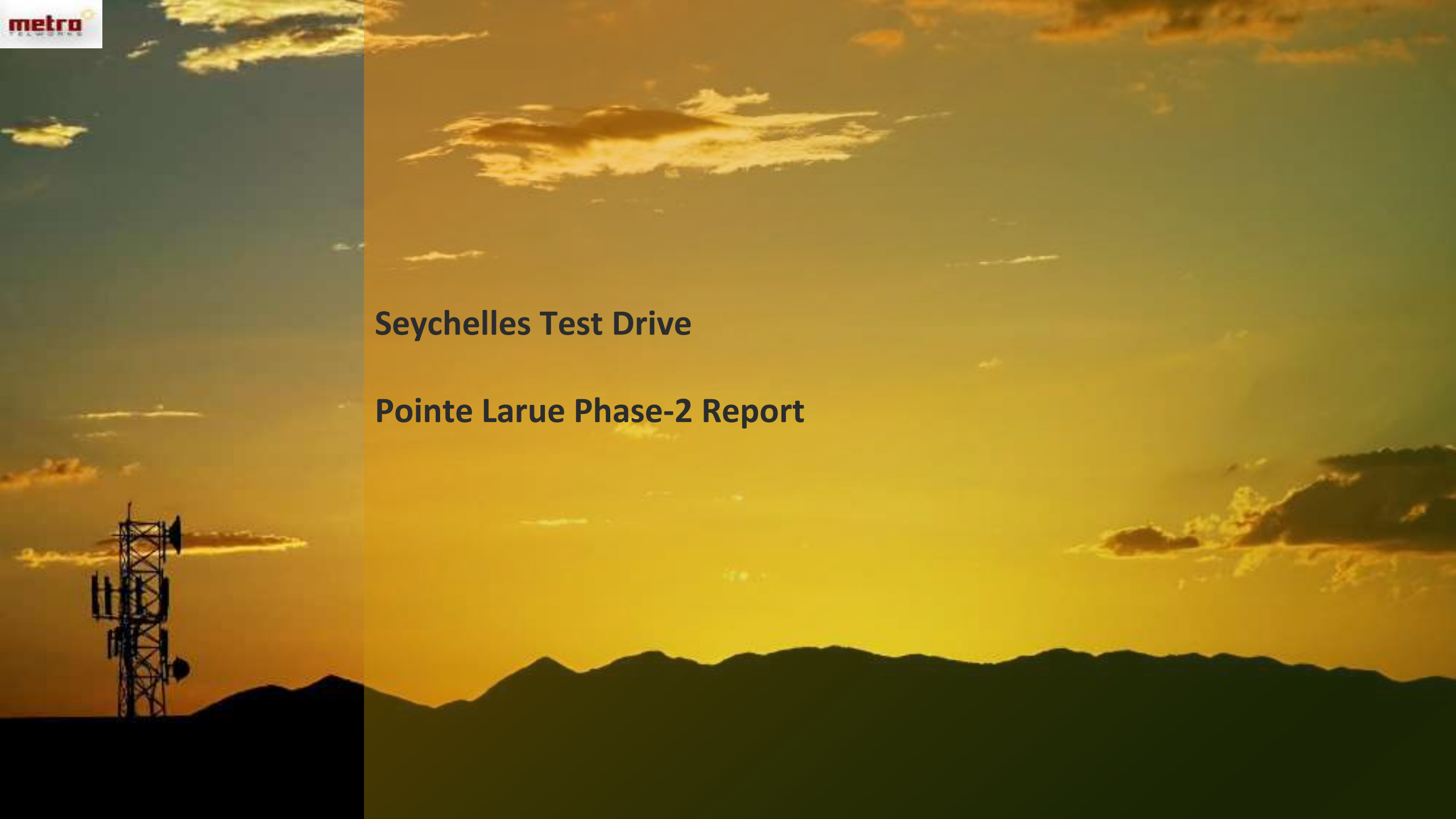


Seychelles Test Drive

Pointe Larue Phase-2 Report

DRIVE TEST ROUTE

Phase-1 Dates- 08th Oct 2024

Route Name: Mahe

District Name: Pointe Larue

Region: East

Island: Mahé

Drive Test Distance: 10.85 kms

Drive Test Duration: 00 hours,39 minutes,40 seconds

Phase-2 Dates- 31st Oct 2024

Route Name: Mahe

District Name: Pointe Larue

Region: East

Island: Mahé

Drive Test Distance: 11.08 kms

Drive Test Duration: 00 hours,48 minutes,05 seconds

VOICE EXECUTIVE SUMMARY

Phase-1

Short Call Findings:

- The Call Setup Success Rate for Airtel is (100.00%), while for Operator CWS it is (89.80%).
- The Call Setup Time for Airtel is (5.74s), while for Operator CWS it is (7.69s)

Long Call Findings :

- The Call Retainability for Airtel is (100.00%), while for CWS it is (100.00%).
- The MOS quality observed for Airtel is (3.11), and for CWS, it is (2.89).

Phase-2

Short Call Findings:

- The Call Setup Success Rate for Airtel is (100.00%), while for Operator CWS it is (95.00%).
- The Call Setup Time for Airtel is (6.67s), while for Operator CWS it is (8.11s)

Long Call Findings :

- The Call Retainability for Airtel is (100.00%), while for CWS it is (100.00%).
- The MOS quality observed for Airtel is (2.87), and for CWS, it is (3.04).

4G PREFERRED DATA TEST – EXECUTIVE SUMMARY

Phase-1

4G Preferred Data Findings:

- Airtel SFTP DL is (14.79 Mbps), while SFTP UL is (5.90 Mbps), CWS SFTP DL is (5.01 Mbps), while SFTP UL is (3.41 Mbps)
- Airtel HTTP DL is (16.16 Mbps), HTTP Capacity DL is (81.62 Mbps) ,HTTP UL is (8.54 Mbps) , and HTTP Capacity UL is (24.97 Mbps).
- CWS HTTP DL is (5.86 Mbps), HTTP Capacity DL is (17.60 Mbps) ,HTTP UL is (6.63 Mbps) , and HTTP Capacity UL is (16.81 Mbps).
- On live web page testing for browsing, www.shein.com took (6.70s), www.nbs.gov.sc took (17.48s), and www.sbc.sc took (21.63s) on Airtel.
- On live web page testing for browsing, www.shein.com took (10.32s), www.nbs.gov.sc took (16.77s), and www.sbc.sc took (15.92s) on CWS.
- On static browsing, Kepler Webpage took (4.06s), and Kepler Mobile took (1.67s) on Airtel.
- On static browsing, Kepler Webpage took (6.38s), and Kepler Mobile took (2.78s) on CWS.
- YouTube average resolution in Airtel is (1040.00) pixels.
- YouTube average resolution in CWS is (898.92) pixels.
- Airtel scored 56.74% in Carrier Aggregation (CA).
- CWS scored 24.11% in Carrier Aggregation (CA).

Phase-2

4G Preferred Data Findings:

- Airtel SFTP DL is (12.66 Mbps), while SFTP UL is (6.71 Mbps), CWS SFTP DL is (8.09 Mbps), while SFTP UL is (3.00 Mbps)
- Airtel HTTP DL is (19.39 Mbps), HTTP Capacity DL is (40.54 Mbps) ,HTTP UL is (9.76 Mbps) , and HTTP Capacity UL is (22.44 Mbps).
- CWS HTTP DL is (6.91 Mbps), HTTP Capacity DL is (13.58 Mbps) ,HTTP UL is (4.82 Mbps) , and HTTP Capacity UL is (8.27 Mbps).
- On live web page testing for browsing, www.shein.com took (6.47s), www.nbs.gov.sc took (17.35s), and www.sbc.sc took (16.57s) on Airtel.
- On live web page testing for browsing, www.shein.com took (8.79s), www.nbs.gov.sc took (14.50s), and www.sbc.sc took (19.57s) on CWS.
- On static browsing, Kepler Webpage took (4.67s), and Kepler Mobile took (1.72s) on Airtel.
- On static browsing, Kepler Webpage took (4.24s), and Kepler Mobile took (3.02s) on CWS.
- YouTube average resolution in Airtel is (1080.00) pixels.
- YouTube average resolution in CWS is (983.69) pixels.
- Airtel scored 63.31% in Carrier Aggregation (CA).
- CWS scored 19.88% in Carrier Aggregation (CA).

3G PREFERRED DATA TEST - EXECUTIVE SUMMARY

Phase-1

3G Preferred Data Test Findings:

- Airtel SFTP DL is (5.04 Mbps), while SFTP UL is (1.50 Mbps), CWS SFTP DL is (4.02 Mbps), while SFTP UL is (1.00 Mbps)
- Airtel HTTP DL is (4.81 Mbps), HTTP Capacity DL is (6.89 Mbps) ,HTTP UL is (1.71 Mbps) , and HTTP Capacity UL is (3.80 Mbps).
- CWS HTTP DL is (2.21 Mbps), HTTP Capacity DL is (5.26 Mbps) ,HTTP UL is (1.90 Mbps) , and HTTP Capacity UL is (4.38 Mbps).
- On live web page testing for browsing, www.shein.com took (11.07s), www.nbs.gov.sc took (12.92s), and www.sbc.sc took (16.55s) on Airtel.
- On live web page testing for browsing, www.shein.com took (9.99s), www.nbs.gov.sc took (10.18s), and www.sbc.sc took (23.54s) on CWS.
- On static browsing, Kepler Webpage took (5.73s), and Kepler Mobile took (1.84s) on Airtel.
- On static browsing, Kepler Webpage took (4.98s), and Kepler Mobile took (2.54s) on CWS.
- YouTube average resolution in Airtel is (963.93) pixels.
- YouTube average resolution in CWS is (1027.54) pixels.

Phase-2

3G Preferred Data Test Findings:

- Airtel SFTP DL is (4.85 Mbps), while SFTP UL is (1.33 Mbps), CWS SFTP DL is (3.54 Mbps), while SFTP UL is (1.17 Mbps)
- Airtel HTTP DL is (4.63 Mbps), HTTP Capacity DL is (5.90 Mbps) ,HTTP UL is (2.07 Mbps) , and HTTP Capacity UL is (4.45 Mbps).
- CWS HTTP DL is (2.63 Mbps), HTTP Capacity DL is (3.32 Mbps) ,HTTP UL is (1.23 Mbps) , and HTTP Capacity UL is (4.29 Mbps).
- On live web page testing for browsing, www.shein.com took (10.47s), www.nbs.gov.sc took (11.75s), and www.sbc.sc took (13.11s) on Airtel.
- On live web page testing for browsing, www.shein.com took (8.30s), www.nbs.gov.sc took (10.54s), and www.sbc.sc took (11.11s) on CWS.
- On static browsing, Kepler Webpage took (4.39s), and Kepler Mobile took (1.73s) on Airtel.
- On static browsing, Kepler Webpage took (4.78s), and Kepler Mobile took (2.61s) on CWS.
- YouTube average resolution in Airtel is (1040.63) pixels.
- YouTube average resolution in CWS is (957.47) pixels.

TESTING METHODOLOGY

Short Call	
Call Duration	10 Seconds
Setup and Release phase	30 seconds
Minimum pause between calls	30 seconds

Long Call	
Call Duration	120 Seconds
Setup and Release phase	30 seconds
Minimum between calls	30 seconds

DATA	Test Type and Timeout	Technology 3G Preferred	Technology 4G Preferred
POP always on. ICMP PAYLOAD PING 800 BYTES			
1	FILE TRANSFER DOWNLOAD	FTP DL (3MB)	FTP DL (5MB)
	135s	wait 10s	wait 10s
2	FILE TRANSFER UPLOAD	FTP UL (1MB)	FTP UL (3MB)
	135s	wait 10s	wait 10s
3	FILE TRANSFER DOWNLOAD	HTTP Get (3MB)	HTTP Get (5MB)
	135s	wait 10s	wait 10s
4	FILE TRANSFER UPLOAD	HTTP Put (1MB)	HTTP Put (3MB)
	135s	wait 10s	wait 10s
5	ICMP PING 32 BYTES	Ping (32 bytes) *5	Ping (32 bytes) *5
		wait 10s	wait 10s
6	YOUTUBE STREAMING	Video: YouTube 60sec	Video: YouTube 60sec
	95 seconds	wait 10s	wait 10s
7	KEPLER WEB BROWSING	HTTPS Browsing: Kepler	HTTPS Browsing: Kepler
	45s	wait 10s	wait 10s
8	LIVE WEB BROWSING	www.shein.com, www.nbs.gov.sc, www.sbc.sc	www.shein.com, www.nbs.gov.sc, www.sbc.sc
	45s	wait 10s	wait 10s
9	KEPLER MOBILE WEB BROWSING	HTTPS Browsing: Kepler Mobile	HTTPS Browsing: Kepler Mobile
	45s	wait 10s	wait 10s
10	ICMP PING 32 BYTES	Ping (32 bytes) 5 www.google.com	Ping (32 bytes) 5 www.google.com
		wait 10s	wait 10s
11	FILE TRANSFER-CAPACITY DOWNLOAD	HTTP Get (500MB) Multiple files	HTTP Get (500MB) Multiple files
	10s fixed duration	wait 10s	wait 10s
12	FILE TRANSFER-CAPACITY UPLOAD	HTTP Put (500MB)-Multiple Files	HTTP Put (500MB)-Multiple Files
	10s fixed duration	wait 10s	wait 10s

VOICE TEST KPI STATISTICS (Short Call)

Phase-1

Short Call Statistics		
Short Call Scenario	Operator 1	Operator 2
Voice KPIs	Airtel	CWS
Call Attempt	51	49
Call Failed	0	5
Call Connected	51	44
CSSR[%]	100.00	89.80
USCSR[%]	0.00	10.20
CST [s] Alerting	5.74	7.69
CST [s]Connected	6.07	7.88

CSSR= Call Setup Success rate
USCSR=Unsuccessful call setup ratio
CST=Call setup time
Call Setup Success Ratio >97%
CRR= Call retainability ratio
DCR=Dropped-call rate
MOS=Mean Opinion Score
Drop Call Ratio<2

Call Setup Time (s)	Operators		Rank	
	Airtel	CWS	Airtel	CWS
Overall CST (until ringing/alerting)	5.74	7.69	1	2
CS calls CST (until ringing/alerting)	5.61	12.51	1	2
CSFB calls CST (until ringing/alerting)	6.06	7.34	1	2
Overall CST (until Connect/Connect Acknowledge)	6.07	7.88	1	2
CS calls CST (until Connect/Connect Acknowledge)	5.95	12.61	1	2
CSFB calls CST (until Connect/Connect Acknowledge)	6.35	7.54	1	2

Phase-2

Short Call Statistics		
Short Call Scenario	Operator 1	Operator 2
Voice KPIs	Airtel	CWS
Call Attempt	60	60
Call Failed	0	3
Call Connected	60	57
CSSR[%]	100.00	95.00
USCSR[%]	0.00	5.00
CST [s] Alerting	6.67	8.11
CST [s]Connected	6.96	8.30

Call Setup Time (s)	Operators		Rank	
	Airtel	CWS	Airtel	CWS
Overall CST (until ringing/alerting)	6.67	8.11	1	2
CS calls CST (until ringing/alerting)	6.27	12.04	1	2
CSFB calls CST (until ringing/alerting)	7.20	7.63	1	2
Overall CST (until Connect/Connect Acknowledge)	6.96	8.30	1	2
CS calls CST (until Connect/Connect Acknowledge)	6.56	12.18	1	2
CSFB calls CST (until Connect/Connect Acknowledge)	7.48	7.82	1	2

VOICE TEST KPI STATISTICS (Long Call)

Phase-1

Long Call Statistics		
Long Call Scenario	Operator 1	Operator 2
Voice KPIs	Airtel	CWS
Call Connected	13	12
Call Dropped	0	0
Call Completed	13	12
CRR[%]	100.00	100.00
DCR[%]	0.00	0.00
MOS	3.11	2.89

	Airtel short call	CWS short call	Airtel long call	CWS long call
CSFB Calls	15	44	9	11
CS Calls	36	5	4	2

Handover Statistics	Airtel MO	CWS MO
Handover Attempt	11	33
Handover Failure	0	0
Handover Success	11	33
HOSR %	100.00	100.00

Phase-2

Long Call Statistics		
Long Call Scenario	Operator 1	Operator 2
Voice KPIs	Airtel	CWS
Call Connected	15	14
Call Dropped	0	0
Call Completed	15	14
CRR[%]	100.00	100.00
DCR[%]	0.00	0.00
MOS	2.87	3.04

	Airtel short call	CWS short call	Airtel long call	CWS long call
CSFB Calls	26	51	12	14
CS Calls	34	9	3	0

Handover Statistics	Airtel MO	CWS MO
Handover Attempt	14	47
Handover Failure	1	0
Handover Success	13	47
HOSR %	92.86	100.00

DATA TEST KPI STATISTICS(4G Preferred)

DATA Scenario		Phase-1				Phase-2			
		Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)	Airtel 4G	CWS 4G	Airtel 4G (Rank)	CWS 4G (Rank)
FILE TRANSFER	SFTP DL (Mbps)	14.79	5.01	1	2	12.66	8.09	1	2
	SFTP UL(Mbps)	5.90	3.41	1	2	6.71	3.00	1	2
	HTTP DL(Mbps)	16.16	5.86	1	2	19.39	6.91	1	2
	HTTP UL(Mbps)	8.54	6.63	1	2	9.76	4.82	1	2
	HTTP Capacity DL(Mbps)	81.62	17.60	1	2	40.54	13.58	1	2
	HTTP Capacity UL(Mbps)	24.97	16.81	1	2	22.44	8.27	1	2
BROWSER	Overall Browser DL Time (s)	10.68	10.27	2	1	9.57	9.93	1	2
	Kepler Webpage DL Time (s)	4.06	6.38	1	2	4.67	4.24	2	1
	Mobile Kepler Webpage DL Time (s)	1.67	2.78	1	2	1.72	3.02	1	2
	www.shein.com Webpage DL Time (s)	6.70	10.32	1	2	6.47	8.79	1	2
	www.nbs.gov.sc Webpage DL Time (s)	17.48	16.77	2	1	17.35	14.50	2	1
	www.sbc.sc Webpage DL Time (s)	21.63	15.92	2	1	16.57	19.57	1	2
LATENCY	Avg Latency (ms)	260.49	336.32	1	2	252.74	192.46	2	1
	Median Latency (ms)	219	323	1	2	139	195	1	2
YOUTUBE	YouTube Access Time (s)	5.39	2.38	2	1	5.19	3.02	2	1
	YouTube Average Resolution (pixels)	1040.00	898.92	1	2	1080.00	983.69	1	2
	YouTube Success Ratio [%]	100.00	85.71	1	2	100.00	87.50	1	2

4G PREFERRED THROUGHPUT FILE ACCESS

Phase-1

Test Type	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
SFTP DL	Success	8	4	100.00	100.00
	Failure	0	0	0.00	0.00
SFTP UL	Success	8	4	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP DL	Success	8	5	100.00	83.33
	Failure	0	1	0.00	16.67
HTTP UL	Success	7	6	100.00	85.71
	Failure	0	1	0.00	14.29
HTTP Capacity DL	Success	7	6	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP Capacity UL	Success	7	3	100.00	50.00
	Failure	0	3	0.00	50.00

Phase-2

Test Type	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
SFTP DL	Success	11	6	100.00	100.00
	Failure	0	0	0.00	0.00
SFTP UL	Success	11	7	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP DL	Success	11	8	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP UL	Success	11	7	100.00	87.50
	Failure	0	1	0.00	12.50
HTTP Capacity DL	Success	9	6	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP Capacity UL	Success	9	3	100.00	50.00
	Failure	0	3	0.00	50.00

4G PREFERRED BROWSING FILE ACCESS

Phase-1

Web Page	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
Kepler	Success	5	6	71.43	100.00
	Failure	2	0	28.57	0.00
Mobile Kepler	Success	7	5	100.00	83.33
	Failure	0	1	0.00	16.67
www.shein.com	Success	7	5	100.00	83.33
	Failure	0	1	0.00	16.67
www.nbs.gov.sc	Success	7	5	100.00	100.00
	Failure	0	0	0.00	0.00
www.sbc.sc	Success	7	5	100.00	83.33
	Failure	0	1	0.00	16.67

Phase-2

Web Page	Status	Airtel 4G	CWS 4G	Airtel 4G (%)	CWS 4G (%)
Kepler	Success	7	6	77.78	100.00
	Failure	2	0	22.22	0.00
Mobile Kepler	Success	9	5	100.00	100.00
	Failure	0	0	0.00	0.00
www.shein.com	Success	9	6	100.00	100.00
	Failure	0	0	0.00	0.00
www.nbs.gov.sc	Success	9	5	100.00	100.00
	Failure	0	0	0.00	0.00
www.sbc.sc	Success	9	6	100.00	100.00
	Failure	0	0	0.00	0.00

4G PREFERRED LATENCY

Phase-1

	Latency KPIs	Airtel 4G	CWS 4G
Overall Latency	Sample Count [32 bytes]	15	11
	Average Latency [ms]	269.67	348.27
	Median Latency [ms]	372	352
	Ping session status: Successful	15	11
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	1
	Packet Loss<1%	0.00	8.33
www.google.com	Average Latency [ms]	399.86	297.40
	Median Latency [ms]	398	237
	Ping session status: Successful	7	5
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	1
	Packet Loss<1%	0.00	16.67
102.133.176.104	Average Latency [ms]	155.75	390.67
	Median Latency [ms]	126	380
	Ping session status: Successful	8	6
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00

Phase-2

	Latency KPIs	Airtel 4G	CWS 4G
Overall Latency	Sample Count [32 bytes]	20	13
	Average Latency [ms]	251.05	197.15
	Median Latency [ms]	130	194
	Ping session status: Successful	20	13
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
www.google.com	Average Latency [ms]	411.00	168.67
	Median Latency [ms]	410	168
	Ping session status: Successful	9	6
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
102.133.176.104	Average Latency [ms]	120.18	221.57
	Median Latency [ms]	120	218
	Ping session status: Successful	11	7
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00

4G PREFERRED YOUTUBE COMPARISON

Phase-1

LTE YOUTUBE Success Ratio		
KPIs	Airtel 4G	CWS 4G
Attempt(Count)	8	7
Success(Count)	8	6
Failure(Count)	0	1
YouTube Access Time (s)	5.39	2.38
YouTube Average Resolution (pixels)	1040.00	898.92
YouTube Success Ratio [%]	100.00	85.71

Phase-2

LTE YOUTUBE Success Ratio		
KPIs	Airtel 4G	CWS 4G
Attempt(Count)	11	8
Success(Count)	11	7
Failure(Count)	0	1
YouTube Access Time (s)	5.19	3.02
YouTube Average Resolution (pixels)	1080.00	983.69
YouTube Success Ratio [%]	100.00	87.50

DATA TEST KPI STATISTICS (3G Preferred)

DATA Scenario		Phase-1				Phase-2			
		Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)	Airtel 3G	CWS 3G	Airtel 3G (Rank)	CWS 3G (Rank)
FILE TRANSFER	SFTP DL (Mbps)	5.04	4.02	1	2	4.85	3.54	1	2
	SFTP UL(Mbps)	1.50	1.00	1	2	1.33	1.17	1	2
	HTTP DL(Mbps)	4.81	2.21	1	2	4.63	2.63	1	2
	HTTP UL(Mbps)	1.71	1.90	2	1	2.07	1.23	1	2
	HTTP Capacity DL(Mbps)	6.89	5.26	1	2	5.90	3.32	1	2
	HTTP Capacity UL(Mbps)	3.80	4.38	2	1	4.45	4.29	1	2
BROWSER	Overall Browser DL Time (s)	9.51	10.92	1	2	8.19	6.97	2	1
	Kepler Webpage DL Time (s)	5.73	4.99	2	1	4.39	4.78	1	2
	Mobile Kepler Webpage DL Time (s)	1.84	2.54	1	2	1.73	2.61	1	2
	www.shein.com Webpage DL Time (s)	11.07	9.99	2	1	10.47	8.30	2	1
	www.nbs.gov.sc Webpage DL Time (s)	12.92	10.18	2	1	11.75	10.54	2	1
	www.sbc.sc Webpage DL Time (s)	16.55	23.54	1	2	13.11	11.11	2	1
LATENCY	Avg Latency (ms)	306.84	181.81	2	1	284.47	220.33	2	1
	Median Latency (ms)	403	154	2	1	204	200	2	1
YOUTUBE	YouTube Access Time (s)	3.95	3.18	2	1	3.63	3.58	2	1
	YouTube Average Resolution (pixels)	963.93	1027.54	2	1	1040.63	957.47	1	2
	YouTube Success Ratio [%]	100.00	60.00	1	2	100.00	71.43	1	2

3G PREFERRED THROUGHPUT FILE ACCESS

Phase-1

Test Type	Status	Airtel 3G	CWS 3G	Airtel 3G (%)	CWS 3G (%)
SFTP DL	Success	7	2	100.00	100.00
	Failure	0	0	0.00	0.00
SFTP UL	Success	7	1	100.00	33.33
	Failure	0	2	0.00	66.67
HTTP DL	Success	7	1	100.00	50.00
	Failure	0	1	0.00	50.00
HTTP UL	Success	6	2	100.00	40.00
	Failure	0	3	0.00	60.00
HTTP Capacity DL	Success	6	5	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP Capacity UL	Success	6	4	100.00	80.00
	Failure	0	1	0.00	20.00

Phase-2

Test Type	Status	Airtel 3G	CWS 3G	Airtel 3G (%)	CWS 3G (%)
SFTP DL	Success	9	3	100.00	100.00
	Failure	0	0	0.00	0.00
SFTP UL	Success	9	3	100.00	75.00
	Failure	0	1	0.00	25.00
HTTP DL	Success	9	6	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP UL	Success	9	4	100.00	57.14
	Failure	0	3	0.00	42.86
HTTP Capacity DL	Success	7	4	100.00	100.00
	Failure	0	0	0.00	0.00
HTTP Capacity UL	Success	7	2	100.00	40.00
	Failure	0	3	0.00	60.00

3G PREFERRED BROWSING FILE ACCESS

Phase-1

Web Page	Status	Airtel 3G	CWS 3G	Airtel 3G(%)	CWS 3G (%)
Kepler	Success	5	2	100.00	40.00
	Failure	0	3	0.00	60.00
Mobile Kepler	Success	6	4	100.00	80.00
	Failure	0	1	0.00	20.00
www.shein.com	Success	6	3	100.00	60.00
	Failure	0	2	0.00	40.00
www.nbs.gov.sc	Success	6	3	100.00	60.00
	Failure	0	2	0.00	40.00
www.sbc.sc	Success	5	4	100.00	100.00
	Failure	0	0	0.00	0.00

Phase-2

Web Page	Status	Airtel 3G	CWS 3G	Airtel 3G(%)	CWS 3G (%)
Kepler	Success	7	5	100.00	83.33
	Failure	0	1	0.00	16.67
Mobile Kepler	Success	6	4	85.71	100.00
	Failure	1	0	14.29	0.00
www.shein.com	Success	7	4	100.00	80.00
	Failure	0	1	0.00	20.00
www.nbs.gov.sc	Success	7	3	100.00	60.00
	Failure	0	2	0.00	40.00
www.sbc.sc	Success	5	3	83.33	60.00
	Failure	1	2	16.67	40.00

3G PREFERRED LATENCY

Phase-1

	Latency KPIs	Airtel 3G	CWS 3G
Overall Latency	Sample Count [32 bytes]	10	6
	Average Latency [ms]	340.90	162.67
	Median Latency [ms]	402	148
	Ping session status: Successful	10	6
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	1	1
	Packet Loss<1%	9.09	14.29
www.google.com	Average Latency [ms]	412.17	143.00
	Median Latency [ms]	410	140
	Ping session status: Successful	6	4
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	1
	Packet Loss<1%	0.00	20.00
102.133.176.104	Average Latency [ms]	234.00	202.00
	Median Latency [ms]	145	202
	Ping session status: Successful	4	2
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	1	0
	Packet Loss<1%	20.00	0.00

Phase-2

	Latency KPIs	Airtel 3G	CWS 3G
Overall Latency	Sample Count [32 bytes]	14	7
	Average Latency [ms]	297.57	178.71
	Median Latency [ms]	399	203
	Ping session status: Successful	14	7
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	2	0
	Packet Loss<1%	12.50	0.00
www.google.com	Average Latency [ms]	414.00	139.67
	Median Latency [ms]	409	140
	Ping session status: Successful	7	3
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	0	0
	Packet Loss<1%	0.00	0.00
102.133.176.104	Average Latency [ms]	181.14	208.00
	Median Latency [ms]	143	211
	Ping session status: Successful	7	4
	Ping session status: Failed [Socket error]	0	0
	Ping session status: Failed [Protocol error timeout]	2	0
	Packet Loss<1%	22.22	0.00

3G PREFERRED YOUTUBE COMPARISON

Phase-1

UMTS YOUTUBE Success Ratio		
KPIs	Airtel 3G	CWS 3G
Attempt(Count)	6	5
Success(Count)	6	3
Failure(Count)	0	2
YouTube Access Time (s)	3.95	3.18
YouTube Average Resolution (pixels)	963.93	1027.54
YouTube Success Ratio [%]	100.00	60.00

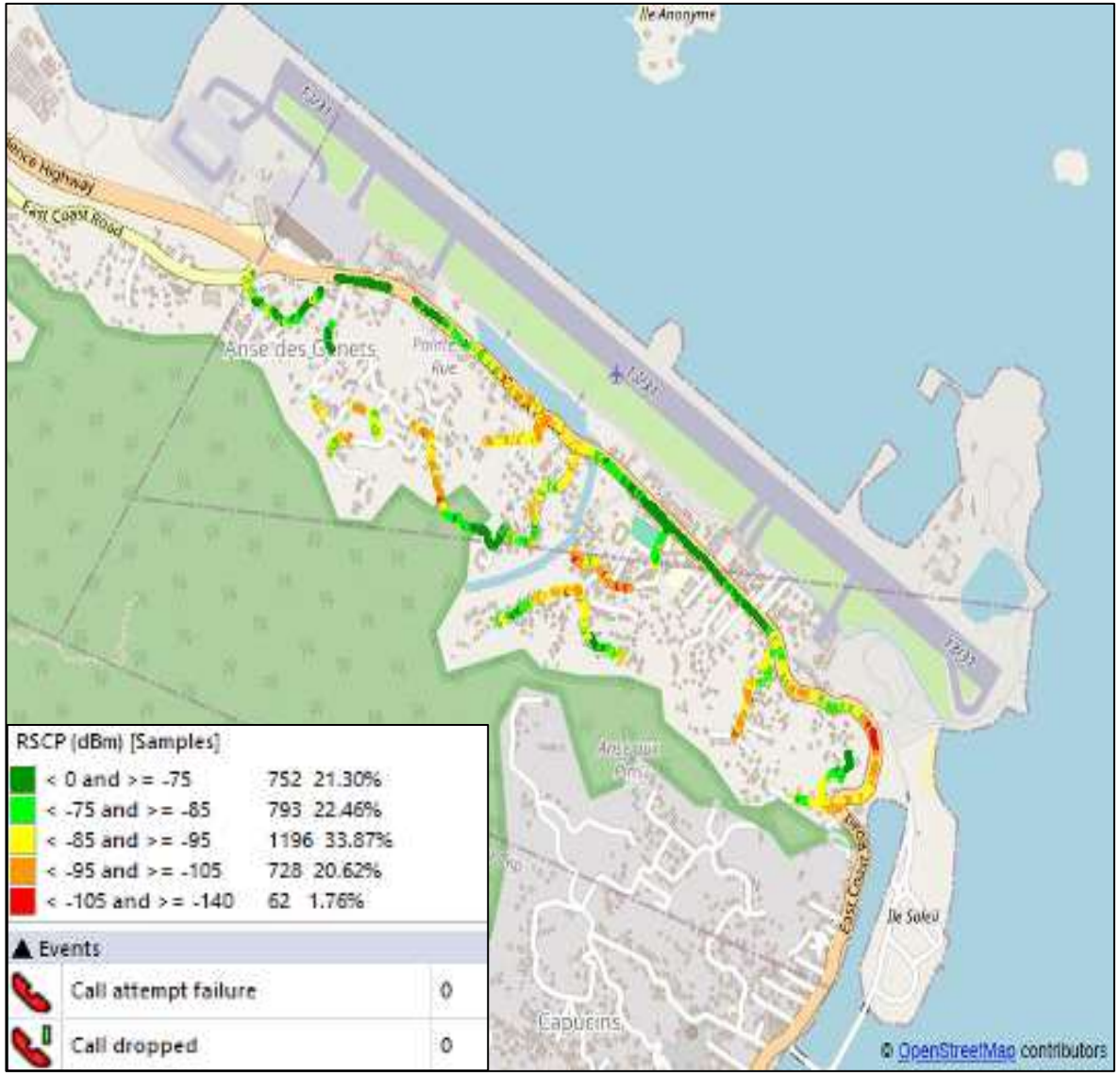
Phase-2

UMTS YOUTUBE Success Ratio		
KPIs	Airtel 3G	CWS 3G
Attempt(Count)	9	7
Success(Count)	9	5
Failure(Count)	0	2
YouTube Access Time (s)	3.63	3.58
YouTube Average Resolution (pixels)	1040.63	957.47
YouTube Success Ratio [%]	100.00	71.43

