



Amitabh Kant CEO, NITI Ayog

Thank you for that introduction, greatly appreciated. Chairman Railway Board, Mr Suneet Sharma, my distinguished colleague Mr D S Mishra, Mr Lohia, ladies and gentlemen. This is a very unique effort by IRSDC to have this webinar on codes for station redevelopment and I would first like to congratulate IRSDC on this initiative. My view always has been that redevelopment of railway stations provides us a unique opportunity not merely to redevelop railway stations but to completely reshape the nature of urbanisation in India, also to give the development of India a completely new framework because by doing this it is possible to create world-class urban spaces to provide state-of-the-art facilities in a very integrated manner. And, this can have a huge multiplier impact on the socio-economic development of the entire region and the entire city itself. And actually, railways can become the key driver of India's economic growth. So, this is not about railway station development. This is about India's development. This is about a new strategy form urbanisation, this is about creating new world-class urban spaces. I would like to say that the government of India, particularly the Hon'ble Prime Minister himself is personally committed to the development of the railway stations and expressed his views on several occasions and several review meetings I have been associated with over the last five years. And, in several meetings, he emphasised how important it is to give a new shape to the development of Indian railway stations. And, we have been working, both Mr Mishra and I have been working with the railway board on a

mission mode to rollout station redevelopment projects and ensure that these are truly world-class in nature. I have been fortunate to see some of the world-class railway stations particularly the Berlin Railway station. Berlin railway station redevelopment shows you that you can do integrated development because that's the point where buses, metros, trains, shopping, hotel, everything connects the entire city at the railway station. The Berlin railway station is much more important to the city than the airport and this is because of its integrated nature of development and its conversions with all forms of transport and the wide number of footfalls that it has. And, our attempt to this development has been that, we should try and integrate and converse. And, I am truly delighted that in this series of systematic and scientific initiatives, Indian Railways through IRSDC has formulated a comprehensive set of handbooks, guidebooks, and codes for stations redevelopment including commercial development on railway land. And, this is the key because wherever new railway station development has taken place there has been commercial development. And it has ensured that you have greater footfalls in the area. The multiplier impact of that is the economic activity, and railway stations become a viable commercial activity. I would also like to congratulate the railways and the IRSDC for this path-breaking initiative towards systematic and scientific standardisation of design and implementation process. This is very important because otherwise everybody will go their way and not follow standard design processes. And, this will in fact help us to fast track the design and redevelopment process with ample potential for customisation and innovation. Innovation is a necessity but it should be within a broad framework. Actually, these models embody the true spirit of Atm Nirbhar Bharat driven by the Hon'ble Prime Minister. Because, they adopt sustainable planning techniques and sustainability as the key. I believe that work towards it is very



important. And sustainability will be possible by emphasizing on renewable energy solutions and digital technologies in the planning and implementation of station redevelopment projects. Once Indian Railways does it, this will become a model for the rest of the world and, therefore leveraging on the key principles of sustainability, innovation, and transit-oriented development, passenger delight. These form-based codes will be imperative for the futuristic and holistic development of world-class urban spaces because the future of good urbanisation has to be around transit-oriented development. All development must revolve around transit-oriented development. And, we from NITI Ayog have been encouraging governments, agencies and civil society to ensure that future's Indian cities prioritise deeper involvement of economy and healthy living. And these guidebooks and codes present an opportunity to implement these principles; in fact, this is a huge opportunity for Indian railways. If Indian Railways gets its rise and is able to drive this process to add close to 2% to Indian railways. If Indian Railways gets its rise and is able to drive this process to add close to 2% to India's GDP, and therefore my belief is that all stakeholders should participate in this collaborative process and provide inputs for the creation of a very robust and workable framework which can suitably guide the development of future urban spaces in India. I would request all state governments, central agencies, private partners to use this opportunity and consider these railway land parcels and the testing ground for rolling out transit-oriented development and form-based codes in their cities. These initiatives of IRSDC will reinvigorate the core of the urban spaces for a self-reliant and self-sustainable future that focuses on people's welfare and wellbeing.

I would once again congratulate the Chairman Railway Board and CEO of IRSDC for this initiative. This is a path-breaking initiative to retransform India and the urban spaces of India. My compliment and all the best in this initiative!



