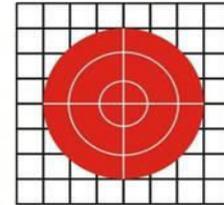


OFB-Industry Partnership For Indigenisation, Innovation & Import Substitution



OFB

Securing Peace



Contents of Presentation



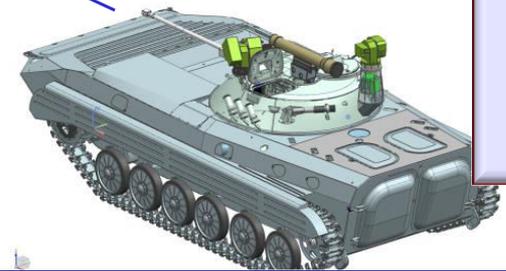
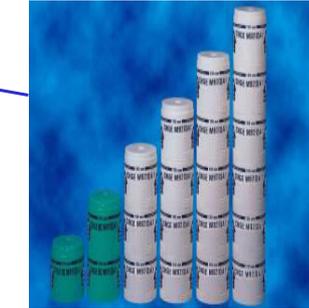
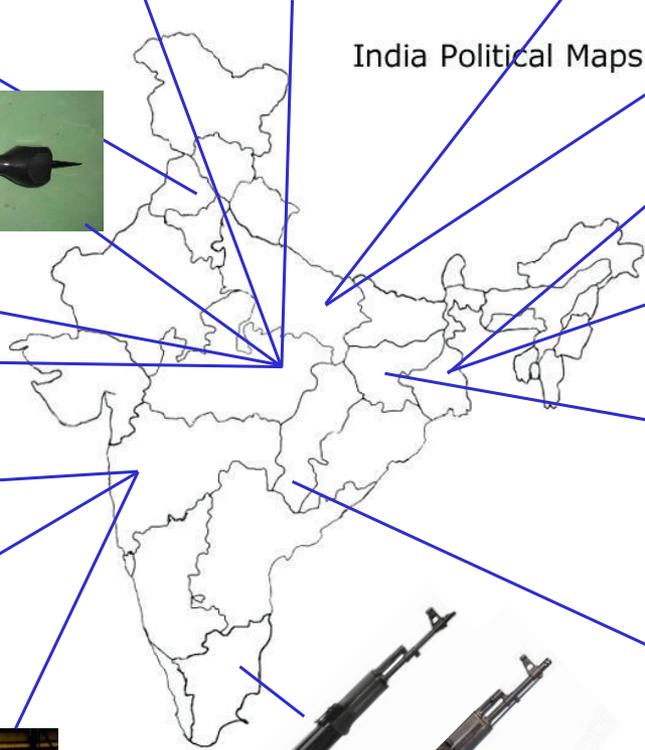
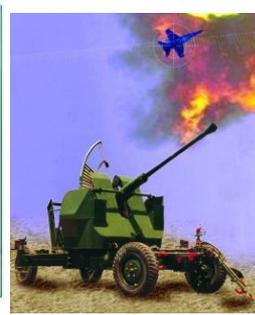
- Overview of Indigenisation / Indigenous Development in OFB
- Indigenous Co-Development for Future Products
- Opportunities in Import Substitution

<https://ofbeproc.gov.in>

Overview



- **Drivers**
 - 13 ODCs and Design Centres in Ord Fys.
 - Indian Industry
 - Collaborative Research
 - With IITs, NITs, Other Premier Govt Labs and RRCAT
 - For Indigenuous Design
- **Focus areas**
 - New Product Development
 - Import Substitution & Indigenization
 - Product Up-grade/Improvement



Collaborative Research



- **23 Collaborative Projects**
 - 11 completed
 - 12 Ongoing
 - **IIT, Kanpur**
 - **IIT, Madras**
 - **IIT, Kharagpur**
 - **IIT, Bombay**
 - **RRCAT, Indore**
 - **MANIT, Jaipur**
 - **ARAI, Pune**
 - **IIITDM, Jabalpur**
- **For**
 - ❖ **Futuristic Infantry Combat Vehicle (FICV)**
 - IIT, Madras
 - IIT, Kharagpur
 - ❖ **Electronic Fuze**
 - IIT, Bombay
 - ❖ **Air Defence Gun**
 - IIITDM, Jabalpur
 - ❖ **Extreme Cold Weather Clothing System**
 - IIT, Delhi

