

My Speech at the Annual Convention of Indian Electrical & Electronic Manufacturers Association (IEEMA)

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मुझे पूरा विश्वास है इस आज के पुरस्कार से हम सिर्फ आप को ही नहीं गौरान्वित कर रहे हैं हम पूरे देश की महिलाओं को recognize कर रहे हैं ! और मैं आप सबसे दरखास्त करूंगा कि इनके example को, इनके काम को आप जितना ज्यादा देश भर में और प्रचलित कर सकें, लोगों तक पहुंचा सकें उतना ही public service के नाम पे किस तरीके से करना है आप सोचिए social media campaign हो सकता है; पर अगर हमें लोकल लेवल तक जाना है तो शायद radio campaign कुछ ज्यादा effective होगा. Rather than just a social media campaign. Social media campaign हम खुद देखते हैं और थोड़ा एक excite हो जाते हैं कि बहुत अच्छा response मिला है लेकिन वो जनता तक पहुँचने के लिए शायद you will have to be a little more in the media areas and all but truly हम आपसे बहुत ही प्रभावित हुए आपके काम को देखके और आपको धन्यवाद भी देते हैं और बधाई भी देते हैं मैडम.

मैं सोच रहा था आज किस विषय पे फोकस किया जाए, मेरी आप लोगों के साथ कई बार चर्चा हुई है. I had a number of occasions to interact with all of you. We have seen the sector come a long way in the last few years and in that I won't talk of 2 years or 3 years I will say a number of years. Industry has moved on, the Indian industry has demonstrated its prowess, the Indian industry has shown our ability to innovate, to keep up with times. But I still think there is a huge possibility going forward to pick up bigger and bigger challenges of innovation because ultimately our future is going to be defined by the levels of innovation, by the way we think it to the future and by the way we prepare ourselves to address the challenges from around the world. And those challenges are not small and simple, the challenges are, in fact, quite deep. For example, if one was to see the import basket of India and on more occasions than one I have discussed with several participants, in my sectors at least in Power, Coal, now mining that India will have to plan to become self-sufficient, India will have to stand on its own feet and fight the competition on economic terms, on fair terms and win the battle. But we will have to look for a future where we are not import-dependent on any product whatsoever and it's not only about my Swadeshi moorings and I am very proud about my Swadeshi moorings, let there be no doubt about it. It's not only because I come from an ideology which believes that self-sufficiency, self-reliance and the ability to take care of ourself, while in a globalised world we should engage with the world but that engagement should be on our terms not on somebody else's terms. But going beyond that I also believe it's a part of our overall security of the nation, energy security or for that matter equipment

security is an integral part of our national security. Many of you, particularly, those who remember the earlier wars that India has fought and I am using that example in the context of the decisive action that we all just now applauded that happened barely 24 hours back. At one stage, our Indian army at the border was standing helpless because some country in the world decided not to give us the ammunition that the army needed at that critical juncture. And that's an example none of us should ever ever forget. The fact that at any critical juncture if India becomes so dependent on any other country or any foreign power. I mean as I was reading the news yesterday and when this news came in I was 70 kms from the border of Pakistan, I was at Salaan, one of the hydro power projects of NHPC when the first news trickled in, and they were actually at that point telling me this Chenab river goes from here, at 70 kms away it enters the Pakistan territory. The point I wanted to make was, at that point of time, the first thought that came to my mind was we all know that we have inimical neighbors in and around our country and we also all know and recognize that a lot of equipment has come from a neighbouring country where tomorrow if we were to be dependent on spares, dependent on equipment to be supplied by companies from there, at any critical juncture, let's say our industry, our power sector, our energy sector was to get crippled for lack of adequate spares or adequate equipment, are we as a nation prepared to handle that situation? And one of these things today security, national security is defined also by our cyber security, also by our energy security, also by our food security. National security is not in isolation of these other elements of human existence or human demand and, therefore, when we look at the import basket coming into this country and you still find \$10 billion of electrical or electronic goods getting imported it's a matter of deep concern. And if I may even venture to add, a matter of shame for all of us. I include myself, I am equally culpable and responsible for not having been able to, as yet, address this very serious issue. In fact, I am quite confident and hopeful that at least on the thermal coal side we will gradually come out of the import syndrome. We may need that, in fact, I requested BHEL and I hope Anshul ji will take this to BHEL, to see how we can re-design some of the boilers or thermal power plant equipment to have a larger intake of our high fly ash coal rather than being dependent on maybe better or cleaner coal coming in from abroad for which these equipment were designed at one point of time when India never had the confidence that it could ever become self-sufficient in coal. It's an unfortunate situation that rather than trying to address the problem of coal and having sufficient production or output of coal our solution was to design the equipment based on imported coal. It's an unfortunate thinking. But I hope that going forward, we as a nation can define and determine, and decide, that we will plan our nation's future, we will plan our

