

Secure Access Service Edge

# Restoring order in the delivery of managed services

Marc Cohn

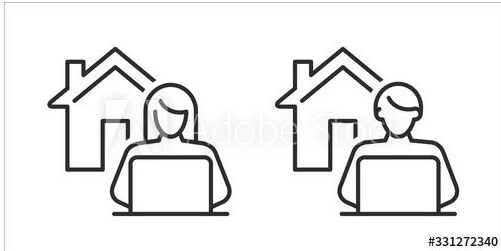
October 15, 2020



# Trends



Campus



Work From Home (WFH)

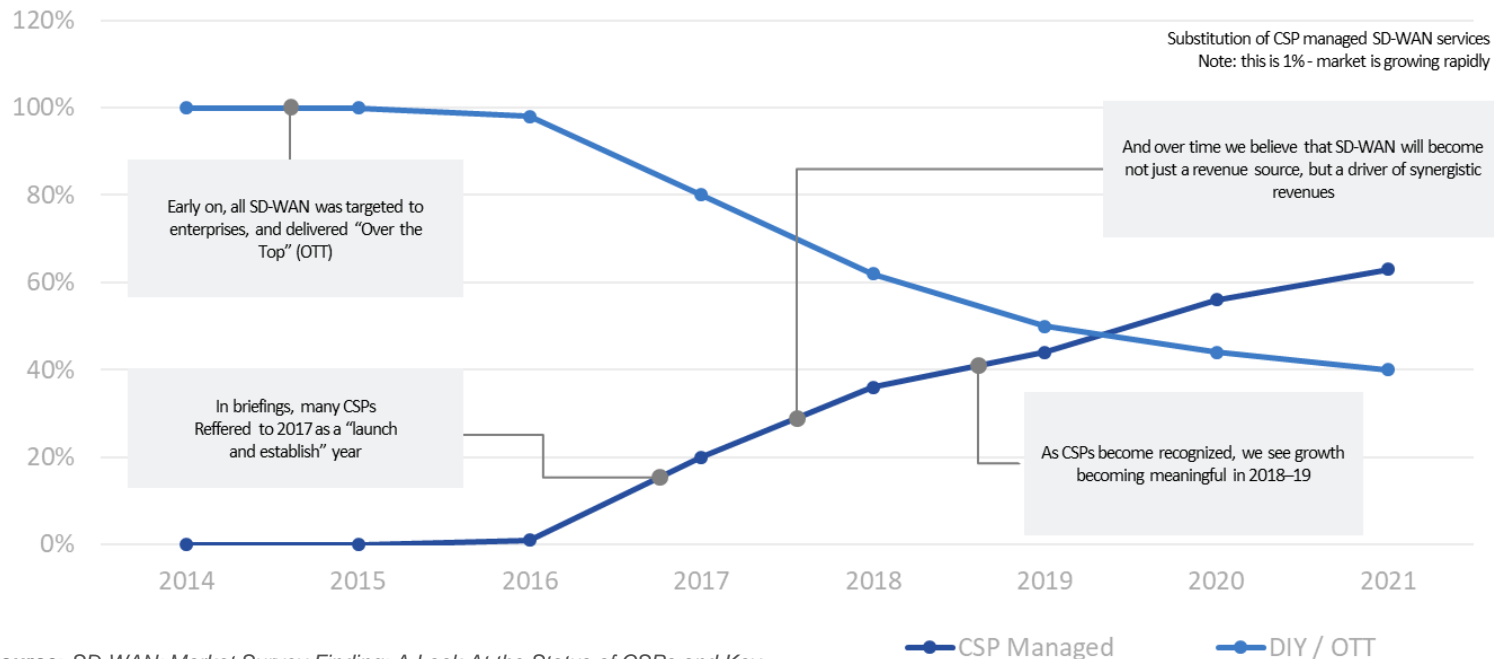
Data Center



Cloud



# Enterprises Prefer SD-WAN managed services



Source: SD-WAN: Market Survey Finding: A Look At the Status of CSPs and Key Suppliers, Appledore Research, March, 2019

