

A vibrant, futuristic digital landscape. The background is a deep blue sky with a satellite in orbit. In the foreground, a laptop displays a globe, and a radio tower stands on the left. The scene is filled with glowing blue and green circuit patterns, a red bridge-like structure, and a white rocket-like object on the right. The overall aesthetic is high-tech and visionary.

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*Your Bridge to the Future*

# TFI Broadband/Video/Wireless Forecast Update

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**TFI Communications Technology  
& Asset Valuation Conference**

January 26-27, 2017

Marriott Courtyard Downtown  
Austin, Texas

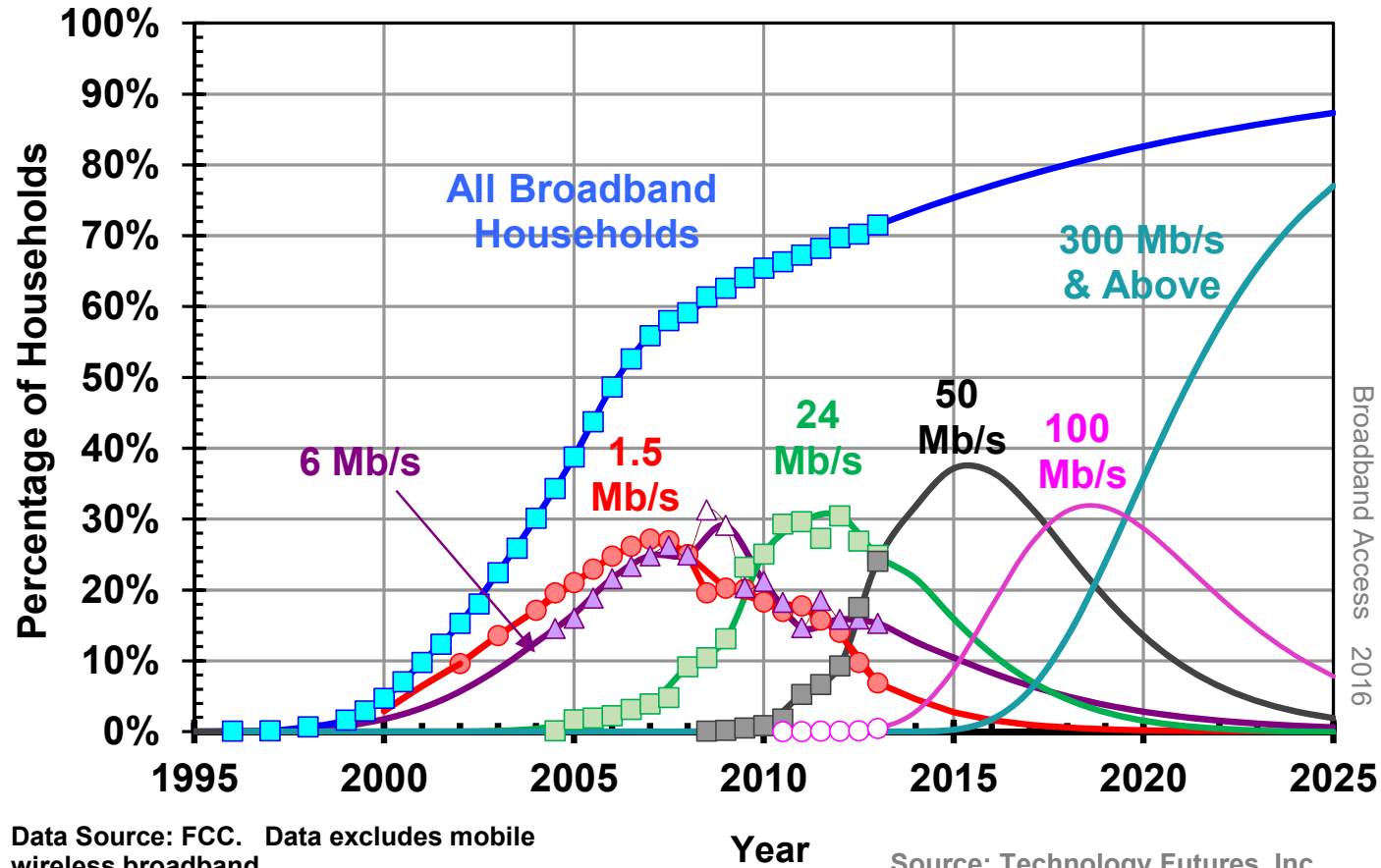
13740 Research Blvd., Bldg. C-1 • Austin, Texas 78750  
(512) 258-8898 • [www.tfi.com](http://www.tfi.com)

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# Industry Broadband Forecast

