Infrastructure Economics
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Module – 04
Lecture - 13
NHAI in India: A Case Study

Our new discussion on a National Highway Authority of India as a part of the case study, which will focus on how, in a very short period national high way authority of India has a contribution in India's road construction development. In our pervious presentation on Enron, we have seen that how the FDI in power sector was not in a position to provide us a better result and how the project was basically delayed and how the project was basically unfinished.

But, this particular presentation is giving you some idea that how authority… national high way authority of India has proved that even after different challenges, which India is facing today in terms of infrastructure development, there are certain achievements. We are going to learn those achievements and we are going to discuss certain issues which still exist and because of that NHAI is also facing certain challenges.

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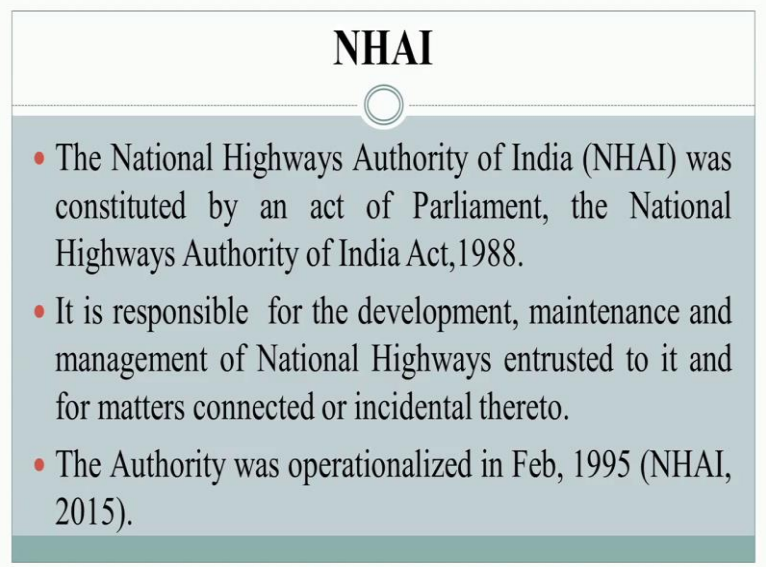

Let me begin with the introduction to the National Highway Authority of India. The National Highway Authority of India was constituted by an act of parliament, which is

named as the National Highway Authority of India act 1998. It is responsible for the development, maintenance, and the management of national highways. And the authority was operationalized in February 1995. One can also find out that there is a similarity in terms of operationalization of this particular act which was 1995 and that is the period of India's post-economic reform period.

Enron was also the case of India's post-economic reform initiative but at same time this project, this particular example is also… this particular case study is also one of the case studies which highlights the India's initiative. Especially in infrastructure development in the post-economic reform era.

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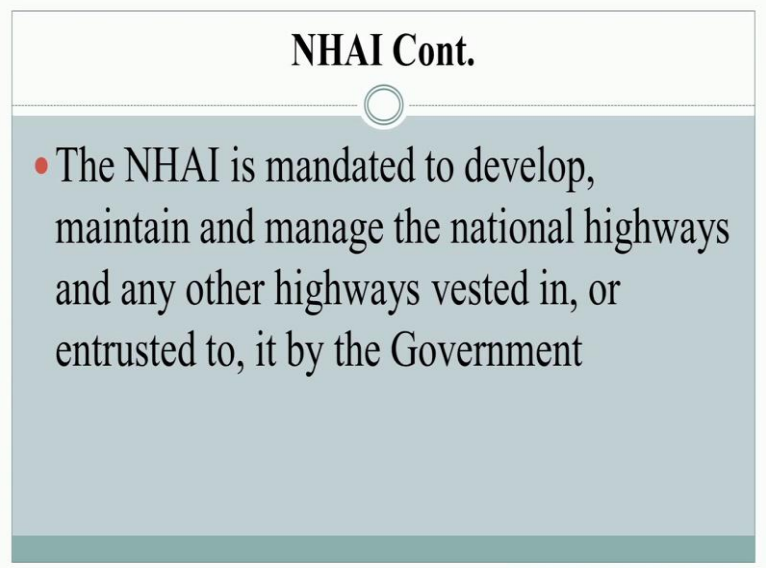

As we have discussed that this particular national highway authority of India is mandated to develop and maintain and manage the national highways and any other highways vested in or entrusted to it by the government. So the countries in turn highways are basically under the umbrella of NHAI.

