

IDC Executive Brief

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IDC Nordic Multicloud Survey 2019

Multicloud brings location and connectivity into focus

Adoption of cloud services has become the biggest engine of growth for the entire IT market and is poised to become even more important over the next five years. But the cloud of the next five years will be markedly different from that of the past decade.

IDC Nordic Multicloud Survey 2019 survey finds that by 2021, 5% 1 of Nordic organizations will have reached #1 and 2 in cloud maturity (figure 1). And the use of multiple private cloud services is becoming increasingly interesting for organizations in the Nordics. This trend brings physical location and connectivity into focus since a lot of private cloud services will be colocated in different locations or in the same colocation data centers.. The shift towards multicloud creates an opportunity to use direct cloud connectivity as a differentiator for data center service vendors.

Nordic countries were late on cloud adoption as a phenomenon, because Nordic organizations are experienced IT-users investing in optimization on-premise. By now cloud adoption is strong in the Nordics driven not only by costs but also by the urge to transform by innovation.

Also, the Nordics just as the rest of Europe has a different approach to the cloud than the rest of the world: It's not cloud-first (cost-driven) but cloud where it makes sense (driven by business cases and security/integrity).

By that a functional focus could soon be dominating – depending on how good vendors are in designing and delivering services, being adequate in functionality as well as infrastructure complexity. Here the multicloud discussion becomes important.

This Executive Brief is based on IDC Nordic Multicloud Survey 2019. The survey was conducted in partnership with Interxion Nordic, a provider of carrier and cloud rich colocation data center services in Europe. Data centers serve as interconnection hubs for Europe's leading businesses by giving access to a wide mix of connectivity, local clouds and public and cloud platform access points.

The IDC Nordic Next Generation Multicloud Survey was conducted in April 2019 and published with survey partners in Q2 2019. Decision makers in 200 Nordic organizations with more than 100 employees participated.

The Nordics just as the rest of Europe has a different approach to cloud than the rest of the world: It's not cloud first but cloud where it makes sense.

Cloud transformation is happening and the maturity level for cloud strategies grows in the Nordics. And we are seeing multicloud already.

Cloud Transformation is Now and Multi

Adopting the cloud as a foundation for digital infrastructure is becoming a reality now in the Nordics. The discussions about cloud transformation have been on the agenda for several years. However, IDC Nordic Multicloud Survey 2019 finds, that cloud transformation is now. For some time, IDC has used the same maturity model to describe cloud strategies in organizations.

Ad hoc – focused primarily on pilot projects and validation activities driven by the needs of individual decision-makers and teams

Opportunistic – driven by the business needs of individual workgroups and departments with no effort to share resources or create scalable, repeatable implementations

Repeatable – consistent effort made to leverage and reuse best practices and resources across multiple groups and departments

Managed – widespread use of cloud is supported by proactive business and IT leadership driving decisions about Cloud use, operational policies, IT architectures, and contract negotiation and monitoring

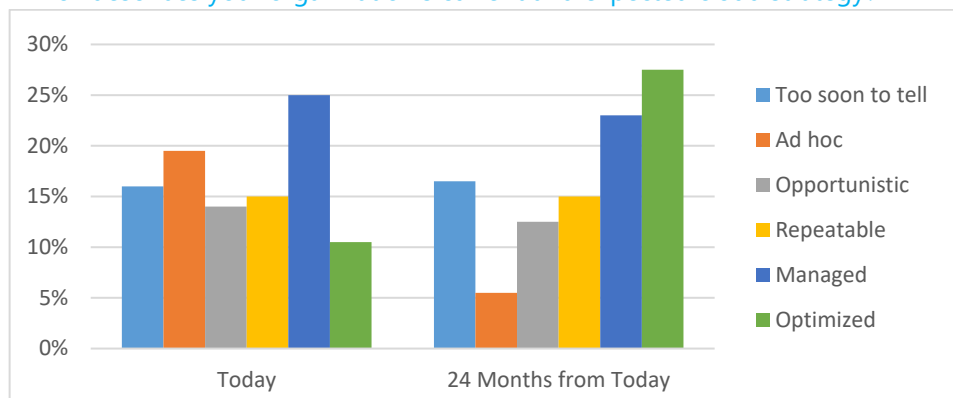
Optimized – have broadly implemented a Cloud-native strategy that is proactively managed and is driving business innovation while improving IT operational efficiency

Too soon to tell – we are in the early stages of defining our Cloud strategy

Within the next 24 months, Nordic organizations will increasingly transform their digital infrastructure to be cloud-based as 51% assess their cloud strategy to be managed or optimized compared to 36% today.

