

Network Evolution Consulting

Professional Services

FEATURES

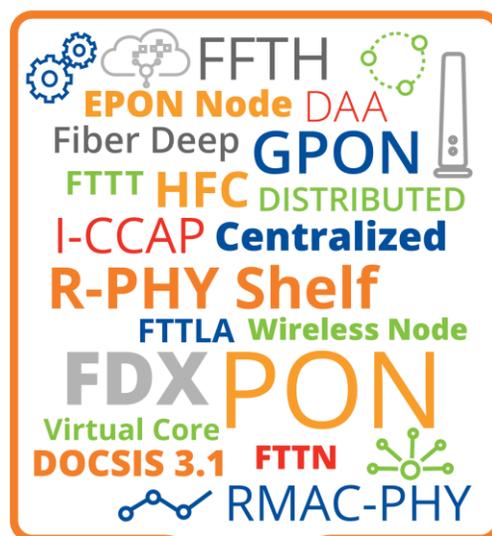
- Strategic network planning and network optimization modelling.
- Model network changes and anticipated growth over time
 - Whole spectrum.
 - All services or any service.
 - Port ... service group ... site.
- Derived from decades of experience in the cable industry, including pioneering technologies,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

SERVICES OVERVIEW

ARRIS 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.

ARRIS 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?



WHAT'S NEXT ?



Consulting Methodology

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

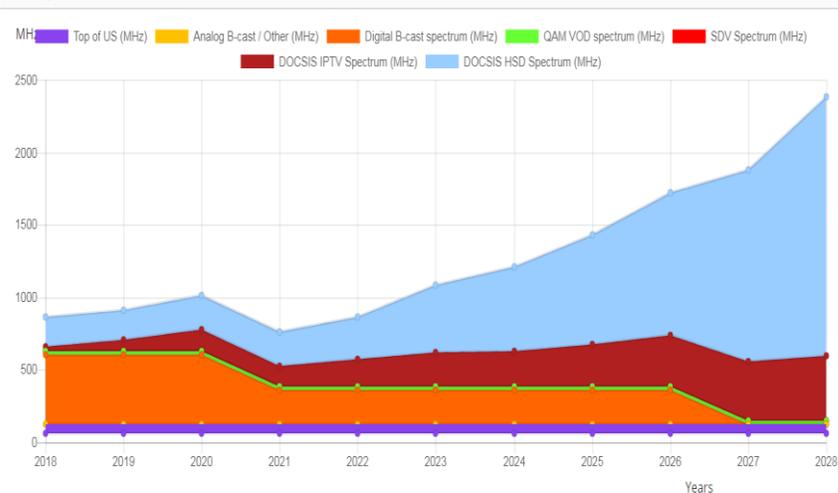
Modelling Capability

ARRIS’s Network Evolution Consulting service utilizes a comprehensive, analytical model for bandwidth planning and modelling 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

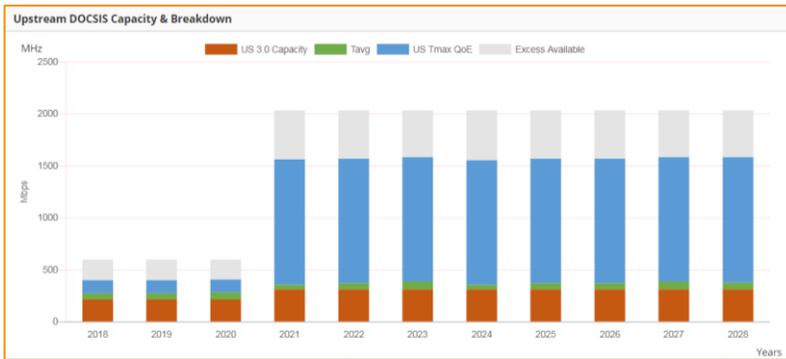
Actions	Services/Year		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
<input type="checkbox"/> <input type="checkbox"/>	Homes Passed per Node	HP	1000	1000	900	500	500	500	250	250	200	200	150
<input type="checkbox"/> <input type="checkbox"/>	Video Subs per node	% of HP	50	50	50	50	50	50	50	50	50	50	50
<input type="checkbox"/> <input type="checkbox"/>	HSD Subs per node	% of HP	50	50	50	50	50	50	50	50	50	50	50
<input type="checkbox"/> <input type="checkbox"/>	HSD Subs per node calculated		500	500	450	250	250	250	125	125	100	100	75
<input type="checkbox"/> <input type="checkbox"/>	Target HP per CCAP/CMTS Core		16000	16000	16000	16000	16000	16000	16000	16000	16000	16000	16000
<input type="checkbox"/> <input type="checkbox"/>	Upstream Freq Split	MHz	65	65	65	208	208	208	208	208	208	208	208
<input type="checkbox"/> <input type="checkbox"/>	Downstream Freq	Mhz	1218	1218	1218	1218	1218	1218	1218	1218	1218	1218	1218

Total Spectrum US + DS



Full Spectrum Modeling

ARRIS 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. ARRIS Network Evolution Consulting Services will show how your services grow and shrink, and the effect they have on the network.



Modeling Expertise

ARRIS has developed and documented the knowledge and the nuances of cable network planning. ARRIS 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.

Results

At the end of the consultation, ARRIS 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 ARRIS-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, ARRIS Network Evolution Consulting truly delivers value, which supports moving forward... confidently.

Complete Network Evolution Services

Plan	Design	Implement	Operate
<ul style="list-style-type: none"> • Consulting • Traffic engineering/modeling • CMTS/R-PHY scaling • Spectrum & frequency planning • Capex/Opex modeling • Workshops/training • DOCSIS® 3.1 readiness audit • Plant assessment • Video strategy 	<ul style="list-style-type: none"> • Engineering & system architecture • ISP site specific – integration/ engineering design package (EDP) • DAA Leaf/Spine EDP • ISP node wiring plan • OSP design • Optical link/wavelength design • Surveys/Walkouts/As-built 	<ul style="list-style-type: none"> • Fiber deep playbook • R-PHY CER/CMTS upgrades • Install & configuration: spine/DAA switches, timing servers • RPD node - RPD modules: install/upgrade, testing • Fiber: OLT install/commission, splicing/termination/ patch panels, management/infrastructure, characterization/ONU testing • OSS/BSS/Telemetry updates & integration • ISP integration: survey, power, install, config, commission, test • ISP migration: onsite & remote • OSP construction & materials mgmt. • Reclamation/recycle/recertification 	<ul style="list-style-type: none"> • Managed services • Staff augmentation • Operational & maintenance playbooks • Call center operations • Proactive monitoring & maintenance • Facility redundancy (smart routing) • Network optimization • Recent build quality control • Traffic study / health checks • Field training • Technical support

CUSTOMER CARE

Contact Customer Care for product information and sales:

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