

PUBLIC PRIVATE PARTNERSHIP IN DEFENCE SECTOR IN INDIA

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➤ **Ancient India**

- Metallurgy
 - Textile
 - Civil engineering and architecture
 - Weapons and Rockets
 - Jewellery
- **STRONG SUPPORT AND PATRONISATION FROM THE RULING CLASS**
 - **INDUSTRY FLOURISHED AS HOME AND COTTAGE INDUSTRY**

➤ **Medieval India**

- Invasions from middle east
- Cultural transitions
- Some of the Technologies of ancient India lost due to non availability of documentation
- Persian Influence

➤ **British India**

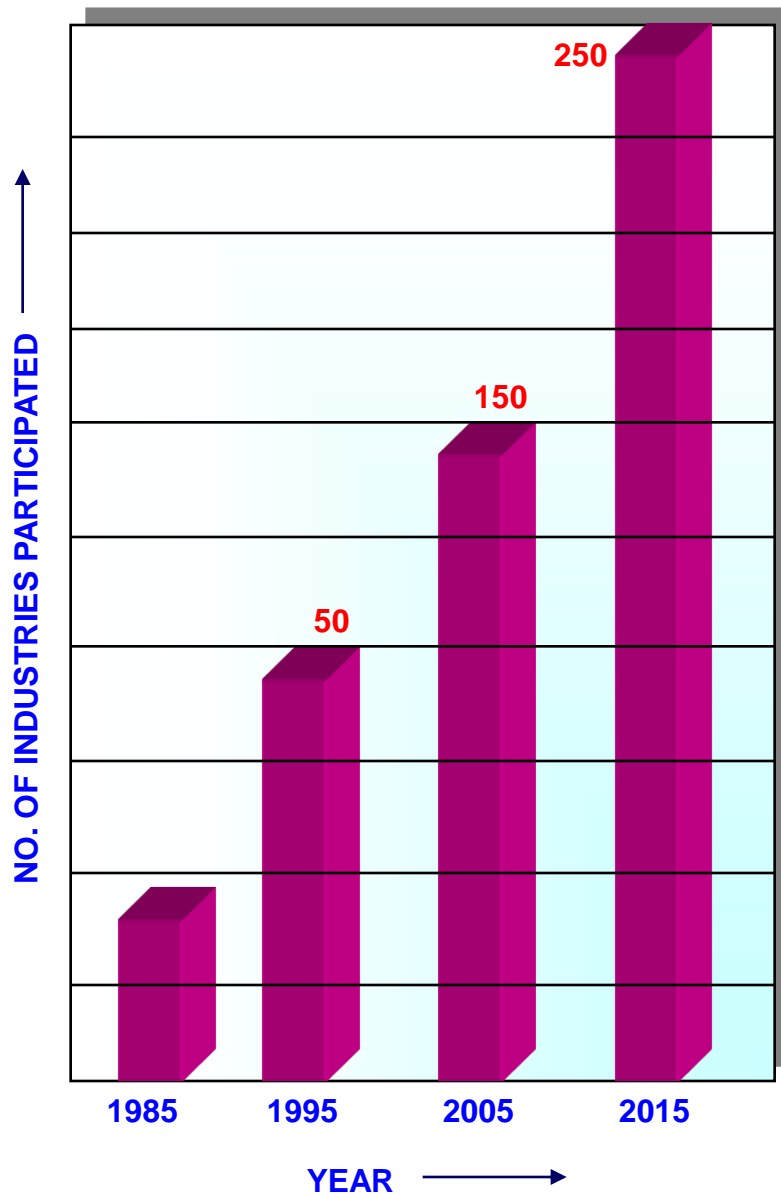
- Industrial revolution
- Systematic Degeneration of local Industry
- European products replace Indian produce.
- Building of Industry by few enterprising Indians

INDUSTRY IN INDEPENDENT INDIA

- FIVE YEAR PLAN
- ESTABLISHMENT OF LARGE AND MEDIUM INDUSTRY BY THE GOVT.
- PRIVATE INDUSTRY UNDER LICENSE
- EMERGENCE OF NEW R&D CENTERS
 - SPACE
 - DEFENCE
 - SCIENCE AND TECHNOLOGY
- ESTABLISHMENT OF EDUCATIONAL INSTITUTIONS

- DELICENSING
- OPENING UP OF FOREIGN DIRECT INVESTMENTS
- NRI CONTRIBUTION
- PRIVATE INDUSTRY IN MAJOR SECTORS LIKE
 - SHIP BUILDING
 - AEROSPACE
 - DEFENCE
 - METALLURGY
 - INFRASTRUCTURE

