



How the WAN is Driving Digital Transformation

An IDC InfoBrief, Sponsored by



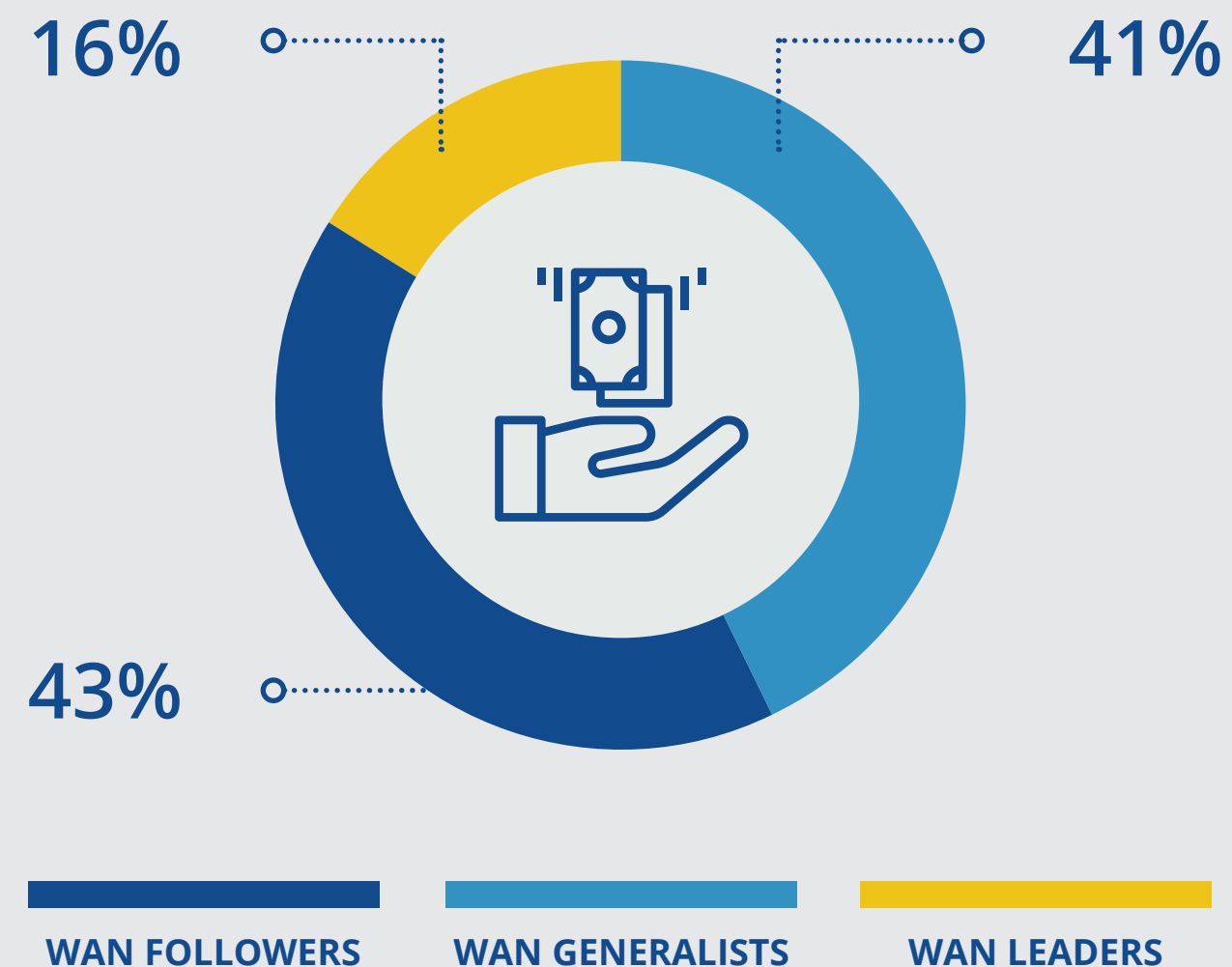
Executive Summary

- Digital transformation needs to go hand in hand with an evolution of the wide area network (WAN). IDC has built a comparison framework to understand how advanced different organizations are in this evolution. In this benchmark survey responses from 300 network experts and decision makers have been scored to group organizations into 3 levels of WAN maturity, based on their approach to infrastructure, intelligence and operations. The most advanced organizations (16%) have been classed as WAN Leaders.
- These WAN Leaders typically get the link between digital transformation and the WAN. On one hand the success of digital transformation is dependent on a well functioning network, while on the other hand the adoption of digital technologies is accelerating network demands. At the same time security is a key concern. Budgets, however, are not growing at the same pace leaving organizations with a balancing act.
- Many organizations are struggling to adapt their WANs to these evolving needs. The implementation of more advanced connectivity options, in combination with a wider use of intelligence and automation can help organizations improve their network.
- SD-WAN has emerged as a solution that can address these changing business requirements. Adoption among organizations is accelerating, as they are attracted by a range of reasons that together help them optimize cost and performance.
- SD-WAN should serve as a stepping stone toward a “network-as-a-service”. The combination with virtual network services will help them maximize the benefits they associate with virtualization like improved security, faster provisioning and reduced complexity. SD-WAN and virtual network services will be key building blocks for a WAN that can enable business outcomes and become a driver of digital transformation

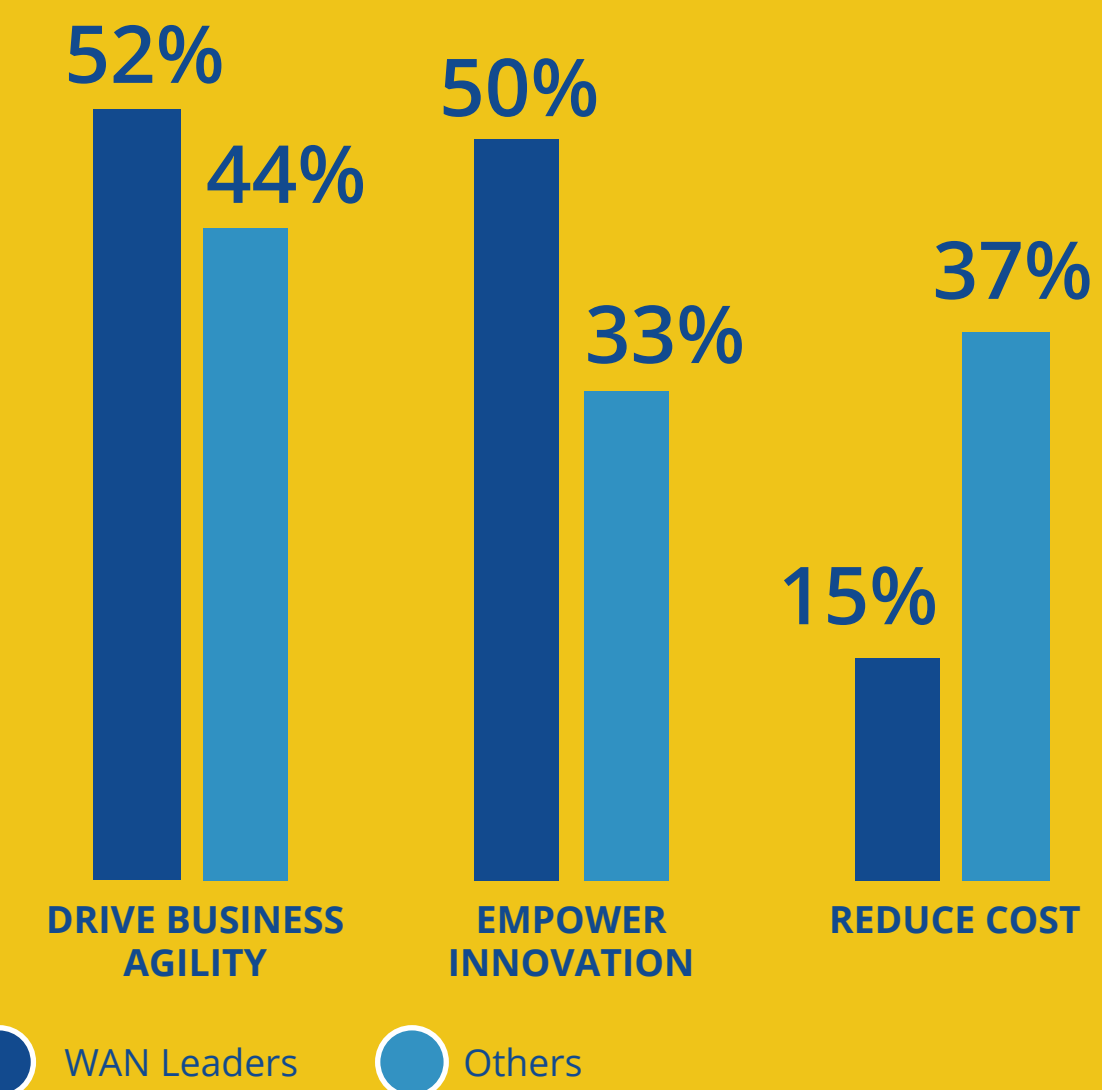
The WAN Plays a Critical Role in Digital Transformation (DX)

- Digital transformation is now an imperative for organizations. IDC's annual leadership survey shows that 89% of European CEOs have DX as a major business priority. However, only 23% of respondents in IDC's survey consider their ICT investment strategy as transformative, which means they invest heavily to transform and digitalize their business.
- An element that is often underexposed in the digital transformation journey is the wide area network (WAN). The success of digital transformation is highly dependent on a well functioning network that connects an organization's employees, sites, partners, and other stakeholders, providing access to the right applications and data at the right time. Concurrently, the adoption of digital technologies such as cloud and Big Data is driving network requirements to new heights. Digital transformation therefore needs to go hand in hand with WAN evolution.
- IDC has built a comparison framework in which survey responses are scored to group organizations into 3 levels of WAN maturity based on their approach to infrastructure, intelligence, and operations. In this benchmark, the most advanced organizations (16%) have been classed as WAN Leaders.
- WAN Leaders typically get the link between DX and the WAN. Elsewhere, senior management often underestimates the importance of the WAN. They should start thinking about their WAN as a driver of business outcomes that empowers business agility and innovation.

IDC's WAN Assessment

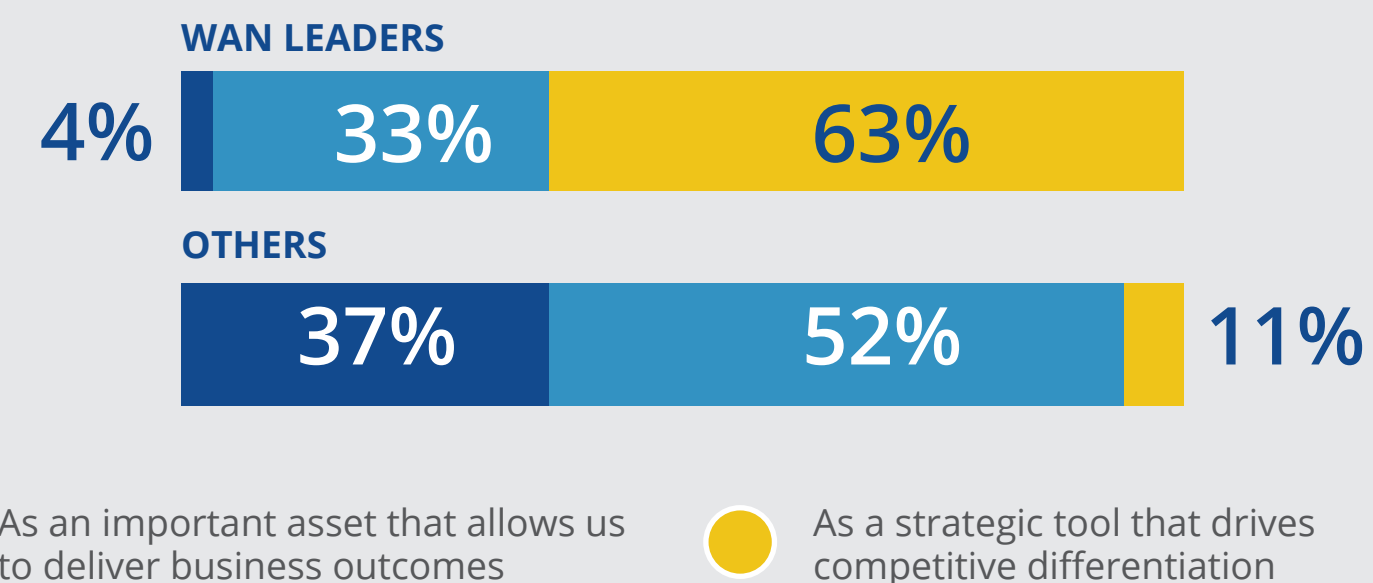


What are the key business outcomes that your company's WAN should support?