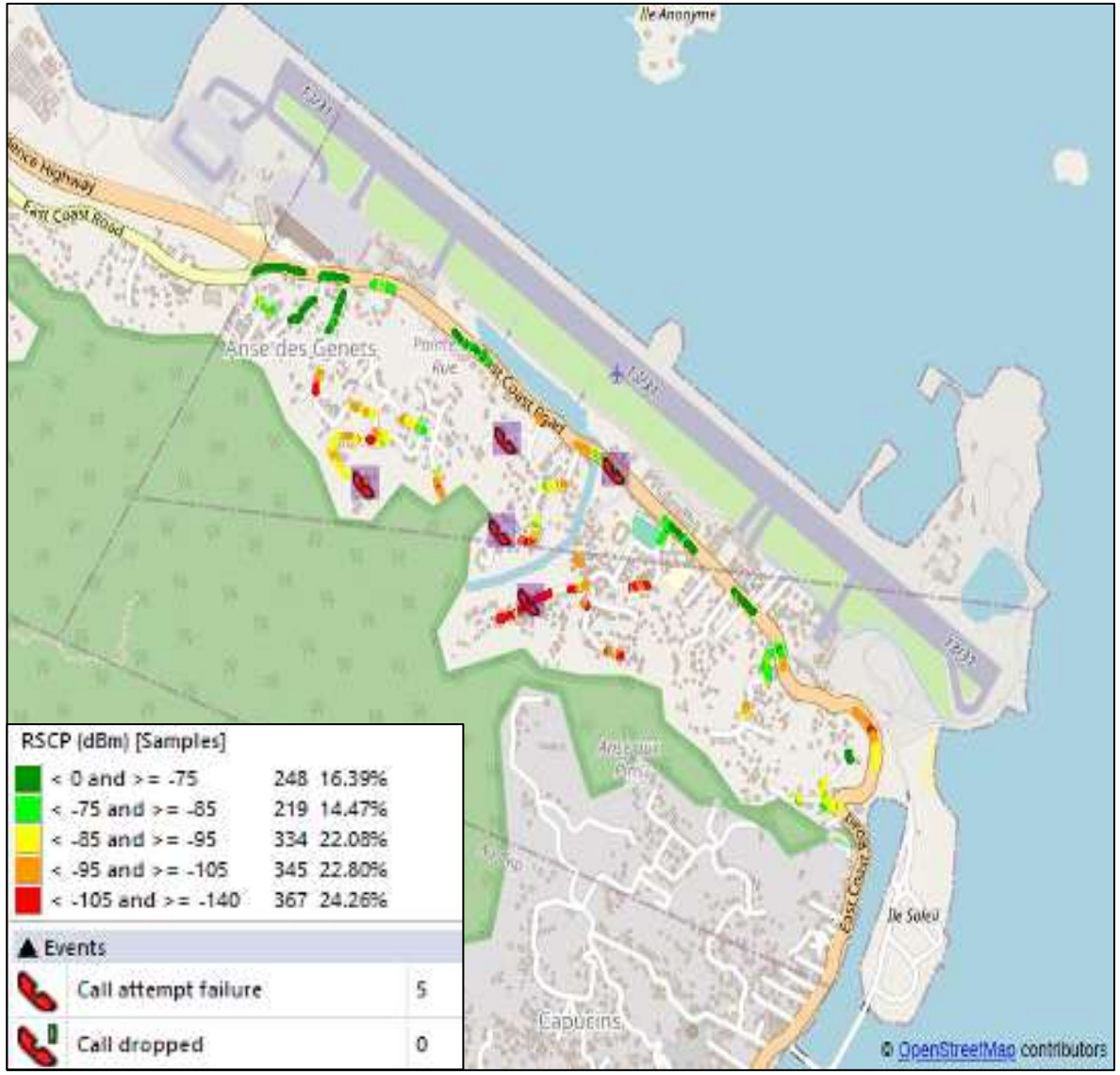
Voice Call Events

Phase-1 SHORT CALL FAILURE EVENTS LOCATION vs RSCP

Airtel SC MO

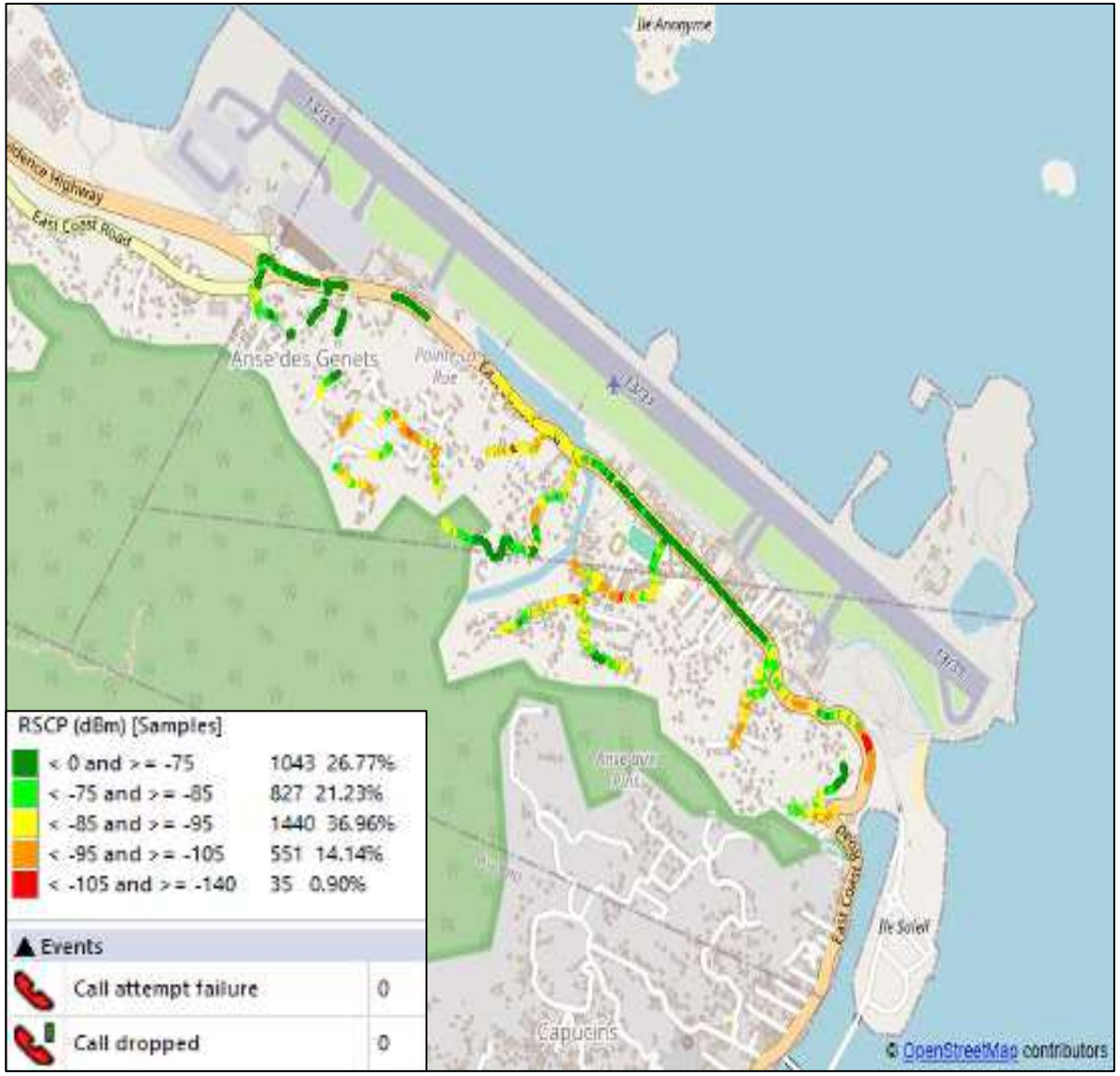


CWS SC MO

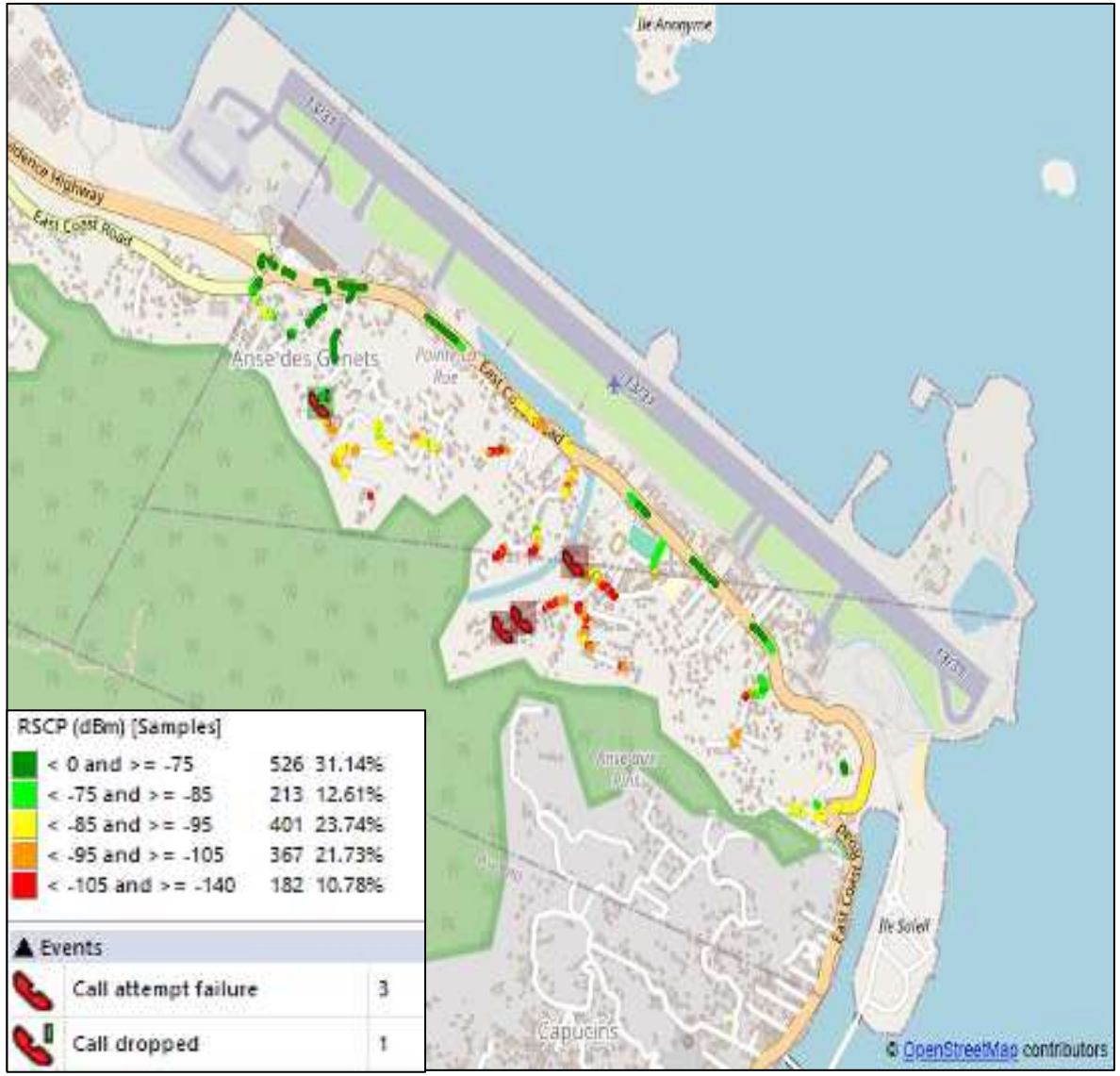


Phase-2 SHORT CALL FAILURE EVENTS LOCATION vs RSCP

Airtel SC MO

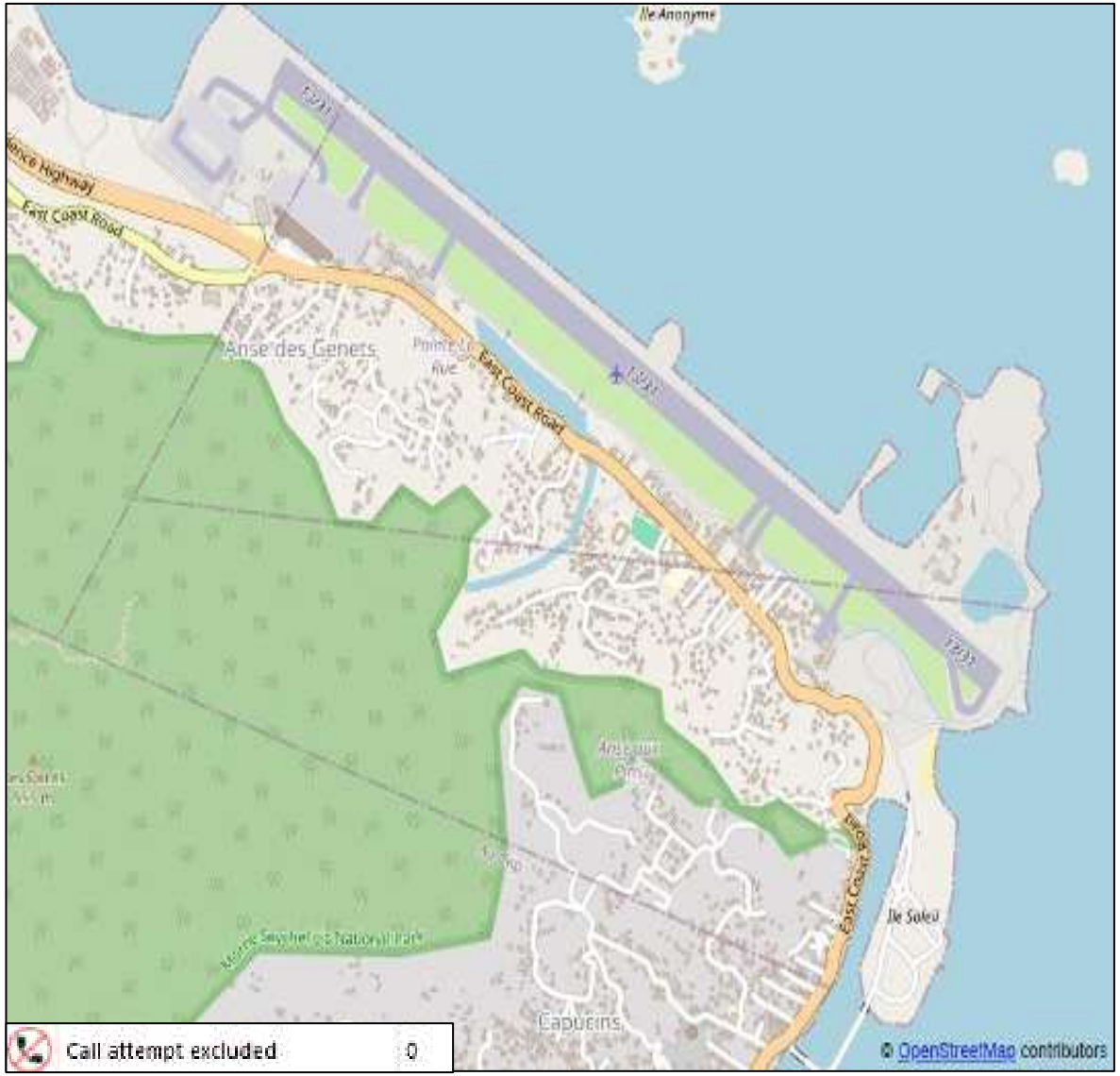


CWS SC MO

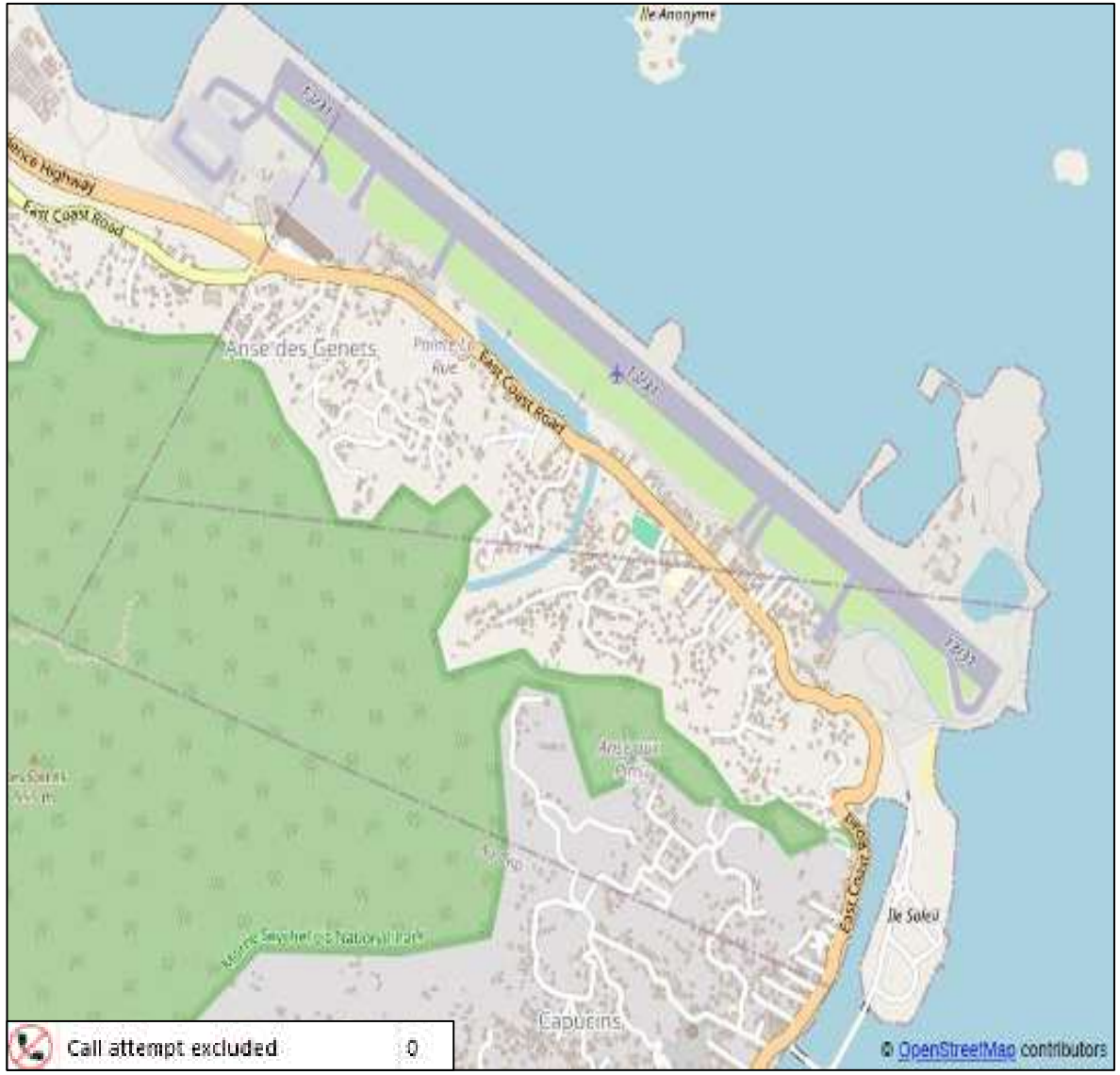


Phase-1 SHORT CALL EXCLUDED EVENTS

Airtel SC MO

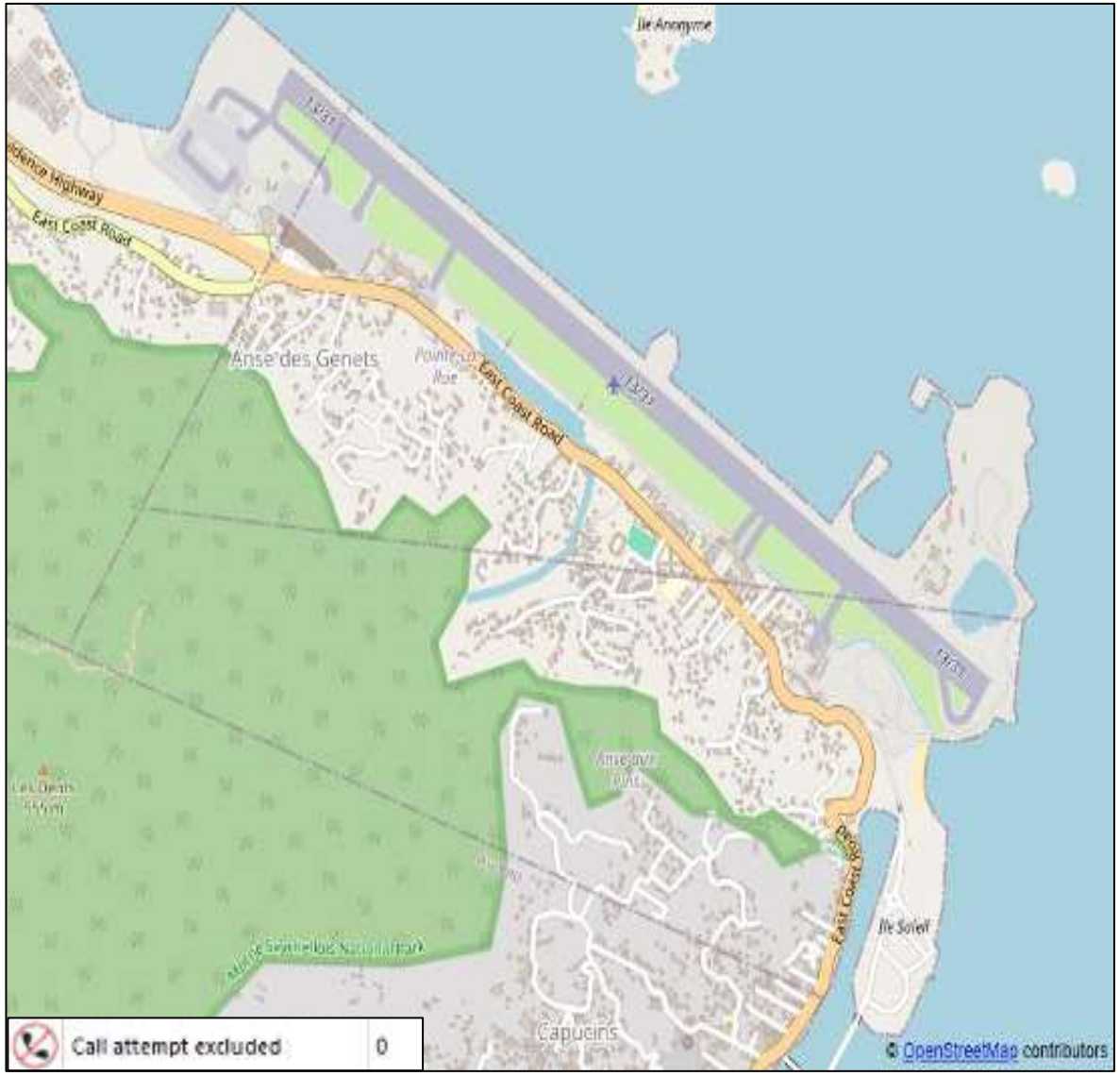


CWS SC MO

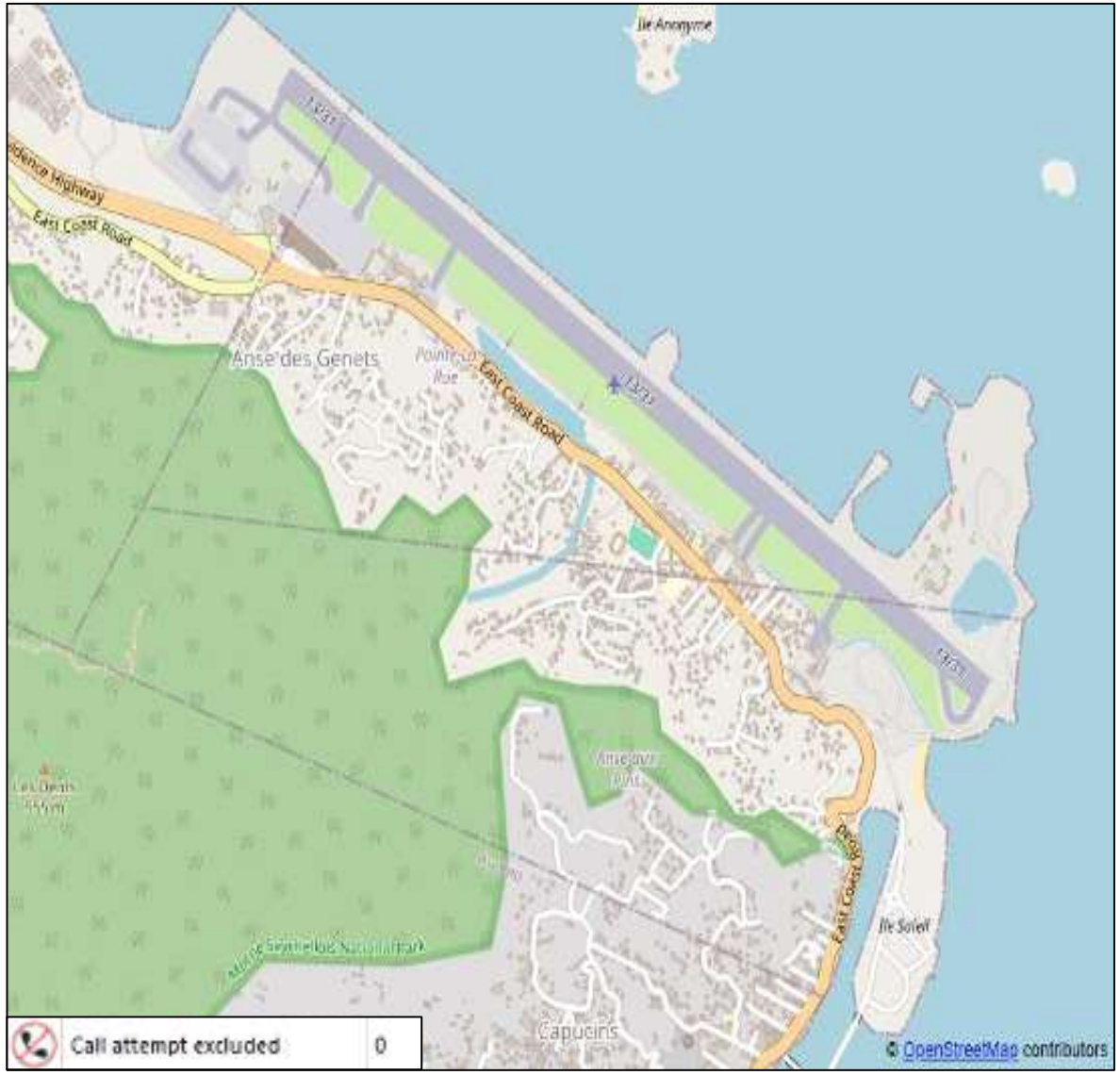


Phase-2 SHORT CALL EXCLUDED EVENTS

Airtel SC MO

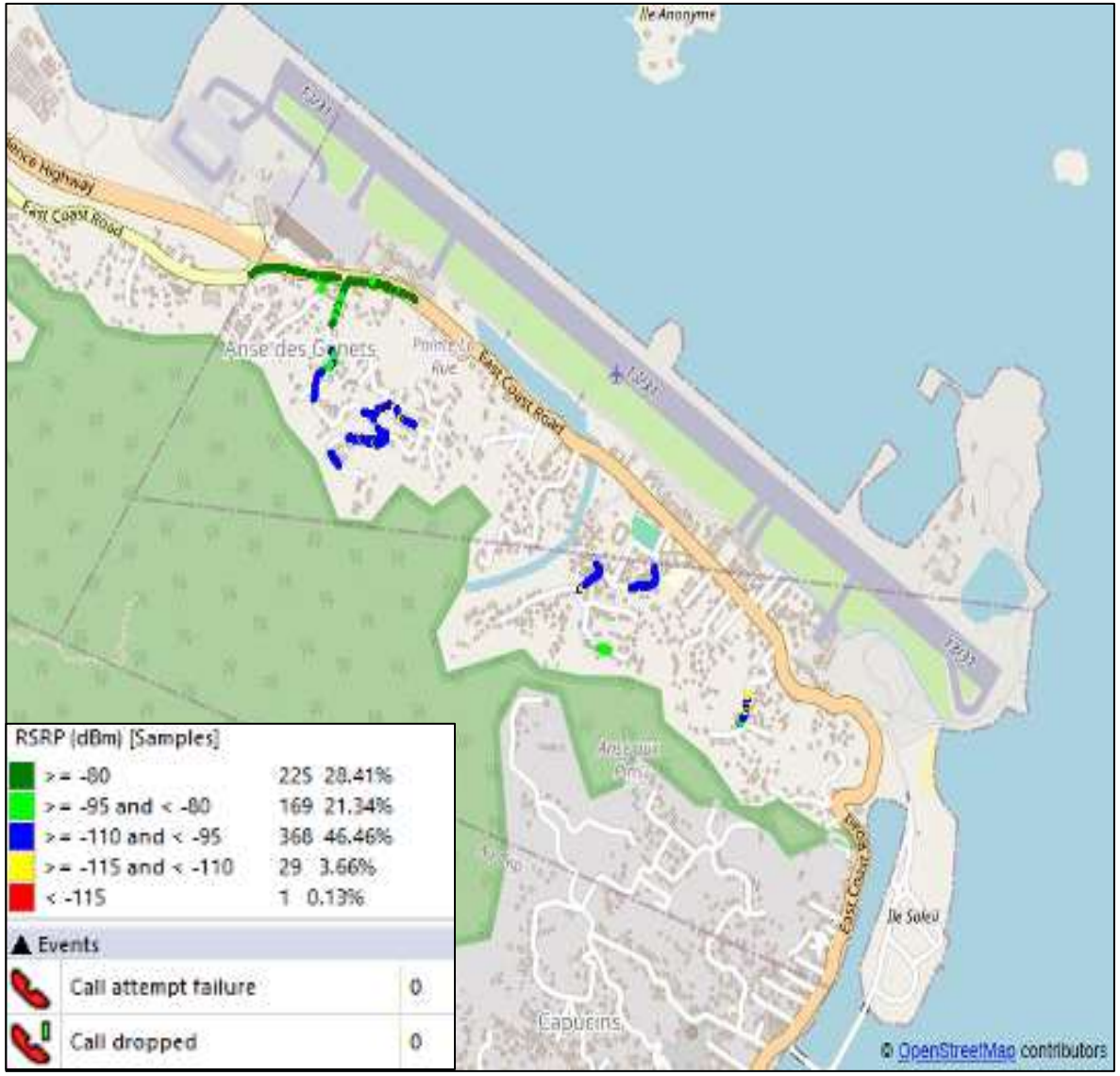


CWS SC MO

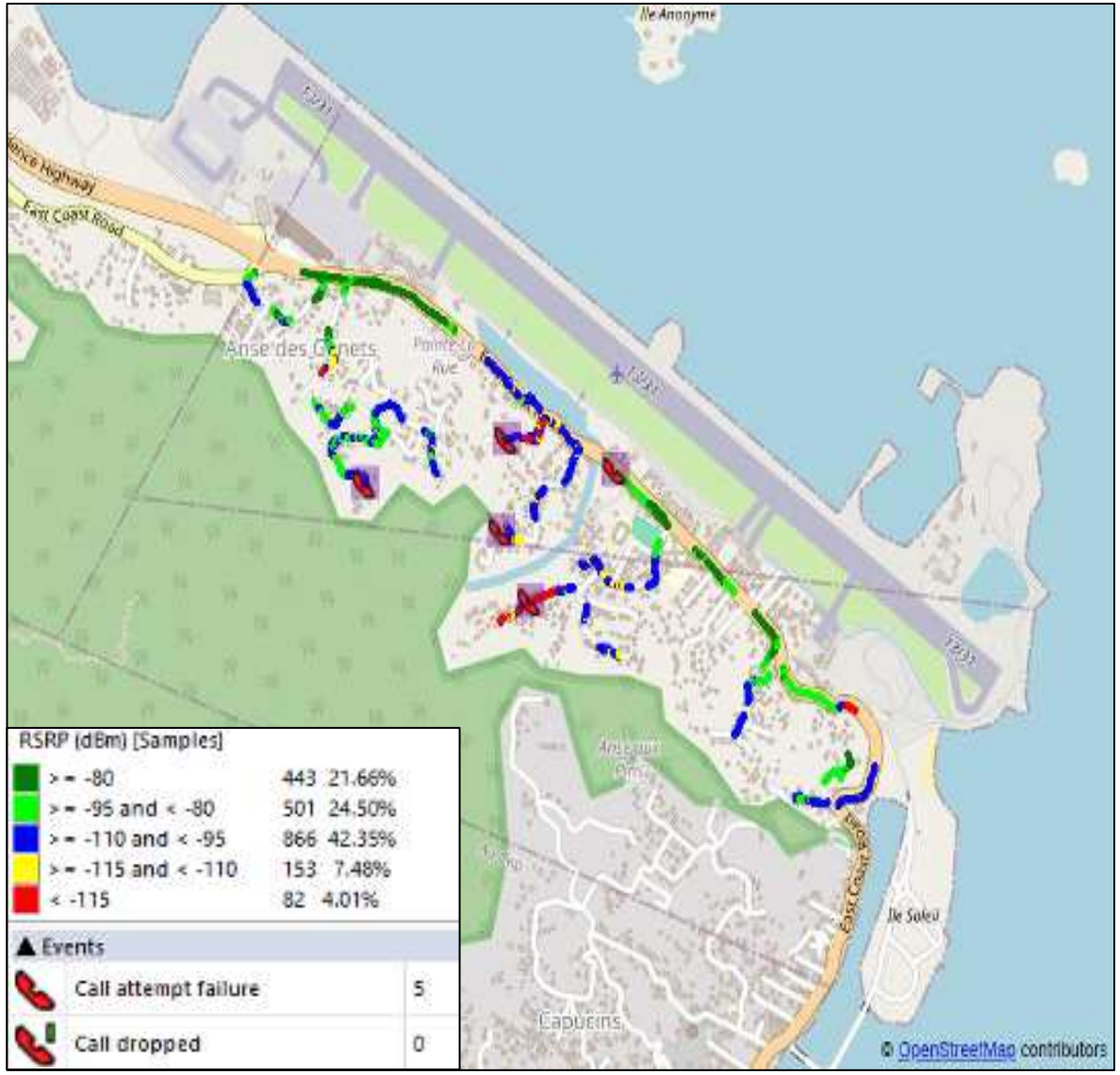


Phase-1 SHORT CALL FAILURE EVENTS LOCATION vs RSRP

Airtel SC MO

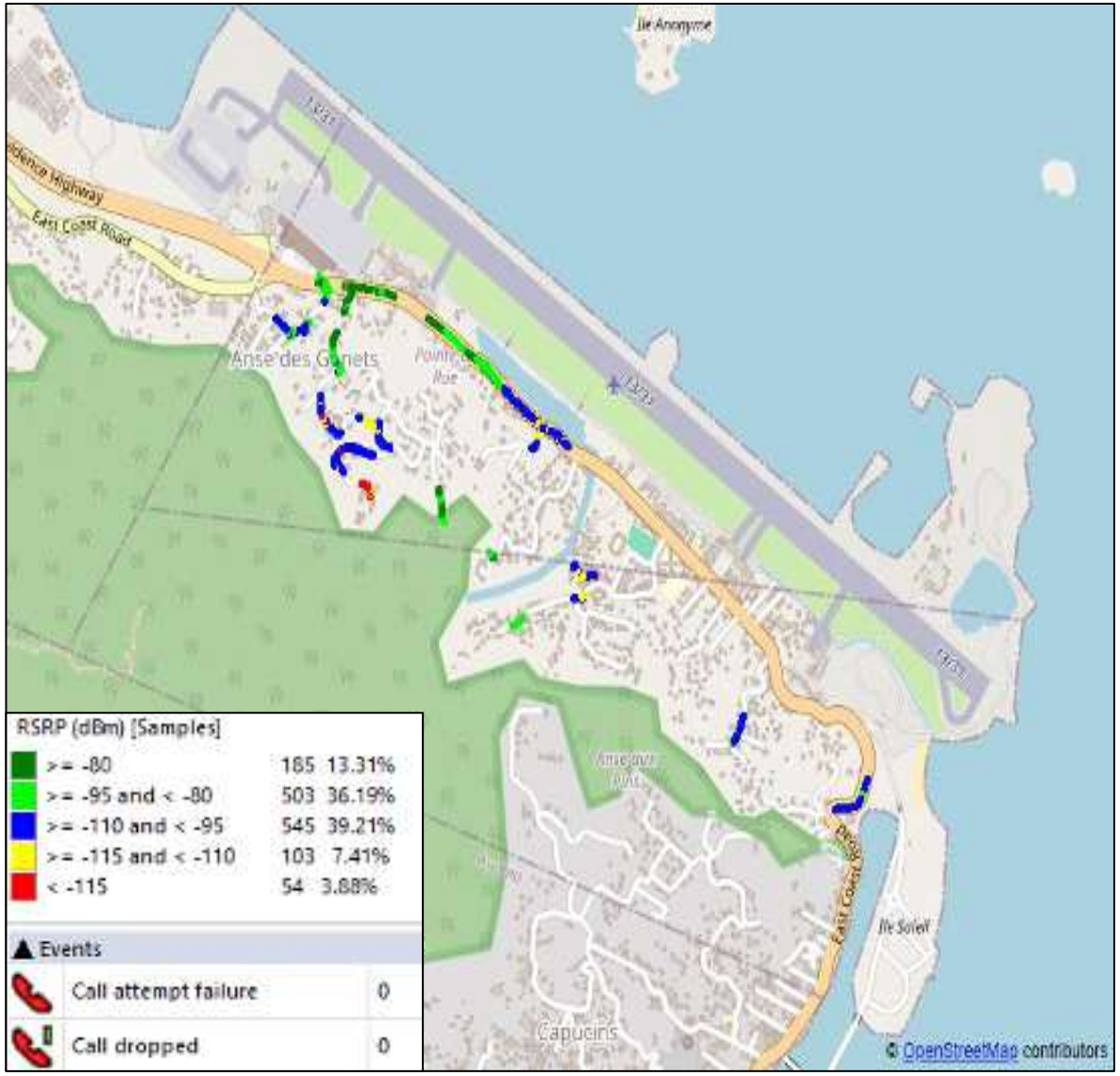


CWS SC MO

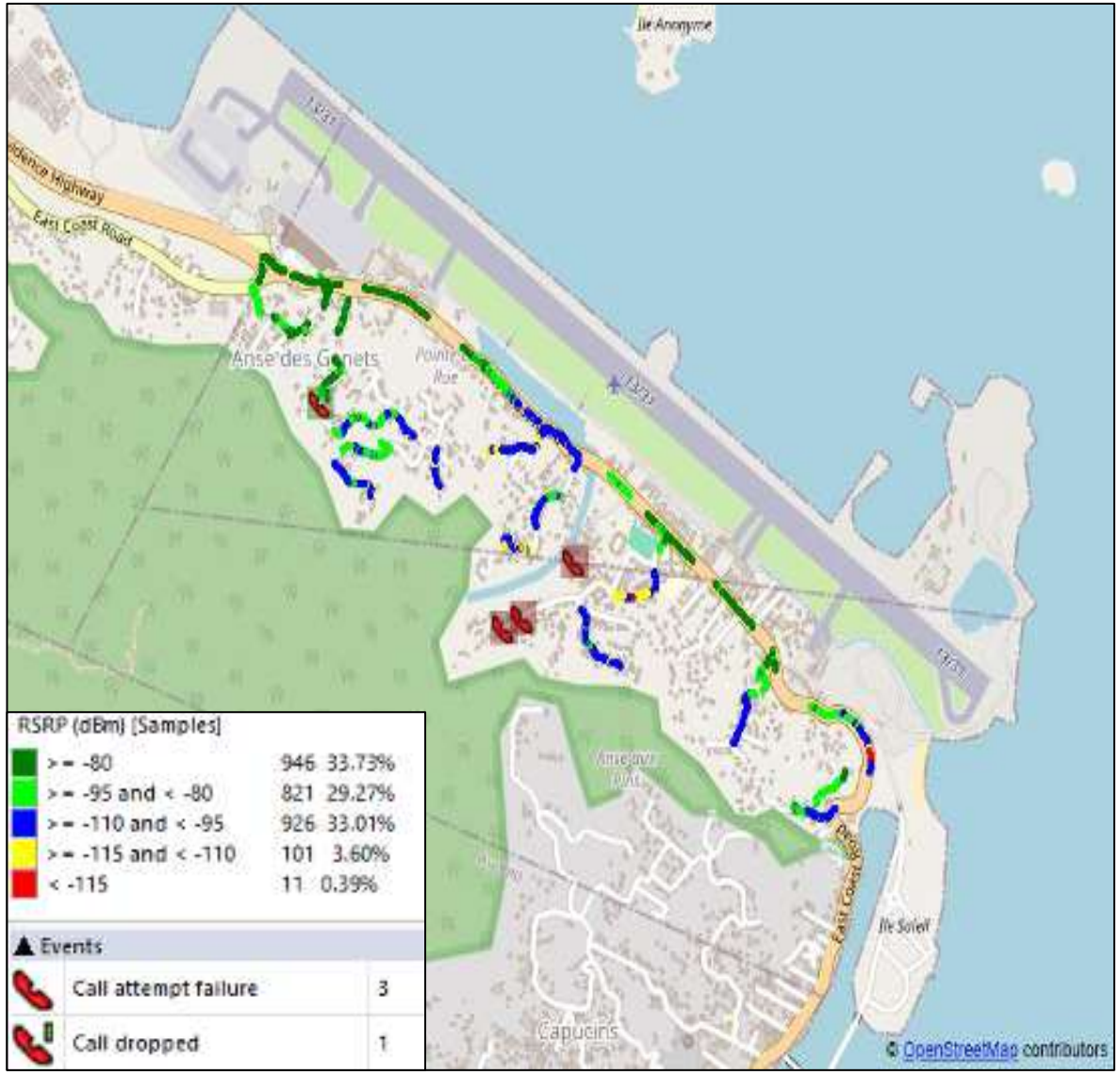


Phase-2 SHORT CALL FAILURE EVENTS LOCATION vs RSRP

Airtel SC MO

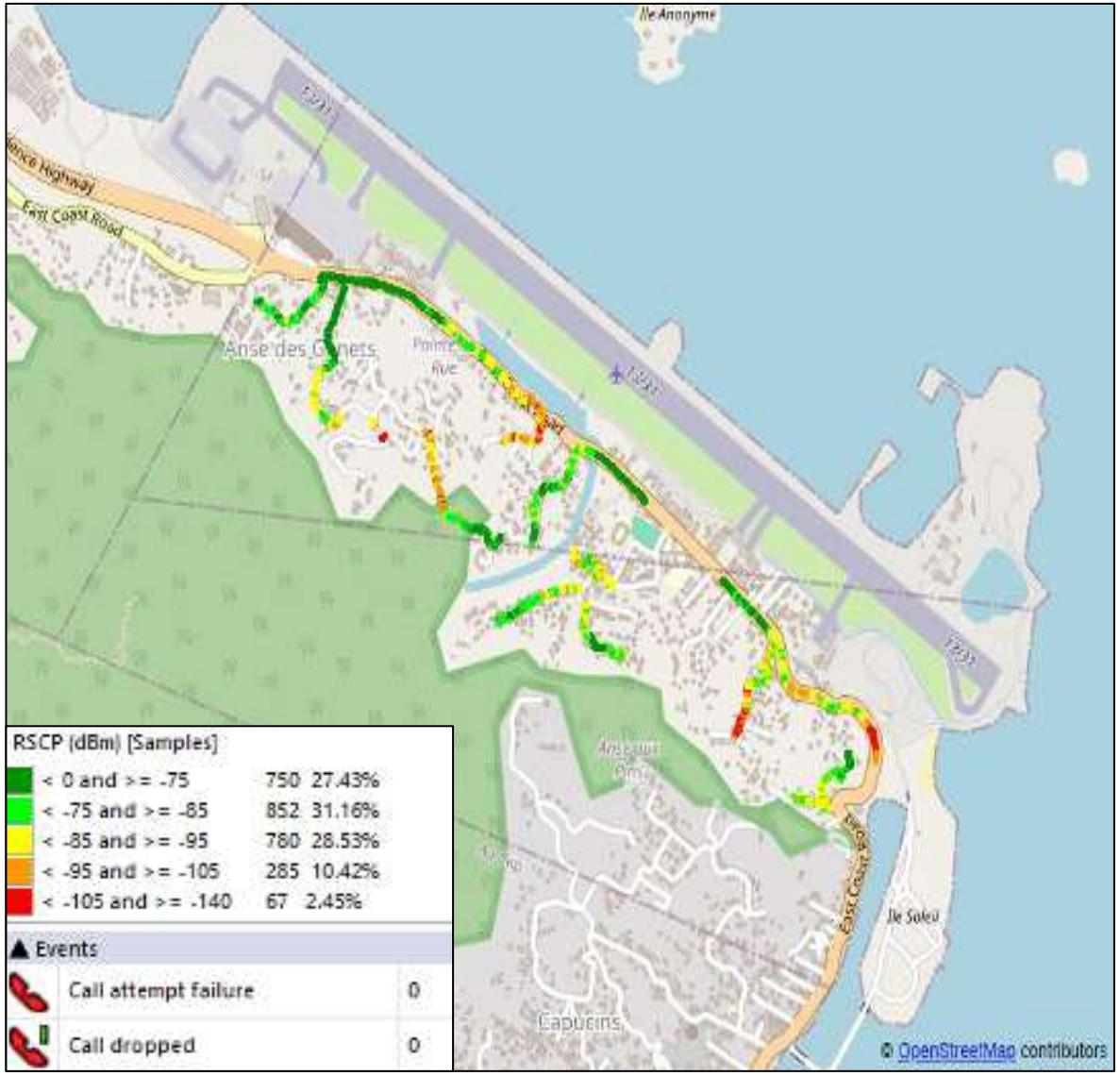