DRDO INDUSTRY PARTNER SHIP – AP GROWTH PROFILE



1985

- FEW FABRICATORS

1995

- 50 INDUSTRIES,
- COMPONENT MANUFACTURERS
- HIGH PRECISION AND SKILLED

2005

- 100 INDUSTRIES
- CRITICAL TECHNOLOGY AREAS
- SUBSYSTEM ASSEMBLY AND TESTING
- SOFTWARE DEVELOPMENT AND TESTING
- DEVELOPED QUALITY PROCESS
- HIGHLY SKILLED MANPOWER

2015

- 250 INDUSTRIES
- SYSTEM DESIGN, DEVELOPMENT, MANUFACTURING AND TESTING
- HIGH TECHNOLOGY
- SOFTWARE DEVELOPMENT, INTEGRATION & TESTING
- 6 SIGMA ENTERPRISES
- BUSINESS DRIVEN ENTERPRISE

IGMDP

Missiles

SSM



Prithvi I - SSM

SSM



Prithvi II SSM

Ship launched
SSM



Dhanush - Ship Launched SSM

IRBM



Agni - IRBM



NAG - Anti-Tank



Trishul - QR SAM



Akash - Medium Range SAM

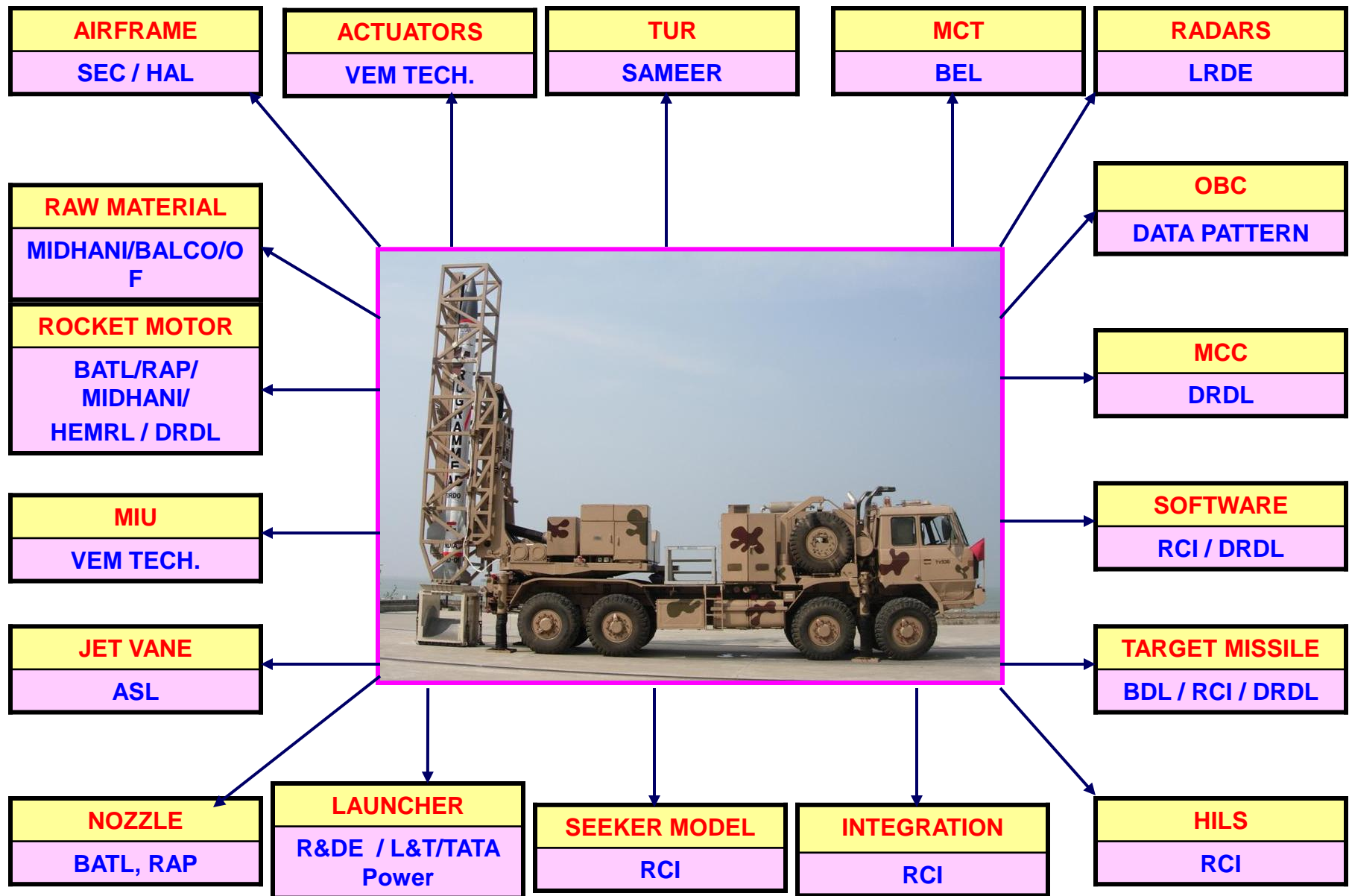
INDIA'S MILITARY SPENDING FROM 2007 AND ITS POTENTIAL GROWTH BY 2022.

