

**Lecture Series - 16**

**Citizen Centric Initiatives**

**October 2016 – March 2017**



**IC Centre for Governance**

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This Lecture Series on issues connected with 'Citizen Centric Initiatives' has been organized in collaboration with the India International Centre and is compiled by Mahesh Kapoor on behalf of the IC Centre for Governance, New Delhi.

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These lectures were held in Lecture Room No.II (Basement),  
India International Centre (Annexe), Lodhi Road, New Delhi-110003

## **SKILL INDIA**

October 14, 2016

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### Shanti Narain

Good evening ladies and gentlemen, it is my privilege to welcome this august audience for a very important issue that is currently debated in press, media and government circles. We are starting our 16<sup>th</sup> series of lectures. The current series is on Citizen Centric Initiatives and we are trying to focus on some of the key initiatives of present government in regard to citizen centric governance. We have a distinguished panel for this evening. We have Shri M C Verma, Member of our core group of IC Centre for Governance who will be chairing the session. I request Mr. Verma to come on to the dais. Our keynote speaker is Shri Rohit Nandan, Secretary, Ministry of Skill Development & Entrepreneurship, Government of India. The third distinguished speaker is Shri Manish Sabharwal, currently Chairman and Co-Founder TeamLease Services Limited.

Let me first say a few words about IC Centre for Governance. This centre started in 2003 and was in response to a recommendation made at an international conference on globalisation in which one of the recommendations was that if developing countries have to take advantage of globalisation, they have to first set their own house in order and that was the beginning of this idea of IC Centre for Governance. We had launched this in December 2003 under the chairmanship of Chief Justice Venkatachaliah and Mr. Abid Hussain, Former Ambassador to the US and we have Mr. Prabhat Kumar as the President of this working group of the Executive Committee of the IC Centre for Governance. Our major activities have been in the area of governance and try to focus issues of governance which can improve the overall delivery of services in this country. This series today is going to be focusing on skill development which is one of the key initiatives of the Government of India today. I request Mr. Prabhat Kumar to set the ball rolling with his introductory remarks on the subject after which Mr. M C Verma will take charge of conducting this programme.

## Introductory Remarks

Prabhat Kumar, President  
President, IC Centre for Governance

Thank you Shanti. Good evening ladies and gentlemen, as Mr. Shanti Narain mentioned this is the first event of a new set of interactions that we are planning and this is on the flagship programmes of the new government. In the last ten years or more, the IC Centre for Governance has covered almost every aspect of public governance through these lectures and one of the normal features of these evenings is that every word that is spoken in this room in the evening is captured and it is reproduced in a publication. These publications right from 2005 onwards are available. To speak to us on the subject, we have Mr. Rohit Nandan, a very senior civil servant. He belongs to the same cadre as I do and he is known in the IAS fraternity for his clarity of vision and dynamism. TeamLease has a byline, **'Putting India to Work'**. We have two eminent speakers and to chair the proceedings of the evening, we have Mr. M C Verma who is also a veteran civil servant and not only that, he is one of us here. I must confess that perhaps I am the least skilled to talk on this subject. That does not mean that I am stupid even if many of my colleagues think so. What I will do is while I am welcoming our distinguished guests, I will try to flag couple of points, couple of issues on skill development just to provoke the speakers as I always do and I will be brief as I always am.

Now where does this skill development come from? I think it comes from the people, citizen-centric. India's population growth and we have been all along talking of it as a huge liability. We used to say that but for population, India would have grown at a much faster rate. But of late, I hear that people have been talking of this population growth as a demographic dividend whatever that means. So a liability has become an asset, a gift. Last year, I think the Prime Minister said that India has the capability and the potential of becoming the skill capital of the world, human capital of the world. And that is how this skill campaign started. I think it was in July last year that this new National Skill Development Mission, the National Policy on Skill Development and Entrepreneurship and a massive programme of skilling the unskilled started. The idea is that by 2022, we would be skilling something like 40 crores people, 400 million people. I think it is the biggest campaign of its type in this world. The idea is when we get skilled, then they will be employable and then their productivity will increase.

What are the dimensions of this? What are the dimensions of the demand side? We are told that the total workforce of the country is about 48.7 crores. That is the total workforce of which 51% is non-farm and 49% is agriculture farm and most of this skill programme is in the non-farm sector. The National Skill Development Corporation, year before

last, conducted a skill gap survey which revealed that we had a backlog or shall we say, up to 2022, we will require 12 crore skilled people in 24 key sectors. We must have 12 crores skilled persons so that these 24 key sectors are properly manned. The challenge is huge. We had the NSSO round in 2011 and 2012, the results of which came out recently. It says that in the age group of 15-59, only 2.2% are formally trained in vocational education and 8.6% are non-formally trained. In all, formal trained and non-formal trained is about 10% meaning thereby that 90% of our workforce is unskilled. That is a very tall task. Therefore, I think skilling is laudable and we must skill our people. I hope that when we skill these people, these crores of people do not flood the job market and we do not have the jobs because if we do not have the jobs, then all these programmes will backfire.

Where are the jobs coming from? Let me try to explain this. The jobs will come from the non-farm 23 key sectors and these 23 key sectors are dominated by the medium, small and micro enterprises, not by the large corporates. 99% of our enterprises are in the MSME sector. 98% of the total non-farm employment is in the MSME sector. So if we do not have new jobs in the MSME sector, then there is going to be some problem for us. Today, if we see, for the last 10 years, the MSME sector has been stagnating when we talk of jobless growth. You know it very well. You were Secretary, MSME. It has been stagnating and therefore, I don't know whether in the next seven years, this volume of jobs will be created in the MSME sector. I think along with skilling, we must have some programmes to create these jobs.

Secondly, I think have a traditional mindset about vocational education. Most of us think, most of us meaning the people, think that this is the last resort for any young man or a young woman. Firstly, they think of the academic that if the boy or the girl have good colleges. There are 37000 colleges and 700 universities. They first think of academics. And then they think of jobs, that if they can get a job without skilling, then skilling is not necessary. How is this mindset going to be changed? I want to know from our learned speakers whether we have a technology for changing the mindset of the people.

The third point is how do we align the aspirations of students with the expectations of the industry? Or in other words, how do we convince employers to employ, to hire the skilled people and not go for cheaper options? The cheaper option is that you employ unskilled people. We are talking of MSME; I am not talking of highly technology-oriented sector. We are talking of MSME. I will be digressing but I will just mention and of course, Rohit knows it very well that out of these 23 key sectors, there are four sectors which will create or which will need 7 crore skilled people. And which are the sectors? They are construction, retail, transport and beauty and wellness. Now jobs must be created in these sectors. How do we convince the employer to employ skilled people who have been skilled under our programme?

I will raise one more point. I don't know whether you are familiar with this skilling business. Good things have happened. We have National Skills Qualifications Framework (NSQF), Sector Skill Councils; we have so many things. We have new schemes. We have training partners. You have approved a large number of training partners. Now there is empirical evidence that there is a lot of malpractices in this skilling business. A friend who has been in this business says that nobody can make money in the skilling business, at least, not honestly. I don't think I should say anything more about it. The fact is that if irregularities are there, then it will tell on the quality of our trained people, quality of skills. There is a private study which says that in our engineering graduates, there are only 18.5% who are employable. Quality of skills – we might skill everybody but if the quality of the skills is not up to the mark, then there will be a big problem. Training – the trainers, again, that is another problem. There is an expert who says that one of the biggest problem is we don't have good quality trainers. We have 10000 ITIs but if you see the quality of our trainers, it leaves much to be desired.

And finally, I would say that there is a report of the World Economic Forum which says that one-third of the skills which are considered important today will be phased out in five years. By 2020, they will not be required in the industry at all. It is because of greater automation and machine intelligence integration. Whether we have a contingency for that or not is another question which I would like our learned speakers to say something about. I think I should end here. I don't mean we should step back. I don't mean that this programme should not run. Of course, this is absolutely necessary but I will just say that a little bit of out-of-the-box thinking is required. I am quite sure that all this is being done. All this is being done in the government; all this is being done in the private sector. We would like to be enlightened so that when we go back from here, we are better informed. Thank you very much.

## **Opening Remarks**

M C Verma, Former Technical Advisor UNDP

Thank you Mr. Prabhat Kumar. You have given lot of thoughts and my job has been very much lightened. I would focus on some of the areas and raise some issues for the benefit of our panel members. The first point which I would like to make is, mismatch between jobs and skills is endemic not only in India but also in most democratic countries, market-oriented countries. Many foreign countries attempted their own methodologies, two of them come to my mind – Manpower Services Commission in the UK and the Comprehensive Employment and Training Act of the US. But these were of 1980s and so on. In any case, temporary mismatch of jobs and skills is a natural phenomenon in a market



economy. The only thing is that it should be for a short time. If it is for too long a period, people who get skilled directly or indirectly can lose that skill and therefore, they can become somewhat unfit to try for new jobs.

But India has suffered from unemployment of the graduates for a very, very long time. Only in the last 30-40 years, we have also seen unemployment of the institutionally trained people. A large number of ITI passed in the employment register of the employment exchanges is evidence of this. But most of this was triggered by the Chinese aggression which led to reduction in the seats for higher technical education, polytechnics and so on.

Happily, we went through a major change of economy in 1991 and therefore, the manufacturing industry and the service industry both now look forward to better skills and they have noted shortage of relevant skills. There may be skills but they may not be relevant to their work. The relevance is also with reference to what kind of mastery they have, what kind of system of work they have which may not all be the best. There is a lot of work to be done on that side as well.

NSDC is not a new thing. NSDC was set up in 2008-09 as a PPP, public private partnership. And it was given the task of skilling 500 million people, institutionally trained people account for only a very small number. Percentage-wise, the number is very small but it does not mean that there are no skills in the non-institutionally skilled people. There are traditional crafts, traditional industries. There are lots of persons who train people like the master craftsmen in different places and this goes on. But even they require upgradation and new skilling and that is something which was needed. It was taken note of by the NSDC when it was formed. It is a different matter that only recently the PM's Kaushal Vikas Yojana and other initiatives have taken the issue of recognition of prior learning as a very important part of skilling. The unorganised sector, which in our country accounts for something like 85 to 93%, has persons who have some kind of skills. Those skills may be outdated. Those skills may be little but they need to be picked up, not always necessarily in the formal ITIs but through other means. I hope the Sector Skills Councils look after them to the extent possible.

They also require a ladder and this is very important. Prabhat has already mentioned about NSQF which is a ladder for moving up from low level skills to higher level skills not necessarily from level 1 to level 10. Level 1 to level 2 may be good enough for a person because he or she may not have enough margins of time and money to wait for getting skills to level 3 and level 4 or level 5, whatever is possible, a person needs to do it now. NSQF is a very important initiative. It was formally set up in December 2013 before the NDA government came. Many of the points which Prabhat mentioned have been the charge of NSDC. But the recent initiatives especially from August 2014 have made a lot of difference. The

setting up of a new Skills Mission was a major initiative, so also the new ministry of MSDE. The amendment of the Apprentices Act because there was a very small number of apprentices in small number of factories. We don't have too many factories as the organised sector was small. But that can be increased and that is what the new government has tried very hard. They have also taken up the responsibility of skilling in one ministry. The Ministry of MSDE has the responsibility for not only direct training but through the ITIs which they have taken over from the Ministry of Labour but also the Sector Skills Council and I hope they also have the responsibility, have the platform for all the other ministries who have also number of training programmes.

When the idea of skilling 500 million persons was broached, the NSDC's direct responsibility was only 150 million. The rest was expected to come from other organisations which means other ministries and state governments. But we have a problem in our multilayered society. Prabhat has hinted at that. We have a problem with languages because at lower level, the skills have to be taught in the language concerned. Then we have a multilayered polity and we have a more serious problem of segmentation of labour market. Our labour market is not uniform. It is not as simple as saying unorganised sector unemployed or employed and organised sector; there are a whole lot of layers within the unorganised sector employment. And even within the organised sector employment, you have two or three major layers – the PSUs, the government which includes the NSDCs and so on and you have the private sector. Private sector is still a small part of the organised sector employment despite the fact that the government has put serious breaks on further increase in employment in the government. Despite that and despite the growth of private industries in the last 15-20 years, the ratio of private sector employment is still pretty low. One of the reasons which we have to tackle a little later is the industry's initiatives towards getting more and more machinery rather than use manpower. So in a way, what we are now talking of automation has peaked in terms of much more capital-intensive sectoring and much more capital-intensive enterprises and those kinds of sectors which do not have the same propensity to create jobs. In fact, a couple of NSSO studies give a very low percentage of jobs created versus growth of GDP. It is as low as just 15%. That is for 100 point growth in the GDP, you have only 15 point growth in the jobs. These are some of the examples of how our industrialisation has moved forward.

The arrival of new technologies especially IT is a different story which has affected all the industries except the unorganised sector and parts of MSME; very small and tiny industries are still not able to make use of IT but rest of them are going headlong for using IT and other technologies and why not? If that increases the productivity of the enterprise or productivity of labour, they will naturally go for it. In earlier attempts, the Planning Commission tried at one time to cut down on modernisation and capital-intensive industries. It failed. I myself wrote a piece on that

in the Sixth Five Year Plan. The problem with the unorganised sector, semi-skilled or unskilled or partly skilled persons is they also have become somewhat aware of the new possibilities, new kinds of jobs. Therefore, they are not just happy with whatever they can manage. If they get upgradation of their skills, they would also like to be certified. A certificate is very important for unskilled or semi-skilled person. That gives him the freedom to move from one job to the other and that freedom has to be provided through the auspices of the NSDC and Ministry of Skill Development, the Kaushal Vikas Yojana in particular focuses on that and provides for not only skill development and upgradation of skills but also provides them some minor amounts of money to go on with that exercise of skilling themselves.

The problem with this to is that if the government has to find all the money and finances for this, it cannot reach 150 million people. Obviously, when the NSDC was set up, it was a PPP. Where is the P, the first P, which is the 'Private'? Our experience indicates that the private sector has not contributed its share to these important initiatives.

The other two points about the same thing is when the ministry has taken over the ITIs, how does it upgrade the skills not only of the persons who come to get skills but also of the instructors or the teachers? Good teachers are really in short supply. The same is true of the vocational education wing of Ministry of HRD. They have 10+2 programme of vocationalisation of secondary education. I was also Secretary Education at one time. Our experience was that you can't get any worthwhile teacher to teach vocational skills in the schools. I hope those things are changing. I hope our panel members will throw more light on that.

I would end with a very difficult point and that is about R&D. The world of work is changing very fast. It has already been hinted by Prabhat. It is not only one study. Any number of studies now indicates that the occupations of today may not exist 10 years hence and in some cases, may not exist in five years hence. Therefore, when these Sector Skills Council prepare their occupational standards or training standards or training curricula or finally assessment bodies, they have also to look at how they will sort of make up for the future occupations, for the future skill needs and that is something which is the job of R&D. There are organisations which do this. The vocational education wing has Pandit Sunderlal Sharma Central Institute for Vocational Education, the labour ministry has ATIs and many others. Now what are they doing in this respect to necessarily upgrade curricula, skills training providers, assessment bodies and a whole lot of them. It is really a tricky task.

And the last point is manpower forecasting is a difficult job. The Sector Skills Councils are doing the skill gap studies. My own experience as a manpower planner in several countries in the world shows that manpower forecasting is a dying art. It has been given up by the International Labour Organisation and replaced by Active Labour Market

Policies. Now Active Labour Market Policies require Employment Market Information. The EMI information which the labour ministry used to collect was rather poor because they entirely depended on questionnaires. They did not have proper peripatetic teams. The MSDE has promised a new set of labour market information system. I hope they will be able to throw some light on this. Thank you.

## **Keynote Address**

Rohit Nandan

Secretary, Ministry of Skill Development & Entrepreneurship,  
Government of India:

Mr. Chairman, my seniors in service who have been my mentors and guides all through my career, Mr. Manish Sabharwal who is a very precious colleague of mine now, members of the Sector Skills Council and the CEOs of the Sector Skills Council who are present here in large numbers, distinguished guests, ladies and gentlemen. First of all, I would like to thank the IC Centre for Governance and especially Mr. Prabhat Kumar, the former Cabinet Secretary for having been kind enough to invite me to be present here and to talk to you about the story of Indian skilling which is presently unfolding itself. It can now be said with some degree of confidence that the present exercise of human resource development that India is undergoing is unmatched. It has never happened in this scale anywhere in the world in human history. Training 1.5 crores people every year who join our workforce is not only a daunting task but is unparalleled in history. We're a young nation today. The data has already been talked about. 60% of our manpower is in the age group of 15 to 59. 54% of our population is less than 25 years of age. By 2020, we expect the average population of Indians is going to be only 29 when the average age of an American would be 40, of a Chinese would be 46 and for Japanese would be 47. India would be one of the youngest nations in the world. For a very, very long time, we all believed that India is cursed and its vast population is a curse and India will collapse under its own weight.

It just needed a visionary like Mr. C K Prahalad to remind the nation that this need not be looked upon as a curse but if proper interventions are introduced at the right time by the government, then maybe this population can itself become a boon. A weakness can be converted into strength and a threat can be converted into an opportunity.

While we are talking about the youth of the country as an advantage, we have also got to understand that this youth is restless. It has got huge aspirations. And unless we are able to produce jobs for them, unless we are able to produce livelihoods for them, the next few years are going to

be explosive in this country. The type of social and political unrest that we would witness is something that cannot be imagined today.

It is also worthwhile mentioning and I think Mr. Prabhat Kumar has already made a mention of this thing that only 18.5% of our engineers are found to be employable. Another study that was done by the CII shows that only 38% of the educated Indians who are aspiring for white-collar jobs are employable. We may agree or disagree with the data, we may agree or disagree with the methodologies by which these types of studies are done; I have been a critique of these studies because many of the studies have taken speaking English as the basic criteria of employability which I think is unfair to a large population of this country. There are whole populations of this country then in that case would be wiped out and would not in that case then eligible for jobs.

I had a detailed discussion on this with Mr. Manish Sabharwal on the subject about 15-20 days back and I think he will speak about this in great detail as to what is happening because large population of this country is unable to speak in English. It is in this context that the Skill India Mission was conceived in the year 2015. I would, however, like to clarify that skilling did not start in this country only in the year 2015. The history of skilling is at least 70 years old. The first skilling effort was done when the first ITI was established way back in the year 1945. The CTS scheme was introduced not by us but by the British and this is an institution which is now 71 years old. Then we had the history of TRISEMs in the 1960s and 1970s, we have history of Rural and Urban Livelihood Missions in the 2000, in the early decades of this century. Skilling has been happening. 2008 was a critical year when the importance of skilling was articulated and the National Skill Development Corporation was formed.

It was a PPP model and it is true as Mr. Verma has said that the share of the private sector in terms of capital infusion did not come. But it was very well accepted by the government at that time that 2008 was a bad year for the world economy. At that time to expect that the industry would invest 1000 crores was perhaps not reasonable. Therefore, it was a conscious decision of the government that they will not insist on this thing. And the Government of India will pay its 1000 crores by way of contribution and the private sector would be associated in a completely different way. I will talk about it when I come to the association of the industry with the employment and with the skilling in this country.

When the Skill Mission was articulated and formulated in the year 2015, we were faced with three basic challenges and when I speak of those three challenges, I would be able to perhaps address many of the issues that have been raised by the previous speakers. The first was the challenge of **scale**. The second was the challenge of **quality** and the third was the challenge of **relevance**. Training 40 crore people in this country and the earlier government had talked about training 50 crore people

does appear to be an impossible job. But we have got to look at this entire data more rationally. About 1.5 crore people join the workforce every year. Our first priority is that these young boys should be trained. Therefore, the first target is to train 10.5 crore people. This was started in the year 2015. The target was 2022. So the expectation was that first emphasis would be on training this 1.5 crore people every year. At the same time, the policy and the mission talked about a new concept in this country that is the recognition of prior learning. And it was decided that we will also recognise the prior learning of people because about 30 crore people in this country have acquired various types of skills through informal methods. And they are talented and they are competent, they are skilled but somehow their skills have not been tested and not certified.

This was the second priority that about 28.5 crore people are going to be certified. It does not mean that they have got to be necessarily re-skilled. They might have to be re-skilled. They would be given a choice. They would be assessed by assessment agencies and if they feel that they would like to get some more skills, then they can go in for fresh training or they can just say that alright, you just recognise whatever skills we have. It was not as easy task because our policy speaks about they shall be certified only when they reach the NSQF level 4. NSQF level 4 mandates certain things which is not expected to be available with the people who have been trained informally. So safety standards, communication standards, entrepreneurial skills are something which these people might not be having. We decided that we will change the rules. And we shall basically just certify their core skill. If they have a core skill, then in that case, we shall say that these guys are skilled. If they want to be trained in more things, they are most welcome. We shall finance their training but that is a task which can wait.

We also took a decision that we will, first of all, give RPL training to only those people who can move from the informal to the formal sector. A certificate only to pep up their self-respect is not good enough, their self-esteem is not good enough. We are working with limited resources. Therefore, we have got to prioritise. We decided that we will do only RPL in those sectors where there is a possibility of a person to move from the informal sector to the formal sector. Thus we created segments with the target of 40 crore people that we had set for ourselves in the year 2015.

As far as scale is concerned, a superhuman effort is being made at the moment actually. And for the first time, I can say with some degree of satisfaction that ever since the formation of this ministry, we have been able to train more than 1 crore people in a year. This has never been done in the past. It was rise of 37% over the previous year's achievement. In the year 2014-15, 76 lakh people were trained. In the year 2015-16, 1 crore 4 lakh people were trained. This includes the extension training that was done by the Department of Agriculture. It also included about 13 lakh people who were trained by the private sector. But they are

partners of the NSDC and they have been given loans by the NSDC and therefore, we treat it as part of our ecosystem. 1 crore 4 lakh people were trained for the first time in this country and in this, we do not count the numbers that come from the industry. There is lot of formal and informal training that is being done by the industry. TCS does not accept our trained people. Wipro does not take our trained people. High quality industries like Welspun do not take people coming from our system. They train people on their own but yet to call them unskilled would be perhaps completely unfair. And this brings me to the numbers, the game of numbers that we have been talking about. Unfortunately, it is a myth that we have created ourselves that 2.2% people of this country are vocationally educated. This is just incorrect and I have taken up this matter with the Ministry of Statistics that this is nonsense. Do you mean to say that our engineers are not skilled? They are not vocationally capable? Our doctors are not skilled, our nurses are not skilled, our managers are not skilled? Even a person who does his B.Com. who can become an accountant is skilled because he can do a job competently. I have taken up this matter that the next NSSO data must reflect these facts correctly. I am very confident of this fact that when we say that 96% of people in Korea are trained, it is only because they treat everyone who is educated as trained and as skilled. Japan says that 80% of the people are trained and skilled but they are taking anyone who has passed the 12<sup>th</sup> class as trained and skilled. This is a self-goal that we have done to ourselves. Imagine a country inviting the entire world to come and invest in this country with just 2.2% people who are trained.

This is question that needs to be raised and raised very loudly. I have been talking about it at all forums that this data is not believable; it is not a credible data. I know it for a fact that in South Korea, only 25% of the people go to vocational educational institutions. Yet they claim that 96% of the people are skilled. In Japan, it is a documented fact that only 25% of the people go to vocational educational institutions and yet they claim that 80% of their manpower is skilled. We cannot insult ourselves. This is the number and I don't think anyone of us should be gullible enough to accept this data. However, in order to reach these figures of training, it is important that we have got to create a proper skilling ecosystem in the country. Fortunately, our capacity to skill has improved substantially during the last two years. In the year 2014, when this ministry was formed, there were only 1700 centres which were carrying out the Pradhan Mantri Kaushal Vikas Yojana (PMKVY). At that time, this STAR programme was being implemented. There were only 1700 centres in the entire country. Today, those numbers have gone up to 8100 and we expect that by the end of this year, the numbers will go up to 10000. The skilling capacity has increased by a few 100%. As far as the ITIs are concerned, in 70 years of this country's history, we had 10000 ITIs and in the last two and a half years, we have added 5000 new ITIs. The capacity has been increased by 50% and this would respond to the demand of Make in India, Swachh Bharat, Smart Cities, Digital India etc.

But we know that perhaps classrooms are not good enough to train everyone in this country. Therefore, we will have to look at new things. Informal apprenticeship is one of the strengths of this country. We accept it as a matter of fact that the cleaner becomes the driver. The assistant mason becomes the mason in this country. Because of sheer poverty, people cannot go to institutions. Institutional training can go only up to a certain extent. People will be trained informally in this country as long as we continue to be a poor country and 30% of our population or whatever the numbers is today lives below the poverty line. They will go and work with some craftsmen next to their house, perhaps work for 5 to 6 hours, learn something from him and in the evening come back with Rs50 or Rs100 which will be good for their family. This is something we cannot ignore. We are now trying to work out a mechanism by which this entire system of informal apprenticeship can be recognised and can be brought within the NSQF guidelines.

We are going to start a pilot project in the next few days. It will be started with the Chikan products of Lucknow and the sports goods of Meerut. We are trying to look at other such places where such trainings do take place and especially the garages where the people are learning the mechanics of a motor vehicle, the scooter repair people, the mechanics of the motorcycles; these people are all people who can be trained informally and we should look at this as an opportunity for ourselves.

Beyond this, I think technologies will have to be deployed in a very big way. Not everyone can be taught in institutions and in classrooms. We will have to redefine the concept of a classroom in this country. And therefore, online courses, the MOOCs, the Massive Open Online Courses is something that we have got to ultimately depend upon. We will have to go for broadcast through the TV, perhaps the classrooms can be held through TVs of simple skills. Maybe, complicated skills cannot be taught by these methodologies but definitely we can teach the service sector skills through computers and perhaps also through the TVs to a lot of people. We are working this out. In the [www.skillsonline.com](http://www.skillsonline.com) of the NSDC, 650 courses are already there. We're working on more courses. We are trying to just identify those simple courses which can be taught by simple methodologies. Ultimately, skilling is done by hand. People cannot actually completely become skilled unless they do things with their own hands. So there is a limitation. It cannot be like other types of education but we are trying to work out methodologies by which this can be done.

As far as the quality is concerned and this is a genuine concern, I think Mr. Prabhat Kumar did talk about the fly by night operators in the skilling field. We know it for a fact that a lot of false skilling is being done in the country. Fortunately, we have been able to develop a very robust system of assessment. And the mere fact that in the Pradhan Mantri Kaushal Vikas Yojana last years, 25% of the people failed. Develop some confidence in the system. We are paying only for those candidates who



are successful in examinations and who are ultimately certified by the Sector Skills Councils (SSCs). These assessment agencies are all independent. We have also now decided and of course, this is a decision that SSCs don't like very much but we have taken a decision that we shall take this work out of the SSCs now and there shall be a National Board of Skill Certification in the country which shall come into existence within the next 3 to 5 months. The EFC note is already ready. The budget announcement has already been made about this particular board. I think it will raise assessment to a different level. We will have a national methodology of testing, a national institution which shall be testing the skills and there shall be now only one certificate that will be issued in this country and that is known as India Skill Certificate which shall be recognized all over the world. We have yet to see how NCVT Certification can also be brought into this because NCVT over a period of time has developed some sort of respectability in this country and the people who come out of the ITIs are actually getting jobs in the southeast as well as in the gulf countries of the world. I think doing away with it with a single stroke of the pen might not be a very wise thing. So we are going in this direction in a phased manner. In the first phase, all short-term skills shall be certified by the National Skill Certification Board and this board shall come into existence positively by March of the next year. The next stage would be perhaps, maybe, we will try to bring the in NCVT also as part of this.

As far as quality is concerned, we have been able to also implement the common norms. Prior to the coming of this ministry and the launch of the Skill Mission, there was no method of training. All over the country, there was a mosaic of training providers who were providing all sorts of skills. For the same thing, somebody was providing a training of 15 days, somebody was providing a training of 30 days and somebody was doing it in 40 days. They were paid differently. The course content was different, curriculum was different. One did not know what exactly the standard of the person who was coming out of a training institution was. During the last one and a half years we have been able to set up the standards. The NSQF is now widely applicable. Nearly, all the states have decided to adopt it. The entire Pradhan Mantri Kaushal Vikas Yojana is being done under this framework. The Deen Dayal Upadhyaya Grameen Kaushalya Yojana which is another very big programme of the Government of India, that is, the National Rural Livelihood Mission has also accepted the NSQF. The courses of the NCVT are also now getting aligned to the NSQF. Out of the 500 courses, we have already been able to align 116 and I hope that by this year end, we should be able to align all the

courses to the NSQF. Therefore, NSQF is going to become the Bible of skilling in this country.

Other than this, we are also trying to look at the quality of our training system. The quality of our training providers should be better. The standards have been laid down by the NSDA. It is going to be notified I think within the next 15 days. Besides that for the Pradhan Mantri Kaushal Vikas Kendras, we have decided that we will have a rating system and the rating system is going to be fairly straight. We have adopted some of the methodologies that have been implemented by the Ministry of Human Resource Development. They have rated all the institutions in the country very recently. It was a massive exercise that they undertook very successfully. We have learnt from that. We have tried to improve on that. But from the 2<sup>nd</sup> of October, all the Pradhan Mantri Kaushal Vikas Kendras, all the institutions who want to do work with the NSDC have to be rated. The system has already been launched and it is known as STAR NSDC. You just have to go there and enter all your data and it will immediately give you a STAR rating. Then an auditor will go to see whatever you have fed into the system is correct or not correct. You shall be assigned a target only when you are 3 STAR or above. If you are not above 3 STAR, in that case, you can continue to exist as a training provider but not recognized by the MSDE. Therefore, there is an element of quality as far as training provider is also concerned.

The third important thing was the challenge of relevance and this is very important because this is related to industry connect, this is related to employment. I talked about that in the year 2008, it was a conscious decision of the government not to insist on the industry that they shall contribute their 1000 crore rupees. The overall vision was this that over a period of time, the government shall contribute 7500 crore rupees and the industry shall also contribute 7500 crore rupees and therefore, the NSDC will have a corpus of 15000 crore rupees. This has not happened. Only 1000 crore worth of investment has come from the government as an initial start-up but every year, we are also pumping in nearly 2000 crore of rupees for the PMKVY and I think overall the Government of India is spending 4000 to 5000 crore of rupees on skilling alone.

But there is a great advantage of this PPP. The great advantage is the entire training ecosystem has been handed over to industry. We have all been officers and we have heard this throughout our careers that the industry kept us on the defensive and kept on telling us that the type of people who are coming out of your institutions are not good enough for us and that the courses were being formulated by our academicians.