89%
of CEOs put DX
at the core of
corporate strategy

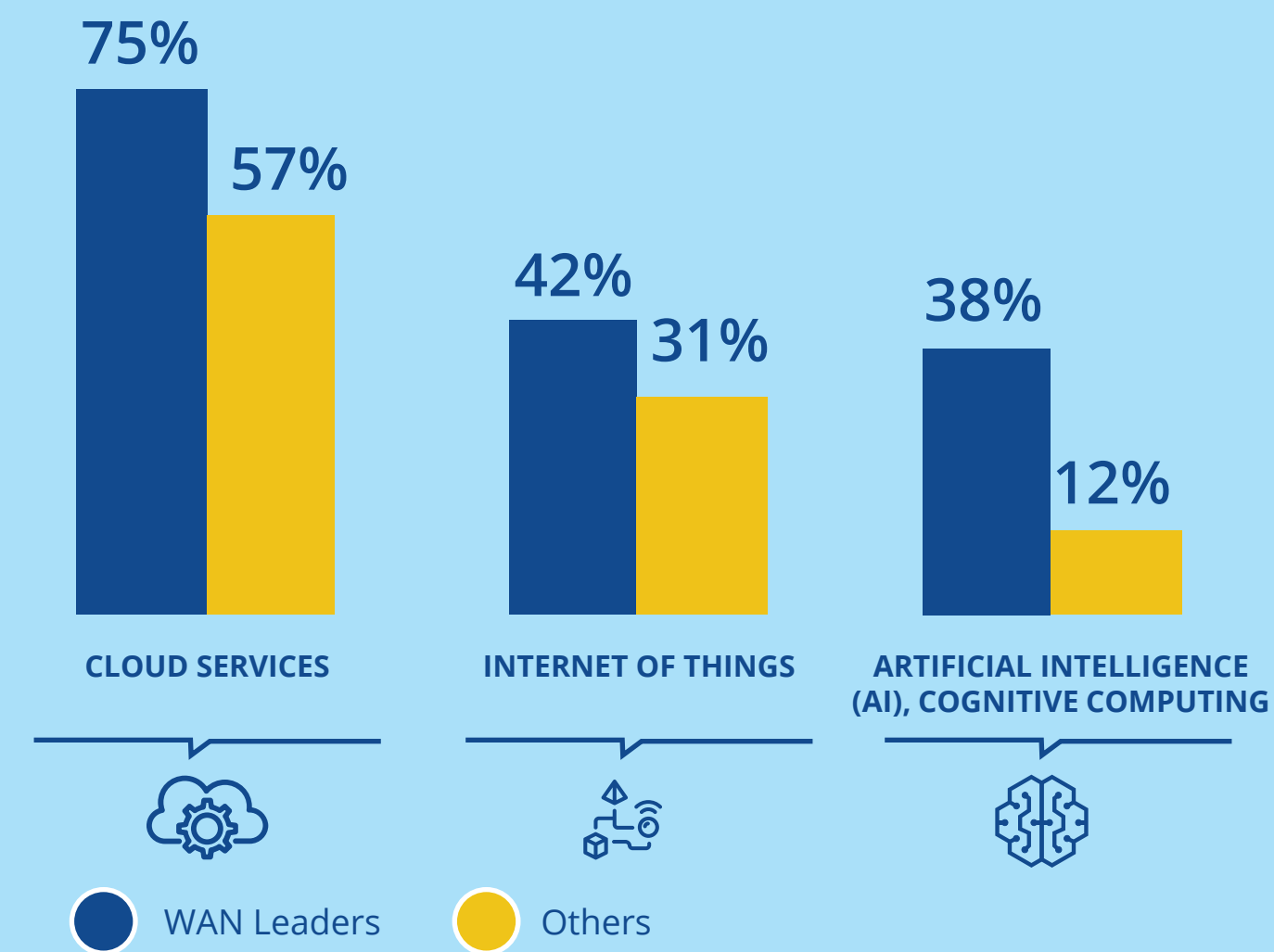
How does senior management perceive the role of the WAN for your company?



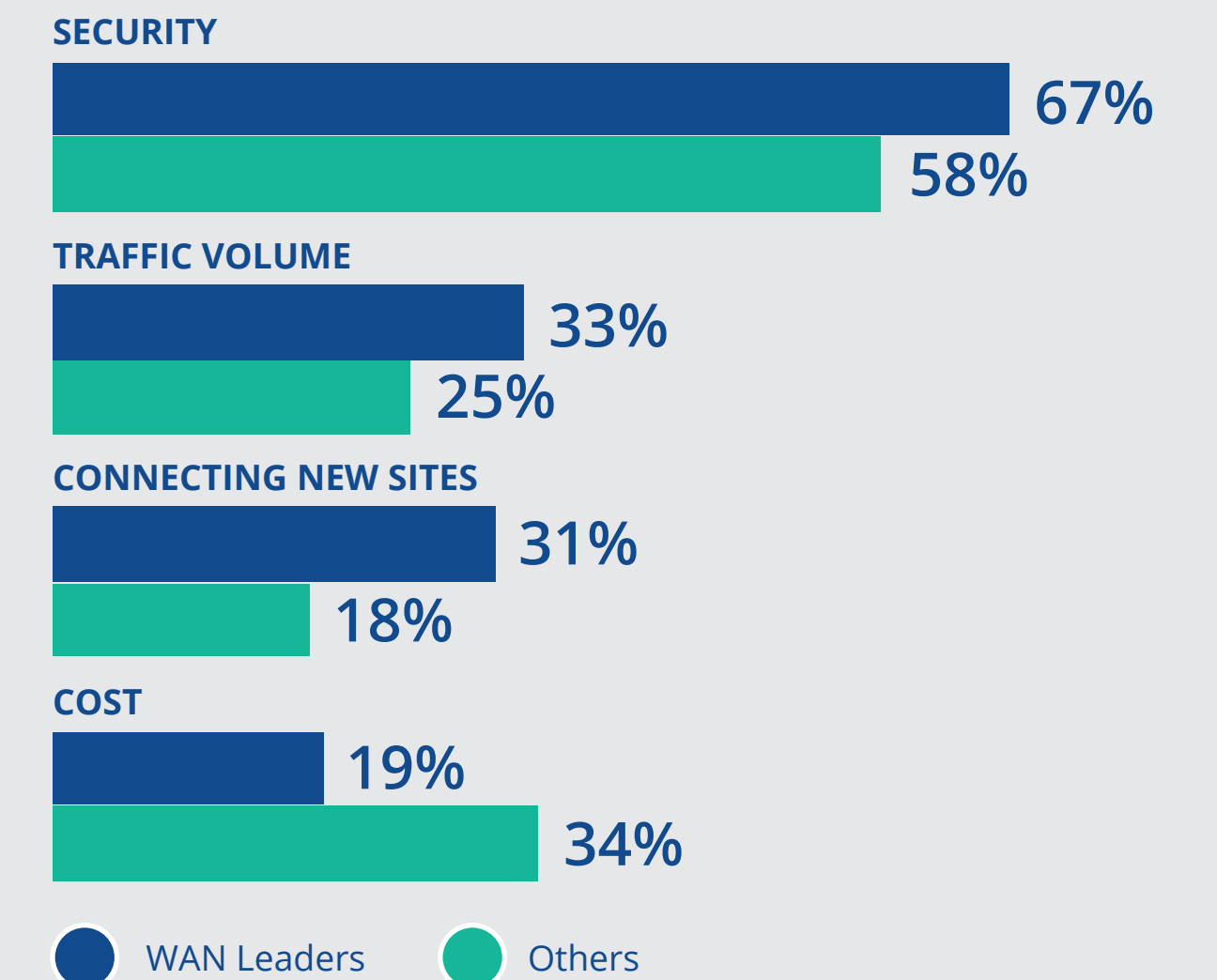
Network Requirements Are Accelerating, But Budgets Are Not

- The demands that organizations place on their WAN are set to accelerate. Cloud has by far the most impact on requirements. WAN Leaders see this even more than others. They also put notably more emphasis on Internet of Things and artificial intelligence.
- Security is generally seen as the main factor that will drive network requirements. The critical role of security is underlined by the expectations of WAN Leaders, while they also foresee a bigger impact of traffic volumes and connecting new sites than others. At the same time, they are considerably less concerned about cost.
- Companies typically expect their WAN budget to show no change or a modest increase. This leaves network managers with a balancing act between accelerating requirements and much flatter budget development. However, WAN Leaders seem to realize that a more substantial increase may be needed to effectively drive digital transformation.

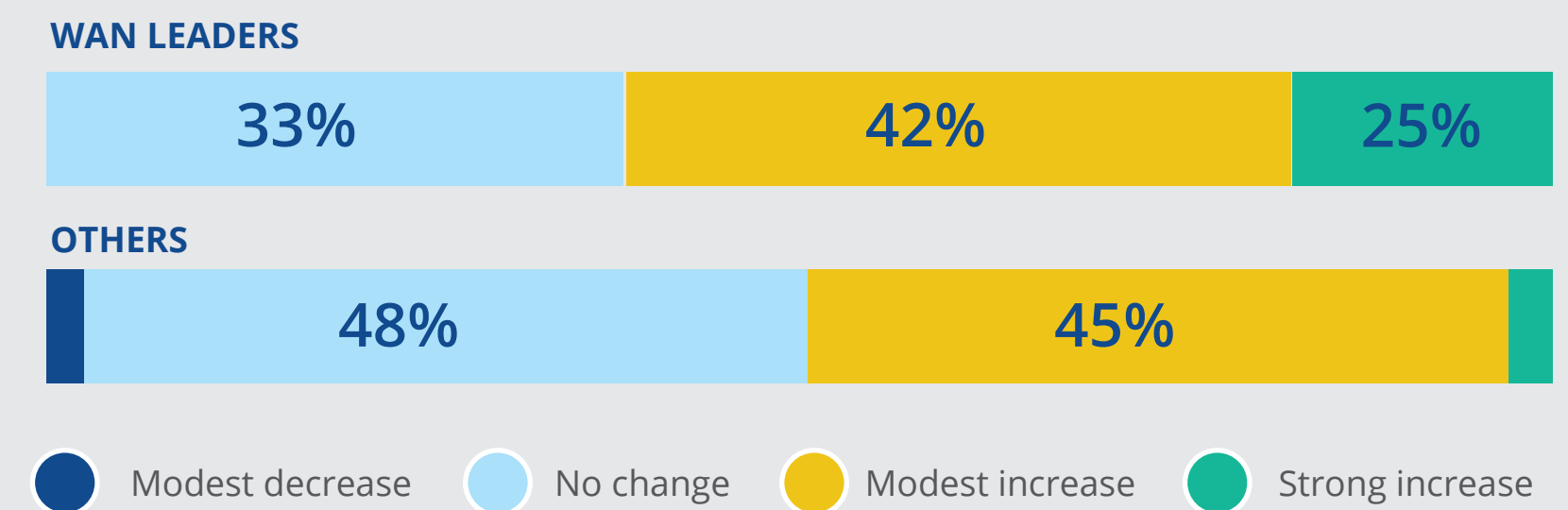
Which of the following technology areas will have the biggest impact on your company's WAN requirements in the coming years?