- INDIAN ARMY SPENT 2007-2011 – Rs. 35,500 Cr.
- 2010-2011 spending is Rs.11,600 Cr.
- Defence acquisition based on
 - 15-year long term perspective plan (LTPP),
 - Five- year Services Capital Acquisition Plan (SCAP)
 - Annual Acquisition plan (AAP).
- Major procurements by Services in the last 2 years
 - 50 Su-30MKI combat aircraft,
 - 40 Hawk Advanced Jet Trainers
 - indigenous Tejas Light Combat Aircraft
 - MiG-29 combat planes
 - Helicopter-carrying ships
 - Akash missiles
- Joint collaboration missile developments
 - BRHAMOS
 - LR SAM
 - MR SAM

PPP DEFINITION

- An agreement between a government entity and one or more private industry to perform work or utilize facilities and equipment. The PPP initiative is directed toward improving the output and performance of organic activities of DoD/DHS through increased participation by the private sector via industrial partnering. **- US DoD**
 - Improves the financial viability of organic activities and result in increased private sector investment in facilities and equipment.
 - Forms: Complex Teaming & Work-share Arrangements through a contract, Leasing of facilities, direct sales of article or services to private sector.

DRDO / MULTI INDUSTRY CONTRIBUTION - Missiles



AREAS OF PUBLIC PRIVATE (PP) PARTNERSHIP

