



Twenty Eighth National
Conference on Communications



Workshop on “Standards Driven Research” at NCC 2022

24 May 2022, 1000-1700 IST



Workshop on “Standards Driven Research” at NCC 2022

Invited Talk

TSDSI ROADMAP

By: Anindya Saha

Chair – TSDSI Roadmap Committee

CTO, SaankhyaLabs Pvt Ltd

About TSDSI

Who are we?

An autonomous, membership based, Standards Development Organization (SDO) for Telecom/ICT products and services in India.

We develop standards for access, back-haul, core Telecom networks, ICT solutions & services that best meet India specific needs, based on research and innovation in India.

We work closely with Global standards' bodies to reflect Indian requirements into International Telecom/ICT standards.

We play an important role in incorporation of Indian IP into Global Telecom standards.

Recognised by Department of Telecommunications as India's Telecom SDO

Registered as a Not-for-Profit Society, under the Indian Societies Registration Act XXI of 1860.

Our Objectives

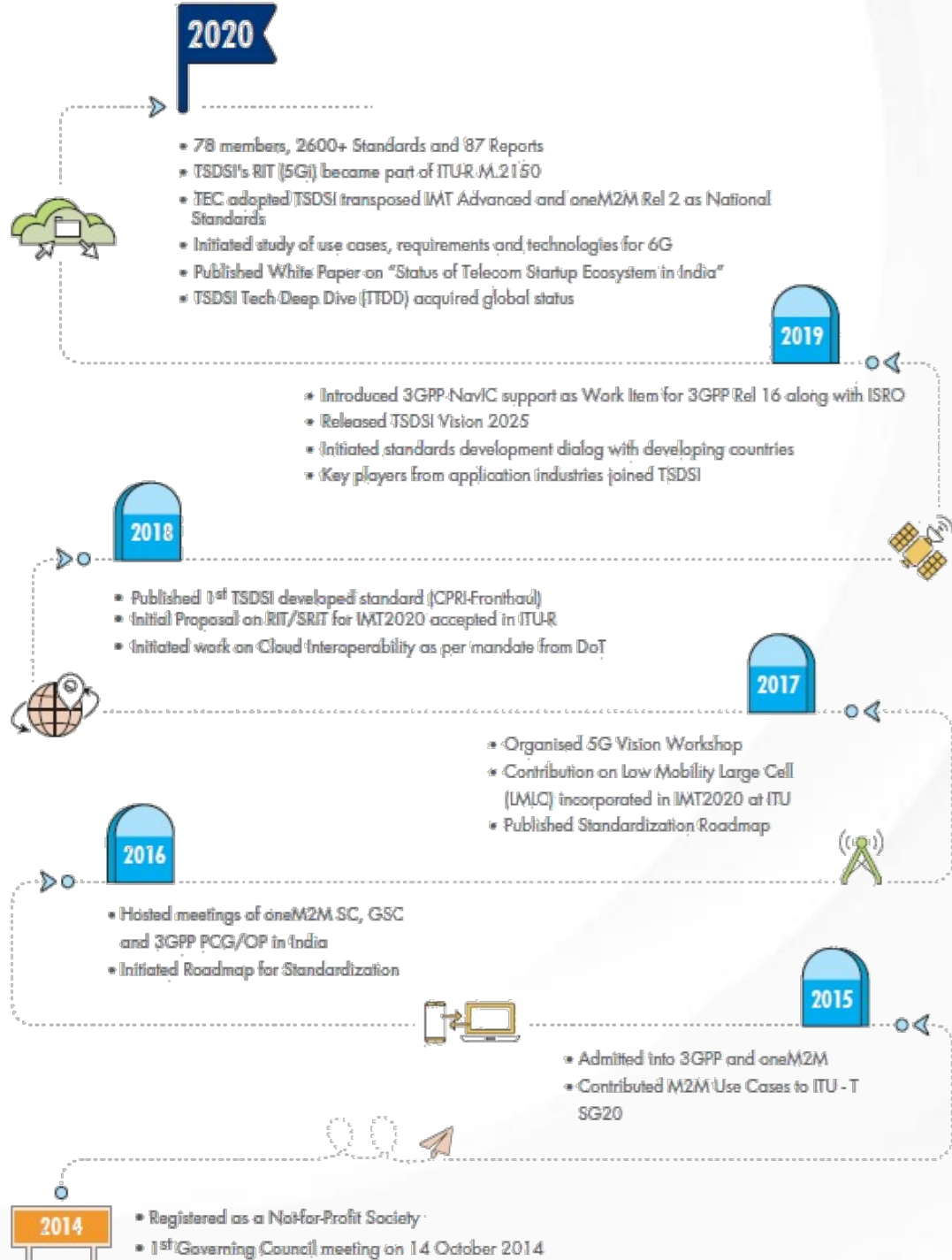
Developing, promoting and standardizing India-specific Telecom/ICT requirements and solutions

