

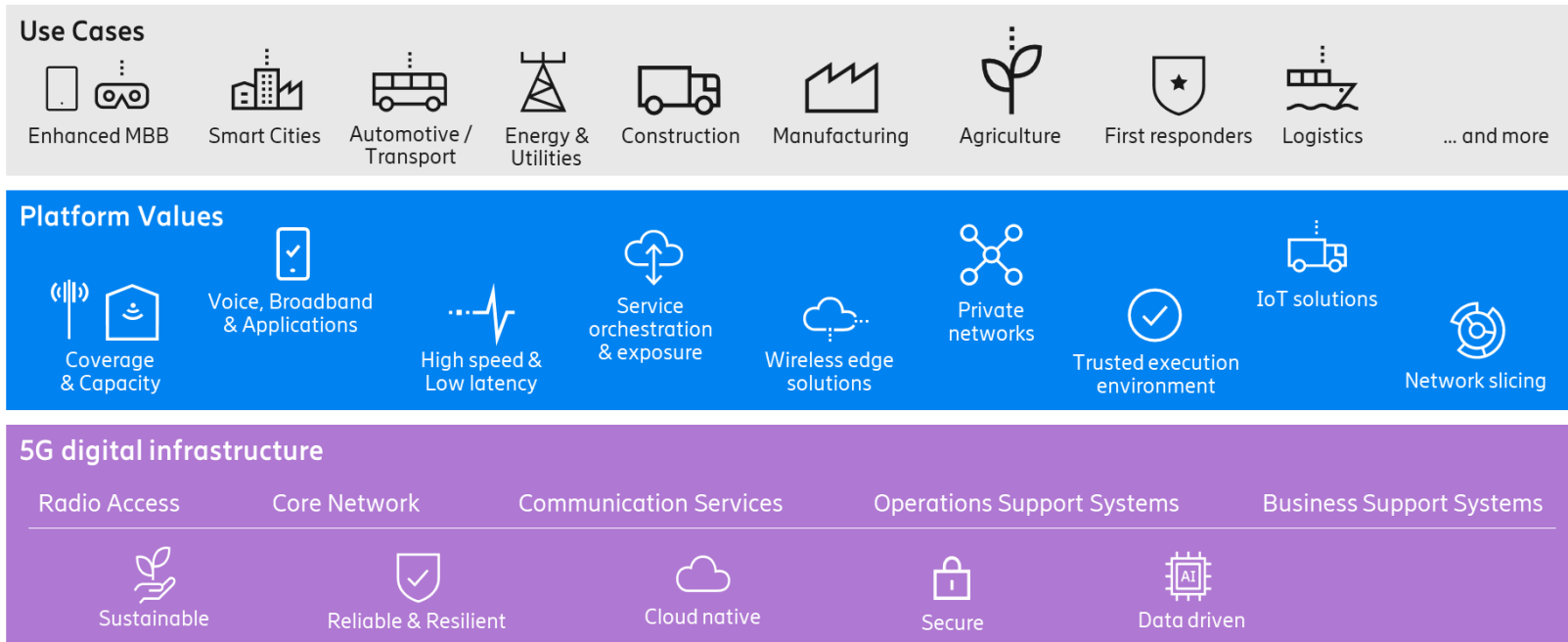
# Norms and Standards for Trusted Connectivity