People who had nothing to do with the industry were formulating the courses. Our officers were formulating the courses who had nothing to do with the industry. Through the NSDC mechanism, this entire training ecosystem has been handed over to the private industry. They now decide where the training shall take place, who will be training provider. They decide the course content. The National Occupational Standards and the Qualification Packs are decided by the Sector Skill Councils who are the crucial link between the government and the industry now. They are the ones who now decide what shall be the content of the course. They are the ones who decide who shall be trained and where he shall be trained. They are the ones who decide who shall assess them and after being satisfied, the person has reached the right level, they are the ones who certify that the man is good enough now for the industry. Now they cannot come to us. As a matter of fact, when I joined, somebody came to me. I said that now I am sitting back. I am going to ask you this question, why you are not producing good people and why you are not giving them employment. It is your job now. We were supposed to give you money. We have assured that whatever money is required for skilling shall be provided by the Government of India. There shall be no dearth of money but now the industry has to have ownership of the entire system. Fortunately, now the industry does not raise these issues with us. They still do talk about ITI because ITI still continues to be more or less with the government but at least about the short-term skilling, they are now completely the owners of the system.

As far as the employment is concerned, there are many programmes who are claiming very good success rates like in the Deen Dayal Upadhyaya Gramin Kaushal Yojana, their Traces study show that 78% of the people who are trained through them are getting jobs. The Integrated Skill Development Scheme of the Ministry of Textiles also says the same thing. Their Traces study show that 85% of the people who are being produced through this and the entire training is being done in the industry and therefore, they are immediately absorbed by the industry. Their employment rate is as high as 85%. The Traces Study which has recently been done by the World Bank for the ITI shows that 63-65% of the people who are produced from the ITIs are also getting jobs. However third rate that ITI might be but people are still finding jobs because the NCVT certification is still treated with respect in this country.

Sir, you had also raised an issue that why should industry employ skilled people because they can take a lot, actually, this is happening in the medium and small industries that they take people raw, train them in their own way. There is a lot of advantage. They have to pay them less

and then they are captives. They cannot go anywhere else. They live and die with them. But one unique feature that we are now seeing is that the employment is not coming from the manufacturing industry. I was talking to the KPMG who has done this Sector Skill study for us. I wanted to understand the methodology. I had to make a presentation before the Council of Ministers yesterday on the Skill Plan that we are developing for the nation. And I had to be very sure about what I am going to say there. And they said that the manufacturing industry is actually showing a negative elasticity of demand because the emphasis has been so much on technology, the incentives have been so much to the adoption of technologies that labour has got displaced. Now this has led to something thinking in the government and recently, when they came out with a textile package of 6000 crore rupees, they decided the incentives shall be to labour-generating technologies. It has been made compulsory that all cabinet notes that now go to the cabinet have got to have a necessary component of this thing that this programme and this investment shall lead to so many jobs. The Prime Minister reiterated this thing at the end of my presentation yesterday that this shall be compulsory that whatever approval is given by the Government of India must necessarily take into account as to what is the type of employment that is going to come out of this thing. Labour-saving technologies will now be discouraged. We cannot tell the industry to move away from technology but fortunately, most of the employment in this country is now taking place in the services sector and not in the manufacturing sector.

We have already talked about the disruptive technologies which has been termed internationally as Industry 4.0, that is the Fourth Industrial Revolution. This is a concept which is doing the rounds all over the world and only a week ago, the President of the World Bank said that 69% of the labour force of India is going to be affected by disruptive technologies. The coming of Robots in this country, the adoption of 3-D printing and Artificial Intelligence is going to change the way people work in this country. 69% of the country is going to either lose their jobs or they will get a job of a different kind. We need not be too frightened. These are the types of fears which are always created when new technologies come. Sir, we have all been witness to the generation when the computers were coming into this country in the 1980s when everyone thought that now everyone is going to lose their jobs but more jobs were created by the computers than any other technology ever. So I also feel and I have great confidence that perhaps robots are also going to create more jobs. After all, somebody will make robots, somebody will have to give them commands, somebody will have to service them and somebody will have

to design them. So I think that India has got a tremendous strength in IT and ultimately, the robots are going to be an opportunity and we need not be too much frightened of that.

When I was talking about as to why the industry should accept skilled manpower and this is a very, very interesting question Sir, with the jobs that are coming in the service sector. Fortunately in this country, the customer is becoming extremely demanding. He will not go to a beauty parlour where you do not get a proper treatment. He will not go to a hotel where he is not properly treated. These are the places where the jobs are going to be. He will not buy from Flipkart if they send you anything or the courier does not behave properly with you, if the packaging is not good. Therefore, the customer now has a choice and customer is now extremely reminding the industry that it has got no option but to take skilled people, but to skill its own people. I was talking to Mr Sachin Bansal, the owner of Flipkart who is a member of our National Skill Mission and he said that before the Prime Minister that they were teaching all their people how to learn English and they have encouraged them by using some gaming techniques. The moment they cross a certain level, they would get a higher pay. Their people are incentivized. Industry themselves are gradually coming to understand that they can survive in this highly competitive system if they had skilled manpower. I think the demand for skilled manpower might come and we need not be too frightened again about what the MSMEs are going to do. MSMEs are going to be very important but MSMEs are not going to be only in the manufacturing sectors. Manufacturing sector will be a part of our total system but 66% of our total GDP is coming from the services sector.

One issue was also raised about the quality of trainers. This is a very serious issue. We are now trying to see that all trainers at least in the Pradhan Mantri Kaushal Kendras should be seconded by the industry. People who are unemployed should not necessarily become trainers. One important decision that we took was and this is something that came from the Prime Minister himself that 60000 people retire from the army at a very young age of 35-40. Many of them are extremely skilled especially the people who come from the air force and people who come from the navy. They are extremely skilled people. As a matter of fact, their skills are so high that our civil systems cannot even absorb them. Therefore, we have decided that in the last year of their service, that is, when they reach whatever is the age that is decided for them for retirement, we shall train them in civilian requirements. That means that they shall be brought down from whatever they know and to be very frank, when we did it for the first time, when we carried out the first

training, there was a beeline of industries who wanted these people as trainers and as assessors. Therefore, these people who are going to retire from the industry need not necessarily now end up as security guards outside this building or as our drivers. They will become trainers and they will become assessors with high quality of skills. I think this is also something that we are now taking care of. I hope that I have been able to answer the very many questions that have been raised. All of you are far more experienced than me. All of you have operated this system from very close quarters. You have been associated with policy planning and you understand the limitations of what the government interventions can mean in the country. Ultimately, there are many things that the society will have to do for itself specially, that very basic question that was raised, the aspiration part. In a country where we have treated a person who has done BA, MA and who knows the Vedas and the Purans, he is the Brahmin and the person who works with his hands is the Dalit. Obviously, this mentality will take time to change but it shall change because economy shall see to it that it changes. Sir, you have seen ultimately, at Rs10000 wage earner who worked in the BPO lived with respect in this country and people came to respect him even though he was 10<sup>th</sup> pass or he was only 12<sup>th</sup> pass. The drivers of Uber and Ola are going to change the world. The way we look at people is going to change. One of my nephews called a Uber taxi and there was a young boy who came out wearing jeans and tee shirt speaking in English. He asked him to sit down. I asked my nephew to talk to him on the way and find out who he was and he appeared to be too smart to be a driver and he said that he was a primary school teacher. He phoned me up when he reached his destination that he was a primary school teacher. His Rs25000 worth of salary was not good enough for him and so he decided to do this in the evening and he earns another Rs40000. If this was the driver, I would not mind him calling into my drawing room and serving him tea or perhaps asking him for coffee. Our attitudes will change. It is also now a documented fact that in the last 3 years, the salary of the engineers at the lowest level has not changed while that of a plumber has doubled. Thank you very much, sir.

Manish Sabharwal,  
Chairman and Co-Founder TeamLease Services Limited

It is a pleasure to be here. I work for a people supply chain company. We have hired somebody every five minutes for the last five years. But we have only hired 5% of the children who came to us for a job. I am sort of at the agony and ecstasy of India's labour market if you think about it.

The ecstasy is I am a child of low hiring standards. Kids getting jobs with me today would not have got jobs two years ago or five years ago. I had a telecom client shouting at me a few months ago saying he had 200 sales positions open and why I had not filled them up. I said that I was doing it for all his competitors because his hiring standards were too high. He called me back in a few hours and said that he needed a pair of hands and he did not care if the brains came attached. So if all you need is a pulse, we can do that. I know economists might worry about the productivity impact of low hiring standards but from a public policy perspective, kids are getting into the formal sector who wouldn't have. That is the ecstasy. But the agony was not all that obvious to me. We had a job fair in Jaipur and 35000 people showed up. I met 800 of them personally. I can guarantee if they were born in Delhi or Bombay or Bangalore, they would have had a job. But they were born in Dausa, Barmer, Jhunjhunu or wherever. The two most important decisions which one in India makes is to choose your parents wisely and to choose your pin code wisely. All of you are laughing because you did it. I obviously did but you don't realize the opening balance. 90000 children come to me every month. I hire about 5000 every month but most of them did what their parents told them to do. They went to the college, they went to do a degree but I just can't give them a job.

But let me step back from skills. I think one of the gifts of a Civil Service parents and uncles, Mukund मुकुण्ड is my uncle, is that you realize early in life that you don't live in an economy; you live in a society. And to me the most interesting question of all times is why our country is poor. I had landed for my MBA in the US in August 1994 and by September, I was asking myself these Americans are not smarter than us. Why are they richer than us? Clearly, individually, I can kick their butt but there is something in there. Why does Joe six packs who drinks beer and watches college football makes 50000 dollars a year and why does Rambharose who works 12 hours a day makes Rs50000 per year? It is an interesting question because productivity is embedded in the air. It has really got nothing to do about poor Rambharose. It is the institutions, infrastructure and it is obviously the human capital. It is just the same pin code sort of choice. My case has been that poverty is about productivity and the productivity is about infrastructure of opportunity. Infrastructure of opportunity is really the three Es of Education, Employment and Employability. But I think in that employment and employability and education are much more closely connected than we traditionally thought. One of the challenges of the government or any complex organization is that you organize yourself vertically while this problem is horizontal. Skills is horizontal,

urbanization is horizontal, manufacturing is horizontal and employment is the ultimate horizontal but there is no ministry of employment and maybe, there can't be a ministry of employment. That is where you come to organization effectiveness and leadership. But if you think about the five assassins of productivity or the five labour market transactions that have to happen in India, farm to non-farm, rural to urban, subsistence self-employment to decent wage employment, informal to formal and school to work.

Let me explain each one. The farm to non-farm one is obvious in my mind. 50% of India's labour force works on farms. They produce 15% of India's GDP. India became the largest producer of milk in the world last year. We produced 120 million tonnes of milk. 75 million people did that. The US produces 60 million tonnes of milk with 100000 people. These people are just hanging out. In fact, they are not really employed. More importantly, they are condemned to sort of poverty and only 12% of India works in manufacturing. Now that is the same as post-industrialized United States. The peak of any country in manufacturing was UK in World War II which was 45% of the labour force. US peaked at about 28% and China peaked at 31%. I don't think India will ever get to those numbers but 11% is the wrong number. The farm to non-farm transition does involve the increase from 11% to maybe, 20% in manufacturing.

I think the rural to urban one is an interesting question of do you take jobs to people or people to jobs? In political imagination, you are always taking jobs to people. But in reality, in the short-run, you have to take people to jobs. In India, we don't have a Chinese New Year. I don't know whether you people follow but there is a four day weekend in February where 200 million people in China buy a train ticket and go home. We don't have that on Chhath, Diwali, Eid or Christmas. Why don't we have that? It is the world's biggest migration. It used to be Wildebeest in Africa but now it is the Chinese on Chinese New Year. Why don't we have that on Chhath, Diwali, Eid or Christmas? It is a very simple explanation. India only has 50 cities with more than a million people. China has now 375 cities with more than a million people. We have 6 lakh villages, 2 lakh of these villages have less than 200 people. You are never going to be able to take jobs to a village of that size. But what is the consequence of this low level of urbanization? It is a massive divergence between real wages and nominal wages in big cities. In a recent job fair in Gwalior, one boy told me, "Give me Rs4000 in Gwalior, Rs6000 in Gurgaon, Rs9000 in Delhi and Rs18000 in Bombay. My bags are packed wherever you want me to go". I asked him why he needed four times more money to go to Bombay. He said that lot of children who were earning Rs10000 in



Bombay have come back because it was impossible to manage food, shelter and office in Bombay in that amount. I said you are only third class pass and who was going to pay him Rs18000. He replied that he didn't eat less food than a graduate. Obviously, he was a smart kid. He was not asking me for a salary; he was asking me for a reimbursement in that sense and obviously, we hired him on the spot. But this is an unintended consequence of our lack of urbanization where Rs18000 in Bombay is equal to Rs4000 in Gwalior. It is assassinating my business. I have hired 15 lakh people in the last 8 years. About 10 lakh of those people were people being moved from small cities to big ones and that is becoming much more difficult to get anybody to move to Bombay.

The informal to formal is very important because it is the child of regulatory cholesterol and I know I am speaking to a crowd which in part helped create that or perpetuated it and now is in the process of dismantling it but we are 63 million enterprises in India. 12 million of those enterprises don't have an office. 12 million of them work from home. Only 85 lakh enterprises in India have any form of tax registration. Only 12 lakh enterprises pay the provident fund. Only 10 lakh enterprises are companies. More tragically, 18000 companies in India have a paid-up capital of more than 10 crores. So 6.3 crore enterprises means jack shit if it translates to 18000 companies with a paid up capital of more than 10 crores. This matters because large enterprises or formal enterprises and those two need not be the same thing. I know people tend to equate. I know many people in this room, at least, my father, equates corporate India with Reliance and Birlas and Tatas. That is a sampling error if you take it from employment perspective. There are only 18000 companies of that kind and everybody wants 90% of the skill output to work for 1% of the companies. But I think it is important to recognize formalization and large isn't the same thing. As an entrepreneur, I recognize that there are two kinds of companies that you can create, a baby and a dwarf. A baby and dwarf are both small but the baby is going to grow but the dwarf is going to stay there. The difference between a baby and a dwarf is not more food, it is not more money. I know this because my first company was a 50 crore company in 5 years and Teamlease is a 3500 crore company. The first company that I created was a dwarf and the second company is a baby. I sure dished out more money in my first company than in my second company. So, most people who walk around with the notion that it is food or money that creates large companies are wrong. But India is a nation of corporate dwarfs. I think we must recognize that there is nothing cultural about that. I think the institutional architecture, if the US which is an economy 8 times our size only has 20 million enterprises

and why does India has 63 million enterprises? We don't need 63 million enterprises. Hopefully, GST will knock off 10 million of these enterprises if not 15 million. And then you will hopefully have better enforcement and knock off another 40 million. 63 million enterprises are not needed.

The school to work transition is more complicated at all three levels – school, college and skills. You may know this but I will just jog your memory. 265 lakh kids take the class Xth exam every year. 105 lakh fail and 160 lakh kids take the class XIIth exam every year. 80 lakh fail. Of the 80 lakh who pass the class XIIth exam, 50 lakh go to college and 30 lakh sort of join the labour force. I think the skill system is starting to change but there was a mismatch. Even till last year, we taught an automobile mechanic with a carburetor. No Indian car is made with a carburetor. We still taught an electrician with the DC fan. In fact, whenever you go to the market and go to buy a DC fan, he asks if I was working in ITI because nobody else is buying a DC fan. Those two specific examples have been changed in the last 18 months. But if you think about college and I will come back to this question but it is an interesting question of how many kids should go to college and what does college mean?

The final one of obviously informal to formal again is labour laws. In 1991, 90% of India worked informally which is the same number now. It means that 100% of the net job creation in the last 25 years has happened in informal jobs net. It makes no sense. There is no cultural proclivity in India for informal jobs. We have to understand the institutional mechanisms which are breeding the informal sector. It is clear that we don't need more cooks in the kitchen. We need a different recipe. I think the three Es are more closely related but if you focus clear just on the supply side, employability and education, there are three problems. There is a matching problem which is connecting demand and supply. There is a mismatch problem which is repairing supply for demand and there is a pipeline problem which is preparing supply for demand and there is a distinction between repair and prepare based on the opening balance of the child or the duration of the course. The matching one is very simple. The Nobel Prize in Economics went to Peter Diamond for his work on search, cost and labour markets. How does a kid in Dausa find a job in Jaipur or how does a kid in Durgapur find a job in Bangalore or how does a kid in Kanpur find a job in Bombay? Employment exchanges were supposed to do this job but the 1200 employment exchanges run by the government, there were 4 crore people registered last year and last year, they gave only 3.5 lakh jobs. They are clearly not able to fulfill that purpose. I think matching is important on

increasing formalization. It is very hard to do matching with the informal sector and not on small versus big; I am talking about formal versus informal. When you talk about labour laws which I think are a very important reason we have 90% informality, it is not only about Chapter VB of the Industrial Disputes Act which is the hire and fire clause which everybody thinks about labour laws. Forget about Chapter VB for the next five years. But we have 22 definitions of wages. We have 17 definitions of workers. I have 26 different numbers issued by the government for me as a company. Why don't we have Aadhaar number for the companies? Why can't we do PPC which is Paperless, Presence less, Cashless for the 500 crore sheet of paper, 6 lakh trees a year are used for labour law compliance in India. Why do we need 500 crore sheets of paper? It is very simple to go paperless, presence less and cashless. Matching is about fixing institutional mechanisms for matching and then obviously labour law formalization.

I think mismatch is about skills. I think upfront we must recognize there is a market failure in skill development in financing. Employers are not willing to pay for the training of candidates but they are willing to pay a premium for trained candidates. Candidates are not willing to pay for training. They are willing to pay for a job. Banks or micro finance aren't willing to lend to the candidate unless a job is guaranteed. And training companies are unable to fill up the classroom. This is a global problem. In fact, the German Minister of Vocational Training has had a bet with me saying that the private sector cannot solve this financing problem. But I think there are solutions sort of emerging in India. I think governance is important in skills. In most ITIs, there is no fear of falling and there is no hope of rising. An ITI which has 90% employment, the principal and his budget is the same as somebody who is, in Gandhinagar, there is an ITI who I work with, he has the same budget, same promotion path as the idiot in Chandigarh who has 90% unemployment. I work with both of them and it is really hard for differentiation. There is no differentiation between them. I think apprentices are very important sort of gap in the system. We have only 3 lakh apprentices. Germany has 3 million and Japan has 10 million and China has 20 million and this is because of the stupid Apprenticeship Act of 1961 that has been amended now and I think there is a lot more action happening on apprentices. In the repair part, that is what is going on. I am not going to cover more because Rohit did a great job.

Pipeline, I think is important because one thing I have learnt in the last 10 years is you can't teach people in six months what they should have learnt in 12 years. It is very clear to me. When I came into this 10 years

ago, I said we will prepare everybody in three weeks, three months but it does not happen that way. Unfortunately or fortunately, in the new world of work, reading, writing and arithmetic and soft skills may be the most important vocational skills because of the evolution of the trajectory of India. The Right to Education Act needs to be amended to become the Right to Learning Act. The Right to Education Act currently confuses school buildings with building schools. Those are two different things.

I think the question of college is important. But we must recognize colleges and what is used to be. Degrees aren't what they used to be. The world has produced more graduates in the last 35 years than in the 800 years before that when college was invented. What is the consequence of that? 60% of taxi drivers in Korea now have a college degree. 31% of retail sales clerks in the US now have a college degree. 15% of Group4 security guards in India now have a college degree. So college isn't what it used to be. But obviously college matters. Michael Spence got his Nobel Prize for Social Signalling Value for Higher Education and it is important. I went to Shriram College, I went to Wharton. Wharton is a good place to be at but it is a better place to be from. IITs are a good place to be at but there are better places to be from IIT because that is a gift which keeps giving. That social signaling value is important. Massification of higher education requires a bit of the vocationalisation of higher education. You need many more skill universities. What's the difference between a normal university and a skill university? There are three things. One is we pray to one god which is employers. Only 5% of our kids are on campus. The balance are either doing an apprenticeship or in distance education or online. And only 5% of our kids are actually getting a degree but 100% have the ability to take a three months certificate as an opening balance for a one year diploma, as an opening balance for a two year social degree and a three year degree. I do have to cover English and this is a conversation me and Rohit have ongoing but employment outcomes are about 250% higher and the wage premium is 100% for English. Why? It is largely because of labour mobility. An unintended consequence of someone going to the northeast is that a migrant from the northeast gets Rs 20000 with me while a migrant from UP and Bihar gets Rs8000 with me because he joins in front office and he joins in backend loader. English is like Windows; it is like an operating system. It is not really a language. Whenever we talk about English, it is important to recognize that it is about 300 words. It is not more than that. I can teach somebody. You just need 300 words to be a sales person; it is not really grammar that I am talking about. But I had a job fair recently I think in Cuttack or something and he was a BA in English. He kept giving me certificates of BA in English and I kept asking him questions in

English and he kept answering me in Hindi. English is like Windows. I asked him why he was answering me in Hindi. He said to tell the truth, he had done his BA in Hindi. When we talk about English in India, it is about being bilingual. It is not about English as a primary methodology and I think we must remember the two most interesting poets at Allahabad University, Firaq Gorakhpuri and Harvansh Rai Bachhan who were very interesting poets of India though they were professors of English literature. Even U R Krishnamurthy in Bangalore and that is really the case. I think in India in this repair and prepare as Rohit has been grappling with and highlighted sort of delicately, cost, quality and scale are the impossible trinity. You can lower costs, skill quality, raise scale, you can raise scale. I am tired of people comparing us to Singapore. Singapore spends 12000 dollars a year on a plumber. That is how much we spend on an IIT engineer and the government writes a cheque for 99% of it. Resources do matter. Costs do matter. I went to Wharton and I paid Rs19000 an hour. ISB is Rs12000 an hour. IIMs are now Rs8000 an hour. IITs are Rs4000 an hour. Vocational training is Rs200 an hour. Cost is a binding constraint for us as a country. At our stage of development, I think we are doing a better job. I think this whole notion of cost, quality and scale is a difficult trade-off in a democracy. In the 1960s, there was an Education Secretary in the US called John Gardner. He wrote a great book *'Excellence: Can we be Equal and Excellent Too?'* I think it is an important question to ask in a democracy. We want to be equal. But how do we be excellent if everybody is equal? When you want to create 10 world class universities, how do you do that with reservations? But I think reservations are an important part of a democracy at our stage. I think people who come up with glib answers of cost, quality and scale probably don't know what they are talking about.

In conclusion, I would say the political economy has been interesting. But I am sick and tired of people telling us what to do. We have known what to do. Apprenticeship Act was the 20<sup>th</sup> point in Indira Gandhi's 20-point programme in 1975. You can change the date on the Kothari Committee report. Why didn't every idiot who was in the government do Apprenticeship Act perform for the last 20 years? It was known in 1975 that it was the 20<sup>th</sup> point. The Kothari Committee report of 1968, you can change the date on the Kothari Committee Report of 1968 and not go very wrong in higher education. I can rattle off to you seven more reports which are about 30-40 years old. I think let us shift the debate from talking about what needs to be done to how it needs to be done. That is probably much more constructive for everybody. I think what is well-known, it is a waste of everybody's time to spend any more time on. I think frankly, the most important innovation which I have seen in the

last 18 months is decentralization. I think 29 Chief Ministers matter more than one prime minister. There is no such thing as India's land and labour market. There may be some such thing as India's capital market but an export labour market like Bihar is completely different from an import labour market like Kerala. Kerala is now 12% Bihari. They sent 10% to the Middle East and so they brought 12% from Bihar. But Kerala is now 12% Biharis. That is completely a different labour market dynamics than Calcutta or Kanpur where every kid is studying to leave. It is a remittance economy. I think it is very important to sort of think about the differences.

But in conclusion, when I landed in the US in 1994, there was a front page article on the Wall Street Journal which said that India is more interesting than important. I hope that journalist is eating the newspaper on which he wrote that because at least from my vantage point, what is happening in India is not once in a decade or once in a millennium; it is really once in a lifetime of a country. It is a very unique time to be young in India. It is a very unique time for me to be an entrepreneur in India but we must remember and I memorized Pandit Nehru's Tryst with Destiny speech when I was a child. It is wonderful and probably his best speech in the world ever. But we miss that tryst with destiny. There are 300 million people in India who will never read the newspaper that they deliver or sit in the car that they clean or send their kids to the school that they helped build. This is not a problem like cancer or climate change. This is a plumbing problem. One of my favourite quotes of Gandhiji is "*the difference between what we do and what we are capable of doing would suffice to solve most of the world's problems*". The three Es of Education, Employment and Employability aren't as big a problem as people think in terms of what is to be done; obviously, how to get it done and do it is important. I think India has made a new appointment with her destiny. I think we finally agree on two things and that is why I think we will meet. Jobs, education and skills change lives in ways that no subsidy ever can. I think that is important to recognize. If you place jobs, skills and education at the heart of the policy, then you are probably making progress. And about the gap, Samuel Huntington, the historian at Harvard used to say and to paraphrase him, "*the gap between India's ideals and its reality is not a lie. It is a disappointment*". It is only a disappointment because ideals are a form of hope when we sort of chose in 1947 to give universal franchise. I think in the last 60 years, we have done a good job on social justice and political justice. We probably have to make progress on economic justice and anybody who thinks about economic justice will think about skills and education. Thank you.

M C Verma: We have about 20-25 minutes for questions and answer session. If anybody has any question, they can start questioning.

### **Question and Answer Session**

Q: Thank you Mr. Chairman. First of all, I would congratulate the IC Centre for Governance for arranging this excellent programme. At the sunset stage in my life, I go back confident. In spite of the cadre to which Mr. Rohit Nandan belongs, he has done an excellent job in convincing us that skilling India is in very good hands. I would like to ask couple of small questions. When there was no NSDC, when there was no skill development industry, how was it that times immemorial in this country, excellent craft, architecture, literature, name anything was absolutely wonderful? How exactly this came about and we descended to a system and culture, of jugaad where we lost quality and lost skills. If that existed without the formal skilling arrangements, can that be captivated, can that be replicated now? Secondly, there are about 18-20 ministries and departments which deal in some form or the other with skilling part of it. I don't know whether there is any rethinking on that subject. Thirdly, ageing population in the rest of the world, we are a young nation and we will continue to be young for the next 25 years, have we taken into account the requirement of skills which India can probably export and in what particular orientation where the language becomes important. Fourthly, is there any system for the ministry, they do lot of skilling. Will they be prepared to do some deskilling also because what the country needs is deskilling of the steel frame that has existed over the last 70 years?

Q: My question is to Mr. Rohit Nandan. How far is the skilling in India inclusive in terms of gender, religion, social groups? That is very important. Does the social structure in India create stumbling blocks in skilling?

Q: Last year, the Prime Minister had allowed a loan scheme for vocational courses. The Indian Banks' Association issued all circulars in this regard. The banks in particular have also started it. The State Bank of India has come out with its circular as also Bank of India, Bank of Baroda, Syndicate Bank and Dena Bank have come out with their circulars. I have not seen a single bank which has agreed to disburse an amount of Rs45000 or Rs60000 for vocational courses. Mr. Manish also spoke about microfinances. Is there any institution in Delhi which can sanction loan for vocational courses which is an NSDC certified course?

Q: It appears that the Ministry of Skill Development is totally confused about what should be done for skill development. Similarly, all the speakers of today were also confused and they could not identify any skill development specific problem. They have been talking in vague terms. For example, our objective is not to give job to the skilled boy. Our objective should be that skilled boy is able to produce something which can be sold in foreign countries by competing with the other countrymen, skilled people. Here, our people are totally confused. For example, our basmati rice is of very poor quality. It cannot be sold in Japan and America because it lacks protein content. In India, CSIR, ICAR cannot increase the protein content of basmati. Our skilled person should be able to do this job and produce better quality of basmati rice. Similarly, solar cell cannot be improved by any Indian professor or any skilled man. Our technology is almost zero. Under this situation, skill development people of India are totally zero.

Q: Someone did talk about 1200 labour exchanges in this country. My take is each one of them on an average is employing only 250 persons per year because the total is 3 lakhs. Are we also planning to rejig these because you are handing over a lot of things to the private sector? We might as well gift away these also, maybe TeamLease may take over.

Q: I just wanted to request the panel that the religious sector in India is huge and also the vendors whom you see on the roads. Thousands and thousands, millions of them are employed in religious sector. Any views or any clarifications on that?

Q: There should be a guarantee of 70% placement in skills training. This is in our clause. But when there is a negative growth in the industry, there will be less job opportunities. When there are less job opportunities, your giving skills trained to so much manpower should not actually become a threat as you yourself said in your speech. I come from a naxal state, Chhattisgarh, the youth though not trained somehow make use of their abilities. But even after getting trained, they do not want to migrate to different places because they have their house, farms and parents whom they are attached to, how can job opportunities be created in such places? We should inbuilt the same in the policy so that job opportunities get created there and the skilled manpower is able to get job opportunities there itself thereby reducing the skill gap.

Q: My question is to the dignitaries on the dais and to the august gathering. I am actually representing Skill Council for Persons with Disability. When we are talking about including everyone in the skilling,



we would like to understand how the skilling can be made more inclusive for persons with disability when skilling as per other references is causing lot of problems. We are facing challenges. The processes have not been made for us. We are finding problems in mobilisation of persons with disability, training partners, training programmes, TOTs, funding. They all become an issue for us. How can it be more inclusive?

Rohit Nandan: I think one of the issues that you have raised is about traditional skilling that has taken place in this country and I talked about it at great length that we have got to respect the type of traditional skilling that has taken place in this country. We cannot reject it. While we are talking in terms of institutional training but I think the traditional apprenticeship where people used to learn from their parents, from their uncles, from the other people in their environment, this is something that has to be preserved because this is something we cannot completely do away with for various social, cultural and perhaps for economic reasons. That is why I said that in the next 15-20 days, we shall be launching a pilot project for traditional skilling in the country. We have identified two trades to start with. One is the chikan of Lucknow and the other is the sports industry of Meerut. We will be expanding this and we will try to see because there is actually a scope of misuse because how do we assess whether a person has actually learnt something or not, whether any teaching has actually gone into the system or not. Somebody might just get somebody who is already fairly well skilled and say that he has skilled him and ultimately take Rs10000 from us. There is public money involved in this thing and we are being careful but I am personally very strongly of the opinion that the traditional skills of India should not be allowed to be lost.