Adhere to the principles of Openness, Transparency, Fairness, Consensus and due Process in conducting our activities.

Maintain technology neutrality and provide a uniform playing field for our members

Providing guidance and leadership to developing countries

Journey till 2020



Partnerships and Affiliations



A GLOBAL INITIATIVE
Organisational Partner
of 3GPP (3gpp.org)



Partner type of I
of oneM2M (onem2m.org)



Member of
Global Standard Collaboration

Partnerships

Adoption Agreements

- The Institute of Electrical and Electronics Engineers Standards Association (IEEE-SA)
- Advanced Television Systems Committee (ATSC)

Co-operation Agreements

- European Telecommunications Standards Institute (ETSI)
- Open Connectivity Foundation (OCF)

MoUs

- 5G Infrastructure Association (5G IA)
- Advanced Television Systems Committee (ATSC)
- Broadband India Forum (BIF)
- Cloud Computing Innovation Council of India (CCICI)
- Global Certification Forum (GCF)
- ORAN Alliance
- The Institute of Electrical and Electronics Engineers Standards Association (IEEE-SA)
- Taiwan Association of Information and Communication Standards (TAICS), Taiwan
- Telecommunications Technology Association (TTA), Korea
- Telecommunications Industry Association (TIA), US
- Wireless World Research Forum (WWRF)

Letter of Intent to Co-operate

- Association of Radio Industries and Businesses (ARIB), Japan
- Alliance for Telecommunications Industry Solutions (ATIS), USA
- China Communications Standards Association (CCSA)