Figure1:

Which describes your organization's current and expected cloud strategy?



Source: IDC Nordic Multicloud Survey 2019 n=200

Cloud transformation is happening, and the maturity level for cloud strategies grows in the Nordics. And it's multicloud already. IDC very broadly defines multicloud as 2 or more cloud services of the same type, and in figure 2 and 3 it is possible to get an impression of the "state" of multicloud in the Nordics already.

Cloud computing is developing fast, and services descriptions changes as well. The overall approach to the cloud can be defined in 3 dimensions.

Cloud definition:

As defined by The National Institute of Standards and Technologies:

- On-demand self-service
- Broad network access
- Resource pooling
- Rapid elasticity
- Measured service

Cloud Services Models:

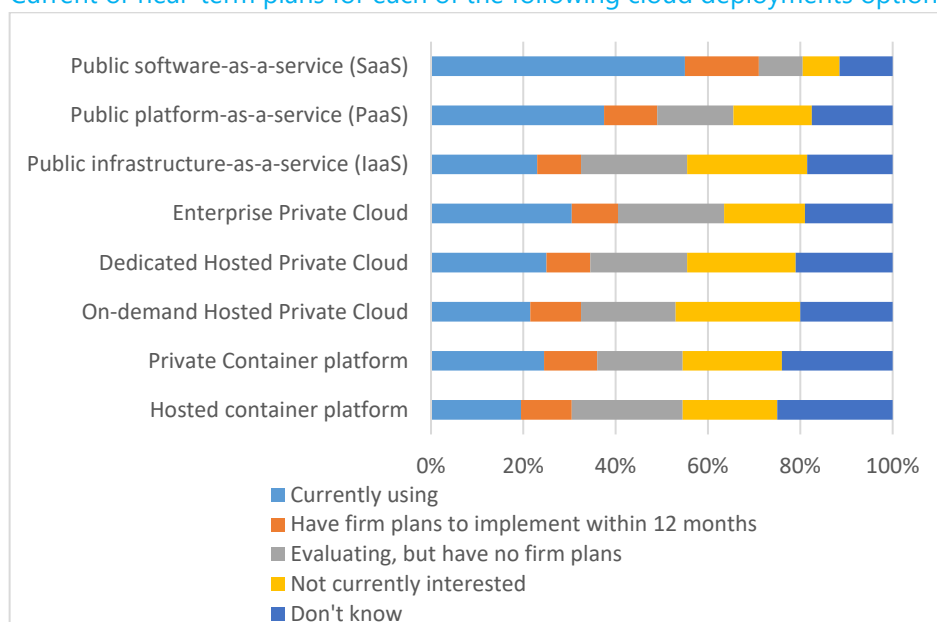
- SaaS: Software as a Service
- PaaS: Platform as a Service
Execution runtime, web server, development tools
- IaaS: Infrastructure as a Service
Virtual machines, servers, storage, load balancers, network

Cloud Deployment Models:

- Public cloud: Services are rendered over a network that is open for public use
- Private cloud: Cloud infrastructure operated solely for a single organization
- Hybrid cloud: Composition of two or more offering the benefits of multiple deployment models.

Figure 2:

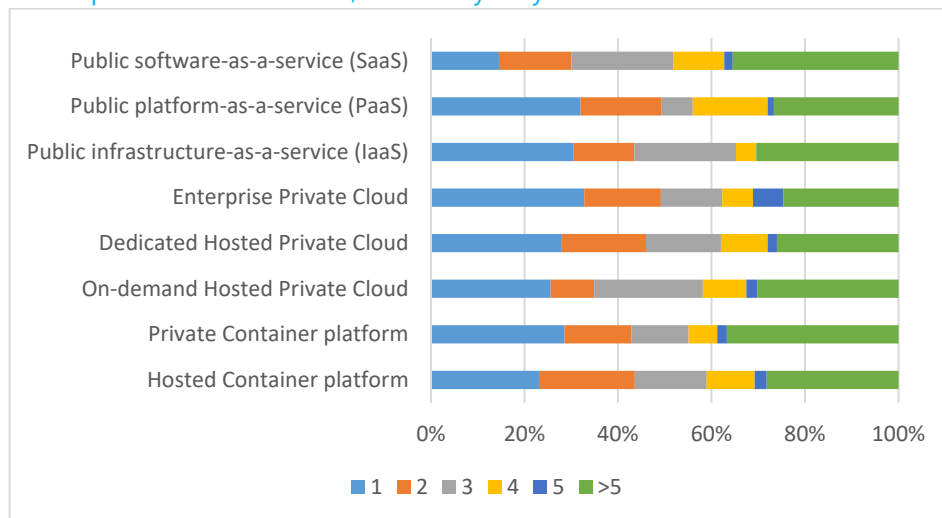
Current or near-term plans for each of the following cloud deployments options?



Source: IDC Nordic Multicloud Survey 2019 n=200

Figure 3:

Asked respondents "Currently Using"
Of the platforms listed below, how many do you use each?



Source: IDC Nordic Multicloud Survey 2019 n=200

The answers from the survey indicate that 54% of Nordic organizations are currently using Public software-as-a-service (SaaS). And 85% are using 2 or more SaaS'. For Public platform-as-a-service (PaaS) the numbers are 37% (using Public PaaS) and 68% (using more than 2 Public PaaS'), and for Public Infrastructure-as-a-service (IaaS) they are 22% (using Public IaaS) and 70% (using more than 2 Public IaaS').

Private Cloud Services are becoming increasingly interesting as important elements in multicloud strategies in the Nordics. Especially when looking in detail at both on-premise Enterprise Private Cloud as well as data center service providers, Dedicated Hosted Private Cloud, and On-demand Hosted Private Cloud.

IDC defines private cloud as cloud infrastructure operated solely for a single organization - on-premise or as hosted or outsourced solutions bringing colocation data centers into focus. The definition of private cloud is the same as public cloud (National Institute of Standards and Technology):

- On-demand self-service
- Broad network access
- Resource pooling
- Rapid elasticity
- Measured service

Over the coming five years IDC expects different types of private clouds to be an important driver in reshaping the cloud market to become even more versatile in terms of the number of clouds within the same type of service (multicloud) but also distributed in terms of locations (depending on the tasks of a workload).

Private Cloud Services are becoming increasingly interesting as important elements when mapping multicloud strategies in the Nordics

*Private cloud services
colocated in data centers
are closing in on public cloud
services*

29% of the surveyed organizations are currently using Enterprise Private Cloud, and 10% has firm plans to and adding the 23% evaluating with no firm plans brings use and interest for on-premise private cloud well above 60%. However private cloud services colocated in data centers are closing in.

Dedicated Hosted Private Cloud is currently used by 24% of the surveyed Nordic organizations, and 9% has firm plans to implement a dedicated hosted private cloud within 12 months. Adding the 21% evaluating with no firm plans brings the interest for private cloud solutions provided by data centers above 60%.

The numbers for the third private cloud segment On-demand Hosted Private Cloud show the same trend (22% use, 11% have firm plans, and 21% evaluate) although these services have more organizations indicating firm plans to implement within 12 months.

Organizations using private cloud services already tend to be using multicloud as well. Especially organizations using private cloud services hosted in data centers are using more than two cloud services of this type.

The cloud of the next five years will be markedly different from that of the past decade. The focus shifts to the 'distributed cloud' — as innovative cloud services become deployed in enterprise data centers; in distributed locations hosting digital infrastructure for the likes of retail stores, branch offices, factories and hospitals; and at an expanding variety of colocated data centers at edge locations.

Also, more than half of organizations surveyed indicate either currently use, firm plans or evaluation of private as well as hosted container platforms. Containerization is an example of technologies which are pivotal to cloud transformation and the utilisation of service-oriented digital infrastructure. Containerization creates the flexibility to get value from cloud solutions in colocated data centers as well as on modern on-premise data centers.

