



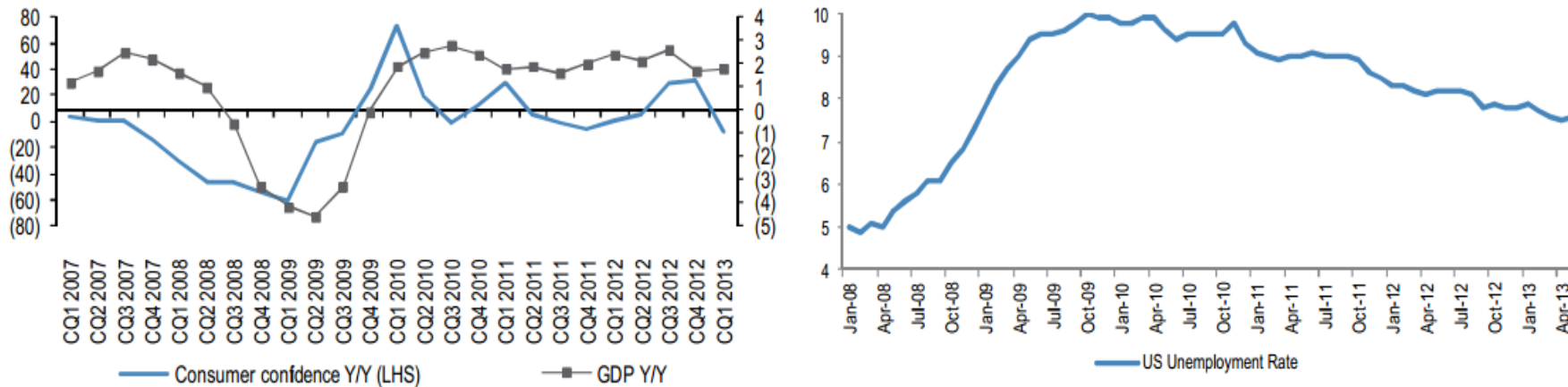
Powering Opportunity Everywhere:
Embracing New Service Models in a Mobile, Virtual
World

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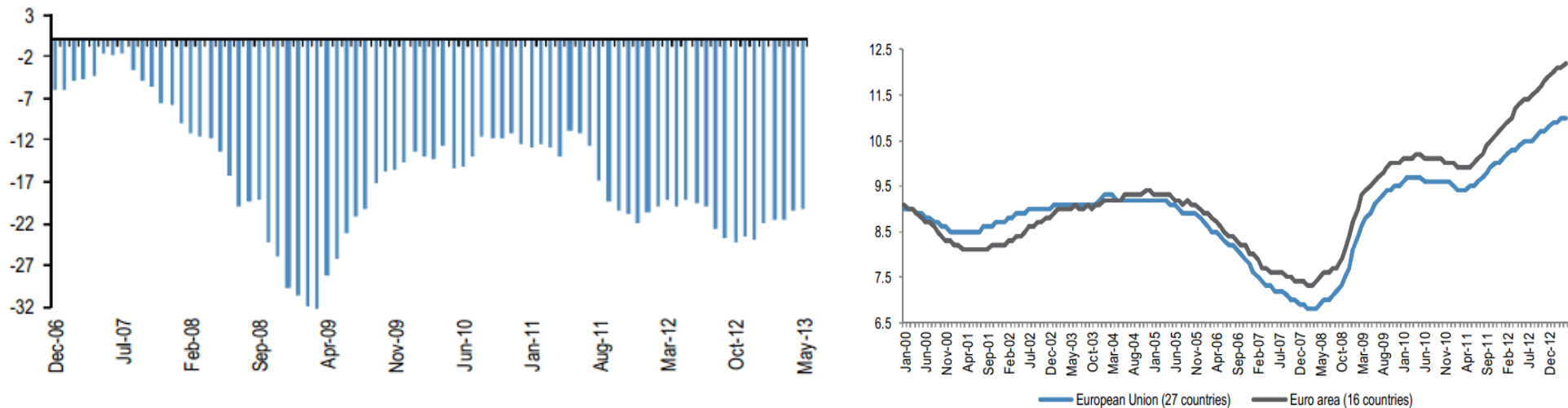
Twitter: @rmota