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# U.S. Broadband Lifecycles



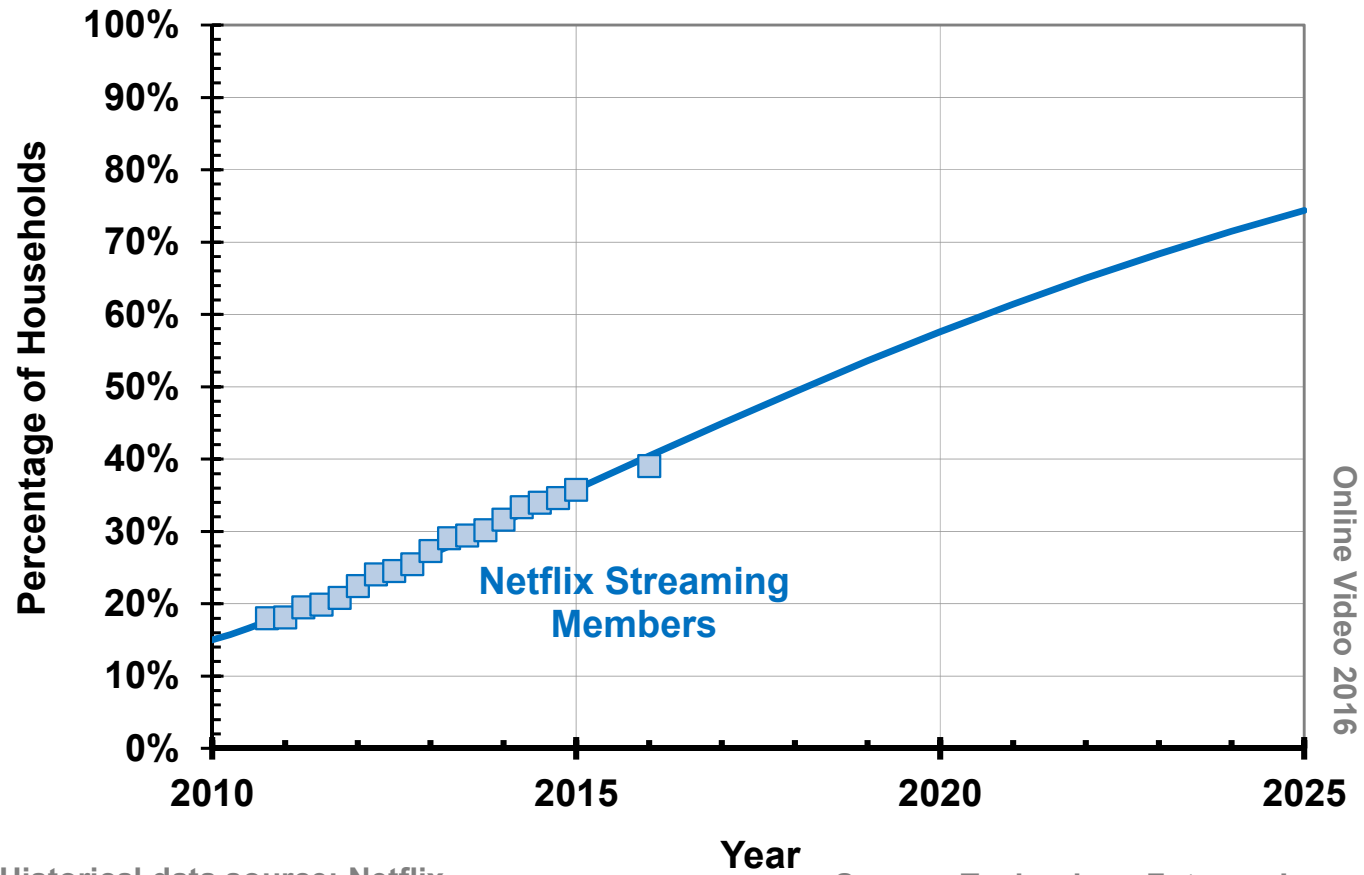
Lifecycle (t) =  
 Substitution (t) – Next Substitution (t)

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# Online Video Forecasts

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# Netflix Streaming Members, Domestic