What are the key factors that will drive your company's network requirements over the next two years?



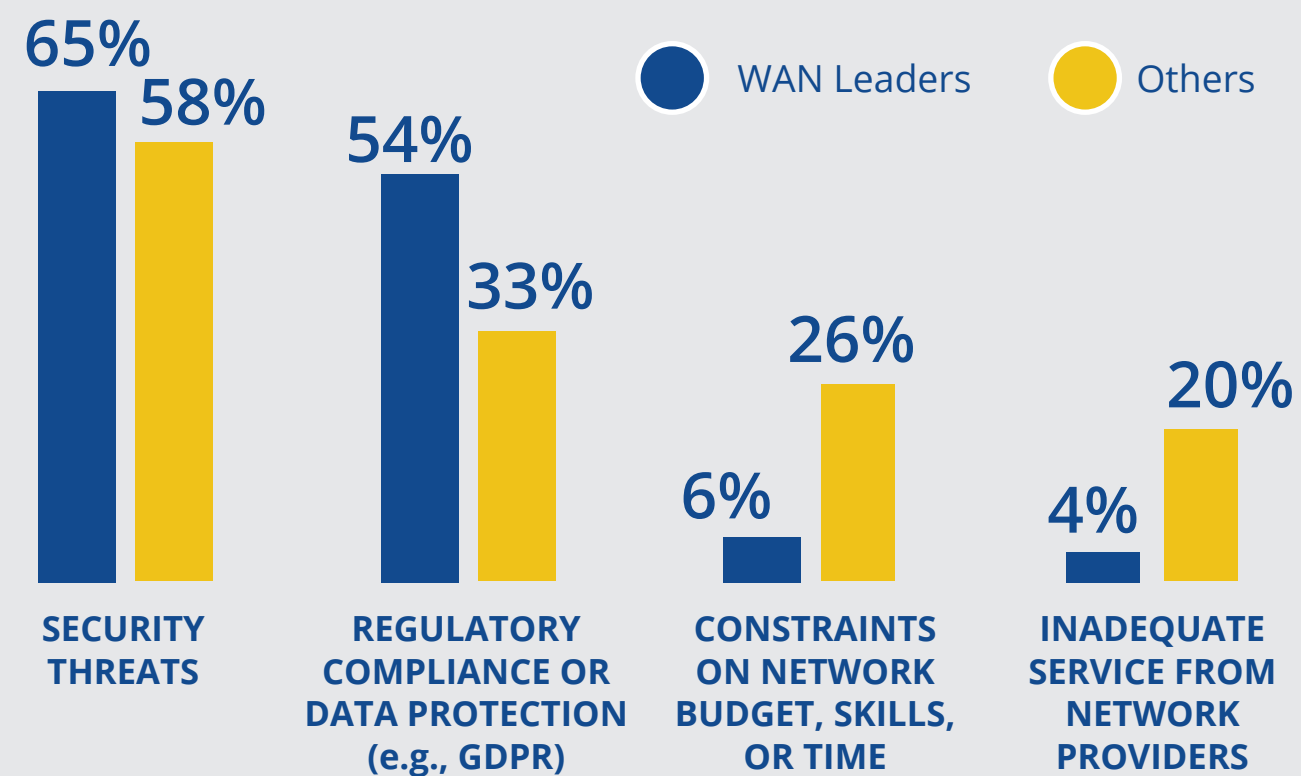
How do you expect the budget for the WAN to change, if at all, in the next two years?



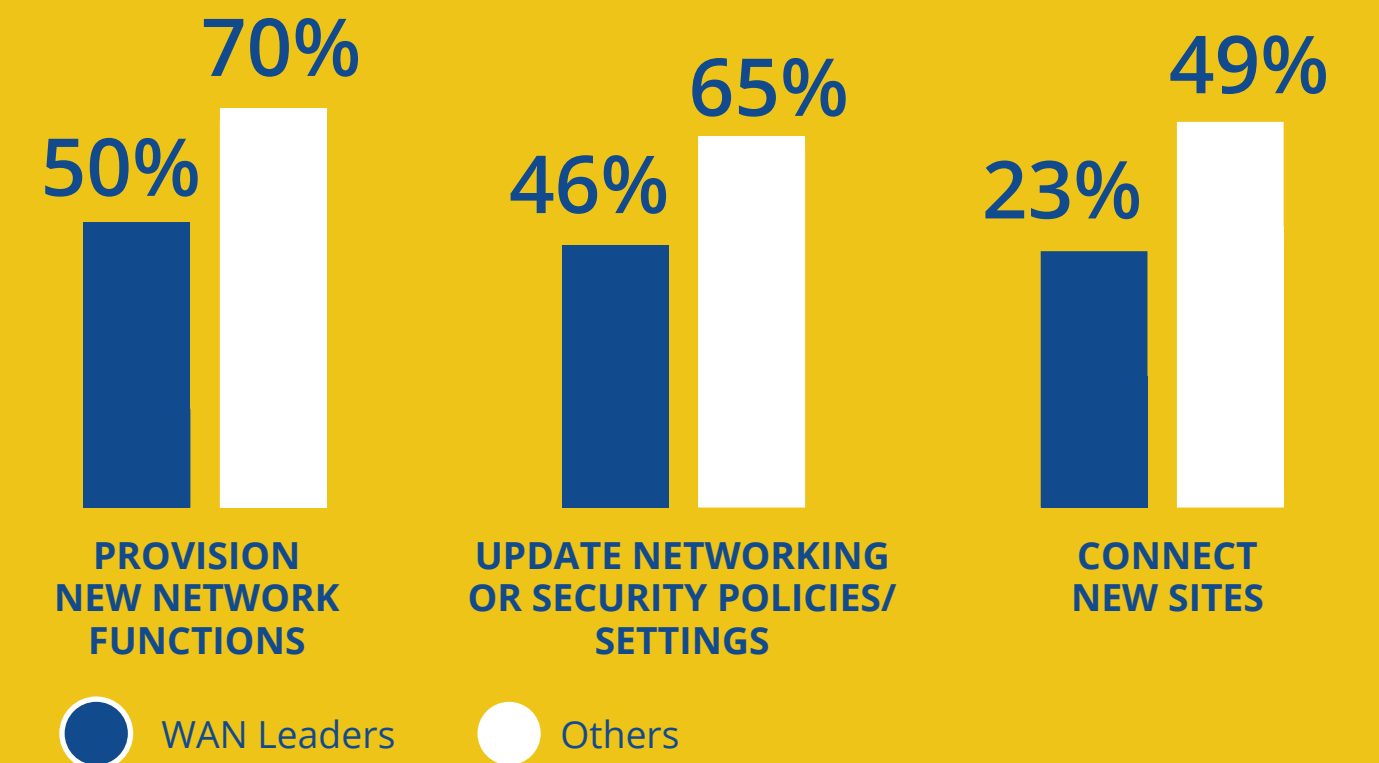
Organizations Struggle to Adapt Their WAN to Changing Needs

- Organizations need to adapt their WAN to cope with changing business dynamics. However, many of them are struggling to do this. Security threats and regulatory compliance are generally perceived as key WAN challenges. Regular tasks, such as connecting new sites, provisioning network functions, and updating policies, are a challenge for many. At the same time, a minority of organizations feel that their staff and network are well equipped to meet growing requirements.
- WAN Leaders also see challenges, but they are different in nature. They are more concerned about security and recognize the importance of compliance and data protection measures, such as the implementation of the General Data Protection Regulation (GDPR). At the same time, they are less concerned than other companies about resource constraints and inadequate service from network providers. This is reflected in the ease with which they can do regular tasks and the confidence they have in the readiness of their staff and network for the future.

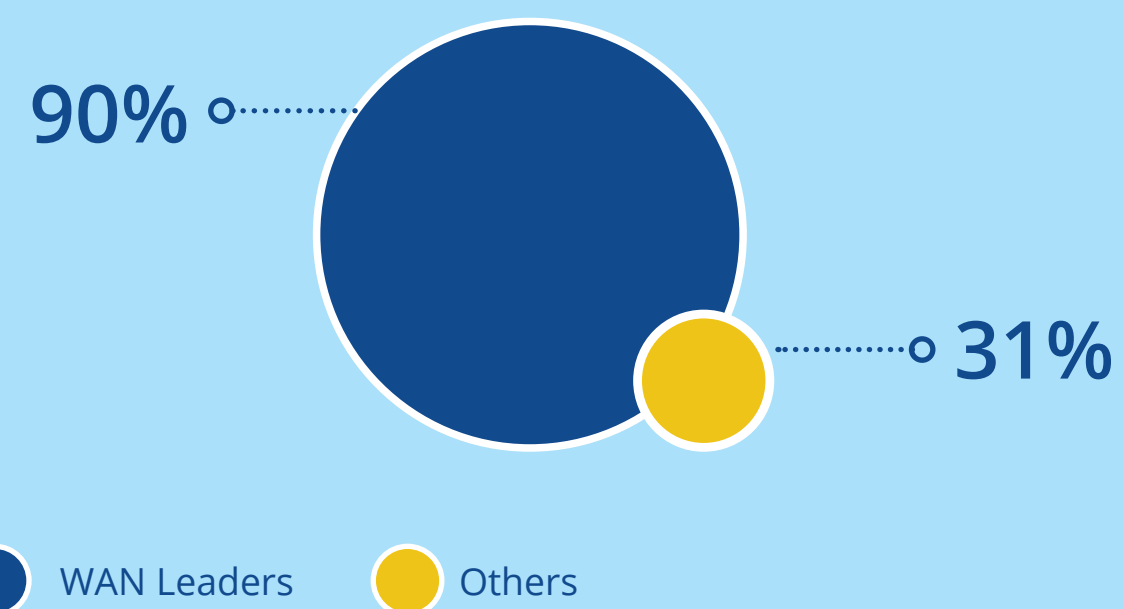
What do you see as the biggest challenges for your company's WAN in the coming two years?



