

## Fibre networks and shaping the digital future

Digital transformation is changing our world at an unprecedented rate, presenting new opportunities and challenges for our daily lives, for the way we work and how we communicate with each other. Digitalisation influences every aspect of our social and commercial interactions. It is therefore essential to maximise the **potential of digital transformation**, to the benefit of all, putting people first and encouraging the development of reliable technologies and infrastructures.

**Fibre connectivity is the cornerstone of digital transformation and the enabler of a sustainable future.** It allows the exchange of data and gives network access to people, which is the only way to fully harness Europe's digital growth potential. To this end, fibre networks to the buildings are crucially the most high-performance, future-proof and sustainable of all known communication technologies. They allow data transfer at gigabit speed, enable reliable real-time transmission, and ensure the viability of high-quality internet services. As such, fibre networks are central to digital transformation, making it a prerequisite for the digital future and a successful transition to the gigabit society.

Moreover, fibre networks are part of the solution to all major policy challenges of the coming decade. **They play a significant role in the economic recovery from the COVID-19 pandemic, serve as an important lever for the achievement of climate objectives and remain an integral part of the overall societal development.**

### 1. Fibre networks in response to the COVID-19 pandemic

The COVID-19 pandemic and its impact on everyday life has stressed the importance of connectivity in all sectors of the economy and the society. Communication technologies, in particular **fibre networks, have helped us stay connected, work from home, facilitate e-learning for children and maintain social contact.** The increased reliance on telecommunication networks has distinguished them as critical infrastructure during the crisis and played a decisive role in keeping our businesses afloat and public services up and running.

Fibre roll-out has exponentially accelerated in recent years, leading to increased market activity and investor participation. That being said, the Coronavirus crisis has demonstrated that further efforts are needed to achieve nationwide fibre deployment in Germany and Europe. Ultrafast broadband access in urban and rural areas is essential for tackling the economic crisis in the upcoming years. Only nationwide fibre infrastructures will allow to fully exploit the potential of digitalisation as a pillar of the future economic recovery. **The political and regulatory framework must therefore set the right incentives to further accelerate the deployment of fibre networks** and encourage the expansion of new high-performance infrastructure to successfully steer the economy through the crisis. This can only be achieved by prioritising economically viable fibre deployment which does not rely on public subsidisation, and by strengthening private investment and market competitiveness. Excessive regulatory market interventions should, as a base rule, be avoided in order not to unnecessarily hamper the dynamics of accelerated deployment. This is important for increased economic activity, to safeguard countless jobs, to help connect underserved areas and to strengthen Europe's global competitiveness in the future.

## II. Fibre networks, the most sustainable long-term infrastructure

Sustainability and digital transformation were already on top of the political agenda before the Coronavirus crisis, which has unveiled the importance of linking them to one another. The full potential of digitalisation can only be harnessed through the use of energy and resource-efficient digital technologies. Future-proof **fibre networks play a key role in combating climate change and achieving sustainable ecological development**. They consume far less energy than other communication technologies, thus significantly contributing to the European Green Deal and the achievement of the 2030 sustainability goals. Full fibre networks (FTTB/H), which allow the transfer of almost unlimited amounts of data, are fundamental to sustainable digitalisation.

To reap the benefits of digitalisation and to enable a more sustainable future, a strong political commitment to fibre technology is needed. This is indispensable to fully realising the long-term energy-efficient effects of the infrastructure. Fibre networks are distinguished by their long lifespan and comparatively low maintenance requirements, which result in low material consumption in the overall product lifecycle. Consequently, it is important to incentivise the acceleration of fibre deployment, since comprehensive nationwide fibre infrastructures are necessary to attain the complete benefits of low energy and resource consumption.

Moreover, digital transformation also has other positive effects on the environment. Exchange of digital data allows people to work in a manner that is less dependent on material goods and fixed office spaces, enables transport and traffic reductions, and facilitates efficient energy management. Many of these benefits have been highlighted throughout the experiences accrued during the Coronavirus pandemic.

## III. Fibre, the basis for a 5G future

Mobile technologies like 5G will play an important role in complementing indispensable fixed line access, enabling a vast variety of digital applications, and giving consumers the opportunity to actively participate in the digital world independent from their location. 5G roll-out will increase the inclusive digital development of our society in the coming years, if policy makers set the right conditions for infrastructure development. **However, fibre networks are a prerequisite for 5G connectivity and the connection of fibre networks to 5G base stations**. A green and digital transformation of the economy will only be possible if these two communication technologies are considered complementary to one another. For this reason, it is important to maintain existing market dynamics in fibre deployment without causing further delays by introducing additional regulation. Negotiated solutions between operators are fundamental for accelerating fibre and 5G deployment.

BREKO's network operators have identified the connection of base stations (FTTS) as part of their business models. The BREKO Purchasing Group has already concluded framework agreements with the 5G-operator 1&1 to connect wireless communication networks to the fibre infrastructure. BREKO members are aware of their shared responsibility for bringing about a sustainable digital future in Germany. Fibre networks are a core component of a sustainable future-proof infrastructure, which yield the benefits of connectivity across all sectors of the economy, from transport and energy to healthcare, education, and agriculture. Establishing synergies with 5G will contribute to the digital inclusion of all and will reduce the digital divide between urban and rural areas.

**Future-proof fibre networks are fundamental to economic and social development, while efficiently contributing to sustainability. Fibre is the centrepiece of a networked society and the prerequisite for a technologically sovereign and globally competitive Germany and Europe.**