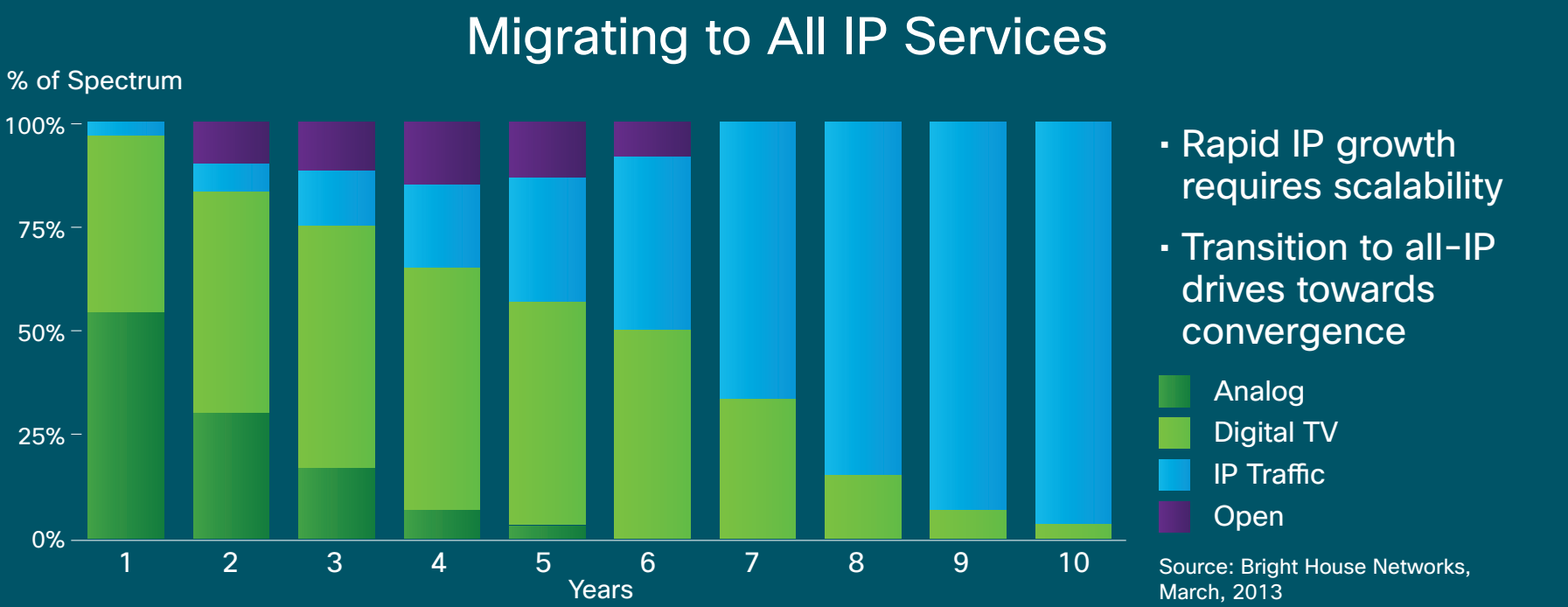
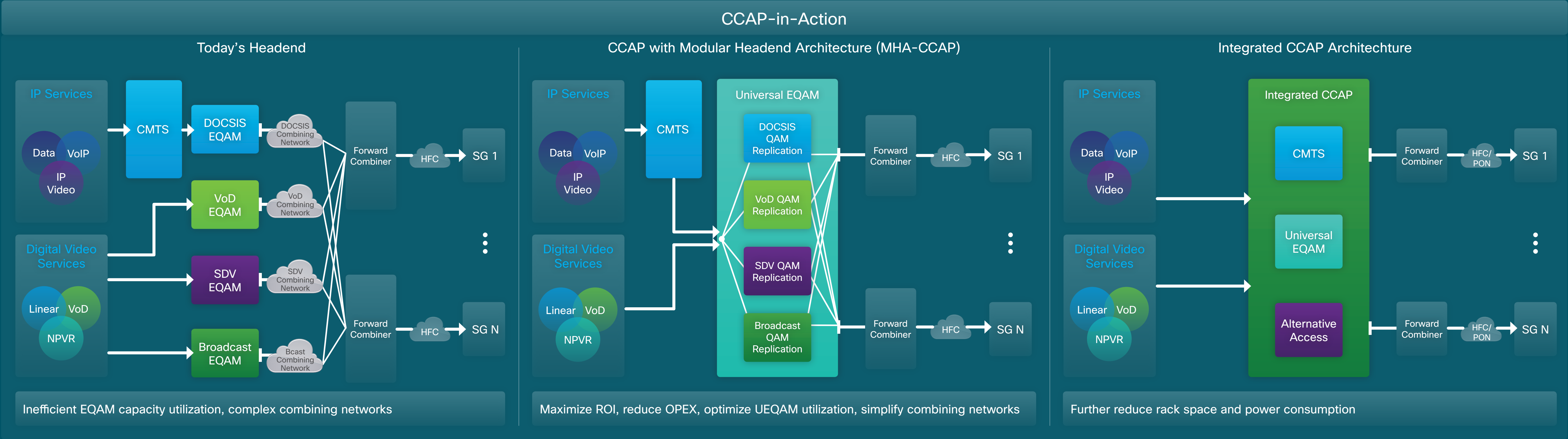
