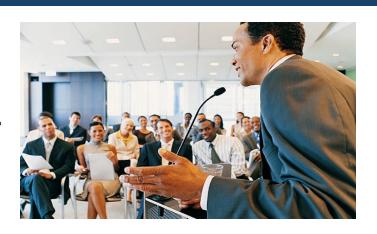


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Today's Presenter



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Focus Points

Opportunities Overview: Indian Defence Market

Trends in the Indian Defence Industry

The Indian Defence Offsets: Methodology

Offset Strategy

Conclusions

Overview of Indian Defense Market







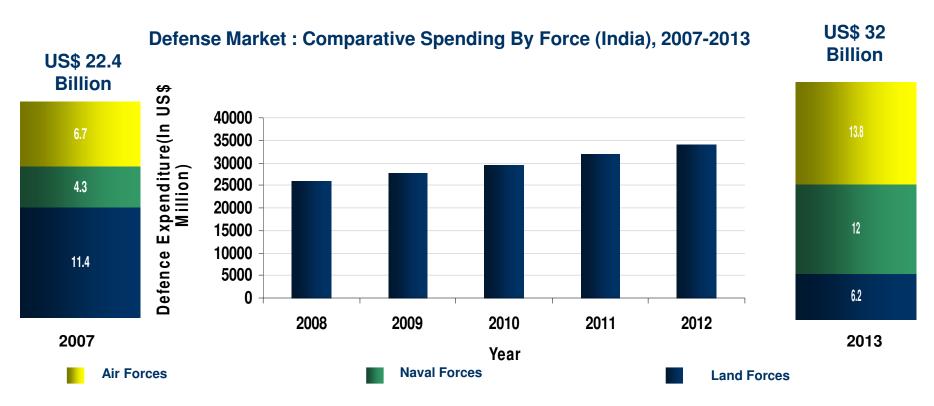


Introduction

What has changed in Indian Defense Procurement?

- Main change-planned acquisition procurement pipeline
- Last two decades-no planned upgrades/modernization-more ad-hoc approach
- Majority of Indian Armed Forces equipment from Soviet Union serious after- market and maintenance issues.
- The Kargil conflict (1999)- turning point-Government decided to push through modernization program.
- What will change in the Future?
 - The procurement procedures are evolving, expect more structure and well defined procedures
 - Local industry- the private sector will become a major partner in this public sector-dominated industry

11th Plan spending set to be over \$32 Billion



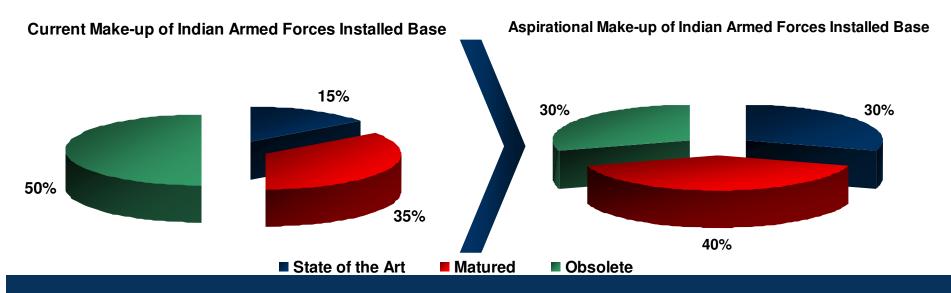
- Various Capital Procurements Planned for all services are set to kick in during the 11th Plan period (2007-2013)
- This production pipeline will continue to grow during the course of the forecast period, affording opportunities for investment up until 2025

Current Equipment Focus is on Land Systems, by 2012 the focus will shift to Air Force Modernization

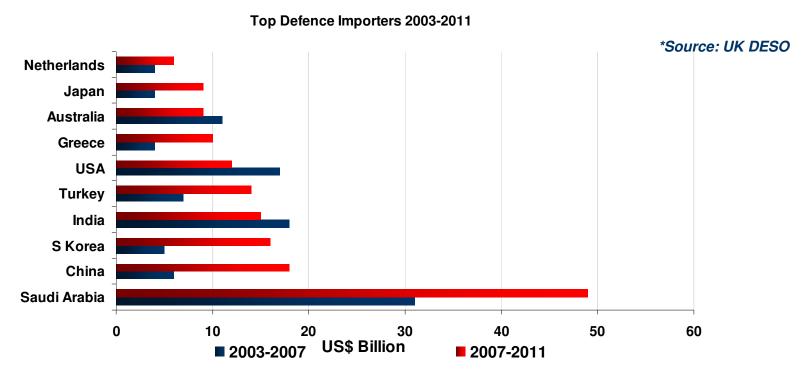
India Defense

Modernization requires massive investment and provides significant opportunity to team up with Indian Industry

- Modernization of the Indian Armed Forces is considered to be lagging behind by up to 10 years
- It is expected that India would be spending about US \$100bn during the 11th Plan Period (2007-2013)
- Of this, up to 40% will be dedicated to Capital Procurement
- Study of Indian Armed Forces by Confederation of Indian Industry highlighted the equipment procurement problem facing India:



