Infrastructure Economics
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Module –08
Lecture - 35
Is India's Infrastructure Ready for Make in India?

In last three lectures, we have discussed about environmental issues in infrastructure development and we have also discussed that how infrastructure development can be an inclusive effort? Next few lectures, next two lecture, I think we will be discussing about how India's infrastructure is ready for Make in India or not? And, after that we will also have one more discussion on India and then, we will try to have a cross country and a comparative study of the infrastructure development between India and the world.

And before summing up, we will also try to see some of the impact of infrastructure development in other countries. So, let me begin with this infrastructure growth or infrastructure readiness for Make in India, because today lots of discussion is going on Make in India movement. Let me begin with, what we are going to basically discuss in this lecture today.

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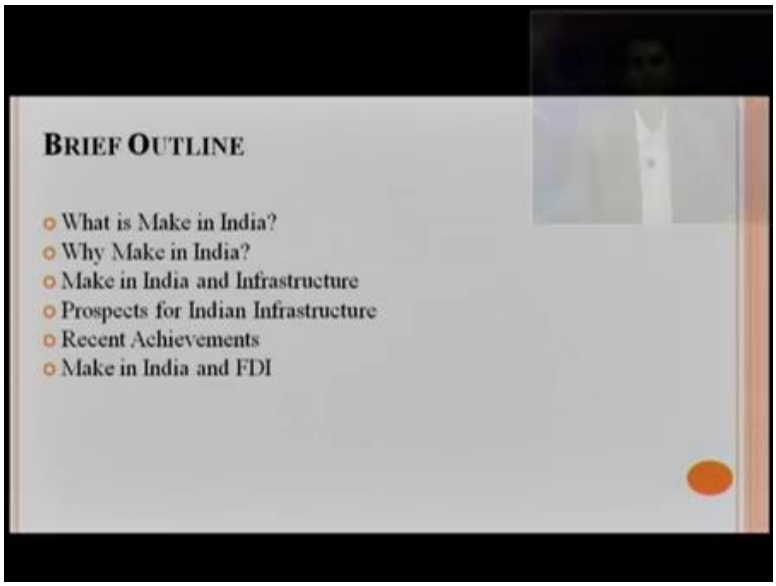

We will first discuss, what is Make in India, why Make in India and after that, the interrelationship between Make in India and the infrastructure, prospects for Indian infrastructure, recent achievements and also the link between Make in India and the FDI.

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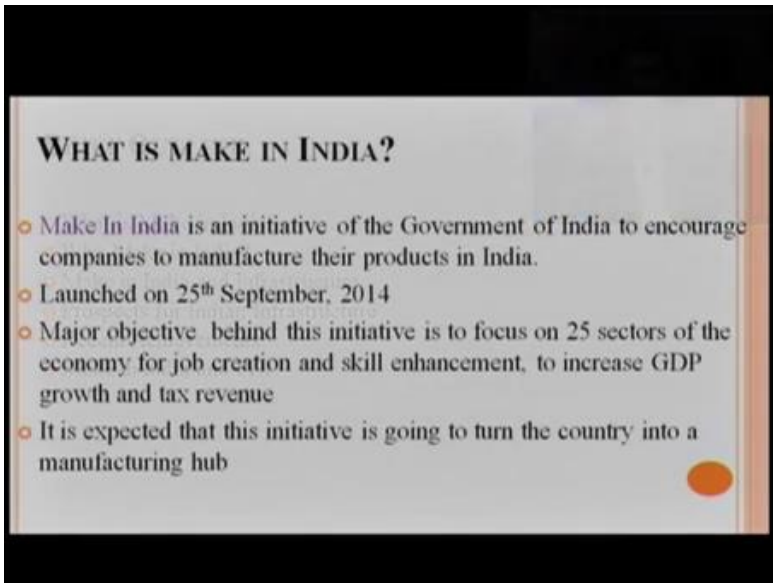

So, what is basically Make in India? It is an initiative of the government to encourage the companies to manufacture their products in India. This was launched on 25th September 2014 more recently, where the major objective was to focus on 25 sectors of the economy for job creation and skill enhancement to increase GDP growth and tax revenue. It is expected that this initiative is going to provide us an ample opportunity in terms of becoming India as one of the manufacturing hub.

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So, what are the pillars of this Make in India? There are four pillars shown in this slide. The first one is the new processes; Make in India realizes the ease of doing business as the single most important factor to promote entrepreneurship. New infrastructure, availability of modern and facilitating infrastructure, which is crucial for the growth of the industry. New sectors - Make in India has identified 25 sectors in manufacturing infrastructure and service activities. And the new mindset, the government approach will be that of a facilitator and not of a regulator. So, these are the main four pillars of Make in India. Why Make in India was one of the focus?

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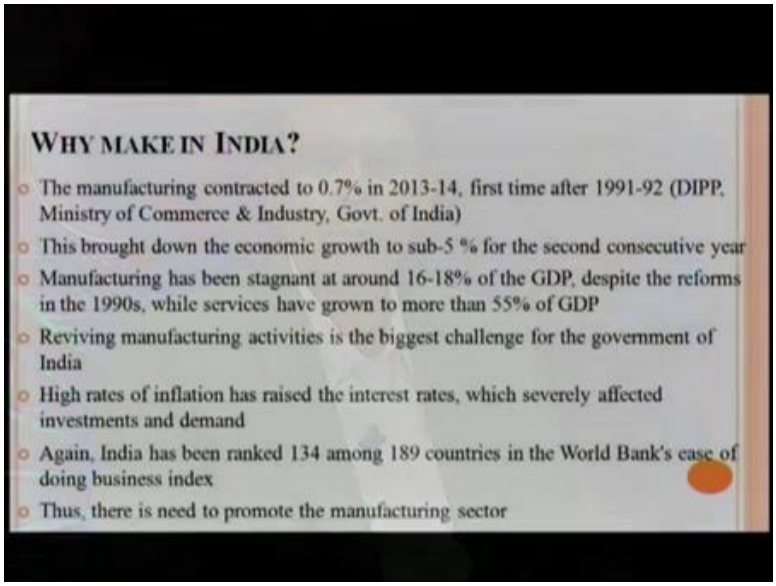

Because, the manufacturing growth effort, which was contracted to 0.7 percent in 2013-14. This is the first time after 1991-92, when we had this low level of manufacturing growth. This brought down the economic growth to sub 5 percent for the second consecutive year. Manufacturing has been stagnated around 16 to 18 percent of the GDP, despite the reforms in the 1990's. While, services has grown to more than 55 percent of the GDP and this shows that our contribution in GDP, especially the manufacturing contribution in GDP has declined, even if the economic reform process has matured enough in last 20 years.

