

*USTelecom Research Brief
July 31, 2019*

U.S. BROADBAND INVESTMENT CONTINUED UPSWING IN 2018

Patrick Brogan
Vice President for Industry Analysis



USTELECOM

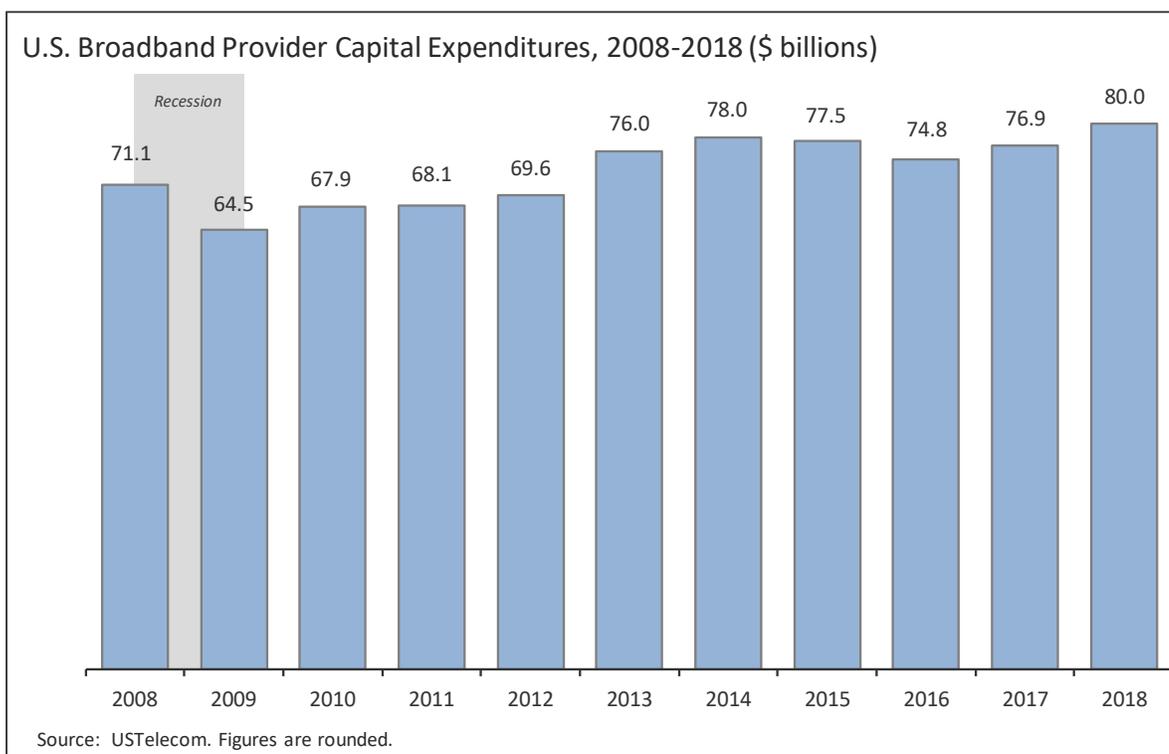
THE BROADBAND ASSOCIATION

USTelecom.org

Summary

U.S. broadband providers invested approximately \$80.0 billion in network infrastructure in 2018, up more than \$3.1 billion from \$76.9 billion in 2017 (see Chart 1). Broadband provider capital spending has now surpassed the recent peak of \$78.0 billion reported in 2014 by \$2.0 billion. From 1996 through 2018, the broadband industry has made capital investments totaling more than \$1.7 trillion (see Chart 2). USTelecom has published its broadband provider capital expenditures data series annually for the last nine years. The data now cover 23 years of broadband provider capital investment and include minor historical revisions to incorporate new information.

Chart 1



The growth in broadband provider capital expenditures in 2018 built on the momentum begun the year before when industry reversed a two-year decline in annual capital spending levels. The decline started in 2015 when capital spending fell, for the first time since the 2008-2009 recession, by approximately \$0.5 billion. The decline then accelerated in 2016, when spending fell by another \$2.7 billion. In all, by 2016, annual capital spending by broadband providers was \$3.2 billion lower than it was at the previous peak in 2014.