Economic Uncertainty

US

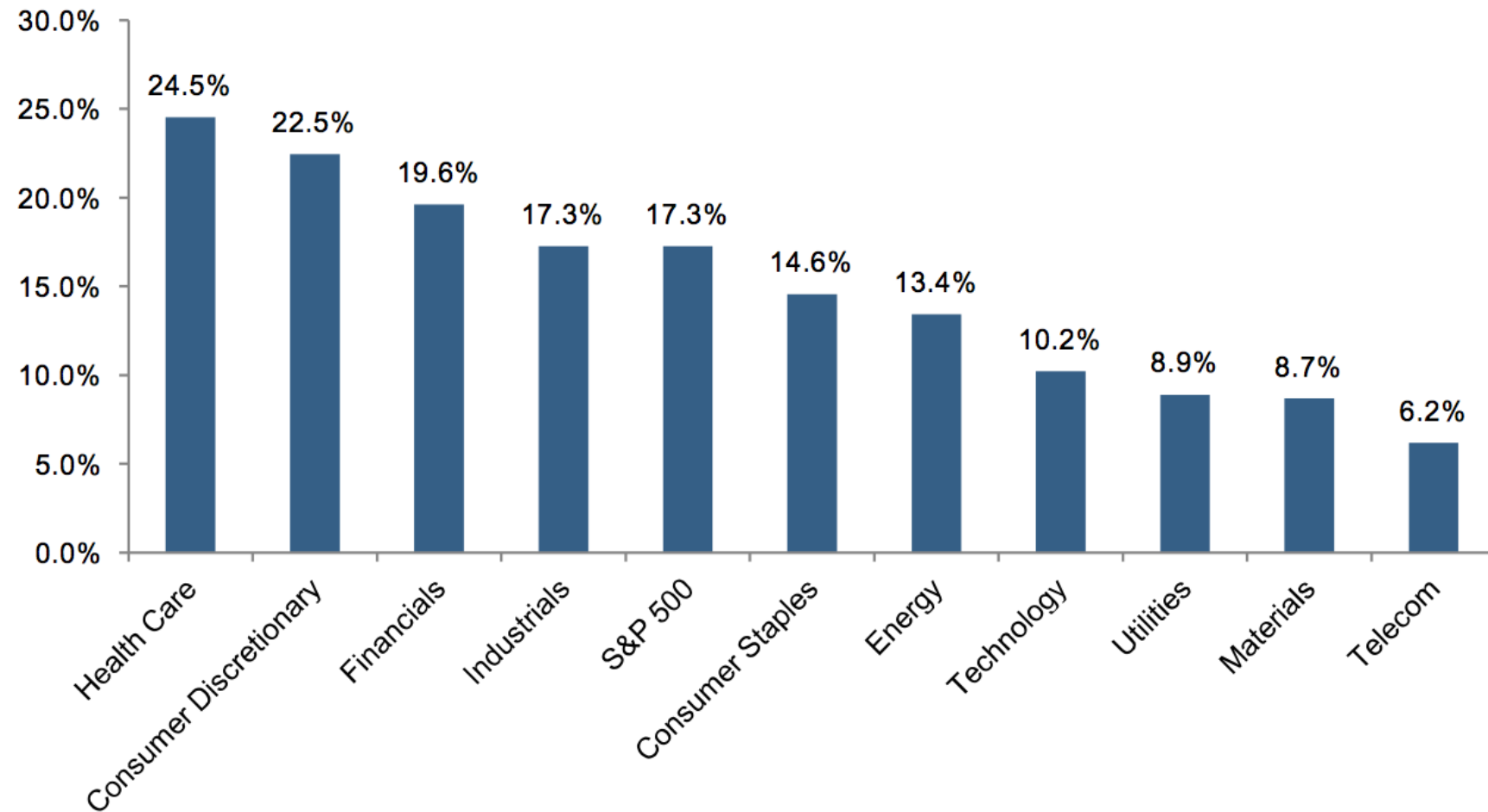


Europe



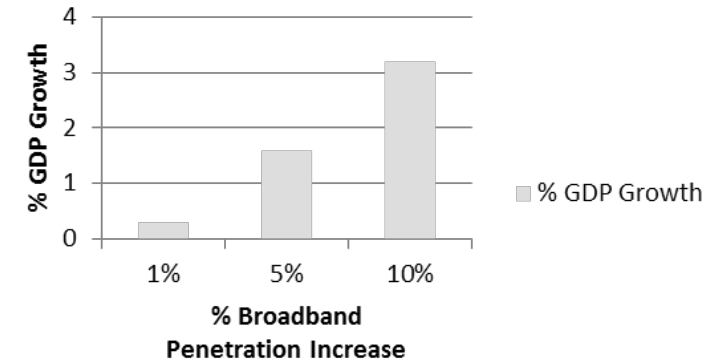
World GDP growth of 4.0% in 2011 fell to 3.2% in 2012. The IMF sees 3.3% growth in 2013

S&P 500 Performance by Sector (YTD)

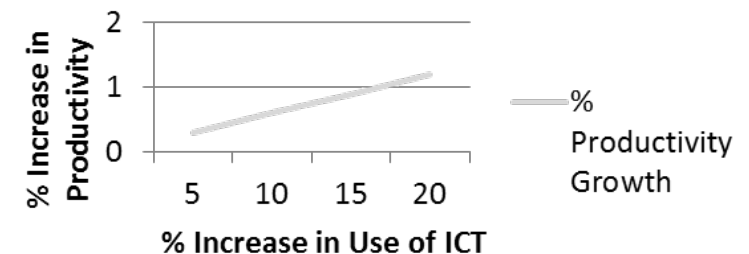


The Benefits of Doing More

- Studies estimate a 1.6% increase in regional GDPs with every 5% increase in broadband service penetration (integrated across consumer, business, mobile and fixed)
 - Source: 'Latin America Insights 2013', Monica Zlotogorski, Telesperience, and Annie Turner, TMF

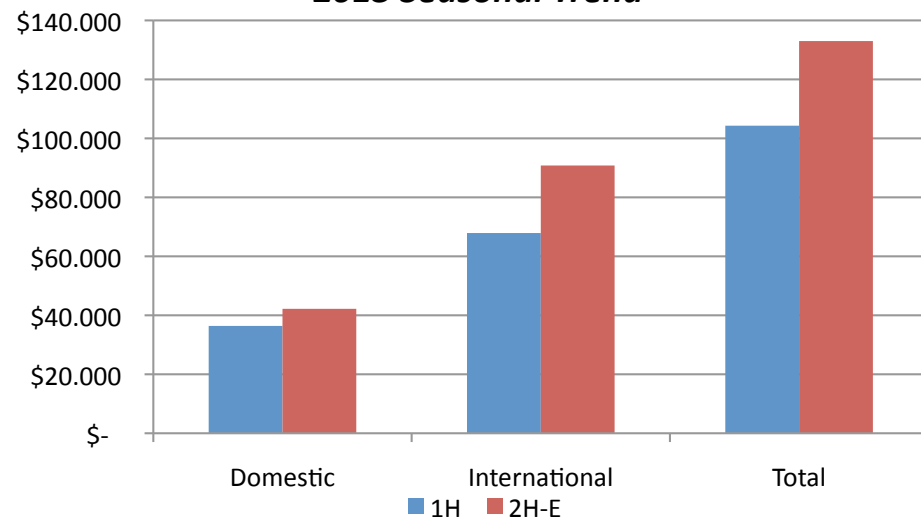


- Studies also show firms who increase their use of ICT by 10% increase their productivity on average 0.6%
 - Source: 'Information and Communication Technologies and Productivity Growth', T. Kretschmer, OECD Digital Economy Papers, 2012

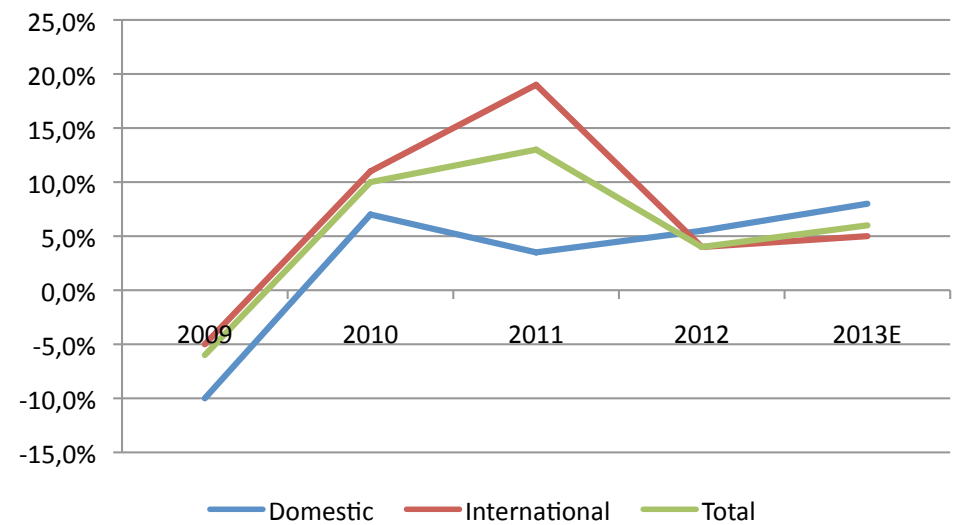


- 29% of IT directors surveyed in a Q1 2013 study said their use of public cloud services would increase in 2013 ..
 - And 50% of those said their preferred supplier for public cloud IT is an existing telecom or managed services provider (vs pure play cloud, vendor-based cloud, or SI/VAR delivered cloud)
 - Source: '2013 Latin America IT Priorities', Tech Target, February 2013