CLASSIFICATION BY SYSTEM



Fighter attack aircrafts



Maritime surveillance aircrafts



Combat Helicopters

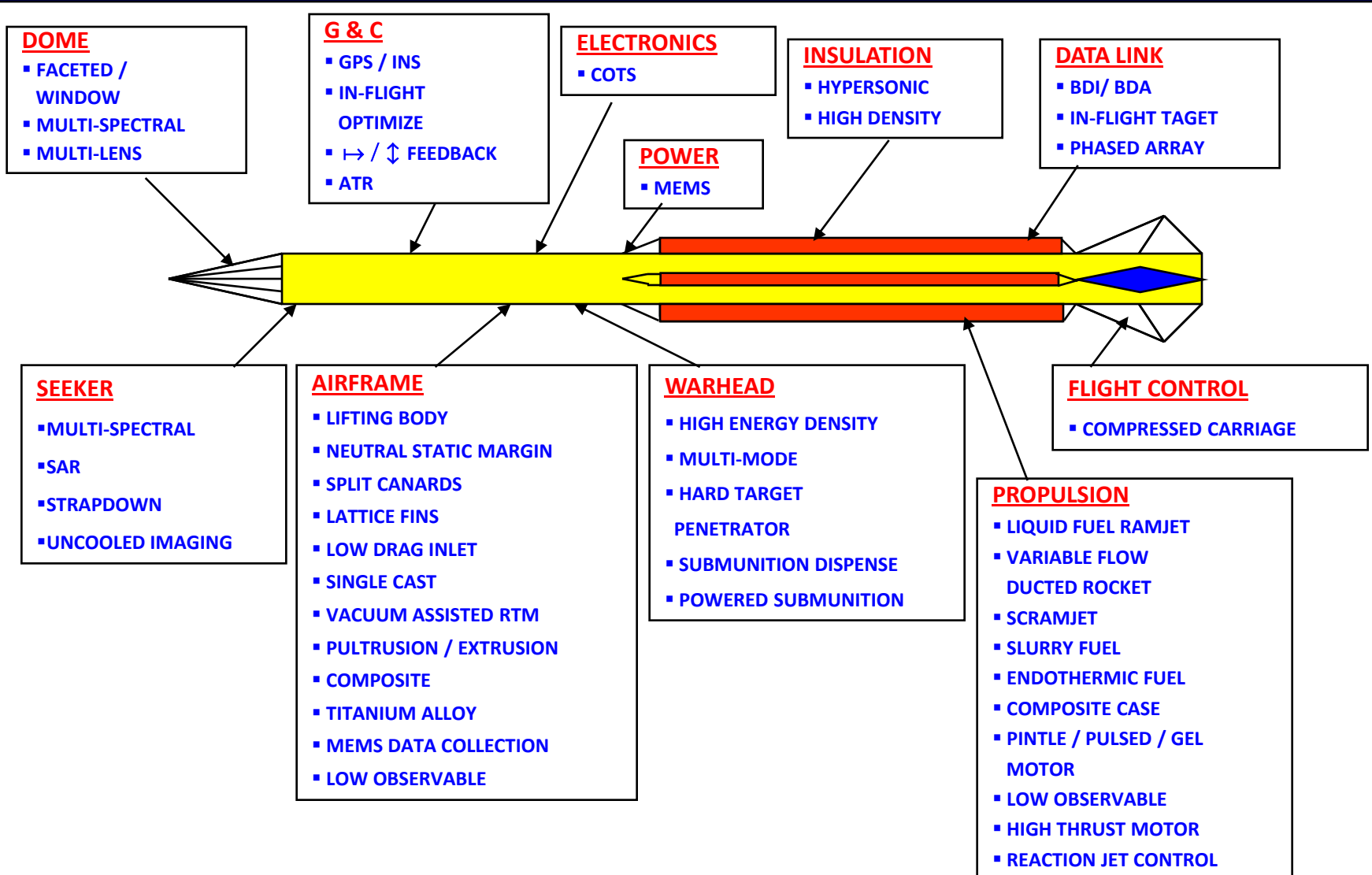


Missiles



Battle tanks

NEW TECHNOLOGIES FOR PRECISION STRIKE MISSILES



CLASSIFICATION BY ENGINEERING DISCIPLINE

- PPP in Electronic Industries:
- Defence electronics is the strategic business
- The industry need to be classified into three tiers
 - **Tier I : Lead integrators and realise the main system.**
 - **Tier II : Build the subsystems and ensure the interfaces working in coordination with the lead integrators.**
 - **Tier III : Component manufacturers.**
- Foundries need to be established to produce semi conductor chips and integrated circuits.
- environmental facilities including the ESS facilities and the EMI/EMC facilities need to be established

ISSUE	SOLUTION
Financial Viability	Ensure Minimum Order Quantity Special vendor status during limited series production
Technology Obsolesce	Continuously upgrade systems Ensure optimum utilisation of systems post upgradation
Infra structure facilities	Creation of Hardware and Software parks Single window cells Provide exemptions on Customs duty for capital equipments that need to be imported
Trained manpower	Provide institutional support and skill enhancement