Regional Co-operation

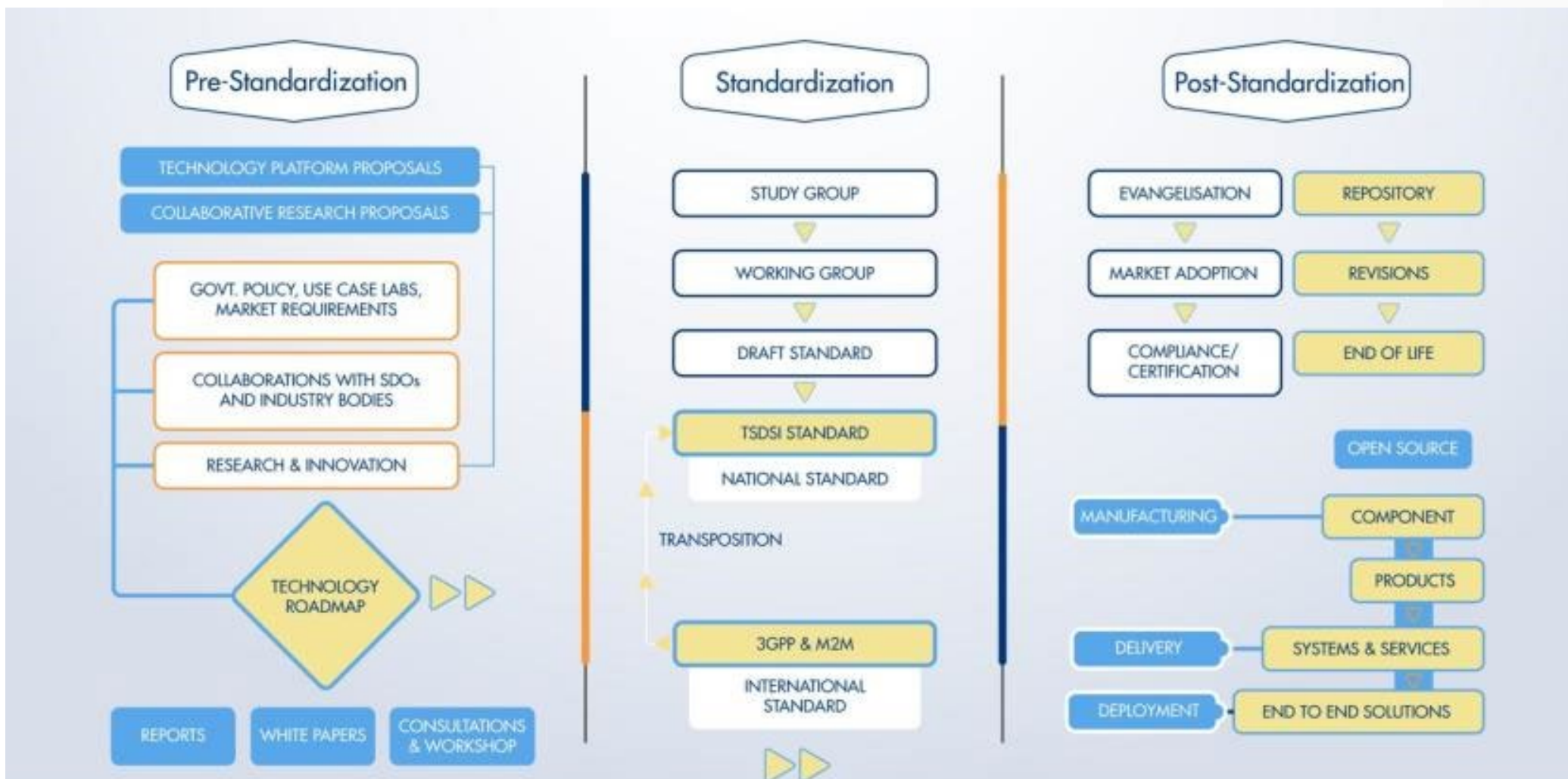
India-EU Cooperation on ICT-Related Standardisation, Policy and Legislation

Anchored by TSDSI and ETSI with the objective of facilitating closer alignment between the regions on standardization activities.

5G Multilateral MoU

Between 5G Americas, IMT2020 PG (China), 5GIA (Europe), 5G Forum (Korea), 5GMF (Japan), 5G Brasil and TSDSI for organising "5G Global event".