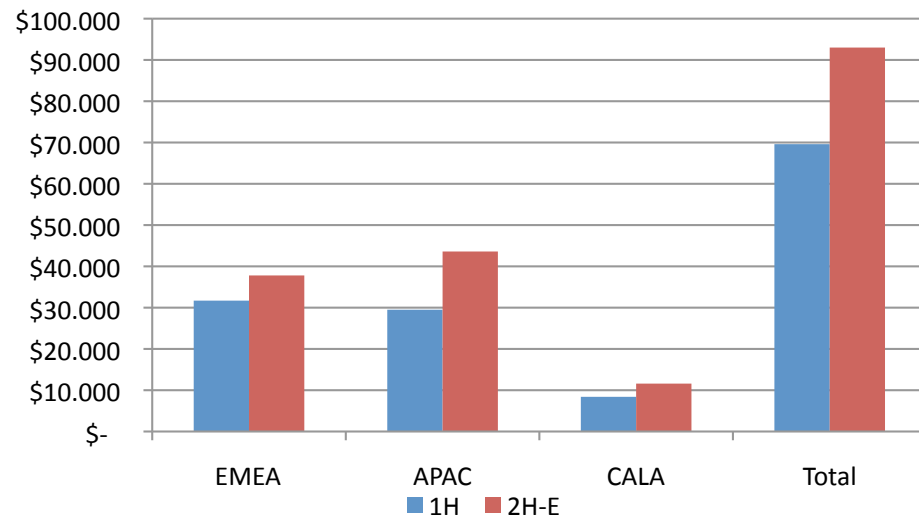
Global Capex Trends
2013 Seasonal Trend



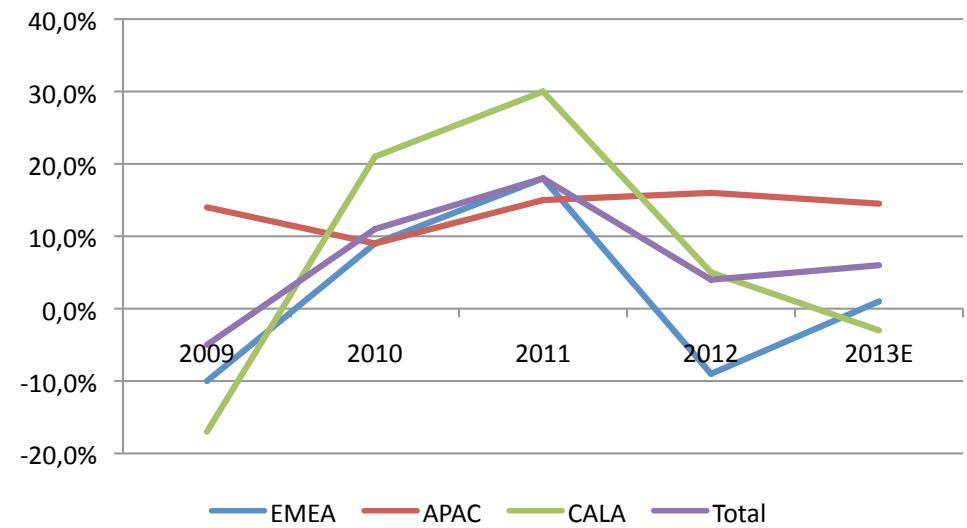
Capex Yr/Yr Growth



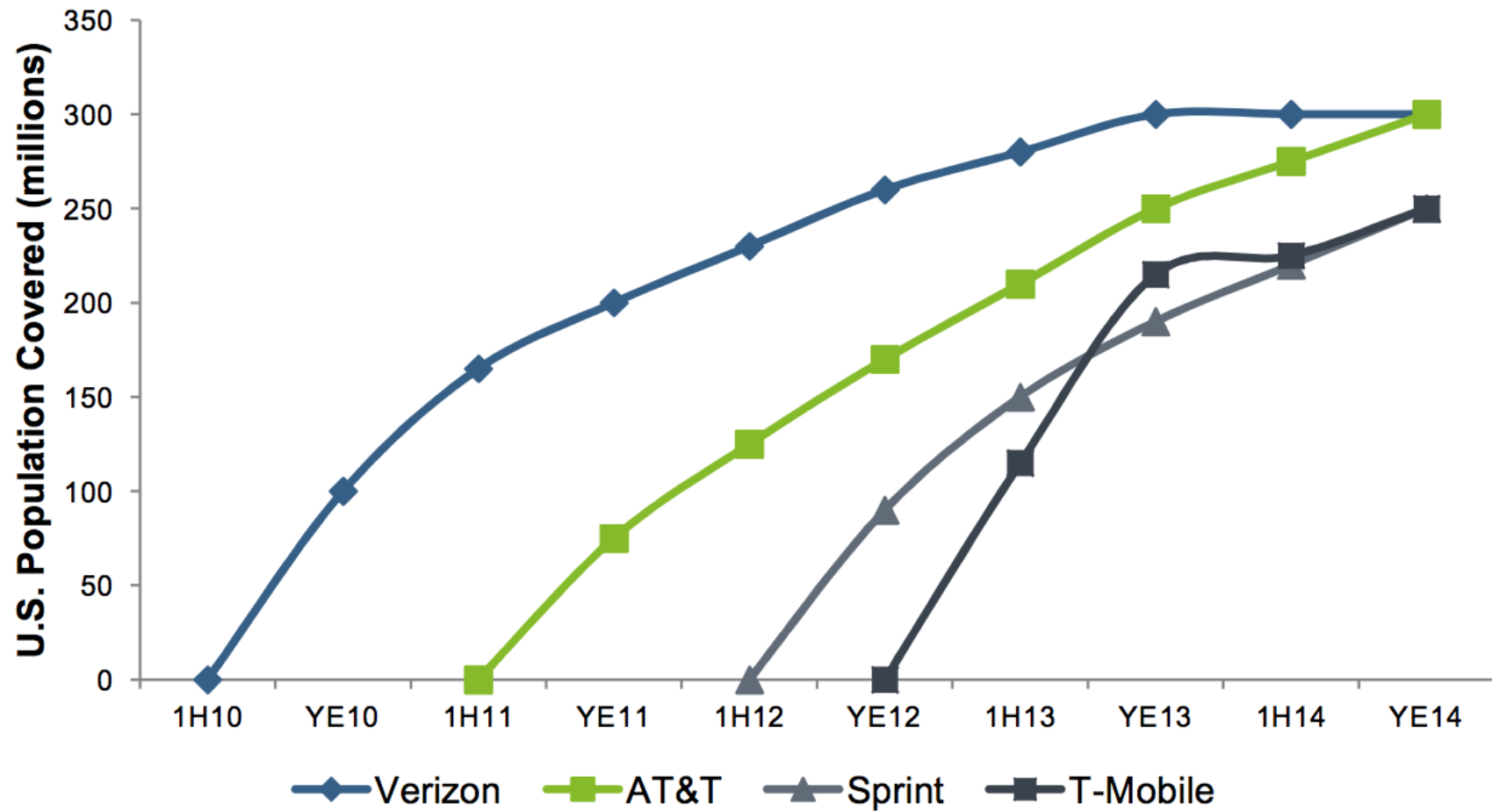
**International Capex Trends by Region
2013 Seasonal Trend**



