



“Bosch Limited
Investor Meet Conference Call Transcript”

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Annamalai Jayaraj:

Yes, welcome to Bosch Investor Meet 2022. The Bosch management we have with today Mr. Soumitra Bhattacharya, Managing Director, Mr. Guruprasad Mudlapur, Joint-Managing Director, and Chief Technology Officer; and Karin Gilges, Chief Financial Officer.

Bosch management will give presentation and followed by a Q&A session. In between, you'll have a coffee break after the presentation. And there is also this statement. The please note that all the contents of this presentation are only for information purpose. Most of the contents are internal Bosch estimate based on assumptions and the experience of the management and hence we intent, but cannot guarantee to be absolutely accurate. Any opinions and expressions in this presentation or contents of this presentation are subject to changes without notice. The presentation should not be construed as legal, tax, investment or other things. Thank you. Over to you, sir.

Soumitra Bhattacharya:

Very warm welcome to all the participants here. Thank you for taking time out. Luckily during monsoon today, it has been rained as much and, it's really a delight to have you here physically, after a couple of years, we had a break. So we are looking forward to engaging discussion today. And between me and my colleagues, you already got the intro from Mr. Annamalai Jayaraj. We will try to take you through some key messages and of course we will share with you, what we see as the market, also share with you about our parent, our sister companies, but most importantly, Bosch Limit. So my Soumitra Bhattacharya and along with me, I have, both Ms. Karin Gilges, who's the CFO she's taken over recently, in the interim I was doing the job. And also we have Mr. Guruprasad Mudlapur who's the CTO as well as the JMD. So between the three of us, we will, not only present, but also address your questions and look forward to a very interesting dialogue. The break is your choice, by the way, we've created a break just for hygiene reasons. But if you want to continue amongst us, the presentations, we can do that.

These are the, that are being presented. I'm not going to read it out for you. There is a flow, there is a sort of handover and takeover amongst ourselves, but also there are we've tried to structure it in a manner that could be more easily understood and also shared with you. So let me give you a look back on Bosch Limited '21 – '22. Can we have the AV please.

Thank you. By the way, this year 2022 is a special year for Bosch because we turned 100 years of Bosch in India, and I'll come to that a little later. So my first slide is about Bosch Global and Bosch Limited. So if I decode the slide and give it to you in simple key sentences, our parent is around EUR 80 billion. So you multiply that 80 into 80, is very simple around INR 640,000 crore turnover with about 400,000 employees and 30 manufacturing locations. Very important, the parent is perhaps the only company in the world, 94% of its total equity, it's a private limited company by the way, is owned by the Robert Bosch Charitable Foundation. And, the foundation owns it, but doesn't run the company, and 5% is with the Bosch Family, but they don't in any way see to the daily business and one person just with the Robert Bosch Fund.

So, very unique structure where, the Executive Management report to supervisory council, and 94% of the equity owned by the foundation. The company Robert Bosch has been over decades, putting in about 8% to 10% of its turnover in capital this is also very unique and about 8% to 10% on R&D and about 6% to 8% on capital over decade. Being a private limited company, being debt free worldwide, and putting in these amounts on CapEx as well as on R&D indicates that the company looks for being invested for the future. And that's why the tagline is invented for life.

Below you can see the four big pillars or divisions that Bosch our parent is in. Mobility solutions, accounts for approximately 50%. In India, this is about 85% you can see in Bosch limited. And then you have industrial technology, consumer goods and energy and building, our second biggest in India, is 11%. What you see. Now,

Bosch India has 15 legal entities, and, we are in practically every area, including the mobility, consumers Bosch home appliances as BHA, a separate legal entity, and within, the automotive or within the mobility part. There are certain units which are infact Bosch Limited, for example, diesel and gasoline, which is now called the powertrain is within Bosch limited, but Bosch Chassis, Bosch Automotive Electronics or Bosch Electrical Drives, or even Automotive Steering is outside the listed company.

Many of the sister companies have inter linkages with the listed company. For example, the Bosch Automotive Products, greatly go through, for all areas on ECUs, which are for powertrain example, either for gasoline or diesel go through Bosch Limited. Example two wheelers, which is also part of mobility, partly goes through, Bosch Limited, but partly which is linked through Bosch Chassis is not within Bosch Limited. So, we have a strong inter-linkage of the sister companies, some parts of our, their product solutions or systems also go through Bosch Limited and Bosch Limited of course, has the powertrain solutions, which is diesel, gasoline, hydrogen, electrification and aftermarket, which is the AA, automotive aftermarket, a great part of the two Wheeler, building technologies, power tools, which is a consumer goods and of course I mentioned building technologies.

I'm not going to tell you about the macroeconomics actually you know it better than me. I can only say perhaps the interlinkages between what's happening in the world at India, today in India, we are placed in a sweet spot relative to the world, in a very, very turbulent and volatile world to perhaps take a initiative and get our act right with the rest of the world on very clear basics. In mind you, the government's doing a very good job in trying to contain the inflation. Our inflation is yes, high, but not as high today as what's happening in the world. Europe has, after the second world war has not seen as high a inflation as it sees today. So there are, many pros happening for India in a very difficult world. Of course, we know the impact of rent and crude on our economy. Of course we know, that we have relative to what we had planned gaps in our current account. We also know, that the RBI governor had to sell sizeable chunks of our Forex reserves to contain the dollar. So you know that well enough, but what happened on 24th of February, with the start of the Ukraine and the Russia war, and after that the series of things that unfolded, including the latest events on what's happening between US China or the China- Taiwan matter are of great concern, which will affect the whole world and also India. And yet amongst all the nations, relatively and India is not the only country, it is one of the few set of countries, which has a possibility for us to actually use this as an opportunity window and in the mid and long run strengthen our economic situation.

And how do we convert this into what we call as the automotive outlook is something I will share with you. So let's look at the automotive outlook. These numbers are indication of what we look as the future and, on the left side, the type of segments, let me starting with flash cards heavy commercial vehicle, light commercial vehicle tractors, three wheelers, and two wheelers. So all of us know that the peak of the Indian automotive market happened during the fiscal year '18 – '19, or the calendar '18 whichever you want to look at it. So pas car '22 calendar year, and here the years that have indicated a calendar year, that's how our parent looks at it. And I've not put, the fiscal year. So pas car at, the forecast for '22 looks more like crossing the peak of '18 – '19 and going towards million pas cars. We estimate that in a Emobility plus case, that means a very positive outlook towards Emmobility, that there's a possibility of a 30% share of EV and when I say EV, it means all types of EVs, not just battery EV or Pure EV, it could be hybrid, it could be mild-hybrid, it could be, battery electric vehicles, whichever type of EV, a 30% possibility is there. If you remember, two years ago, when we were discussing, we were saying that this is around 25% and could go to 30%, we're looking at a more optimistic scenario, and this would amount to a CAGR of about 4.6%.

Heavy commercial vehicles, which had peaked at 480,000, we don't see it coming, for multiple reasons. You have better roads, tolls were taken away. You have higher loads being transported, axle loads increased and you have, railroad competition, et cetera, et cetera. And then of course also there will be, in the year its 28, 29, 30, some amount of change of the vehicles also, we will talk about it on what this has

impacted on heavy commercial vehicle. So we look at a good growth and, but we don't see crossing the peak. Light commercial vehicles saw electrification, especially the sub-one ton. 670,000 will be touched this year, and we'll go onto approximately 900,000 as we see, and has a very good chance, especially for the intra city for peak to come in and we are talking for about the 20% EV from practically a zero base currently.

Tractors had already, shown the peak already 1.5 years ago, the peak of 900,000 tractor. So India's the largest tractor manufacturer in the world, but small tractors, 35 or 50 horsepower, which we see are likely to continue as a majority, the bigger ones will still be on a minority. And we have crossed that, and it's already at a very high volume. And we expect to be in the bandwidth of 10 lacks to 12 lacks. So 1.2 million and also has a good -- and later will come to the content per vehicle because we have to look at volume. We'll have to look at content per vehicle. And then what we'll talk about is the addressable -- target addressable market that convert that.

So three wheelers had an impact on COVID. And that 1.25 million is going to take a long, long time to get back and that's what we are saying, '29 - '30 for it to get back. And three wheel electrification possibility we see along with two wheeler electrification, and here on two wheelers, the peak of 25 million and don't forget the entry level two wheeler costs have gone up when, when we had the 25 million vehicles, the cost of two wheelers, especially the entry level, the 100 CC, 125 CC was totally different from what you have today. And also you had the fuel injection change system, where earlier we had carburetors. So content has changed, two wheelers costs have changed, ownership therefore has not become as strong and we expect that 25 million to be crossed sometime around '25 and then to move forward. But also two wheelers will have a decent percentage of electrification. So what does this mean in context, you have to look at the volumes, you'll have to look at the mix within the volumes, and then you'll have to look within the mix, how much remains at powertrain possibility, what could be the possibility of electrification, and then what does it mean in content of vehicle. Now these content per vehicle are indicators in terms of X for industry. So sometimes the content from BS VI has not really shifted in a major way, if you look at, from the port fuel injection from BS IV to BS VI or 1.1x or the GDI or the CNG, but when you look at the CRS, that has pretty much changed. If you remember in the February 2020 auto expo, had indicated that pre-COVID that was before the COVID happened in March, pre-COVID Bosch had acquired around 23,000 crore acquisition for BSVI. I even stated after COVID, that that 23,000 had got converted to anyway between 18,000 and 19,000 for COVID, because it's all about demand at that time. So there was a very good acquisition that we did and acquisitions normally are taken for the meter of five years, excluding the year that is being discussed. So you can say five plus one. So in the same way, our acquisition trend and later I'll come to that is at a very solid pace, Besides the BS IV to BS VI. BS IV Bosch model that are actually the industry and, India did it at the fastest level where Europe had done it eight years, India did it in three years.

