# Migration patterns for success with Amazon WorkSpaces Family and Amazon AppStream 2.0

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# Agenda

Key drivers for migration

Common migration pitfalls

Migration to Workspaces, Amazon AppStream 2.0

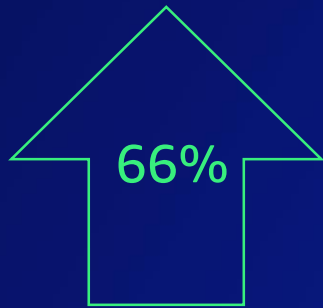Migration to WorkSpaces Web for browser access
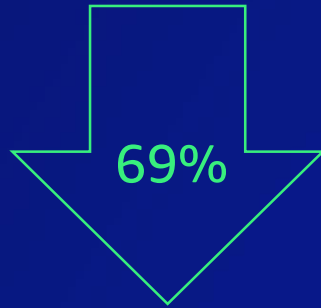
Next steps to success

# Key drivers for migration

# Why AWS End User Computing?
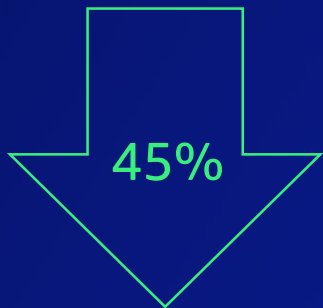Proven expertise enabling customer success
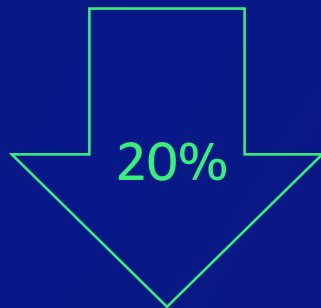
## Migrating from on premises to AWS

66%
Admin productivity

69%
Unplanned downtime

45%
Security-related incidents

20%
Infrastructure costs

## Empowering end users with AWS

*"Key results include increased staff productivity after shifting from on-premises to cloud VDI, as well as newfound business agility and EUC flexibility.*

*Interviewed decision-makers' found that AWS's solutions allowed them to experiment with bring-your-own-device (BYOD) policies and better meet employee EUC needs."*

*– "The total economic impact of AWS End User Computing"–Forrester, Dec 2021*

The Hackett Group January 2022

# AWS End User Computing services

**AWS virtual desktop services**

**Application SaaS conversion service**

**WorkSpaces** (fully persistent)
**AppStream 2.0** (selective persistence)

All-inclusive virtual desktop services

**WorkSpaces Core**

Virtual desktop infrastructure APIs for third-party VDI software

**WorkSpaces Web**

Secure, low-cost browser service for access to internal websites and SaaS apps

**AppStream 2.0**

Secure, reliable, and scalable access to applications from any location

**WorkSpaces Streaming Protocol (WSP) and DCV protocol**
High-performance remote display protocols for any application

# Key drivers for AWS EUC migration?

- My boss told me to do it
- EUC are managed services
- Scale
- Make use new features
- Reduce costs

