

A black and white photograph of a man with glasses and a beard, seen from the side, holding an HTC smartphone to take a picture. The phone's screen shows a photo of a woman. In the background, two women are seated at a table with wine glasses, in what appears to be an outdoor cafe setting. A solid magenta rectangular overlay covers the bottom third of the image, containing the text.

THOMAS LIPS

CTIO AND BOARD MEMBER OF T-MOBILE POLSKA

WHAT ARE THE KEY CUSTOMER NEEDS



LIFE IS FOR SHARING.



**TO BE IN RANGE
EVERYTIME AND EVERYWHERE**



**DATA USAGE WITHOUT
WORRIES ABOUT NETWORK
SPEED AND CAPACITY**



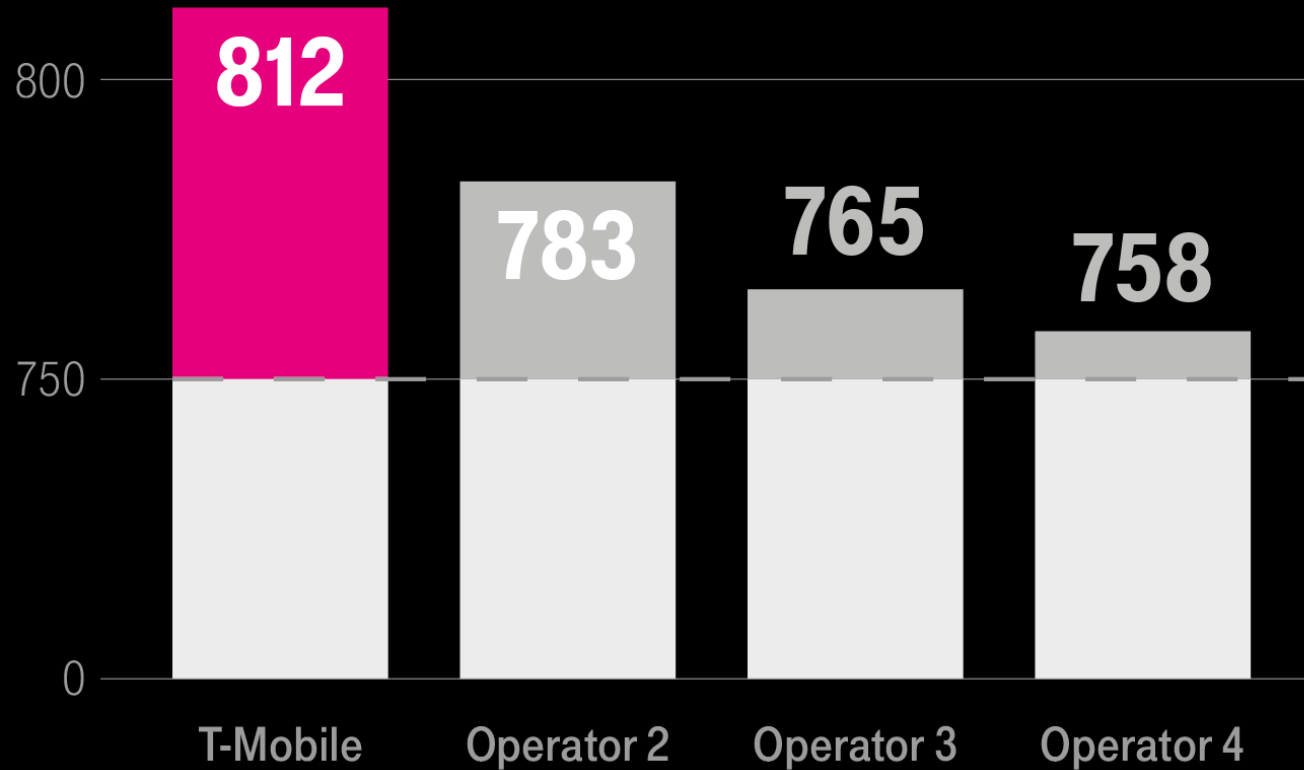
LIFE IS FOR SHARING.

AND
WE
DELIVERED!



LIFE IS FOR SHARING.

T-MOBILE BEST NETWORK OF 2015



LIFE IS FOR SHARING.

WHERE WERE WE IN 2016?

#najlepszasieć



LIFE IS FOR SHARING.