Now, if you look at the BS IV to BS VI for the LCV at the HCV, you have also a multiple of HCV 1.6X, and 1.8X content. Again the X of gas treatment got added. There were other elements that have got added. And in case of TREMs, IIIA to TREM IV, TREM V and TREM V, when you go to CRS. So current tractor has an in line, and when that goes in, you can even have a five plus X content change. So a, the legislator map and the emission roadmap in India, which actually changes the technology and I remember about seven years ago, we were 17 years behind Europe. And today we are about four years behind Europe, as we speak. And, it's shadowing, has a change. And the Indian consumer has been quite adaptive to the price changes. And you yourself can see it in your own buying pattern of cars, what you would've thought of five, seven years ago, what band and today, what bands they have been released and what you're buying. So first one was volume. This is content per vehicle, and Bosch is positioned well within the industry on the content per vehicle for improving the content, including having a portfolio and expanding a portfolio.

This results in target first column is in 2022. What is the TAM, then the same TAM by value in 2029 - '30, whatever you want to look at and then the overall TAM

CAGR between '22 to '29. So the first one is diesel. The first one on the top left, the second one is petrol or gasoline. The third one is CNG, and the fourth is ...

To shifting is for the installation and emissions and this volume into content per vehicle, how it gets then addressed into total addressable market. Summary is Bosch is well positioned to retain its position on both technology, which we will latest as well as acquisitions, or not only our core or what we call as reviewed core, our adjacencies, but also the new business areas. And this has a strong linkage also with technology roadmap that our parent plays place and all three acquisition, which we have a very strong umbilical cord between our parent and us and, we do it at arms length in a very fair manner. And then we apply it for innovation and of course affordability.

So the picture of the vehicle in two pace, personalized, automated, connected, and electrified. And here you can see, this is something that our parent has been working for many years. For example, on electrified, our parent has been spending EUR 400 million to EUR 500 million for the last 10, 11, 12 years. Later my colleague will share the acquisition value currently that our parent has, I told you the investments are nearly EUR 5 billion till now on electrification and climbing, but we are very strong. You must remember that Bosch is also very strong, not only in the world, but also in India on software. So Bosch is, good at components. Many of you call it a component company, but it's not really a component company. It's a systems and solution company. So it's good at components. It's good at systems. It's also good at solutions because, today a car is defined not only by the mechanical parts, but greatly driven by electronics sensors and most importantly, software and Bosch is strong in each of these elements.

So whether it's the personalization of a vehicle, which now you see more and more, ADAS which gives you automation. And, of course in India, you don't need autonomous, but Bosch is already at level four and on the road and go to level five, strongly connected cars have becoming very, very strongly connected. You call it a phone, on four wheels nowadays, and of course electrification.

So in summary, I would request you to look at the slide in two parts. A, pace is connected all over the world. Our parent is very strong in it. We have already lot of strengths within pace, but most importantly, we draw on our parents' strength to use what is time tested and proven through acquisitions also for India. One change that you should note, the pace of electrification in the world will not be similar in India. I'll give you the recent why. If you take Euro VII, which is the change of norms for ICE, that's applicable in '27. Now most of the OEMs in Europe are looking at, should we go for Euro VII or should we go for electrification? Because it doesn't make sense to put investment up front for Euro VII and then within two years that go for electrification. They also have a cutoff for the electrification and vehicles to be electrified. So in India, ICE will still remain dominant for quite sometime. And the pace of electrification of what is happening in Europe is very likely not to be followed in India unless there is disruption of, statutory laws, which I honestly don't anticipate because it's a country of a strong bark and you can't make such changes. So quickly, this was one part on the matter on base and perhaps the slight difference between what's happening in Europe and more importantly, in India.

Two wheel business, I mentioned to you 25 million, which is currently at 19, going towards crossing the 25 in the year 2025 has several elements to it. And Bosch is also strongly entrenched in the two wheeler business. We have strong electrification projects in two wheelers, some of them who launch, we already talked to you, we don't talk about it until the launches happen, worldwide, the supply chain crisis on semiconductors still going on, including overall supply chain, but for two wheeler, this is even more applicable. Now we did have a bit of a lull in two Wheeler because of the entry price growing up and the demand not being high, but growth will pick up, raw material price later you'll hear from my colleague, Karin Gilges, is a major issue, not just for, two wheel for everything, automotive companies, and including the OEMs, the pressure on cost, what they're having the tier ones aren't having the equal pressure because prices of raw material, prices of electronics and prices of logistics have seriously gone up.

So there has to be a win-win between OEMs tier ones, tier twos of what you can absorb and what you can pass on. So Bosch has a very clear system, including Bosch Limited of what we should, and we will recover. So it's a very clear game plan. And then of course, in case of two wheeler, from '23 to '25, you are aware of though and if that shifts, that will be a two year, we don't see a major hit in our business, but there could be a shift from '23 to '25.

And finally, fuels will also play an important role, including flex fuel. Again, for which we have solutions on the fuel part too. In Bosch Limited, I covered powertrain a bit, but now I'll come to after market. This is a very fast growing business. The last two year, it has grown in very strong double digits, and we expect this year also to be equally good year, from nearly 125 Bosch car services. We are up to 400 and by 2025, we should go towards 1,000. So we expect Bosch's analytics through diagnostics, to be a USP. Because today you can't have a moment for car repair shop anymore. Gone are the days that you can solve it just with a hammer, so you need not just electronics, but you also, you need very strong, analytics tools and diagnostic tools, which Bosch worldwide has, by the way, last year, Bosch completed a 100 years of the Bosch car service worldwide. So this is one area which we strongly look at, but more importantly, automotive market, with its ring plus strategy has improved. Its reach has improved its coverage and also its entire product and services portfolio. So this is one area where we will continue to grow and we are we did tie up with Auto Zilla, this is the e-commerce space, which allows you to know, inventory sales purchases and also the location. And, this we are also using effectively. Our power tools, which is also a market leader where we want to also grow by 5% share is also really very well and, we have a very clear focus to go towards, the MPP range in India, we are at the all ranges of the HPP. We are partly also at the high end of the MPP would not strongly be in trench in the MPP. We want to have a very clear focus on cordless meaning Bosch. Cordless is not commonly used in India, but you know, the productivity efficiency can improve tremendously. And of course we are making our whole ecosystem like automotive market, extremely digital.

So A, as a market leader, we have strengthened our current policy. We see a very strong drive in power tools. Our Chennai factory has been voted out of its four years of existence, three times the world's best factory, it's a all women, factory, by the way, and that helps. And we have a further localization plant for our power tools also Make in India, an Aatmanirbhar Bharat. Building technology is a small part of Bosch Limited, it's broken up into these four areas and we are now looking at localization opportunities, because we clearly see a lot of import, we do for this from different countries, including China and the government is really discouraging China origin products. So we are looking at further localization opportunities. We are also looking at the inorganic partnerships, so you will see Bosch Limited doing more and more inorganic partnerships. Also for the future.

Talking about inorganic opportunities, we have done quite few. You remember, while of course Sun Mobility was invested through Bosch Netherland, but it's been given, the Bosch India, executive team has the responsibility. My colleague Guruprasad Mudlapur is actually front facing that with Sun Mobility. But if you see the many other names, we have bought minority share in multiple startups or small companies, and we will continue to invest, but also in the future, do not be surprised if we also invest in mid or larger companies, because we are looking for synergies. We are looking for partnerships and in each of the areas, it could be the powertrain area, it could be in the aftermarket and the power tools, leading technologies, any of these areas, or even in the digital ecosystem.

ESG, it's a very interesting thing. There's a saying, if you are good, you have to also talk that you are good and we made a mistake about it. You just see the scores on the left, what was earlier of ESG G? Bosch Limited was raise as 55 with E at 44 S as in social as 56 and G governance and 65. Not very good. And we are today is, the score has improved from 22.6 to 13.2, lower the better, my colleague Rishit is here with me and Rishit is one of our team members who's driving this. And today Bosch Limited has also improved its rank from 60th out of 209 to fourth, 4th out of 165. We have our annual report, and for the next 30 pages, we have described what our ESG policy is and we can of course, to the investor community and we can give you the elink.

Rishit, we can keep a note of those who want and share. So we have a very strong ESG focus. We were doing it, but now we are also see it, we are one of the few companies in the world, globally who became carbon neutral in 2020, and in India also scope and into, we are carbon neutral.

