



IDC – Randy Perry, Karl Whitelock, Curtis Price

IDC 2021 Research: The State of Service Provider Digitization

June 3, 2021

Abstract

- In light of COVID-19's impact on the worldwide economy, IDC conducted a global research study about the state of the Service Providers' digitization efforts — before, during, and as they work their way towards resiliency, post-pandemic.
- Over 400 service providers answered a survey that covered 7 key domains — Infrastructure, Automation, Customer Services, Security, Organization, Business Processes and Analytics.
- The research analyzes digitization progress in each of these domains, as well as performance across key business metrics and how they were affected by the SP digitization progress.
- The research also offers guidance on how SPs can successfully advance in their digital transformation journeys and improve business performance as a result.

Webinar Presenters

Presentation Team



Randy Perry

Vice President, Sales
Enablement Practice,
IDC



Curtis Price

Program Vice President,
Infrastructure Services,
IDC



Karl Whitelock

Research Vice President,
Communications Service
Provider Operations &
Monetization, IDC



Agenda

- Purpose and Methodology
- Digital Transformation Key Findings
- Domain Specific Findings
 - ✓ Infrastructure
 - ✓ Automation and Orchestration
 - ✓ Customer Facing
 - ✓ Security
- Essential Guidance

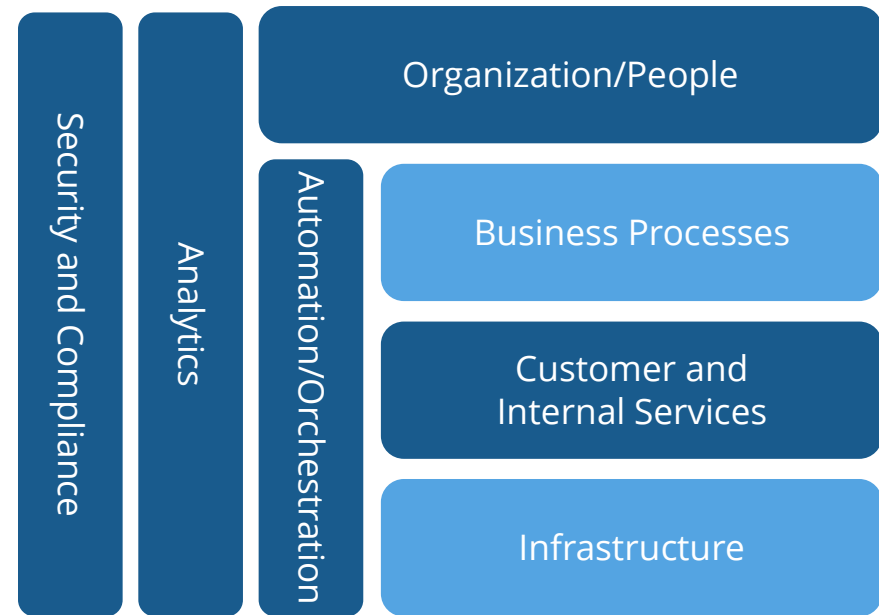


Purpose and Methodology

Purpose of the 2021 Digital Maturity Survey

- Digital Transformation (DX) journey of a typical SP is a complex undertaking
- IDC worked with Cisco to simplify the journey by making it manageable and measurable
- Research outcome is the SP Digital Maturity Index defined by 7 domains and 35 sub-domains

Updated the SP Model as defined in 2018



*Broke down the problem: 7 domains,
35 sub-categories and additional
questions to cover the DX maturity levels*

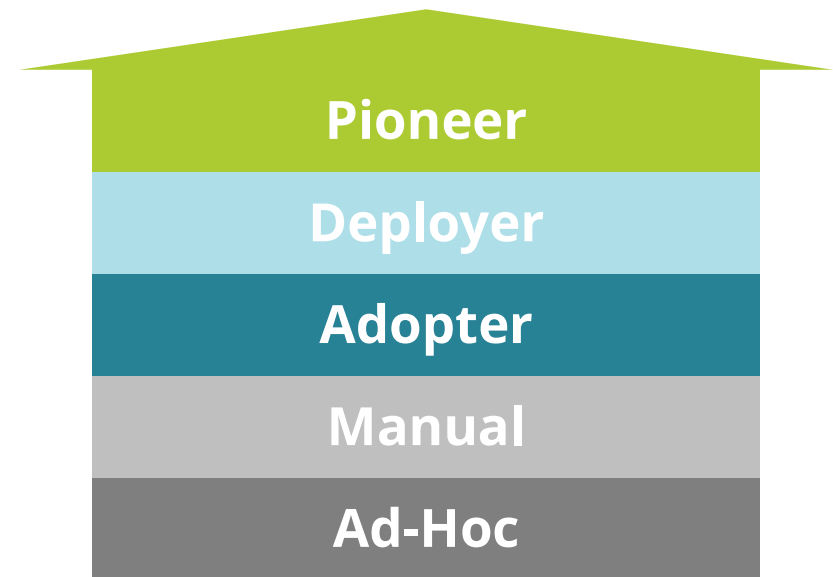
N = 400, Source: IDC SP Digital Readiness Survey, 2021

Methodology Used

- The Index defines five digital maturity levels
- The index is based on 400 SP surveys from all geographies and several in-depth interviews with small and mid-size SPs
- The Index provides a guide to help SPs improve effectiveness of DX initiatives and to measure progress

In addition to the quantitative survey, IDC conducted **in-depth interviews** with SPs at the highest level of digital maturity. In this analysis, we focused on quantifying the impact of initiatives in four key domains: **network infrastructure, operations and orchestration, customer-facing services, and security**. The research also sought to uncover how DX in each domain was turning challenges into opportunities for the respective SPs.

Measure the progress per domain from 'Ad-Hoc' to 'Pioneer'



Explore how digital transformation progresses in each domain and sub-category

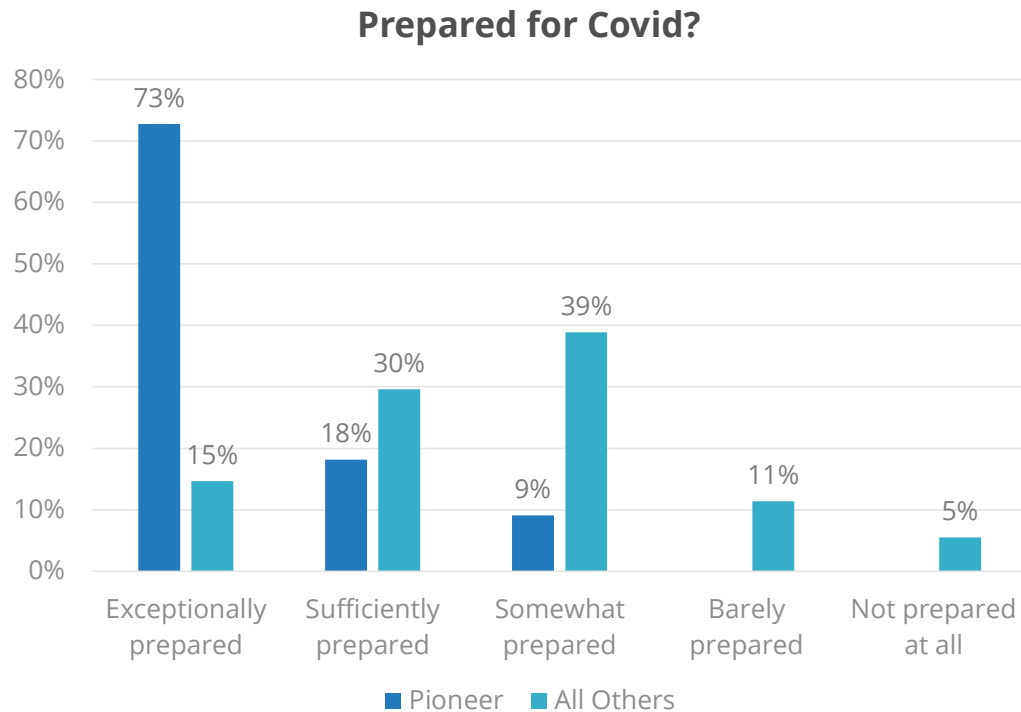
N = 400, Source: IDC SP Digital Readiness Survey, 2021



Digital Transformation (DX) Key Findings

Poll Question #1

How prepared was your organization to adopt new ways of working in response to the COVID-19 pandemic?

