NEXT G ALLIANCE

An ATIS Initiative

North American 6G Vision

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Next G Alliance Steering Group Co-Chair

WWRF Huddle 2025, Brasilia, Brazil
September 23-24, 2025

Foundations for NGA 6G Vision

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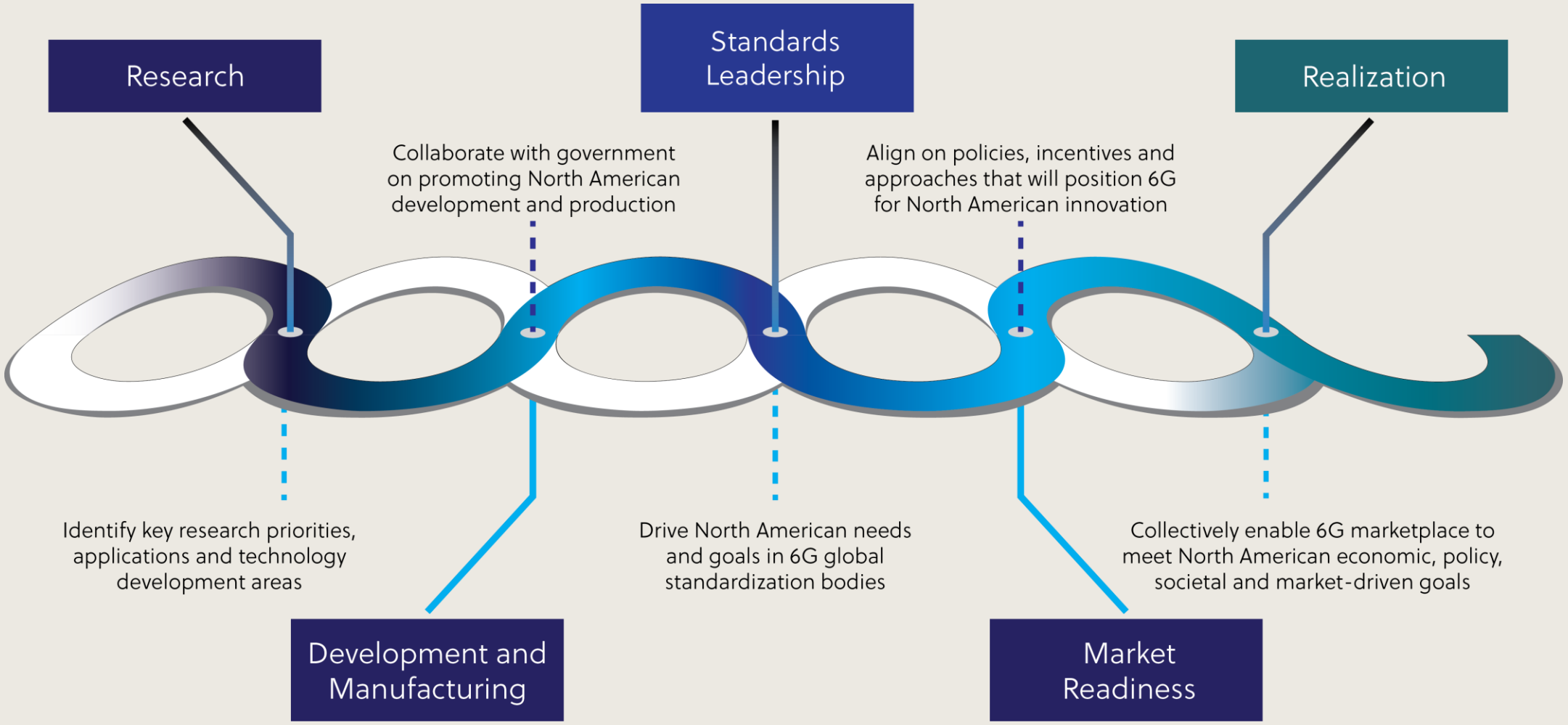
North American 6G Roadmap defines the path for connecting every stage of the lifecycle and progressing to an end-of-decade 6G vision

6G Leadership Priorities incorporate innovative applications, societal needs, economic goals, government actions, and technology developments

Audacious Goals create the framework for advancing North American leadership and positioning a robust 6G marketplace

