



# LSA in 3GPP

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# Outline



- 📶 3GPP Overview
- 📶 3GPP SA5 study on OAM support for LSA, objectives and status
- 📶 Conclusion & Next Steps

# 3GPP - The Mobile Broadband Standard



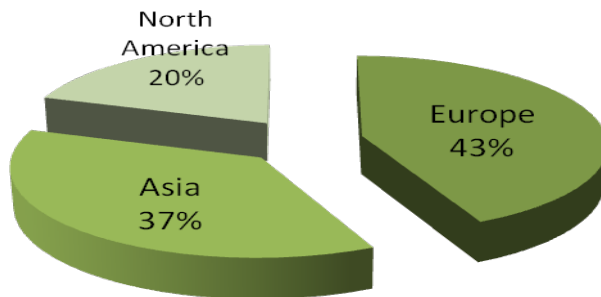
- 📶 The 3rd Generation Partnership Project (3GPP) unites [Seven] telecommunications standard development organizations (ARIB, ATIS, CCSA, ETSI, TSDSI, TTA, TTC), known as [“Organizational Partners”](#) and provides their members with a stable environment to produce the Reports and Specifications that define 3GPP technologies.
- 📶 The project covers cellular telecommunications network technologies, including radio access, the core network, and service capabilities - including work on codecs, security, quality of service - and thus provides complete system specifications.

# 3GPP Facts and Figures

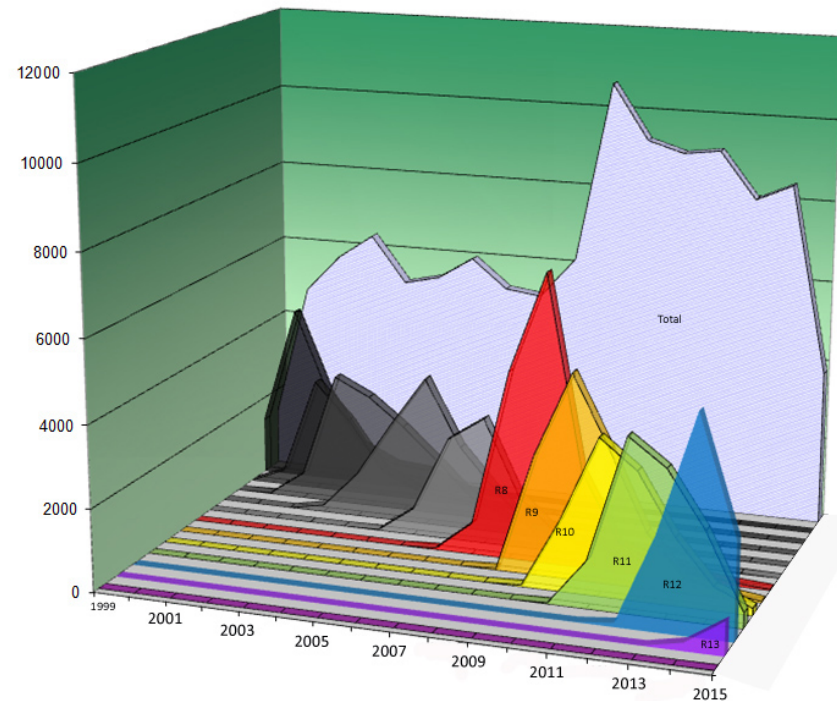


- ~400 Companies from 39 Countries
- 50.000 delegate days per year
- 40.000 documents per year
- 1.200 specs per Release
- New Release every ~18 months