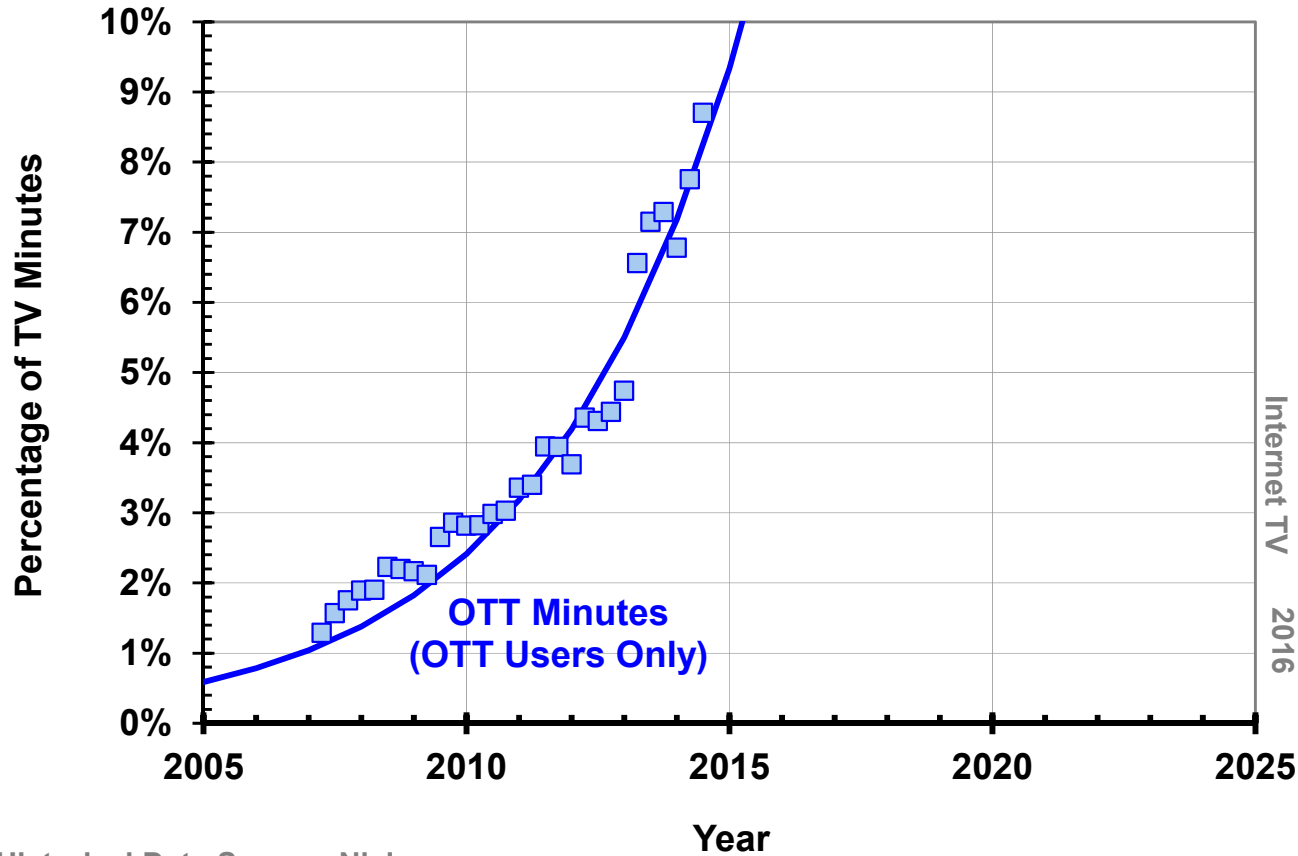


Historical data source: Netflix

Source: Technology Futures, Inc.

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# Online Video Minutes, Percent of Total TV Viewing (Scale to 10%)

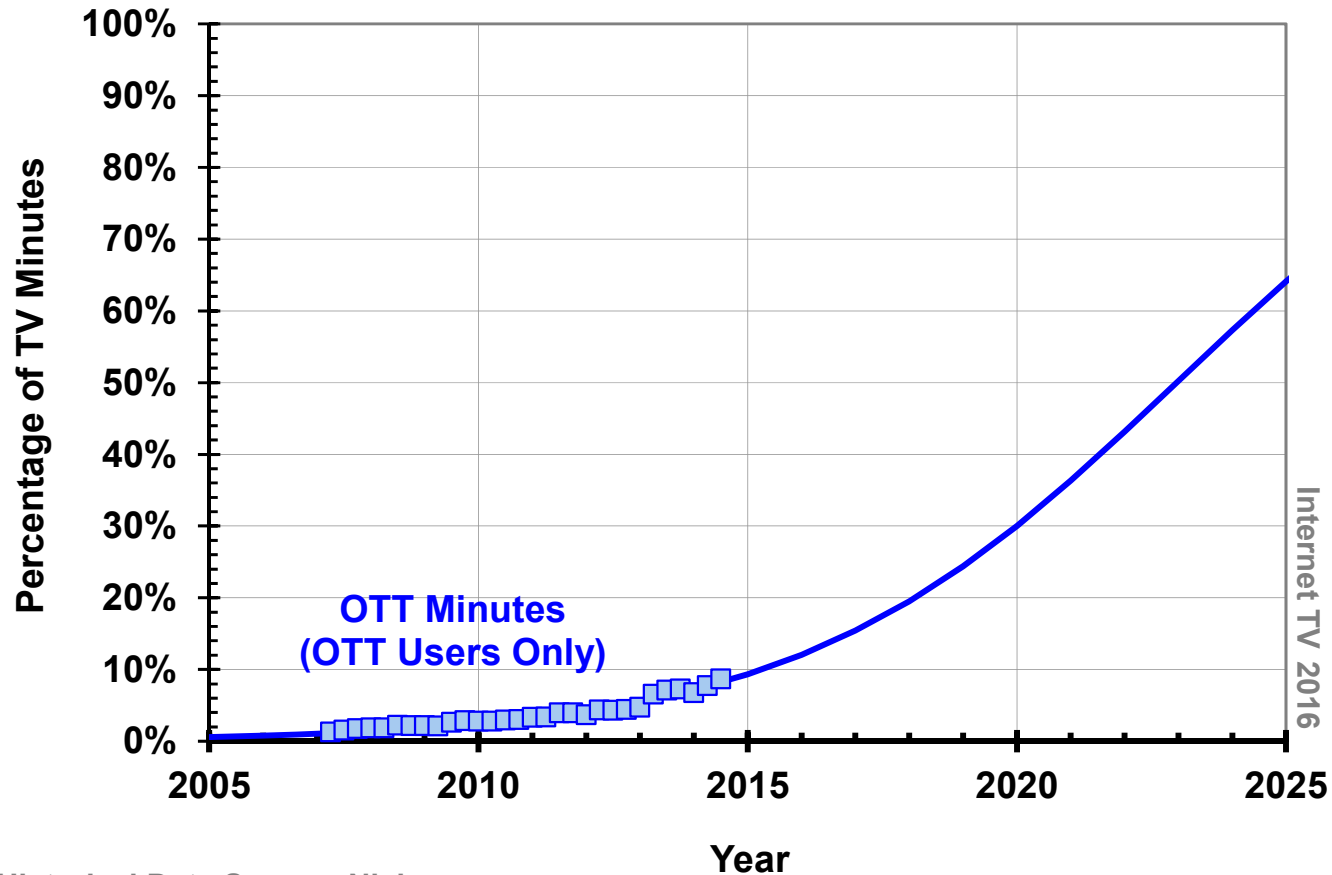


Historical Data Source: Nielsen

Source: Technology Futures, Inc.

