



ETSI ISG F5G: fixed network harmonized evolution

Luca Pesando

TIM

ETSI ISG F5G Chair

ETSI Board member

November 9 2022

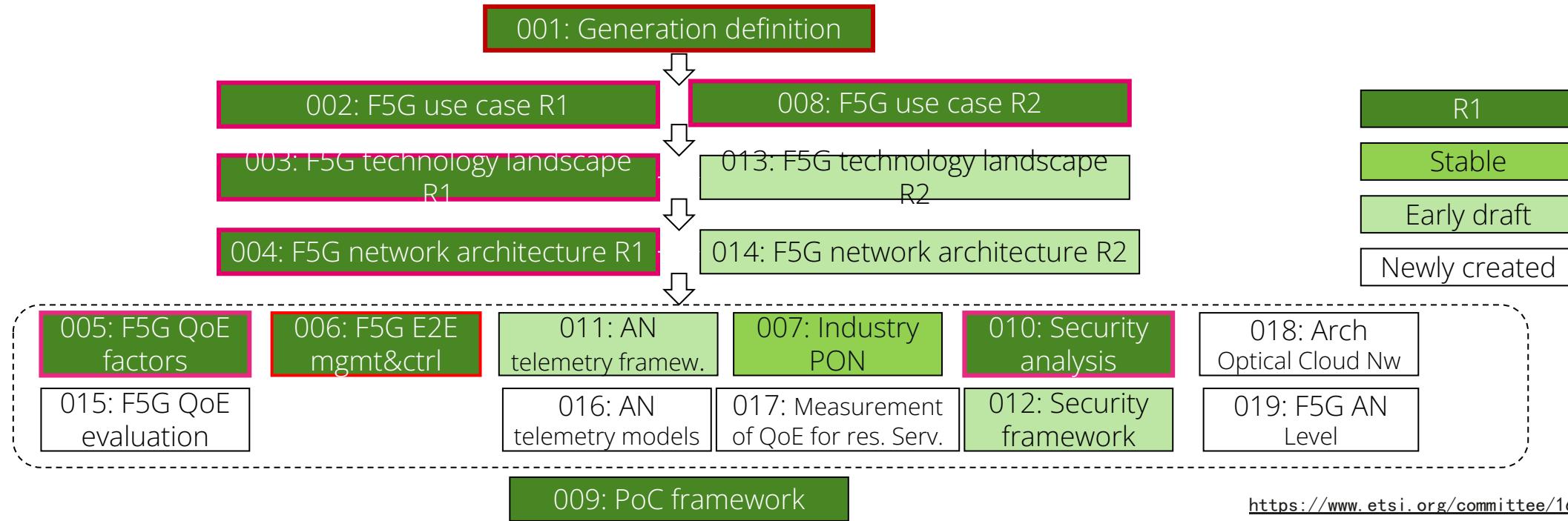
Agenda

- ETSI ISG F5G: a first successful mandate
- A snapshot through the use cases
- What to do next