CWS SC MO

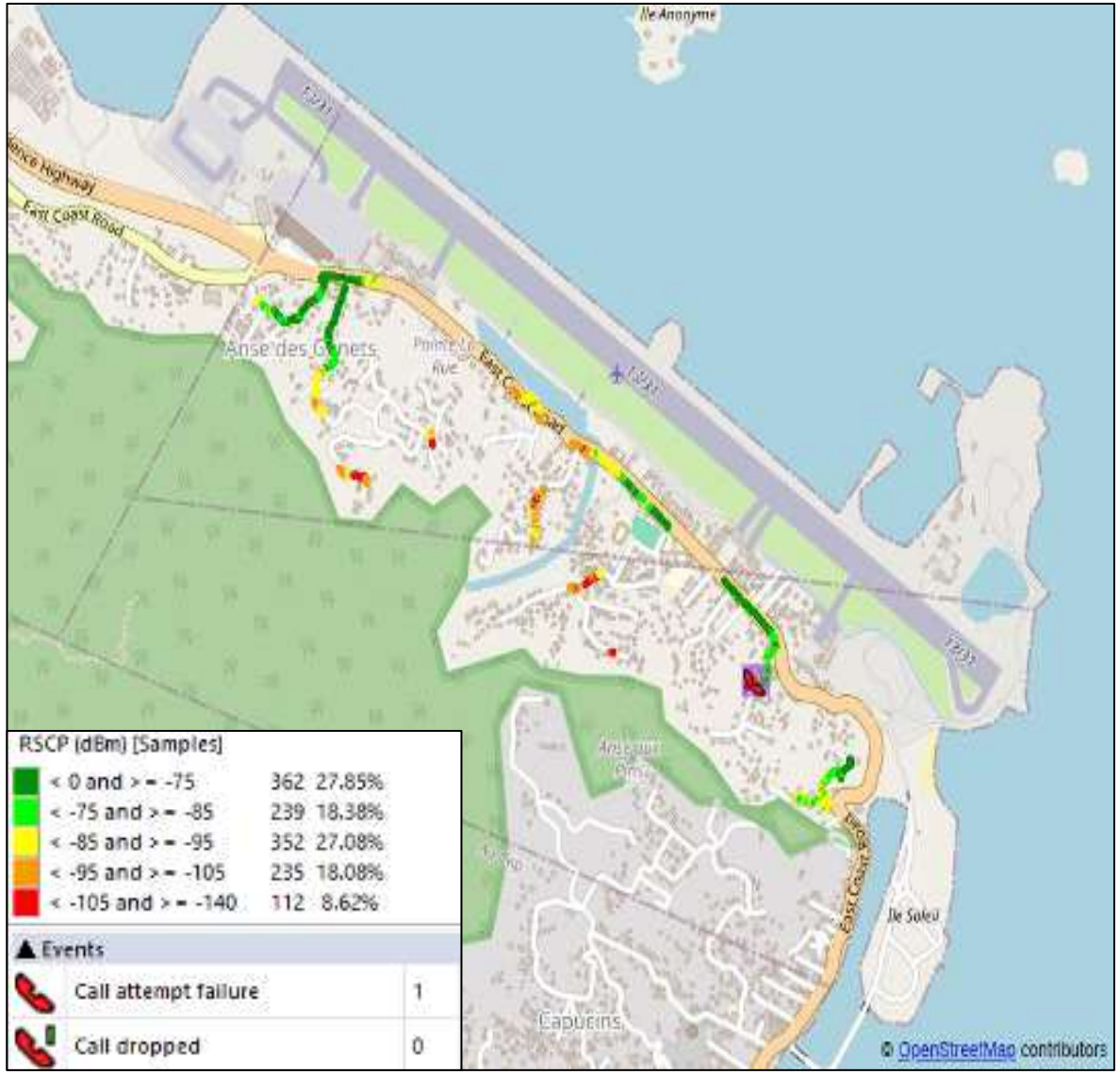


Phase-1 LONG CALL FAILURE EVENTS LOCATION vs RSCP

Airtel LC MO



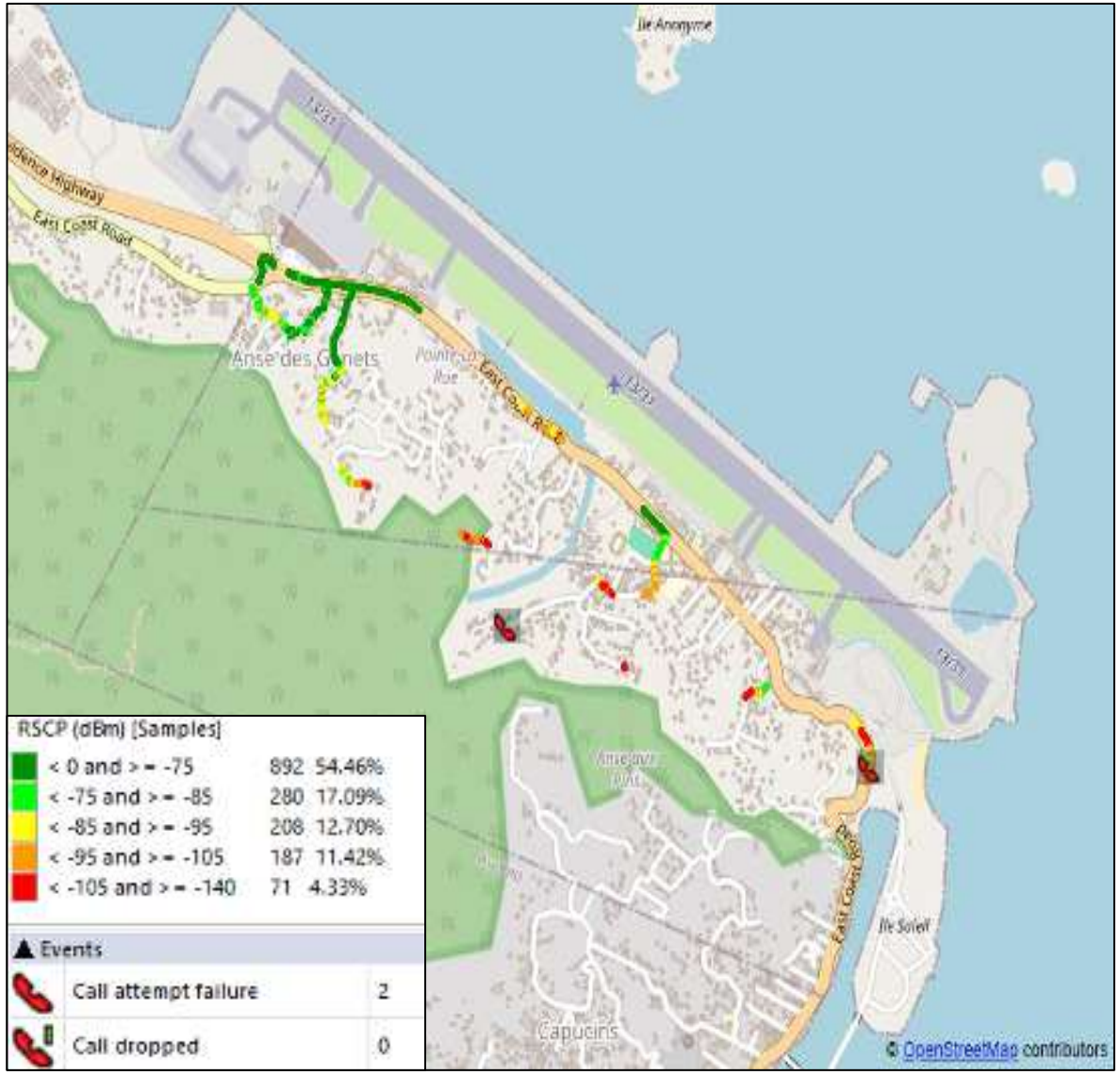
CWS LC MO



Phase-2 LONG CALL FAILURE EVENTS LOCATION vs RSCP

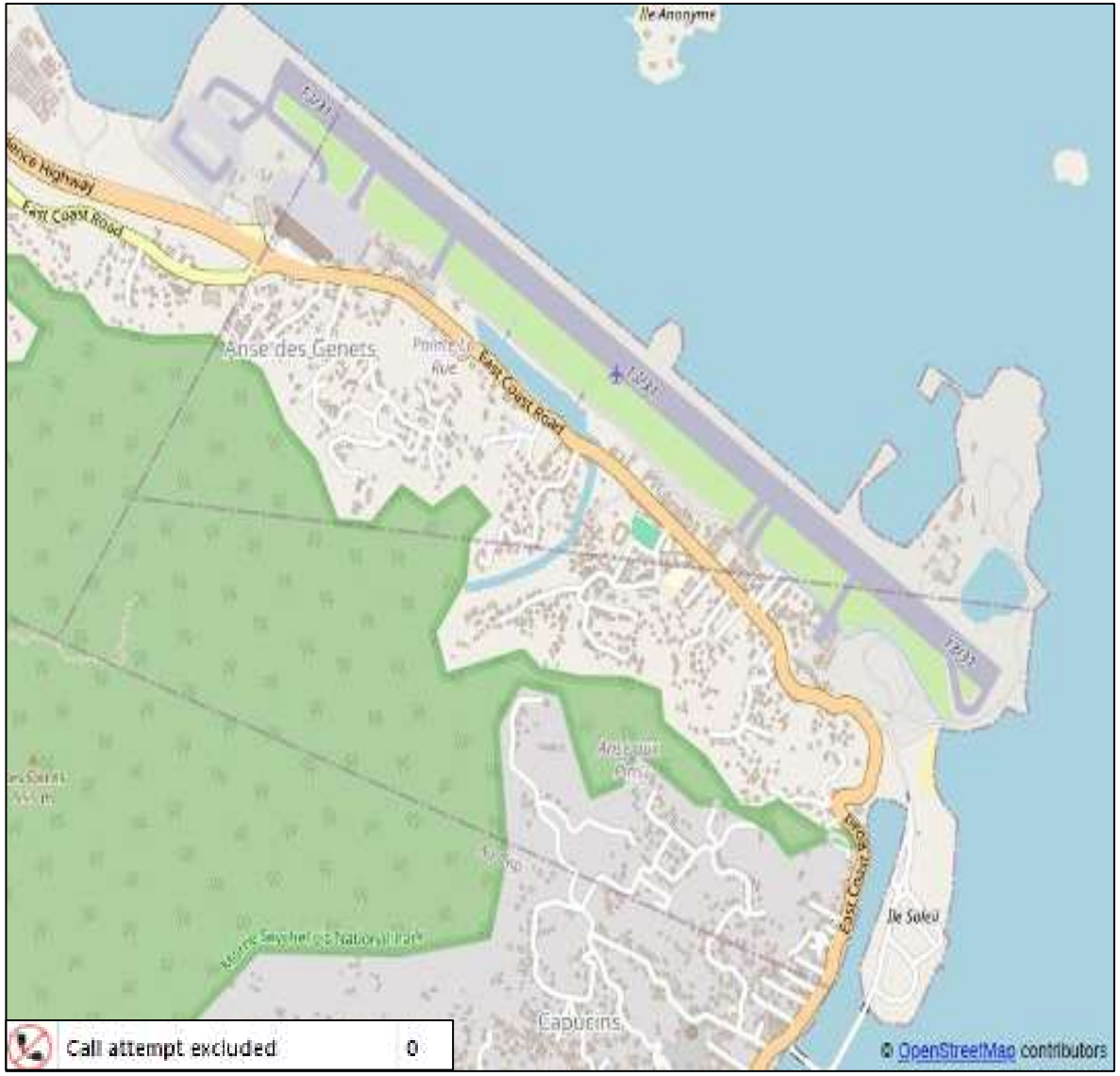
Airtel LC MO

CWS LC MO

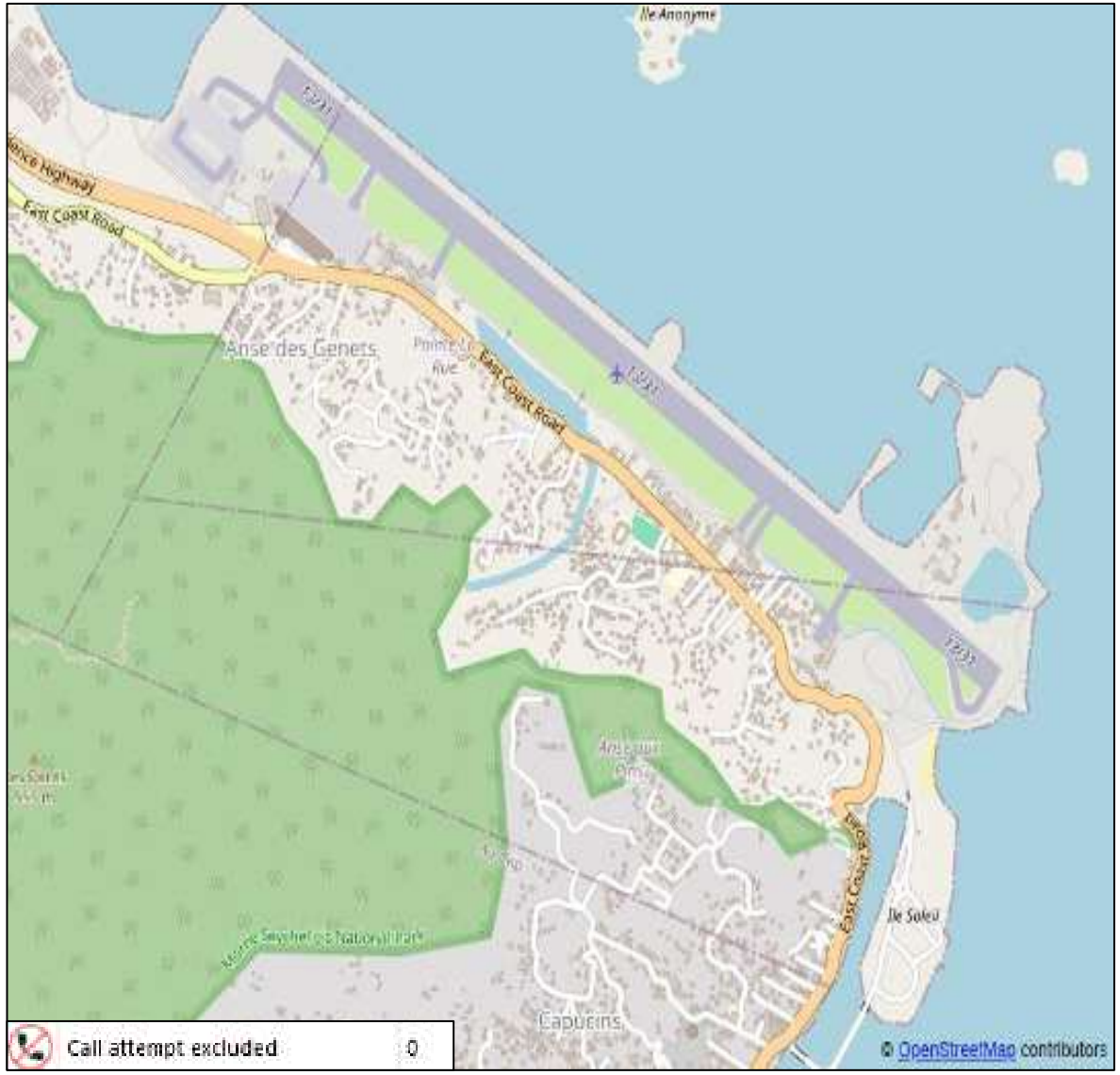


Phase-1 LONG CALL EXCLUDED EVENTS

Airtel LC MO

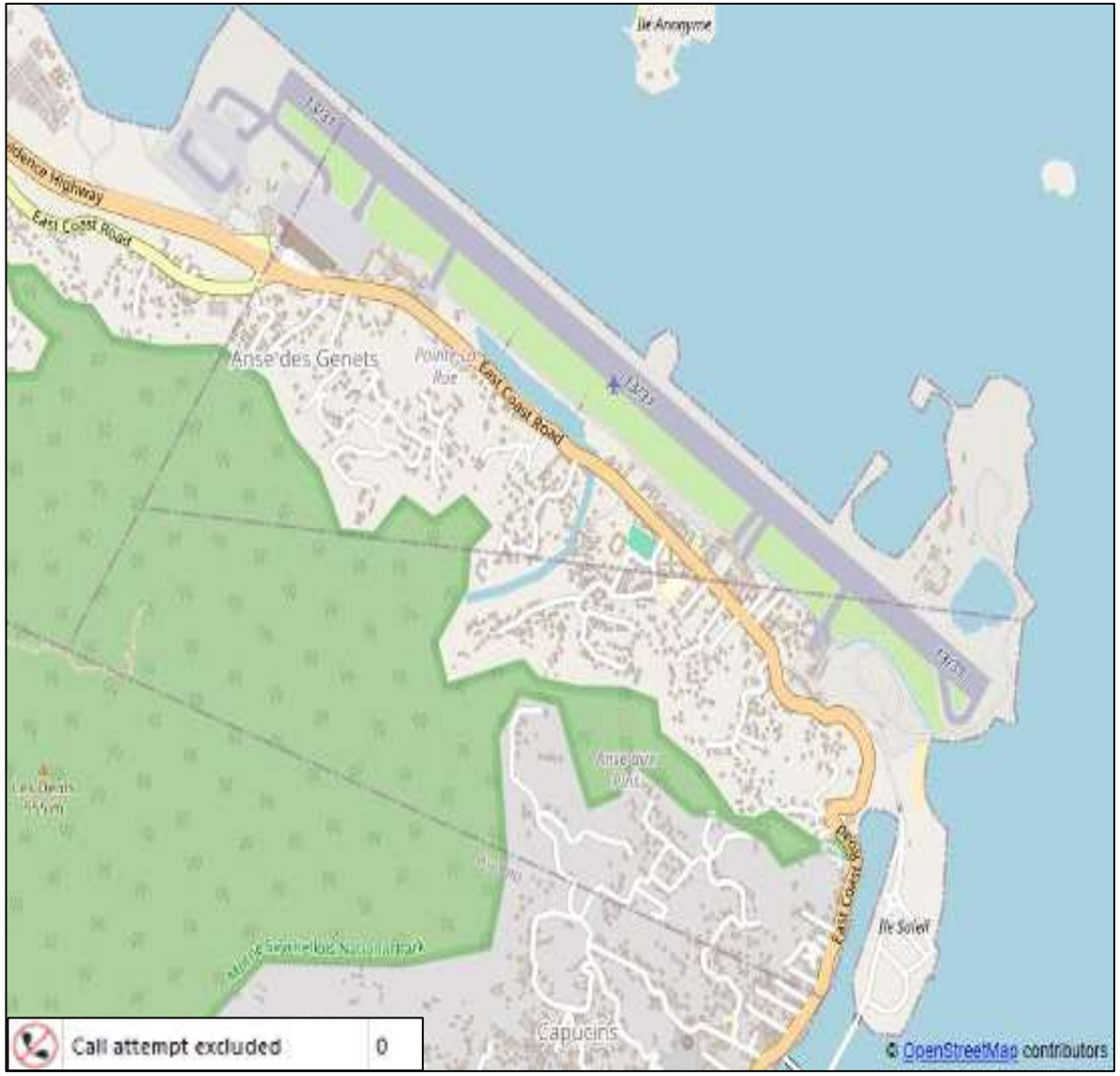


CWS LC MO

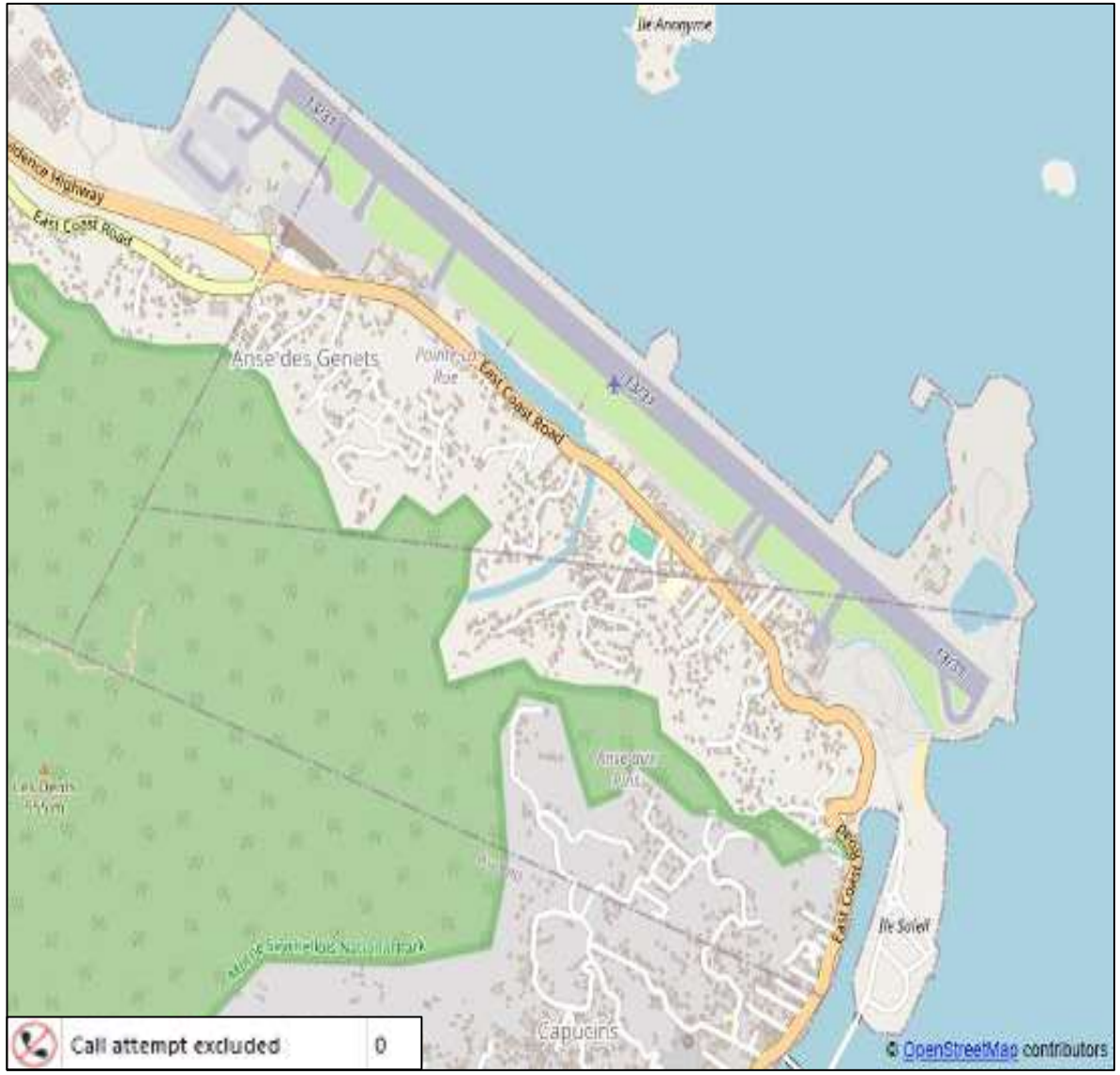


Phase-2 LONG CALL EXCLUDED EVENTS

Airtel LC MO

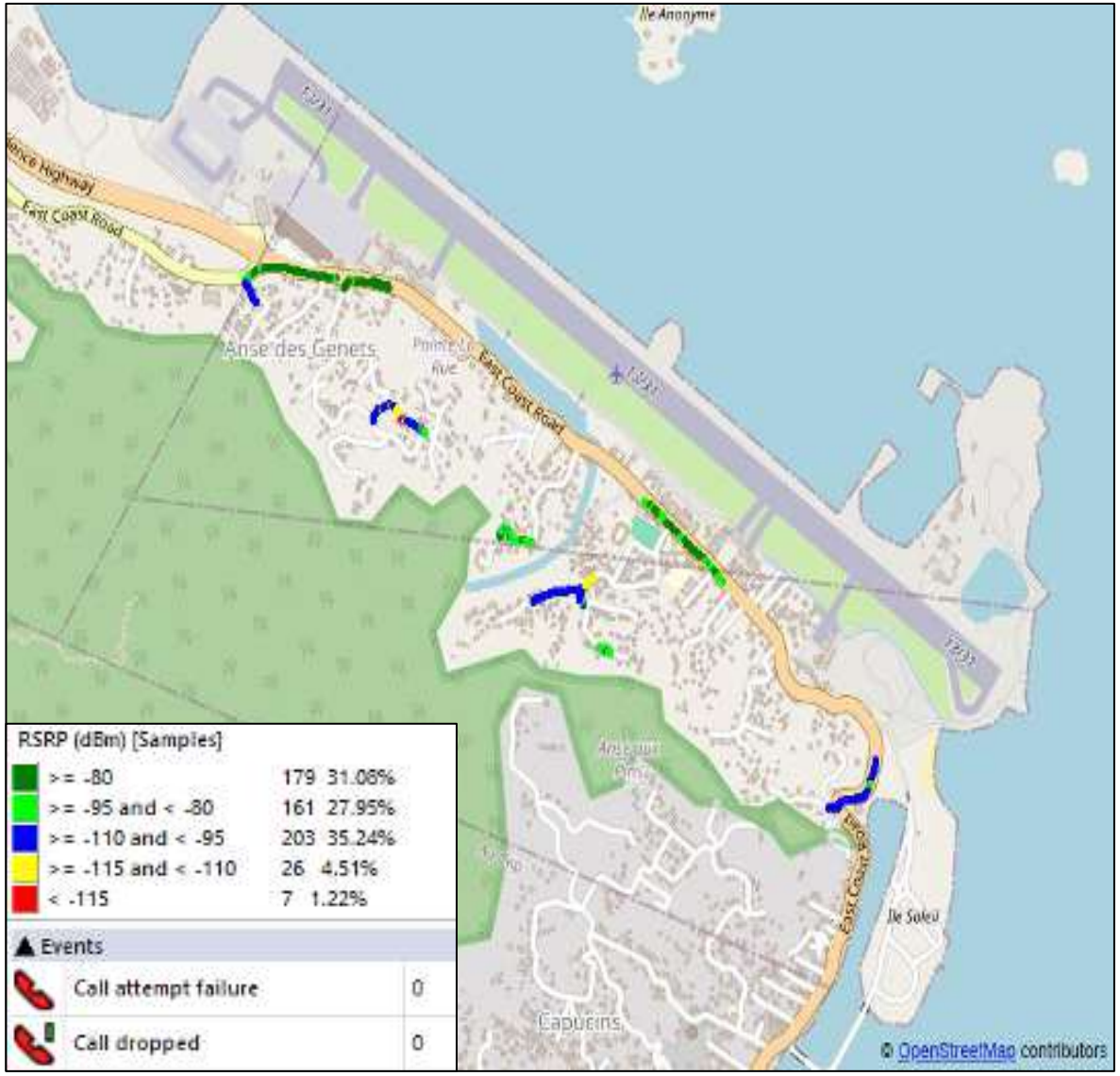


CWS LC MO

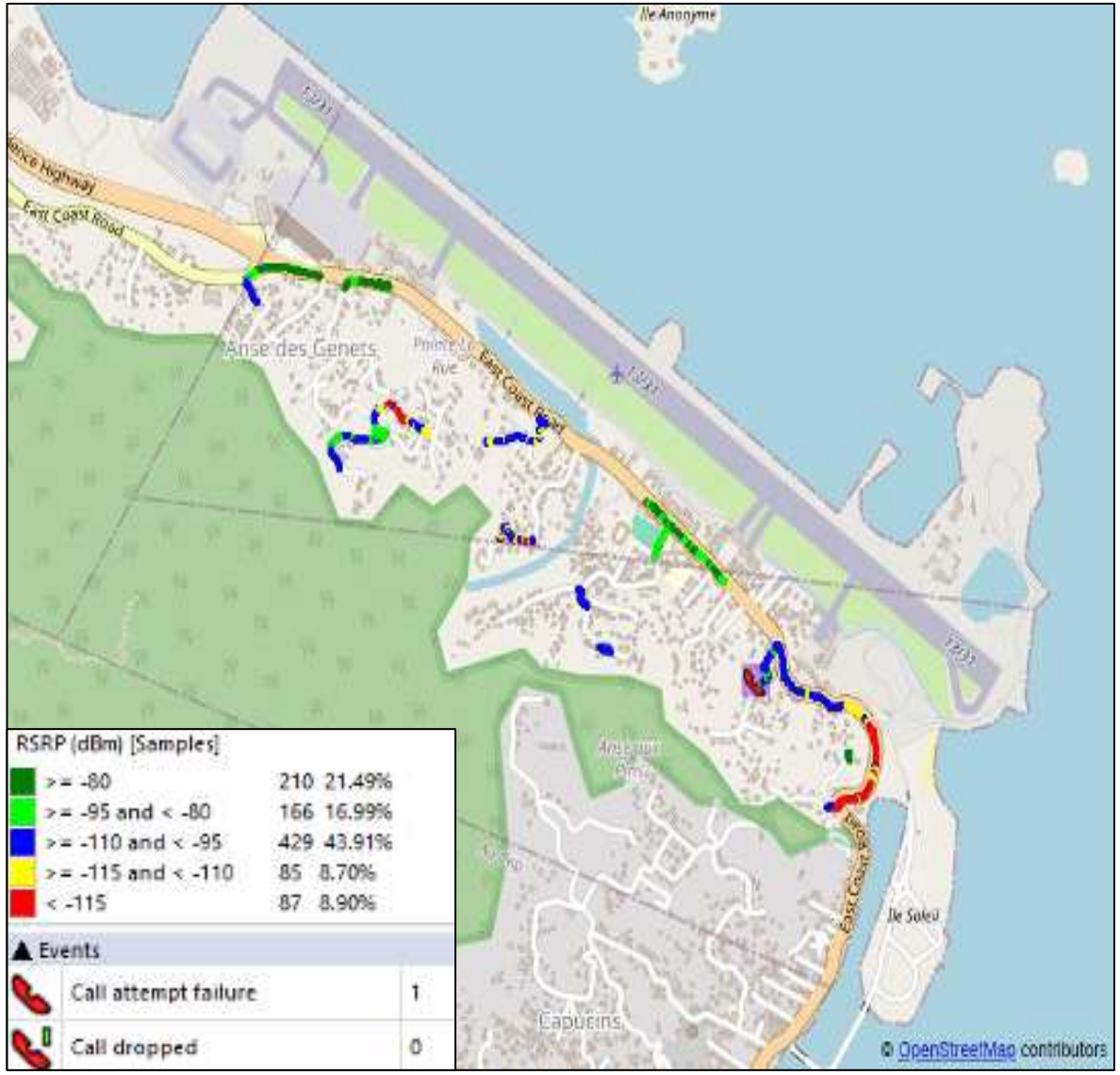


Phase-1 LONG CALL FAILURE EVENTS LOCATION vs RSRP

Airtel LC MO

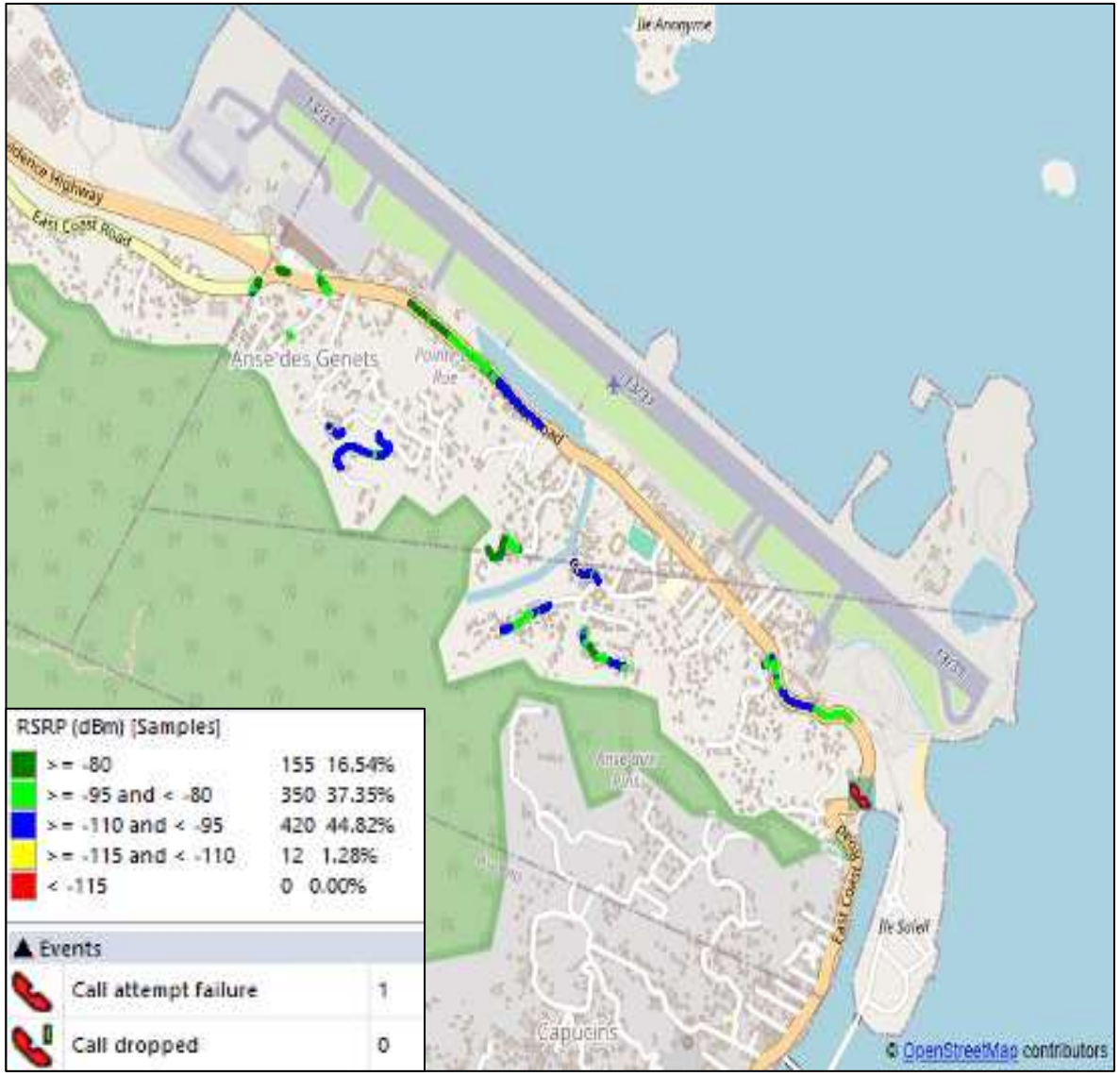


CWS LC MO

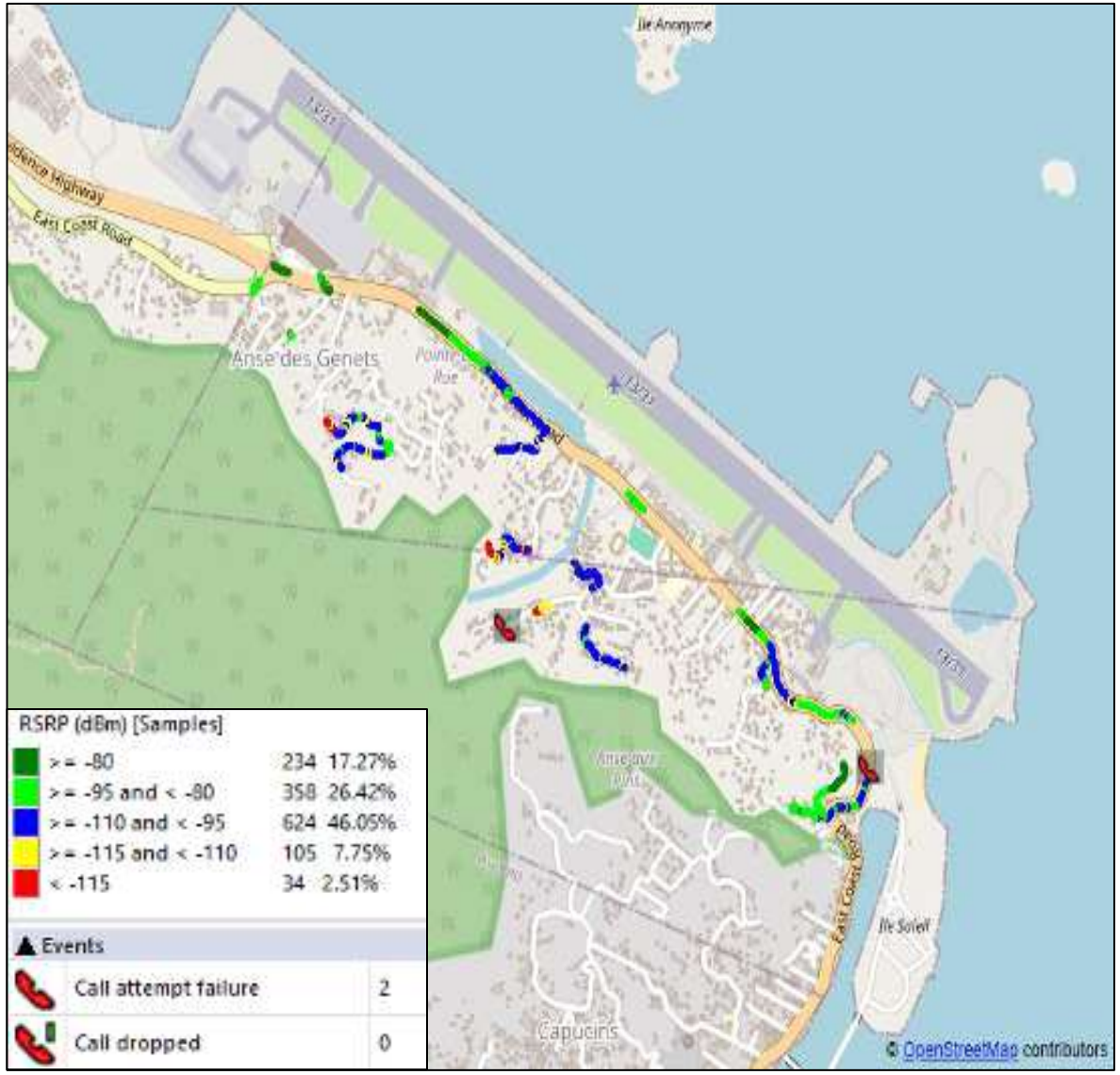


Phase-2 LONG CALL FAILURE EVENTS LOCATION vs RSRP

Airtel LC MO



CWS LC MO



LONG CALL DRIVE PLOTS