Great place to work. You can't do any of these things if you don't have good people are motivated. I remember four years ago when we started, we were at the median, today, about, a month and a half ago they announced that Bosch Limited is not only the top quartile, but also amongst the best places to an auto company companies. So this is something that we are, quietly proud about, but what is most important is we are creating a high trust, high performance culture. And, we are creating this push pull because the world is changing and we have to adapt with the world. The average age of Bosch Limited days down to 35 dropping, the average age of a software company is 28 and dropping.

30th June, we opened our smart campus. Those of you have been through Bangalore in the heart of the city we have in the 75 acre campus. We have invested in the last five years, INR 800 crore for this campus. 10,000 Boschlors, roughly one third of the total bachelors in India, we have 31,500 will work out of this. If you look the floor space, from Mumbai standards, we should actually put 120,000 people in including cell space out. We will not do that. Of course you can ask ROI, ROC return interest but we will not do that. That's Bosch. we are creating a great place for people to work it's universal, and it's green, you can work from anywhere within and it's vibrant. And, the great part is it's one of the smartest campuses today, not just in Karnataka, but also in India. This was inaugurated by the Prime Minister and, perhaps you have heard him speak about Bosch. He rarely inaugurated MNCs and he called Bosch a company which has German engineering and Indian energy.

So next up is my colleague Karin Gilges who will share with you the financials. I end by saying only three things. One, this is a very volatile world and India also is volatile. However is in a relatively sweetest spot for us to grab this opportunity. And therefore also the mobility world or the other industries. Second, Bosch in India has been here for a hundred years and we have a very strong tie up with the parent who gives us unqualified support. And of course, as a listed company with high principles of governance and counselling, we will continue to bank on them while having and we also in India have the largest R&D centre in the Bosch world outside Germany. And third Bosch limited, has been transforming, transitioning into this new world. And we will retain our strengths to rewire our core. We will continue our journey on adjacencies, but we are very strongly also transitioning and transforming for the new age business, which details further. My colleague Guru will speak about. So over to my colleague Karin Gilges. Thank you very much.

Karin Gilges:

Good afternoon, ladies and gentleman. Thanks for joining our annual investor meeting today. And of course also I would like welcome from my side. I would like to take you today through the final business update. And I would like to start with the last year's, revenue from operations. you can see, compared to the previous year 2021, we had a growth of 21%, but please keep in mind that we are coming from a very low because as all of us know, we were hit very hard by COVID all over the world. And therefore this 21% is a very good growth, but of course, based on a, low previous year. And nevertheless, in the year '21 – '22, we have almost reached our peak in 2018, 2019, and therefore, quite good year in the last year.

In EBIT, we see an increase of 38% for the relevant time period which ended up by 9.6% of the total revenue.

And as like, our parent, as my colleagues already mentioned, we are going ahead in investing into our future this, INR 6.3 billion in R&D INR 4.1, billion in our plants and machinery, as well as you just saw it in the last slides state of the art technology centre in Bangalore and, last but definitely not least we will, go ahead and I will show you this later on, it's becoming now to the year '22.

The year '22 is characterized by a steep increase in raw material. And as you can see in the crafts, prices were flat and raw steel was three times higher compared to 2020. Besides this challenge, we face major disruptions in the supply chain, for example, in semiconductors and the uncertainty of the global economical effects like the Ukraine war in Europe. The increase in crude oil elevated the freight costs and the cost of the entire supply chain is at the all-time high currently. Material costs are also influence by changes in legislation with the change from BS IV to BS VI, we had subsequently a mix in our product portfolio and therefore also in the material costs.

Of course, we go ahead, with, further localization in the upcoming years to adapt to this new condition and optimize our recovery from the company. If you look at our dividend, you can see that we are maintaining a consistency in our dividend payments in the last five years, the Board of Directors in the Board meeting in May '22 have recommended a dividend of 210, which includes a dividend of INR 100 per share for 100 years Bosch is in India.

So the total dividend, pay out, for the year the '21, '22 is 51% and, as in the previous year, of Bosch, because we are on a lower profit after tax. If you look at our liquidity situation, we have our liquidity is quite solid and quite stable. We are adequate funded in our investments plan, while we are making the dividends. And also if you have a look at the cash flow, there is a very robust cash flow. So overall a solid situation in the Bosch Limited.

We now look in the year in the first quarter of the fiscal year '22 – '23, if we compare it with the previous year or the quarter of this year with the quarter of the last year, then of course we see a high jump of 45%, nevertheless, please keep in mind the COVID year of '21. If you compare the last quarter, April 2022 to January to March '22, then we see a good increase of 7.5% in the revenue.

We have closed with operating profit, EBIT of 10.9%, 12.3% in the BPT and 9.4% in the BAT. So if we look at the revenue in the quarter, April to June '22, then we have an improved supply of the semiconductors, which had us to come or to fulfill the market demands. And we had, especially a very good demand and delivery into the sector.

If you make an outlook for the overall year '22, then, our current, sales forecast showing a revenue growth of more than, or roughly 15%, we are optimistic to achieve a healthy EBIT margin. Again, we go ahead in the investing into the R&D with 5.8 million, we will have further capital expenditures with 5.1 million and we are also going ahead in investing in our new business like digitalization, electrification, and hydrogen this INR 2 billion. So overall the outlook of the year '22 – '23, is positive, nevertheless, if you look at the overall frame conditions, of course, we have to watch out what is happening in the material market, what is happening all over the world, but nevertheless positive and caution on the list, which would procure. Thank you very much. Either we have a break or can go ahead with we can continue.

Guruprasad Mudlapur:

Welcome to this meet really refreshing change to have people, face to face. So at least gives us an opportunity to interact with each other, even beyond the presentation. So I'll take you through technology aspects of where we are and where we go will our business. So I'll give you an overall perspective of where things ahead and then take you through the -- so if you imagine, a world from 70, 80 years ago, we tend to plot the technology curve so the starts, it ramps up and then it sort of saturates. And, we can say, if you look at the plot in the middle, we are probably for the last 70, 80 years we've been largely or curve, which is, pretty stable and now slowly declining with regard to combustion engine business or the car or the vehicle we have seen so far, which is a typical picture you see on the left.

But if you now look at, where we are and look further into the, future, we start to see the emergence of, a new curve, which will lead us to changes, which are pretty exponential for the auto world, which will drastically change the way we look at things which will bring in new technologies, which will bring in confluence of

multiple technologies, for example, some of the things Soumitra talked about in terms of, personalized, automated, connected, electrified. So there are many of these things happening, and some OEMs have started to be early adopters of this globally. One good example is Tesla, which is like the way on the second left already, for some time now. But a large part of, the OEM base today, especially also in India is still on the primary itself and looking at how to transition to the secondary itself. So it's still very early day. At the same point, we should remind ourselves that if we look at a global path of, maybe 85 millions and look at a time point in the future like 2030, we will still have maybe 45 million, 50 million vehicles on the primary curve. So there is still a lot of life left on the primary curve and while the secondary curve is where all the excitement is, but there is a lot of money still to be made and a lot of technology application also happening on that. And I'll talk, a little bit of both.

So Soumitra talked about this, I won't go deep into this. And there are multiple elements happening all at once. The personalization of vehicle, which is now starting to more look like an extension of our mobile phone and the mobility world, automated driving, which is becoming very, very, feasible at some point of time in the future while simple driver assistance features start to come in now. But, at a point of time, very soon, we will have much more highly automated driving features coming in.

We, of course already have a highly connected car. Lots of new technologies will come in, including technologies toward cybersecurity and so on, which will enable us to have a much more connected environment between cars. So this is something that happen quite a lot, and all of this, the primary base to carry multiple technologies here will be the electrification. So on an electrified base, you start to have new technologies introduced with sort of very low legacy. So that's the big advantage of where we are headed on the new curve and that's the exciting part here.

So the vehicle of the current as we have now may not have all sorts of new features introduced. They will, of course have some of them coming in, but at some point of time, it's the electrified platforms that will carry most of the new features as we see today.

I will, will very quickly take you through what Bosch does in general about also in India about that, personalized, automated and connected parts, not necessarily at Bosch limited, but, we've been, leading this, technology space overall as Bosch in India. We have already several designers, if you look at, I can talk about it because it's already out in the open, the behind the XUV 700, the personalization, the Adrenox platform is Bosch a lot of these things start to come in which, bring in new, ways of experiencing. I have a bad throat, so I don't know, I thought maybe realize that. So, lot of these things start to come as we move forward.

So in terms of the automated, space, we might think India will, lag behind, but there are several levels of automation and at least the first two levels, already start to come into, Indian vehicle base, good examples are all the driver assistant features, which are very, very useful, automated parking or assistance towards, side views. So a lot of these things are very, useful, and they will come into, Indian vehicles as well. And, we already have, several designers with Indian OEM, on this. Connected is another space which, will not escape the, automotive world cars get highly connected. Lots of, communication happens both with, content coming into the vehicles and content going out of the vehicles and for automated driving to happen. Connected cars are absolutely needed an so in that sense, we start to do a lot of these. I talked a little bit about this also because many of these things have interlinkages to what we also do at Bosch Limited. And, when we have, these domains picking up, we also have multiple things going off from, Bosch Limited.