NUMBER OF SITES AT THE END OF 2016



10.370

INCLUDING

■ **7000**

LTE1800

■ **2100**

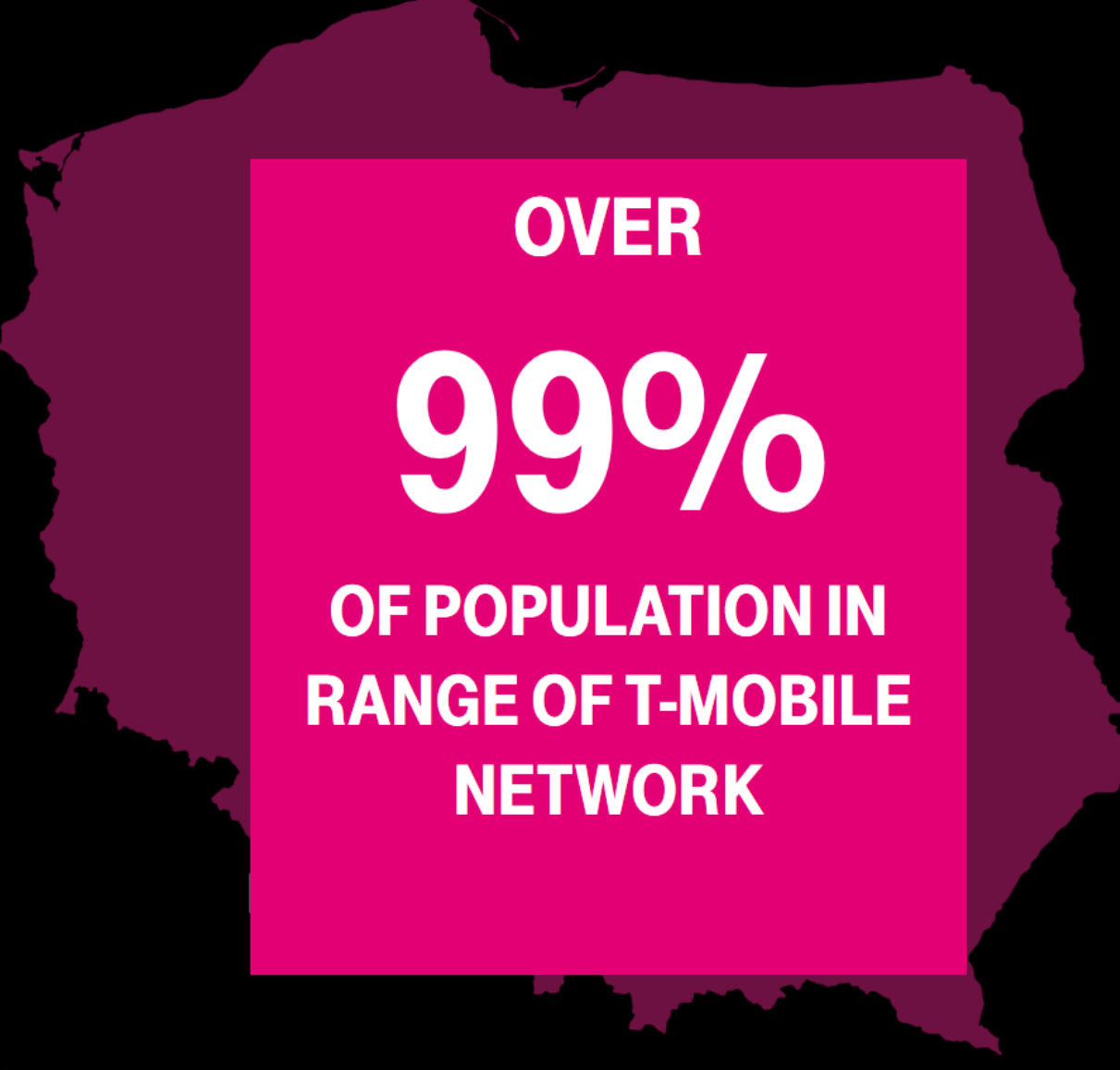
LTE800 AND/OR 2600

■ **600**

CARRIER AGGREGATION



LIFE IS FOR SHARING.



OVER

99%

**OF POPULATION IN
RANGE OF T-MOBILE
NETWORK**

GSM – 99,7%

Since SEPTEMBER 1996 till 2008

UMTS – 99,5%

Since OCTOBER 2006 till 2014

LTE – 99,1%

Since JUNE 2014 till 2016



LIFE IS FOR SHARING.

IT WAS A YEAR OF A MASSIVE ROLLOUT

150

OF 2G/3G

380

LTE1800

2100

LTE800/2600



LIFE IS FOR SHARING.

AND WE NEED IT DUE TO RAPIDLY GROWING DATA CONSUMPTION

DATA
CONSUMPTION (YoY)



△+27%



△+28%

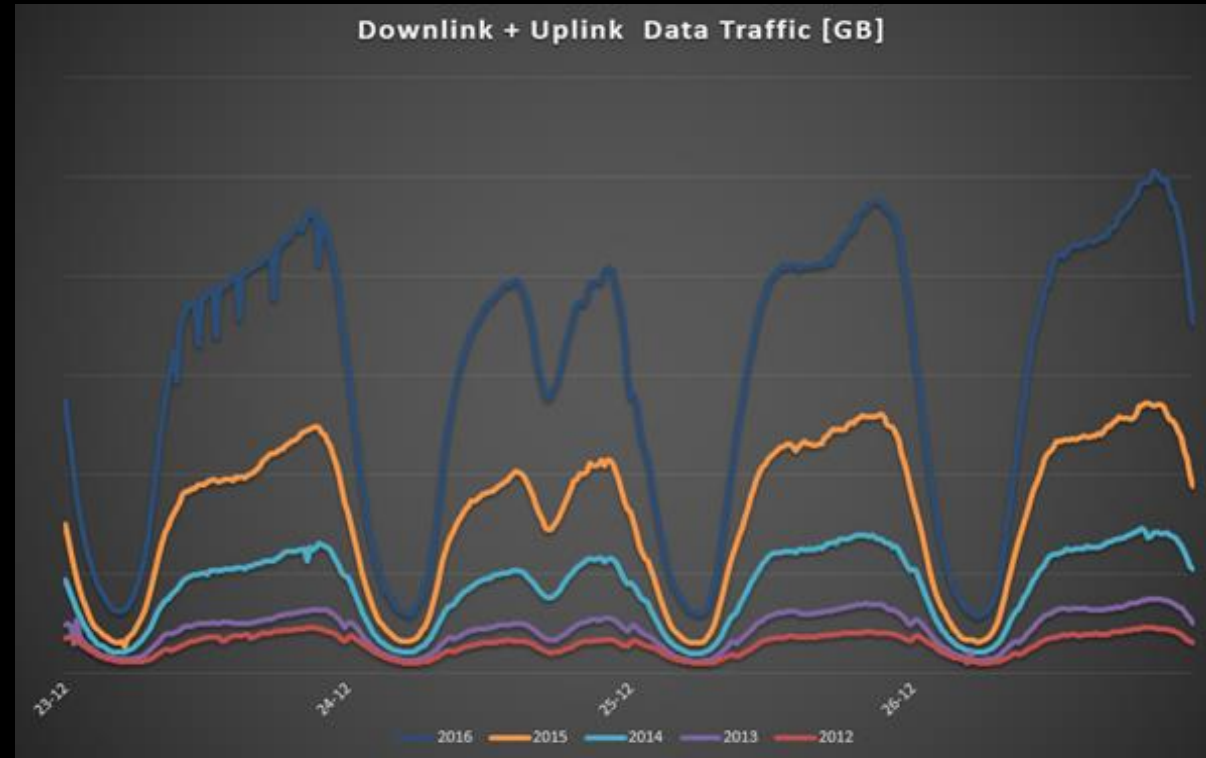


△+275%



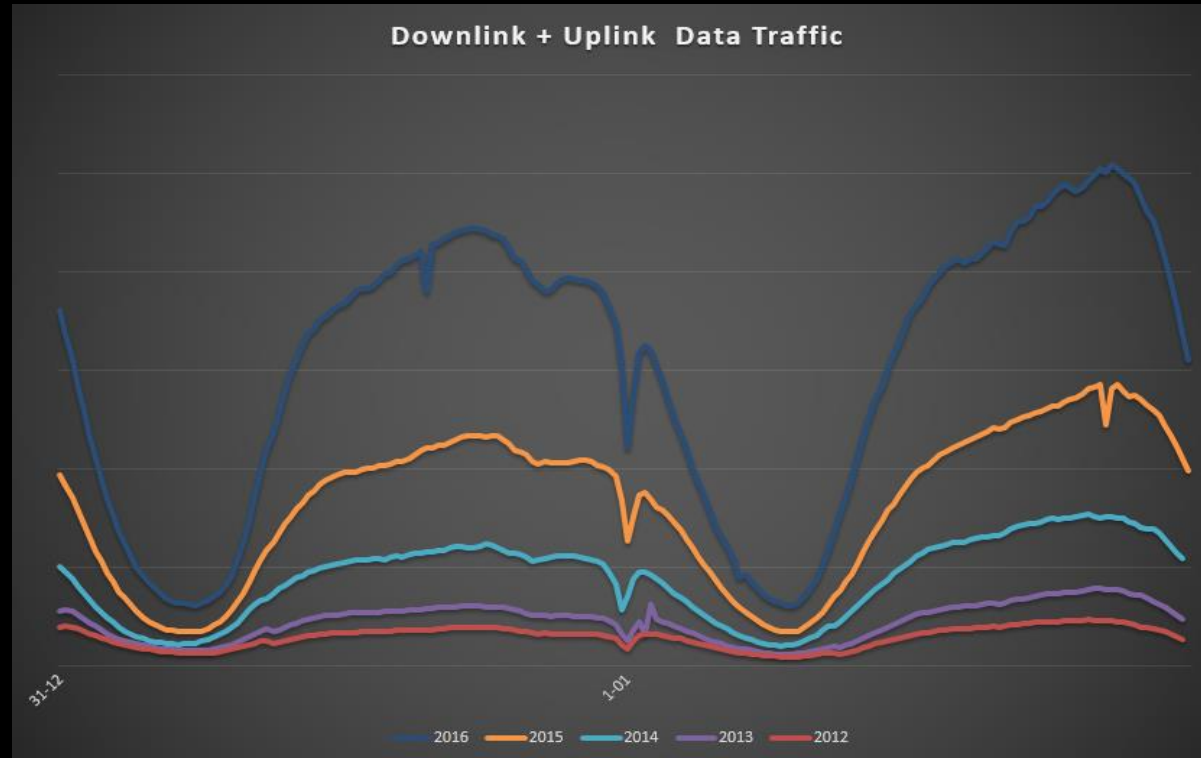
LIFE IS FOR SHARING.