By contrast, annual spending increased by approximately \$2.0 billion in 2017 and \$3.1 billion in 2018. In all, annual broadband provider capital spending was approximately \$5.1 billion greater in 2018 than 2016. In the last two years, industry has spent approximately \$7.1 billion more than it would have at 2016 annual spending levels.

The start of the broadband capital investment decline in 2015 coincided with a Federal Communications Commission (FCC) decision to reclassify broadband providers as common carriers under Title II of the Communications Act. USTelecom has consistently stated that the relevant question with respect to the impact of Title II on investment is what investment would have been over the long term under different regulatory scenarios, holding other factors constant. Relevant factors might include, for example, competition, financial markets, taxes, government mandates, product cycles, project timelines, regulation, and company-specific factors. USTelecom does not attempt in this research brief to isolate and control for the various factors and therefore does not draw conclusions about the extent to which the move to Title II may have caused the decline in capital investment. However, the decline in the series in 2015 and 2016, followed by a return to growth in 2017 and 2018 after the FCC had indicated its intention to repeal the Title II classification, suggests that expectations regarding common carrier regulation were likely a factor and warrants further investigation and analysis. USTelecom cited previous research efforts to isolate the impact of common-carrier regulation on investment in its [October 31, 2017 research brief](#).

Broadband investment remains critical to modernizing our nation’s network infrastructure, maintaining international leadership, expanding economic growth and job creation, and closing the broadband gaps that exist in rural America. It will be necessary to maintain a policy environment that encourages greater investment, given projected growth in demand for data usage as well as the need to expand networks further into currently unserved areas.

The Cisco Visual Networking Index [projected](#) U.S. Internet Protocol traffic to **grow nearly three times** in the five years from 2017 to 2022. Traffic growth will be driven by consumer and business use of streaming media, faster 5G mobile networks, the growing Internet of Things, and cloud-based services. The internet connections and the mobile and data center infrastructures that deliver these services will require constant broadband investment in capacity, speed, and reliability.

While underlying broadband infrastructure, both fixed and wireless, is available to almost all Americans, there remain gaps in portions of rural America. For example, an [analysis](#) of 2017 data from USTelecom and BPI-Telcodata indicate that 73 percent of rural areas have access to fixed terrestrial broadband at speeds of 25 megabits per second download and 3 megabits per second upload, compared to 99 percent of non-rural areas. Policies that encourage more investment can help to close these gaps and bring the benefits of cutting-edge broadband service to all American consumers and businesses.

Chart 2

Historical Capital Expenditures by U.S. Broadband Providers (\$ billion, 1996 -2018)

	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Broadband Provider Capex	55.1	65.0	71.8	91.8	118.1	111.5	72.0	57.0	57.5	62.1	70.1	70.4	71.1	64.5	67.9	68.1	69.6	76.0	78.0	77.5	74.8	76.9	80.0

Source: USTelecom

Methodology

USTelecom collects capital expenditures data for wireline telecommunications, wireless telecommunications, and cable broadband providers in order to approximate an industry aggregate. The data exclude other providers, such as satellite providers, telecommunications resellers, and electric utilities. The data are nominal; USTelecom does not adjust for inflation or quality. Figures are rounded. Previous years may include minor revisions.

The majority of telecommunications data come from company financial statements, taking into account business segment reporting, accounting changes, mergers, and spin-offs. The analysis is subject to the reporting practices of individual companies. Capital expenditures may include investment in property, plant, and equipment, capitalized software, capitalized interest during construction, corporate, directory, and other capital expenditures, and intra-company eliminations. Reasonable efforts are made to eliminate double counting, non-U.S. investment, and non-capital spending. USTelecom makes estimates for non-reporting companies.

USTelecom also consults additional market research and government sources for comparison, including the United States Census Annual Capital Expenditures Survey, the Yankee Group Global Capex Forecast 2010, the Skyline Marketing Capex Report 2010, data from the Cellular Telecommunications & Internet Association (CTIA), and New Paradigm Resources Group. Cable data are from NCTA – The Internet & Television Association.

Technical Notes

It has been necessary to adjust certain reported capital expenditures, particularly since 2014, to ensure that the data series remains consistent over time and reflects actual change in the capital stock of the U.S. economy. The data contain additional historical revisions based on new information. The discussion below addresses the adjustments to reported capex and historical revisions. See Chart 4 for a detailed listing of adjustments since 2015. See also related discussions in previous USTelecom broadband provider capital expenditures research: [December 14, 2016](#); [October 31, 2017](#); and [October 18, 2018](#).