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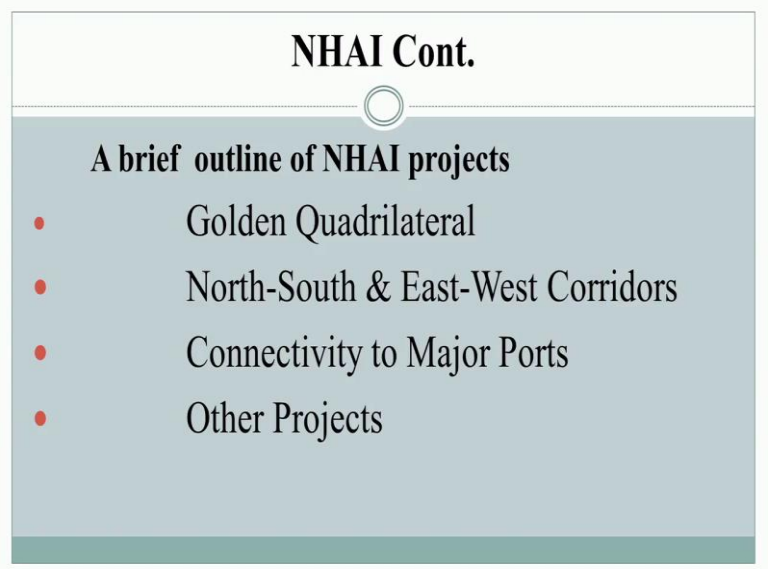

And a brief outline of NHAI projects may be seen in four different points. One is the golden quadrilateral, second is the North South and East West Corridors, third is the connectivity to major ports and the forth is the other smaller projects.

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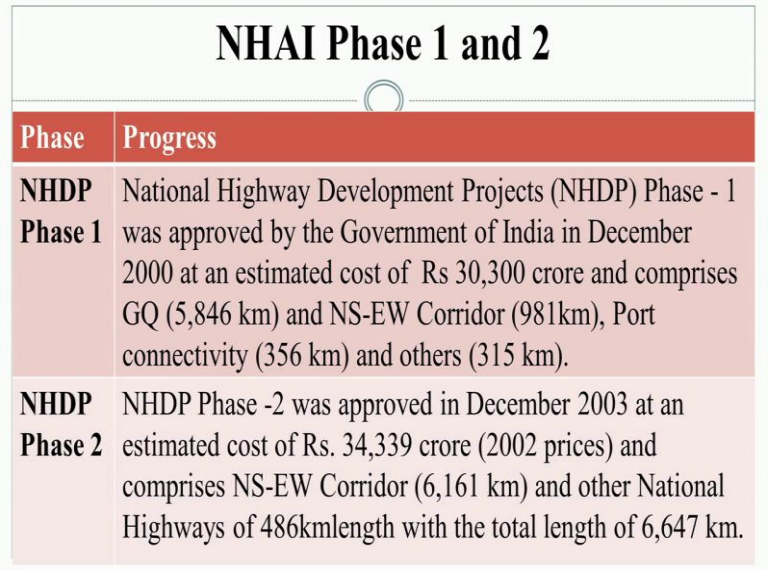

The National Highway Development Projects Phase 1 was approved by the Government of India in December 2000 at an estimated cost of rupees 30,300 crore, which comprises golden quadrilaterals which is 5,846 kilometer; North-South and East-West corridor - 981 kilometer; port connectivity which is 356 kilometer; and others 315 kilometer. That

was basically the phase 1 of national highway development projects, which was approved by the government in 2000.