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# Online Video Minutes, Percent of Total TV Viewing (Full Scale)



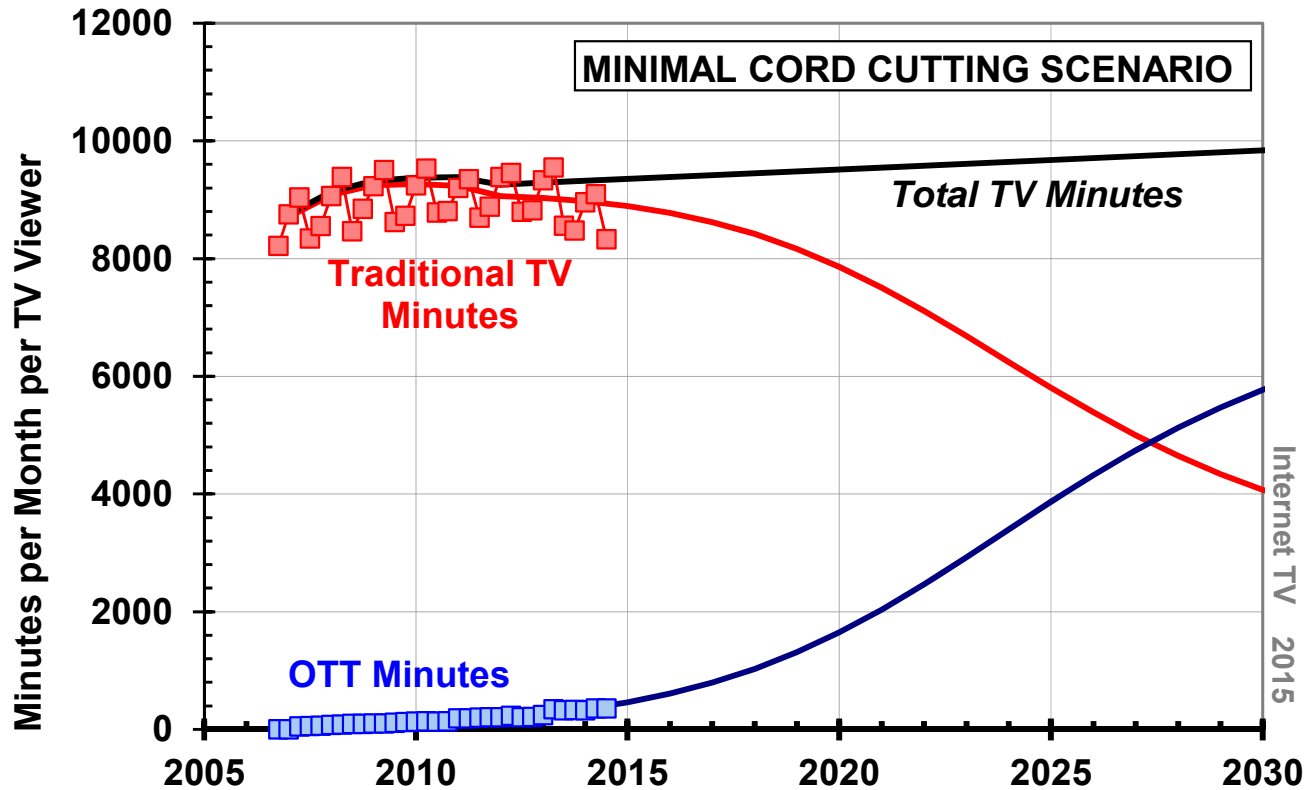
Historical Data Source: Nielsen

Source: Technology Futures, Inc.

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# Online Video Minutes vs Traditional Total TV Minutes