# Digital governance as an enabler of trusted connectivity

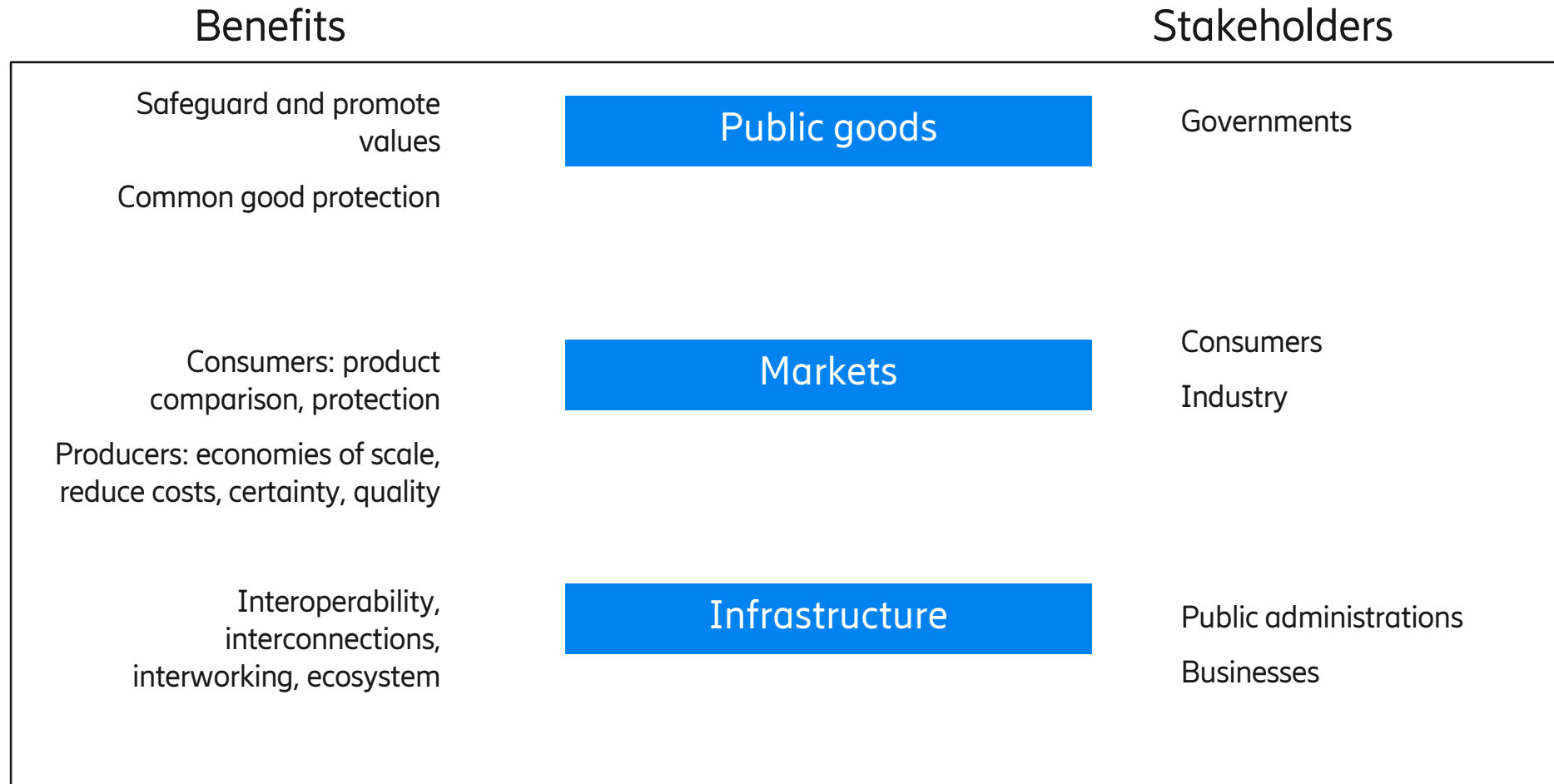


## 5G - a connected open innovation platform



- Holistic and joined up policy approach is necessary.
- Data layer and trust in data flows is just one aspect.
- Disconnections in national data policy frameworks introduce challenges.
- Any disconnection at infrastructure and standards level are challenge-amplifiers

# Benefits of standardization



# Mobile industry has been shaped through shared innovation



700

Companies  
collaborate today

>100

Open  
interfaces

One global standard leveraged by large ecosystem enabling standard based innovation in mobile communication devices and network equipment.

# Global Trusted evolution beyond 5G



## CARBIS BAY G7 SUMMIT COMMUNIQUÉ

### Our Shared Agenda for Global Action to Build Back Better

...to **support effective standard setting** that reflects our core values and principles...

..to this end, **we endorse the framework for G7** collaboration on digital technical standards.

..underpinned by **transparency, openness of process and participation, relevance and consensus-based decision making in line with WTO...** and the Technical Barriers to Trade (TBT) Committee Decision on Principles of International Standards.

**Global 5G and 6G leadership with core values protected is ensured by...**

**Avoiding government-imposed standards** to allow marked led initiatives to flourish is necessary but not sufficient.

**Openness in the process and participation** coupled with consensus-based decision making in international standards development is key.