Lifecycle to 6G



ATIS Next G Alliance Overview

Full Member Group

Steering Group

6 Working Groups *(today)*
- National 6G Roadmap
- Societal and Economic Needs
- Applications
- Technology
- Spectrum
- Green G

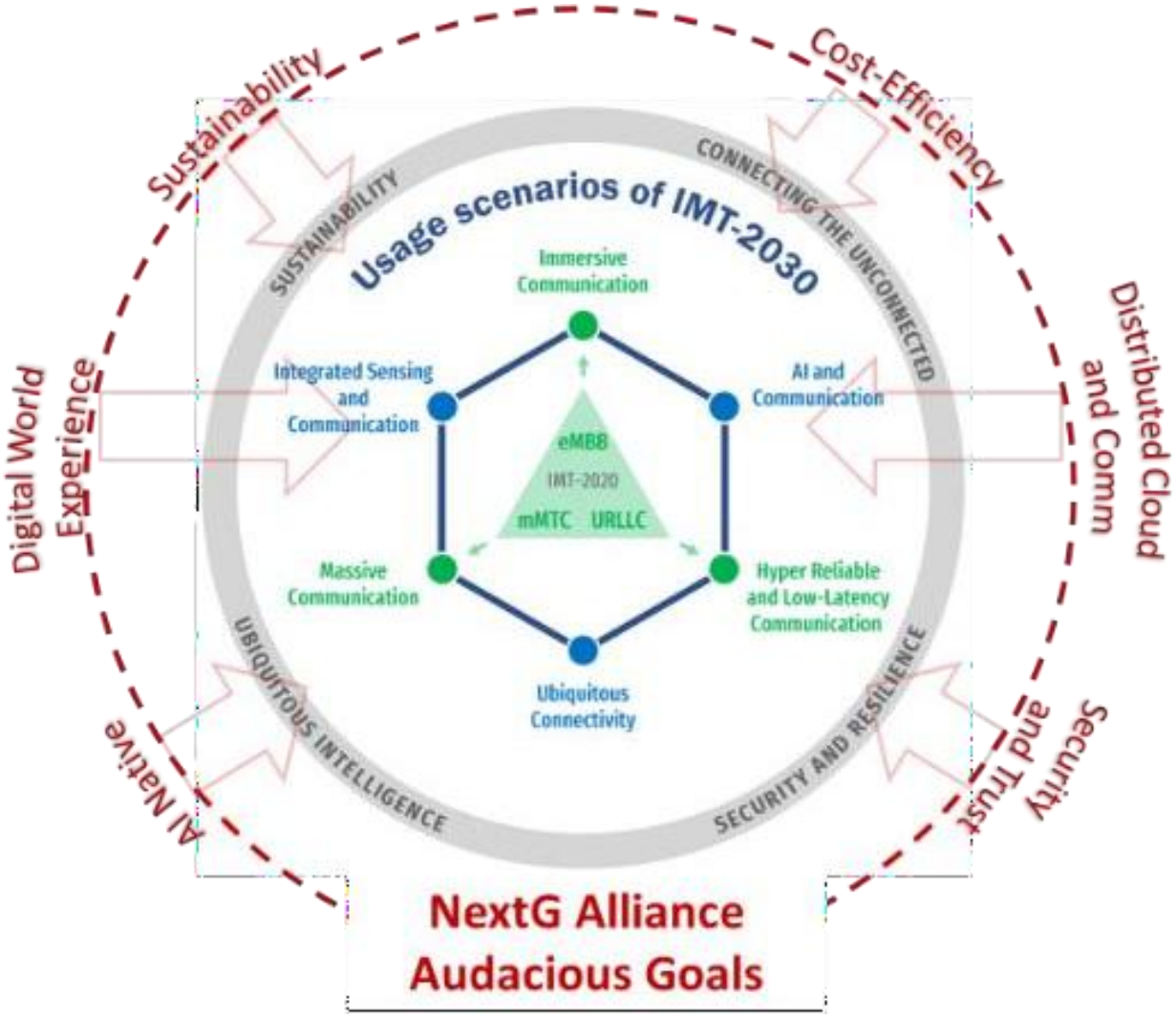
4 Working Groups *(from June 2025)*
- Technology Roadmap
- Market & Applications
- Sustainable Development
- Spectrum

