



Layer123 SDN & NFV
World Congress

ETSI ZSM Forum

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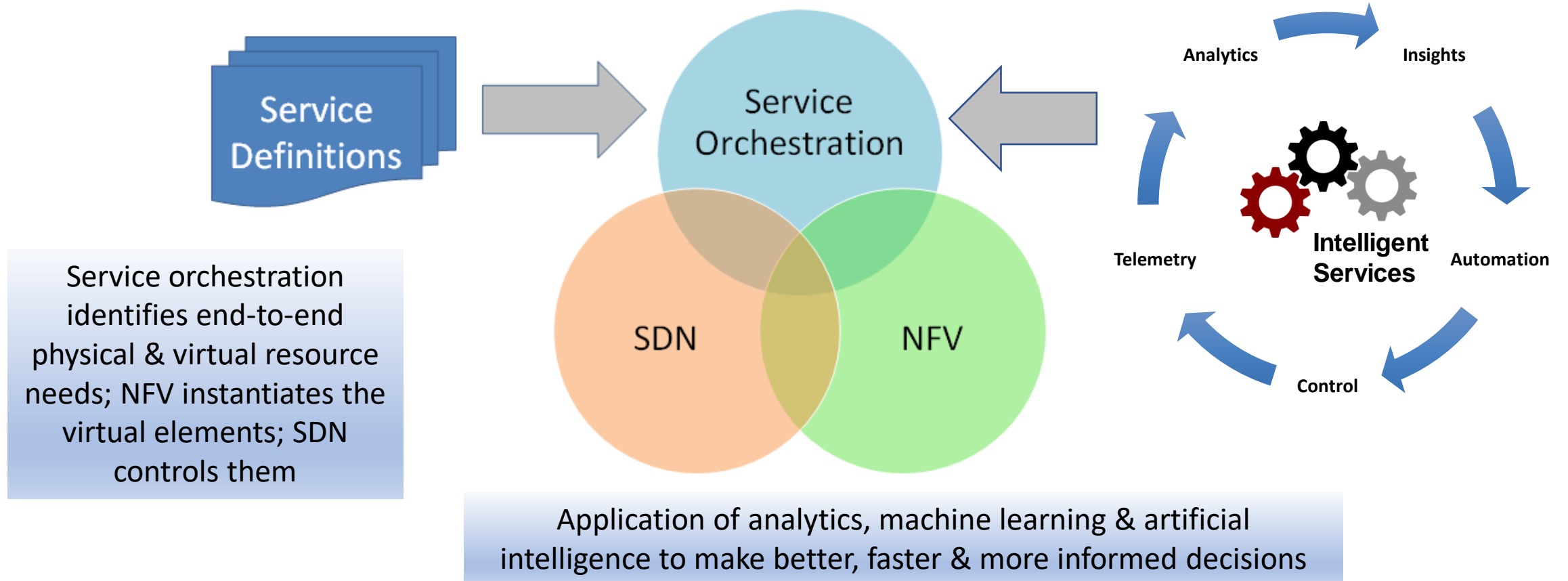
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October 8, 2018

Topics

- ACG Research Networking Framework
- Adaptive Network Automation Primary Research
- The Impact of Open Source Technologies on the CSP Ecosystem

ACG Research Reference Framework



Adaptive Network Automation Research

Ciena Press Release



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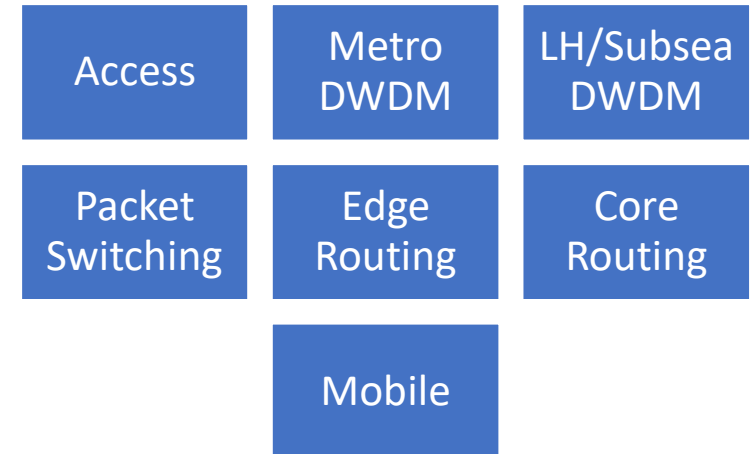
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FOR IMMEDIATE RELEASE