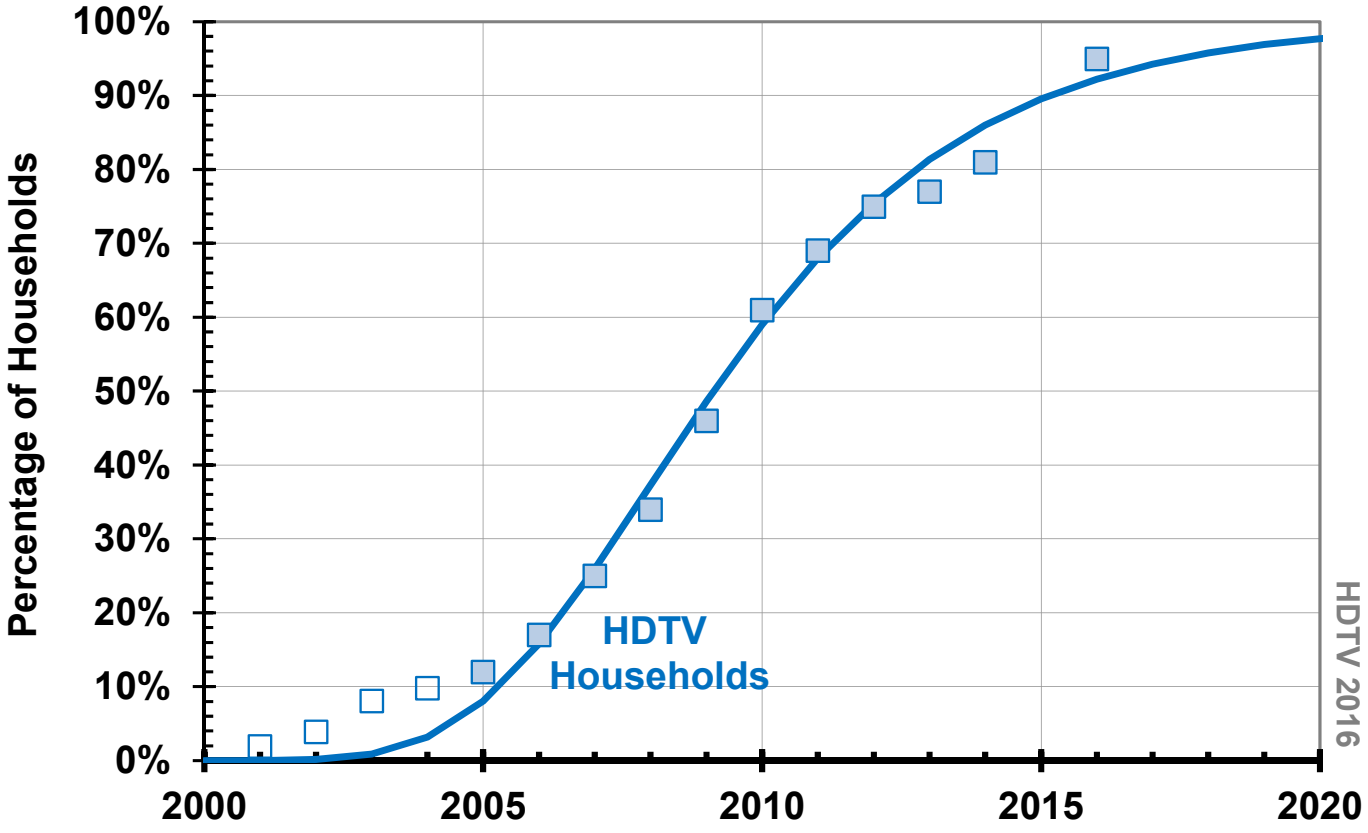
Historical Data Source: Nielsen

Year

Source: Technology Futures, Inc.

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# HDTV Households

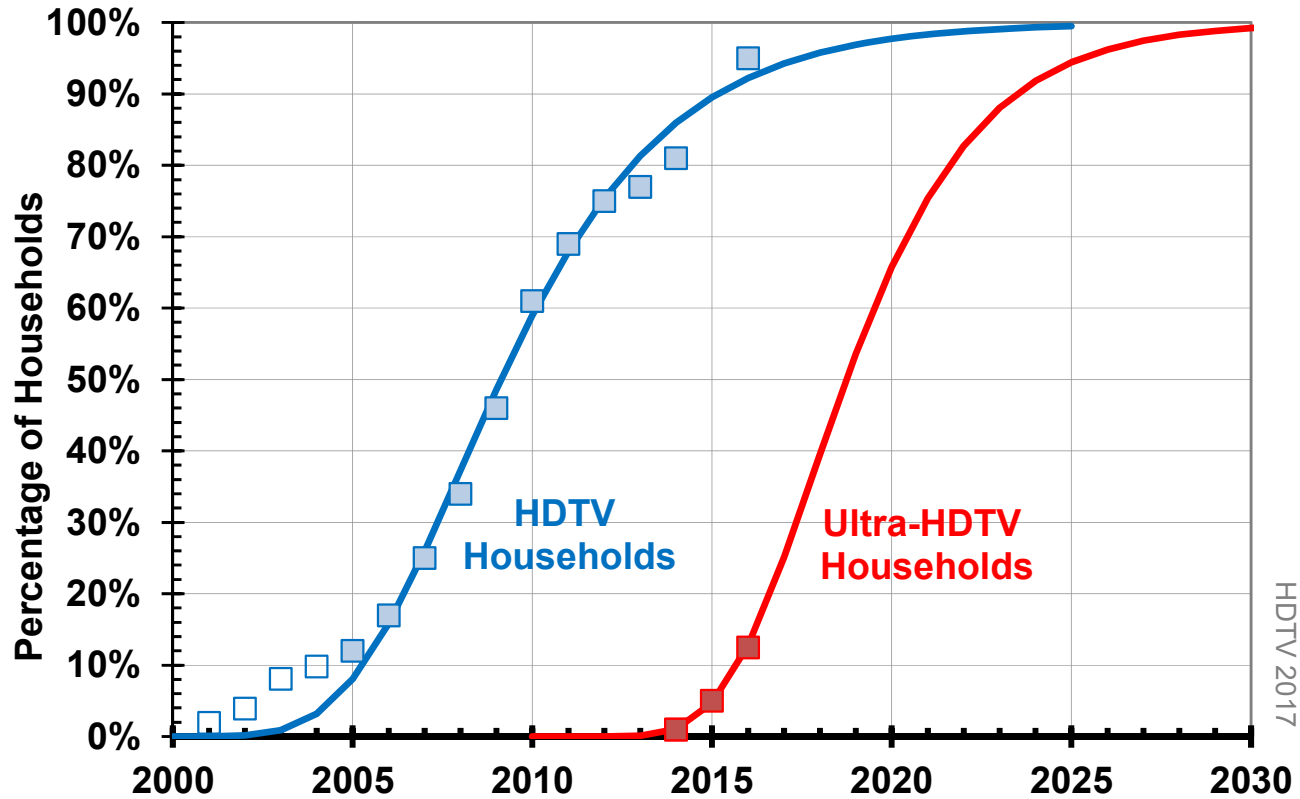


Historical data sources: 2001-2004 Misc,  
2005-2015 Leichtman Research

Source: Technology Futures, Inc.