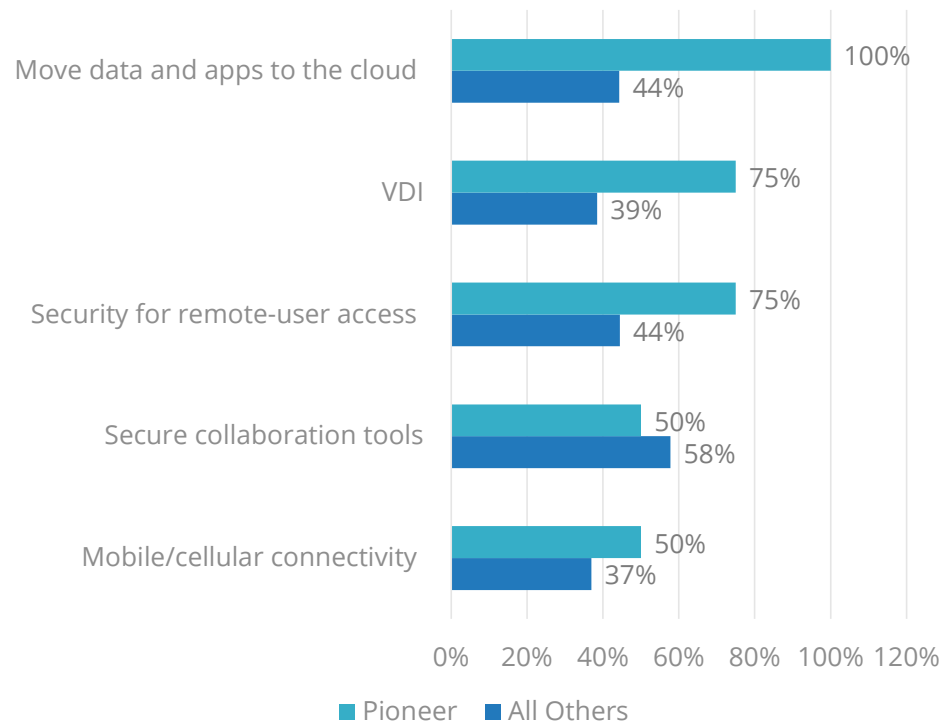


N = 187 Respondents knowledgeable about Organization and People
Source: IDC SP Digital Readiness Survey, 2021

Pioneers were prepared:

- They invested in technologies to support remote workers
- Built digital resilience to lower the risk of business disruption
- Prepared not just from effects of COVID-19 but for the next “Black Swan” global crises too

Which of the following technologies has your organization adopted to make remote work more productive?

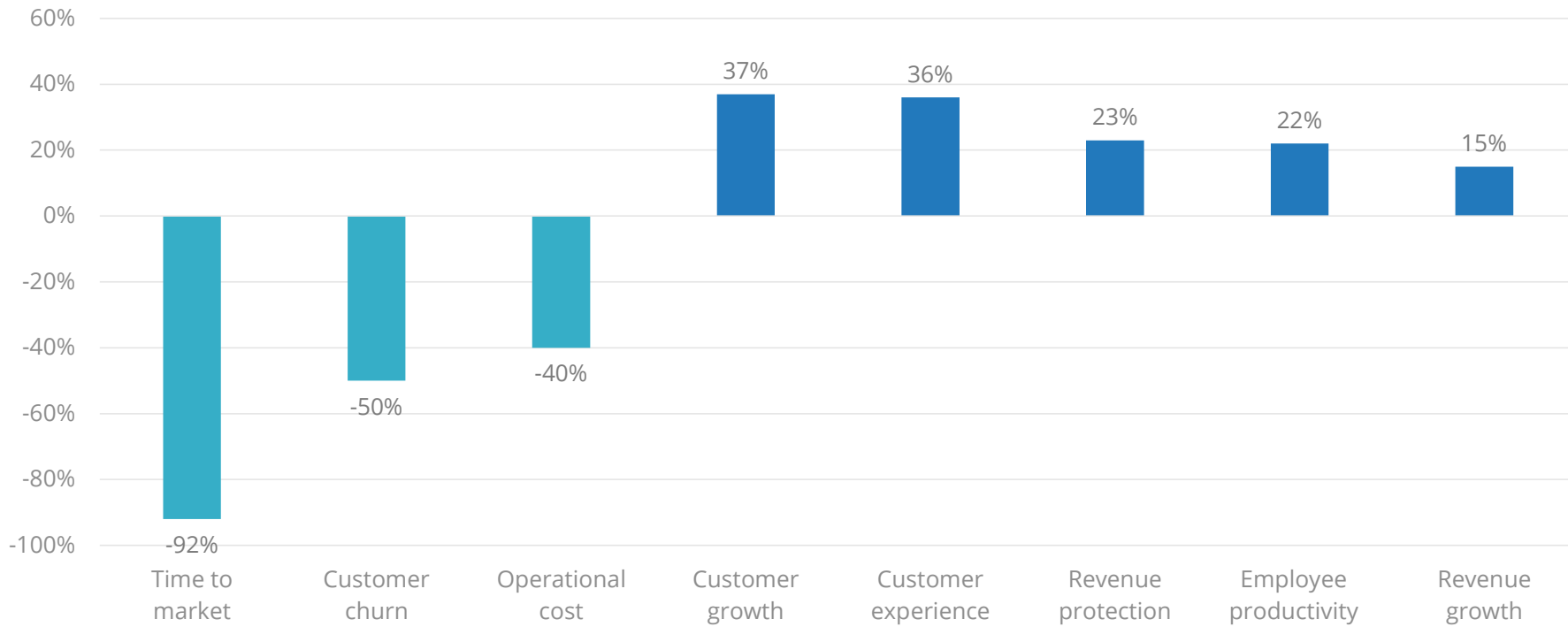


N = 187 Respondents knowledgeable about Organization and People
Source: IDC SP Digital Readiness Survey, 2021

Pioneers successfully:

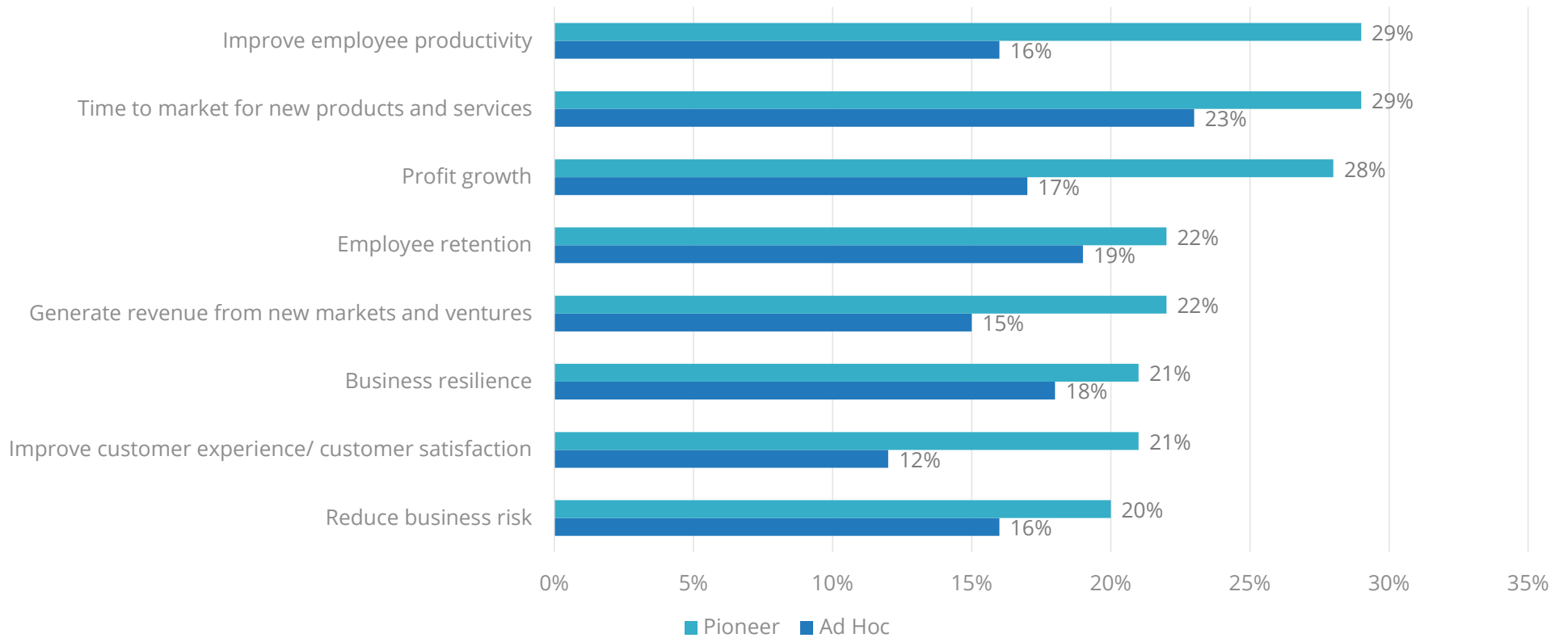
- Moved data/apps to the cloud
- Provided Virtual Desktop infrastructure
- Provided security for remote user access
- Emphasized mobile connectivity

Digitally advanced "Pioneer" SPs see significant business benefits (average improvements resulting from DX initiatives)



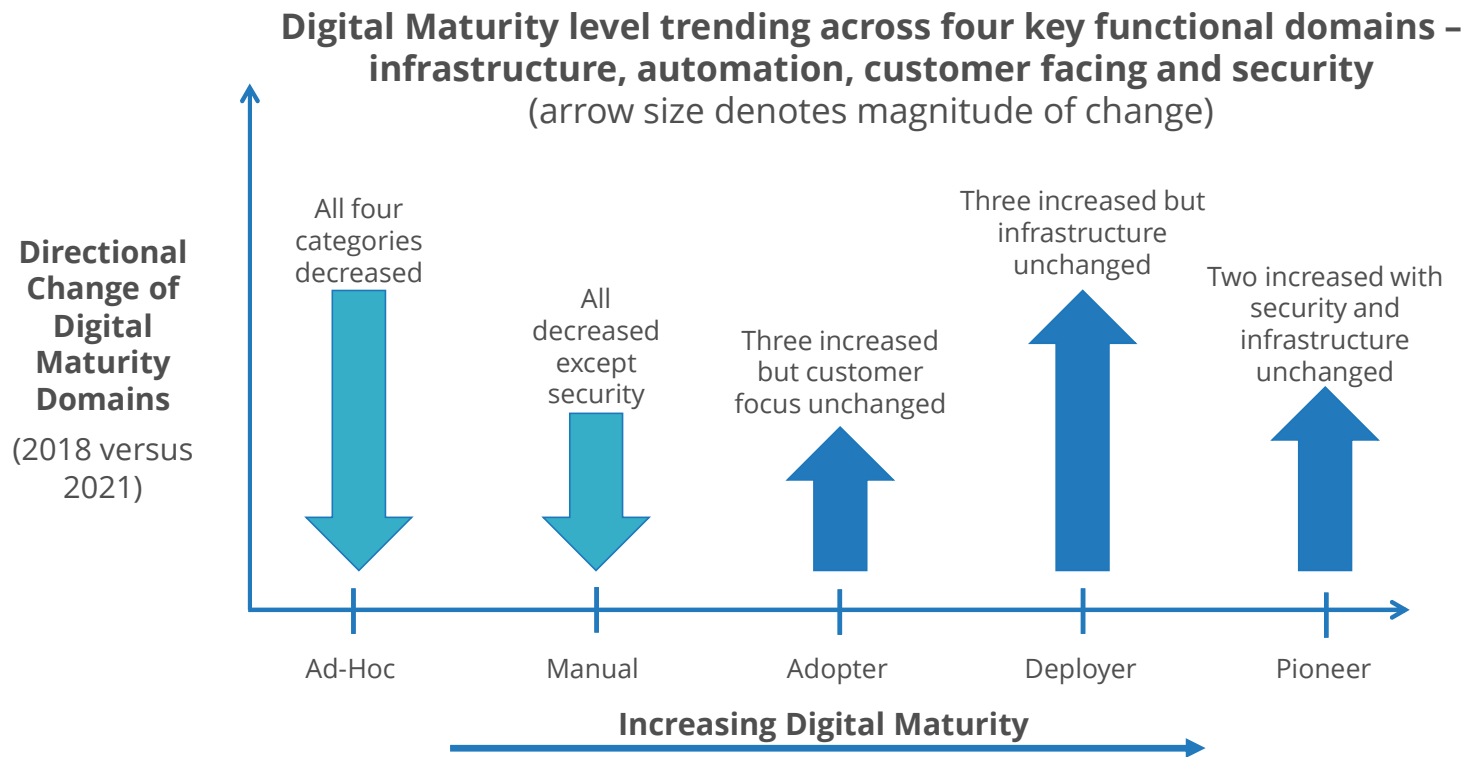
Based on in-depth interviews, 2021

Business Outcome Improvements



N = 400, Source: IDC SP Digital Readiness Survey, 2021

SP digital maturity grew significantly from 2018 to 2021 as Ad-Hoc and Manual levels declined and Adopter, Deployer and Pioneer levels grew



The automation and customer-facing domains show the most change.

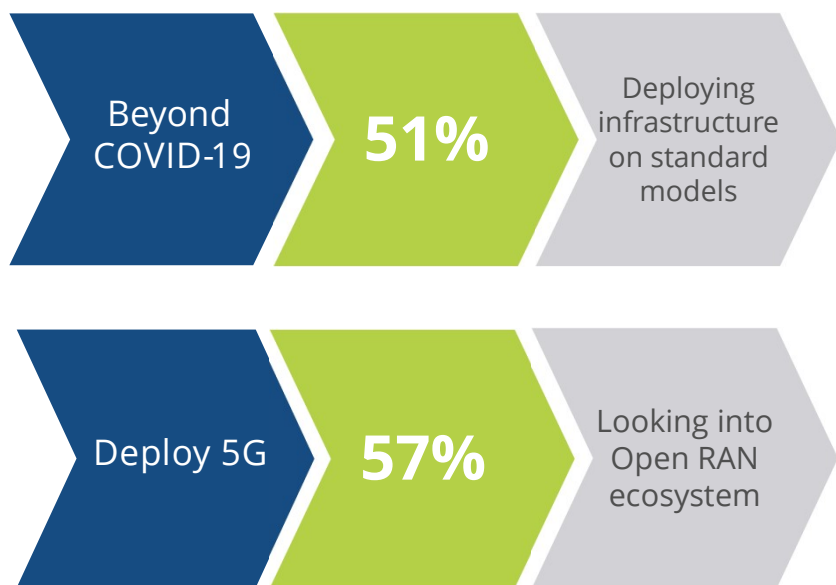
N = 400, Source: IDC SP Digital Readiness Survey, 2021



