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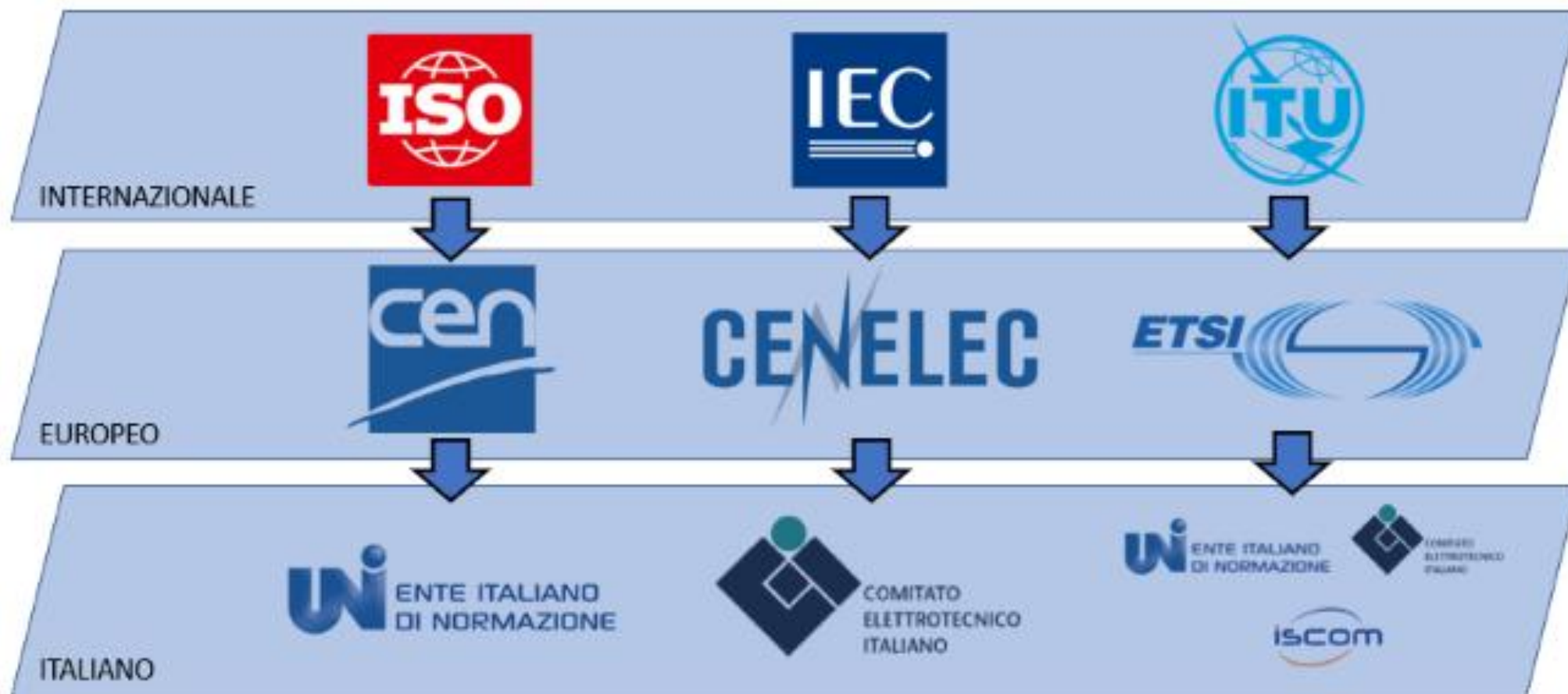
Innovation and standards in ICT industry

Gabriele Elia
Telecom Italia, Head of Standard and IPR



LA FORZA DELLE CONNESSIONI

De jure standards



The Interplay of Standards and Innovation in Network Engineering

The value of Standards

- **Interoperability** for networks and services
- Economies of scale and **reduction of vendor lock-in**
- Creation of **new services** / markets
- Reduction of market risk especially in large investments (e.g. cellular infrastructure)
- Compliance with **regulatory** requirements
- **Co-opetition** between stakeholders to identify the best possible solution (from a win-win perspective)

The value of *participating to the Standards*

- Alignment between the evolution of the Networks and the strategy
- **OPEX and TTM reduction** through shared activities e.g. terminal certification, and access to standards and specifications
- Creation and dissemination of **know-how**
 - Support in RFI/RFQ processes
 - Open Source Development
- Development and monetization of intellectual property (**Patents**)



Key Ongoing Activities in



- **5G (3GPP)**
 - 5G-Advanced extends 5G reach in new vertical markets and enhances eMBB services, at the same time addressing real and urgent commercial deployments needs. Key features include Satellite integration (Rel18), Energy efficiency for Green Networks (both RAN and Core) and new services like Ambient IoT (Rel19), and Sensing services (Rel20).
- **Automation and AI (3GPP, TMF)**
 - AI and ML for network management and automation,
 - Autonomous Network Operations: Operating model to automate network operations and improve service management, with reference to the autonomous network architecture and the TMForum Open Digital Architecture (ODA) project.
- **Network and service exposure (LNF CAMARA, GSMA, TMForum)**
- **Cloud transformation (LNF Nephio, Sylva)**
 - Nephio project (LNF) solves network automation challenges for telco
 - EU-based LNF Sylva project
- **Fixed network transformation (PRPL)**
 - Work is ongoing in prpl on enabling a smart Home GW
- **Satellite integration** - 3GPP standards define enhancements to the UE,
- **6G** - 6G standardization has just started and will last several years and come in phases (similar to the evolution of 5G). Although the standardization will involve the coordination and collaboration of several SDO, 3GPP will be the main one for 6G . The first 3GPP TRs (studies) are expected within 3GPP Rel-20, starting in 2025. The first TSs (normative docs) within 3GPP Rel-21, planned to be completed not before Q1 2029

New Standardization Requirements from EU Laws

AI Act

- **Risk Assessment:** assess and mitigate risks associated with AI systems, as required by the Act
- **Transparency & Explainability:** transparency and explainability of AI systems
- **Data Governance:** compliance with the Act's provisions on data quality, privacy, and security

Data Act

- **Data Access & Portability:** data sharing and transfer between different cloud providers and edge computing platforms
- **Data Interoperability:** Promoting the use of common data formats and interfaces, making it easier for businesses to access and utilize their data.
- **Data Control:** tools and technologies to have more control over their data and how it is used.

GRAZIE

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