You have also talked about the multiplicity of departments. This is a serious issue. But we have taken care of this thing. These departments have been skilling for the last 50-60 years. They have now some experience of that particular sector. They have got expertise. Like textiles has been in that business for a very, very long time. They understand what the demand of the industry is and they have got a closer relationship with the training system like the industries. We do not want to wish them away. Of course, as a ministry, I would like that everything should come to me. We all want to be dominion builder but we understand the limitations. There has been an extensive exercise for this for the last 2 years as to do what should come to the Ministry of Skill Development and what should continue to be with the concerned departments. What we have tried to do is that firstly, the common norms have now been implemented across all the departments. From 1<sup>st</sup> of

April, it was made mandatory that not a single penny shall be released in any department by the finance department unless they give a certificate that the common norms have been adopted. Secondly, the NSQF, which is the national framework of skilling has been adopted by all departments. I think the two major things have happened in the sense that we are now on a common platform. The quality of training is now the same. Therefore, whether it is done by 10 people or it is done by one department is actually now immaterial.

You talked about the export of manpower. This is something we are focusing on greatly. The Prime Minister last year had said that he would like to make India the skill capital of the world. We can actually become not only the skill capital but skill bank of the world. I talked about this thing that the population of the Western countries is going to decline while that of India is going to become more and more young in the years to come. Therefore, there is a potential for us to perhaps find jobs abroad. We have got two studies done in the last one year, one for the International Labour Organisation and another through another consultant called Grant Thornton. We have identified the opportunities that exist for Indians in all the countries of the world in the next 10 years. We have identified geographies where people can go to, what are the type of jobs that the Indians can get, what are the types of jobs that Indians can excel in and we have already started 16 India International Skill Centres and we have started training people to start with the gulf countries but of course, the market in the gulf countries at the present moment is not very good. We are aiming also on Canada, the whole of the west Europe, Japan, Singapore, Australia and New Zealand. Therefore, a very serious exercise has started in this country for the last few months.

Some gentleman had raised the issue about inclusiveness as to whether social groups are getting a proper representation. I am happy to inform you that 40% of the people who have been trained in the Pradhan Mantri Kaushal Vikas Yojana last year were women. About 20% scheduled castes people are being trained, scheduled tribes are being trained in large numbers. We are spreading into those areas where such communities live. Therefore, we do not feel that as of today, there is a problem as far as the social inclusiveness is concerned.

We have recognized the importance of disability. I myself had been secretary of the Disabled Welfare Department of UP for four years and that is the largest department of its type in the country. I understand the issues regarding disability very well. When I joined, I made it a point that a Sector Skill Council for Disability should be exclusively set up to address the issues of the disability. It is not mind you a financial issue. It

is not an issue of resources; it is an issue of our mindsets. Are we ready to give them jobs? I have been interacting with your CEO on a regular basis because I understand what the requirements of a disabled person are. We feel that we will have to adopt completely different strategies but the industry has got to be ready to employ them. That is the most important thing. Lot of awareness needs to be created. I told you when I was answering this question that the government cannot do everything. Ultimately, there are some functions that the society will have to bear. These are issues of mindsets. As Secretary for four years, I kept on advocating this thing all over. I kept on roaming the entire state to make people aware of disabilities and I always say that disability is not somebody else's problem, it is going to be our problem also. Someday, we will lose our eyesight because we will all become old. Some day we will stop hearing less. We are all going to become disabled after sometime. We will have arthritic problems. Women will become pregnant and have difficulties in mobility. Every one of us is going to be disabled at some moment of our lives and therefore, it should not be looked upon as somebody else's problem; it is our problem. And that is what I have been advocating and I think that the Sector Skill Council is doing a good job, a great job. It is not an easy job. Don't lose patience.

Regarding creation of local jobs, let me say that some facts will have to be accepted that the Department of Skill Development can prepare one for a job but not create jobs. Job creation is the responsibility of the economy. If the economy does well, it is but natural that jobs will get created. Then you will have to see because you don't want to leave your place and want that the industry also should be put up at your doorstep, Birla or Tata comes and set up a factory and give you jobs also; it does not happen that way. If you are unwilling to leave the place where you live, you will have to see what kinds of skills are required there. We have made a hierarchy of skills in our ministry. One is traditional skills where there is a requirement in the local area. For example, if a boatman in Banaras wants that people from Cochin should come and run a houseboat at Banaras, it is not possible. They will stay there only. They have to skill themselves according to the requirements of their local areas. You need to understand this that we can prepare them for jobs but not create jobs.

**Manish Sabharwal:** If I may just add to two questions which always upset me, one is the cultural explanation and the other is self-employment. India is already 50% self-employed but it is marginally self-employed. These people are self-exploiting. They don't pay themselves the market wage. We don't need more self-employment; we need more wage employment right now. Everybody cannot be an entrepreneur and not all

entrepreneurship is viable. Most Kirana stores are self exploitation. Please be careful with advocating more subsistence self-employment. We have to examine why only 25% of our labour force is wage-employed while it is probably 85%. Not everybody can be an entrepreneur and not all entrepreneurship is viable is important to remember.

Secondly, I heard somebody say social structures and cultural explanations. Cultural explanations don't go very far. At best, they are the soft bigotry of low expectations and at worse, they are racism. One thing which has always upset me in at least growing up was these pejorative of the Hindu rate of growth. Between 1820 and 1950, India grew at 0.1% and from 1950 to 1991, we grew at 2%. So some idiot economist said that it is the Hindu rate of growth. But from 1991 till now, we have grown at 7% and we did not shoot all the Hindus. I think institutional explanations are very important. Sometimes, the lazy explanations we have. We used to run and we still run an employment exchange in Dausa and I remember one child was crying asking for giving him a job. I gave him a job. This was about 7 years ago at Rs6000 in Jaipur. He went to his father outside and came back saying that he did not want the job. I called his father. Along with the labour secretary, there was a guy called Lalit Kumar and we explained to him for half an hour. He was 6 foot 2 Gujjar guy and he got up in 15 minutes and said that we urbanites do not understand that they gave their daughter, votes and job only to those of their caste. He took his kid and left. Lalit asked me to just forget it and it did not matter because nothing could be done about it. I said what rubbish. I called the employment officer and sent him to his house saying that there had been a mistake and it was not Rs6000 job but Rs15000 job. He signed and he works for us now. He was calculating the difference between working in Dausa and working in Jaipur. You could have a cultural explanation for that of unwillingness to migrate or him being a Gujjar or XYZ, my sense is some of those explanations are unfair and they are downright wrong and at worse, they are racism.

**Rohit Nandan:** About loans, it is not as if the loans are not being sanctioned. We have already distributed 52 crore loans till last month. It is very clear that a banker gives a loan when he is assured of recovering it. It is not like we can tell the manager of some branch to give you loan. The manager will give the loan only based on the strength of your application.

**Speaker:** We do not want manager; we want a bank.

Rohit Nandan: The banks are giving it. All banks have adopted it. It has been circulated to all the banks. If you go to Air India's office, just opposite to that, Bank of Baroda has advertised for taking Kaushal loan. Banks are inviting people to take Kaushal loans.

Q: India has got a glorious past about its expertise and exports even Dhaka muslin and other things. They were part of India and our Gurus, Ustaad and Khalifas have all been pioneers in training the personnel and what is lacking is the certification. Certification could also be done at local levels if government relaxes its rules through BDOs, through district magistrates, through these MPs and MLAs who are disbursing lot of money of government channels for improvement. Why don't we relax the rules for the self-improvement of people? They are getting exploited without certificates.

Rohit Nandan: How does one know it leads to self-improvement or a downfall?

Q: My question is to kindly revive the old system which is already there to be recognized.

Rohit Nandan: Does the MLA in your district know how muslin is made?

Q: They have the entire knowledge. I have heard the Governors of Bihar and Goa recently say that they are getting well connected with the people. Kindly start giving and once you are giving freedom to disburse the funds.

Rohit Nandan: It is not a question of trust here but about knowledge, knowhow. Are they informed about that?

Q: There are barbers, sweet seller, mechanics, one who undertake repairs, diamond cutters, goldsmiths, glassblowers, potters who are all experts. Kindly consider this.

Manish Sabharwal: If I could respond to that, the last I checked, the district magistrate is responsible for 312 schemes. It is unlikely that he will be able to be a Sector Skill Council. Secondly, when the devaluation of certification happens which we have seen in many countries, in UK, they massively handed out certificates. Then the certificate is not worth anything. You can be like IITs and IIMs with tight entry gates and wide open exit gates or you can be like the chartered accountant exam with wide open entry gate and tight exit gate. But vocational training is wide

open entry gate and wide open exit gate and that's what we have to change.

Q: We should have a separate session because your knowledge could be very useful. And the question that Mr. Gandhi raised, please have a separate session.

Q: Will the skill training which is being given will still be relevant 20 years from now? We are talking about robotics, metro rail, new airports etc. Are there any skills that would be required in the future? I feel whatever training is being given now will just be to suit the requirement of the employment exchanges. We have also seen the website of NSIC. You are going to make the same old incense sticks, candles using the old technology. NSIC has also come out with books on the same. There was also a programme today of NSIC where they have given dividends worth 30 crores saying that despite doing nothing, they have earned profits. Minister Kalraj Mishra happily accepted the cheque of 30 crores praising NSIC for having done a great job. Similarly, is our Department of Skill Development is there for making money or does it really skill the people?

Rohit Nandan: I am now aware of what your experience has been but if you go the NSDC website and SSC and see for yourself what type of training is being given by them, what type of courses they are offering and after all, the airport of Delhi was built by the Indians and not by people from outside India. Today, it is considered as one of the world's best airports. Mumbai airport was built by people of Mumbai and not by foreigners.

Q: But they are not people with the same skills.

Rohit Nandan: I have answered your question.

Q: It is not a satisfactory answer. What I would like to know is like you talked about Swacch Bharat mission, is it enough only to clean our cities with slogans and brooms? Are there any courses for the skills training of the government run programmes for this mission? My question is whether our courses have been formulated keeping the future vision of the country say about 20 years from now.

Rohit Nandan: I would like to inform you that the Sector studies that we had got done, it has been seen that what sort of manpower that would be required in the days to come, which type of skills would be required and what kinds of jobs will be there. Whatever training schemes have

been prepared have been done in order to meet the requirements of those jobs. Rest assured that airports and incense sticks will continue to be made in this country. Making of incense sticks is not going to stop because you will continue to do your puja in the morning.

Manish Sabharwal: You seem to imply that somebody knows where jobs will be. I think you have to be careful. There have been 52 country studies, US in 2050, UK in 2030 and so on. John Galbraith said economic forecasters ----

Speaker: Please some Indian models.

Speaker: You are contradicting what he has said. He says we already know in which countries the jobs would be.

Manish Sabharwal: If you let me finish, we can. Otherwise, you can decide. It is your call. We can deal with it. I think there is nothing in contradiction between making a system self-healing. It is arrogance to believe that you can predict exactly where the market will go 20 years from now. John Galbraith said "The only function of *economic forecasting* is to *make astrology look* respectable." Please remember the wisdom in that. The world is changing much faster than it was when you were younger. The job market is changing much faster. Let us make a focus on apprenticeships, on Sector Skill Councils and making the system self-healing rather than believing that we can predict exactly where the jobs will be, the vocationalisation of school education, the improvement of school education, vocationalisation of higher education, our systemic interventions where we don't have to predict because we can't predict but hopefully people will get jobs.

Q: My question is simple. 200 years back, India was 25% of the GDP. Today, we have the largest young population which will remain young for the next 40 years. We have window of opportunity for India to take off. If we try to forecast rather through the rear view mirror lest you look at the big white chick coming in front, things are changing rapidly. India is totally geared up for change. Our systems are not geared up. Your skill development is the end product of an education process. The education process is totally ruined. It is totally useless, it is producing degrees which are unemployable. There is a tremendous demand. 70% of our people live in the villages. There is a phenomenal demand. My question is how do we make that demand. The demand is the problem in all other countries. Robotics automation increases productivity. We have the demand and we have the raw material for making the demand. For the next 30-40 years, we just handle and satisfy our own internal demand.

50% people don't have houses. Instead of looking at the factory model which even Toffler talked about is the second wave is obsolete. We are talking about the third wave and the fourth wave. We have got there. Today, about a month back when Jio was introduced, I was two months in a remote part of Himachal Pradesh. I can tell you, I could see the difference. I am carrying one of these gizmos here. I was zapped. We have to look at tomorrow. We are all looking at yesterday, day before yesterday because all of us retired as I am but I can only say one thing. We have got the youngest population, we have got tremendous model. You have got things like Khan Academy, you can get them the latest knowledge which can be milked just in time and you don't need an army of 1 lakh people who will take about 12 years to learn the latest syllabus. The kids can learn it up fast; just train them up to that. I can assure you we can take them but if we follow precedence and everything and look nice and have beautiful conferences, we will have conferences and no progress. Thank you.

M C Verma: Thank you for the last word.

Q: I have a question which is more suggestive. In the NSQF, I have observed that they are more on the positive sides of building the programme and bring in more trainees but can I suggest to look at some damage control activities, damage control structural mechanisms so that if an institution, just slums for some reason, maybe HR problem or a technical problem or something within that given academic period or within that short period, is there a damage control, structure or a mechanism which will take care of it so that the projected target can be smoothly achieved? Thank you.

Rohit Nandan: When you say damage control, you are talking of an individual or an institution?

Q: Of an institution or that sector of institution.

Rohit Nandan: I could not get your question actually.

Q: For example, two years ago, if I am right, there was a banana fibre programme promoted from the NSDC and they were looking for partners to train. In Tanjore, we have a huge banana cultivation thing going both by the Tamil Nadu government and by the private sector. We had trainers. You know what happened? Once they understood that banana fibre is picking up, everyone Googled and they found that Thailand was offering a better price and they all migrated. Should I call this a ----



Rohit Nandan: They went to where the jobs are. That is what Mr. Sabharwal has been suggesting.

Q: They are able to hold them back for a matter of three months. Our damage control structure ----

Rohit Nandan: You cannot build dams that you will not allow them to go to ----

Q: I am only saying that this is one other avenue which needs to be strengthened so that our targets can be achieved in a safer way.

Rohit Nandan: Thank you for your suggestion.

M C Verma: Thank you very much. Thank you Mr. Rohit Nandan and Mr. Sabharwal.

### **Vote of Thanks**

Shanti Narain

Let me conclude by saying that I am reflecting the views of this vast audience that the panel has done an excellent job. We are going back highly educated, informed and I think the future of the country is in safe hands. Let me also say that we have a small token of our appreciation. I would request Mr. M C Verma to please hand over the mementos to our two honourable speakers.

Thank you very much.

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## **SWACHH BHARAT MISSION**

November 18, 2016

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Mahesh Kapoor

I request Mr. Kewal Sethi, Mr. Pankaj Jain and Mr. Saraswati Prasad and Mr. Saurabh Jain to please come to the dais. On behalf of the IC Centre for Governance and the Indian International Centre, let me welcome you to this second lecture in our series on Citizen Centric Initiatives. Our last one was on Skill Development and today we are talking on Swachh Bharat, Swachhta, cleanliness, water, sanitation; you name it. We have all the money. In fact, I was surprised to see that the new currency notes of Rs2000 and Rs500 has a message of Swachh Bharat and Gandhiji's glasses at the back. So we literally have all the money. It is on every note. And we have on the panel to discuss the subject, a wide range of experience both in terms of years and also in terms of the range that they cover. We have Mr. Kewal Krishan Sethi, who is presiding over the function this evening who made the original note and will give the Introductory Remarks. We have Mr. Pankaj Jain IAS, (Retd), Former Secretary Drinking Water and Sanitation and Presently, Hony. Chairman, Sulabh Sanitation Mission Foundation. When you talk in terms of sanitation and toilets, we always think of Sulabh which has made the biggest contribution. We also have Mr. Saraswati Prasad, IAS, Additional Secretary, Ministry of Drinking Water & Sanitation, who handles rural areas and urban is being covered by Mr. Saurabh Jain, IAS, Director (SBM), Ministry of Urban Development. With these words, it is over to you, Mr. Sethi, to conduct the proceedings of this evening. Thank you.

### **Introductory Remarks**

Kewal Krishan Sethi  
Director, ICCFG

Friends, welcome to the meeting. We are discussing today the Swachh Bharat and sanitation has been something most important from every point of view, from the health point of view also. India has got a great problem. We face a situation where we are almost, it is a dubious distinction, but we are leading in the world for lack of sanitation. The whole world is interested in this programme. This has been included in the Sustainable Development Goals which says that clean water and

sanitation availability must be ensured. There should be sanitation for all. Earlier also, it was part of the Millennium Development Goals where also it was said that by 2015, the problem should be halved. Though of course, we have not been able to achieve that much, if we go by the government reports 2015, we say that 87% of the people have access to safe drinking water but actually the situation is not as good as depicted which is given by various number of things. We have the Swachh Bharat programme which was launched on October 2, 2014 and they have given five years to achieve this target. This is a huge task; gigantic task considering the target of 11.11 crores toilets to be built. If we take the example of Chhattisgarh, the basic Baseline Survey said that some 46 lakhs houses have to be given the toilet system and so far we have just covered 8 lakhs. If we go by this, we will need 1,700 toilets per day to be constructed. I wonder whether the Chhattisgarh government has got that capacity or not but because infrastructure is needed, people are needed, materials are needed but most of all, what is needed is the people's attitude towards this movement. If we can persuade the people to themselves come forward and take part in this Swachhta Abhiyaan, probably we can achieve the target. That is one thing.

One of the problems which I have come across is this toilet programme cannot succeed unless we can solve the water problem. Drinking water problem is there and I wonder whether we can suggest that water harvesting should be made part of the Swachhta Abhiyaan. If you do not have enough water, then construction of toilets probably will go waste. Already, in the Baseline Survey, it was found that 1.4 crores are built but are not used. We have to rejuvenate them and bring them around this apart from 11.11 crores which are there.

Open defecation has been a problem and India is leading in that with 60% of the population. It is said that India has as many people doing open defecation as the next 18 countries. India is, of course, followed by Nigeria, Ghana, Indonesia and Pakistan. Pakistan has got just 21%. We have got 60%. That is another programme which has to be done and that requires a change in the mindsets. Unless we do that, it will be difficult. Of course, I am sure that the programme which has been devised does look after all these things especially the people's participation, the monitoring of the programme that is there. But we will get the expert opinion from the persons who are really executing these programmes and we will be able to find out exactly what is happening and what can be done in the future and of course, our suggestions will be there. With these words, I request Shri Saraswati Prasad to talk about the Swachhta Abhiyaan in so far as the rural sector is concerned.

## **Keynote Address**

Saraswati Prasad, IAS,  
Additional Secretary, Ministry of Drinking Water & Sanitation

Good evening ladies and gentlemen, thank you chair. It gives me great pleasure and it is an honour for me to be present here today this evening to talk about Swachh Bharat Mission. I would be essentially talking about the Gramin part of the Swachh Bharat Mission. It has got two verticals. I would finish my presentation possibly in 10-15 minutes and we can take more questions in the Q&A. These are essentially the two key objectives of the Swachh Bharat Mission – to make in India open defecation free by 2<sup>nd</sup> October 2019 by providing access to toilet facilities to all. That is the first one and the second one is that the villages are to be kept clean with solid and liquid waste management. Both aspects of cleanliness are covered in the key objectives of the Swachh Bharat Mission.

This has been talked about earlier. It is not a slide of pride. We are essentially ashamed of this slide. We are trying to do something that the situation changes quickly. Even in South Asia, we are the worst. It is really a bad situation. All other countries have less open defecation compared to India. This is actually open defecation where the high bar is actually a bad performance.

This is today's picture. This gives you a snapshot of what has happened since the launch of the Swachh Bharat Mission. The top tab in yellow gives you the number of toilets built since the launch of the mission. It is actually over 2.7 crores. Over a lakh and 18000 villages have been declared open defecation free. In Namami Gange areas, basically, the five states where the Ganga River flows, about 2400 villages have become open defecation free. And about 60 districts as a whole have become open defecation free.

The percentage access has moved from about 42% on October 2, 2012 to about 57% today. The greens and the reds and the light yellows that you can see on the left, it is not that the situation is really good; it is just a relative thing that we are trying to depict here. Real green are only a few states like Sikkim and Himachal Pradesh and now slowly, Kerala. These are the areas where things are changing fast.

This number has already been spoken about. When we went actually to the cabinet to get the Swachh Bharat Mission approved, these were the numbers that we had at that point in time. These numbers have somewhat changed. But 11.11 crores was the number of households toilets. We found that of the households that we surveyed, about 1.4 crores were also defunct. That is actually households that had received incentives earlier in earlier programmes and they were probably not eligible for incentives now. What is significant to note here is that the way

the programme was designed, practically all households were eligible. You can see this figure of 88 lakhs. Only 88 lakhs households of about 18 crore households that we surveyed were found to be not eligible. I will come to another slide where I will show you what kinds of households are eligible for the incentives. Like all the Above Poverty Line households are also eligible for the incentives provided they fall in one of these categories – SCs, STs, Small and Marginal Farmers, Landless Labourers with homestead, Physically Handicapped, Women headed households and of course, BPLs in any case are covered. It practically covers all households in the rural areas except those 88 lakhs. When this mission was launched, then incentive available from the government was raised from Rs10000 to 12000. Essentially, this raise was done to ensure that there is water in or near the toilet to ensure hand washing and cleaning of toilets. This Rs2000 was specifically enhanced for this.

The next point is not really very relevant. This is 60:40 sharing in most states and the erstwhile special category states, we share this in the ratio of 90:10. There is an element of the solid and liquid waste management where we provide assistance to the gram panchayats from a range of Rs7 to 20 lakhs depending on the number of households in a gram panchayat and the guidelines specifically provide for convergence. This is an obvious thing but it is still stated in the guidelines that we can converge from MNREGA, from state plan, from Finance Commission awards and things like that for setting up of these solid and liquid waste management projects.

Two other things had happened when Swachh Bharat Mission was launched. Obviously, school sanitation is an important component of Swachh Bharat Mission. You cannot have Swachh Bharat with schools without toilets. But then the experience had shown that there was a problem of coordination. School sanitation was entrusted specifically to the HRD. Earlier, some schools which were pre Sarva Shiksha Abhiyaan were the responsibility of the Ministry of Drinking Water and Sanitation and post SSA, they were being constructed with grants from HRD. This distinction was done away with. The responsibility for all school toilets went to HRD and similarly for Anganwadis, the responsibility went to the Ministry of Women and Child Development. We have sufficient resources in the provisions for IEC. I will come back to this why we have made this provision and there is sufficient money available. I think one of the distinguished members from the audience said that there is enough money available. It is almost true.

What are the exact essential challenges? This audience is aware that the essential challenge is the mindset change and the behaviour change. It is not just the construction of the toilets. It is actually not the construction of the toilets alone. What they say is that the toilet first needs to be built in the mind and then only it has to be built on the ground. Somebody added this. We keep interacting with the large number of grassroots champions who are actually carrying this mission forward. And they have

added that that first and foremost, the toilet needs to be built in the heart, in the mind and then on the ground. Then only, there is a possibility of the toilets being used. Funds, of course are a constraint but fortunately, we have been receiving funds. There is some shortage but still, funds are not a real constraint at the moment. Technologies, yes, we have one technology which is called the Twin Pit technology, as most of you would be aware, where we basically use two pits, the human excreta keeps going to one pit, it gets filled up and once it gets filled up, the excreta is diverted to the other pit and this decomposes. It becomes inert and after that, it can be manually handled. It is totally safe. That is the key technology which is being used. It is a decentralised technology. It does not require any sewer connections. If used with caution, it does not lead to any water pollution. This is the key technology but there are areas where this technology does not work, in the hard and rocky areas, for instance. In very sandy areas, it might be a problem. We have a bit of a problem with the technologies in some areas and in any case, we need to improve the technologies in terms of water usage and all that because water is always a constraint. Even in the twin pit technology, actually the pans are of a higher slope where the water requirement is much less. Same is the case of solid and liquid waste management particularly liquid waste management. Even solid waste management, we all keep talking about composting, biodegradable and all that. These are all thoughts but the information dissemination to the people who are actually on the ground is still a challenge.

O&M of school sanitation, school toilets and anganwadi toilets continues to be a challenge. There is no funding available even today for maintenance of school toilets and in fact, for anganwadi toilets, there is even no funding available at the moment to construct toilets in a large number of anganwadis particularly the ones that are running in rented accommodation. About more than 1/3<sup>rd</sup> of anganwadis still run in rented accommodation and if they don't have a toilet, we don't have a solution.

Community toilets and SLWM and need for availability of water for use of toilets – I think the chair mentioned that unless we have water, there will be a problem of sustainability of toilets. I just wanted to mention one point in this regard that availability of toilet helps improve the coverage of sanitation. There is no doubt about it. It always helps but the evidence is that there is actually very little connection between the two. The evidence is provided within the country as well as outside the country. Within the country, if you just look at 2011 census for instance, I don't have that slide with me at the moment but if you just draw the scattered plot between access to sanitation and access to drinking water within the premises, many states fall on the straight line, on this line, but there are about 8 states that lie much above this line. I will mention about 4 states that lie much below this line which is almost a straight line, a linear relationship between access to sanitation and access to drinking water. The 8 states that I mentioned lie much higher than the line are all the north-eastern states where it is actually showing that they have a much

better sanitation compared to availability of drinking water, for instance, within the premises. And we had 4 states, this is 2011 census, UP, Bihar, Gujarat and Puducherry. We can ignore Puducherry but these were the states, UP, Bihar and Gujarat were all having sufficient supply of water within the premises but sanitation was really poor. It is essentially a problem of culture, it is a problem of the mindset and it is the problem of the behaviour of the communities. I just wanted to share that water indeed is important, it helps improve sanitation but we should not stop ourselves by saying that we will provide first 100% tap water connection in all the households and then only we can hope to succeed. That is not proved from evidence.

Some of the things that we are trying to do for addressing the challenges that I mentioned, we are all aware that we are having this massive campaign on the audio/video channels and all the AFMs and everywhere we are talking about Swachh Bharat. Now even the notes are having that Swachh Bharat message. Incidentally, I am happy that we were involved in the development of that logo and I take personal pride in that.

Then, capacity building is certainly a very, very important aspect. We don't have the number of people who are actually equipped because the key is to change the behaviours. Now it is not an easy job to convince the people that it is your problem because today, it is a problem of the state. We think it is a problem and we are trying to do something. But if the people start believing, the households start believing that it is their own problem, then they solve it themselves. That is the key. All this training and IEC and triggering is essentially about us trying to tell the people that it is your own problem and you try and solve that. We don't have sufficiently large number of people who can actually impart this kind of a transfer of knowledge and interaction with the people. But we have been trying to follow a kind of a cascade model. We have trained about 400 collectors so far. We have brought them together and we are trying to ensure that they all charge and believe that we solve this problem. We have gone to the Academy. All the probationers have been trained. All the assistant secretaries who come here were all trained on Swachh Bharat.

Then we are having a large number of interactions and workshops. Basically, it is learning by sharing the experiences from others. I just wanted to spend two minutes on the cleanliness indicators. Now often what is talked about is cleanliness is not just the toilets but also how do you measure the cleanliness outside, the environmental cleanliness. We came out with this set of indicators and we actually worked very hard for about one and a half years to two years and consulted a large number of experts and we tried to find out how do you compare cleanliness in a village in Guwahati with a village in Bangalore because the topographies are different. We conducted a very large scale survey. We went to about 70000 households in about 75 districts and then we found that the perception of cleanliness is actually dependent on only four things. We did a detailed statistical analysis of the various factors that could possibly be

related to cleanliness and we found that it is actually related to just the outcomes. And the outcomes where, the first one was what is the percentage of households that have access to safe toilets. The second one was what was the percentage of the households that don't have litter around them. The third was what was the percentage of public places that don't have litter around them and the fourth was what was the percentage of households that don't have stagnant waste water around them. The measurement of cleanliness did not depend on whether you are disposing your biodegradable by composting or feeding the cattle, or by sending it to some processing unit and I think the results that we obtained after this detailed analysis was obvious. It should have occurred to us in the beginning because when you are trying to measure outcomes, you should really be looking at outcomes and not the processes. We now have an index through which we can actually measure cleanliness in all the villages of the country. In fact, this index has been launched and through the same index, citizens are also allowed to give scores to the villages. They have to move around the villages and arrive at the approximate percentages that they think that this is the percentage of households that have litter around them. They just have to key in those numbers and the village score will emerge from the software itself.

We have built-in a very, very high degree of transparency. 'All the time talking' is actually available on the website. We have a mobile app where we upload the photographs of all the households' toilets that are built. Then there has always been this talk about usage. I think that will be an obvious question that you construct but what happens to the usage. Usage has historically not been measured in the sense that technically whatever is ticked in my MIS that this toilet is built, now the incentive is actually allowed only when it is built and used. In theory, my programme data says that all toilets are used but actually, we have to have an independent verification. NSSO conducted a study in 2015 all over the country as a part of their commitment to Swachh Bharat. They did come out with a very, very high percentage of usage. The usage was defined a little differently. It said that if a toilet is built, is it used? That percentage was close to 96%. But there are other ways of defining usage. Whether each member of the household is using the toilet all the time? If you do that, then the percentage would drop drastically. But even this figure was quite satisfying for us. We still don't know how much it will drop. When I am mentioning IVA, maybe in the next two or three months, we will have the first survey where we will actually be measuring even that. That if even one member of the household is defecating outside, that is the real definition of ODF, Open Defecation Free means that all the households have access to safe toilets and there are no visual signs of open defecation anywhere which means that members of the community all the time use some toilet. It could be a private toilet or it could be a public toilet.

Although we always say that it is a demand-driven programme and our key is to try and generate demand in the people but still the very fact that we have a deadline also forces us to plan for phases. So the first phase



districts, there are some districts we know that are likely to become Open Defection Free faster. We have an inverted pyramid kind of a thing where we say the first year, we will try and achieve about a hundred districts and the next year and so on and so forth. By the end of this period, we would have covered all the 650 odd districts that we have.

Then we have a Mashelkar Committee for renovation. I just mentioned that anybody making an innovation in the field of drinking water or sanitation and this is a kind of accreditation that we provide, and so far we have been able to provide 30 accreditations to different kinds of technologies mostly relating to drinking water but in sanitation also, we have been able to provide accreditation to about 7 or 8 new technologies. One is, of course, the DRDO technology that I think many of you would be aware. It is a biodigester which provides an alternative to the twin pit that I mentioned in the beginning. There is a World Bank project. In fact, in the Swachh Bharat Mission, one of the cabinet decisions was that we will incentivise states that perform better than the others.

Q: Can you tell us a little more about the DRDO technology?