# "Managed" makes a difference

**AWS End User Computing services**

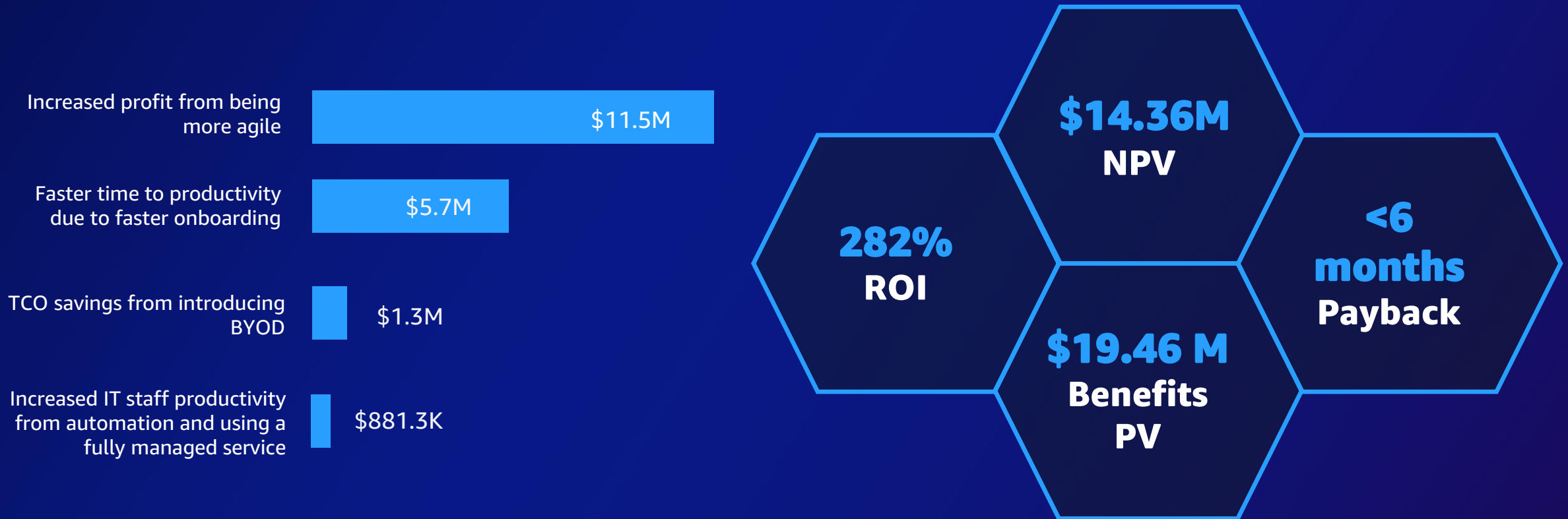| Solution stack | On-premises VDI | DIY cloud VDI | Amazon WorkSpaces Core | Amazon WorkSpaces, AppStream 2.0, WorkSpaces Web |
|---|---|---|---|---|
| Image management | ○ | ○ | ○ | * |
| Directory services and policies | ○ | ○ | ○ | ○ |
| VDI control plane install and admin | ○ | ○ | Customer or partner | ✓ |
| Host admin | ○ | ○ | ✓ | ✓ |
| Storage admin | ○ | ○ | ✓ | ✓ |
| Load balancers install and admin | ○ | ✓ | ✓ | ✓ |
| Hypervisor install and admin | ○ | ✓ | ✓ | ✓ |
| Physical security | ○ | ✓ | ✓ | ✓ |
| Power / HVAC | ○ | ✓ | ✓ | ✓ |
| Rack and stack | ○ | ✓ | ✓ | ✓ |

○  Customer or partner managed
✓  AWS managed
* No image management required for WorkSpaces Web

# Business value migration benefits

## Based on composite customer with 3,500 users on WorkSpaces/AppStream

Increased profit from being more agile — $11.5M

Faster time to productivity due to faster onboarding — $5.7M

TCO savings from introducing BYOD — $1.3M

Increased IT staff productivity from automation and using a fully managed service — $881.3K

