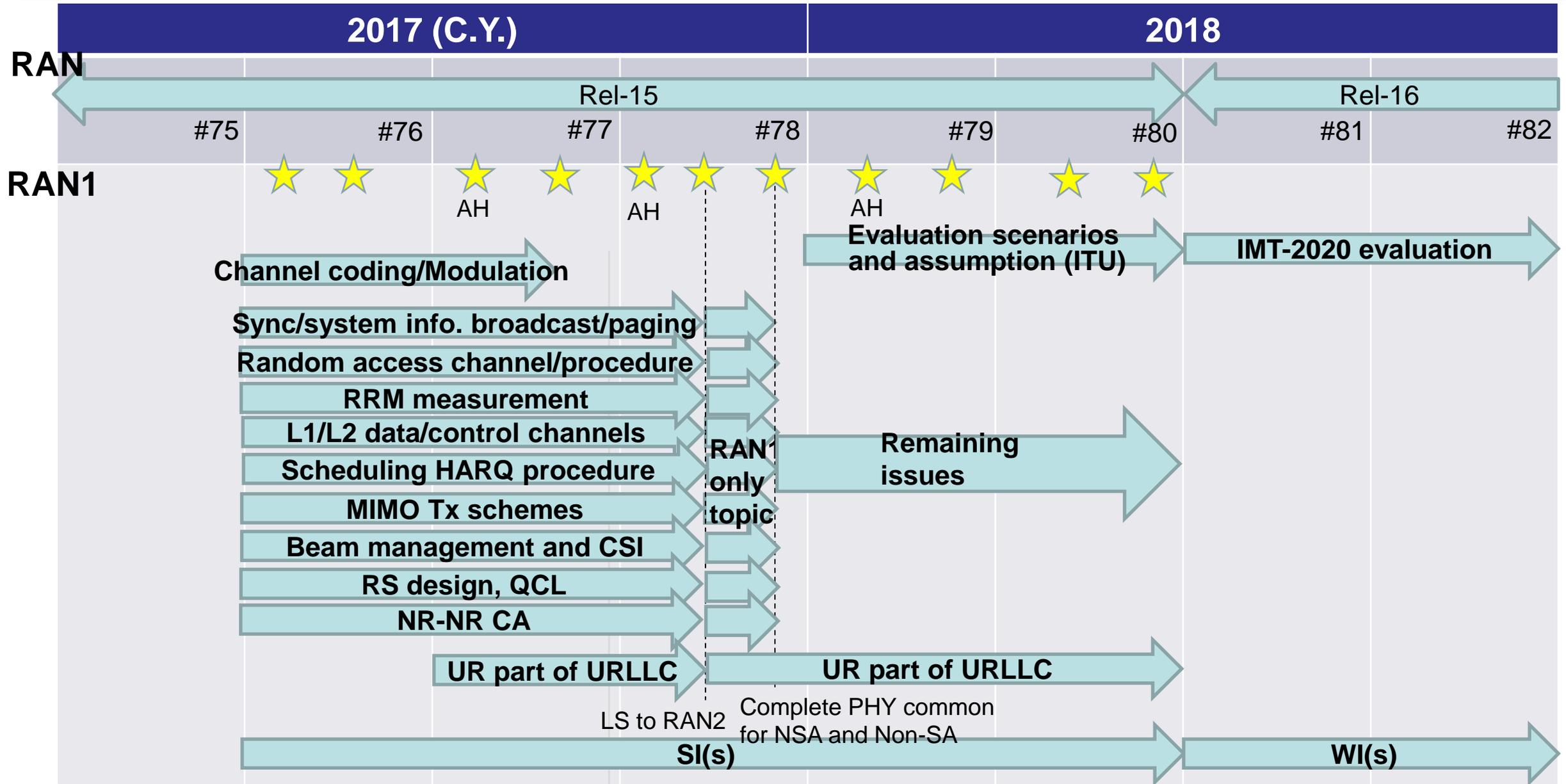


# **Work plan for Rel-15 New Radio access technology WI**

**NTT DOCOMO, INC.**

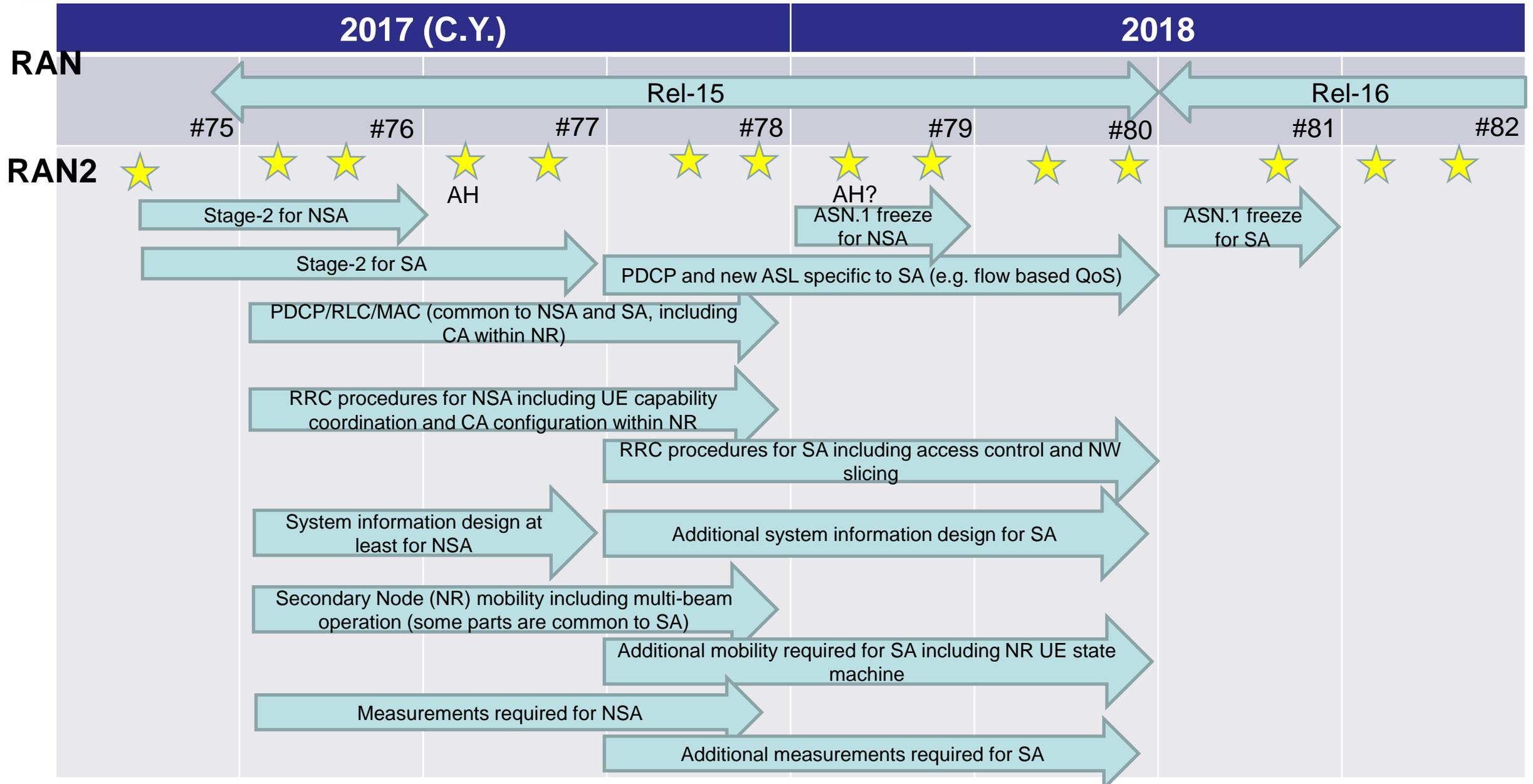
# RAN/RAN1 Time Plan



- Physical layer aspects
  - Until Sept. 2017
    - Channel coding and modulation;
  - Until Dec. 2017
    - Physical layer channels for control and data based on associated waveform, numerologies and frame structure in line with the conclusions of the study item, including mini-slot design;
    - Synchronization and broadcast channels/signals related to initial access and mobility and channel/signals related to random access, including multi-beam support;
