

Johann Jungwirth

Short Presentation, Geneva 2016

The Reinvention of Mobility

Dear Friends and Dear Guests,

I'm back, I'm very pleased to be with you and to talk to you about a very important topic this evening. Many of us are not even aware of what **historic times** we are living in.

Not only **the automobile** is about to be **reinvented** by digital transformation, this is also about **the reinventing mobility**: self-driving automobiles without a steering wheel and pedals will be on the streets in the first of our cities to move people and goods in just a few years' time.

This will bring about similar **progress for society** and in particular it will **improve our quality of life**, and will be tantamount to bringing about a similar transformation to the change from horse-drawn carriages to the automobile. I am not talking here about the year 2030 or 2035. This will happen in the **next 5 years** when this new world will be created. By 2025 it will be commonplace for people to be driven from A to B in self-driving automobiles in many regions of the world.

Tonight, I should like to take you on a little journey through time and give you an idea of the very practical effects of this revolution brought about by full autonomy.

Everywhere in the world, our innercities are defined by lack of space, overcrowded parking spaces, traffic jams and stress in traffic on the roads. Take a look at this where a city like Berlin with cars parked along the sides of the roads on right and left.



Autonomous automobiles will be able to find a parking space on their own and these spaces along the sides of the roads will be clear. Here you can see a view of the same street in 2025:



You can see just a couple of self-driving cars from the Group and there are no longer any cars parked along the sides of the road. This space can be used for additional lanes. It will massively alleviate the pressure on the infrastructure of our cities.

Here you can another example in Houston, Texas: Lots of valuable space in innercities is taken up with parking spaces and in multistory car parks.





And this is what the city could look like in 2025 because self-driving cars can simply drop people off and look for a parking space on the fringes of the city, and then come and pick up people later. This means that valuable space in the innercities is not wasted on parking. This can be used to create new parks, playgrounds, shopping centers, offices and living space in the best innercity locations in the world. That would be really great wouldn't it? People would thank us for doing this.

Or have a look here how we treat the weakest in society, old people, people who are ill, the visually impaired, young children. They have to cover large stretches with great effort on foot, some of them have to use a Zimmer frame to get to public transport stops, or pay for expensive taxis. And this trend will continue to increase as a result of the demographic change.





Here you can see the situation in 2025:



Everybody will be included in the new mobility world. We will be able to move conveniently and easily from door to door – with mobility available at the touch of a button or with voice commands. “My Audi, please pick me up”, or “My Volkswagen, I’m ready.” Or another brand from our company. People will see an increase in the level of convenience and they will enjoy a higher quality of life. It will enable them to have a better social life. Can you imagine how thankful to us these people will be? A huge market will also open up here which did not previously exist.

Let me give you another example of the opportunities of autonomous driving. What would you say if I told you today that we could save the lives of up to 1.25 million people – every year. This is the number of people who die in road-traffic accidents every year. 91% of them lose their lives as a result of human error. Minimizing traffic accidents will soon become a reality in many parts of the world because self-driving cars don’t go into shock and they are able to respond within milliseconds, they are not distracted, they don’t drink alcohol, they don’t get tired, and quite simply they are able to drive a car much more safely than we people can as a result of artificial intelligence. Computer speeds are growing exponentially and they are linked together with real-time networking.

And how would you respond if I told you today that we would give each and every one of you in this room **37,668 valuable hours of your lives back**? How much would that be worth to you? That is the time that the average person spends on average in cars during their lifetime – many of you in this room will probably be above the average and spend more than this in cars. Unfortunately, a lot of the time spent in cars is lost time. Just think about traffic jams, stop and go in the city, or fruitless searching for a parking space. We will give this time back to people, so we they can travel in a relaxed way in a car. We will have quality time in a car for relaxing or wellness, for working, for talking to each other, for enjoying the beautiful countryside we are travelling through, for playing with our children, it can be a cinema room for watching a movie, or a concert hall, and much more.

Wouldn’t it be a dream in the evening after **work to be able to bed down in the lounge of your car**, and arrive well rested at you vacation destination in Italy? Or to watch a movie with the quality of cinema sound and vision?

More space, more time, more quality of life, more efficiency and safety: The autonomous self-driving, fully connected automobile of the future can bring people all that.

We would love to live in this future! I am absolutely passionate to ensure that **our children will have a better, safer, more relaxed, less stressful, and more wonderful life** than we have done. As a Group, we with our brands, **our cross-functional teams**, and I myself personally will **work day and night** in order to make this a reality, in order to **improve our world sustainably and move our company forward**. And we will do this so that people do not have to do without their individual mobility and the freedom entailed in that.

As I mentioned at the start, **we are writing history**... this is a gigantic process and it is a huge challenge for everyone here at the Volkswagen Group that we are passionate about mastering. It is also a huge **opportunity to significantly improve life on planet earth and leave the world in a better state** than we found it.

You can undoubtedly imagine what it must have been like for the people living more than a hundred years ago when the first cars came on roads which at that time were full of horse-drawn carriages. I can fully understand that today we

also have a lot of sceptics similar to the situation all those years ago, who see fewer opportunities and more risks. Let us join together and convince these people! We have to use all the means at our disposal **to support the courageous people, the bold investors, the visionaries and the inventors working in our current era.**, so that the reinvention of the automobile finds acceptance and that all the rules, regulations and laws are amended to take account of it.

