5G for our country

We want the best-performing digital infrastructure for Germany. We want to achieve this objective together with the companies that are willing to invest, and with the responsible politicians. We want to speed up digitalization in Germany: In cooperation with the public sector by digitalizing administration. Together with industry, ensuring that Germany is fit for the future. We want to get people in Germany to participate in the digital world. In urban centers and rural areas alike. Broadband for millions instead of a digital divide. Because we are only satisfied when everyone can participate.

For this we offer

1. A high-performance mobile communications infrastructure

By 2020, we will cover 99 percent of the population with 50 Mbit/s. By the end of 2022, we will double the bandwidth to 100 Mbit/s. By 2025, we will cover 99 percent of the population and 90 percent of the country with <u>5G</u>. Where needed, we will offer speeds of one Gbit/s. We will provide problem-free coverage along highways, federal roads, and railways. We are thus providing better coverage than that stipulated by authorities and voluntarily committed to by industry.

2. The largest fiber-optic network in Germany

Our networks are ready for $\underline{5G}$: At a length of 500,000 kilometers, we boast the largest fiber-optic network in Germany – after all, no optical fiber means no $\underline{5G}$ and no digitalization. We build out an additional 60,000 kilometers each year. We are the fiber-optic company! Approximately 22,000 \underline{LTE} sites are already connected to our fiber-optic network and, as a result, are "ready for $\underline{5G}$." We already operate a $\underline{5G}$ network in Berlin.

3. Faster mobile build-out

Each year, we want to build over 2,000 new mobile sites – four times more than originally planned. Many of these will eliminate <u>white spots</u>. We also plan to build 10,000 smaller <u>radio cells</u> to improve coverage at particularly high-demand locations or inside buildings.

4. Shared use of our infrastructure

We want to share the infrastructure needed for <u>5G</u> with other network operators, particularly in rural areas. Therefore, we are opening up our fiber-optic network to other providers. Just how we recently agreed with Telefónica/O2. We give our competitors the opportunity to share all of our cell towers in rural areas and alongside traffic routes. We also hope for similar agreements with other network operators. Not only does this speed up network build-out. It also ensures that expansion, particularly in rural areas, is simpler and more cost-effective. Together, we cover the white spots.

5. Developing a 5G infrastructure together with German industry

 $\underline{5G}$ is not simply an additional network; it is an essential element when it comes to adding value to our industrial customer's products. We need $\underline{5G}$ for the Internet of Things and for controlling autonomous machines or smart cities. We are offering industry an opportunity to support the development of a European, standardized platform – contributing expertise and equity. We want to develop this high-performance network together with industry. Therefore, we are inviting German industry to a " $\underline{5G}$ user conference", in order to clarify the specific quality requirements for our network in terms of coverage, latencies, and bandwidths. All projects that are critical to success in Germany will be given priority.

6. Faster digitalization for administration

Together with the Fraunhofer Institute, Acatech, and Städte- und Gemeindetag (German Association of Towns and Municipalities), we want to develop suggestions to achieve a more

systematic and faster digitalization of authorities and administrations. We will explore these as part of a round table meeting.

7. Faster networks for people living in Germany

Thanks to <u>5G</u>, people in Germany will be able to enjoy significantly faster networks and higher transmission speeds – both mobile and at home. In urban centers and rural areas alike.

8. A clear investment undertaking

In recent years, we have continually increased our annual investment in Germany to 5.5 billion euros. We aim to maintain this rapid pace in addition to the costs associated with acquiring mobile spectrum.

Over 100,000 Deutsche Telekom employees in Germany and almost 200,000 employees throughout Europe are working on the eight points presented. This will aid us in safeguarding their jobs. An amended regulatory framework could provide further momentum to the enormous investments.

What would help us to build out 5G even faster

- 1. Moderate conditions for awarding contracts every euro can only be spent once.
- 2. Voluntary service offerings in place of service provider obligation. Framework conditions that make infrastructure investments pay off.
- 3. Voluntary in place of mandatory national roaming.
- 4. Requirements independent of the respective technology and service.
- 5. Frequencies other than 3.7–3.8 GHz for regional <u>frequency</u> allocations. No artificial 25 percent reduction in the available spectrum.
- 6. Simplified and accelerated approval procedures for the construction of <u>5G</u> antenna sites. Provision of and shared use of sites in public areas for installing new antennae. The United States and Asia are leading the way here.
- 7. The provision of further important <u>5G</u> frequencies in the 25 and 60 GHz band in the short term. The United States and Asia are already a step ahead in this aspect, too.