

# ECONOMY

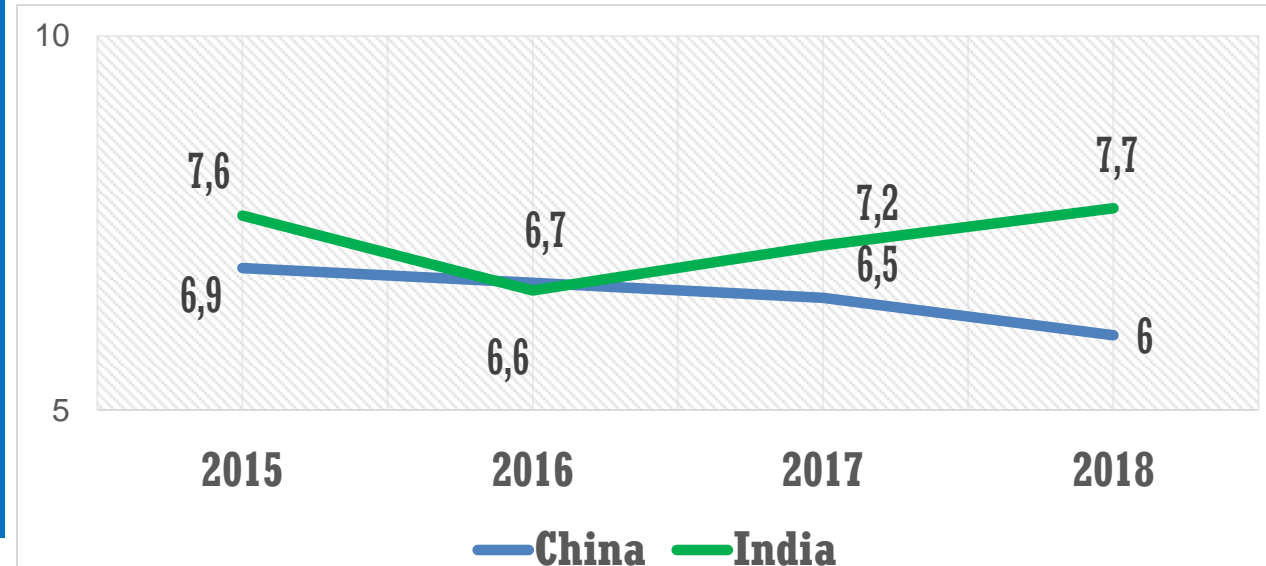
- Economy grew by 7.6% in 2015-16 ~ fastest in the world.
- Officially a \$2 Trillion economy.
- Sectoral contribution to GDP
  - ❑ Agriculture ~ 17.5%
  - ❑ Industry ~ 31.8% (Manufacturing ~ 17.4%)
  - ❑ Services ~ 50.7%
- Moderate inflation @ 5~6%.
- Population @ 1.25 billion

- Current account deficit ~ 0.8% of GDP (2016); Exptd. 1.3% in 2017
- FDI ~ \$55 Billion (2015-16); \$29 Billion (Apr-Sep 2016)
- Forex ~ \$367 Billion (Jan 2017)
- Govt. Debt to GDP @ 67%; Household Debt to GDP ~ 10.1%.
- Unemployment Rate – 4.9%; Labour Participation Rate ~ 52.5%.
- Trade (2015-16): Exports ~ \$262Bn; Imports ~ \$380Bn.
- Central Bank Interest Rate ~ 6.5%; Bank Lending Rate ~ 9.7%.
- Credit Rating:
  - ✓ Moody's : Baa3 (Positive)
  - ✓ S&P : BBB- (Stable)

## Economic Forecast

- ❑ World Bank: India's growth for 2016-17 fiscal ~ "still robust" @ 7% despite demonetisation...India will regain momentum with 7.6% growth in 2018 and 7.8% growth in 2019.
- ❑ Demonetisation Impact:
  - ❑ World Bank: Aid liquidity expansion in the banking system; help lower lending rates, and boosting economic activity.
  - ❑ Moody's: Strengthen India's institutional framework by reducing tax avoidance and corruption.

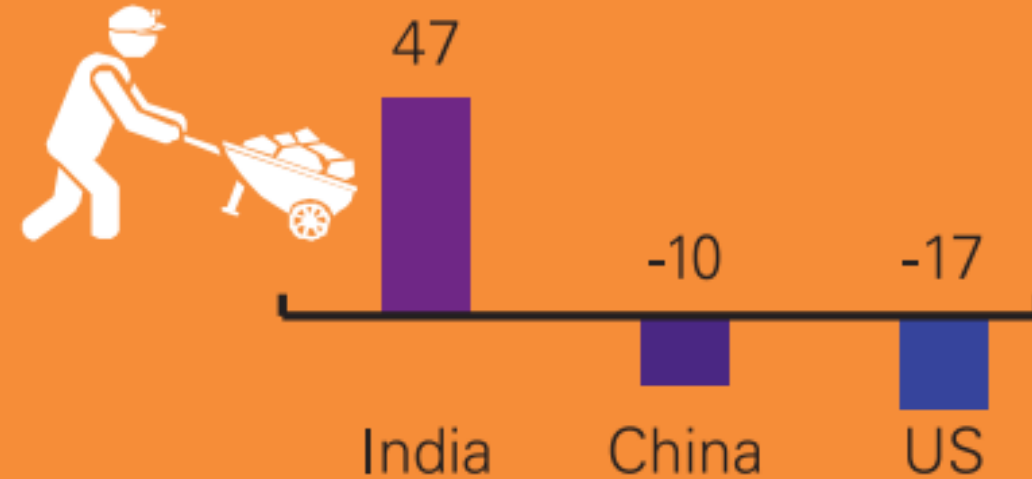
## IMF Forecast till 2018



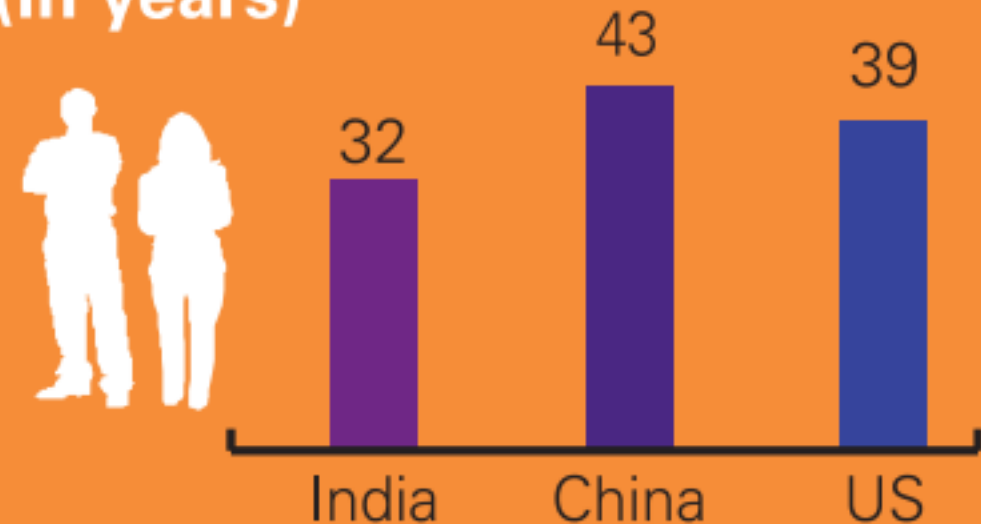
# YOUNG DEMOGRAPHY

- World's youngest country by 2020, with an average age of 29 years...A surplus workforce of 47 million against a deficit of 10 million in China and 17 million in the U.S.
- By 2030: India's workforce will have an average age of 32 years. In comparison, during the same period, the average age is expected to be 43 years in China and 39 years in the U.S
- Young Demography: A window of opportunity ~
  - ✓ To improve labour productivity,
  - ✓ To increase domestic production,
  - ✓ To enhance revenue from services,
  - ✓ To increase savings; and
  - ✓ To reduce the burden of old residents on the working population.
- Empowered with unique demographic advantages and guided efforts, India is poised to position itself among developed economies within the next 10–15 years. .

