PORSCHE SE

Speech

by Philipp von Hagen
Executive board member responsible for investment management at
Porsche Automobil Holding SE

Annual press and analyst conference
on 20 May 2018 in Stuttgart

Wire embargoed: Start of speech
Check against delivery

Thank you, Mr. Pötsch.

Ladies and gentlemen,

I would now like to explain to you the current status of our investment activities. I am all the more happy to do so in view of the fact that we acquired three equity investments in the past year.

First of all, let me tell you more about our new investment, PTV Planung Transport Verkehr AG – the PTV Group for short. In September 2017, Porsche SE purchased almost 100 percent of the shares in the software company.

The PTV Group was founded in 1979 as a spin-off of the University of Karlsruhe, today the Karlsruhe Institute of Technology (KIT), and has around 800 employees in 18 countries worldwide. One of the first computer programs for tour planning for trucks has since developed into one of the world's leading providers of traffic and logistics management software. More than 2,500 cities use PTV's products, and transports with over one million vehicles in more than 120 countries are deployed on a daily basis using PTV software. From optimizing routes to simulating networks through to forecasting traffic flows, PTV software makes mobility more efficient, safer and more environmentally friendly. The company thus occupies key functions in the areas of smart traffic and fleet management.

The business fields of the PTV Group consist of three areas: 1. The **logistics software division** offers software for planning and tracking delivery processes from receiving the order through to its delivery. It accounts for around half of total revenue. 2. The **traffic software division** comprises products aimed at supporting communities and planning offices with traffic planning and traffic management. 3. And thirdly, the PTV Group offers

advisory services for the implementation of traffic projects. Together, these two areas account for the second half of revenue.

In the business field of logistics, the company delivers software, among other things, for route and distribution planning. In this way, PTV logistics software enables forwarding agents to calculate the most efficient route. This takes into account key parameters such as expected fuel consumption, tolls, mandatory rest periods or avoiding bridges that are too low. PTV software is even used to select locations, e.g., for DIY stores. This enables data on purchasing power, distance from rival or own stores and accessibility by means of transport to be assessed. PTV has over 800 customers in this area. And even German tax authorities use PTV software to determine the standard reference kilometer when assessing tax returns. The PTV Group has also developed the “Truck Parking Europe” smartphone app. With more than 770,000 downloads, over 29,000 parking lots and more than 740,000 parking spaces throughout Europe, the app is the world’s largest long-distance truck driver community and the number one app for finding a place to park en route. It enables truck drivers to quickly find parking spaces if, for example, highway rest stops are full, allowing for rest periods to be complied with and also for reducing tailbacks on exit lanes leading into overcrowded parking lots.

In the second area of traffic software, the company combines traffic planning technology such as the modeling of traffic networks in real time. PTV is a global leader in this field. Simulation technology developed by PTV helps support infrastructure operators and the public sector with the planning and optimization of the road network and local public transport, among other things. The products are used to improve the flow of traffic as well as to develop modern, future-proof infrastructure.

Take for example a city with an intersection notorious for being an accident hotspot, this process starts with PTV simulating various traffic light sequences to determine the

optimal flow of traffic to reduce the number of accidents. Another example: PTV supports the Swiss federal railway in planning and creating the train timetable. PTV's software can be used to efficiently plan passenger traffic and make the scheduling of the trains customer-friendly. A further example is the planning of new traffic routes in cities. For example, PTV has provided the city of Copenhagen with advice on how to develop and plan the new bikeway infrastructure and thus contributed to establishing Copenhagen as a model city for cyclists.

Furthermore, in the third business area, PTV advises communities, cities and states on traffic planning and in major infrastructure projects. For example, PTV played a key role in the Lisbon study of the OECD and was one of a select group of companies that have analyzed the impact of fleets of fully automated vehicles on our cities using the example of Lisbon. What is still a vision in Europe is already reality in Singapore. Starting this year, the Asian city-state resolved to not allow the registration of any new cars and will rely on self-driving taxis in the future. In order to bring about this change, there needs to be a planner and technology partner like PTV who can translate this vision of future mobility into a reliable and resilient infrastructure. The company is also involved in numerous projects in the Stuttgart region. For example, the MEGAFON study carried out by the University of Stuttgart used PTV's models to investigate the potential impact of self-driving cars on traffic in city regions using the example of Stuttgart. Furthermore, as part of Stuttgart's clean air program, PTV draws up a report on the impact of a combination of various measures in order to comply with the emission and particles matter thresholds as quickly as possible.

Ladies and gentlemen,

So you see, even if you do not realize it, you do indeed have a lot of exposure to PTV's products and services in your daily lives. Often it is simply not obvious where PTV is

involved as the company mainly operates in the public sector and B2B business, but many of us benefit from PTV on a daily basis.

As an investor, we have set ourselves the target of sustainably expanding the business of PTV AG. The company has a tried-and-tested business model and shows that there are also German technology companies at the forefront of the development of the mobility of the future. Such developments include PTV's "Mobility as a Service" ("MaaS" for short) accelerator program, with which it is expanding its portfolio of technologies for modelling and controlling mobility services. The program is aimed at automobile manufacturers as well as mobility service providers that would like to bring shared mobility services to the market with their own vehicle fleet. At the same time, it also allows local councils to analyze the impact of these mobility services on city traffic and to control the implementation of the MaaS offering.