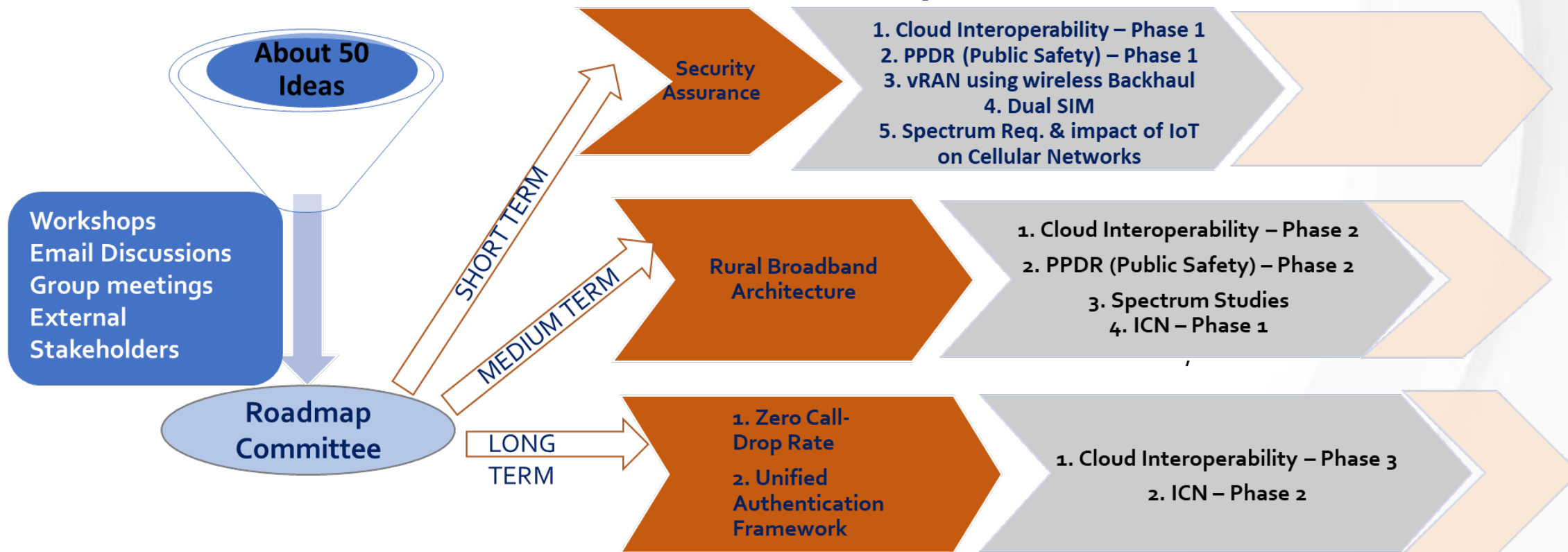
Standardization Process @ TSDSI



Purpose of Roadmap for an SDO

- **Visualization of Strategic Initiatives**
 - Ties together strategy (the "why"),
 - Work needed to do to achieve the goals (the "what"),
 - Timeline for completion (the "when")
- **Output of a Strategic Planning Process**
- **Gets all stakeholders aligned on the strategy**
- **Targeted uses of the TSDSI Roadmap**
 - Strategy document of TSDSI
 - Sets the agenda of TSDSI – short-term, mid-term and long-term.
- **Relationship with Technical Groups**
 - Champion of the Roadmap Item to follow-up and drive the work in the Technical Group
 - Reflect ongoing technical work in the Roadmap visualization based on technical leadership inputs