Phase-1 Long Call RADIO TECHNOLOGY PLOT

Airtel LC MO

CWS LC MO

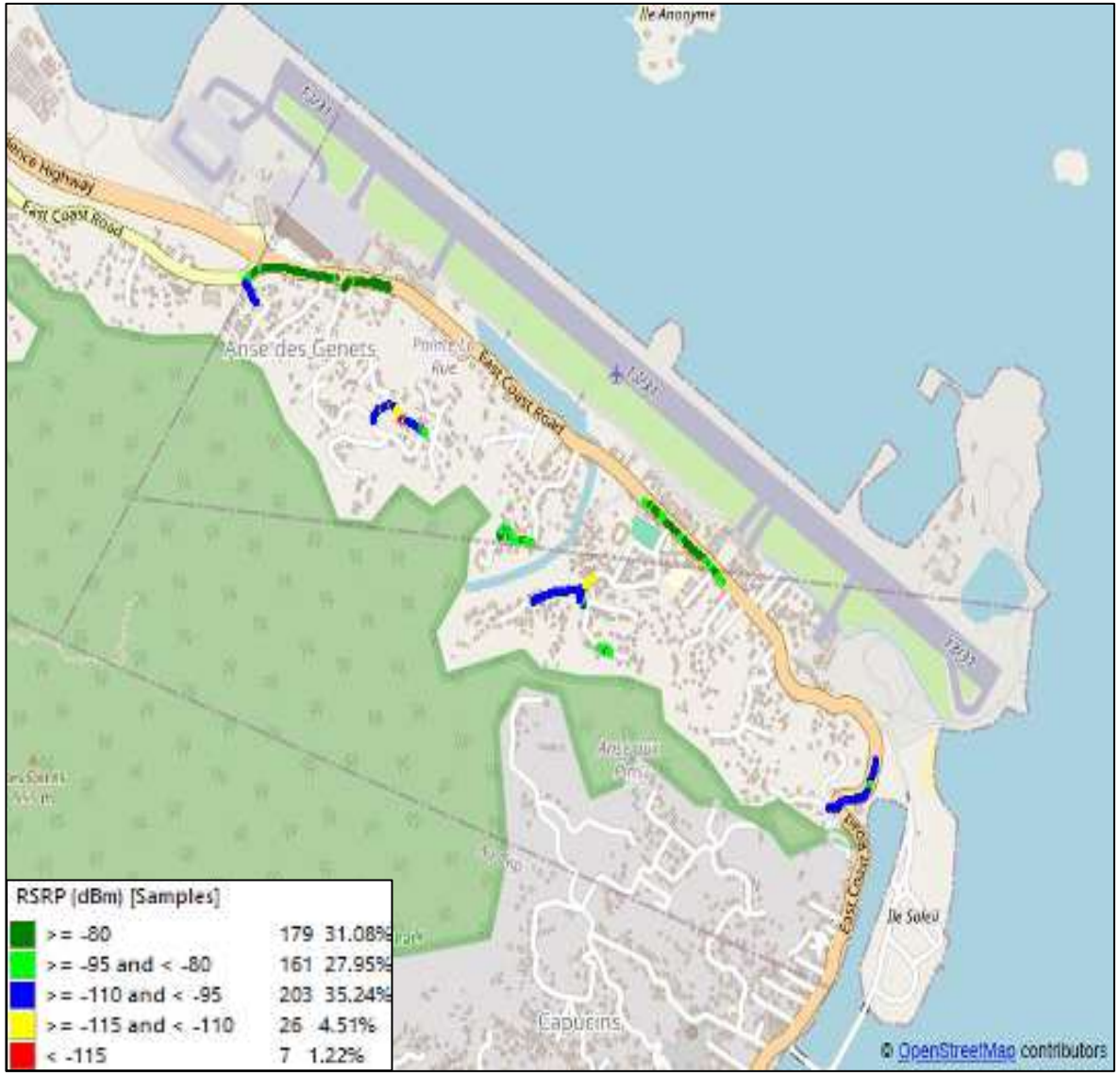
Phase-2 Long Call RADIO TECHNOLOGY PLOT

Airtel LC MO

CWS LC MO

Phase-1 Long Call RSRP PLOT

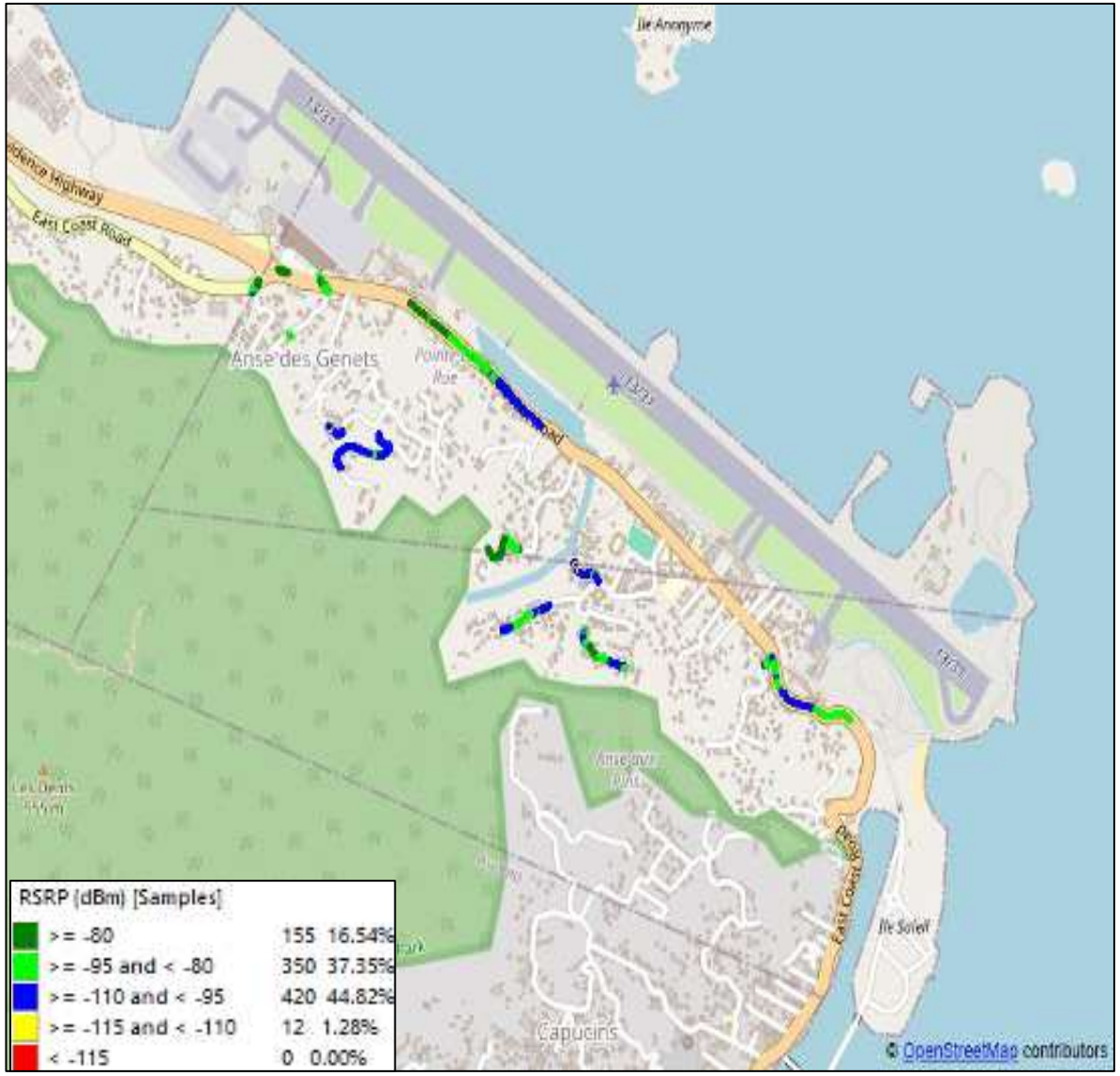
Airtel LC MO



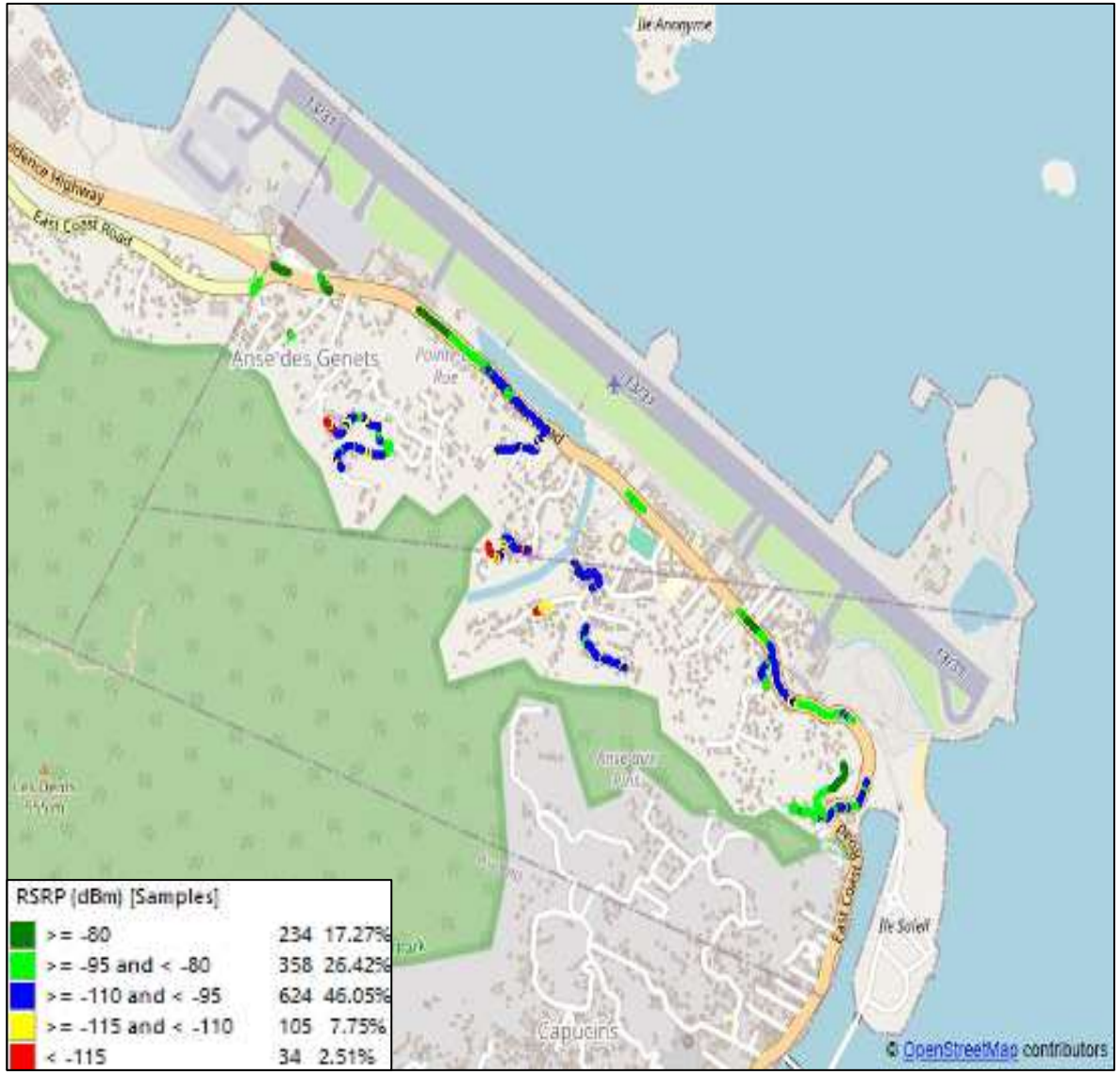
CWS LC MO

Phase-2 Long Call RSRP PLOT

Airtel LC MO

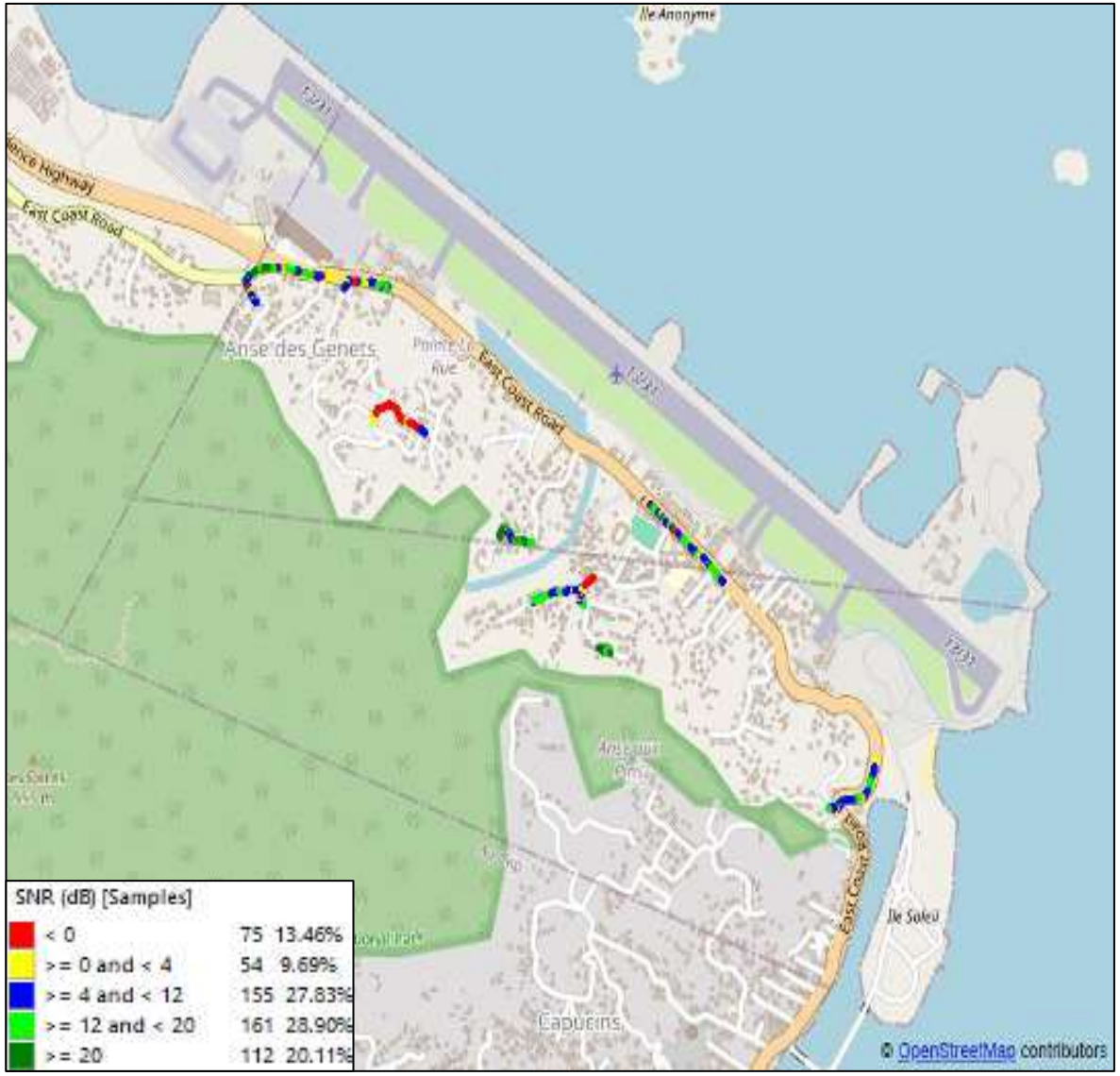


CWS LC MO

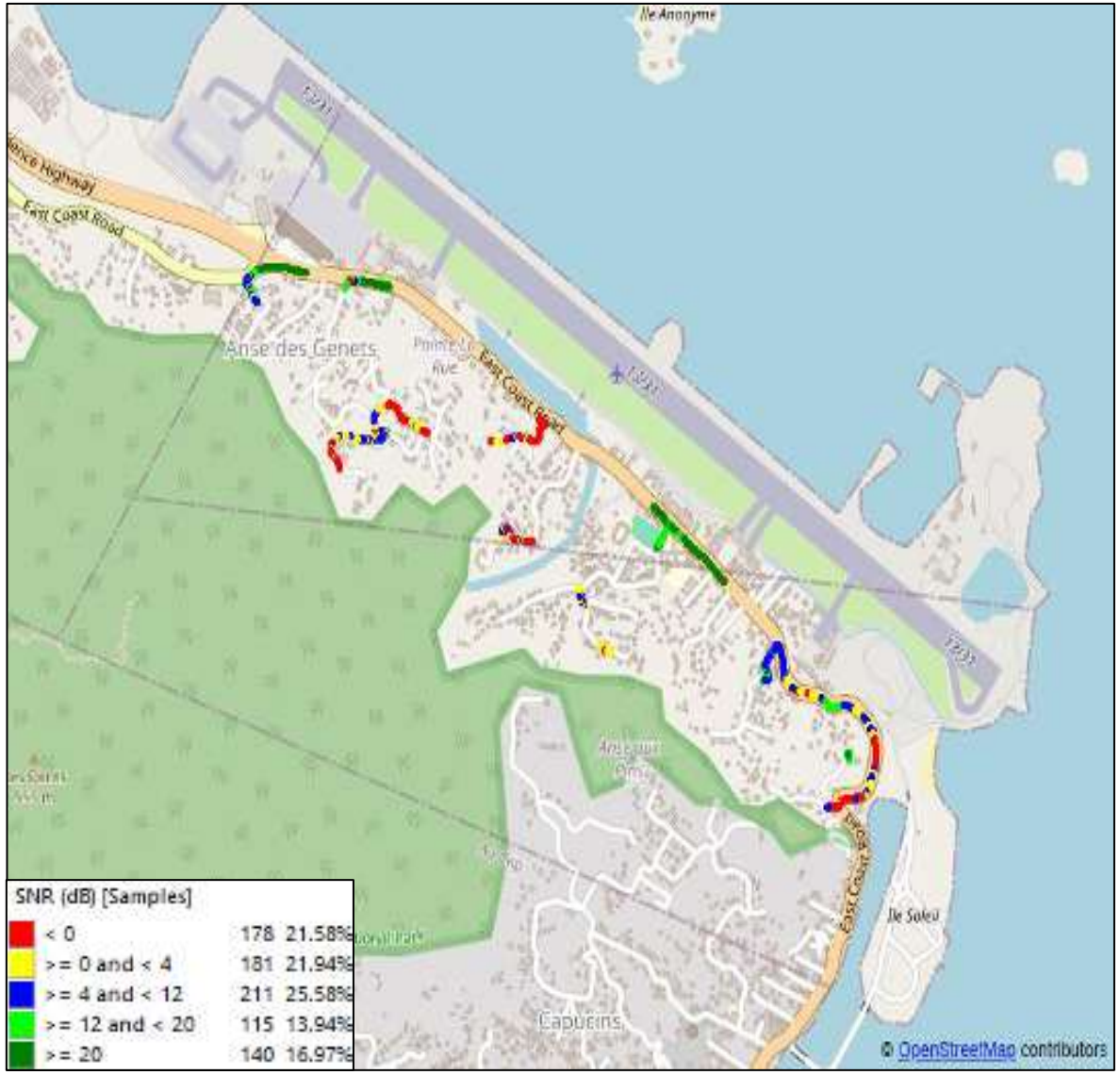


Phase-1 Long Call SINR PLOT

Airtel LC MO

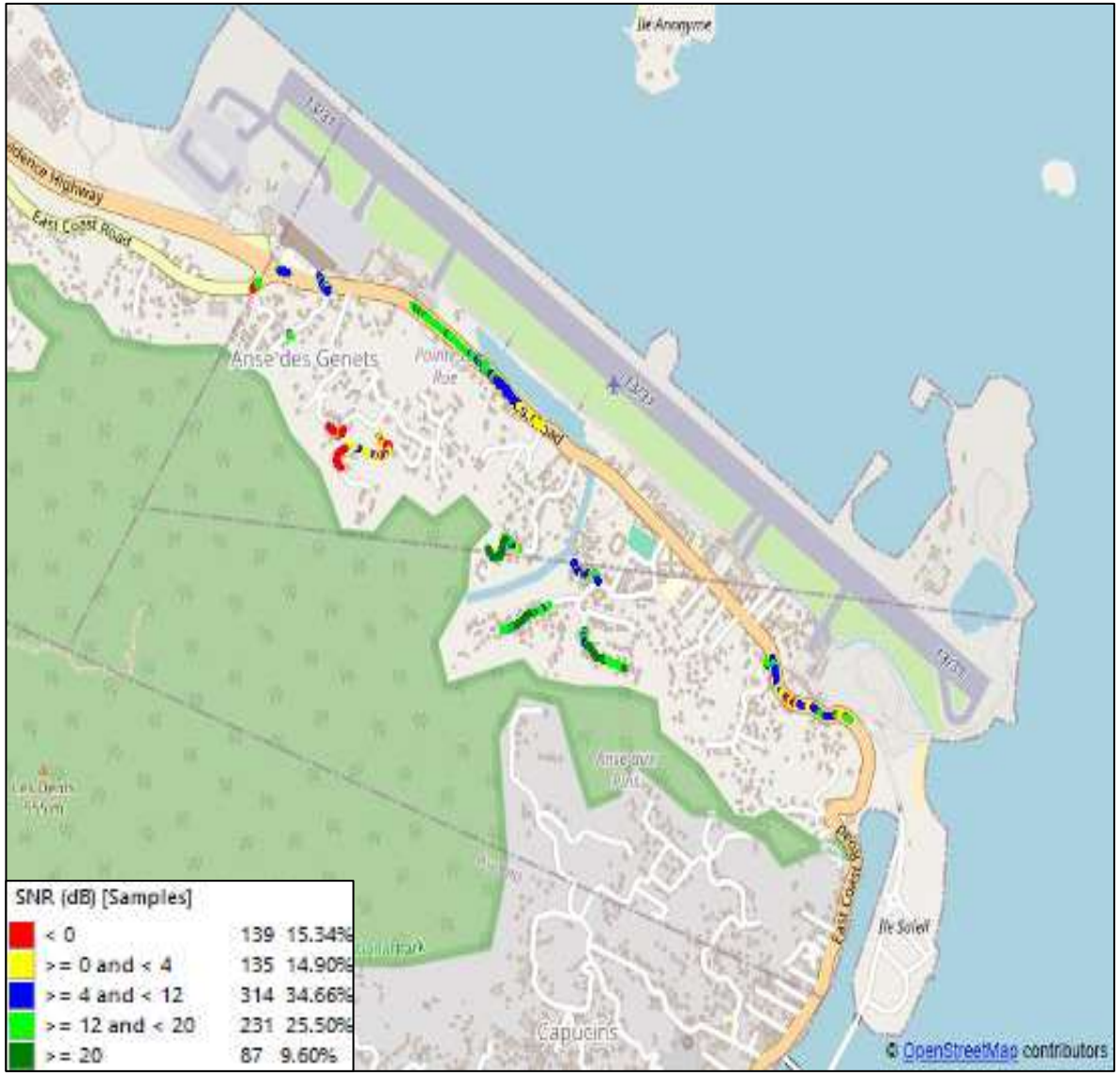


CWS LC MO

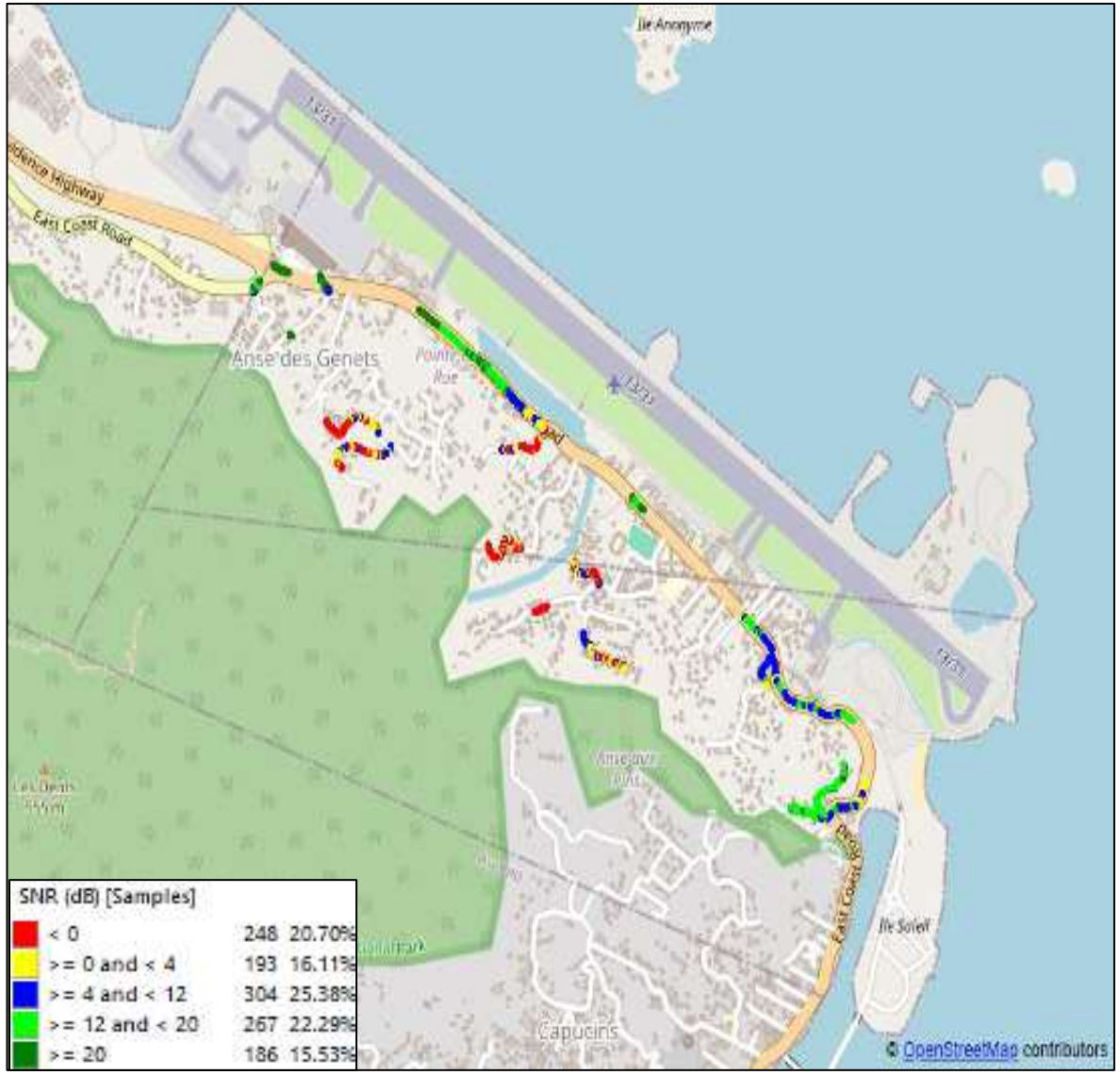


Phase-2 Long Call SINR PLOT

Airtel LC MO

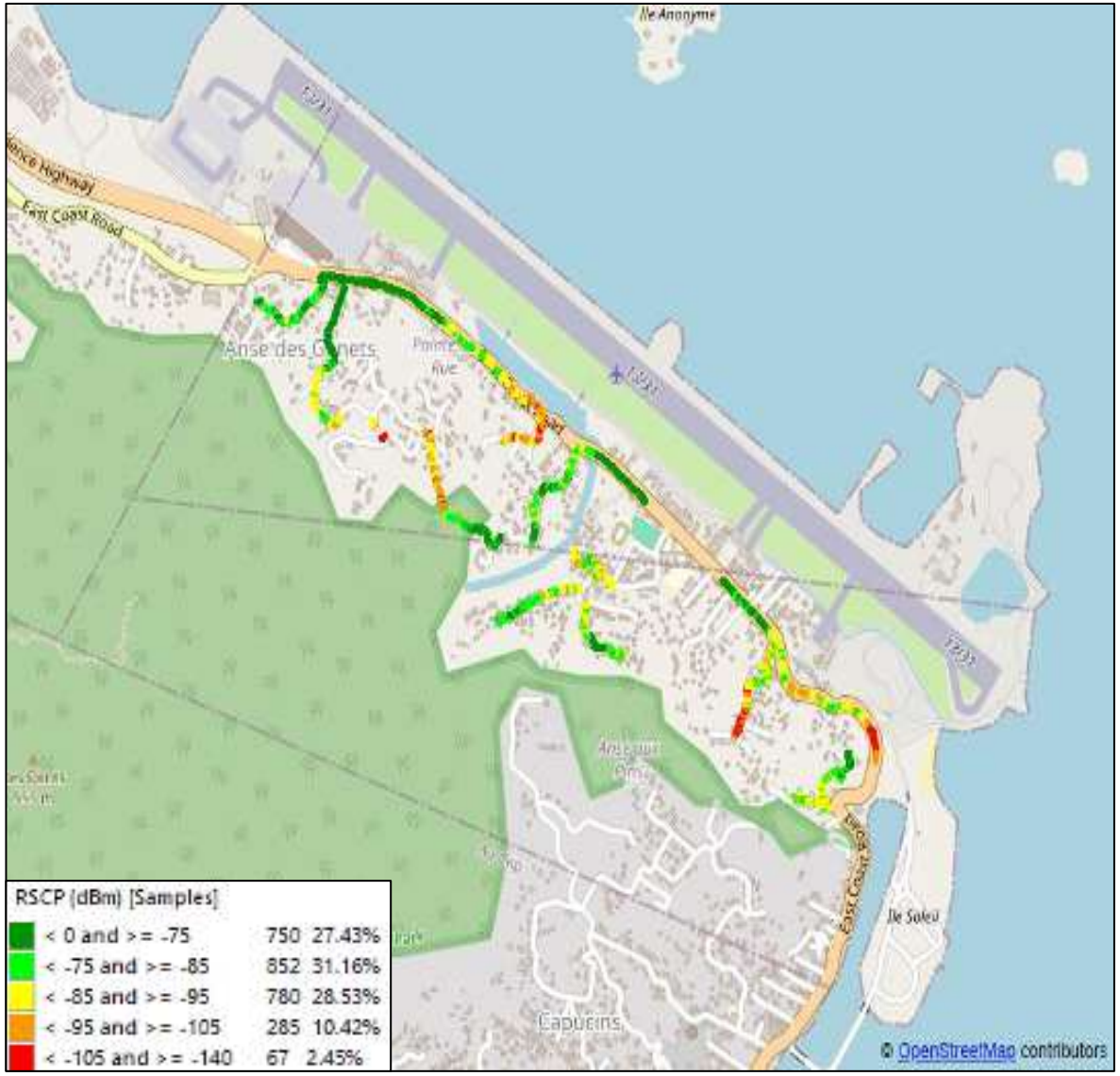


CWS LC MO

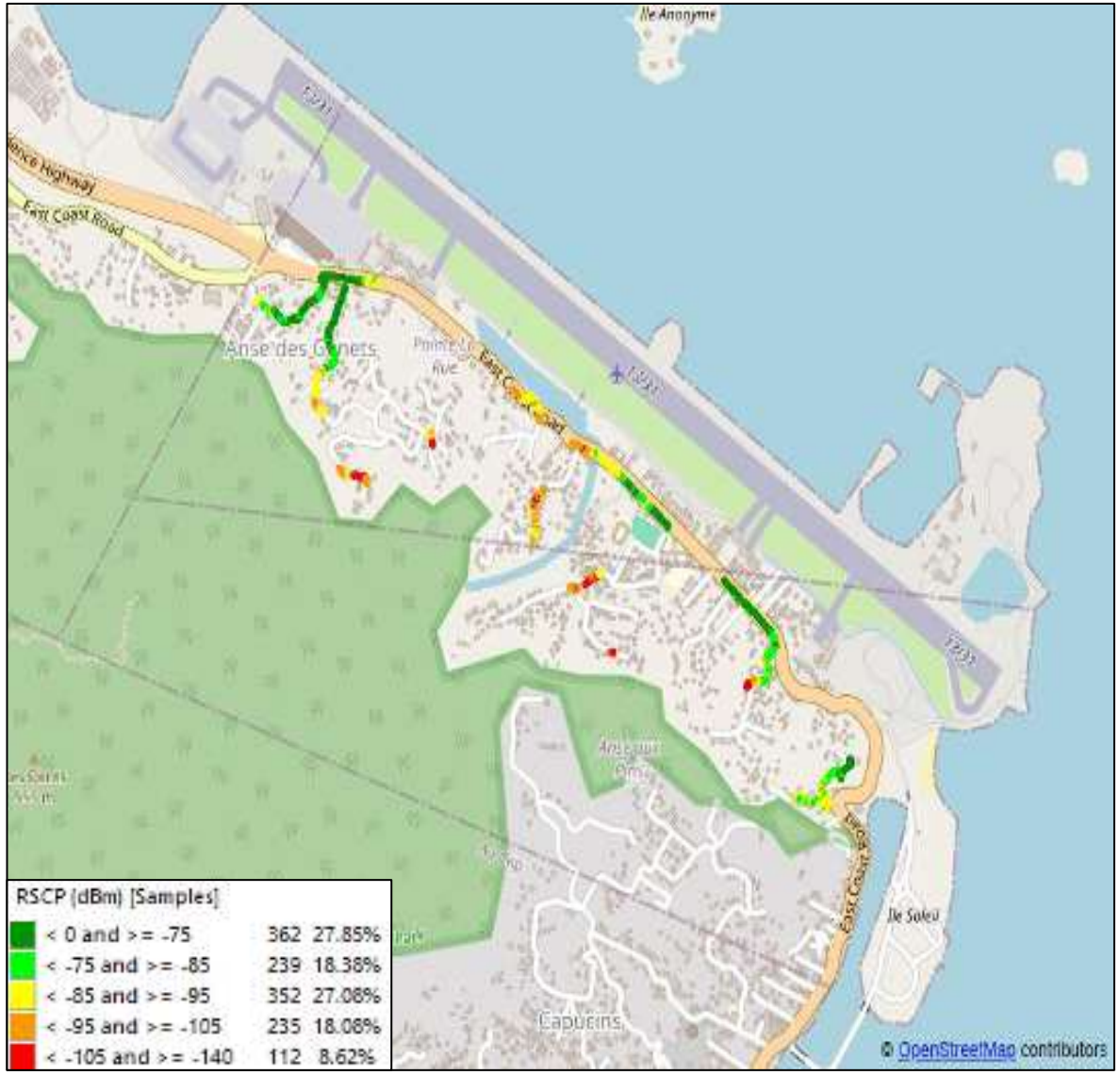


Phase-1 Long Call RSCP PLOT

Airtel LC MO

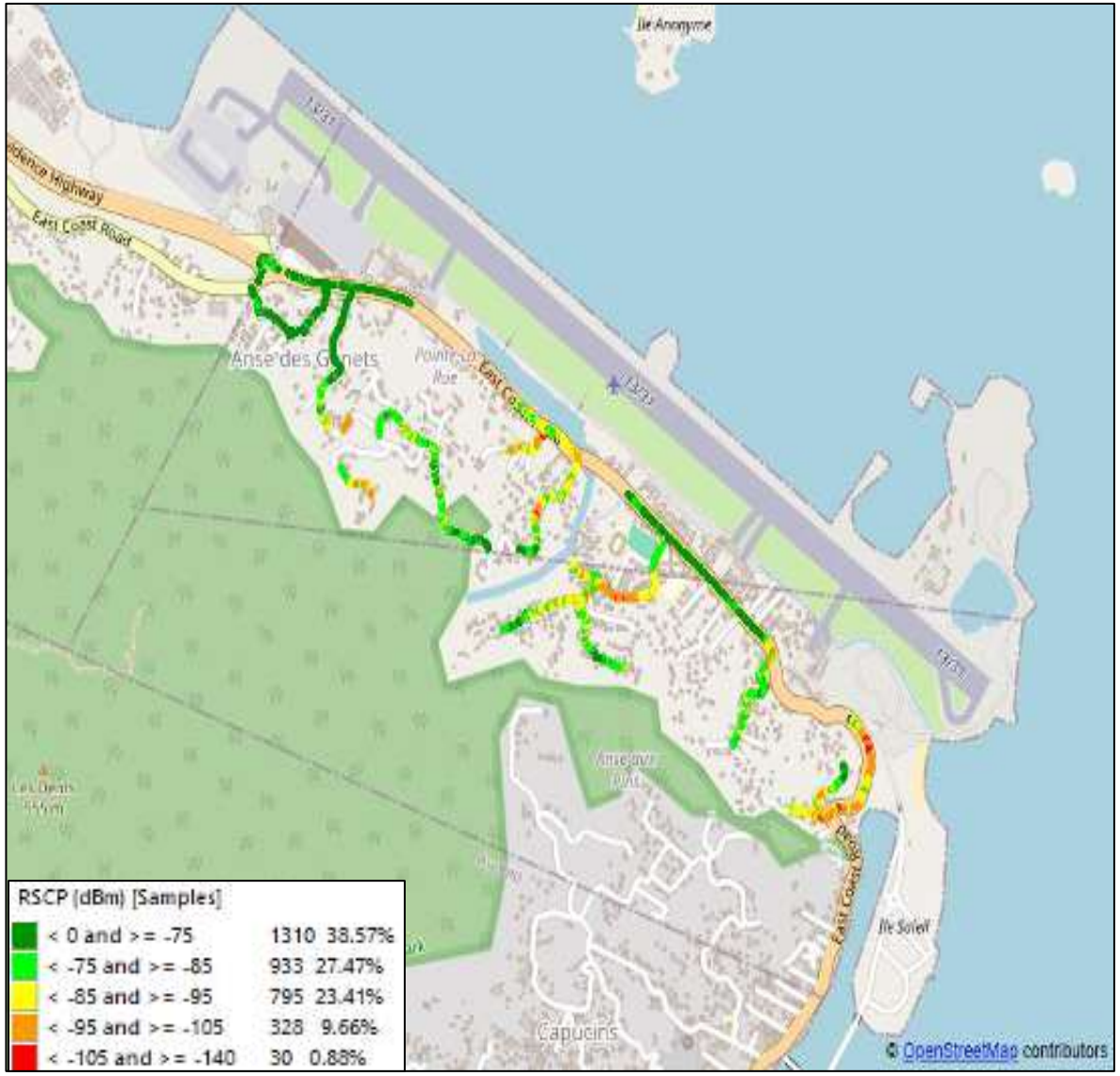


CWS LC MO

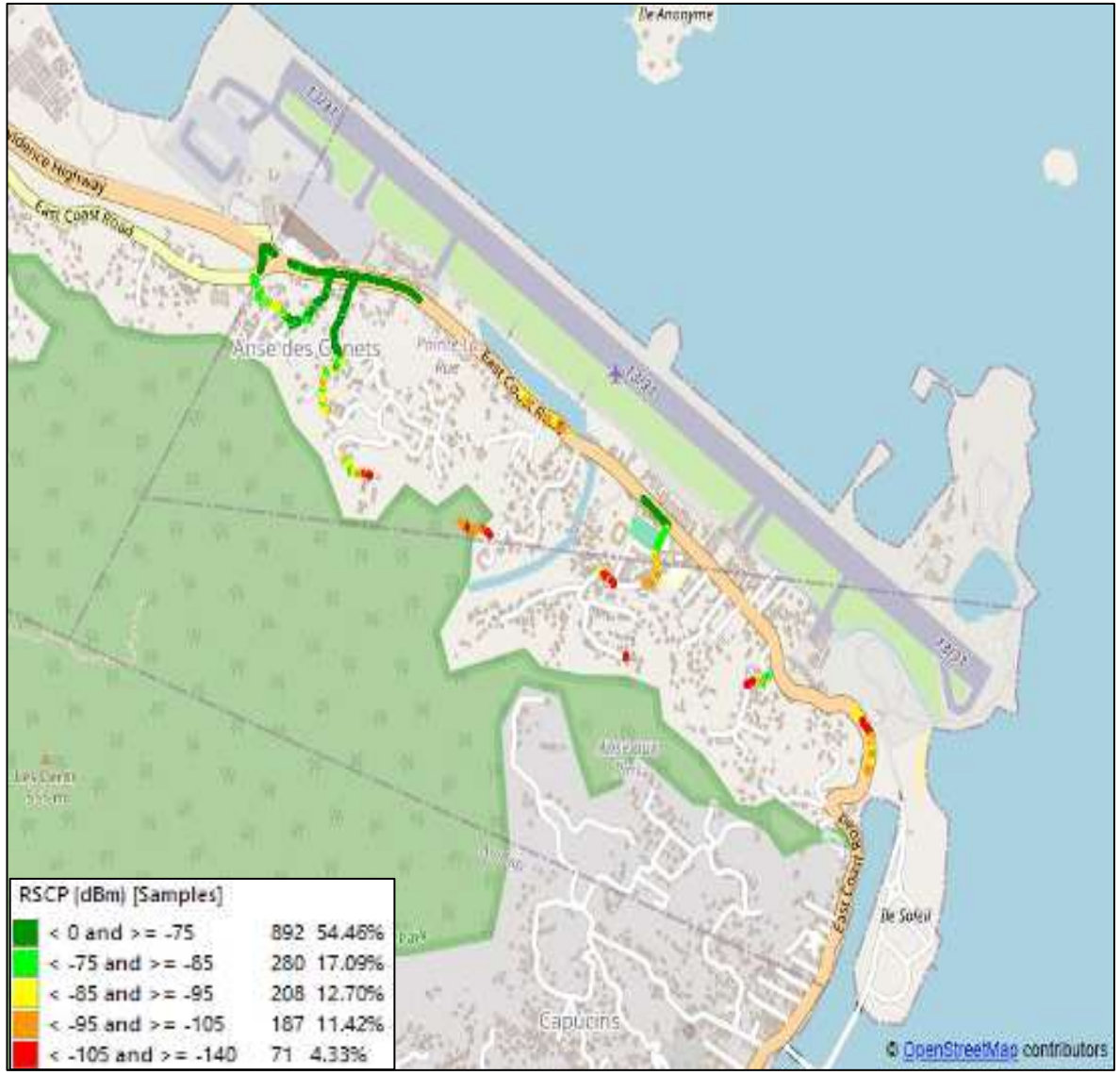


Phase-2 Long Call RSCP PLOT

Airtel LC MO

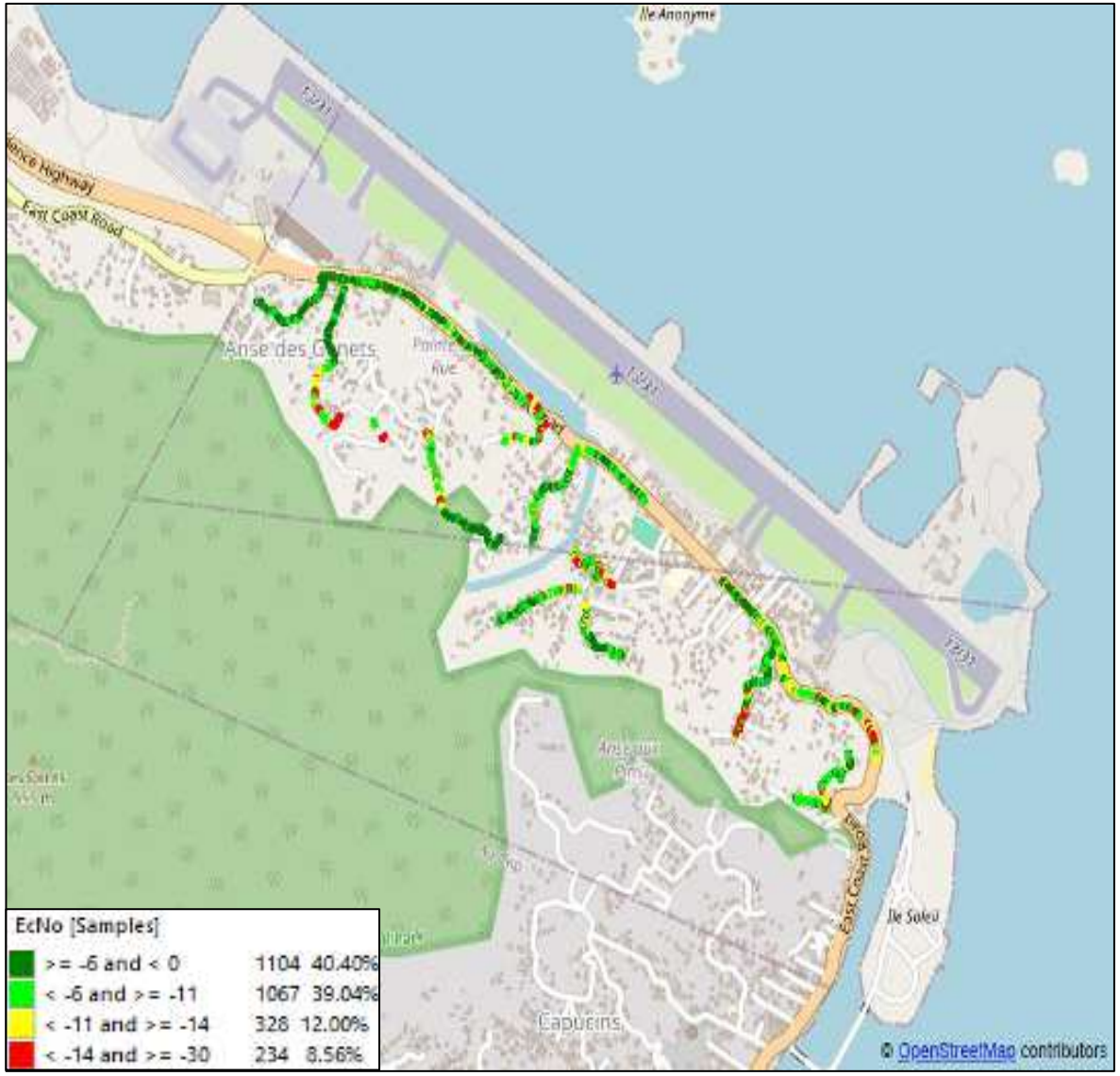