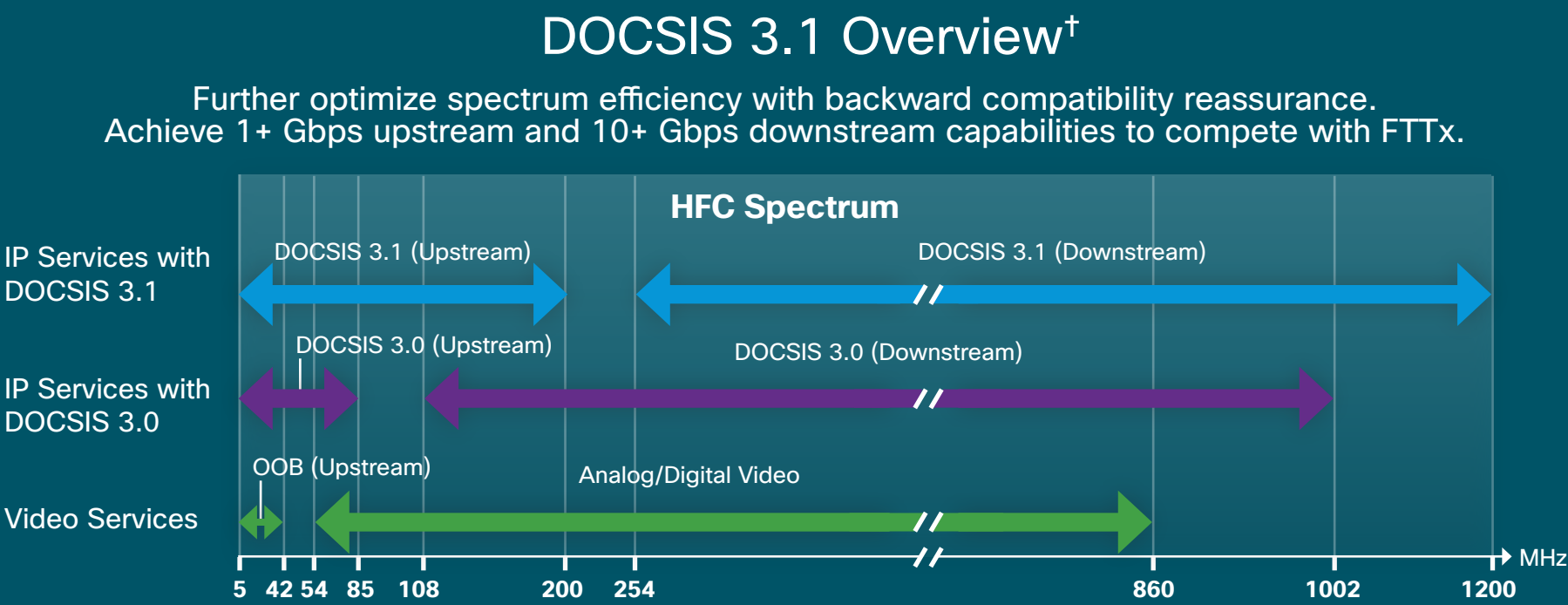