Saraswati Prasad: I can. The DRDO biodigester toilet is essentially a tank kind of a thing. It is where the human excreta go into a tank. There is some consortium of bacteria which is put there and the human excreta is converted entirely into liquid and gas. Gas means it is essentially methane and carbon dioxide. There is no sludge there. That is the process. The affluent that comes out of that tank, if you have a soak pit along with that, then it is pretty safe. You can't release it directly into water body but if you have a soak pit tank, like your septic tanks, I think most of us are not aware that septic tank is not actually a perfect technology. If from the septic tank, if the affluent goes directly into an open drain, it is actually a dangerous thing to do. Similarly, this is an improvement over the septic tank and it works in many areas where the twin pit technology does not work. We have aerobic biodigesters also where it is not methane but it is only carbon dioxide but again, the result is the same. No sludge is generated.

Q: What is the technology used in the aeroplanes?

Saraswati Prasad: There, you just collect the human excreta and then you send it for proper disposal in a municipal Sewage Treatment Plant. The cycle is not completed. It is just collected there.

Q: What about Railways?

Saraswati Prasad: Railways have started using biodigesters now. Earlier, it was all open defecation. I just wanted to spend a minute on this. The cabinet approved incentivisation of the states on this. This is called Programme for Results. This is a new instrument that World Bank has.

What we do is we measure independently the outcomes. The three outcomes that we are measuring are reduction in open defecation, what is the sustainability? If a village has become Open Defecation Free, whether it is Open Defecation Free or not and what is the improvement in solid and liquid waste management. These three indicators would independently be verified by a third party agency and states will be incentivised on the basis of improvements in these. That in essence is the World Bank project and there the improvement in solid and liquid waste management is actually measured with the index that I talked about earlier. We can see how the aggregate or the average score of the state is improving over the years. And that will be the basis on which the states will be incentivised. I would stop here and I would welcome any comments later on.

**Kewal Krishan Sethi:** Thank you Shri Saraswati Prasad. I think from the rural now, we will go to the urban and ask Mr. Saurabh Jain to talk about it.

**Saurabh Jain, IAS**  
Director (SBM), Ministry of Urban Development:

Good evening ladies and gentlemen, it is an honour for me to be present before you to talk about Swachh Bharat Mission and I am grateful to the IC Centre for Governance for giving me this opportunity. As the theme of this programme which is Citizen Centric Initiatives under various flagship programmes, I will be mostly focusing upon the Citizen Centric Initiatives that we have taken under the Swachh Bharat Mission (Urban). Just before that, just to have a brief overview about Swachh Bharat Mission (Urban). The target is the same and the objectives are the same to make all the urban areas Open Defecation Free. We have 4041 towns in India which have to be made Open Defecation Free and 100% scientific processing of municipal solid waste. If you see, still 12% of urban India defecates in the open. And when we started this mission in 2014, around 18% of municipal solid waste was scientifically being treated. India generates around 1.5 lakh MT of municipal solid waste and out of that, only 18% is being treated. That 18% has gone up to 22.5% now. We have still a long way to go if we have to achieve our objectives by 2019. The outlay for this programme is around 15000 crores for Swachh Bharat Mission (Urban) which is the central component and the states also have to contribute at least 1/3<sup>rd</sup>. Whatever the centre contributes, the state has to contribute and the majority focus is actually on the participation of the private sector and other organisations to come up and invest in this sector because it was felt that a large scope of private sector participation can be made in this particular sector. Citizen Centric as our honourable Prime Minister has said that this programme cannot be treated just like any other government programme and if it has to achieve its objective, it has to be made into a jan andolan or a mass movement. And that is why, it is very, very important that the different stakeholders should be involved and they

should be made part of this mission so that we can achieve success and in fact, we are going in that direction whereby not only creating the infrastructure in terms of solid waste management systems and construction of toilets but also lot of emphasis on behaviour change, mindset change and lot of emphasis on engaging with various organs of the society are an essential part of this programme.

Considering the targets, in urban areas, we have to construct around 66 lakhs individual toilets and around 5 lakh community toilets and public toilets. That is the target under the toilet construction part. For the urban solid waste management, we have to construct lot of processing plants for scientific disposal of municipal solid waste. These were the objectives.

Now I will be basically focusing about the some of the Citizen Centric initiatives that we have taken to involve every section of the society under this programme.

Q: Do you have the cost-benefit analysis also?

Saurabh Jain: What does that mean?

Q: Whatever you are doing, there has to be a cost-benefit analysis.

Saurabh Jain: Sir, everything cannot be done in terms of the economic benefit.

Kewal Krishan Sethi: Mr. Vardhan, let us wait for the completion. Maybe, he will come to it during the course of his presentation.

Saurabh Jain: Swachh Bharat for Citizens and by Citizens. Over 8 crore households is expected to be benefited from Swachh Bharat. 100 hours voluntary efforts per year have been pledged by the citizens as on date contributing towards Swachh Bharat. Brand Ambassadors have been made under Swachh Bharat, ambassadors like Amitabh Bachchan

Speaker: He is daily on TV. There is too much of exposure.

Saurabh Jain: Okay, there is too much of exposure but we want more and more exposure because the task is very huge. 140+ ambassadors have taken this Swachhta pledge and they have actually dedicated themselves towards the cause of Swachh Bharat in terms of promotion of various activities. If we see on national level, students pledge on 26<sup>th</sup> January, over 2300 schools and 1.5 million students participated and we are engaging NGOs, Self Help Groups, Citizen Organisations across nation to influence safe hygiene.

I just want to talk to you about one of the very novel initiatives taken under Swachh Bharat Mission to promote a sense of healthy competition

among the cities to improve their infrastructure and improve their sanitation. Last year, we had this Swachh Survekshan for 73 million plus cities and rankings were carried out in terms of delivery of services and the provisioning of infrastructure as well as citizen engagement. These 73 cities were ranked in the order of 1 to 73. Mysore came first last year and this year, we have expanded this and from 73 cities, it has been made into 500 cities. All the 1 lakh plus cities will now be surveyed on the infrastructure whether in terms of the solid waste management infrastructure or the sanitation infrastructure as well as how citizens perceive about their city in terms of their infrastructure and how citizens think that whether their city is clean or not. 30% weightage is given to the participation of citizens and their feedback about their perception about sanitation and cleanliness of their cities. This is a very game changing initiatives to promote a sense of healthy competition on the cities. We are now going to every part of the country and conducting these workshops across the states and we are telling them that this is their status as of now and what they need to do in the next two or three months to improve their rankings because these rankings would be announced at the national level. Lot of cities are actually asking us what they can do, how they can improve their infrastructure and what steps can they take. It has generated a very good healthy competition and the cities are getting benefitted and the citizens are getting benefitted out of this exercise.

Q: Is it available online?

Kewal Krishan Sethi: It is.

Saurabh Jain: Swachh Survekshan will be carried out by the Quality Council of India.

Q: Are the suggestions that you are giving to the cities available online?

Saurabh Jain: We are conducting workshops. We are going to every state capital and we are inviting the cities, doing the workshops, talking to them about various parameters and then resolving their queries about the survekshan that will be launched in January 2017.

I was discussing about ambassadors. These ambassadors were felicitated in the month of January this year by the Honourable President just to show them what they mean for Swachh Bharat and how they can further engage and promote their followers to engage in various kinds of sanitation activities.

Various kinds of events are being organised. Citizens painting the walls of Ludhiana; they are painting the walls around national highways, mass pledges, cyclothon and NDTV cleanathon. Various kinds of activities organised wherever we can engage the citizens are being carried under the Swachh Bharat Mission.

Citizen centric services – we can divide them under four categories. One is the information needs. What is the kind of information that is required by a citizen is available on our Swachh Bharat Mission urban portal about the eligibility of citizens, what is the kind of subsidies that they will be getting under this programme and what are the different kinds of guidelines, key achievement, IEC material, advisories and circulars. These are available on our website. The tracking the status of the applications – for constructing an individual toilet, he is being given Rs4000 as central government subsidy. There is a provision for online application. He can just go to any of the Citizen Service Centre or he can log into the website of Swachh Bharat and he can just submit his application and then he can keep track his application status. There is a mobile app also for tracking the status of his application for toilet. Addressing the citizen's need – recently, in association with Janaagraha, we have launched the Swachhta App which is basically for engaging the citizens and making them a part of the governance process in which they can post their complaints, they can post their grievances about various kind of civic issues and these grievances and their complaints are then routed through the concerned municipal functionaries. They have to resolve these complaints in a time bound manner. For every category of complaint, a time frame has been defined. Any if they are not able to do it in a time bound manner, then this complaint gets escalated to the next higher level. Through this, there is an accountability that is being tried to be built up into the system. We have the Swachh helpline 1969, the toll free number in which any citizen can call. He can register his complaint. If he wants to know about his application status, then he can find out or if he wants to know about any information relating to the guidelines or any other scheme, then he can do that. Toilet Locator App is what we have developed. Now all the toilets which are located in a city are mapped on the Google Maps platforms. All the public toilets, the community toilets are being mapped. This pilot project was carried out in the NCR area and the plan is now to roll it across the nation.

We have the e-learning platform because as was mentioned earlier, there is a lot of gap in capacity of municipal functionaries in executing the programme. Since municipal governance is a day to day function and it is very difficult for them. for a Municipal Commissioner to actually leave their employees for the training programme for more than 5-7 days because it affects the municipal governance. What we thought was that we should develop e-learning courses on each area of sanitation and solid waste management and about different technologies and different best practices and put in on our web portal and the municipal officials at their own leisure can log into these courses and they can do courses at their own leisure so that they can build their skill sets and knowledge set in their respective places and need not have to come to Delhi for attending a training programme. We are organising training programmes but this is also one way of reaching out to their respective places and training them.

Then citizen participation through the MyGov platform. As you know, MyGov platform is there. This is the Swachh Bharat page where the citizens can take pledges and they can contribute hours, they can dedicate themselves to the cause of Swachh Bharat by contributing hours like they can say they will do 50 hours of activity under Swachh Bharat for this year. They can do that. We are conducting Thematic Drives every fortnight on different themes. Right now, the theme is on the maintenance of public toilets and community toilets for 15-30<sup>th</sup>, in which in a city, whatever are the public and community toilets, they will be seen and the infrastructure will be upgraded and the onus is on the municipal body to see that all their infrastructure about community and public toilets is well maintained.

These are the four different areas under Swachh Bharat through which we are trying to provide citizen centric services.

This is the Swachh Bharat Urban portal. It provides the information on all the mission components. It is an interactive map based dashboard with major KPIs at the national and at the state level. It has the interaction with the MyGov portal and all the events, circulars, newsletters, MoUs and everything that a citizen wants to know about Swachh Bharat can be accessed from this website. He can also apply for online for his toilet application and he can track the status of his application on this portal.

This is the IHHL application and the mobile app. Though this, he can apply for getting subsidy and the online MIS is there for tracking of the status. There is a mobile app also which has been developed for reviewing the application status and reviewing the progress via the dashboards.

I have already discussed about the e-learning portal. This is the site where they can log in and do the e-learning courses. At present, 30 courses are available on our portal and we are also developing 100 new courses and we are sure that within two months, we will be able to upload these 100 new courses so that the municipal functionaries will have a wide variety of different kinds of courses and depending upon their requirements, they can take these courses and get the certificate from the municipal body.

Swachhta Mobile App as I have discussed already, is about the citizens scan report, cleanliness-related issues by posting photos. In fact, this App as I have mentioned under the Swachh Survekshan, 30% weightage is given to citizens' feedback and the predominant portion of the citizens' feedback will be taken through the performance of a city on the Swachhta App, how well they have resolved their complaints on Swachhta Appl application. This is becoming a very important app for resolving citizens' grievances at the city level. I urge all of you to also please download it. It is available on Google Apps and also other platforms. 15000+ downloads have already been made on Google Play Store and Apple App Store as of now and 7000 complaints have been received and resolved till now. We are

regularly promoting this app so that every city should adopt this app for handling the municipal grievances.

Swachh Helpline 1969 is available, a four digit hotline number and citizens can call and ask for information as well as resolve their grievances. They can post complaints and this will be taken care of.

One initiative that was launched was GPS-based vehicle tracking of municipal vehicles because many of the times, we found that the municipal vehicles were not regulating visiting their designated locations and many location, this service has been outsourced and there was a lot of misuse of the municipal vehicles and they are not actually doing the task related to the collection and transportation of municipal solid waste. Now we have a MoU with BSNL, MTNL and DIMTS. Under this, they have provided a solution for tracking and monitoring of all municipal vehicles through the GPS-based systems. All the municipal vehicles are tracked and monitored. There is a dashboard through which in the vehicle route, we can see whether the vehicle is following its designated route or it is not following and the garbage bin that has to be cleaned as part of that route has been cleaned or not. It provides for MIS for waste collection and transportation and real time SMS delivery for vehicle breakdown and maintenance. It provides transparency in the civic administration and more and more accountability. Through these IT initiatives, we are trying to improve the administration and ensure more accountability of municipal governance towards citizens.

These are the national initiatives but apart from the national initiatives, the city themselves are taking their own initiatives. We have in Faridabad WhatsApp helpline. We have the Swachh Kashi App in Varanasi. The biometrics attendance system for ensuring the attendance of the municipal employees has been carried out at many places, toilet locators. These are the initiatives that have been taken up by the cities on their own in addition to the initiatives taken by the central government.

I have talked about the Toilet App. You can locate the nearest toilet through Google Maps. It was conducted in 5 cities in the Delhi-NCR region. We are planning to expand this project on national level after the success of this pilot project.

I have already explained about MyGov.in. Citizens can upload their activities, whatever activities they are performing in terms of Swachh Bharat, cleanliness or engagement of volunteers. They can upload their activities, they can upload their photographs on MyGov. They can take pledge and they can commit themselves for the number of hours they want to contribute towards Swachh Bharat.

These are some of the initiatives that we have taken under the Swachh Bharat Mission to make it much more citizen centric. We are seeing citizens as one of the main stakeholders around which the entire mission

has to be built and how more and more citizen participation can be involved in the design of this programme so that the accountability improves and ultimately, the civic governance improves in the country. Thank you.

Kewal Krishan Sethi: Thank you Mr. Saurabh Jain. You have given a very exhaustive view of how citizens can be part of this campaign. We hope that it does succeed. I now request Mr. Pankaj Jain who was Secretary earlier and actually the initiator of the entire programme and retired just two days before the programme was launched. He has carried out all these wherewithal of what is to be done. Now he is with a voluntary organisation. He has got the experience of both the sides. We will profit by his experience on this.

Pankaj Jain IAS, (Retd),  
Former Secretary Drinking Water and Sanitation and  
Presently, Hony. Chairman, Sulabh Sanitation Mission  
Foundation:

Just to start off from what Mr. Sethi said, in 2014 when the PM took over, he called all the secretaries and said we want to have some new initiatives. Every secretary was asked to give a suggestion. I was the second to put my hands up and to say why can't we have a Clean India because India is so dirty. There is litter everywhere and people are defecating in the open and causing diseases. He asked where we are going to fund it from. Do we have the funds? I said that in addition to the government funds, we can rope in CSR. And then I also talked about creating a Swachh Bharat Kosh and also the Swachh Bharat Cess but of course, for the cess part, lot of people blamed me for that because it is an added tax on people. But these four sources, we ----

(M K Kaw: You have got company there. I got the education cess.)

Pankaj Jain: Oh you did. I am sure people didn't think very high of the additional tax. But we were really in a soup as far as the funds were concerned and to just share it in this limited audience, in some of the meetings and we used to have regular meetings which the Prime Minister used to call twice a week at least and Mr. Jaitley said we have no funds and we can't really do this because I remember, I gave a bill of 1.5 lakh crores at that time and we had a budget of 2500 crores or something. It was a huge jump and everybody's eyes gaped. Mr. Jaitley said he was not going to give any money to Jain because he cannot spend it. He does not know how to spend it. Spending is easy but only if you pocket it. If you want to spend it reasonably and within the guidelines, it was very difficult at that moment of time because we were forced to converge four sources of funds – MNREGA, state funds, central funds, essentially three and the beneficiary funds. If you have four sources, it never converges. And I also



recall which I can share within this confine that Mr. Venkaiah Naidu in one of the meetings said, “Mr. Jain, what are you talking about?” Isn’t there a District Magistrate whose job was to converge all the schemes together? I said that it was absolutely correct in theory. But in practice, if he has to wait for the next instalment to come, he loses interest and people keep waiting. As it is, we have a very complicated system, I am sorry to say and we are all responsible for it. We release to the state. The state releases to a thing called Swachh Bharat Mission, it in turn releases to the District Magistrate and in turn, he gets it executed. In this chain and pipeline, I think the year is lost. We need to think about how to hasten the process. I will also in passing mention that this issue came up when we were thinking of Smart Cities.

When the Cabinet Secretary called up a meeting and since I had spent over 10-12 years in the urban sector, he asked me what could be a possible model for this because states are admittedly slow because of the constitutional position, after all, release and further release and all that. I asked why not we have a Special Purpose Vehicle. We did that in Jammu and Kashmir. I was in charge of a thing called Economic Reconstruction Agency where the funds flowed directly to the agency and no questions were asked by the government. There was only the board and the board was kind enough to give me full powers. You just go ahead and report to the board. That was much faster implementation. Now I am happy to share that in the Smart Cities programme, this SPV has come into place. The Divisional Commissioner or the District Magistrate or the Municipal Commissioner or the person in charge of similar programme can head this SPV as per the directions of the state government. If it has resolved some things by making the implementation faster, we can certainly think about such kind of structures. Somebody of course, very rightly pointed out that sanitation is much more than building toilets. I totally agree. The Honourable Prime Minister asked me this question, what is sanitation in one of the meetings. I said that it had a number of components after all. It is solid and liquid waste management. It is also cleaning the streets. It is non-littering and of course, stopping open defecation because that spreads a lot of disease. But if you want to prioritise, I said that stopping of open defecation was the highest priority because it is a national shame. We are ranking no.1 in open defecation. 60% of the world’s open defecators belong to India. And at that moment of time, in 2014, only 42% coverage was there. Now it is, 57% as Saraswati said. It is a very good progress, I must say. About 20% has been achieved in just 2 years. It is fantastic. If you look, we still need to construct 7.7 crore toilets and we have only 3 years to complete the programme by 2019. The way we are going, in these two and a half years, we have constructed 2.7 crores. It is roughly about a crore, 1.3 crores was the last year’s achievement. Let us say 1.5 crores but we are not going to have it in three years. It will mean 5-6 years programme. So we need to double our efforts. That is one of the major issues which I wanted to flag. Regarding Rs12000 for the cost of a toilet, there was a lot of debate in one of the meetings. I was also opposed. Lot of

people said that there was no money for it when I wanted to increase it from Rs10000 to Rs12000. We collected the calculation as per the state schedule of rates from a number of states and Rs18000 was coming roughly as the state schedule of rates cost. I recall in a similar situation in Indira Awas Yojana or rather equivalent in the urban sector when I was the Joint Secretary, the now President was chairing a GoM. He said that in Indira Awas Yojana, we give Rs30000 and in urban, we can increase it by Rs10000. We will make it Rs40000. I said this was not something like bargaining while buying vegetables in the market. Which engineer will touch in the urban sector a thing which is not in collaboration with the state schedule of rates? He will be in deep soup. And if he just makes a raw house, he will be caught by the state vigilance. I put my foot down. I am just giving an example, I am sorry to quote history but these are some of the problems that we have to surmount. I told the minister to rake it up and she asked me to explain to the chairman, GoM. We passed on this paper and we got Rs80,000. It is a question of putting up a fight for it.

Now, we have, of course, reached 57% but we need to double our efforts as I was mentioning. And the other issue is, of course, open defecation is a mindset as has been said by all the speakers. And to break this mindset, we are having a large number of film stars on TV which you see every day which is to change the habit. There are cases where people get the government toilet constructed but either they put goats inside or use it as a storehouse or the women of the house use it but the men say that they prefer the open fresh air. They go out. It is one of the indicators, as was said, as to whether everybody was using it in the house or was it only few people. It is a very useful indicator incidentally.

Now coming to CSR, the tragedy of CSR is about 18000 crores is available per year and I thank Saraswati Prasad for giving me this figure before I rushed to the PM and out of this, you will be surprised, only 6000 to 7000 crores are actually spent by year which is also increasing. Earlier, it was less and out of that only 8% of 18000 goes to sanitation which is about 1000 to 1500 crores. And it does not go through nice NGOs like Sulabh. It goes through their own foundations we hardly get any funds from. You will be surprised. We make the project on the request of many of the corporates, we submit it to them. Then they sleep over it. They will say they will give it next year. Although, we are the world's largest sanitation NGO and by far the best toilets are made by us and best maintenance. But the corporates need to step up their activity. We don't mind them giving it to X, Y, Z NGO but do it through your foundation but the contribution of CSR into sanitation is abysmally low. That is the issue I wanted to flag. And even if you look at it, there is this India Sanitation Coalition which I was sharing with Saraswati which is within the FICCI does not seem to be making much headway. I met the railway minister sometime back and he said that he will tell Naina Lal Kidwai who will help us and organise a seminar. But in practice what I have seen in the corporates is that they only want a photo-up session and put it on the Facebook. They try to escape the actual dirty work or they linger on the

thing. They organise a meeting, take photos and put it in the Facebook and shake hands with the Prime Minister, they promise to do it in four other places and that is it. Corporates have to come out of this kind of mentality.

Q: No targets?

Pankaj Jain: Targets is difficult by the government. It is voluntary after all. How can you force people? I will give you a point on this. We had suggested at various forums including to the Honourable PM after I retired that some portion of this money should be routed to sanitation. And there were reports in the media that you might have seen that 30% was to be spent on sanitation on CSR. I don't know now. Saraswati will tell us if that order was ever issued.

Saraswati Prasad: That order was never issued sir. The only thing that came was the CSR liability of 2%. If you contribute to the Swachh Bharat Kosh, it was eligible to be charged as a valid compliance. In fact, Mr. Jaitley has been exhorting the PSUs that whatever is left at the end of the year, to at least the PSUs, he can't direct the corporates which you have not been able to spend as per the 2%, to please put it in PM's Kosh. There is no study as to whether it is actually going in or it is not going in. If you want other figures, Swachh has collected about 2500 crores per year. This year's target is 3000 crores and it is all going into the DWS and the other mission. There are two missions. This is earmarked for the missions and of course, I have indicated the CSR amounts. But if you again look at 2014, the Prime Minister announced that corporates should take up the construction of the toilets especially girls' toilets in the schools. There was a huge effect. Every corporate rushed towards this. Even now they approach us that if you want to construct school toilets in school, we will give you the money. Recently, I was approached by Ashok Leyland as we submitted to them but they want school toilets only. They do not want to divert to any other kind. Otherwise, there are public toilets, school toilets and individual household toilets. But look at the effect in 2014 where in one year, four lakh toilets were built. If PM gives an announcement today that the corporates are requested to sponsor individual toilets or public toilets, I think it would make a difference. You are in a position and you can suggest to the Prime Minister. I had drafted a letter but I was just thinking over it as to whether we should move it through the Secretary and maybe, you would also like to do it. But I did not send that letter.

Q: Please send your suggestions.

Pankaj Jain: I will send my suggestions. There are some other issues which I wanted to touch. Since open defecation is a mindset problem, we have to create demand rather than thrust it on them. If you don't create the demand, either they will put their goats there or use it as a store room or men will not use it. One of the ways to really create demand is CLTS

which we didn't touch. It is Community-led Total Sanitation. It is one of the concepts which was very successful in Himachal Pradesh. In this, the person who is the CLTS coordinator calls the whole village community and explains the benefits of sanitation and he practically demonstrates that if people are shitting all around the village, then you are eating each other's shits. Would they like to eat the other person's shit? He puts a fly on the shit and he puts it in the drinking water and gives you the water to drink it? Will you drink it? People who have seen it will not drink it but people otherwise in the village drink it. This is to practically tell them that it is bad to have open defecation and this can be a trigger for demand for toilets and of course, the demand can be satisfied by the government schemes. MPLADS is another thing which is the source of funds. But if you look at it, even the PM had exhorted his MPs to adopt a village. But hardly any MP has done it. Today, hardly any MP approaches organisations like Sulabh for example or anybody to create toilets in the villages. It is a shame. I don't understand the reasons for it.

A few words about Sulabh. We are the world's largest sanitation NGO.

Speaker: You have to lobby with them.

Pankaj Jain: We have a special officer for that. And incidentally, I also go and meet a lot of ministers and MPs. The ones who show little interest, I go and meet them. Day before yesterday, I was sitting with one of the ministers and he said that if it can't be done through MPLADS, he will give it to me through CSR. There was no problem. If people show interest, start with your own constituency. I am not saying do it for any other thing. You take the case of Ashok Leyland. They said that they won't fund anywhere except around their factory. I said fine, do that. We approached the tea companies and the coffee companies in the Nilgiris but you will be surprised, the coverage in Tamil Nadu around their factories is only 40%. 60% is Open Defecation. Yet not a single tea company and they are quite well off, has come forward to get their toilets constructed. This is what CSR in India is actually. In fact, the minister I am mentioning asked me if it will be done in his constituency only. I said yes. Sitting right there, I rang up my controller and told him that the minister was willing to get 1 crore from CSR and asked him to make a project for public toilets. He gave it to me on telephone while I was sitting with the minister. I gave it to him, got his approval on those sites and we are going to get the CSR money. This is how we have to work. But my message is for the corporates to become more active.

We have constructed 1.3 million toilets in the country which is quite a large figure. 8500 public toilets and our largest toilet is in a place called Pandharpur in Maharashtra which sees the Ashadi Yatra in June-July. It has nine public toilets and the total number of seats is 2300 at one time people can use. It is a big job and the bathing. And in a day 10 lakh yatris can use it. After that, open defecation has stopped in that place. We also have constructed biogas toilets in Kabul and also one in Bhutan and we

are consulted in Nepal and South Africa. We are in consultative status with the UN ECOSOC and our founder as you may know Mr. Pathak has been working on this from 1968. He is the recipient of a very large number of international awards. I have a list but that will bore you. I have distributed some booklets on Sulabh.

**Speaker:** He has got Padmashri.

**Pankaj Jain:** Yes, Padmashri but he has got a very large number of foreign awards. Everybody here is welcome to our campus; just give me a call and we have demonstrated everything on ground. There is a biogas plant. There is a waste water cleaning plant. The same water which comes out of a toilet is recycled. We clean it and it becomes like manure in water shape. We put it in the lawns and it is a very nice fertiliser. And we have a school there. We give vocational training to the scavengers who have been liberated and to Dalit children. For scavengers, it is free. We have converted the scavengers and made them Brahmins. I don't know whether anybody is aware of that. We say that they are not scheduled caste by birth. Their caste should be by where you work. We have taught them all the shlokas and now they are conducting marriages. That is how it is. We have changed their names also. This is a real social experiment. Why should we look down upon these people?

We have the world's only single international museum on toilets. Coming to technology, there is a lot of technology options but you would be happy to know the government since long adopted the twin pit technology which Sulabh had invented long time back. Now it is not the single pit. But of course, there are some limitations in places where the water table is high where this may not be successful. Saraswati has already mentioned and in certain cases like those, the DRDO model may be better.

I will just give you one example. I think Saurabh mentioned it. Coming back to the urban sector, figures have already been given and so I will not repeat it. 12% is the open defecation figure but actually find a lot of floating population and tourists and people going to markets and all that but the actual fact (forget Delhi), do you find nice toilets around? You don't. Surprisingly, we have been in touch with cities surrounding Delhi – Greater Noida, Noida, Faridabad, Gurgaon and even Delhi DDA. All of them only talk. They have no funds. They can't decide about the execution agency. To give you positive examples, I will take you to Varanasi. We cleaned Assi Ghat in Varanasi. I don't know whether the people are aware of that. It totally looks new. We are constructing 238 public toilets there. They are in various stages of construction. We already have in slums about 30-40; I am forgetting the exact figures. In each office, we are constructing a new toilet. And this is funded by JICA by the way.

Pankaj Jain: I will tell you the technology if you are interested. It is a twin pit technology. There are 3 or 4 types of technologies. The costliest is if you have a flush system and if you have a sewerage and STP and into the river. The oldest technology is the septic tank which is actually not a technology; it is a sham. But still I think around 60 or 70% of Delhi is covered by the septic toilets; most of the cities in any case because the coverage by sewer is only about 22% in India in the cities. Even my house has a septic tank. The technology has slightly changed. You have an overflow and it goes into a soakage pit. The thing infiltrates into the soil and dies within 1.5 meters or something. The same technology we actually use in Sulabh but revised. We don't use a septic tank. We have a honeycomb structure and it is only one tank used at one time. The muck with the wastewater goes into it, the water reaches into the soil and what remains is sludge. When it is full, the sludge is still semi-wet. You change to the other pit and this becomes dry and becomes manure. This is the cheapest technology because it uses very little water, one litre.

Speaker: Will it not smell?

Pankaj Jain: No, it does not. It is all covered and underground. This is the cheapest technology for India and it is even being adopted in other countries.

Speaker: How much does it cost?

Pankaj Jain: It depends on the location but we work on SoRs. It might roughly be around Rs30000 or so because it depends on what quality superstructure you want. It could be Rs40000 also.

Saraswati Prasad: The same thing for the rural areas, we are providing an assistance of Rs12000 and it can be constructed in most part of the country. Obviously, it is not tiled and the material used is not great. But it can be constructed in Rs10000-12000 also.

Pankaj Jain: You have a choice actually. That is the basic cost. If you want to have a slightly better one, then we give options like that. I will give you another example. It is a very successful corporate CSR example that is in Ludhiana district. Airtel has adopted the whole of the district of Ludhiana because the owner belongs to that area and they are working through us and making it ODF entire. These are some of the successful examples.

Recently, there have been talks about giving incentives at the same time enforcing law strictly meaning that you should create demand, then create the supply and then if people don't behave, you penalise them. There has been a talk in the press also about the law and in fact, the honourable Prime Minister in 2014 had asked me why we cannot have an Act for this. I informed him that the Municipal Act covered nuisance under the

nuisance section and anybody can be booked. But in actual fact, nobody is ever booked. The suggestion which I had been giving in various places is why we don't have a stronger enforcement. The Environmental Protection Act covers it. You can work on that also and we need to move in this direction in the future. And, of course, we need to widen the definition of sanitation in the future to cover street cleaning, anti-littering, clean potable water. Somebody also mentioned rain water harvesting on a stronger scale so that real swachhta comes in every way. They have already started covering the solid and liquid waste management in a big way. Then encroachments, illegal construction and breaking down houses and reconstructing it without any dust barriers. You need to control the dust pollution. But that is covered under the EPA but there is no implementation. Thank you very much.

Kewal Krishan Sethi: Thank you Mr. Jain. We can have some questions from the audience now. I would like to ask the first question with your permission.

### **Question and Answer Session**

Q: Kewal Krishan Sethi: How is that Bangladesh is at 1.8% from 40% in 1990s? It has come down to 1.8%. How do you account for that?