CWS LC MO

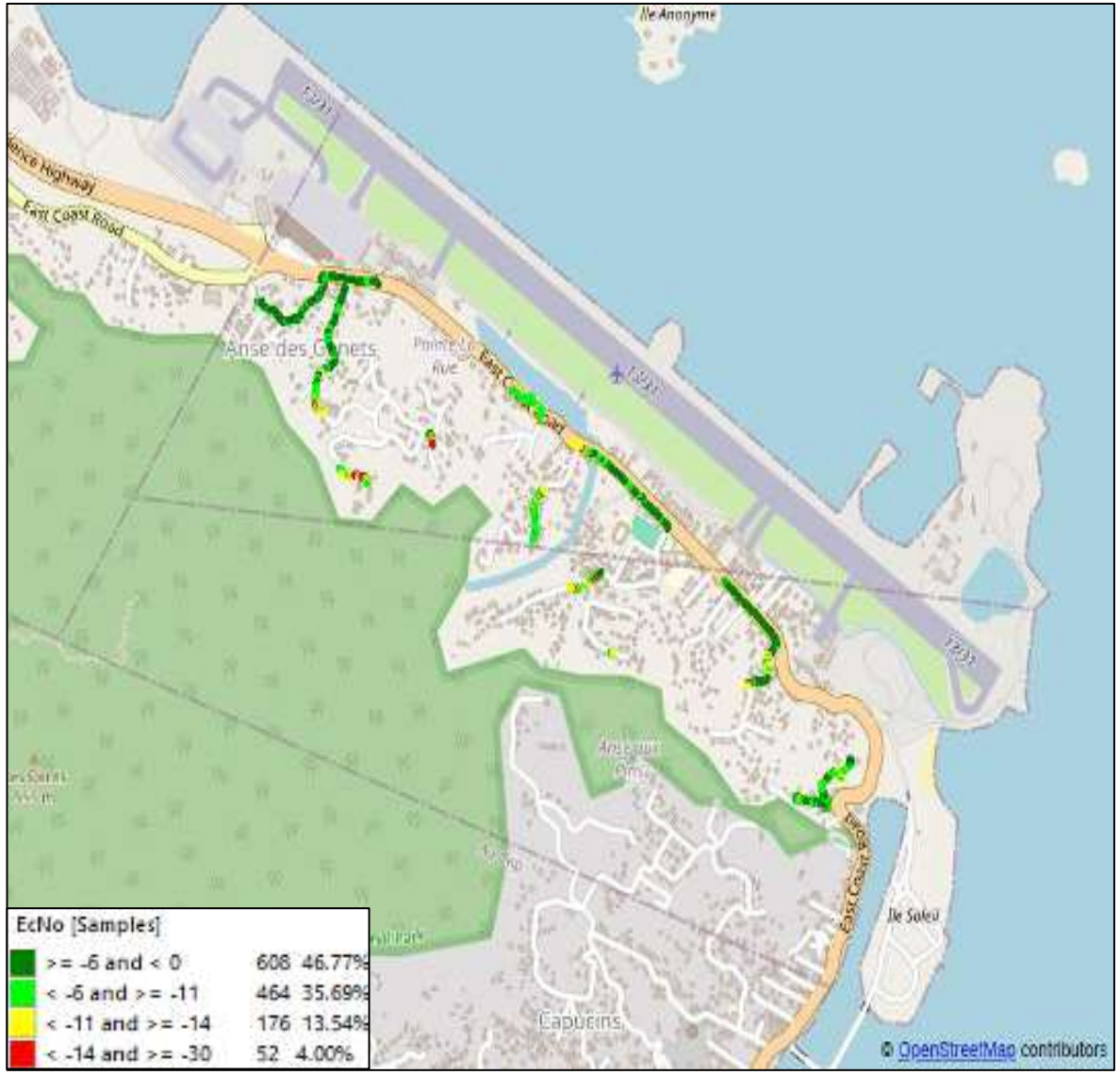


Phase-1 Long Call EC/NO PLOT

Airtel LC MO



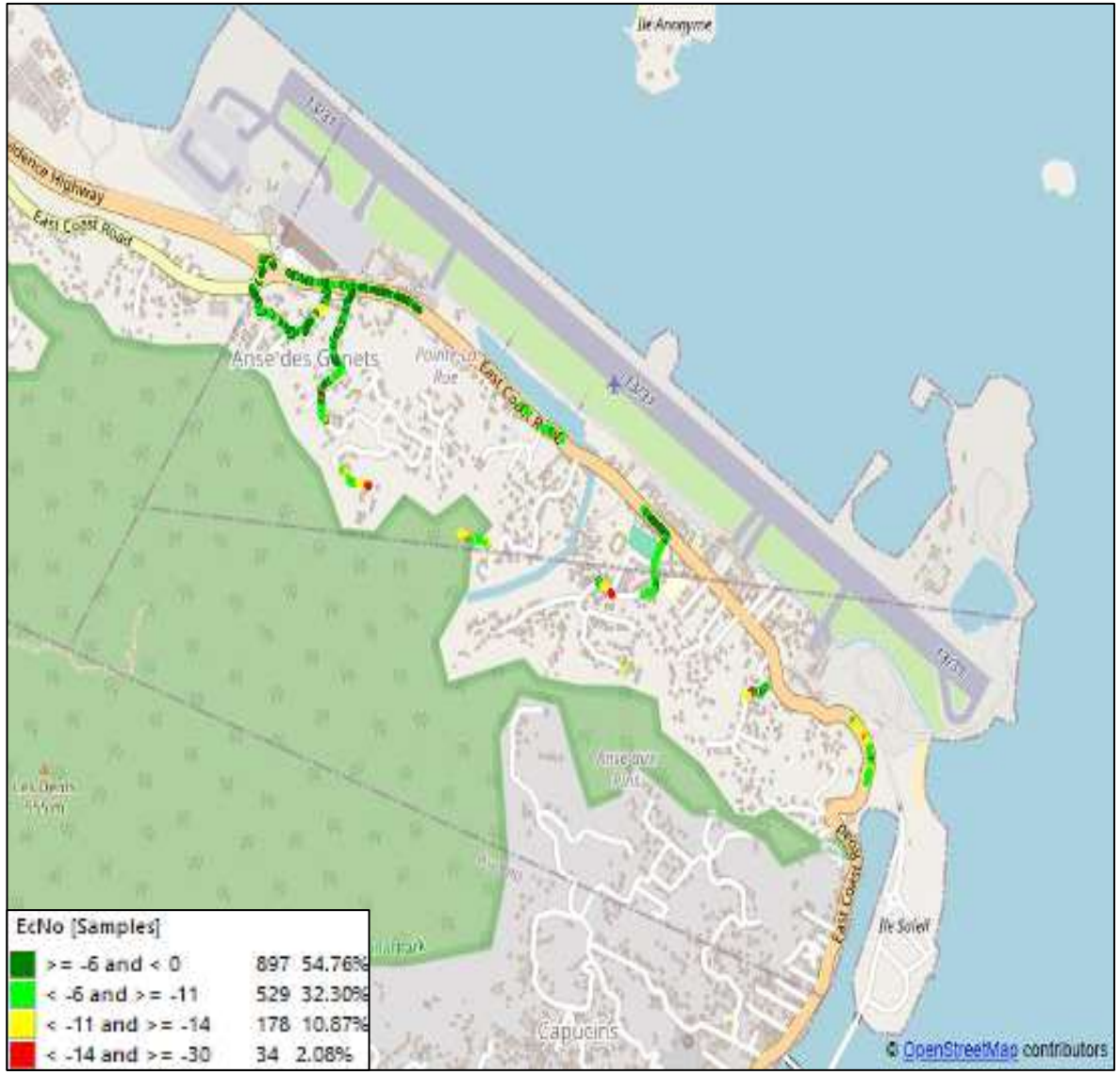
CWS LC MO



Phase-2 Long Call EC/NO PLOT

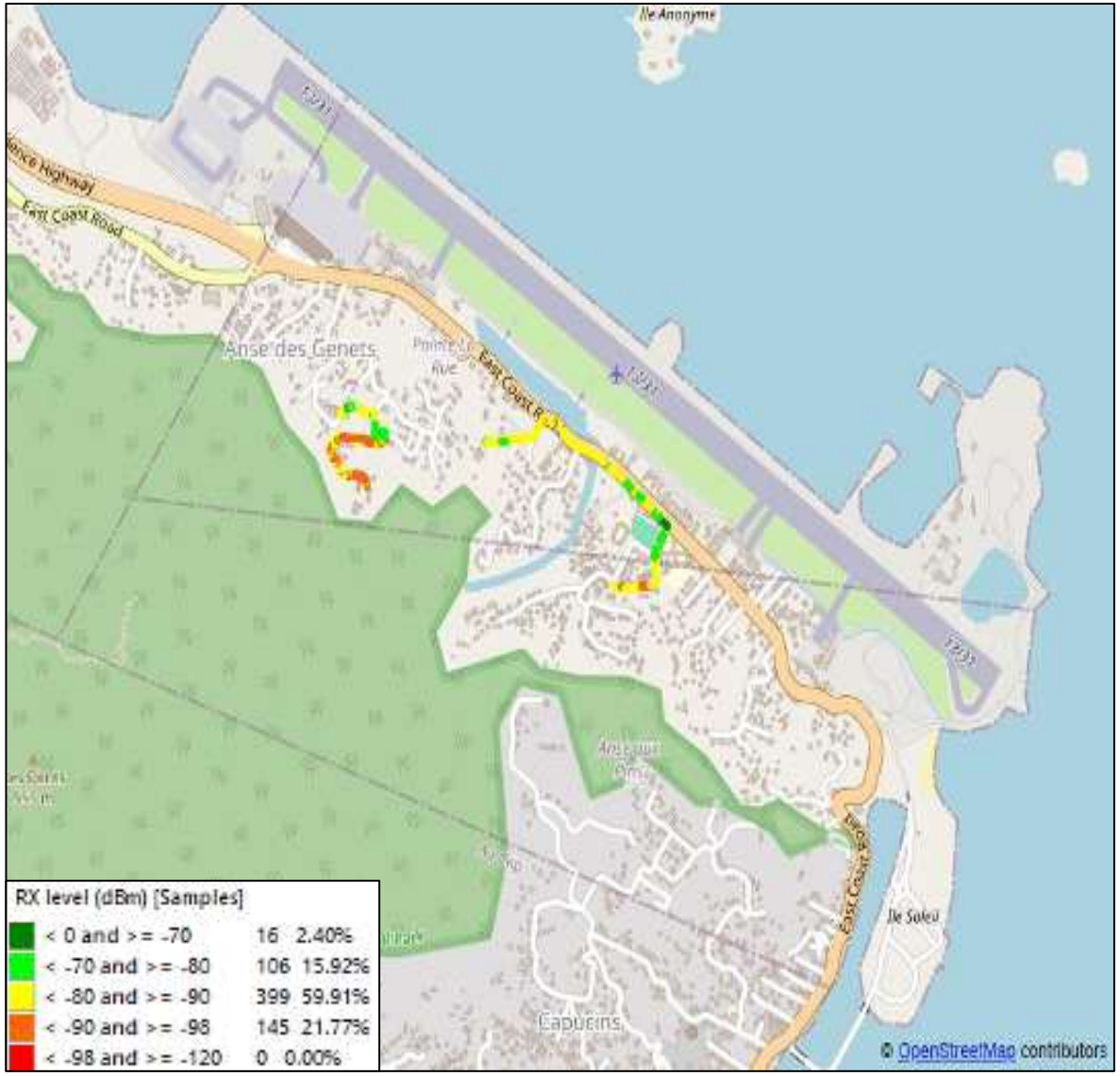
Airtel LC MO

CWS LC MO

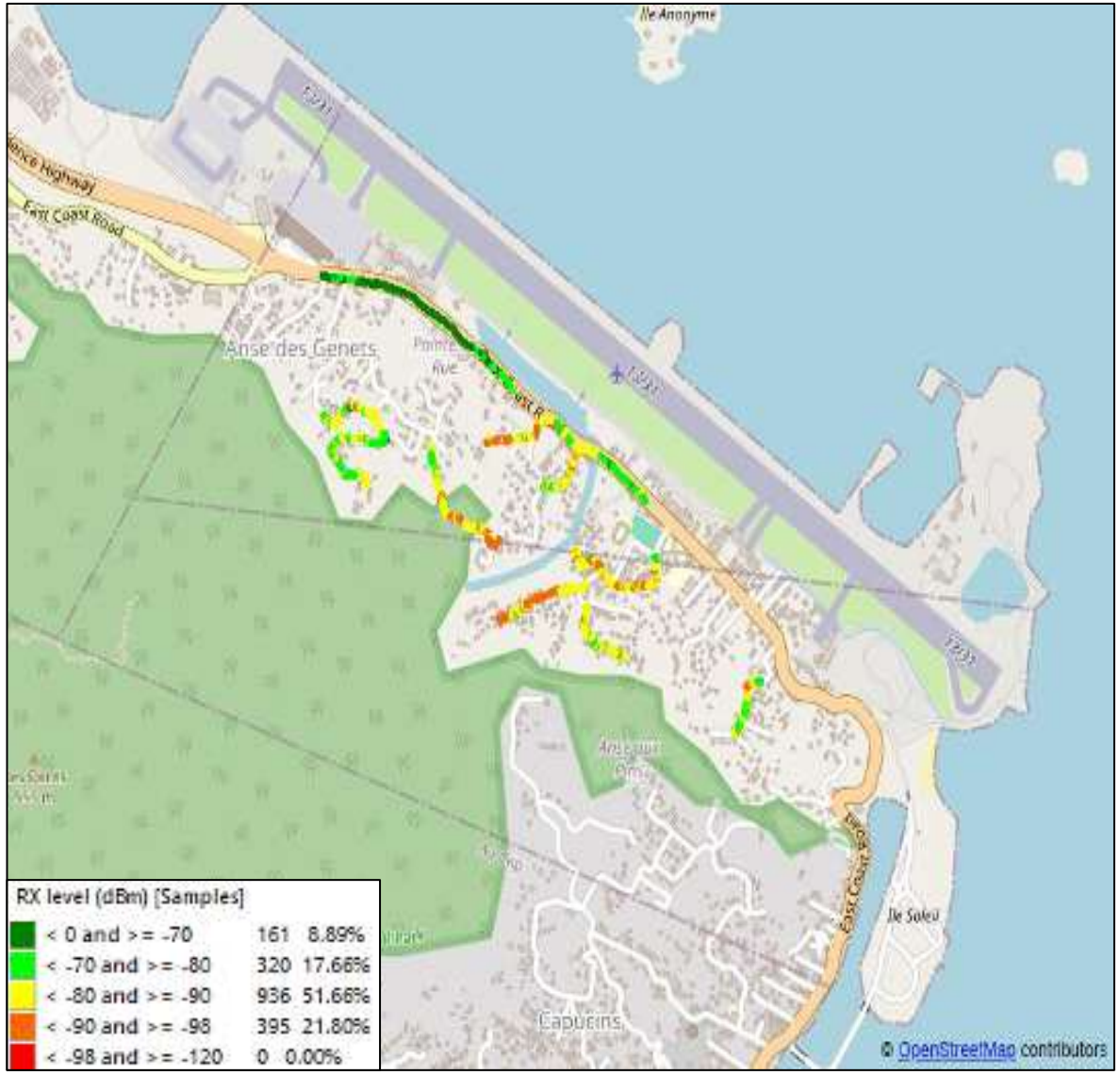


Phase-1 Long Call RX level sub PLOT

Airtel LC MO

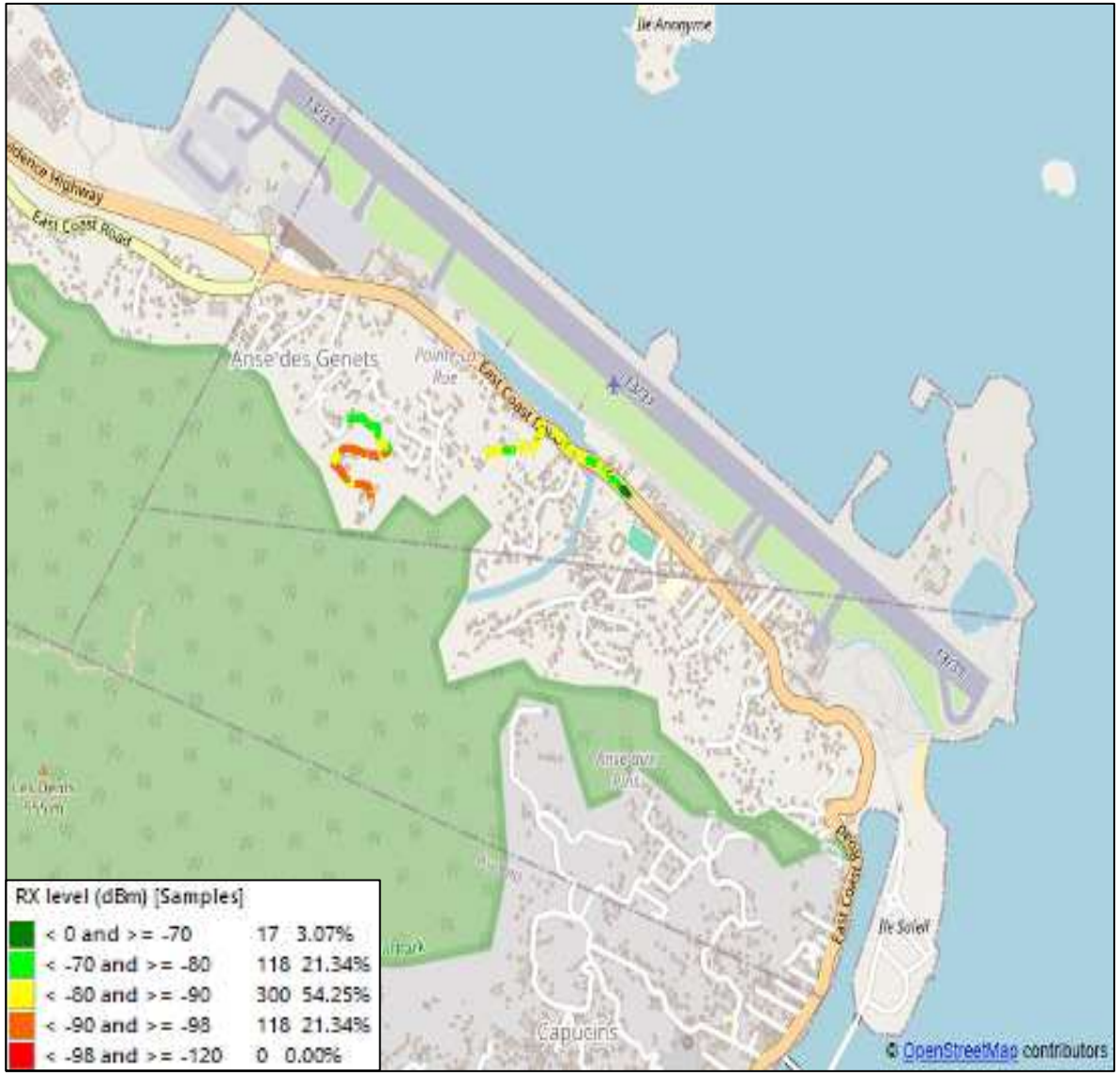


CWS LC MO

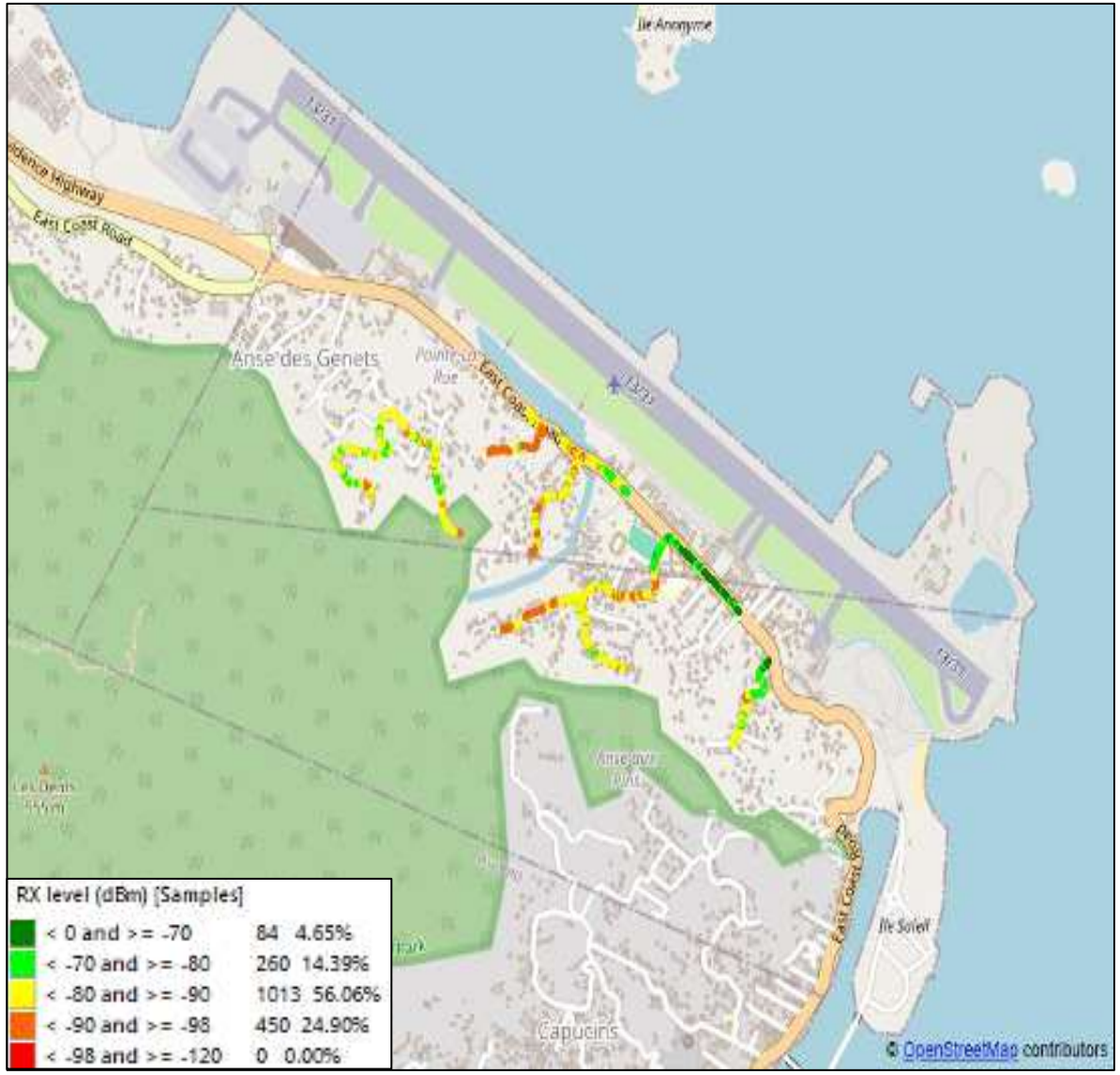


Phase-2 Long Call RX level sub PLOT

Airtel LC MO

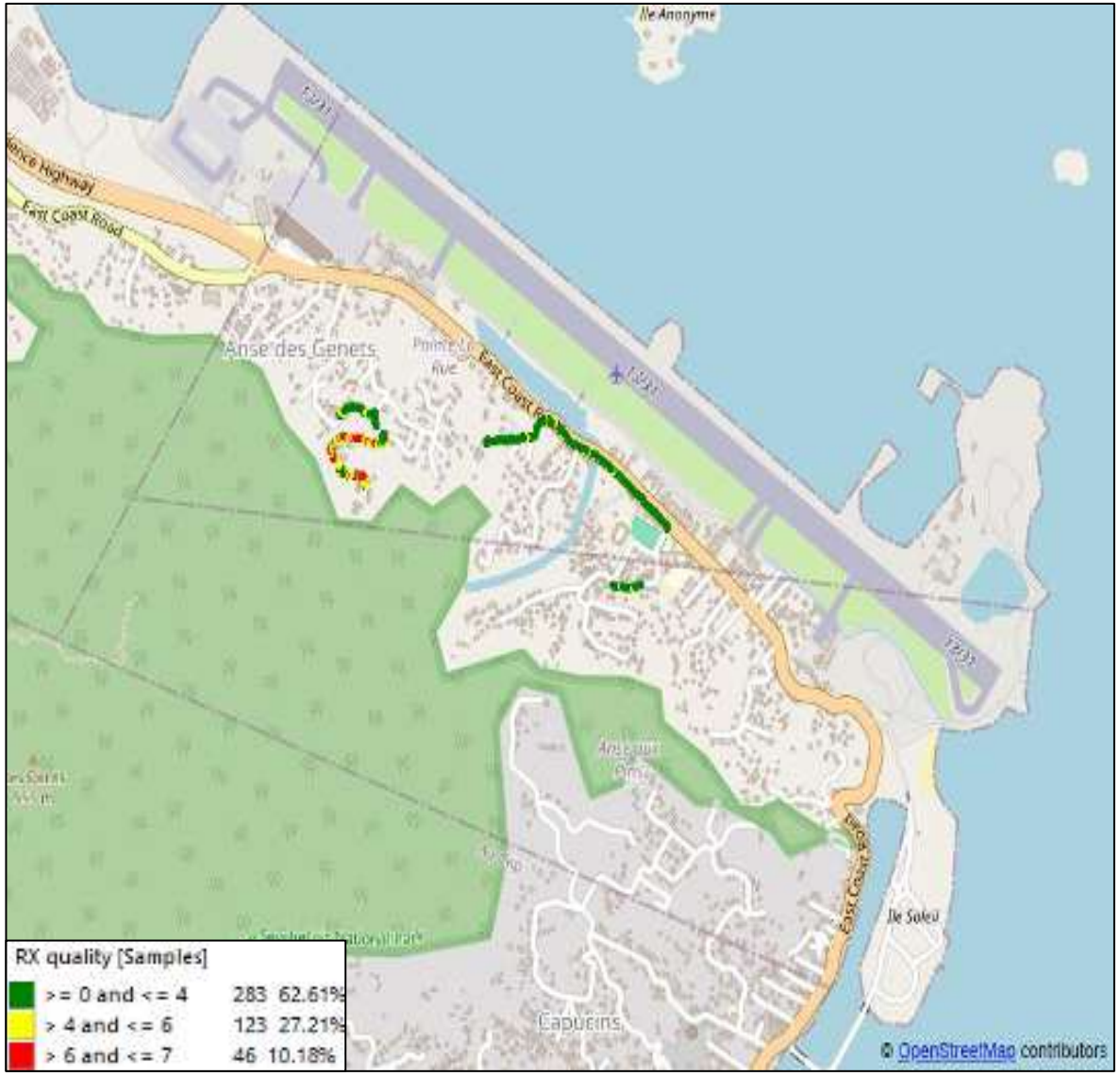


CWS LC MO



Phase-1 Long Call RX quality sub PLOT

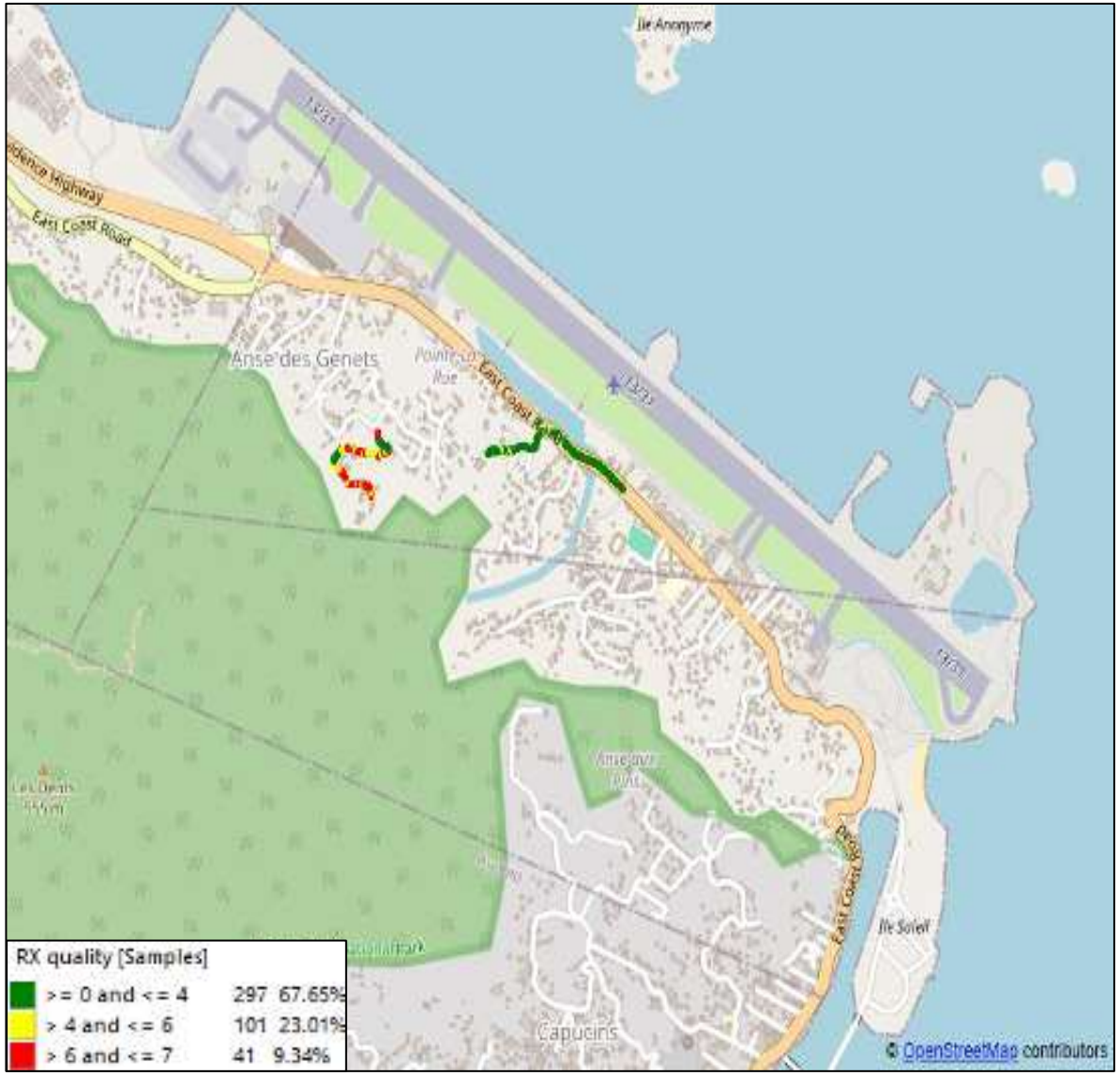
Airtel LC MO



CWS LC MO

Phase-2 Long Call RX quality sub PLOT

Airtel LC MO



CWS LC MO

3G PREFERRED DATA DRIVE PLOTS

Phase-1 3G PREFERRED DATA TEST - TECHNOLOGY PLOT

Airtel Data 3G

CWS Data 3G

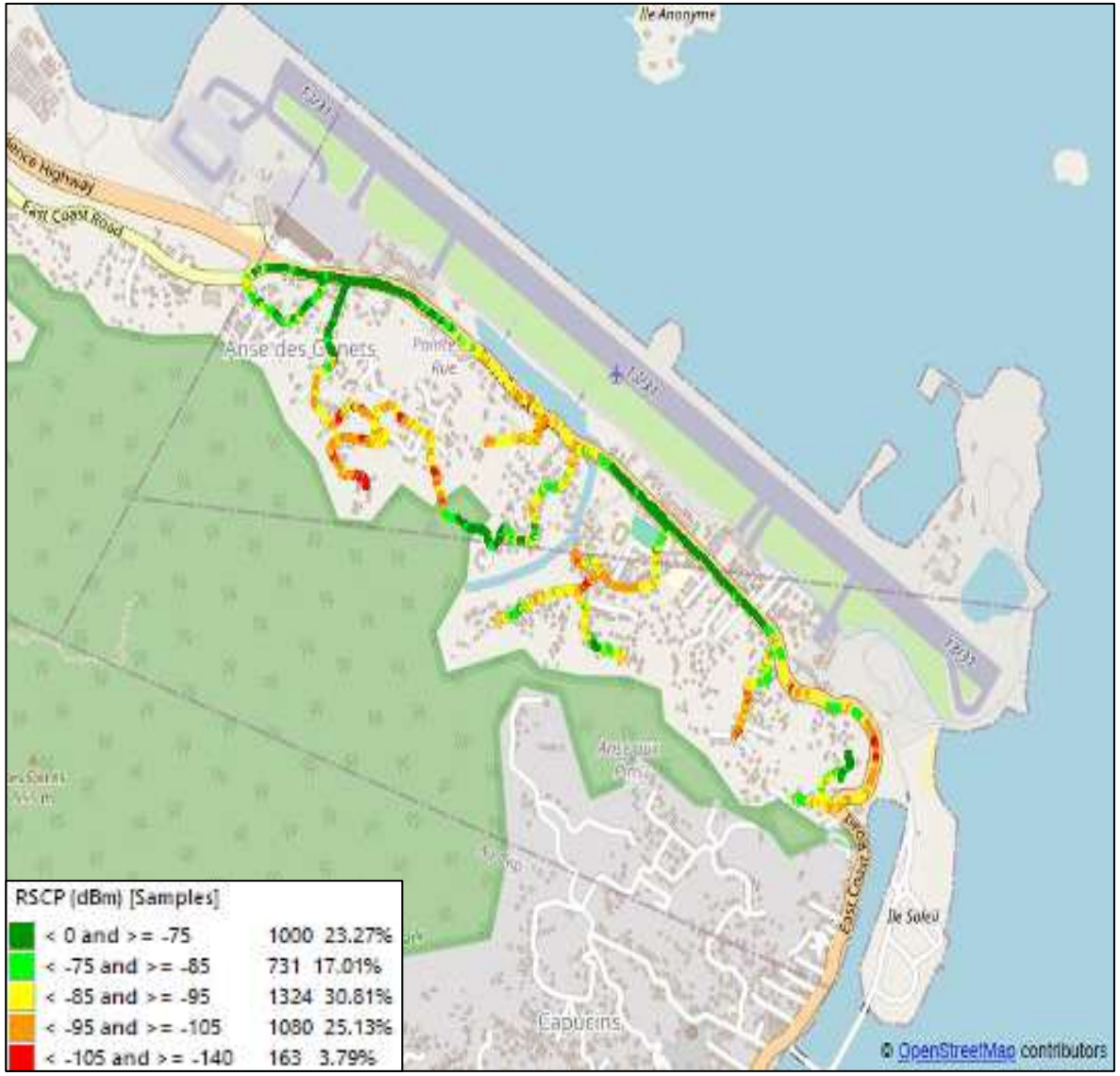
Phase-2 3G PREFERRED DATA TEST - TECHNOLOGY PLOT