75 Percent of Network Providers Expect Significant or Full Network Automation Within Five Years

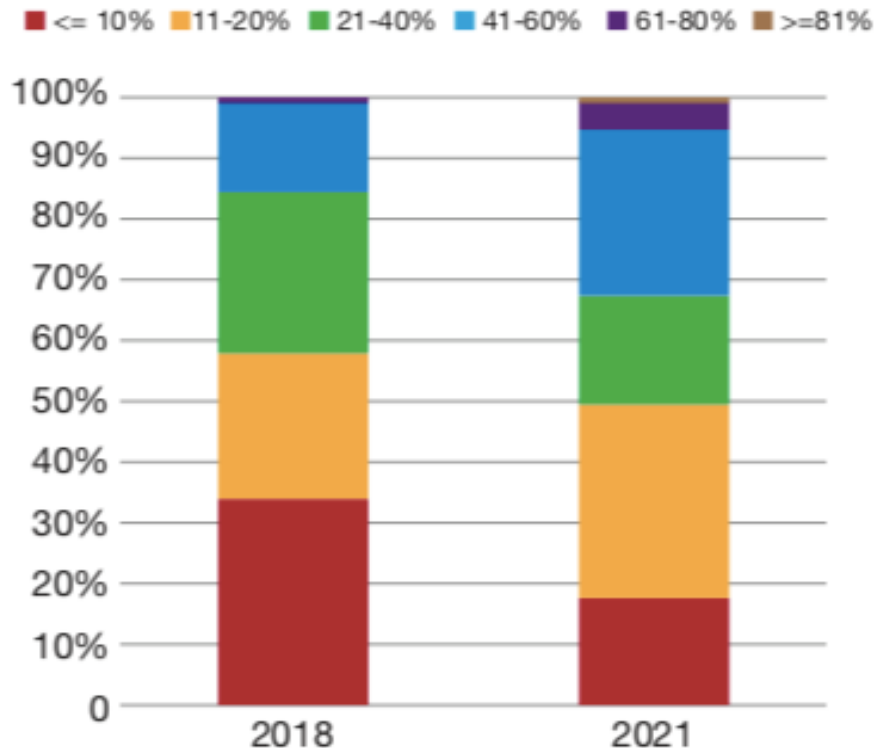
Research reveals top trends, opportunities, and challenges in achieving more adaptive networks

HANOVER, Md. — April 24, 2018 – Organizations across the globe are transforming their networks with intelligent automation, programmable optics and advanced analytics capabilities to be able to adapt and respond dynamically to changing market demands. Understanding the critical role automation plays in responding to future business and market changes, Ciena (NYSE: CIEN) sponsored an independent research report by [ACG Research](#) to highlight the current state of adaptive networking and further explore service provider motivations and implementations as they transform their networks to meet customer demands.