ISG F5G Standards overview

F5G
Standard
S



White
Papers

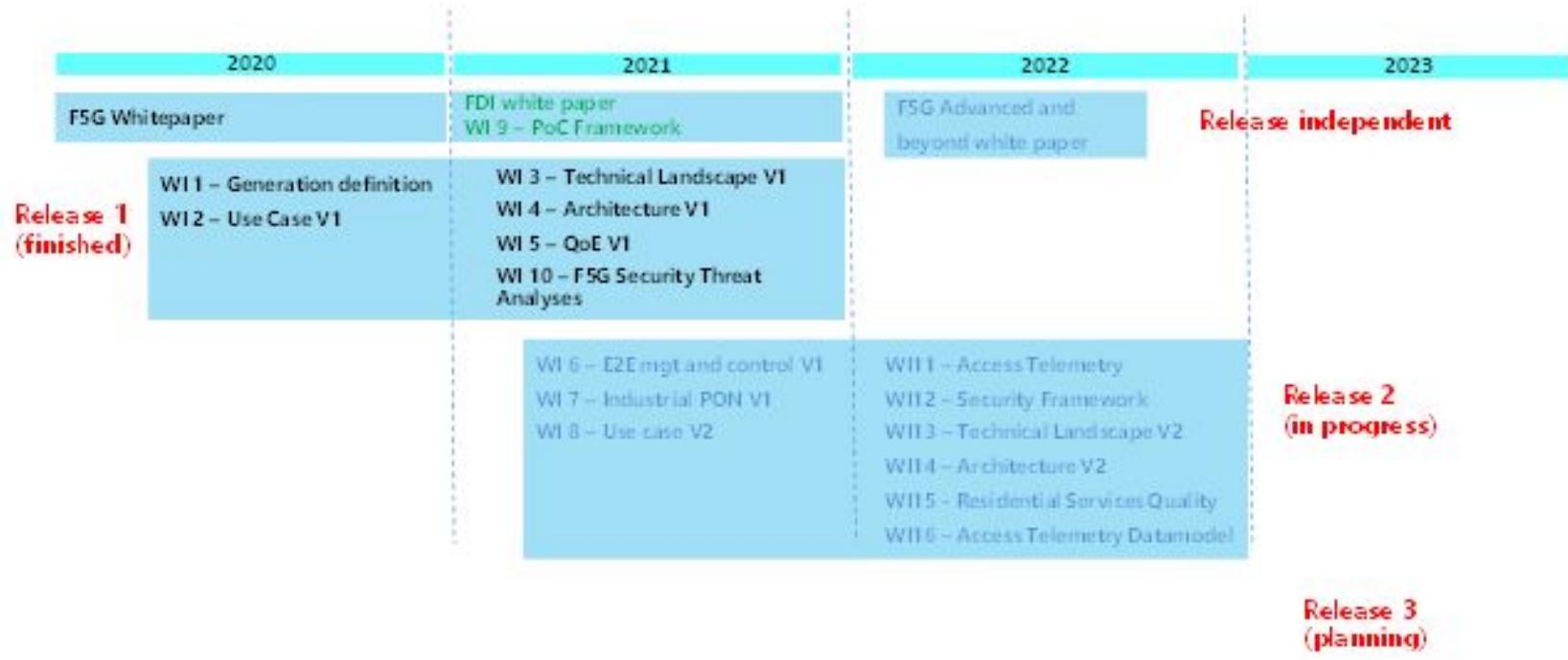
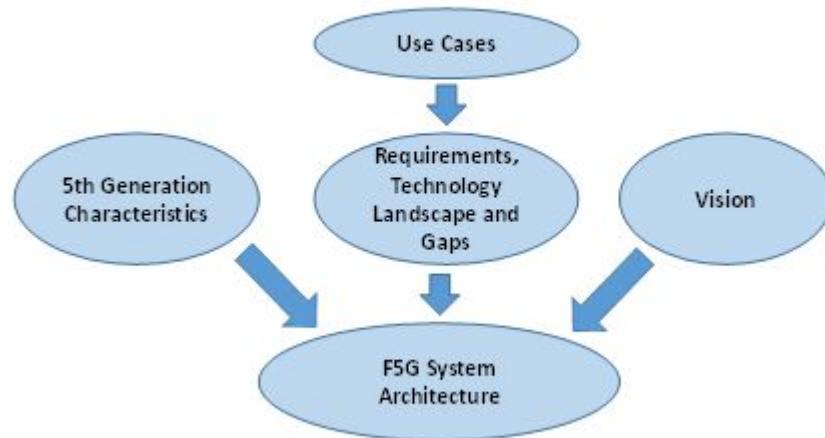
The Fifth Generation Fixed Network (F5G): Bringing Fibre to Everywhere and Everything