equipment design, our equipment availability, our technology, our innovation, allow it becoming self-sufficient, becoming self-reliant. We should become the laboratory of the world on innovation and we should be taking our products to the rest of the world with cost-effective solutions.

In fact, I was delighted when I saw the two MoUs that you are entering into. The one with NTPI on skill development clearly demonstrates that you recognize that skilling the Indian people to participate in the electrical and electronic sector is going to be very important if you are going to expand the frontiers of our production capability, our delivery capability, our capability to serve a billion people in the country with more and more modern outputs, modern gadgets. At the same time your other agreement with the... is equally gratifying. In fact, I didn't even know a body like that exists; and for 90 years. Does that report to you Anshul ji, the body that has signed the MoU, CIBP, Is it my sector? It's something like when I became a minister for the first three-four months I didn't even know the Bureau of Energy Efficiency is under me. It's only when a cabinet note came to me on the ... that I first came to know that यह भी मेरे under है, then we started looking at it and came up with EESL and you know what the story is after that. I didn't even know nobody has ever met me from this. Centre for Irrigation and Power. Are you sure it's under me or it's under Water Resources? किसके under है यह? So it's with Water Resources now? No wonder I thought, because I am not that bad की ढाई साल बाद मुझे मालूम ही नहीं if somebody is reporting to me. Thank God, I actually got scared, I said मेरे तो पत्ते कट गए आज के बाद!

But it's good to see that the industry is willing to associate and engage with CIBP to see how we can collaborate and work together to look at new technologies coming up, new ideas getting firmed up. In fact, convergence of digital technology and lighting technology, to my mind, is going to be the way forward.

I was reading somewhere about the next stage of Wi-Fi being Li-Fi, something to do with the Light Emitting Diodes being used also for transferring maybe mobile telephony or data and stuff like that. And I am given to understand that that can have ramifications in terms of the ability to transmit large amounts of data or large number of calls much much larger, transformationally bigger than what is being done at present. That is the kind of leapfrogging of technology that we in India should focus our energies on. I don't know if I mentioned it at any of my earlier engagements with you but in one of the first few meetings that I had with the Prime Minister when I became the minister his direction to me was that India should start

leading the world and stop only following the world. If there is a good idea it's not that we have to be isolationist and say no now we will not follow any good idea from anywhere in the world. That is not what I am trying to suggest. But can we not start thinking how we will lead the path to the world, how we will come up with innovation or technology which is two steps ahead of what the world could think of. After all, we today, all of us, represent the world's largest energy market, the largest market for energy equipment, the largest market of a nation which is hungry for development, aspiring for a better quality of life. And in that situation, it's really at that cusp where if we look at newer technologies defining our future we can actually bring up cost-effective solutions and prepare ourselves for a brighter and better, more energized tomorrow. In fact, just as I was walking in Babu babail and you team talked about the motor which he also mentioned from the podium and my only question to him was are you asking for a subsidy or is it self-financing. Because I mentioned it before a subsidy can only be a restraint, can only be a restricting factor to any good program, whereas an economically viable solution will have no limits to its ability to grow and expand and be used just like our LED program. If it had been backed on subsidies we could never had achieved what we have with the support of all of you. Similarly, the motors, as he has pointed out to me, has the ability to almost give a one year, one and a half year payback. And maybe the economies of scale come in and as it becomes more competitive and is used in larger scale he says it could be even less than a year. Now this is the kind of ideas that excite me, that really make me feel that IEEMA is truly concerned with national good, concerned with the future of the energy sector in India. I compliment all of you.