## Labour force surplus/deficit by 2020 (in million)



## Projected median age in 2030 (in years)



# EASE OF DOING BUSINESS

- Single-window clearance, 14 central government services are integrated with e-Biz portal.
- **Cooperative and Competitive Federalism**
  - ❖ Greater devolution of finances to States – 42% share for states in the divisible pool of taxes.
  - ❖ States assessed on 8 broad parameters of Ease of Doing Business.
- **Goods and Services Tax** has been approved by the Parliament...will be in place by July 2017.
- New Bankruptcy Law Passed.
- New IPR policy announced.
- Investor Facilitation Cell – INVEST INDIA, established to guide, assist and handhold investors during the entire life cycle of a business.
- Road-map to reduce corporate tax from 30% to 25% laid down.

## Highlights of Budget 2017-18:

- ❑ Foreign Investment Promotion Board (FIPB) to be abolished...since 92% of all FDI is allowed through automatic route.
- ❑ Legislative reforms to simplify, rationalize & amalgamate existing labor laws into 4 Codes on Wages, Industrial Relations, Social Security & Welfare and Safety & Working Conditions.
- ❑ **Minimum Alternate Tax (MAT)** credit allowed to be carried forward up to a period of 15 years (10 years at present).
- ❑ **Corporate tax** for smaller companies with annual turnover of up to 50 crores **reduced to 25%**.
- ❑ **Concessional tax rate of 5% withholding tax** being charged on interest earned by foreign entities in ECBs / Government securities extended till 30.6.2020 and also extended to Masala bonds.



# EASE OF DOING BUSINESS...2



- As part of the Ease of Doing Business, the **Make-in-India (MII)** program was launched on 25 Sept 2014.
- **MII** focuses on:
  - ❑ Attracting investment into manufacturing by introducing a business friendly regulatory environment, fostering innovation, enhancing skill development, protect IPR, and build best-in-class manufacturing infrastructure.
  - ❑ Increase manufacturing share in GDP from 16% to 25% by 2022.
  - ❑ Create 100 Mn additional jobs by 2022.
  - ❑ Completely overhaul the FDI regime.
  - ❑ **25 Sectors identified:** Automobile, Auto Components, Aviation, Biotechnology, Chemicals, Construction, Defence, Electrical Machinery, Electronic Systems, Food Processing, IT & BPM, Leather, Media & Entertainment, Mining, Oil & Gas, Pharma, Ports & Shipping, Railways, Renewable Energy, Roads, Space, Textiles & Garments, Thermal Power, Tourism & Hospitality, and Wellness.

A pentagon of corridors is being envisaged to facilitate manufacturing and to project India as a global manufacturing destination.

1. Amritsar Kolkata Industrial Corridor
2. Bengaluru Mumbai Economic Corridor
3. Chennai Bengaluru Industrial Corridor
4. Delhi Mumbai Industrial Corridor
5. Vizag Chennai Industrial Corridor

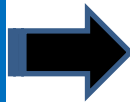


# FDI

- No. 1 FDI Destination in the World.
- Most open economy in the world for FDI.
- FDI (April – Sept 2016): US\$ 29 billion (+30%)
- National Investment and Infrastructure Fund (NIIF) created with a corpus of USD6.2 billion.

- No. 1 Rank out of 110 countries on the Baseline Profitability Index (BPI) – 2015

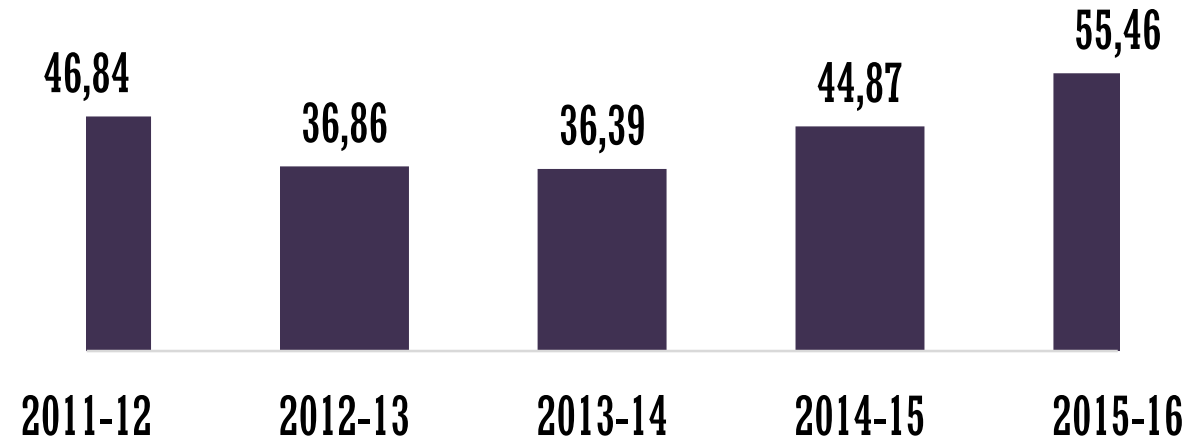
BPI Ranking (2015)	
India	: 1
U.S.	: 50
China	: 65
Brazil	: 99
Russia	: 108



## Factors on which success of FDI depends on:

- Growth of Asset Value
- Preservation of Value while the asset is owned
- Ease of repatriating profits

## INDIA FDI FLOWS (US\$ billion)



## 100% FDI allowed in 92% of sectors, including:

- Industrial Parks, and Construction Development
- Railways, Telecom, Defence and Petroleum & Natural Gas – Exploration.
- Airports – Greenfield & Brownfield; Ground Handling Services; MRO facilities; Flying & technical institutes.
- Credit Information Companies, Non-banking Finance Companies, and Asset Reconstruction Companies
- Pharma, Bio-tech, Medical Devices – Greenfield & Brownfield
- Mining – coal & lignite, metal & non-metal ores
- Trading – Wholesale & B2B E-commerce, Food Products Retail Trading, and Duty Free Shops.

“As per BPI Index, India is the Best Bet for Investors”

# INDIA RANKING

- **World Bank** ~ India will be the world's fastest growing major economy in 2017.
- **UNCTAD World Investment Report (2015)** ~ India climbs 6 places to reach 9 rank, joining the league of the world's top 10 countries by FDI inflows.
- **World Economic Forum 2015** ~ Up 16 places to reach 39<sup>th</sup> on the Global Competitiveness Index.
- **World Bank's 2016 Logistics Performance Index.** ~ Moved up 19 ranks to reach 35<sup>th</sup> position.
- **Global Innovation Index** ~ India moved up 16 ranks to reach 66<sup>th</sup> position.