Suneet Sharma Chairman Railway Board &

Thank You Paromita for your kind words. At the outset, I will thank the MD of IRSDC, S K Lohia who has taken pains and initiatives to organise this seminar and to all the leading luminaries in the field of industry, ASSOCHAM and other colleagues from all the industries, and not to say the least visionary presence of CEO, NITI Ayog Shri Amitabh Kant with whom we had a lot of interactions and who has always been very willing to give us a totally different perspective of what we should be looking at things, how we should be going about improving the basic facets of the working of the Indian railways of which stations constitute a very important part. Thank you, Sir, for being with us. We are also grateful to have the presence of Mr Mishra who has also been associated with railways for a large number of other projects. We have been interacting and he has always been very kind enough to lend his voice to things where we need certain opinions. With his vast experience, he has been helping us with a large number of projects. First of all, at the outset, I would like to say that the railways over a period of time is undergoing a very transformational phase as you would recall we started in 1853, one of the oldest railways in the world. We used to have a technology of steam locomotives. We had wooden body coaches because at that time, steel was a thing that was just invented. We had wagons which were primarily again of the wooden body. Our stations were very rudimentary and our industry was limited to certain workshops which we used to have. And at that time there were not many areas which had been developed well.

I am talking prior to the industrial revolution. Over a period of time, the railways started evolving itself. We started looking at technology in a different way because we realise that today the path to growth is technology-driven. No organisation today can develop without this support, and if you have to make quantum jumps then technology is going to be the thing that is required. And, the railway started modifying itself, adapting itself not only from the point of view of changes in the technology in the locomotives, from steel to diesel to electric locomotives, but also in other areas for example in the coaches; we used to have wooden body coaches, then steel body coaches, then the coaches which are smart coaches now which we are manufacturing in our workshops. The same applies to wagons, we started looking at more pay to load ratio so that we could move more consignments within the same dimensions. We made a lot of inputs into our track when we used to have a pod iron sleeper, we had a 90 kg rail of action loads. So, with a lot of technological changes, we started having those concrete sleepers now, 60 kg rail, 25 ton excel load to carry more. The same happened in signalling where we used to have old manual interlocking, old mechanically operated signals. Now, we have the panel operated, panel operated changed into electric interlocking. We are all looking at cab signalling, at IGBT technology. So, in all the areas of the railways, we started making progress which resulted from a level of 180 millions of tons of traffic in the 1980s to about we joined 1 billion ton club of four countries today. Last year, we carried a record 132 million tons of traffic. But, side by side, we ought to change the way we look at things. We ought to change the way we look at our customers. Customer focus started happening probably from the nineties a little bit, increasing our presence at the stations, improving the housekeeping. But they were all modular approaches. We improved our waiting rooms. We provided a lounge for the people. We provided better toilets, better facilities for the handicapped, better reservation facilities. But these are again isolated efforts, but not in a holistic manner.



I think the first development for the stations started happening in Mumbai where you must have heard an organisation called CIDCO, when they started making the stations of the New Bombay area, stations like Vasi, Shanpara, Bhelapur. And, those stations were the first eye-openers for us, because they were not only stations for people to transit, but they were also places where you could do a lot of other work. You could do your marketing, there were malls, shops. There were a lot of other things which were integrated. And, for the first time that was somewhere in 2005-06 and later continued at some stations in Bombay, that we could see the development beyond a station. So looking at things from an overall different perspective, I don't say that was also perfect. But we want to know a few things about station development, that it is not only limited to providing facilities at the station, to providing a better experience to persons who are coming to board a train, but to also provide a pleasurable experience. People should be very fond of coming there; they should feel happy about it.

Then came the concept of station development somewhere in, I think in 2012-13 when railway set up this IRSDC. There also the efforts initially were localised to about 4 stations or 8 stations. But probably in the last four to five years, I would say under the leadership of our very visionary CEO of NITI Ayog, we moved ahead. He has totally transformed the way we have started looking at things. It is not only an integration of various facets of stations or malls or the development or the industry which is there. It is also an integrated development of the entire station with the city that is very important, as to how the holistic development should take place for which our IRSDC MD, Sanjeev has already spoken and Mishraji also commented on that. The entire urban development and how does railways fit into it, because an isolated development of a station does not serve the purpose, if it cannot look at the overall development of the entire facilities in and around the station and how does it fit into the entire gamut of the city. The railways indeed has very large land parcels. It is also true that some of the areas are also encroached, we are not making good use of it over a particular period of time. But, now with this development, now with this thrust of providing a wholesale change, a total paradigm shift, a total difference in our way of thinking that it is not a business as usual, basically it's a paradigm shift.