Speaker: Sri Lanka is at 0%.

Q: Kewal Krishan Sethi: Sri Lanka is 0%. Vietnam is 1.1%. These are the figures but Bangladesh is just next door. That is why I am asking about that.

Saraswati Prasad: In fact this is true. There is lot of material available on this and one school of thought is that actually government incentives disincentivize the whole programme because if you have an incentive which divides the communities; the argument is that the entire community must realise that it is in their own interest to build toilets. The key in Bangladesh was, as Mr. Pankaj Jain mentioned about CLTS, Community-Led Total Sanitation, the concept is that the entire community has to realise that it is not my problem or his problem; it is the entire community's problem. Even if the rich have toilets, they are still eating somebody else's shit because the flies are all around. That is the key concept and that is what Bangladesh did and they hardly provided any incentives. But in India, we have been having this legacy of providing incentives to households. It used to be a very small amount when Total Sanitation Campaign was initially started, TSC in 1999. Everybody knows about the theory that incentives don't really work. There is also a counter point that we have some part of the population that cannot afford toilets. So we must provide. It is actually balancing the two key elements here. But Bangladesh went ahead without incentives ---

Q: Poverty levels of Bangladesh are now better.

Saraswati Prasad: Certainly. I am not saying that. There has perhaps to be a realisation that incentives may not really work. But the quality of toilets which Bangladesh has is not comparable to the kind of toilets that government-assisted households get. But the fact is that they are way ahead of us in terms of stopping open defecation. They have very rudimentary toilets, what we had initially in the Total Sanitation Campaign where the pan itself rests on the pit. It can be built with very little money. But this experiment was carried out in India also but the 1.4 crores toilets that I mentioned in my presentation, toilets that seem to have gone defunct, most of them are those kinds of toilets. The argument was if you build toilets which are rudimentary and people will stop open defecation, then they will get into this habit and they will build their own toilets as they become richer but that didn't sort of happen in this country. That is the experience. So we have a problem but every day, we are facing this dilemma because the kind of money that is required for funding this even at Rs12000 per household is enormous. Even today, the balance work that we have to do is of the order of about 80000 crores of central assistance alone. It is a huge sum of money. We don't really know. We have been assured so far that Swachh Bharat will be funded. But within these walls, I have my little sense of a bit of a doubt whether we can actually get this funding. We might move towards the Bangladesh route sometime later.

Pankaj Jain: Just to add on what Saraswati said, in the northeast, we have rudimentary toilets and they call themselves open defecation free in some of the states. It is just exactly as he said. The pan is right on the pit and there may be only one pit and after use, if you don't have water, you just put sand or mud on it so that there is no access to flies and that is it. It is the cheapest model. It hardly costs Rs1000. He can just make it at his home. He won't have to pay more than Rs1000. But we are not doing that. In the government system, it is a very nice toilet.

Q: Varadan: I have two questions. I am working on some 21<sup>st</sup> century villages but we don't have this kind of fancy funding but I saw some villagers who have done a very unique thing. What they do is on the peripheries of their pumps, in the village, there is a pump and they have dug pits, some 2 feet diameter and 3-4 feet down and I don't know whether there is a line underground. They use it for defecation and they have built something for privacy and they have put wooden planks.

Speaker: There is a similar thing in Ladakh.

Q: Varadan: And the logic is unlike the two pits system which is a mess, and what they say that this breaks down once in two or three years, they close it down and they dig another pit and it takes about 2 years more for it to become compost. They plant a fruit tree there. He is solving the



defecation problem. He is planting a fruit tree. He does not have to get the fertiliser for this. I thought that was a brilliant idea and I am talking about it to other people. Perhaps you could share it with your people.

The second idea which I have is I am working on aquaponics which is growing fish and food without drawing water. I was stumped because we could not get protein rich food because the fish needs fish feed which has high protein and we could not get it. I think Bill Gates is doing research on the black soldier fly. I think IIT, Roorkee has posted some work on that. I went into that and basically, all the excreta, any waste, be it meat waste or vegetable waste, the pupa of the black soldier fly eats it up and there is a method, the pupa comes out and it is able to clear it much faster than this composting. This can be easily be put up for all the vegetable waste. I don't like using the same thing with human excreta if that is possible otherwise it could be done. That will cut down half your green waste. Delhi is producing about 67000 tonnes of green waste per day. If you do this, you are going to be getting more fertiliser than the entire fertiliser requirement much faster.

Q: Where is it being done?

Q: SS Garg from Dwarka: I had come from America some years back on a visit. I think that the central ministries of Sanitation and Urban Development suffer from several implementation and operational defects. One is that additional secretaries and secretaries do not have any scientific knowledge. Second is they never go to the project site and work in a camp for even a week. They teach provincial officials in training centres which is just paper work which is copied from some book and produce in the training centres. For example, their ministries ---

Speaker: But today's bureaucrats are not like that.

Speaker: Can we stick to the topic of the seminar? What you are saying makes no sense?

Kewak Krishan Sethi: What do you propose should be done?

Speaker: Please suggest what is to be done.

Q: S S Garg: Let me at least complete.

Speaker: Mr. Garg, there is a lot of scope in America to improve toilets. They use toilet papers there.

Q: S S Garg: Let me finish what I want to say. The technology for toilets that the ministry has used so far ---

Speaker: It would be better if you can give us your background, we will also come to know about it.

Q: S S Garg: We cannot call it a technology; this is a very crude technology and shoddy technology. They should do some research on good technologies like when the toilets are used with water, then chemicals should be mixed in that so that it becomes biodegradable. For example, alum which is called फिटकरी in Hindi, which is also called aluminium sulfate,  $Al_2(SO_4)_3$

Kewal Krishan Sethi: We know what alum is.

Q: S S Garg: If you mix this alum, lot of bacteria and virus can be killed. Secondly, if you mix chlorine gas or chlorinated salts in that water, it will act as a disinfectant. Thirdly, we can collect the water that overflows from the septic tank and use ultra violet radiation in that and through infrared solar, we can bring in the disinfectant effect. Research should be done on all these things and we must encourage our IAS officers to increase their knowledge and they should also be sent for training.

Q: Mr. Saraswati Prasad, I want information on the 100 smart cities that in now in the plan again like Swachh Bharat, which is being talked about now, whether by the time they are completed, they can be example cities from Swachh Bharat for public toilets and not the individual household toilets. Whether you have any scheme to cover and tie up those cities? My second question is for Mr. Pankaj Jain. The original gentleman was very famous when the project started and they build very good toilets and they were well-maintained with a nominal charge. They were not free. People had to put 50p or Re1 to use the toilet. They are being maintained. It was a success. I don't know about now. Why can't you have that with your wonderful public and private experience? Why don't you start in all the towns and model states so that people will see that and the so-called politicians can be made to follow such examples? I don't know whether you are already doing that or not.

Pankaj Jain: I will answer both. As I recall, I was not in the urban ministry but he may be able to answer this better but in the smart cities, I think 20% or some component is for Swachh Bharat. I don't know exactly the points from ranking and the ranking is done on the 1<sup>st</sup> of January every year. Of course, how I knew this was from reading materials and also I had gone to Varanasi last year for my official work and there I met the Additional Commissioner who is the chairman on some context about our toilets, he said that their ranking was going to start from 1<sup>st</sup> January and asked us to complete the toilets fast otherwise they will get less marks. There are marks for Swachh Bharat and we are constructing 238 toilets in Varanasi.

On your second question as to why we don't upscale it, that was exactly what I was saying, we approached, you will be surprised, Greater Noida Authority, Noida Authority, Faridabad, Gurgaon. They are all paying lip service because they have got some circular from the Urban Ministry through the state governments that they have to do this. But there is utter confusion. We said that they can arrange for funds and we will construct it. We can finish it in a year and we can complete 600 in a district like they want us to do in Gurgaon. They want us to do 600, takeover the existing ones and have one in every corner, urinals and so on. We said that we are ready for it and ask them to arrange for the funds and also to be ready for asking us through a letter. But they have been keeping quiet.

Q: When you upscale it, you also maintain it. You can say that you will look after it.

Pankaj Jain: We have certain models which I will come back on this since you asked. In viable cases, we have on 'pay and use' basis and in most places, we made urinating free by the way. It is not a heavy charge. For the big job, we charge Rs5 and for bathing, we charge normally Rs5 but in tourist areas where the foreigners want hot water, we charge Rs10. We also have a western toilet with normal bathroom, western toilet cum hot geyser, everything combined and we charge Rs20 from foreigners. They lovingly give it. It is always full. I went to Rajasthan in the present post, Jodhpur, Jaipur and they are always full. And they are praising Sulabh like hell. I didn't get very good response in Greater Noida. I didn't get anything in Noida. I didn't get anything except lip service. What am I to do? If the government is behaving like this, the Municipal Commissioner, the Urban Development Authorities, then somebody has to talk to them. We are willing to construct. By the way, they have the money.

Q: After demonetisation, maybe things will improve.

Pankaj Jain: They have the money. This is what I am saying.

Q: M K Kaw: You said something about passing of the money from the centre to the states and then to the corporation bodies and then extended to various persons. Did you try the DRDO? Then we found the solution workable as you must be aware. The DC was the chairman of the DRDO. The money did not go to the state government. It came directly from the ministry.

Pankaj Jain: I totally agree and I was talking of similar models actually.

Saraswati Prasad: Actually, when this programme was initially launched, the Government of India had that kind of an arrangement. But you may recall, there was a huge resistance by the states. What has happened now is that in all centrally-sponsored schemes, the centre's

share has to go to the state exchequer and this has actually happened over the last 4-5 years.

Pankaj Jain: I think it happened in 2012. I was there.

Saraswati Prasad: The present Prime Minister when he was the Chief Minister made a huge pitch for this that no money should directly go to any sub-state level organisation. It should only go to the state exchequer. That is how it is. Earlier, it was sent directly to the state missions. So there was no delay of financial sanctions in the state secretariat.

Q: M K Kaw: But then, he was not committed to Swachh Bharat Mission. Now that he is the Prime Minister and he has done this black money thing and he has tasted blood, he might not be allergic to do this.

Saraswati Prasad: We are in all possible forums trying to tell the finance ministry that for this particular programme; there are many other programmes, we are always taking it up but we haven't yet had any success.

Pankaj Jain: I will add to what Saraswati is saying. The real culprit is the Constitution of India. If you look at it, the Schedule for States and the Schedule for the Urban Local Bodies and Panchayats, the entries are duplicate. Sanitation there also, sanitation here also. Water is here also and water is there also. The state can actually take you to Supreme Court if you bypass them. That is an important issue.

Q: Fix a time limit on that.

Pankaj Jain: The SPV for the smart cities was agreed by the state government. That is why you will escape the Supreme Court in that. You have to make the state agree.

Saraswati Prasad: In fact, in this

Speaker: I think now the time is ripe politically.

Saraswati Prasad: Actually, the funding through the state exchequer has started only recently. It is just two years old. Before that, it was directly to the implementing organisation in the state.

Pankaj Jain: In fact, I recall in 2012, when this move of the cabinet when Mr. Jairam Ramesh used to be the Minister of Rural Development, when he went to the cabinet meeting, I rushed to his office. His office was separate from mine. I was in Nirman Bhawan and he was in Krishi Bhawan. I wanted to tell him to please make an objection to this. What was this happening? When I could not catch him, I rang him up in the

cabinet room. I could not talk to him properly and so I sent a huge message that this will cause a lot of slowness in the whole system and asked him to please rake it up in the cabinet. But the order was passed.

Saraswati Prasad: It now applies to all centrally-sponsored schemes. If they make an exception, fine.

M K Kaw: They can always make an exception. This government is totally committed to this Swachh Bharat thing. If you tell him that this will not work the way he wants unless this is done, it might be the single most important step in the acceleration of this mission.

Saraswati Prasad: In fact, there are many states where we are having serious problems because of the financial conditions.

M K Kaw: It gets diverted.

Saraswati Prasad: It gets diverted and maybe, it takes 6 months and in some cases, even 18 months for our money to actually reach the implementing agency. It is a huge problem.

Q: Karni Singh: I work with a large cement organisation called ACC. My question was this ODF is fine and is doing well despite whatever constraints. It is progressing. Is there a possibility, in some manner, to run down OD so much, there could possibly be a situation where open defecation itself could be controlled in such a manner that it is less damaging? Since you can't get it over in the next three years and that you have run it down so badly, there have been people long before you who have sort of looked at open defecation and sort of looked at mitigating those aspects. Mao Zedong's Red Book itself talks about how to defecate properly, take a grub axe kind of a thing, dig a hole and defecate, cover it and things like that. Why do you run down something so badly? Is it because all of us have grown up on commodes or something like that? I am sure there must be at least five people in this room who has defecated in the open and there is nothing wrong in it as long as it is done responsibly and that responsibility can be taught.

Q: I would like to add in this. We have two Jains here who are in the best positions today to reflect holistically. You experience of 30-40 years, Sulabh's experience, challenges, Mr. Kaw said that he brought in education cess. There was not an iota of improvement. Now you have introduced Swachhta cess. Lot of people say that even in this, there is not an iota of improvement. It is not as if there is no improvement but there are many who say it. I want to say that many people enjoy doing it in open and you may question their happiness or you may think they are perverted. You can question certain things in terms of policy issues. The scheme which is there now in rural and urban and if a village is a part of that, wherein you have water harvesting also and lot of other things, if it can be made into a better

model which is transparent, viable, eco-friendly and is local-resources based and Mr. Jain, you can make very big contribution there. I pray to god that this Sulabh project takes off well. You have got a platform and you are in a position and here, you have lot of people like Mr. Prabhat Kumar and other people from different fields, from railways, police and others. You have got such a good platform for networking which you may hardly get anywhere outside this. My request to you is to reflect on this. If it succeeds, then it is very well. But for people who are convinced that this place is full of muck, you see any railway line, it is all dirty. You travel by railways and you can see the tracks full of shit. There are issues. I request you to look at this holistically and through the medium of Sulabh, you can take this up because your past is great and you have had direct connectivity with the Prime Minister, I think with the help of the members of IC Centre for Governance, you can make a very big contribution in coming out with a basic model in area approach using local aspirations which can change the face of India.

Pankaj Jain: There are a number of studies which show that open defecation actually boils down to bad open defecation which is uncontrollable and it spreads diseases. There are so many reports. I don't think we can really subscribe to this easily.

Q: Sukomal Chandra Vardhan: I have been fortunate that since I started my career as 1973 batch IAS cadre, I have been associated with Swachhta.

Kewal Krishan Sethi: Were you not associated earlier with this?

Q: Sukomal Chandra Vardhan: I am talking about my capacity as administration officer. This practice starts when the child is born. I know you were joking. You are our senior member of our Madhya Pradesh Cadre. I was first posted as SDM in Burhanpur in district Khandwa in Madhya Pradesh and the people used to address me as ADM with respect which was an ego booster. Why I am describing this is because I was also given the additional responsibility of Administrator of Burhanpur Municipal Corporation. Right from day one there, I was associated with Swachhta. I was fortunate that at that time, Smt. Indira Gandhi was the Prime Minister of India and Burhanpur Municipality got an All India first prize for production of compost. You have talked about toilets in Swachh Bharat Mission, you don't get to see open defecation in cities; it is mostly in villages or near the railway tracks. In South Delhi where I reside, garbage is just thrown out in the open. You have Gautam Nagar in between Hauz Khas and Gulmohar Park whenever you go there, you can see 10-12 trolley carts just scattered all over the place. This dirty sight is right in front of our eyes.

Lady Speaker: Why don't you take some action?

Q: Sukomal Chandra Vardhan: I will do it but since senior officials from the government are here, they can see it for themselves. I want to share

some experience of mine when I was SDM. At that time, we were not lucky to have any government vehicle like a jeep but since I was in charge of Burhanpur Municipal Corporation, I had got a jeep at my disposal and we used to leave at 5 o'clock in the morning to take a tour of the whole city.

Lady Speaker: You must have been quite young at that time.

Q: Sukomal Chandra Vardhan: That is true. Please make this as a part of your Swachhta Mission. If the Municipal Commissioner takes a round from the Panchayat to the Delhi Nagar Nigam, definitely this Swachhta Mission can become a success. Mr. Pankaj Jain, I am not aware how Sulabh toilets are since I have not been to one but is the old technique being used for washing your posteriors and hands? I don't think they have jet sprays which is a must. It has to be made an essential part of the toilet facility. Otherwise, we will succumb to various stomach ailments of which I have also been a victim. Do you have jet sprays in Sulabh?

Pankaj Jain: We have to economise and so we don't have it.

Q: Sukomal Chandra Vardhan: Please make it a part. Otherwise, washing your anal aperture and washing hands leads to dreaded diseases as happened in the past because the bacteria will go through our skin.

Pankaj Jain: But you tell me, nowhere in the western country is water used.

Q: Sukomal Chandra Vardhan: That is what I am trying to say. I was fortunate to go to America many times but they use a very primitive way of cleaning yourself because they use toilet paper. Trees are cut to make the toilet paper and when you use toilet paper, some particles of stool tend to remain in your hands. Please use water.

Pankaj Jain: I will give you a reply of one of the ambassadors of one of the western countries when we were discussing this recently. They offered to fund some toilets. His wife said over a cup of tea India is wasting lot of water; they should use toilet paper. Save water because there is no water. What answer should I give them?

Q: Sukomal Chandra Vardhan: But at least, use it in the Sulabh toilets otherwise सुलभ will become दुर्लभ (Sulabh will become Durlabh). It will become unapproachable.

Q: Presently, we have three ministries dealing with Swachh Bharat. Why can't we have a National Council for Sanitation?

Pankaj Jain: I tend to agree with you.

Q: This will ensure sound governance and implementation because what is happening is we are constructing toilets and most of them are unusable.

Pankaj Jain: I will answer this. In 2014, when this issue was raised before the PM, he made the Ministry of Drinking Water and Sanitation as the nodal ministry because the volume was larger. Now, I don't know whether that continues.

Saraswati Prasad: It continues.

Pankaj Jain: I will tell you something which is actually a joke. Israel had come to see me in 2014. Israel and Spain are water starved countries and they have done a lot of work on water and so that is how I ended up visiting them to learn something. He came and said how many ministries in India can deal with water. I counted on my fingers and I said 11. He laughed. He said that is why India did not work. This is in a lighter vein.

Q: We are talking about Swachh Bharat and toilets are a part of it. We have concentrated only on toilets in the entire session.

Kewal Krishan Sethi: Mr. Saurabh Jain had mentioned lot of other things.

Q: Suppose the toilet problem was completely eliminated and we come to 0%, will we have a Swachh Bharat?

Pankaj Jain: I had given the answer to that question.

Q: We have not discussed many other aspects.

Saurabh Jain: Under the Urban Mission, toilets are only one of the components. The most important component is Municipal Solid and Liquid Waste Management.

Q: Very little has been discussed on other points. You have focused too much on toilets.

Saurabh Jain: Yes. Actually ----

Q: Sukomal Chandra Vardhan: There is no segregation of OS at all.

Pankaj Jain: There is shortage of funds. That is all.

Q: Sukomal Chandra Vardhan: What is preventing the segregation?



Saurabh Jain: I will just explain to you. In China, there is no segregation. It is just like India.

Q: Sukomal Chandra Vardhan: It has to segregate at some point.

Saurabh Jain: They are not segregating at all.

Q: Sukomal Chandra Vardhan: They are burning it just like that?

Saurabh Jain: Yes. They are investing in lot of waste to energy plants. Lots waste to energy plants are coming up in China and they are burning.

Q: Sukomal Chandra Vardhan: Are they not separating the metals and other things?

Saurabh Jain: Obviously, the metal has to be separated.

Q: Sukomal Chandra Vardhan: Metal and no-metal have to be separated. What is the big deal?

Kewal Krishan Sethi: We will close now since we have to vacate this room. You can discuss it outside if you so desire. There is no problem. Thank you very much. I think there was an interactive participation from the audience and the experts have given their advice. I think we can prosper from whatever discussion has taken place. Thank you very much.

### **Vote of Thanks**

Mahesh Kapoor

Before we close, I request Mr. Prabhat Kumar to present a memento to the guest speakers of the evening. Thanks very much to all the three speakers who have spoken and to Mr. Sethi.

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## Third Lecture

# **MAKE IN INDIA**

January 13, 2017

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Rajiv Sachdeva

Good evening ladies and gentlemen, welcome to this evening with the main topic Make in India. We are fortunate to have Mr. Amitabh Kant as our chief guest today. Thank you very much for coming sir. Unfortunately, he has very little time. He has to go for a meeting to the PMO. He has requested that he would like to leave early. And therefore, we are cutting short the tea interval and starting right away. I will not take much of your time in welcoming. I would like to go straight so that Mr. Amitabh Kant has maximum time available to address us. Before I handover the mike to Mr. Kant, I would just like to give you his brief introduction. It is very brief. I am sure most of you know about him. When I started looking into the net about Mr. Amitabh Kant to be able to prepare a few words, there was so much written there, I almost got a feeling that whoever's name is Amitabh, too much is written on the net. It took me, I must say Mr. Kant, two hours of effort to be able to write a small paragraph, to be able to extract it.

Shri Amitabh Kant is the CEO of Niti Aayog which is the National Institution for Transforming India. A member of the IAS 1980 batch, he is the author of The Branding India – An Incredible Story and has been a key driver of Make in India, Startup India, Incredible India and God's own country initiatives. These campaigns have won several international awards. Until March 2016, Shri Kant was heading the Department of Industrial Policy and Promotion (DIPP). He has worked in several senior positions in Kerala. During his tenure there, he structured the Calicut Airport as a private sector project. He was also responsible for introducing new technology in the fisheries sector. Shri Kant did his schooling from Modern School, Delhi and graduation in Economics Hons. from St. Stephen's College, Delhi University and MA from Jawaharlal Nehru University. He has also undertaken mid-career programmes of Harvard University, John F. Kennedy School and IIM, Ahmedabad. He has been the recipient of the Economic Times Policy Change Agent of the

Year award, the Bloomberg TV Personality of the Year Award, the Administrator of the Year award and the Distinguished Fellowship of the Institute of Directors. He is also the recipient of the One Globe Award-2016 for leadership in Transforming Governance for the 21st Century. If I were to go on and on, there will be nothing left to discuss about Make in India because there is a lot to speak about Mr. Kant.

**Speaker:** He is made in India.

**Sachdeva:** That is the fortunate part for us. It is my privilege and the privilege of ICCFG to welcome Mr. Kant. The mike is yours and we look forward to hearing from you.

## **Keynote Address**

Amitabh Kant, CEO, NITI Aayog

Thank you Mr. Sachdev for those very kind words. Mr. Prabhat Kumar who has been a very distinguished Cabinet Secretary asked me to speak here today. It is a great pleasure to be able to interact with such distinguished people, many of the seniors with whom I have had the honour and pleasure of working with earlier. Actually, I would have been here for a much longer period but today, the Prime Minister has formed eight groups of secretaries and he is taking presentations from them on several aspects of transformation. He has suddenly fixed up two groups today. In the evening about 6 o'clock, they are starting with two presentations. I am a member of one of those groups and so I will have to be leaving a little earlier and that's why colleague Ramesh who is Secretary, DIPP is not here. My apologies for that. Since it is the presentation before the Prime Minister, I have to leave. My apologies for that.

Ladies and gentlemen, the subject given to me by Mr. Prabhat Kumar was to speak on Make in India. This is a subject which I dealt with as the Secretary, DIPP and since then, I have moved over as the CEO of NITI Aayog but I will give you a broad overview of this. I will try and respond to some questions. India is growing at about 7.6% per annum. It is an oasis of growth in the midst of a very, very barren economic landscape across the world. There is a huge trend of protectionism going across Europe, across America and the challenge is for India to grow in the midst of all this. This is extremely difficult because post World War II, all

countries which have grown whether it was Japan, Korea and China have all grown on the back of exports. Therefore, there are several challenges for India. My view is that India must grow at higher rates. India's ambition and its hunger must be to grow at the rates of 9 to 10% per annum over a three decade period to be able to lift a very young population above the poverty line. And if India is to do that, then there are several things that India has to do. First and foremost, India has made itself a very, very complex, very complicated and a very, very difficult place to do business in. Over the last 66 years, we have added a lot of rules, regulations, procedures and Acts knowingly. Every year, we have added new Acts and new Rules. And this has made India an extremely difficult place to do business. When you talk to investors in India, they will tell you how difficult it is and the mindset of India is actually about controls. Actually, in the last two years, for the first time, we have seen a movement toward cleaning up the system, about making India easy and simple. There has been a huge movement about making India easy and simple. So a lot of things have been done. There is a new eBiz platform which has been created where all departments converge and integrate digitally to give clearance. Today, you can get a company registered in one day. MSME can register in exactly 10 minutes time today because it's all been made possible.

The number of forms for export and import which were 11 and 9 has been brought down to 3. But there is a lot of more work in progress right now. India is a very, very large country. These are the 24 countries of Europe. Therefore, much of the challenge lies in the fact that we need to make our states very easy to do business. They have made themselves very complex because actual investments take place in states and you need to make them easy. What do we do? Year before, when I was Secretary, DIPP for the first time, after talking to all the chief secretaries, we created a 100-point action plan which is outcome-based and not inputs.

In India, we keep doing inputs, procedures and outputs. That was the first time, we did an outcome-based monitoring and we said we will make the states compete on ease of doing business. For one year, the states worked on it. They created a dynamic portal on which the states could see on a daily basis whether they are going up or coming down. There was a huge competition. From the DIPP, we did several workshops using World Bank, US Aid and KPMG and did a number of workshops on how to make them easy and simple. And actually, at the end of it all, we found that the states were competing because on a day to day basis, they were seeing whether their ranking was going up or down. The intention

was really to name and shame the states in this whole process. There was such a heavy competition that Gujarat last year came number 1, Andhra came number 2. The good thing was mineral lands of Jharkhand and Chhattisgarh did very revolutionary work especially in the field of labour and procedures and clearances. They came number 3 and 4.

This year, we did the same competition across 360 points, 360 different outcomes. There was again a huge competition. The chief ministers got into the act, chief secretaries started to act. There was a huge pressure. This year Gujarat got dethroned totally. Andhra came number 1, Telengana jointly came number 1. And both these states are competing amongst each other. But Jharkhand and Chhattisgarh again did very well. My belief is that the spirit of competitive federalism more than cooperative federalism has now crept in and this year when I moved to NITI Aayog, one of the things we have done and actually, India performs very badly, at least 7 to 8 states of India do very badly on health and education. The challenge is not historically how you have done.

Historically, if you look at it, Kerala will continue to do well but you have to capture how you have done during the course of the year. You have to capture that delta. You create a baseline and then capture the delta and that is quite a tough job. We have done these health outcomes, we have done the education outcomes and we're doing this exactly in the same competitive spirit across health and education this year. Our teams are out in the field doing series of workshop with states. So we have moved from the ease of doing business to health, education and next, we are doing on nutrition because nutrition again is a big challenge. 33% of the stunted children come from India and unless we improve on nutrition, India will not get this huge advantage of demographic transition that we are passing through. My view is that create this huge sense of competition amongst states. First and foremost, make India a very easy and simple place to do business in; very simple and easy, digitize everything, put everything upfront on the net and converge and integrate departments because we have all got used to working in silos and therefore, this integration has taken place. There is a lot of convergence and integration across departments and the attempt has been to make India easy and simple. That is the key. Create a sense of competition also amongst states.

The second is that it is important to understand that we are a very integral part of a globalised world and because we are living in a globalised world, India has to be an integral part of this global supply chain. Goods are designed somewhere, innovated somewhere else, some parts are made somewhere else, they get assembled somewhere else and

therefore, that is the way the manufacturing process takes place. The best example of that is the Apple phone which is processed, innovated and designed across several countries of the world but the least value addition is actually done in China where it is finally assembled. And therefore, India has to be necessarily a very integral part of this global supply chain. Now one of the things we have tried to do is to make India a very integral part of the global supply chain. During the last two and a half years, we have opened up India's economy in a very big way. We have opened India for investments in defence, in e-commerce, just about every sector of India's economy like food processing. Look at the whole vast range of sectors we have opened up and actually, India has today become the most open Economy in the world from railways to construction to urban management. We have opened up for foreign direct investment and India's actually in reality the most open economy of the world except for multi-brand retail which we have not opened up for political reasons but we have opened up every other sector. And therefore, in the last two and a half years, India's Foreign Direct Investments flow has increased by about close to 60%. Its growth has been enormous. At a point of time, when globally FDI's have fallen by 16%, India's FDI inflows have grown by 60%. We have beaten China in terms of total receipts of FDI and India has emerged as the number one destination for foreign direct investments.

Not many people talk about it but we are the number one destination beating China for two years in a row in foreign direct investments. And this has been a consequence of the fact that every single project, as the Secretary DIPP, I took 22 proposals to the cabinet and every single one of them was approved. Only in the case of defence where we had proposed 74% FDI, it was brought down to 49% but they said that in exceptional cases, you could go up to 100%. Every single proposal was approved and this has actually led to a huge, huge revolution in terms of FDI inflows. Now what FDI does is it puts a lot of pressure on your domestic companies to improve technologically and to think big in size and scale. And to benchmark yourself technologically to global size and standards. It is very important to do that because if you look at the total manufacturing in India, almost 84% of the total employment comes from medium and small industries. The difference between India and China is that in China, close to about 79% of the total output comes from large companies and only about 22% comes from MSME whereas in India, it is just the reverse. India has not been able to do large scale manufacturing to penetrate global markets. This is critical and I will come back to this point a little later.

The third point I want to make is that India is seeing a lot of energy, vibrancy and dynamism in its young entrepreneurs. It has seen a huge movement of young startups and I deal with them regularly because I launched this Startup India movement and I see this huge energy, vibrancy. We have close to about 19000 startups right now in India. Their valuation is in the region of about 75 billion but I envisage that by about 2023-24, we will have close to about 100000 startups with a valuation of 500 billion. We are seeing tremendous amount of unique work which is happening across sectors. It is not just that Flipkart and Snapdeal are taking on Amazons of the world. But you see a young girl like Pranshu Bhandari actually teaching 9 million Indians how to speak English in year through an App called Hello English which no education system has been able to do. We see a huge movement.

When the Chennai floods happened, there was a young startup called Social Cogs which assisted the Government of Tamil Nadu in reaching out food and locating all the distressed people in far-flung areas of Tamil Nadu. Or in the field of health where Mitra Biotech which has done some unique work in the field of cancer relocated from Silicon Valley into Bangalore and has done some amazing work in cancer care. Consure Medical, Practo; many of these in the field of health have done some unique work and some remarkable work has been done by, I don't know how many of you have heard about it, Inshorts, many young people do not read newspapers but Inshorts is able to give news in just 60 words and it has had 5 billion downloads over a period of time. These are young startups, by young dropouts from IIT Delhi. Remarkable work and some of these are led by women. Shanti Mohan who started Lets Venture has been able to put about 18000 Indian startups in touch with about close to almost a 1500 investors from across the world and she has done an amazing job of putting investors linked to startups.