## No. of Days to Start a Business



**WB Doing Business Rank : 130**

**UNIDO Manufacturing Index : 6**

**Baseline Profitability Index: 1**



# RAILWAYS

## Indian Railway Facts:

- 114,000 km of tracks: Caters to 15% of public transport & 30% of total freight
- 12,500 trains ferrying 22 Mn passengers and 7,400 trains carrying 3 Mn tons of freight every day respectively.
- Employs 1.4 Mn people – world's 7<sup>th</sup> largest employer with revenues: US\$25 Bn (2014-15)

## New Initiatives:

- **100% FDI allowed under the automatic route** in construction, operation, and maintenance of suburban corridor projects, high-speed train, dedicated freight lines, railway electrification, mass rapid transit systems, passenger/freight terminals and signaling systems.
- **Mumbai-Ahmedabad 508 km High Speed Railway Corridor:** Japan to fund 80% of the US\$ 15 billion project @ 0.1% interest with a 15-year moratorium on a 50-year repayment period.
- **Project Nilgiri (Wifi Services at Stations):** In partnership with Google, wifi hotspots will be set up in 400 stations in the 1<sup>st</sup> phase. In 2<sup>nd</sup> phase wifi on running trains.
- **Locomotive and wagon manufacturing:** Contracts worth US\$ 6.2 billion signed with GE & Alstom for diesel and electric locomotives.



## New Objectives:

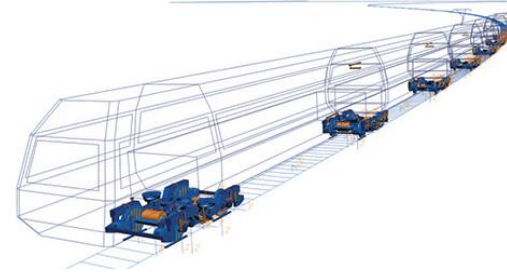
- Increase investments
- Decongesting heavy haul routes
- Speed up trains
- Better amenities & safety
- Improving railway systems

## Investment Planned:

USD 133.5 billion over the next 5 years ending 2019



# RAILWAYS...2



## TARGETS:

- Increasing track length by 20% to 138,000 km; daily passenger carrying capacity from 21 Mn to 30 Mn; and annual freight carrying capacity from 1 billion tonnes to 1.5 billion tonnes.
- Replace 3,450 railway crossings with 920 under and over-bridges through an investment of US\$1 billion.
- Redevelop/Modernize 400 railway stations through PPP model.
- Introduction of bio-toilets and vacuum toilets, waste-to-energy plants at stations, conducting energy audits etc.
- Installation of train protection warning systems and train collision avoidance systems.
- Installation of surveillance cameras in trains and railway stations.

## FOCUS ON SPEED:

- Increase speed of 9 railway corridors from 110-130 kmph to 160-200 kmph.
- Increase the average speed of freight trains to 100 kmph (unloaded trains) and 75 kmph (loaded trains).
- Diamond quadrilateral network of high-speed rail to connect major cities.
- Introduction of bullet trains (350 kmph speed) and semi-high speed trains (16—200 kmph speed).

## Railway Investment opportunities:

- Dedicated Freight Corridors (DFC)
- Railway lines to and from coal mines and ports
- Development of high-speed tracks and suburban corridors
- Re-development of railway stations and freight terminals
- Power generation and energy saving
- Setting up wagon, coaches and locomotive unit
- Gauge conversion
- Network expansion.





# ROADS

## QUICK FACTS:

- Road Network: 4.8 million Km...accounts for 60% of total goods movement and 85% of total passenger traffic in the country.
- National highways make up about 2% of the network but account for 40% of road traffic.

## Road Projects Awarded & Completed

Status/Year	2014-15	2015-16
<b>Awarded</b>	7,566 km	10,000 km
<b>Constructed</b>	4,410 km	6,029 km

**2016-17: 25,000 km of National Highways to be awarded**

**Govt. aims at building 30km road stretch per day from 2016.**

## NORTH EAST FOCUS:

Total Length of the NE Highway: 13,258 Km - 109 Projects of length 7,148 km underway...Rest to be awarded.

## New Initiatives:

- ❑ **Bharatmala:** Build National Highways to connect coastal/border areas, tourist places and all district headquarters. – Contours of the program being worked out.
- ❑ **Setu Bharatam:** To make National Highways free of railway level crossings. Project involves:
  - ❑ Building 208 Railway over Bridges @ an estimated cost of USD 3.1 Bn
  - ❑ Replacing 1500 old bridges @ a cost of USD 4.5 Bn.
- ❑ **Eastern Peripheral Expressway:** a 135 km six-lane expressway with a total project cost of USD 3.7 Bn – Already awarded & work has commenced.
- ❑ **Western Periphery:** 135 Km in 2 sections – Manesar-Palwal (52 Km) – Completed; and Kundali-Manesar (85 Km) – Awarded.
- ❑ **Delhi–Meerut Expressway:** A 150 km project with a total project cost of USD 1 Bn – Already awarded.

## Up-coming High Profile Road Projects:

- ✓ **Vadodara–Mumbai Expressway (400 Km)**
- ✓ **Bengaluru-Chennai (334 Km) on NH4**
- ✓ **Delhi-Jaipur (261 Km) on NH8**
- ✓ **Kolkata-Dhanbad (277 Km) on NH2**

# ROADS . . . 2

## **POLICY SUPPORT:**

- Industry status for the road sector.
- FDI of up to 100% and increased concession periods of up to 30 years.
- 100% tax exemptions in any consecutive 10 years out of 20 years.
- Duty free imports of certain identified equipment for construction plants.
- Amendments made to the Model Concession Agreement (MCA) for BOT projects.
- Segregation of Civil Cost from Capital Cost for National Highway (NH) Projects for appraisal and approval.
- Rationalized compensation for concessionaries executing NH projects in BOT mode for delays not attributable to them.
- Exit Policy for Private Developers: 2 years from start of operations, irrespective of date of award of project.

## **Highlights of Budget 2017-18**

- Budget allocation for highways @ 64,900 crores (\$9.7 Bn) in 2017-18.
- 2,000 km of coastal connectivity roads identified for development.

## **Awarding of Road Projects:**

Road projects in India have always been awarded in one of the three formats—BOT annuity, BOT-toll and EPC.

- **BOT annuity**, a developer builds a highway, operates it for a specified duration and transfers it to the government, which pays the developer annuity over the concession period.
- **Under BOT-toll**, a concessionaire generates revenue from the toll levied on vehicles using a road.
- **In EPC**, the developer builds with government money.

## **HYBRID ANNUITY MODEL announced (2016):**

- **Govt. commits up to 40% of the project cost over a period and hands over the project to the developer to start road work.**
- **Revenue collection will be Govt.'s responsibility, while developers will be paid in annual instalments over a period of time.**
- **HAM gives enough liquidity to the developer and the financial risk is shared by the government.**

# PORTS



India has 12 Major Ports (administered by the Central Government), and around 200 notified Non-Major Ports (administered by the State Governments).