Of course, all the electrification and, topics around this, which will be largely the focus of what I talk, over the next 10 - 12 minutes will, be centered at Bosch Limited. And I will, get into the details of that.

So, Bosch has always believed in, continue draining of the environment, the mobility environment, and we've looked at, how to clean the current powertrains, which, can be improved, emission norms, so as we go forward, we've also driven the hybrid wave for a long time. We are one of the global leaders of hybrid technologies for vehicles. And of course we are now, working, very heavily on electrification. Soumitra already talked about how we've invested, over the last 10 years, close to INR 500 million year-on-year. And, that is an investment of EUR 4 billion, EUR 5 billion, into electrification technologies for Bosch Globally. And since 2018 already, we realized this is the way which is coming into India and we started to invest there as well. For both in terms of basic technologies for electrification, make electrification, technologies robust for India, customizing safety aspects towards the Indian conditions, every aspect of this, we start to focus also in the Indian context.

Very quickly, I do not want to ignore the fact that we will have a very large pack of vehicles even in 2030, which will be largely combustion related. So there will be quite some advances in that. And, globally Bosch has lots of technology in this be it, in terms of natural gas, engines be it in terms of flex fuel, or in terms of, specific customized technologies towards, off-highway or other segments. So we have the complete, portfolio of technologies, which we will offer. We've already started to talk to all the tractor OEM. We have a position there as well, and we will drive the, wave as we go further on combustion technology.

Now let's focus a little bit more on, battery electric vehicles and another special topic of mine and why we believe that's also going to make a significant impact here. So on battery electric vehicles, just to give you a context, this is by the way, based on publicly available information things could move, plus and minus a little bit clear and there, but by and large, we believe these are correct.

OEM have already announced, a sort of, end of design for ICE vehicle. So they've all set by roughly, centering around that timeframe some couple of years earlier, some a couple of years later, what happens with regard to electrification and how they intend to switch over, and to what extent they prefer to switch over, in terms of, whether it's combustion technology continuing or electrification coming in, into the auto world. And we are tracking this very closely, we do work with global OEMs everywhere, and we have full awareness of what's happening, and this is what helps us develop technologies at the right space for multiple OEMs as we go forward. So whether it's a complete battery electric vehicle or combination technologies of hybrid plus battery electric vehicle, this is the way which, will come and, we are very, very, aware of this and, already working with multiple global OEMs, in fact, our global acquisition on electrification today exceeds EUR 22 billion. So it's a very large, amount of acquisitions we already have on electrification. what normally drives the adoption of technologies is the aspect of legislation and Europe, if you have observed recently, legislated or, approved a legislation to end a machine engines by 2035. So that's, sort of a clear indication that they will have no sale of ICE vehicles after 2035. And OEMs will course follow that very, very closely while this has not been made so clear in the other parts of the world, but, plus or minus a few years the same, kind of trends will happen, but we don't see that yet in the Indian context, like Soumitra already mentioned, we do not that, kind of a clear mandate coming in, but there will be other drivers which will drive technology introductions. And, we are very, very, closely watching and working, to make that happen. So this just gives, legislation roadmap on then what, the government mandate in the Indian context, both for safety and for powertrain. And this clearly shows how legislation has largely propelled growth in India and will continue to drive this growth. So there is still a lot of life left, and I keep repeating myself on this before ICE technologies, and this is something that will continue, but of course, at some point of time, there is an end to that time that there is a need to prepare ourselves for electrification and we are doing, everything to get ahead of ahead of time.

In terms of being on the second curve, I think we've spotted this change, maybe 10 years ago, 12 years ago, and we've invested, extensively to be riding that, second curve very, very well. Some global drivers for electrification and, specifically in the Indian context, three main things we track and we believe are going to make a difference. One is the total cost of ownership. The second one is how the overall EV

ecosystem develops in India and of course, in every country around, but last but not the least in the India context today, largely the subsidies and the incentives, which drive electrification and take this element out, there is not going to be sale of EV vehicles today. And that's something we, as a technology company are very well unaware of and trying to look at how technology can mitigate, how can we have better technology at the more optimal prices and at what point of time would this really help take over as we move forward.

We believe and Soumitra already talked about it. He took away a lot of what I wanted to say through his words, but I give it, anyway, we believe good, Emobility plus scenario about 30% of vehicles sold in, world would be electric. And maybe even a little bit more, a lot of this, is maybe, not so much limited by technology, but also limited by the amount of investment, there is a huge amount of investment required. And some of you who track, Giga factory developments for lithium and all, or other, battery technologies that come in will realize the extent of investment that has to come in. So both have to happen hand in hand. And that's one reason why we believe, especially in the Indian context, this has to go together because we can't simply from one day to another switch over to a totally new, ecosystem and then make it all work.

But we believe on a very good basis 30% electrification in India is a very good feasibility. And, we are very well prepared for that. So in terms of our global product portfolio, we have, everything from lower voltage all the way up to high voltage powering segments from e-bikes, by the way we are the global leader of e-bike powertrain systems, e-bike meaning, bicycles, which are driven by electric batteries and electric motors, right up all the way up to powertrain heavy commercial vehicles. So the complete range from powertrain to energy management systems, to energy management and control, system control, vehicle control systems, all range of portfolio is available within Bosch. And the whole range of portfolio is now being offered to Indian OEMs with or without adaptation. So of course, Indian OEMs also requires some level of adaptation. And we start to do that locally. In terms of level of integration and probably Bosch is one of the most unique companies, which goes all the way down from semiconductors, to right up to the final product that can go directly into a bus or a vehicle or a cycle.

So in terms of electronics, we cover range. We have a very large portfolio of electronics, and we take the entire breadth of it, right from semiconductor all the way up. Of course, maybe after tier one, one of the largest buyer of semiconductors, but that just shows the scale at which, we operate. It is the typical product, which Indian OEMs have been, very, very instantly. This is a combination of a motor and Inverter and all the power electronics that drive the, motor and the electronics. And this combination of these three gives significant efficiency advantages as a unique one box solution. This is something which you see in today's vehicles already on the Indian roads. And we will offer these into, OEMs and we are discussing with, several of them as we speak now.

We are also very, very strong in battery systems. We've got a full portfolio of 48 volt traction batteries. We are a leader in hybrid battery technologies, and we offer the full range as well. And, maybe just to wrap it up, hydrogen is really upcoming technology. So as a more of a tease today is to tell you that, this is something which should interest a lot of you because the big announcements happening, billions and billions of dollars of commitment, even in the Indian context is happening towards building a hydrogen ecosystem. And why do they do that? Is this picture. Basically, if you look at what we have had a diesel or a gasoline ecosystem petroleum based ecosystem today, which, sort of started, 80 -100 years ago, that is the kind of an ecosystem that has to come up for hydrogen as we move forward. And that's a massive challenge, massive opportunity. And, the big, guys, very keen to invest in this. Bosch has spotted this already quite some time ago as a technology, which will drive specifically long haul trucks and certain categories of vehicles. And we believe this is very well suited also in the Indian context. And we've started to talk to several OEMs in India and several ecosystem players who are coming into this generation of hydrogen.

So we have, technologies which help generate hydrogen through electrolysis. We have technologies which, distribute -- help distribute store and, of course, a whole, range of technologies, which get into the vehicles to offer hydrogen based mobility. And I very quickly talk about two flavors of this. So there are likely -- or there will be two variants of hydrogens variants, the first one will be fuel cell electric vehicle, which is the more global norm, which is likely to come up in the future. There are several companies already in trials, several pilots running all over the world. And Bosch is probably the only company which offers an extensive end-to-end portfolio of hydrogen based components here.

So on the extreme right, you see one box solution, we call it the twin box. This is a 200 kilowatt power plant, as you can call it. This is basically replacing the engine in a commercial vehicle. So you plug this commercial vehicle, it is replacing the complete engine. And at the other end the hydrogen storage. So storage, is also essential in a vehicle. And, if you take the entire range, it covers everything that is required to make hydrogen vehicle come alive. Of course, there are other elements too, but, by and large, the tier one level component and even much more than a tier one component is, what's on offer here.

We also see the emergence of a new class in India where hydrogen could be an injection source into combustion vehicle. So as hydrogen engines and this is something where industries have taken a lead, in the global context, because we simply have a very huge part of, combustion vehicles, which can be simply converted to take hydrogen plus of course have direct OE fitments of hydrogen vehicles as we move forward. So we have end to end, injection systems for hydrogen and, we already are talking to several OEMs on this extremely good interest in this technology. And, we also have the first acquisitions on this project today. So we have several, projects running globally, with Nicola with ..in China. Maybe we are the only one who has large amount of hydrogen pilots running, globally. And so it's, easy for us to bring in all the technology into the Indian roads. And we have the, local acquisitions on hydrogen engineer as well already.

