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TTDD 2026 CONFERENCE (9th EDITION)

SHAPING NEXT DECADE OF TELECOMMUNICATIONS:

6G STANDARDS, SYSTEMS AND CROSS-SECTOR SYNERGIES

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Session #2 - AI Native 6G

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Earning AI-Native 6G

by

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THE QUESTION

Not whether AI is in the network.

How deeply.

6G will not arrive on a clean slate. It runs on the multi-vendor 4G and 5G networks we already have, and that is where AI-native gets earned.

WHAT AI-NATIVE MEANS

Two pathways, one network

AI in the network

AI-native architectures and applications

Intelligence and automation embedded in network components. In a real network, that means agents optimising across vendor boundaries no single-vendor system can cross.

The network for AI

Cross-domain data and federated pipelines

The network as a foundation for pervasive AI. The moment agents need data no operator can pool, federated and cross-domain pipelines matter more than central data lakes.

These are the two pathways the session is built around. Both only become real once the network is multi-vendor-aware. That is the thread through this talk.

ITU-R M.2160 (IMT-2030): Integrated AI and Communication, one of six usage scenarios. The two-pathway split is the architecture framing in the literature, not ITU wording.

THE STANDARDS WINDOW

Where AI-native enters the standard, and when

Release 19

Frozen, 2025

The last release fully dedicated to 5G. ISAC and 7 to 24 GHz studies bridge toward 6G.

Release 20

2025 to 2027 · 6G study

Dual track: 5G-Advanced normative plus the 6G study. TR 22.870 frozen March 2026; TR 38.914 June 2026. Open into 2027.

Release 21

Timeline agreed June 2026

The first normative 6G specifications, and the IMT-2030 submission release. ASN.1 freeze no earlier than March 2029.

IMT-2030

ITU · through 2030

Technology proposals early 2029, full specs by mid-2030. M.2160 already sets the six usage scenarios.

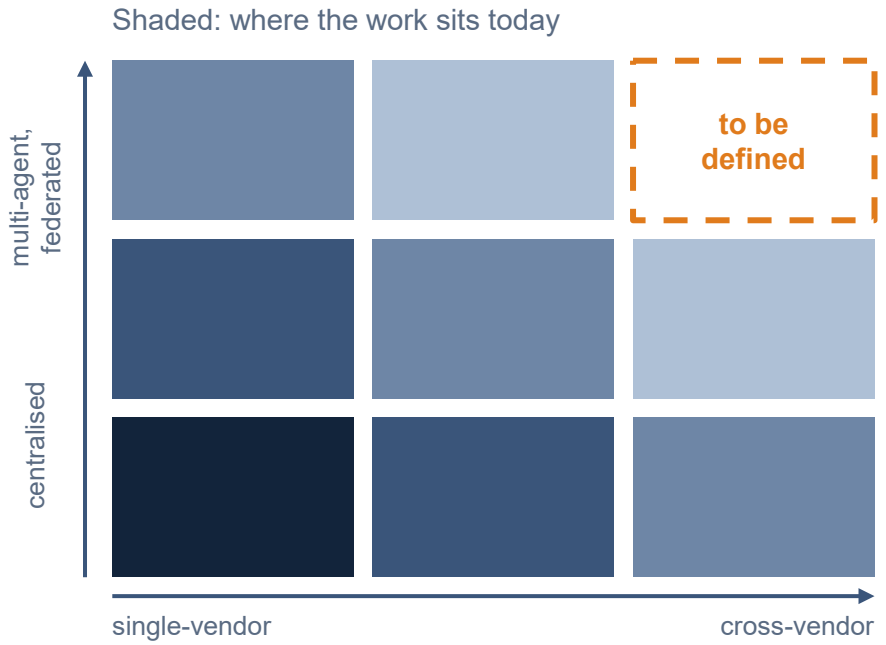
The requirement window is open now, in the Release 20 study.

By Release 21 it is normative and locked. You shape it early, or you inherit it.

Not a product gap - A standards gap –

the requirements as specifications.

The interfaces for cross-vendor, federated, multi-agent operation do not exist yet. That is what 6G has to define.



A WORKED EXAMPLE

Fixed wireless access, where it gets concrete

Reach and cost

FWA serves a scale market. The metric is cost per connected home, not premium ARPU.

Capacity per sector

The binding constraint: on the order of 100 homes per mid-band sector, each wanting 100 to 300 Mbps. This is where cross-cell, cross-vendor coordination earns its keep.

Uplink

Mid-band is provisioned downlink-heavy, about 4:1 on the standard DDDSU frame. AI use, uploads, agents, multimodal prompts, pushes the uplink toward symmetric. A requirement to design for, not a result to claim.

Backhaul without fibre

Where fiber will not reach, backhaul rides microwave and NTN satellite, coordinated with the terrestrial network as one estate.

The band runs synchronised: every network shares one downlink-heavy frame. Flexing the uplink for AI means re-coordinating a whole multi-vendor estate in real time.

These are requirements, not results. Each is a number a vertical can hold the standard to, and AI-native coordination is what meets them.

Where the value actually sits? (in USD)

$2.0T

Telecom services
operator service revenue, end customers
78% wireless; 22% wireline
B2C 41% and B2B 59%

~$580B

Devices

~$290B

Network equipment

~$40B

RAN, the radio

The radio is a small, flat slice. The value sits in software, services and the requirements that shape them.

So, the commercial leverage is in getting the standard right, not in the box.

Annual, ~2025: services ~$2.0T (Grand View, Precedence); devices ~$580B (IDC); equipment ~$330B of which RAN ~$40B (Dell'Oro/Omdia).

INDIA'S OPPORTUNITY

Requirements in early, technology pulled through

IMT-2020

Low Mobility Large Cell

India's LMLC was adopted into the 5G evaluation, a 6 km cell. It merged into Release 17.

IMT-2030

Ubiquitous connectivity

India's push helped place ubiquitous connectivity among the six scenarios of Rec. ITU-R M.2160.

This cycle

The window is open now

Carry the coverage and AI-native case into the live 6G Radio and SA studies, running to 2027, before Release 21 locks it.

The mechanism repeats. Get the requirement into the Release 20 study, let it pull the technology through Release 21.

The window runs through 2026 and into 2027.

OVER TO THE PANEL

The priorities to name today

Academia

Federated learning across operators, multi-agent methods, and the benches to prove them.

Industry

The cross-vendor interfaces and automation methods that make multi-agent operation real.

Verticals

Which use cases, FWA, agriculture, health, set the requirements, and the numbers to hold the standard to.

Government

Spectrum, the Bharat 6G and TTDF rails, and carrying the requirement into TSDSI and ITU.

One question for the panel: which of these requirements do we take into the Release 20 study, while the window is still open?

IN CLOSING

Earn it in the network we already run

AI-native 6G is won the way every generation was:

get the requirement in early, then let it pull the technology through.

The window is open now. Let us shape it together.

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