Our strategy (continued)

Improving asset utilisation

Vodafone enjoys the benefits of market leading assets and infrastructure but we need to improve the utilisation of all our assets, so we can improve our return on capital. We see several opportunities to generate significant value creation and returns.

Capital smart infrastructure partnerships

Network sharing opportunities

We see a unique window of opportunity to initiate or extend our existing mobile network sharing agreements as the industry begins to deploy 5G. By sharing infrastructure, we will support the 'digital society' by improving network coverage and speeding up the deployment of 4G and 5G services; protect the planet by substantially reducing energy emissions; and materially improve the utilisation of our assets, realising significant cash savings in both operating costs and capital expenditure. Importantly, by ensuring that we only share networks with partners who share our determination to operate leading Gigabit networks, we will not compromise our differentiation compared to value players.

Specifically, across our European markets we aim to pursue:

- 'Passive' infrastructure sharing, including towers and rooftop sites, on a national basis.
- 'Deep passive' infrastructure sharing, including high speed backhaul solutions, on a regional or national basis.
- 'Active' infrastructure sharing, including radio equipment, outside major cities.

Reflecting this priority, we have announced agreements in recent months in Italy and Spain, which in aggregate are expected to reduce our annual medium term operating expenses and capital expenditure by around €200 million; we also extended our 4G agreement in the UK:

- In April 2019 we signed a new agreement with Orange in Spain to significantly extend the scope of our existing mobile network sharing agreement, and to include 5G services, with an estimated cumulative cash benefit for Vodafone of at least €600 million over the next ten years.
- In February 2019 we signed an MOU with Telecom Italia for a new network sharing agreement across both 4G and 5G services.
- In January 2019 we signed an MOU with Telefonica in the UK to extend our existing 4G agreement to cover 5G services

Unlocking tower efficiencies and monetisation options

Once these sharing arrangements are sufficiently progressed, we will be in a position to consider potential monetisation options for our towers. We are currently actively exploring a tower merger in Italy with Inwit, Telecom Italia's listed tower subsidiary, as well as monetisation options in the Netherlands, Spain and the UK.

For markets where tower monetisation is either strategically or financially unattractive, we are creating an internal 'Virtual' TowerCo, in which a centralised management team will bring a dedicated focus to drive greater operating efficiency and incremental revenues from additional tenancies.

Capturing the material synergies from in-market consolidation deals

We have announced a number of in-market consolidation transactions, which we expect to unlock significant synergies. We have a strong track record of delivering or exceeding targeted cost and capex synergies on prior deals, including Kabel Deutschland in Germany and ONO in Spain.

- In the Netherlands, VodafoneZiggo has already delivered half of the targeted cost and capex synergies, and now expects to achieve its goal of €210 million of annual run-rate savings by calendar 2020, one year ahead of its original plan.
- In India, we have made a very fast start on capturing targeted cost and capex savings following the merger of Vodafone India with Idea Cellular, and now expect to achieve the INR 84 billion annual savings run-rate by FY21, two years ahead of the original plan.
- Our announced acquisition of Liberty Global's cable assets in Germany and Central and Eastern Europe ('CEE') targets expected cost and capex savings of €535 million by the fifth full year post completion, with an NPV of €6 billion including integration costs. We will remain highly focused on capturing these significant opportunities for value creation.

Material cost and capex synergies

vodafone Ziggo

€2.5bn
NPV of cost and capex synergies

vodafone Idea

INR 84bn
Annual run-rate savings by FY21

unitymedia upc

€6bn
NPV of cost and capex synergies

Leading Gigabit networks

Our ambition in both Consumer and Business is underpinned by our market leading or co-leading network position. We intend to build on our leadership in 4G to create Europe's largest 5G network in the coming years. We are well positioned to do this thanks to Project Spring, where we densified and fully modernised our network infrastructure.

Co-leading in 5G

Our strategy for 5G deployment will be one of co-leadership, matching the pace of other leaders in each market. Our initial focus will be on major cities, where today 69% of sites are 5G ready. This means they are both single RAN enabled and have a backhaul capacity of more than one Gigabit per second. In February 2019, we were the first operator in the World to complete a full 5G live connection, and we expect to have 5G live across 50 cities in Europe by the end of FY20 following commercial launches this summer.

Creating an efficient Gigabit factory

Demand for mobile data is growing rapidly, with European data traffic growing by 52% in 2019. As we evolve to 5G, one of the biggest opportunities we see in the near term is that it is a much more cost effective technology.

