End-User Computing: The Modern Workplace an Extension of the Hybrid Cloud Market

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IDC | ANALYZE THE FUTURE

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What Work Is and Where It's Done Is Changing

Past

In the past, end users reported to a workplace and performed a job using assets assigned to them by the company, following established procedures.

Present

TODAY, **ALMOST HALF** OF ORGANIZATIONS

Offer knowledge workers the freedom to do

- ***What*** they need to
- ***Where*** they need to do it

In order to achieve a business outcome

50.79%

Flexible time
(employees choosing when they start/finish work)

44.26%

Flexible location
(employees choosing to work from the office, from home, or other locations)

41.97%

Flexible role
(employees choosing, within certain guidelines, what they do as part of their job)

Present

This broader trend is true across industries, except for the public sector and services, which have comparatively low role flexibility at 34% and 25%.

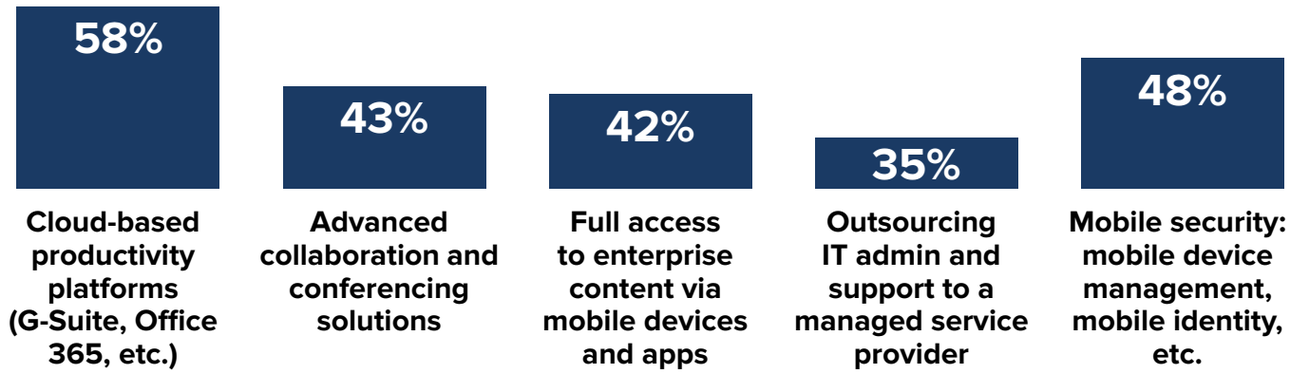
Flexible	Financial Services	Manufacturing	Healthcare & Life Science	Telco & Media	Energy	Retail & Wholesale	Public Sector	Services
Time	45.30%	48.15%	49.29%	71.49%	60.47%	51.00%	49.37%	38.09%
Location	51.32%	40.38%	42.00%	45.37%	49.47%	38.19%	37.43%	53.70%
Role	46.04%	41.27%	47.27%	38.11%	43.71%	41.53%	34.50%	25.35%

Enterprises Are Shifting Their Technology Stacks to Accommodate

Enterprises have shifted to **rapid procurement and provisioning for IT resources** to meet this changing landscape.

42% intend to deliver all enterprise applications via mobile devices and apps

48% are implementing mobile security and identity to improve productivity



OVER 40% OF HEALTHCARE, ENERGY, MANUFACTURING, AND TELCO & MEDIA ENTERPRISES

offer knowledge workers the freedom to do what they need to, where they need to, in order to achieve a business outcome.

Enterprises granting full access via mobile devices and apps to enterprise content by industry

Financial Services	Manufacturing	Healthcare & Life Science	Telco & Media	Energy	Retail & Wholesale	Public Sector
36%	43%	51%	41%	49%	30%	38%