# SD-WAN MSP Challenges: SD-WAN Design

- **End-Customers**

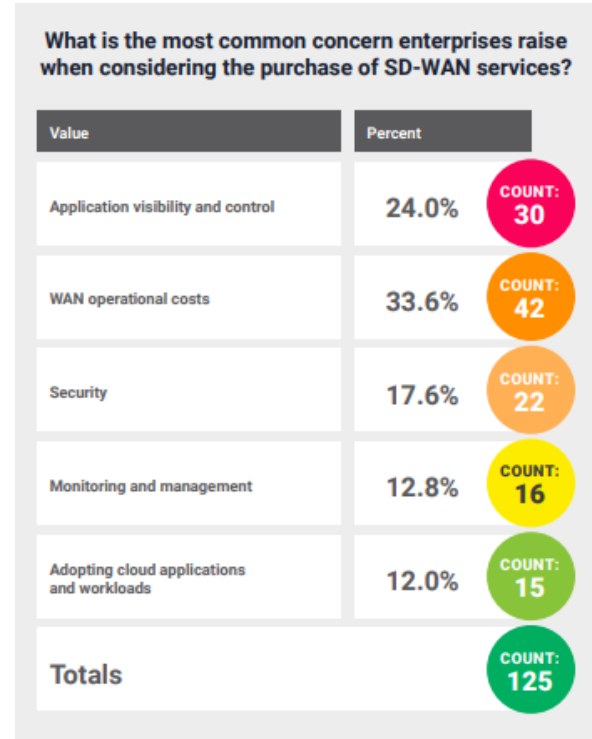
- Expect services on-demand
- Impose unique requirements (frequently selecting SD-WAN vendor)

- **Managed Service Provider**

- Proliferation of SD-WAN vendors
- Must optimize network for each customer
- Expensive to assess multi-vendor solutions

- **Vendors**

- Seek to differentiate and highlight value-add



# SD-WAN MSP Challenges: SD-WAN Deployment

- **End-Customers**

- Expect Zero Touch Provisioning
- Many sites are unique

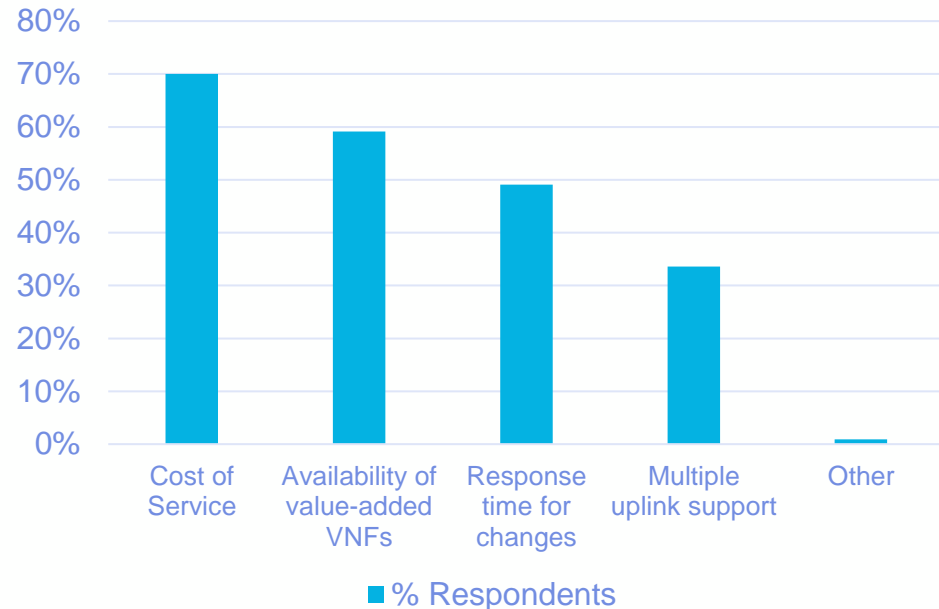
- **Managed Service Provider**

- High number of failures during deployment
- Must master proprietary SD-WAN controllers with inconsistent management features

- **Vendors**

- Typically blamed for problems whether or not their solutions are the cause

Which of the following factors are most important to your SD-WAN enterprise customers?