So, this reviving manufacturing activities is one of the biggest challenges for the government of India today and the high rates of inflation has raised the interest rates, which severely affected investments and demand. Again, India has been ranked 134 among 189 countries in terms of the World Bank's ease of doing business index. So, there is a need to promote manufacturing sector and this was realized by the government of India recently before the new government has started functioning, before that also.

The previous government has also realized to promote the manufacturing sector growth and this was the constant growth contribution in our GDP. When we have seen that manufacturing is not really turning up as one of the major sector for India like other countries like China.

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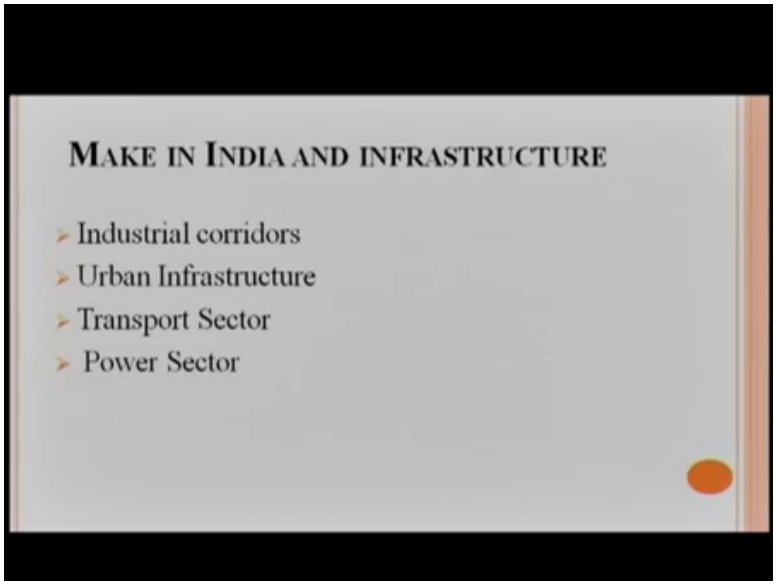

So, this Make in India and infrastructure has an important link and these important links are in terms of industrial corridors, urban infrastructure, transport sector and power sector.

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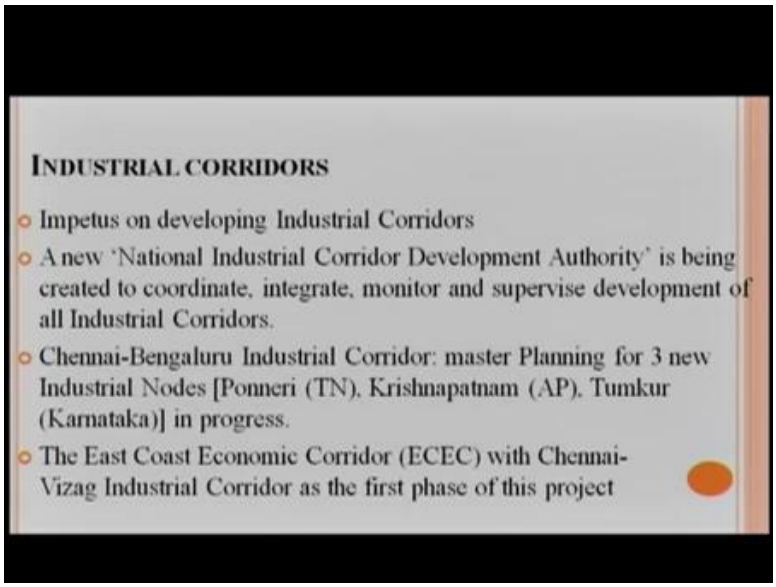

So, in industrial corridors, impetus is on developing industrial corridors, a new national industrial corridor development authority is being created to coordinate, integrate, monitor and supervise development of all industrial corridors. Chennai-Bangalore industrial corridor; master planning for three new industrial nodes and the east coast economic corridor with Chennai-Visakhapatnam industrial corridor as the first phase of this project is going on.

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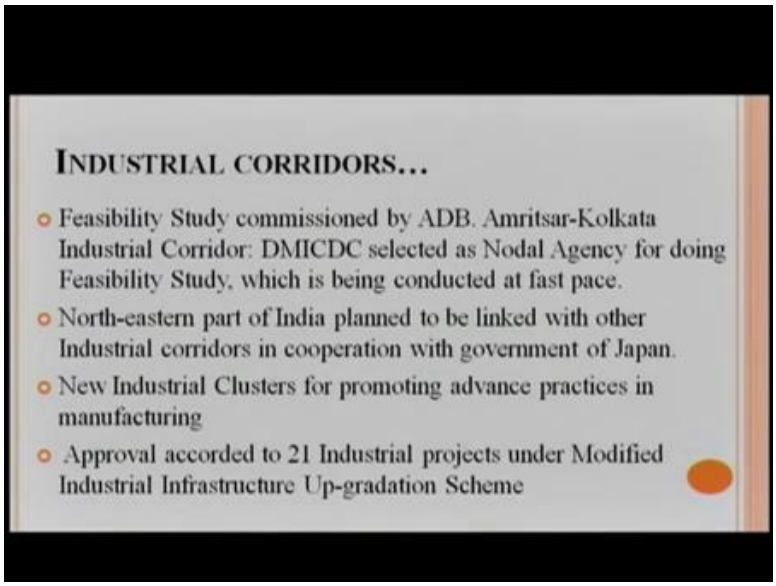

Feasibility Study Commissioned by the ADB, Amritsar-Kolkata Industrial Corridor and DMICDC selected as Nodal Agency for doing this feasibility study, which is being conducted at fast pace. North-Eastern part of India planned to be linked with other industrial corridors in cooperation with government of Japan. New Industrial Clusters for promoting advance practices in manufacturing is also one of the agenda of the government today. And, their approval accorded to 21 industrial projects under Modified Industrial Infrastructure Up-Gradation Schemes.