Capitalized Wireless Phones

USTelecom excludes certain reported capital expenditures for wireless phones leased to customers. It was necessary to exclude capital expenditures for leased phones because otherwise total company-reported capital expenditures would not provide an apples-to-apples comparison over the course of our time series.

Under accounting rules, Sprint reports wireless phones purchased for leasing to customers as capital expenditures. It breaks out capital expenditures for leased wireless phones from network and other capital expenditures. Sprint reports based on a fiscal year ending on March 31 each year. Therefore, USTelecom uses quarterly data mapped to the calendar year.

Sprint's wireless phone leasing program began at the end of 2014 and ramped up at an extraordinary pace in 2015. Reported amounts remained similar – in the \$2 billion range from 2015 through 2017. Through 2017, Sprint only capitalized wireless phones leased through indirect channels. Starting in 2018, Sprint began capitalizing all leased wireless phones, whether leased through indirect or direct channels. Sprint has reported revised historical data sufficient to calculate all capitalized wireless phones for the full calendar year back to 2017.

In order to maintain the consistency of the data series for all periods, USTelecom excludes the following amounts that Sprint reports as capital expenditures for leased wireless phones: \$143 million in 2014; \$2.163 billion in 2015; \$2.098 billion in 2016; \$6.613 billion in 2017 (revised from \$2.182 billion with only devices sold via indirect channels); and \$7.667 billion in 2018. See Chart 3.

Including such capital expenditures for leased phones would skew the data series and would have inflated the perception of growth by \$2 billion from 2014 to 2015 and by \$4.5 billion to \$5.5 billion in either 2017 or 2018, after Sprint began reporting capitalized devices leased through direct channels. (For a detailed analysis of these changes and their impact on USTelecom's capital expenditures data, see Chart 3 and Chart 4).

Chart 3

Impact of Sprint's Leased Device Program on Reported Capex and Growth						
	2013	2014	2015	2016	2017	2018
Sprint Spending on Capitalized Devices						
Indirect Channels Only	n/a	\$ 143	\$ 2,163	\$ 2,098	\$ 2,182	n/a
Direct and Indirect Channels	n/a	n/a	n/a	n/a	\$ 6,613	\$ 7,667
Total Capex	\$ 76,036	\$ 78,143	\$ 79,671	\$ 76,945	\$ 83,489	\$ 87,717
Total Capex Excluding Sprint Capitalized Devices	\$ 76,036	\$ 78,000	\$ 77,508	\$ 74,847	\$ 76,876	\$ 80,050
Total Capex Change Year over Year	n/a	\$ 2,107	\$ 1,528	\$ (2,726)	\$ 6,544	\$ 4,228
Total Capex Change Year Over Year Excluding Sprint Capitalized Devices	n/a	\$ 1,964	\$ (492)	\$ (2,661)	\$ 2,029	\$ 3,174

Source: Company Financial Reports and USTelecom Analysis. In 2018, Sprint began capitalizing all leased handsets - those leased through direct and indirect channels. Previously Sprint only capitalized handsets leased through indirect channels. Sprint reports on the basis of a fiscal year ending on March 31 of each year. USTelecom uses quarterly data mapped to the calendar year. Sprint has publicly restated historical amounts to reflect both indirect and direct channel leasing; but due to the fiscal year period, the restated data go back only to the quarter ending June 30, 2016. This table shows restated data only since 2017 since full-year data are not available for prior years.

Wireless Phone Accounting

The traditional business practice among wireless companies has been the subsidized phone sale model, in which the provider purchases phones and sells them to its customers along with a service contract. Typically, the provider sells the phone at a steep discount, say \$200 for a \$600 device, or a \$400 subsidy. The provider and the customer enter into a contract for about two years, in which the customer agrees to pay a certain monthly subscription rate. That rate includes an amount sufficient to cover the cost of service and to pay off the subsidized cost of the phone over the term of the contract.

From an accounting perspective, under the subsidized phone model, the devices purchased by providers go into inventory and the company records them as a cost of equipment sold once the customer takes ownership

of the device. Under Sprint's leasing program, since it purchases phones to lease rather than sell to the customer, the devices become an asset of the company, which it records as capital expenditures.