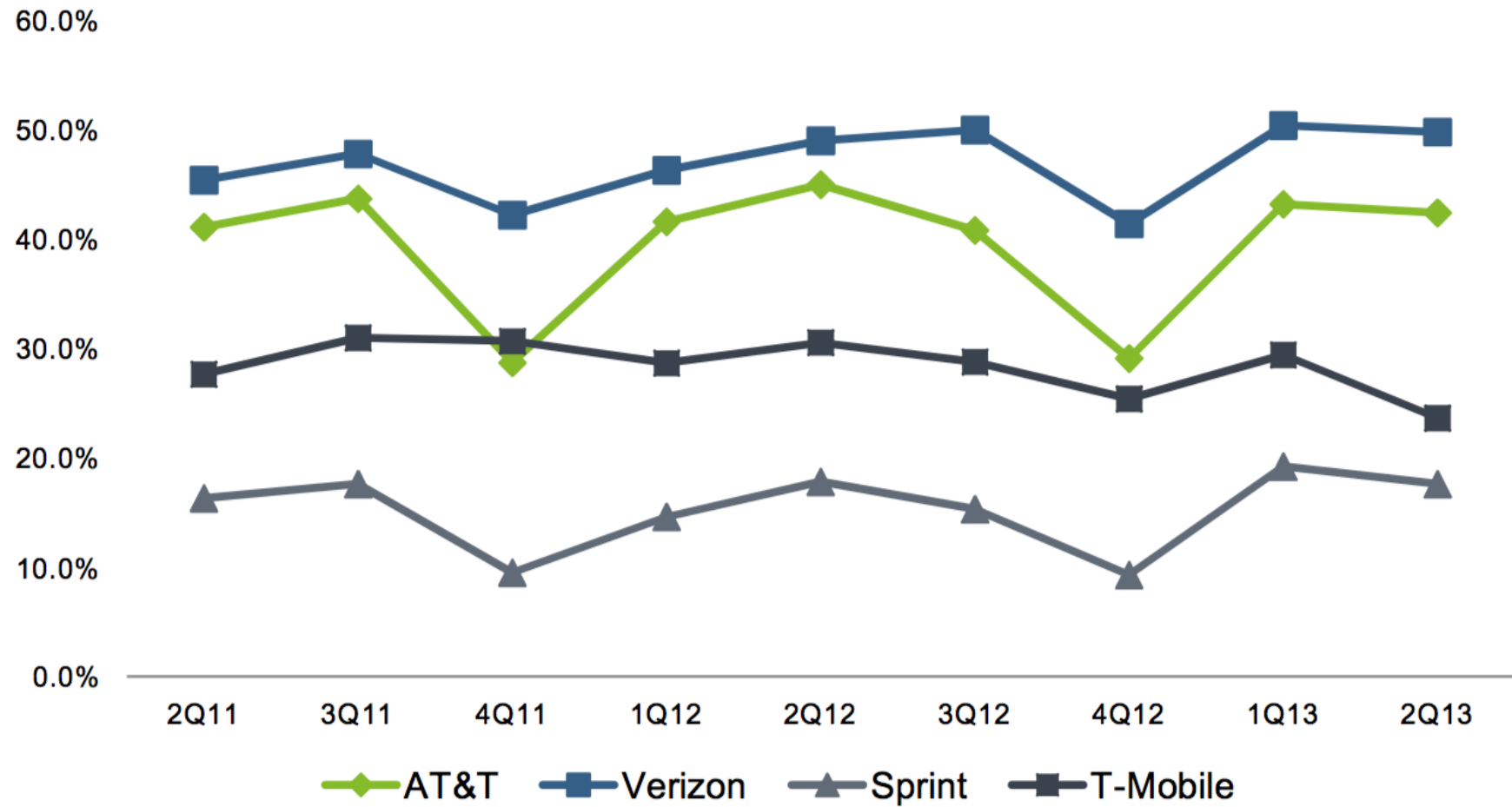
Capex Yr/Yr Growth



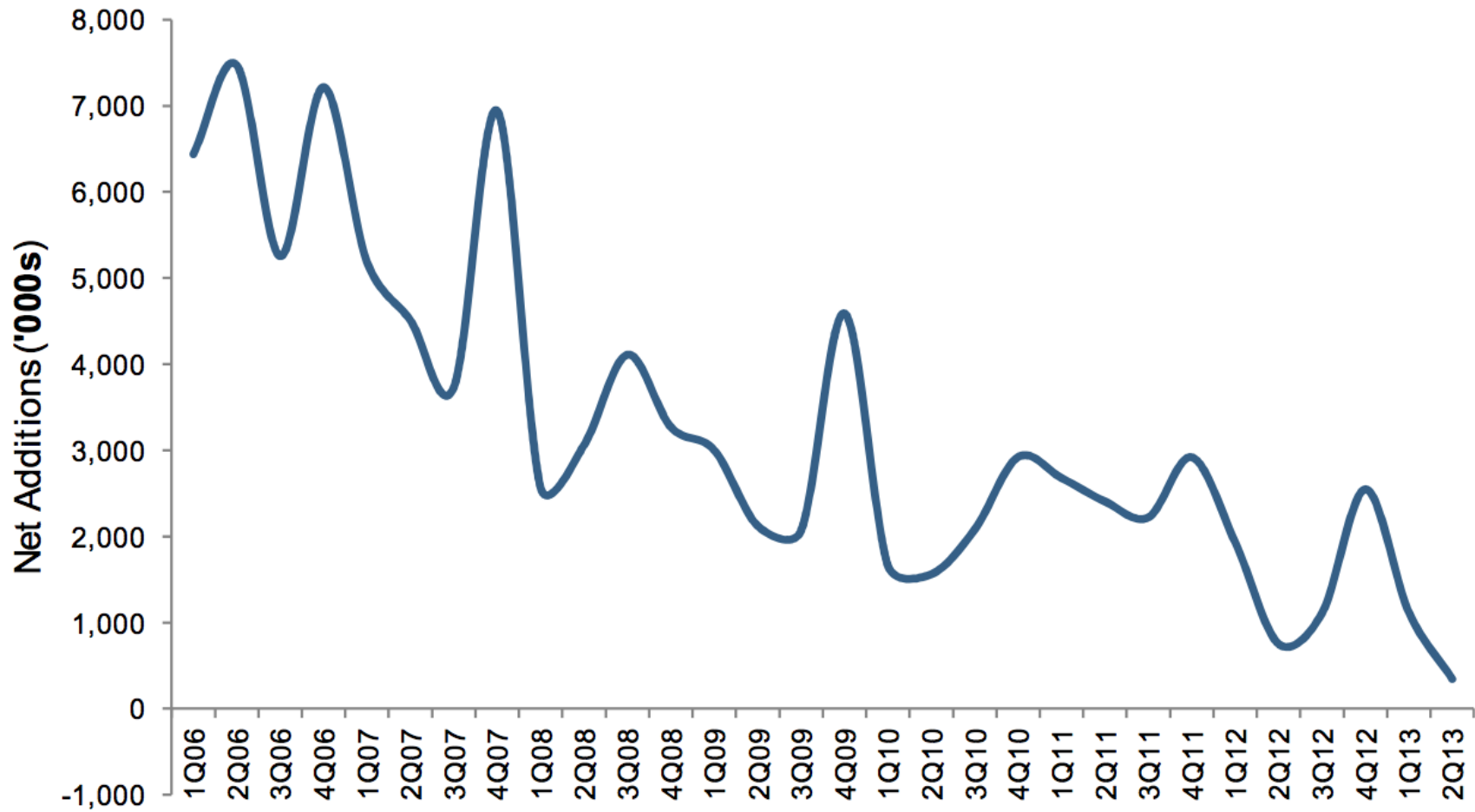
4G LTE Coverage