So just to wrap it up, we cover end to end portfolio on, the new coast, specifically on electrification. we cover everything from voltage all the way up to heavy commercial vehicles, both at the battery electric vehicle level and that fuel cell or hydrogen level as and when the technologies can come in. We are very focused on building these technologies for the Indian market and in line with what our customers locally want, including the right levels of localization as we move forward. So be rest assured that, we are leading the second wave as well. Thank you.

Participant:

Just couple of questions, broadly on one is on one of the slides, which you talked about, where you showed the TAM for different vehicle segment between 2022 and 2029 given that we have other groups of who also invest in this field, just trying to understand how much of that valuation will kind of come within the other group entities and the kind of CapEx we would have to engage, to capture that evaluation in the left side.

Soumitra Bhattacharya:

Our CapEx in Bosch Limited is anywhere between a low of INR 250 crore INR 300 crore goes up to INR 500 crore INR 550 crore. And, for the Bosch in India, it's anywhere between a low of INR 400 crore and goes up to INR 700 crore , maybe INR 800 crore. So, the CapEx, thing is completely dependent on market requirements. We are driven completely by market and advanced planning. The listed entity I've already shown you what it contains the listed entity contains. Many of you were dock contains the powertrain. And some of you ask the question about electrification, hydrogen, that'll be in the listed company. And of course we spend CapEx, for not just powertrain, but for automotive aftermarket for power tools. And we have building technologies and two wheeler as a front facing to the customer. So these are the listed entity and the other parts are in different legal entities. But I can't give you now beyond this, a further breakup of.

Participant:

No, I understand what I'm trying to is we also made a commitment to participate. So we talked about INR 200 crore.

- Soumitra Bhattacharya:** The listed entity has applied and been approved, along with, a couple of other Bosch legal entities but the listed entities is very much applied and in the business.
- Participant:** Okay. So basically the indicated range is including the investment in advance automotive products, right?
- Soumitra Bhattacharya:** Yes, naturally. Whatever we put, it is for everything including advanced automotive technologies.
- Participant:** Okay. second question is broadly on the margins, now just to understand over next, say 3, 4, 5 years, pretty long term horizon. So if you look at last year or two we had couple of multiple impacts, as you talked about in the past RM, forex volatility, you had transfer pricing impact related to trivial codes, and then the product mix. So if we just trying to understand the traded goods and the relative transfer pricing impact. If you were to kind understand how contract pricing has arrived at, because other purchases more on CII, So are we the one who kind of bearing the impact related to freight and simply in regards to the forex or the raw material? So any volatility in regard to that, kind of bored by the, manufacturing entity or we are the one who are bearing it, is there a back to back arrangement with the OE for recovery.
- Soumitra Bhattacharya:** Okay. part of your question is leading question towards guidance. So I'll avoid the guidance part of it, and I'll give you the non-guidance answer. Bosch has very good contracting systems with OEMs, and it depends on which OEM, but we have very comprehensive OEM contracting and very strong process oriented worldwide, but also India. Our CFOs presentation contained that we have a very strong focus towards recovery on RMI and ECI and also logistics cost. So that's again on a win-win situation. The OEMs can't recover everything. We can't recover it, but we have a very strong method and a very clear intent of also focusing on that part. That is a part of the presentation. So the second part. The third part in terms of, what you asked as margins, margins are a direct function of what you do at the marketplace. So we focus very strongly, strongly on getting the right acquisition. I told you BS VI, I also want to assure you that other than BS IV to BS VI, our acquisition book this year is at a whole time high. So we have a strong acquisition book, for our whole mobility business, which includes the listed company. And, margins, as I mentioned are apart. Our CFOs presentation also stated, Yes, just to give an example, we have started also investing additionally for new businesses. So you saw our INR 2 billion for new businesses. So we are also further investing for the future specifically.
- Participant:** This last question was on that as well. So you know, the investment INR 200 crore, typically when you say what investment new age businesses, these are in what forms, so what is the nature of these are these purely tech transfer payments. Or these are like type to specific customer SOP. And how do we go about measuring the efficiency?
- Soumitra Bhattacharya:** So that these are investments which we are doing for hydrogen electrification, digital, we believe very strongly that we have to put project houses, which we did already three, four years ago, and put also money people, resources, competence, because we don't build it. You don't get prepared for them. Maybe a couple of sentences from Guru, you are heading electrification impact.
- Guruprasad Mudlapur:** So we did talk about the softline.
- Soumitra Bhattacharya:** He's checking me out, whether I'm going to say the same thing. So you spoke with him separately, but that's a good one, but we normally going to speak the same thing.
- Participant:** Thank you.
- Sonal Gupta:** Yes. So this is Sonal Gupta from L&T Mutual Funds good to meet you in person. Sir just, couple of questions first. I mean like now we are sort of, we've seen the BS VI transition. I mean, in some segments we starting with the transition, but I mean, just from a three, five perspective from Bosch in India and from the listed entity perspective, what are your key goals and objectives or what is strategy other than, I

mean, obviously we will all be moving along with the market, and how the market shifts, but over and above that, how are you, trying to direction the company?

Soumitra Bhattacharya:

We follow greatly the principles of our parent. And if you look at what our parent says, parent says we are invented for life. So, the parent has always looked at first of all, the parent is a private limited company. So we do the responsibility of a listed company, but don't act like a just a public listed company looking at quarter to quarter. So we invest for the future, always in advance, which we have done in the past. And you can see it from inline bumps to common rate systems to now what you'll see the electrification and hydrogen. Second we draw a lot of -- we don't reinvent America, but we draw a lot of inputs from our parents who already there done that. You can see it from his from Guru's presentation of the portfolio, the depth and the width and what our parent has done, including acquisitions. He even shared one slide on hydrogen. I think so a lot of feet on the ground, so it's not theoretical. I think he showed three acquisitions worldwide and India there are Adova and India Map that tells you something. So our very clear focus is to remain a very serious player for not just score. If you know, if you are good at something, you have to re give that. So that's why we are reive the code. I told one of my colleagues, you may not know, but Bosch Limited has reduced its head count by 40% to 50% very quiet. And, and in the Bosch way of taking care of people, et cetera. So revise the core, also focus on Hs and Cs and transition for the translation of the new business. So all of the elements we to be. So we want to remain clear that we have been in the core and the revive core. We have got into efficiencies based on all the emission roadmap Guru has shown and where we are relevant. I give you indication on the TAM, which has to be read volume, which is market in two content of it, we are strong on content per vehicle. Then we talked about realistic dates of electrification versus breaking news. So you have to understand electrification will happen and hydrogen will happen, but at realistic days, and we have the technical knowledge, but we will also be entering all these for many of the at the right time. Otherwise many companies will burn huge amounts of money. So very clearly we want to retain our leadership position in mobility area. But also I shared with you after market, we are the leaders, power tools we are the leaders, building technologies, we are not the leaders in a fragment market. The building technologies, we are playing on the high HPP, but that's the small business and we want to go to LPP. And I shared that.

Sonal Gupta:

Wonder. And so this is the data point question in terms of, I mean, like, I didn't expect the routine, just in terms of your OE business, I mean, could you sort of, tell us broadly, like now where are you in terms of your diesel gasoline mix, right? Like I think FY '17, you were at 90% diesel to properly sort of indicate number?

Soumitra Bhattacharya:

You have to look at this from what the, what has happened to the market. India went from, 15% diesel up to 48% and now has come down to 20% on the UV and pas car. Only other thing digitalization is high. Yes. So, yes, we have had very high strengths in diesel because we came in diesel in 1953 with the in line funds. Then we came with single cylinder, we came with many things. So diesel boom at 48% naturally had a positive impact on Bosch India, but also Bosch limited. 18%, 20% has a certain impact, but we are very strong on, ICE, including gasoline. We came gasoline relatively later, but now we are already 15 years. We are 15, 18 years already. Not 69 years. You can't compare, but again strong in a market where we have a pretty good market share. And, we have a very good portfolio on electrification, hydrogen. We shared it. So this is ICE. This is, Bosch has worked with flex fuels in different countries. I think Guru can talk a little bit about flex fuels in Latin America. And also you can talk a little bit about CNG, so we are there, but if flex fuel and CNG, I'll give it to you.

Sonal Gupta:

I was just trying to understand, what's the sort of broad powertrain?

Soumitra Bhattacharya:

Power train. We will follow what the market is happening. So you have to really look at the market, broken up into those five elements. Heavy commercial vehicles will be diesel until the hydrogen and hydrogen in a small, small vehicle. And he shared already, we are in it like commercial vehicles will be diesel gasoline both and electrification. We are in those. Three wheelers we are in. And when electrification comes, we have that. Two wheelers, I think we have spoken about and pas car there's

been a very detail discussion. So percentages are going to be driven by market, not by us. Acquisition books this year is at all-time high.

Participant: Hi, just one very simple question. I don't know. Is it possible for you to simplify for us? I am sure you must be measuring your company even in terms of the content for a weaker kind of thing. so if you put it say last five years, because the FY '22, basis is not probably right base a FY '19 might be the peak of the industry, which is where we stand today. And the kind of technology change what Bosch Limited is doing what you think you are establishing in terms of the contemporary or next five years by 2029 or something like that. It'll give some idea in terms of how to Bosch Limited, because if I look at historical number of the last 5 years or last 8 years, or last 10 years, the growth has been a little bit subdued, maybe due to the variety of reasons, but going forward over next 5, 10 years, you are rightly positioned technology advantage, absolutely we all agree, but how well should finally translate into the scope of the contemporary vehicle for Bosch?