We want to develop our stations, we want to set examples of architectural brilliance, of excellence in our work, of integrating with the other modes of transport, integrating with the other facets of the city, that has led to the development of IRSDC and the various codes that Sanjeev has been talking about, and the various algorithms and the MISs which have gone around it. Now, we are developing over 150 stations.

We are looking at them as places where not only we will improve the overall experience of the people, the amenities will improve, the facilities will improve, the overall ambience will improve. But, it also adds value to the railways as such.

The railway is the only transit area where a train is available, a better train. But the overall experience for the traveller who comes to the station should be very good, should be happy. And, that is the way that we are now moving forward under this station development program



Shri Durga Shanker Mishra Secretary, MoHUA, GoI

Thank you, Paramita for this kind of introduction. Well, respected CEO of NITI Ayog Sir, the chief guest for today's consultation seminar, Chairman of the Railway Board, other senior officers of the Railway Ministry and National Railway Station Development Authority, the officer who have joined from ASSOCHAM Mr Nira and I would like to congratulate the National Station Development Authority for making a form-based code and also a complete code for commercial development within Railway Station. Your Transit-Oriented Development Policy and the fact that how it will be implemented, what will be the code of the green building, how will the code of green building be implemented, how to do architectural design, how the railway is a heritage property will pave the way for development. All the stations of Indian railways are heritage property, and what can be done for them? How we will cover all such aspects, or commercial development at railway stations? You have made a complete code about it and will keep that code in the public consultation for the next 45 days. I would like to congratulate you on this. Lohia Ji had discussed with me long ago about the same.

He wants to develop the railway station something like this. I told him that the aeropolis has developed the whole area around all the airports, as the airport itself is such a significant business. There is also industry to cater to that business and also living of people. It has been developed into a city and all the requirements are fulfilled. No such aeropolis has yet been developed in our country. But the railway stations are in the middle of all our cities today, and by redeveloping them you can make a smart city. Our Hon'ble Prime Minister has talked about 100 smart cities. And, you can go to those 100 cities and see the kind of changes that have been made there, the way resources are being used, the way transformations are happening in people's lives. Today, we can transform every city in the country. There are 4372 cities in our country. In order to reach all those cities, we recently released a document 'Making Cities Smart', Learning from Smart Cities, that is, how can we make the whole city smart. Hon'ble Prime Minister while launching Smart City mission on 25 June 2015, said that Smart City is about 'getting more from less'. If you have water, how you will ensure that everyone gets water. Electricity is limited, how you will ensure that everyone gets electricity to ensure inclusive development and resources to each one. We can reach and deliver in such a way that they fulfil their needs and realize their potential. This is the vision of our smart city and it seems to be gradually coming to the ground. Our smart cities



have their railway station in the middle and there is real estate property as well. We have railway stations that have hundreds of acres of land available. Can we develop something that can become a small smart city on hundreds of acres of land? Can it be a railopolis? Can a new metropolis be developed there? We can fulfil all our requirements through the activities there. And, I will congratulate Lohia Ji for doing this. I will go through all the codes you have created. I didn't get the time to see what you have just sent to me a short time ago. I will see it in leisure.

The biggest advantage of these codes is the creation of a standardised system. One big advantage of standardisation is that your cost will come down. It will make all people's thinking structured. I will look at it and also comment on it. I will also tell you, what is lacking in it. Align these codes with the learning of our smart city. By aligning it, you will be able to ensure the best use of resources. How you can talk about whatever is available with you today, such as form-based code, transit-oriented development? What is Transit-Oriented Development? Transit-oriented development that we have Rapid Transit, where, if people settle around, all their needs through mixed development are fulfilled. Then, they do not need to travel.