# Ultra-HD Households (aka 4K)



Historical data sources: 2001-2004 Misc,  
2005-2015 Leichtman Research

Year

Source: Technology Futures, Inc.

UHDTV Data Source (Red Squares): Strategy Analytics

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**Netflix SD Stream = ~ 2 Mb/s**

**Netflix HD Stream = ~ 4 Mb/s**

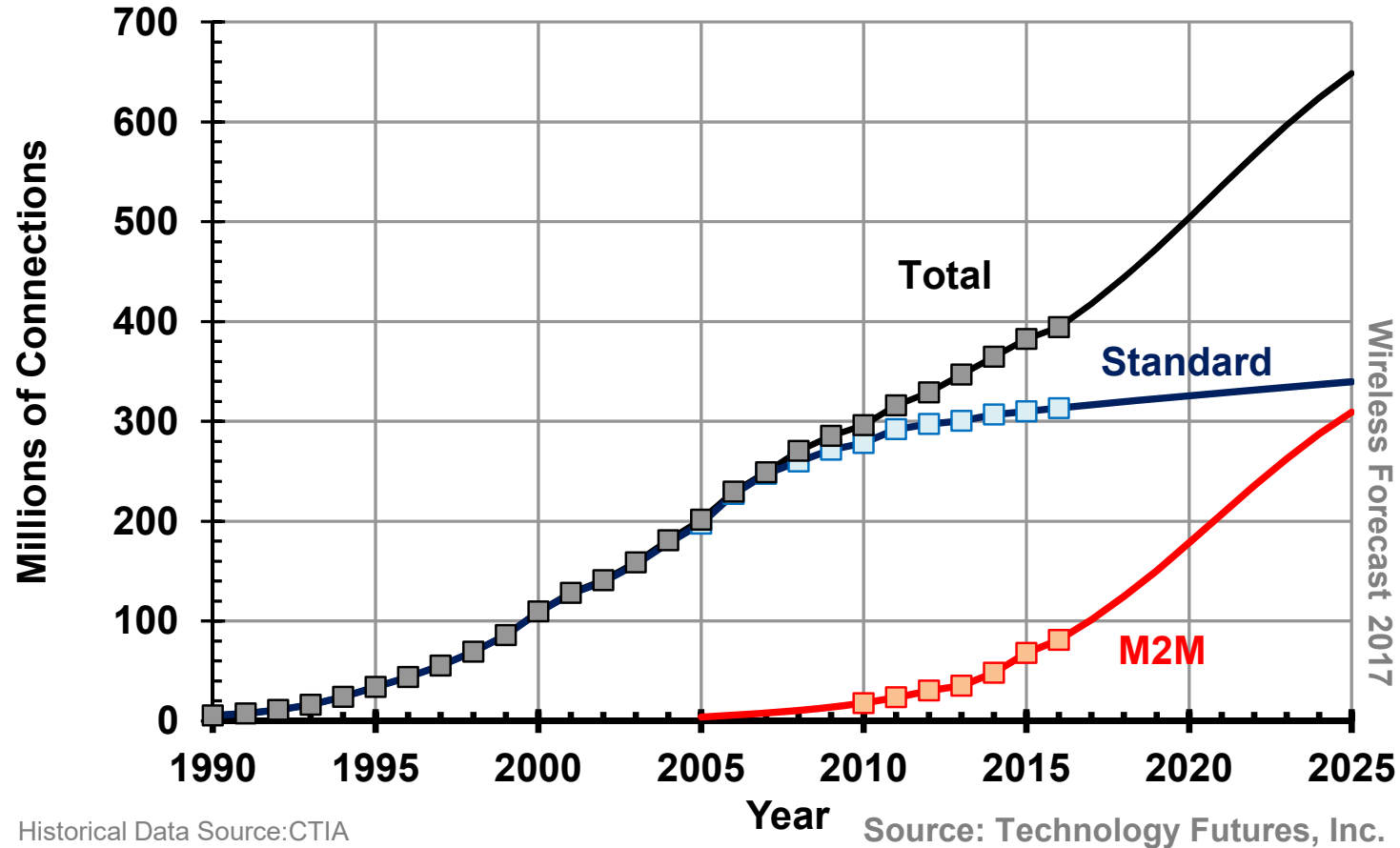
**Netflix 4K Stream = ~ 18 Mb/s**

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# Industry Wireless Forecast