DATA USAGE DURING CHRISTMAS



LIFE IS FOR SHARING.

DATA USAGE ON NEW YEAR'S EVE



LIFE IS FOR SHARING.

PREPARATION FOR WINTER HOLIDAYS

26 NEW INVESTMENTS

6 CAPACITY EXTENTIONS

6 MOBILE BASE STATIONS

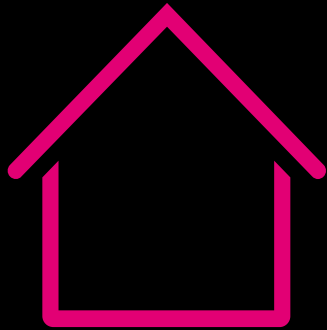


LIFE IS FOR SHARING.

VOICE SERVICES IN ALL TECHNOLOGIES

2G ✓ 3G ✓ LTE ✓ WiFi ✓

AND EVEN IF YOU ARE, WITH SOME REASONS, OUT OF T-MOBILE NETWORK YOU CAN USE VOWIFI:



AT HOME



IN PUBLIC PLACES



AND EVEN AT PLANE



LIFE IS FOR SHARING.

VOLTE & VOWIFI

T-MOBILE LEADING INNOVATIONS IN POLAND

AS OF END OF 2016	T-MOBILE	PLAY	PLUS	ORANGE
VoLTE	YES	NO	NO	YES
VoWiFi	YES	YES	ONLY APPLICATION	NO
VoLTE > VoWiFi Handover	YES	NO	NO	NO
VoWiFi > VoLTE Handover	YES	NO	NO	NO
WiFi MMS	YES	NO	NO	NO
WiFi SMS	YES	YES	NO	NO
Service Activation	YES	BY SMS	NO	NO

AVAILABLE DEVICES:

- SAMSUNG GALAXY S6
- SAMSUNG GALAXY S6 EDGE
- SAMSUNG GALAXY A5
 - SONY XPERIA XZ
 - SONY XPERIA X

**19 MODELS BY THE
END OF 1Q2017**



LIFE IS FOR SHARING.

ZERO DROP NETWORK



H1'2014



H1'2015

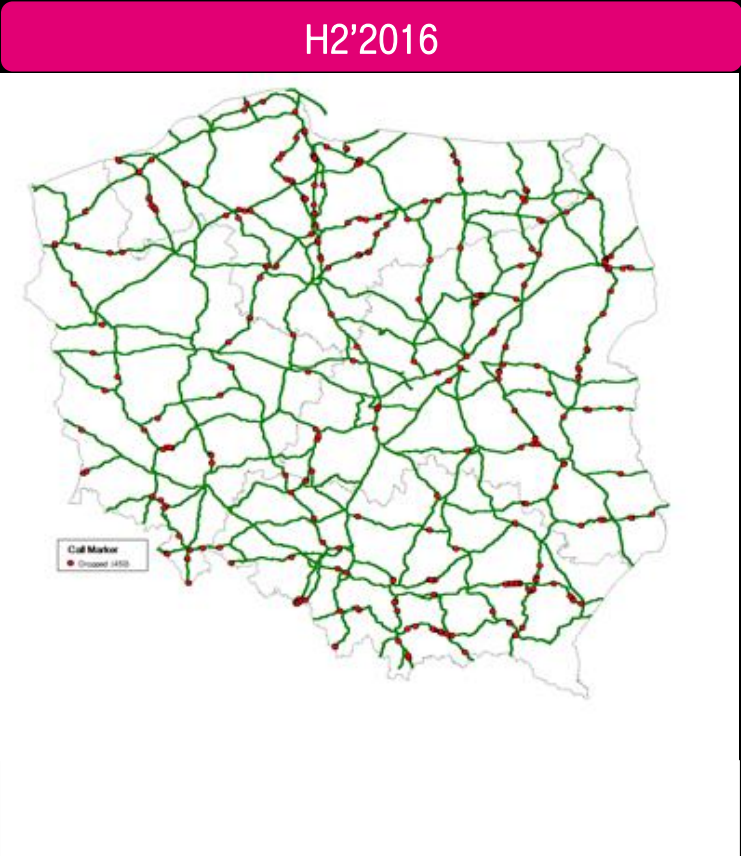


H1'2016



LIFE IS FOR SHARING.

ZERO DROP NETWORK



H1'2014		H2'2016
152 544 km	DISTANCE	254 048 km
659	DROPS	450
231	KM/DROP	548

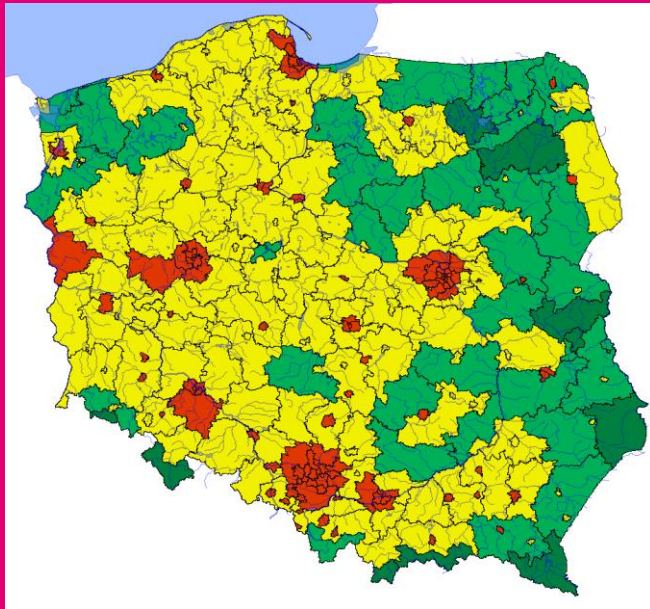
2,3 x LONGER DISTANCE WITHOUT DROP



LIFE IS FOR SHARING.

