# RFP: RAN Quality Evaluator

## Requirement List

### Result Analysis

* Evaluation Result:
  + Pass: All KPIs Pattern Pass
  + Fail: At least one KPI Pattern Fail
  + Restored: At least one KPI Pattern Restored, and the others KPI Pattern Pass
* KPI Pattern Result
  + Pass
  + Fail
  + Restored
* KPI Pattern Type: 9 Possibles KPI Pattern Type

Settings:

* + threshold: 5%
  + period: 7 days
  + guard: 7 days

Measure Ranges:

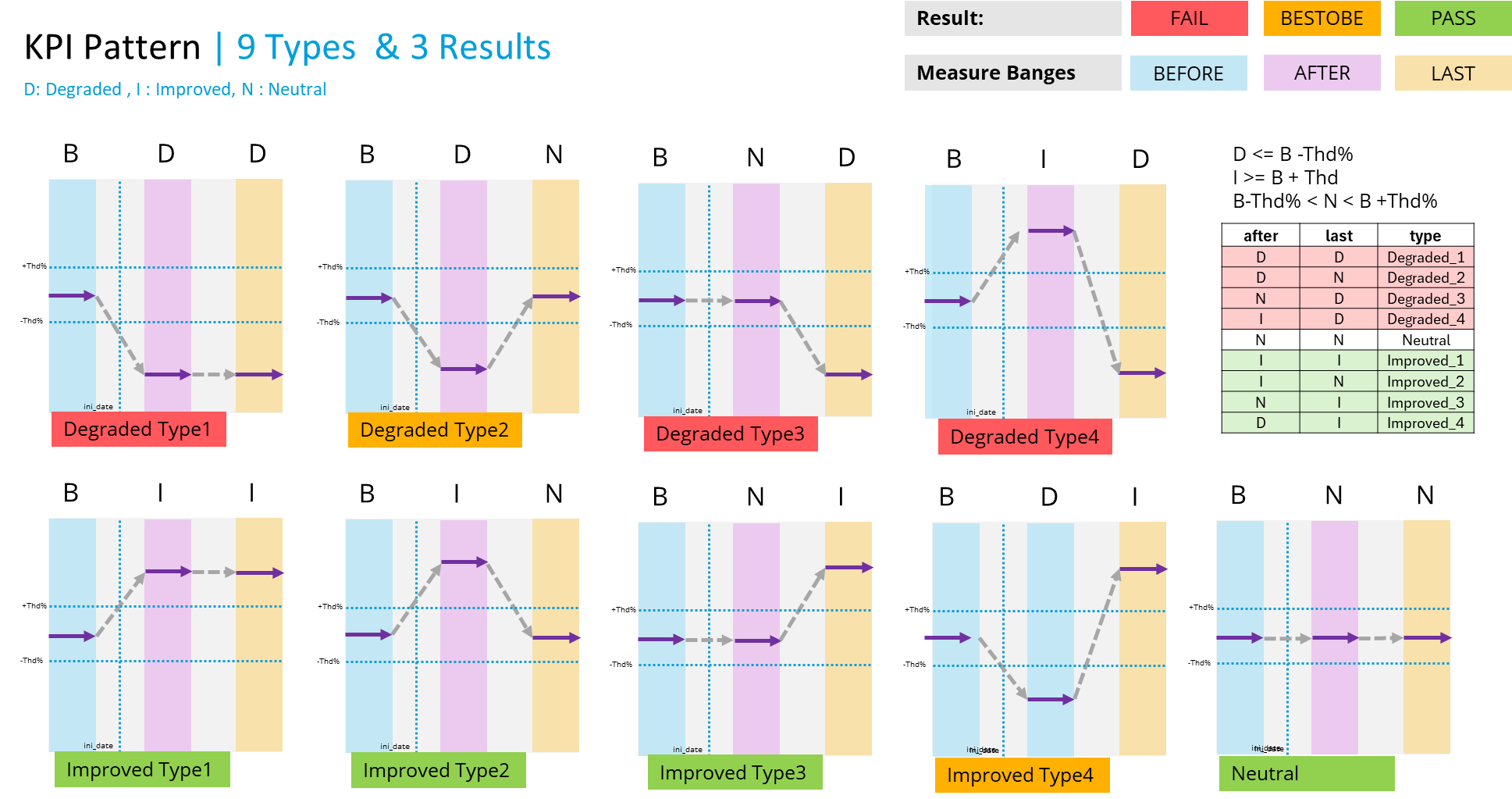
* + Before: [input\_date – guard – period; input\_date – guard]
  + After: [input\_date + guard; input\_date + guard + period]
  + Last: [max\_date – period; max\_date]