Please do let me know what the government needs to do as to create an enabling environment and I will be delighted at least as far as all the companies under me and we have some 35-40-50 companies which work directly under me. We will be delighted to look at a mass scale replacement of motors across the sectors; coal, power, renewable energy, whatever. In fact, that reminds me only yesterday at Salaal, the hydro power station, it's about 30-35 years old. The control room of that station was half the size of this room, whereas a modern day new control room in a new plant is what, a 10 by 10 or 10 by 20 sq ft room. So when I visited Salal, two or three things came to my mind and I am just sharing it with you to reflect the changed thinking of the government of India and the Prime Minister Narendra Modi. The first thing that struck me as I was driving down towards Salal was the problem of silting, as we were driving down towards the power house I saw a large quantities of silt deposited on the plains on the side of the flowing river. So I said what are we doing to dispose off this silt. And they said no this is a 35-year old plant,

it was designed on some American technology which never planned for de-silting or segregating the silt. And, therefore, from a reservoir of 22 kms then, the current reservoir is reduced to 2.5 kms over 35 years or 30 years. I was absolutely amazed and I had just visited Naphthajhari in Himachal Pradesh with the Prime Minister of Nepal a couple of weeks ago where we created, it's a modern relatively newer hydro power plant. They have created an entire set up which segregates the silt before the water goes through the turbines and flushes out the silt through a side pipe into the river after the power generating units. So even though we do not damage the ecology the silt goes back into the river and then flows along with the river water, whereas here we have allowed the silt to deposit over 30 odd years. So my first question to them was why don't we immediately look at some solution, dredge the whole reservoir, look at a continuous dredging so that for the long haul this plant can continue to serve the nation and then I talked to the District Collector to see how that silt, whether it could be used for construction activity, build roads, to build newer infrastructure in the state and then maybe some of it could go back into the river post the power plant. Then I also recognize that India has a problem today to set up new hydro power plants - land acquisition, rehabilitation, the gestation period, the cost - all of these things are challenges for the hydro sector. So I said why don't you try and see, it's a 30-year old plant, if some new technologies can help us upgrade this plant and instead of 6x215 MW each, can we look at replacing them with higher capacity equipment, more modern equipment, something which can even expand the output, maybe 20%, 50%, maybe 100%, I don't know, I am not a technical person in any case. But can we think like that. So that existing assets can be put to better use. Of course, in fact the answer was, no no that depends on the head at the reservoir. I said fine maybe at one point of time there was a design which restricted or determined this capacity. Let's explore in Canada, in Australia, in America, wherever, Brazil, can we look at any new technologies which can help us, does this equipment need refurbishing or replacement and can, after all power from that plant, ladies and gentlemen, was at 94 paisa per unit. Because there is a Rs 1.25-1.24 state government cess but that's fine, government needs that cess to develop Jammu & Kashmir which is a very important part of India. But at 94 paisa per unit if we can expand power generation from that plant, would you not agree that would be true national service for the country. And then, of course, many other elements came out as we discussed - could we look at reducing the manpower, in fact, 900 people working there, can we relocate some of them to other plants because, to my mind, hydro plant doesn't require 900 people in a 690 or whatever MW project. Can we look at expanding the tourism frontiers of that area? It was gorgeous, just beautiful. But when we go to Jammu other than Mata Vaishno devi I don't know if