SUBSCRIBERS MIGRATIONS

CALLS



Traffic migration Chrsitmas
Absolute value of calling subscribers

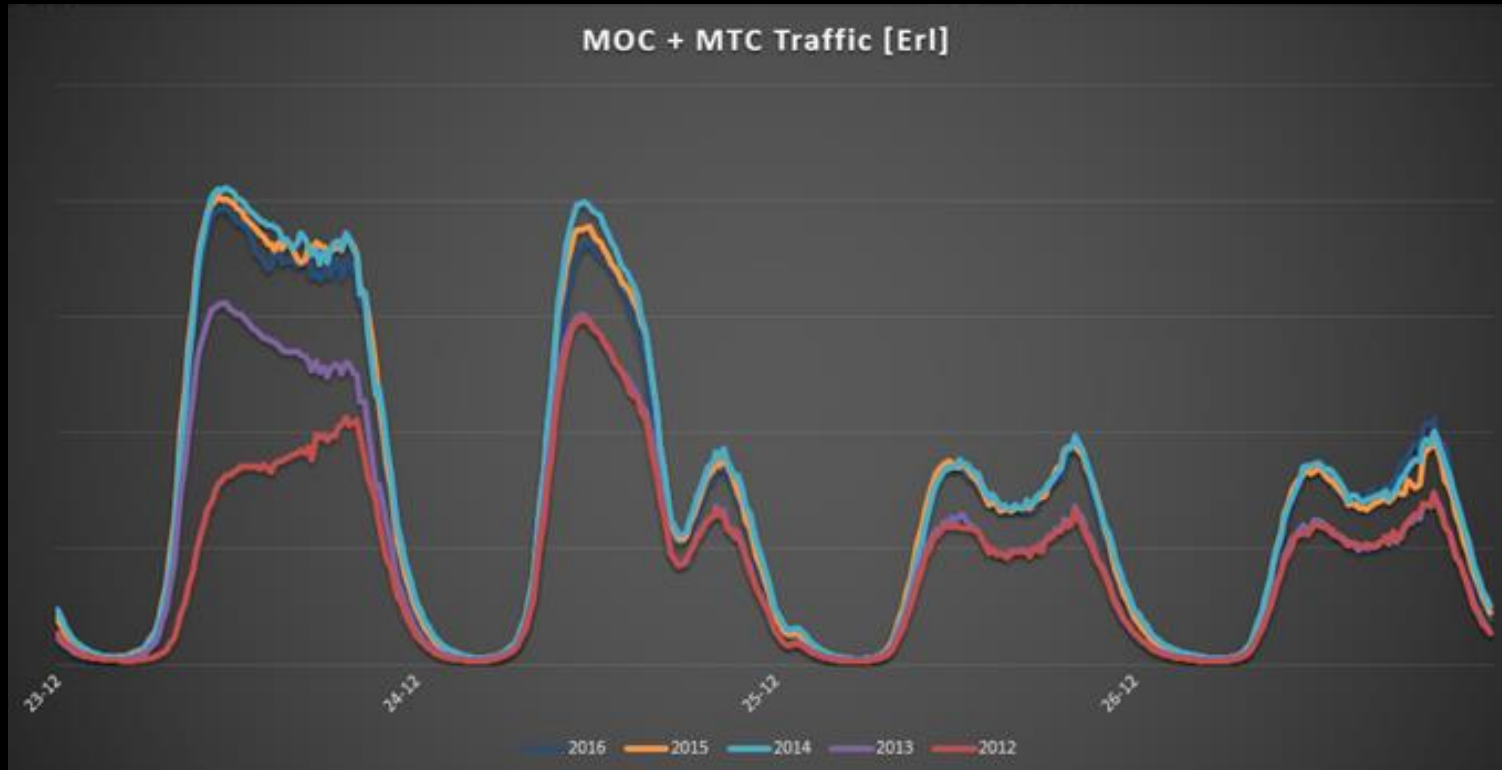
■	> 110% of users	(10)
■	100-110% of users	(36)
■	80-100% of users	(129)
■	<80% of users	(118)

DATA



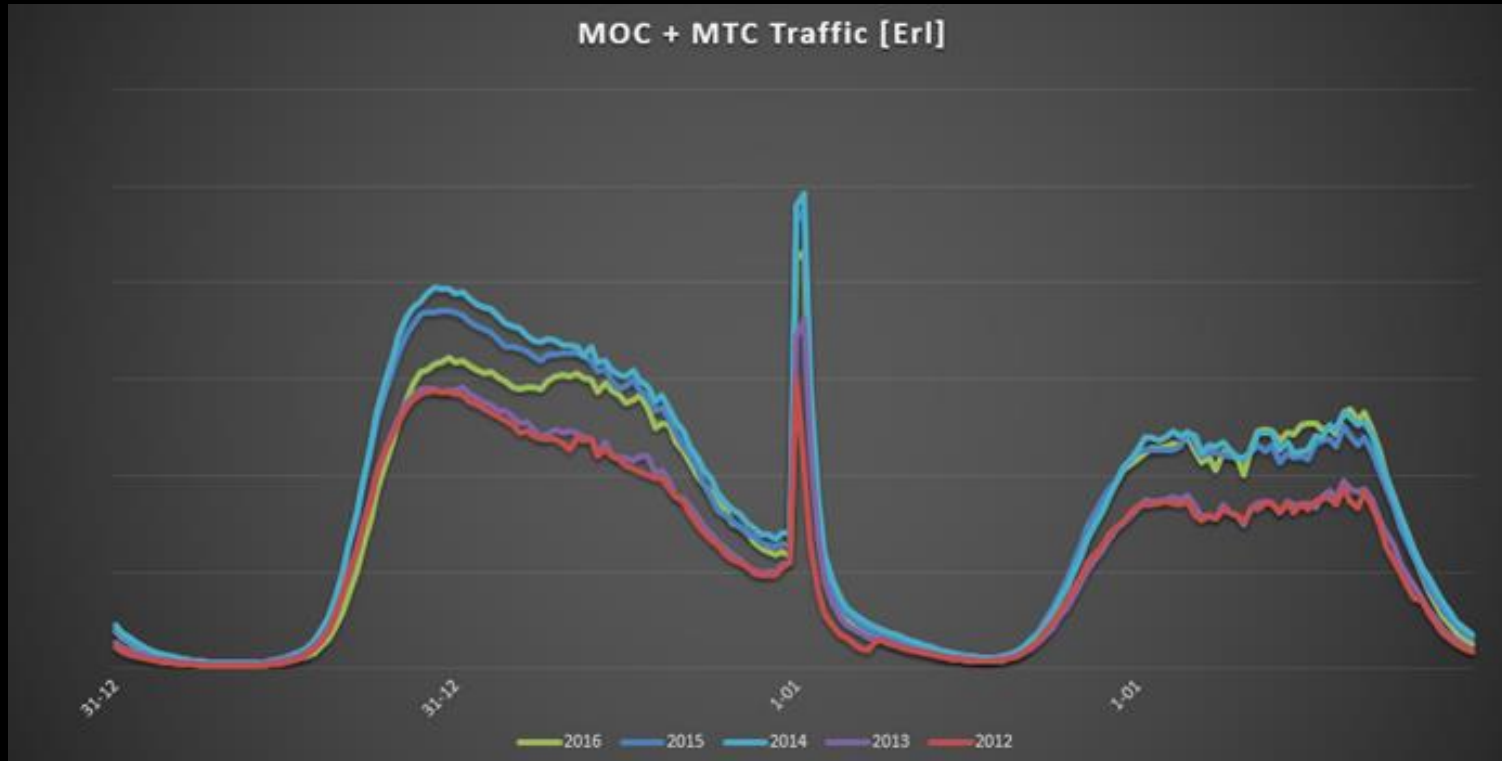
LIFE IS FOR SHARING.