The National Highway Development Projects Phase 2 was approved in the December 2003 at an estimated cost of 34,339 crore and which comprises North-South and East-West corridor that was 6,161 kilometer and other national highways of 486 kilo meter length with the total length of 6,647 kilometer.

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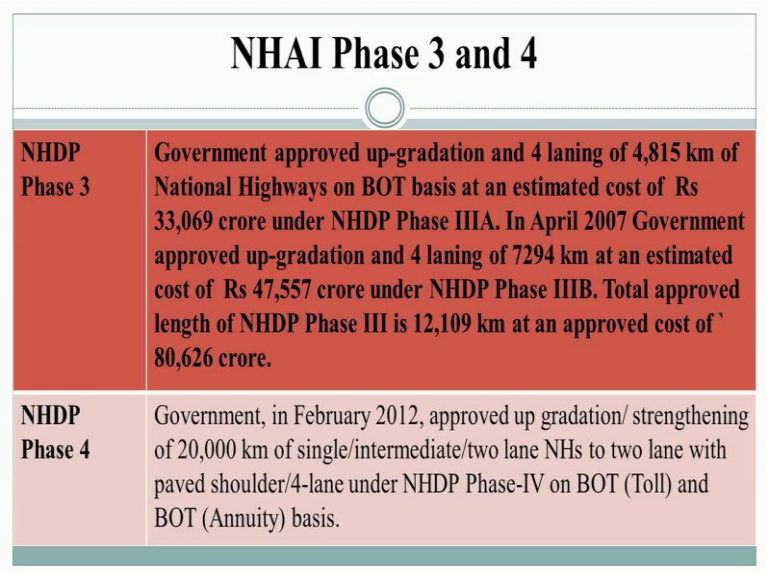

So, in phase 3 and 4 we can also see here the government approved up gradation and 4 laning of 4,815 kilometers of national highways on build operate transfer basis as one of the methodology of public private partnership that we will also learn in the discussion on the matters of infrastructure development in detail. But national highways on build operate transfer basis which was having an estimated cost of rupees 33,069 crore under National Highway Development Project Phase III A.

In April 2007, government approved upgradation and 4 laning of 7,294 crore at an again estimated cost of 47,556 crore under the National Highway Development Program Phase III B. So, the total approved length of NHDP phase III is 12,109 kilometer at an approved cost of 80,626 crore. In phase IV of National Highway Development Program, the government in February 2012 approved upgradation, strengthening of two length national highways with 4 lane under NHDP phase 4 on the method of build operate and raising the tool and build operate immunity basis. So, in NHAI phase 5, 6 and 7 we are

finding again that government in October 2006 approved 6 laning of 6,500 kilometer of existing 4 lane highways.

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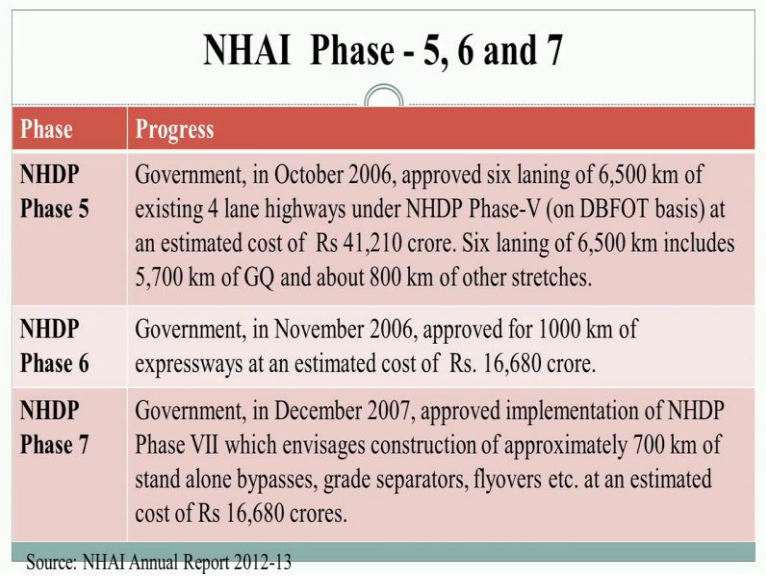

