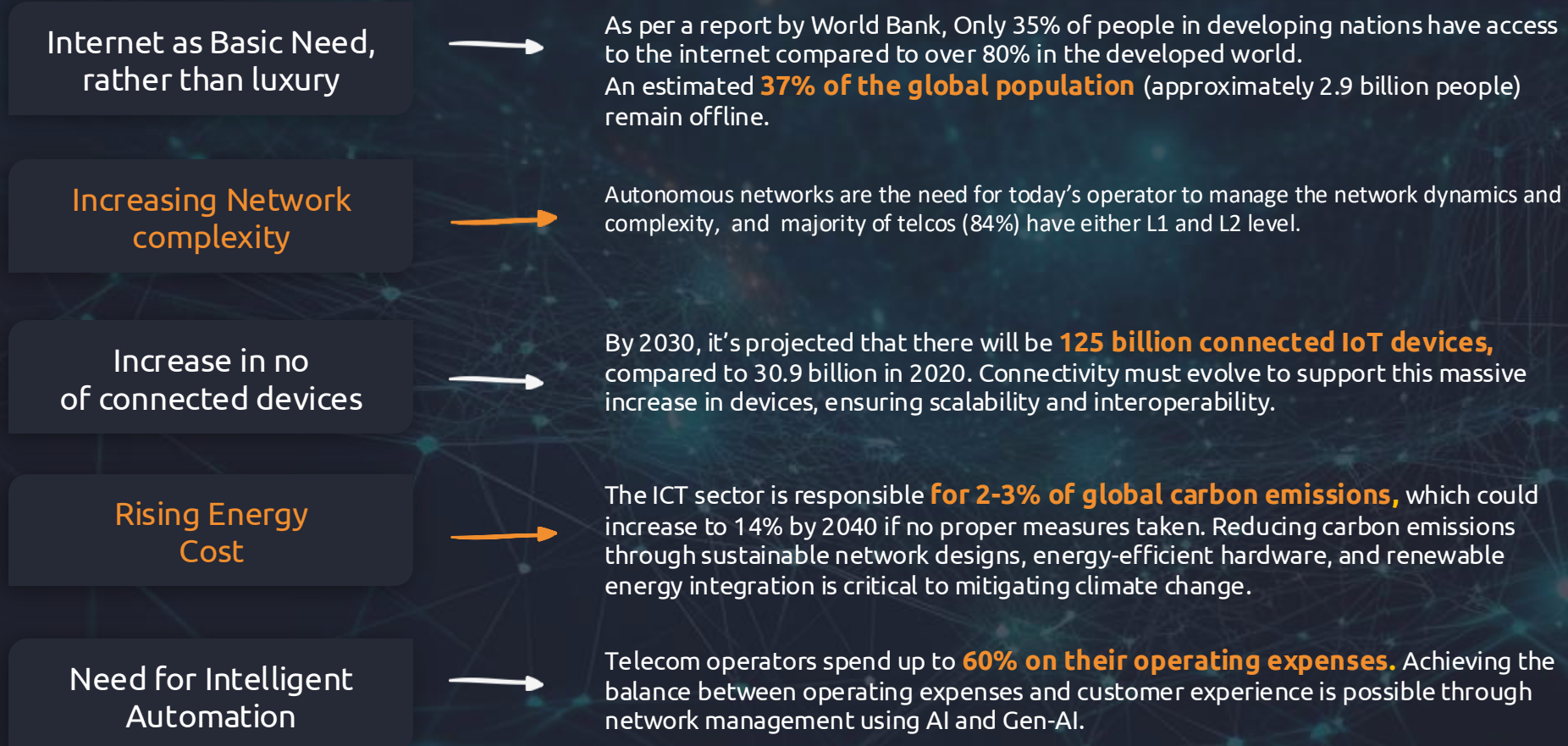




# FUTURE OF CONNECTIVITY



# Why future of CONNECTIVITY matters?





# Challenges



## Accessibility

Despite technological advancements, there remains a **significant gap in internet access between urban and rural areas**, as well as between developed and developing countries.



## Lack of intelligent network management

Majority of operator's network management systems still follow rule-based/static mechanism. **Network dynamics** should be managed through AI-enabled intelligence for improving network efficiency.



## Security and privacy

The massive exchange of data over digital networks raises concerns about security and privacy. As networks become more complex, they become more vulnerable to cyberattacks,



## Sustainability

Networks, data centers, and connected devices consume vast amounts of energy. With increasing concerns about climate change and sustainability, reducing energy consumption is critical.