VOICE TRAFFIC - CHRISTMAS



LIFE IS FOR SHARING.

VOICE TRAFFIC – NEW YEAR



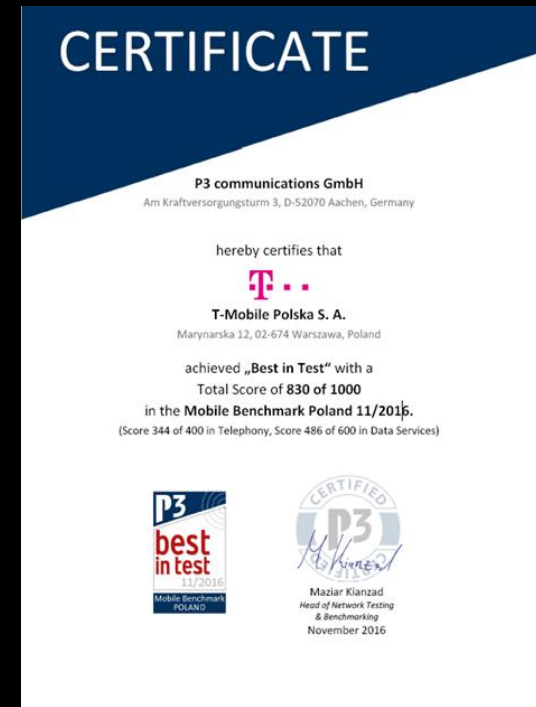
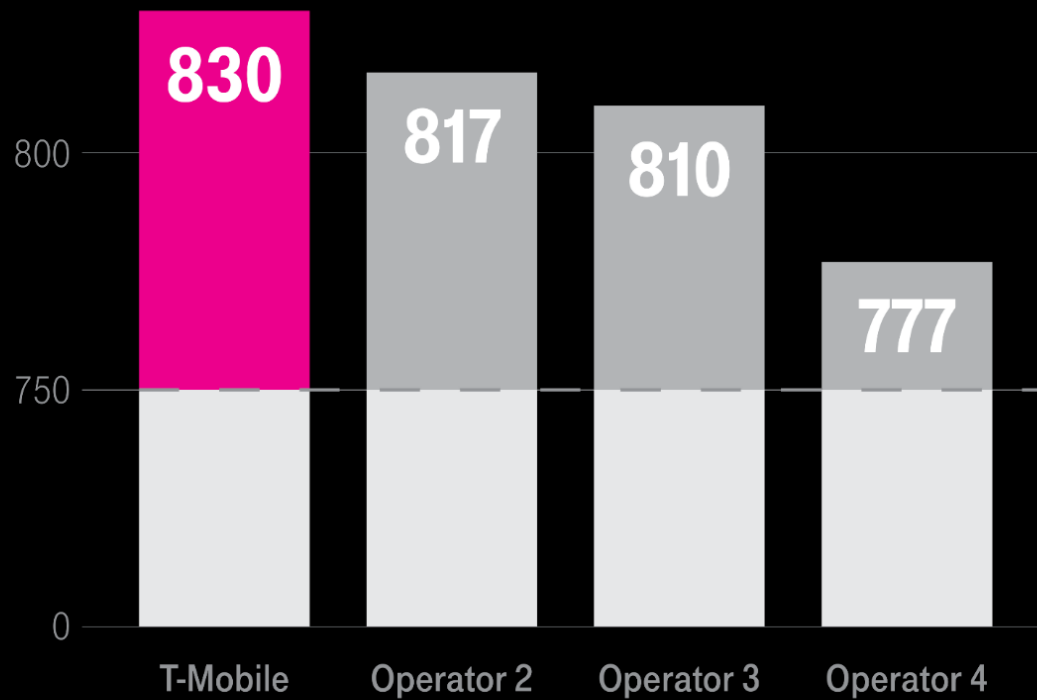
LIFE IS FOR SHARING.

**WAS IT ENOUGH
TO BE THE BEST
NETWORK IN
2016?**



LIFE IS FOR SHARING.

T-MOBILE BEST NETWORK OF 2016



LIFE IS FOR SHARING.

P3 MEASUREMENT SETUP

GENERAL INFO



27 DAYS OF MEASUREMENTS

CA **190** HOURS

CA **10000** KILOMETERS

100% DRIVE TEST - **56.8%** IN CITIES, **17,5%** IN

TOWNS, **25,8%** ON ROADS

4300 VOICE SAMPLES PER OPERATOR

3000 DATA SAMPLES PER OPERATOR

WARSAW - 2 DAYS OF MEASUREMENTS

41 TOWNS - 1 DAY MEASUREMENTS

21 CITIES - 2-4 HOURS OF MEASUREMENTS



LIFE IS FOR SHARING.

P3 MEASUREMENT SETUP

ROADS



Roads picked by P3 for measurement in 2015



Roads picked by P3 for measurement in 2016



LIFE IS FOR SHARING.

P3 MEASUREMENT SETUP

TEST CASES



- MOBILE-TO-MOBILE
- 4G TO 4G
- 4G TO 3G
- 115 SEC CALL WINDOW
- 70 SEC CALL DURATION
- 15 SEC CALL SETUP TIMEOUT
- DATA 4G PREFERRED CA
- HTTP DL DATASTREAM 10S
- HTTP UL DATASTREAM 10S
- HTTP 3MB DL FIXED TRANSFER
- HTTP 1MB UL FIXED FILE TRANSFER
- WEB BROWSING KEPLER
- 10 LIVE WEB PAGES (50% HTTP, 50% HTTPS)
- YOUTUBE HD/SD VIDEO 45S



LIFE IS FOR SHARING.