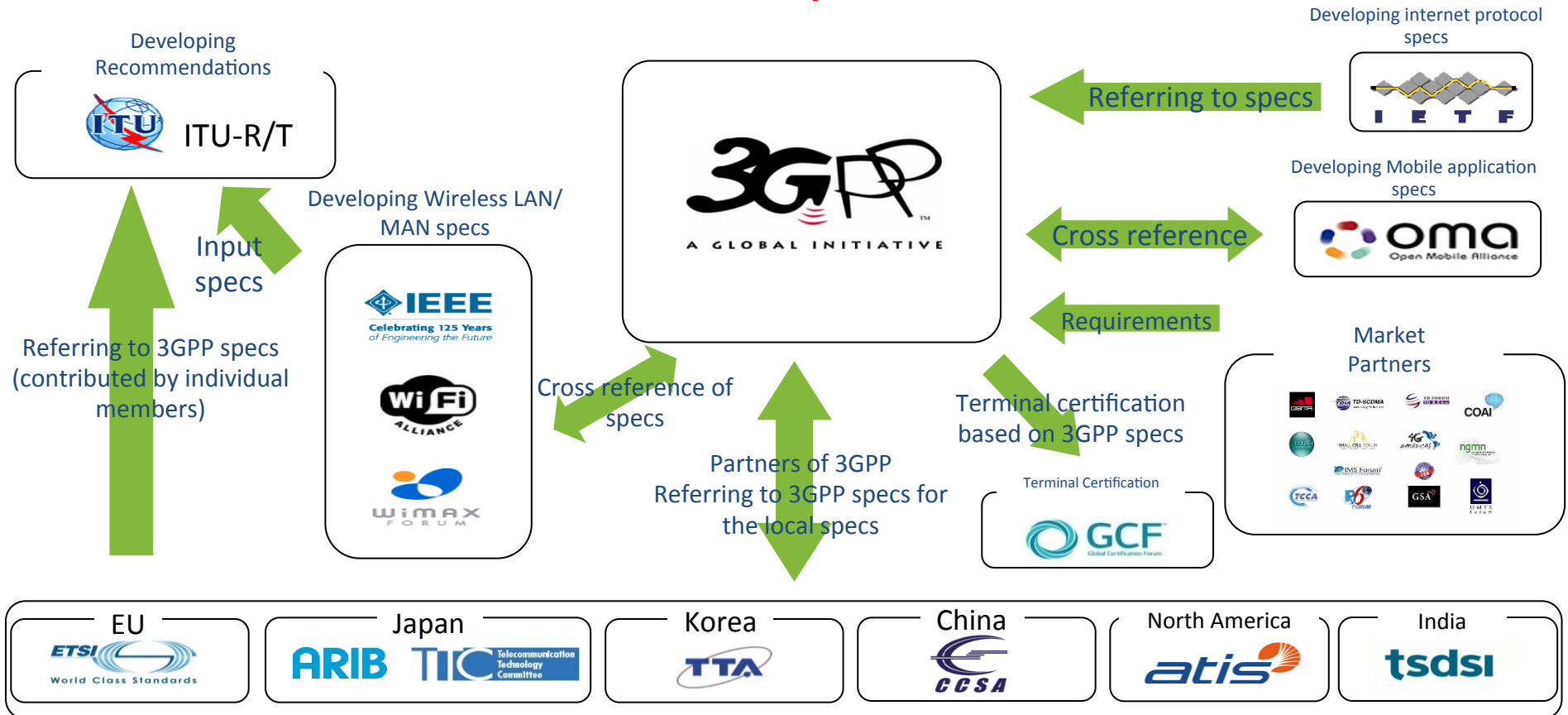
## Participation by Region

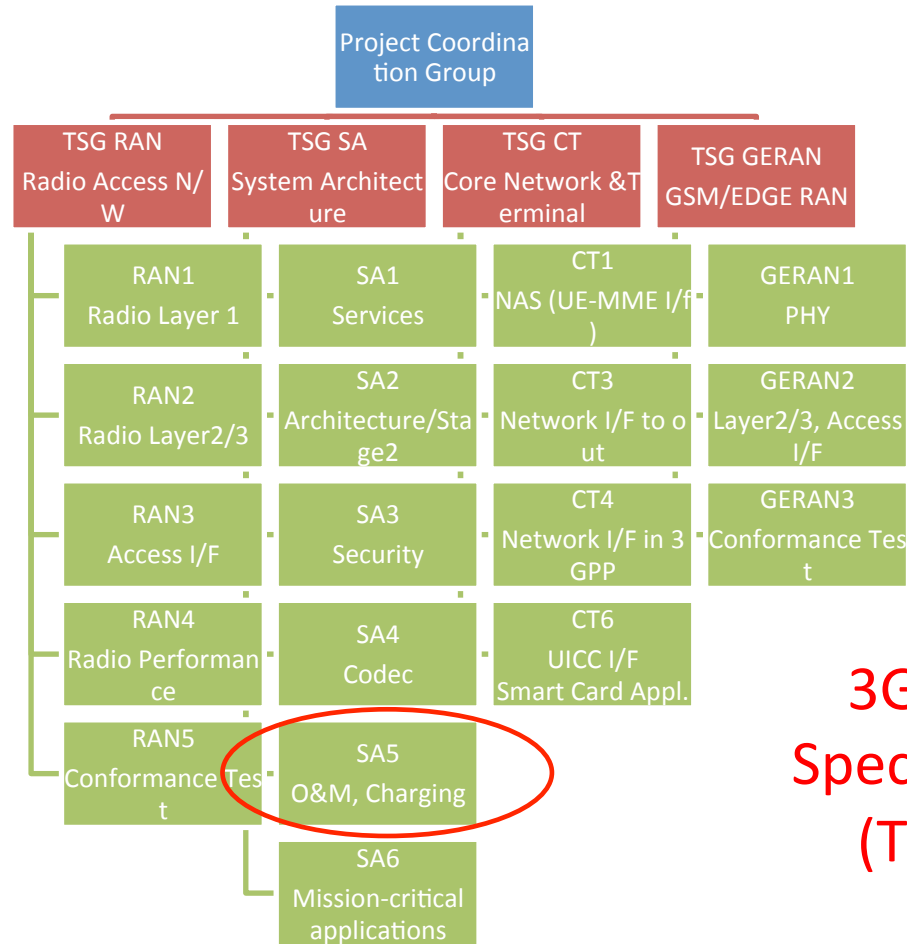


Approved CRs per Release / Year



# The 3GPP Eco-system





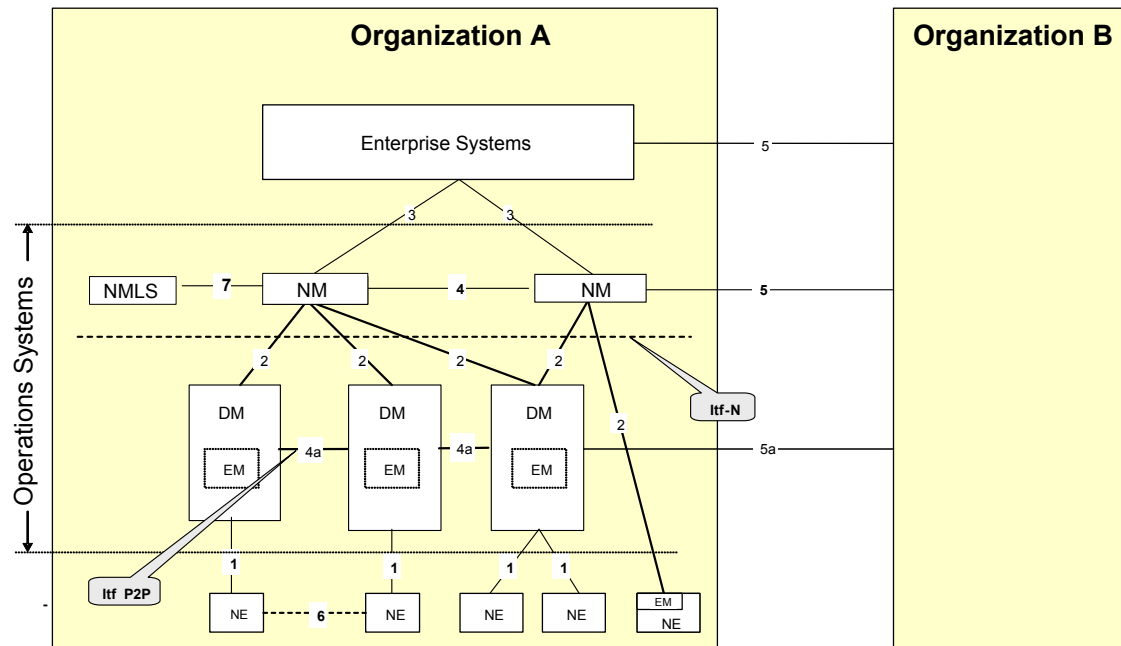
## 3GPP Technical Specification Group (TSG) structure

# Study on OAM support for LSA - Objectives



- 📶 Study how the solution and architecture defined in ETSI TS 103 235 may provide a global solution for mobile networks.
- 📶 Study the impact on the 3GPP management architecture (reference model defined in 3GPP TS 32.101).
- 📶 Analyse the LSA functionalities and the information flow defined in ETSI TS 103 235 towards a 3GPP mobile network operator and any impact on Itf-N (SA5-defined standard “Northbound” management interface).
- 📶 Study how to support the static and semi-static spectrum sharing scenarios and reference use case defined in ETSI TR 103 113.
- 📶 Started April 2015
- 📶 Result documented in Technical Report (TR) 32.855