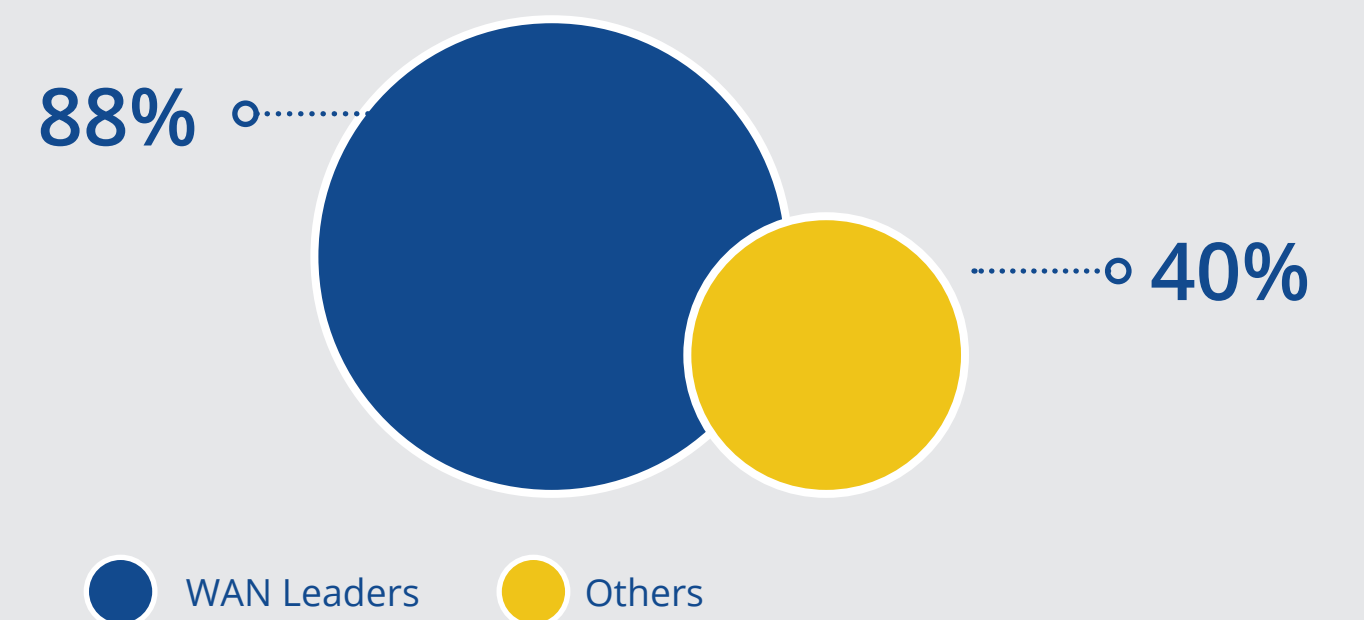
How easy do you think it is to do each of the following on your company's current WAN? — Challenging/Very Challenging



Do you feel that the staff at your company have the right skills to drive the evolution of its WAN? — Yes



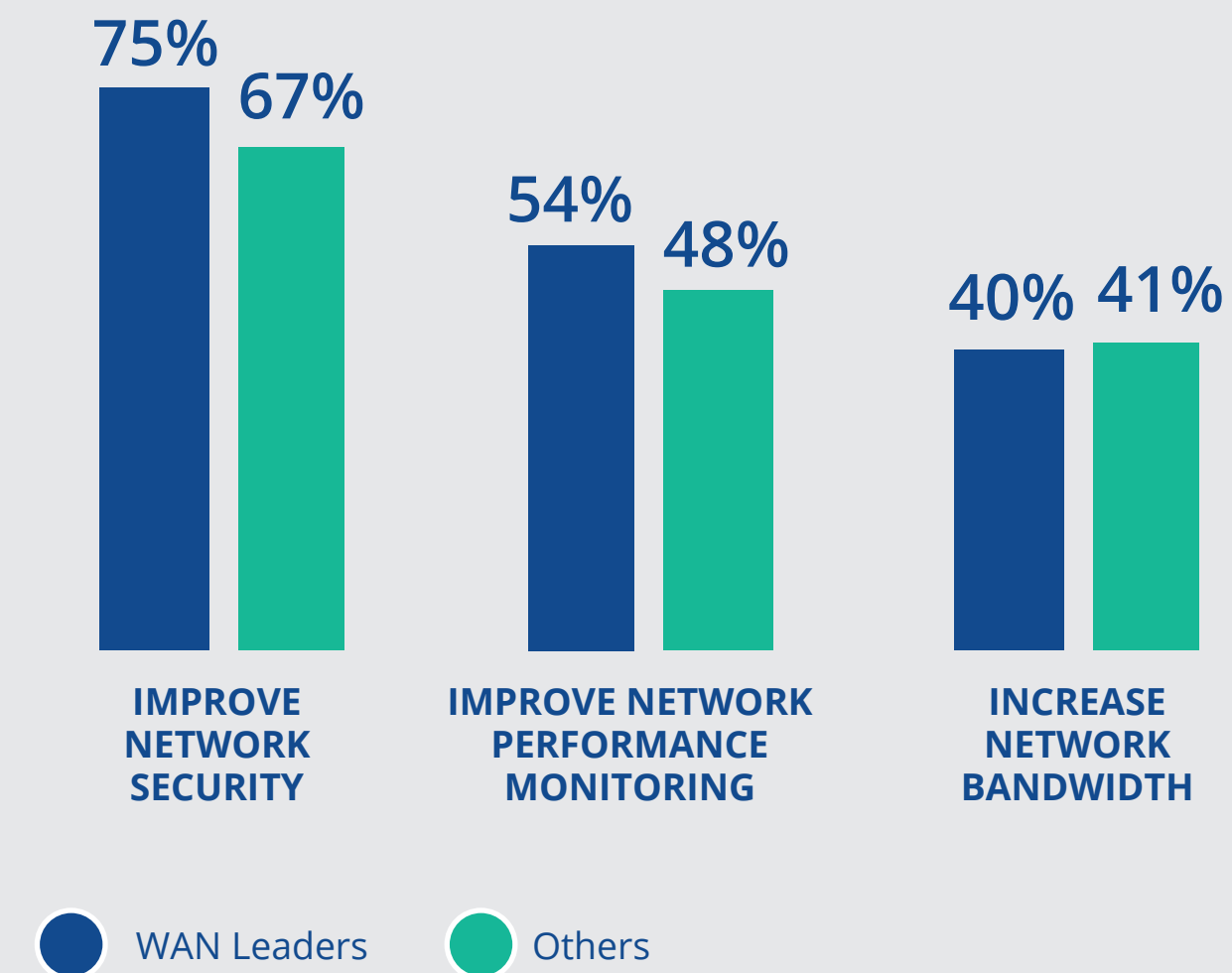
How ready is your company's network to meet growing requirements and deliver these business outcomes? — Somewhat/Completely Ready



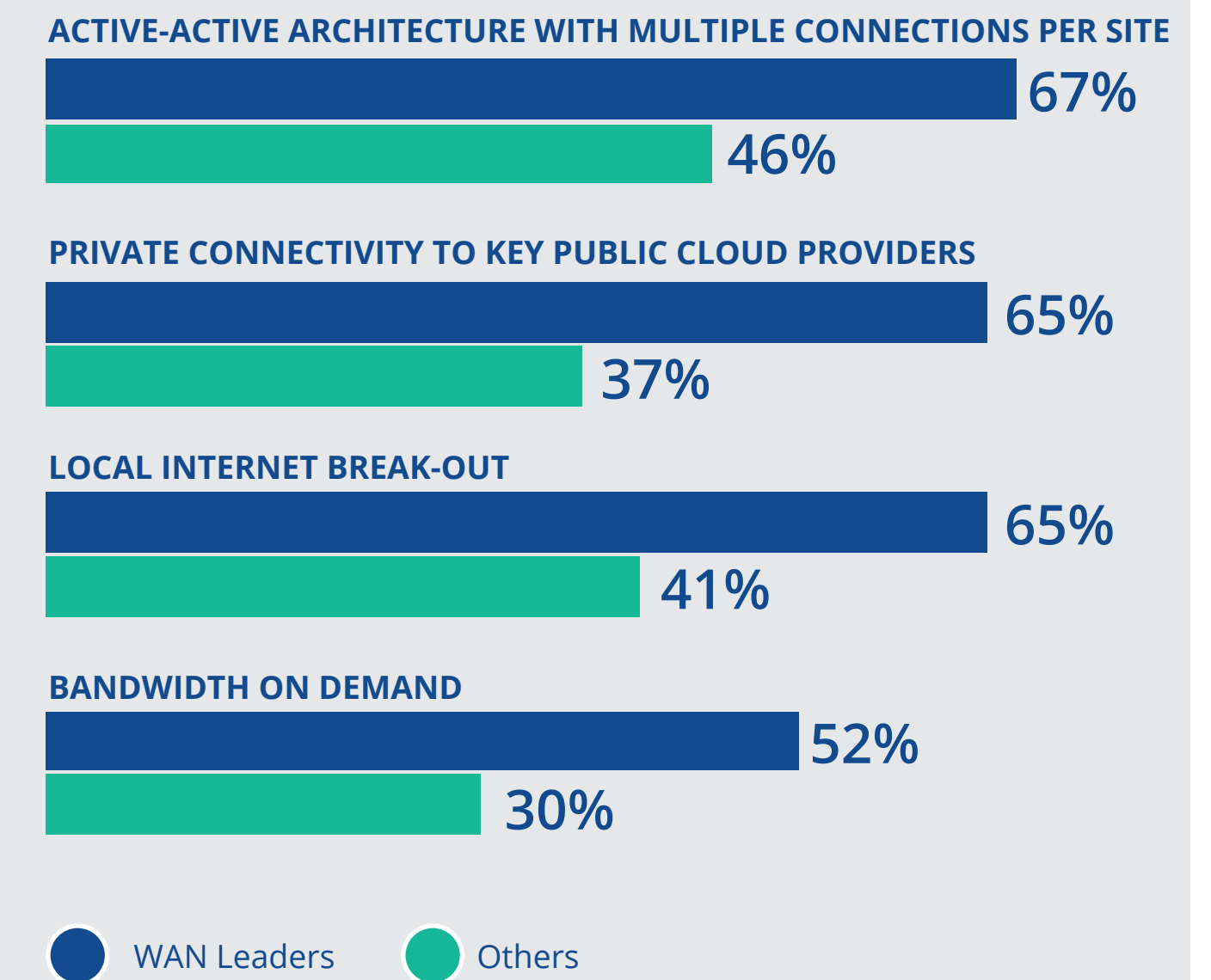
Organizations Search for Ways to Optimize Their WAN

- Companies are implementing a wide range of measures in their WAN in response to changing business requirements. Security, network performance monitoring and bandwidth are the most common areas of improvement. Not doing anything is clearly not an option!
- WAN Leaders are more perceptive of how advanced WAN options, such as active-active architectures, local internet breakouts, cloud connectivity, and bandwidth on-demand can help them optimize cost and performance. They also show more strategic buying behavior, sourcing WAN connectivity centrally where it makes sense.

What changes have you made or are you planning to make to your company's WAN to respond to these changing requirements?