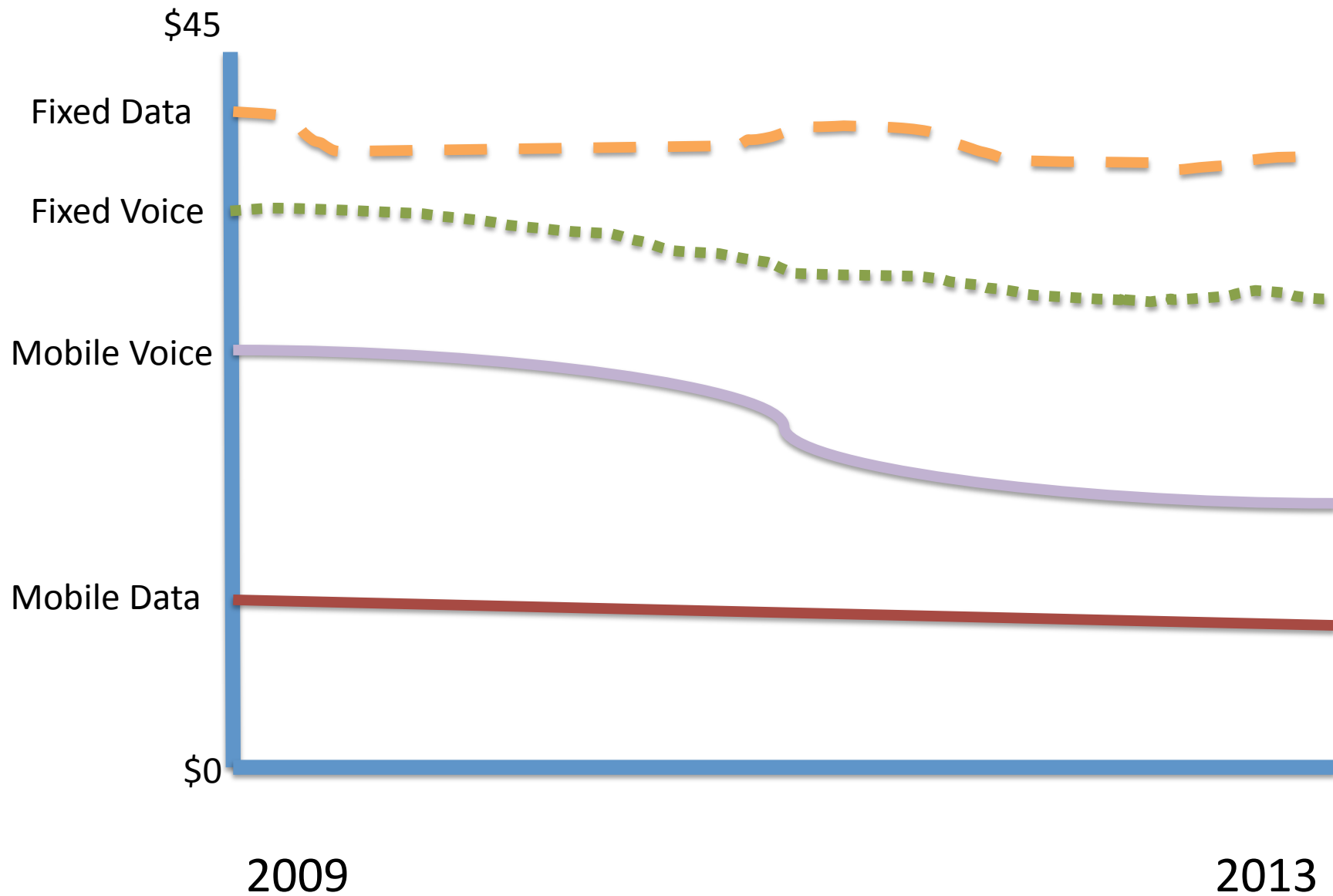
Big 4 Wireless Margins Trends



Wireless Subscriber Net Adds (U.S.)