Airtel Data 3G

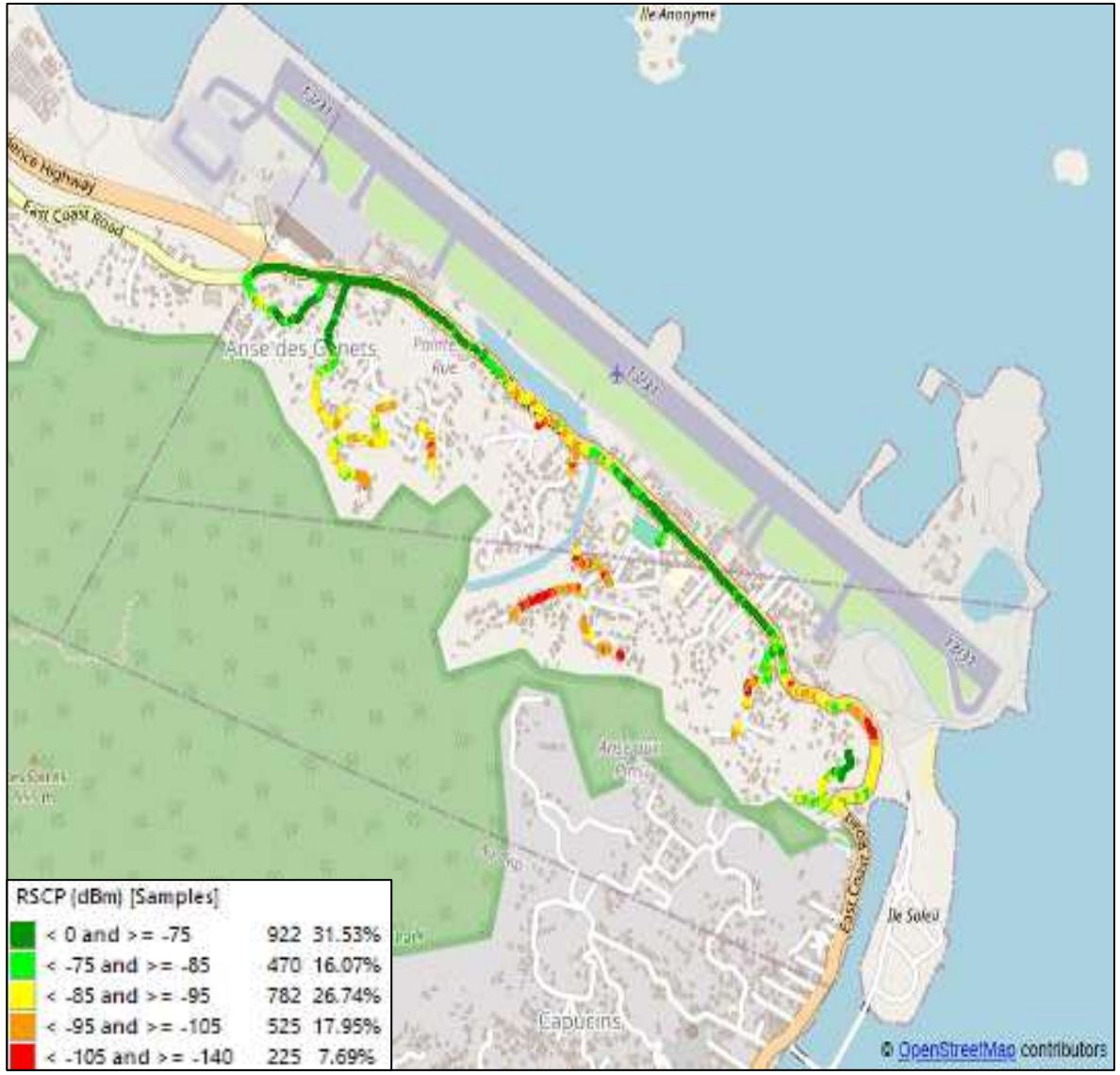
CWS Data 3G

Phase-1 3G PREFERRED DATA TEST - RSCP PLOT

Airtel Data 3G

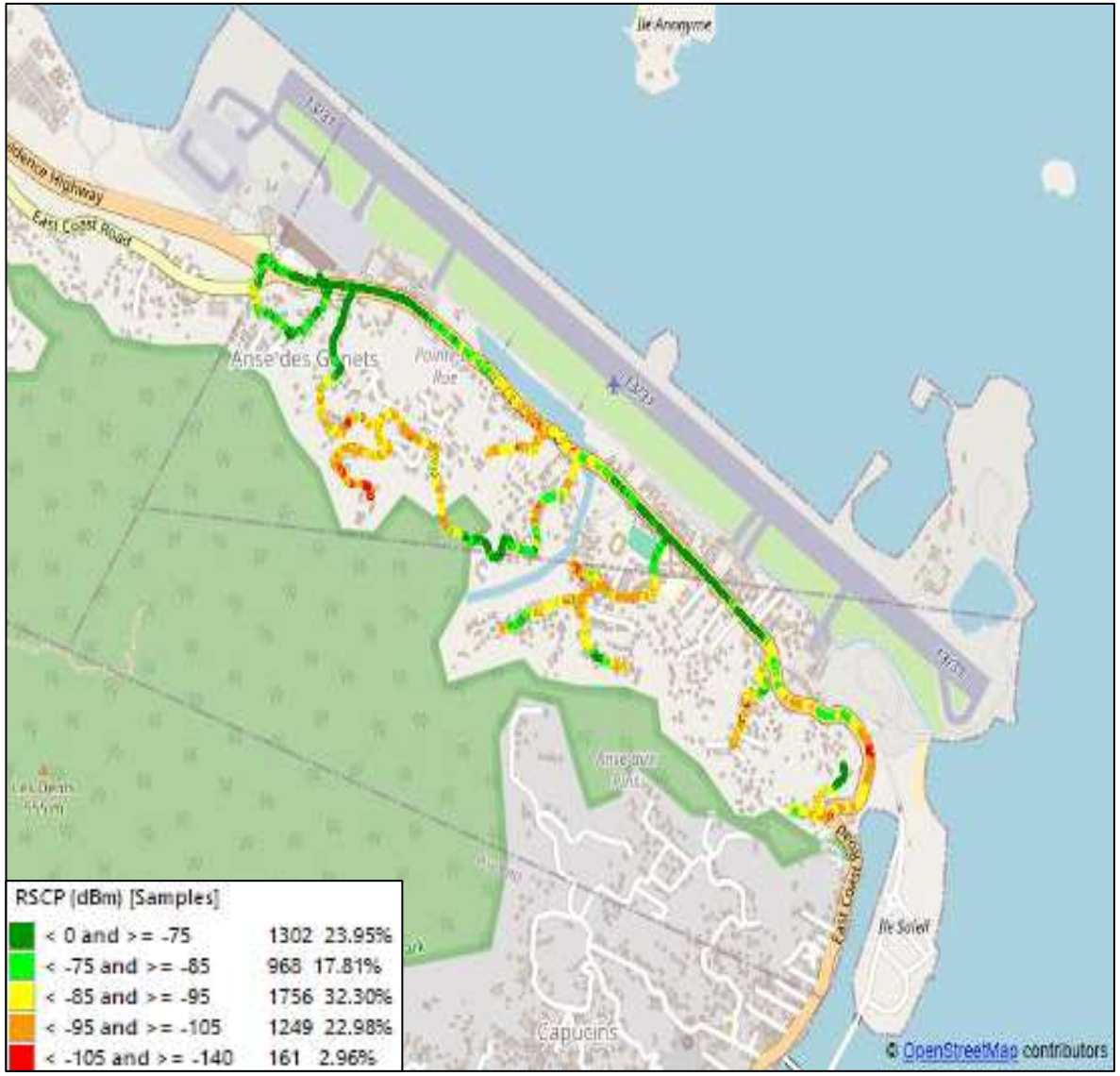


CWS Data 3G

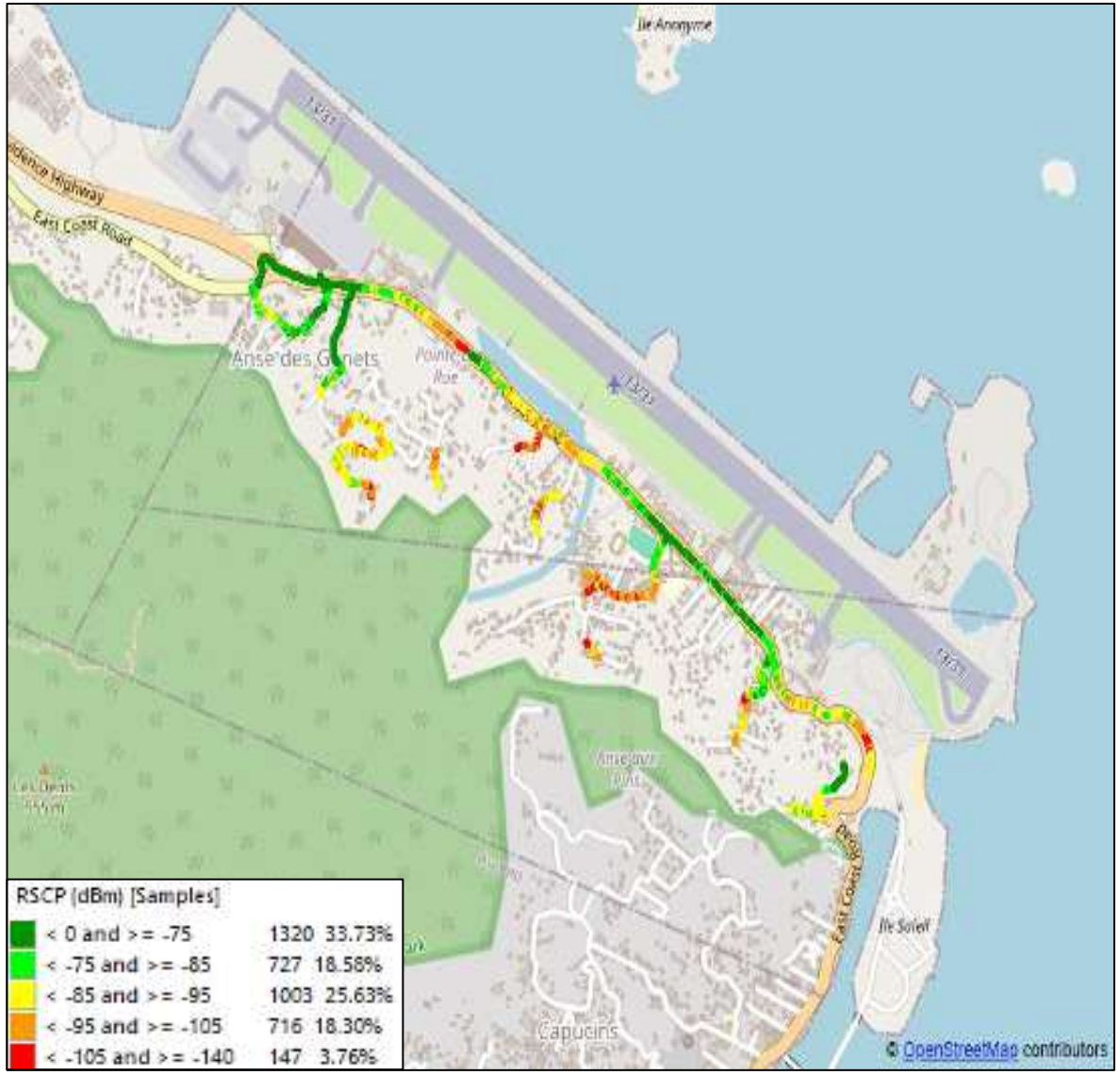


Phase-2 3G PREFERRED DATA TEST - RSCP PLOT

Airtel Data 3G

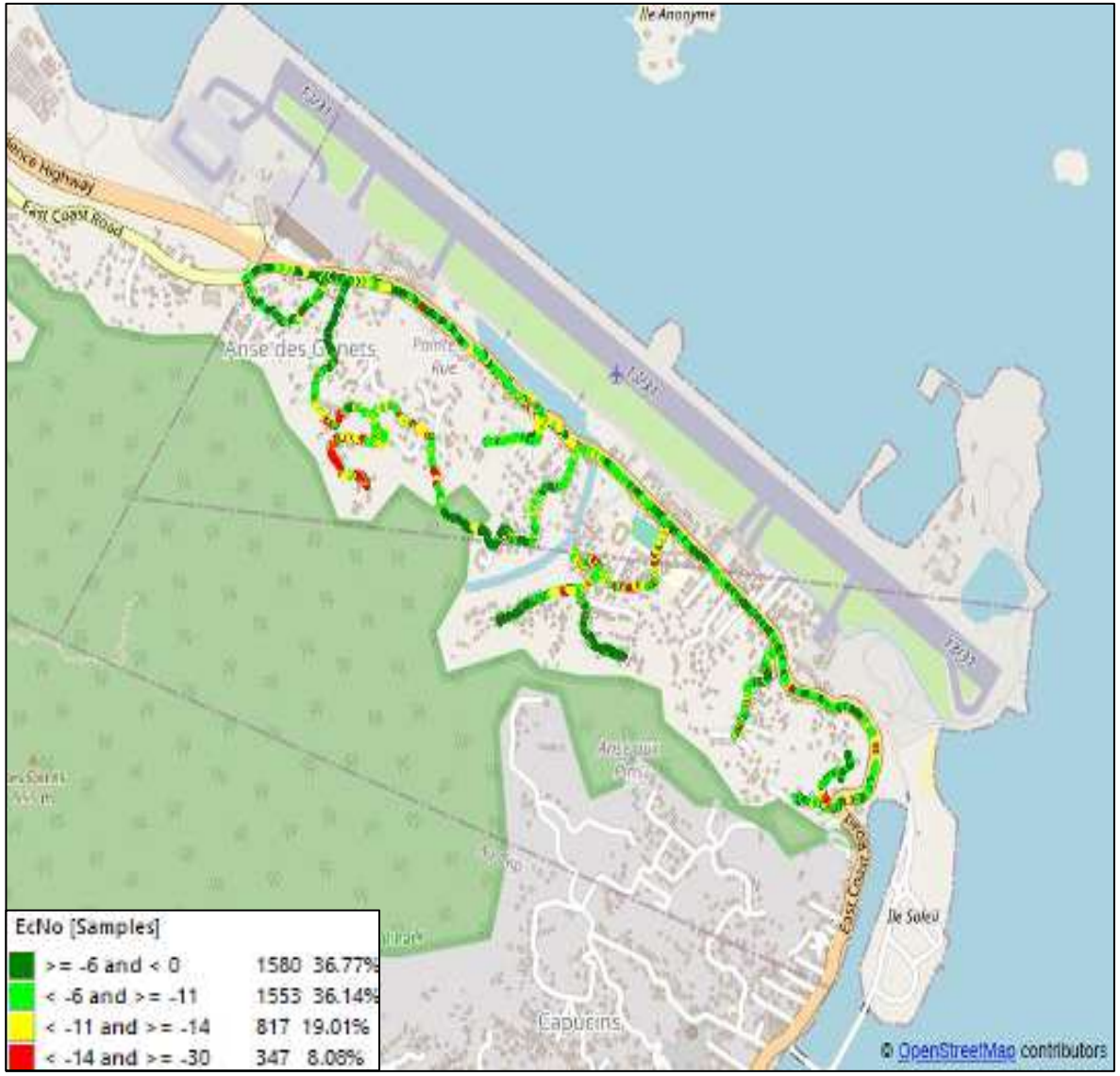


CWS Data 3G

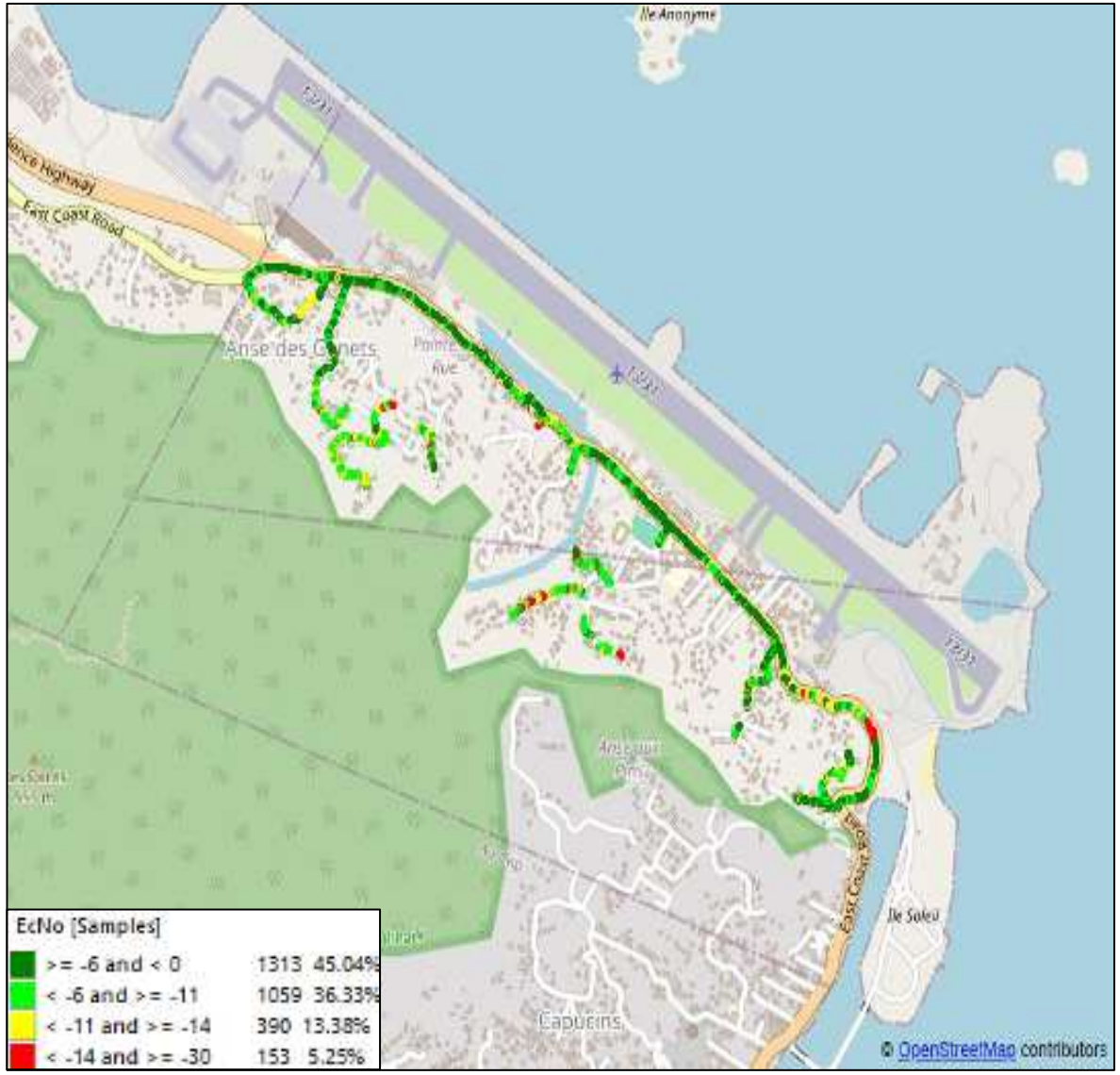


Phase-1 3G PREFERRED DATA TEST - EC/NO PLOT

Airtel Data 3G



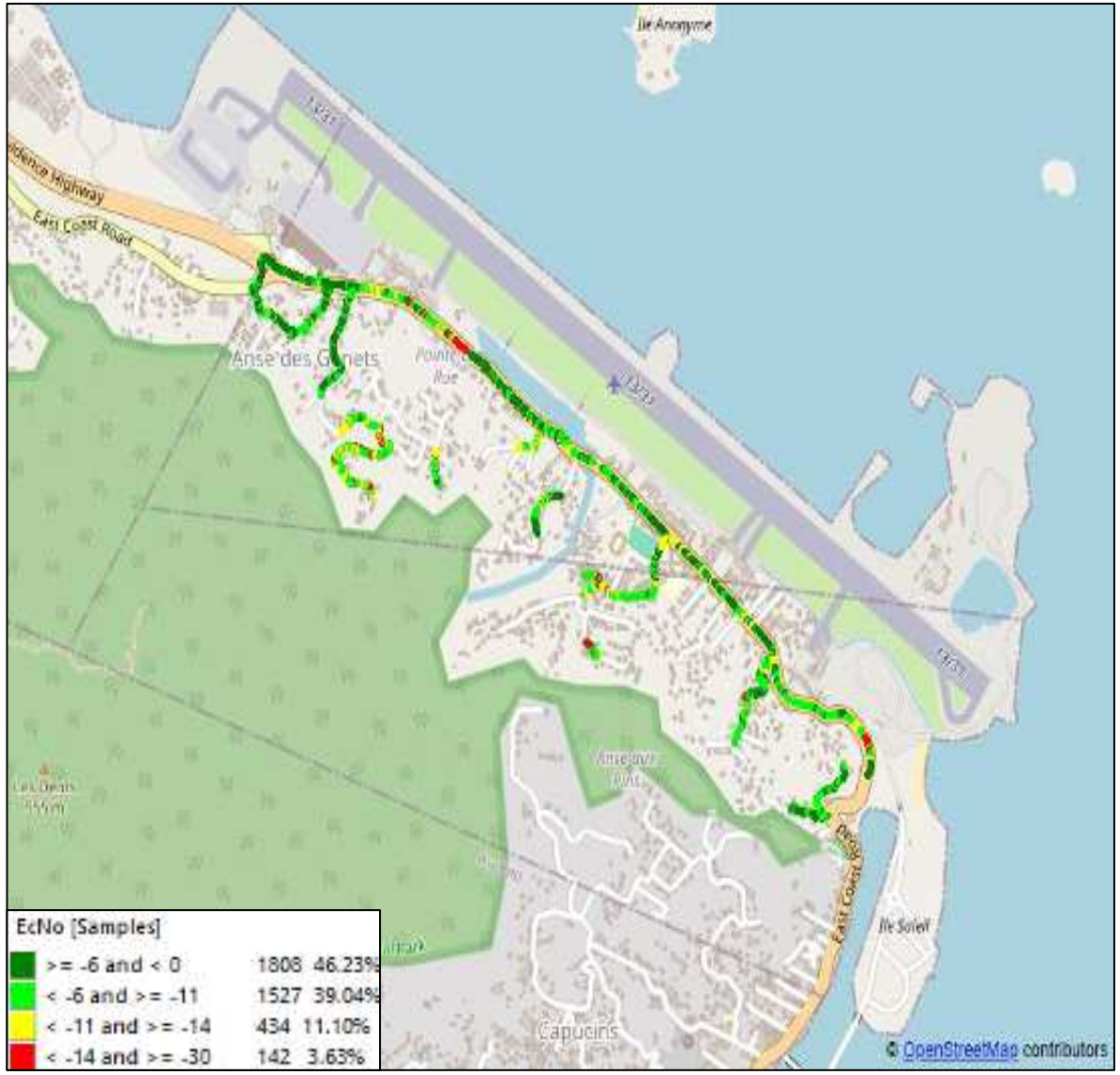
CWS Data 3G



Phase-2 3G PREFERRED DATA TEST - EC/NO PLOT

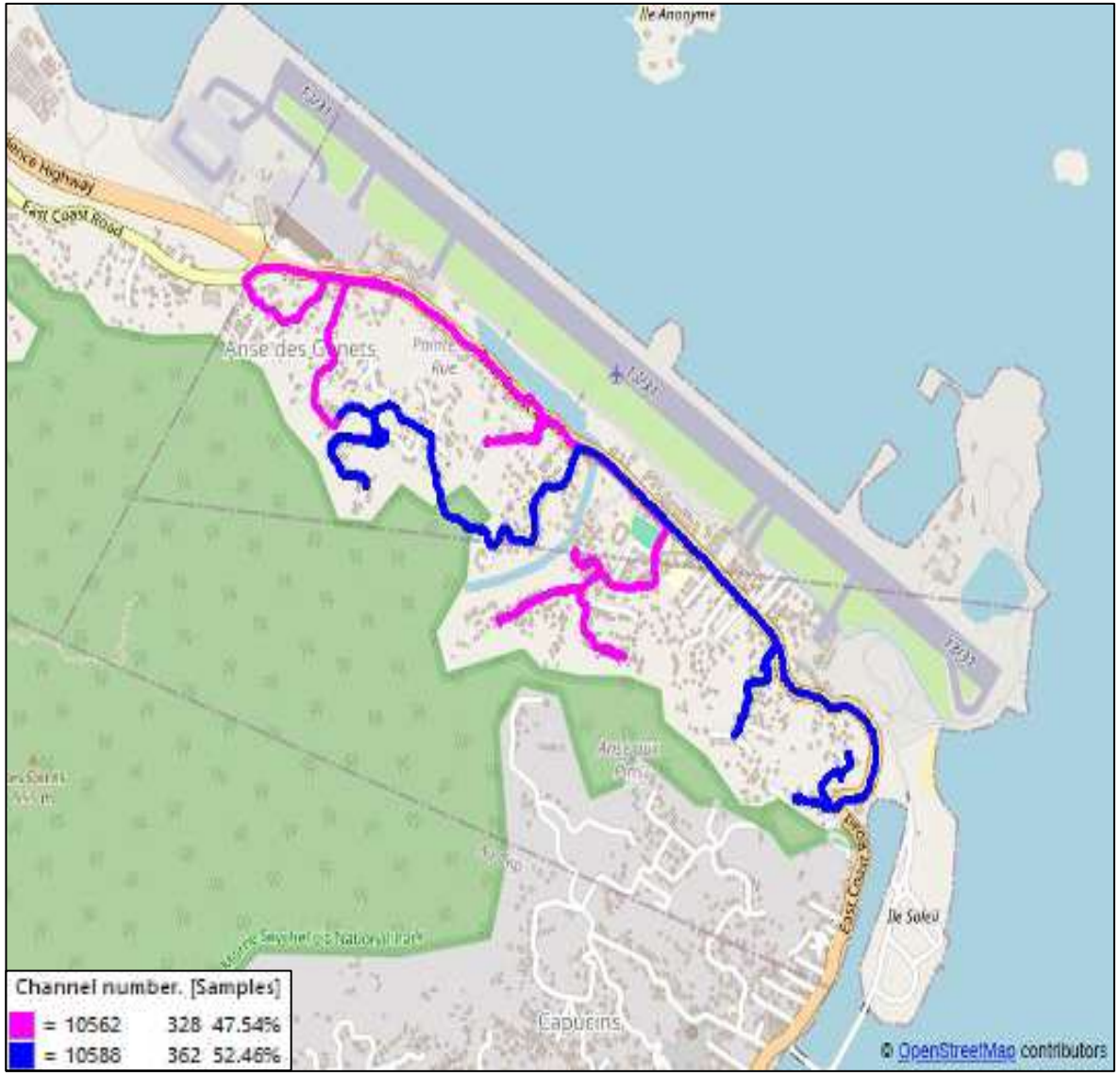
Airtel Data 3G

CWS Data 3G

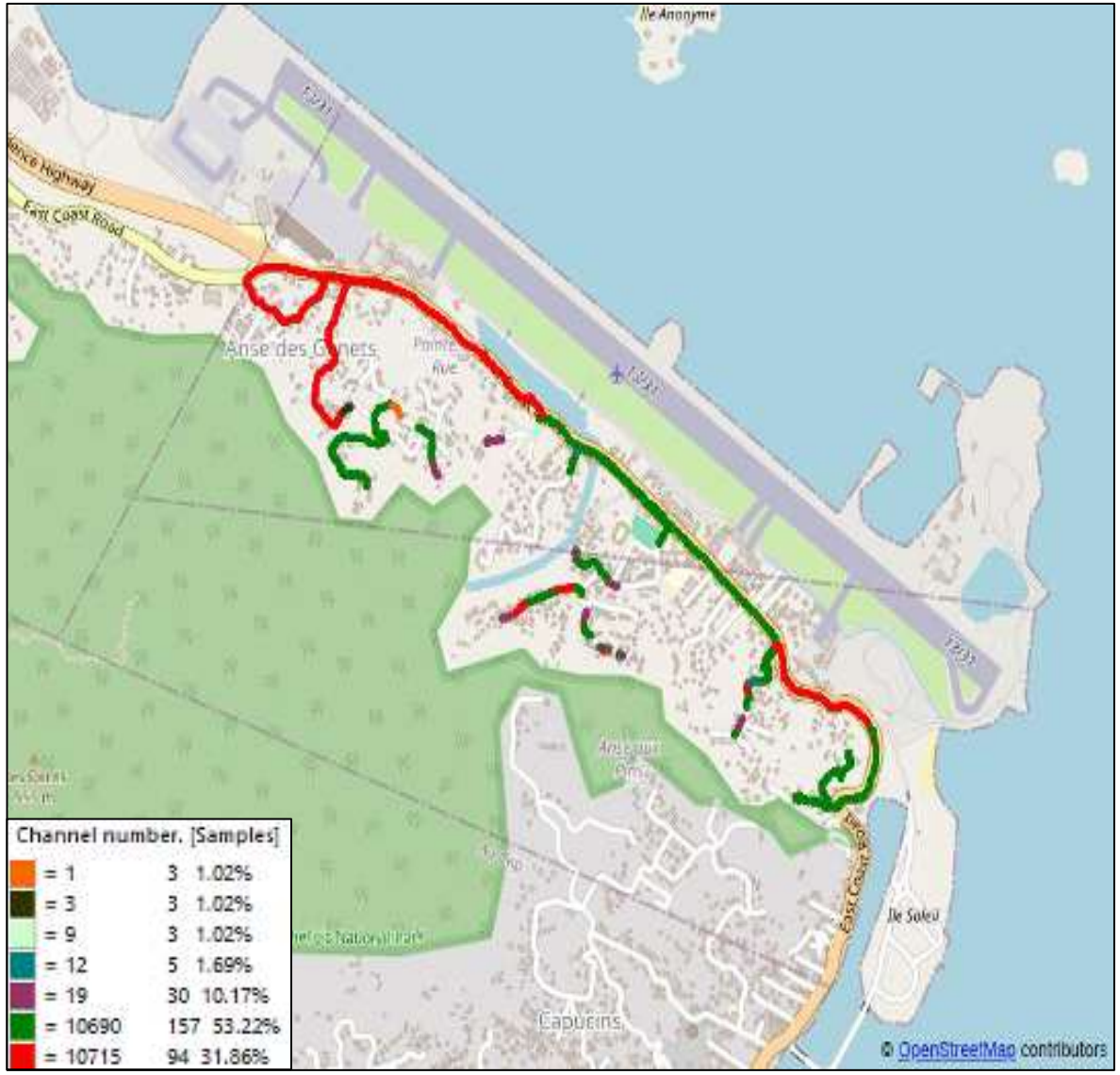


Phase-1 3G PREFERRED DATA TEST - UARFCN PLOT

Airtel Data 3G



CWS Data 3G



Phase-2 3G PREFERRED DATA TEST - UARFCN PLOT

Airtel Data 3G

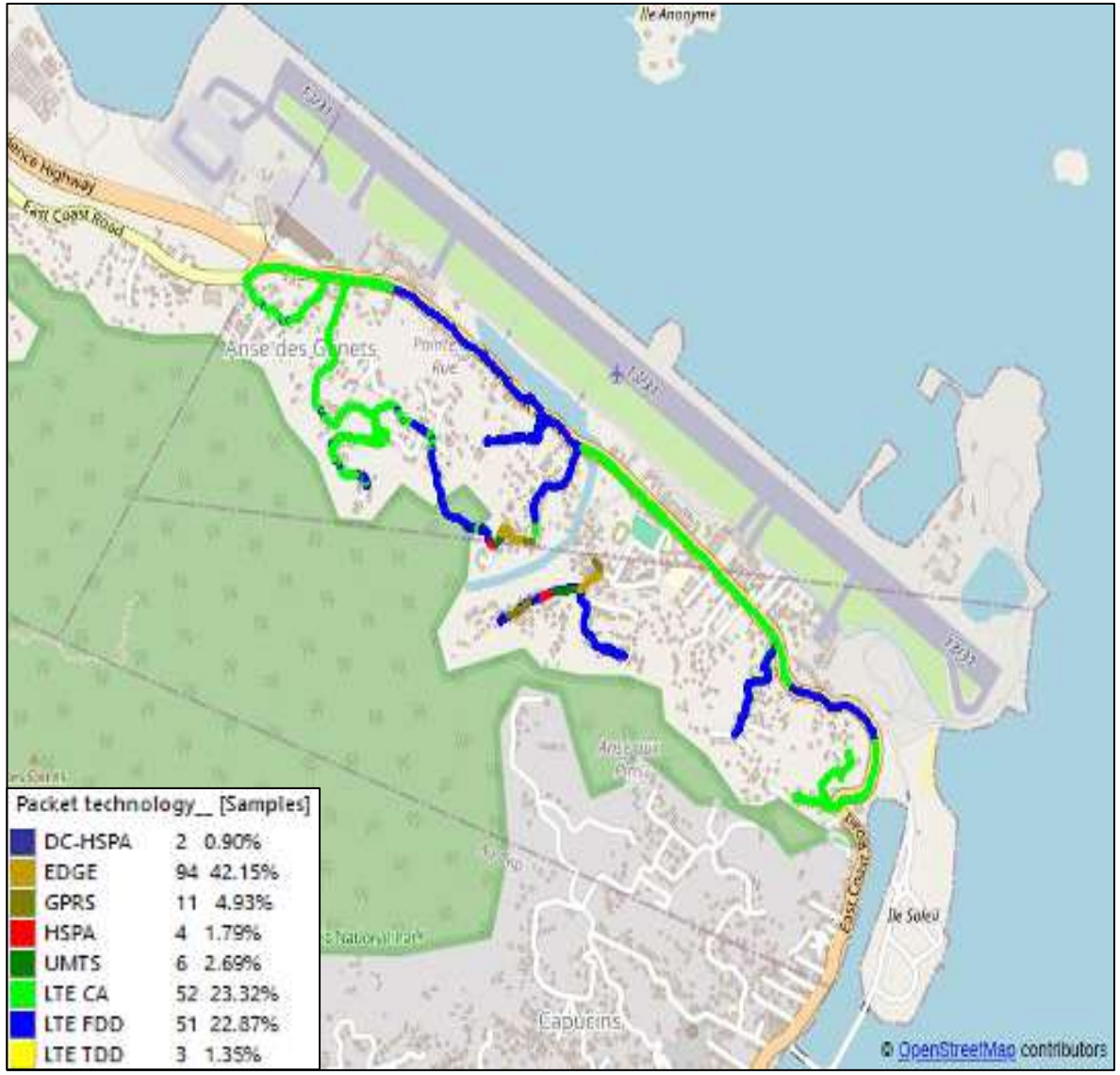
CWS Data 3G

4G PREFERRED
DATA DRIVE PLOTS

Phase-1 4G PREFERRED DATA TEST - TECHNOLOGY PLOT

Airtel Data 4G

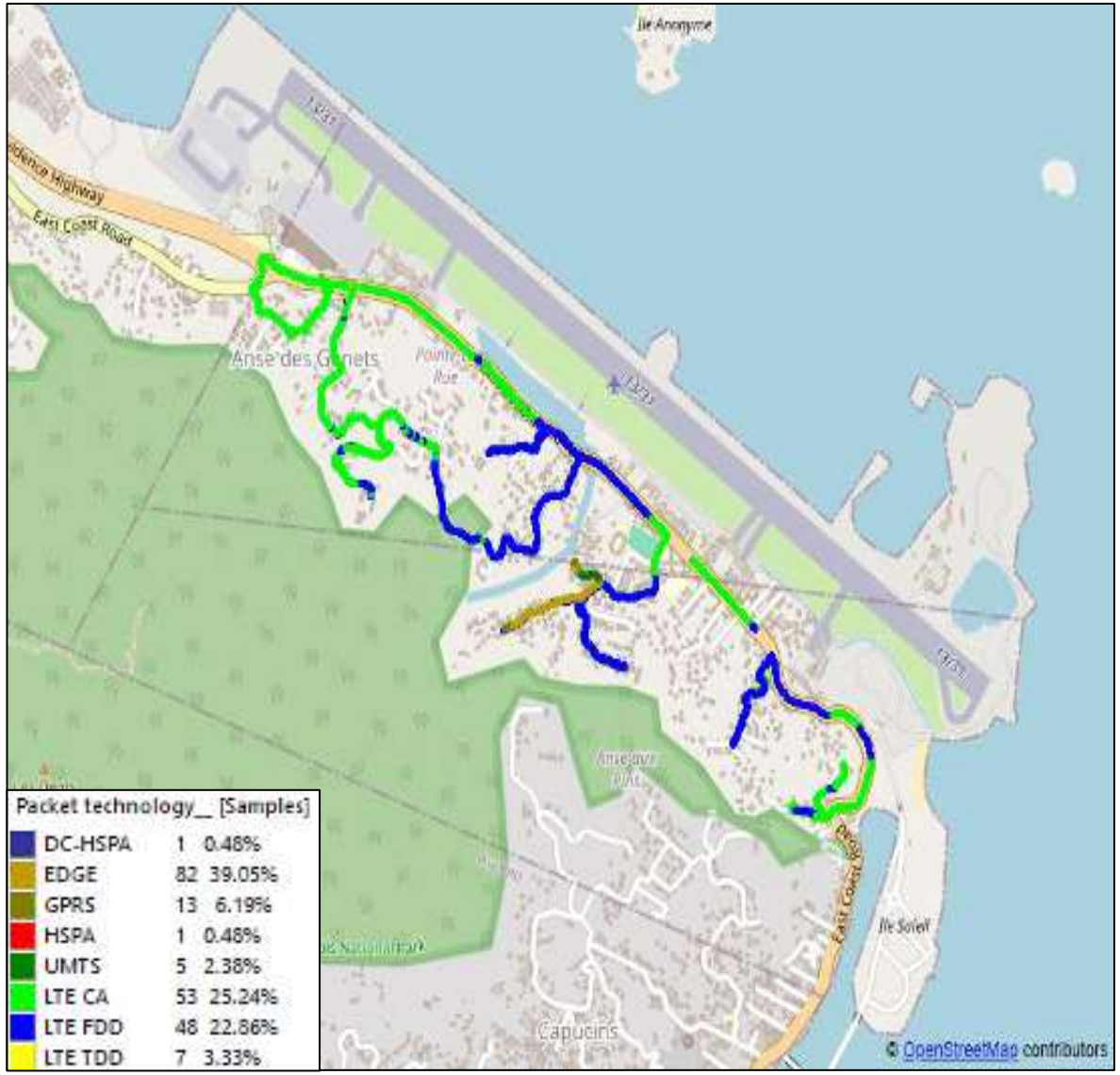
CWS Data 4G



Phase-2 4G PREFERRED DATA TEST - TECHNOLOGY PLOT

Airtel Data 4G

CWS Data 4G



Phase-1 4G PREFERRED DATA TEST - RSRP PLOT

Airtel Data 4G

CWS Data 4G

Phase-2 4G PREFERRED DATA TEST - RSRP PLOT

Airtel Data 4G

CWS Data 4G

Phase-1 4G PREFERRED DATA TEST - SINR PLOT

Airtel Data 4G

CWS Data 4G

Phase-2 4G PREFERRED DATA TEST - SINR PLOT

Airtel Data 4G

CWS Data 4G

Phase-1 4G PREFERRED DATA TEST - FREQUENCY BAND PLOT

Airtel Data 4G

CWS Data 4G

Phase-2 4G PREFERRED DATA TEST - FREQUENCY BAND PLOT

Airtel Data 4G

CWS Data 4G

Phase-1 4G PREFERRED DATA TEST - CARRIER AGGREGATION PLOT

Airtel Data 4G

CWS Data 4G

Phase-2 4G PREFERRED DATA TEST - CARRIER AGGREGATION PLOT

Airtel Data 4G

CWS Data 4G

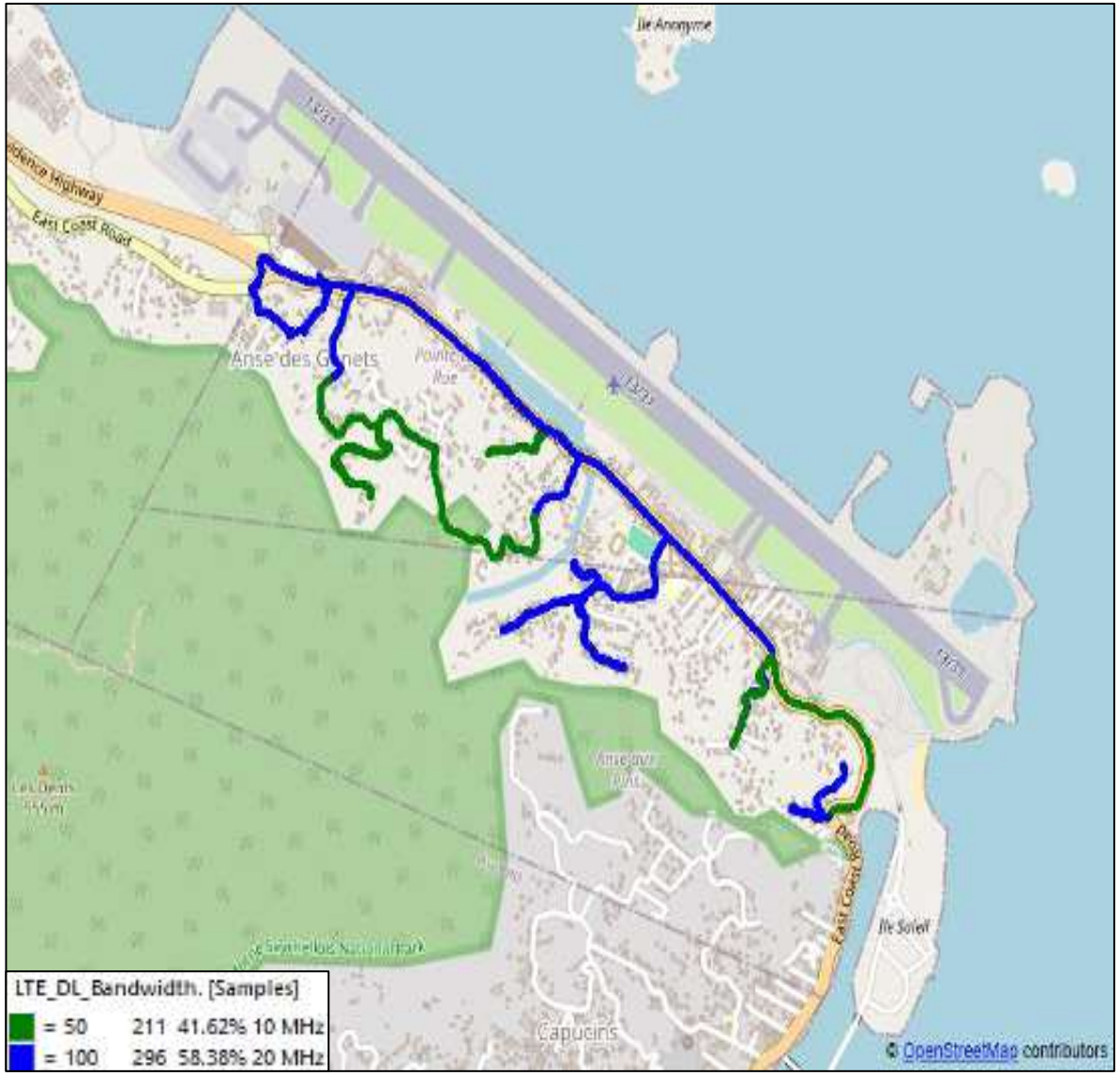
Phase-1 4G PREFERRED DATA TEST – BANDWIDTH PLOT

Airtel Data 4G

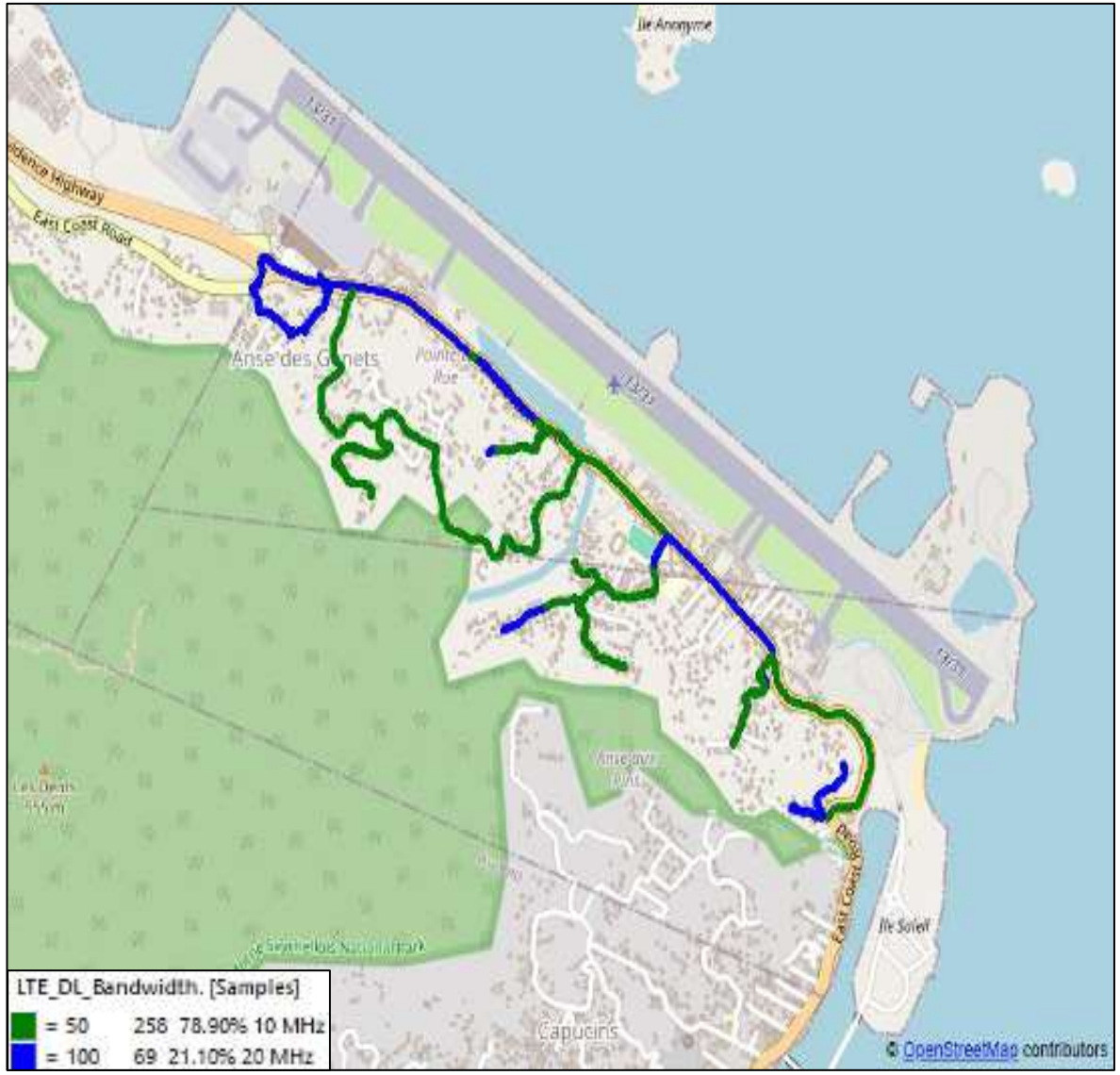
CWS Data 4G

Phase-2 4G PREFERRED DATA TEST – BANDWIDTH PLOT

Airtel Data 4G



CWS Data 4G



Negative Event Analysis

Phase-1 Call Drop & Call Attempt Failure Airtel , CWS Summary

Call Attempt Failure cause from Airtel	Count
Total Call Attempt Failure	0

Call Attempt Failure cause from CWS	Count
Total Call Attempt Failure	5
Poor Coverage	4
Poor Quality	1

Call Drop cause from Airtel	Count
Total Call Drop	

Call Drop cause from CWS	Count
Total Call Drop	0

Phase-1 Call Attempt Failure Analysis 1 From MS7 CWS MO

	Time	System	Serving band	
1.	14:29:34.378	UMTS FDD	2100	No
2.	14:37:21.856	GSM	0	Call
3.	14:47:31.991	UMTS FDD	2100	Dro
4.	14:52:22.588	GSM	0	Call
5.	14:54:55.588	GSM	900	TCH

	1. best active RSCP	Time	Ch	SC	1. best
282.		14:29:29.693	10690	201	-15.3
283.	-120.8	14:29:30.127	10690	201	
284.		14:29:30.127	10690	201	-17.1
285.	-123.4	14:29:30.702	10690	201	
286.		14:29:30.702	10690	201	-20.6
287.	-116.8	14:29:31.051	10690	201	
288.		14:29:31.051	10690	201	-16.8
289.	-110	14:29:31.749	10690	201	
290.		14:29:31.749	10690	201	-11.8
291.	-116.4	14:29:31.919	10690	201	
292.		14:29:31.919	10690	201	-16.4
293.	-114.5	14:29:32.633	10690	201	
294.		14:29:32.633	10690	201	-15.1
295.	-114.5	14:29:32.899	10690	201	
296.		14:29:32.899	10690	201	-15.1
297.	-114.5	14:29:32.915	10690	201	
298.		14:29:32.915	10690	201	-15.1
299.	-116.8	14:29:33.433	10690	201	
300.		14:29:33.433	10690	201	-21.3
301.	-123.6	14:29:33.813	10690	201	
302.	-123.6	14:29:33.899	10690	201	
303.	-123.6	14:29:33.919	10690	201	
304.	-115.1	14:29:34.479	10690	109	
305.		14:29:34.479	10690	109	-18.9
306.	-115.8	14:29:34.850	10690	109	
307.		14:29:34.850	10690	109	-21.9
308.	-113.9	14:29:35.481	10690	201	
309.		14:29:35.481	10690	201	-15
310.	-113.9	14:29:35.738	10690	201	
311.		14:29:35.738	10690	201	-15
312.	-113.9	14:29:35.779	10690	201	
313.		14:29:35.779	10690	201	-15
314.	-112	14:29:35.913	10690	201	
315.		14:29:35.913	10690	201	-15.1

	Event ID	System	Transf. dir.	Time	Subchannel	Message name
1185.	L3SM	UMTS FC	Uplink	14:29:16.805	DCCH	ROUTING_AREA_UPDATE_REQUEST
1186.	RRCSM	UMTS FC	Downlink	14:29:19.108	DCCH	MEASUREMENT_CONTROL
1187.	RRCSM	UMTS FC	Downlink	14:29:19.128	DCCH	SECURITY_MODE_COMMAND
1188.	RRCSM	UMTS FC	Uplink	14:29:19.128	DCCH	SECURITY_MODE_COMPLETE
1189.	RRCSM	UMTS FC	Uplink	14:29:19.199	DCCH	UPLINK_DIRECT_TRANSFER
1190.	L3SM	UMTS FC	Uplink	14:29:19.199	DCCH	SETUP
1191.	RRCSM	UMTS FC	Downlink	14:29:19.248	DCCH	DOWNLINK_DIRECT_TRANSFER
1192.	L3SM	UMTS FC	Downlink	14:29:19.248	DCCH	TMSI_REALLOCATION_COMMAND
1193.	RRCSM	UMTS FC	Uplink	14:29:19.249	DCCH	UPLINK_DIRECT_TRANSFER
1194.	L3SM	UMTS FC	Uplink	14:29:19.249	DCCH	TMSI_REALLOCATION_COMPLETE
1195.	RRCSM	UMTS FC	Downlink	14:29:19.378	DCCH	DOWNLINK_DIRECT_TRANSFER
1196.	L3SM	UMTS FC	Downlink	14:29:19.378	DCCH	CALL_PROCEEDING
1197.	RRCSM	UMTS FC	Downlink	14:29:23.368	DCCH	RADIO_BEARER_SETUP
1198.	RRCSM	UMTS FC	Uplink	14:29:23.611	DCCH	RADIO_BEARER_SETUP_COMPLETE
1199.	RRCSM	UMTS FC	Downlink	14:29:23.858	DCCH	MEASUREMENT_CONTROL
1200.	RRCSM	UMTS FC	Downlink	14:29:23.898	DCCH	MEASUREMENT_CONTROL
1201.	RRCSM	UMTS FC	Downlink	14:29:23.938	DCCH	MEASUREMENT_CONTROL
1202.	RRCSM	UMTS FC	Downlink	14:29:23.978	DCCH	MEASUREMENT_CONTROL
1203.	RRCSM	UMTS FC	Downlink	14:29:24.138	DCCH	DOWNLINK_DIRECT_TRANSFER
1204.	L3SM	UMTS FC	Downlink	14:29:24.138	DCCH	AUTHENTICATION_AND_CIPHERING_REQUEST
1205.	RRCSM	UMTS FC	Uplink	14:29:24.175	DCCH	UPLINK_DIRECT_TRANSFER
1206.	L3SM	UMTS FC	Uplink	14:29:24.175	DCCH	AUTHENTICATION_AND_CIPHERING_RESPONSE
1207.	RRCSM	UMTS FC	Uplink	14:29:24.247	DCCH	MEASUREMENT_REPORT
1208.	RRCSM	UMTS FC	Downlink	14:29:24.538	DCCH	PHYSICAL_CHANNEL_RECONFIGURATION
1209.	RRCSM	UMTS FC	Uplink	14:29:25.001	DCCH	MEASUREMENT_REPORT
1210.	RRCSM	UMTS FC	Uplink	14:29:25.330	DCCH	PHYSICAL_CHANNEL_RECONFIGURATION_COMPLETE
1211.	RRCSM	UMTS FC	Downlink	14:29:25.578	DCCH	MEASUREMENT_CONTROL
1212.	RRCSM	UMTS FC	Downlink	14:29:25.898	DCCH	MEASUREMENT_CONTROL
1213.	RRCSM	UMTS FC	Uplink	14:29:25.919	DCCH	MEASUREMENT_REPORT
1214.	RRCSM	UMTS FC	Uplink	14:29:26.419	DCCH	MEASUREMENT_REPORT
1215.	RRCSM	UMTS FC	Downlink	14:29:26.498	DCCH	SECURITY_MODE_COMMAND
1216.	RRCSM	UMTS FC	Uplink	14:29:26.498	DCCH	SECURITY_MODE_COMPLETE
1217.	RRCSM	UMTS FC	Uplink	14:29:26.899	DCCH	MEASUREMENT_REPORT
1218.	RRCSM	UMTS FC	Uplink	14:29:26.919	DCCH	MEASUREMENT_REPORT

Analysis:

- This call failure event occurred on short call at 14:29:34:378 time when UE was latched with 3G network.
- After sending “CM Service Request” message to core network, then core network responds with “Call Proceeding ” message. After that call setup has been failed.
- During the failure, UE was latched with PSC 201 and RF condition RSCP -123.6 dBm and Ec/No -21.3 dB are very poor.
- As per the analysis call failed happened due to poor coverage of the network.

Phase-1 Call Attempt Failure Analysis 2 From MS7 CWS MO

	Time	System	Serving band	
1.	14:29:34.378	UMTS FDD	2100	Nor
2.	14:37:21.856	GSM	0	Cal
3.	14:47:31.991	UMTS FDD	2100	Dro
4.	14:52:22.588	GSM	0	Call
5.	14:54:55.588	GSM	900	TCH

	Time	Band (MHz)	Ch	PCI	RSRP	SNR
965.	14:36:14.758					-3.1
966.	14:36:15.026	800	6300	15	-108.2	
967.	14:36:15.026					-5.2
968.	14:36:15.567	800	6300	15	-108.5	
969.	14:36:15.567					-2
970.	14:36:16.038	800	6300	15	-112.8	
971.	14:36:16.038					-4.4
972.	14:36:16.973	800	6300	15	-112	
973.	14:36:16.973					-7.9
974.	14:36:17.564	800	6300	15	-116	
975.	14:36:17.564					-9.2
976.	14:36:17.932	800	6300	100	-109.6	
977.	14:36:17.932					-5
978.	14:36:18.602	800	6300	100	-113.4	
979.	14:36:18.602					-7.9
980.	14:36:19.095	800	6300	100	-110.1	
981.	14:36:19.095					-4
982.	14:36:19.647	800	6300	100	-108.3	