282% ROI

$14.36M NPV

$19.46 M Benefits PV

<6 months Payback

aws migrations

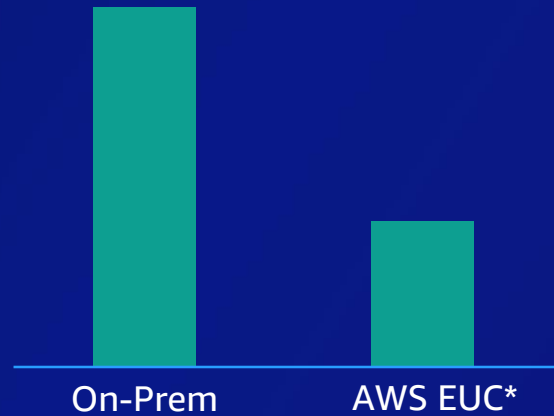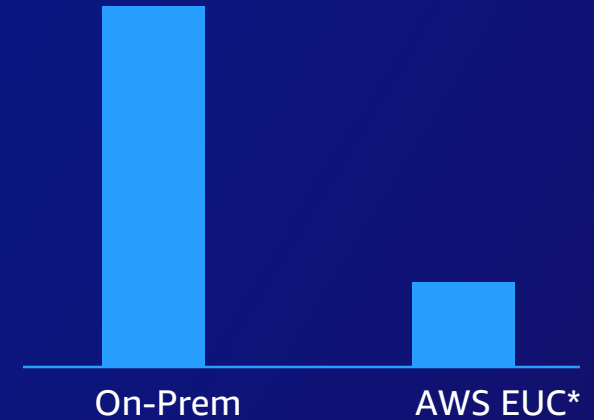# TCO migration benefits

## Cost savings (TCO)

Infrastructure cost savings/ avoidance from moving to the cloud

On-Prem     AWS EUC*

**41**%

Savings over 3 years with on-prem hardware/software refresh

On-Prem     AWS EUC*

**15**%

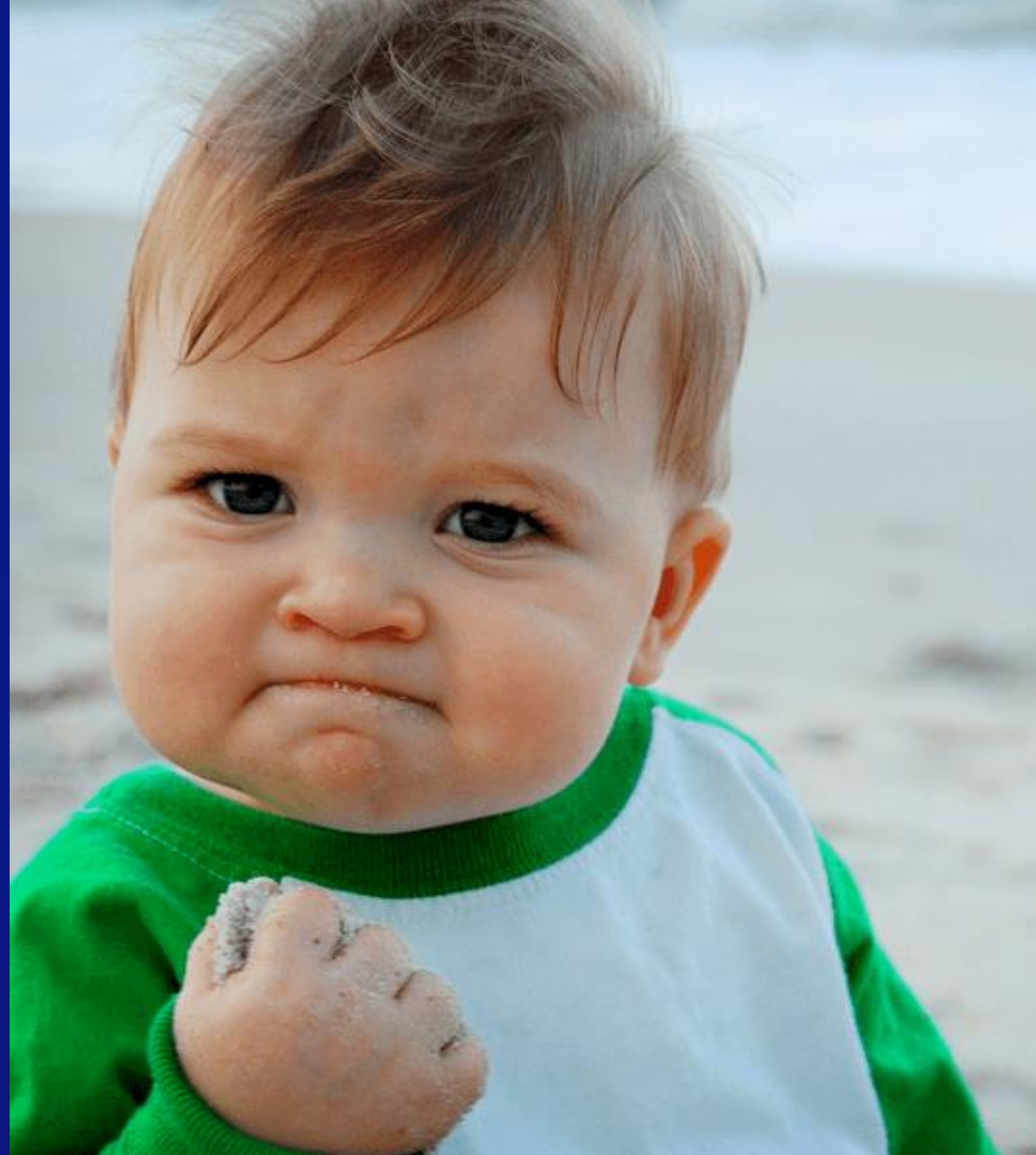Savings over 3 years with no on-prem hardware/software refresh