**Only through effective standard setting based on core values being protected can infrastructure enable convergence on data governance standards**



# WTO encourages the use of international standards as a means to facilitate trade

- To ensure that neither the standard-setting procedures, nor the use of standards, **cause discriminatory treatment and unnecessary obstacles to trade, the legal framework includes several procedural requirements.**
- The procedures and standards should be **transparent, open during all stages, impartial to different interests, consensus-striving, effective, relevant, coherent and ensure an effective participation of all WTO members** and the relevant parties within their territory.
- Furthermore, **WTO members must take reasonable measures to ensure that private standardizing bodies within their territory strive to comply with these procedural principles.**

## Technical standards

- Avoid fragmentation of standards.
- Refrain from using national standards in situations where global standards exist.
- Avoid state-imposed standards.
- States ensuring that private standardization bodies comply with WTO procedural principles.

# 3GPP – Key end-user benefits



Affordability



Fast time to market



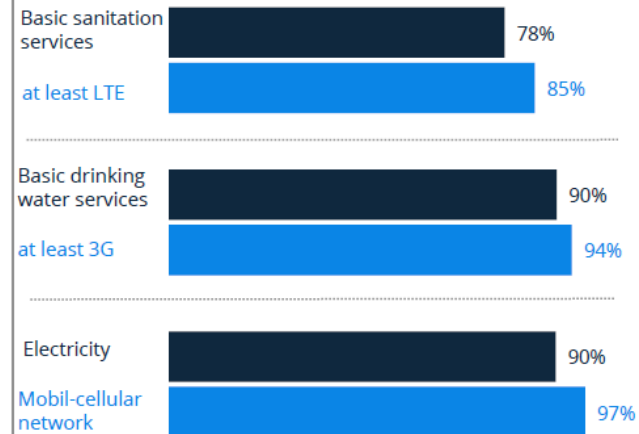
Mobile  
broadband



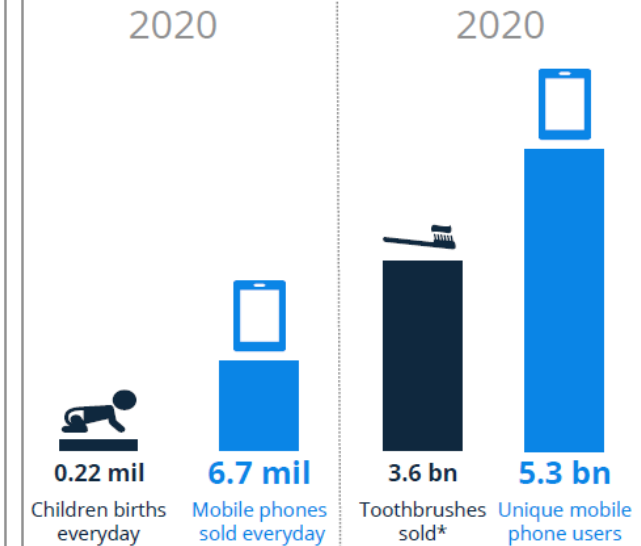
Unparalleled global  
diffusion

## 3GPP technologies diffusion vs. essential commodities

Percent of population covered by ... (2020)



## Did you know?



Source: <https://www.statista.com/study/74670/a-mobile-connected-world>

\*\*\*\*Estimated by Statista

Source(s): [Grandviewresearch](#), [GSMA](#), [ITU](#), Statista Analysis, [WHO](#), [Worldbank](#), [Worldometer](#)