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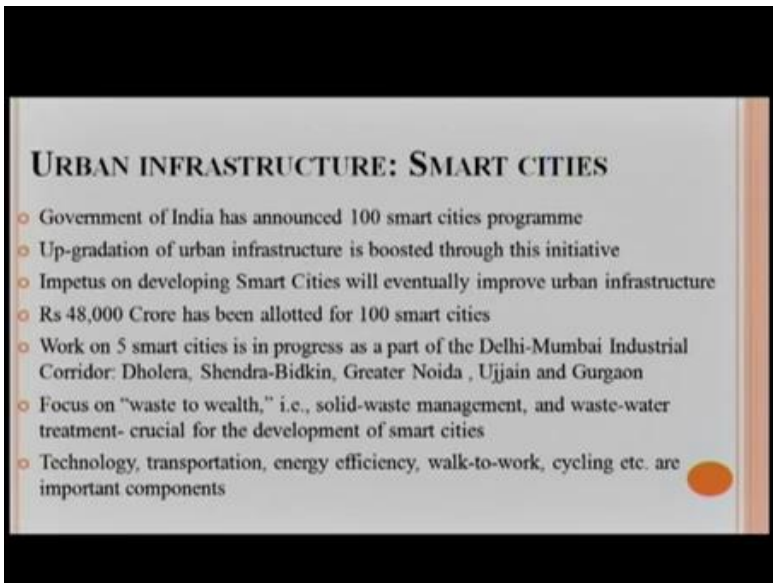

So, in terms of urban infrastructure, a smart city is also one of the most buzzing word today in India and the government of India has announced 100 smart cities programme, up-gradation and urban infrastructure is boosted through this initiative. Impetus on developing smart cities will eventually improve urban infrastructure, around rupees 48,000 crores has been allotted for 100 smart cities development.

Work on 5 smart cities in progress as a part of Delhi-Mumbai Industrial Corridor. At the same time, focus is also on waste to wealth, solid waste management, waste water treatment, crucial for the development of a smart cities. Technology, transport, energy efficiency, walk to work, cycling, etc are important components of this smart cities plan.

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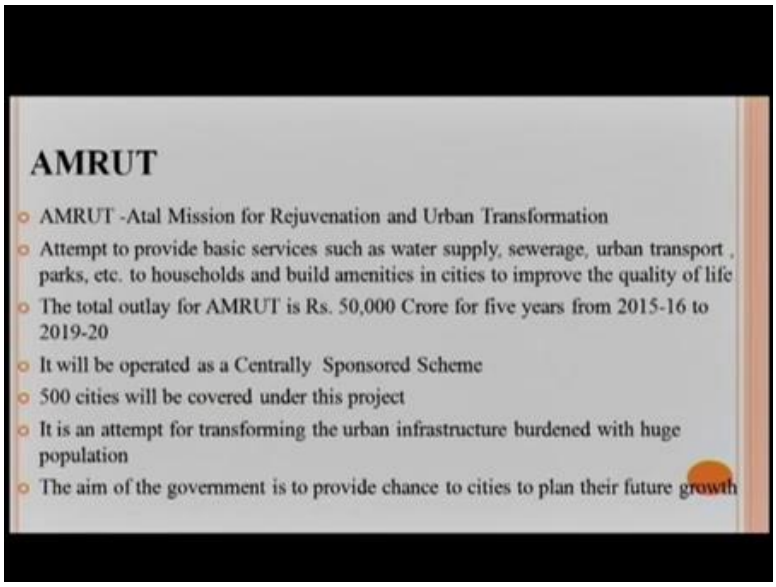

At the same time Atal Mission for Rejuvenation and Urban Transportation (AMRUT), which attempt to provide basic services such as water supply, sewerage, urban transport, parks, etcetera to households and build amenities in cities to improve the quality of life is also one of the prime task, which is underway. The total outlay for AMRUT is rupees 50,000 crores for 5 years from 2015-16 to 2019-20.

It will be operated as a centrally sponsored scheme, 500 cities will be covered under this project. It is an attempt for transforming the urban infrastructure burdened with huge population, the aim of the government is to provide chance to cities to plan their future growth.

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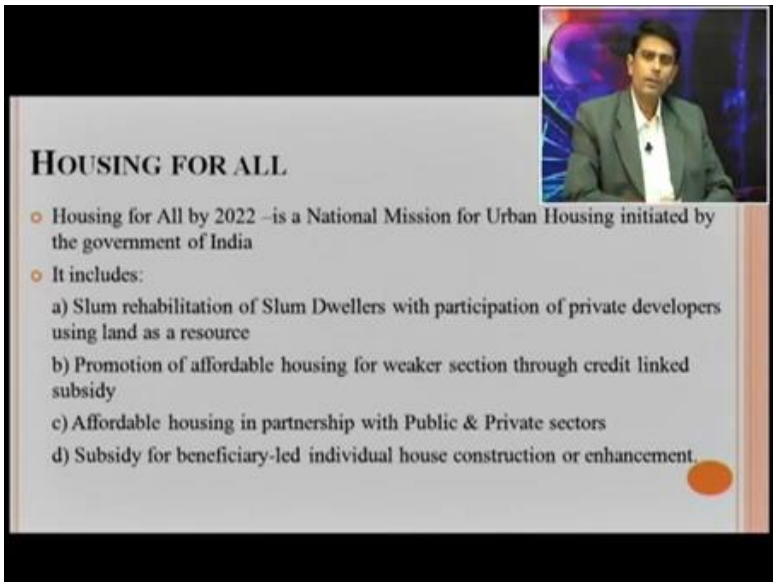

Housing for All is a National Mission for Urban Housing initiative by the government of India, which includes slum rehabilitation of slum dwellers with participation of private developers using land as a resource. Promotion of affordable housing for weaker section through credit linked subsidy, affordable housing in partnership with public private sectors and subsidy for beneficiary led individual house construction or enhancement.