# 3GPP management reference model (from TS 32.101)

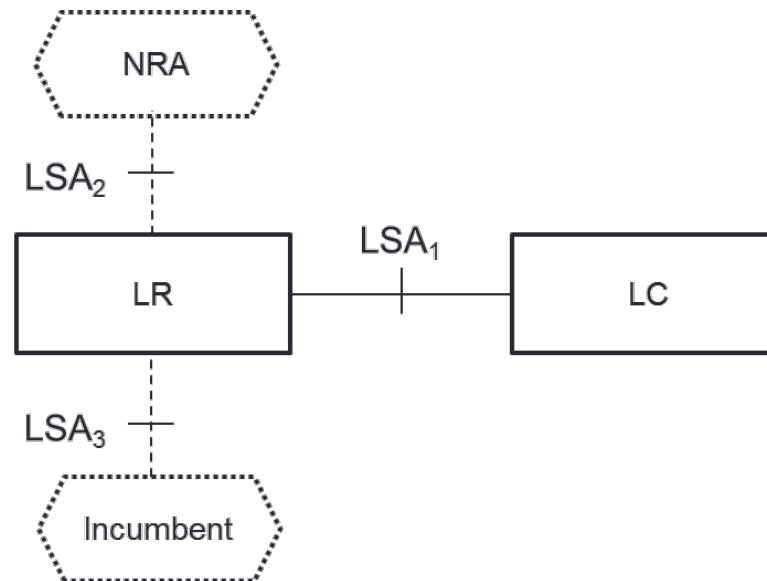




# Architecture and Reference points to be considered by 3GPP SA5



- 📶 All based on the LSA Architecture reference model defined in ETSI TS 103 235:

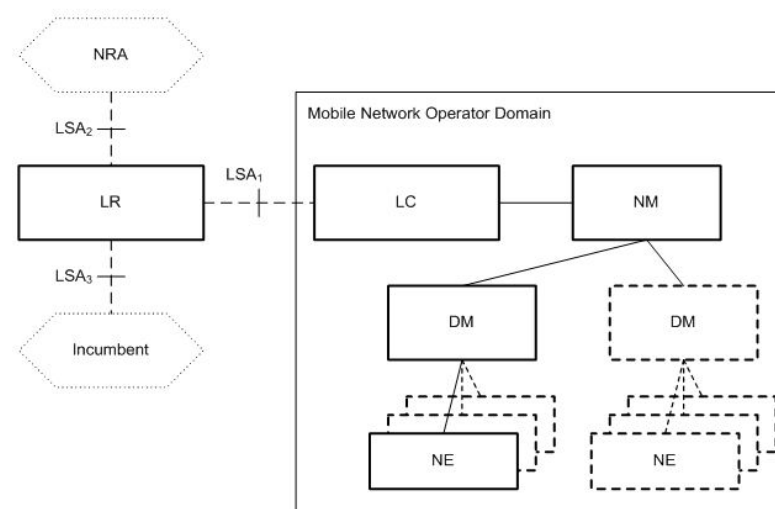


# Options to connect LC to a 3GPP network



- 📶 Option 1 - Direct interaction between LC and Network Elements (NEs)
- 📶 Option 2 - LC as part of the NE
- 📶 Option 3 - Interaction between LC and Domain Manager (DM)
- 📶 Option 4 - LC as part of the DM
- 📶 Option 5 - Interaction between LC and Network Manager (NM)
- 📶 Option 6 - LC as part of the NM

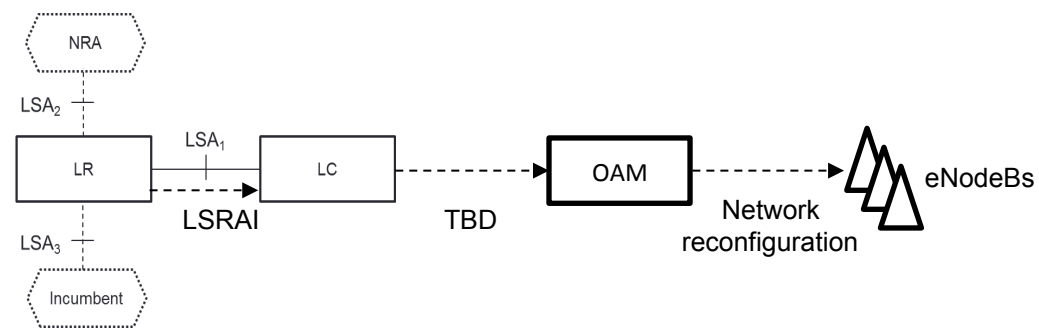
Example: Option 5



## Main focus of study



- 📶 Implications on the 3GPP management architecture
- 📶 Advantages & disadvantages with all 6 options above
- 📶 Options with regard to functional split between LC and OA&M
- 📶 Interface functionality & information flows as depicted in the following diagram:



## Conclusion & Next Steps



- 📶 Completion of ETSI specification work is essential for standard support of LSA
- 📶 3GPP SA5 study to conclude on the options and necessity for further normative work in 3GPP
- 📶 Study expected to be completed by Dec. 2015

## For more Information:



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