# 3GPP – Key end-user benefits



Affordability



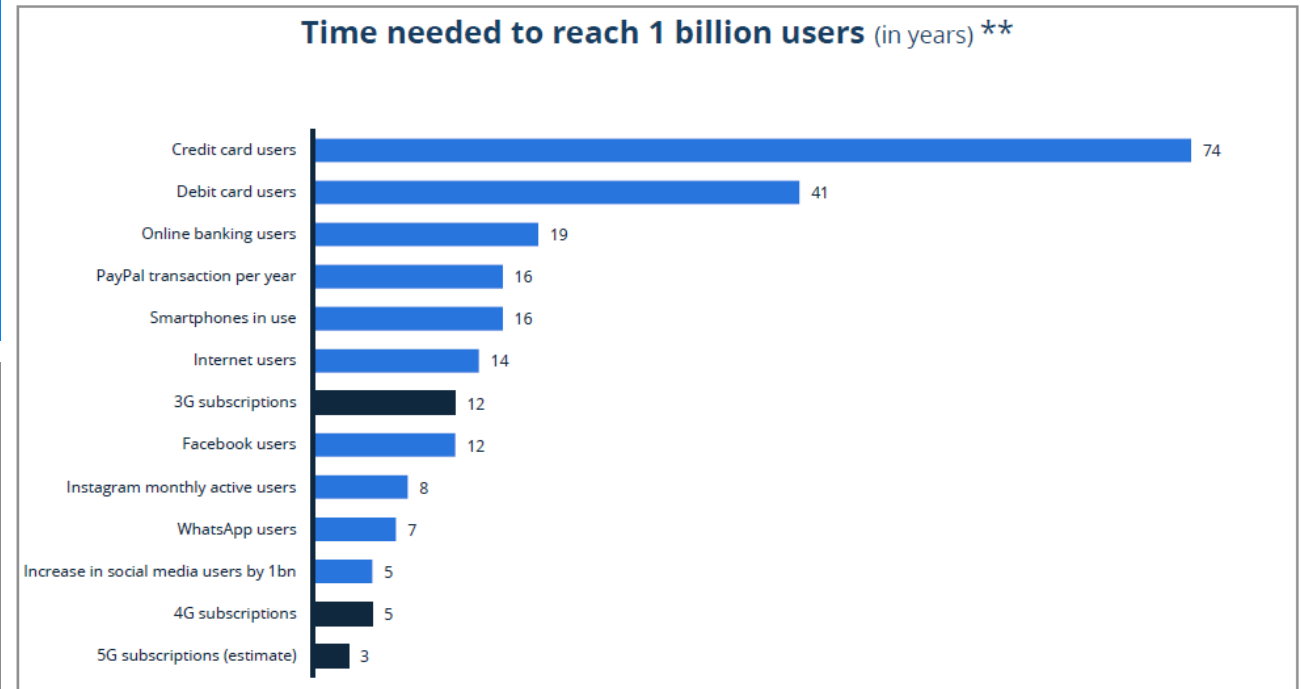
Fast time to market



Mobile  
broadband



Unparalleled global  
diffusion



Source: <https://www.statista.com/study/74670/a-mobile-connected-world>

**Note(s):** \*3GPP includes 3G,4G & 5G \*\* The years have been counted from the entrance of the mentioned technology to the market onwards. Calculated by Statista as of April 2020  
**Source(s):** EMarketer, Ericsson mobility report Facebook, GSA, Instagram, ITU, Jefferies & companies, our world in data, PayPal, Statista analysis, Strategy Analytics



# Example 5G security of deployed networks



## Operations process

- Secure operational procedures, e.g., segregation of duties, use of least privilege and logging
- Monitoring the security performance, vulnerability management and detection of attacks
- Response and recovery after breach

## Deployment process

- Solid network design with security and resilience in mind
- Configuration of security parameters, hardening

## Vendor product development process

- Secure hardware and software components
- Secure development processes
- Version control and secure software update

## Telecommunications standardization process

- Secure protocols, algorithms, storage

- End users' experience of network security is determined by deployed networks.
- Security status of deployed networks depends of four inter dependent levels.
- Holistic approach to security includes all four levels.
- Operators are in control of operations, deployment and integrator and vendor selection.
- Vendors are in control of their product development and sourcing decisions (component suppliers).
- Standards are set in a multi stakeholder fashion.

# Enhancing trust in global mobile networks



***NESAS development and product lifecycle assessments are conducted against security requirements that cover the following areas***

Security by design	Security testing	Automated build process	Security fix communication
Version control systems	Staff education	Build environment control	Documentation accuracy
Change tracking	Vulnerability remedy processes	Vulnerability information management	Security point of contact
Source code review	Vulnerability remedy independence	Software integrity protection	Source code governance
Security testing	Information security management	Unique software release identifier	Continual improvement & Security documentation

The *GSMA Network Equipment Security Assurance Scheme (NESAS)*, jointly defined by **3GPP** and **GSMA**, provides an **industry-wide security assurance framework** to facilitate improvements in security levels across the mobile industry

NESAS defines security requirements and an assessment framework for secure **product development and product lifecycle processes**, as well as using **3GPP defined security test cases** for the **security evaluation of network equipment**





<https://www.ericsson.com/en/public-policy-and-government-affairs/cyber-network-security>