Indigenisation at OFB

- Present indigenous content – 90.60%
- Items indigenised

	2017-18	2016-17	2015-16	2014-15
Indigenised	582	567	378	211
Imported	24	24	27	41

Indigenous Technologies - Successes



- T-90
 - Modified barrel chemistry
 - Ordnance/ Article and Recoil Systems of T-90 Tank
 - Hull, Turret, Transmission & Running Gear, Engine, Track links etc.
- Naval Gun CRN-91 - Indigenous design
- Bi-Modular Charge System M-91 and M-92
- Case bonded rocket motor propellant
- Mine Protected Vehicles
- Indigenisation of design of T-90
 - Turbo Charger & Fuel Injection Pump
 - Power Unit for T-90 tank
- Indigenous Development of two-layer Physical Vapour Deposition on obturation system

Opportunities



- Artillery Gun 155mm x 45 Calibre 'Dhanush'
- Armament upgrade of BMP-II with Missile Firing and Tracking Capability
- Futuristic Infantry Combat Vehicle (FICV)
- Air Defence Gun
- Electronic Fuzes for 155mm Ammunition
- Extreme Cold Weather Clothing System

BMP-II UPGRADE



Up gradation:

- Turret with modern Optronics
 - Video Tracking
 - Fire Control System (FCS)
 - Missile firing through FCS
-
- **Industry support for Phase-II**
 - **Higher power 380hp engine**



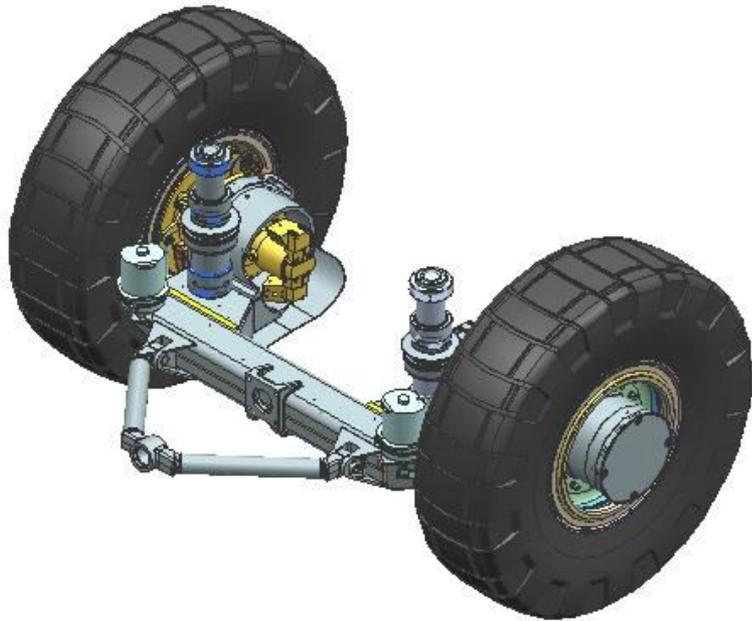
155mm ARTILLERY GUN (DHANUSH)



- Indigenously designed and developed
- Support of Industry required for
 - 1087 types of Sub-Assemblies & Components
 - For items of Elevating Mass, Under Carriage, Wheel Carriage etc.