# SD-WAN MSP Challenges: SD-WAN Network Operations

- **End-Customers**

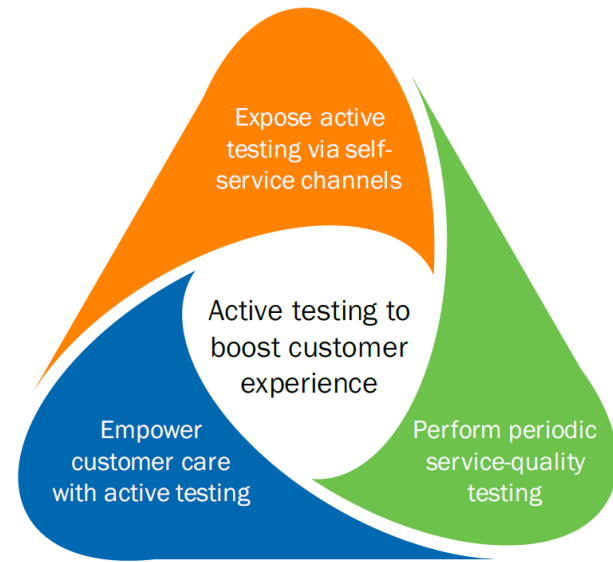
- Application availability and security are key
- Maintain E2E user experience

- **Managed Service Provider**

- SLAs & KPIs differ from connectivity services
- Multi-layer, multi-vendor troubleshooting is complex, time-consuming, and expensive