*AWS EUC service is AppStream 2.0 (Always-On)
44% Assumes 1 complete hardware & software refresh during this time period
Without a hardware & software refresh during this time period, savings is closer to 5% yearly; 15% over 3 years

# Migration anti-pattern

- Identify feature needed
- Deploy feature
- Enjoy glory

# Common migration pitfalls

# Common pitfalls

- Failure to plan for what
- Failure to plan for when
- Lack of planning for how
- Poor planning to validate success
- When its delivered, how does success keep happening?

# Common pitfalls

- Active Directory configuration and availability/reliability
  - GPOs, Sites & Services, availability/reliability
- Networking considerations
  - IP allocation, appropriate routing
- Service level quota (limits) increased
- Image validation
  - BYOL windows 10/11

- Identify targeted business units and test users
- Outline escalation paths
- Right-sizing performance
- Functionality needed (choosing the right protocol)
- Region availability
  - Service availability and capacity

# Proven EUC migration customer journey

ASSESS → MOBILIZE → MIGRATE & MODERNIZE

Identify Stakeholders

TCO report

Discovery and planning

Migration plan

Briefings & workshops

Operate

Accelerate

Align on Timeline

Highlight Owners

Security & compliance

Operating model

Immersion day

Modernize

Migrate

**CREATE A CASE FOR CHANGE**

**MOBILIZATION THROUGH EXPERIENCES**

**ACCELERATE MIGRATION AT SCALE**

EUC Sales Specialists and Solution Architects | EUC Partners | EUC ProServe
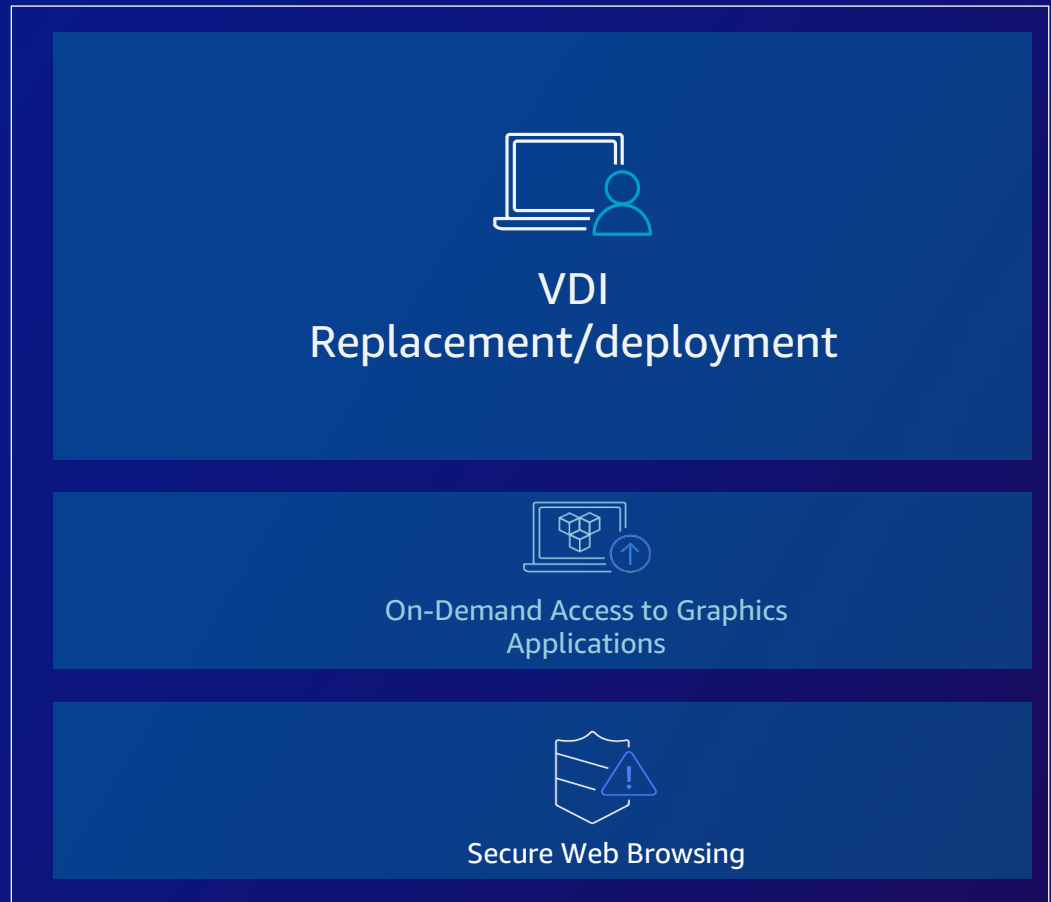
aws migrations

