



# ATIS' 5G Vision and Initiatives

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**Jim McEachern**

*Senior Technology Consultant*

*ATIS*

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# ATIS in Brief

## Alliance for Telecommunications Industry Solutions (ATIS):

Top global ICT companies advance the industry's most pressing business priorities including 5G, the All-IP transition, NFV, big data analytics, cloud services, device solutions, emergency services, M2M, cyber security, and much more. ATIS follows a fast-track development lifecycle -- from design and innovation through standards, specifications, requirements, business use cases, software toolkits, open source solutions, and interoperability testing.



# Objective

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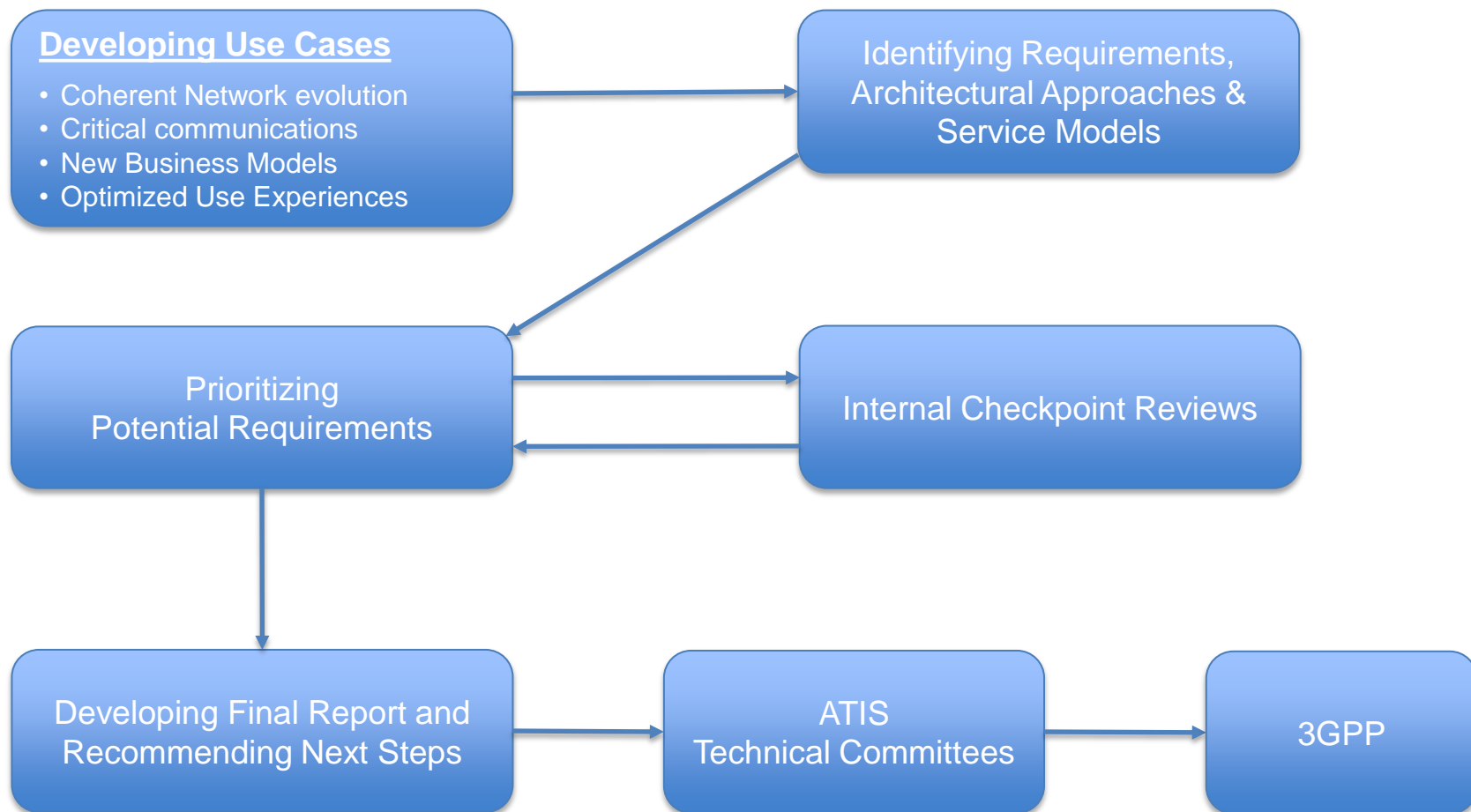
- Understand, define, and advance North American requirements.
- Focus on:
  - Regulatory
  - Unique network characteristics
  - Potential breakthrough opportunities
- Evaluate North American needs in a global context:
  - Leverage synergies wherever possible
  - Identify new requirements
- Contribute to standards process as required.
  - To be developed by ATIS technical committees

# Methodology

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- ATIS 5G work focuses on:
  - Network / System
  - Service
  - Coherent LTE/5G network view
- Developing 5G use cases for North American market.
  - Includes assessment of “disruptive” use cases with “breakthrough” potential
- Defining requirements based on use cases.
- Evaluating against global requirements to maximize synergies.