And under NHDP V at an estimated cost of 41,210 crore rupees 6 laning of 6500 crore which includes 5,700 kilometer of golden quadrilateral and about 800 kilometer of other stretches. In National Highway Development Program Phase VI, government in November 2006 approved for 1000 kilometer of expressway at an estimated cost of rupees 16,680 crore. In National Highway Development phase 7, government in December 2007 approved implementation of NHDP phase 2 which has the construction of approximately 700 kilometer of a state alone bypass, grade separators, flyovers etcetera at an estimated cost of 16,680 crore.

So, let me also see the estimates of the national highway authority of India, we have seen in different phase there are certain targets for the national highway authority of India in terms of a golden quardilateral which was basically the early phase initiative.

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Early Phase Achievements of NHAI

Projects	Total Length (kms)	4/6 Lane Completed	Under Implementation
Golden Quadrilateral	5,846	5,846	0
North-South & East West	7,142	6,134	636
Port Connectivity & Other Projects	1,770	1,438	312
NHDP Phase 3	12,109	5,292	5,132

The total length which was 5,846 kilometers, NHAI has completed 4,846 kilometer and there is no under implementation targets right now. In case of North-South and East-West kilometer length is 7,142 kilo meters out of which 6,134 kilo meter has been achieved and 636 kilo meter is under implementation. Port connectivity and other projects 1,770 was the target and the achieved target is 1,438 kilometer. 312 kilometer is under implementation. In National Highway Development Program Phase 3, the total length was 12,109 kilometer, at the same time 5,292 kilometer is completed, 5,132 is under implementation.

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Achievements in Phase 4 and 5

Projects	Total Length (kms)	4/6 Lane Completed	Under Implementation
NHDP Phase 4	20,000 (14799 with NHAI)	172	3,956
NHDP Phase 5	6,500	1,496	2,584

In phase IV, 20,000 length was the target out of which 172 kilometer is achieved. But, another 3,956 is under implementation. Out of this 20,000 total length 14,799 was with NHAI and rest of the project is with other agencies. National Highway Development Program Phase 5 had 6,500 total length, out of which 1,496 is completed and 2,584 is a under implementation.

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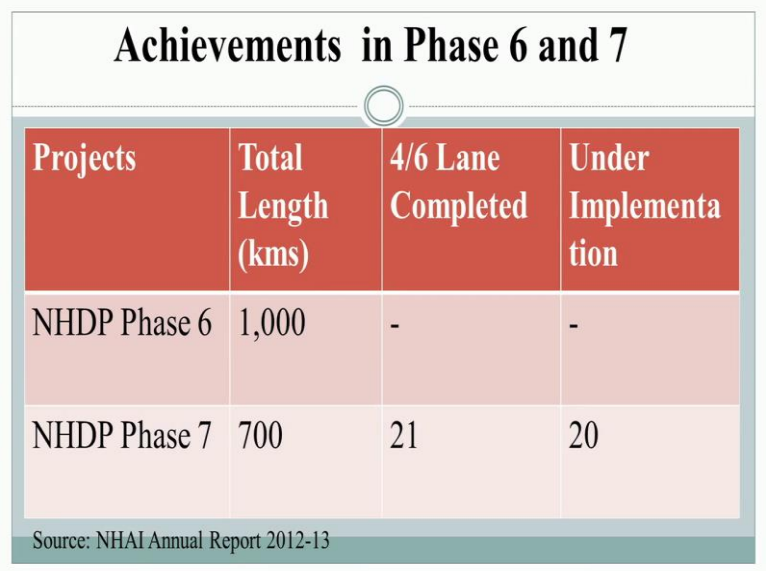

In NHDP phase 6, 1000 was the target and we do not have a statistics of completed kilo meters and this particular phase, while in phase 7 we have 700 kilo meter as the target, out of which only 21 was completed and 20 was under implementation.