Traffic handled by Indian ports in FY2014–15 was 1052.1 MTPA. By 2025, the ports are required to handle a cargo of 2500 MTPA.

## Focus of Port Modernization programme:

1. Mechanization – improvement of gate processing & rake turnaround time.
2. Dredging: Increase draft up to 23 meters to handle container vessels of >15,000 TEUs and super-max vessels (50,000 to 60,000 DWT).
3. New Terminal Developments.

**16th LARGEST**  
MARITIME COUNTRY IN THE WORLD WITH  
**7,515km OF COASTLINE**

**1052**

**MILLION TONNES**  
of Cargo Traffic  
recorded in 2015

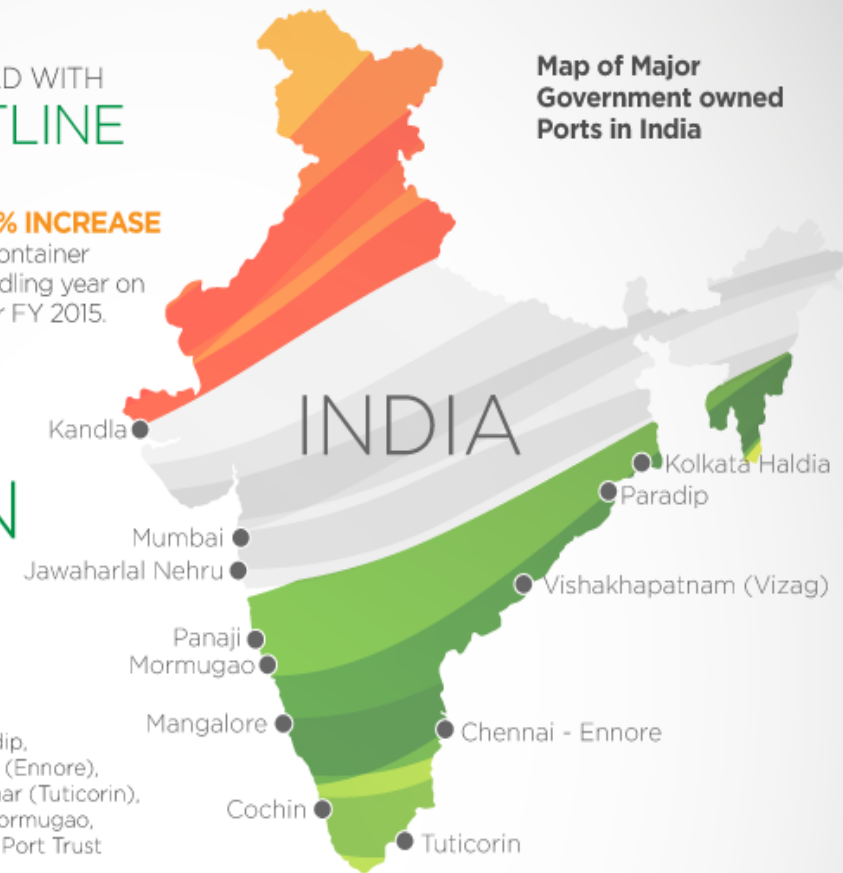


**6.7% INCREASE**  
In container  
handling year on  
year FY 2015.

**\$10.5 BILLION**

Dollars will be invested in 12 major ports  
in the next five years under 'Sagarmala'  
initiative.

**12 MAJOR PORTS**  
Identified as Kolkata, Paradip,  
Visakhapatnam, Kamarajar (Ennore),  
Chennai, VO Chidambaranar (Tuticorin),  
Cochin, New Mangalore, Mormugao,  
Mumbai, Jawaharlal Nehru Port Trust  
(JNPT) and Kandla.



Map of Major  
Government owned  
Ports in India

## Maritime Agenda 2010-20

- Increase percentage share of India to 5% in global ship building
- 10% share in global ship repair for India by 2020.



# SAGARMALA

## **New ports:**

- 5-6 new ports have been proposed to be built.
- Over 40 port-capacity enhancement projects — modern port infrastructure — mechanization of berths and deepening of drafts to accommodate larger vessels.

## **Rail-Port connectivity:**

- Over 80 projects are being planned
- Focus: Heavy-haul rail corridor to evacuate large volumes of coal, freight-friendly expressways to enable efficient movement of containers on key routes, and the development of strategic inland waterways.

## **Port-led industrialization:**

- 14 Coastal Economic Zones (CEZs) along the coastline.
- Clusters to have industries from the energy, bulk materials as well as discrete manufacturing segments.

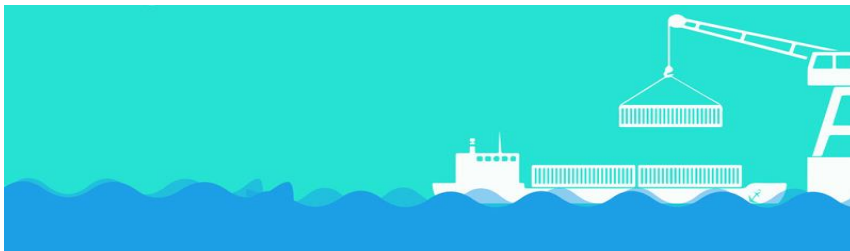
## **Coastal communities:**

- Developing opportunities for fishermen and other coastal communities as well as development of the numerous islands along India's coastline.

## **SAGARMALA project aims at:**

- Optimizing multi-modal transport to reduce the cost of domestic cargo,
- Minimizing the time and cost of export-import cargo logistics,
- Lowering costs for bulk industries by locating them closer to the coast, and
- Improving export competitiveness by locating discrete manufacturing clusters near ports.

**The government is expected to invest US\$16 billion in the SAGARMALA project.**



# URBAN DEVELOPMENT

- **100 Smart Cities** – Retrofit/Redevelop or build Greenfield cities planned.
- Growing Urbanization ~75% of GDP by 2030.
- **Smart City Mission:** Drive economic growth and improve the quality of life in the country by enabling local area development and harnessing technology
- **60 cities** already approved.
- Projects that commit at least 30% of the total cost for low-cost affordable housing ~ exempted from the minimum built-up area and capitalisation requirements.
- 100% FDI in automatic route permitted for operation of townships, malls, and business centres. Floor area restriction and minimum capitalisation removed; easy exit option for foreign investors.