Soumitra Bhattacharya: So I give you an indication on the content of vehicle of technologies that we are linked with of what is changing in the market and Bosch's content for vehicle can be very much be looked at in a similar way. So basically content per vehicle is actually improving. Number one. the part that you are asking critically is, again, I think indirectly is acquisition. It's not content per vehicle. I don't know. That's what you, are you hinting at content vehicle or acquisition?

Participant: You mean acquisition of companies?

Soumitra Bhattacharya: No acquisition of orders.

Participant: Yes. I mean, combined .

Soumitra Bhattacharya: Basically, Yes. So when you look at TAT, it's just the target addressable market. Or the total addressable market. We have a situation changed on emissions norms, which I clearly showed BSIV BS VI, TREM III, TREM IV, TREM V of actually maintaining the higher content of the vehicle, number one. Number two, we want to always meet market growth and better it. And that you can't do unless you have the right acquisition or unless you have the right content of it. And of course, finally you have to have the ability to play in these markets, which we have shared. So we have shared with you ICE and we've shared with you to have shared hydrogen and electrification.

Participant: Basically, what I'm trying to understand is if you put that volume number. Like you also mentioned interaction that don't look at MSP volume look at the overall tonnage, right? So basically what is important is the revenue growth of the industry, the underlying automotive industry, and are they looking at just the volume with the volume has no meaning. If I put it from that perspective when Bosch India grows in last five years now, seven kind number. It's not that number compared to your technological leadership because you when it comes to technology. So I'm not going by the volume look at haulage. So internally, I'm sure when you are doing within your company, you'll be presenting the haulage volume growth for the last five years and projecting for next 10 years, rather than claim to the marketing industry is going 2% we are happy with 3%, definitely not. Right. I'm sure that's not objective. So how we can get that perspective. And the blended mix we are not too sure about the blended mix, right? So yes, your presentation on, how do you see the TAM over next five years for each of the segment, but what is our current mix? Mix keep changing depending on course the industry, how should we look at what Bosch say, 2029? I'm not asking partner, because I know you don't talk about partners, right? Let's focus five years. In five years, the content per week is blended, or maybe you can do the blending index for you, right now, wherever it is compared to the last five years. And how do you see that over the next five years? Sometimes I'm sure future is really difficult to answer the question, but some trend.

Soumitra Bhattacharya: We will share it a little bit amongst ourself. I'll give the overall, and maybe Guru can specifically talk about electrification, hydrogen. Look what happened in the last four,

five years there's been a huge, reduction on diesel for passenger car and utility vehicles, which I talked about the 48% to 20%, which will have also in Europe. So naturally that would have an impact on a company which was heavily dependent and focused on diesel. So you saw that impact from that angle and while we continue to reach in our strengths on diesel. We increase our strengths on other areas, keeping this in mind that this is an irreversible trend and one has to face it. And the settling down of 18% to 20% is something which is likely to stay also. Number one. Second, what was very important was were we prepared for the acceleration and the legislation change the map that he showed and to enter the market through acquisitions. And I give you two data points. One data point was February 2020. We shared INR 23,000 crore for the next five years on BS IV to BS VI and I shared one more data point today saying we've had the all-time highest acquisition for Bosch mobility business. That should give you already indication, because its acquisition and my slide on content of vehicle is linked to legislation change. So that also gives you an indication on barrier. Now, these you can't directly now link to margins because that's not linkable margins are dependent on the whole market. What happens including the thing that happened in the world today, including logistics went haywire, so you can't link it to market. So do we have a game plan? And since yes, do we plan that out well before example what he mentioned and there I'll give it to him on what we are planning where India will be behind others but electrification, hydrogen will come and what we are plan. But over to you, so core, which is ICE, we are very much there. Very clear game plan, including revive core and very clearly for the emission roadmap given. And the emission roadmap, I think you shared is still '27 or '29. Till '29. So very clearly plan. Beyond core and revive core on hydrogen. I give you a generic answer, but Guru. If you want to say something specifically on trend and there, let me tell you hydrogen electrification, don't expect one player to go to 80% to 90%. That's not the world that is going to be limited. Yes. There will be several players, including OEMs and new age players.

Participant: And you didn't answer the content per vehicle some index something because that's my question how should we look at over five years?

Soumitra Bhattacharya: Look, we look at numbers inside a company in a very different way compared to what we talk, in public, because we will not do it in public. We look inside a company with Rupees per vehicle or Euro per vehicle, and we clearly see what our content on X going up to 1.2 or 3 or 5, or in case of tractor even higher. And we very close to that because it's a worldwide system, including India, but we don't check it.

Participant: What the reason for that? Many global companies do share with their shareholders.

Soumitra Bhattacharya: All things you don't share with everyone.

Participant: But you are a listed entity.

Soumitra Bhattacharya: But look when I'm giving you a 1.5 X. So I'll have to translate this for my account for my colleagues. So, for those who understand, glance is good. I've given you more than a glance. This is the first time we have shared with you market content per vehicle and target interest in market. And you just have to add up the three and get your maths right. I think that should be a good answer.

Guruprasad Mudlapur: Okay. Just to elaborate a little bit for short, the content per progression on our traditional technologies, so that you've seen the sort of progression we have, but in case of electrification, for example, the order simply multiplies several fold, so very easy to calculate its \$10, \$12 per kilo, of every axle that gets in. So the, acquisition value for us is even orders bigger than what we would've had with the recent acquisition with summary. So there it's very easy for you to calculate, but you also mentioned a very important fact at this point of time in the electric vehicle evolution is that, it's pretty chaotic, or dynamic, the market share and how things will play out are not steady stake yet. We would be happy at this point of time, if we are as tier ones, looking at a 20% market share, that would be great. It's probably going to change in five years from now where our positions change and we want to be a leader there as well. We're very well prepared for that, but as we move further, we can talk

more about it. But right now it's very dynamic to link these two and say, so there's the content per vehicle and this is the kind of acquisition potential. It's very, very hard to contribute. Hydrogen, we show the showed the portfolio, I mean, it's actually 100X of where we are with regard to diesel. Very, very huge.

Soumitra Bhattacharya: Just on a lighter side, I deeply appreciate your persistence, but you'll get the same answer.

Prateek Poddar: This is Prateek from Nippon India Mutual Fund. So you talked about, you have no legacy in the electric version, but you, you do have a legacy when it comes to the traditional powertrain in terms of market share, when this transition is happening, will you be able to maintain that same market shares or in this new transition, there are new competition coming in and hence the domination, which we have, if I may use that word in the ICE might not be a correct picture in the EV world.

Soumitra Bhattacharya: I meant on to say I'm loving it. But I have to decode your question, whether, you are wanting to know how much is our market share and where are we.

Prateek Poddar: No.

Soumitra Bhattacharya: Thank you. Then. It's pretty good. I won't use the word domination. No market share is there for domination. We've used it like when we did for BS IV to be BSVI, I was sharing with some of your colleagues. Bosch has very good cross domain knowledge and because we have cross domain knowledge and because we look at customizing the solution for OEM from the conception and that was a very good example of BSIV to BSVI to the SOP, so this we will continue to use as a USB. Bosch India is able to do a lot and especially under Bosch limited, a lot of cross domain cross legal entity. My colleague Guru was heading automotive electronics he was the MD of that company, but very close collaboration because automotive electronics is delving into Bosch Limited. So, and Bosch is also the front phase to the entire customer. So no other legal entity Bosch Limited. So we will continue to cross collaborate. We have the strong knowledge of what our parent does, or cross domain knowledge and we will continue to get in as we do for core, in case of new businesses, we will again use our parent's knowledge and we'll do again, cross collaboration, but then the plain field is different from which we have already indicated. So we will continue. What is an outcome of that percentage that we don't look at. We go for every acquisition, actually we have a acquisition calendar. We look at naturally projects won, projects not won, et cetera. But if I give up you a indication, we've had the all-time highest this year acquisition, again that gives you the indication.

Guruprasad Mudlapur: Maybe just to add to what he said on a global level, the Bosch acquisition, as I said, crossed EUR 22 billion in electrification alone. So we are the number one tier one in terms of acquisition value today. And the situation in India may be very different and we are aware of it. We are doing everything to make, the best of, the situation here, because there are two Indian OEMs and the rest of them are global OEMs. A lot of them will bring global platforms. We are already designed into several global platforms and they will come here as well. So the thing I would urge is don't look at it at this point of time when it's still in a huge amount of plus, this thing will come to life maybe in three years from now, four years from now, when you start to see real volumes come into the market.

Prateek Poddar: Sure. Actually, if I may just this question from your perspective, in the listed entity, right, obviously look ultimately the numbers, which matter, and not getting the numbers, but directionally, when this transition happens, is there a phase where our legacy kind of pulls us down when this migration is happening or what is an outcome, which we don't know it?

