



Cost Savings Blueprint: How Customers Achieved 103% ROI by Migrating SAP Workloads to AWS

Brian Griffin, Professional Services
SAP Practice CTO, AWS



Agenda

- Speaker introduction
- SAP on AWS
- Forrester – Total Economic Impact™ study
- Building a better business case for SAP on AWS
- Summary
- Q&A

Speakers



Brian Griffin

Professional Services SAP Practice CTO, Amazon Web Services, Inc.

SAP on AWS

How SAP customers are lowering costs
and maximizing performance with AWS



How does SAP fit into enterprise modernization?

77%

of the world's transaction revenue touches a SAP system¹

94%

of SAP customers say the need for innovation is of "critical or moderate importance"²

81%

Of SAP customers are already using cloud for at least one application³

21%

Increase in ERP migrations to cloud in 2020 vs 2019³

1. [SAP: About Us](#).

2. [Rimini Street: Navigating the Future of Your SAP Roadmap Strategy](#)

3. [ASUG and Syntax: The Marathon to the cloud for SAP Customers Begins with Strategic Sprints](#)

Why SAP customers choose AWS



Unmatched experience and industry leadership



Comprehensive, industry-leading security and compliance



Customer Choice and Flexibility



Proven Cost Savings



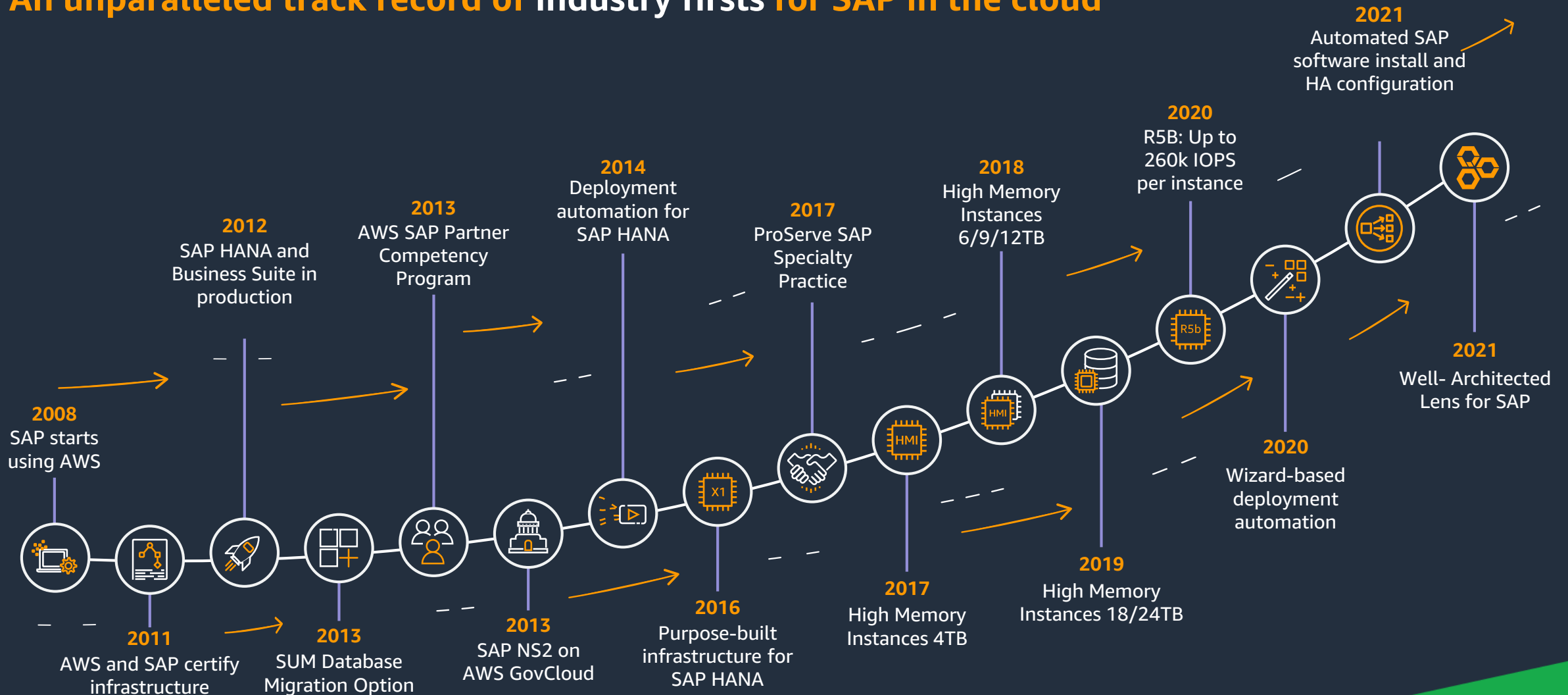
200+ cloud services to innovate, modernize, and transform