Containerization is a lightweight encapsulating of an application in a container with an operating system. In cloud computing this enables agility for developers. And the majority of organizations using containerization technology are using 2 or more platforms confirming the flexibility and thereby importance of multicloud strategies that containerization brings into digital transformation.

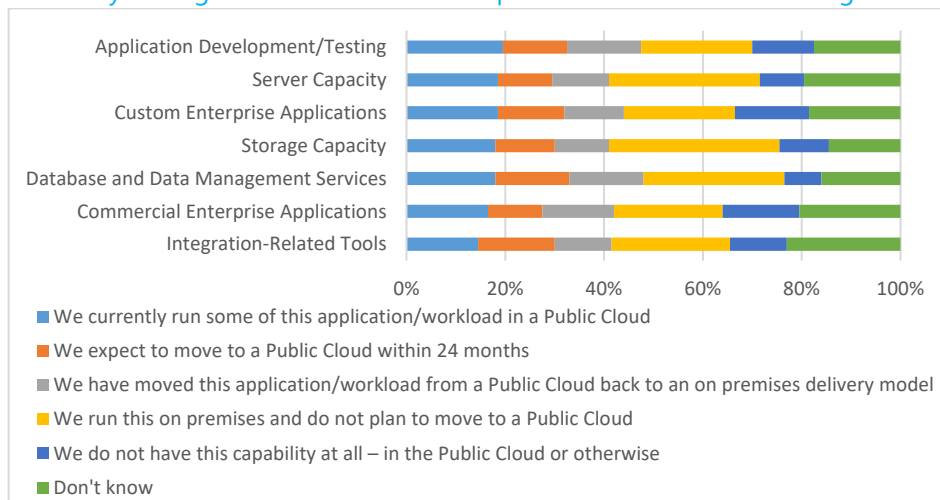
Agile cloud plans

When asked about public cloud plans for several workloads, services and applications (Figure 4), a very interesting trend emerge in the middle of the figure. Even though between 11% and 15% of Nordic organizations have moved one of these workloads or applications from a public cloud to an on-premise delivery model, there is between 11% and 16% expecting to move into public cloud within 24 months.

Even though the importance of on-premise data centers is diminishing over the next 24 months. The picture varies from market to market and confirms, that the local business structure and its transformation will be pivotal to the use of different types of clouds.

Figure 4:

Indicate your organization's Public Cloud plans for each of the following

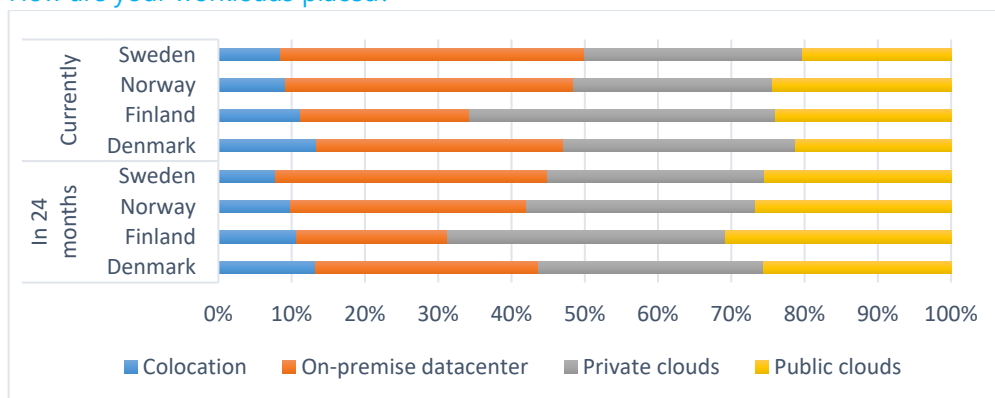


Source: IDC Nordic Multicloud Survey 2019 n=200

Considering the detailed analysis of the current and planned cloud use in figure 2 and the flexibility of public cloud plans, it is interesting to have a topline view of where workloads are placed in the four Nordic main markets to explore differences defined by the local industries and their tasks.

Figure 5:

How are your workloads placed?



Source: IDC Nordic Multicloud Survey 2019 n=200

Even though the importance of organizations' own in-house on-premise data centers is diminishing over the next 24 months, the picture varies from market to market and confirms, that the local business structure and its transformation will be pivotal to the use of different types of clouds.

