PROFESSIONAL SERVICES

Network Evolution Consulting

COMMSCOPE®

Services Overview

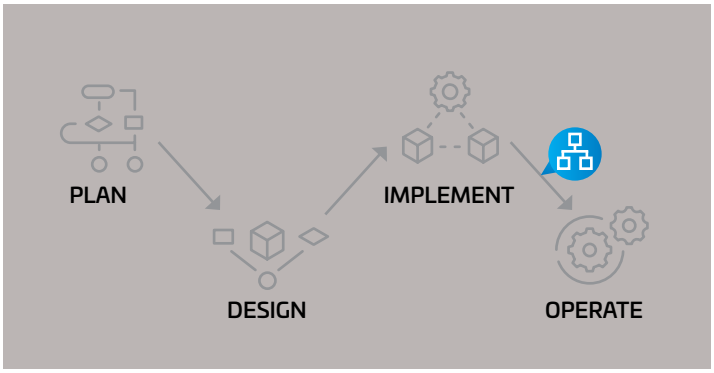
CommScope has the expertise, processes and tools to consult with cable operators on network evolution. This consulting practice analyses and plans for network bandwidth capacity to help operators make informed, targeted and optimized decisions about the implications of various architectural options on their network. It results in specific architectural and equipment recommendations (system by system and node by node as needed) with clear Capex and Opex implications. The end goal of this consulting is a flexible and sustainable network that maximizes ROI on prior and new capital investment and minimize disruption to business as usual.

CommScope expert consultants help operators answer the questions that will shape their network:

- How can I best handle the continual growth in data, without constantly splitting nodes or Running FTTH?
- How can I implement a converged IP network while maintaining my legacy Video network?
- How can I retain bandwidth for legacy services given finite capacity in the network?
- How can I extend my network without rebuilding it?
- How can I manage the complexity of implementing, operating and maximizing performance of my network?

FEATURES

- Strategic network planning and network optimization modeling
- Model network changes and anticipated growth over time
  - Whole spectrum
  - All services or any service
  - Port... service group... site
- Derived from decades of experience in the cable industry, including pioneering technologies, standards contributions and patents
- Part of the CommScope network evolution framework



Consulting Methodology

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A network evolution project begins with the creation of a project team, led by an CommScope Project Manager and made up of CommScope Subject Matter Experts and operator stakeholders. Phase 1 is Data Collection (which may be remote or on site) and collaborative development of key modeling assumptions. Phase 2 is Modeling where CommScope uses its proprietary modeling software (built by CommScope CTO' Office) to model existing and predict future network characteristics. Phase 3 is Reporting the CommScope PM holds a preliminary review to obtain feedback and the produces a written report including forward looking recommendations.

Modeling Capability

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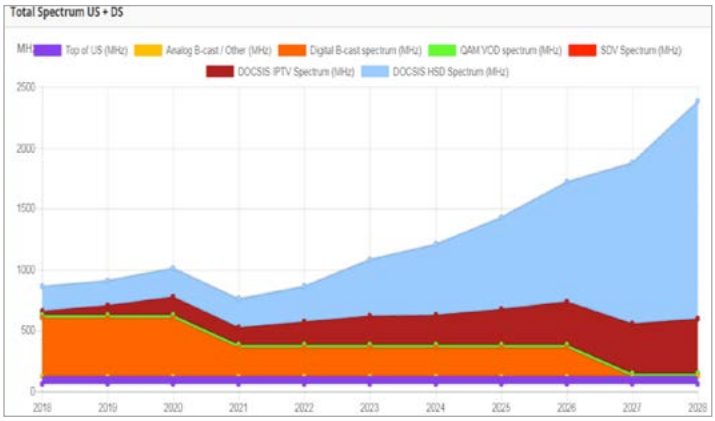
CommScope's Network Evolution Consulting service utilizes a comprehensive, analytical model for bandwidth planning and modeling for up to 10 years. Over 300 variables are considered covering: Broadband Service Tier growth, Broadband data usage growth, DOCSIS 3.1 and FDX introduction, Distributed Access Architectures e.g. R-PHY, PON, IP video migration strategies, legacy video reclamation analog & digital, legacy video migration to MPEG-4, spectrum planning, plant upgrades, node splits and upstream split changes, and plant performance requirements.