# 5G Approach



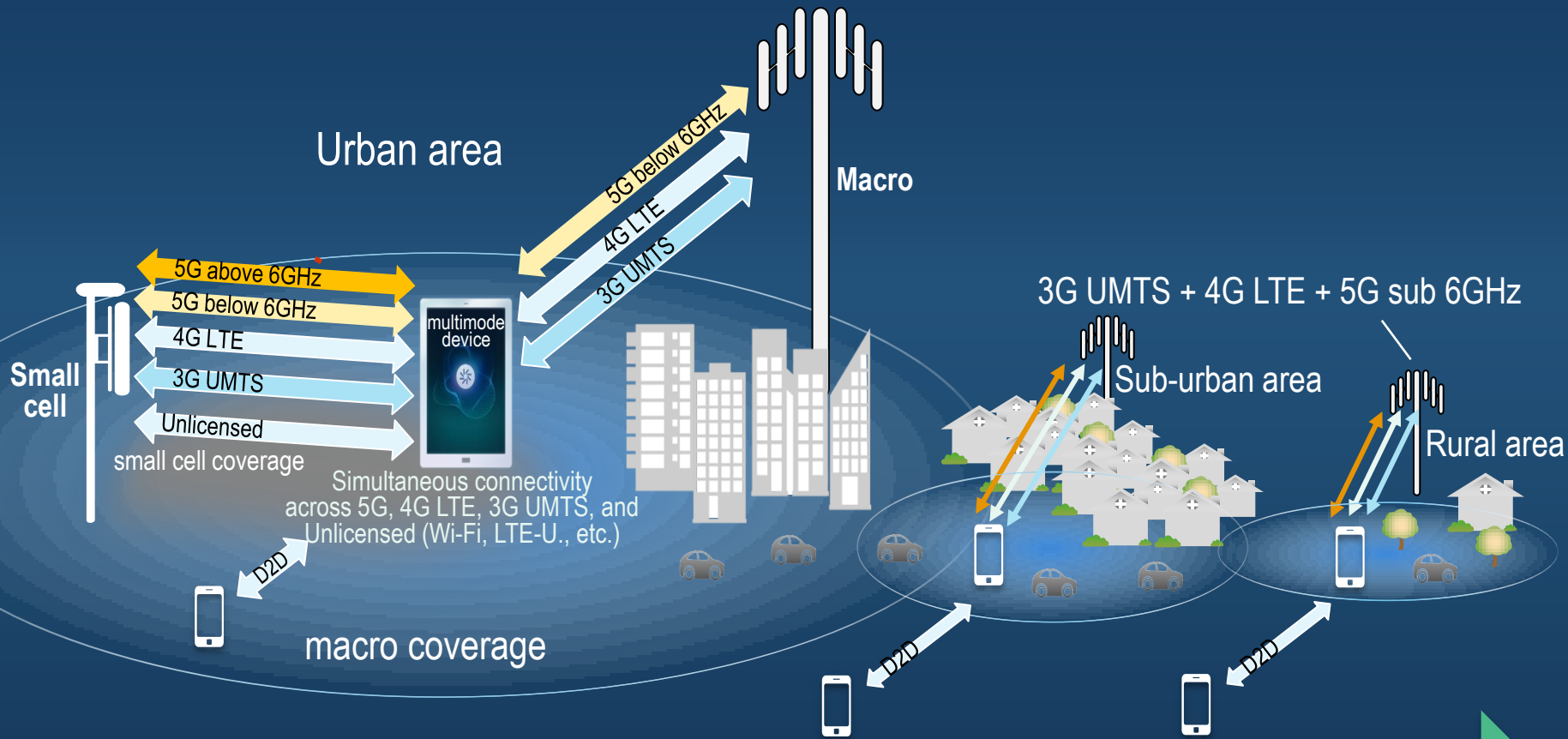
# ATIS 5G Matrix and Priorities

## Use Case Focus

Topic	ATIS Priority
<u>Evolution of 4G LTE to 5G</u>	<b>High</b>
Virtualized Mobile Core with variable mobility and local offload	Medium
Utilization of Unlicensed Spectrum and Dual Lic./Unlicensed Models	High
Spectrum Sharing and White Space Spectrum	High
Millimeter Wave RAN Access	Medium
Expanded SON Use Cases to Address HetNets including 5G Small Cells, Expanded use of Unlicensed Spectrum, etc.	Medium
<u>New Business Models and Associated Use Cases</u>	<b>High</b>
IoT Devices and Impacts	Medium
<u>Use Cases Related to Optimized User Experiences on Smart Devices</u>	<b>High</b>
Fixed Wireless as a PSTN Replacement	Medium
<u>NA Regulatory Requirements</u>	<b>High</b>

# Multi connectivity across bands & technologies

multi-connectivity improves coverage and mobility



Leverage 4G investments to enable phased 5G rollout  
(Initial deployment likely in the Urban areas with higher capacity demand, other areas to follow)

# 5G Initial Conclusions

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- Regulatory:
  - Support evolution of Public Safety Related Applications
  - Support Public Switched Telephone Network replacement
  - Ensure full support for critical communications
- Coherent network evolution:
  - Policy-driven network configuration / reconfiguration
  - Interoperability will depend on spectrum band
    - Focus on interoperability below 6 GHz
    - Focus on service optimization above 6 GHz
  - Enable Mobility on Demand.



# Next Steps

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- Complete requirements analysis.
- Collaborate with other 5G industry activities:
  - 4G Americas
  - GSMA
  - NGMN
  - ITU
- Publish white paper (Oct 2015).
- Identify priorities to be addressed by ATIS technical committees:
  - Develop ongoing contributions to 3GPP 5G work