Research Council

6 Audacious Goals
- Trust, Security, & Resilience
- Digital World Experience
- Cost Efficiency
- Distributed Cloud & Communications System
- AI-Native Future Network
- Sustainability

Top 10 Research Priority List
- Security, Trust, & Resilience
- New Radio Components and Antennas
- Network Convergence and Integration
- AI/ML
- Spectrum Sharing and Enhanced Spectrum Access
- Radio Access Technologies
- Joint Communication and Sensing
- Architecture and Control of Open, Disaggregated Systems
- Sustainability / Reduced Energy Consumption & Cost
- Cloud Native Networks and Distributed Cloud

Mapping NGA Goals to IMT-2030



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North American Representative Use Cases

Multi-Sensory XR

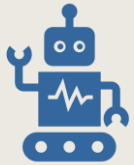
Fixed Wireless Access

ITS/Connected Vehicles

Smart Factory

Low Power Wide Area (LPWA)

Personalized User Experiences

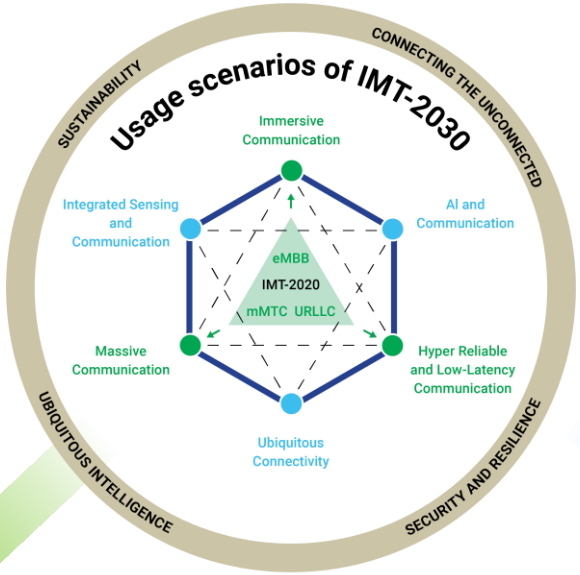


Robots

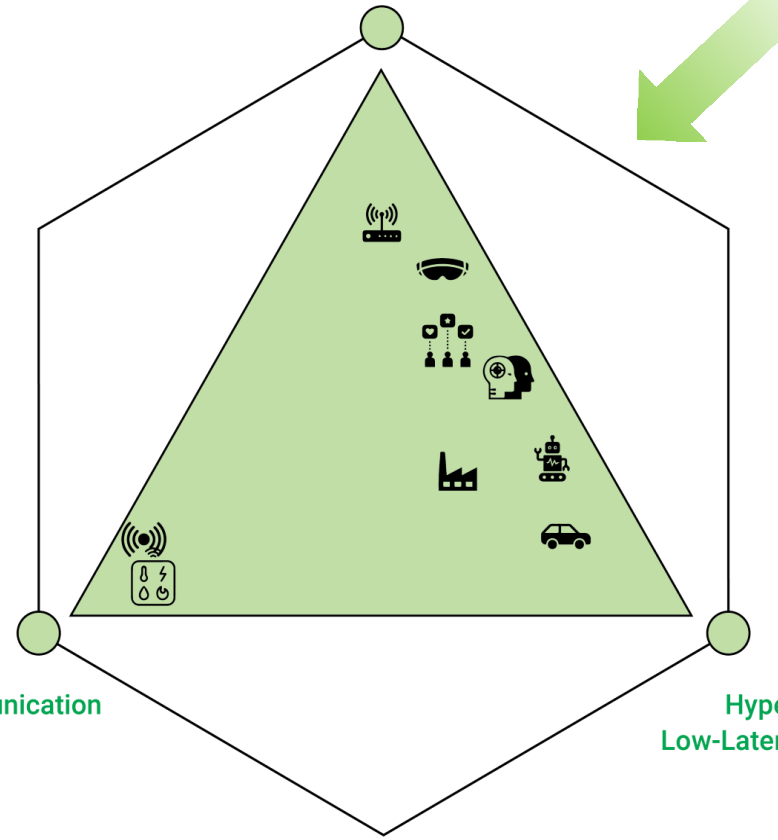
Digital Twins

Short Range Massive Sensors (Ambient IoT)

