

## ***Products and business model***

### **Johan Land – TomTom – Chief Product Officer**

It is great to be here with you today. There's a lot that has been building up to this moment. We've been working on this for a long time. And it's just fantastic to be able to share this with you today. So, my name is Johan Land. I'm the head of product at TomTom. And in this role, my responsibilities are to ensure that we successfully build and invest into the right products, and that we go to market with a scalable and profitable business model. I'm now at TomTom for one and a half years. Prior to this, I spent 10, 15 years in various companies on the West Coast, including Google, YouTube, and Waymo. And what brought me to TomTom was the sheer size of the opportunity for the company. The strategy we've laid out is creating a truly unique and hard-to-copy opportunity. And I want to share three specific things about this today. Firstly, the product portfolio we're building around the new maps platform and how this is solving problems for our customers. Secondly, the business model we're pursuing and how this improves profitability. And lastly, I want to share the ecosystem that we're building around this and how this leads to a strong long-term position.

Now, to start off, the products that we're building are targeting application developers that need geospatial services. And we serve a wide set of different application developers. In terms of size, it's everything from the very largest tech companies to small independent application developers. In terms of industries, it's everything from automotive applications, to social and travel applications, and the applications from mobile phones all the way to embedded in cars. Now, overall, we estimate that 20% to 40% of all applications in the world are using geospatial services in some shape or form. And while there are wide differences between all these applications, all of them are built on top of a base map. Now, this base map is the foundational product of our whole product portfolio. And it lays out the core features of the world, the road network, the cities, the countries, the coastlines, the lakes, and the mountains. Now, there are only five global base maps that have ever been created through human history. And there hasn't been a new global base map created in over a decade. Now, we are TomTom, we have one of these five base maps, and it's a very unique asset that makes us able of providing the products that we are. Now, the base map, however, it lacks the data that most customers need in order to create great applications for their end-customers. To solve this, we have what we call value-added data that sits on top of the map data.

Now, for example, the road network and city names are in the base map. But the speed limits, the lanes, the traffic information, and the restaurants, and the EV charging stations, all that sits in the value added data. An example use case for the value added data is one of the major tech companies that has their own web search solution, and they need to answer queries like: "Where is a great Italian restaurant near me?" Or a question like: "Get me a list of all the movie theaters in Singapore." Now, to answer these types of questions, they need to marry the geo-data with their other proprietary data that they have. Another example would be a social network, needing to show the location of all my friends on a map. Similarly, there they need our data. Now, the use cases for the value-added data in the portfolio are typically larger companies that integrate this data themselves into their solutions. This typically not only creates a deep dependency on the data, but a dependency on highly critical data.

Now, not all application developers are of a size where they can build directly on top of the raw data, therefore we provide services. Now, routing is an example of a service where we provide an API for customers to request essentially the best route from point A to point B. And for example, a company that has a fleet of vehicles and needs to optimize the route planning, would make use of such a service. Now, this includes finding the fastest route to avoid traffic jams or ensuring that a large semi truck is not sent down a road with overpasses or turns that it can't make. Now, logistics is an industry with very slim margins. And having the best route in an industry like this directly impacts the bottom line. So, routing for them is an

absolutely crucial service. Now another example of services is search. Now, this is where an application developer would look up an address or city, or a point of interest. And an example of this would be an electric carmaker that needs to locate a charging station. But not only a charging station, but a charging station that has the right plug, that is available right now, at a price that is reasonable. And ideally, a charger with a good restaurant nearby. Now, this same customer of ours may also use our routing service to route the car to this charging station. Now, in the overall electrification of the automotive industry, these types of services are absolutely crucial. And overall, in our product portfolio, these services provide a low-friction, low-investment, and fast way for our customers to access all our great map data. And for us, it creates leverage for reuse, as we invest once into building these services and then sell them multiple times to customers that, each of them, avoid having to make that same investment.

Now, we do not stop at only providing the services for customers. We also develop SDKs. Now, SDKs they can be viewed as us kind of providing packages or building blocks. And these packages, what they do is that they enable, essentially, developers to quickly bring in a great experience into their applications with a very, very limited investment on their side. So, examples here would be a large logistics company that has their own mobile application for their drivers. And they want to extend this application to also have say, turn-by-turn navigation and turn-by-turn navigation that integrates into their overall planning system. Now, with our Navigation SDK, they can do this with less than a day's work and have world-class navigation inside their own proprietary app. Now, another example here would be an OEM that wants to integrate search, traffic, maps, and navigation in their built-in systems in the cars. And for that we have an out-of-the-box SDK for doing this. The SDKs in our product portfolio are the highest-value products. And they tie together all the other products, all the way from the base map to the value-add, to the services, and in a very easy-to-use way for application developers.

Now, in terms of business model, the base map essentially serves as the low-cost entry point into the product portfolio. There's limited restrictions, but it also has limited data and SLAs attached to it. The purpose of it is to encourage application developers to develop on top of our base map. Now, remember, there are only five base maps in the world, the base map integration and dependence is typically very deep. As such, this serves as our vehicle for selling the value-added data. Now, currently, none of our competitors are providing this low-cost low friction entry point into their product portfolios, so this is new. For the value-added data, it is proprietary, and we break it into packages for different use cases and for different geographies. And as such, a customer can choose which package they want. We price it in a subscription like model. Now they download the data, and as long as they're subscribed, they have the right to use it and receive updates for this data. Now, there are significant licensing and usage restrictions on the product to avoid channel conflict and to enable high price realization. But also here, the model of having detailed packaging and distribution, under a new recurring revenue model, is new to the industry. And early feedback on this has been very positive.