983.	14:36:19.647					-4.1
984.	14:36:19.920	800	6300	100	-106.8	
985.	14:36:19.920					-3.2
986.	14:37:21.856	800	6300	102	-107	
987.	14:37:22.058	800	6300	102	-104.9	
988.	14:37:23.113	800	6300	102	-103.1	
989.	14:37:23.897	800	6300	102	-103.1	
990.	14:37:24.718	800	6300	102	-101.3	
991.	14:37:25.805	800	6300	102	-104.3	
992.	14:37:26.940	800	6300	102	-103.8	
993.	14:37:26.940					
994.	14:37:26.940					-0.9
995.	14:37:28.491	800	6300	102	-104.8	
996.	14:37:28.491					-2.9
997.	14:37:29.566	800	6300	102	-109.4	
998.	14:37:29.566					-5.1
999.	14:37:30.861	800	6300	102	-118.6	
1000.	14:37:30.861					-7.6
1001.	14:37:32.090	800	6300	102	-117.3	

	System	Transf. dir.	Time	Subchannel	Message name
3870.	GSM	Uplink	14:37:19.597	SACCH	MEASUREMENT_REPORT
3871.	GSM	Downlink	14:37:19.948	SACCH	MEASUREMENT_INFORMATION
3872.	GSM	Uplink	14:37:20.068	SACCH	MEASUREMENT_REPORT
3873.	GSM	Uplink	14:37:20.539	SACCH	MEASUREMENT_REPORT
3874.	GSM	Downlink	14:37:20.816	DCCH	CHANNEL_RELEASE
3875.	LTE FDD	Downlink	14:37:21.644	BCCH-BCH	MasterInformationBlock
3876.	LTE FDD	Downlink	14:37:21.658	BCCH-SCH	SystemInformationBlockType1
3877.	LTE FDD	Downlink	14:37:21.658	BCCH-SCH	SystemInformation - SIB2,SIB3
3878.	LTE FDD	Downlink	14:37:21.658	BCCH-SCH	SystemInformation - SIB5
3879.	LTE FDD	Uplink	14:37:21.674		TRACKING_AREA_UPDATE_REQUEST
3880.	LTE FDD	Uplink	14:37:21.674	CCCH	RRCConnectionRequest
3881.	LTE FDD	Downlink	14:37:21.710	CCCH	RRCConnectionSetup
3882.	LTE FDD	Uplink	14:37:21.714	DCCH	RRCConnectionSetupComplete
3883.	LTE FDD	Downlink	14:37:21.777	DCCH	DLInformationTransfer
3884.	LTE FDD	Downlink	14:37:21.777		TRACKING_AREA_UPDATE_ACCEPT
3885.	LTE FDD	Uplink	14:37:21.779		TRACKING_AREA_UPDATE_COMPLETE
3886.	LTE FDD	Uplink	14:37:21.779	DCCH	ULInformationTransfer
3887.	LTE FDD	Downlink	14:37:21.792	PCCH	Paging
3888.	LTE FDD	Downlink	14:37:21.797	DCCH	RRCConnectionRelease
3889.	LTE FDD	Downlink	14:37:22.578	BCCH-SCH	SystemInformationBlockType1
3890.	LTE FDD	Downlink	14:37:23.073	PCCH	Paging
3891.	LTE FDD	Downlink	14:37:24.353	PCCH	Paging
3892.	LTE FDD	Downlink	14:37:25.633	PCCH	Paging
3893.	LTE FDD	Downlink	14:37:28.193	PCCH	Paging
3894.	LTE FDD	Downlink	14:37:35.872	PCCH	Paging
3895.	LTE FDD	Downlink	14:37:40.992	PCCH	Paging
3896.	LTE FDD	Downlink	14:37:43.552	PCCH	Paging
3897.	LTE FDD	Downlink	14:37:46.112	PCCH	Paging
3898.	LTE FDD	Downlink	14:37:47.392	PCCH	Paging
3899.	LTE FDD	Downlink	14:37:49.952	PCCH	Paging
3900.	LTE FDD	Downlink	14:37:51.232	PCCH	Paging
3901.	LTE FDD	Uplink	14:37:52.443		EXTENDED_SERVICE_REQUEST
3902.	LTE FDD	Uplink	14:37:52.444	CCCH	RRCConnectionRequest
3903.	LTE FDD	Downlink	14:37:52.490	CCCH	RRCConnectionSetup
3904.	LTE FDD	Uplink	14:37:52.494	DCCH	RRCConnectionSetupComplete
3905.	LTE FDD	Downlink	14:37:52.514	DCCH	SecurityModeCommand
3906.	LTE FDD	Uplink	14:37:52.515	DCCH	SecurityModeComplete

Analysis:

- This call failure event occurred on short call at 14:37:21:856 time when UE was latched with LTE network.
- During the session before the call failure UE send “RRCConnectionRelease“. Then call setup has been failed.
- During the session UE was latched with PCI 102 and RF condition RSRP -107 dBm is poor and SINR -3.2 dB was very .
- Call failed due to poor network coverage at the MO site. Insufficient signal strength in the area is causing call failures.

Phase-1 Call Attempt Failure Analysis 3 From MS7 CWS MO

	Time	System	Serving band	
1.	14:29:34.378	UMTS FDD	2100	Nor
2.	14:37:21.856	GSM	0	Call
3.	14:47:31.991	UMTS FDD	2100	Dro
4.	14:52:22.588	GSM	0	Call
5.	14:54:55.588	GSM	900	TCH

	1. best active RSCP	Time	Ch	SC	1. best
1796.	-103.3	14:47:26.566	10690	92	
1797.		14:47:26.566	10690	92	-11.5
1798.	-104.8	14:47:27.079	10690	92	
1799.		14:47:27.079	10690	92	-13.5
1800.	-107.4	14:47:27.574	10690	92	
1801.		14:47:27.574	10690	92	-15.9
1802.	-106.7	14:47:28.192	10690	92	
1803.		14:47:28.192	10690	92	-14.8
1804.	-110.6	14:47:28.568	10690	92	
1805.		14:47:28.568	10690	92	-20.9
1806.	-108.5	14:47:29.092	10690	92	
1807.		14:47:29.092	10690	92	-17.5
1808.	-108.7	14:47:29.621	10690	92	
1809.		14:47:29.621	10690	92	-17.7
1810.	-103.5	14:47:30.351	10690	92	
1811.		14:47:30.351	10690	92	-12.4
1812.	-106.8	14:47:30.792	10690	80	
1813.		14:47:30.792	10690	80	-15.4
1814.	-107.2	14:47:31.431	10690	92	
1815.		14:47:31.431	10690	92	-15.1
1816.	-103.5	14:47:31.962	10690	92	
1817.		14:47:31.962	10690	92	-12.9
1818.	-109	14:47:32.496	10690	80	
1819.		14:47:32.496	10690	80	-17.6
1820.	-99.6	14:47:32.929	10690	92	
1821.		14:47:32.929	10690	92	-9.6
1822.	-100	14:47:33.549	10690	92	
1823.		14:47:33.549	10690	92	-10.6
1824.	-105.8	14:47:33.921	10690	92	
1825.		14:47:33.921	10690	92	-15.2
1826.	-108.8	14:47:34.567	10690	92	
1827.		14:47:34.567	10690	92	-18.5
1828.	-98.8	14:47:35.230	10690	92	
1829.		14:47:35.230	10690	92	-9.4

	System	Transf. dir.	Time	Subchannel	Message name
6138.	UMTS FD	Downlink	14:47:18.759	DCCH	TMSI_REALLOCATION_COMMAND
6139.	UMTS FD	Uplink	14:47:18.760	DCCH	UPLINK_DIRECT_TRANSFER
6140.	UMTS FD	Uplink	14:47:18.760	DCCH	TMSI_REALLOCATION_COMPLETE
6141.	UMTS FD	Downlink	14:47:18.869	DCCH	DOWNLINK_DIRECT_TRANSFER
6142.	UMTS FD	Downlink	14:47:18.869	DCCH	CALL_PROCEEDING
6143.	UMTS FD	Uplink	14:47:18.884	DCCH	MEASUREMENT_REPORT
6144.	UMTS FD	Uplink	14:47:19.133	DCCH	MEASUREMENT_REPORT
6145.	UMTS FD	Downlink	14:47:19.259	DCCH	ACTIVE_SET_UPDATE
6146.	UMTS FD	Uplink	14:47:19.271	DCCH	ACTIVE_SET_UPDATE_COMPLETE
6147.	UMTS FD	Downlink	14:47:19.369	DCCH	MEASUREMENT_CONTROL
6148.	UMTS FD	Uplink	14:47:19.386	DCCH	MEASUREMENT_REPORT
6149.	UMTS FD	Uplink	14:47:19.494	DCCH	MEASUREMENT_REPORT
6150.	UMTS FD	Uplink	14:47:19.749	DCCH	MEASUREMENT_REPORT
6151.	UMTS FD	Uplink	14:47:20.575	DCCH	MEASUREMENT_REPORT
6152.	UMTS FD	Uplink	14:47:21.571	DCCH	MEASUREMENT_REPORT
6153.	UMTS FD	Downlink	14:47:23.669	DCCH	DOWNLINK_DIRECT_TRANSFER
6154.	UMTS FD	Downlink	14:47:23.669	DCCH	AUTHENTICATION_AND_CIPHERING_REQUEST
6155.	UMTS FD	Uplink	14:47:23.707	DCCH	UPLINK_DIRECT_TRANSFER
6156.	UMTS FD	Uplink	14:47:23.707	DCCH	AUTHENTICATION_AND_CIPHERING_RESPONSE
6157.	UMTS FD	Downlink	14:47:23.979	DCCH	SECURITY_MODE_COMMAND
6158.	UMTS FD	Uplink	14:47:23.979	DCCH	SECURITY_MODE_COMPLETE
6159.	UMTS FD	Uplink	14:47:24.313	DCCH	MEASUREMENT_REPORT
6160.	UMTS FD	Downlink	14:47:24.349	DCCH	DOWNLINK_DIRECT_TRANSFER
6161.	UMTS FD	Downlink	14:47:24.349	DCCH	ROUTING_AREA_UPDATE_ACCEPT
6162.	UMTS FD	Uplink	14:47:24.351	DCCH	UPLINK_DIRECT_TRANSFER
6163.	UMTS FD	Uplink	14:47:24.351	DCCH	ROUTING_AREA_UPDATE_COMPLETE
6164.	UMTS FD	Uplink	14:47:24.572	DCCH	MEASUREMENT_REPORT
6165.	UMTS FD	Uplink	14:47:25.830	DCCH	MEASUREMENT_REPORT
6166.	UMTS FD	Uplink	14:47:25.884	DCCH	MEASUREMENT_REPORT
6167.	UMTS FD	Uplink	14:47:27.053	DCCH	MEASUREMENT_REPORT
6168.	UMTS FD	Uplink	14:47:27.093	DCCH	MEASUREMENT_REPORT
6169.	UMTS FD	Downlink	14:47:27.139	DCCH	ACTIVE_SET_UPDATE
6170.	UMTS FD	Uplink	14:47:27.170	DCCH	ACTIVE_SET_UPDATE_COMPLETE
6171.	UMTS FD	Downlink	14:47:27.259	DCCH	MEASUREMENT_CONTROL

Analysis:

- This call failure event occurred on short call at 14:47:31:991 time when UE was latched with 3G network.
- After sending “CM Service Request” message to core network, then core network responds with “Call Proceeding ” message. After that call setup has been failed.
- During the failure, UE was latched with PSC 92 and RF condition RSCP -103.5 dBm and Ec/No -15.1 dB are very poor.
- Call failed due to poor network coverage and quality at the MO site. Low signal strength and degraded network quality are contributing to call failures.