Indicators:

* + Site Compound Quality Indicators: umts\_cqi, lte\_cqi, nr\_cqi
  + Site Traffic Data (traffic\_data) 3G\_PS + 4G\_PS + 5G\_PS
  + Site Traffic Voice (traffic\_voice): 3G\_CS + VoLTE.
  + Neighbor Compound Quality Indicators: umts\_cqi, lte\_cqi, nr\_cqi
  + Neighbor Traffic Data (traffic\_data) 3G\_PS + 4G\_PS + 5G\_PS
  + Neighbor Traffic Voice (traffic\_voice): 3G\_CS + VoLTE

Methodology:

* + Calculate Average during Measure Range
  + Calculate the variation between Measure Ranges
  + Categorize the variation in one of the 9 KPI Pattern Types, 3 KPI Pattern Results.



### Site Analysis

Create plot using the site counters for neighbor list then calculate

* User Inputs:
  + site\_att
  + input\_date
* input\_date recommendation
  + list of dates with cell qty variation (3g, 4g)
* Plot01
  + - period: [input\_date – 30; max\_date]
    - KPI Type: line continue
    - KPI: Site Compound Quality Indicators: umts\_cqi, lte\_cqi, nr\_cqi
    - Vertical Lines: dotted line
    - Vertical: before, after, last limits
* Plot02
  + - period: [input\_date – 30; max\_date]
    - KPI Type: stacked bar
    - KPI: Site Traffic Data (traffic\_data) 3G\_PS + 4G\_PS + 5G\_PS
    - Vertical Lines: dotted line
    - Vertical: before, after, last limits
* Plot03
  + - period: [input\_date – 30; max\_date]
    - KPI Type: stacked bar
    - KPI: Site Traffic Voice (traffic\_voice): 3G\_CS + VoLTE.
    - Vertical Lines: dotted line
    - Vertical: before, after, last limits

### Neighbor Analysis

Create plot grouping (sum) all the counters for neighbor list then calculate

* Plot04
  + - Geolocated\_Map
    - site\_att -> green
    - neighbor sites-> yellow
* Plot05:
  + - period: [input\_date – 30; max\_date]
    - KPI Type: line continue
  + KPI: Neighbor Compound Quality Indicators: umts\_cqi, lte\_cqi, nr\_cqi
    - Vertical Lines: dotted line
    - Vertical: before, after, last limits
* Plot06
  + - period: [input\_date – 30; max\_date]
    - KPI Type: stacked bar
  + KPI: Neighbor Traffic Data (traffic\_data) 3G\_PS + 4G\_PS + 5G\_PS
    - Vertical Lines: dotted line
    - Vertical: before, after, last limits
* Plot07
  + - period: [input\_date – 30; max\_date]
    - KPI Type: stacked bar
  + KPI: Neighbor Traffic Voice (traffic\_voice): 3G\_CS + VoLTE
    - Vertical Lines: dotted line
    - Vertical: before, after, last limits

### Report Results

* + - * All the previous results in a pdf format.

Report Plot Site SampleA graph with red green and orange lines

AI-generated content may be incorrect.

A graph showing different colored lines

AI-generated content may be incorrect.

A graph of different colored lines

AI-generated content may be incorrect.