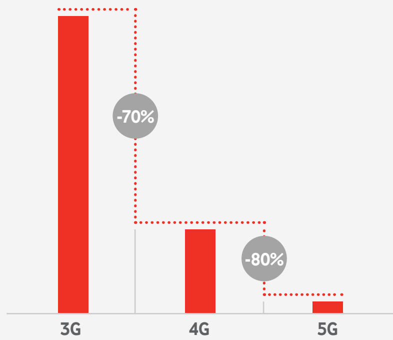
The cost per gigabyte on a 5G network is up to 10 times more efficient than on 4G, therefore driving unitary cost down. This provides us with the ability to keep network costs stable while still being able to manage the significant growth in data volumes.

We are also rapidly moving towards a single cloud-based architecture where our IT applications and network functions are virtualised. This enables us to become a much more agile business, operating at a lower cost base. On average, we see a 30–40% cost saving each time an IT or network function is migrated to the Cloud. Adding incremental capacity to the network will now take a matter of hours rather than having to plan weeks or months in advance.

Delivering Gigabit speeds on cable

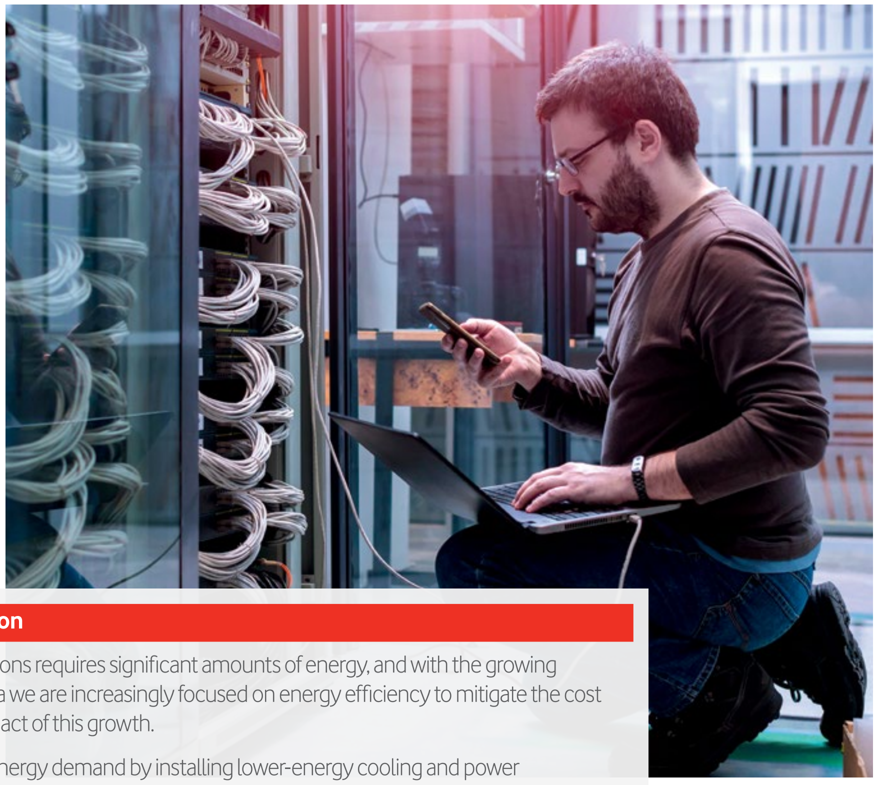
In fixed, we are upgrading our cable infrastructure to deliver Gigabit speeds. This is being achieved through a combination of freeing up existing spectrum previously used by analogue TV, deploying fibre to the last mile, and rolling out the latest DOSCIS 3.1 technology. In Spain, this upgrade is fully complete, and in Germany we are two thirds through the upgrade. We have also commenced our roll-out in the Netherlands.

Relative radio cost of delivery
Indexation of unit costs



Delivering Gigabit speeds on cable

	DOCSIS 3.0	DOCSIS 3.1
Maximum upstream speed	200Mbps	1Gbps
Maximum downstream speed	1Gbps	10Gbps



Our purpose in action

Providing communications requires significant amounts of energy, and with the growing demand for mobile data we are increasingly focused on energy efficiency to mitigate the cost and environmental impact of this growth.

We have reduced our energy demand by installing lower-energy cooling and power technologies. For example, at our main technology centre in Germany we improved energy efficiency by 8% by upgrading to a state-of-the-art power supply system. Across our network, we have also cut energy use by decommissioning legacy assets including data storage systems and servers.

These energy efficiency initiatives contribute towards our objective of **reducing greenhouse gas ('GHG') emissions by 50% by 2025**. During the year, we achieved a 36% reduction in the amount of GHG emissions per petabyte ('PB') of mobile data carried, to reach an average of 371 tonnes CO_2e per PB.