you have ever done any sightseeing or tourism in Jammu. There may be many in this audience who may have gone to Vaishno Devi but I suspect you went to Jammu, went to Katra, did Darshan and came back. Because Jammu has never imagined itself also as a tourism destination. But if you visit this Salal, I promise you it's a good And I can imagine in the winters it must be even more beautiful because there wouldn't be any snow and yet you would enjoy the snow-peaked mountains, you would enjoy lovely weather, flowing river, clean water of the Chenab. Now what I am trying to reflect is this government has tried to break the silos of governance, to think beyond, even met me to give us some photographs so that we could get some restoration artists to come and recreate that fort and then see if we can develop some tourism facilities, subject to, of course, security clearance from the army, that being a very sensitive area. What I am only trying to say is that when you all also plan your programs for the electrical and electronic industry, please don't look at it the silo of our sector, you could come up with an absolutely nice and fancy solution for Swachh Bharat Abhiyan on the sanitation side using some of the ingenuity that all of you have in your companies, in your research labs. I won't be surprised if some of you could come up with some good interesting innovation which could help the differently-abled, Divyangs of our country. Two very important things that this government has taken up with great deal of passion and commitment. The important thing which I am trying to convey is think out of the box and think beyond, that is the humble message that I wanted to share with all of you. The potential going forward is huge, we are looking at innovative and new ideas going forward. I don't know if any of you are aware we have an experiment going on in Bodhgaya, also in one of the villages in Rajasthan to see if Direct Current (DC) transmission into homes can be looked at as an alternative in the long run to cut down on transmission and distribution losses also to ensure that in the eventuality of any blackout also we can give at least enough power to run the lighting and basic needs through a brown out instead of a black out and we are investing nearly Rs 80 crores in that research program. When Professor Jhunjhunwala gave me that concept on a flight from Delhi to Mumbai or Mumbai to Delhi rather, I said I would love to experiment on that and, by the way, that was just when I had become a minister so my mindset also at that time was one of shortages. It's only now that when I see what we have done and what the regulations in India are I realized that literally everything we have done in the past and all our laws and regulations were of a mindset of shortages, probably, time to even look at now new paradigm of working where we will have to start planning for surpluses rather than shortages. And I am sure that's a more delightful scenario to work in. Nobody, none of us wants to work or live in a country where you don't know whether we have enough power

to get 24x7 power for our homes, for the schools, hospitals, for our businesses. And it happens, you know, in power ministry, for example, we are all the time planning regulation around allocation of power and now they are getting used to the idea or the concept that hey there is no allocation, nobody wants your power, now plan how you are going to sell your power.

Same thing is happening with coal. After two years of high growth today I am unable to grow because I am not able to get enough market for my coal even after meeting the expanded demand based on the usual growth trajectory. But there is, there is really a situation which I had once, sometime in August 2014, out of frustration I had told the team in Coal India that we will have to plan for a billion tonnes of coal production and I think I had just jokingly told the Director Marketing, Saxena at that time, that Saxenaji आपको डेढ़ साल बाद कटोरा लेके जाना पड़ेगा कोयला बेचने के लिए. And God has been kind we have actually reached that situation. I have actually told the current Director Marketing, the new guy who came in who is still on probation that look your job is going to get confirmed only if you can reduce some of the stocks out of the pithead mine. But I think we will all be happier to live in a country of surpluses where today we have to struggle where the next power demand is going to come from. And I am sure you are all aware that this government has committed itself to reducing our import bill on petroleum products also by 10% in the next few years. And mind you, when we are talking of reducing our import bill it also factors in the fact that we have to have a growth also. So there is a growth which we need to provide for and yet reduce the import of petroleum products. So it's a double value that we are hoping to achieve. Meet our growing needs and reduce the imports. But it's all possible, if we all start looking innovatively, if we all start thinking innovatively. After all, the Ujwala yojana that my colleague Dharmendra Pradhan has successfully steered and through which we are going to give 5 crore poor BPL homes with a LPG gas connection will impact not only the health of the families but will also impact the wasteful consumption of kerosene in large measure. It will also impact the chulhas, wooden chulhas and things like that which really affect the health of our brothers and sisters living in the villages. Or why villages I am told even in the slums in cities anybody still doesn't have an LPG connection. Now these are programs, look at our thrust that Mr Anshu Prasad and his team are working on, Mr Anshul Prakash's Ministry is looking after the promotion of electric vehicles in the country, to my mind, that is going to be the single most transformational story in the mobility sector in the days and years to come. Can India leapfrog that and become the capital of the world for electrical vehicles particularly since India's demand is still a new demand. Our billion people still don't own their own vehicles