Mapping NGA Use Cases to IMT-2030 Usage Scenarios



Immersive Communication



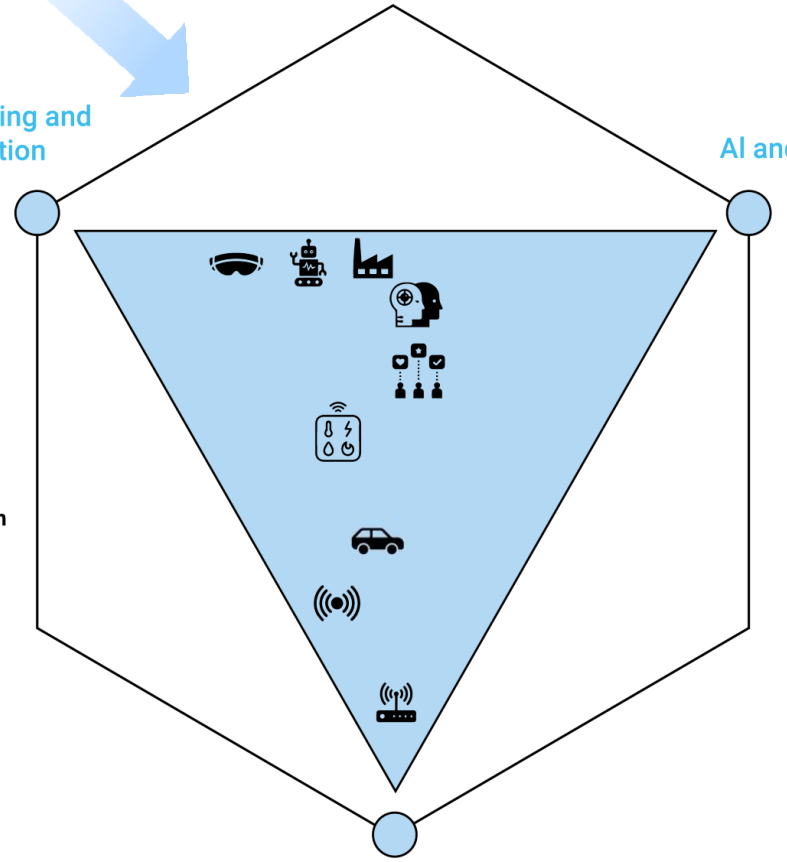
Massive Communication

Hyper Reliable and Low-Latency Communication

- Multi-Sensory XR
- Digital Twins
- Fixed Wireless Access
- Personalized User Experiences
- Robots
- ITS/Connected Vehicles
- Smart Factory & Industrial Automation
- Low Power Wide Area
- Short Range Massive Sensors

Integrated Sensing and Communication

AI and Communication



Ubiquitous Connectivity

Technologies and Use Cases

Selected Subset of Technologies	Technology & Market Readiness	Multi-Sensory XR	Digital Twins	Fixed Wireless Access	Personalized User Experiences	Robots, Robotic applications	ITS/Connected Vehicles	Smart factory, Industry automation	LPWA	Ambient IoT/ Massive Sensors
Advanced MIMO	High									
Spectrum Sharing	High									
Upper mid-band enhancement	Medium									
NTN	Medium									
Positioning	Medium									
JCAS	Medium									
Distributed computing or cloud	Medium									
AI/ML	Medium									

Essential

Beneficial

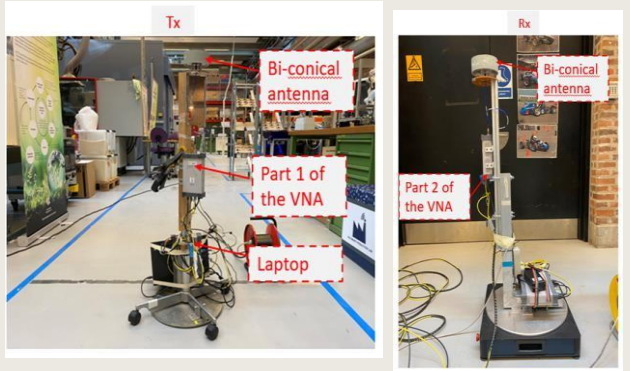
Not needed

Relevant NGA Research Priorities

- New Radio Components& Antennas
- Trust, Security, Resilience
- Artificial Intelligence AI/ML
- Spectrum Sharing & Enhanced Spectrum Access
- Radio Access Technologies
- Joint Communication& Sensing
- Cloud Native Networksand Distributed Cloud