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In the field of transport sector, transport sector contributes to 6 percent of country's GDP with extensive road network of 4.86 million kilometers. India stands at the second in the

world in terms of road network. Indian roads handle more than 60 percent of the freight and 90 percent of the passenger traffic. Private sector play key role in development of road infrastructure. Roads and bridges are expected to grow at CAGR of 17.4 percent during 2012 and 17.

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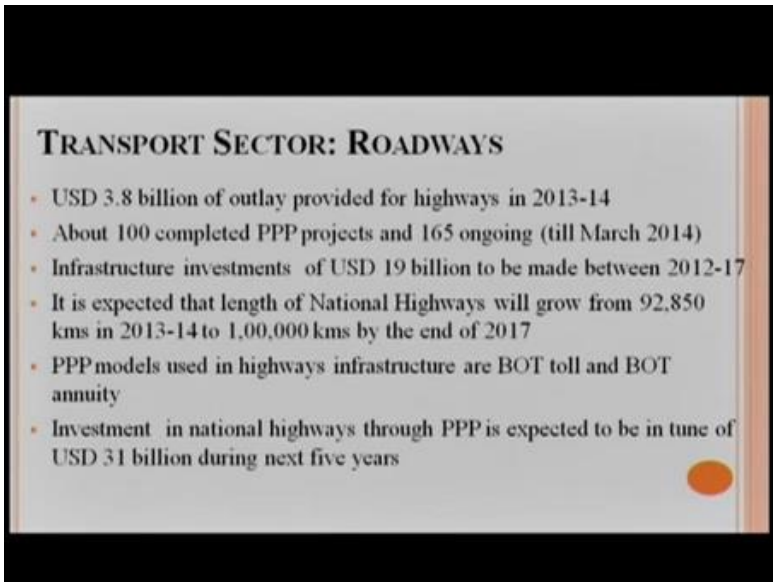

3.8 billion US dollar of outlay provided for highways in 2013-14. About 100 completed Public Private Partnership projects and 165 is ongoing till March 2014. This shows one of the major reform, which had achieved in terms of road development in India. Infrastructure investments of 19 million US dollar to be made between 2012 and 2017, it is expected that length of national highways will grow from 92,850 kilometer in 2013-14 to 1 lakhs kilometer by the end of 2017.

The public private partnership models, models used in highways infrastructure are BOT toll and BOT annuity. Investment in national highways through Public Private Partnership is expected to be in tune of USD of 31 billion during next 5 years. National Highway Development Project, a special accelerated road development program for North East Region.

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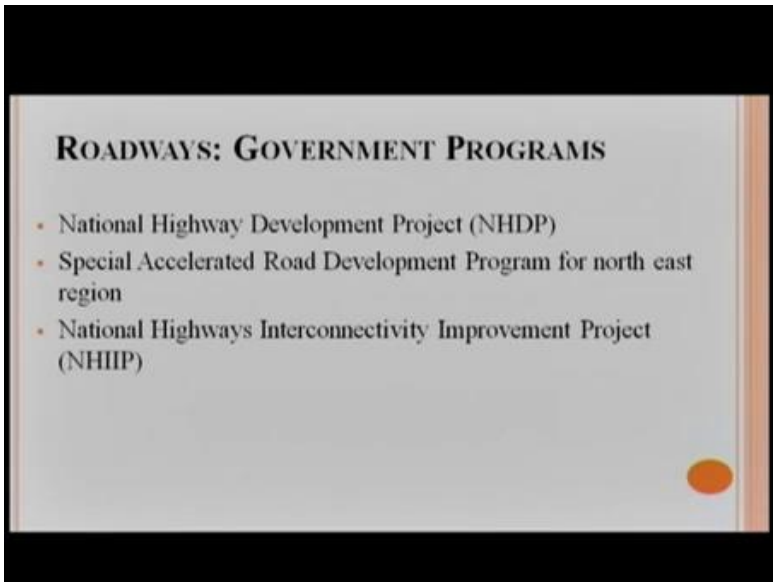

National Highway Interconnectivity Improvement Programs, projects are the government programs in the roadways.

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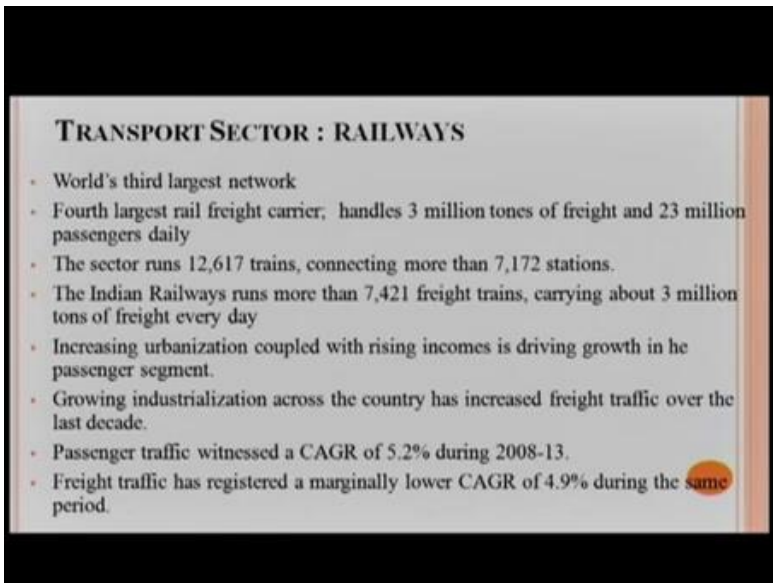

In railways, we are still the third largest network in the world, fourth largest rail freight carrier, handles 300 million tons of freight and 23 million passengers daily. This sector runs 12,617 trains connecting more than 7,172 stations. The Indian Railway runs more than 7, 421 freight trains carrying about 3 million tons of freight every day. Increasing urbanization, coupled with rising incomes is driving growth in the passenger segment.

Growing industrialization across the country has increased freight traffic over the last decade, passenger traffic witnessed 5.2 percent of CAGR during 2008-13. Freight traffic has registered a marginally lower CAGR of 4.9 during the same period.

