

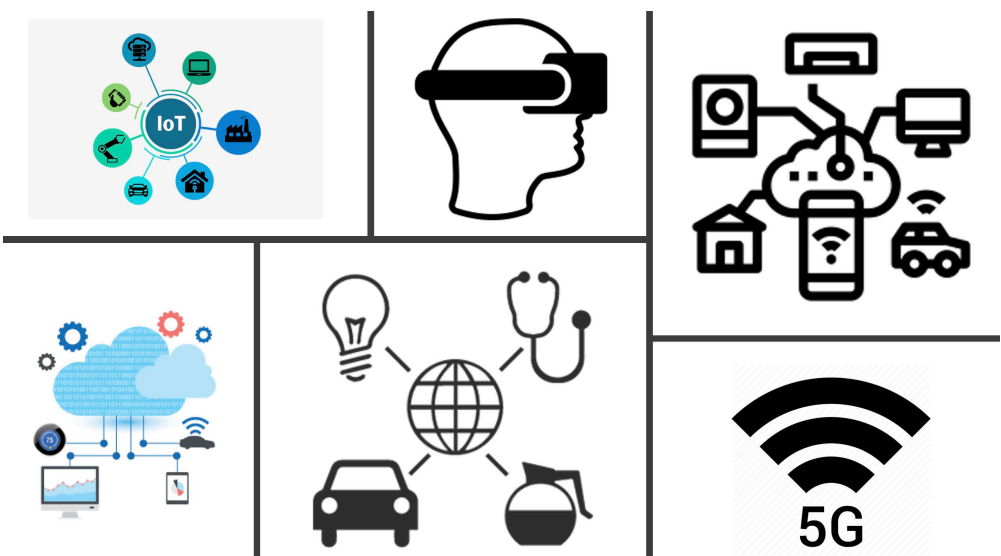
SIMPLIFYING IP NETWORKS

BUSINESS IMPACT ON NETWORK EVOLUTION OF IP NETWORKS

THE NEED FOR A NEW APPROACH TO IP NETWORKS



Ciena partnered with **ACG Research** to apply business modeling to the evolution of IP networks enable by the **Ciena Adaptive IP Solution**



NEW APPLICATIONS REQUIRED A DIFFERENT APPROACH TO **DELIVERING STANDARD-BASE IP CONNECTIVITY**

TODAY'S OPERATOR CHALLENGES

New application requirements

- More bandwidth
- Low latency

Network impact

- Emergence of edge computing & telco cloud
- Network densification to support 5G mmWave

Operational constraints or limitations

- Too many manual processes
- Siloed operation
- Box-based decision making

FUTURE MODE OPERATION

OPEN

LEAN

AUTOMATED

COST-EFFICIENT

Difficult to isolate **complex routing** problems

Impossible to **proactively repair** the network before a problem has occurred

No visibility of network and services performance

Monitoring and troubleshooting VPNs is a challenge

Difficult to correlate problems from different vendors, no **root cause** in **multivendor's** network

Limited visibility of a multivendor and multilayer network

01

02

03

04

05

06

PMO OPERATIONS AND CHALLENGES



Upto **70%**

Engineering and Planning

Upto **35%**

Service Fullfillment

Upto **70%**

Service Assurance

OpEx Savings with ADAPTIVE IP™

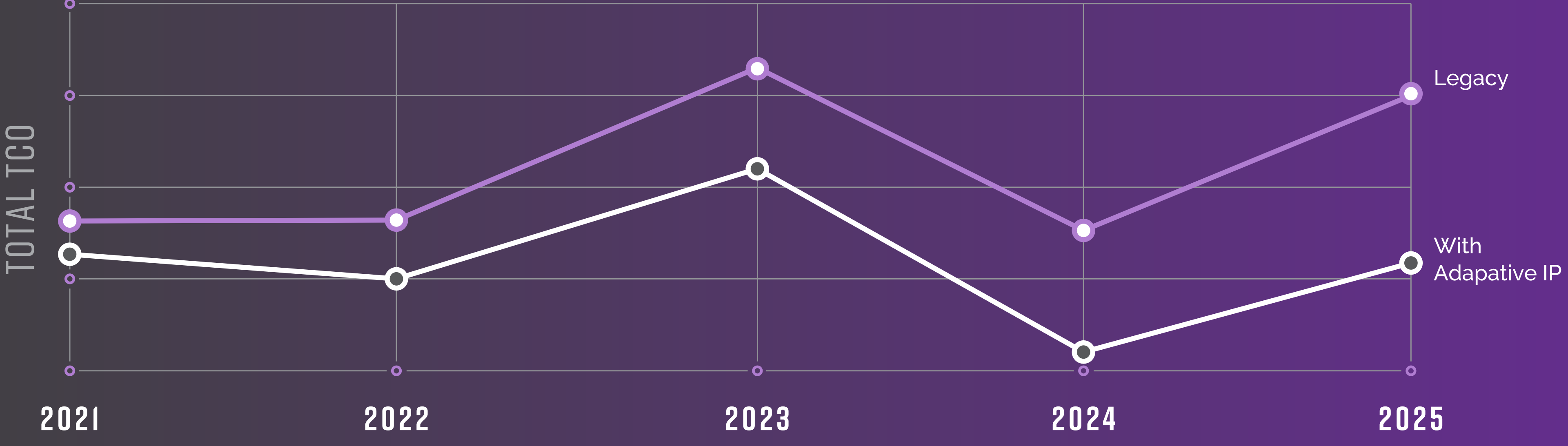
ADAPTIVE IP
ACCELERATES TIME
TO REVENUE

GENERATE MORE
REVENUE WITH THE SAME
INFRASTRUCTURE

CIENA ADAPTIVE IP ECONOMIC IMPACT

UPTO 22% TCO SAVINGS
UPTO 35% OPEX SAVINGS
UPTO 17% CAPEX SAVINGS

TOTAL TCO (OpEx + CapEx)



Year	Legacy	With Adaptive IP
2021	High	Low
2022	High	Low
2023	Very High	Medium
2024	Medium	Very Low
2025	High	Low

The business model outcomes are based on the evolution of IP networks to support 5G use cases

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