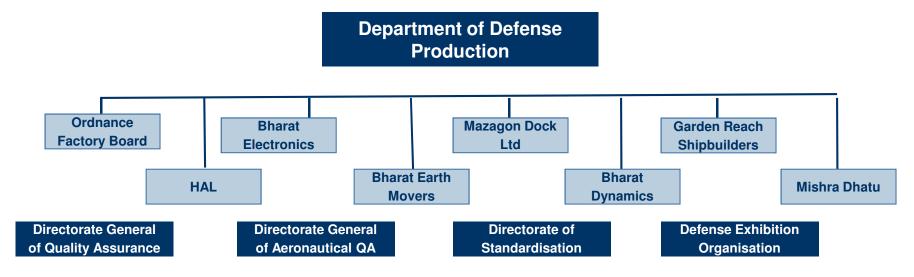
Expected growth in imports in major defense spending nations highlights a need to diversify customer base as well as Govt-Govt route to market



- Traditional Defense importers are increasingly looking to develop and support local industry through offset
- Asia-Pacific is a major importer of defense technology, but local competition are set to become significant competitors on export markets
- Indian Defense Industrial Base has been limited to Defense PSUs and Ordnance Factories, this is witnessing a sea change, with emerging domestic defense companies and Defense Offsets is a key driver
- Global Defense OEMs are entering into long term partnerships with domestic industry

Industry Structure

- There is an ongoing shift towards developing a modern private defence sector
- In the future, partnerships with PSU's will have to be complemented with private sector relationships



India has 8 Defense Public Sector Undertakings and 39 Ordnance Factories which account for almost total indigenous production of military goods.

India Defense

Offsets are key aspects of business in India and has become a key decision area when awarding contracts

Description of Offset rules

- 2008 offset policy designed to leverage the country's position as a large buyer and exporter.
- Provisions apply to all purchases from foreign vendors
- Policy also applies to RFPs issued by the MOD and imports by the defence Public Sector Undertakings (PSUs), Ordnance Factories, and Indian Private defence companies.

All Indian offsets partners must be granted an Industrial Licence from Department of Industrial Policy & Promotion (DIPP).

Any procurement exceeding \$75
Million a minimum of 30% must
be reinvested into the defense
market in the form of
components and services.

Options to meet Offset obligations are threefold depending on Foreign vendors' purchase or investment patterns within India's domestic defense capabilities.

Direct procurement of defense products, components and services from Indian defense industries. Foreign Direct Investment in Indian defense industries in industrial infrastructure, co-development, joint ventures and co-production of defense products.

Direct foreign investment in Indian organizations engaged in defense Research & Development as certified by Defense Offset Facilitation Agency (DOFA).

Key Points on Offsets

- Joint Secretary in DDP (Defense Department Production) heads the DOFA (Defense Offset Facilitation Agency) with associated members from: HQ Integrated Defense Staff, Service HQ, DRDO, Defense Public Sector Unit, OFB, CII/ FICCI/ASSOCHAM and other trade bodies.
- DOFA designed to act as a single window agency for all matters pertaining to defense offsets.
- DOFA may engage independent professional expert bodies to assist in its functions and commission studies on offset policies, implementation, utility and impact.
- The Defense offsets Policy is an evolving one; some key points under evolution are :
 - The Defense Offsets may be raised from 30% up to 50 %, on a case by case basis
 - The duration of banking of defense offsets maybe increased
 - There is a strong case for the FDI (Foreign Direct Investment) limit for the foreign partner to be raised from 26% to 49 %
 - Co-Production and joint development programs could be the focus

Defense Offset opportunities – Key Segments & Acquisition Programs

SECTOR	SHORT TERM	MID TERM	LONG TERM
SHIP BUILDING	Modular design & Integrated Construction	Material sciences	Ship systems
AIRCRAFT	Embedded Systems	Microwave systems	Propulsion plants
HELICOPTERS	Composite materials	Gear Boxes	Propulsion plants
MISSILES	Rocket propulsion	Canister /VLS	Seeker tech
SENSORS/ RADARS	Medium Frequency Sonar	MFR/ Phased Array Radar	Advanced Intelligent systems

Army Budget - Projected Procurement and size

- Change in war doctrine due to externally abetted proxy war, insurgency, militancy & semi urban terrorism.
- The focus is on precision fire power, air defense, missile systems and Aviation, Future Infantry Soldier as a system, network centricity and achieving battle field transparency through improved surveillance, night vision and target acquisition.

Artillery Modernization Program

- 814 motorized howitzers (under Buy-Make category)
- 100 155mm/52-calibre self-propelled tracked guns
- 140 air-mobile ultra-light howitzers (ULHs)
- 400 155mm/52-calibre towed artillery guns, which is to be followed by indigenous manufacture of another 1,180 howitzers

Major Indian Army Programs 2009- 2014

- Modernization Program of artillery & guns
- Light Armored Vehicles
- Tactical Communication
- T-90 procurement
- QRSAM & MRSAM
- Helicopter Replacement Program
- MALE and Tactical UAVs

Capital spending for the current programs expected to be \$2.6bn including modernization program.