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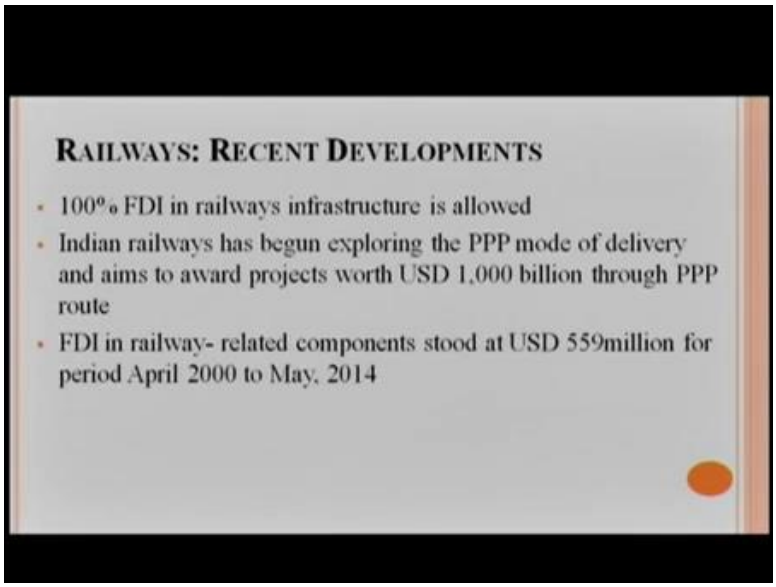

100 percent FDI in railway infrastructure is allowed, Indian railways has begun exploring the Public Private Partner mode of delivering and aims to award projects worth rupees 1,000 billion US dollars through Public Private Partnership route. FDI in railway related components stood at USD 559 million for the period of 2000 to May 2014.

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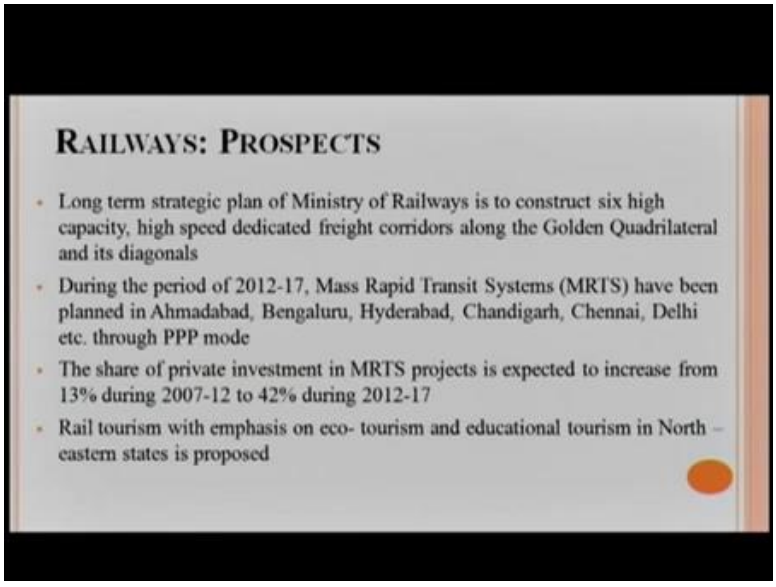

Long term strategic plan of Ministry Of Railways is to construct 6 high capacity, high speed dedicated freight corridors along the Golden Quadrilateral and its diagonals. During the period of 2012-17, mass rapid transit systems have been planned in Ahmadabad, Bangalore, Hyderabad, Chandigarh, Chennai, Delhi through Public Private Partnership mode.

The share of private investment in MRTS projects is expected to increase from 13 percent during 2007-2012 to 42 percent, during 2012-17. Rail tourism with emphasis on eco-tourism and educational tourism in North-Eastern states is also proposed.

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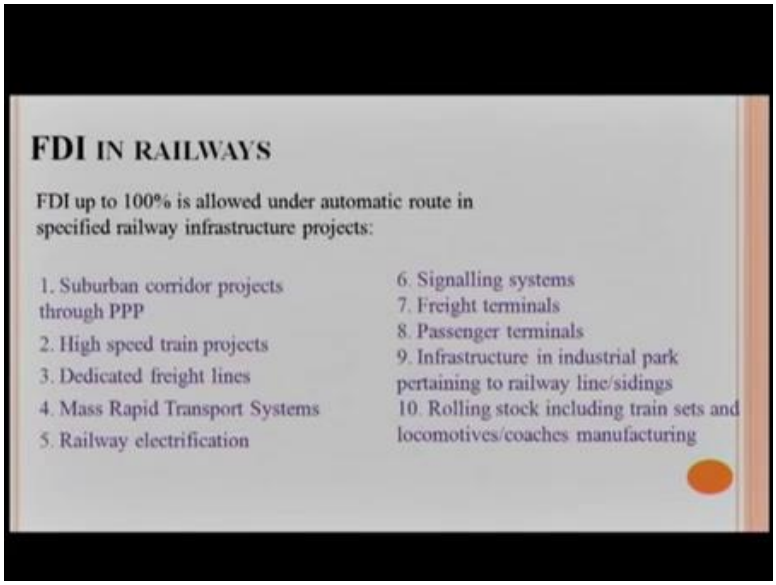

FDI in railways allowed under automatic route in a specific railway infrastructure projects, such as suburban corridor projects through PPP. High speed train projects, dedicated freight lines, mass rapid transport system, railway electrification, signaling systems, freight terminals, passenger terminals, infrastructure in industrial park pertaining to railway lines and sidings, rolling stock including train sets and locomotives coaches, manufacturing.

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In terms of civil aviation sector, India is the 9th largest civil aviation market, where 163 million passengers traveled in 2013. It is going to be the third largest available market by 2020. It is also going to add 800 aircrafts by 2020, 300 business jets, 300 small aircrafts and 250 helicopters are expected to be added to current fleet in the next 5 years. The major foreign investors are United States, Malaysia, UK, Germany, South Africa, etc.