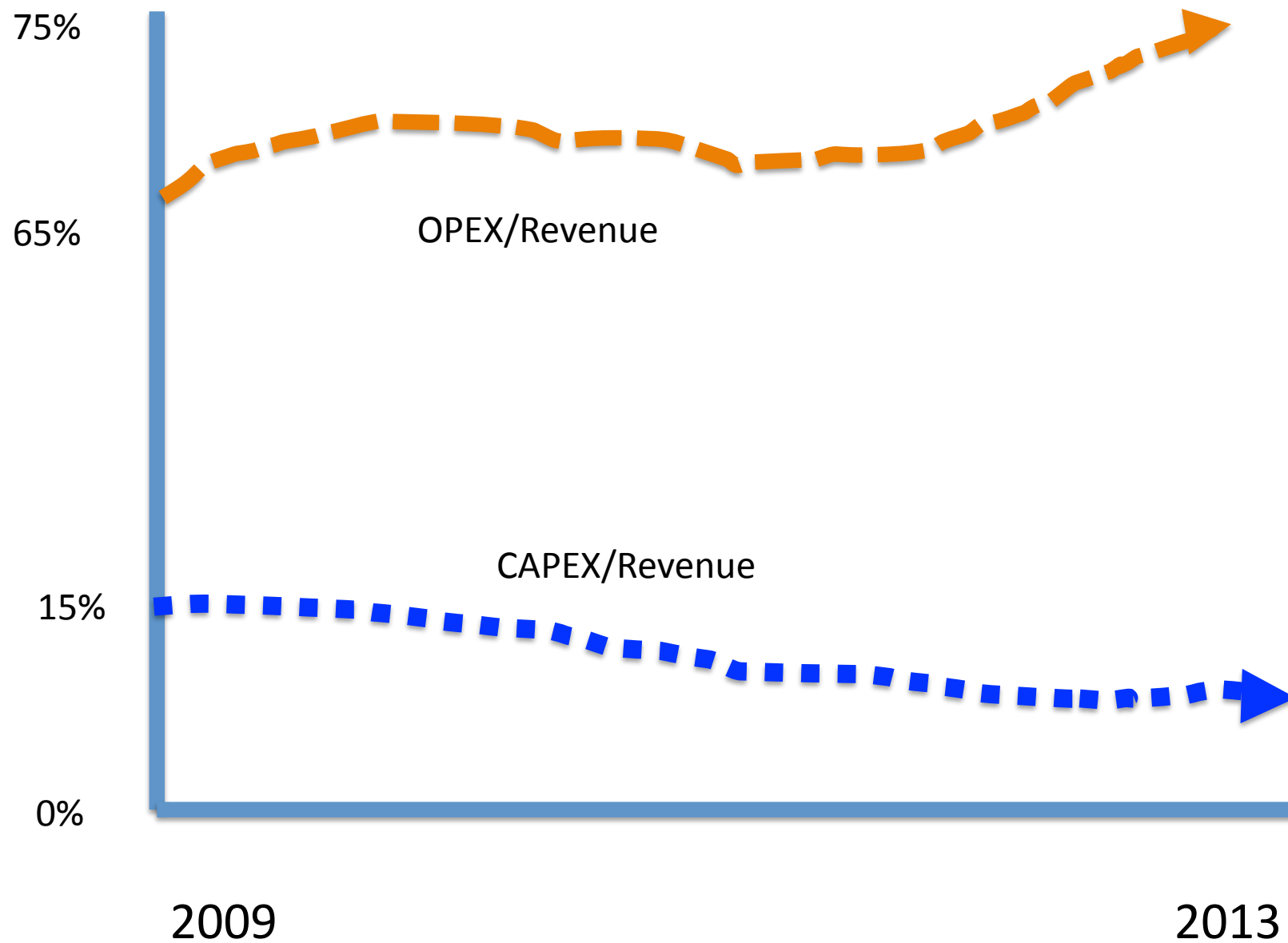


Service Provider - ARPU



Think APPU

Service Provider – Cost and Profits

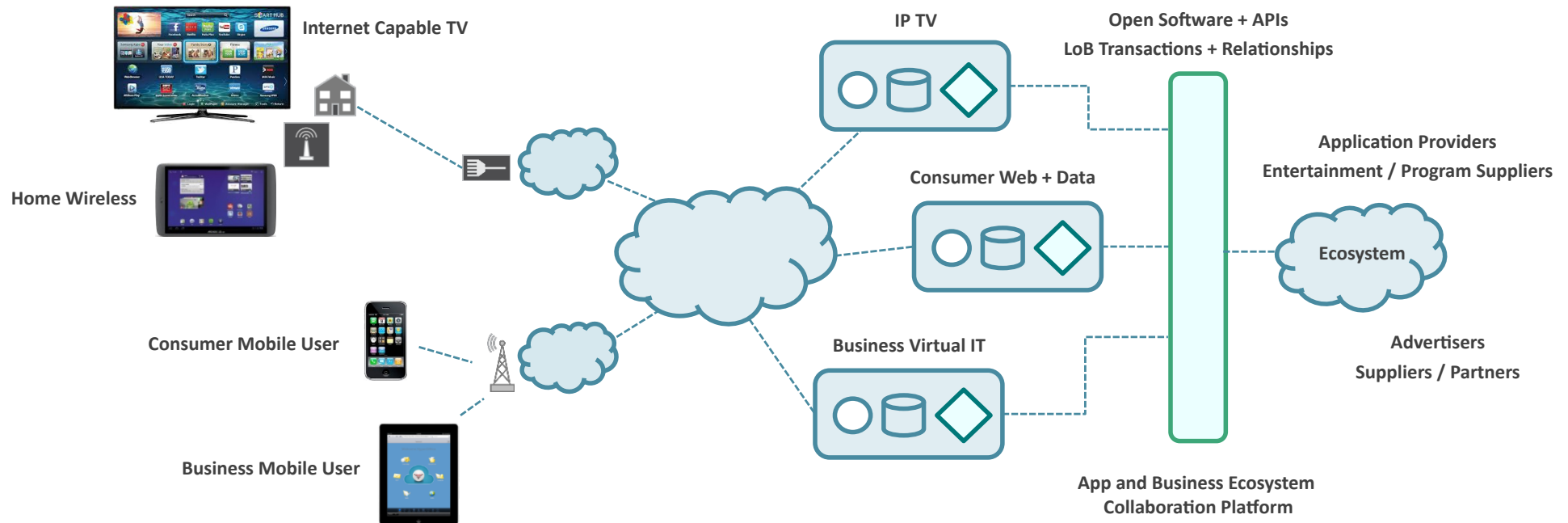


ARE YOU
SURE THIS IS
HOW WE GET
DATA INTO
THE CLOUD?