Markets dominated by manufacturing will be much more focused on IoT-solutions and the private cloud solutions (colocated in data centers and on-premise) to minimise for instance latency whereas markets dominated by services and trade will be more focused on public clouds.

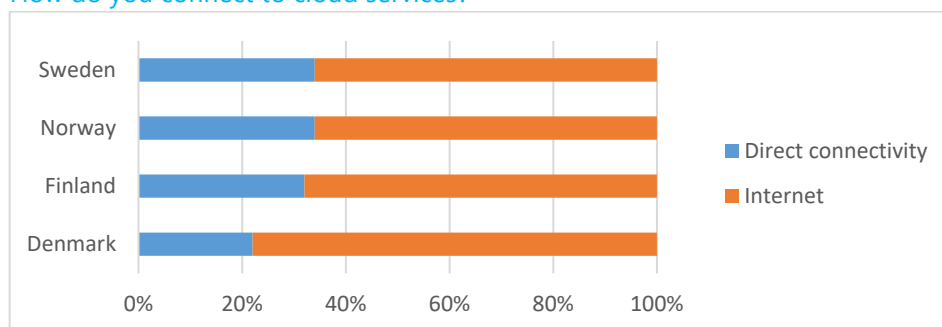
Figure 6 shows another interesting but often overlooked aspect of cloud transformation – connectivity. Traditionally the Internet is seen as the best (only) way to connect organizations and public cloud solutions. Other direct and flexible solutions exist depending on, i.e. data center service vendors. And markets with more suppliers of direct connectivity – like Sweden – have higher percentages of direct connectivity.

Connectivity and network will be important elements in multicloud, because different services can connect in various ways depending on processes, software and hardware involved and the geographical location.

In markets dominated by manufacturing like Sweden and Finland, the percentage of Direct Connectivity is higher in service or trade dominated markets like Denmark. Markets dominated by manufacturing has a tradition of using direct connection back from Second Platform Technologies like Value Added Networks (VAN) in the 1990s.

Figure 6:

How do you connect to cloud services?



Source: IDC Nordic Multicloud Survey 2019 n=200

Managing multicloud

As cloud transformation changes the Nordic cloud landscape into multicloud, the question of how organizations are orchestrating the cloud solutions they use is emerging. Figure 7 shows how Nordic organizations answer this question in the four Nordic main markets.

Orchestration tends to be done by internal IT organizations – automated or manually. IDC expects automation to grow rapidly enabling IT organizations to monitor and administer remotely creating another argument for outsourcing or colocation of cloud services.

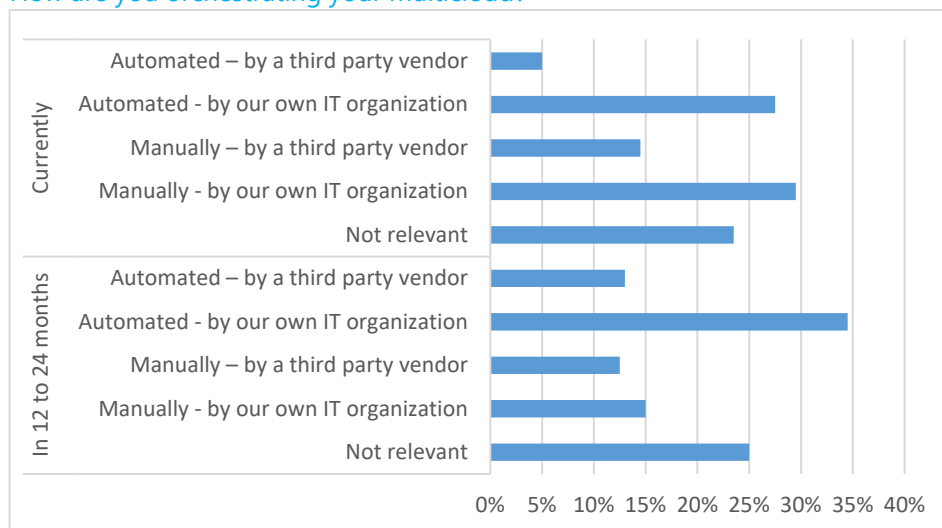
Third-party vendors are not very involved in orchestrating multicloud – yet. And even though automation will grow, IDC expects service vendors to take a firmer grip of this market in the coming 24 to 48 months. Multicloud orchestration is not only about maintaining services and workloads but also help to create the right cloud strategy depending on the digital infrastructure of the organization. Also help to purchase and to choose the right cloud