Infrastructure Key Findings

Pioneers highlighted that cloud and edge capabilities are a prerequisite for ongoing growth ambitions

Pioneer Business Priorities



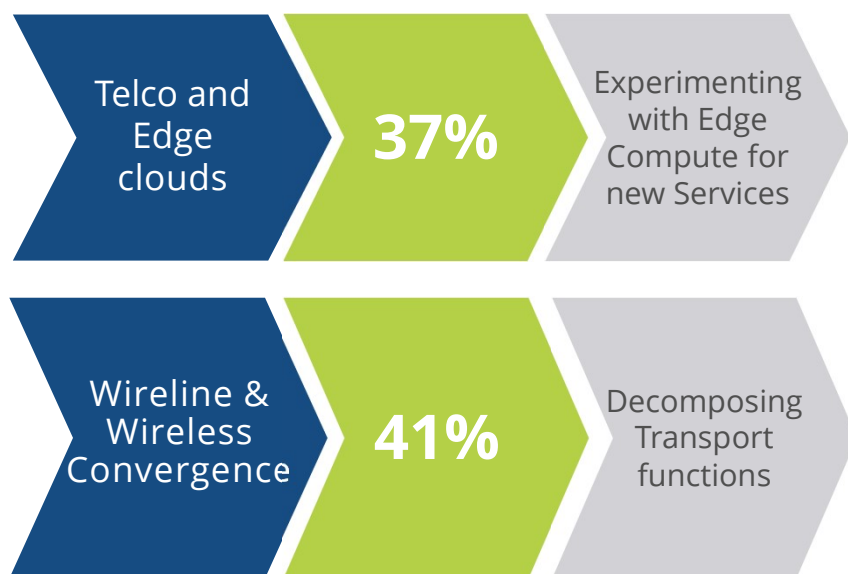
Why Pioneers are Changing

- 35% are pursuing hardware and software network element disaggregation
- 40% are facilitating the deployment of cost-optimized distributed user planes
- 44% are leveraging open-source solutions and technologies (open APIs) to deliver new infrastructure
- 41% are looking to provide dynamic network slicing, segment routing

Source: IDC SP Digital Readiness Survey, 2021, N = 214 respondents knowledgeable about network infrastructure

Pioneers have, on average, a growth factor of **1.45X** that of their Ad-hoc peers

Pioneer Business Priorities



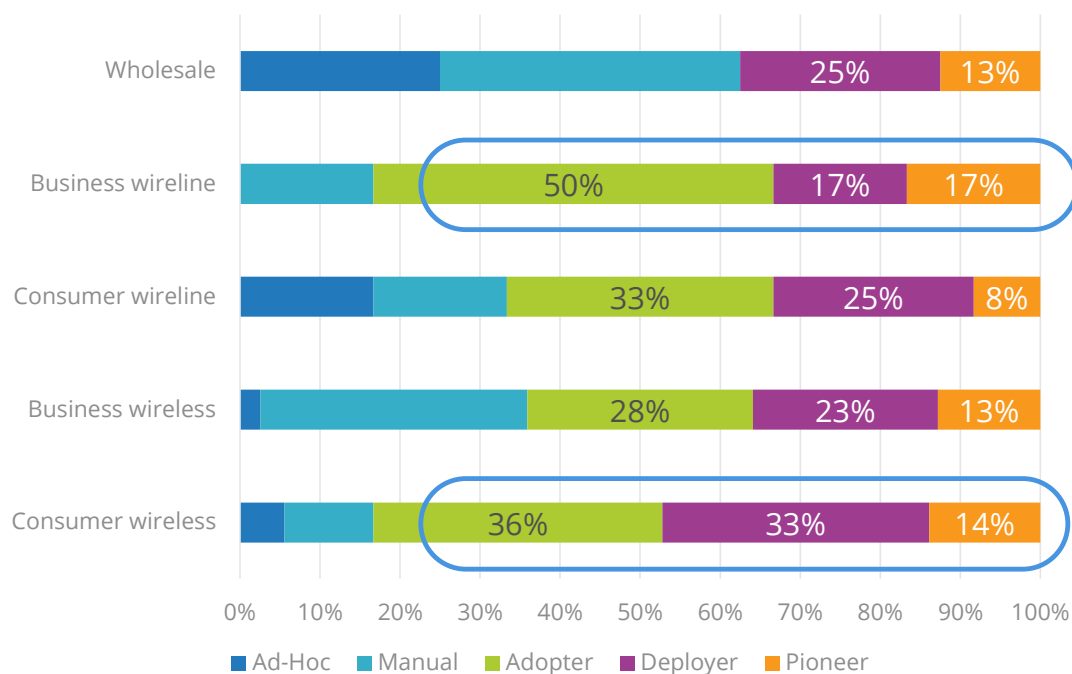
Why Pioneers are Changing

- 45% are transitioning network appliances to cloud-native functions
- 43% are Implementing new access and aggregation systems to boost performance
- 42% are migrating to an optical-routed transport network
- 44% are prioritizing a cloud-native BNG with control and user plane separation

Source: IDC SP Digital Readiness Survey, 2021, N = 214 respondents knowledgeable about network infrastructure

SPs are engaging with software-defined networks with more than half using single or multi-domain virtualized network functions

Software Defined Maturity by Sector

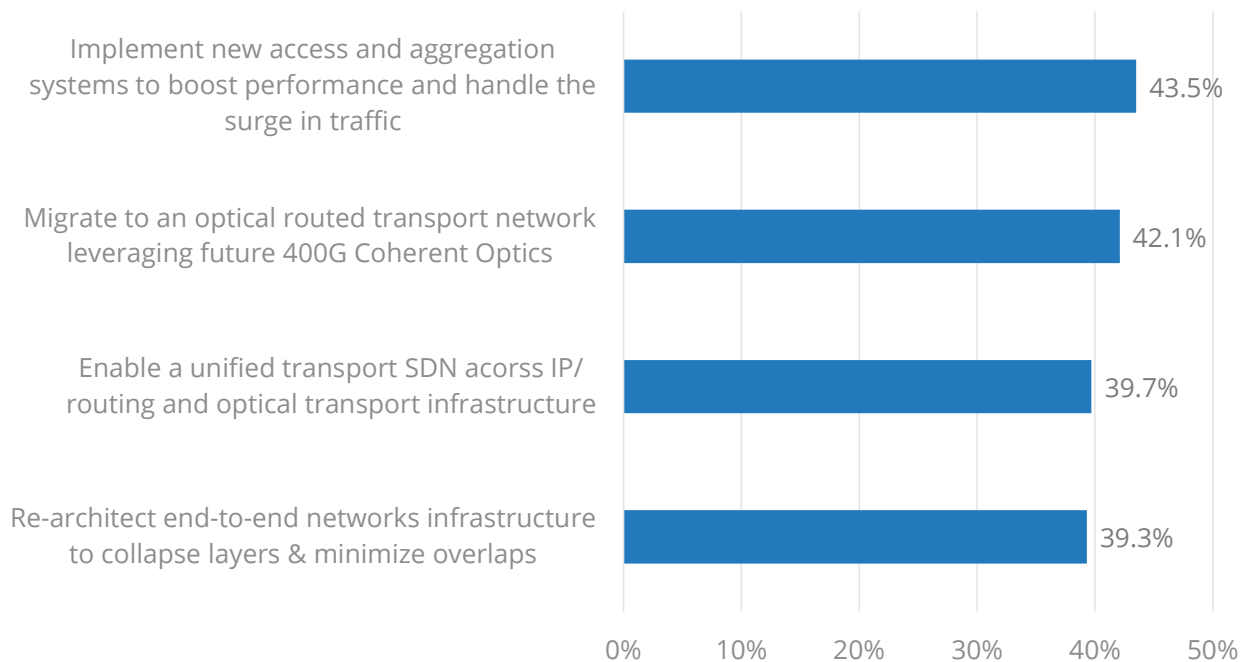


- Business Wireline or Consumer Wireless SPs are **2X more likely** to be adopters and deployers of new virtualized network functions
- Over **54% of SPs** leverage single or multi-domain virtualized network functions

Source: IDC SP Digital Readiness Survey, 2021, N = 214 respondents knowledgeable about network infrastructure

Which statement(s) best describes your organization's infrastructure top priorities?