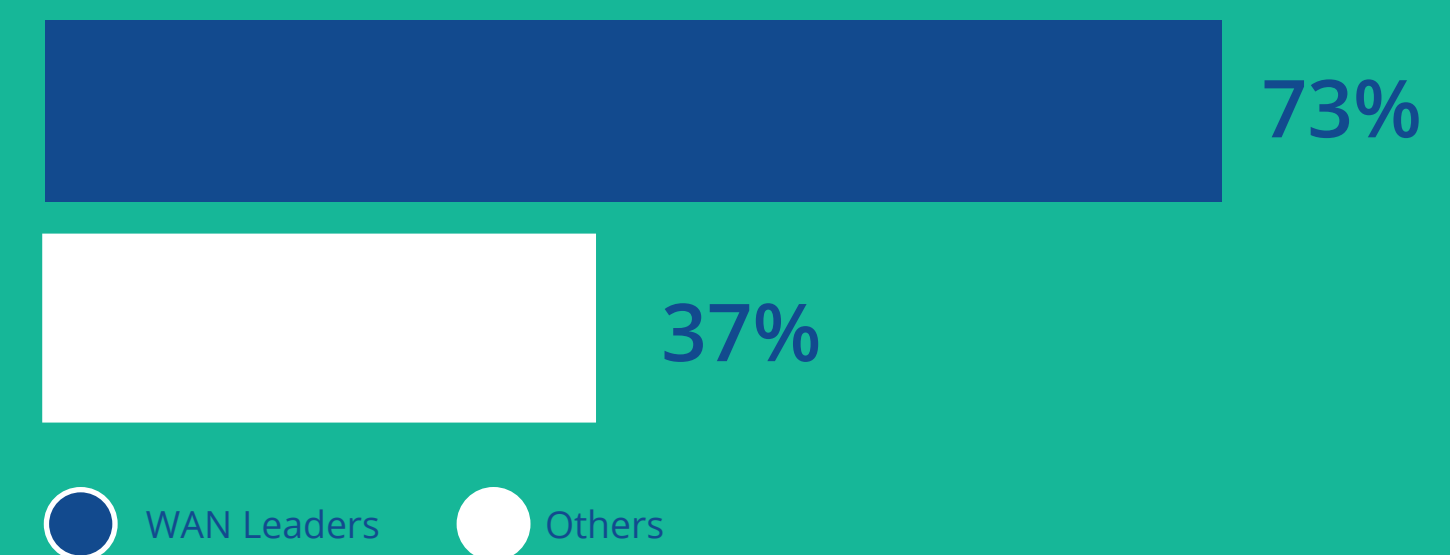
Does your company use any of the following in its WAN solution?



<1%

Do not change their WAN in response to changing network requirements

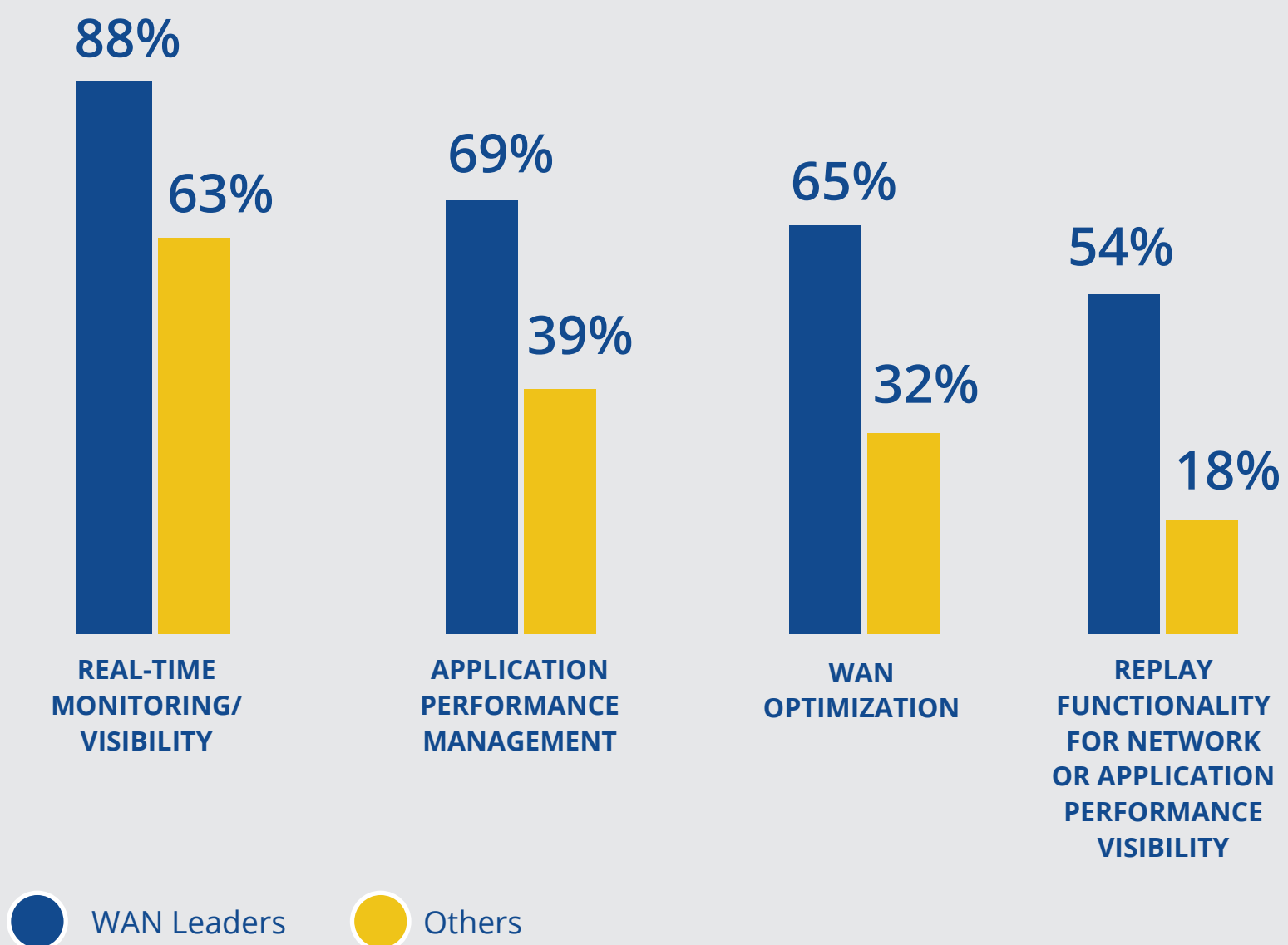
How centralized is the sourcing of WAN connectivity at your company?
— Mostly/Completely



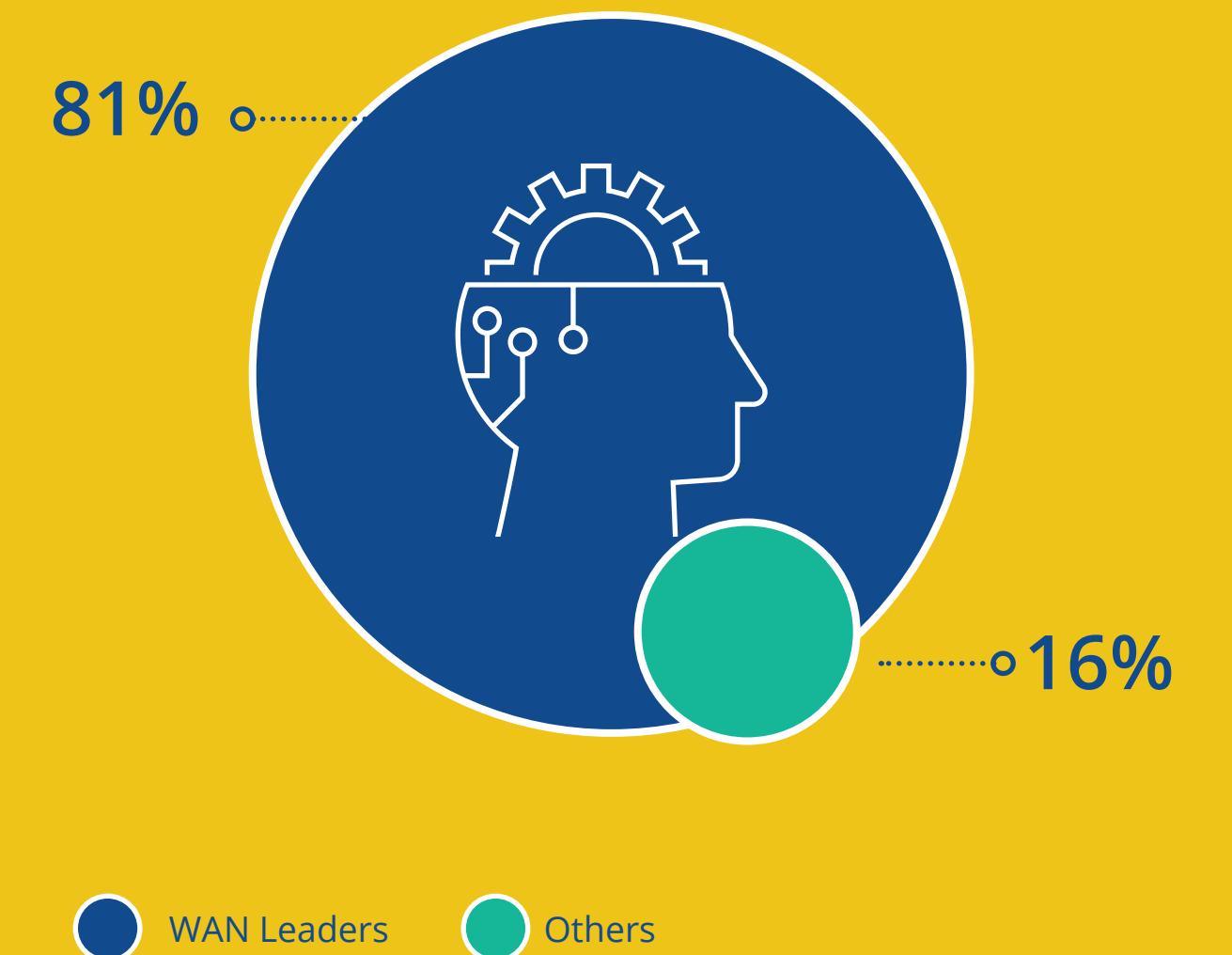
A Transformative Business Requires a WAN With Intelligence

- Connectivity by itself will not be enough to bring the corporate WAN into the digital transformation era. Network intelligence will play an increasingly critical role in optimizing the network and ensuring that application performance expectations are met.
- Intelligent services such as real-time monitoring, application performance management, replay functionality, and WAN optimization can drive visibility into the network and applications and significantly improve performance. Predictive analytics and automation will prove a powerful combination to drive performance even further.

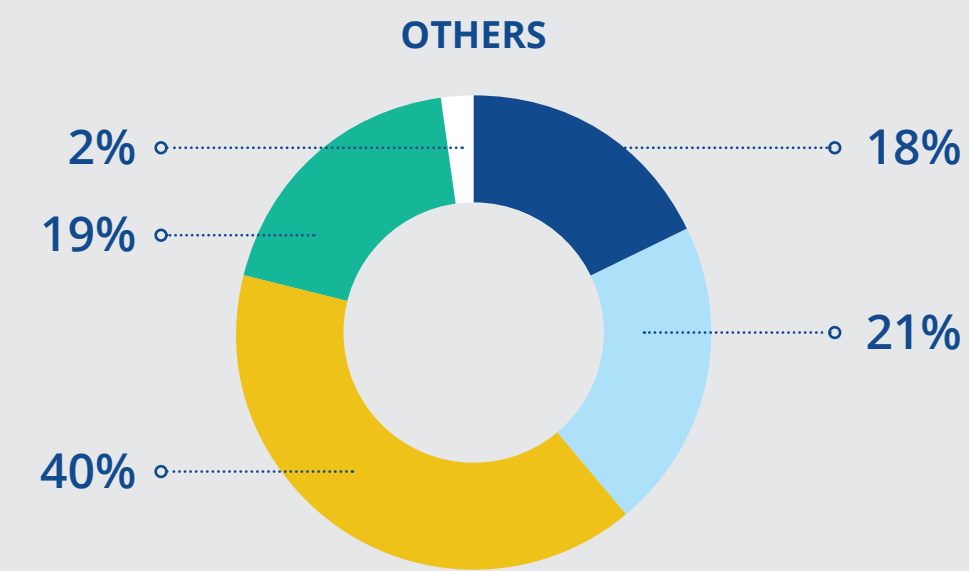
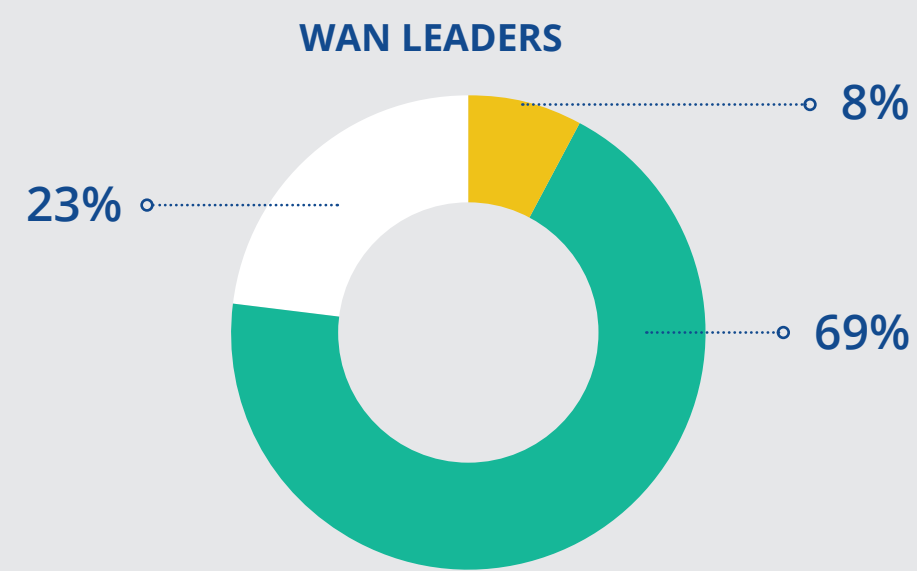
Does your company use any of the following intelligent WAN services?