So, for the services, they're sold based on usage, similar to how most API businesses are run. And for some segments and services, the billing is based on number of requests. For example, the customer would pay based on how many times their end users are searching for an address. And for some segments, like logistics that we're talking about before, the billing is based on how many vehicles they have in the fleet. Now, lastly, for the SDK, part, we build on top of the usage of the services, and the smaller application developers typically integrate the SDKs themselves. Whereas for larger customers, we often do the integration against a fee. And in fact, for some customers, in particular in Automotive, we even do custom development. Now, we see the move here, towards clear packaging, recurring revenue, easy entry points, and a high degree of reuse as key building stones of the strategy and the business model.

Now, another key building stone in the strategy is how we are forming an ecosystem around data collaboration. And before I go into this, let me let me set a bit of context. There's an enormous amount of data in this industry. And no doubt the data is crucial and valuable. But in practice, in reality, most of the data actually goes unused. The reason for that is that it's proven difficult and costly to synthesize the data. And knowing the location of all people, and all vehicles in the world in itself is not so useful. It's only when you synthesize it into traffic jams that is truly helpful, as an example. Now, it also proves that the magic with geospatial data happens only when you put together a lot of different types of data on a global basis. So you need it all. And furthermore, handling this type of data requires a very unique skill set. So that effectively leaves most of the data in this industry sitting with our customers and partners unused. However, if you think about these problems, this is exactly what we are TomTom are exceptionally good at.

So, therefore, in the relationship with our customers and partners, we've worked with them on their geospatial data to integrate it into the Maps Platform, with their data contributions. And examples here were mentioned earlier. In fact, I had the old data. An OEM is contributing 70 million kilometers – I had 35 million, but it's gone up so much since then. So, they can contribute that data to us every day. And from this data that they give to us, we then construct the value-added navigation data, which they, in turn benefit, from as they are using our navigation services to get the value back. Another example is how major tech companies are contributing hundreds of millions of consumers' location data for us to identify hazards. So, the customers that contribute this data back to us – we take the investment to integrate the data, and they get the benefit from the data without having to take the investments themselves.

But for TomTom, the benefit is that we get to use this data as part of the overall product portfolio. As such, their data contributions are improving the overall product. And we're already seeing major improvements to our products from these types of collaborations. So, the thing that was mentioned before is it's expanded our road network by 20%, which effectively propels us to be, by far, the unrivaled leader on that particular feature. Another example is how these contributions have led to tremendous improvements in navigation data here. An example would be the speed limit coverage, which is now best among our competition. And just to make a point there, for something like Intelligent Speed Assist, having the wrong speed limit effectively leads to the product causing a speeding ticket for the end customer – like, this data is crucial.

So, furthermore, as Mike and Antoine were telling us all about, we're now seeing how these improvements are opening up new segments and customers for us. And these new customers,, in turn, they start contributing data back. Now, this creates a virtuous cycle, a flywheel. And this flywheel is a core component of the strategy. And we are the orchestrators. And we do the heavy lifting around the geospatial data and the services. And we control all the data, but we also create the rulebook for the participants. And we integrate the data back into our overall product portfolio that we package and distribute as part of our value-added data, services, and SDKs. We control and monetize this ecosystem that we're building.

Now this isn't new. In many companies and industries, these types of flywheels have been deployed and proven to be a key component. However, in our case, I would venture to argue that is likely to prove to be even stronger. Now, the fact that there are only five base maps acts as a really strong barrier to entry in this industry. Furthermore, the complexity of the geospatial data creates the distinct need for an orchestrator of this ecosystem. Now, worth noting here is that this ecosystem is open to anyone. Participants are free to innovate in this ecosystem. Participants get access to the raw data. There's no bundling of services, so you can bring your own data and maintain it as your proprietary data. You use what you want, and you do so freely under reasonable licenses.

Now, this is very different from the non-collaborative operating model of the current market incumbent – that is Google. When using Google, you have to take all of their services. For example, you can't build your own routing, and use it with Google search. It's not allowed. Now, this makes it impossible for most customers to

truly integrate their own solutions with Google services. Now similarly, Google is not providing the raw data. And that makes it again impossible to enrich that data with your own proprietary data. So, in practice, for most of our customers, using Google is simply not an option. Furthermore, Google tends to not always be the most partnership-minded actor.

So, it's proven over and over in history here, as we were exploring the tech industry that has thrived, that open ecosystems growth takes time, but it's the way to go for faster innovation. And partner reception to this ecosystem we're now building has been phenomenal. Particularly in light of the operating model of the incumbent. So, I personally have seen deployed this type of flywheel strategy in several of my previous roles and would like to share a couple of those experiences. When I was in at YouTube, the flywheel essentially started with partnering with influencers to create better videos. And these better videos attracted more users, and the more users lead to higher monetization, which in turn lead to more influencers. That was the flywheel at YouTube. That's the core of it. Or similarly, when I was in Google Ads, it looked slightly different, but with the same principle. We built a platform for websites, and the websites attracted advertisers, the advertisers paid for ads, which made the platform even more attractive for websites.

These mechanisms are powerful. But it starts small. It starts with a first spin of this flywheel. In our case, that's a first data contribution by a partner. Followed by that leading to an improvement to a customer, and attracting a new customer. This new customer, in turn, starts contributing themselves, closing the spin. And then after that, you have a second spin of the same flywheel, and a third. And before you know it, the flywheel is spinning by itself. And we're already at a stage where we have done the first couple of spins, and it's working. The flywheel is spinning. Now, don't make any mistakes, there's a lot left to do. And we need to unlock more segments and customers. We need to perfect the platform, but all the proof points are already there. And it's at this stage, we're on a pretty firm path to creating the best map in the world, and an ecosystem that will perpetually improve the products on top of that, and create a highly defensible and profitable business. So, with that, thanks so much, and I will now hand over to my beloved friend Eric.