X-Haul and Core Network Convergence Priorities



Source: IDC SP Digital Readiness Survey, 2021, N = 214 respondents knowledgeable about network infrastructure

SPs are **upgrading** core, front haul, and backhaul networks to:

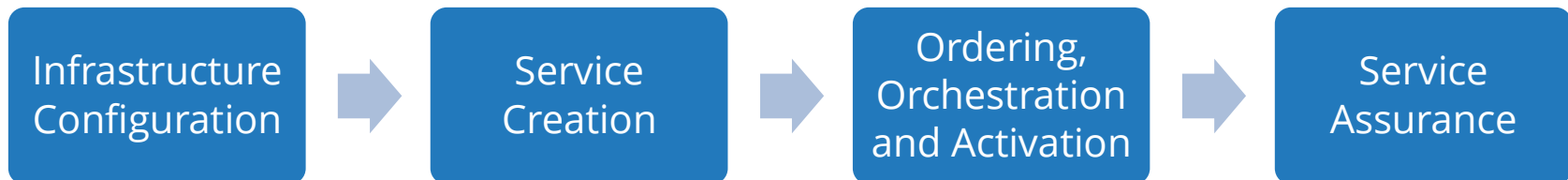
- Keep people **connected** during COVID
- Support accelerated traffic **growth**
- Address demand from **5G** deployments
- Increase **broadband** connectivity needs



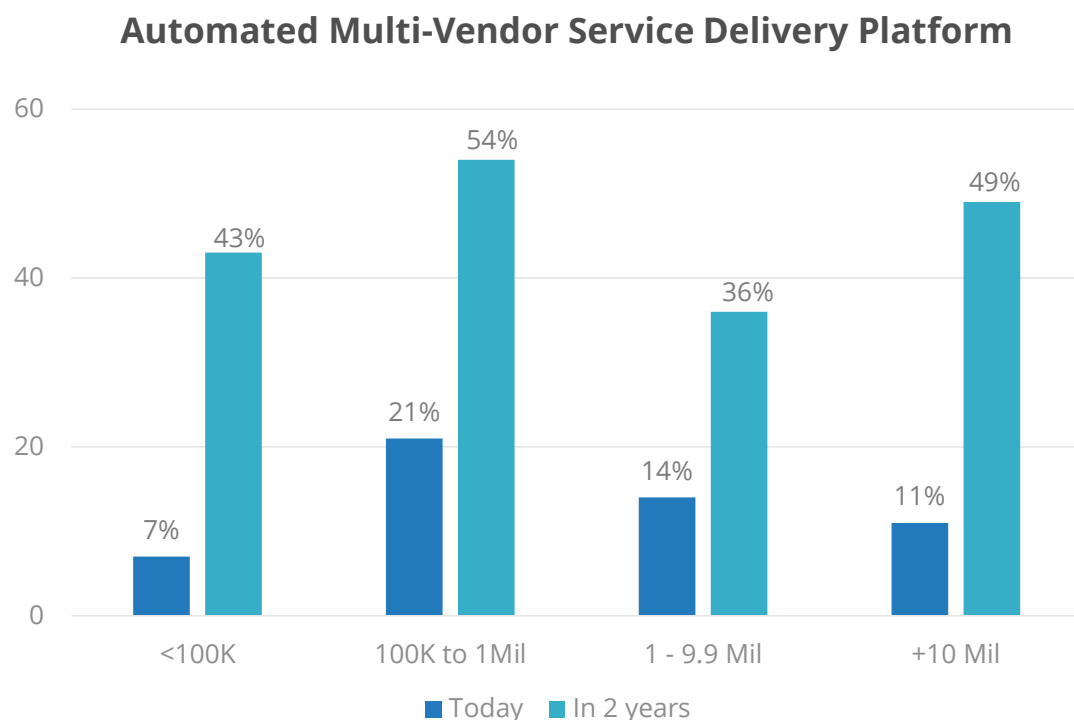
Automation / Orchestration Key Findings

Automation and Orchestration Consists of Four Parts

Technology evolution and customer demand drive SPs to automate the service management and delivery process pertaining to:



All sizes of SPs are investing in automation, but most are in the lower stages of readiness

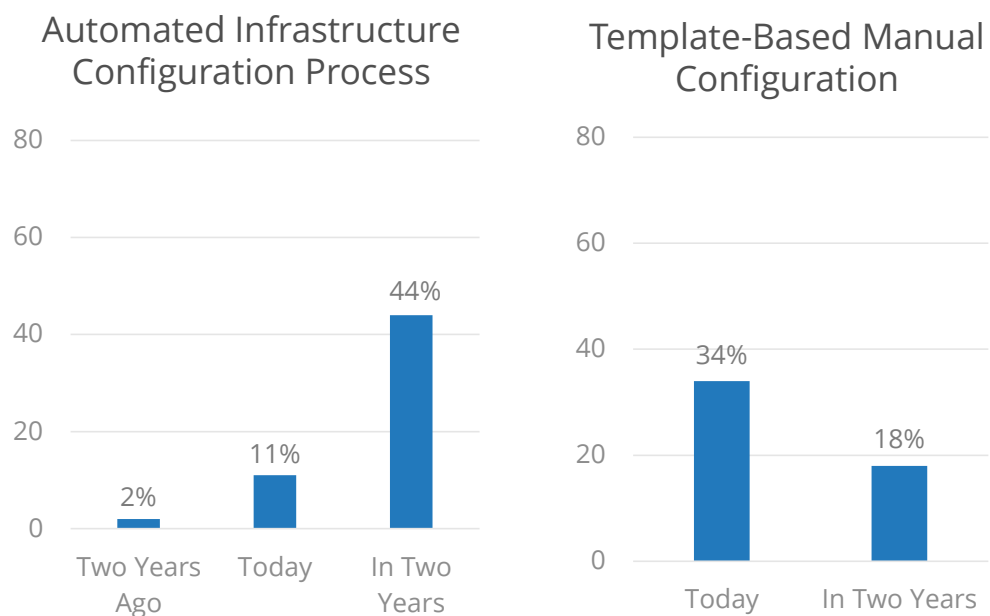


- For Pioneers engaging in automation:
- Customer satisfaction is 2.4X more likely to **improve**
- Business **resilience** will be 2.3X better
- Employee **productivity** 1.8X higher

Source: IDC SP Digital Readiness Survey, 2021, N = 158 respondents knowledgeable about automation and orchestration

Which of the following best describes your organization's approach to infrastructure configuration?

Overall SPs



Configuration automation adopted slower than we anticipated:

- Automation was nascent two years ago
- Only 11% of SPs fully automated today
- SPs will be 4 times more automated two years from now

Automated service development is another key indicator:

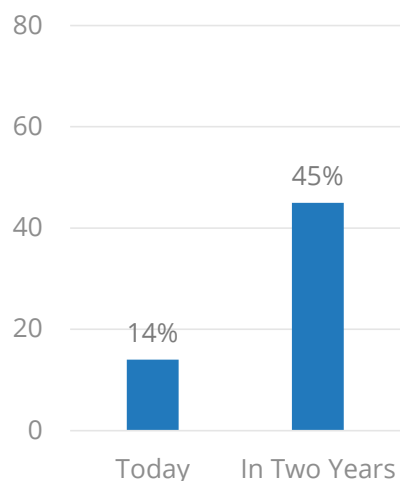
- 26% of Pioneers engage today
- 3X this number in the next two years

Source: IDC SP Digital Readiness Survey, 2021, N = 158 respondents knowledgeable about automation and orchestration

Which statement best describes your organization's service creation function?