What is your company's approach to using network intelligence to optimize the network? — Using Predictive Analytics



How does your company ensure application performance expectations are met?

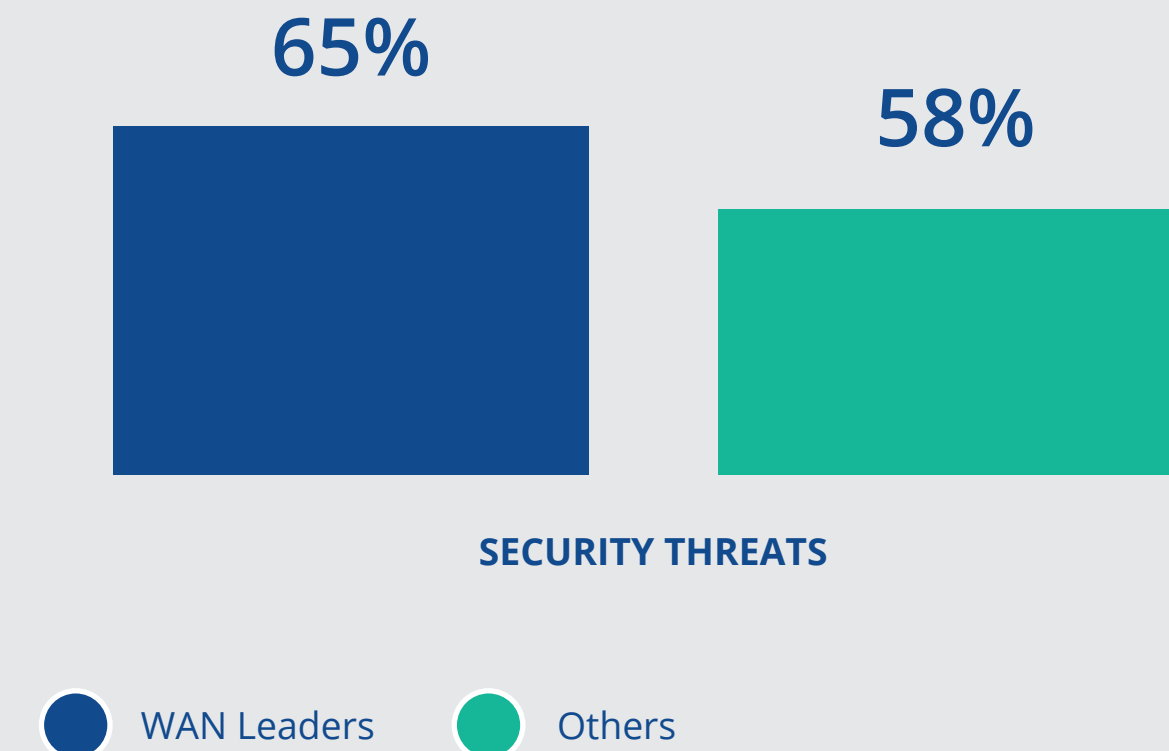


- We take a best-effort approach
- We physically segment the network to separate traffic classes
- We virtually segment the network to separate traffic classes
- We statically configure QoS to prioritize traffic to key applications
- Our network can automatically adapt to ensure app performance and user experience based on SLAs

Security is a Key Consideration on All Counts

- Security is top of the agenda on all counts, and rightfully so. Security threats are considered the #1 WAN Challenge and a key driver of network requirements. WAN Leaders emphasize this importance even more than others.
- In spite of this recognition, much work remains to be done. Few organizations beyond the most advanced have implemented a form of rapid detection and response in their WAN, let alone technology that lets its policy automatically reconfigure based on predictive analytics. At the same time, updating policies and settings is still a challenge for many.

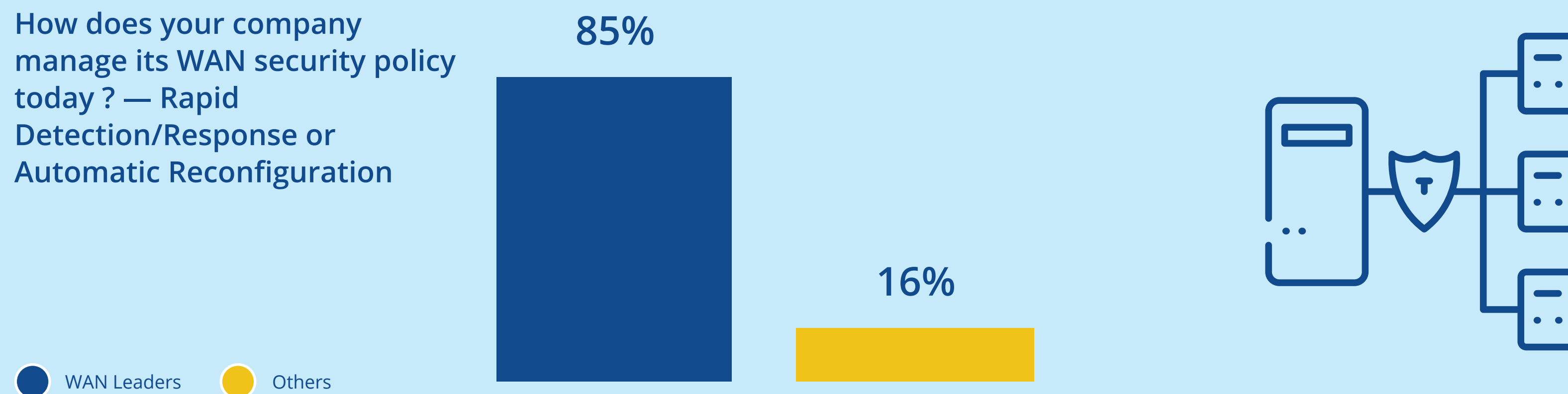
What do you see as the biggest challenges for your company's WAN in the coming two years?



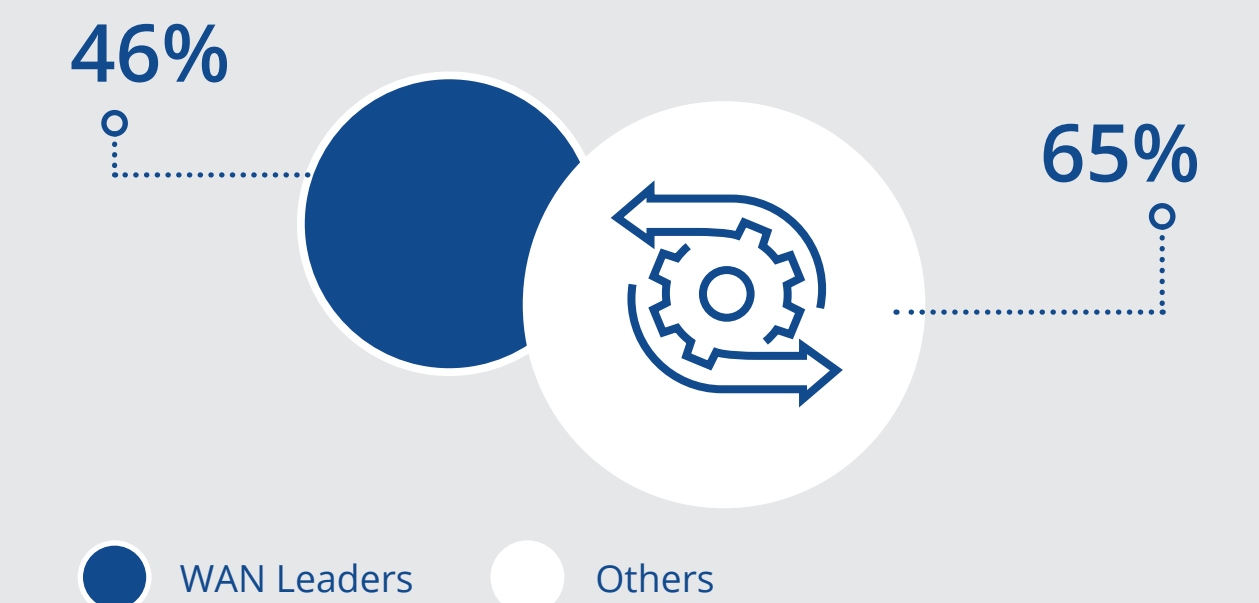
What are the key factors that will drive your company's network requirements over the next two years?