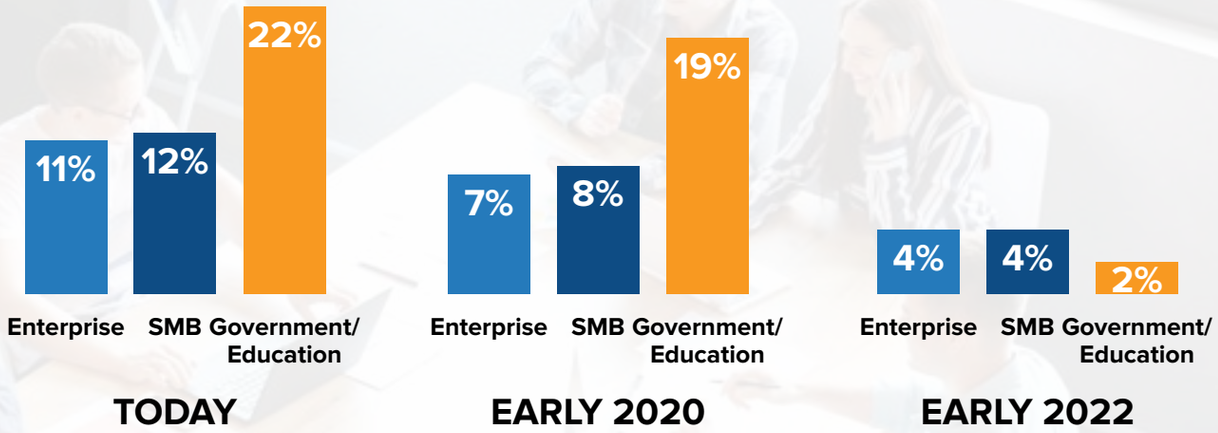
Updating the Technology Stack Includes Migrating from Windows 7 to Windows 10

The first stage has been completed.

The bulk of migration work is done, but the remaining "long tail" will continue due to:

- **Application compatibility issues**
- **Software controlled device requirements**
- **Lack of budget to purchase new hardware to Windows 10 specification**

This long tail will substantially persist in the market for at least 2 years after Windows 7 End of Life.



Q. You indicated Windows 7 accounts for the following share of your PCs today. Please estimate what that share will look like at each of the following dates.

Source: IDC 2019 U.S. Commercial PCD Survey, N=500

But IT Is Slow to Respond—Especially When Limited by Hardware and Software

To respond to requests "fast enough," IT must move away from traditional ways of procuring and provisioning client computing resources.

of companies see outdated technology as an inhibitor to the organization being more agile.

of companies believe that IT cannot respond to requests fast enough.

Source: IDC Future of Work Survey

Average time to procure and provision a traditional virtual desktop infrastructure system:

14 TO 28 WEEKS

Average time to deliver a laptop:

4 TO 6 WEEKS

Source: IDC VCC MarketScape Research, 2019

There Is a Better Way to Improve End-User Experience

Virtualized applications and desktops—i.e., End-User Computing—as well as software as a service, can be procured and provisioned in minutes; retired in seconds (addressing speed, flexibility of role, and time). Virtualized apps give enterprises quality access from any device (addressing mobility) from anywhere with a network connection.

AVERAGE TIME TO SET UP A VIRTUAL DESKTOP ON A CLOUD:
4 TO 6 MINUTES

AVERAGE TIME TO DEPLOY A VIRTUAL ENTERPRISE APPLICATION:
1 TO 2 MINUTES

Source: IDC VCC MarketScape Research, 2019

Business Outcomes Drive the Design and Approach

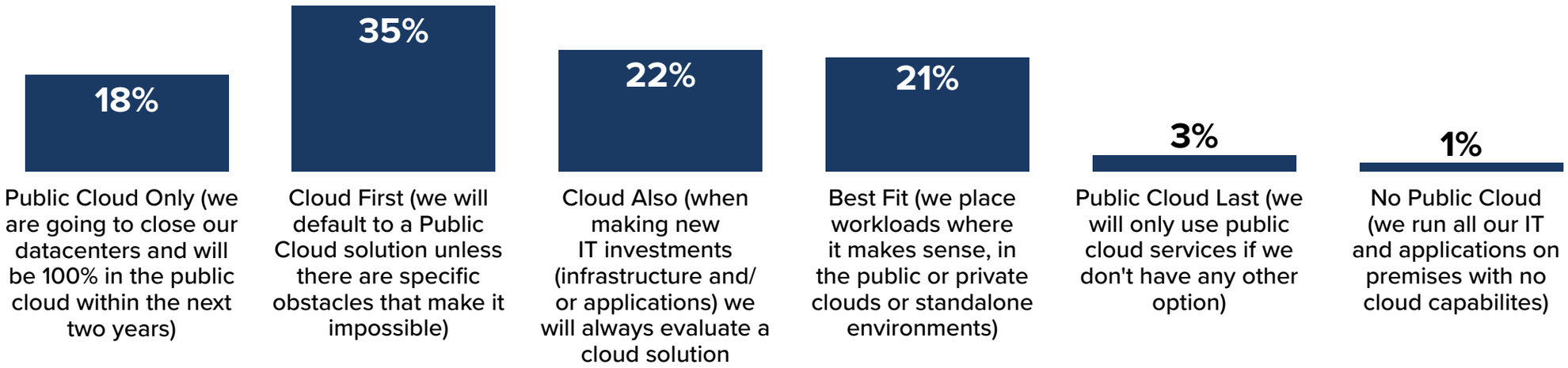
Software as a Service is excellent for addressing new and emerging requirements (rapid feature release) in a way that can be quickly procured and provisioned.