All SPs

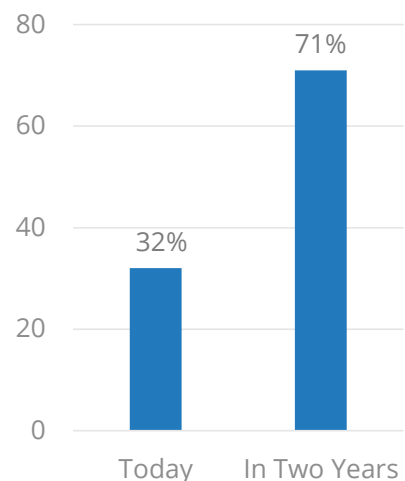
Automated Multi-Vendor Service Delivery Platform



VS.

Pioneers

Automated Multi-Vendor Service Delivery Platform



Service creation automation is:

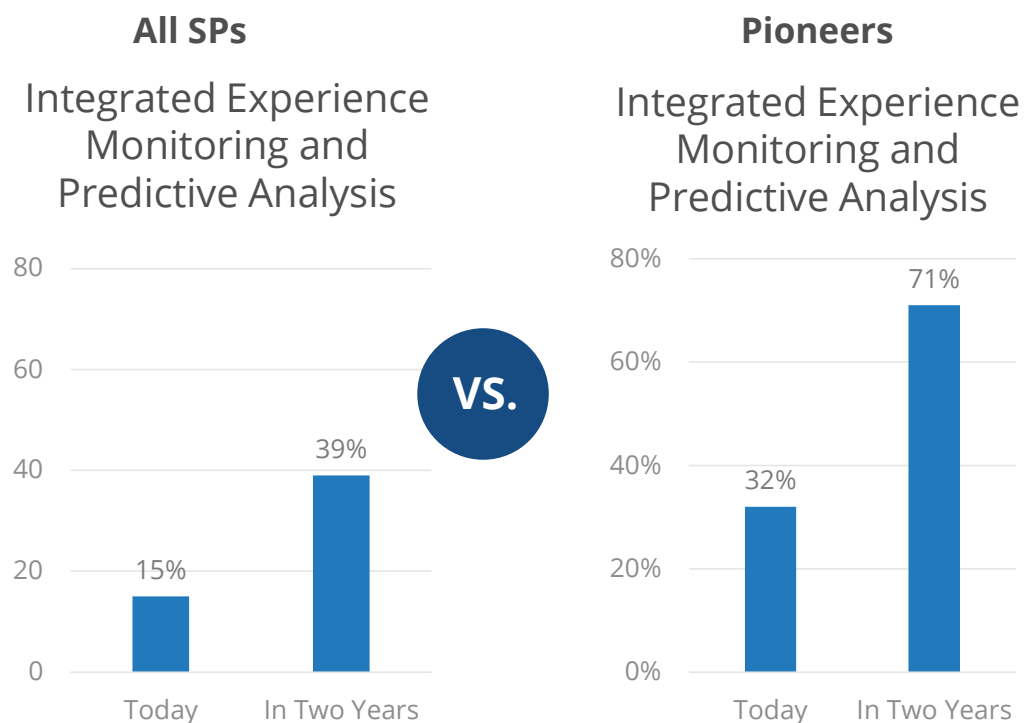
- Slowly adopted by SPs
- **Pioneers** are 2X more likely to use an automated service delivery platform

Point solutions are:

- Becoming less important
- Will **still be used 2 years** from now even as network architecture evolves

Source: IDC SP Digital Readiness Survey, 2021, N = 158 respondents knowledgeable about automation and orchestration

Which statement best describes your organization's approach to service assurance?



Source: IDC SP Digital Readiness Survey, 2021, N = 158 respondents knowledgeable about automation and orchestration

Service Assurance automation is:

- **Complex** and involved
- Network KPI monitoring is soon becoming **customer experience** management through ML and AI
- Service assurance **full automation** is not likely as services gain complexity

Automated trouble reporting is central to all assurance strategies

- **Predictive analytics** is gaining SP acceptance

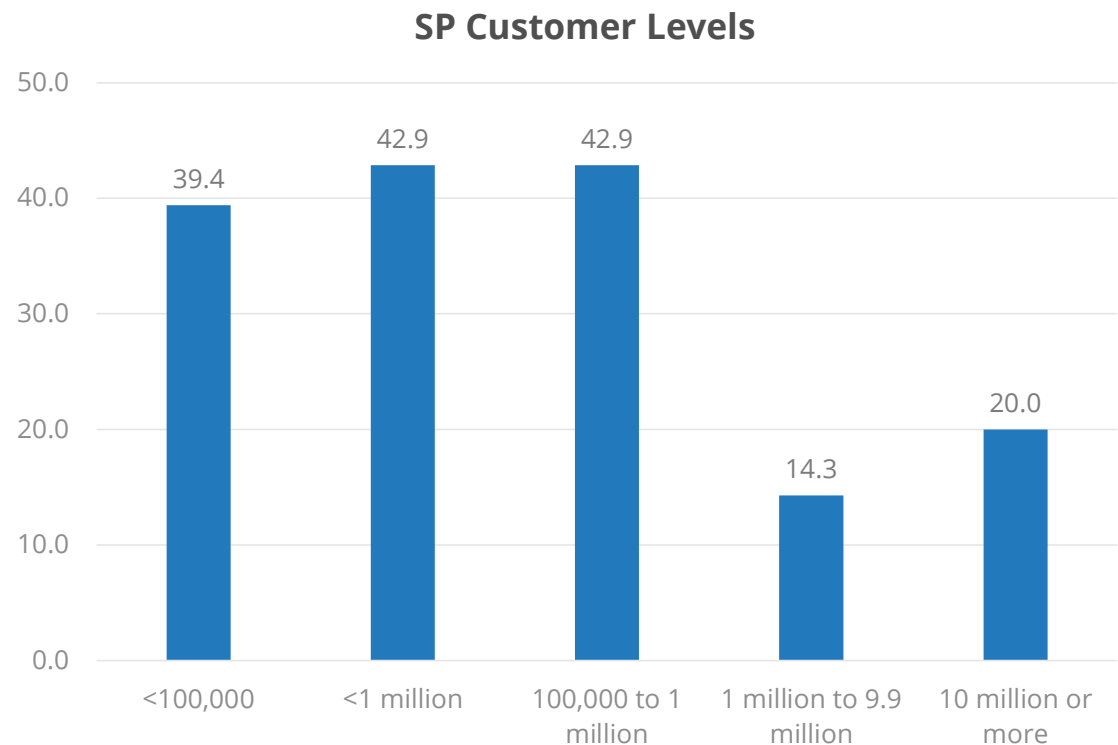


Customer Facing Key Findings

Poll Question #2

How is your organization leveraging partnerships to drive enterprise services to market?