There is a lady called Meena Ganesh who had led Portea Medical which is a unique startup which has provided jobs to about 14000 people for assisting old people. When people get old, they require a lot of assistance and support which she is able to provide, not merely doctors but technically trained manpower to assist people at their homes. What is happening is some unique things and quite a bit of this is happening in our campuses. IIT, Chennai has led this movement in many ways. There is a startup called Ather Energy which has launched a scooter called S340 in Bangalore which is going to be a smart scooter of the future likely to be the Tesla of the scooter industry which is going to be very smart electric scooter which is just being launched in Bangalore. Much of this movement is amazing. It is really great innovation by young

people, many of them relocating from different parts of the world in India and Indians are actually attracting foreign investments by driving the startup movement. It is quite a unique thing. This startup movement is going to grow big and it is important to do this because established companies do not create jobs; it is young companies which create jobs. There are established studies on these. You need these young companies to grow big.

The fourth point that I want to make is that there is a lot of innovation which is taking place but many of us don't realise this. But in the last four or five years, we have seen close to almost about 2000 multinational corporations relocating from across the world in Bangalore and Hyderabad. Bangalore and Hyderabad have become the centre of innovation for the rest of the world. Global innovation centres which were historically linked to the head offices of the multinational corporations always have moved out of there and relocated in Bangalore and Hyderabad. People don't realise this. They have created close to about 700000 jobs in Bangalore and Hyderabad whether it is IBM, CISCO, 3M and all the top pharma companies, all the innovations for them are all being launched from Bangalore and Hyderabad. This movement of innovation is going to spread from Bangalore and Hyderabad to other cities like Pune, Gurgaon etc. I think innovation will become a very critical component. That is the fourth point.

The fifth is how India manages its process of urbanisation will be very critical. Whether we like it or not, every minute in India is as I speak here today, there are 30 Indians who move from rural areas to urban areas. And if we go by the latest McKinsey study by 2050, India will see 700 million additional Indians getting into the process of urbanisation and people are going to move in. India has been doing unplanned urbanisation. If you go from here to Jaipur, you will see all unplanned urbanisation taking place. How well we manage it? That is a very big challenge because whether we like it or not, people are going to move from rural areas to urban areas. Many people will talk about urbanising our rural areas. That is not feasible. It is important to understand this because cities are centres of growth. They are centres of innovation. They create jobs across the world and we must understand that cities across the world create 80% of the global GDP. 80% of the global GDP comes from cities. Almost close to 91-92% of the total employment comes from the cities and they are centres of growth. Therefore, cities are critical. But cities are also responsible for almost 78% of the CO<sub>2</sub> emissions. And therefore, India has a unique opportunity. The process of urbanisation has ended across America, it has ended across Europe and it is nearing



its completion in China but it is just starting in India and India will do more urbanisation in the next 50 years than what it has done in the last 500 years. Therefore, how we do this process of urbanisation, whether we can do compact dense urbanisation on the back of public transportation, whether we can recycle our water, whether we can recycle our waste is a big challenge. And many of these lessons don't come from the European or the American part of the world; they come from the Asian part of the world. They come from Singapore on how they recycle their water. Almost 10% of their waste water is actually used for human drinking, what they call as new water. They recycle all their water. There is a great city called Kitakyushu in Japan which post World War II became one of the key drivers of industrialisation of Japan but by late 1970s, it became the centre of the biggest pollution in Japan. And the Japanese housewives led a big movement there and working in partnership with the Ministry of Trade and Industries, they made it one of the most smartest cities in the world.

Everything is recycled from automobile to motor cycle to bulbs and it is a unique city led by a women's movement and Yokohama where a woman Mayor was able to bring down almost 39% of the waste at household levels by segregation, by education, by extension and mass communication. Every household gets public transport by three minutes of walking and therefore, the favourite mode of transportation is public transportation and not cars. When America urbanised, land, gas and water were cheaply available and because they were cheaply available, America went on to create cities like Atlanta when in 1998 people travelled by car. The Americans made cities for cars and not for people. The car companies bought over the railway companies, destroyed them but India can't afford this luxury. India will have to make cities for people and not for cars. And India will have to make cities which are embedded with public transportation.

India will have to make cities where it can recycle its water, its waste and fortunately, today there are technologies available and therefore, how India does its process of urbanisation is very critical and I am making this point because this will throw up very key challenges for Make in India because a lot of this new technology will come in areas of urbanisation and these are very key challenges. One of which is that India has been a very reluctant urbaniser. For the first 60 years, we did not even have a scheme for urban development. Jawaharlal Nehru National Urban Renewal Mission was the first scheme for this. This is the first time somebody is talking about smart cities. Prior to independence, we had mayors who came into the political system. Rajendra Prasad was

the Mayor of Patna. Rajagopalachari was the Mayor of Chennai. Motilal Nehru was the Mayor of Allahabad. But post-independence, we never had mayors getting into the parliament. This is the first time that you have a mayor who has become the Chief Minister of Maharashtra, Mr. Fadnavis but mayors do not have a voice in the Indian political system. I think we need to strengthen that system very, very strongly.

The sixth point I want to make is that how we build our infrastructure will be a very critical feature. Mumbai airport or the Delhi airport has been built as private-public partnership but it is very important to institutionalise private-public partnership. It is not possible for government to be able to do world-class infrastructure creation in India. India's experience with creation of world-class airports is really pathetic and our ability in public sector to be able to operate and maintain has been something pretty bad. And a good example would be, if you go to Ahmedabad airport or Chennai airport, the quality of the airport is pretty bad compared to Mumbai and Delhi. Therefore, you need to bring in the private sector play into infrastructure. That requires the ability of the government to plan big, to conceptualise big, to be able to take land, divest projects, take all approvals upfront and create Special Purpose Vehicles where all approvals are embedded in that SPV and then bid it out in a transparent and competitive manner. Therefore, competition, transparency must become the hallmark of this country if this country has to become a very competitive nation and create world-class infrastructure. And that is critical.

Infrastructure development especially roads, railways and a lot of this is critical for us, particularly the railways. Many countries in this world, Japan, Korea, China; all of them have been driven by their railways respectively. Quite a substantial component of their GDP was driven by railways. It was possible because they were able to spring out SPVs out of their railways which were professionally managed. If you go and see the Maglev operation in China or if you are able to see the high speed train, the terminal working which they have achieved because they were able to take a lot of projects out of railways and housed them into Special Purpose Vehicles. And similar was the case with Japan. Shinkansen is a great example of high quality developments simply because they have created Special Purpose Vehicles for that. And that train has never ever run late; it has run late only once for 3 minutes when the earthquake in Japan happened. It is important for us to build infrastructure of that class and that quality if India is to grow at 9 to 10% over a long period of time. But more important than that is it will be very difficult for India to grow in all these areas for long period till India improves its quality of

health and education. It is important to say this that while we have been able to provide access to education to everyone in India, the quality of education is appalling.

Standards have very sharply fallen. A class V student is not able to read his mother tongue. Almost 45% children are not able to read mother tongue. Almost 40% of class V students are not able to do addition and subtraction. And you should just wait for the new Pratham survey which is shortly going to come out to demonstrate how poorly we are performing in our education. And similar is the case with health where our outlays have not risen but irrespective of that, whatever allocations we do, quality of implementation, infant mortality rate, maternal mortality rate as compared to neighbouring countries of Sri Lanka, Bangladesh, we are performing pretty badly and therefore, my personal view is that health, education and nutrition is very critical. India is passing through a window of demographic transition which rarely happens in history. This window of demographic transition is the biggest social transformation that is happening. The population in Europe and America is getting older and older and the population in India is getting younger and keeps getting younger. And if we want to get this window of demographic transition, you need young people who are capable of doing great work but if 33% of the stunted children across the world come from India, it is very difficult and therefore, you need a radical, revolutionary change in your nutrition system. That is critical. So health, education, nutrition are all key.

If India is to grow at those rates, what more do we need to do? The first and foremost thing, I think, India needs is a huge focus on bringing in predictability, consistency and clarity in its policies. Investments happen when there is predictability and consistency particularly in your tax policies. It is very important to bring in predictability and India has had one of the most inconsistent and one of the most unpredictable tax policies in the world. And therefore, predictability, consistency and clarity of policies, simplicity of policies, the ability for a common man to understand that policy is very critical. I think we are badly lagging in that.

Secondly, factor market reforms are very important. In factor market reforms, land and labour, I talked briefly about China and India and compared how size and scale is critical. And in India, 84% of the production comes from MSMEs because we are not allowing them to grow big and large. And therefore, today, most of the employment is getting created in the informal sector because when you get into the formal sector, your contribution for EPFO and ESIC is so high, 45% of

your money is getting into EPFO and ESIC which do not face any competition for greater efficiency. People prefer to work in the informal sector. And therefore, you need institutional changes in the factor market reforms. I am particularly saying this because at the peak of its growth, when Japan was growing, its productivity levels were rising at the rate of about 51% but when Korea overtook Japan for growth for the next decade period, Korea's productivity levels were rising at the rate of 42-43% but when China overtook Korea, its productivity levels rose by 70-72. And therefore, it is not about manufacturing per se but it is about enhancing the productivity in your system and therefore, factor market reforms are very critical. To my mind, one should not get hung up ideologically about labour reforms, one should not get hung up about infrastructure reforms; if you have to do it, you have to do it. If you want India to grow, there is no other way out to create world-class infrastructure. And there has to be a single-minded pursuit on some of these things. And you need these reforms to be able to grow and I am not talking about short period of time but I am talking about a long three decade period. India must have that vision and hunger to grow.

The third is very critical. We must understand that India is the only country in the world which has a billion mobiles. It is the only country in the world which is a billion telephones, billion biometrics; no other country in the world has this. No other country in the world has billion biometrics and billion mobile and therefore, it is going to happen whether we like it or not that India will make technological leapfrogging in this area. And Aadhaar will be used on mobile to actually transact all your payments. It will be very easy and simple because you just need to feed your Aadhaar number and just put your thumb impression and you can reach your bank account and from there, you can do debit/credit. It will be the easiest way to do transformation. Some of you should try this evolution of DMAP which has been done. It is one of the easiest interfaces. As long as your mobile is linked to your bank account and the oncoming Aadhaar-based transition because if you go to Krishna district of Andhra Pradesh, West Godavari district, people who do not have mobiles go to their ration shops and the ration shop dealer has a micro-ATM from which he weighs the ration, allows them to do debit/credit from their bank accounts and also gives them cash, if they so require. He is also the banking correspondent. Increasingly, what will happen is that ration shop dealers will become bank correspondents. Whoever has a micro-ATM and actually all of us have mobile phones and all of us who have a smart phone will all become walking ATMs in the next one year. All of us will be walking ATMs and we will be able to cash in and cash out. Anybody requiring will be able to take money out and transfer it.

Actually, we are all in the midst of a very major radical, digital transition. We are at the cusp of a digital revolution in many ways. And by 2020, I envisage that credit cards/debit cards, ATMs will all die out and India will be transferring all debits/credits through Aadhaar. Those of you, who have not tried this App, should try it out. It is very simple and easy. As soon as this movement spreads in a bigger way, you will find this happening. India will be using technology in many areas to leapfrog and that is how we should help it to transform.

I have given you my perspective. I have given you what the challenges are and there are major challenges across several sectors. I personally am very optimistic. I deal with a lot of young people who do start-ups as I said and I see a different energy and vibrancy and I see a lot of optimism that India will use technology to leapfrog in many ways to achieve this ambition of growing at rapid rates over the next three decade period. Thank you very much ladies and gentlemen.

Prabhat Kumar, President, ICCFG: Thank you very much Amitabh. We are really grateful to him and I marvel at the breadth of his perspective and depth of his vision. Thank you very much Amitabh. Mr. Kant has agreed to take a few questions. We have 5-7 minutes. Please keep your questions very short so that we can accommodate as many questions as is possible.

## **Question and Answer Session**

Q: You made a statement that we are not allowing the SMEs to grow. What do you think is not allowing the SMEs to grow?

Amitabh Kant: Our labour laws are very, very antiquated, that is for sure. The definition of MSME is totally outdated in India. You look at the definition of MSME in China. It is defined as per sectors and there for the construction sector and for some manufacturing sector, the definition of MSME takes them in the area of 2000 crores. Our definition is wrong. Our size and scale are wrong. We have constrained them by our labour laws. They are totally outdated. You need to radically restructure them.

Q: I have been absolutely spellbound by your presentation that you made today. I really don't know where to begin. In all the brilliant presentations, you said you were optimistic. I have only one question. How far do you really think with all the challenges which we are facing

will be overcome and what kind of a time span now or in the next 20 years, when do you think the digitisation will be done?

**Amitabh Kant:** I think structural transformations are on the way. There are some very radical structural transformations which have been taken across ease of doing business, opening the economy, I think we need to recapitalise our banks. That is important. You need to get your banking sector right. You need to create the political will to be able to do more labour reforms. Jairam Ramesh brought in land acquisition laws which have actually taken India back by 200 years. You want to be fair to farmers; you must be fair to farmers. You must pay the right price. But ensure that whatever you do should be quick and fast. It should not be that the process takes 2-5 years. You will not be able to create world-class infrastructure which is critical for growth. It is important that we carry out some of these changes.

**Q:** You said that our tax system is very unpredictable. I don't know how long it will take for GST to come and even our Prime Minister like Donald Trump is unpredictable. I don't know what is going to happen to our youth which is a liability. How are you going to deal with it?

**Amitabh Kant:** Youth is a big asset. There is a lot of optimism in the youth. I don't think we need to blame our youth but we definitely need greater predictability and consistency in our policies, in our tax policies in particular.

**Q:** We cannot leave the agriculture from Make in India. When we talk about Make in India, we leave the primary sector. You also emphasised on the nutrition part. When we have already gone for public-funded agricultural research on nutrition to bio fortification, there is a feeling that GM crops are a taboo for the country. Why is it so? When it comes from the public-funded institution, it is not Monsanto or any other company which is going to get the benefit.

**Amitabh Kant:** You are talking to the converted. I am a great believer. In short speech, I can't talk about all the sectors. I am a great believer that we need a second Green Revolution in agriculture. You can't do this without technology. And some of our own technologies have done very well. A lot of work on GM crops has been done in India. We should look at that and take it forward irrespective of what our views are about other international companies. I am not saying that but what has been developed, what has been made in India, we need to take forward. Without technology, let me tell you, India can't achieve growth in agriculture. Technology is the key to agriculture. We need to get rid of

some of our outdated mindsets. We need to really make radical transformation using technology in some of these areas.

Q: Very true sir but what would be the future of social security schemes like EPF and ESI in the new design of GDP growth?

Amitabh Kant: My view is the country should not create monopolies. You create a monopoly in social sector, you make it an inefficient monopoly. Monopoly, whether in private sector or public sector, is equally bad. Therefore, allow EPFO and ESIC to compete. And the minute you compete, you will see efficiency into the system. The more you analyse and examine EPFO and ESIC, you would realise that they are highly inefficient systems.

Q: We just notice that despite all these good things talked by NITI Aayog etc. there are still running businesses which are shut down and there are still processes which go on and on and there is no contemporaneous, that state governments, central government and forget all these, even within the central government different ministries go on with the process for long as two years or three years.

Amitabh Kant: This is actually talking in generality. Let me tell you that we should stop making these general statements. If you have a specific case, my email is [amitabh.kant@nic.in](mailto:amitabh.kant@nic.in). Please mail it to me. There is a full body Invest India which has been created for this purpose which will act and set it right. If it is a central government issue, we will set it right. If it is state government, I will personally write to the state government on this issue. Thank you very much.

Prabhat Kumar: If you have any other question, he has given you his email id. You can write to him.

Amitabh Kant: I would have loved to handle all the questions but my apologies.

Rajiv Sachdeva: The chairman is coming back. If you have any questions, we can discuss it. After a very thought-provoking and punch-packed address by Mr. Amitabh Kant, I am sure you have a lot of questions some unanswered, some answered and also you would have started thinking how the future is going to be. You must also be wondering one of the things which I have got as a feedback that the talk of Mr. Kant was primarily on the overall economic scenario of India. Two of the participants came to me and said, what about Make in India because it was not entirely focused on Make in India which is

understandable as head of NITI Aayog, his concentration is far bigger. He was covering up a lot of spheres, apart from Make in India also. For example, he covered the start-ups sector quite a bit. The question is when we talk about start-ups sector, one of the things which you would have also realised is most of the activities of the start-ups sector are in the service sector. The start-ups are primarily concentrating on the service sector. There are very few start-ups in the manufacturing sector. There are very few and quite a few have closed down also.

**Speaker:** Mr. Kant spoke about electric scooter.

**Rajiv Sachdeva:** What I have seen is that out of the new start-ups, 83% are in the services sector and only about 16-17% is in the manufacturing sector. There are some. I also know, for example, I was helping one startup when they were trying to design an electric automobile for racing. Racing cars are being developed at IIT Delhi. But these are few and far apart. Now the question is if you were to come back to Make in India, what would be the specifics and how are things going to be in the coming years? Is the Make in India programme although very hyped and very passionately followed by none other than the Prime Minister himself going to be the success which we have envisioned or is it that our growth would continue to remain in the services sector? This is the question because Make in India programme will succeed only if lot of reforms are carried out, the changes which Mr. Kant mentioned are actually put into practice and implemented. Make in India is not just about planning; it is about implementation of making things actually change at the ground level. What has happened and what we have seen during the demonetisation drive also that a lot has been planned, lot of discussion has taken place but the implementation at the ground level was rather poor. Whether we like it or not but this is the fact because we have seen the long queues and everything and we have gone through it ourselves to a large extent. Will the Make in India programme also follow the same path that there be a lot of changes made but at the ground level, things are not going to be so easy? I just want to make you a bit aware of some of the hurdles which are facing Make in India today. I have mentioned to you very briefly some points. You could afterwards comment on it, ask questions. These are not my points, not my viewpoints. I have also extracted it from various newspaper articles from the internet. But whatever it is, these are thought-provoking points. You might have an opinion on it.

The Make in India programme was going somewhat properly till one particular day. Till the 7<sup>th</sup> November, everything seemed to be okay. It was going slower than expected but things were moving. But then came



a day called the 8<sup>th</sup> November. Two things happened almost simultaneously on that day. If you had listened to the news, in the morning, you would not have anticipated that by about 9 o'clock in the evening, two major things would have happened. One was Mr. Trump got elected as the US President and second was the Prime Minister's address at 8 o'clock in the evening of demonetising 86% of the Indian currency. What were the effects on Make in India? Let us remain focused on Make in India. Now Mr. Trump's election may have had a dampening effect because his election promise was to bring back jobs to America. In order to secure jobs back at home, that is, in the USA, he vehemently opposed to all sorts of outsourcing, manufacturing to foreign countries. This may put companies like Apple, General Motors, Boeing and Lockheed Martin under pressure. You would have already seen, for example, if you have been reading the newspapers which you must have been, during the last 10-15 days, Apple is making it more and more difficult. Their demands are constantly increasing and the government is practically agreeing to every proposal of theirs and yet they are not satisfied. Step by step, they are demanding more and more to set up the manufacturing facilities in India. Today, the news was that the government was really thinking as to what to do with Apple. They would like Apple to manufacture in India but at the same time, how can they meet the demand of one particular supplier when there are so many other mobile phone manufacturers in India.

About demonetisation, there are a lot of conflicting opinions, pros and cons are there. The positive side is that there is a huge amount of capital inflow to the banks which will reduce interest rates, make borrowings easier and thereby spur the domestic manufacturing growth. Increased access to banking will increase the productivity of Micro, Small and Medium Enterprises, MSME in India and aid the Make in India initiative. One thing which we have to keep in mind is that only 5% of MSMEs had access to institutional finance which underscores the need for financial inclusion to drive India's growth agenda. Banking activities and digitization will improve transparency which Mr. Kant also mentioned, reduce corruption and bring more money into productive circulation. Consequently, India's ranking on major global barometers such as Corruption Perception Index and Ease of Doing Business may see significant upgrading. This is a point which lot of people will dispute because I have discussed it in other circles also. A lot of people feel that this is not correct and India's ranking will not improve. It is a disputable point but from the face of it, from the facts, it can be expected that India's ranking should improve.

Speaker: It has improved in the last three years.

Rajiv Sachdeva: Yes but by four positions, marginally. Yes, if you are actually go into the nitty-gritty's, there were countries at the same place and some more countries have come and that is why we have improved two positions because of that. But the improvement is only two positions which is not a very, very significant but it is a positive trend and let us hope we jump further. I would say that a significant improvement would be if we jump 10 positions. Let us hope that in 2017, that jump actually takes place.

On the negative side, I don't use the word on the other hand because somebody made a joke of the other hand on the other side. Demonetisation has reduced consumer spending and sent shock waves into the Indian industry even though many of you may say that it is temporary. For example, mobile phone sales have dropped almost 50% since demonetisation. Many of them were being purchased in cash. As a consequence, mobile manufacturers are laying off sizeable amount of their workforces. Foxconn is a major manufacturer of electronics. They do manufacturing for practically all the big companies. Their head office is in Taiwan. They had promised 5 billion dollars of investment into India and have already retrenched 25% of the workforce in India itself which is a setback because I do not know with all these retrenchments, how soon, I am sure they will come back but how soon will they come back to India with that promised investment. Other mobile phone manufacturers like Lava, Karbonn, Intex are also planning 10 to 40% layoffs which can be a problem for India.

The manufacturing erosion must also be seen in the background of the fact that 90% of all transactions were hitherto in cash. The brunt of the demonetisation has fallen on the informal sector which accounts for 80% of all the jobs and where 85% of the workers were paid in cash. It is a major impact which has taken place. We can hope that this is only temporary and then in the next few months, particularly, maybe, in six months things will actually look up. In addition, there are some very big concerns regarding the Make in India programme which I was hoping would be mentioned but because of paucity of time, this has not been mentioned but these are some of the things which could become a major hurdle in the Make in India programme and which I am not very clear why they are not being addressed by the Government of India at various forums. One, the global picture is not encouraging. There is weak economic growth and underutilised manufacturing capacity particularly in China. Other underutilised capacities are in South Korea, in Taiwan and now, even in Vietnam. The world exports are growing at a slow pace

of less than 3% per annum. Under the circumstances, it will be very difficult for India to dislodge countries like China, South Korea and Taiwan who have already established a sizeable lead worldwide. So we actually have to come up with very innovative ways and not just pricing to convince customers all over the world to go in more for Indian products than for the products of these countries which are firmly entrenched. For example, toys from China have flooded the markets. Even the biggest company in the world, Fisher Toys now manufactures in China. We will have to convince either Fisher toys or the people who buy toys in the west, in the US and other countries to start buying the toys which are manufactured in India or the companies should start manufacturing in India.

One of the points which I had just mentioned earlier also, during the last 25 years particularly, post-liberalisation, India has oriented itself to the service sector and now service sector is more than 50% today. All our policies have been reformed, made friendly more towards the service sector and very little has been done for the manufacturing sector. Now, a very big rethinking will have to take place in the government circles to make manufacturing easy. It was mentioned that our policies were not good and we have to simplify them. But then the talk that took place was more for the service sector, for the benefit of the service sector. But the manufacturing type of changes requires a different mindset and the government will seriously have to think, contemplate and act and thereafter, implement the major changes which are required for the manufacturing sector. What are the types of changes? One was mentioned which was land and labour reforms, a robust banking system. We claim that we have a very good banking system but our banking system needs a lot of improvement. We have seen the faltering of the banking system a lot in the last couple of months. One very important thing which is very rarely mentioned, although in smaller discussions, we discuss it a lot, a faster and more responsive judiciary. How are we going to tackle all these? If cases are pending for 12 years and more than half the cases get solved because one of the party passes away, that is no solution. There are so many cases where the defendant or whoever has filed the case has passed away.

**Speaker:** We have almost three crore pending cases.

**Rajiv Sachdeva:** If there is no fresh case today, it will take us 12 long years to finish the pending cases. What do we do? How do we make the judiciary more responsive? And then, we have to eliminate the layers of bureaucracy.

**Speaker:** We have to put in all these questions and send it to Mr. Amitabh Kant.

**Rajiv Sachdeva:** He was in a hurry and did not have time. The idea was to put these questions to him before his address but then the order reversed. Now I am addressing the questions to you but as you said, the idea is to put all these questions across to him, taking reference to his address today.

**Speaker:** The government usually escapes under the plea that they don't have time.

**Rajiv Sachdeva:** Little do they realise that all their actions are for the people. We are the people. And yet whenever it happens, we are 100% right. You snatched my thoughts which I was somewhat scared to present. The other thing which I don't know whether all of you have realised it that India has not been adequately focusing and investing on research programmes and development of indigenous technologies. It is not just good enough to take pride that we have launched this missile and this satellite because a lot of their engines are not made in India. They are outsourced or in collaboration and we are only assembling. The problem with assembling is even if you invite some international company to manufacture in India, they will supply all the components but you are continuously dependent upon them. Tomorrow, if the politics does not match, that means the host country disagrees with India or they get a cheaper destination to manufacture, then they will take the manufacturing away. The sustainability of the Make in India programme becomes weak if we are always dependent upon foreign technologies. In one breath in India, we talk about R&D saying that we are doing this R&D or that R&D but do you realise that we hardly do any 'R'. There is no 'R' component in India. If at all, it is only a 'D' component which is development and development is only having copycat technology. That means that we take some technology and try to adapt it to Indian conditions and put that amount in the R&D budget. But that is not true R&D. Mind you, I don't want to name any public sector company or even some multinational company, all the companies, I have extensive experience in dealing with them, all they do is copycat technology. In German, it is called Nachbau which is a very appropriate word which means that you take something, strip it apart and join it together to adapt it to local conditions.

**Q:** Reverse engineering?

Rajiv Sachdeva: Yes, reverse engineering. Reverse engineering is also like a copycat technology. Until you have 'R', you will never have a good 'D'. And that is why 'R' precedes the 'D'. 'R' is far more important than 'D'. It is reverse engineering if you can reverse the 'R' also. But we are only doing the 'D' part of it. Do you know where the strength of Germany lies? Their 'R' budget is far more than their 'D' budget. For example, if in Germany, they want to develop a product, a lot of these companies will go to an institute which is somewhat like, for example, IITs or something. It is called Fraunhofer University. They will go there and get all their research work done. It starts from basic physics also, how this phenomena occurs and then they make development on it and finally commercialise the product which is totally missing in India. What we are trying to do is we are just trying to jumpstart, miss out a whole lot of steps which precedes manufacturing and just start manufacturing. My personal feeling is and I might get a lot of criticisms for it but I wanted to say it in front of Mr. Kant that Make in India should not have been the name; it should have been Create in India. Create encompasses not only R&D but also make. It should have been Create in India where we can have something of our own. Think about it, look around in this room. Be sensitised when you are sitting in your car, whenever you are listening, when you are at home, when you are lying in your bedroom or when you are in your drawing room, look at all the things around you, think and find out one product which has been made, that is, conceptualised and developed in India.

Speaker: Auto-rickshaw.

Rajiv Sachdeva: You may not find. Their engines are; it is a contraption, maybe. But the maximum amount of our work which has been done in India and I am not being cynical about it, is in the kitchen. We have originality there. Hats off to the Indian ladies or whoever the chefs were who have done a lot of 'R' in the kitchen bit otherwise manufacturing or the products which you see, look around in this room, you will find nothing...

Speaker: We have been inventing religions.

Rajiv Sachdeva: Yes, but I don't know if we can call it invention.

Speaker: There are two concepts which I thought I will bring out to you. There is a management study of strategy, there is a Blue Ocean strategy and a Red Ocean strategy. Blue Ocean is peaceful and has enough space. In the Red Ocean, there is a lot of competition. If you can avoid the Red Ocean and get into the Blue Ocean, sailing is relatively smoother. If you

look at India, if we are talking about Make in India and whatever we have discussed, this is totally a Red Ocean. You already have conversation, strong people and all those things which you rightly pointed out. There is a Blue Ocean here. We are a democracy. 70% of the people in India vote. So the politicians whether they like it or not can't go against them. If we can get villages productive and if the economy grows, it has got two advantages. I will come to how to do that but if the economy grows, then the politicians get re-elected. You started a Nano plant and saw what happened. If you get a village and change of village to make it more productive, you cannot make it into a NASA kind of a thing but just make the village self-sufficient. They need simple housing which does not need import component, does not need investments. There are lots of technologies available.

Rajiv Sachdeva: Talking about technology, also about manufacturing technology, now Skill India runs concurrently with all these other programmes like Smart Cities, Make in India, Digital India and Swachh Bharat. On skilling, our focus seems to be on conventional skills. The question is, are the conventional skills going to be useful in the next 10 years? For example, a milling machine or a lathe operator. You may train the people but if you are training and we are saying that we have got lot of youth power, we train an 18 year old but when he is 33, he is still very young. What will he do then? There will be no lathe or milling machine. We have to see that new technologies which are coming up, for example, we are already on the threshold. The world is on the threshold of Industrial Revolution 4.0 which is the new industrial term. We are undergoing an Industrial Revolution without feeling it in India. But Industrial Revolution 4.0 is going on in the world. What does it include? For example, totally integrated automation. Currently, we have automation here and there but they are not integrated and manual intervention is required. We need total integration from A to Z. Then Robotics, car manufacturing. We always say that car manufacturing in India, we should increase the automation industry. There should be growth because it leads to higher amount of employment but robotics is going to replace it very soon which will mean that actually employment will reduce dramatically but the quality will improve. The punctuality will improve and logistics will improve. There is no way we can stop it. We have to gear our manufacturing for the future and not as was in the past. We cannot extrapolate. Our biggest mistake, it is actually not a mistake but is a part of us. We human beings are not designed to think non-linearly. We are only designed, we can't blame it on god, we are human beings. We should be grateful that we can think. We think linearly. What we do is we take the past, use our knowledge and

extrapolate it linearly. कल आज और कल; there are two कलs and the Indians, I must say, are very intelligent. They use the same word कल for the past and the future because the कल is based upon the old कल. It is a linear extrapolation but the future unfortunately has never been linear. And this is the reason that all future predictions have invariably failed.