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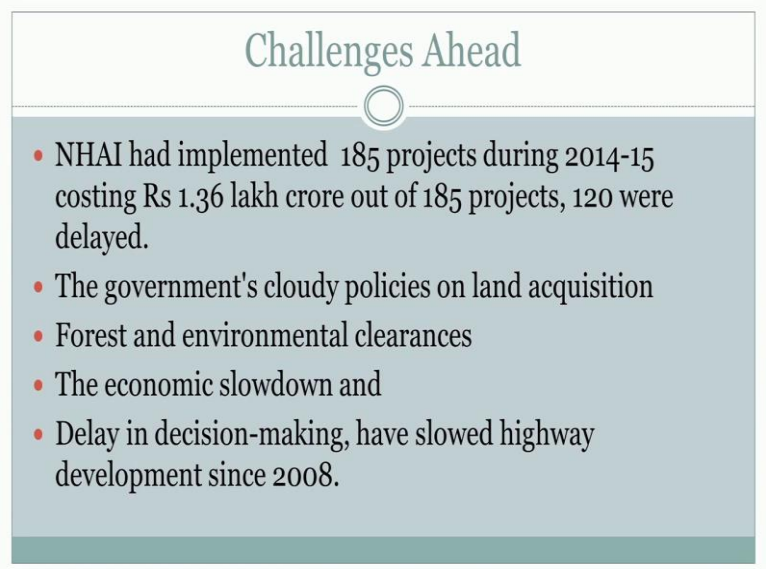

So, in phase VI and VII we are finding even in phase… in last 2-3 phases we are finding that the speed of finishing the targets are less compare to the previous phase of NHAI. Here you can see in phase IV also, also in phase 5 the length completed is not as per the target set. In phase VI also and VII also, we are finding that the completed lane is not as per the target fixed. So, there are certain challenges which NHAI is facing today. During 2014 and 2015 alone we are finding that NHAI had implemented 186 projects, out of which one out of 185 projects only 120 projects were out of this particular 185 projects, 120 were delete.

And that shows that the completion of project is one of the bigger challenge in these days and when we are finding what are the major causes, major issues for this delay and these particular problems. We are finding that one of the first important challenge which India is facing, especially in road construction sector, is the government's policies… cloudy polices on land acquisition. One cannot really forget to discuss here the recent controversy on the land acquisition act which is being discussed in the parliament.

And how again this land acquisition act is one of the most controversial topic today in India. And where we are finding that there are two different opinions and two different group one who supports the land acquisition at any cost, because infrastructure development is the prime concern for this country at this moment. At the same time we

are also finding that there are another group and they really approach this land acquisition in the name of farmers, in the name of poor people.

And the land is a still considered as one of the source of livelihood and it is also true that majority of the work force is still dependent on the farming as livelihood in India. Around 52 percent population is still dependent on the farming activity. That is the source of livelihood for them. So, we cannot really… India which has not really shifted the majority of the work force from the primary sector to the industrial sector because India has not really achieved a better infrastructure or better industrial conditions in last 40 years.

India has not industrialized in the way like the smaller countries, newly industrialized countries, which was discussed in last few lectures that how some of the industrialized smaller countries are really industrialized their production while the India having the big population depended only on the agriculture and land activity is still continuing with the majority… chunk of the population dependent on one sector and that is the primary sector.