- **Partnerships** are a key strategy for enabling SPs to drive innovation and enhance service value
- **Small SPs** today are almost 2.5X more active in expanding their **partner channels**

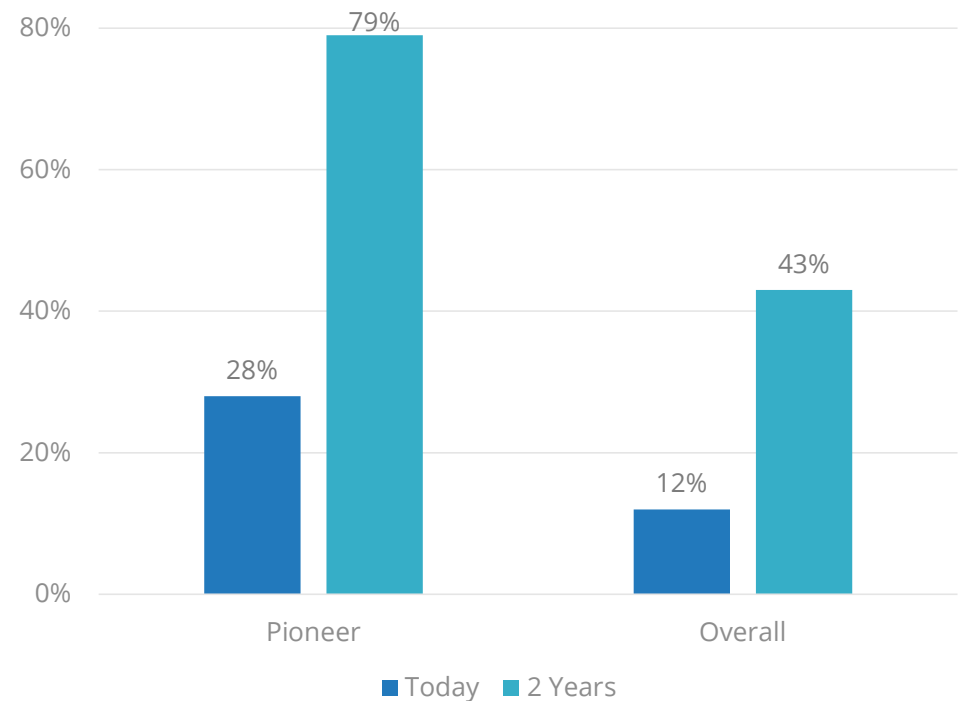


Source: IDC SP Digital Readiness Survey, 2021, N = 147 respondents knowledgeable about customer facing functions

How is your organization leveraging partnerships to drive enterprise services to market?

- We have developed a **co-creation** model with technology and cloud partners
- In 2 years, there will be a **3.5X increase** in the number of SPs executing co-creation models with partners
- **Pioneer** SPs are pursuing co-creation strategies at 2X the rate of other SPs

Driving Innovation with Partners



Source: IDC SP Digital Readiness Survey, 2021, N = 147 respondents knowledgeable about customer facing functions

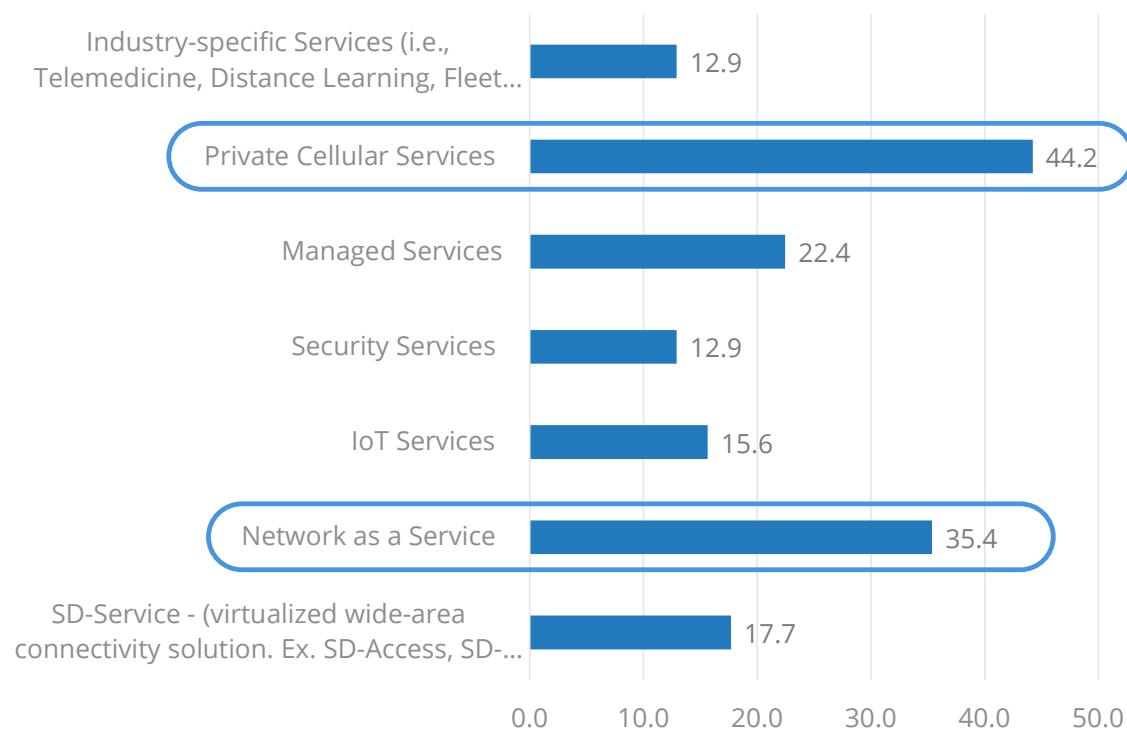
Which of the following services represent priorities to expand your services portfolio?

- SPs are prioritizing the rollout of **new services** that drive innovation, consumption flexibility and choice to enterprises

Use cases developing around:

- **Private** cellular services opens opportunities for SPs in industry segments beyond pure connectivity
- **NaaS** is rapidly becoming a significant business focus with many SPs

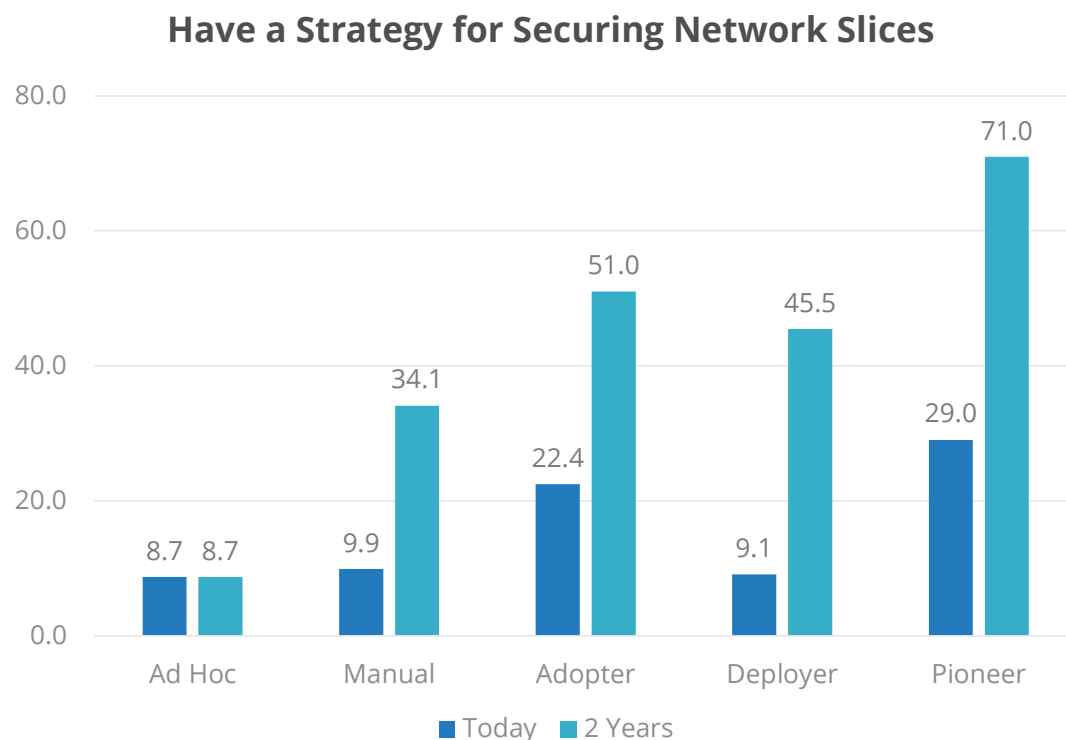
Overall SP Service Priorities



Source: IDC SP Digital Readiness Survey, 2021, N = 147 respondents knowledgeable about customer facing functions

What is your organization's strategy for end-to-end security of new virtual connectivity services?