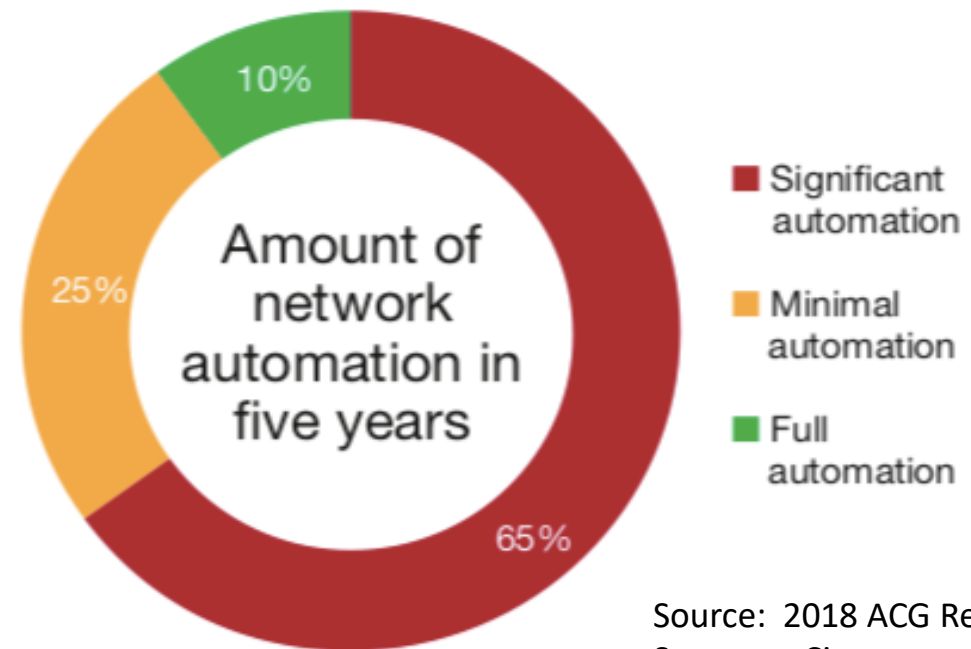


Automation Investment & Execution Network Providers Expect Increases

Automation investments are expected to grow by
~30 percent between now and 2021
Automation Capex



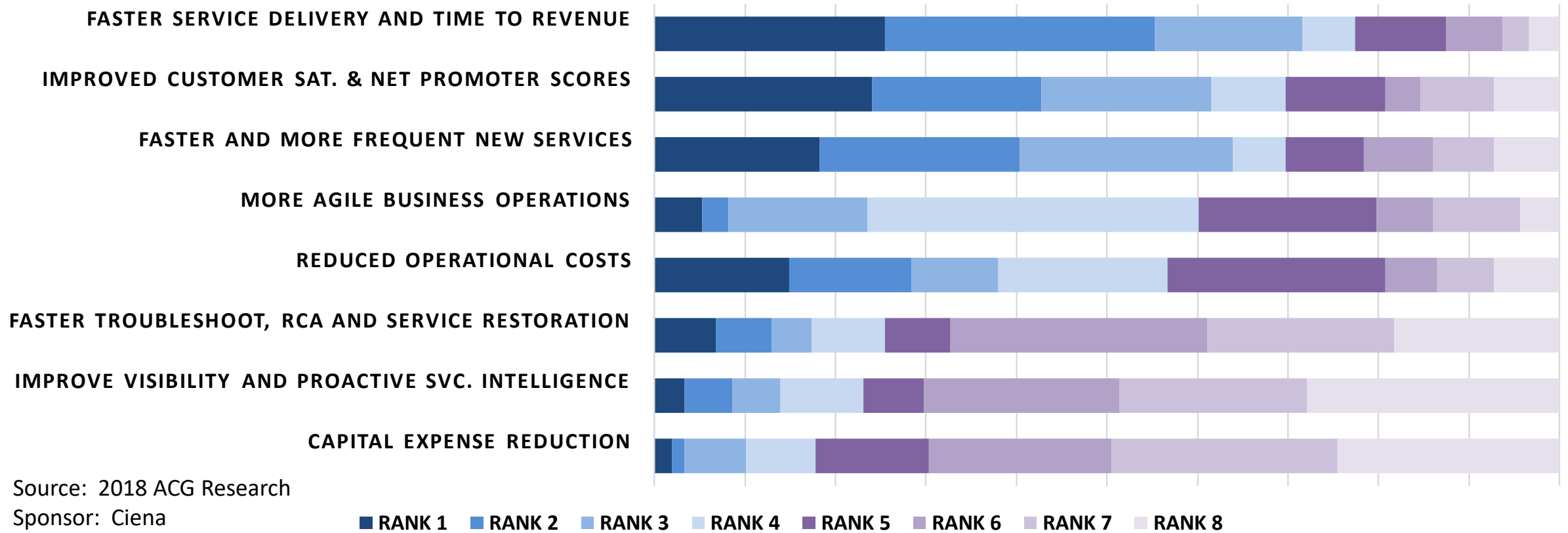
75 percent of respondents expect to achieve
full or significant network automation in the
next five years