## Investment Outlay:

- Smart Cities Mission from FY2015-16 to FY2019-20 is more than **US\$15 billion**.
- Atal Mission for Rejuvenation and Urban Transformation (AMRUT) from FY2015-16 to FY2019-20 is appx. **US\$7.5 billion**

# URBAN DEVELOPMENT...2

Sector	Investment Potential
Smart Energy	<ul style="list-style-type: none"><li>✓ Implementation of 8 smart grid pilot projects with an investment of US\$10 million for energy storage</li><li>✓ Power Grid Corporation of India has planned to invest US\$ 26 billion in the next 5 years; about 130 million smart meters would be installed by 2021.</li></ul>
Smart Environment	<ul style="list-style-type: none"><li>✓ The Ministry of Water Resources plans to invest US\$ 50 billion in the water sector.</li></ul>
Smart Transportation	<ul style="list-style-type: none"><li>✓ Govt. of India has approved a US\$4.13 billion plan to spur electric and hybrid vehicle production by setting up an ambitious target of 6 million vehicles by 2020.</li></ul>
Smart ICT	<ul style="list-style-type: none"><li>✓ Cloud computing is expected to involve into a US\$4.5 billion market in India by end-2016.</li><li>✓ US\$333 million allocated to 7 cities (Delhi, Mumbai, Kolkata, Chennai, Ahmedabad, Bengaluru and Hyderabad) under the Safe City Project.</li></ul>
Smart Building	<ul style="list-style-type: none"><li>✓ India is expected to emerge as the world's 3<sup>rd</sup> largest construction market by 2020 by adding 11.5 million homes every year.</li><li>✓ Intelligent Building Management System market estimated to reach US\$ 2 billion by end-2016.</li></ul>



# AMRUT

## Atal Mission for Rejuvenation and Urban Transformation



- AMRUT envisages urban India's transformation by focusing on:
  - Water supply.
  - Sewerage facilities and septage management.
  - Storm water drains to reduce flooding.
  - Pedestrian, non-motorized and public transport facilities, parking spaces etc.
  - Enhancing amenity value of cities by creating and upgrading green spaces, parks and recreation centers, especially for children.

- 500 cities selected.
- Total estimated outlay: USD7.5 billion till 2019

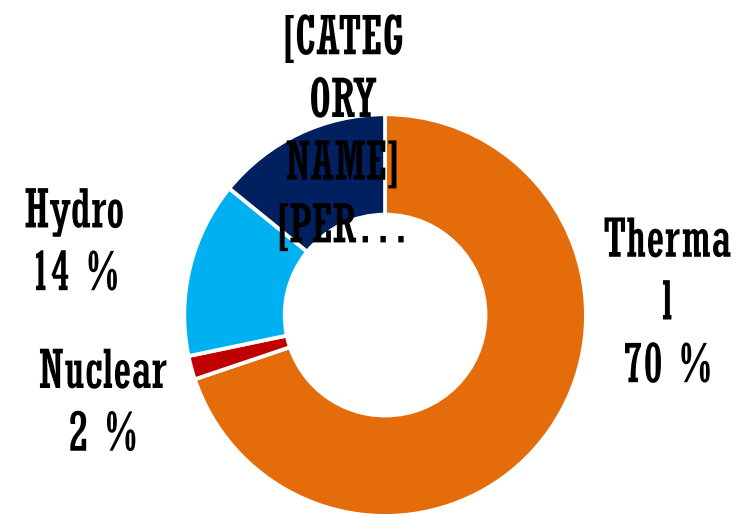
## BUSINESS OPPORTUNITIES

- Water treatment plants, pipelines, metering and grid management solutions, de-silting, ground-water recharge, etc.
- Waste management: decentralized underground sewerage networks, sewage treatment plants, waste collection-transport treatment integration, septage cleaning-transport treatment, storm water drainage and reuse, etc.
- Urban transportation: Ferry vessels, pathways, skywalks, non-motorised transport, multi-level smart parking, bus rapid transport system, etc.
- Green zone components: Landscaping, creating of green infrastructure (parks, ponds, etc.), vertical greening, etc.
- Reform implementation would need services like implementation, consulting, monitoring and evaluation services



# POWER FOR ALL (PFA)

- **24x7** power to all households, industry, commercial businesses, agriculture farm holdings, and any other electricity consuming entity by FY 2018-19.
- PFA covers the entire spectrum of the power sector, including generation, transmission, distribution, renewables, energy conservation and customer initiatives.
- Focus on modernising transmission and distribution infrastructure.
- Setting up 5 new coal-based Ultra Mega Power Projects (UMPPs) with supercritical technology, under the plug and play model ~ investments of USD15.1 billion.
  
- **New Renewable Targets By 2022:**
  - Solar: 100GW
  - Wind: 60 GW
  
- **International Solar Alliance (ISA):**
  - Coalition of 121 prospective member countries between the Tropics of Cancer & Capricorn. ISA will be a Treaty-based organization, headquartered in India.
  - ISA Framework Agreement opened up for signature in Marrakech during COP22.
  - 27 Countries already signed up.



## Investment Outlay:

US\$45.2 billion in power transmission and distribution business to achieve its targets under the Power for All initiative.

The government has set a goal to add 115,603 MW of power capacity by 2017 and 101,745 MW between 2017 and 2022

Coal Mines Special Provisions Bill, 2015: Allocation of coal blocks through auctioning.



# Renewable Energy

## Grid-connected Capacity (Sept. 2016):

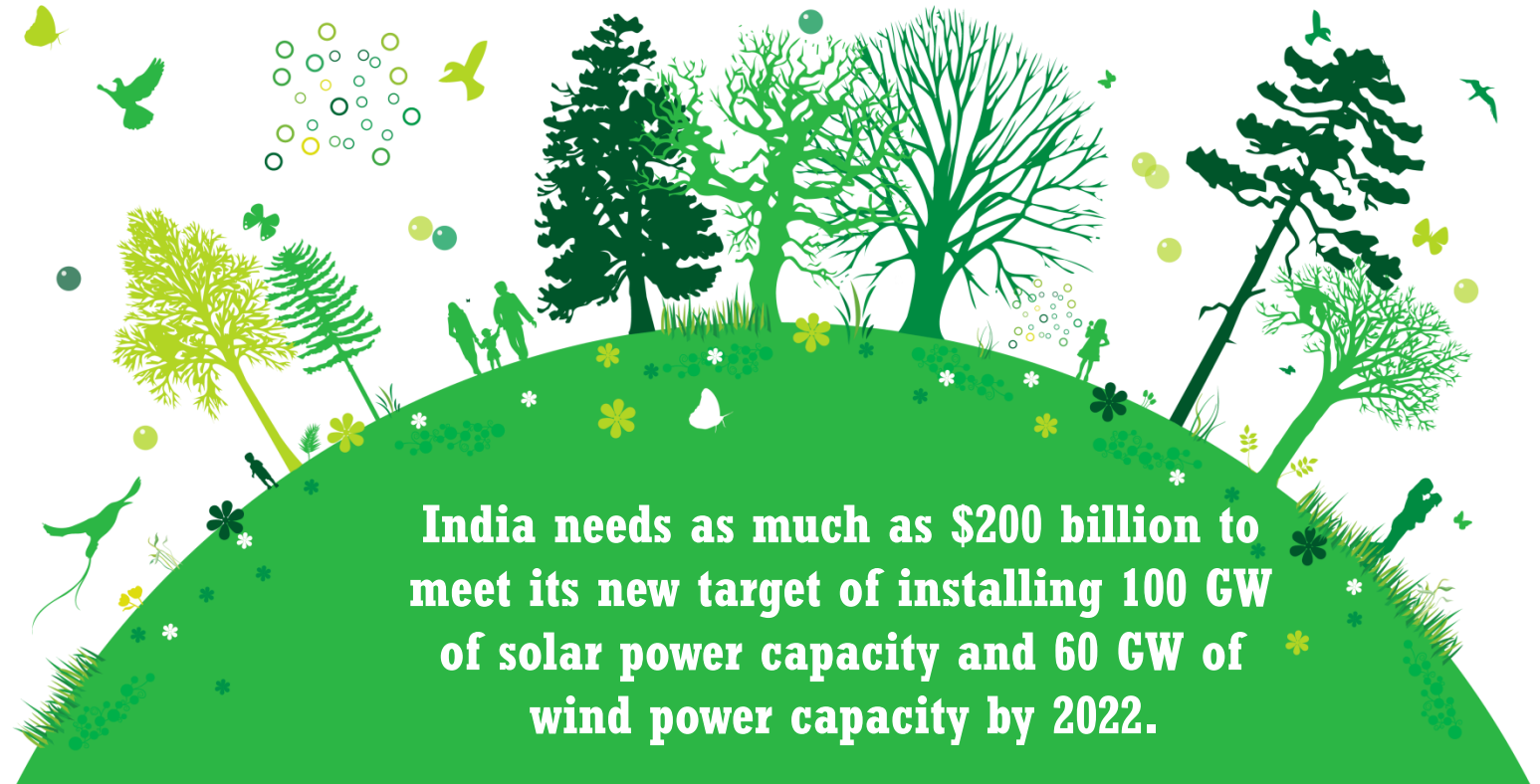
Renewable Source	GW
Wind	28.08
Solar	8.51
Bio-Power	4.99
Small Hydro	4.32
<b>TOTAL</b>	<b>45.91</b>

