New ACG Research Study Reveals Fixed Networks Face Nearly 4 Times Higher Per Subscriber Costs Despite Lower Per GB Rates

Comprehensive TCO Analysis Shows Just Nine Applications Drive 92% of Fixed Network Traffic Costs, with Netflix and YouTube Leading the Charge

GILBERT, AZ, UNITED STATES, August 25, 2025 /EINPresswire.com/ -- ACG Research today released groundbreaking findings from its comprehensive total cost of ownership benchmarking study of fixed and mobile broadband networks, revealing that while [fixed networks](#) operate at significantly lower per gigabyte costs than mobile networks ($0.06/GB versus $0.33/GB), they face dramatically higher per subscriber expenses due to exponentially greater data consumption patterns.

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> *Ray Mota*

"The Economics of Application Traffic: TCO Benchmarking for Fixed and Mobile Networks" analyzes network infrastructure costs across North America, Europe, and developed Asian markets using ACG Research's proprietary cost modeling methodology combined with global traffic data from AppLogic Network's 2025 Global Internet Performance Report.

Key findings include:
* Fixed network subscribers generate 393% higher monthly TCO ($21.22 versus $5.40 for mobile) despite lower unit costs, driven by average household consumption of 355GB monthly compared to just 16.5GB for mobile subscribers

* Traffic concentration creates cost vulnerability: Just nine applications account for 92% of fixed network traffic expenses, while seven applications drive 96% of mobile network costs

* Video streaming dominates infrastructure burden: Netflix ($2.87/month), YouTube ($2.69/month), and Amazon Prime ($1.16/month) represent the top fixed network cost drivers per subscriber

* Mobile networks show different usage patterns: Facebook leads mobile traffic costs at

$1.35/month per subscriber, followed by YouTube ($0.88/month) and Instagram ($0.44/month)

"The research demonstrates that network access infrastructure represents 75% of fixed network TCO, while Radio Access Network components comprise 85% of mobile network expenses, highlighting where operators face the greatest economic pressure as application traffic continues expanding. This analysis fundamentally changes how we need to think about network economics in the age of streaming and social media," said Dr. Ray Mota, CEO and Principal Analyst at ACG Research. "Although the industry has long focused on mobile data growth, our research shows that fixed networks actually face the greater economic challenge. When just a handful of applications can drive nearly all your infrastructure costs, operators need sophisticated traffic management strategies and new economic models to maintain sustainable growth."

Dr. Peter Fetterolf, CTO at ACG Research, added, "The mathematics are stark. Fixed networks deliver data at one-fifth the unit cost of mobile, but household consumption patterns mean they're carrying a much heavier economic load per subscriber. As we move toward AI driven applications and next-generation cloud gaming, this cost concentration will only intensify. Network operators must implement application-aware traffic engineering and pursue fair economic partnerships with over-the-top providers to maintain profitability."

The study provides three strategic recommendations for communications service providers:
1. Deploy Application-Aware Traffic Management: Implementation of real-time, subscriber-aware policy enforcement and application classification to optimize resource utilization and defer capital expenditures

2. Pursue Economic Engagement with OTT Providers: Establish interconnection agreements, regional caching arrangements or fair-share regulatory frameworks to address disproportionate infrastructure burdens

3. Implement Customized TCO Modeling: Develop tailored analyses reflecting specific traffic profiles and regulatory contexts to support investment strategy and policy advocacy

The research arrives as network operators worldwide grapple with escalating infrastructure costs driven by bandwidth-intensive applications, encrypted traffic protocols, and emerging technologies including cloud gaming and AI assistants. The findings support growing industry discussions around sustainable network investment models and fair contribution frameworks for digital infrastructure.

Go to acgcc.com to download the report (https://www.acgcc.com/reports/the-economics-of-application-traffic-tco-benchmark/).

About the Methodology

ACG Research's TCO analysis utilized comprehensive CapEx and OpEx data collected from communications service providers across North America, Europe, and developed Asian markets. The study evaluated fixed network components including access infrastructure (PON, DSL, Cable), broadband network gateways, and aggregation/core routers, alongside mobile network elements spanning RAN, mobile core, and IP aggregation layers. Traffic volume data was sourced from AppLogic Network's Global Internet Performance Report 2025, providing real-world application usage patterns for the economic modeling.

About ACG Research

ACG Research is a leading ICT research and consulting firm focused on innovations that drive communications infrastructure transformation. Founded by telecommunications industry veterans, ACG Research provides strategic guidance, market intelligence, and technical expertise to help communications service providers, technology vendors, and enterprise organizations navigate the evolving digital landscape.

The company is headquartered in Gilbert, Arizona.

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