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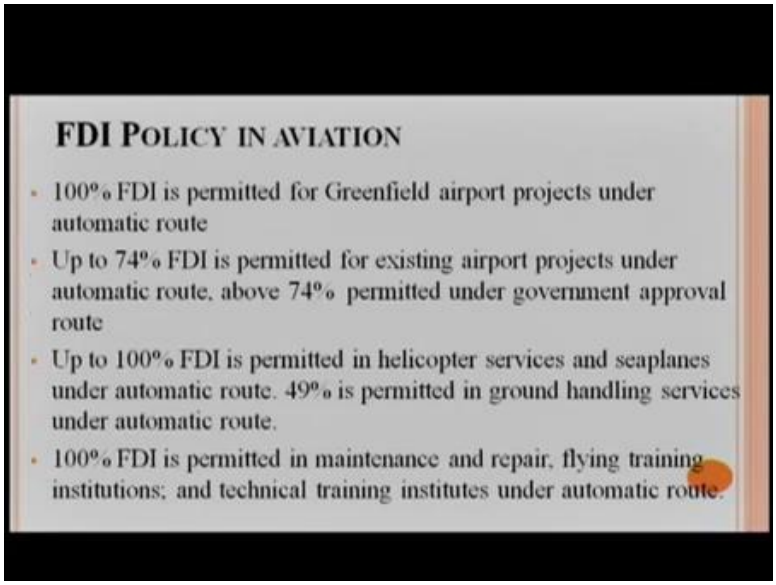

FDI policy especially in aviation sector is permitted for Greenfield airport projects under automatic route. Up to 74 percent FDI is permitted for existing airport projects under

automatic route, above 74 percent permitted under government approval route. Up to 100 percent FDI is permitted in helicopter services and seaplanes under automatic route, while 49 percent is permitted in ground handling services under automatic route. 100 percent FDI is permitted in maintenance and repair, flying training, institutions and technical training institutes under automatic route.

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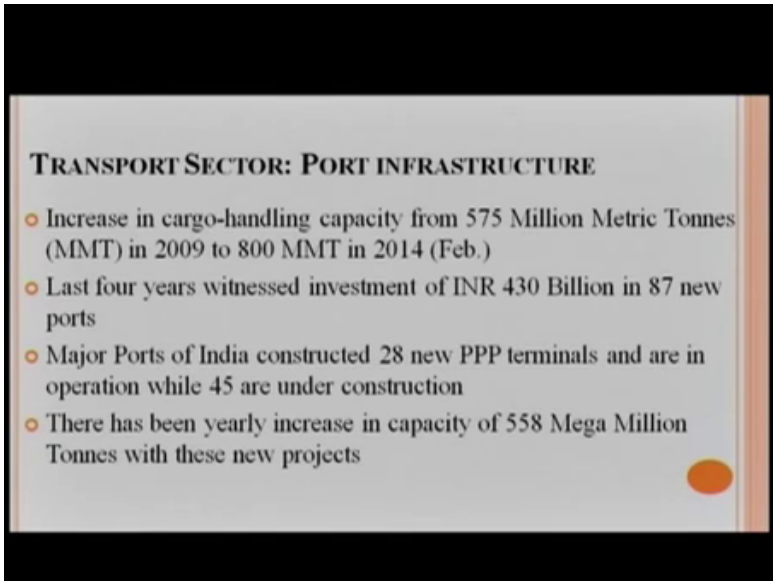

The port infrastructure, an increase in cargo-handling capacity from 570 Million Metric Tonnes in 2009 to 800 million Metric Million Tonnes in 2014 is the new and development. Last 4 years witnessed investment of 430 billion Indian rupees in 87 new ports, major ports of India constructed 28 new Public Private Partnership terminals and are in operation, while 45 are under construction. There has been yearly increase in the capacity of 558 Mega Million Tonnes with these new projects.

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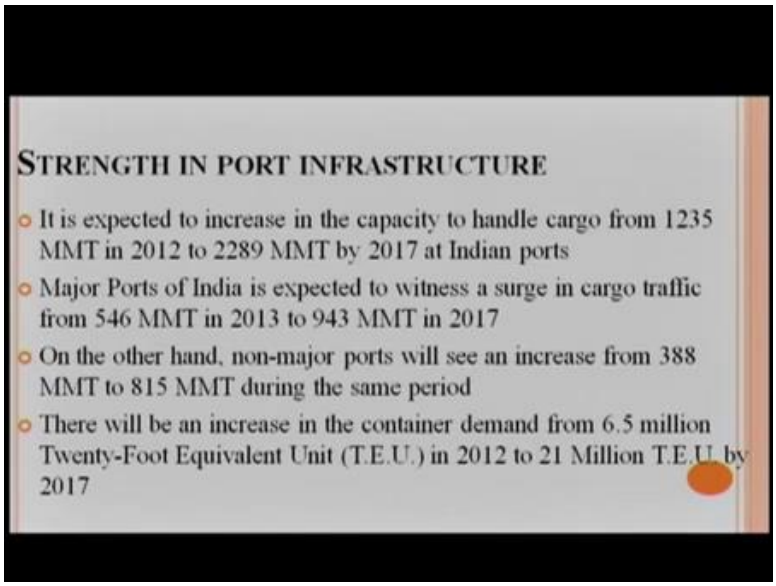

Strength in port infrastructure, it is expected to increase in the capacity to handle cargo from 1235 MMT in 2012 to 2289 MMT by 2017 at Indian ports. Major ports of India is expected to witness a surge in cargo traffic from 546 million Metric Million Tonnes in 2013 to 943 Metric Million Tonnes by 2017. And, on the other hand non-major ports will see an increase from 388 MMT to 815 MMT during the same period. There will be an increase in the container demand from 6.5 million, Twenty- Foot equivalent unit in 2012 to 21 million Twenty- Foot equivalent units by 2017.