## Off-Grid / Captive Power (Sept. 2016):

Renewable Source	GW
Waste-to-Energy, Biomass cogeneration, Biomass Gasifiers, Aero-generators, Solar Photovoltaic Systems, Water Mills	<b>1.38</b>

## India's Intended Nationally Determined Contribution (INDC)

- Reduce the emissions intensity per unit GDP by 33 to 35 percent below 2005 by 2030.
- Increase the share of non-fossil-based power capacity from 30 percent today to about 40 percent by 2030.
- Create an additional carbon sink of 2.5 to 3 billion tons of CO<sub>2</sub> through additional forest and tree cover.



# SOLAR

## India's Solar Potential: 748 GW

### National Solar Mission: 100GW by 2022...Capacity break-up:

- Rooftop Scheme : 40GW
- Entrepreneur Scheme : 20GW
- Already planned : 10GW
- State Policy : 10GW
- Public Sector : 10GW
- Private Sector : 5GW
- Independent Power Producers : 5GW

- ❑ New target envisages **\$100 Billion** investment in solar over the next 7 years.
- ❑ Fixed targets for grid-connected solar power through the mandatory use of Renewable Purchase Obligations (RPOs) by utilities backed with a preferential tariff.

- ❑ Majority of Indian projects adopted crystalline silicon technology, with an average efficiency of 16-17%.

### Current status of manufacturing:

- ❑ At the start of April 2016, India had 1.2GW of cell and 5.6GW of module production capacity.
- ❑ Photo-Voltaic industry dependent on imports of critical raw materials and components.
- ❑ Low capacity to manufacture silicon material & solar thermal.

### Opportunity for Manufacture:

- ❑ Concentrator collectors, receivers, crystalline silicon technology components etc.
- ❑ Off-grid technologies: Micro grids of 150 watts (powering 20 households) to 5 kilo watt (40 households and commercial use like water pumps) in villages; lanterns, street lighting; refrigeration etc.

### Business Models in India:

- **Feed-in-tariff**: Developers sign a PPA at fixed tariffs.
- **Renewable Energy Certificates.**

- **Open Access** – Developer supplies to any 3<sup>rd</sup> party at negotiated rates.
- **Captive & Group Captive**: Consumers offtake the majority of the output from the captive & own at least 26% of equity.
- **Sites & Parks** - Developer develops the infrastructure and charges a rental fee from

### Policy Support:

- 100% FDI via auto route for solar cell manufacture.
- 10-year tax-holiday for solar projects.
- Accelerated depreciation @80% within first 2 years of commercial operation.
- Exemption from Open Access Charges, Wheeling & Banking Charges etc.
- Developers get a fixed sum per unit energy generated in addition to tariff.
- No Excise Duty for RE generation components.
- Customs Duty @ 5% for selected components of RE generation power projects.
- 30% subsidy for off-grid PV & Solar Thermal.
- Payment Security Mechanism to cover defaults by state utilities/distribution companies.

# WIND



## Facts:

- ❑ The National Institute of Wind Energy (NIWE) has estimated that India's installable wind energy potential has been estimated to be **302 GW** with towers of a height of **100 metres**.
- ❑ India ranks No.4 in terms of installation capacity (28.08 GW as of Sept 2016) after China, the US and Germany.
- ❑ State of Tamil Nadu installed capacity: 7.63 GW.
- ❑ India's domestic wind manufacturing capacity is about 10,000 MW annually.
- ❑ Wind energy attracted cumulative investments totalling US\$ 3.16 Billion.
- ❑ New Capacity Installation Target: 60 GW by 2022.
- ❑ **Turbine suppliers:** Gamesa, Suzlon, Inox, Regen, Wind World, LM Wind and Senvion.
- ❑ To address grid integration challenges, Govt. initiated the Green Corridor programme. The objective is to improve linkage between India's regional (southern) grids with its national grid. This will facilitate interstate transmission.

## National Offshore Wind Energy Policy, 2015 (NOWEP)

- Guidelines allow for setting up offshore wind farms within territorial waters that extend up to 200 nautical miles from the coastal baselines of India.
- NIWE will allocate the blocks to the project developers through an open international competitive bidding process.
- NIWE will give single window clearance.
- Environmental Impact Assessment, oceanographic surveys, environmental audit etc. to be done before the blocks of offshore wind energy can be demarcated.

## Policy Support:

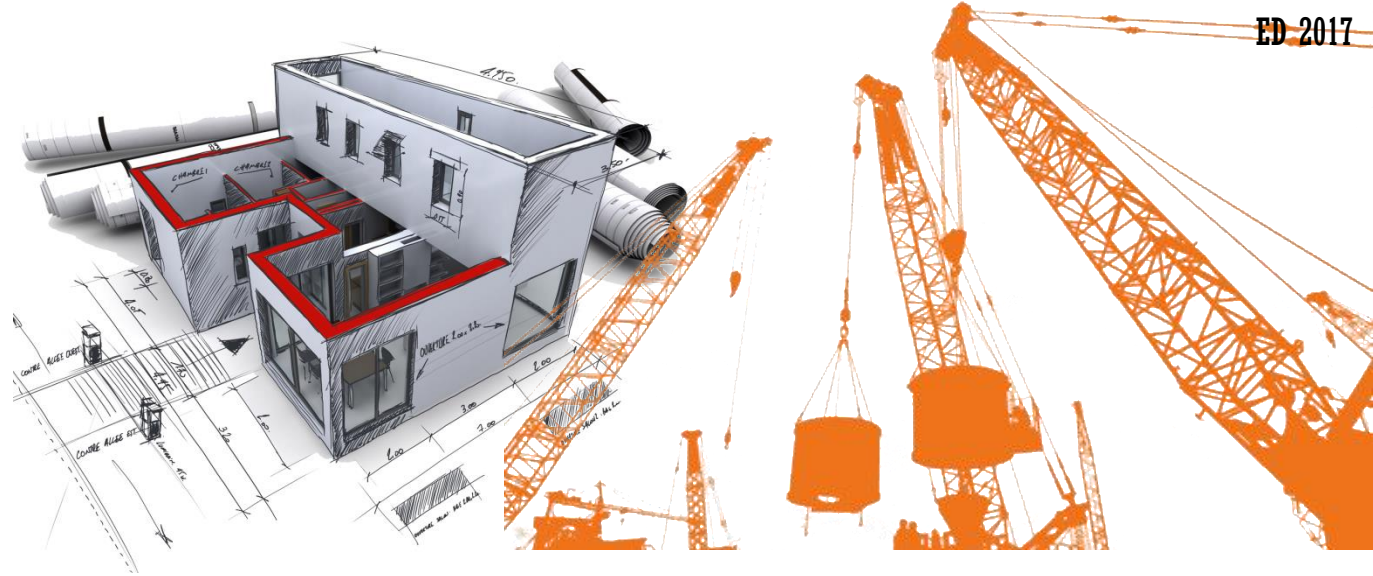
- Raw material used in manufacturing of wind turbine generators have been exempted from the Special Additional Duty of 4%.
- No excise duty and Customs duty @ 5% on import of forged steel rings used in the manufacture of bearings used in wind operated electricity generators.
- Accelerated depreciation (AD) @40% (*to save income tax*) and Generation Based Incentive (GBI) Scheme: 50 paise per kWhr of electricity generated for at least 4 years and up to 10 years. Incentive will stop once pay-out reaches INR 1 crore (US\$ 163,000) per MW of capacity. Scheme ends 2017. Companies can opt either for AD or GBI, but not both.
- The tax on coal for the National Clean Energy Fund (NCEF) doubled to Rs. 400 per ton. NCEF is used for supporting research and clean energy technology solutions.