Fibre Development Index: Driving Towards an F5G Gigabit Society

F5G Advanced

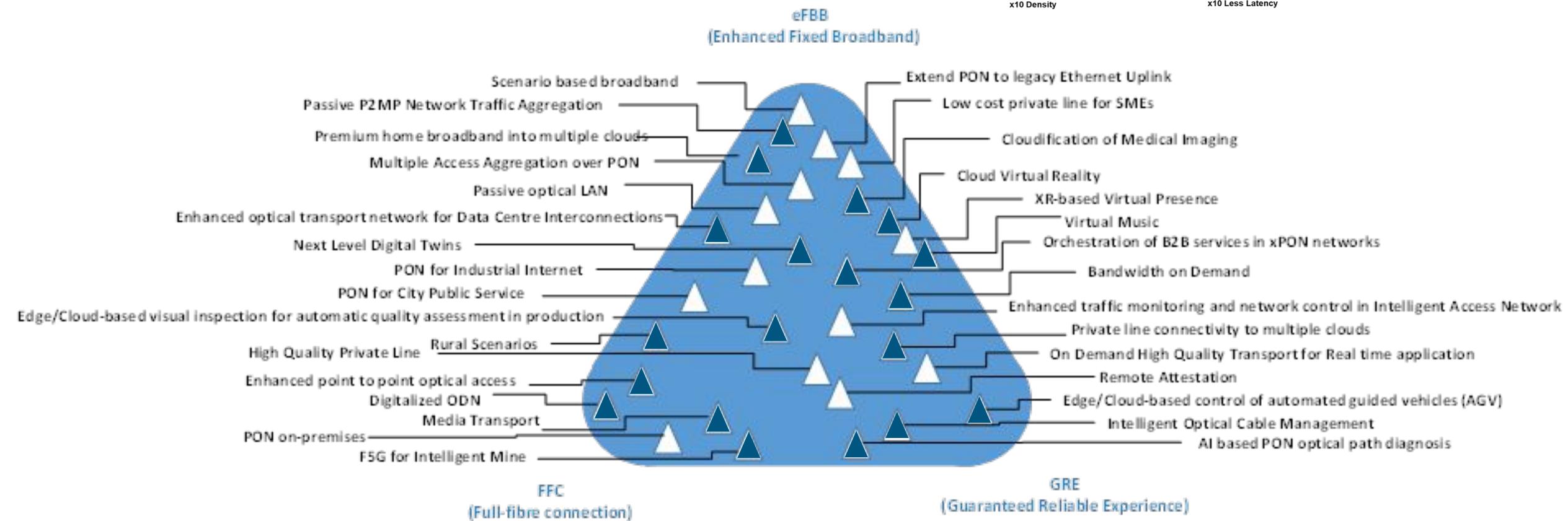
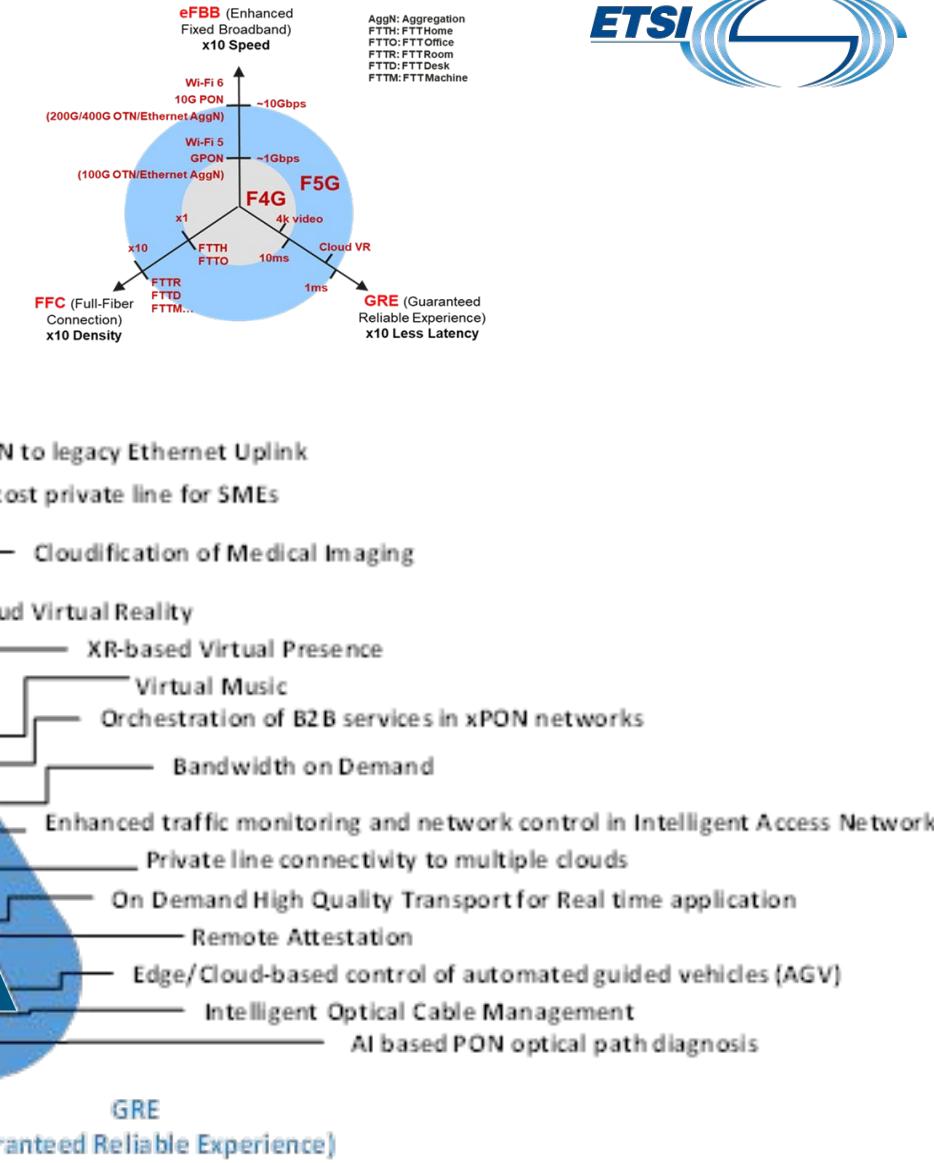
First release of specifications completed by the end of 2021;
 R2 in progress, based on the set of 18 Use Cases (added to the previous 13,
 that are the input for requirements and the evolution of the architecture ...)