ITEMS OF WHEEL CARRIAGE ASSY - Dhanush



Components - Dhanush



Rammer of Dhanush



RAMMER

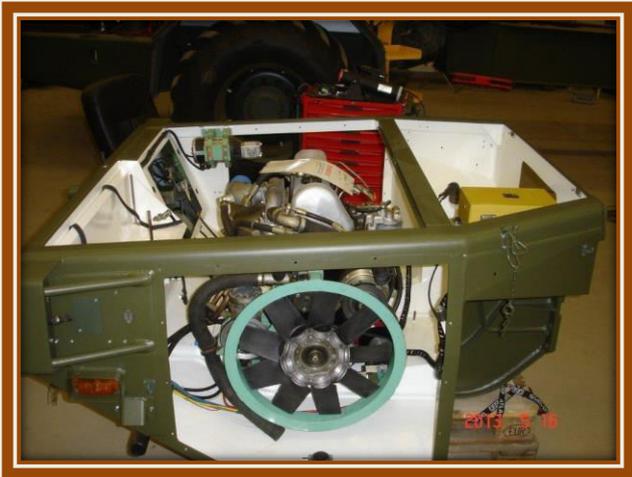
Other items - Dhanush



ELECTRONICS SUITE/
ELECTRICAL SYSTEMS



HYDRAULIC SYSTEM



POWER PLANT



BRAKE SYSTEM

COMMANDER' s THERMAL IMAGERS

- Supply commenced in 2016-17
- Industry support for
 - Power Supply Cards
 - Control PCBs
 - Precision Components
 - High life seals with EMI/ EMC block capability
 - TV Monitor



7.62 x 51mm ASSAULT RIFLE

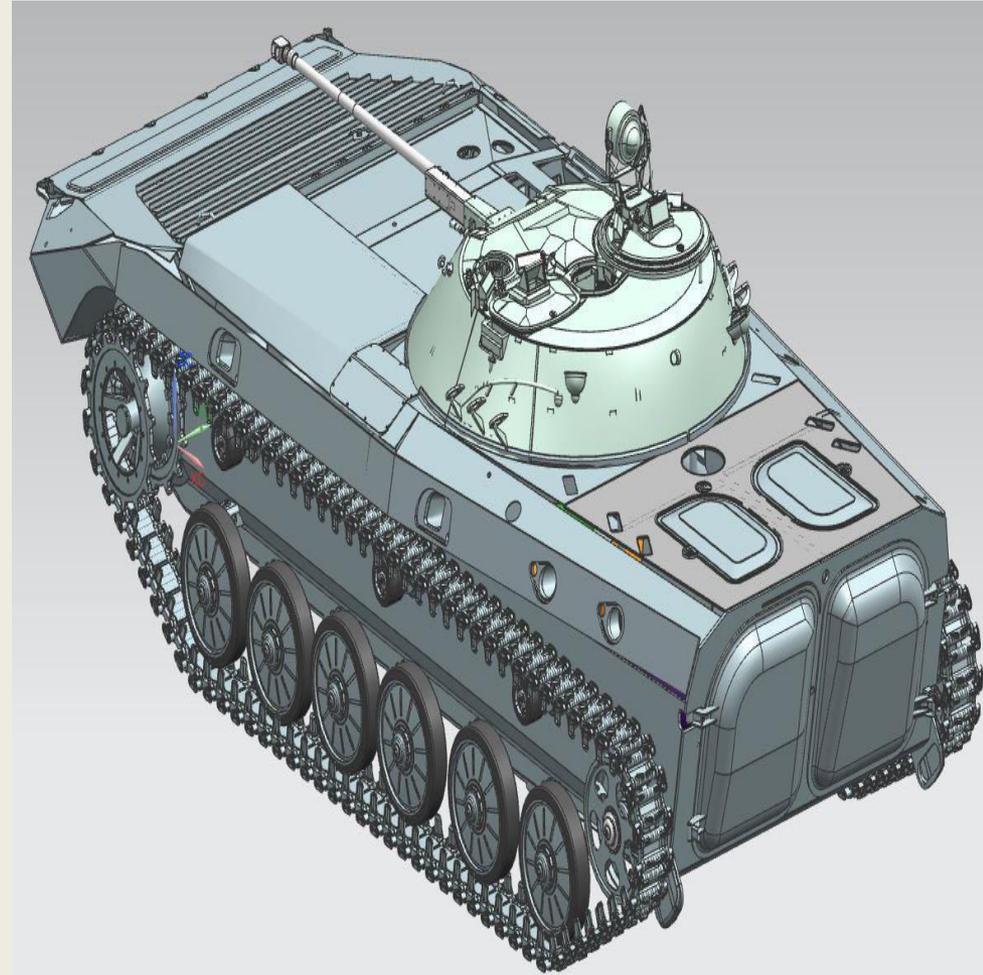


- ◆ Prototype developed
- ◆ Opportunities in
 - Metal Injection Moulding Components – 10 types
 - Composite Engineering Plastic Components
 - Sights – Aiming Aid, Reflex Sight

