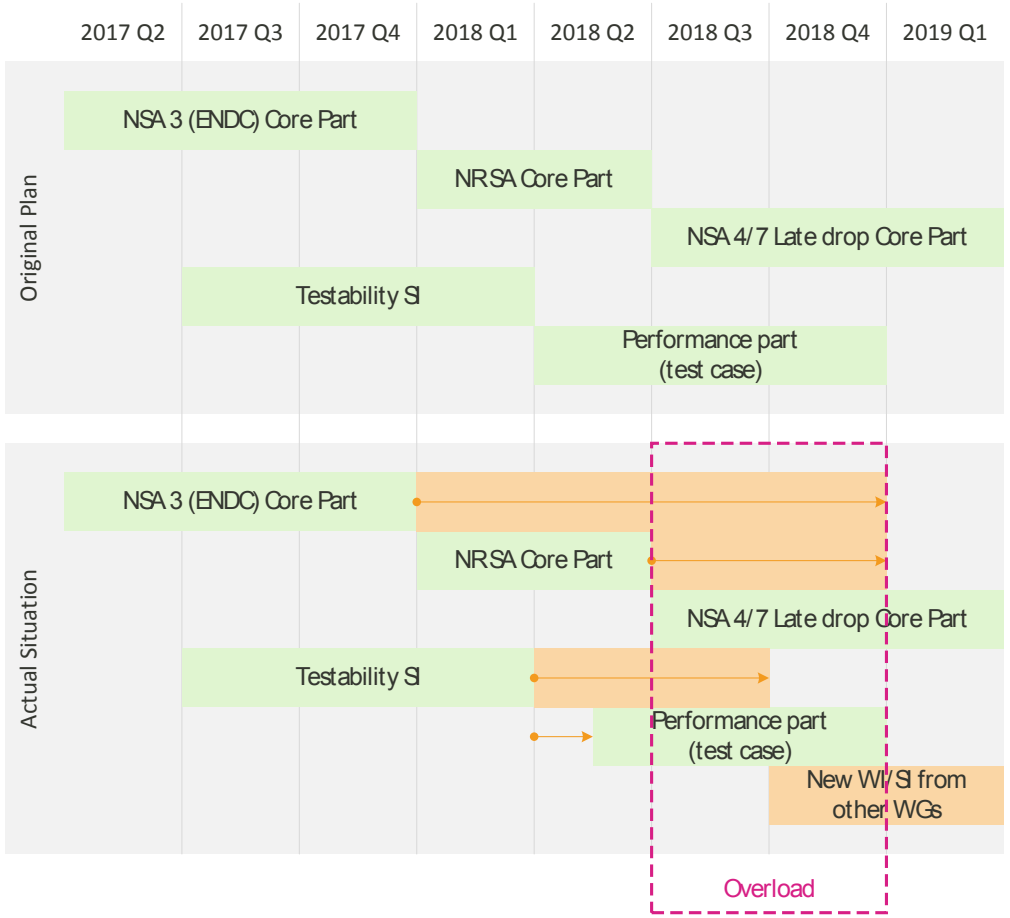
RP-181865

Priority to RAN4 RRM Work

RAN4 [1/3] Rel-15 Status

- Very high workload esp. RRM session
- Waterfall overflowing due to
  - Higher workload for ENDC and NR SA (Opt.2) than anticipated
  - Higher workload for testability SI than anticipated
  - NSA Opt.4/7 and new WI/SI
- NSA 4/7 are dependent on ENDC + NR SA
  - Recycle work for ENDC + NR SA once completed (large editorial effort)
- Proposal 1
  - Prioritize ENDC and NR SA over any other items (i.e. NSA 4/7 and other non-spectrum work) in Q4
  - No non-spectrum WI/SI in Q4



NSA 3 = ENDC

RAN4 [2/3] Rel-15 Status

- Basic ”intra/inter frequency measurement delay”
  - 10 months late (finalization initially due in Nov’17)
  - Essential core requirement for RRM measurement performance in IODT
  - Proposal 2
    - Sufficient time must be allocated in RAN4 for discussions on intra/inter frequency measurement delay
- RRM Test Cases
  - High delay expected: >300TC to be specified
  - Limited progress in August meeting
  - Only 2 meetings left
  - Proposal 3
    - Sufficient time must be allocated in RAN4 for discussions on RRM TC
- Testability SI
  - Two quarters delayed
  - Many outstanding issues on RRM testing
- Knock-on effect to RAN5
- CSI-RS RRM
  - One more quarter needed

RAN4 [3/3]
Rel-15 Status

- NR_newRAT Exception Sheet
  - See appendix
  - Proposal 4: the following items need to be explicitly indicated in the exception sheet
    - *[for RRM measurement]* gap starting point, UE behavior before or after measurement gap, de-activated SCells, carrier specific scaling factor, inter-RAT measurements including E-UTRAN and RSTD measurements
    - *[for signalling characteristics]* L1-RSRP computation for reporting
    - UE Measurements Procedures in RRC_CONNECTED State (Inter-RAT NR measurements, Measurements for E-UTRA – NR Dual Connectivity)

Conclusions
Recap of proposals

- Proposal 1
  - Prioritize ENDC and NR SA over any other items (i.e. NSA 4/7 and other non-spectrum work) in Q4
  - No non-spectrum WI/SI in Q4
- Proposal 2
  - Sufficient time must be allocated in RAN4 for discussions on intra/inter frequency measurement delay
- Proposal 3
  - Sufficient time must be allocated in RAN4 for discussions on RRM Test Cases
- Proposal 4: the following items need to be explicitly indicated in the exception sheet
  - *[for RRM measurement]* gap starting point, UE behavior before or after measurement gap, de-activated SCells, carrier specific scaling factor, inter-RAT measurements including E-UTRAN and RSTD measurements
  - *[for signalling characteristics]* L1-RSRP computation for reporting
  - UE Measurements Procedures in RRC_CONNECTED State (Inter-RAT NR measurements, Measurements for E-UTRA – NR Dual Connectivity)

Appendix
Open issues in RAN4 RRM Core Maintenance

Open issues in RAN4 RRM Core Maintenance
TS 38.133 requirements mainly for CA and FR2

Topic	Open issues
4. RRC_IDLE state mobility	• Cell reselection measurements for FR2
6. RRC_CONNECTED state mobility	• Random access requirement for CA
7. Timing	• MTTD and MRTD for inter-band NR CA between FR1 and FR2
8. Signaling characteristics	• CSI-RS based RLM evaluation period, • Interruption during the measurement on deactivated Scell and UL carrier addition-release • SCell activation and deactivation delay for FR2 • Link Recovery Procedures, • BWP switching requirement, • L1-RSRP computation for reporting

9. RRM Measurements	• Gap sharing,
	• Gap starting point,
	• UE behavior before or after measurement gap,
	• Intra-frequency requirements
	  • SCell SMTC partial overlapping scenarios
	  • De-activated SCells,
	• Carrier specific scaling factor,
	• Inter-frequency measurement,
	• Inter-RAT measurements
	  • E-UTRAN measurements
	  • RSTD measurements

Open issues in RAN4 RRM Core Maintenance
TS 36.133 requirements

Topic	Open issues
8. UE Measurements Procedures in RRC_CONNECTED State	• Inter-RAT NR measurements, • Measurements for E-UTRA – NR Dual Connectivity

Thank You!