ISAC Readiness and Channel Modeling

- Channel Measurement Campaigns with FR3 focus
  - Exchanged findings to support recommendations to 3GPP on test environments and channel models for object detection and tracking
  - Recommended improvement to 3GPP Channel model for sensing (R1-2403107)
    - Environmental Clutter Modeling
    - Parameters for Target Model
- ISAC Readiness Positions
  - Prioritized North American Use Cases for ISAC
    - AGV Detection and Tracking in Factories
    - UAV Flight Trajectory Tracing
  - Waveform Design options
  - Proof of Concept Summaries and results
- See Whitepapers here
  - Channel Measurements and Modeling for ISAC and 7-24 GHz Communication (Phase 1, Phase 2)
  - Integrated Sensing and Communications Readiness Report, Phase 1



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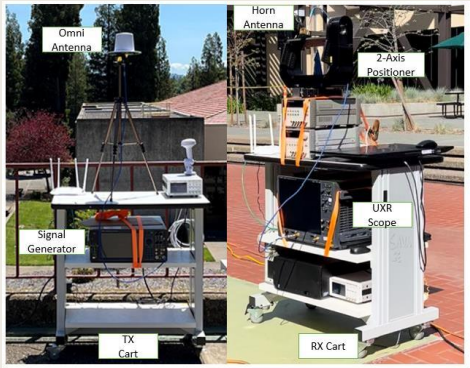
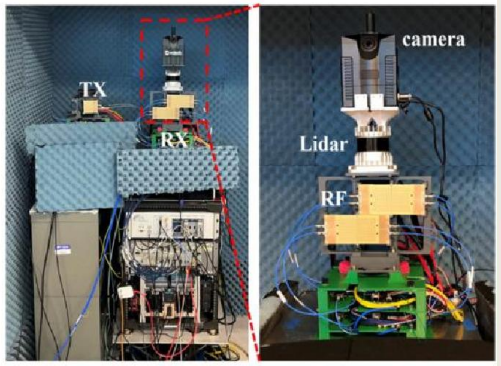


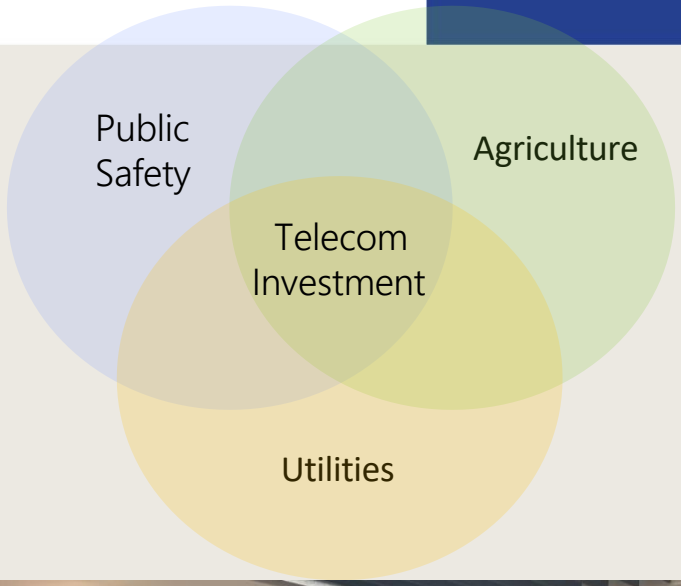
Keysight



NIST

Next G Alliance: Verticals Workshop

- Details
  - F2F Event, February 25-26, Washington DC
  - Presentations: NGA Verticals Workshop
  - ~50 people (NGA + Verticals industries)
- Objectives
  - How to cooperate and create Value together
  - Understand specific needs of verticals and identify common requirements for telecom investment
  - Bring requirements and roadmap to NGA working groups and discussions to drive deeper support



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Thank You