

Telefonica

Meaningful and inclusive connectivity

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Meaningful and inclusive connectivity

A holistic policy approach is needed to attract investments and create demand

Innovation is needed to be able to connect all and leave no one behind

Connectivity and Services



Digitalization



“In order to get people connected it is necessary to use **innovative ways to deploy networks**, enable the creation of **relevant digital services** and equip **users with basic digital skills to benefit from them.**”

Connectivity and Services

Innovation regarding policies, business models and technology is needed to connect all

Policy and Regulatory innovation

Sustainable investments



Attract private investments in connectivity infrastructure

Business model innovation

New partners



Open wholesale models, financial long-term investors

Technology innovation

Future networks – New services



More open, modular and software-based network architecture (e.g. OpenRAN)

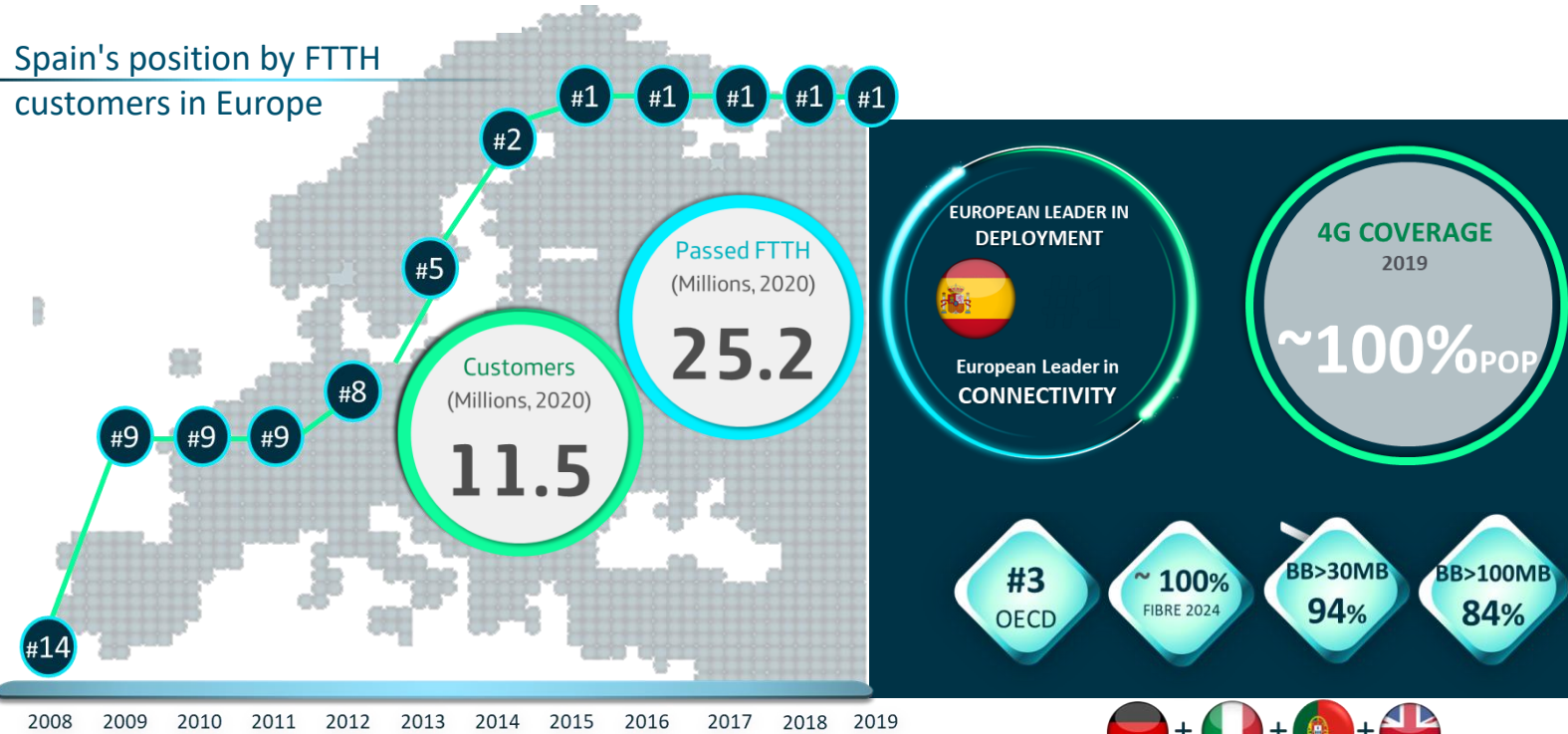
1. Policy and Regulatory innovation



Sustainable investments and infrastructure-based competition

Since last economic crisis, Spain has become a leader in the deployment of ultrafast fiber in Europe, supported by a regulatory policy that attracts infrastructure investments

Spain's position by FTTH customers in Europe

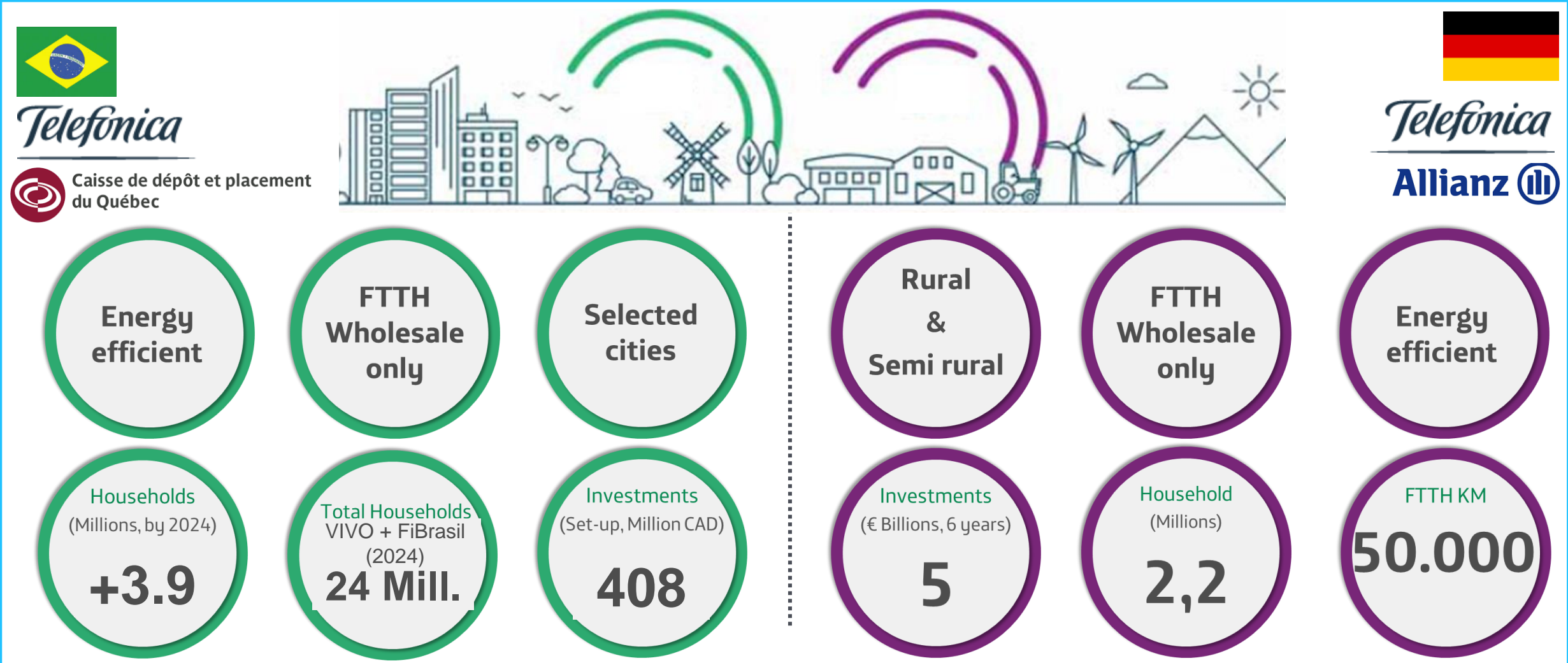


- Regulated access to physical infrastructure
- No wholesale access to broadband services above 30Mbit/s
- In 2020: Competition between cable or fibre infrastructures in over 600 municipalities