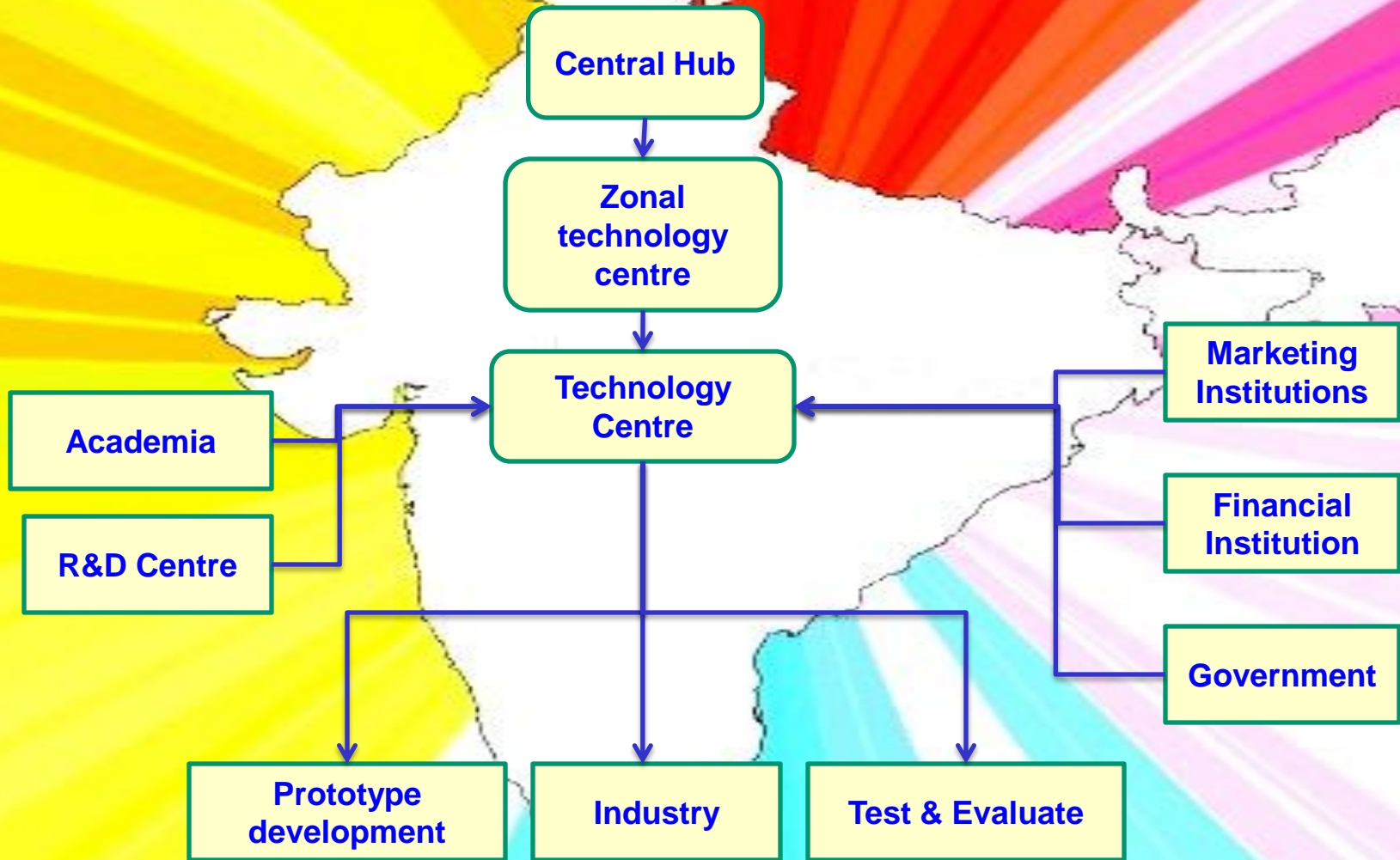
STAKE HOLDERS AND PRE REQUISITES

➤ The stake holders in the PPP for Defence sector are :

- Defence Services
- Defence PSU and OF DRDO
- Electronic Industry
- Large Industry Houses
- Small and Medium Enterprises
- Components and Device Manufacturers
- Financial Institutions
- State and Central Governments
- Academic Institutions

➤ The pre requisites for PPP Partnerships are:

- Sharing the strengths to deliver Products and services at competitive costs
- Identification of fields and opportunities for PPP and generation of list of opportunities agreeable to major stake holders
- Estimation of volume of business and commitment to Private Industry and for PPP on time line
- Government willingness and policy support through legislation –laws and statutory rules and regulations including tax laws.
- Creation of suitable financial institutions for gap financing
- Willingness to uphold culture of mutual respect to each other in PPP operations
- Tri-partite partnerships between Academia-Industry-Govt organisations.



ROLE OF CENTRAL HUB

- **Global Marketing**
- **Policy Advice to Government**
- **Identify and Facilitate International Technical Collaboration**
- **Synchronise Zonal technology Centres towards National Goals**

ROLE OF TECHNOLOGY CENTER

- **Provide infrastructure facilities**
- **Identify core technology areas**
- **Interface with zonal technology hubs, establish technical collaboration**
- **Facilitate Financial Institutions/Angel funding**
- **Provide marketing support**
- **Co-ordinate between industries for sharing resources**
- **Carryout risk analysis and advice industry**
- **Provide government support for PPP**

ZONAL TECHNOLOGY CENTER

- **Co-ordinate between technology center**
- **Identification potential area of strengths**
- **Gap analysis**
- **Education institutions participation and special courses identification**
- **Training for Entrepreneurs, Govt. Officials,**
- **Organizing exhibitions, trade seminars**
- **Advice to Government on development needs**
- **Capital mobilization from Govt. & Financial Institutions**
- **Provide funds longterm to medium term for system integrators & industries**
- **Provide capital for low volume products.**
- **Government need to step in wherever the infrastructure investments are not financially viable (necessary for technology growth)**

GAINS FOR NATION

- **Economic development**
- **Self reliant in critical technologies**
- **Trained manpower**
- **Employment opportunities**
- **Rise in gross GDP and per capita income**

CONCLUSION