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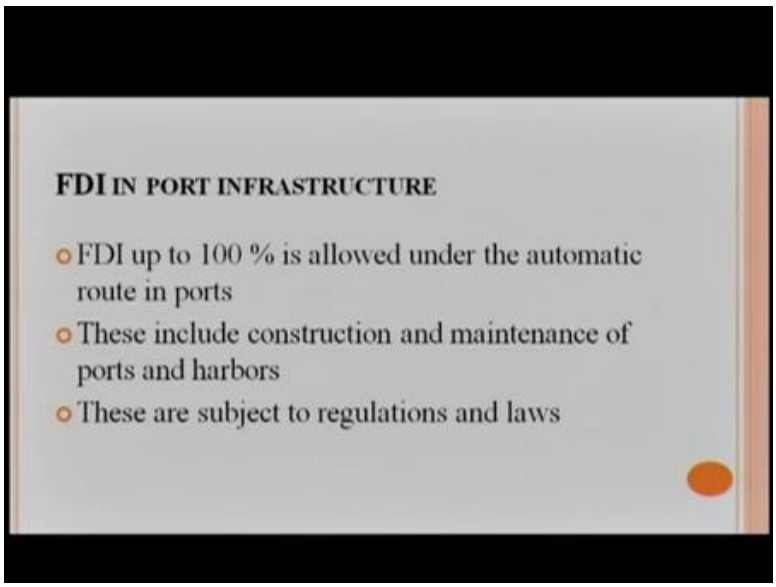

FDI up to 100 percent is again allowed under the automatic route in ports, these include construction and maintenance of ports and harbors. These are subject to the regulations and laws.

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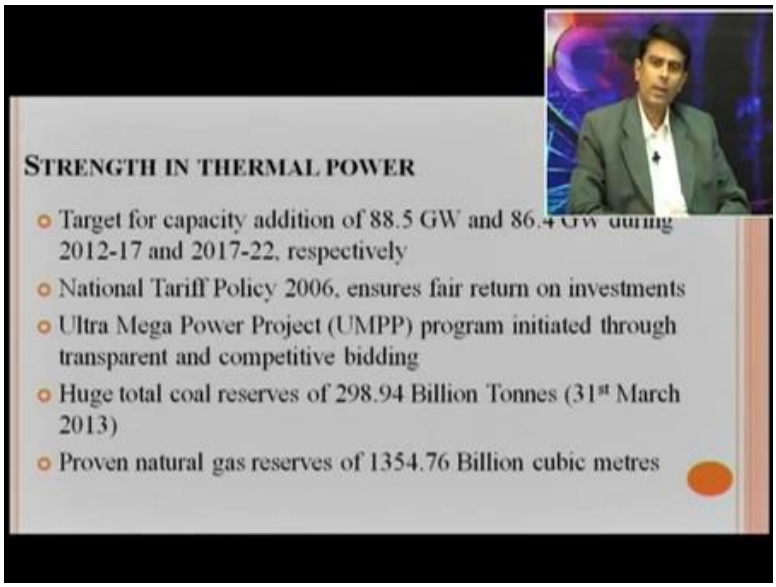

Strength in thermal power, target for capacity addition of 88.5 GW and 86.4 GW during 2012-17 and 2017-22 respectively. National Tariff Policy 2006 ensures fair return on investments, ultra mega power project, program initiated through transparent and competitive bidding, huge total coal reserves of 298.94 billion tones, which has proven natural gas reserves of 1354.76 billion cubic meters. FDI is again allowed through automatic routes except automatic energy sector, this is allowed in the following segments of the power sector:

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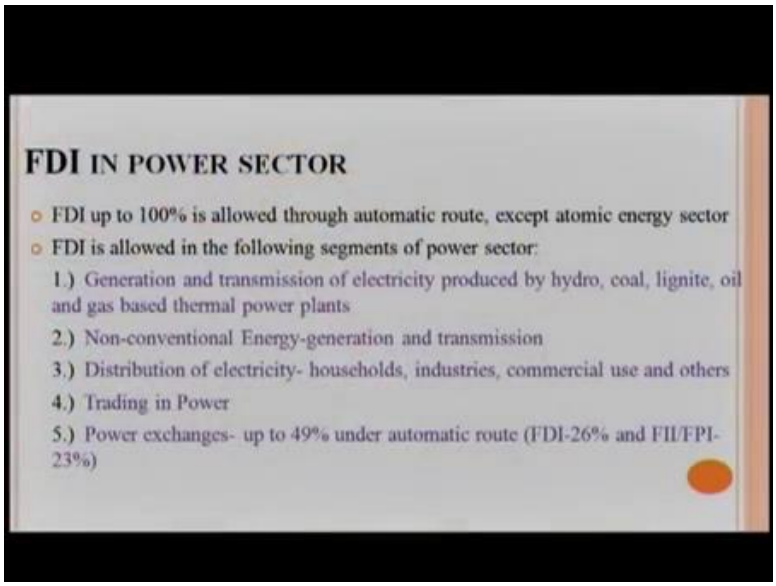

Generation and transmission of electricity produced by hydro, coal, lignite, oil and gas based thermal power plants, non-conventional energy-generation and transmission, distribution of electricity- households, industries, commercial use and others, trading in power and power exchange up to 49 percent under automatic route.

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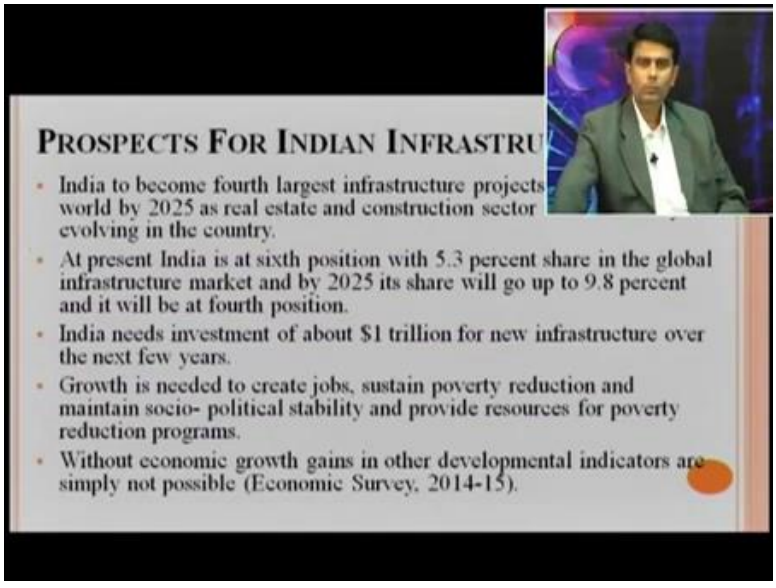

Prospects for Indian infrastructure; India to become 4th largest infrastructure projects market in the world by 2025 as real estate and construction sector is continuously evolving in the country. At present, India is at sixth position with 5.3 percent share in the

global infrastructure market and by 2025, its share will go up to 9.8 percent and it will be at 4th position.