How does your company manage its WAN security policy today? — Rapid Detection/Response or Automatic Reconfiguration



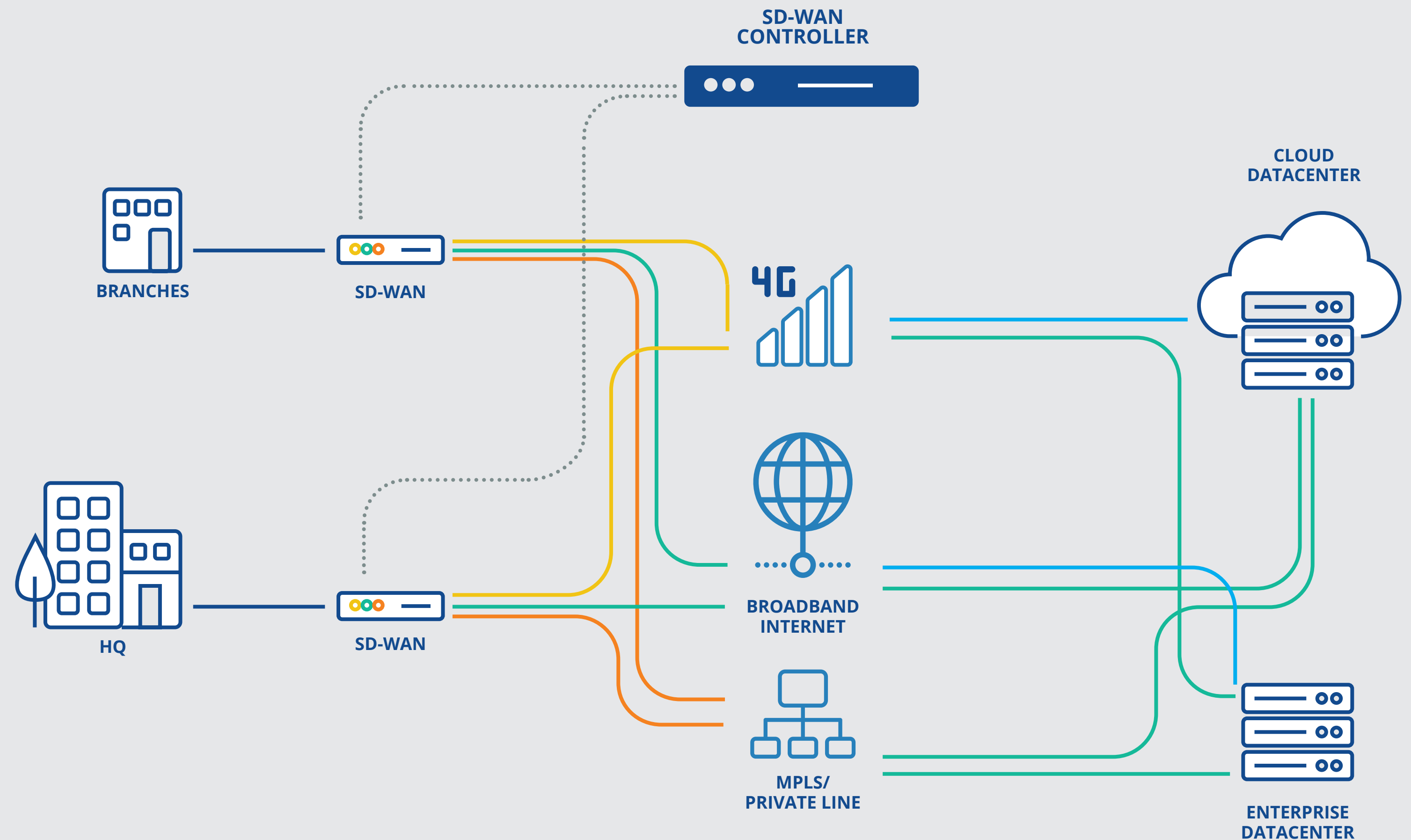
How easy do you think it is to update networking or security policies/settings on your WAN? — Challenging/Very Challenging



SD-WAN Has Emerged in Response to Business Requirements

SD-WAN ELEMENTS

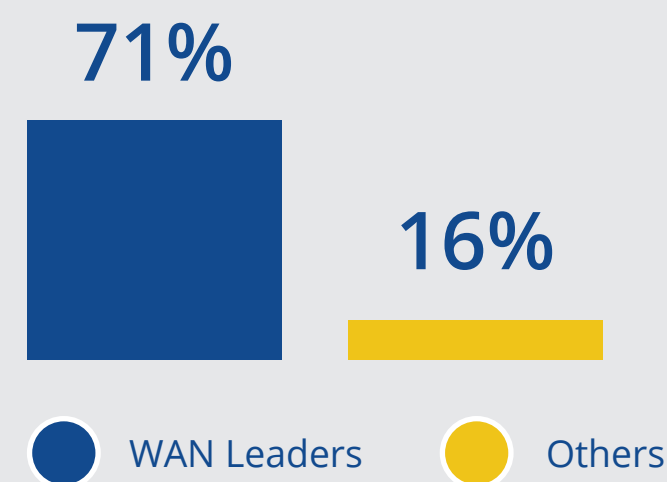
- Hybrid-network leverage
- Centralized, application-based policy controller
- Application and network performance monitoring
- Software overlay that abstracts and secures underlying networks
- Dynamic path selection to optimize the WAN based on application requirements



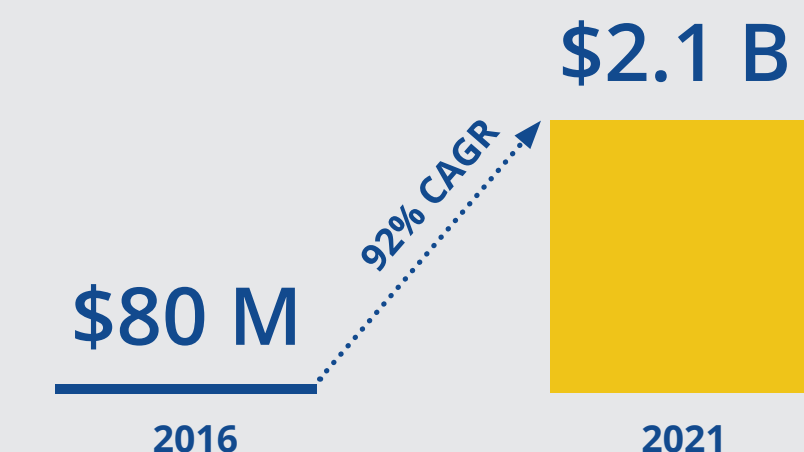
SD-WAN's Reduced Complexity, Traffic Optimization and Flexibility Drives Rapid Adoption

- Attention on SD-WAN has been growing for the past couple of years, with many product launches and hype building. Traction among end users is now also clearly increasing. SD-WAN is now a common component of RFIs and RFPs. This is clearly shown in current and planned usage. WAN Leaders are clearly ahead of the curve.
- The value proposition of SD-WAN is not just about pure cost reduction, but rather about a combination of factors that help organizations optimize cost vs. performance. Reduced complexity, flexibility and traffic optimization are the most important. Security, uncertainty around interoperability and lack of standardization and market maturity are key factors holding back adoption for WAN Leaders, while others worry more about cost and a lack of skills.

Which of the following best describes your company's adoption, plans, or awareness of SD-WAN — Using - Limited/ Extensive Deployment

