



THE MAKE IN INDIA PARADIGM NAVAL AVIATION





INTRODUCTION

- Indian Naval Aviation is an important instrument of India's maritime policy
- Aviation provides eyes, ears and teeth to naval force at sea
- Indian Naval aviation came into being in 1953 with nine Sealand aircraft



INTRODUCTION

- Indian Navy operates variety of aircraft including Fighters, Helicopters, Medium and Long Range Recce Aircraft and RPAs
- It is planned to gradually build up to 600 aircraft Navy in next decades





PLANNED AQUISITION



ALH



KM 31



MRH



NMRH



NUH



UAV



PLANNED ACQUISITION



MRMR



DORNIER



P-8I Poseidon



AMPHIBIOUS AIRCRAFT



LCA



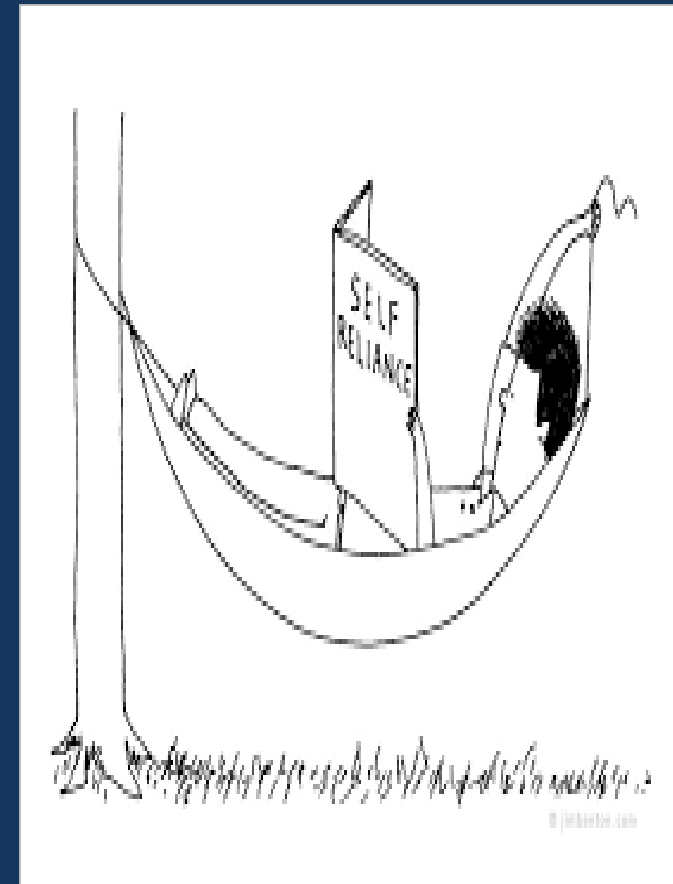
SCOPE

- Necessity of self reliance
- Assessed capability Indian industry
- Policy initiatives and reforms undertaken by Govt. of India
- Imperatives for Indian Industry
- Way ahead to strengthen Aerospace Industry
- Conclusion



NECESSITY OF SELF RELIANCE

- ✓ Self reliance is vital for strategic and economic reasons
- ✓ Formation of consortia, Joint ventures and Public-Private-Partnerships are necessary
- ✓ 48 ships under construction in Indian shipyards
- ✓ Aircraft manufacturing industry and MRO by the Indian industry





ASSESSED CAPABILITY OF INDIAN INDUSTRY

- Interest shown by Indian companies
- Greenfield facilities set up to construct airframes and aero-structures in nine months
- Situation not reassuring in field of manufacturing of high end components
- Engines, avionics, components and sensors are other weak areas




CONCERNS - PRIVATE SECTOR

- Policy Issues
- Procedural issues
- Functional issues
- Lack Of Mutual Confidence
- Communication Gap
- Potential of Indian Industries

DEFENCE **BIZ BOOST**

Some areas identified by defence ministry for pvt sector investment

Platform	Units	Worth (\$ bn)
Project 75 (submarines)	6	10
Naval multi-role helicopters	123	4
Avro replacement programme	56	3
Light utility helicopters	387	2
Naval utility helicopters	100	1.5
Basic trainer programme	106	1.3





INITIATIVES BY GOI

- Interaction with industry
- Streamlining of payment terms
- Impetus to Public Private Partnership model
- Providing Level Playing field
- Trust Building





POLICY INITIATIVES BY GOI

- Extension of Validity of Industrial Licenses
- Exclusion from Licensing List
- Increase in FDI
- Rationalisation of Taxes
- Interactive portal created
- Level playing field
- New export strategies
- Indian Design Dev & Manufacture





POLICY INITIATIVES BY GOI

Research Going Local

DEFENCE establishments opened up for private sector to test military equipment

DOZENS OF facilities, including weapon testing ranges of air force, army and navy now available