ISG F5G: a first release of specifications and the planned work



- [ETSI GR F5G 001 V1.1.1 Fifth Generation Fixed Network \(F5G\); F5G Generation Definition Release #1](#)
- [ETSI GR F5G 002 V1.1.1 Fifth Generation Fixed Network \(F5G\); F5G Use Cases Release #1](#)
- [ETSI GS F5G 003 V1.1.1 Fifth Generation Fixed Network \(F5G\); Technology Landscape and Gap Analyses](#)
- [ETSI GS F5G 004 V1.1.1 Fifth Generation Fixed Network \(F5G\); F5G Network Architecture](#)
- [ETSI GS F5G 005 V1.1.1 Fifth Generation Fixed Network \(F5G\); F5G High-Quality Service Experience Factors Release #1](#)
- [ETSI GR F5G 010 V1.1.1 Fifth Generation Fixed Network \(F5G\); Security; Threat Vulnerability Risk Analysis and countermeasure recommendations](#)

F5G a snapshot by UC R1+R2



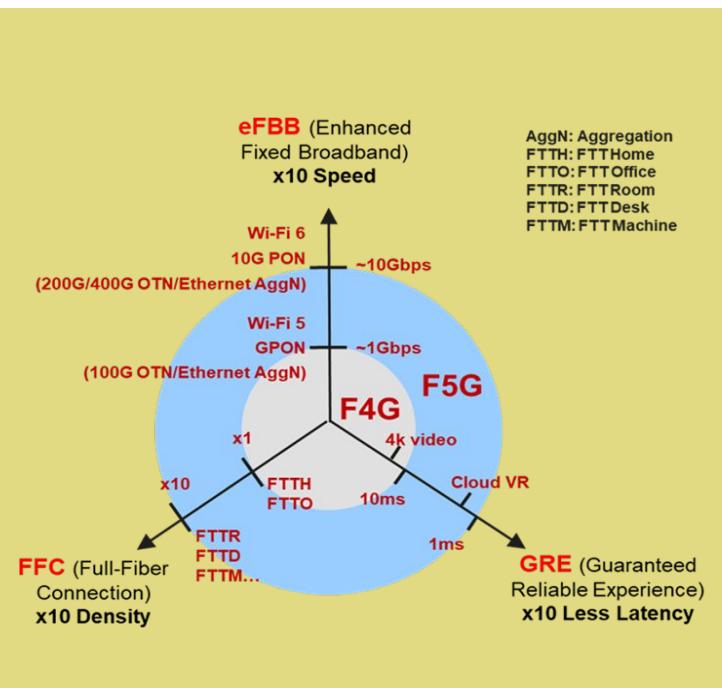
...and the future



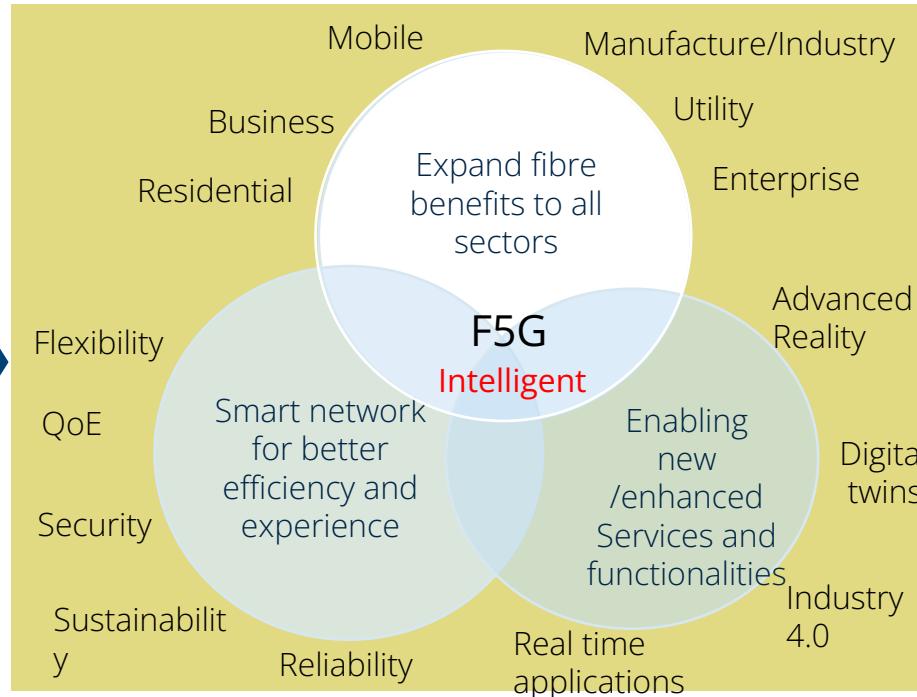
Directions of future evolution: F5G Advanced



F5G : tri-dimensional evolution features

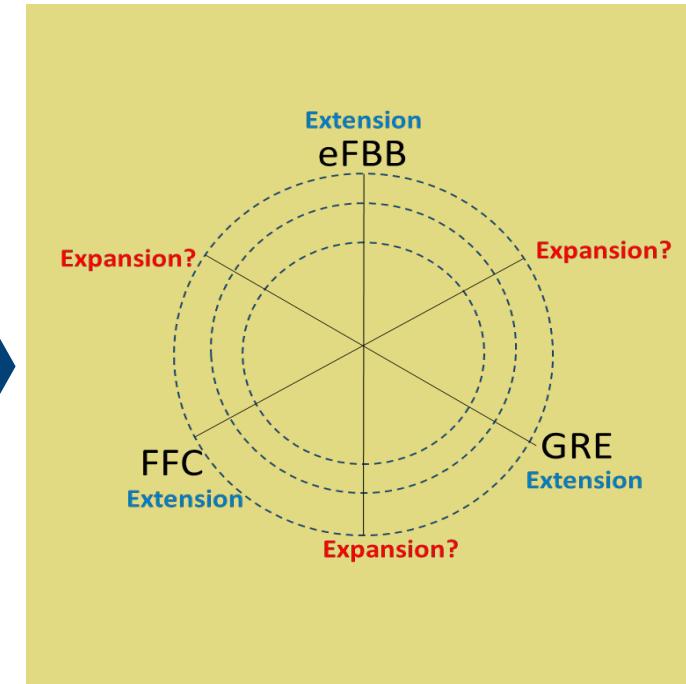


New scenarios and services drive F5G development



Fibre to everything everywhere
Higher speed
Greener
Smarter to guarantee experience of both operator and end user(digital twins, ADN L4)
Lower latency and zero jitter for machine

Adding New F5G evolution directions



F5G Advanced and Beyond White Paper was created in February during #9 plenary meeting of ISG F5G and plan to publish in September 2022

ISG f5G Way Forward

New roads to explore:
the future for F5G in its
3rd White Paper, finalized and
available on ETSI web site at
<https://www.etsi.org/media-library/white-papers>

- Increasing performance
- UHD immersive experience services
- Digitization of production networks
- Enterprise digitization and cloudification
- Smart optical infrastructures for a Sustainable Society
- Optical access networks simplification to make them more viable
- Moving from TDM to dense WDM...



All these will drive the future releases of requirements, guiding fixed networks technology towards next generation

Conclusions

- ISG F5G completed its R1 and, at the beginning of 2022, its second Use Cases release
- 18 new Use Cases for R2 are driving the gap definition and new set of requirements, for enhancing the architecture
- QoE, Security, automation and specific deployments for Industry and Residential customers are in focus for the rest of the active Work Items in ISG F5G
- Leveraging on virtualization and cloudification to exploit the full power of fibre technology
- Besides defining the evolution from the first release of specifications with R2, ISG F5G is now looking ahead to the future with the new white paper, which is available from <https://www.etsi.org/images/files/ETSIWhitePapers/ETSI-WP-50-F5G-Advanced-and-Beyond.pdf>

**Thank you !
Any further questions?**

luca.pesando@telecomitalia.it