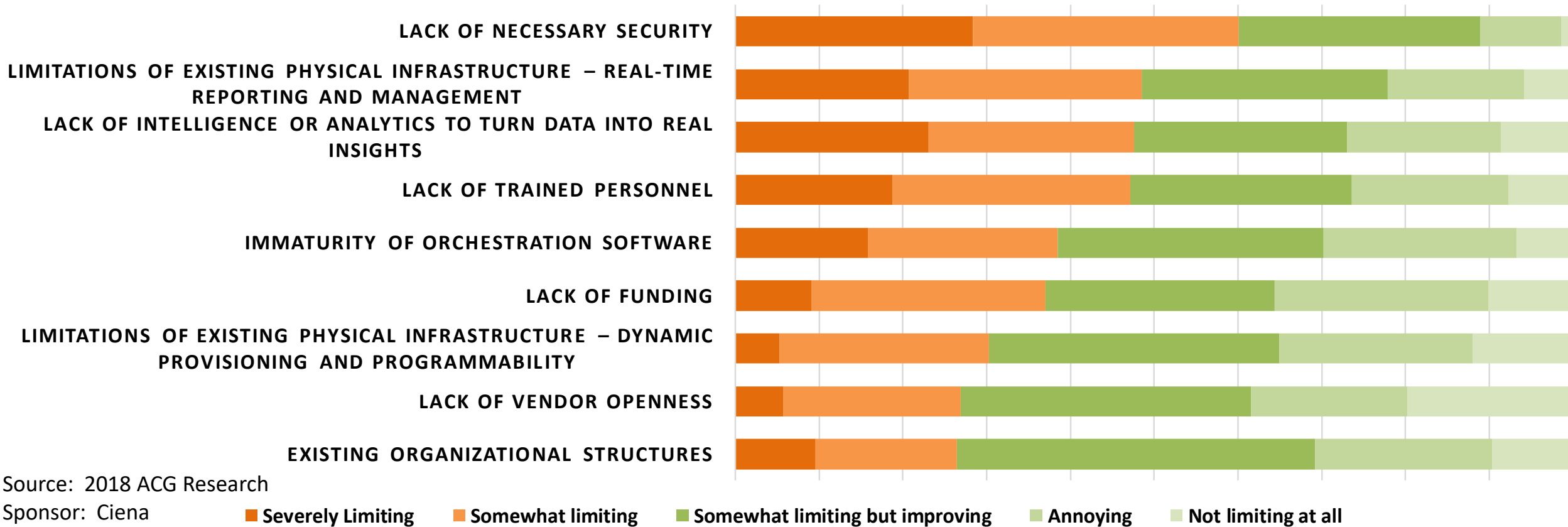
Source: 2018 ACG Research
Sponsor: Ciena

Network Providers' Motivations for Adaptive Network Automation

Faster Service Delivery, Happier Customers, New Services, Agility



Top Items Limiting Progress in Adaptive Network Automation Security, Real-time Reporting, Analytics/Intelligence, Trained Personnel