    - Downlink and uplink functionality related to multi-antenna transmission/reception enabling closed loop and open/semi-open loop transmissions, beam management, interference measurement, Type I codebook-based CSI acquisition and Type II CSI acquisition as well as CSI acquisition for reciprocity-based operation, the associated reference signal designs, and related quasi-colocation assumptions.
- Physical layer procedure(s)
  - Until Dec. 2017
    - Procedures related to initial access, paging, and mobility;
    - Scheduling /HARQ mechanisms.

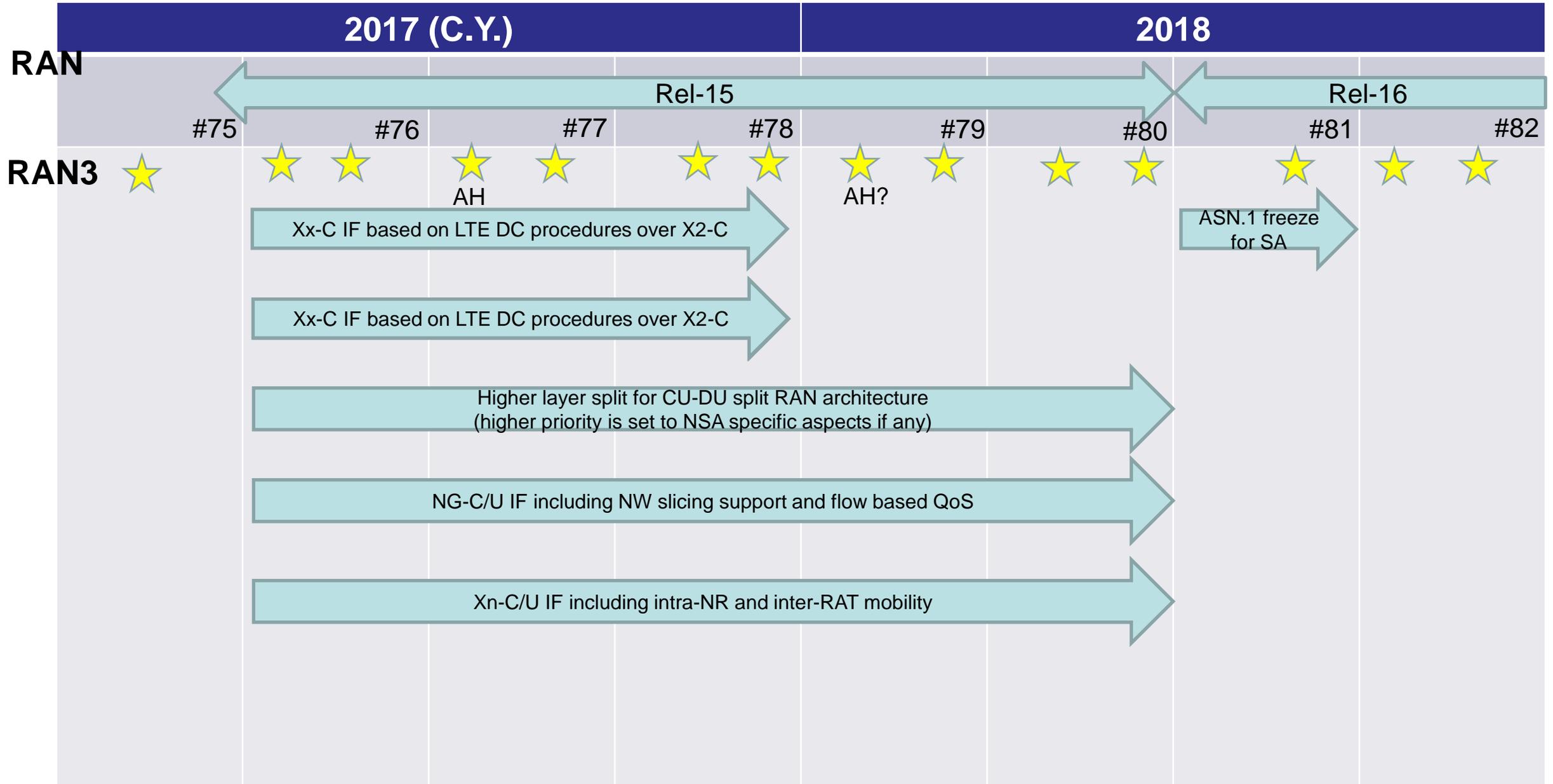
- Duplexing identified in Section 5.1 of TR38.802 supported by a PHY design common to paired and unpaired spectrum, including
  - Until Dec. 2017
    - Enablers for interference management mechanisms for handling cross-link interference.
- NR-LTE co-existence mechanisms
  - Until Dec. 2017
    - Support co-existence of LTE UL and NR UL within the bandwidth of an LTE component carrier and co-existence of LTE DL and NR DL within the bandwidth of an LTE component carrier, and identify and specify at least one NR band/LTE-NR band combination for this operation.
- Support of ultra-reliable part of URLLC
  - Jun. 2017 – Dec. 2017
    - Identify techniques to meet the URLLC requirements set forth by [TR38.913] starting after RAN#76
  - Dec. 2017 – June 2017
    - Conduct corresponding URLLC specific normative work after RAN#78 for the selected techniques