So, when we are not in the position… when we have not really most our work force from the agriculture sector to the industrial sector and we do find out that there is a small fraction of the work force which has some employment in the service sector. But as we have knowing the fact that is service sector is not a sector where everybody will get the employment. Because service sector employment is dependent on certain skills and opportunity to get the job in service sector is limited compared to the opportunity to get the job in industrial sector, because industrial sector requires more worker than the service sector.

So, country like India, Brazil, Pakistan and many other Asian economies today they all are finding their ways to shift their work force from agriculture to the industrial sector. Vietnam had some good result. Other East Asian countries are having some good result. In India also we have industrialization in some states. But, not in all states and where we have industrialization we are finding that workers' mobility from agriculture to industries is very high.

But where we are not finding industrialization… in the states where we are not finding industrialization on a very speedy level, there we are finding that workers are basically in

the disguised unemployment condition and where ever they are having any opportunity to move they are really moving out from agriculture to specific employment in some urban area and they do not want to either leave the agriculture, they do not want to really continue with the urban employment, because even if they are migrating the cost of living in certain urban area is very high.

So during the cultivation and during the crop cutting they do try to come to the rural area and when the crop and other things are over then they again go back to the industrial or service or the town for further employment. So the mobility is not restricted in the areas where they have their families and where they have their village. India is not in the position to really control this big population of labor and ultimately their productivity, their contribution is a subject to the consideration. Because they are really in the position to produce something, but in absence of the proper growth of the manufacturing sector, the government policy is not really allowing them to continue in some other sector. Because the FDI conditions are not really supportive to the new manufacturing activities. Comparatively we are… India is match better compared to the past, but at same time the freedom of the investors are again the matter of a more political debate.

And when we see land acquisition act is a controversial act and where the government policy is not really… and the government and the political parties are not really clear that what type of action India should do to attract foreign investors and how India can achieve the new targets in infrastructure development. We do consider here that it is not basically the failure of this particular act, but it is the failure of the India's fast development which has not allowed the industrialization on a very fast speed. We were completely adopted the inward looking model, import substitution model.

And for many years India continued with that model and that has left many industrialist to find out new destinations outside India and even the outside investors were not really interested to join Indian market. So this has basically made India a completely non-industrializing economy compared to the economy which had very fast growth of industrialization during the same period of time when we were not having industrialization on the faster speed.

So, that is one of the challenge for the… especially for this particular sector, where we are finding that land acquisition became very controversial today. Because majority of

the farmers they find their hope, their identity, their job, their employment related to the land. And how long a country will only depend on this particular primary activities, one has to really think that there should be many other parallel activities in the economy and this cannot be possible without a fast infrastructure growth.

So there is a need to… especially at this juncture for a proper understanding on the land acquisition and land acquisition act should not really favor the industrialist. I am also in the opinion that or any student of infrastructure economics will be in the opinion that land acquisition act is not really the matter of favor for only and only the industrialist. But at the same time, without providing them an opportunity to get certain profit, get certain return it is also difficult to tap their investing capacity.

So, India is a very… at this juncture India is one of the country, where the investors are really looking for. But at the same time, with the controversial act like land acquisition act and the controversy surrounded with this debate, we are not in the position to convince the world community that yes, this is the destination where you can come. So, the 'Make in India' slogan if it is not really supported by the different act or a bunch of act, then manufactures are not really looking for how Indian labor is cheap. But they are also looking that how any project will be completed in time and infrastructure projects specially the road is the life line. It is one of the major tool to attract other infrastructure investment and other manufacturing investment. Because it reduces road and transport… reduces the cost of production that is well stabilized by many people… many economists in the world today. At the same time these roads and construction activities, especially express highways and highways, they also need the clear and from the forest and environment department today and getting the approval from the forest and environment department is another one of the challenge for the national highway authority in India today.

And this particular challenge with the global financial crisis which was started in the world… this has really slowing down the investment potentials also in many developing countries. So, delay in decision making by the government at the state level or at the central government level is seen in India and this is not only the case in India, but also in many developing country, where government policies are not really clear that what will happen to this particular project.