Recently, wireless carriers have employed installment plans instead of either traditional subsidy plans or leasing programs. Under installment plans, consumers also own the devices and payback the cost in installments over time, similar to a loan. There are differences in accounting for subsidy plans and installment plans. For example, under subsidy plans, companies recognize revenue in periodic increments over the term of the contract; under installment plans, companies recognize revenue for the full sale price of the phone up front and collect "receivables" as consumers pay off their "loan." Regardless, like subsidy plans, wireless providers do not report phones sold under installment plans as capital expenditures and therefore they do not affect USTelecom's capital expenditures data series.

Excluding Capitalized Leased Phones Is Appropriate and Necessary

Including leased wireless phones as capital expenditures makes sense from an accounting perspective, but not from an economic perspective. From the perspective of USTelecom's capital expenditures time series, in particular, it is appropriate and necessary to exclude capital expenditures resulting from the shift to phone leasing programs in 2014 and their acceleration in 2015 and thereafter.

First, shifting phones from a cost of goods sold to a capital expenditure on financial statements reflects an accounting change and has no impact on the capital stock of the U.S. economy. The phones appear as capital expenditures merely because leasing phones requires different accounting than selling phones. In any given period, U.S. wireless consumers would have had approximately the same quantity and quality of wireless phones regardless of whether they leased them or purchased them. The capital stock of the U.S. economy attributable to wireless phones in circulation is no different than it would be otherwise because Sprint chose to lease rather than sell some of its phones. This allows, of course, for potential marginal impacts on wireless phone adoption and market share resulting from the availability of less expensive leased phones and shorter commitment periods. But the effects are likely minimal.

Second, USTelecom's capital expenditures series measures *change* over time and it is therefore essential to measure the same thing from one period to the next. It is improper to include the capitalized phones in USTelecom's time series because the capitalization of these phones does not reflect actual growth in the capital stock of the economy, just a shift in where this capital is measured. From the standpoint of the economy as a whole, leased phones are a business asset and sold phones are a consumer asset. One could make a case for measuring all wireless phones, whether they are company assets or consumer durable goods; but that would require measuring all phones in all periods, not just a one-time shift of a subset of phones onto business financial statements due to a new leasing business practice. Including such a subset of leased phones would artificially skew the *change* in capital expenditures reflected in USTelecom's data and would create the false impression of growth in 2015 and then again in 2017 or 2018. In other words, including the phones would falsely imply that broadband providers' contribution to the national capital stock grew by \$2 billion more than it actually did in 2015; and then again by \$4.5 billion or \$5.5 billion in 2017 or 2018, respectively, depending on which year the series included capitalized devices leased through direct channels.

Finally, the exclusion of Sprint's leased phones from USTelecom's capital expenditures data is not to single out Sprint nor is it to criticize leasing phones as a business practice. Most other wireless providers do not lease phones. Those who lease phones do not report them as capital expenditures, e.g., T-Mobile's JUMP! On Demand. USTelecom's only objective with excluding Sprint's capitalized wireless phones is to develop a time series that accurately reflects change from one period to the next.

AT&T Estimates and Historical Revisions

In 2015, AT&T revised its financial reporting to reflect the acquisitions of DirecTV and its Mexican wireless business, which occurred near the middle of that year. In 2018, AT&T again revised financial reporting to reflect the acquisition of Time Warner, now known as Warner Media, near the middle of the year. To develop a consistent time series with appropriate comparisons from year-to-year, USTelecom has excluded certain capital expenditures for these acquired businesses. In some cases, it has been necessary to estimate non-reported capital expenditures. This section describes, by year in the data series, the various estimations for AT&T capital expenditures, and details how USTelecom made historical revisions as new information became available.

2015 AT&T Estimate

For the full year in 2015, AT&T reported capital expenditures, including capitalized interest, of \$20.0 billion. Based on public information, DirecTV was investing approximately \$3 billion per year at the time of the acquisition. Additionally, in 2015, AT&T stated that it would spend approximately \$3 billion over four years to upgrade its Mexican cellular network. USTelecom estimated at that time that AT&T would spend approximately \$750 million per year on the Mexican wireless upgrades. USTelecom backed out approximately \$2 billion for DirecTV and Mexican wireless operations, including estimated capitalized interest, reflecting a half year of operations since the business units were acquired mid-year. Therefore, USTelecom estimated AT&T's 2015 capital expenditures excluding the DirecTV and Mexican wireless units were \$18.0 billion. USTelecom does not make any additional revisions to this estimate with this release of 2018 capital expenditures data.

