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**Shaping the Digital Change – the Opportunities of  
IoT for Governmental Future**

Keynote

Imaging new possibilities to transform citizen experiences

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Ms Koederitz, Ladies and Gentlemen,

Thank you very much for the invitation and opportunity - after more than 50 election campaign speeches - to talk to you today about the challenge of digitalisation. I did talk about digitalisation during the election campaign, too. But as soon as I started on the topic, the audience's attention would rapidly decline. Internet of Things? What on earth is that? Artificial intelligence? That's just science fiction! Everyone already has a computer and a smartphone. What more can there really be?

You have to work with examples to get people's attention: Yes. Today, everyone has a computer. Today, a commercially available processor has the same capability as the brain of a mouse. If things continue to progress the way they are, in 2030 its capability will match that of a human brain. And if this development continues still, in 2050 one processor will match the capability of the collective brain of the entire human race. The surge in available computing power will change the world. The question is merely how? But there is something that is growing even faster than computing power. The quantity of data and sensors.

Take a look out the window. What you see is the A9. 150,000 cars pass by here every day. 150,000 sensors. Almost all of them connected to the Internet. Right now, mostly thanks to drivers' smartphones. I drive on this road every week. Almost always under time pressure and always wanting to know what the traffic will be like. I used to listen to the radio to find out. Now I look at Google Maps. Google Maps calculates the traffic situation in real time using the geo-tracking data from the Android smartphones. And far more precisely than any traffic congestion reports on the radio, I might add.

Yesterday, as I was writing this speech, the fire brigade drove past my house to attend to a road accident. Even before the fire brigade had arrived at the scene, I saw where the accident had happened thanks to the traffic data on Google Maps.

That is the Internet of Things.

In the future, cars themselves will be connected to the Internet. When this happens, it will not just be Google that has this data, but car manufacturers, too. And not just geo-tracking data, but hundreds, perhaps even thousands more pieces of data. For governments this poses two challenges:

1. What type of regulation will this require in the future? The key term being data protection.
2. How can these developments be harnessed to improve people's lives?

If you look out of the window on the other side, you will see the "Mittlerer Ring" road. Landshuter Allee is one of the most heavily congested roads in Germany. Diesel cars may be facing a ban for this reason. If vehicles already know where they are, then why not have the engines switch to a city mode with minimal emissions once they are on the "Mittlerer Ring" road? Wouldn't that be the smarter solution that meets the needs of our citizens better? Would it actually even be feasible?

We have come to the Watson IoT Center today to find answers to these kinds of questions. The centre showcases examples to catch people's attention and to develop new solutions. Innovation doesn't just occur by developing something completely new. It occurs by combining existing technologies in new ways. Geo-tracking data exists and recently we also learnt that software in engines can reduce emissions. With the growth of data and computing power, the number of combinations for generating new solutions is growing ever larger. It is a matter of finding the right combinations. And this means bringing the right people together. Engineers versed in the technology. Professionals from the field of practice who know the problems and decision-makers who can assess the opportunities and potential more easily thanks to specific examples and prototypes. That is the added value that Watson IoT in Munich has to offer.

For policymakers like myself, IBM is an interesting partner here. IBM is not the cheapest partner under the sun, but its business model is not based on making money with its customers' data, but rather helping its customers to get the most out of the data. I'm looking out the window again and see at least one large American software company that pursues a different model. Please don't get me wrong. These are completely legitimate business models, but as the government sector we have a special need for sovereignty and therefore have problems with some of these cloud products and services. Data is the oil of the 21st century and, as government, data is not something we lack.

In 2015, in the US, IBM bought "The Weather Company" for EUR 2 billion. Not because of its special cloud expertise but to gain access to the data. We have the German Weather Service. We don't even have to buy it, but we can learn from industry and other countries how to use and harness this wealth of data even better.

That is just one example. Another example: the German armed forces, the Bundeswehr. The Bundeswehr is a software company, an airline, a satellite operator, a shipping line and much more. In every area, the Bundeswehr can learn from industry how to cut costs and improve operational readiness. I could name many other fields: police and intelligence services, local public transport, power generation, disaster prevention and relief, and so on. In each field, the business community and other countries are grappling with similar problems. Today's programme also includes a tour on which we will probably notice many parallels.

I see three factors as critical for IoT projects in order for the transfer to the government sector to work.

1. Make it secure! The Internet of Things is an opportunity and risk at the same time. Each additional device, each additional interface is a possible point of attack. IT security is an even greater challenge for government than the Internet of Things. Security by design has to be a central architectural principle.
2. Think big, start small! Government has no shortage of large-scale IT projects and there is no shortage of failed large-scale IT projects either. Successful IoT projects are not about reinventing everything from scratch, they are about connecting existing platforms, systems and data in new ways.

And last but not least:

3. Stay agile! Innovation happens during development. You have to involve the client, user or citizen throughout the whole project. And their most important question at this centre should be: "So what?" It is not a matter of technology just for the sake of technology. It is not about connectivity just for the sake of connectivity.

It is about the real and tangible gains for government, citizens and society. I very much welcome the fact that IBM has decided to locate this worldwide Government IoT Center here in Munich. I am looking forward to the presentations to follow and the tour. I hope that if we do this tour in three years' time we will not just see projects from Beijing, Paris and Atlanta, but also from Munich, Frankfurt and Berlin. So when I am back on the election campaign trail in four years' time, I hope that these examples will allow me to do a better job in getting people more interested in digitalisation.

Thank you!