- **Vendors**

- Each SD-WAN controller is unique and provides proprietary testing/assurance

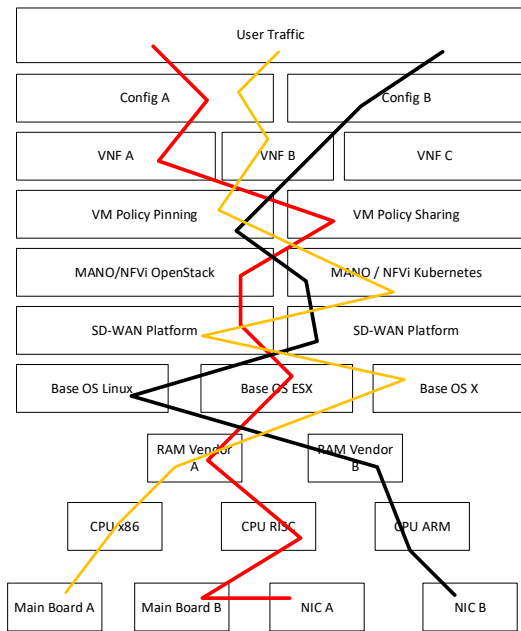


Source: Analysys Mason

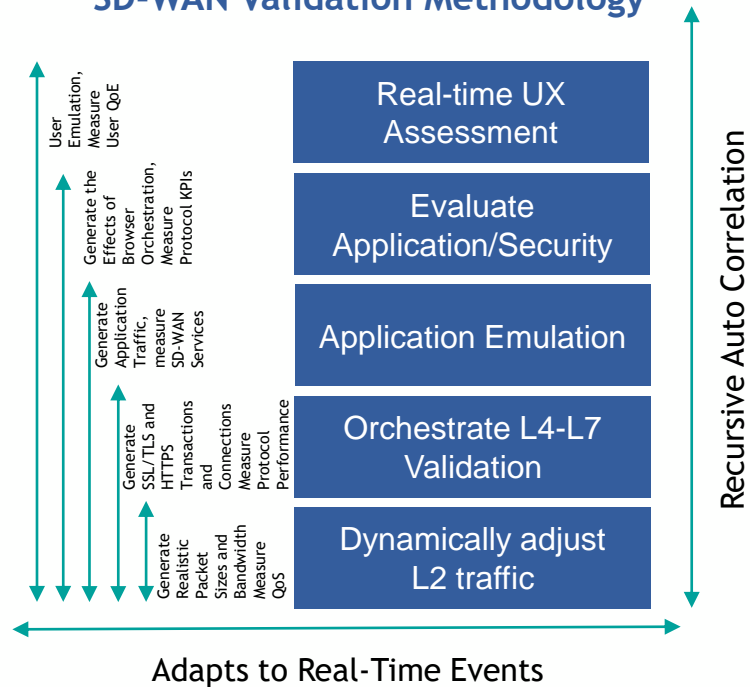
**Source:** Active testing techniques can help communications service providers to improve the customer experience, Analysys Mason, February, 2020

# SD-WAN stack is complex

## Real-World Interactions



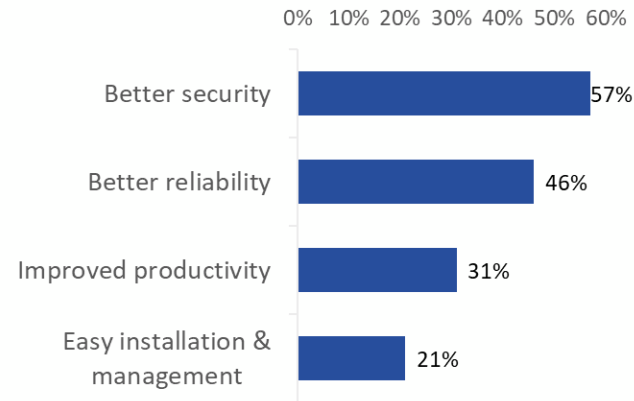
## SD-WAN Validation Methodology



# Network vs. Security Testing

Area	Network Testing	Security Testing
Verify	<ul style="list-style-type: none"> <li>• Performance</li> <li>• Availability</li> <li>• Conformance</li> </ul>	<ul style="list-style-type: none"> <li>• Resilience</li> <li>• Configuration</li> <li>• Impact on performance</li> </ul>
Scope	<ul style="list-style-type: none"> <li>• SD-WAN Underlays</li> <li>• SD-WAN Overlays</li> </ul>	<ul style="list-style-type: none"> <li>• Applications</li> <li>• Security functions (appliances/VNFs)</li> </ul>
Methods	Standards-based tests	Ad-hoc tests
Test Scenarios	Fixed	Dynamic (ever-changing threats)
Test Equipment	Support pre-defined tests	Programmable
Test Traffic	Simulated	Emulated
Certification	Static testing	Static & continuous testing

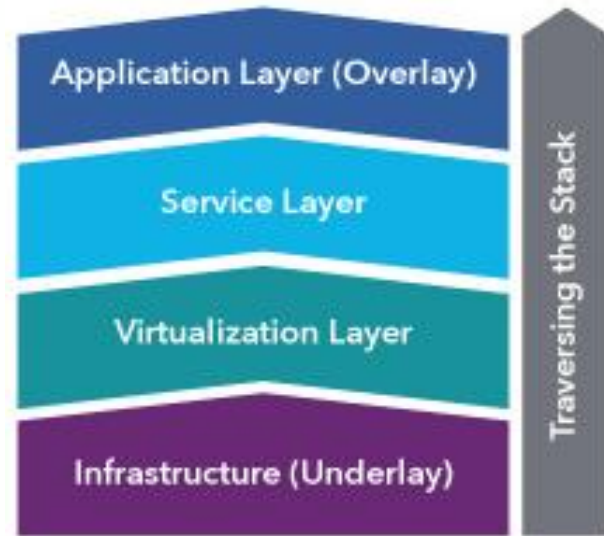
## Prime Benefits of Using Managed SD-WAN Service (Up to 2 Choices)



Source: *SD-WAN Managed Services Trends*, Futurium, November 2019.