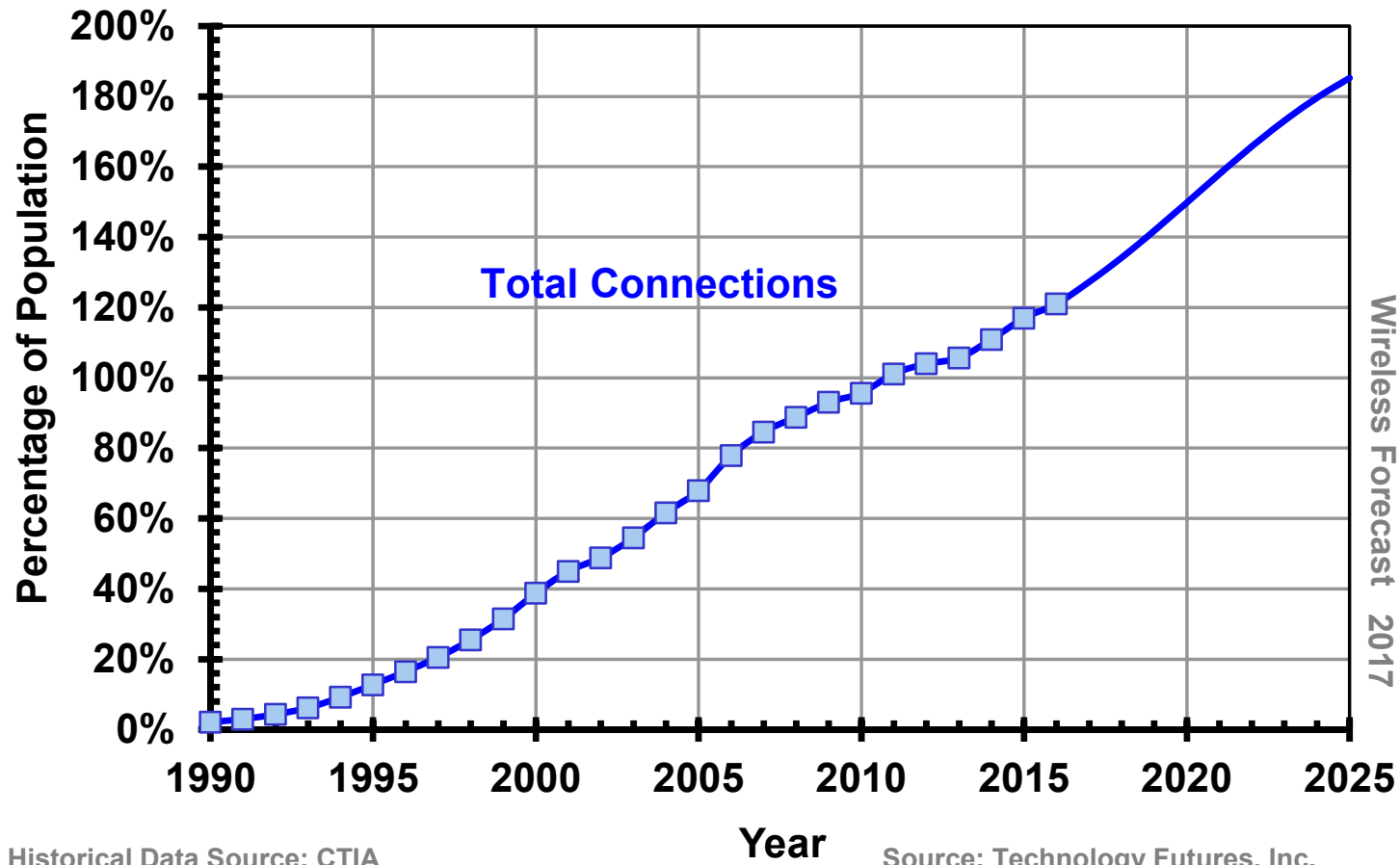
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# 2017 TFI Wireless Connection Forecast



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# U.S. Cellular Connections, Percentage of Population