End-User Computing (EUC) addresses a wider range of enterprise-level concerns while also providing rapid procurement, provisioning, and retirement of end-user resources.

	EUC	SaaS
Rapid Procurement	X	X
Rapid Provisioning	X	X
Rapid Feature Release	–	X
Rapid Retirement	X	–
Unified UX across Applications	X	–
Enterprise Control of Data	X	–
Enterprise Governance across applications	X	–
Secured Work Environment	X	–
Leverage Existing Enterprise Application Investments	X	–

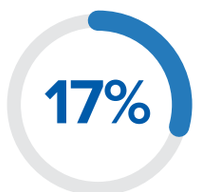
When Enterprises Use EUC, They Must Balance Between Public and Private Clouds

Enterprises have adopted a cloud-first strategy. EUC systems run on a mix of public (e.g., Amazon, Azure), hosted (Citrix, IBM), and private (in the enterprise datacenter) clouds.

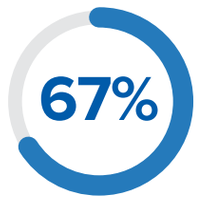


Source: IDC Future of Work Survey

Desktop as a Service (running EUC in public and hosted clouds) is expected to grow over the next few years:



2016
% of DaaS Market

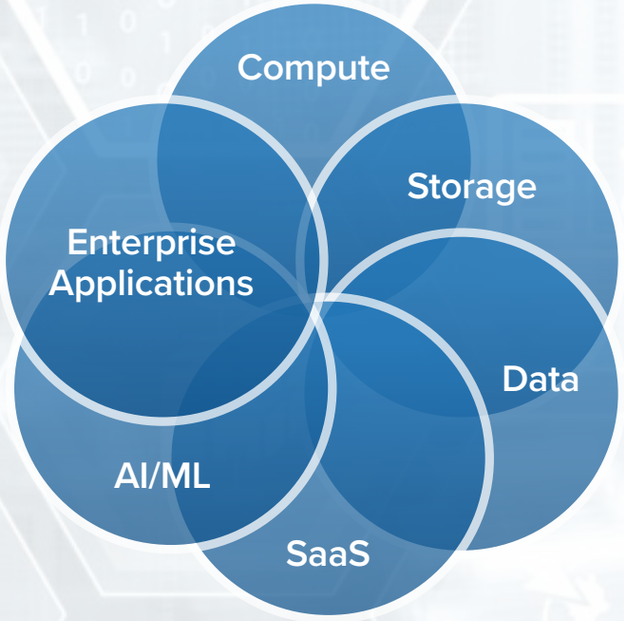


2023
% of DaaS Market

Source: IDC Public Cloud Tracker – VCC Market

With So Many Options, the Location of the Workload Is Critically Important to Performance

The role of EUC in unifying the governance, security, and user experience (UX) across the enterprise means that it is sensitive to latency within the system.



Modern systems adjust within limits, but the critical factor to reducing latency is to locate the EUC system close to (or hyperconverged with) the systems and data that end users will use.

Demand Will Come from Both Old and Emerging Use Cases

As the demands on and the devices that can run clients become more complex, new use cases will need to be addressed quickly and effectively.