Orchestration tend to be done by IT organizations – automated or manually. Third party vendors are not very involved in orchestrating multicloud – yet. IDC expects services vendors to take a firmer grip of this market in the coming 24 to 48 months

solutions at the right time is a service opportunity not yet utilised by the services vendors.

Figure 7:

How are you orchestrating your multicloud?



Source: IDC Nordic Multicloud Survey 2019 n=200

Concerns about cloud point towards an immature market

The lagging of a well-defined role for third-party service vendors in the cloud ecosystem is a sign of an immature market. Figure 8, 9 and 10 show the concerns regarding private cloud, public cloud and multicloud.

Security is the main concern in all three figures: #1 When it comes to multicloud and public cloud and #2 in the private cloud. There is a very important job for the IT industry to demonstrate security in cloud solutions in general. Cloud security is a very important part of creating digital trust as a foundation for digital transformation.

Regulatory or compliance issues are in #3 in Private Cloud, Public Cloud and Multicloud underlining a growing concern around the importance of data. It's not only about data protection but also the general ethics around data handling and local as well as geopolitical issues regarding the residency of data.

Lag of skills is #5 concern when it comes to Private Cloud and Multicloud and the lowest ranking concern in Public Cloud. These answers indicate more maturity in public, whereas insights are a need in private cloud and multicloud. Cost concerns topping the list for private cloud confirms this trend.

All the concerns which trouble organizations regarding cloud point towards an immature market in need of capacity and time to bring insights and thought leadership to organizations as part of the cloud transformation preparation.

These insights must contain knowledge about technology, solutions and product development brought to the market during the last three years utilising 3rd Platform Technologies and Innovation Accelerators (Figure 11).

Figure 8, 9 and 10:

Your organization's main concerns about the cloud?

Figure 8: Private cloud:

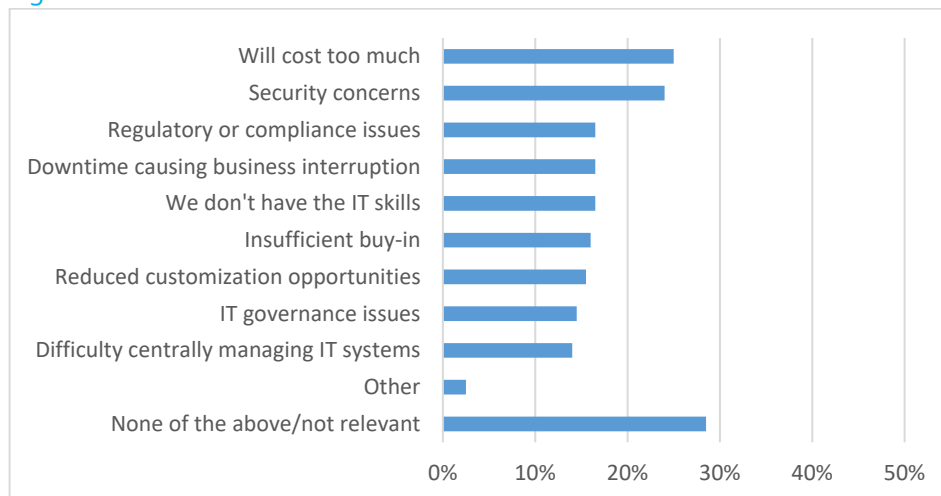


Figure 9: Public cloud:

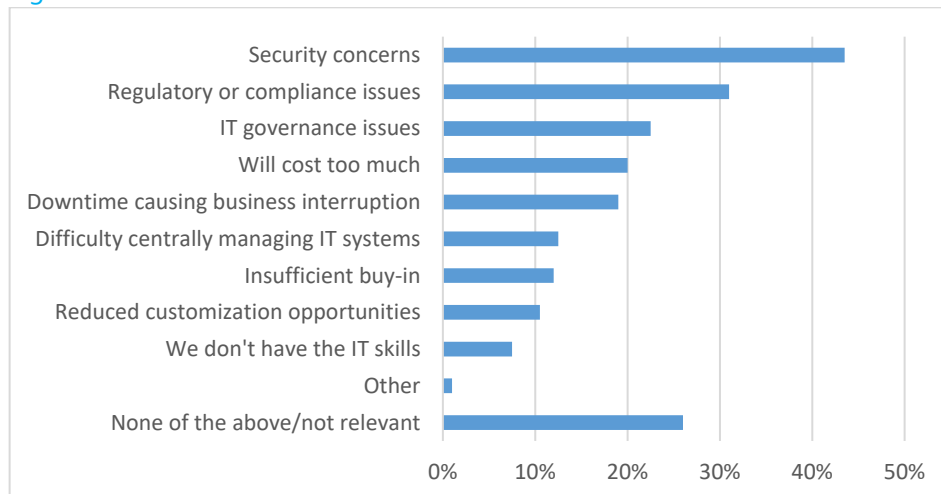
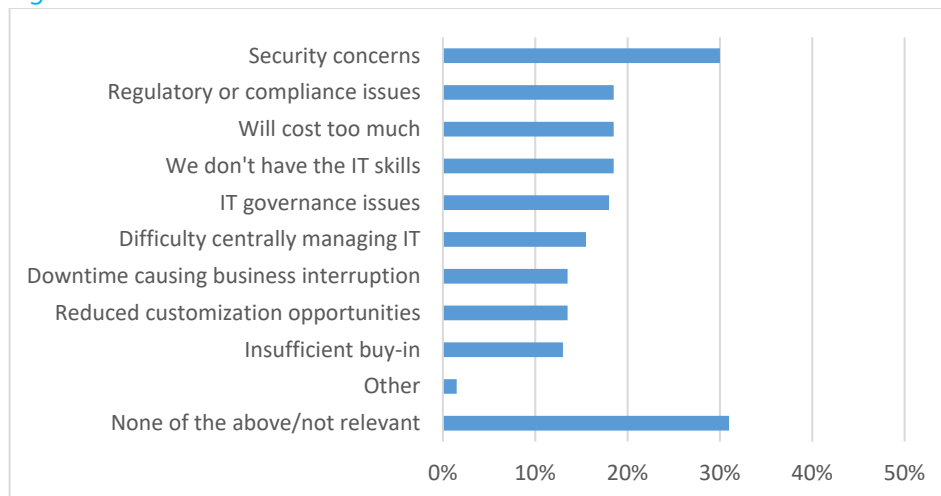


Figure 10: Multicloud:



Source: IDC Nordic Multicloud Survey 2019 n=200

Figure 11:**3rd Platform Technologies and Innovation Accelerators****Key Takeaways:**

- Cloud transformation is happening, and the maturity level for cloud strategies is growing in the Nordics. And the use of cloud computing can be described as multicloud already (2 or more cloud services of the same type).
- Organizations are constantly evolving their plans for workloads and cloud solutions and the cloud of the next five years will be markedly different from that of the past years.
- The digital architecture of the future will comprise colocation data centers, on-premise data centers and hyper scale data centers. New services in orchestrating and connecting multicloud are in the making. However, most organizations need help to strategize and execute.
- Direct connectivity is pivotal to multicloud. Organizations need a well-connected foundation, which would point to hyperconnected colocation.

Recommended Actions:

- Revisit your company's cloud strategy and examine if it's agile enough to leverage the multicloud opportunities in the market.
- Invest in knowledge on digital security as part of risk management in general and especially cloud security and what data centers and cloud services providers are doing. Seek external advice and help.
- Start a continuous assessment of your organizations cloud maturity and create KPI's for cloud usage.
- Revisit your company's network setup to ensure that your network provides the needed bandwidth, latencies and SLAs to and between your various deployments. Refresh your knowledge on connectivity.

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The IDC Nordic Next Generation Multicloud Survey was conducted in April 2019 and published with survey partners in Q2 2019. Decision makers in 200 Nordic organizations with more than 100 employees participated.

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