HFC Plant and Subscribers

Full Spectrum Modeling

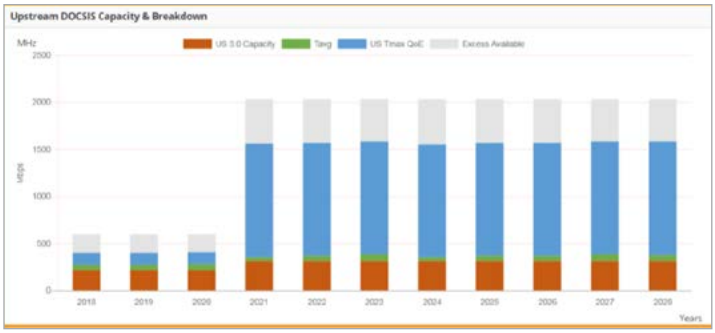
CommScope understands how services are delivered… and knows that service impact must be evaluated both collectively and as individual services especially legacy services with older technologies. As technologies are upgraded or replaced, these legacy services will migrate to more efficient platforms. An effective modeling service takes all of this into account. CommScope Network Evolution Consulting Services will show how your services grow and shrink, and the effect they have on the network.



Total Spectrum US + DS

Modeling Expertise

CommScope has developed and documented the knowledge and the nuances of cable network planning. CommScope people helped plan, build and evolve the first HFC networks. Our CTO's and Fellows are deeply involved in leading edge standards and architectural direction for the industry. And, all of this expertise is captured in our Network Evolution Consulting service.



Upstream DOCSIS Capacity & Breakdown

Results

At the end of the consultation, CommScope will produce a final report. It will show the upsides and downsides of the network's current plans and near term initiatives, and models out future spectral and capacity requirements. We'll hold a web review, and Interactively review through the report, in detail. The report starts with the factual reality of how the network looks today a solid baseline for planning. The real value is in the projections of what the network will look like and support assuming current evolution plans and CommScope recommended direction. To see the impact of data traffic growth, or that migrating your legacy video channels to IP is not going to be as painful as thought, CommScope Network Evolution Consulting truly delivers value, which supports moving forward… confidently.

Complete Network Evolution Services

Plan	Design	Implement	Operate
Consulting	Engineering & system architecture	Fiber deep playbook	Managed services
Traffic engineering/modeling	ISP site specific integration/ engineering design package (EDP)	R-PHY CER/CMTS upgrades	Staff augmentation
CMTS/R-PHY scaling	DAA leaf/spine EDP	Install & configuration: spine/ DAA switches, timing servers	Operational & maintenance playbooks
Spectrum & frequency planning	ISP node wiring plan	RPD node RPD modules: install/ upgrade, testing	Call center operations
Capex/Opex modeling	OSP design	Fiber: OLT install/commission, splicing/termination/patch panels, management/ infrastructure, characterization/ ONU testing	Proactive monitoring & maintenance
Workshops/training	Optical link/wavelength design	OSS/BSS/Telemetry updates & integration	Facility redundancy (smart routing)
DOCSIS® 3.1 readiness audit	Surveys/Walkouts/As built	ISP integration: survey, power, install, config, commission, test	Network optimization
Plant assessment		ISP migration: onsite & remote	Recent build quality control
Video strategy		OSP construction & materials management	Traffic study/health checks
		Reclamation/recycle recertification	Field training
			Technical Support

Complete Network Evolution Services

Contact Customer Care for product information and sales:
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CommScope pushes the boundaries of communications technology with game-changing ideas and ground-breaking discoveries that spark profound human achievement. We collaborate with our customers and partners to design, create and build the world's most advanced networks. It is our passion and commitment to identify the next opportunity and realize a better tomorrow. Discover more at commscope.com

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Visit our website or contact your local CommScope representative for more information.

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