Core Five
- Application Compatibility
- Mobility
- Security
- Disaster Recovery
- Seasonal Work

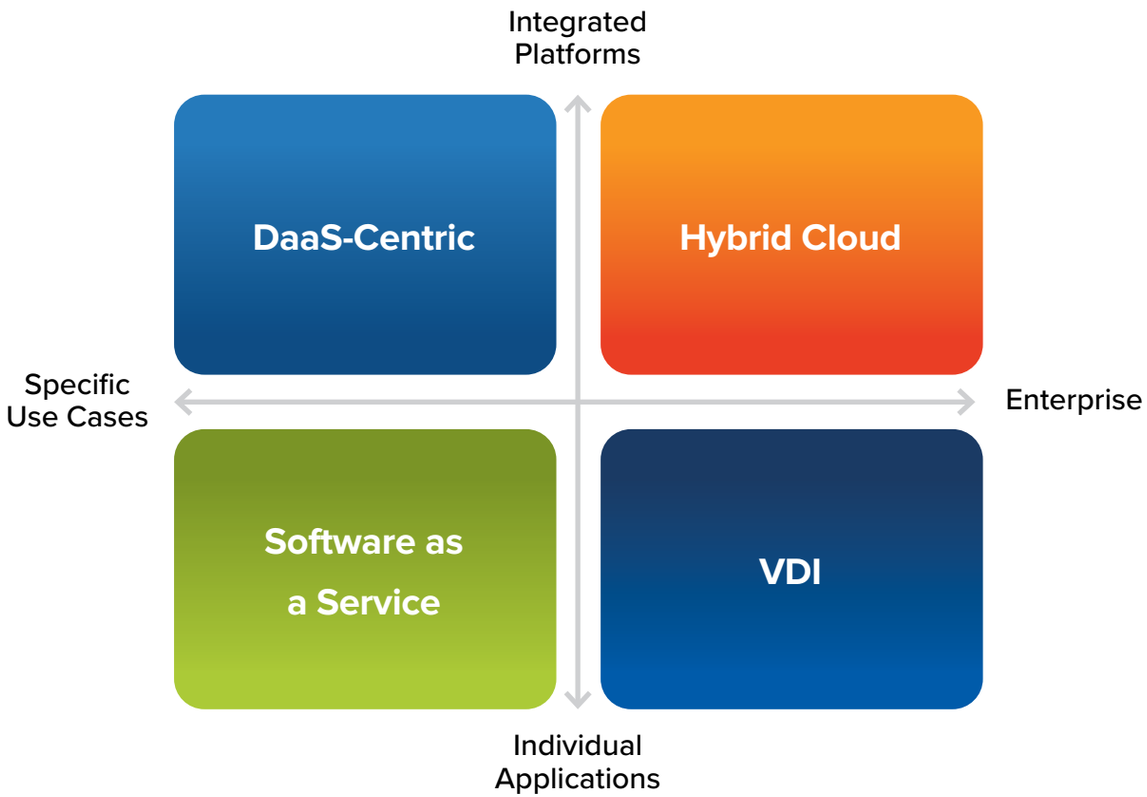
Emerging
- IoT Nexus
- Aggregated Workspace
- Edge/AR Nexus
- Software-Defined Clients
- Aggregate SaaS Provisioning
- Instant Provision/Decommission
- Legacy Application-as-a-Service

Application compatibility will help with the continuing "long tail" of Windows 7 migrations.

Moving to a Modern Workplace Requires a Balanced Approach

Select from four core scenarios:

- If using integrated platforms (e.g. O365, Google Office) and focused on delivering specific use cases, then a **Desktop-as-a-Service**-centric approach works best.
- If using integrated platforms with a broad range of enterprise controls, then a **Hybrid** (public and private cloud) approach works best.
- If delivering specific (often new) use cases in individual applications, often **Software as a Service** works best in the short term with a potential to shift a DaaS-centric or hybrid solution later.
- If delivering individual applications with enterprise-level controls, then a traditional **Virtual Desktop Infrastructure (VDI)** system with the ability to burst into the public cloud is desirable to address disaster recovery and seasonal work requirements.



Source: IDC VCC MarketScape Research, 2019

Nutanix Solutions for EUC

Thousands of customers, millions of users, world class support*

Nutanix HCI Platform for VDI

» Excellent end user experience at scale
» Always on availability and security
» Faster time to delivery
» Improved efficiency

Desktop as a Service (DaaS)

» Instant start
» Unlimited scale in Hybrid cloud
» World class security
» CapEx to OpEx

www.nutanix.com/euc

* Weighted CSAT score of 9.7 and average NPS score of 90 for 5 years