Investors can differentiate on quality from competitors

2. Business model innovation

New investors and partners for fibre deployments

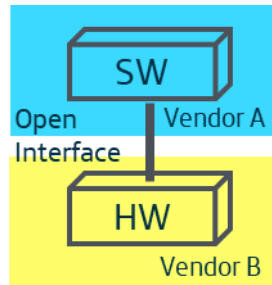


3. Technology innovation (I)

Fibre & 5G networks will have different network architecture providing new possibilities

New possibilities due to **Open architectures**, **virtualization** & **softwarization** of the network

OpenRAN



Software Defined



Unbundled & Open Interfaces



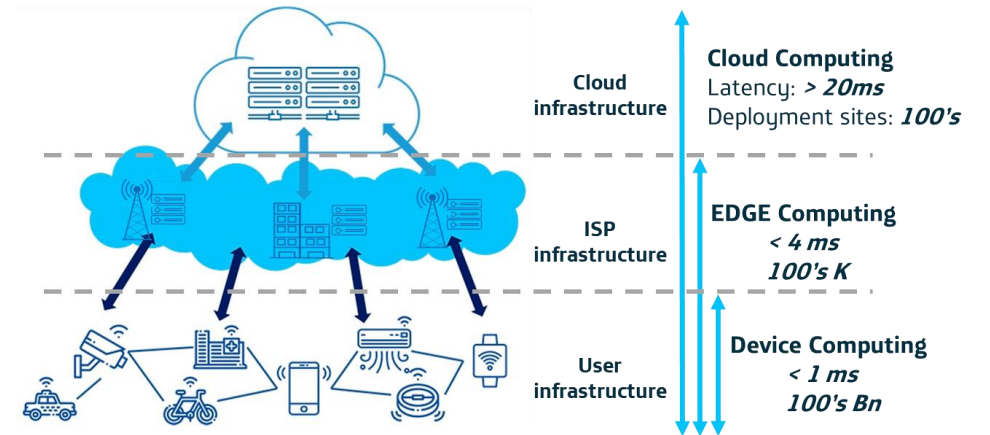
Programmable & Flexible



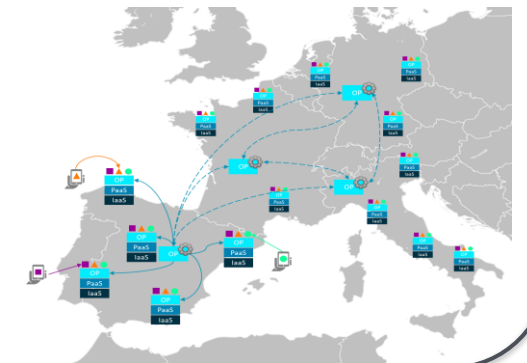
Multi-vendor Friendly



Cloud & Edge Computing



Federate Cloud and Edge Computing for European Enterprises and Administrations



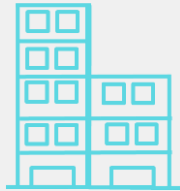
Digitalization

Improving connectivity is not enough, digitalization initiatives need to support it



Public Administration & Businesses

Going digital



- Covid-19 recovery funds should be used to improve digitalization of SMEs and Public administrations
- Less than 20% of small business employ ICT specialist (<45% medium & <80% large)*

Innovation Ecosystems

Key technologies & start-ups



- Create excellence for key future technologies
 - ✓ Artificial Intelligence
 - ✓ High Performance Computing (HPC)
 - ✓ Quantum technology
 - ✓ Blockchain
- Foster start-ups and innovative businesses

Skills

Lifelong learning



- More Public and private up- and reskilling initiatives
- Modernize public education using best practices
- 60% of children will work in jobs that do not even exist today

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