- Securing **network slices** is a key component for driving new revenue.
- SPs are developing **security strategies** for virtual connectivity services now but make the most significant advances over the **next two years**.



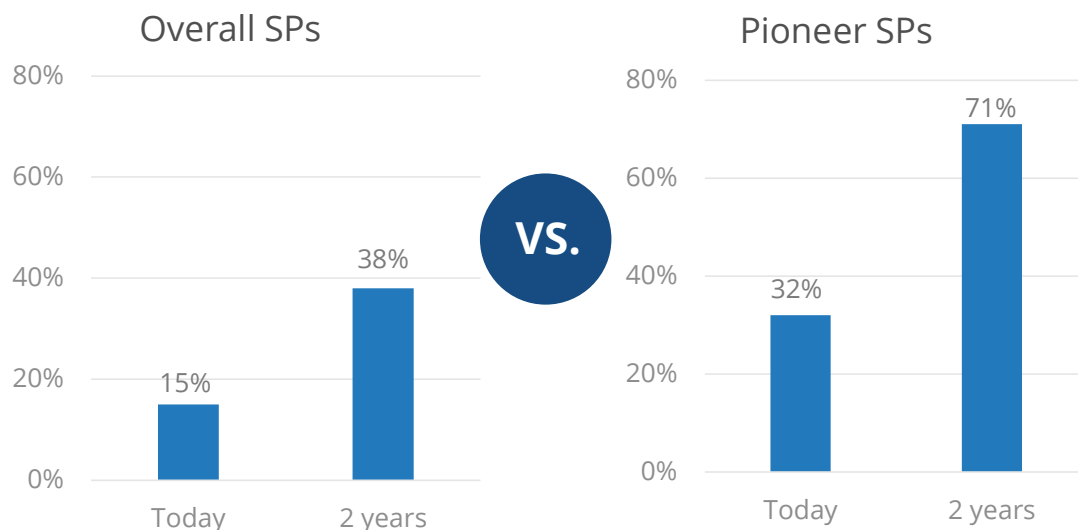
Source: IDC SP Digital Readiness Survey, 2021, N = 147 respondents knowledgeable about customer facing functions



Security Key Findings

Which statement best reflects your organization's strategy for securing the cloud-native components of your infrastructure?

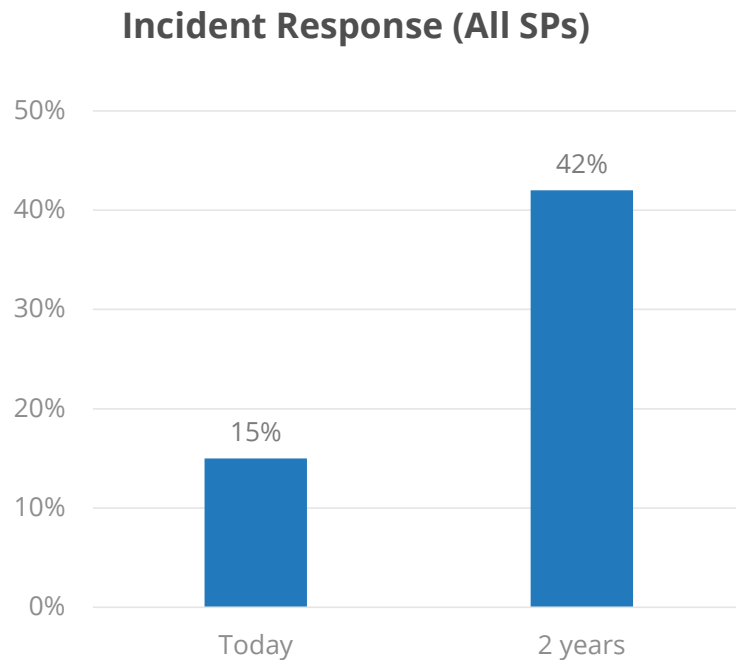
Implemented automated security controls with AI-based analytics for end-to-end visibility



- Advanced technologies for cloud infrastructure security are **slowly adopted**, yet Pioneer SPs are progressing over 2X as fast as the other SPs
- Advanced technologies drive **proactive** and preventative approach to cyber threats

Source: IDC SP Digital Readiness Survey, 2021, N = 227 respondents knowledgeable about security functions

Which statement best describes how your organization manages its response to a crisis or incident?



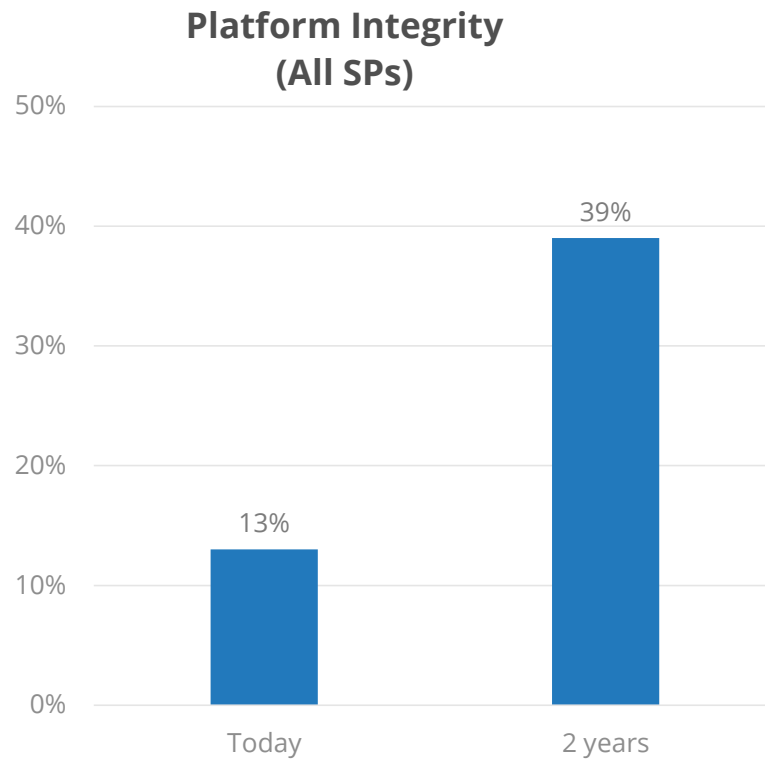
- We have an **Incident Response plan** in place that is tested in routine practice runs and continuously reassessed

Which statement best describes how your organization manages its response to a crisis or incident?



- We have a comprehensive **risk framework** that addresses compliance, governance and end-to-end security

Which statement best describes how your organization manages its response to a crisis or incident?



- We have developed a **comprehensive trust platform** with continuous reporting for internal stakeholders



Essential Guidance

Essential Guidance

- Get your house in order. The top challenges to becoming a DX organization are overcoming corporate silos and not having a digital workforce.
- Transformation in and of itself is inherently a risky endeavor. Trying to drive a holistic transformation initiative is a futile effort. The better approach is to identify the business outcomes that are most important to your organization.
- You cannot do it alone. Engage with a trusted partner who can look at the strategic and market aspects, as well as the technology and automation aspects. 56% of Pioneers have a co-creation model.
- There is no defined expiration date. Your organization needs to be constantly changing because the market is constantly changing.



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