IAF SAYS 'no precedence' of private sector using its testing equipment



SOP ISSUED, companies will need to submit financial documents, equipment details to avail facility

IN THE PAST, private players sent equipment abroad for testing

SPECIAL measures put in place to maintain secrecy at military bases

A Shot in the Arm

NEW EXPORT LAWS FOR DEFENCE TO MAKE INDIAN COMPANIES COMPETITIVE

For components and parts, certification needed only from immediate buyer, not 'ultimate end user'

In past, all parts supplied abroad needed assurances from multiple foreign govts

Sectors Opened Up

Armoured equipment, weapon control systems, countermeasure equipment, engines, underwater detection devices & military software



Level Playing Field

Defence manufacturing is among the key 25 sectors identified under Make in India campaign



On Same Page Foreign defence goods makers complained that excise & customs exemption gives an unfair cost benefit to state-run cos
It's a boost for pvt cos & foreign OEMs such as Boeing, Airbus, Lockheed Martin & BAE Systems

SHOT IN THE ARM

Not a single modern 155mm artillery gun inducted since infamous Bofors scandal of mid-1980s, followed by corruption cases against South African Denel in 2005 & Singapore Technology Kinetic's in 2009

Delayed Artillery Modernization Programme Worth Around ₹50,000 Crore Includes

Mounted guns » JV between Indian private sector & foreign collaborator for 814 guns. First 100 to be bought off-the-shelf, rest indigenously produced in ₹15,750-crore project. **Fresh tender** to be issued now

Towed guns » Buy 400 & manufacture another 1,180 with tech transfer to Indian collaborator. **Scrapped 3 times** after scandals

Tracked self-propelled guns » Buy 100 from abroad for five regiments. **Trials completed**

Wheeled self-propelled guns » **Fresh tender** to buy 180 guns from abroad after earlier trials **scrapped** in 2010
Ultra-light howitzers » \$885 million deal with the US for 145 M-777 guns stuck due to high costs & non-compliant offsets package
Advanced towed artillery systems » Being developed by DRDO under initial ₹248-crore sanction in Sept 2012

Dhanush howitzers » Indigenous upgraded version of original Bofors guns. Prototypes undergoing quality assurance trials. Army keen on 414 howitzers, with ₹1,260-crore order for 114 guns already placed

- Partly due to this preference foreign cos used to tie up with a PSU for a defence min contract
- Now, smaller Indian pvt cos will be able to be sub-suppliers & contractors for larger military contracts





INVOLVEMENT OF PRIVATE INDUSTRY IN R&D

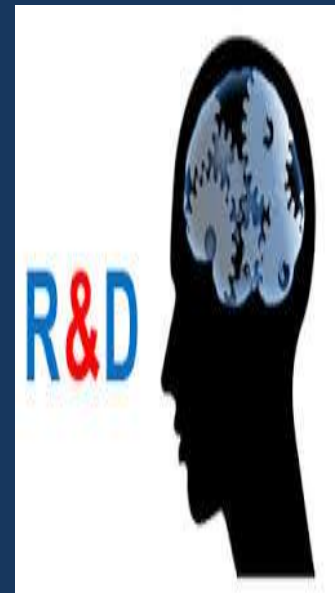
- Long standing contribution of DRDO
- High upfront R&D and establishment cost deter private players
- Requirement exists for the private industry to participate in R&D





INVOLVEMENT OF PRIVATE INDUSTRY IN R&D

- Aircraft design & manufacture
- Technologies for hypersonic flights, C4I, high velocity kinetic energy weapon systems
- Sensors and displays
- Miniature sensors for UAVs and miniatures SAR/ ISAR technologies





IMPERATIVES FOR INDIAN INDUSTRY

**Confidence
Building
Measures**

**Quality
Assurance**

**Timely
Delivery**

**Consolidation
and
Specialisation**



RECOMMENDATIONS

➤ Transfer of Technology- Know How- Know Why.

Need expertise to be able to design and manufacture niche components

➤ MRO Opportunity. Contribute immensely in facilitating life cycle extension for existing fleet whilst keeping operational costs in check