Guruprasad Mudlapur: I wouldn't say that so far we've allowed any legacy to pull us down. The legacy has helped us invest consistently 5 billion - 6 billion over the last 10 years in electrification. No other tier one has done it. So if thanks to our very good legacy and our cash position at that, we have, been where we are today. So I wouldn't say that -- but there is also an element of truth in what you say, that if you are too heavily

invested in legacy, we be invest more electrification, but this is a balance we are aware of and we will watch this as we move forward.

Soumitra Bhattacharya:

Yes. I'm only trying to say that the core, and perhaps you're talking only a Bosch Limited here. The core of Bosch Limited you have to protect, because if you don't protect that the new age business will come, but I've been repeating that compared to Europe and others will come much later. And we have to balance both. So the core we will protect and what you call legacy I suppose. And the new business, we are already doing stuff before Indian industry was really working. We opened the project house when four years ago, 2018, So we opened that in 2018. So we will and already, we are doing investments for the new age business. So we will continue to invest. And besides that, our parent is investing massively, and we don't reinvent America. We take something. So we will do both answer is both. But what percentage, when that depends on how the market is doing.

Prateek Poddar:

Okay. My second question is in an EV world, the role of tier one is as crucial or, or their share profit pools for tier ones would be very similar to what it is in it world or is this EV world -- does the OEMs have a higher share of profit pool rather than relying on tier ones for systems and conditions versus building out debt and hence having a higher share of that profit pool. Is what I was just asking?

Soumitra Bhattacharya:

Yes. look, let's talk about the non EV world. In the non EV world of the ICE world, all these questions were asked before common rail, common rail was introduced by Mahindra Scorpio in 2001 the same set of questions came in. I was at that time in Nashik as the plant manager, making common rail, the starting of common rail components and the same questions came in and our back door was the Mahindra factory. So these questions are about to come, what happened, diesel grew. There was a sharing of profits based on market determination. Market will determine. My last comment, any of these new businesses will have money, which will initially you will not earn. How many people are earning money on selling electric vehicles? Let's ask this basic question from volume part from content part, and how much of the selling price is aided today by aid. So you have to ask some very basic questions. So profits arrive at, in a mature world. And that's what I'm saying. Bosch is using this maturity model, which we have always used enter at the right time, be a significant player and make the business grow profitability over time. So you have to enter at the right time, not too early, not too late. You have to have, a program which will define in total, this was not something hopeful. This is feet on the floor, and finally, profits are a determination of how you run the business and you can never define, how much weather OEMs will make more or supplies will make less it can never be different. It has to be a bid for the industry to survive and profits come over time. And in electrification, hydrogen, it'll happen over time. Initially to say that you'll start making a EBITDA of 10% or 20% well question mark.

Guruprasad Mudlapur:

Also don't, I keep repeating this again and again, don't look at it from today's situation. It's still in a massive plus OEMs have already their feet in electrification. So the margin of the, just the price increases in lithium ion battery cells over the last two, three years have been all massive to wipe out anybody's market. So it's still a very, very, very early day in electrification to really determine how this can go forward, but things will definitely change. And the whole value chain will, sort of get rewritten as we move forward. And, we can, watch this space.

Amit Nigam:

Hi, Amit Nigam from Invesco Asset Managemet. So the question that I have is, for the future mobility, you had the base framework, under automated, would that also include the entire powertrain? So the battery, the BMS and the motor, which Bosch will have capability in,

Soumitra Bhattacharya:

I didn't understand. Did you understand? Do you want to redo?

Amit Nigam:

So within the electric vehicle, the new powertrain, Bosch has the expertise to provide the entire powertrain from the battery, along with the PMS and the motor.

- Guruprasad Mudlapur:** Yes. the answer to that is partially yes, because, we are not into high voltage battery. We are not into battery cells. We are into BMS for both low or high voltage. We are course into, powertrain, motors, e-axles, power, electronics, everything. But we do not make high voltage batteries we only do voltage batteries.
- Amit Nigam:** And the motors that you make can go across the voltage range. Is that correct?
- Guruprasad Mudlapur:** Absolutely. Some 48 volts all the way after 850 volts. Yes, that's not in India. But I'm talking about our portfolio coverage.
- Amit Nigam:** And this last bit is that, if I look at all the four components, PACE as a revenue potential, or a business that you can earn, if I remove the powertrain system, then what is left. So if 100 was a total opportunity if I removed the battery, BMS and the motor, what else remains that can be monetized?
- Guruprasad Mudlapur:** I think the question is clear, but I don't know if there is a straight answer to that because, see personalized could be a one off activity, so it could just be non-recurring engineering work we do to a OEM, it could be selling infotainment cluster, So that is recurring, then for connected, it could be, the selling of the telematics unit, but it could also be selling of services on cloud services, communication services, we have a lot of services. It's very hard to quantify at this point of time when things are not yet, fully established even globally. So these are, I mean, there are multiple reports you would've read, the services part of mobility will outgrow the OEM part. I mean, the traditional part, of mobility at some point of time, but we don't know how this develop yet.
- Amit Nigam:** Okay. Because since we were not here, so we thought maybe we can have some insights, but thank you so much for that.
- Arjun:** So this is Arjun from Kotak Mutual Fund. My first query is regarding the legacy. So if I look at the profitability of the legacy curve, how does that interplay, let me know it as a finance finding, like, at some point in time, you look at international investments, you talk about incremental investment toward electrification and localization. So how do you look at the profitability of that?
- Soumitra Bhattacharya:** Every curve has a life. But, we see that, India is in a sweetest sport relatively to extend this life. I think Guru mentioned it already and I would agree with what he said that a, the S curve will apply, in different countries will apply for different time zones. In India, the chances keeping Emobility, plus as a possibility of 30% in 2030, which is different from Europe and US gives us a better chance. Second, for core you can also aggregate the core that is also a possibility for us, which is called the last man standing concept. And don't underestimate that. Third, everything has a life, and we should not underestimate the introduction of electrification in different forms and the introduction of hydrogen. And for that, as you saw, we have a parent and we are also getting very strongly prepared. Right now, already also good mentioned it's very, very early days nascent times, and this has to be understood. The OEMs and the industry are finding their feet, and this will continue for a few more years. So it will happen, we are reasonably confident of riding both the curves, a protecting the core and rewriting the core on the traditional S curve and B on the new S curve, which is base means also including electrification, but also the PAAC. And we are also confident of riding this. And our parent is doing a lot of work on mobility of the future. And later once our parent shares more about this we will share with you.
- Arjun:** Actually just on the legacy, in terms of the profitability, because not in terms of margin...
- Soumitra Bhattacharya:** I'll give you a simple example on the profitability, there are two elements. One is -- what is your, how is your profitability based on, your legacy based on electrification, diesel, et cetera, second, what can you give to your customers? And third, what can you aggregate beyond your customers before India and the world? All three, we are aware and we are trying always to optimize. Many of the steps that we do on optimization are examples of what we do calmly, which is a part of a bigger story

example our 3R story. The 3R story, which we started four years ago was exactly this, that we felt our workforce has to change. And it has to have a different level of competence, both for blue collar, but also white collar. So we start those journeys in cycles, and we want to maintain our profitability. I will not define and now tell you, is that going to be 12%, 16%, 14% that I will not delve.

Arjun: Sure. The second part to that is before actually, and this community really speculating a lot of content increase, I think you told a lot, thank so much for, if we look at .. the side of it, someone did talk of domination, I think from the tractor we seem to have domination. If I could, that words to, we speak to most of the variants, we talked about 5.5X potential increase. One third, five comes in right now, 50 HP plus, but in terms of acquisition of orders, when one look at market share, just one example you get EV and other segments also, would you say competitive pressure are right? Which potentially could impact margins? Or do you think the market we are trading share sense of recuperating of profitability for the investment?

Soumitra Bhattacharya: So I'll give a simple answer. These acquisitions are already happening and Bosch in a good space in a very good way. And our OEMs are very intelligent, because you have to respect the OEMs whatever acquisitions we are getting are on merit, and again, I repeat because of being a full service provider, we are not just a component service. We also give huge amount of engineering services. So a lot of billings come from engineering services and we have a -- how much do we have 450 colleagues working, 500, just on engineering, just for powertrain. So you have to please examine what is Bosch Limited and Bosch in India, delivering to the customer. A customer doesn't look at a selling price, a customer looks at the total package and this -- I don't want to use a domination, this USP we want to continue across.

Arjun: My just final question that we want to more being provider, rather than just a component provider. There obviously will be some risk. We've seen some unique understand maybe our product, but, how do you put that risk in the overall context, in terms of, the business and how do you mitigate that risk as going forward?

Soumitra Bhattacharya: Thank you. I will say a few sentences of after that you can talk because we will not talk about, who's got fired and why. I'll give you my personal experience about Bosch 28 years. You know, Bosch is an extremely process oriented company, which, believes tremendously on reliability and safety of products. Our safety of products and the liabilities of products that every employee has to go through a very tough web based training, including me and sometimes I don't pass in it, the whole concept of, that is the level of what Bosch is in terms of belief on safety, on reliability of products and, it's not just in electrification. Electrification is a very important, so when Bosch started putting money into electrification, 12 years ago, a huge amount of effort went into understanding of repeatability, safety, reliability, across the world, not just in Europe, but beyond that.