India needs investment of about 1 trillion dollar for new infrastructure over the next few years. Growth is needed to create jobs, sustain poverty reduction and maintain socio-political stability and provide resources for poverty reduction program. Without economic growth, gains in other development indicators are simply not possible.

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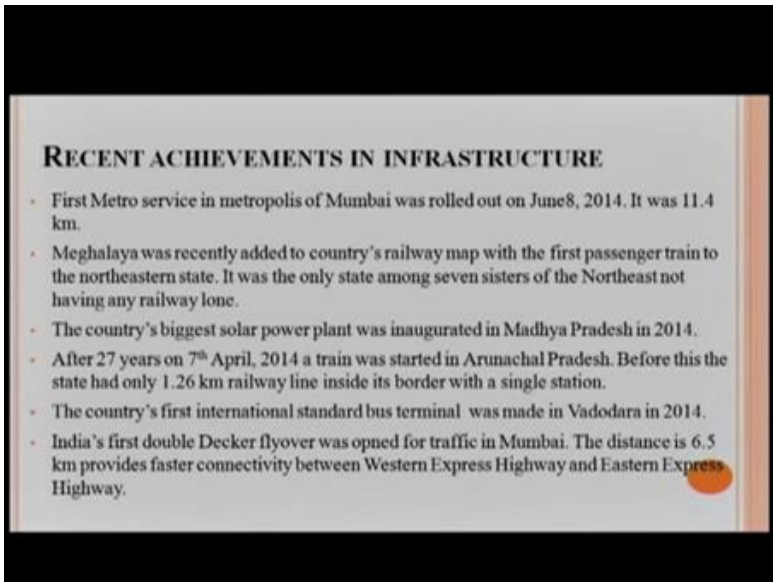

Recent achievements, if one can see here is the first metro service in metropolis of Mumbai was rolled out on June 8, 2014, it was 11.4 kilometers. Meghalaya was recently added to country's railway map, which is the first passenger train to the Northeastern state. It was the only state among seven sisters of the Northeast not having any railway line.

The country's biggest solar power plant was inaugurated in Madhya Pradesh in 2014. After 27 years on 17th April 2014, a train was started in Arunachal Pradesh. Before this the state had only 1.26 kilometer railway line inside the border with a single station. The country's first international standard bus terminal was made in Vadodara in 2014. India's first double Decker flyover was opened for traffic in Mumbai; the distance is 6.5 kilometers provided faster connectivity between Western Express Highway and Eastern Express Highway.

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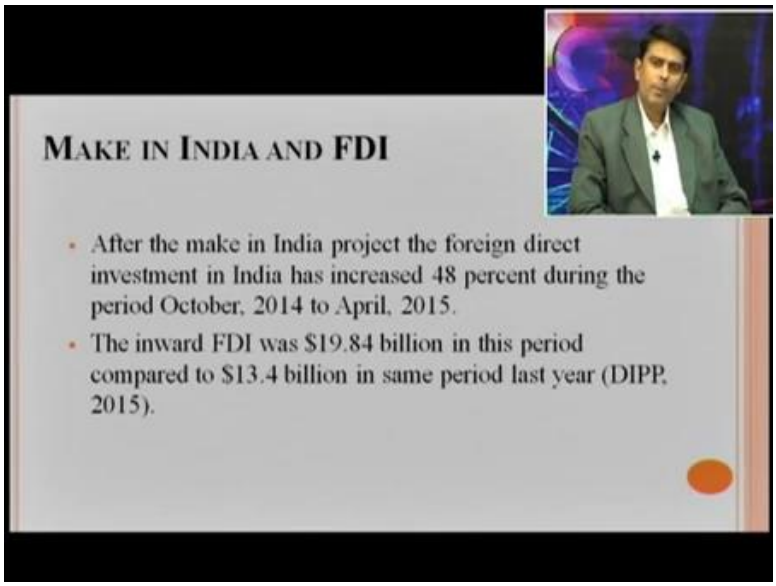

After the Make in India project, the FDI investment in India has increased 48 percent, during the period October 2014 to April, 2015. The inward FDI was 19.84 billion in this period compared to 13.4 billion in the same period last year.

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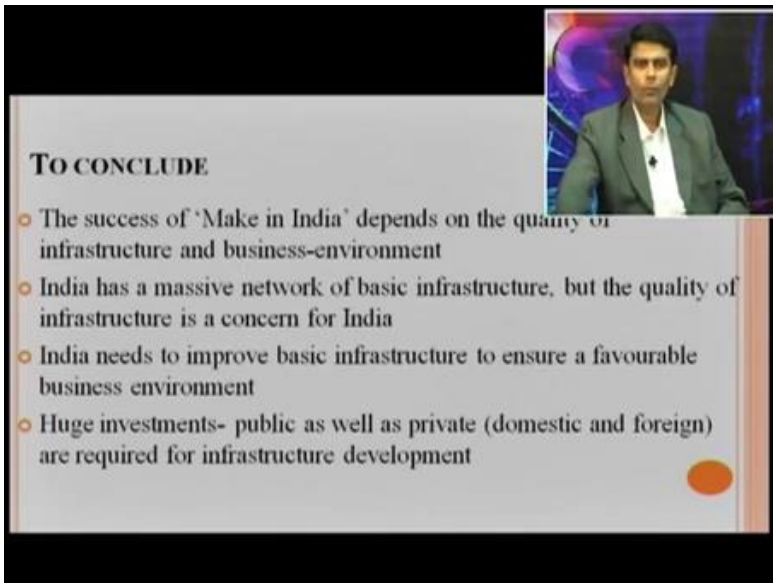

So, the success of Make in India depends on the quality of infrastructure and business-environment. India has a massive network of basic infrastructure as we have seen in the case of railway, in case of road, in case of other infrastructure.

But, the quality of infrastructure is major concern for India, because in terms of population, we are going rapidly. At the same time, urbanization is on peak and to maintain that level of demand of infrastructure, we need a huge investment in infrastructure development. As it is seen in the previous slides that we are the 4th largest infrastructure market in the world. So, India needs to improve basic infrastructure to ensure a favorable business-environment and huge investment, public as well as private investment is required for the infrastructure development today.

Thank you.