**Speaker:** Sorry to interrupt you. Can I raise a question here which is relevant? You say that we are linear in our thinking. Are we not doing the same thing? We are accessing robotics and automation from abroad. Does it suit us? India is the only country which is young. All countries suffer from shortage of manpower. Therefore, for them robotics is a must. Do we need to have the robotics here? And if you do, what do you propose for the 1 crore Indian people who come into this world. How do we give them jobs? If you don't give them jobs, the naxalites who are there in the two or three states will spread all over the country. How are you going to tackle that? You have to give them to make their careers. You cannot say that just to copy that. You have to have integrated solutions and you have to see that this problem is solved. That is also a problem. If you don't do that, how are we going to survive?

**Rajiv Sachdeva:** I don't have the solution for this but I know what is going to happen. You are right. What you are saying is socially a very relevant point. It hurts me, it hurts you; it hurts everybody. But the fact is if we don't adopt robotics, if we don't adopt automation, the competition will kill us.

**Speaker:** This is a wrong assumption. What I am saying is we have read and it is recorded history that the best machines today cannot manufacture the fine cloth which our ancestors made. They made it with their hands, so fine that your body was visible even after wearing two or three layers. 14 meters of cloth weighed only 100gms. We have that history here. It is not that we cannot do that. It is a very relevant point.

**Rajiv Sachdeva:** Let me just explain to you that whatever it may be, social reasons, emotional reasons, psychological reasons, technology cannot be stopped.

**Speaker:** I am not saying against the robotics. We have to have in adoption of that, it has to be there. We cannot copy that.

**Rajiv Sachdeva:** I agree about adoption. The other thing is, for example, Internet of Things which is also going to play a major role in the manufacturing of it. 3D printing; some of may be aware of it and some of you may not be aware of it but for the benefit of the audience, 3D

printing is you can make things sitting at home. You can create, for example, if you are going to make gaskets or shoes, for example, even houses through 3D printing. You do not have to go in for mass printing in factories. Just like for example, you have two different printing where you see an image on a piece of paper, a 3D printing actually creates an object ---

**Speaker:** A model.

**Rajiv Sachdeva:** A model and the product itself which is going to be a major revolution in manufacturing. For example, shoes are being 3D printed extensively in China now. You can 3D as per your requirement. You don't have to go to a shop and say that this one is pinching me or you want a bigger size. Your size is 8 and the next size is 8.5 but you wish you had 8.25. All that will be printed as per your requirement, customised exactly as per your need and it will become very, very cheap and economical to do 3D printing. And then, of course, you have cloud computing. When we talk about jobs, a lot of manpower, a lot of work goes in accountancy, calculations, scientific calculations, storages, archiving data and everything, very manpower-intensive which the factories also use, past data and all that. If all these go to the cloud, it is dramatically going to change everything. I personally feel, it will also unfortunately lead to manpower reduction.

Therefore, the original assumption of when we say that the stated objectives of the Make in India programme was to increase employment and I have taken this from the internet, the objective said that it will create 100 million jobs by 2022. We are in 2017 now and I have my doubts whether we are going to have another 100 million jobs. I hope I am proved wrong. But it is going to be a phenomenal challenge but my assumption may be based upon linear thinking, maybe something non-linear and the jobs get created but if you actually see the future scenario and I am not being very theoretical that future governments because when technology changes, there is a change socially and politically things change. The responsibility of the governments will not be to provide employment; it will be the responsibility of individuals to provide occupation for themselves. For example if somebody has an idea, suppose Brigadier sitting here has a wonderful idea and he comes up with that idea and he earns enough money for 10 years, then he can occupy himself with other things. It is not a question of employment; it is a question of occupying yourself properly and utilising your resources. Employment itself will become a question mark in the next 15 to 20 years. A very simple example I want to give you is we are talking about driverless cars. 4 years back I presented the concept and imagine a lot of



people asked me what I was talking about. How can there be a driverless car? It is not long, in 2012 or 2013, I had presented it. Today, faster than expected, they are saying that there will be so many driverless cars in 2020. The US is already doing it and Uber is jumping and Google and all are very enthusiastic. Toyota is also doing it. What will happen? A lot of young Indians from rural areas, from the cities 18-19 years of age will say that they would like to become drivers because it is very good. What they would require is a licence. Now once they become drivers and learn no other skill, when they are about 33 or 34 years of age, what will they do? They would have learnt nothing else and driving itself will become irrelevant. Somebody said driving can never become irrelevant; it's a wonderful thing and he would like to drive because it is fun. Horse riding was also fun but now for horse riding, you have to go outside the city. If I am very fond of horse riding, 110 years back or even a 100 years back, horse riding was no longer a fun because that was the only way you could transport yourself. There is a picture of New York, on Easter day, taken in the year 1900 from the same building which shows the road and the road is full of horses and horse carriages and with a lot of horse dung on the road. It was far from clean. The same picture from the same angle was taken in 1913, 13 years later and there was no horse on the same road and there were only cars and the streets were relatively clean. That time, they did not realise that the smoke was causing pollution and all that but otherwise the streets were clean and it was full of cars. In 13 years, the whole thing had transformed. People may not have realised that they were part of it. This is eventually going to happen. Whether we like it or not is the question; we will be forced to change. Maybe, we did not like the demonetisation; many of us but we were forced to change. We had to do it.

Of course, one of the biggest hurdles which the government is facing which is often brushed aside in the plans, we have unfortunately, a very hostile opposition. Even though they did not get many seats, but they tend to oppose anything and everything that the government says. Most of the discussions are not based on facts but more on opposing just for the sake of opposing.

**Speaker:** Vested interest.

**Rajiv Sachdeva:** Vested interest, envy, jealousy or whatever it may be but this is another problem in the country. It will have to be overcome for all the reforms which the government is envisaging which is very good. But at the same time, I must say what I have observed and this is my personal observation that the government itself is very dedicated, very passionate. I have heard Mr. Amitabh Kant for the fourth time in the last

three months and I am actually extremely impressed, almost overwhelmed by his enthusiasm and passion to bring about changes which itself even if it rubs off a few percentage will lead to a dramatic change. Hats off for such persons who are in the driver's seat, I am sure things will change. If the government can actually carry out all these reforms and all the changes which they want to make and reduce bureaucracy, simplify things, make it easier as he said, make things easier for people to invest, for people to manufacture, then let us seriously hope whether we are there or not that time but in the next 10-15 years, that we see a sea change. When I was born in this country, as a concluding remark, I was born in a third world country, in a developing country. Everybody told me. I was too small in school where they taught me that. I don't want to die in a third world country and a developing country. So let's hope that things change and that we have a developed and an industrialised country in the next 10-15 years. That's all. Thank you very much.

**Speaker:** You said China grew by 42%. The difference between India and China is that India is a democratic country. The reforms that China could take for example, labour reforms, it was mentioned that one of the biggest hurdles was the labour reforms. Labour reforms are not taking place because it is a democratic country. The hostile opposition will exploit it. What can be done on that? The second thing is that we are not having focus. Even the earlier UPA government said and this government also said that this micro and small industries is the manufacturing hub. They will create jobs but it is not being given sufficient focus. Our energy and attention is spread all over. If it is one-point focus, then probably we can do something. Thirdly, he talked about labour reforms and second about the definition. I would like to emphasise what is the hindrance in definition. You yourself said that 5% people are in micro and small who get the financial credit. 99.99% industries are less than 15 crores, if we see the definition of MSME as per the MSME report. If you want to increase this, what is the fun? If they are less than 15 crores, there is no hindrance. But still you want to increase it just because in some other country, it is 1000 crores or 2000 crores. How is it going to change? You are not meeting 15 crores and you say it is a hindrance. I don't know how it is matching.

**Rajiv Sachdeva:** You are right. Actually, China is not the model to copy. Clones rarely succeed. What we are trying to do to a certain extent, although, we are trying to clone.

Speaker: I think he was talking about something different. What he said was that we are defining it this way but what is happening now is we are getting a signal that if you grow, you will be in a different category and there will be some more hurdles. There is an incentive for industrialists -  
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Speaker: He specifically talked about the definition part. The definition of MSME defines that the maximum is 15 crores and 99.99% industries are less than 15 crores. What is the hindrance in that?

Speaker: That is right but in that definition, there are other things too.

Speaker: As on date, in the definition, there is nothing. The definition is there only for plant and machinery.

Speaker: I agree to what you are saying but we need to do is we need to remove that incentive to remain small.

Speaker: What should be there is we should have more focus on labour reforms and that is the crux of the matter that we should pay attention to.

Speaker: Nobody talks about productivity. If you talk about productivity, there will be lot of hue and cry.

Speaker: Let me request the dialogue that is going can be done later since you both are here. What I want to mention as a closing remark is I must admire the patience of all of you for listening to an extremely wonderful presentation by Mr. Amitabh Kant and further I must admire Mr. Sachdev who has been able to keep you on your seats and kept the interest in dealing with the issues which needed to be dealt with in the programme today. Unfortunately, the sequence changed. Thank you very much for your patience. Thank you Mr. Sachdev for your wonderful presentation. Thank you.

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## **DIGITAL INDIA**

March 7, 2017

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Mahesh Kapoor

On behalf of the IC Centre for Governance, India International Centre and our sponsors NHPC, I welcome you all to this fourth lecture in our 16<sup>th</sup> series of lectures which is on Citizen Centric Initiatives. We had discussions on Swachh Bharat. We have debated the issues of skilling India and we have also talked about Make in India. And today is the turn of Digital India. Presiding over this evening programme is Mr. Vinay Shankar, Former Secretary Govt. of India who is a man of many parts, an engineer who did engineering in PWD, in NES, in Railways before he joined the Indian Administrative Service and did many jobs there including rural development, environment and ocean science and has not kept silent even after retirement. He is the right man to preside over today's subject of Digital India. We have two experts. We have Mr. J S Deepak who has been Joint Secretary and Secretary, Department of Telecommunications and he has also been the chief negotiator for WTO where he is now going as our Permanent Representative in Geneva. We have Mr. Alok Kumar, a 1993 batch IAS officer who is now Adviser, NITI Aayog and who has done lot of work on Digital India. Without taking too much time of you all, I now request Mr. Vinay Shankar to take on this evening's proceedings. Thank you.

Opening Remarks by Vinay Shankar, Former Secretary Govt. of India:

Thank you for a nice introduction. Friends, we will be hearing two great experts on Digital India, a programme which I think has the maximum potential to transform our country from a developing country to a developed country. The use of technology, information technology particularly is to be seen in almost every sector of the activity of the government. It affects the citizens, it enables the government, it enables every profession whether you are in business, profession or service; whatever you are doing, information technology can be of tremendous use. While it can make the life of citizens very, very easy at the same time, it enables the government to provide the services very effectively and efficiently. At the same time, it gives a very good handle to the government to enforce its regulations against those who deliberately try to cheat or deviate from the prescribed rules, not pay taxes and things like that. This is an extremely important subject and it has so many ramifications. Since we have very good experts here, I think most of the

aspects will get covered in their talks here. Without taking too much of your time, I request Mr. Alok Kumar to make his presentation.

## **Presentation by**

Alok Kumar, Adviser, NITI Aayog

Good evening. Thank you so much for inviting me to this august gathering. My piece will be confined to the steps which the government is taking in terms of promoting digital payments, encouraging digital payments and making sure that it penetrates to all sections of the society. The idea essentially is to try and bring, capture as large a part of the economy in the formal sector rather than in the informal sector. That is basically the thrust of my presentation but before I do that I have two colleagues from IDFC. I don't know whether you all of you are using digital payments or not. We just wanted to give a 2 or 3 minute demo of how easy it is to do it. I just took the liberty of bringing them along and then we were struggling with getting the Wi-Fi here but I think they found some solution because the IIC management told us that we should have informed them 24 hours in advance and then they would have provided the Wi-Fi. I will request Mr. Parvez to come and do a 2-3 minute demo. We would try and demonstrate two mainstays of what we believe will be the basis for digital transactions in the future. One is the BHIM application, Bharat Interface for Money application which allows us to do interbank transfer very simply and this is without regard to the bank of the payee and bank of the payer. That is one part and the second part we would try to demonstrate is in case you don't even have a smart phone, this requires, for instance, it is a smart phone based app. If you don't have a smart phone, all you have is the Aadhaar card and your biometric which travels along with you and the vendor at his end is enabled to capture that biometrics, how do you effect that payment. So over to Parvez.

## **Demonstration by Parvez, IDFC**

Good evening all of you. We will just showcase our IDFC Aadhaar Pay. Formally, it has been launched today only. I was at the India Habitat Centre only when Mr. Alok Kumar called. We took the opportunity to showcase the technology and IDFC is the first bank to launch this for the small merchants. In our country, we have almost 1.5 million POS machines but looking at the size of the country of 1.2 billion population, it is nothing. There are small merchants who have a turnover of 10 lakhs, 20 lakhs, small kirana shops, mobile recharge shops but they were not able to take the technology like POS machines or any other digital platforms and in similar manner, we have almost 350 million smart phones in the country. But at the same time, we have 350 million people who don't have any phone, neither a smart phone nor a feature phone. Our IDFC Aadhaar Pay is designed basically to cater to those people, those rural people who don't have any smart phone but still they

can enable towards digital banking or cashless or less cash economy. My colleague will showcase how it is to be done. IDFA Aadhaar Pay is very simple and how it enables the customer, the merchant also. On the customer side, the customer does not require anything, any internet banking or wallet. Nothing is required. Only the Aadhaar number is required which is linked to any bank. So the customers can come to the merchant and they can perform cashless transactions.

Here, the merchant has to download an App which is called IDFC Aadhaar Pay App on his mobile phone which is a smart phone whereas the customer on the other side does not require carrying anything. The customer only has to carry his Aadhaar number or he has to remember his 12-digit Aadhaar number and is coming along with his biometrics. He is travelling with his biometrics. I hope everyone is able to see it because we want to show you this App. It has to be seen by you all. There is an Aadhaar App where there is an icon known as Aadhaar Pay. Let us say I am merchant and when a customer comes to me, I am having this mobile phone and with that phone, I have this biometric dongle which is connected to this simple smart phone. I select this Aadhaar Pay and ask the customer as to which bank account his Aadhaar number is linked with. The customer comes and says that he has an Aadhaar-linked account in IDFC Bank. I will ask his Aadhaar number. There is a field wherein you can punch your Aadhaar number. If he has purchased goods worth Rs10. I am putting Rs10. This App says that the name of the bank is IDFC Bank, 12-digit Aadhaar number, amount is Rs10. I am just making a payment or receiving this payment. On the next screen, it will ask for the biometrics of the customer. Now it is getting processed. Biometrics got mismatched and again, it will ask for it. A message comes on the mobile phone which is a green signal. It also says it is a successful transaction. His savings bank account has got debited and my merchant account got credited. The transaction is successful. Thank you everybody.

**Q:** What happens to the Escrow accounts with the same bank?

**Parvez:** This Aadhaar gives you the liberty to link as many as bank accounts you want to link with the Aadhaar. Suppose you have five bank accounts and you want to link all five bank accounts with Aadhaar, you can link. Here is the dropdown you can select, from which account you want to pay and if you want to transfer, you can select the bank.

**Speaker:** Do you need to give your account number?

**Parvez:** No account number is required. Only Aadhaar number is required.

**Speaker:** Suppose I have got two accounts in Dena Bank with the same Aadhaar number.

Parvez: Only the primary account only will be debited. Only one account will be debited.

Speaker: There is no primary or secondary. I have got two similar accounts. One is my pension account and one my own account. Suppose I want to draw money from my pension account.

Speaker: Aadhaar will be linked to only one account.

Speaker: Aadhaar is linked to both.

Parvez: In one bank, it will be linked to only one account.

Speaker: In the same bank, all the accounts are linked.

Parvez: I got your point. By default, your first account would be considered as a primary account, old one and if you want to change it and if you have opened the pension account later, you can go to the bank and say you would like to make your pension account as the primary account and then only, you can either debit your account through biometrics or you receive EPF's payment into pension account.

Speaker: I will give you another case. I have got two accounts in two branches of the same bank, both are primary.

Parvez: It does not matter in which branch, you have opened an account. It is CBS. At the central level, the account will be considered as primary or secondary.

Speaker: How do I know which is primary and which is secondary?

Parvez: That is why I am saying ---

Speaker: Suppose with SBI, he has two accounts in two different branches.

Speaker: I think you are asking a difficult question.

Parvez: It is not a difficult question. I will give you the answer. As a customer, if you are going to SBI Aadhaar Pay, on a transaction, your account number be reflected and from which account you want to pay. It will come. Suppose I have three accounts in IDFC Bank. Every time, I use the biometrics authentication on any device, it reflects all my three accounts.

**Speaker:** Like in ATM, all the accounts are displayed and they ask from which account you want to draw the money, it will also come in this system.

**Parvez:** Yes. Similarly, you will get here also.

**Speaker:** What are the charges?

**Parvez:** There are no charges for either the merchant or the customer. It is free of cost.

**Speaker:** Is biometrics linked to the bank account or to the Aadhaar.

**Parvez:** Aadhaar number is linked with your bank account.

**Speaker:** In the software which you have here, your biometrics and Aadhaar number are linked together. Or is it with the bank?

**Parvez:** Authentication is done by the UIDIA. It happens on real time basis. When you give your thumb impression here, it goes to UIDIA's server, it confirms back.

**Speaker:** That is then Aadhaar?

**Parvez:** Yes, the Aadhaar.

**Speaker:** The deduplication is simultaneously done in UIDIA. Suppose the same name is there but the biometrics is different. There is a process of deduplication at UIDIA.

**Parvez:** But it will be linked to your number. Whole of your biometrics will get captured there.

**Speaker:** Your software deduplicates that.

**Parvez:** When you are making the Aadhaar, then they do deduplication at that stage.

**Speaker:** Deduplication happens at the time of enrolment.

**Speaker:** I have faced this problem. I have one account in SBI in Rail Bhawan and another account in Palam Vihar. I got a credit card from the branch in Rail Bhawan. I had applied for it. But then I received at SBI, Palam Vihar branch. They said that the bank had made the account at Palam Vihar as the primary account. I think the bank chooses which one is the primary one. The choice should not be left to the bank. The bank



should ask the customer as to which bank should be made the primary one.

Speaker: It goes around 2000 to 2500.

Speaker: What happens in the case of joint account?

Speaker: If individual account is a joint account, it does not accept Aadhaar-linking.

Speaker: But they accept the Aadhaar of the first holder.

Alok Kumar: Thank you so much. There are so many questions. As we go along, I think some of the questions will get answered. I think many of these are very valid concerns. This was just by way of demonstration of the technology. What I would now look at is more from a policy perspective where we are and where we intend to go. In terms of digital payments, per capita per annum, India is at a very low level even when compared to China, Mexico and Brazil. It is well-known and if you look at the number of pay points per million and this is where it is important to look at. We have only 1080. China is about 16 times us and therefore, one of the critical things which we need to look at is how do you get the vendor end or the merchant end tied up. In fact, that is why this Aadhaar technology is very important because then your smart phone, in effect, becomes a POS machine. Now a lot of people feel that the digital payments started after the announcement of demonetisation. Actually, it is not true. In fact, this process started two and a half years or in fact, earlier because we built in Aadhaar and then we built a whole payment clearing infrastructure. We are probably one of the unique countries in the world which has a billion plus Aadhaar ID and an entire payment clearance infrastructure. Earlier, the cards that we used, the Master Card or Visa, all the data resided somewhere in the US or some foreign location. This infrastructure of NPCI, National payment Corporation of India is a full-fledged digital payment clearing infrastructure which is residing inside the country. It is in our control. This has not happening post- demonetisation. This has happened long time back.

I just wanted to illustrate the steps which the government has taken:

- Opening of Jan Dhan account, 25 crore of them.
- Introduction of Rupay cards as distinct from Master and Visa.
- Aadhaar given a statutory footing.
- Pilot implementation of DBTs in a variety of experimentation, one on petroleum side with regard to cooking gas cylinder, public distribution system in three union territories and now we are looking at the maternity benefit schemes going on the same route. We are looking at a vast variety of schemes going on the Direct Benefit Transfer route.

- Voluntary disclosure schemes for unaccounted money.
- Demonetisation.
- Of course, we did a lot of things but we have not really gone publicising it and going to the masses with a great amount of clarity. That happened obviously after demonetisation with the DigiDhan campaign.

What were the constraints? The biggest of course is the behavioural part. People are used to cash. Therefore, to make them shift from cash to digital seems to be the biggest challenge. And then, of course, the infrastructural constraints, POS machines, the limitations of the POS points and of course, the security and the safety aspect of these things. Also different entities came up with different apps. If you look at payment wallets, paytm has another payment wallet, SBI has SBI Buddy; there was no interoperability among the paying mechanism. If you have a Paytm account and you go and the vendor has a SBI Buddy, then you can't interact. These kinds of issues are there and I will tell you as to how we are going along addressing them. This is broadly the six points, action plan for popularising digital payments machines. I would describe in detail as I go along in the presentation.

One part was how do we make it attractive for people to shift to digital payments and we launched two schemes for that called the Lucky Grahak Yojana and DigiDhan Yojana, one targeted at the consumer and one targeted at the merchant. And the idea was that you do digital transactions and if your transaction ID gets drawn in a lucky draw, then we will give you some kind of cash incentives. And these incentives were daily and about 15000 prizes are given almost on a daily basis every day. Then there are weekly prizes which are of slightly higher denomination and then there is a mega prize which is going to happen on 14<sup>th</sup> April where the prize money is substantially high. And the other part that we are trying to do is that we conduct this draw in one city of the country and we are doing it across 100 days in 100 cities. The idea is to go to the hinterland and try and popularise this idea there. For instance, I went to Meerut and there was a lot of interest on the prospective merchants who wanted to know where they could buy the POS machines from, how they could install the POS machines, was it safe and there are lots of questions. Then the problems, Aadhaar is linked. There is a problem that the fingerprints do not match or the name is mistakenly printed and therefore, the bank was not accepting it. Linking mobile phone to the bank accounts; there are all kinds of problems. What we do is the telecom companies get together, the banks get together and the entire infrastructure is present. The mela continues from 10 in the morning to 5 in the evening and then one hour is earmarked when this lucky draw is done in this whole idea. We have a short film of about 10 minutes where we demonstrate the various kinds of digital payment modes and how to use it in a very simplistic manner. Today is the 79<sup>th</sup> day of the mela and we have another 21 days to go before we have the final mega draw on the 14<sup>th</sup> of April. So far we have 11.78 lakh winners. We have distributed a

total cash prize of 179 crores. This total scheme is about 340 crores. And in this melas, we not only have the political people participating but we also usually get a local celebrity. Abhinav Bindra could come one day, sports personality, Anupam Kher, culture, films. So the idea is to try and use these personalities to spread this message of digital payments.

Here is a state-wise analysis and it is a random draw process. If you see Maharashtra, Tamil Nadu and Uttar Pradesh, of course, we have not collected per population. So there would be some correction on account of population but it is clear that Maharashtra is way ahead the other states. Let us see how it goes. This is the status as on yesterday. Of the total number of awards, these many awards have gone to merchants and consumers of Maharashtra. Maharashtra, Tamil Nadu and Uttar Pradesh are the three top states in this regard as of now.

One of the things to note is how the digital transaction has evolved over a period of time. And if you see the graph on the left top, there seems to be a rise between 2011 and 2015-16. There is a consistent rise and if you see 2014 and 2015 and 2016, the rise is sharper. And if you see the effect of demonetisation, if you see October 2016, we had 740 million transactions. November was slightly less and November is the time when we announced demonetisation and there was a bump up. And then again, as the remonetisation set in, there is little bit of a dip again but if you look at this level compared to last year January, we are still about 70-75% higher than what we were last time in January. It is to be expected because suddenly an event is forced upon you. You are forced to go but then as the cash comes in, again, you start getting back to your normal habits. This is the biggest challenge as to how to keep this tempo up. But it is heartening to note that if you look at it from the level of what it was in January, we are still fairly high.

This will show you the growth in the number of transactions. If you see the other bar which is the parallel bar which is light brown in colour. This is the NPCI share of it. The digital transactions would be out of Master, Visa, NEFT, RTGS and so on. Those are the dark brown bars and the light brown bars are the NPCI. NPCI basically has four products. One is the RuPay card which is the Indian version of credit/debit card. Then we have the USSD which is, if you don't have a smart phone, you only have a feature phone, there is a \*99# option available which then converts your mobile phone into a payment mechanism. The requirement is that your mobile phone must be linked to your bank account and you can transfer money, you can know your bank balances etc. everything can be done. That is called USSD. Then you have a UPI, United Payments Interface which works like a interbank transfer. There what happens is just like you an email ID for transmitting data, you have an email id which is linked to your bank account and that email ID is your unique ID. So from that email ID, money is sent like an attachment on your email. That is called a virtual payment address and that is linked to a bank account with my bank. And just like we send mails, similarly, we

can attach money and send it across and the virtual address of the other person will be linked to his account and automatically, this transfer takes place. This is called the United Payments Interface. There is no issue of interoperability, whether it is a State Bank account or whether it is the ICICI account, whether it is the IDFC account, all banks are connected on this United Payment Interface. If you see the share of NPCI, that has risen very substantially, if you see the yellow bars. But in terms of value of transactions, it is very low. Who are using these? These are being used by poor people, at the lower end of the economic spectrum. In terms of numbers, it has picked up but in terms of value, it still has not picked up much. This is the point I was trying to make. If you see the number of transactions, it peaked sometime in December and in February, till 19<sup>th</sup>, if I project it and use a 28/19 simple proportion, it amounts to about 800 million transactions which is slightly lower than January. But if you look at the corresponding period in the previous year, we are somewhat slipping down. On that base, we are still higher. Since we started with a very low base, BHIM, USSD, UPI and AEPS, these are the four different modes of payment. Everywhere you see, there is almost an exponential rise because these were very small value of transactions, very low volumes of transactions pre-demonetisation and demonetisation shock suddenly leads to a rise in all these simultaneously.

What is the basic issue? The basic policy issue is cash is almost free in so far as the consumers and the merchants are concerned. It is not free for the government. It is not free for the banks as well because minting, transport, storage, protection, the manpower involved in counting, dispensing, and collecting back but for the consumer and the merchant, it is free. As opposed to this, the digital transaction is a transaction where the banks charge what is called as Merchant Discount Rate (MDR). Every transaction is charged at 2 to 2.5% and the theory or why it came about was when Master and Visa kind of people were establishing, they had established a backend payment infrastructure. And the machine which they lent is normally lent by the acquiring bank. The merchant does not pay for the machine but they recover this cost of infrastructure from the merchant through this MDR. Now here is a situation, if you want to promote digital, that is costlier for the consumer and the merchant and cash is free. We need to really reduce the MDR to 0 if possible and to charge something for the cash. That is the sense of direction that we are going in for and what are the steps we have taken to do that? In a sense, we are looking at tax incentives, we are looking at waiving of the merchant charges. We are actually, for instance, in the transaction on state-run petrol pumps, we are offering a discount now. On the one hand, we are offering discounts and on the other, we are also giving cash incentives. It is at both the end of the process. The real question is how do I bring my MDR rate as close to zero if possible. Cash back incentives cannot be continued over a long period of time because it will not be financially wise and not sustainable also. It is only at the primary promotion stage to get people hooked on to this digital payment

bandwagon. It may be a good strategy but it cannot be an indefinite strategy. The real question is how do I reduce my MDR and the answer is Aadhaar Pay. We are also working with other mechanisms, with the banks to really tell them that it is not that cash is free. You spend so much money in ATMs transport; there is a whole logistics to cash and also the cost of manpower for maintaining all that. This happens without any manual intervention. Therefore, if you can save on that, if you make it cheaper for the people to have this; that is the conversation we are having with the banks. It is a mindset issue. It will take some time to kind of materialise but that is the direction in which we are moving.

One part is the central government. The other part is the state government where you have the largest interactions of the citizens. This is another area where we are really pushing the state agencies, wherever the citizens interact with states, whether it is electricity payment or municipal dues payment, telephone bill payment, we are really trying and pushing the states and the central government to try and see wherever the citizens interaction is there and wherever the state accepts the payments to let them make it digital as far as possible. We had set up a committee under Mr. Chandrababu Naidu to suggest ways and means to promote this. They have come out with the first set of recommendations which I have listed here. One of the things is the QR Code. If you go to a Paytm, there is a QR Code which if you just click a photo of, the transaction goes through. Every payment mechanism is generating separate QR Code. A QR Code generated by a Patym will not be acceptable to SBI. QR Code generated by SBI will not be accepted by somebody else. We are now looking at a uniform common interoperable QR Code which has just been done. It was launched yesterday. A lot of backend work on the technical side is happening to make this digital payment revolution possible. NPCI, Department of Financial Services, NITI, DeITy; all the departments are working together to make sure that these things are made mandatory. For instance, the eKYC norms, if you simply have Aadhaar because Aadhaar is now linked to your address, everything is there. If you just give your Aadhaar card and give your biometrics, that should be good enough to identify a person. Why do you need all these documentation when you open a bank account etc.? Now it is possible to open a bank account only with your biometrics and Aadhaar card. Today, they told us that it is not only possible to register in a bank but also transact only with Aadhaar card and your biometrics. That is the direction in which the government wants us to go. As of last year, we had 8 billion digital transactions. For the year 2017-18, the target is to go to 25 billion transactions. It is almost three times. DeITy has now been given this task to set up this mission to make sure that we have a three-fold increase in the digital transactions. This is more like a command. I don't see there is any scientific method of going about this.

**Speaker:** After January this year, I have been noticing a decline in digital payments. What you have shown is only marginal. But if you compare January 2017 to now, which is almost a month and a half, the

decline is rather sharp. Something should be done to arrest it. Paytm started with a very good scheme of giving a discount in every transaction.

**Alok Kumar:** As I said, some cash back on every transaction.

**Speaker:** For example, you organise these melas where a few people get in. If you would have organised discount for every transaction, it would have been more.

**Alok Kumar:** Each one of these has a fiscal implication. I don't know how much you are willing to spend. The logic there is to try and get the banks to understand that it will be in their interest to shift from cash to digital because the saving which would occur to them, in fact, they should be aggressively pushing for it. It is like the government pushing the banks saying they should do this and that. When they went from the manual teller to the automated teller machine, nobody was pushing them to say that they need to establish so many machines because they felt that by saving on the cost of staff and other things, it may perhaps be in their interest to invest in that infrastructure. This is exactly the situation in which we are at this point in time and we have not been able to really convince the banks that if they went in for digital, it will be less costly for them. But we are now working with them to make sure that they understand that perhaps it is better for them even in a commercial sense and if they reduce their MDR from 2.5% to let us say 1 or 0.5% and eventually to 0, they are looking at this loss. The opportunity cost of not doing it is what they are not calculating. This is the conversation which is happening between the government and the banks.

**Speaker:** But why are you remonetising so much? You should keep a cap. The more you remonetise, the more cash will be there.