Guruprasad Mudlapur: Yes. I would only say that EVs will catch fire. So accept it. Right now, this is something that we have to go through for maybe two reasons. One is they are inadequately designed. The other one is they're marginally designed for Indian weather conditions or robustness conditions and so on. So this is a phase of learning for everybody in the industry. So not to beat one or the other, but this is something that we will go through. But I personally wrote to the secretary and made a pitch on why this happens, why batteries are catching fire, and what could be done to mitigate this, and how could we have more robust battery designs or more robust EV designs, from our global knowledge base that we have shared with this. So a lot of changes are also coming in, and I would also say that these changes will only make our position stronger. Beyond that. You get a hint. I mean, my boss wants me that, nothing Bosch related has caught fire in the market yet.

Vinay: This is Vinay here from Karma capital. So just had one question. So you talked about you talked about the, volume CAGR for the next 7 years from '22, to '29, for the different segments. And you even shared the data for, the content per vehicle going up for these segments. So just have one query. So when you talk about the total accessible market, the TAM, why is it lower than the volume growth, which you're seeing for segments like, PV, MNCV, and NCV to be in particular, just wanted to

understand that thing, because if I see, the volume CAGR, which you've mentioned for passenger vehicle is around 4.5%. Whereas the dam for passenger vehicle is around 2.2%. So just wanted you to understand that point.

Soumitra Bhattacharya:

Yes. Vinay for this question look at slide number one, don't look at it from TAM. TAM is the value, right? TAM is the outcome of the, total volume multiplied by content per week. So here, what you're asking the better way to look at it, slide number one. And there we are seeing as per our indication currently, the best possible case for India is a 30% for UV and pass car for that's all. So you need to look at that and then you said 4.04 or 4.2 this year would likely go to 5.9 or something. I think I do 5.8 or 5.9. So that's what you need to look at and then 30%. The TAM is outcome based on content per vehicle volume and then you have to look at the TAM based on the X and the Y where we've kept CNG at the base. So then you have to look at the ratio of what is changing.

Vinay:

So my understanding was that, when you, when you were calculating the TAM CAGR, so you would've taken into concentration the 30% EV penetration, which is coming through and content for vehicle versus for an EV versus the CNG.

Soumitra Bhattacharya:

No. EV part is not just taken into account, it is the ICE. Because if you remember on the right side, I had written over the ICE. Okay. There were two parts of the slide. One part of the slide was IAM value 22 TAM value 29, right then the total Delta and the value. And then there was a line I said, please look at the line. And then you look at the right side, right? And there you look at the top, it was written ICE. If I'm not wrong, I'm just asking the colleagues. So it was ICE.

Vinay:

Even MNACV, which is largely going to be your diesel market.

Soumitra Bhattacharya:

Clearly there's not happening.

Vinay:

They're also, there is this drop, which is coming in.

Soumitra Bhattacharya:

No, because it's very simple, 480,000 and 360,000. You have to look at -- the moment you look TAM you have to look at the volume base. We achieved 480,000 and '18 - '19. And, the best case cannot from 360,000 in 2029. So you have to look, even if the 1X became 1.5X or 1.6 X, right? The base is 300,000.

Vinay:

You're expecting the peak to come, even in...

Soumitra Bhattacharya:

I'll tell you why.

Vinay:

But maybe, most OEMS are talking about committee achieving, at least the MNACV volumes over the next two years, the peak achieved in 2018 - '19.

Soumitra Bhattacharya:

You have to look at the reality. What is this year going to be? Look, you have to look at a data point, which is available today in the market. Axle, tonnage, and haulage. The speeds have gone up considerable. Five years ago, we had 1,200 tolls, there was no fast tag. Second, the government allowed 20% extra loading and all of us know beyond the official 20%, how much is the extra loading? Right? Third, the axle has changed considerable. So your logistics have changed completely, right? Railway and road administration has come in, not so much water ways, but I expect Nitin Gadkari will also work on water ways, which is good for India. So, it is I will not contest respected OEMs, but we work very closely in the marketing department. I have respect for also. And we believe that it'll take a significant time for this part to reach because you are not comparing apples to apples, understand you're comparing apple to oranges.

Jayesh Shah:

Hi, this is Jayesh Shah from Ohm Portfolio. I have a couple of questions going back as a follow up to the earlier question on the profit pool for the OEM, once it's vendors on electrification, and the fact that you say that it's too early right now to make any judgment, to talk about profitability, given the fact that you guys are investing into these electrification projects, how do you look at payback or INR?

- Soumitra Bhattacharya:** Maybe I'll answer after Guru.
- Guruprasad Mudlapur:** I mean, the simple thing is, we are looking at project level payback, and these are acquired projects. we acquire a project with a phone and then we calculate, how that acquisition should look like. So that's as simple as that. See the reason, I mean the deeper question there is, OEMs also trying to figure out what to do internally, what they should get done through tier one. And they started with some position and based on what, one of the OEM successfully demonstrated and everybody tried to hit that. And everybody said, we will verticalize 100%. 90% of the OEMs have now changed stance. They want to come back and started to redo things because they're just not good at it. Eventually the whole thing game will come down to who has the right resources to do it. And everybody in the value chain is fighting for similar kind of resources. So the -- that's the reason I say, wait for a couple of years for the flux to clear, and then you start to see who's swimming.
- Jayesh Shah:** So safe to believe that this is a modular CapEx or OpEx investment that you do where you do have eyes, or pay back and based on your internal measurements.
- Soumitra Bhattacharya:** So let me try to give you a broad directional answer, in any of the future businesses, there is no a straight jacketed close box in how you should tackle, because on one hand, any company with who has on economy and Bosch has a little bit, is not get into a perpetual bud, nobody, and definitely we will not get into that. Second, you will always want to do, to say that you don't want to miss an opportunity, market opportunity, but also have the backend project. Bosch has a very strong back end process on pay back acquisition value, contracting and on so forth. That's why Bosch is Bosch. So we will continue that, but we will also continue to look and there guru has already shared in one of the slides, for example, on hydrogen how Bosch is already having, feet on the street. And, we will see that in the long run in the medium grant, this becomes a winner. So summary is too much flux in a nascent market, which is not yet mature, where people are trying on different things and it'll settle down and we have our own systems also to enter new areas, which we have done decade after decade. And we will look at how to be embedded, but at the right place, right time and we will use our resources to do it, like we've done it earlier. We could have not been the person to bring in common rail in India. We could have said, let somebody else come in and bring common rail. We could have not entered gasoline because we entered diesel so early. We could have said by 15 years ago, why should we enter the market is crowded. So we will be doing it. And we will not do it with having a situation there. The market, when it's too nascent will be like work from home. Initially when COVID happened, we said everyone will work from office. Then we said, a 100%, we work from home. Then we said, no it's going to be hybrid. So let it settle it down. COVID has though us a lot of things, let it settle down and not make judgements.
- Jayesh Shah:** How we calculate project. How we do it for new project.
- Karin Gilges:** Well the main question is, if you have an initial project, which you do together with a customer, then you have of course a certain purpose to come to approve of project, for example, then you are doing ... to make, to reach a certain milestone and then to say, okay, go or no go further on. And I think that we have, very much clarity and of course it gives us also input from the customers and go further and pulled together.
- Soumitra Bhattacharya:** POCs are there, what Karin mentioned, you can do POCs, you can enter a project. There are different forms of doing, but POCs are also a part of it. I mean, I'll give a small example to extend what Karin mentioned Bosch has regularly co-create with the Government of India on multiple things . We have worked for the last 12 years with Government of India on access.
- Karin Gilges:** Protects our automotive industry, because this is the only way for the German government to go ahead. Otherwise we have a huge problem and we have already a problem in Germany that we face inflation, which we never had after World War. So that means, emotions, fear in Germany, in society are already there. If you put on top,

economical disaster on automotive industry, then we have most, probably a government crisis.

So I'm sure there will be tough times espec. They, you come into the winter season. If you get a hard winter, for example, there will be tough times, at times you come in winter season, you get hard winter, so there will be tough times, but we have to balance it somehow in Germany.

Participant: Given the special nature of the Indian market, does it allow you to indigenous here or look something abroad.

Soumitra Bhattacharya: When Opportunities come and not necessarily from Germany, it could be from different parts of the world for a possible relocation, which have happened earlier, we had relocation small relocations from Japan or Korea or whatever. We will take those relocations, so we will continue to be focused on India. We will not forget our exports and grow on them, but we will not become an export oriented unit.

Participant: Thank you.

Guruprasad Mudlapur: Maybe just to complete that thing you asked about the German industry, German auto industry is not just the BMWs and the Daimler, supplier level, they supply to virtually every car maker or every auto maker in the world. So they see everybody catches the code, so in that context, although it's a very difficult situation for the rest of this year, I'm very sure that taking enough measures to ensure that they come up.

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