BEST CALL SETUP TIME

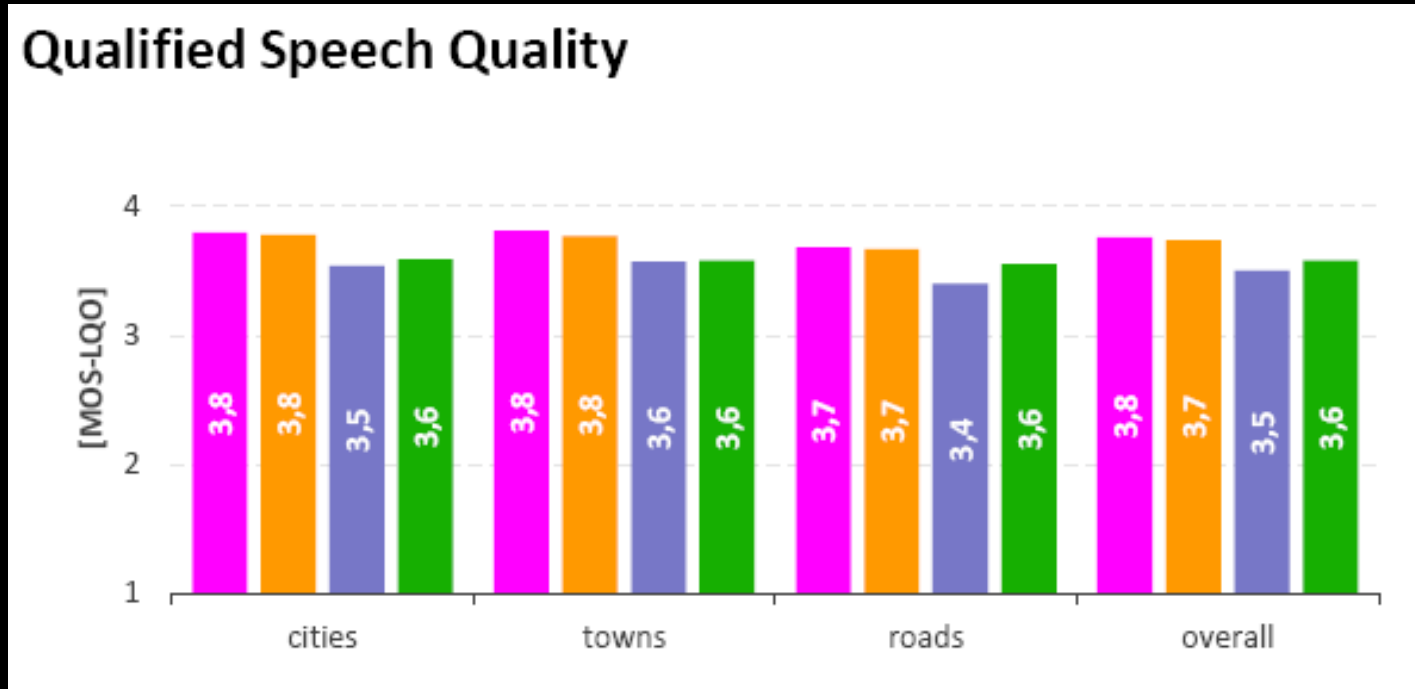
HIGHEST SPEECH QUALITY

VOICE M2M	KPI NAME	UNIT	T-MOBILE	OPERATOR 2	OPERATOR 3	OPERATOR 4
CITIES	QULIFIER	[%]	99,3%	98,7%	98,8%	98,8%
	CALL SETUP TIME	[s]	6,0	6,3	6,1	6,9
	AVG SPEECH QUALITY	[MOS-LQQ]	3,8	3,8	3,5	3,6
TOWNS	QULIFIER	[%]	98,5%	99,2%	98,8%	99,1%
	CALL SETUP TIME	[s]	5,8	6,1	6,1	6,6
	AVG SPEECH QUALITY	[MOS-LQQ]	3,8	3,8	3,6	3,6
ROADS	QULIFIER	[%]	95,7%	96,4%	92,2%	96,9%
	CALL SETUP TIME	[s]	6,0	6,3	6,4	6,8
	AVG SPEECH QUALITY	[MOS-LQQ]	3,7	3,7	3,4	3,6

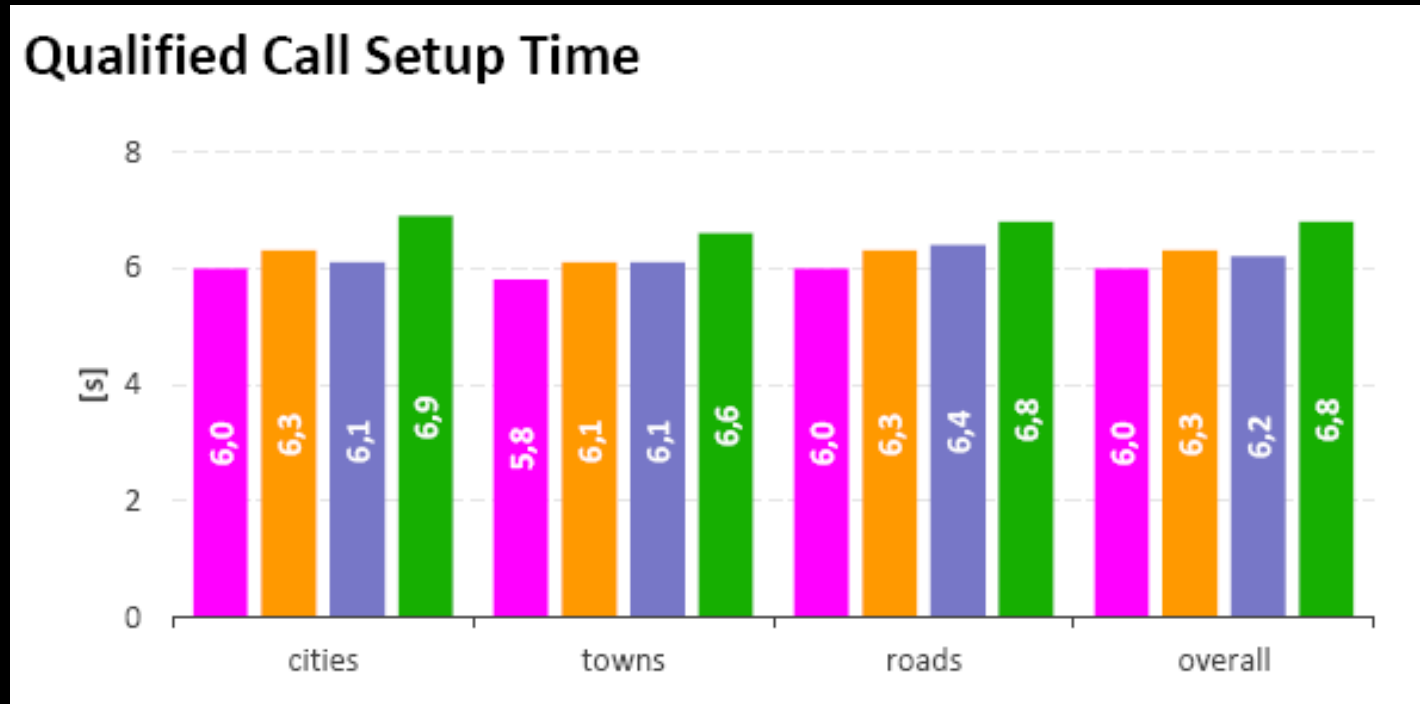


LIFE IS FOR SHARING.

HIGHEST SPEECH QUALITY



BEST CALL SETUP TIME



LIFE IS FOR SHARING.