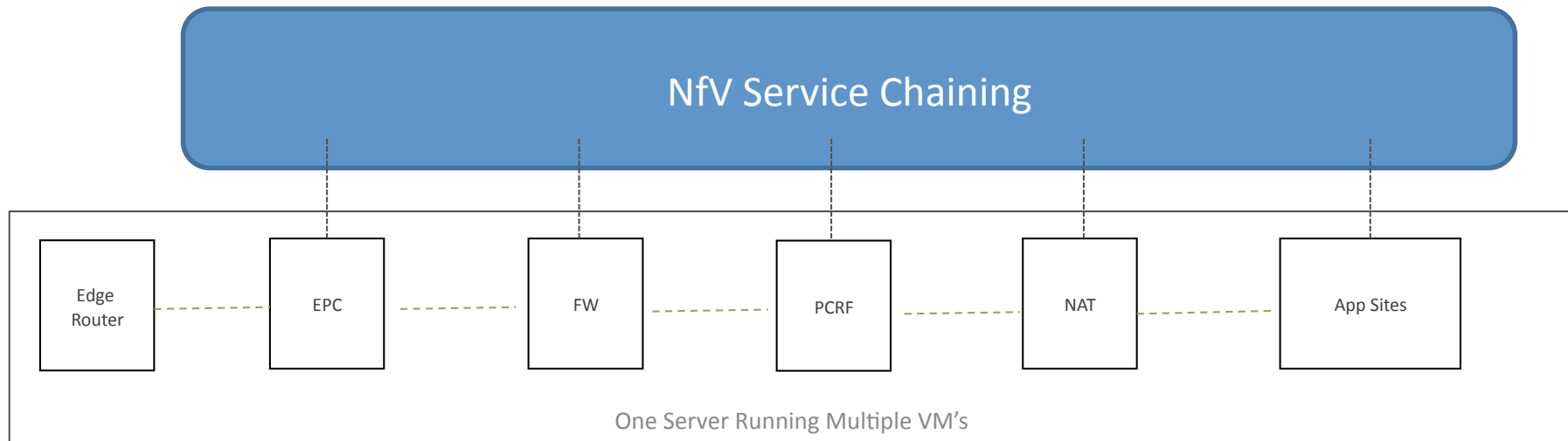


| <u>DC Virtualization</u> | <u>WAN Virtualization</u> | <u>Traffic Steering - SP & Ent</u> | <u>Network Performance Improvement</u> |
|--|--|---|--|
| Enterprise campus | Private DC interconnect - R&S between DC's by assigning VM's, looks like single DC | Security steering into FW - by customer | Latency Computation |
| SP networks | Is a use case where you can use OpenFlow to provide dynamic traffic steering between datacenters over the WAN via centralized traffic engineering with an OpenFlow Controller. | Network Analytics | Optimized video traffic management |
| | SP mobile access | Network monitoring-virtual patch panel | Bandwidth on Demand |
| Cloud gateway for VPN services | SP wired WAN | Data mining | Multilayer Optimization - Packet Optical |
| Campus network slicing - private networks on one full network R&E - meteorology, physics, film VGI, | | Offline TE and planning | Self service provisioning |
| Enterprise private cloud | | CALEA tool | Flexible fabric for OTT services |
| Enterprise private security | | Probe traffic collection | |
| Enterprise private access | | Application delivery/load balancing | |
| Enterprise private WAN - inter DC | | SLA management | |
| | | Parental control | |

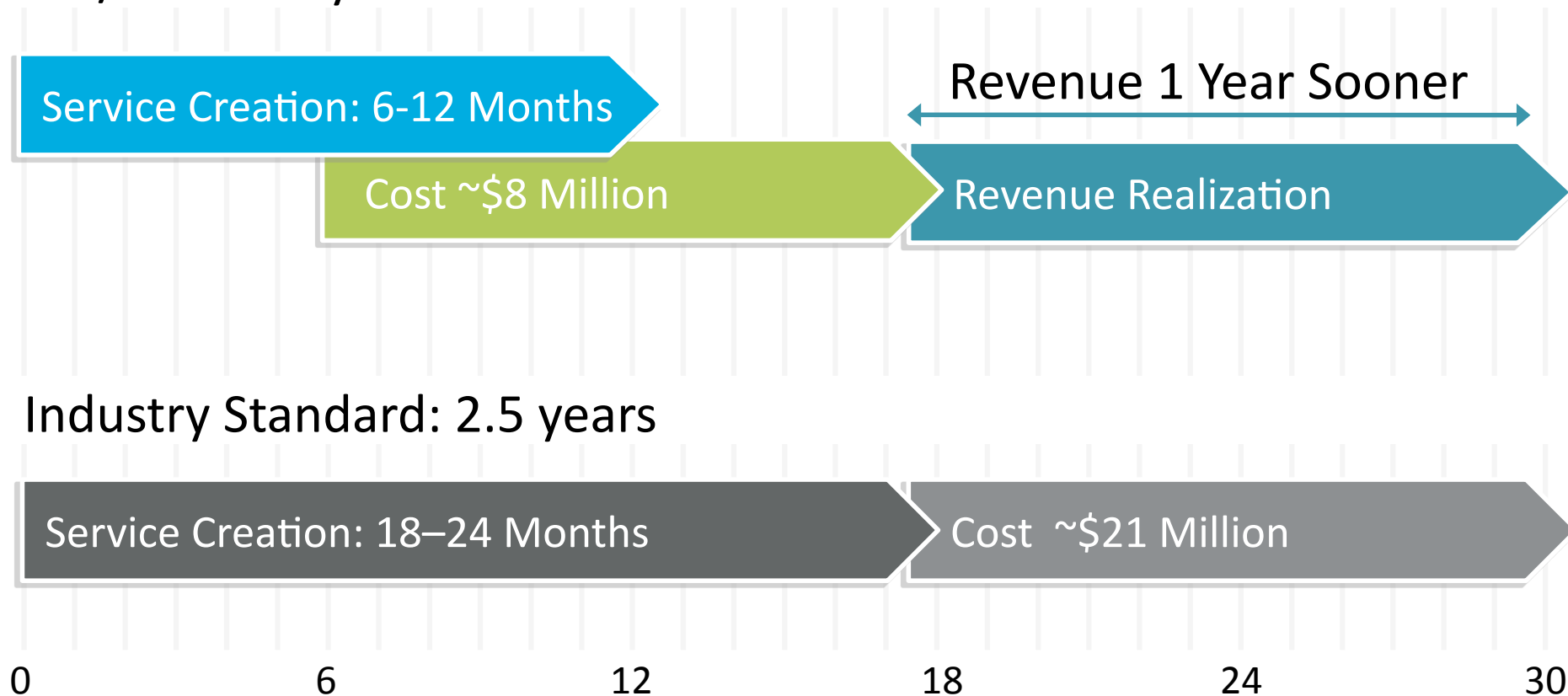
Use Case: Open Online Marketplace for Applications, Programming, and Business Development (European Operator)