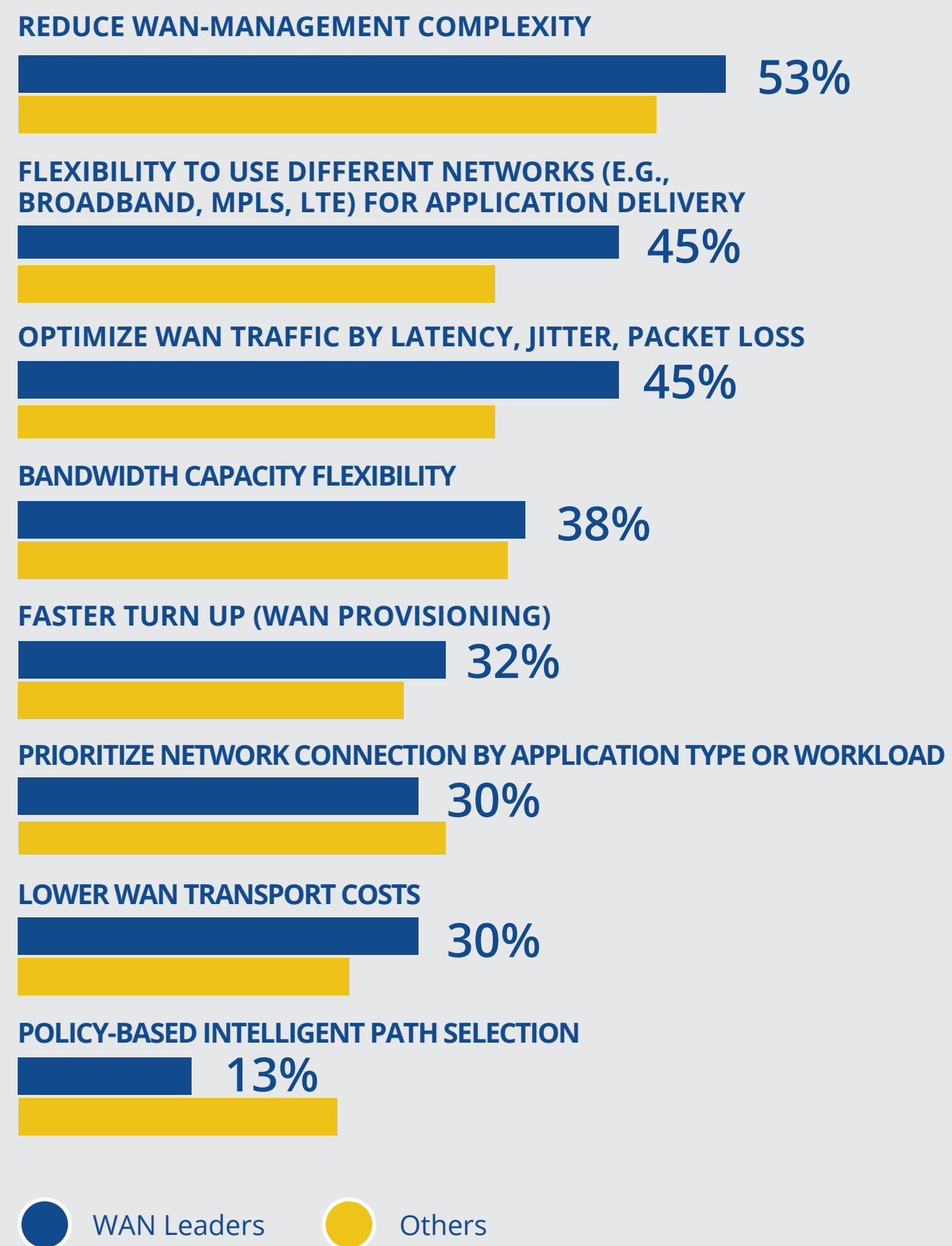


EMEA SD-WAN Market

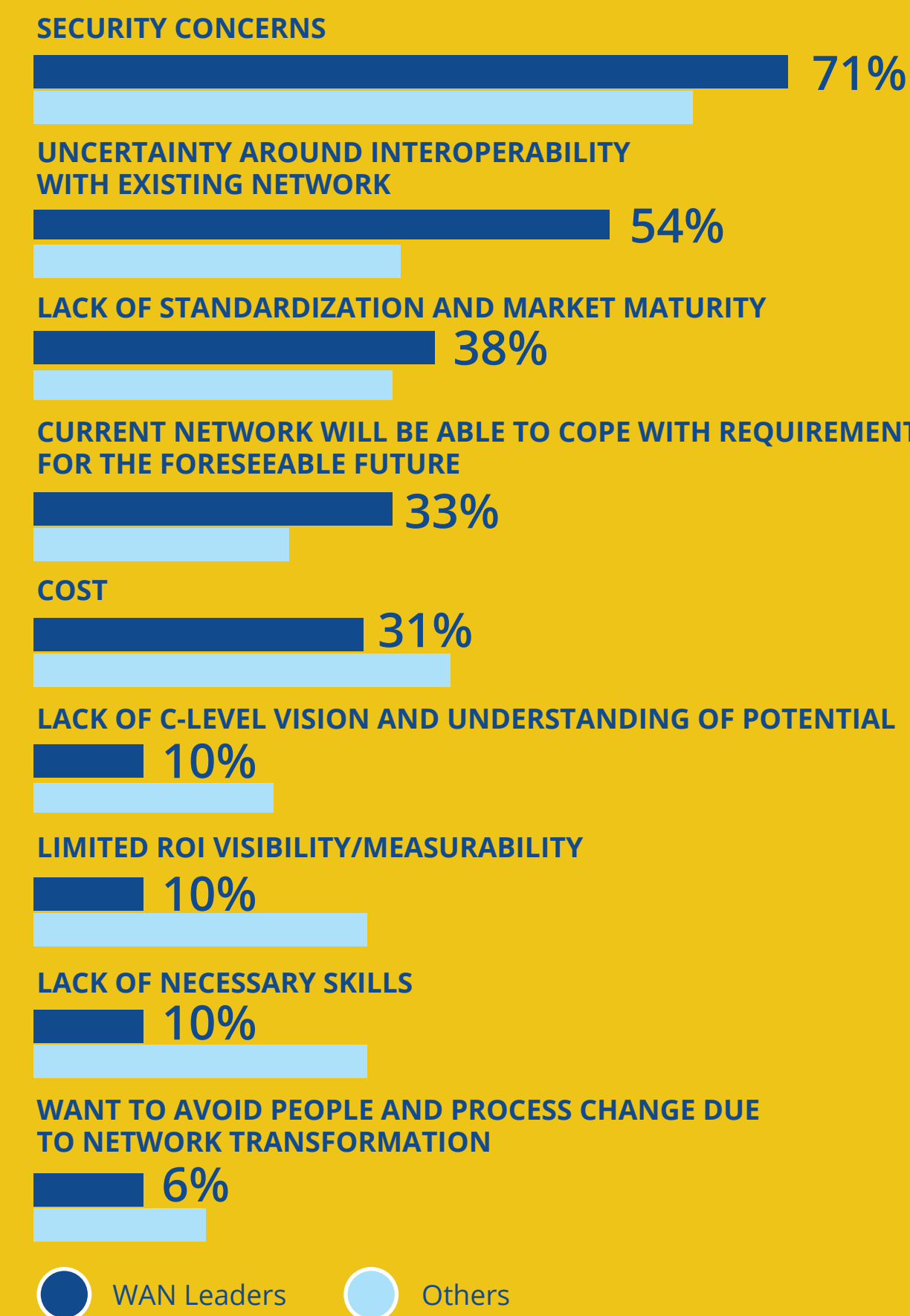


The SD-WAN Opportunity in EMEA (IDC# EMEA423433317, April 2017)

What are the most important reasons for using or considering using an SD-WAN solution for your company?



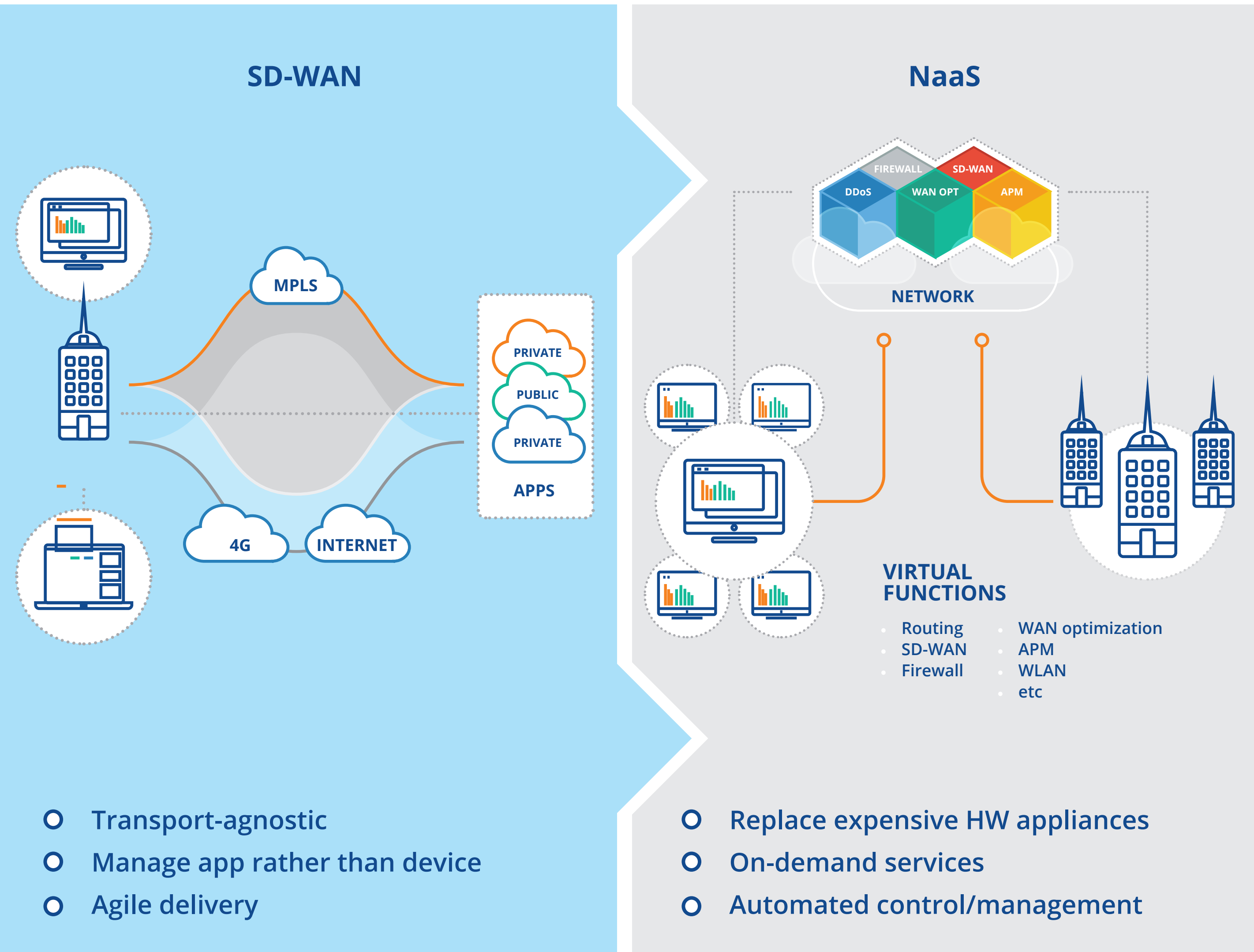
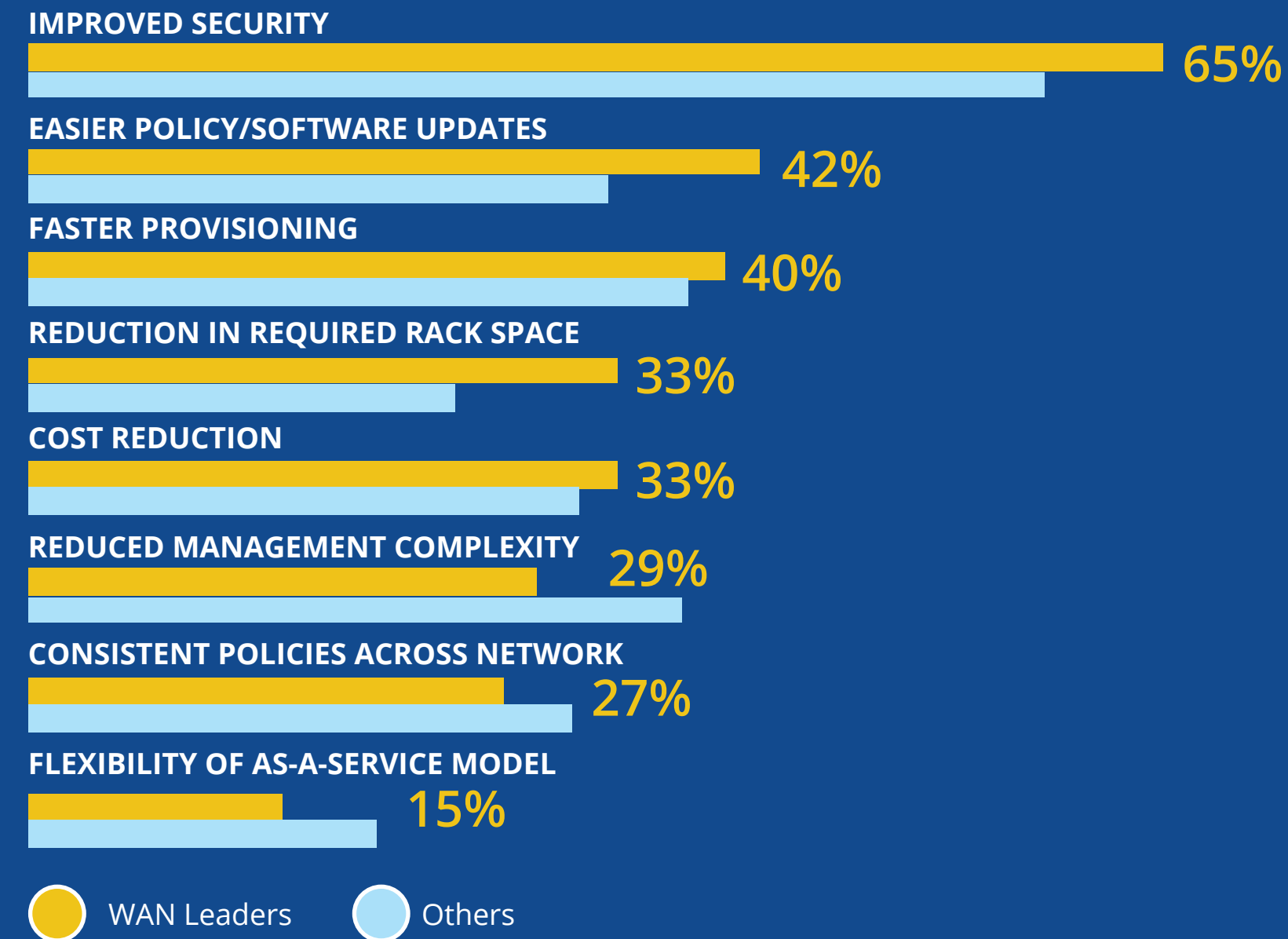
What are the main factors that inhibit (or slow) your company's adoption of SD-WAN?



From SD-WAN to NaaS

SD-WAN should serve as a stepping stone toward a true network as a service (NaaS), where SD-WAN and a wide range of network functions are deployed as virtual services, via an on-demand consumption model. Depending on the architecture, an SD-WAN device may become the home of a range of virtualized network services, or SD-WAN itself could be deployed as one of multiple virtual functions on a universal CPE. The combination of SD-WAN with other virtual network services helps organizations maximize benefits that they associate with virtualization, such as improved security, easier updates, and faster provisioning.

What do you see as the top benefits that virtual network services can bring to your company?



Essential Guidance

Digital transformation, with cloud at its heart, is changing the networking paradigm and driving requirements to unprecedented heights. The WAN needs to change to cope with these demands and enable organizations to reap the full benefits of digital transformation.

Review the strategic roadmap for the evolution of your WAN. Assess the current status of your network, and where you want it to be in the future. Prepare a gradual migration path that leverages existing infrastructure where possible.

Consider how you can optimize your use of intelligence and automation to give your network the scalability, flexibility, manageability, cost effectiveness, and security that it needs.

SD-WAN has emerged as a solution that can integrate much of the above. Start exploring today, if you haven't already, what benefits SD-WAN may or may not bring to your organization. Beyond that, investigate how a more widespread use of network virtualization can help you reap further benefits in terms of security, flexibility, and efficiency.

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To assess the state of your WAN and find out how you can prepare for the future, go to [NTT's Next-Generation WAN Advisor](#)



Methodology

This Infobrief draws upon on a survey about plans, usage, and attitudes related to the Wide Area Network (WAN)

- Respondents: influencers or decision makers for network or telecom services
- Sample Size: 300
- Industries: all verticals except government and telecom
- Fieldwork: January–February 2018
- Survey Method: CATI