HIGH QUALITY OF ALL FACTORS

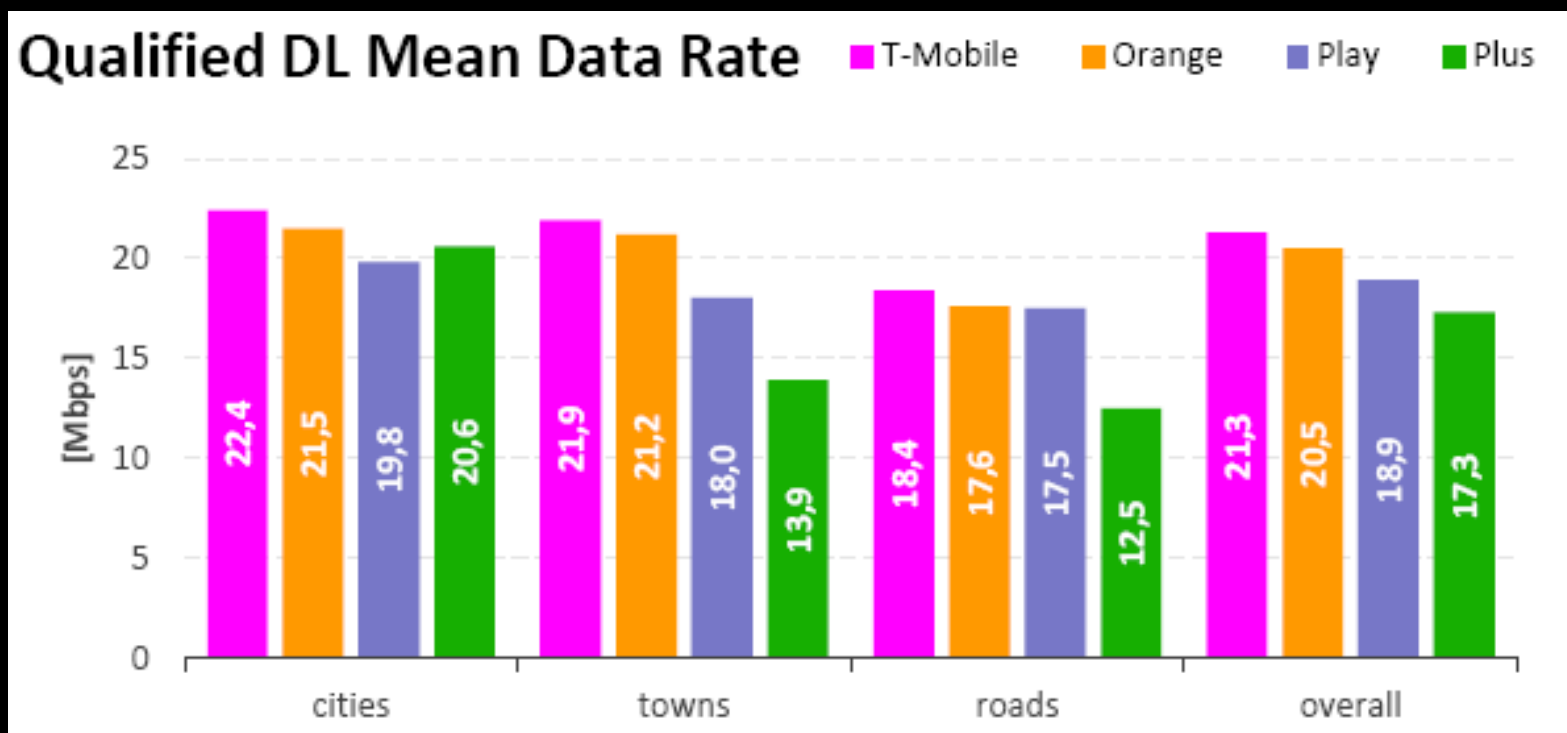
11 OF 12 IN TOP2

DATA	SERVICE GROUP	MAX.	T-MOBILE	OPERATOR 2	OPERATOR 3	OPERATOR 4
CITIES	WEB BROWSING	126	87%	84%	85%	85%
	FILE DOWNLOAD	72	81%	79%	79%	82%
	FILE UPLOAD	72	86%	81%	80%	88%
	YOUTUBE	90	92%	91%	90%	93%
TOWNS	WEB BROWSING	42	80%	75%	80%	71%
	FILE DOWNLOAD	24	74%	76%	76%	71%
	FILE UPLOAD	24	68%	62%	44%	74%
	YOUTUBE	30	91%	88%	88%	82%
ROADS	WEB BROWSING	42	59%	60%	49%	62%
	FILE DOWNLOAD	24	74%	74%	62%	73%
	FILE UPLOAD	24	55%	51%	36%	64%
	YOUTUBE	30	78%	80%	66%	77%



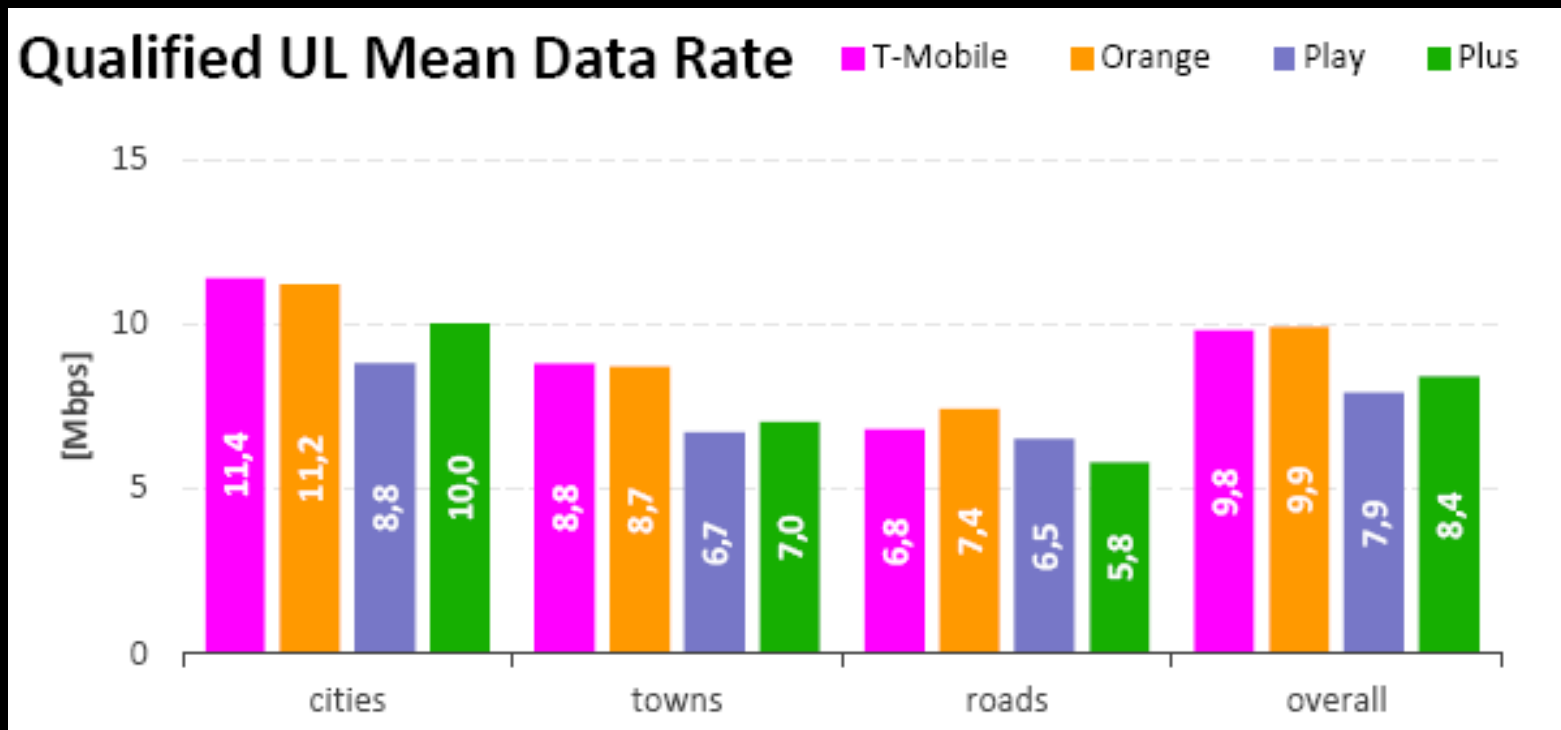
LIFE IS FOR SHARING.