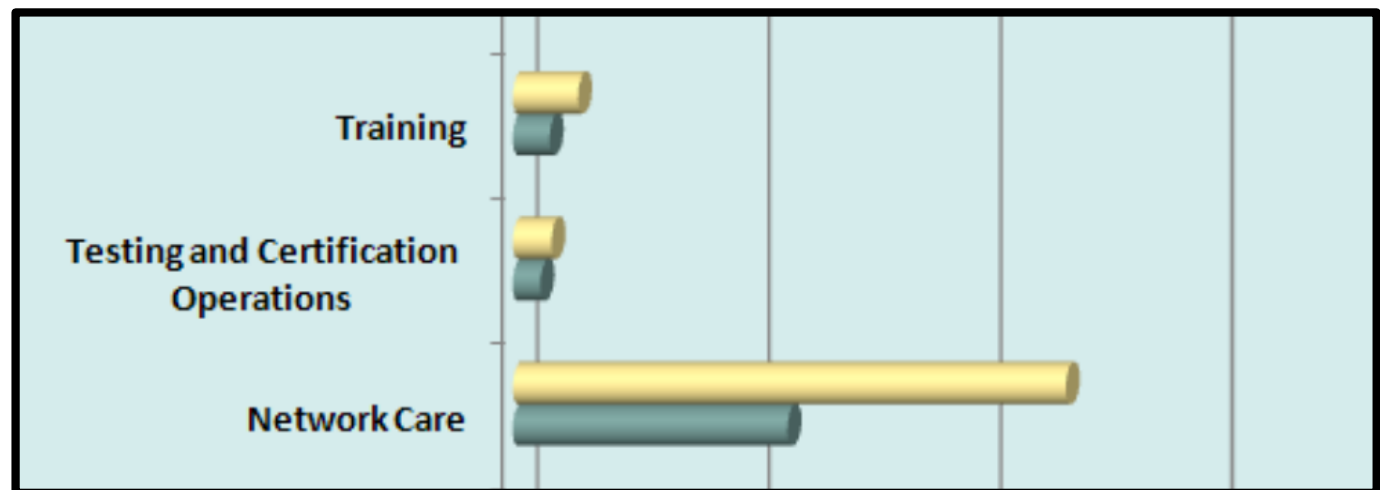
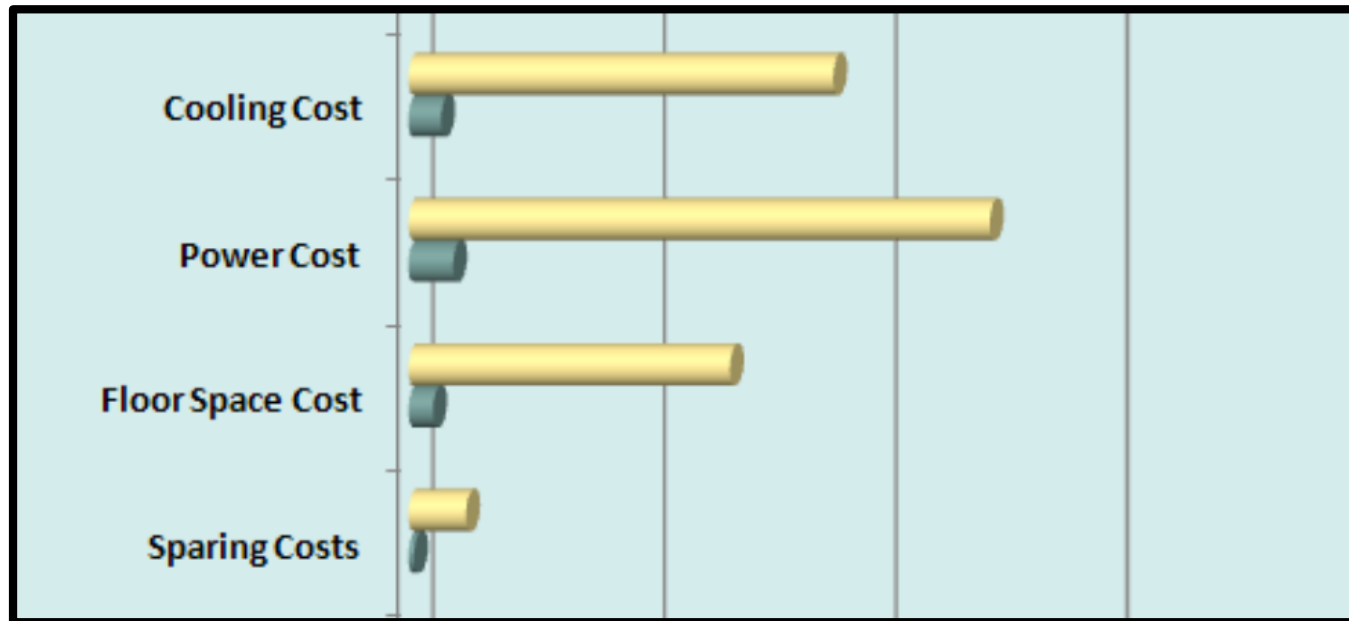
- Operator's software provides open interfaces + transactions for both consumer and business markets (TV, fixed + mobile broadband formats for consumer; platform, sector + supply chain formats for business)
- Subscriber self-service and multi-screen delivery provide easy access + uptake
- Steady multi-double digit growth in IP TV subscriptions, IP TV add-on apps, mobile phone subscriptions + add-on apps, and business apps subscriptions and advertising revenues has resulted
- Overall footprint (broadband uptake), breadth of catalogue, and mix of revenue sources for the operator have increased ..
- .. nearly all software-driven!



Nfv/SDN: 1.2 years



Five-Year Cumulative Operations Expense Comparison



Market in Transition: Cloud/Virtual CPE

