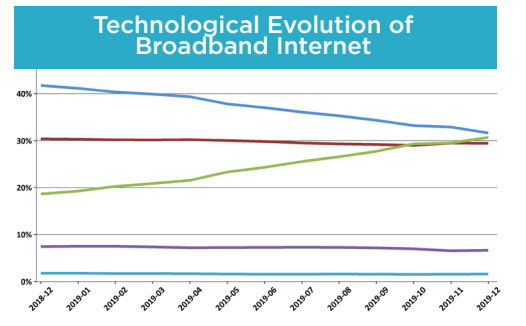
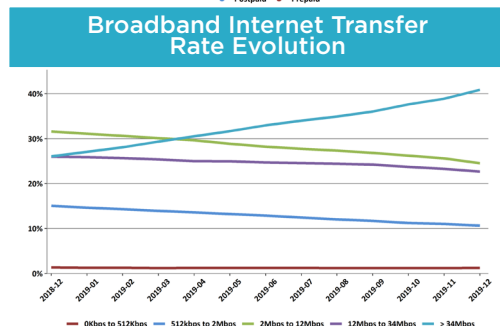
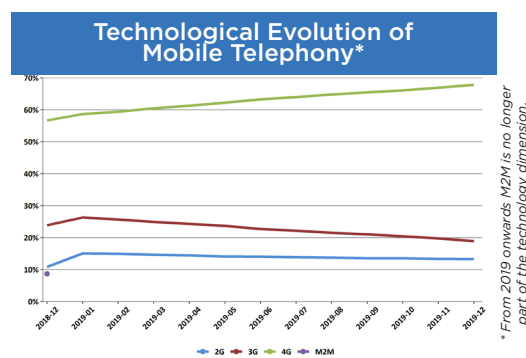
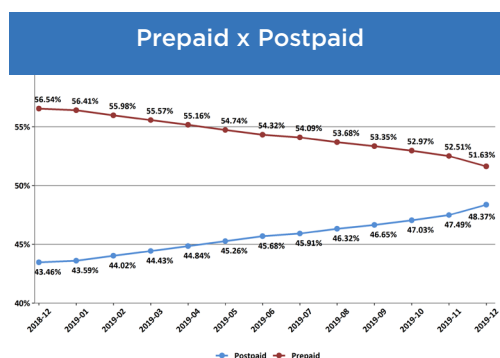
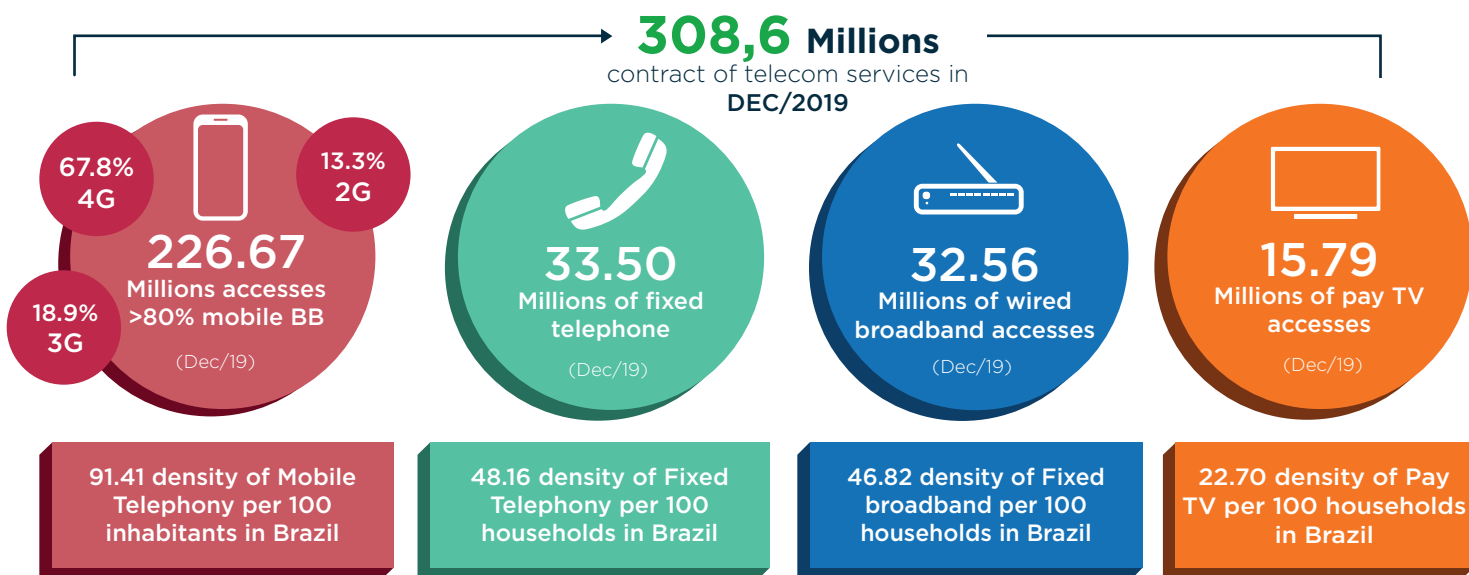
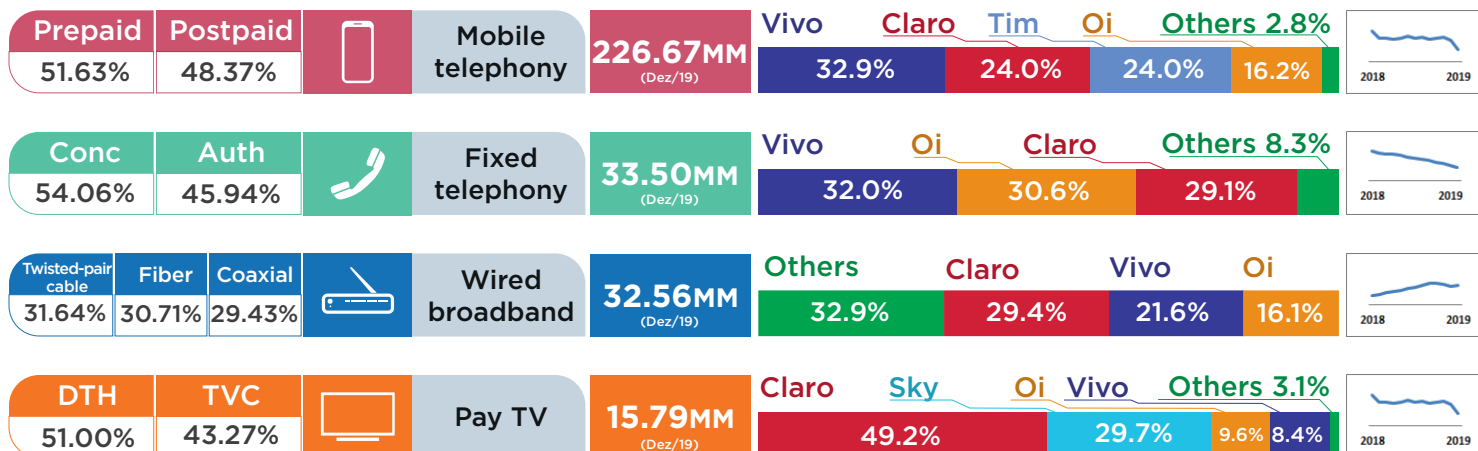
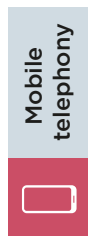