2016 AT&T Estimate

For the [initial release](#) of its 2016 broadband investment data on October 31, 2017, USTelecom estimated that AT&T's 2016 capital expenditures, excluding DirecTV and its Mexican cellular network, were \$18.5 billion. AT&T reported total 2016 capital expenditures, including capitalized interest, of \$22.4 billion. Since the DirecTV and Mexican wireless units were part of AT&T for the full year in 2016, it was necessary to back out a full year of capital expenditures for these business units plus capitalized interest. USTelecom backed out approximately \$4 billion for the DirecTV and Mexican wireless units.

With the [subsequent release](#) of its 2017 capital expenditures data on October 18, 2018, USTelecom revised its estimate for AT&T's 2016 capital expenditures, excluding the DirecTV and Mexican wireless units. See Chart 4. In 2018, AT&T publicly reported that it had accelerated the timeframe for its upgrades to the Mexican wireless network, completing the vast majority of the project by 2017. Assuming that the overall capital spending

associated with the upgrades remained constant at \$3 billion and that the acceleration occurred in 2016 and 2017, USTelecom revised its estimate for Mexican cellular operations in 2016 to \$1.2 billion and backed out an additional \$0.5 billion from AT&T's total 2016 capital expenditures.

As a result, USTelecom reduced its estimate for AT&T's 2016 capital expenditures, excluding the DirecTV and Mexican wireless units, from \$18.5 billion to \$18.0 billion. USTelecom does not make any additional revisions to this estimate with this release of 2018 capital expenditures data.

2017 AT&T Estimate

For 2017, AT&T reported approximately \$21.6 billion in capital expenditures, including capitalized interest. As with 2016, USTelecom must back out a full year of DirecTV and Mexican wireless capital spending plus capitalized interest. Due to subscriber trends affecting equipment purchases, partially offset by a satellite launch, USTelecom assumes DirecTV capital spending declined from approximately \$3 billion per year in 2016 to \$2.5 billion in 2017. Meanwhile, as discussed above, USTelecom estimated that the Mexican wireless unit continued to invest at an annual rate of \$1.2 billion in 2017. Therefore, in its October 18, 2018 release of 2017 broadband providers' capital expenditures data, USTelecom estimated AT&T capital expenditures, excluding DirecTV and Mexican wireless units, were \$17.7 billion in 2017.

With this release of 2018 broadband provider capital expenditures, USTelecom adjusts its estimate for AT&T's 2017 capital expenditures to reflect investments in FirstNet. FirstNet refers to a national public safety network for which AT&T receives federal financial support through "reimbursements." AT&T reports capital expenditures on its cash flow statement "net" of FirstNet capital reimbursements. To get total capital expenditures, USTelecom adds back FirstNet capital reimbursements. AT&T began reporting the reimbursements in mid-2018, including \$279 million for 2017. After adding this amount, USTelecom's estimate for AT&T's 2017 capital expenditures, excluding DirecTV and Mexican wireless units, increases from \$17.7 billion to \$18.0 billion.

2018 AT&T Estimate

For 2018, AT&T reported capital expenditures, including capitalized interest, of \$21.3 billion, net of FirstNet reimbursements. It also reported \$1.4 billion in FirstNet capital reimbursements, for a total of \$22.7 billion. For consistency with historical periods, USTelecom excluded capital expenditures for newly acquired Warner Media, DirecTV, and the Mexican cellular unit.

Pursuant to new reporting practices adopted after the Warner Media acquisition in mid-2018, AT&T broke out 2018 capital expenditures for certain business segments. As a result, USTelecom needed to make fewer estimates. For 2018, it was possible to back out capital expenditures directly for Warner Media (\$581 million) and the International business segment (\$745 million, including DirecTV's Latin American operations and the Mexican cellular unit). USTelecom still had to make an estimate for DirecTV's U.S. operations. DirecTV capital spending had been trending down from \$3 billion per year around the time of the acquisition to \$2.5 billion in 2017. Due to continued subscriber losses and migration to streaming services, USTelecom believes that the trend continued downward in 2018. Based on this trend, historical analysis of DirecTV's Latin American and U.S. operations, and the data AT&T provided for the International segment in 2018, USTelecom backed out an

estimated \$1 billion of capital expenditures for DirecTV U.S. in 2018. In all, USTelecom backed out \$2.4 billion in capital expenditures and capitalized interest from AT&T's gross 2018 capital expenditures of \$22.7 billion, yielding an estimated \$20.3 billion in capital expenditures for 2018, excluding Warner Media, DirecTV, and the Mexican wireless unit.