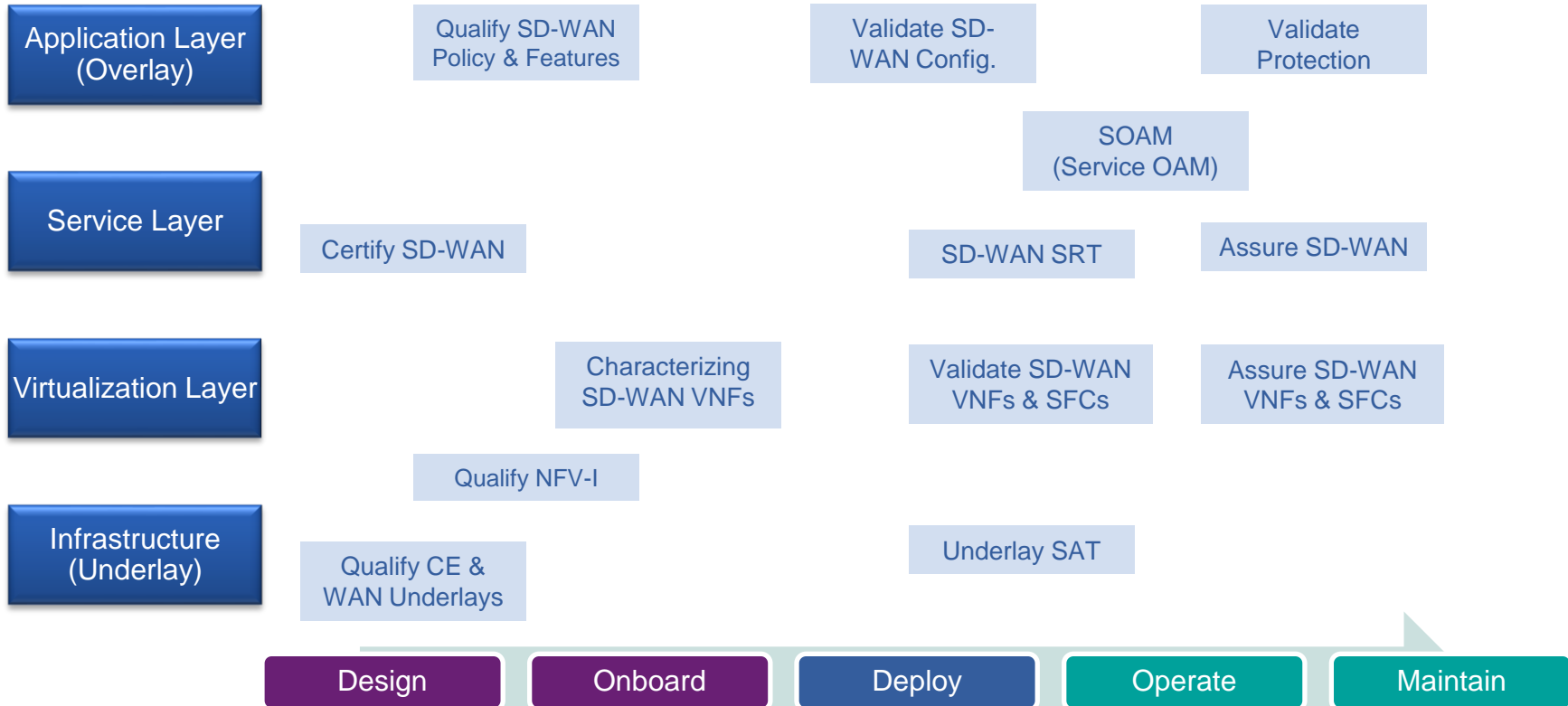
# SD-WAN Testing/Validation/Assurance Methodology

Spanning the Lifecycle



# Target Use Cases: SD-WAN MSPs

## Testing/Validation/Assurance





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