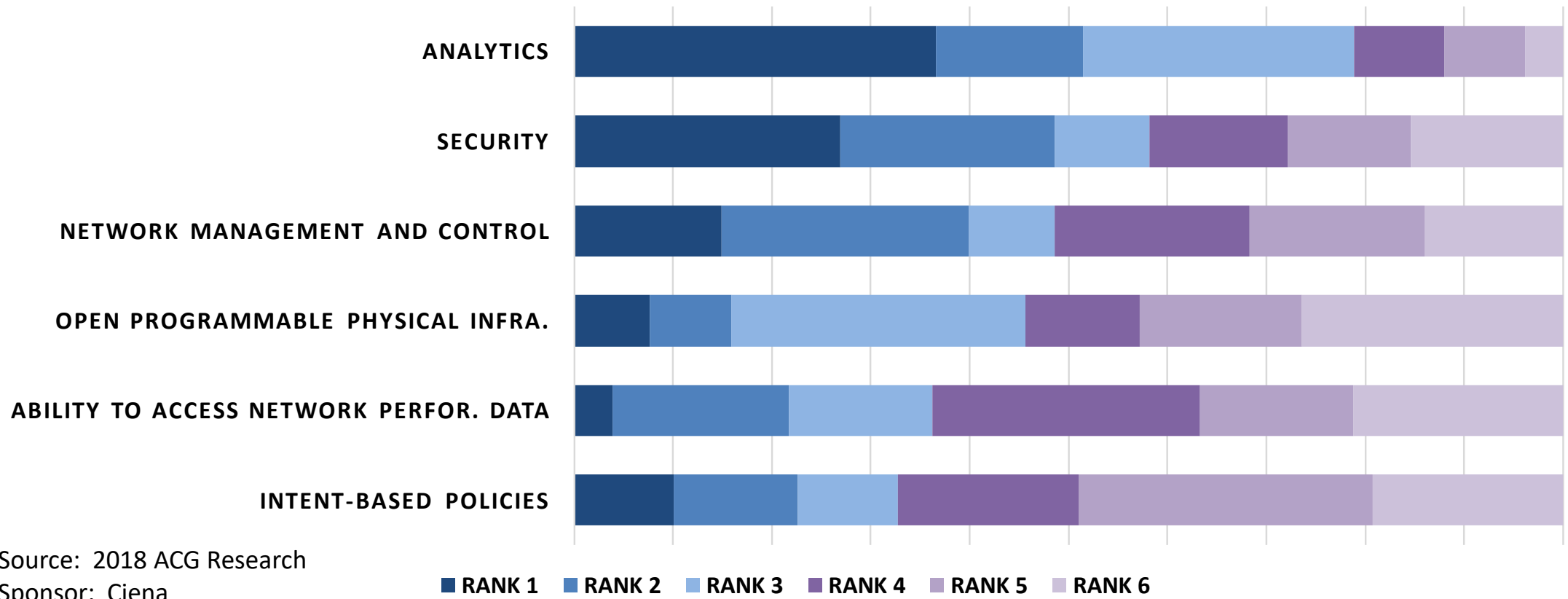
Source: 2018 ACG Research

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■ Severely Limiting
 ■ Somewhat limiting
 ■ Somewhat limiting but improving
 ■ Annoying
 ■ Not limiting at all

Key Components to Increase Adaptive Network Automation

Analytics/Intelligence, Security, Network Management and Control



Source: 2018 ACG Research
 Sponsor: Ciena

Open Source Research Project

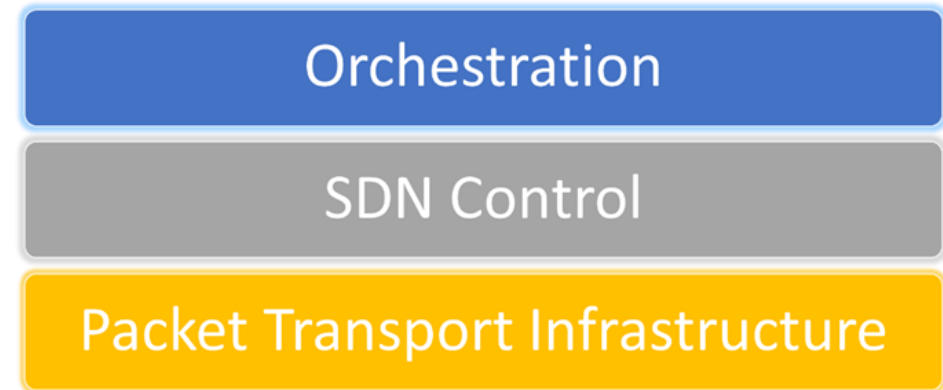
Extensive Interviews with SP and Vendor Leaders

“Succeeding on an Open Field: The Impact of Open Source Technologies on the Communication Service Provider Ecosystem”

- *Communication Service Providers*
- *Diversified Portfolio Companies*
- *Open Source Portfolio Companies*