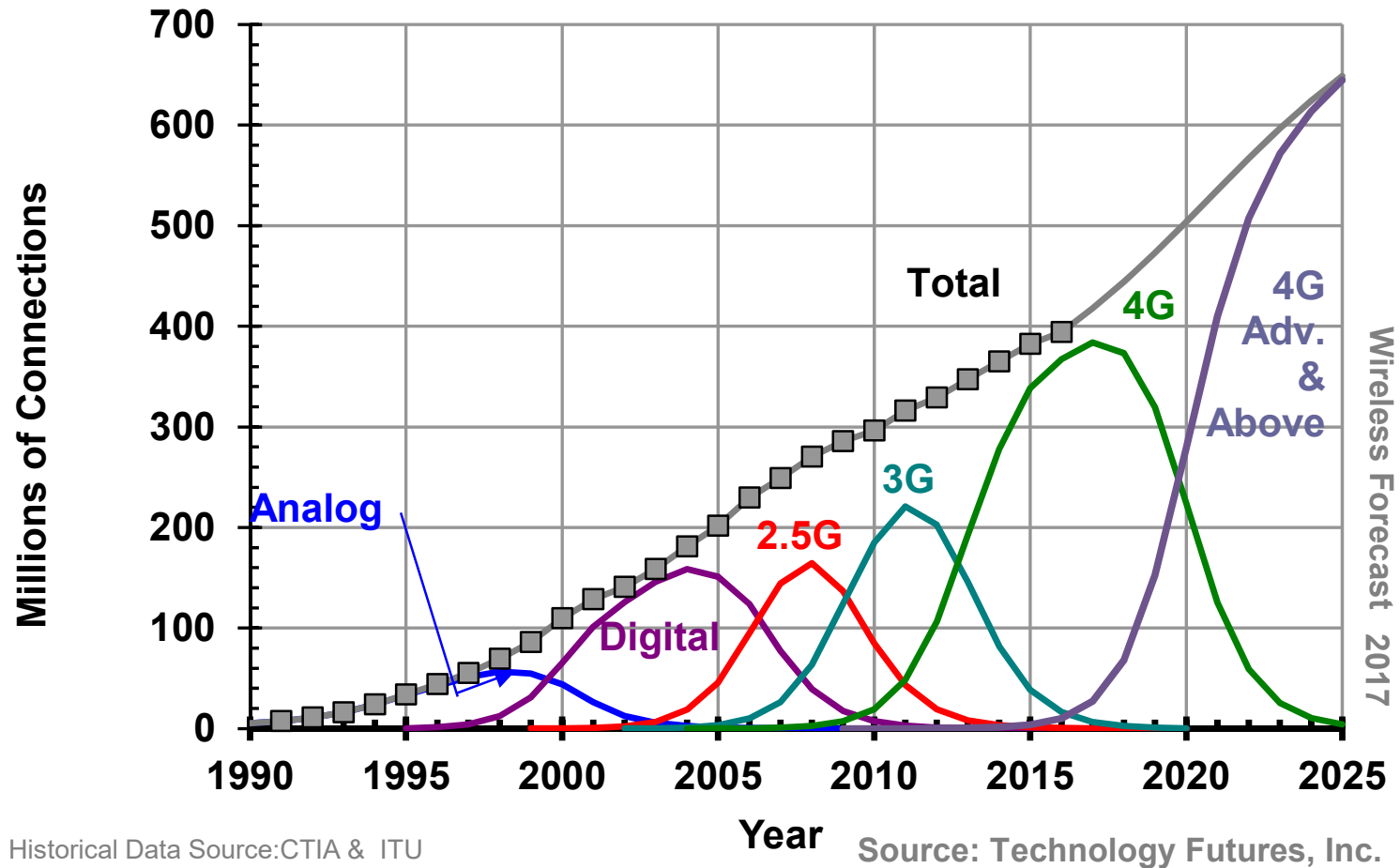


Historical Data Source: CTIA

Source: Technology Futures, Inc.

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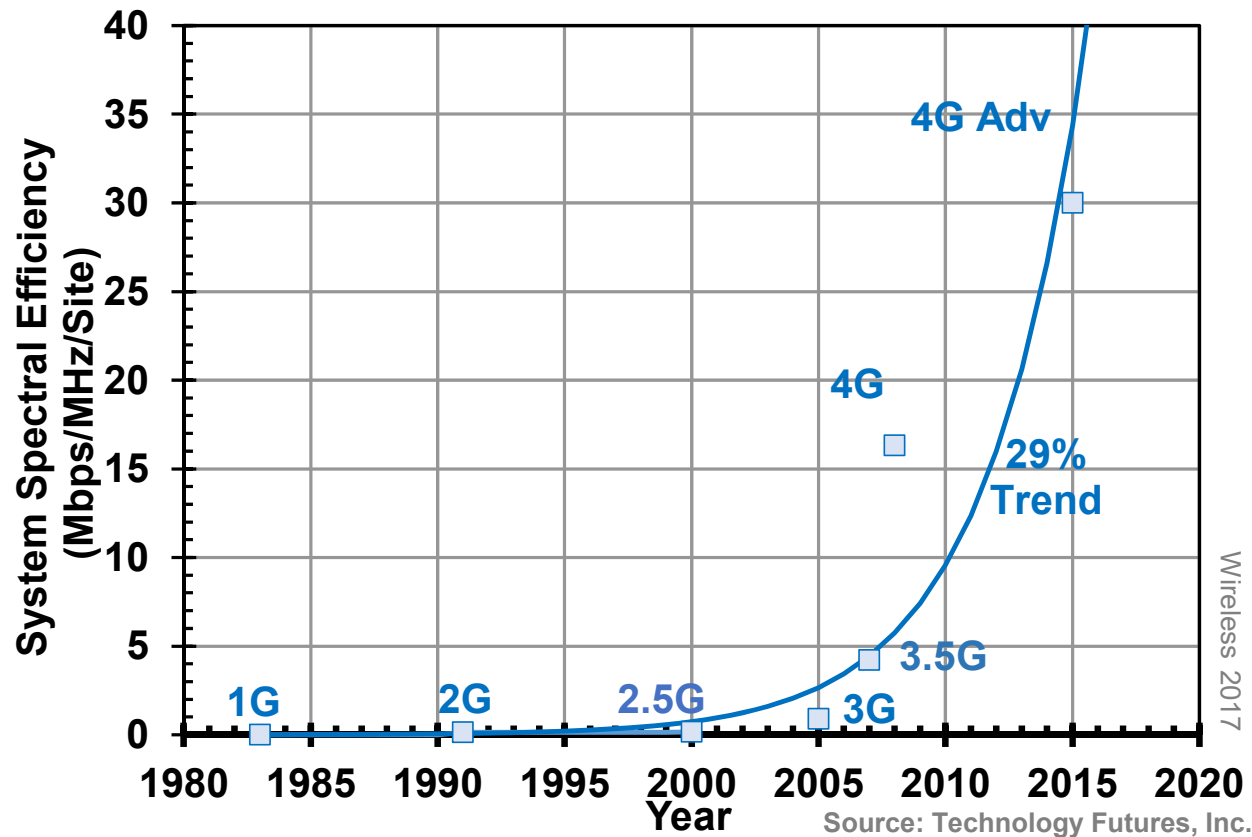
# 2016 TFI Wireless Generations Forecast



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# Performance Improvements of Cellular Wireless Generations



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A stylized graphic of a bridge with two arches, rendered in a light blue color. The bridge is positioned behind the main company name. Two thick, diagonal lines, one light blue and one light red, cross the page from the bottom left towards the top right, passing behind the bridge graphic.

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