Converged Cable Access Platform (CCAP) and DOCSIS 3.1



Cisco's CCAP Solutions

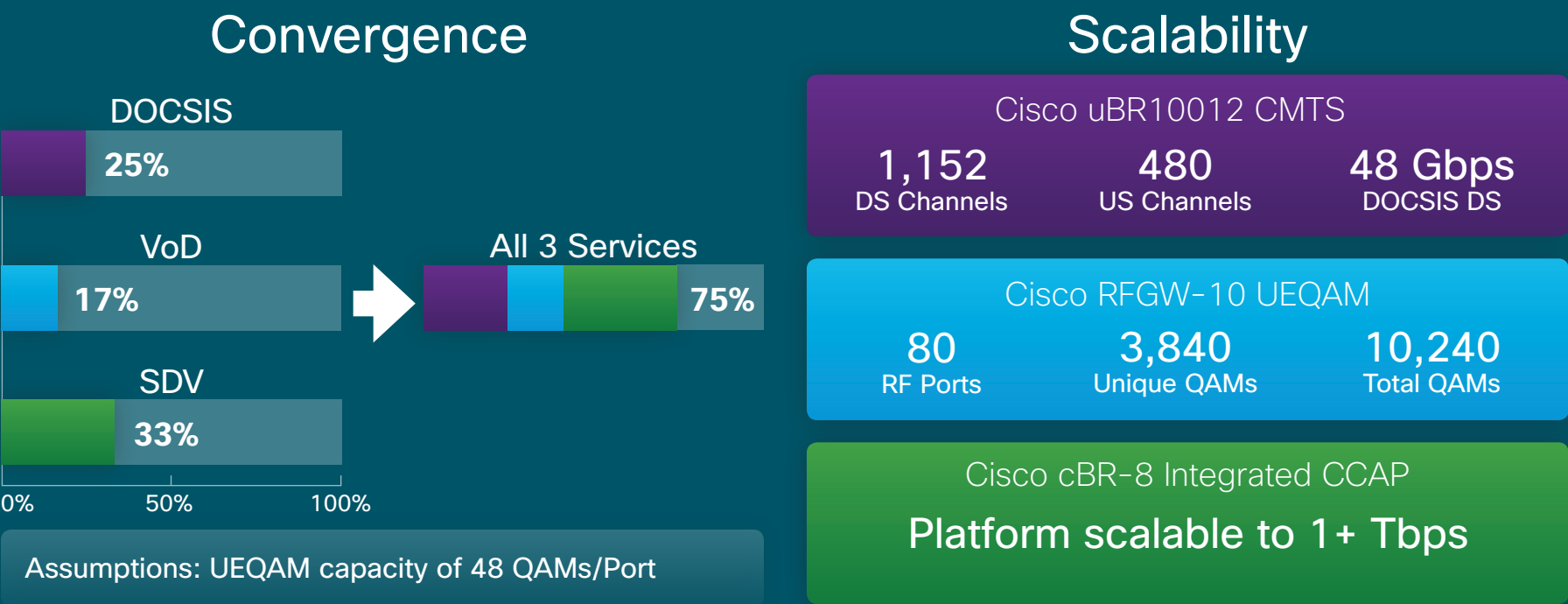
Driving Convergence with Scalability and Density



Meeting CCAP Objectives

CCAP Objectives	Cisco MHA-CCAP: uBR10012 + RFGW-10	Cisco I-CCAP: cBR-8 ¹
Increased scalability & capacity	✓	✓
Reduced cost-per-downstream	✓	✓
Converged multi-service	✓	✓
Rack space per system	35 to 56 RU	13 RU
DOCSIS Downstream capacity	Up to 1 Gbps / SG	Above 1 Gbps / SG
Deployment range	1 Gbps – 80 Gbps	80 Gbps – 1+ Tbps

Note: ¹Specifications pending final product release



Technological Potential of DOCSIS 3.1

	DOCSIS 3.0		DOCSIS 3.1		
	Now	Phase 1	Phase 2	Phase 3	
DS Range (MHz)	54-1002	108-1002	254*-1200	500*-1700	
DS QAM Level	256	256	≥1024	≥1024	
Number of DS Channels	8	24	158**	200**	
DS Capacity (bps)	300M	1G	7G*	10G+*	
US Range (MHz)	5-42	5-85	5-85*	5-200*	5-400*
US QAM Level	64	64	≥256	≥256	≥1024
Number of US Channels	4	12	12**	32**	60**
US Capacity (bps)	100M	300M	400M*	1G*	2.5G*

Note: [†]Pending CableLabs® final specifications on DOCSIS 3.1 spectrum, *TBD value, **equivalent number of single-carrier QAMs