HIGHEST HTTP DL SPEED



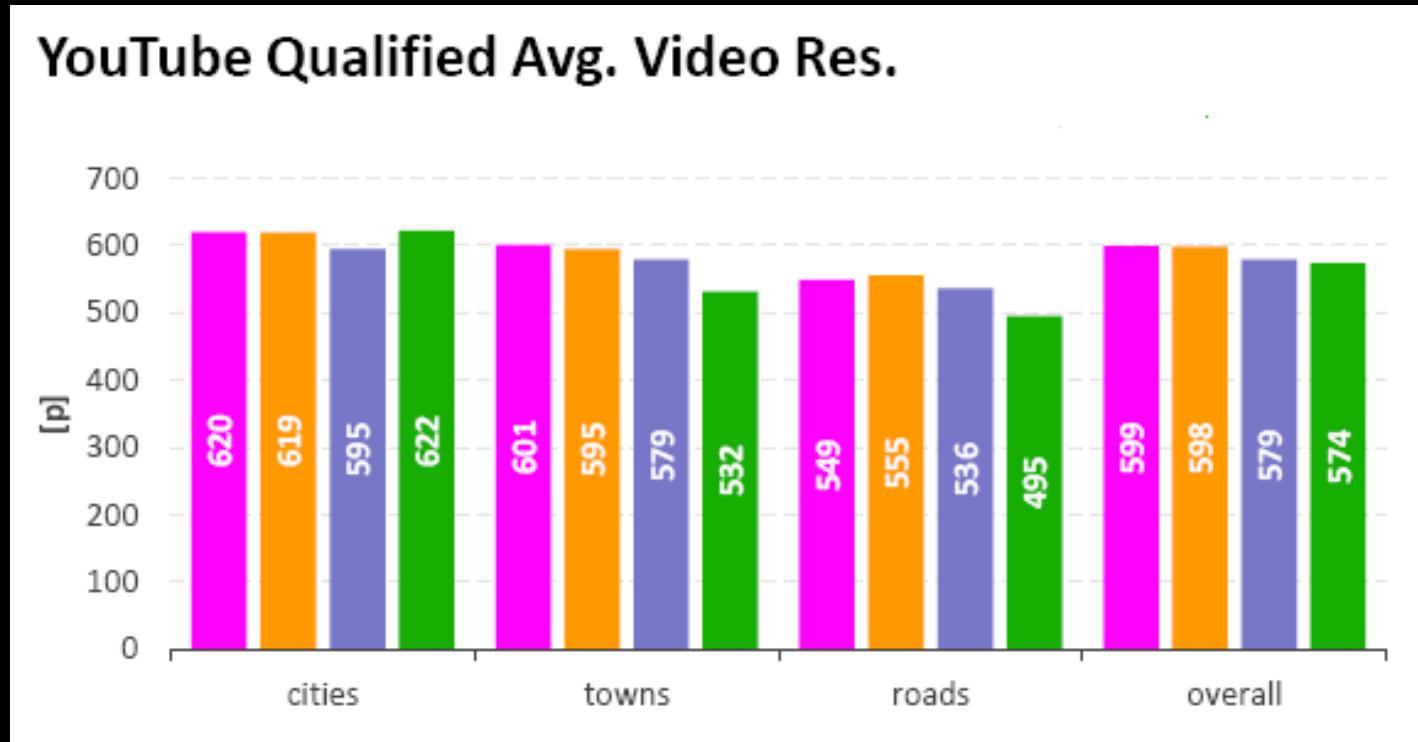
LIFE IS FOR SHARING.

HIGHEST HTTP UL SPEED



LIFE IS FOR SHARING.

QUALITY OF SERVICES



SPEEDTEST.PL RESULTS - DECEMBER

3G/LTE

1 T-Mobile	+1 poz.	T-Mobile	19.18 Mbps 7.93 Mbps 47 ms 12,455	- średnia prędkość pobierania (+7%) - średnia prędkość wysyłania (+6%) - średni ping (-1%) - liczba testów	SpeedTest.pl najlepszy ISP
2 Orange	-1 poz.	Orange	17.97 Mbps 7.78 Mbps 44 ms 18,307	- średnia prędkość pobierania (-10%) - średnia prędkość wysyłania (-10%) - średni ping (-6%) - liczba testów	
3 Plus		Plus	14.13 Mbps 5.89 Mbps 48 ms 20,696	- średnia prędkość pobierania (-6%) - średnia prędkość wysyłania (-15%) - średni ping (-1%) - liczba testów	
4 Play		Play	13.45 Mbps 4.86 Mbps 42 ms 31,742	- średnia prędkość pobierania - średnia prędkość wysyłania (-5%) - średni ping (-1%) - liczba testów	

LTE

1 T-Mobile	+1 poz.	T-Mobile	26.85 Mbps 11.64 Mbps 38 ms 7,837	- średnia prędkość pobierania (+8%) - średnia prędkość wysyłania (+5%) - średni ping - liczba testów	SpeedTest.pl najlepszy ISP
2 Orange	-1 poz.	Orange	24.92 Mbps 11.35 Mbps 38 ms 11,466	- średnia prędkość pobierania (-7%) - średnia prędkość wysyłania (-7%) - średni ping (-3%) - liczba testów	
3 Plus		Plus	19.02 Mbps 8.31 Mbps 44 ms 13,498	- średnia prędkość pobierania (-4%) - średnia prędkość wysyłania (-14%) - średni ping (-1%) - liczba testów	
4 Play		Play	17.75 Mbps 6.54 Mbps 33 ms 22,063	- średnia prędkość pobierania (+5%) - średnia prędkość wysyłania (-2%) - średni ping (+2%) - liczba testów	



LIFE IS FOR SHARING.

THANK YOU



LIFE IS FOR SHARING.