Phase-1 Call Attempt Failure Analysis 4 From MS7 CWS MO

	Time	System	Serving band	
1.	14:29:34.378	UMTS FDD	2100	Nor
2.	14:37:21.856	GSM	0	Call
3.	14:47:31.991	UMTS FDD	2100	Dro
4.	14:52:22.588	GSM	0	Cal
5.	14:54:55.588	GSM	900	TCH

	Time	Band (MHz)	Ch	PCI	RSRP	SNR
2432.	14:50:24.570	800	6300	102	-94.1	
2433.	14:50:24.570					8.1
2434.	14:50:24.984	800	6300	102	-92.1	
2435.	14:50:24.984					6.3
2436.	14:50:25.639	800	6300	102	-94.3	
2437.	14:50:25.639					8.3
2438.	14:50:26.274	800	6300	102	-96.5	
2439.	14:50:26.274					5.9
2440.	14:50:27.245	800	6300	102	-95.6	
2441.	14:50:27.245					3.1
2442.	14:50:27.820	800	6300	102	-94.3	
2443.	14:50:27.820					7.1
2444.	14:50:28.020	800	6300	102	-98.2	
2445.	14:50:28.020					4.1
2446.	14:50:28.928	800	6300	102	-101.8	
2447.	14:50:28.928					1.2
2448.	14:50:29.147	800	6300	102	-100.4	
2449.	14:50:29.147					1.9
2450.	14:50:30.149	800	6300	102	-101.6	
2451.	14:50:30.149					1.8
2452.	14:50:30.645	800	6300	102	-96.1	
2453.	14:52:22.158	800	6300	102	-107.4	
2454.	14:52:23.252	800	6300	102	-107.8	
2455.	14:52:23.574	800	6300	102	-100.7	
2456.	14:52:24.202	800	6300	102	-105.9	
2457.	14:52:24.574	800	6300	102	-105.9	
2458.	14:52:24.993	800	6300	102	-109.1	
2459.	14:52:25.666	800	6300	102	-105.7	
2460.	14:52:26.410	800	6300	102	-108.4	
2461.	14:52:26.791	800	6300	102	-108.6	
2462.	14:52:27.581	800	6300	102	-111.4	
2463.	14:52:27.581					
2464.	14:52:27.581					0.5
2465.	14:52:28.547	800	6300	102	-111.9	
2466.	14:52:28.547					-1.6

	System	Transf. dir.	Time	Subchannel	Message name
7406.	GSM	Downlink	14:52:21.658	DCCH	CHANNEL_RELEASE
7407.	LTE FDD	Downlink	14:52:21.781	BCCH-BCH	MasterInformationBlock
7408.	LTE FDD	Downlink	14:52:21.801	BCCH-SCH	SystemInformationBlockType1
7409.	LTE FDD	Downlink	14:52:21.801	BCCH-SCH	SystemInformation - SIB5
7410.	LTE FDD	Downlink	14:52:21.801	BCCH-SCH	SystemInformation - SIB2,SIB3
7411.	LTE FDD	Uplink	14:52:21.808		TRACKING_AREA_UPDATE_REQUEST
7412.	LTE FDD	Uplink	14:52:21.808	CCCH	RRCConnectionRequest
7413.	LTE FDD	Downlink	14:52:21.844	CCCH	RRCConnectionSetup
7414.	LTE FDD	Uplink	14:52:21.848	DCCH	RRCConnectionSetupComplete
7415.	LTE FDD	Downlink	14:52:22.076	DCCH	DLInformationTransfer
7416.	LTE FDD	Downlink	14:52:22.076		TRACKING_AREA_UPDATE_ACCEPT
7417.	LTE FDD	Uplink	14:52:22.078		TRACKING_AREA_UPDATE_COMPLETE
7418.	LTE FDD	Uplink	14:52:22.078	DCCH	ULInformationTransfer
7419.	LTE FDD	Downlink	14:52:22.101	DCCH	RRCConnectionRelease
7420.	LTE FDD	Downlink	14:52:22.925	PCCH	Paging
7421.	LTE FDD	Uplink	14:52:22.925		SERVICE_REQUEST
7422.	LTE FDD	Uplink	14:52:22.925	CCCH	RRCConnectionRequest
7423.	LTE FDD	Downlink	14:52:22.992	CCCH	RRCConnectionSetup
7424.	LTE FDD	Uplink	14:52:22.993	DCCH	RRCConnectionSetupComplete
7425.	LTE FDD	Downlink	14:52:23.008	DCCH	UECapabilityEnquiry
7426.	LTE FDD	Uplink	14:52:23.009	DCCH	UECapabilityInformation
7427.	UMTS FD	Uplink	14:52:23.009		INTER_RAT_HANDOVER_INFO
7428.	LTE FDD	Downlink	14:52:23.034	DCCH	SecurityModeCommand
7429.	LTE FDD	Uplink	14:52:23.035	DCCH	SecurityModeComplete
7430.	LTE FDD	Downlink	14:52:23.036	DCCH	RRCConnectionReconfiguration
7431.	LTE FDD	Uplink	14:52:23.040	DCCH	RRCConnectionReconfigurationComplete
7432.	LTE FDD	Downlink	14:52:23.061	DCCH	RRCConnectionReconfiguration
7433.	LTE FDD	Uplink	14:52:23.063	DCCH	RRCConnectionReconfigurationComplete
7434.	LTE FDD	Downlink	14:52:23.082	DCCH	DLInformationTransfer
7435.	LTE FDD	Downlink	14:52:23.082		MODIFY_EPS_BEARER_CONTEXT_REQUEST
7436.	LTE FDD	Uplink	14:52:23.084		MODIFY_EPS_BEARER_CONTEXT_ACCEPT
7437.	LTE FDD	Uplink	14:52:23.084	DCCH	ULInformationTransfer
7438.	LTE FDD	Uplink	14:52:23.417	DCCH	MeasurementReport
7439.	LTE FDD	Uplink	14:52:23.417	DCCH	MeasurementReport
7440.	LTE FDD	Downlink	14:52:26.297	DCCH	RRCConnectionReconfiguration

Analysis:

- This call failure event occurred on short call at 14:52:22:588 time when UE was latched with LTE network.
- During the session before the call failure UE send " Service Request". Then call setup has been failed.
- During the session UE was latched with PCI 102 and RF condition RSRP -107.4 dBm is poor and SINR -1.8 dB was very .
- Call failed due to poor network coverage at the MO site. Insufficient signal strength in the area is causing call failures.

Phase-1 Call Attempt Failure Analysis 5 From MS7 CWS MO

	Time	System	Serving band	
1.	14:29:34.378	UMTS FDD	2100	Nor
2.	14:37:21.856	GSM	0	Call
3.	14:47:31.991	UMTS FDD	2100	Dro
4.	14:52:22.588	GSM	0	Call
5.	14:54:55.588	GSM	900	TCH

	Time	RxLev sub	ARFCN	LAC	RAC	RXQ su
788.	14:54:48.297					7
789.	14:54:48.768	-94	19	1		
790.	14:54:48.768					1
791.	14:54:49.239	-91	19	1		
792.	14:54:49.239					0
793.	14:54:49.709	-94	19	1		
794.	14:54:49.709					6
795.	14:54:50.180	-94	19	1		
796.	14:54:50.180					2
797.	14:54:50.704					7
798.	14:54:50.731	-94	26	1		
799.	14:54:51.184					6
800.	14:54:51.271	-95	26	1		
801.	14:54:52.063					6
802.	14:54:52.534					5
803.	14:54:52.572	-95	19	1		
804.	14:54:53.225					7
805.	14:54:53.497	-95	19	1		
806.	14:54:53.732	-95	19	1		
807.	14:54:54.417					6
808.	14:54:54.573	-94	19	1		
809.	14:54:54.888					5
810.	14:54:54.892	-98	19	1		
811.	14:54:55.359					7
812.	14:54:55.588	-95	19	1		
813.	14:54:55.834	-95	19	1		
814.	14:54:56.571	-95	19	1		
815.	14:54:56.923	-95	19	1		
816.	14:54:57.503	-95	19	1		
817.	14:54:57.952	-95	19	1		
818.	14:54:58.654	-96	19	1		
819.	14:54:59.125	-95	19	1		
820.	14:54:59.595					7
821.	14:54:59.600	-95	19	1		
822.	14:55:00.066					7

	System	Transf. dir.	Time	Subchannel	Message name
7897.	GSM	Uplink	14:54:43.124	DCCH	CM_SERVICE_REQUEST
7898.	GSM	Downlink	14:54:43.271	SACCH	SYSTEM_INFORMATION_TYPE_5
7899.	GSM	Uplink	14:54:43.589	SACCH	MEASUREMENT_REPORT
7900.	GSM	Downlink	14:54:43.594	DCCH	CM_SERVICE_ACCEPT
7901.	GSM	Uplink	14:54:43.594	DCCH	SETUP
7902.	GSM	Downlink	14:54:43.741	SACCH	SYSTEM_INFORMATION_TYPE_5TER
7903.	GSM	Uplink	14:54:44.060	SACCH	MEASUREMENT_REPORT
7904.	GSM	Downlink	14:54:44.065	DCCH	CALL_PROCEEDING
7905.	GSM	Downlink	14:54:44.212	SACCH	SYSTEM_INFORMATION_TYPE_6
7906.	GSM	Uplink	14:54:44.531	SACCH	MEASUREMENT_REPORT
7907.	GSM	Uplink	14:54:45.002	SACCH	MEASUREMENT_REPORT
7908.	GSM	Downlink	14:54:45.154	SACCH	MEASUREMENT_INFORMATION
7909.	GSM	Uplink	14:54:45.472	SACCH	MEASUREMENT_REPORT
7910.	GSM	Downlink	14:54:45.624	SACCH	MEASUREMENT_INFORMATION
7911.	GSM	Uplink	14:54:45.943	SACCH	MEASUREMENT_REPORT
7912.	GSM	Downlink	14:54:46.095	SACCH	MEASUREMENT_INFORMATION
7913.	GSM	Uplink	14:54:46.414	SACCH	MEASUREMENT_REPORT
7914.	GSM	Downlink	14:54:46.566	SACCH	MEASUREMENT_INFORMATION
7915.	GSM	Uplink	14:54:46.885	SACCH	MEASUREMENT_REPORT
7916.	GSM	Downlink	14:54:47.037	SACCH	MEASUREMENT_INFORMATION
7917.	GSM	Uplink	14:54:47.355	SACCH	MEASUREMENT_REPORT
7918.	GSM	Downlink	14:54:47.507	SACCH	MEASUREMENT_INFORMATION
7919.	GSM	Uplink	14:54:47.826	SACCH	MEASUREMENT_REPORT
7920.	GSM	Uplink	14:54:48.297	SACCH	MEASUREMENT_REPORT
7921.	GSM	Downlink	14:54:48.449	SACCH	SYSTEM_INFORMATION_TYPE_5TER
7922.	GSM	Uplink	14:54:48.768	SACCH	MEASUREMENT_REPORT
7923.	GSM	Downlink	14:54:48.920	SACCH	SYSTEM_INFORMATION_TYPE_6
7924.	GSM	Uplink	14:54:49.239	SACCH	MEASUREMENT_REPORT
7925.	GSM	Downlink	14:54:49.391	SACCH	MEASUREMENT_INFORMATION
7926.	GSM	Uplink	14:54:49.709	SACCH	MEASUREMENT_REPORT
7927.	GSM	Downlink	14:54:49.861	SACCH	MEASUREMENT_INFORMATION
7928.	GSM	Uplink	14:54:50.180	SACCH	MEASUREMENT_REPORT
7929.	GSM	Downlink	14:54:50.332	SACCH	MEASUREMENT_INFORMATION
7930.	GSM	Downlink	14:54:50.420	DCCH	ASSIGNMENT_COMMAND
7931.	GSM	Uplink	14:54:50.480	DCCH	ASSIGNMENT_COMPLETE

Analysis:

- This call failure event occurred on short call at 14:54:55:588 time when UE was latched with 2G network.
- After sending “CM Service Request” message to core network, then core network responds with “Call Proceeding ” message. After that call setup has been failed.
- During the session UE was latched with ARFCN 19 and RF condition Rx lev -95 dBm is good and Rx qual 6 dB was very POOR.
- As per the analysis call failed happened due to poor quality of the network.

Phase-2 Call Drop & Call Attempt Failure Airtel , CWS Summary

Call Attempt Failure cause from Airtel	Count
Total Call Attempt Failure	**0**

Call Attempt Failure cause from CWS	Count
Total Call Attempt Failure	**3**
Poor Coverage	2
Poor Quality	1

Call Drop cause from Airtel	Count
Total Call Drop	**0**

Call Drop cause from CWS	Count
Total Call Drop	**0**

Phase-2 Call Attempt Failure Analysis 1 From MS7 CWS MO

	Time	System	Serving band	
1.	16:57:43.102	GSM	900	Droppe
2.	16:58:21.087	GSM	900	Call wa
3.	17:00:43.242	GSM	900	Call wa

	Time	RxLev sub	ARFCN	BSIC	LAC	RAC	RXQ sub
777.	16:57:29.272	-97	19	16	1	0	
778.	16:57:29.798	-97	19	16	1	0	
779.	16:57:30.107	-97	19	16	1	0	
780.	16:57:30.779						5
781.	16:57:31.250						7
782.	16:57:31.274	-96	19	16	1	0	
783.	16:57:32.192	-95	19	16	1	0	
784.	16:57:32.192						3
785.	16:57:32.662	-94	19	16	1	0	
786.	16:57:32.662						0
787.	16:57:33.133						7
788.	16:57:33.193	-96	19	16	1	0	
789.	16:57:33.604						5
790.	16:57:34.075	-95	19	16	1	0	
791.	16:57:34.075						6
792.	16:57:34.545						4
793.	16:57:34.605	-96	19	16	1	0	
794.	16:57:35.016						6
795.	16:57:35.432	-99	19	16	1	0	
796.	16:57:35.487						7
797.	16:57:35.627	-95	19	16	1	0	
798.	16:57:36.429	-98	19	16	1	0	
799.	16:57:36.429						6
800.	16:57:36.899						7
801.	16:57:37.069	-97	19	16	1	0	
802.	16:57:37.370						6
803.	16:57:38.154						7
804.	16:57:38.181	-96	26	16	1	0	
805.	16:57:38.634	-98	26	16	1	0	
806.	16:57:38.634						7
807.	16:57:39.114	-95	26	16	1	0	
808.	16:57:39.114						4
809.	16:57:39.594	-96	26	16	1	0	
810.	16:57:39.594						5
811.	16:57:40.074	-94	26	16	1	0	
812.	16:57:40.074						3
813.	16:57:40.554						6
814.	16:57:40.559	-95	26	16	1	0	

	Event ID	System	Transf. dir.	Time	Subchannel	Message name
9142.	L3SM	GSM	Uplink	16:57:35.312	DCCH	TMSI_REALLOCATION_COMPLETE
9143.	L3SM	GSM	Uplink	16:57:35.487	SACCH	MEASUREMENT_REPORT
9144.	L3SM	GSM	Uplink	16:57:35.958	SACCH	MEASUREMENT_REPORT
9145.	L3SM	GSM	Downlink	16:57:36.327	SACCH	SYSTEM_INFORMATION_TYPE_6
9146.	L3SM	GSM	Uplink	16:57:36.429	SACCH	MEASUREMENT_REPORT
9147.	L3SM	GSM	Downlink	16:57:36.724	DCCH	CALL_PROCEEDING
9148.	L3SM	GSM	Downlink	16:57:36.797	SACCH	MEASUREMENT_INFORMATION
9149.	L3SM	GSM	Uplink	16:57:36.899	SACCH	MEASUREMENT_REPORT
9150.	L3SM	GSM	Uplink	16:57:37.370	SACCH	MEASUREMENT_REPORT
9151.	L3SM	GSM	Downlink	16:57:37.739	SACCH	MEASUREMENT_INFORMATION
9152.	L3SM	GSM	Uplink	16:57:37.841	SACCH	MEASUREMENT_REPORT
9153.	L3SM	GSM	Downlink	16:57:37.901	DCCH	ASSIGNMENT_COMMAND
9154.	L3SM	GSM	Uplink	16:57:37.961	DCCH	ASSIGNMENT_COMPLETE
9155.	L3SM	GSM	Uplink	16:57:38.154	SACCH	MEASUREMENT_REPORT
9156.	L3SM	GSM	Uplink	16:57:38.634	SACCH	MEASUREMENT_REPORT
9157.	L3SM	GSM	Downlink	16:57:39.068	SACCH	SYSTEM_INFORMATION_TYPE_5TER
9158.	L3SM	GSM	Uplink	16:57:39.114	SACCH	MEASUREMENT_REPORT
9159.	L3SM	GSM	Downlink	16:57:39.548	SACCH	SYSTEM_INFORMATION_TYPE_6
9160.	L3SM	GSM	Uplink	16:57:39.594	SACCH	MEASUREMENT_REPORT
9161.	L3SM	GSM	Downlink	16:57:40.028	SACCH	MEASUREMENT_INFORMATION
9162.	L3SM	GSM	Uplink	16:57:40.074	SACCH	MEASUREMENT_REPORT
9163.	L3SM	GSM	Downlink	16:57:40.508	SACCH	MEASUREMENT_INFORMATION
9164.	L3SM	GSM	Uplink	16:57:40.554	SACCH	MEASUREMENT_REPORT
9165.	L3SM	GSM	Downlink	16:57:40.988	SACCH	MEASUREMENT_INFORMATION
9166.	L3SM	GSM	Uplink	16:57:41.034	SACCH	MEASUREMENT_REPORT
9167.	L3SM	GSM	Downlink	16:57:41.468	SACCH	MEASUREMENT_INFORMATION
9168.	L3SM	GSM	Uplink	16:57:41.514	SACCH	MEASUREMENT_REPORT
9169.	L3SM	GSM	Downlink	16:57:41.948	SACCH	MEASUREMENT_INFORMATION
9170.	L3SM	GSM	Uplink	16:57:41.994	SACCH	MEASUREMENT_REPORT
9171.	L3SM	GSM	Uplink	16:57:42.474	SACCH	MEASUREMENT_REPORT
9172.	L3SM	GSM	Downlink	16:57:42.908	SACCH	MEASUREMENT_INFORMATION
9173.	L3SM	GSM	Uplink	16:57:42.954	SACCH	MEASUREMENT_REPORT
9174.	L3SM	GSM	Downlink	16:57:43.102	DCCH	DISCONNECT
9175.	L3SM	GSM	Uplink	16:57:43.102	DCCH	RELEASE
9176.	L3SM	GSM	Downlink	16:57:43.240	DCCH	RELEASE_COMPLETE
9177.	L3SM	GSM	Downlink	16:57:43.360	DCCH	CHANNEL_RELEASE
9178.	L3SM	GSM	Downlink	16:57:43.388	SACCH	SYSTEM_INFORMATION_TYPE_5
9179.	L3SM	GSM	Downlink	16:57:43.618	CCCH	IMMEDIATE_ASSIGNMENT

Analysis:

- This call failure event occurred on short call at 16:57:43:102 time when UE was latched with 2G network.
- After sending “CM Service Request” message to core network, then core network responds with “Call Proceeding ” message. After that call setup has been failed.
- During the call failure UE, was latched with ARFCN 19 and RF condition Rxlev -98 dBm is poor and Rxqual 6 which is poor.
- As per the analysis call failed happened due to poor coverage of the network.

Phase-2 Call Attempt Failure Analysis 2 From MS7 CWS MO

	Time	System	Serving band	
1.	16:57:43.102	GSM	900	Droppe
2.	16:58:21.087	GSM	900	Call wa
3.	17:00:43.242	GSM	900	Call wa

	Time	RxLev sub	ARFCN	BSIC	LAC	RAC	RXQ sub
869.	16:58:08.462	-95	19	16	1	0	
870.	16:58:09.176	-95	19	16	1	0	
871.	16:58:10.007	-95	19	16	1	0	
872.	16:58:12.069				1	0	
873.	16:58:13.195	-96	19	16	1	0	
874.	16:58:13.850	-96	19	16	1	0	
875.	16:58:14.584				1	0	
876.	16:58:15.233	-95	19	16	1	0	
877.	16:58:15.233						5
878.	16:58:15.673	-95	19	16	1	0	
879.	16:58:15.673						0
880.	16:58:15.973						5
881.	16:58:16.070	-96	19	16	1	0	
882.	16:58:16.444						4
883.	16:58:16.614	-95	19	16	1	0	
884.	16:58:17.173	-96	19	16	1	0	
885.	16:58:17.385						6
886.	16:58:17.856	-94	19	16	1	0	
887.	16:58:17.856						3
888.	16:58:18.327	-97	19	16	1	0	
889.	16:58:18.327						6
890.	16:58:18.798	-97	19	16	1	0	
891.	16:58:18.798						7
892.	16:58:19.268						4
893.	16:58:19.439	-95	19	16	1	0	
894.	16:58:19.739						4
895.	16:58:20.071	-95	19	16	1	0	
896.	16:58:20.071						
897.	16:58:20.487				1	0	
898.	16:58:24.611				2	0	
899.	16:59:12.274	-94	26	16	10	10	
900.	16:59:12.274						7
901.	16:59:13.041	-94	26	16	10	10	
902.	16:59:13.041						1
903.	16:59:13.629	-83	26	16	1	10	
904.	16:59:13.629						0
905.	16:59:14.070	-85	26	16	1	10	

	Event ID	System	Transf. dir.	Time	Subchannel	Message name
9401.	L3SM	GSM	Uplink	16:58:15.031	SACCH	MEASUREMENT_REPORT
9402.	L3SM	GSM	Downlink	16:58:15.202	SACCH	SYSTEM_INFORMATION_TYPE_5TER
9403.	L3SM	GSM	Uplink	16:58:15.502	SACCH	MEASUREMENT_REPORT
9404.	L3SM	GSM	Downlink	16:58:15.673	SACCH	SYSTEM_INFORMATION_TYPE_6
9405.	L3SM	GSM	Uplink	16:58:15.973	SACCH	MEASUREMENT_REPORT
9406.	L3SM	GSM	Downlink	16:58:16.144	SACCH	MEASUREMENT_INFORMATION
9407.	L3SM	GSM	Uplink	16:58:16.444	SACCH	MEASUREMENT_REPORT
9408.	L3SM	GSM	Downlink	16:58:16.467	DCCH	CLASSMARK_ENQUIRY
9409.	L3SM	GSM	Uplink	16:58:16.467	DCCH	CLASSMARK_CHANGE
9410.	L3SM	GSM	Uplink	16:58:16.467	DCCH	UTRAN_CLASSMARK_CHANGE
9411.	L3SM	GSM	Downlink	16:58:16.614	SACCH	MEASUREMENT_INFORMATION
9412.	L3SM	GSM	Downlink	16:58:16.702	DCCH	CIPHERING_MODE_COMMAND
9413.	L3SM	GSM	Uplink	16:58:16.707	DCCH	CIPHERING_MODE_COMPLETE
9414.	L3SM	GSM	Uplink	16:58:16.707	DCCH	SETUP
9415.	L3SM	GSM	Uplink	16:58:16.915	SACCH	MEASUREMENT_REPORT
9416.	L3SM	GSM	Downlink	16:58:17.085	SACCH	MEASUREMENT_INFORMATION
9417.	L3SM	GSM	Uplink	16:58:17.385	SACCH	MEASUREMENT_REPORT
9418.	L3SM	GSM	Downlink	16:58:17.556	SACCH	MEASUREMENT_INFORMATION
9419.	L3SM	GSM	Uplink	16:58:17.856	SACCH	MEASUREMENT_REPORT
9420.	L3SM	GSM	Uplink	16:58:18.327	SACCH	MEASUREMENT_REPORT
9421.	L3SM	GSM	Uplink	16:58:18.798	SACCH	MEASUREMENT_REPORT
9422.	L3SM	GSM	Downlink	16:58:18.968	SACCH	MEASUREMENT_INFORMATION
9423.	L3SM	GSM	Uplink	16:58:19.268	SACCH	MEASUREMENT_REPORT
9424.	L3SM	GSM	Downlink	16:58:19.439	SACCH	SYSTEM_INFORMATION_TYPE_5
9425.	L3SM	GSM	Uplink	16:58:19.739	SACCH	MEASUREMENT_REPORT
9426.	L3SM	GSM	Downlink	16:58:19.762	DCCH	CHANNEL_RELEASE
9427.	L3SM	GSM	Downlink	16:58:21.336	BCCH	SYSTEM_INFORMATION_TYPE_1
9428.	L3SM	GSM	Downlink	16:58:21.336	BCCH	SYSTEM_INFORMATION_TYPE_2
9429.	L3SM	GSM	Downlink	16:58:21.336	BCCH	SYSTEM_INFORMATION_TYPE_2QUATER
9430.	L3SM	GSM	Downlink	16:58:21.336	BCCH	SYSTEM_INFORMATION_TYPE_2QUATER
9431.	L3SM	GSM	Downlink	16:58:21.336	BCCH	SYSTEM_INFORMATION_TYPE_2QUATER
9432.	L3SM	GSM	Downlink	16:58:21.336	BCCH	SYSTEM_INFORMATION_TYPE_2QUATER
9433.	L3SM	GSM	Downlink	16:58:21.336	BCCH	SYSTEM_INFORMATION_TYPE_2QUATER
9434.	L3SM	GSM	Downlink	16:58:21.336	BCCH	SYSTEM_INFORMATION_TYPE_13
9435.	L3SM	GSM	Downlink	16:58:21.336	BCCH	SYSTEM_INFORMATION_TYPE_4
9436.	L3SM	GSM	Downlink	16:58:21.336	BCCH	SYSTEM_INFORMATION_TYPE_3
9437.	L3SM	GSM	Uplink	16:58:21.336	DCCH	LOCATION_UPDATING_REQUEST

Analysis:

- This call failure event occurred on short call at 16:58:21:087 time when UE was latched with 2G network.
- During the session before the call failure UE send " Service Request". Then call setup has been failed.
- During the call failure UE, was latched with ARFCN 19 and RF condition Rxlev -95 dBm is poor and Rxqual 4 which is poor.
- As per the analysis call failed happened due to poor coverage of the network.

Phase-2 Call Attempt Failure Analysis 3 From MS7 CWS MO

	Time	System	Serving band	
1.	16:57:43.102	GSM	900	Droppe
2.	16:58:21.087	GSM	900	Call wa
3.	17:00:43.242	GSM	900	Call wa

	Time	RxLev sub	ARFCN	BSIC	LAC	RAC	RXQ sub
1027.	17:00:37.300	-86	19	16	1	0	
1028.	17:00:37.300						0
1029.	17:00:38.145	-93	19	16	1	0	
1030.	17:00:38.145						2
1031.	17:00:38.615	-88	19	16	1	0	
1032.	17:00:38.615						0
1033.	17:00:39.086						0
1034.	17:00:39.112	-99	19	16	1	0	
1035.	17:00:39.557						2
1036.	17:00:39.681	-92	19	16	1	0	
1037.	17:00:40.028						2
1038.	17:00:40.124	-91	19	16	1	0	
1039.	17:00:40.499						0
1040.	17:00:40.595	-88	19	16	1	0	
1041.	17:00:41.001	-87	19	16	1	0	
1042.	17:00:41.772	-88	19	16	1	0	
1043.	17:00:42.243				1	0	
1044.	17:00:42.243						
1045.	17:00:42.779				1	0	
1046.	17:00:43.242	-88	19	16	1	0	
1047.	17:00:44.013	-91	19	16	1	0	
1048.	17:00:44.364	-90	19	16	1	0	
1049.	17:00:45.010	-89	19	16	1	0	
1050.	17:00:45.368	-90	19	16	1	0	
1051.	17:00:46.002	-91	19	16	1	0	
1052.	17:00:46.380	-91	19	16	1	0	
1053.	17:00:47.133	-91	19	16	1	0	
1054.	17:00:47.468	-91	19	16	1	0	
1055.	17:00:48.072	-95	19	16	1	0	
1056.	17:00:48.462				1	0	
1057.	17:00:49.072	-94	19	16	1	0	
1058.	17:00:50.642	-94	19	16	1	0	
1059.	17:00:52.071	-92	19	16	1	0	
1060.	17:00:53.070	-91	19	16	1	0	
1061.	17:00:53.582	-90	19	16	1	0	
1062.	17:00:54.410	-90	19	16	1	0	
1063.	17:00:55.818	-88	19	16	1	0	
1064.	17:00:56.293	-88	19	16	1	0	

	Event ID	System	Transf. dir.	Time	Subchannel	Message name
10430.	L3SM	GSM	Downlink	17:00:37.535	DCCH	CIPHERING_MODE_COMMAND
10431.	L3SM	GSM	Uplink	17:00:37.540	DCCH	CIPHERING_MODE_COMPLETE
10432.	L3SM	GSM	Uplink	17:00:37.540	DCCH	SETUP
10433.	L3SM	GSM	Uplink	17:00:37.674	SACCH	MEASUREMENT_REPORT
10434.	L3SM	GSM	Downlink	17:00:38.080	SACCH	SYSTEM_INFORMATION_TYPE_6
10435.	L3SM	GSM	Uplink	17:00:38.145	SACCH	MEASUREMENT_REPORT
10436.	L3SM	GSM	Downlink	17:00:38.551	SACCH	MEASUREMENT_INFORMATION
10437.	L3SM	GSM	Uplink	17:00:38.615	SACCH	MEASUREMENT_REPORT
10438.	L3SM	GSM	Downlink	17:00:39.021	SACCH	MEASUREMENT_INFORMATION
10439.	L3SM	GSM	Uplink	17:00:39.086	SACCH	MEASUREMENT_REPORT
10440.	L3SM	GSM	Downlink	17:00:39.492	SACCH	MEASUREMENT_INFORMATION
10441.	L3SM	GSM	Uplink	17:00:39.557	SACCH	MEASUREMENT_REPORT
10442.	L3SM	GSM	Downlink	17:00:39.963	SACCH	MEASUREMENT_INFORMATION
10443.	L3SM	GSM	Uplink	17:00:40.028	SACCH	MEASUREMENT_REPORT
10444.	L3SM	GSM	Downlink	17:00:40.434	SACCH	MEASUREMENT_INFORMATION
10445.	L3SM	GSM	Uplink	17:00:40.499	SACCH	MEASUREMENT_REPORT
10446.	L3SM	GSM	Downlink	17:00:40.904	SACCH	MEASUREMENT_INFORMATION
10447.	L3SM	GSM	Uplink	17:00:40.969	SACCH	MEASUREMENT_REPORT
10448.	L3SM	GSM	Downlink	17:00:41.375	SACCH	MEASUREMENT_INFORMATION
10449.	L3SM	GSM	Uplink	17:00:41.440	SACCH	MEASUREMENT_REPORT
10450.	L3SM	GSM	Downlink	17:00:41.772	DCCH	CHANNEL_RELEASE
10451.	L3SM	GSM	Downlink	17:00:42.588	BCCH	SYSTEM_INFORMATION_TYPE_4
10452.	L3SM	GSM	Downlink	17:00:42.607	CCCH	IMMEDIATE_ASSIGNMENT
10453.	L3SM	GSM	Downlink	17:00:42.635	CCCH	IMMEDIATE_ASSIGNMENT
10454.	L3SM	GSM	Downlink	17:00:42.653	CCCH	IMMEDIATE_ASSIGNMENT
10455.	L3SM	GSM	Downlink	17:00:42.681	CCCH	IMMEDIATE_ASSIGNMENT
10456.	L3SM	GSM	Downlink	17:00:42.699	CCCH	IMMEDIATE_ASSIGNMENT
10457.	L3SM	GSM	Downlink	17:00:42.727	CCCH	IMMEDIATE_ASSIGNMENT
10458.	MACSM	GSM	Uplink	17:00:42.750	PACCH	PACKET_RESOURCE_REQUEST
10459.	MACSM	GSM	Downlink	17:00:42.885	PAGCH	PACKET_UPLINK_ASSIGNMENT
10460.	MACSM	GSM	Uplink	17:00:42.885	PACCH	PACKET_UPLINK_DUMMY_CONTROL_BLOCK
10461.	MACSM	GSM	Downlink	17:00:42.903	PAGCH	PACKET_UPLINK_ASSIGNMENT
10462.	MACSM	GSM	Downlink	17:00:43.067	PACCH	PACKET_DOWNLINK_ASSIGNMENT
10463.	MACSM	GSM	Downlink	17:00:43.085	PACCH	PACKET_UPLINK_ACK/NACK
10464.	MACSM	GSM	Downlink	17:00:43.108	PACCH	PACKET_DOWNLINK_ASSIGNMENT
10465.	MACSM	GSM	Downlink	17:00:43.127	PACCH	PACKET_UPLINK_ACK/NACK
10466.	MACSM	GSM	Downlink	17:00:43.205	PACCH	PACKET_POWER_CONTROL/TIMING_ADVAI
10467.	MACSM	GSM	Uplink	17:00:43.206	PACCH	EGPRS_PACKET_DOWNLINK_ACK/NACK

Analysis:

- This call failure event occurred on short call at 17:00:43:242 time when UE was latched with 3G network.
- During the session before the call failure UE send " Service Request". Then call setup has been failed.
- During the call failure UE, was latched with ARFCN 19 and RF condition Rxlev -88 dBm is good and Rxqual 0 which is good.
- Need to check MT.

Call Attempt Failure Analysis 5 From MS8 CWS MT

	Time	RxLev sub	ARFCN	BSIC	LAC	RAC	RXQ sub
922.	17:00:08.488	-89	19	16	1	0	
923.	17:00:08.958						0
924.	17:00:09.429	-88	19	16	1	0	
925.	17:00:09.429						0
926.	17:00:09.900						2
927.	17:00:09.995	-91	19	16	1	0	
928.	17:00:10.371						0
929.	17:00:10.412	-85	19	16	1	0	
930.	17:00:10.841						0
931.	17:00:11.070	-85	19	16	1	0	
932.	17:00:11.312						5
933.	17:00:11.354	-88	19	16	1	0	
934.	17:00:11.783						0
935.	17:00:12.071	-84	19	16	1	0	
936.	17:00:12.254						7
937.	17:00:12.309	-81	19	16	1	0	
938.	17:00:12.931						
939.	17:00:13.057				1	0	
940.	17:00:13.648	-81	19	16	1	0	
941.	17:00:14.336	-83	19	16	1	0	
942.	17:00:14.765	-83	19	16	1	0	
943.	17:00:15.217	-84	19	16	1	0	
944.	17:00:15.909	-84	19	16	1	0	
945.	17:00:16.325	-84	19	16	1	0	
946.	17:00:16.997	-83	19	16	1	0	
947.	17:00:17.317	-83	19	16	1	0	
948.	17:00:17.945	-84	19	16	1	0	
949.	17:00:18.582	-84	19	16	1	0	
950.	17:00:19.085	-84	19	16	1	0	
951.	17:00:19.204	-86	19	16	1	0	
952.	17:00:20.503	-83	19		1	0	
953.	17:00:21.557				1	0	
954.	17:00:22.379	-86	19		1	0	
955.	17:00:23.625	-86	19		1	0	
956.	17:00:24.262	-86	19		1	0	
957.	17:00:24.271				1	0	
958.	17:00:25.211	-87	19		1	0	

	System	Transf. dir.	Time	Subchannel	Message name
9258.	GSM	Downlink	17:00:17.788	PACCH	PACKET_UPLINK_ACK/NACK
9259.	GSM	Downlink	17:00:18.185	PACCH	PACKET_UPLINK_ACK/NACK
9260.	GSM	Downlink	17:00:18.208	PACCH	PACKET_UPLINK_ACK/NACK
9261.	GSM	Downlink	17:00:18.337	BCCH	SYSTEM_INFORMATION_TYPE_13
9262.	GSM	Downlink	17:00:18.365	PACCH	PACKET_UPLINK_ACK/NACK
9263.	GSM	Downlink	17:00:18.425	PACCH	PACKET_UPLINK_ACK/NACK
9264.	GSM	Downlink	17:00:18.466	PACCH	PACKET_TIMESLOT_RECONFIGURE
9265.	GSM	Downlink	17:00:18.577	BCCH	SYSTEM_INFORMATION_TYPE_2QUATER
9266.	GSM	Downlink	17:00:19.085	CCCH	PAGING_REQUEST_TYPE_1
9267.	GSM	Downlink	17:00:19.561	CCCH	PAGING_REQUEST_TYPE_2
9268.	GSM	Downlink	17:00:20.032	CCCH	PAGING_REQUEST_TYPE_1
9269.	GSM	Downlink	17:00:20.216	BCCH	SYSTEM_INFORMATION_TYPE_13
9270.	GSM	Downlink	17:00:20.456	BCCH	SYSTEM_INFORMATION_TYPE_2QUATER
9271.	GSM	Downlink	17:00:20.503	CCCH	IMMEDIATE_ASSIGNMENT
9272.	GSM	Downlink	17:00:20.969	CCCH	PAGING_REQUEST_TYPE_1
9273.	GSM	Downlink	17:00:21.439	CCCH	IMMEDIATE_ASSIGNMENT
9274.	GSM	Downlink	17:00:21.915	CCCH	PAGING_REQUEST_TYPE_1
9275.	GSM	Downlink	17:00:22.104	BCCH	SYSTEM_INFORMATION_TYPE_13
9276.	GSM	Downlink	17:00:22.339	BCCH	SYSTEM_INFORMATION_TYPE_2QUATER
9277.	GSM	Downlink	17:00:22.379	CCCH	PAGING_REQUEST_TYPE_1
9278.	GSM	Downlink	17:00:22.856	CCCH	PAGING_REQUEST_TYPE_1
9279.	GSM	Downlink	17:00:23.987	BCCH	SYSTEM_INFORMATION_TYPE_13
9280.	GSM	Downlink	17:00:24.223	BCCH	SYSTEM_INFORMATION_TYPE_2QUATER
9281.	GSM	Downlink	17:00:24.267	CCCH	PAGING_REQUEST_TYPE_2
9282.	GSM	Downlink	17:00:24.740	CCCH	PAGING_REQUEST_TYPE_1
9283.	GSM	Downlink	17:00:25.676	CCCH	PAGING_REQUEST_TYPE_2
9284.	GSM	Downlink	17:00:25.866	BCCH	SYSTEM_INFORMATION_TYPE_13
9285.	GSM	Downlink	17:00:26.101	BCCH	SYSTEM_INFORMATION_TYPE_2QUATER
9286.	GSM	Downlink	17:00:26.145	CCCH	PAGING_REQUEST_TYPE_1
9287.	GSM	Downlink	17:00:28.506	CCCH	PAGING_REQUEST_TYPE_1
9288.	GSM	Downlink	17:00:28.970	CCCH	PAGING_REQUEST_TYPE_1
9289.	GSM	Downlink	17:00:29.913	CCCH	PAGING_REQUEST_TYPE_1
9290.	GSM	Downlink	17:00:30.389	CCCH	PAGING_REQUEST_TYPE_2
9291.	GSM	Downlink	17:00:31.326	CCCH	PAGING_REQUEST_TYPE_2
9292.	GSM	Downlink	17:00:31.794	CCCH	PAGING_REQUEST_TYPE_1
9293.	GSM	Downlink	17:00:32.738	CCCH	PAGING_REQUEST_TYPE_1
9294.	GSM	Downlink	17:00:33.204	CCCH	PAGING_REQUEST_TYPE_1

Analysis:

- On MT End, During the setup fail, UE was latched with ARFCN 19 and RF condition Rxlev -83 dBm is and Rxqual -7 which is poor.
- Call failed at the MT end due to poor network quality. The terminating device experienced low signal strength, leading to call failure.

THANKS