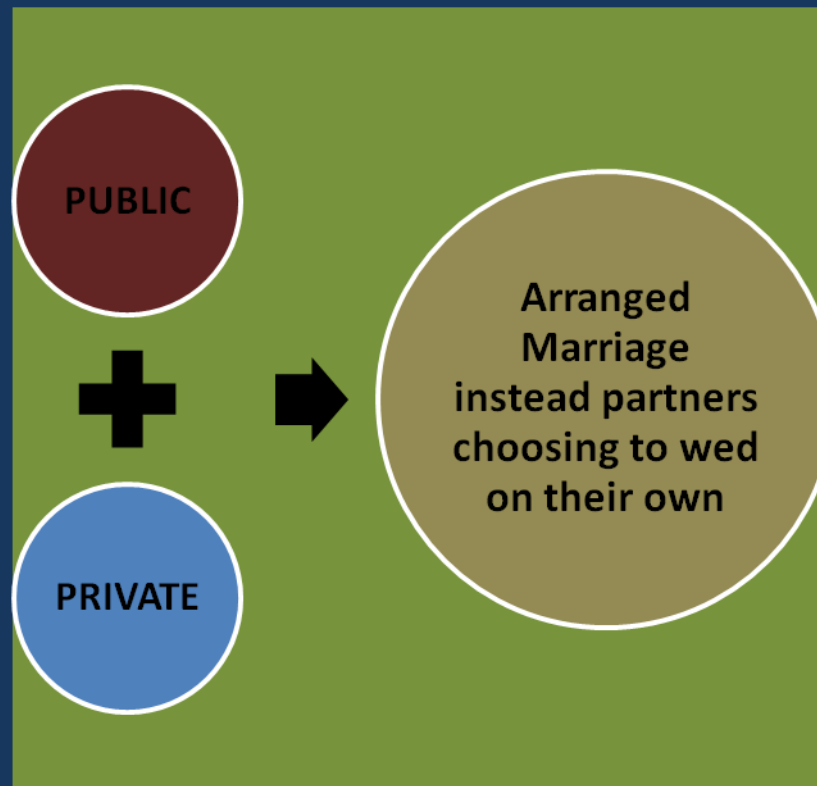
RECOMMENDATIONS

- SMEs contribution vital
- Synergy in Aeronautical Organisation by creating empowered National Aeronautics Commission
- Strengthening of certification organisations like CEMILAC and DGCA
- Strengthening of Quality assurance organisations like DGAQA and DGCA



RECOMMENDATIONS

- Creating Private Public Partnership (PPP) to exploit knowledge base and entrepreneurship of private sector





RECOMMENDATIONS

- Creation of Special Aerospace Economic Zones
- Mechanism needed for facilitating offsets in the areas that our industry is lacking
- Companies having strengths in specific sector may consider forming consortia



CONCLUSION



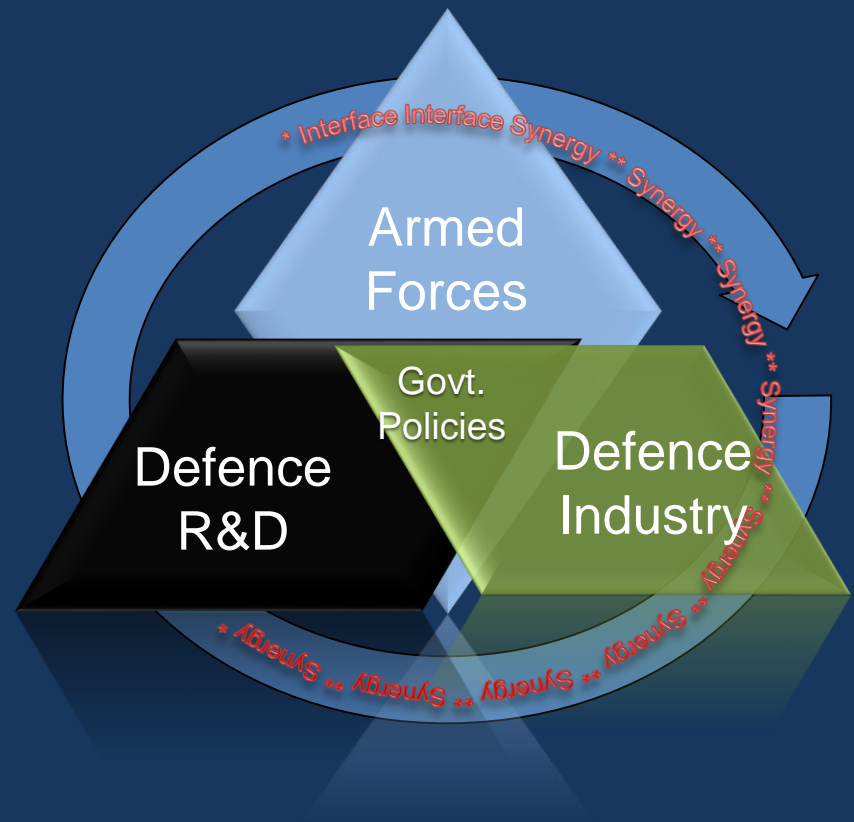
- No military can ensure meeting the required level of aviation preparedness unless its aviation strengths emerge from an indigenous base
- Response from private industry very encouraging
- DPP 2016 provides a fillip to Defence acquisition through indigenisation
- Win win situation for Armed Forces as well as industry if the 'Make in India' drive is fructified in a time bound manner



CONCLUSION



➤ Synergy between armed forces and Aviation Industry needed to pursue the 'Make in India' programme



Thank You