# CONSTRUCTION

100% FDI by automatic route is allowed in construction development of the following:

- Townships
- Roads & Bridges
- Residential & Commercial premises
- Hotels & resorts
- Hospitals
- Educational institutions
- Recreational facilities
- City and regional level infrastructure.


- 100% FDI under automatic route is permitted in completed projects for operation and management of townships, malls/ shopping complexes and business centres.
- No minimum floor area or minimum capitalization requirement.



- Each phase of construction development project will be considered as a separate project for the purposes of FDI.
- **A foreign investor will be permitted to exit and repatriate foreign investment before the completion of project** under automatic route, subject to a lock-in-period of three years.
- **Lock-in period will not apply for FDI** into hotels and resorts, hospitals, SEZs, educational institutions, old age homes and NRI investments.
- FDI is not permitted in an entity which is engaged or proposes to engage in real estate business, construction of farm houses and trading in transferable development rights (TDRs).
- **Budget 2017-18:** Affordable housing will be given “infrastructure” status...enabling low-cost housing to avail associated benefits.

# TEXTILES & GARMENTS

- Textiles contribute 5% to GDP; 14% to overall Index of Industrial Production (IIP) and 15% to exports.
- 2<sup>nd</sup> largest employer after agriculture ~ employs over 45 million people directly and 60 million indirectly.
- 2<sup>nd</sup> largest producer of textiles and garments in the world.
- Availability of complete value chain – from fibre to fashion.
- 1<sup>st</sup> in global jute & cotton production; and 2<sup>nd</sup> largest producer of silk & manmade fibres.
- India accounts for almost 24% of the world's spindle capacity and 8% of global rotor capacity.
- 100% FDI allowed in Textiles.
- 60%+ of textile & garments exported to the U.S. and EU.
- India has FTA with ASEAN
- Current market size is \$127 Billion (Domestic~\$87 Billion and Exports~\$40 Billion)...expected to grow to \$223 Billion by 2021.
- Global textile/garment sourcing houses have offices in India.

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- Govt. of India approved a Rs 6,000 crore (US\$900 million) package for textiles and apparel sector with an aim to create 10 million new jobs in three years and attract investments of \$11 billion with an eye on \$30 billion in exports.
  - **Technology Upgradation Fund Scheme (TUFS):** Rolled out in Jan 2016 with a budget provision of Rs.17,822 crores (\$2.3 Billion) for the next 7 years; expected to attract an investment of Rs. 1 lakh crore (\$15 Billion) and generate 3 million jobs.
  - **Apparel and Garment Centres** set up in all the 8 North Eastern States to promote entrepreneurship in apparel manufacturing and provide employment to the local population
  - **Integrated Processing Development Scheme** rolled out to provide up to 50% assistance for Common Effluent Treatment Plants with Zero Liquid Discharge system, subject to a ceiling of Rs.75 crore; six projects sanctioned to support processing clusters.

# TEXTILE MACHINERY

- Market size for textile machinery sub-sector is Rs 12,308 crore.
- The sector has been growing at 5.1% p.a over last 3 years.
- Production, currently at Rs 6,960 Cr has grown by 9.6% p.a.
- Import constitutes a significant portion of total demand at 63%; also 35% of total production is exported.



## TECHNOLOGY GAPS IN TEXTILE MACHINERY

### WEAVING

- Shuttleless looms (rapier >400 rpm; air jet > 800 rpm; water jet > 800 rpm)

### KNITTING

- High speed circular knitting machinery (Micro -processors)
- Warp knitting

### PROCESSING

- Environmentally sustainable processing,
- High speed wide width processing and
- Special purpose processing and finishing machinery (e.g. plasma-finishing)

### INDUSTRIAL STICHING

- Hi-tech industrial stitching/sewing machinery (lockstitch, overlock, Cover stitch, bar tacking, pocket set, button holes, etc.)

# SPACE

- **ISRO:** Established in 1969, the Indian Space Research Organization is headquartered in the city of Bengaluru. Its vision is to "harness space technology for national development", while pursuing space science research and planetary exploration.
- **ANTRIX:** Is the commercial arm of ISRO and an agency for providing launch services for customer satellites, on-board ISRO's launch vehicles - Polar Satellite Launch Vehicle (PSLV) and Geo-Synchronous Satellite Launch Vehicle (GSLV).
- As on 7 Dec 2016, the **PSLV** has launched 122 satellites, ~ 43 Indian and 79 foreign.
- **15 Feb 2017:** ISRO launched a record **104 satellites** in one go using the PSLV... Of the 104 satellites, 80 belong to foreign countries, including Israel, Kazakhstan, the Netherlands, Switzerland and the US.