Indian Air Force Budget - Projected Procurement and size

- IAF is under Transformation
- Plans for 64 squadrons including; 45 Combat sqdn (currently 30), 12 Transport force and 7 Force Multipliers.
- 6 squadrons through MMRCA Programs and the rest through Sukhoi, LCA and upgrades of MIG and Mirage.

MMRCA (2011 -2020)

- 126 Medium multi role combat aircraft
- Market size forecasted to be more than \$11
 Billion
- 50 % offset to Indian Defense market from 2014 when the first squadron is inducted.

Major IAF Programs

2009-2014

- Hawk Advanced Jet trainer,
- SU 30 MKI
- LCA. HAL Tejas
- C-130 J, C-17
- AWACS
- MALE UAVs/ UCAVs
- Indigenous SAM AKASH
- Attack Helicopters Dhruv ALH, MI-17
- Heavy lift helicopters
- Upgrade programs MIG 29, AN 32, Mirage 2000, Jaguar

•Estimates are that IAF would consistently need to invest \$5 – \$6 Billion annually for the next 10 years to build its operational and infrastructural capabilities to meet the desired level of minimum 45 Combat squadrons.

Navy Budget - Projected Procurement and Size

- Real time networking –thrust area. Increasing the connectivity and networking via increased use of C4ISR
- Trends towards reducing the number of surface ship & increasing the no of the submarines
- Aerospace, Shipbuilding and Development of Systems are the areas where offsets would be generated.

Naval Projected Requirement

- 52 Aircrafts & Aerial Vehicles
- 95 Missile Systems
- 80 Fast Interceptor Craft

Major IN Programs 2009- 2014

- Scorpene Submarine
- 75l Program
- Vikramaditya (Gorshkov) [under procurement]
- IAC [under procurement]
- MiG29K [under procurement]
- Multi Role Helicopter
- Shivalik & Talwar Class vessels
- Akula Class & Project 75/75I Submarines
- Counter Mine & special ops vehicle

•The aerospace sector has a potential of about Rs 6500 crores (10mil) in offsets, the ship building sector has a potential of about Rs. 6200 crores, high technology weapons and sensors have a potential value in the range of about Rs. 1600 crores from the planned projects.

India Defense

Key Market Entry Strategies into the defense market

Joint Ventures



- With liberalization, many Indian private sector companies have entered the defense market.
- This allows companies to explore beyond the scope of individual contracts

MOU's/ Agreements



 This is a stepping stone towards greater industry cooperation and future joint ventures and partnerships

Many Global OEMs adopted this strategy while exploring business opportunities in the Indian market

Technology Centers



 Strategy used to sustain a long term presence in the market and establish business relationship with industry and procurement officials

Eg- Honeywell India's R&D Centre, EADS technology centre, Boeings' partnership with IITs/ IISc.

Consortium Approach



- When bidding for individual programmes, it's the most preferred strategy
- It facilitates entry into the market and the possibility of creating niche market presence

Contracts
falling
Below offset
targets



- Direct access when the cost of contract falls below offset obligations and domestic industry cannot provide
- These include certain technologies and equipment for armed forces and small surveillance and radar technologies

Eg- many Israeli firms specializing in surveillance, radar technology enter the market without offsets.

Conclusions and Recommendations

Market is opening up to foreign competition - Total imports now exceed US\$15 billion per year and are expected to double by 2015.

- The Indian Defence establishment is seeking to broaden its equipment supplier portfolio
- Funding has not proven to be a constraint, but access to market requires investment in-country
- Geo political influences do have a role to play... Govt 2 Govt contracts
- Indian RFPs typically are Unique! Don't expect them to conform to standard equipment profiles
- Global OEMs in India need to develop direct relationship. It's a long term game need to invest in relationships.
- There is an immense potential at Tier II and Tier III level for partnering with local industry sub contracts, sub vendors Indian Market is not just for the big player, SME's can profit too!

After market issues are extremely important in India and provide a healthy revenue stream

- Showcase your capabilities the Indian Armed Forces are a technologically aware force.
- There are emerging opportunities in the Homeland security market, where there are commonalities of the equipment.
- Indian offset policy is pitched at a base level. View it as another business opportunity. Equipment must have minimum 30 percent indigenous content

Conclusion/Key Take-Aways

- The procurement procedures are evolving, expect more structure and well defined procedures
- Indian RFPs typically are Unique! Don't expect them to conform to standard equipment profile
- India will spend about US \$100bn during the 11th Plan and up to 40% will be dedicated to Capital Procurement
- The Defense Offsets Policy is an evolving one
- After-market issues are extremely important and provide a healthy revenue stream
- Current Equipment Focus is on Land Systems, by 2012 the focus will shift to Air Force Modernization

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