And land acquisition is controversial in all developing economies, because developing economies has not moved their workers for finding a job outside the elite and primary sector. In absence of the industrial development… industrial growth, this is one of the major challenge, where one cannot really grab the land without giving them compensation or outside this compensation they are… farmers and workers are also looking for some other opportunity, some other venues in terms of employment.

The moment government and the policy makers are in the position to convince them that this particular land acquisition act is going to give you certain return I do not think that farmers… because majority of the farmers are the marginal farmers in India and they are having very small size of the land holdings. So, that small size of the holdings basically makes them very uncertain about what has to be done and how they will continue with their livelihood and what will be their employment pattern.

So, these challenges are one of the major challenges for the NHAI in the current age and because of that reason around 60 percent to 70 percent of the projects are basically delayed and this is one of the major challenge for the road construction.

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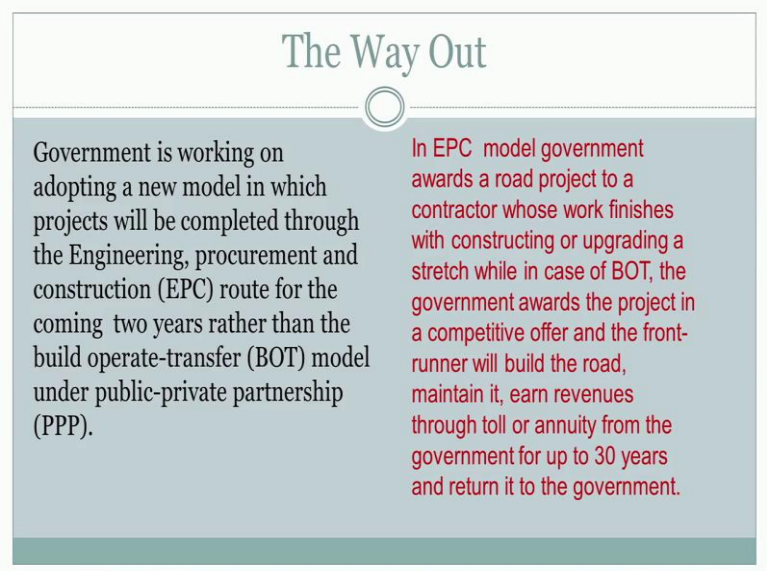

One of the way out which government is thinking today is basically working on a new model of infrastructure development, especially road construction activity. And that model is the engineering, procurement and construction root for the coming two years rather than the build operate transfer model. So, in this particular model engineering,

procurement and construction model, government awards a road project to a contractor whose work finishes with a constricting or upgrading at a stretch.

While in case of a build operate transfer, the government awards the project in a competitive offer and the front runner will basically build the load or the maintain the world and it earns revenue through toll from the government for up to 30 years and return it to the government. So, compared to BOT, when government is looking for this engineering, procurement and construction model that may be also one of the way to have the fast completion of the projects.

And to really attract more private partners, because in case of BOT for 30 years they are engaged and in case of EPC they are not engaged for 30 years, but they must be engaged for a very short span of time. But apart from this difference in the public private partners it model, the challenges which we have discussed the challenges of land acquisition or the challenges of getting the approval from the forest or environment ministry.

At the same time the challenges, which is well connected today with the global crises such as the financial crises and other crises are going to really hamper the road construction projects in India. And this particular case study of National Highway Authority of India proves that India has achieved, NHAI has achieved certain targets in last few years. But at the same time especially in early phase NHAI has achieved much bigger targets.

But in the next phase of the development we are finding that majority of the projects or delayed and it is not delayed just because of the PPP model. But this is also delayed because of the political interference, because of the environmental issues and because of other global issues related to the infrastructure development. I hope this presentation gives you an idea that how India has improved its road construction and upgradation and maintenance in last few years, but at the same time this presentation will also give us some idea that how there are certain challenge on the road of road construction.

Thank you.