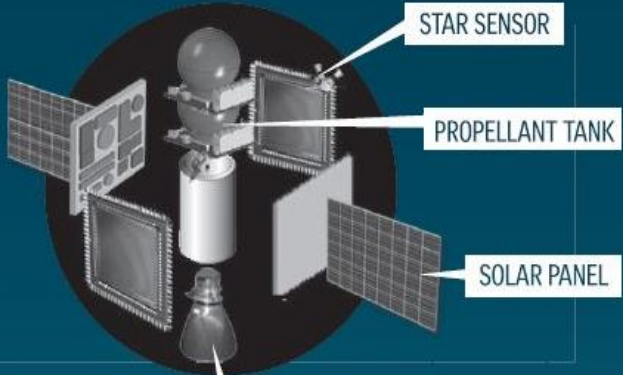


# IRNSS: INDIAN REGIONAL NAVIGATION SATELLITE SYSTEM

**7**  
SATELLITES

**3** GEOSTATIONARY  
**4** GEOSYNCHRONOUS

ORBIT ALTITUDE **36,000** KM  
COST **₹1,420** CRORES



Covers India and up to **1,500** km beyond its borders

**3** extremely accurate rubidium atomic clocks in each satellite

**GPS** receivers will not work; need special receivers (yet to be developed)

IRNSS provides Standard Positioning Service

Open to all users

Accuracy better than 20 metres



**4** satellites in geosynchronous orbit – in pairs, move in two inclined orbits – appear from ground to travel in figure '8' – assist in accurate position determination

**3** satellites in geostationary orbit – appear from ground to be at fixed positions in the sky

- **1960s:** Beginning of the Indian space program.
- **1975:** Launched 1<sup>st</sup> satellite –**ARYABHATTA**.
- **2008/09 Chandrayaan-1:** India's 1<sup>st</sup> unmanned moon mission carried the Moon Impact Probe payload and made the discovery of water on the moon.
- **2014:** 1<sup>st</sup> country to **reach Mars** in its 1<sup>st</sup> attempt.
- **2014:** Successfully tested the "**crew module**" aboard the **GSLV MK3**.
- **May 2016:** Successfully tested the Reusable Launch Vehicle-Technology Demonstrator (**RLV-TD**).
- **June 22, 2016:** ISRO launched 20 satellites in one mission.
- **Aug 2016:** ISRO successfully tested the indigenously developed **Scram Set** (or air breathing) engine.. The engine will be used to power India's Reusable Launch Vehicle at hypersonic speed.



**RLV-TD**

**April 2016:** India completed launching **7 satellites** as part of the **Indian Regional Navigation Satellite System** to offer **GPS services**.



# DEFENCE

- 4th largest defence spender @ US\$ 50.7Bn (2016-17)...estimated to reach US\$ 64Bn by 2020.
- 36% of defence spend assigned to capital acquisitions.
- Only 25% of defence equipment is manufactured in India.

## Defence Procurement Policy – DPP 2016

- Highest preference for Indigenous Designed Developed and Manufactured (IDDM) equipment.
- Sourcing Norms: 60% to be locally sourced if design not Indian; and 40% local content if design is Indian.
- Offsets policy liberalized for foreign vendors: Obligation to invest at least 30% of the contract value in India will kick in at Rs.2,000 crore, a significant increase from the (previously @ Rs.300-crore)
- Special focus on MSMEs, and on “Make in India”.
- 10% weightage for superior technology, instead of selecting the lowest bidder only in financial terms.



## Defence Production – Self reliance

- All naval ships & submarines are being built in India.
- 75% of the total acquisition orders of the Indian Army are with Indian firms.
- Examples: Tejas LCA; Naval Warships – INS Kochi & INS Kolkata; Submarine – INS Kalvari; Akash Missile System; HTT40 – Basic Trainer aircraft; Dhanush-155mm/45 calibre artillery gun system etc.

## New Defence Deals concluded:

- 36 Rafale jets – Deliveries between Sept 2019 to Apr 2022 – Provision for offsets ~50% of value.
- 2 Phalcon/IL-76 AWACS valued and 10 Heron TP UAVs.

## Domestic Players:

- Between Jan 2001 and Feb 2016, 333 industrial licences have been granted to private firms for defence manufacturing.
- Serious players such as Bharat Forge Ltd (BFL), Reliance Industries Ltd (RIL), Tata group, Larsen and Toubro Ltd (L&T), Godrej Group and the Mahindra Group have built a portfolio in electronics, land systems, aerospace products and short-range missiles.
- BFL has tied up with Rafael Advanced Defense Systems Ltd and Elbit Systems Ltd and UK-based Rolls-Royce Corp.
- Tata group has tied up with US-based firms Sikorsky Aircraft Corp., Lockheed Martin Corp. and Boeing Co.
- Reliance has tied up with the French company Thales (for underwater systems), Ukraine-based Antonov (for transport aircraft) and Israel's Rafael (for air-to-air missiles).
- Mahindra has tied up with Airbus for helicopters and UK's Ultra Electronics for underwater weapon systems.

## Indigenously developed Tejas LCA inducted into the Indian Air Force in July 2016



## Defence Export Regime:

- Requirement of End User Certificate (EUC) has been dispensed with for the export of parts, component, sub-assemblies and sub-systems;
- Issuing advance / in principle clearance for exploring business opportunities abroad.
- DRDO laboratories and test facilities of other organizations of the Ministry of Defence (MoD) are made available to the Indian Domestic Defence Industry based on their requirement and availability.
- Exports in 2015-16 reached US\$ 303Mn.



# CIVIL AVIATION

- 9<sup>th</sup> largest aviation market in the world with a market size of US\$ 16 Billion...3<sup>rd</sup> largest by 2020.
- Domestic aviation market clocked 81 million flights; a growth of over 20.3% in 2015 — the highest ever growth rate recorded in the world.
- Combined fleet size of all airlines about 430 planes...Airbus and Boeing estimate India will need 1,610 and 1,740 jets, respectively, over the next 20 years.
- Only 75 airports in the country have a scheduled airline service. There are 350 unused airstrips — reviving these airports are high on government agenda.
- Govt. is planning to invest around \$120 Billion in airport infrastructure and aviation navigation services over the next decade.

## Growth Drivers:

- Growing economy and rising disposable incomes.
- Increased competition among airlines, especially among low-cost carriers.
- Fall in prices of Aviation Turbine Fuel.
- Rise tourism flows — E-visa scheme extended to 150 countries.
- Modern airports, and greater use of technology.



## New Civil Aviation Policy 2016:

- Airlines can commence international operations provided they deploy 20 aircraft or 20% of total capacity, whichever is higher.
- Open Skies Policy for SAARC and countries beyond 5000 km from Delhi.
- Focus on Regional Connectivity.

## New Order:

- Spice Jet, India's 4<sup>th</sup> biggest airline - 13% share, is buying up to 205 Boeing planes worth \$22 Billion to fuel major expansion of its domestic operations.



### **Liberalized FDI Policy:**

- 100% FDI through automatic route in greenfield airports.
- 100% FDI in brownfield – automatic route up to 74% and government route beyond 74%.
- 49% FDI through automatic route in Scheduled Air Transport / Domestic Passenger Airline...100% for NRIs.
- 100% FDI through automatic route in non-scheduled air transport service
- 100% FDI through automatic route in Helicopter / Seaplane services.
- 100% FDI through automatic route in MRO operations, flying training institutes, and technical training institutions.
- 100% FDI through automatic route in Ground Handling Operations.

### **MRO business opportunity:**

- The Maintenance, Repair and Overhauling (MRO) business of Indian carriers is around US\$ 750Mn;
- 90% of Indian airplanes are serviced outside India – in Sri Lanka, Singapore, Malaysia, UAE etc.

### **NEW MRO POLICY:**

- Tools and tool-kits used by the MRO have been exempted from Customs and Excise duty.
- Restriction of one year for utilisation of duty free parts removed.
- Import of unserviceable parts by MROs for providing exchange / advance exchange allowed.
- Foreign aircraft brought to India for MRO work will be allowed to stay up to 6 months or as extended by the Directorate General of Civil Aviation (DGCA). The aircraft can carry passengers in the flights at the beginning and end of the stay period in India.