The time has come for us to talk about the parts of our National Urban Transport Policy- 2006, when you used to be a part of that ministry. With the National Urban Transport Policy that we brought in 2006, our motive was to move the people and not vehicles. Our National Urban Transport Policy does not aim to move vehicles from one place to another. We have to move people and meet their needs. If our needs are fulfilled in our surroundings, then we don't need to go from one part to the other in cities like Delhi to do jobs or to fulfil our needs, whether it is of health, entertainment, education, or anything else. What is the need to travel to meet every requirement? There is also congestion, pollution, and accidents in the city. There are all kinds of effects of the situation. How can you reduce those effects? So the National Urban Transport Policy means that you can meet the needs by doing mixed development there. And, you can make the whole city walkable and cyclable. And to fulfil the big requirements, you can take mass rapid transit to reach the station where you can fulfil the needs. Regarding this, the Transit-Oriented

Development policy was formulated and I am happy that today you have brought a new code based on the policy which is fit for railway station development, and if it is done, there will be high rise development there. We will be able to take advantage of its potential that will help develop a new smart city there. I would like to congratulate you on the fact that you have developed a form-based code. I would like to tell the people who are connected here that the form-based code is not yet applicable in our country. Form-based code was implemented on a slightly experimental basis in the development of the front which is near the Sabarmati River in Ahmedabad. But, the form-based code needs to be gradually brought into the country, it is very much needed. Today, it has got much recognition in the world. All of us are stuck in the old system of the Sixties and Seventies, which was the form of our urban planning in our automobile industry, during which we forgot our development. We worked on the zonal development, this is the zone of our industry, education, health, residence, and forced people to travel around. Along with this, all the codes developed were became textbook-based code. We have decided how much height we can keep for the building, how much to leave behind the building, how much to leave in the right, how much to leave in the left, how much to leave at the front. That is, what would be different setbacks, you grew on it. You started to decide what our FAR would be. How much of FAR? What will be the floor area ratio or floor index? What percentage of ground cover will be there while using the land? After all of these we have prescribed, the development that has taken place in our cities is not a narrative. You go from one part to the other in the city. You do not see anything in the city that represents the best architecture, a particular kind of architecture, a particular kind of facade. You don't find anything giving such a message. Each plot became a complete story in itself during the development of the city-leaving a certain part to the left, to the right, determining a certain height, etc. As a result, the narrative you should give from home to locality to the city to the entire area has stopped. If you look at the old cities, look at the old ones which we developed. There you will find a particular pattern. This is the form-based code which means that in the total area, we know, how much we can create for a built-up area, how much we can use in that built-up area. We know how much to draw for road, infrastructure, parks,



community space. Apart from that, how will we use the remaining area as a built-up area? If you decide the form of each one in advance, then it will be an easy task for the architecture community and the planning community, and the work will become easy for everyone. And with that, you will give a particular narrative of your city. It's a good development that came about the railways, I congratulate you on that.

Form-based codes are being used at the Sabarmati front and the seafront development in Mumbai. And, it was also used at some places with little application. Our ministry has started working on form-based code basis, because this is our future. Our future is Transit-Oriented Development, Form-Based Development, Green Development, Sustainable Development. We cannot make things for today and leave them. It will not be sustainable for the future. They will sustain when we will weave these things together. So, I would like to ask the people to study about this form-based planning. You will see such kind of development in Singapore today and at various other places. Our ministry of planning during the Sixties and Seventies started the Local Area Plan (LAP) for the old area which is the brownfield and Town Planning Scheme (TPS) for New Area. For this, we prepared a complete training module. In 25 states of the country, where we had master plans available, we selected 25 of their cities.

And through them, all the town planners of these states got out of their old thinking of the Sixties and Seventies. So that we can make these 25 cities lighthouses to encourage a new kind of thinking. And work on TPS is going on in these 25 cities today. Today, we have 4372 cities. In the next 30 years that is in the Parliament of 2051, the urban population of our country would be more than double, about 87-88 crores. And for this to happen, we have to take the sustainable path to build a new India, which our Hon'ble Prime Minister talks about. In the new India, we have to move forward for a new urban India. And as I see that you have put so many codes in public consultations. And, you will do further consultations around it on May 1st, May 15th, and till 28th May. So, you will close it in the next 45 days. Your documents will be very useful for us as well. I will instruct the TCPO, which is an authority on the national level town and country planning and works with states, to work with you.

I am looking forward to learning from you with the workshops which start from here. We have the honour of having Shri Amitabh Kant; I always see him with great respect. We get a lot of learning from him and will get the same in future too, so that the new urban development of our country will go on this path. For this, I would like to wish you to move ahead for the development of railway stations. Thank you!

