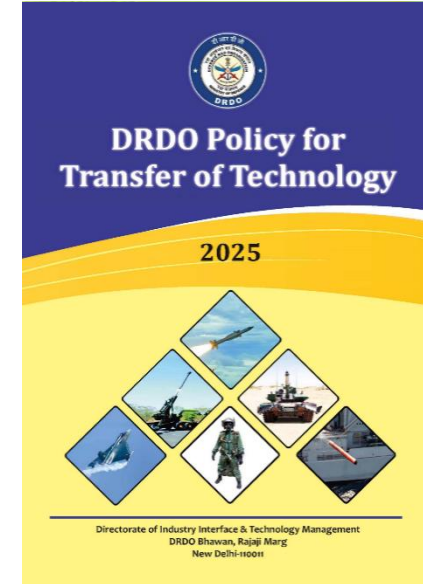
- Two tier mechanism to address industry Grievances/ suggestions
- SPOC at Lab and HQ level identified and displayed on DRDO website
- Fortnight Open houses with Industry (Lab level) – 1st and 3rd Wed
- Monthly Open house with Industry (HQ level) - Last Friday
- One Industry meet in a year at Lab level

Unresolved issues to be taken up by DG(PC&SI)
Through open house every quarter



Documents

- DRDO Policy & Procedure for ToT
- DRDO SOP for Export of Military Equipment
- DRDO Policy for LSP and Production Coordination
- SOP for Access to DRDO Test Facilities by Industries
- DRDO Products for Export
- Compendium on DRDO Industry Partners



जय हिन्द

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