# RAN2 Time Plan



Features for Dec 2017 early drop	Features for Phase 1 (beyond Dec 2017)
<ul style="list-style-type: none"><li>▪ Layer 2 protocols<ul style="list-style-type: none"><li>- PDCP</li><li>- RLC</li><li>- MAC</li></ul></li><li>▪ Minimum System Information required for NSA</li><li>▪ Secondary Node (NR) mobility<ul style="list-style-type: none"><li>- beam level mobility is included</li></ul></li><li>▪ Measurements required for NSA, including<ul style="list-style-type: none"><li>- NR measurements for UE in LTE</li><li>- Measurements for Secondary Node mobility</li></ul></li><li>▪ RRC procedures for NSA<ul style="list-style-type: none"><li>- UE capability coordination is included</li></ul></li><li>▪ Carrier Aggregation with NR for Secondary Node (i.e. only PSCell and SCell)</li></ul>	<ul style="list-style-type: none"><li>▪ New AS layer for flow based QoS</li><li>▪ Additional System Information for SA</li><li>▪ Additional mobility required for SA, including<ul style="list-style-type: none"><li>- NR UE state machines and relevant mobility</li><li>- NR paging</li></ul></li><li>▪ Additional measurements for SA</li><li>▪ Additional RRC procedures for SA, including<ul style="list-style-type: none"><li>- access control</li><li>- security key management</li></ul></li><li>▪ Network slicing</li></ul>

# RAN3 Time Plan



Features for Dec 2017 early drop	Features for Phase 1 (beyond Dec 2017)
<ul style="list-style-type: none"><li>▪ Xx-C/U interface for EN-DC (option 3) operation, including;<ul style="list-style-type: none"><li>- SgNB addition</li><li>- SgNB modification (MeNB/SgNB initiated)</li><li>- Intra-MeNB HO involving SCG change</li><li>- SgNB release (MeNB/SgNB initiated)</li><li>- MeNB to eNB change and vice versa</li><li>- SCG change</li><li>- Inter-MeNB HO w/o SgNB change</li></ul></li><li>▪ Higher layer split for CU-DU split RAN architecture (for EN-DC operation)</li></ul>	<ul style="list-style-type: none"><li>▪ NG and Xn interface for;<ul style="list-style-type: none"><li>- Standalone NR operation</li><li>- Flow based Qos</li><li>- Intra-NR mobility for connected/inactive</li><li>- Inter-RAT mobility</li><li>- Network slicing</li></ul></li><li>▪ Higher layer split for CU-DU split RAN architecture (for Standalone NR operation, if there is delta from EN-DC)</li></ul>

# RAN/RAN4 Time Plan