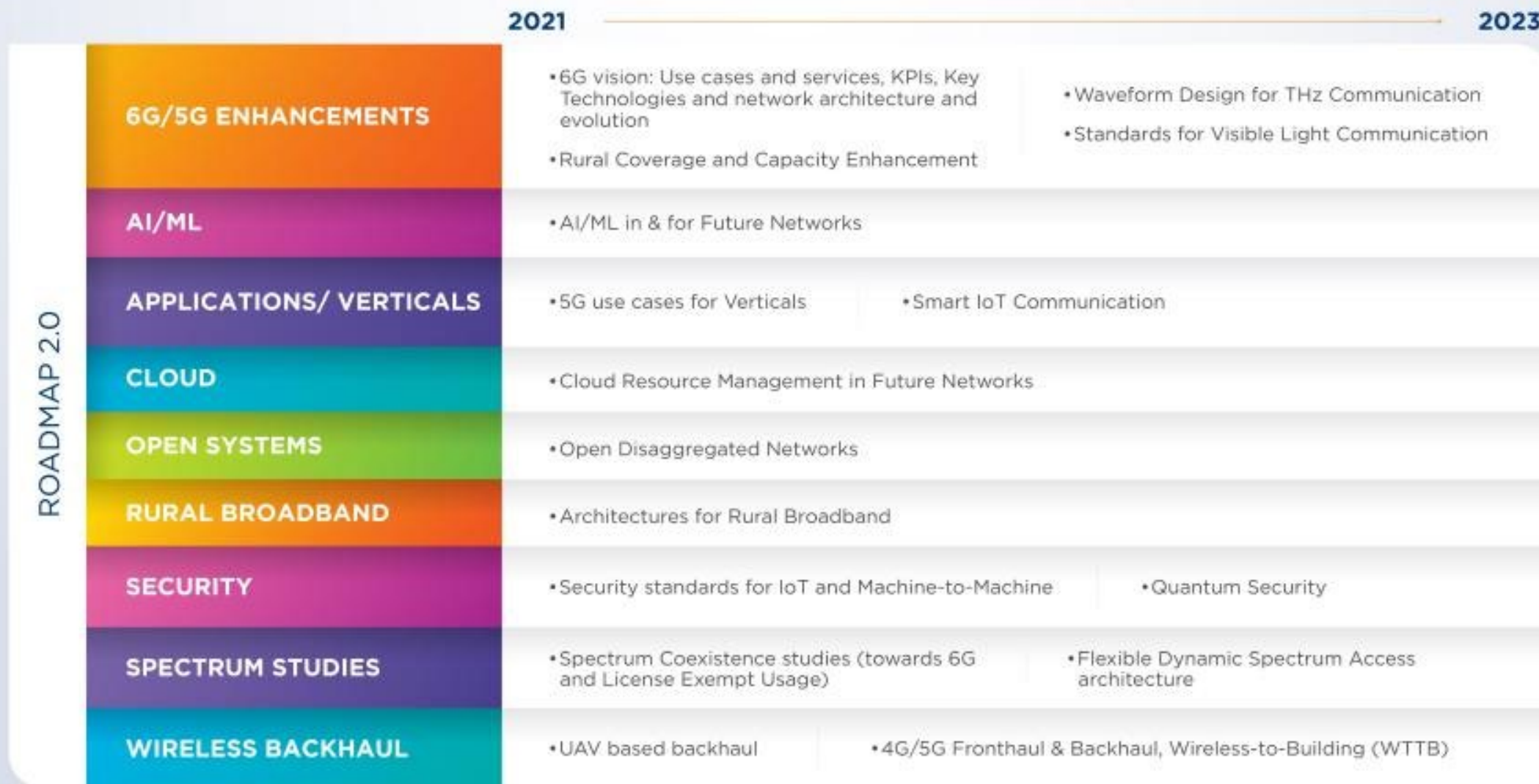
TSDSI Roadmap 1.0



Colour Code	Meaning
	Accepted as Roadmap Item by the Roadmap Committee in 2018
	Items progressed to New Item Proposals(NIP) or Work/Study Item
	Standards/Reports already developed out of 2018 roadmap items

Short Term	Q1, 2018 – Q1, 2019
Mid Term	Q1, 2018 – Q4,2019
Long Term	Q1, 2018 – Q4,2020

TSDSI Roadmap 2.0



Proposals from latest Roadmap Workshop

Sno.	Title	Clusters
1	Waveform and Physical Layer aspects of 6G Radio Interface	6G
2	Specification Group on Intelligent Reflecting Surfaces	6G
3	Terahertz Super-Massive MIMO Communication Systems for Outdoor and Indoor	6G
4	Relay design in THz communication with multi-band OFDM	6G
5	Mapping of deterministic flows between DetNet and TSN	5G Enhancements
6	Interworking of Non-3GPP Broadcast Networks with 5G System	5G Enhancements
7	AI/ML in the future networks	AI/ML
8	Towards a Flexible and Efficient Mobile Network Architecture using AI/ML	AI/ML
9	5G Vertical Operator Platform	Applications/Vertical
10	Reference Architecture for Automated Electric Road Transportation	Applications/Vertical
11	Path Planning and Mobility Analysis of UAVs in Dense Urban Deployments	Verticals
12	A Framework for Developing and Deploying Portable RAN applications	Open Systems
13	Concurrent Spectrum Sharing to Enable Next Generation Wireless Systems	Spectrum Studies
14	Non-Terrestrial network roadmap	NTN Cluster

IEEE - International Network Generations Roadmap (INGR) - 2022 Edition





Thank You

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