FUTURISTIC INFANTRY COMBAT VEHICLE



- ◆ Indigenous design completed
- ◆ Industry support required for
 - Driver control dashboard
 - Blast attenuating seats
 - Suspension & running gear items
 - Environment control unit
 - Active Protection system
 - See Through Armour



Import Substitution

Import Substitution



Sl.	Item	Qty.	Approx Value (Rs. in Cr)	Action
1.	Barrel Complete 301139910 in Finish Condition for 84mm RL MK-III	1777 Nos	126.69	Item has been advertised on iDEX Portal as one Challenge for Start-Ups, MSMEs and Indian Developers.

Import Substitution

Sl.	Item	Qty.	Approx Value (Rs. in Cr)	Action
2.	SCCC (Filled) for 125mm HE & HEAT Ammn.	42,371 sets	123.56	Tender for indigenous development of Imported Pyroxylyene Sheet (PC Sheet) and Chemicals, covering long term requirement for 10 years published.

Import Substitution

Sl.	Item	Qty.	Approx Value (Rs. in Cr)	Action
3.	Unit PKUZ-1A (AED1.570.00 1-01) Specn. No. AED1.570.001 TY1	118 Sets	57.56	<ul style="list-style-type: none"> • Nuclear and Chemical detector. • Warlier Eol did not succeed. • Defence Lab Jodhpur (DLJ) for indigenous development. • Industry to obtain ToT from DLJ after successful development.

Import Substitution

Sl.	Item	Qty.	Approx Value (Rs. in Cr)	Action
5	Fuel Pump HK-12M to Drg No.SB- 327-00-73	200 Nos	45.51	<ul style="list-style-type: none"> • Item indigenised • New sources are welcome in forthcoming source development tender.
6	Product Support items Unit BV- 291A43 of T- 90	173 Sets	43.29	Item is being indigenised with the help of Indian Industry.

Import Substitution



Sl.	Item	Qty.	Approx Value (Rs. in Cr)	Action
7	Ballistic Computer BV-1, PBA3.031.033 and BV-2 PBA3.031.034	30 Nos Each	41.58	<ul style="list-style-type: none">• Previous indigenous development order hasn't been successful so far.• Item is being considered again for inclusion in development tender.
8	Product Support Items Unit BG-29-4S	164 Sets	39.07	Item is being indigenised with the help of Indian Industry.

Import Substitution

Sl.	Item	Qty.	Approx Value (Rs. in Cr)	Action
9.	Arming Device Fuse system 551 for 84mm HEAT-551 Ammn.	21,250 sets	37.98	Item is being indigenised with the help of Indian Industry.
10.	Product Support items for Missile Information Block 9S-516, AL5.975.005	30 sets	34.77	Item is proposed as 2 nd Challenge for development through iDEX Platform (Laser Radiator to be indigenously developed)

Import Substitution

Sl.	Item	Qty.	Approx Value (Rs. in Cr)	Action
11.	Product Support items for Stabilising Unit AL-2.564.007 (consisting of 49 items)	30 sets	31.52	<ol style="list-style-type: none"> 1. These three Item are being indigenised with the help of Indian Industry currently. 2. However, these three items will again be offered for indigenous development in next cycle.
12.	Relay Regulator	108 Nos	30.97	
13.	Product Support Items for Block-D	30 sets	29.89	

Assistance Provided for Indigenisation

- Assistance in
 - PDR, DDR/CDR where design is involved
 - Functional, Environmental and Dynamic trial
 - BPC
 - Samples, drgs and tech assistance given&
 - Process auditing
 - Available test facilities provided
- List of items to be indigenised available on http://www.ofb.gov.in/download/mm/Items_for_indigenization.pdf and http://www.ofb.gov.in/download/mm/RFI_for_Import_subsn.pdf .

जयहिन्द