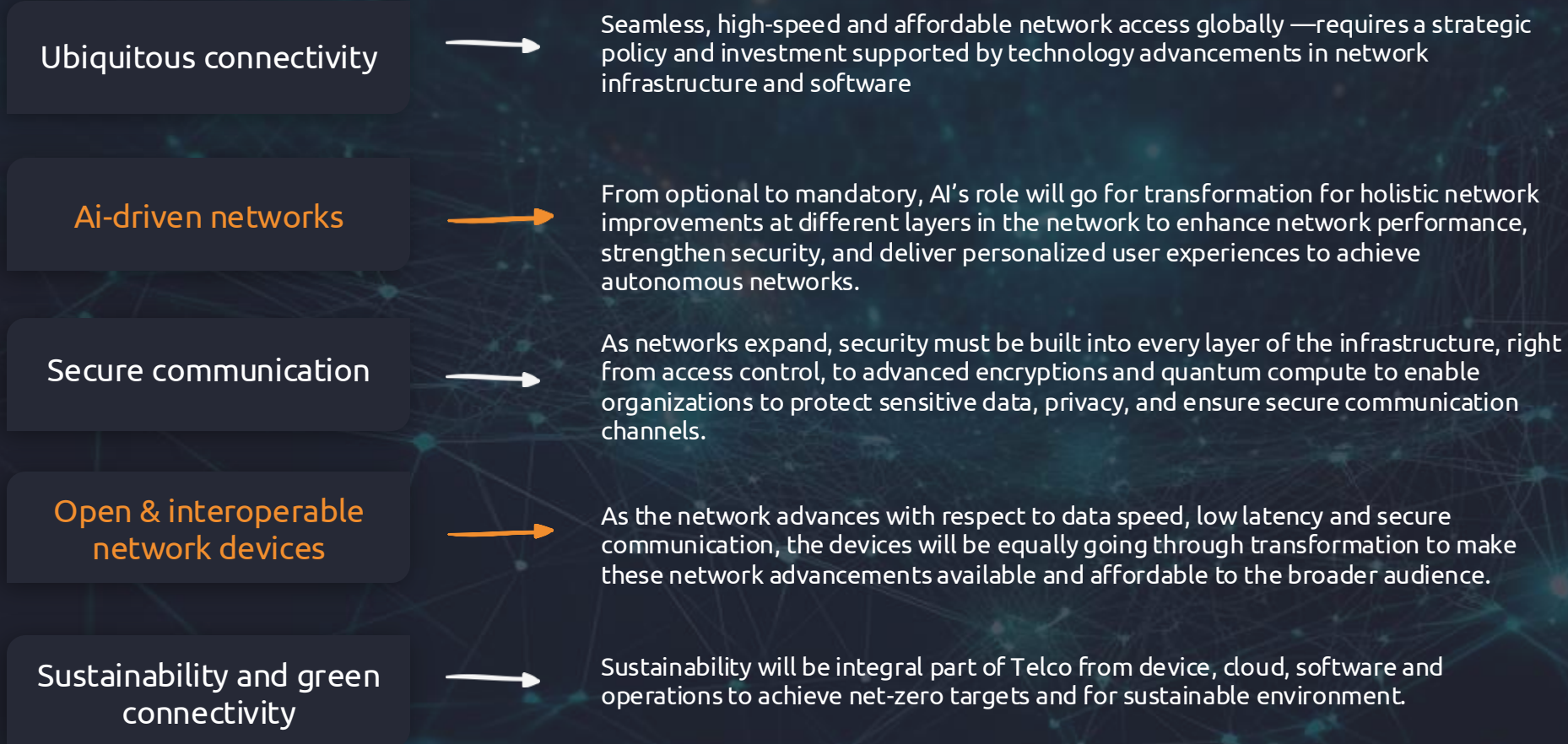


## Interoperability

Devices often use **different protocols, standards,** and technologies, which can lead to compatibility issues when connecting to existing networks or other devices.



# « OUR CONVICTIONS »



# Summary of main trends



- H1 Scaling
- H2 Innovation
- H3 Research



# R&i projects

## Ubiquitous Connectivity



1. **IMAGINE-B5G**  
**AMAZING-**  
Innovative technology enablers in Communications, Applications and AI, IoT and localization

## AI-Driven Autonomous Networks



1. **PROJECT MARCONI** (India): Intelligent Link Adaptation in RAN

## Secure Communication



1. **QUEENS & TRUST** (Portugal, Proposed): Security framework for 6G networks that is resistant to attacks from quantum computers.

## Interoperable Network Devices



1. **6G-XR (Spain):** Open platform to develop Holographic, XR, AR communications
2. **AMAZING-6G** (Portugal) : Large scale trials and pilots for verticals in 6G
3. **EXIST: DIGITAL TWIN ROBOTIC ARM :** Controlled through the industrial metaverse

## Sustainability



1. **PROJECT BOSE (In)::** Intelligent Energy Saving For 5G and Beyond Telco Networks