Independent Competitive Provider Mergers and Historical Revisions

USTelecom must estimate capital expenditures for the independent competitive provider industry because many of these providers are private companies that do not disclose financial data. USTelecom estimated independent competitive providers' capital expenditures were \$4.5 billion in 2018, down from \$4.6 billion in 2017 and \$5.2 billion in 2016. For consistent historical comparisons in the years shown, these figures exclude capital expenditures for certain providers who were acquired and who are now included in line items for the acquiring companies. Specifically, the figures exclude Broadview and Earthlink (acquired by Windstream in 2017), Level 3 (acquired by CenturyLink in 2017), and XO (acquired by Verizon in 2017).

The competitive provider industry is changing rapidly and has undergone significant consolidation in the last couple of years. In addition to the mergers cited above, in 2017, Crown Castle acquired Lightower and Zayo acquired Electric Lightwave. In 2018, Fusion Connect acquired Birch and Megapath. Other independent competitive providers have gone private. For example, a private equity firm acquired previously public Lumos in 2017, then acquired privately held Spirit Communications in 2018 and merged the two. In 2019, Zayo announced plans to go private. Meanwhile, TPx announced in early 2019 its plans to go public through a business combination with Pensare, but has since [terminated](#) the business combination.

The independent competitive provider figures also exclude former cable over-builders such as WOW-Knology and RCN-Grande, since USTelecom accounts for these companies in the cable line item. USTelecom removed these companies from the independent competitive provider line item for current and historical periods in 2016. See Chart 4.

Miscellaneous Historical Revisions and Other Estimates.

For cable, USTelecom reported \$20 billion in 2017. USTelecom revises its cable capital expenditures estimate for 2017 from \$20.0 billion to \$20.2 billion, due to availability of more detailed data. For 2018, USTelecom includes estimated cable capital expenditures of \$20.8 billion. The cable figures includes the former cable over-builders such as WOW-Knology and RCN-Grande.

Sprint made minor historical revisions to its data, resulting in an increase in reported capital expenditures of \$40 million for 2017.

Starting with the 2017 series, USTelecom removed CyrusOne capital expenditures from the data series for current and historical periods. There are no related changes in 2018. For a detailed discussion, see USTelecom's October 18, 2018 [research brief](#) and Chart 4.

In the 2018 data series, USTelecom revises historical data for TDS and US Cellular to include corporate capital expenditures and to correct historical errors. The changes are immaterial for all years except 1996-1998 and

therefore USTelecom does not show them in Chart 4. The impact in 1996-1998, ranging from \$0.2 billion to \$0.3 billion per year, does not materially affect the reported figures or trends since total capital expenditures in those years ranged from \$55 billion to \$72 billion.

Discontinuance of Wireline and Wireless Breakout and Impact on Historical Series

Starting with the release of 2016 broadband provider capital expenditures series, USTelecom discontinued publishing breakouts of wireline and wireless capital spending. There are several reasons it no longer makes sense to report this breakout. First, the line between wireline and wireless investment is blurring as a growing portion of wireline investment supports either dedicated wireless backhaul or transport infrastructure shared by wireline and wireless access networks. Meanwhile, devices increasingly shift between wireless and wireline networks. Second, a major company, AT&T, stopped breaking out wireline and wireless capital expenditures as of the second half of 2015. USTelecom attempted to allocate AT&T's capital expenditures to wireline and wireless for the full-year 2015; but such estimated allocations became increasingly imprecise, with potential for error. Third, another large company, Verizon, reports capital expenditures in categories for wireline, wireless, and "other." USTelecom historically allocated "other" capex between wireline and wireless categories. As Verizon has acquired digital media and other services not fitting into wireless and wireline categories, the "other" category has grown quickly. Allocating Verizon's "other" capital investment to wireline and wireless categories adds to the growing imprecision in these categories. Starting with the 2017 capital expenditures series, USTelecom no longer allocates Verizon's "other" capital expenditures to wireless and wireline categories, but rather maintains a separate "other" category. USTelecom applies this change retroactively to historical data reported by Verizon, but it has no impact on Verizon's total annual capital expenditures included in the series.

