

### **5G IN THE DIGITAL SOCIETY**

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### WHAT IS IT ALL ABOUT?

## Innovation

Whatever was new before we were born is environment

hTC

Whatever came after is innovation

**Innovation drives demands** 

### CAPABILITIES

# Capability creates Opportunity

Once it is there it could be a business in itself or provides a platform for even more innovation

5G is about to provide new capabilities enabling new innovations and applications MOBILE COMMUNICATION HISTORY

### **Example Germany** every 10 years new

1984	1992	2002	2012	2020+
C-Net	GSM	UMTS	LTE	5G
<ul> <li>Analog voice network</li> </ul>	<ul> <li>Digital voice network</li> <li>SMS, Texting</li> </ul>	<ul> <li>Digital voice &amp; data network</li> <li>Mail, Browsing, Apps</li> </ul>	<ul> <li>Digital data network</li> <li>Streaming</li> <li>High Speed</li> </ul>	<ul> <li>Digital data network</li> <li>?</li> </ul>

**SAMSUNG** Smartphones came with mobile internet connections

Song download came from "load and wait" to instant availability

ELECTION Spotify Netflix and Spotify came with high speed internet

**WhatsApp, facebook, etc. came with internet everywhere** 

(()) TELENOTARZT.DE

Mission critical applications came with improved reliability

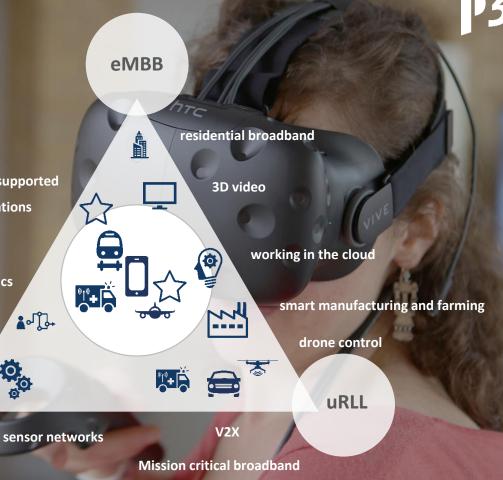
Services will be developed along with capabilities Until now, all provided resources have been consumed...

# The next big thing to change our lives

Frontend	Transport	Backend	Aggregation Visualization	Processes Products
<ul><li>Sensors</li><li>Wearables</li><li>Machines</li></ul>	<ul><li>High speed</li><li>High capacity</li><li>High reliability</li></ul>	<ul> <li>Big Data</li> <li>Massive computing</li> <li>Across locations</li> </ul>	<ul> <li>Post processing</li> <li>Digital scientists</li> <li>New formats</li> </ul>	<ul> <li>Process automation</li> <li>Product development</li> </ul>

### **5G AT THE HORIZON**

**300** Mbit/s in dense urban areas **1000** Mbit/s in smart office environment **10 Gbit/s peak data rates** < 1ms latency video-supported applications 15 Tbit/s / km<sup>2</sup> for smart office areas Real time positioning accuracy < 1m logistics **ຼ**ັດໃີ່ໄ⊶ health monitoring More capabilities massive to come... IoT





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