Matthias Müller made it clear right at the beginning: **The Volkswagen Group will drive this transformation forward and shape the change.** This will increase the pace and the investments in these important innovation fields of digitalization. And we are well positioned to get on with this task. The change will enable the **Volkswagen Group to advance from being an automobile manufacturer to a mobility provider – with the mindset and the agility of Silicon Valley.**

Over the past century, the engine was the heart of the automobile and the driver was its brain. **In this century, the self-driving system of the automobile will replace the driver as the heart of the automobile** and the mobility platform for booking mobility on demand will become its brain.

The self-driving system based on artificial intelligence with 360 degree laser, radar, camera and ultrasound sensors, central computer and redundancy systems and the mobility platform are largely composed of software and very complex algorithms. They carry out functions like recognizing the surroundings and sensor fusion, through object identification, situational analysis, route planning, decision-making logic based on artificial intelligence to the learning HD card which we have develop together with the HERE card service recently purchased.

This means that **we as the Volkswagen Group will further develop partly into a software service group** in order to master the challenge of this change and – very important –

Develop new business opportunities and sales potential.

Presentation: "People who are really serious about software should make their own hardware." - Alan Kay

At this point, I would like to give you a quotation from Alan Kay, who already 30 years ago said: **"People who are really serious about software should make their own hardware."**

We concur with this at Volkswagen and we see it in just the same way. And the **huge competitive advantage** as far as we are concerned is that we **have already mastered the production of the perfect the hardware.** Since our future depends on it, we must and we **will drive forward the software and the services development to become as professional and focused** as the hardware development.

You will undoubtedly confirm to me that we as the Volkswagen Group have perfected the development and construction of automobile hardware with our 12 colorful brands, mainly using the art of German engineering and styling. The results are icons like VW Golf, the Audi A5 or naturally the Porsche 911 Series.

These are all truly mouth-watering automobiles. Although I have to admit that **my dream automobile is the Porsche Mission E**: I have three children and I love to glide noiselessly along the highway with zero emissions. Looking to the future, I am very much looking forward to being driven fully autonomously, comfortably and safely in an automobile from the Volkswagen Group in the first cities in the world.

Our objective is to provide optimum support for implementing the **digital transformation, the best design and the best integration of hardware, software and services**. Design and my area of digitalization are establishing Group Future Centers in Europe, California and Asia. Matthias Müller has already referred to this. Our Center for Europe has already been established in Potsdam. And by the end of the year, both our Future Centers will have been established in San Francisco, or Silicon Valley, and in China. It is absolutely pioneering and unique in the automobile that digitalization and design have been merged into one unit and develop and create hand in hand the interior, the exterior and the user experience design for our products. And the absolute focus needs to be on our customers, their needs, aspirations and dreams! And we are bringing a piece of Silicon Valley Culture, its mindset and way of working to the Volkswagen Group and our brands.

It goes without saying that perfect connectivity for automobiles through the cloud and a seamless experience with customer smartphones and Smart Home will transform mobility into the best-in-class digital user experience. Over-the-air software updates and upgrades keep our automobiles at the latest status and offer customers new services.

Digitalization enables us to create an “ecosystem” across Group brands that deliver the best user experience to customers and users in a competitive environment. This will be similar to the ecosystems we are familiar with from our smartphones, PCs and home entertainment. **The automobile will become our best friend**. We will give it a name, it will understand us, talk to us, learn about our habits, what we like and the automobile will be able to read our thoughts so that it can support us perfectly. The Volkswagen brand has demonstrated with the Budd-e at the CES where this journey is going.

I am confident that **this new customer experience will be fascinating** and the high level of automation will bring the dream of accident-free driving closer. It will also offer driving pleasure as demonstrated on the race course with the Audi RS7 piloted driving concept last year. This is because emotion, performance and Fun to Drive will all remain important factors. I will go so far as to say: Many customers will only experience the true driving experience and the true performance of these automobiles with **autonomous** self-driving high-performance vehicles from our product range – with a better and safer driving performance than we mere humans can achieve. This will be absolutely fascinating!

Creating this future gives us an opportunity to make a major contribution to the reinvention of the automobile and reinventing mobility. This is what drives us all in the Volkswagen Group and it drives me personally.

I would like to close my presentation with a quotation from Alan Kay. Alan said: **“The best way to predict the future is to invent it.”**

Presentation: “The best way to predict the future is to invent it”. - Alan Kay

This is exactly what we are doing and we have already started. This is precisely why we are working in the Volkswagen Group and I am firmly confident that we **will have advanced to become the leading mobility provider by 2025**. We have an **irrepressible desire**, the **courage**, and we are now taking **extremely important and landmark decisions** that will be instrumental for the Volkswagen Group to make the **right investments** in our fantastic brands, create the **right competence centers for the future and most importantly develop the right approach, the right management culture, the right mindset and the necessary agility**.

We are reinventing the automobile. Mobility will be reinvented. And we will lead this revolution!

*Presentation: All 12 brand logos with the text **Think Reinvented**.*

I would like to wish you an enjoyable evening and I very much look forward to talking to you.