Given the blurring of lines between wireline and wireless investment, as well as the disproportionate impact of AT&T and Verizon, which historically have represented approximately two-thirds of wireless capital expenditures and one-half or more of wireline telecom capital expenditures, USTelecom has discontinued separately reporting aggregates of wireless and wireline capital expenditures.

Despite the imprecision, USTelecom does continue to track estimates for wireline and wireless capital spending internally. USTelecom historically used these breakouts to estimate capital expenditures for non-reporting wireless providers and incumbent local exchange carriers (ILECs). While breakouts are imprecise, they continue to be the most practical means of estimating certain non-reporting providers' capital expenditures. However, under this method, the removal of Verizon's "other" spending from the wireless and wireline categories resulted in minor revisions to historical estimates for non-reporting wireless companies. See Chart 4. There was no impact on historical estimates for non-reporting ILECs.

Chart 4

Adjustments to USTelecom Broadband Provider Capital Expenditure Estimates 2015-2018

	USTelecom Estimated Broadband Provider Capital Investment (Wireline, Wireless, and Cable, \$Billions)								
	2010	2011	2012	2013	2014	2015	2016	2017	
2015 Series									
Series Before Handset Adjustment	68.0	68.2	68.8	75.4	77.5	78.5			
Less Sprint Capitalized Handsets	-	-	-	-	(0.1)	(2.2)			
Final 2015 Series After Handset Adjustment	68.0	68.2	68.8	75.4	77.4	76.3			
New 2016 Adjustments									
Cable / CLEC									
Cable Data Series Revision	0.1	0.1	0.8	1.1	1.3	1.8			
Eliminate Duplication in CLEC and Cable Line Items	(0.2)	(0.3)	(0.3)	(0.3)	(0.3)	(0.4)			
Windstream									
ARRA Stimulus Expansion	-	0.022	0.105	0.036	0.013	-			
CAF I Expansion	-	-	-	-	0.013	0.074			
Data Revision	-	-	-	0.029	-	-			
Uniti (CS&L) REIT Spinoff	-	-	-	-	-	0.044			
	2010	2011	2012	2013	2014	2015	2016	2017	
2016 Series									
Series Before Handset Adjustment	67.9	68.0	69.4	76.2	78.5	80.1	78.1		
Less Sprint Capitalized Handsets					(0.1)	(2.2)	(2.1)		
Final 2016 Series After Handset Adjustment	67.9	68.0	69.4	76.2	78.4	77.9	76.0		
New 2017 Adjustments									
AT&T Mexican Wireless Capex Acceleration	-	-	-	-	-	-	(0.5)		
Other Wireless Adjustment	-	-	(0.1)	-	-	(0.1)	(0.1)		
CLEC Adjustments for New Information	-	0.1	0.3	-	(0.1)	(0.1)	0.2		
Less CyrusOne				(0.2)	(0.3)	(0.2)	(0.7)		
	2010	2011	2012	2013	2014	2015	2016	2017	
2017 Series									
Series Before Handset Adjustment	67.9	68.1	69.6	76.0	78.1	79.7	76.9	78.5	
Less Sprint Capitalized Handsets					(0.1)	(2.2)	(2.1)	(2.2)	
Final 2017 Series	67.9	68.1	69.6	76.0	78.0	77.5	74.8	76.3	
New 2018 Adjustments									
Sprint Capitalization of Direct Channel Leased Handsets								4.43	
Sprint Historical Revision								0.04	
Cable Historical Revision								0.2	
AT&T FirstNet								0.3	
	2010	2011	2012	2013	2014	2015	2016	2017	2018
2018 Series									
Series Before Handset Adjustment	67.9	68.1	69.6	76.0	78.1	79.7	76.9	83.5	87.7
Less Sprint Capitalized Handsets					(0.1)	(2.2)	(2.1)	(6.6)	(7.7)
Final 2018 Series	67.9	68.1	69.6	76.0	78.0	77.5	74.8	76.9	80.0
Year over Year Change	3.5	0.2	1.5	6.4	2.0	(0.5)	(2.7)	2.0	3.2

Figures may not add due to rounding