but as prosperity grows, as the economy improves we will have a more and more aspirational middle class looking to buy new vehicles, maybe initially a two-wheeler as the incomes improve a four-wheeler, maybe at some stage an SUV or a sedan. Simultaneously, we have electric buses as a potential going forward to bring down not only our dependence on oil imports but also the high degree of pollution. Now, other countries, particularly, the developed countries will have to replace their petroleum-driven cars with electric cars whereas we can make the first car or the first scooter or the first motorcycle owned by a person as an electric vehicle. Now imagine the huge opportunities that opens up for you, huge opportunities that it opens up for electric equipment for batteries, for newer designs of automotive components, motors. Now should we just follow the world and keep tom-tomming what one company in California is doing or can we create 50 companies in India which are better than that. That is the choice we as a nation have to make. And to my mind, there is nothing restricting this growth of this industry except our own limitations of our own thinking. After all, the two or three requirements that this sector has, to my mind, would be adequate availability of power and we in India have sufficient generating capacity today that we can even double our generation of power based on whatever capacity is on-ground, based on the plants which are in the pipeline and the huge amount of renewable energy plants that we are planning to set up. Just these three put together working at optimal capacity can help us double our power generation from a trillion units to two trillion units. When you add to that, our ability to reach charging stations across the country through our petrol pump network, I am given to understand we have about 50 or 60,000 petrol pumps all over the country. So the second essential requirement other than availability of sufficient electricity is charging stations, now charging stations today may sound expensive but just for a moment imagine if I was to order 60,000 charging stations, imagine! I am very confident that if we were to take out a bid for 60,000 charging stations like our 50 million at a time LED bulbs. I don't know if you are aware the last tender came at Rs 38, against 310 two years ago, Rs 38, and from a international supplier, international company probably the world's largest lighting company. So if we were to come up with a 60,000 fast charging stations bid I won't be surprised if we could do in maybe a \$100 billion, I won't be surprised ladies and gentlemen. And then some of you will innovate, when you that kind of visibility of business I am sure some of you will apply your mind, will come up with newer ideas and make it even more attractive. And just like the chip technology or memory storage prices have crashed over the years and at one point I was told every month for the same price you could get double the capacity or memory. I don't know if that fall is still continuing or... I am told battery storage also is going down the same

path. We have seen that happen in solar. So can we, all of us, put our minds together, I don't know if IEEMA is the right forum or no but I do like to throw ideas open at whatever forum I get. Can we imagine that India produces 10 million electric vehicles 5 years from now and you know that I don't think to small scale.

And we should economically viable, let's not create the crutches of a subsidy around it. Let's see how we can make it an enabler, this subsidy if at all on government intervention should be an enabler, an infrastructural enabler. And let the business stand on its own feet. After all, as a minister I am very concerned where will I sell all this power so for me there is a vested interest I want these vehicles.

I would urge all of you to think in those lines, let's think into the future, let's do a little bit of crystal gazing, let's look beyond what we are doing today. If each one of us in IEEMA and you have 800 trust members, large companies, I was just seeing your list of sponsors, many of them could do a lot of research and development in innovation in India. By the way, I don't know if any of you have even bothered to find out that the government of India in the last budget, Finance Minister Mr Jaitley has created a special dispensation, a special window to encourage research and development and patents being registered in India. Are you guys aware of it? So now any patent which is registered in India, which comes out of R&D in India the tax on that on worldwide income is at what, 10%? Is at only 10%. So if all of us were to look at what we can introduce new in this business and there are so many things, the other day somebody came to me with a technology, I don't know, I have not yet studied it fully. The Uniper power station in UK where a thermal power plant can be ramped up and down in one hour, now we have been struggling with as we expand our renewable energy, we have been struggling with peaking power and peaking loads and how we balance the grid and manage the grid frequency. थोड़े बहुत शब्द सीख गया हूँ टेक्निकल को ध्यान रखता हूँ just to show that I am not ignorant about this line. But if this technology works or if some of you can come up with such a technology and my thermal plants can become peaking reserves or peaking plants I am sorted as I expand my renewable energy in India. When the desperation or the fears of the grid stability significantly get sorted out or resolved. And India has the capability, it's not as if we don't have the capability, after all, with the support of all of you and, in fact, if at all there is an example of public-private partnership and collaboration, the PGCIL effort in the 1200 KV substation, the HVDC substation. It's truly an example of public-private partnership that PGCIL worked with BHEL, another wonderful company that the nation is very proud of with Crompton Greaves, with ADB, Toshiba, Siemens, number of companies, Indian, international, government, private;