**Speaker:** We were told that we would get credit when paying for petrol by card in petrol pumps and I had taken it personally several times on the card since the announcement was made and I am sure many others would have but not a single penny has been credited so far.

**Alok Kumar:** I don't know but I have taken twice and each time, I have got it. Maybe, they are doing a special favour to NITI Aayog but both times I had taken it, there was some credit in my account. They just send it to the bank account and we get a statement.

**Speaker:** Which is the forum where we can take this up? When we ask the bank, they say that it has not been done.

**Alok Kumar:** There is a Department of Financial Services which runs this thing and the name of the Joint Secretary there is Mr. Amit Aggarwal

who is Joint Secretary, Financial Inclusion. He is a kind of regulator to complain to if the banks are not complying with this.

**Speaker:** Do you have a system to encourage digital payments, you accumulate some points like in cash. When you are holding cash, you have the advantage of holding cash. It is like something tangible and that is why people are addicted to cash. To make it digital, there must be some system of accumulating points so that people can have the benefit of monetary value later on.

**Vinay Shankar:** Can we have the question and answer session later on? Let him finish his presentation. Then you can ask questions.

**Alok Kumar:** I think I am done.

**Vinay Shankar:** Please go ahead and complete your presentation.

**Alok Kumar:** I am done.

**Vinay Shankar:** I think we will have the next presentation and then after that, there can be a question and answer session. Thank you so much Mr. Alok Kumar. Your presentation was very, very interesting and invoked so much response.

## **Presentation by**

J S Deepak,  
Secretary, Department of Telecommunications:

Chairman, distinguished members of the audience, it is indeed a privilege and an honour to be making this presentation to this group and looking at the vast experience which is in this room, it makes it a matter of special pleasure for me. I am absolutely delighted to be here. Let me start by talking about the Digital India Programme which is the topic of my presentation. As many of you would realise, it is a flagship programme of the Government of India. Our Prime Minister most famously said that in the old days, the cities came up on the banks of rivers. More recently, we have cities developing along highways and a time will soon come when cities and congregations, the economy will go on the banks of broadband highways and next generation infrastructure wherever it is available. That is the thinking behind Digital India. The vision is to have digital infrastructure, services and empower the citizens and in my talk today, I would structure it around four or five key areas.

First, of course, is the challenges we face in implementing a programme of this kind. The second would be the opportunity it presents. Then I would go on to the elements of the Digital India programme and finally,

the reforms and the progress that has been made in the last two years and then to try to share with you some issues on the way forward and how I see it unfolding.

If you look at the challenges, there are some huge challenges which come in the way of its implementation of Digital India. We have undoubtedly made a huge amount of progress in the area of telecoms. Today, we have the second largest subscriber base. We have the second largest number of Internet users in the world after China. We have global leadership in IT and ITES. The rate of the growth of smart phones is 30%+ per year compounded which is by far the highest in the world. We have an expanding and vibrant telecom sector. There is the ecosystem which should help in getting Digital India going. However, the challenges are many and I would just quickly go through five or six of them which are really the bigger ones.

The first, of course, is of digital connectivity. In spite of the fact that we have large number of internet, mobile users, India today continues to be a digital have not. The vast majority of the population is not connected to the internet. We have today, less than 400 million internet subscribers in a population of more than 1.25 billion. If you look at the international indices, our ranks are pretty poor. On the fixed broadband, we are 131<sup>st</sup> in the world with only 1.2% of the population using fixed broadband or having access to fixed broadband. If you look at mobile broadband, our rank is 155<sup>th</sup>. We have 5.5% compared to 47% which is the global average. If you look at the percentage of households which are connected, our rank is beyond 100. We have only 18% of households which have access to internet. The problem is that we are unable to leverage the digital resources for economic growth and social change. This is very worrisome for the simple reason that a number of studies show us that there is a great deal of linkage or correlation between broadband connectivity and economic growth. One famous study done by the World Bank shows that for every 10 percentage points increase in broadband use, the GDP goes up by 1.38 percentage points. It is an amazing linkage which we are not able to leverage and this is a problem. Digital connectivity is problem number one which is a major challenge.

The second equally important is digital literacy. Now a survey done by a Common Service Centre, CSC which runs the common service centres, in 2014 December, a large survey of more than 7.5 lakhs samples, shows that in India, only 18% of rural households are digitally literate and digital literacy being defined as at least one per in the household who can use a laptop or tablet or a device or is familiar with mobile phones to the extent of being able to use the apps. If only 18% of households are digitally literate, switching from an analog to a digital medium will increase the digital divide. It will lead to asymmetry of information which will create asymmetry of opportunities. We quickly need to bridge the gap because going digital without addressing this divide will have adverse consequences for equity etc. As it is famously said, *Ignorance anywhere*



*is a threat to progress everywhere.* Unless we can carry the large, vast and especially rural population along, the benefits of digital India will not percolate.

The third challenge is the limited content that is available in Indian languages. We have to introduce languages recognised by the Constitution, 200+ languages now. But most digital content as all of you would appreciate is limited to English. This is restricted to 350 to 400 million people. Rest of the people do not have good quality digital content whether it is websites or through mobile apps or in any other medium. The internet reach is indeed is very restricted in the vernacular. The famous French Statesman Charles De Gaulle once famously remarked that how do you run a country like France which has 542 varieties of cheese. You can imagine the problem of creating digital connectivity in a country which has 200 languages. It is a big challenge.

The fourth is the limitations on the availability of e-services. Utilities, government departments, municipalities are now only going online. It is not easy to access municipal services online. It is not easy to make digital payments to government organisations. Also, there is a lack of end-to-end automated services. Today, we can go to AIIMS and on e-hospital platform, you can get an appointment. It is useful in the sense that it enables you to go there when the time is there. You can even make under certain conditions a digital payment of Rs10 which you have to give. But then again, you have to go there and queue up because they give you a printout which is in the form of the hospital paper where the doctor will write in longhand. Ultimately, you have to queue up. It is not a great service but it is improving. The issues with the quality of websites and the user-friendliness of the websites as well as the applications and the end-to-end automation continue to be there.

The fifth point which I am sure all of you are aware is the poor user experience. The speeds of websites, the speed of mobile phones, data plans is something which leaves much to be desired and it has a relation with the number of users, spectrum available, the kinds of websites you use, the server capacity and so on and so forth. Often, we in the Department of Telecommunications get the blame for slowly running mobile apps. Often the problem is with the server. After demonetisation, when the digital payment started, NPCI used to complain that there was no connectivity. We found that 95% of the ICICI transactions were happening, only 2% SBI transactions were happening. That was because SBI had placed additional layers of security on the servers. Similarly, when NPCI delogged the servers by giving a server separately to Airtel, Vodafone and Idea from one to four servers, the connectivity was much better. There is an issue of quality of the consumer experience, not the least to do with non-transparent plans where the operators tell you that you will get 2 mbps but there are fine prints say that you will get 2 mbps when you use a certain amount of data and after that, the speed will come down to something else.

Lastly, is the problem of cyber security. Digital payments is a great idea if the incentives structure can be got right if the technology can be got right and the connectivity can be got right. But cyber security can be a major problem. If I have one account and I am having all my savings in that one account, I would not like to that to disappear because of a credit card or a debit card or a payment fraud. That is something which we need to work out.

These are some of the issues. Then there are issues like malware, lack of discipline, the Hilary Clinton kind of problem of secured treatment of your mails and your accounts and number of people share their passwords and so on and so forth which is a major problem. These are some of the challenges that have been faced in the implementation of this Digital India.

Having said that, there is also a huge opportunity. Today, in India, we have 200 broadband users mostly on the mobile phones. And this gives a great opportunity from health to education, from agriculture to disaster management, from human resource development to e-commerce to financial inclusion; a variety of applications can be run on these broadband speeds on mobile phones which can make life simpler for the citizens. All this has been made possible by the mobile phone. Most of our broadband, most of our internet today is on mobile phones. This has been somewhat of a revolution. However, we need to remember that we still have 700 million people without Internet connection. And so the need for bridging the digital divide again before Digital India can be a game changer or a transformation programme for everybody.

What exactly then are the components of the Digital India vision of the Prime Minister and how does it translate into this programme? This is basically a programme to transform India into a digitally empowered society and knowledge economy. It has three major pillars as I call them. The first is digital infrastructure as a core utility for every citizen meaning thereby that every person whether in cities or towns including the remotest villages should be able to get high speed broadband which he can use for getting government and citizen services and a variety of other applications which you and I take for granted. It also means universal mobile coverage. 97% of our population is under the mobile network, under the footprint of the mobile network. But there are still 50000 villages which need to be connected in the northeast and distant areas and it requires that because most of the mobile broadband is being accessed through the mobile phone. It also means cradle to grave digital identity, the Aadhaar kind of a system where you can identify a person whether X is X uniquely, efficiently and real time. And finally, internet access through CSCs where assisted delivery of services can be provided. It is good to say that services are available on the website, please go and make a transaction or access the service. But looking at the technological savviness of the population, we often require assisted services. For this, the common service centres or some kind of internet cafes are the place

where people can access these services. And finally, cyber security so that the data is secure, privacy is maintained and in critical transactions like banking transactions, we are assured that our money will not disappear into thin air. This is about digital infrastructure which is the first pillar.

The second pillar is governance and services on demand; services which are as we say faceless, paperless and cashless. You can access your entitlements from government sitting at home if you choose online and make payments to government, get receipts from government online. The end-to-end electronic delivery of services rather than getting them over a counter at a government office can really enhance efficiency and also improve the efficiency of the government offices which are often overburdened by a large number of people who try to access services from there. And ultimately, all receipts and payments from the government should be cashless, RTGS, cheque or some kind of a digital payment.

The third pillar after digital infrastructure and delivery of services is empowerment and this is perhaps what makes the Digital India programme at a higher pedestal than any other. In the sense, the idea is that there should be information available to all, everyone should be able to access services and real empowerment should take place in the sense that every citizen has a choice of how he accesses his services and voice in what the schemes and programmes and other measures designed by the government for his benefit should be. Unless there are applications like MyGov platform where you can give in suggestions on various schemes and various programmes, the government is thinking of formulating rather than ex post-facto complaints or inputs which is usually given. Basically, these are the three major pillars of Digital India which make it a programme which could be transformational.

Let me quickly take you through some of the reforms mostly in the telecom sector that we have done in the last year to make or facilitate digital India and its implementation. The Indian telecom sector is characterised by the private sector enterprise. 90% of consumers are with private telcos; private sector enterprise, investment and innovation. The role of the government has been supportive and facilitative. We believe that the business of the government is to keep government out of business and focus on improving on taking care of pain points, improving the ease of doing business and implementing reforms. Reforms act like the high tide which can lift all boats. So reforms could help every organisation or every stakeholder working in the system. With this broad philosophy in mind, we have sought to bring out certain reforms especially in the area of spectrum management.

I would like to talk of some of the major reforms like spectrum sharing, spectrum trading, spectrum harmonisation and the auctions which

happen. Before I go to that, let me just share two concepts which are important to understanding of this process. The way the propagation is effected by spectrum – the two principles are if the radio frequency in which the propagation is taking place is lower, the coverage is better. The signal goes out further. You can cover large areas. If it is higher, the capacity is more, you can send in more data. Also if the block size of the spectrum is small, you can support a few consumers. With 5 megahertz of spectrum, a telecom may be able to support a million consumers which a number of towers say in Delhi. But if you double the spectrum holding to 10 megahertz, it can support 5 million consumers. It increases exponentially. It is a good idea to have large blocks of spectrum. To ensure that, we have implemented the policy since last May of spectrum sharing where two companies can share the spectrum and get larger blocks so that the efficiency of both increases and they give a levy to the government. Trading spectrum – they can sell to each other and spectrum harmonisation which I believe is perhaps the single most far-reaching reform that has been done in the Indian telecom sector in the recent past. That is, you consolidate the spectrum.

Just like we consolidate land holdings and bring them together to make large chunks which are easy to manage and more efficient and productive to use, different spectrum holdings by each user has been put together which has exponentially increased the efficiency of propagation and helped them to cater to a larger number of customers with the same capital expenditure. It is advantageous to the industry. It is advantageous to the customers that with large blocks, the quality of services improves. Many of you might agree that the call drops is a continuing problem in our country because of the large population but the call drop status is better this year compared to the same time last year. That is what at least the TRAI findings tell us. And that is because primarily the blocks of spectrum which they are using specially in places like Delhi has gone up. Once the roll out is completed, it will improve further. There is an advantage of spectrum harmonisation or spectrum consolidation is to the consumer and it is also advantageous to the government because if you have spread out holdings, you have to have filters and guard bands and lot of spectrum is wasted. Through this exercise, over the last one year, we have been able to harness spectrum of the order of 200 megahertz which we have sold for 27000 crores which I call money from thin air and it is a triple win for the industry, the consumer and the government.

We have also tried to implement some reforms in the consumer area. Aadhaar is now 1.08 billion. We have 1.08 mobile phones. What we are doing now is the eKYC for mobile phones which was paper-based, you had identity proof, proof of residence and so on and so forth, is now done through the Aadhaar-based eKYC. While earlier it took us 20 hours to activate a mobile connection, today, it can be done in 20 minutes and it is paperless. 10 crore new connections coming in the telecom sector every year would save about 60 crores sheets of paper and

approximately, 50000 trees. It is an environmentally friendly measure. It is better for security and it enables some new players who have come into the market to quickly enrol consumers. Ajo, for instance, has got 100 million consumers in 6 months. It would never have been possible without this kind of a thing. It has helped competition, it has brought in new technology and has facilitated others.

We also have done other things like the abolition of licenses etc. to make life simpler for people but the basic point is the role of the government is to push reforms so that it becomes more efficient for the industry, more cost-effective and with real competition as we have in the telecom sector, the advantages of efficiency can be passed on to the consumer and that is what is happening. The rates of calling are dropping, now it is often zero in some plans. The data rates are dropping and the consumer is really the king.

Coming to the way forward, what is it that we need to do to take the vision of Digital India forward? The first thing is I think we need to leverage the mobile, the policy of mobile first and that is what the government has identified as a priority. Every application of the government to citizen services should be available on the mobile. It may be available on the website or elsewhere but it should be available on the mobile as well. All e-services should be available in the form of a dashboard, a wraparound app where the citizens can download those which they need and in a user-friendly manner, be able to access the services.

The second thing is mandatory local language on mobile phones. The government is working on ensuring. Today, on mobile phones, you mostly transact in English, few of them in this area transact in Hindi. We are mandating that from next year, every mobile phone in the country will have the ability to transact in three languages – English, Hindi and one regional language in the area where it is sold so that the problem of those who do not use English or Hindi for communications are taken care of and they are also brought into the fold of the Digital India.

The iris recognition feature is coming into the mobile phones as a business case and it is also expected that after consultations which have happened with the industry, we would be able to implement it so that most mobile phones, at least the smart phones which come out will have iris identification so that it is easier and you don't have to have these attachments and you can get your identity proved easily.

And finally, the framework of digital payments which Alok mentioned to make payments ubiquitous, seamless and safe.

There are various other areas also but basically, we are trying to address the challenges which I talked of connectivity through a Bharat Net programme which takes the fibre optical cables to 250000 gram

panchayats by 2018, 100000 is to be reached by June by covering the entire country with broadband and by making available to citizens assisted services as well as looking at language content and services end-to-end automated.

As a result of all this, I do believe that the Digital India programme has the potential of transforming both the economy and the society. The mobile device can convert from a tool of communication to an instrument of empowerment with both services as well as communication as well as the ability to give feedback on programs that affect the citizen all in one device. Also the agenda is about partnerships. We are working closely with the private sector as most of the industries are private and state governments as well with various other organisations especially in the R&D field to take these applications forward. There is an old saying that *If you want to walk fast, walk alone. If you want to walk far, walk together.* And that is the vision of Digital India. So appropriate partnerships between various stakeholders to be able to transform the availability of services and make life simpler for citizens. The vision of Digital India often reminds me of an old Beatles number, I belong to the age of Beatles, when Paul McCartney sang, *Hey, Jude, take a sad song and make it better.* The vision of India is basically to look at pain points, look at problems and use and leverage technology to provide solutions as you believe that technology can change the way we work and it can change the world. Thank you so much for your presence and your patience.

Vinay Shankar: Thank you Mr. Deepak for a very, very exhilarating and informative presentation on Digital India. I am sure all of us are enriched by the information that you have given and Mr. Alok Kumar also has done excellent work in telling us how money can be paid digitally without any problem. But I am sure there are lots of questions and I think both the gentlemen will be very happy to answer them. We will now have the question and answer session. Thank you.

### **Question and Answer Session**

Q: Both were wonderful presentations. Thank you very much. What is the institutional mechanism that the government has put in place to monitor and evaluate this programme of Digital India which has so much potential and I think this is something that the government must be doing. I would greatly appreciate if you kindly articulate about that.

J S Deepak: Yes, it is a programme which is flowing from the vision of the Prime Minister. So you bet it is very closely monitored. The Prime Minister himself monitors it once a month with various departmental secretaries who are involved with it. There are two areas which are very rigorously monitored. One is the creation of infrastructure which makes rural connectivity a possibility. This is done by two programmes which we in the Department of Telecom implement. One is the Bharat Net

programme which talks of providing optical fibre cable connectivity to all the gram panchayats by December 2018 and the last mile delivery of services through Wi-Fi hotspots in villages. The progress on that which is we have increased from 40kms a day last year to 400kms a day in the last three months of laying fibre and the lighting up of the gram panchayats so that connectivity becomes available. That is one thing which is monitored. The second thing which is monitored is the extension of the mobile footprint to the northeast, to Andaman and Nicobar, to the Islands basically and the hilly areas of the northwest, Kashmir, Himachal and Uttarakhand and the left-wing extremists states which have dark spots of connectivity. We have specific programmes for these with outcomes, with milestones which are monitored once a month face to face and once a month on video conferencing with the Secretary. As far as services, I am not even talking about digital payments which is separately monitored, as far as services is concerned, there are targets that all government payments have to be online by March 2017 which is one month from now. All receipts have to be online by December 2017. These are timelines that we have broken into various things to various departments and we being major revenue earning department as well as major expenditure department, we get it both ways.

Q: This is monitoring. What about evaluation?

J S Deepak: Evaluation has really not taken place. We also have a National Digital Literacy Mission which is a centre-state scheme to online get people educated on using this. That is run directly by the central government on 50:50 sharing basis with the states. It is called the DISHA programme and there they have independent assessments of the so-called those who are certified as digital literates, quality etc. These are some of the areas where monitoring and evaluation is taking place. I am sure after these target dates come in, 100000 gram panchayats by June 2017, payments and receipts, we will have independent evaluation to see how it is working.

Q: The telecom sector is private-driven. You talked about NPCI. Is it not enjoying a monopoly? Don't you think there should be other players? And what is the accountability framework of NPCI when the government does not have a major shareholding in that when performing a very sensitive business? Thank you.

Alok Kumar: I will answer it in two parts, whether it is a monopoly. It is a monopoly if you consider the market segment only as these four services but there is a market service beyond that. For example, digital wallets could be private, Paytm is there. That is an effective substitute. The Master Visa, the entire infrastructure that is outside the purview of the NPCI. To say that it's a monopoly would be misplaced. Secondly, NPCI is regulated by RBI using the very same standards that it does for banks. Both on the regulation side and on the competition side, there are sufficient checks and balances. At this point in time, the market share of

NPCI as compared to the overall market size is only 20%, that is, by volumes. If you look at value, they would be less than 1-2%. But Master and Visa has is no incentive to penetrate into the rural hinterland or for low value transactions. That is what is NPCI is doing. You may really ask whether the business model of their charging on transactions is a good model, can it be reduced with increasing volumes, perhaps that will be. But to say that it is monopoly, I think I would not agree with that statement.

Q: You had mentioned that there is 18% digital literacy. Is there a breakdown between rural and urban?

J S Deepak: This 18% is rural households digital literacy. Urban is slightly doing much better. I don't have the figures right now but rural was 18% in December 2015.

Q: Is the problem on the demand side or the supply side?

J S Deepak: It is both I suppose. Access to quality services can create demand. So there s no access available, the quality is there. But if you look at the way the mobile revolution has progressed, when we got our independence, we had 82000 phones. After 50 years in 1997, we had 20 million phones. Today, we have a billion plus mobile phones. There is a possibility of leapfrogging stages of technology and bringing about transformations. The same is happening in the area of internet. First 100 million internet connections took 18 years in India. The second 100 million took three and half years and the third 100 million took 24 months. And the fourth 100 million which we are going to reach very soon will take something like 18 months. The pace is accelerating. Eric Schmidt, Chairman of Alphabet, the holding company of Google has estimated that of the next billion internet connections, 400 or 500 million are going to be in India. It is happening but slowly and it is an issue of lack of awareness, lack of quality of services, lack of content, lack of applications. If a person has internet today in a rural area, he does not want to surf the net as we do looking at the English content, what does he do? There is not much to be done and most municipality, local bodies and panchayats are non online and the service if available is often of indifferent quality and consumer experience is very poor.

Q: I must compliment you both for excellent presentations. Did I hear you rightly that you said at the time of independence, we had 47000 mobile phones?

J S Deepak: 82000 mobiles.

Q: But there were no mobile phones at that time.

J S Deepak: Sorry, total telephones and not mobile phones.



Q: Yes, because there was no mobile technology then. I must also compliment you for sorting out the spectrum issue because we started off on the wrong foot by rolling out spectrum as if it was our own property. It started off with 4.4 megahertz. You can't do any spectrum planning with that. Your masterstroke of 3G auction is required to be recognised and complimented. Thirdly, you talked about the digital divide.

Another issue which is closely connected to the digital payments is the gender divide. I believe DoT does not maintain statistics of the gender-wise mobile phones because empowerment is coming through this option. Even at the time of demonetisation, many ladies found concealed incomes in their cupboards because they had tried to save money under sarees and other things. That is one statistical data which could be useful to see.

Lastly, you rightly pointed out the issue of cyber security. They say the more digitalized the economy gets, the more vulnerable you are because it is a cat and mouse game. You will recall a few years ago, I think it was Estonia which was supposed to be a highly wired economy, it was brought to a standstill with the denial of service attacks. I am sure you are looking into areas which would ensure confidence in digital payment. I can tell you frankly, I don't make online payments because I am worried my bank account may disappear because nowadays technology is available. If a friend of yours is going with you in the car, his mobile can swipe all my data into his mobile. This is an area which requires special attention. I know there are groups going into it but I just thought I would bring it to your notice. Thank you.

J S Deepak: You made a number of very valid points and the point about us not maintaining figures on women subscribers is absolutely true. We depend on TRAI statistics who are the keepers of data and we have been advocating to them that this is what we need to do because the figure of 18% of rural households which are digitally literate is bad enough. If you look at women who can connect to the net to avail services or make digital payments will be even more disappointing. Regarding the spectrum, personally I am blessed that the first spectrum auction, the first spectrum sharing, the first spectrum trading, the first spectrum harmonisation ever in India has happened under my watch. And that is very humbling. The spectrum situation has improved and it is no longer an excuse for quality of services. The spectrum scarcity in India is now history. The blocks of spectrum which we have, used to be well below the international standards but today, we have an average of 18 megahertz of spectrum which compares very well with the 22 megahertz in the US. With the spate of consolidations which are happening, this will go up to the European standards and that should further ease it.

The point about cyber security, it is true that denial of service attacks in a place like Estonia have it, we do not have the ability to anticipate or to

do remediation if attacks happen. It is there in telecom sector strongly hardened, banking sector is there but there are lots of areas and as far as individual use is concerned, we do it in a very undisciplined manner. Many of these applications are not designed for those who share mobile phones for instance. In India, we have a concept of sharing mobile phones. Here, we have the thing that you give the mobile phone to the postman to punch. I will also not feel very comfortable if someone else is punching and that amount gets debited from my phone because I don't know how I can get it back if it gets done by mistake. The system has not been developed. When the debit card problem took place, my brother lost Rs100000 from his ICICI Bank account for five debits, Rs20000 each debit. He is based in the US. He complained to the ICICI Bank and they said fine, it has happened and asked him to lodge an FIR and to let them know. He sent me a mail to lodge an FIR. I contacted the police. If you lose your mobile phone, you can online lodge an FIR and you get it immediately. It is very simple and you can do it if you lose your documents, passport and so on and so forth. They said the online system for lodging of FIR is for loss of merchandise and it is not for frauds. I had to use my influence with the Additional Chief Secretary who is batch mate of mine in Mumbai. After talking to various people and finally, I said you send me this thing. Don't call it an FIR, call it a complaint has been registered. It took me three days to get that done and when I went to the ICICI Bank, they immediately credited the amount. The systems also have to take this in addition to what you said.

**Q:** With the verifications now coming, will it solve the issue of cyber security

**J S Deepak:** Cyber security is now meriting attention. We now have a separate cell for the banking sector and I am sure these will get taken care of. But there is a huge need for urgency.

**Q:** Self-discipline as you said is correct because sometimes, senior officials during demonetisation gave their debit cards with the pins to their constables to draw money.

**J S Deepak:** many senior government officers have their personal staff who are signing files for them, who are sending replied to mails and who are accessing mails. I on my official mail ID get 650 mails a day. I can just on my device quickly go through and pick out some which are personal which I have to, rest of it has to be handled by my officers. There is a problem of plenty also, I would say.

**Q:** This question is to all the three of you. Cloud computing is coming up in a big way and the main boosting companies for cloud computing are Amazon, Microsoft and Google. There are two questions to it. What is the Government of India doing to boost capacities in cloud computing and

secondly, what I wanted to know was that support the internet blacks out, then what happens?

**J S Deepak:** The Government of India has a policy of Cloud First as there is a policy of Mobile First. What it says is that you would not set up data centres, do not buy servers, do not buy hardware because at a fraction of a cost, one can with the use of software, really have compute and storage, you can have various other things in the cloud. Our policy is of Cloud First and the clouds available are, there are a number of cloud service providers. You mentioned Microsoft, Amazon. BSNL is a cloud service provider and NIC is a cloud service provider. Also we have developed a model RFP for departments and public sector undertakings to be able to hire cloud services from private providers because NIC and BSNL are not able to cater. These two things are there. We encourage this and in the coming era of Internet of things and machine to machine communication, everything is going to be on the cloud. We do encourage and it is very cost-effective and value for money.

**Q:** My question is to Mr. Alok Kumar. This is the problem faced by poor people in the unorganised sector. Say, a labourer who belongs to Bihar comes to Haryana and he wants to open a bank account. He has his Aadhaar card with him which is supposed to be the universal thing, but the bank does not allow him to open the account because he does not have a local address. Since he is in the unorganised sector, temporary employee, the employer will also not give him a certificate to enable him to open an account. How does the Government of India propose to overcome this issue?

**Alok Kumar:** I don't think I have an answer to this question. Presumably, if your account is there already existing somewhere, you can use your ATM and other facilities if you have that. Otherwise, I think you are right that they require a local employer as a guarantor or some kind of a introducer to open a bank account. The whole idea of digital payment is that he does not need to have a bank account and that is the ultimate direction but to answer you honestly, we haven't really thought at least at the NITI Aayog but this is a definite problem and I think it is a pain point that needs to be addressed.

**J S Deepak:** This is a pain point and another pain point which has not been mentioned is the incentive and the disincentive structure. The tax, if you do cash transaction, you keep it away from the books and everyone saves tax and shares it. My wife the other day went to Khan Market to frame a picture. This is the height of demonetisation when the country was shocked. She said the shopkeeper said if you give cash, it was Rs600 and if it was done digitally, it would be Rs700. What she wanted him to do. That is a problem. When cash was short, digital payments took over and when cash is coming in, again the digital payments are going on because the incentive structure needs to be addressed. The merchants

do not want to do this because they have to then pay the VAT and they potentially get into the income tax bracket which they are not doing. When something is done on that and all the transactions get into the books and more digital payments will happen and it will not be a burden to do digital payments as it is now.

Q: Internet connectivity is a big problem even in urban areas. Even internet connectivity of Vodafone or Airtel, the data is rather poor. It is good that the government is going in for these Wi-Fi, Hotspots In railway stations and airports. But one of the very obvious places where one should have a Wi-Fi or Hotspot which should be made compulsory is in all bank branches. You should be able to go to a bank with your client ID as your password or whatever, it should be there. In fact, at the bank itself, the biggest problem is they don't have data connectivity and very often, you have to request the bankers to do it. Why doesn't NITI Aayog make it compulsory or recommend that all bank branches must be Wi-Fi Hotspots?

Q: Just to supplement, the down time in banks is very high. You have to wait for umpteen number of hours for internet connectivity.

Q: It is very high. In State Bank of India, I am sorry to say that the availability, server down time is almost 40-50%. I went for my pension, for Aadhaar registration, the server was down. For two hours, I kept drinking tea and then I had to go back and get it registered. Downtime is very high. I request NITI Aayog to improve the infrastructure and particularly these Wi-Fi Hotspots of the bank branches.

Alok Kumar: Thank you so much. It is a good suggestion.

Vinay Shankar: Mr. Deepak and Mr. Alok Kumar, it is time for us to thank you profusely for your informed and learned presentations. I think we have become much wiser. I think one suggestion that I would like to make is very often, the introduction of technology becomes the objective function. I feel that the objective function should be the convenience of the user, the customer. But in our anxiety to do things faster and introduce things, many times, the aspect of the centre of focus which should be the consumer is lost. While you frame your policies and programmes and implementation, this aspect needs to be looked into. This came to my mind particularly because while new schemes are coming at a very fast speed but those schemes which are ongoing for ages, have not received attention or reformed. That is particularly happening in the central government. In the state government, the Prime Minister himself is introducing the ease of doing business programme, 300 points action plan and things of that type but where the ongoing departments are there and in the central government which I think are extremely important for the conduct of business after they have been established, while establishing the business, people need to go to the

state governments for land, water, electricity and things like that. Once the business is established, it is the central government agencies with which the business plan has to deal. And unless that environment improves, I think it may be very difficult for new investment to come up. In the present policy, what is happening is we are addressing the policies and programmes which affect the poor. That is very nice and it must be done but it does not mean that we should exclude from consideration, the productive people who add quite substantially to the economy. I think their viewpoints are not receiving the attention which they should receive. This will affect the growth of the economy as well as the employment potential with which we are very deeply concerned. The entire country wants things to be done quickly.

Thank you once again for wonderful presentations and for informing us with so many facts and schemes and concepts that are under the consideration of the government. Thank you very much.

### **Vote of Thanks**

Mahesh Kapoor

Before we disperse, let me thank Mr. Vinay Shankar, Mr, Deepak and Mr. Alok Kumar and I request Mr. Shanti Narain to please give mementos on behalf of the IC Centre for Governance to the guest speakers.

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