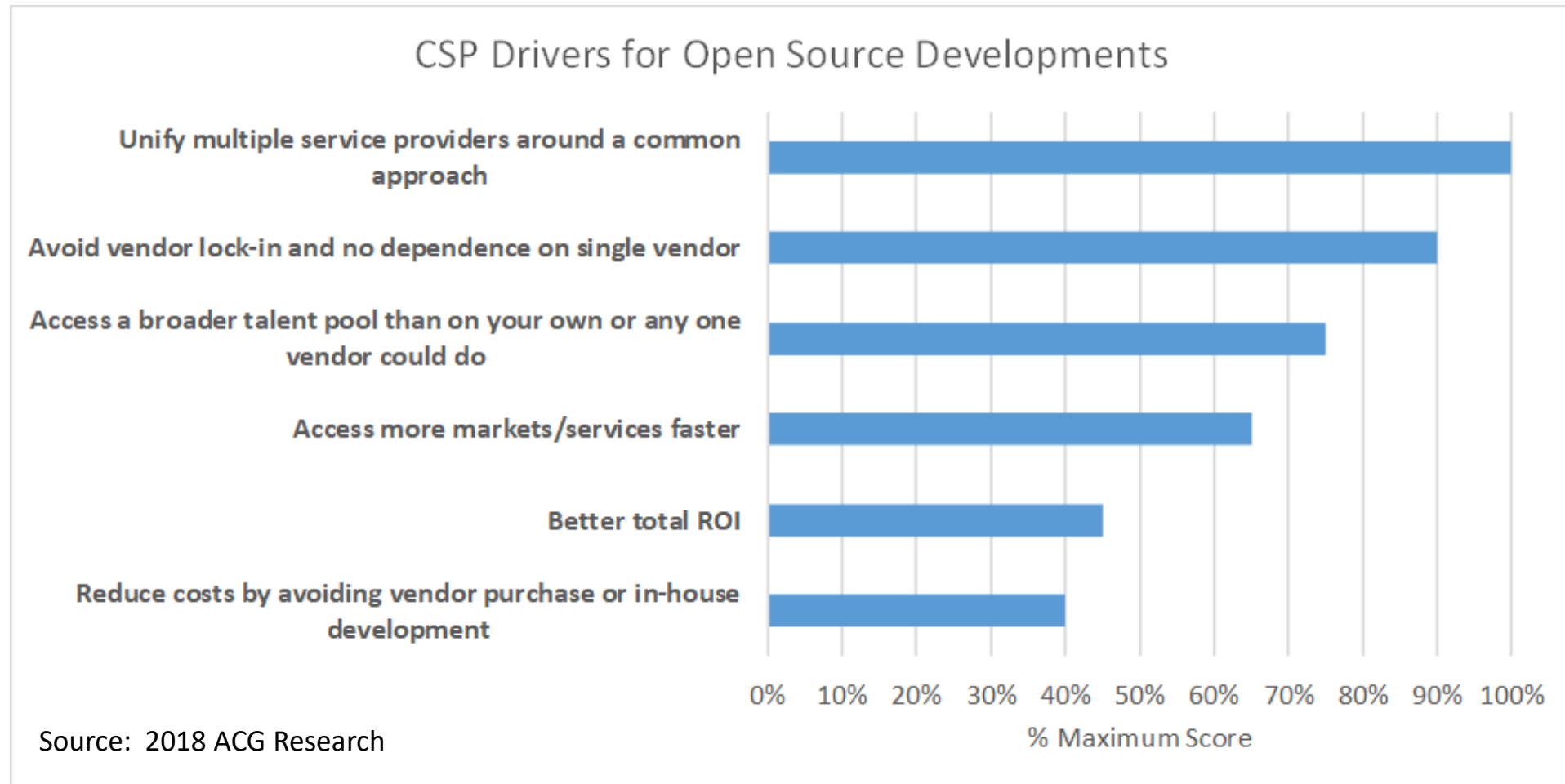
ACG Blog: click [here](#)

Linux Foundation Blog and paper download: click [here](#)



Open Source Research Project

CSP Motivations for Open Source Adoption



Open Source Research Project: How Do CSPs See Open Source Impacting Their Operations?

| Vendors | Still Rely on Vendors | OS Spreads Investment | Separate HW & SW Buys | Shared Risk w. Vendors | Use Vendor Pro-Svcs. |
|---------------------------|-----------------------|-----------------------|-----------------------|------------------------|----------------------|
| CSP Open Source Attitudes | | | | | |

| Development | Enables Experimentation | Increases # CSP Engineers | Moves toward Dev/OPS | Initial SW Maturity | Requires More Test |
|---------------------------|-------------------------|---------------------------|----------------------|---------------------|--------------------|
| CSP Open Source Attitudes | | | | | |

| Financial Impacts | Lowers CAPEX Eventually | Lower Budgets Eventually | Changes CSP Revenue | Higher Margins | Higher ROI for IP |
|---------------------------|-------------------------|--------------------------|---------------------|----------------|-------------------|
| CSP Open Source Attitudes | | | | | |

| Competitiveness | Enhances Competitiveness | CSP Engineers Like | Customers Like |
|---------------------------|--------------------------|--------------------|----------------|
| CSP Open Source Attitudes | | | |

Source: 2018 ACG Research

Agenda Next

11:30–11:40: CSPs' top ZSM focus areas: Oliver Cantor (Verizon) and Klaus Martiny (DT) 2 slides / 5 minutes each

11:40–12:25: CSP & Vendor Panel: the journey toward zero-touch network and service management

12:25–12:30: Wrap-up and Closing Comments
Nurit Sprecher (ETSI ISG ZSM Vice-Chair / Nokia)

Company Information

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