# Combine Services

Every customer is unique in how they address use cases. We see overlap between WorkSpaces and AppStream 2.0 Desktop View. Understand the experience the customer wants to deliver in order to position the right solution – which can be both

**WorkSpaces**

**WorkSpaces Core**

**AppStream 2.0**

**WorkSpaces Web**

VDI
Replacement/deployment

On-Demand Access to Graphics Applications

Secure Web Browsing

# Next steps to success

# Be successful

- Plan for what
- Plan for when
- Plan for how
- Validate for success
- Iterate

# Additional resources

## BUILD WITH WELL ARCHITECTED FOUNDATIONS AND EMBRACE EXPERIMENTATION

https://aws.amazon.com/blogs/enterprise-strategy/experiment-more-fail-less/
Experiment More, Fail Less

https://aws.amazon.com/blogs/enterprise-strategy/failing-creating-a-culture-of-learning/
Failing & Creating a Culture of Learning

https://docs.aws.amazon.com/whitepapers/latest/WorkSpaces-linux-best-practices/best-practices-for-amazon-WorkSpaces-images-and-bundles.html
Best Practices for Amazon WorkSpaces Images and Bundles

https://d1.awsstatic.com/whitepapers/WorkSpaces/Best_Practices_for_Deploying_Amazon_WorkSpaces.pdf
Best Practices for Deploying Amazon Workspaces

https://aws.amazon.com/blogs/desktop-and-application-streaming/creating-an-image-programmatically-with-appstream-2-0-image-assistant-cli-operations/
Creating an image programmatically with AppStream 2.0 Image Assistant CLI operations

https://docs.aws.amazon.com/wellarchitected/latest/framework/welcome.html
AWS Well-Architected Framework

# Thank you!

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