The stake we acquired in INRIX some time ago also makes an important contribution in its capacity as a B2B service provider towards the efficient planning of mobility and has developed into a market-leading platform for processing and analyzing real-time data in the transport sector. You may have heard of the Global Traffic Scorecard that INRIX published in February, which analyzed the emergence and impact of traffic jams in 1,360 towns and cities in 38 countries, including Germany.

We have a roughly ten percent stake in INRIX. However, the company again faced strong competition in the industry in the fiscal year 2017. On top of this, networking of vehicles and infrastructure is not growing as fast as originally expected.

In light of these challenges INRIX has developed its business model further, adding parking area operators to its strategic partnerships. As a global market leader, INRIX now has a database at its disposal with parking lot information of more than 41 million

parking spaces in 15,000 cities worldwide. Not only does this database show parking spaces in parking garages in real time, it also now displays street parking spaces in over 300 cities.

Analytics is also a growing area for networked cities. INRIX analyzes movement of traffic and people based on its data sources and sells these analyses to authorities and cities. 2017 saw INRIX win new customers in North America in particular, including the US Department of Transportation, cities such as Los Angeles as well as the states of Ohio and Iowa. Here in Germany, Stuttgart also uses INRIX's data to analyze traffic in the city.

INRIX's global data network comprises around 300 million data sources in total covering eight million road kilometers in 50 countries. We remain convinced that INRIX has great potential. And eventually this will also be reflected in the business figures.

Ladies and gentlemen,

In addition to investing in established companies, we also widened our investment focus in the past year to include start-ups. These young companies have the potential to massively change mobility and industrial production in the future, as well as being an important source of innovation. In order to benefit from this innovative strength, it is essential to identify the corresponding technologies and business models as early as possible and promote them through investment. By building up a portfolio of venture capital investments, we are expanding our strategy without fundamentally changing Porsche SE's risk profile.

Last November we acquired venture capital investments in the two US companies Markforged Inc. and Seurat Technologies Inc. based in the wider Boston area, each in

the single-digit percentage range. Both companies work in the field of additive manufacturing also known as 3D printing. The investment volume was a single-digit million-euro figure in each case.

Markforged was founded in 2013 and develops and sells 3D printers as well as 3D printing solutions. It offers the only industrial 3D printing platform which manufactures high-strength parts from complete pallets of materials from carbon fiber to metal. Another unique selling proposition of the company is the ability to print continuous fiber-reinforced plastics. Markforged has already sold several thousand printers and, moreover, presented its first 3D metal printer for industrial applications last year.

Seurat Technologies was founded in 2015 and is developing an innovative new technology in the field of 3D metal printing. This technology will allow a significant acceleration of 3D metal printing and will promote its use in industrial series production. The most recent financing round served to develop the existing prototype further.

With these two investments, we have positioned ourselves in an area of significance for future industrial production. According to production experts, 3D printing will play an important role in the automotive industry for the future. The possibility of being able to print plastic, carbon fiber and even metal opens up whole new possibilities such as printing spare parts eliminating eventually high storage and transport costs. Furthermore, 3D printing is a cost and energy-efficient alternative in small series production, in which the injection molding process is often very laborious, time-consuming and thus expensive. 3D printing offers the additional advantage of being able to produce delicate structures that would barely be possible with the current injection molding process.

Our two investments in 3D printing thus serve as an example for the kind of technology, products and services that not just open up profitable new business fields, but also have the potential to change the automotive industry forever. One area we are also looking into in more detail is sensor technology for autonomous driving. Whoever is able to set a new standard has the potential to shape the industry for the long-term and in a sustainable way.

An additional field in which we see opportunities for investments is the topic of battery technology. The core competence in this field clearly lies with the established battery companies, major car parts suppliers and automotive manufacturers. Nevertheless, there are some highly innovative start-ups out there with the potential to revolutionize the standard of car batteries, be it by developing special coating materials that extend the life span of the batteries, or by developing chemical processes that increase the reach.

Looking into attractive investment possibilities means that we are able to benefit from the cooperation within the network of the Volkswagen Group and its brands. Again in 2017 there was dialogue between Volkswagen’s strategy and development experts and Porsche SE’s investment management. In this regard, Porsche SE, together with Porsche Consulting, was able to analyze the potential of passenger transport using drones. Porsche Consulting just recently published the main findings from this investigation in a “Vertical Mobility” study. The study highlights how electric propulsion has the ability of making the flying car as a regular means of transport a reality by 2025. Such drones are more agile, quieter thanks to their electric drive and more environmentally friendly overall as well as significantly less expensive than today’s helicopters. The study suggests that the relevant market may be worth around 32 billion US dollars by 2035.

Our origin lies with the automotive industry and we are specialists in mobility. That is why we are exploring today how we will be traveling in the days after tomorrow, what transportation of the future will look like and what it will have to provide. It seems highly realistic that air taxis will become an attractive link in sensibly networking all modes of transport. Such studies are a key instrument for Porsche SE to identify attractive trends and subsequent investment opportunities. It is important for me to point out here that we are not searching from the perspective of an automobile manufacturer, but rather through the eyes of an investor in search of investment opportunities.

Ladies and gentlemen,

Mobility as we know it today finds itself in a state of rapid flux, which is opening up many investment opportunities. The current developmental, inventive and entrepreneurial spirit is giving rise to numerous new and promising products, technologies and business models, in which we at Porsche SE would like to invest.

And so, to conclude, let me emphasize one thing: If in this time of upheaval in the automotive industry we are able to find the right answers to the important questions, then Porsche SE as a company will be able to benefit from our investment decisions in the long term – and so will our shareholders.

Thank you for listening.