everybody worked in together. And I believe 1200 KV HVDC system is not common even internationally I think they went up to 1100 KV probably. That is what India should aspire for, that is what we need to do in India. Something significantly different, something new, something going beyond the frontiers of knowledge that exist in the world and as we develop these systems let's also expand our frontiers internationally. In fact, IEEMA I must compliment you for the effort you said you are doing in the states but now plan going internationally. Why should you not have your people and the government is willing to support you, tell me what you need from my Ministry, tell me what you need from the Ministry of External Affairs, ask me from our support from our trade missions internationally, tell me what EXIM bank can do for you, tell me if EXIM and the companies with me REC, PFC and IREDA can together do to support you to export your new technologies and new products to the world. Tell me how we can bring down this \$10 billion imports, I am not asking for an overnight tomorrow that it should be zero but let's have a trajectory, let's have a plan, let's study what are the products that are being imported, what you need from us to help you become competitive in that, what you are going to do as a group, one of my first requests when I took over the mines was to bring out the list of products that India imports, the mineral products because that will be my first focus area. Anything that India imports we have got to stop that import, if it is available in India, let's try and find where it is available in India. So for you a twin track, what is being imported, how we can do an import substitution of that and what the world needs, how can we be export-competitive in that. This twin track and frankly over the years of this so called globalised world or global engagement, people have forgotten the word 'import substitution'. I remember when I was young that used to be the buzzword of those times. An import substitution product was given a special importance. An import substitution company will get special licenses. To my mind, that's equally relevant today. So a combination of import substitution and export competitiveness if we as a team between the private sector, public companies and the government of India and in the government of India include not necessarily only my ministry. And I have said this to you before, if I recall, this government does not work in silos. We walk up to each other to sort out issues. We talk to each other on mobile, we don't wait for file movement to resolve issues. So if a product needs protection we can even discuss and sort it out over the phone with the honorable Finance Minister. If commerce needs something to be done from my Ministry, Mrs Nirmala Sitaraman doesn't have to send me a letter or create a file Secretary to Secretary. The Secretaries talk on the phone, the Ministries talk on the phone and I have no hesitation if I have to talk to an Under Secretary also in a ministry to get anything resolved. There is no barrier. And I would urge all of you to

use this opportunity, use this window of engagement with the government and between all of us to see what we can do faster and bigger. And I have no doubt in my mind that if we are looking to create a brighter and better future what we need in the present is more creativity and that creativity, ladies and gentlemen, is there amongst all of you, it's there within all of you, we only need to foster that creativity, we only need to get that creativity out in the open, we only need to encourage our young engineers, many of them hidden stars we don't even recognize. Many times a young engineer in our own company may come up with an idea which we may have no time for or which we may find silly or ridiculous in the first place. In fact, on a lighter note, I think it's only lazy people who can come up with better and brighter innovations. After all, the remote must have been created by a lazy couch potato; or remote sensors and all must be somebody who didn't want to have the trouble of switching the light switch on and off too many times. So even amongst those lazy people I think there is a lot of creativity. Let's look at encouraging innovation in a big way, let's look at becoming the harbingers of change not only for national needs but for the international world. I am delighted you have your next program coming up in Noida, ELECRAMA 2018. I am also delighted to support you to make that a grand success, for me SWITCH or ELECRAMA both are equally important, equally a part of our joint and collective endeavor to make India proud of our industry. Of course, I still hold my request I am not calling it a grouse as yet the promise that Mr Kaliya and you had made about helping us create a permanent Convention centre, somewhere where land could be available and we could work together and not be dependent on the crutches of government but look at how and I had suggested maybe FICCI, CII, ASOCHAM, PHD, ELECRAMA; all of you could get together and look at creating something which is of international scale. I agree with you when you mentioned to me outside that we want to take ELECRAMA 2018 to the level of an international conference never seen before. I know that when you do any of this, you will land up spending 100-200 crores probably if you are going to that level, on creating and dismantling the superstructure for that. Maybe when all of us put our heads together and my government companies will equally participate in any such endeavor. Let's together and collectively see if we can create another Pragati Maidan somewhere or we can create another large huge facility which can rival the best in the world in terms of technology, in terms of facilities, in terms of planning well, planning right down to the last detail of pedestrians, of car parking, of the Divyans go into that detail which certainly the private sector can do very well and efficiently. So my good wishes to ELECRAMA 2018, I do hope you can, we have enough time, we have 18 months, I do hope you can dovetail that with my expectation from you both on the facility front but also on the innovation front and we can have in that

ELECRAMA 2018 a pavilion or a huge showcase of Indian strengths in innovation and technology. I wish IEEMA well, I wish Sanjeev Sardana glorious year in this service of the electrical and electronic industry and I wish all of you well in your business in the days and years to come.

Thank you very much.