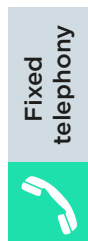
OVERVIEW OF TELECOMMUNICATION IN BRAZIL DECEMBER/2019





MOBILE TELEPHONY, PER GROUP AND TECHNOLOGY

Group	Accesses	4G	3G	2G	Market Share	Complaints Index
VIVO	74,582,095	48,846,852	11,603,352	14,131,891	32.90%	0.35
CLARO	54,488,088	35,898,375	17,212,861	1,376,852	24.04%	0.46
TIM	54,446,923	39,027,988	8,402,219	7,016,716	24.02%	0.71
OI	36,785,888	24,826,982	5,018,462	6,940,444	16.23%	0.47
OTHER	6,365,603	5,132,250	577,807	655,546	2.81%	Not applicable
TOTAL	226,668,597	153,116,924	42,814,701	30,519,946	100.00%	
PERCENTAGE	100%	67.82%	18.89%	13.29%		



ON SERVICE ACCESSSES, FIXED TELEPHONY

Group	Accesses	Market Share	Complaints Index
VIVO	10,721,631	32.01%	1.82
OI	10,251,078	30.60%	2.01
CLARO	9,740,126	29.08%	1.46
OTHER	2,785,332	8.31%	Not applicable
TOTAL	33,498,167	100%	

ACCESSSES PER TYPE OF GRANTS, FIXED TELEPHONY

Type	Accesses	Percentage
As a public service concession	18,109,588	54.06%
As a private service	15,388,579	45.94%
TOTAL	33,498,167	100.00%



WIRED BROADBAND, PER GROUP AND TECHNOLOGY

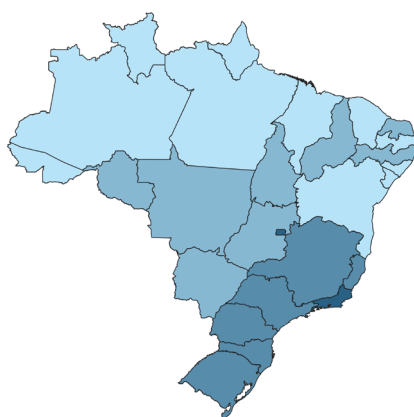
Group	Accesses	Twisted-pair cable	Coaxial cable	Optic Fiber	Radio	Others	Market Share	Complaints Index
CLARO	9,578,629	77,218	9,209,049	267,830	14,804	9,728	29.42%	1.46
VIVO	7,024,007	4,432,590	0	2,591,417	0	0	21.57%	1.31
OI	5,255,766	4,205,021	0	1,018,909	18,345	13,491	16.14%	1.69
OTHER	10,705,051	1,588,614	375,571	6,120,863	2,134,129	485,874	32.87%	Not applicable
TOTAL	32,563,453	10,303,443	9,584,620	9,999,019	2,167,278	509,093	100.00%	



PAY TV, PER GROUP AND TECHNOLOGY

Group	Accesses	DTH	FTTH	MMDS	TVA	TVC	Market Share	Complaints Index
CLARO	7,766,614	1,206,189	0	0	0	6,560,425	49.20%	1.32
SKY/AT&T	4,690,679	4,690,679	0	0	0	0	29.71%	2.03
OI	1,517,245	1,456,312	60,933	0	0	0	9.61%	1.64
VIVO	1,319,731	606,627	713,104	0	0	0	8.36%	1.76
OTHER	492,011	90,960	129,677	266	64	271,044	3.12%	Not applicable
TOTAL	15,786,280	8,169,684	903,714	266	64	6,831,469	100.00%	
PERCENTAGE	100.00%	51.30%	5.72%	0.00%	0.00%	43.27%		

Base Stations (BS) per inhabitants



Transport Network - Fiber presence