Most Reliable and Extensive Cloud infrastructure

13 years of customer-obsessed innovation

An unparalleled track record of industry firsts for SAP in the cloud



5000+ SAP customers across industries and geos trust AWS

HEALTHCARE & LIFE SCIENCES	ENERGY & NATURAL RESOURCES	RETAIL & CONSUMER GOODS	MEDIA & ENTERTAINMENT	PUBLIC SECTOR & DEFENSE
AUTOMOTIVE & TRANSPORTATION 	MANUFACTURING & INDUSTRIAL 	AGRICULTURE, CPG, & FOOD/BEV 	PROFESSIONAL/ FINANCIAL SERVICES 	TECHNOLOGY



Unmatched experience delivering customer success across approaches

Lift and shift ECC



83% CapEx reduction, 18% OpEx reduction, 28% performance increase



Improved process performance by 60% while reducing costs

Suite on HANA



Uses Suite on HANA with AWS IoT for smart manufacturing



Moved to HANA, reduced costs by \$530k while navigating GoldCorp acquisition

S/4HANA migration



Reduced costs by 20% and automated GxP compliance with greenfield S/4HANA deployment



Transforming their Smart Infrastructure business by moving to S/4HANA on AWS

Innovate, modernize, and transform with AWS services

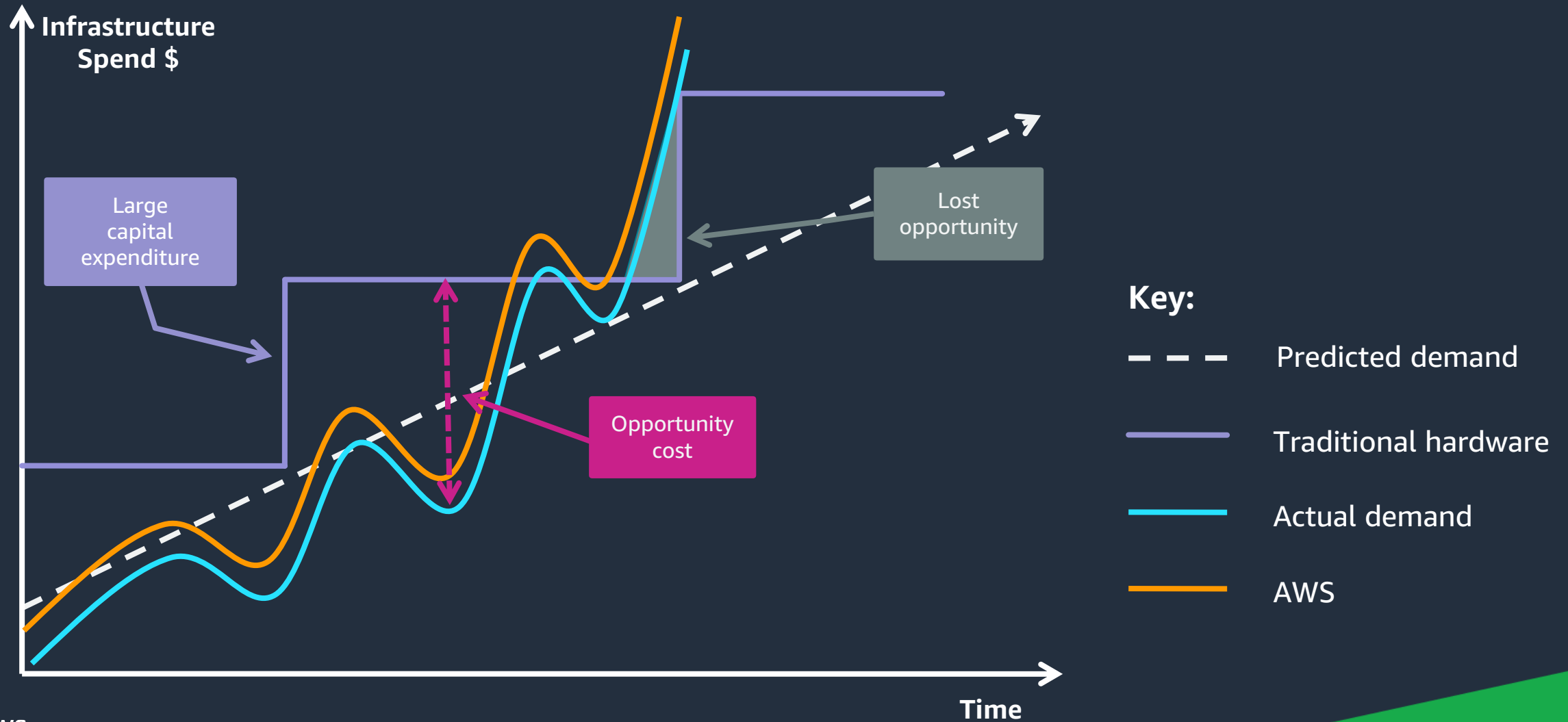


Estimated \$300M in operational value by combining ECC with AWS analytics, AI, and ML services



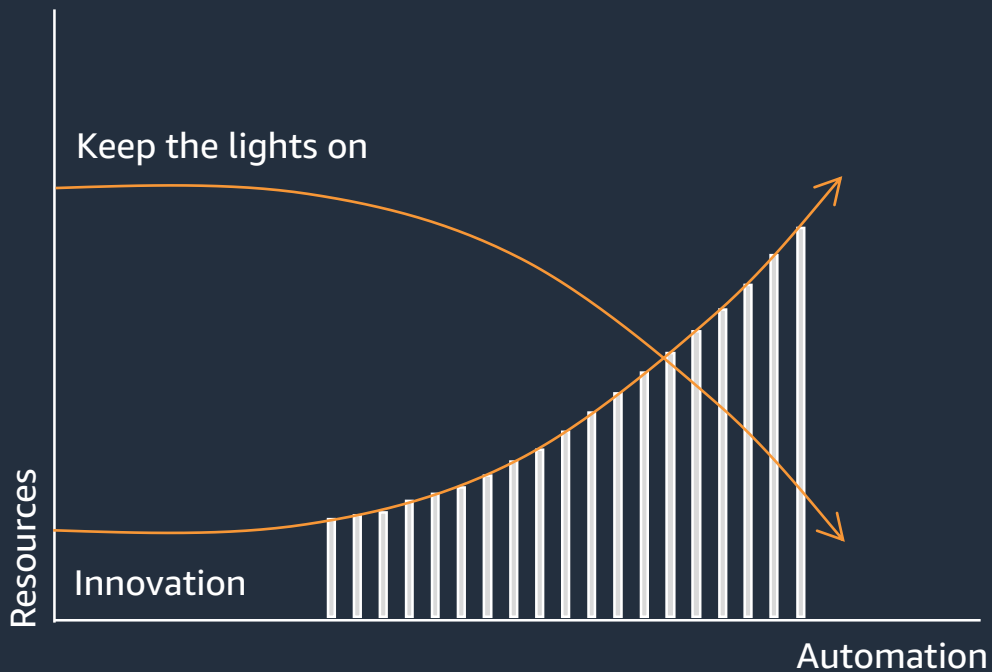
Integrating S/4HANA with VW Digital Production Platform to improve manufacturing productivity by 30%

Cost Savings: Economics of the Cloud



Reduce labor costs with industry-leading automation

For most companies, **>60% of IT spend is personnel**, and up to **90% of staff time is spent keeping the lights on**¹



Reduces S/4HANA deployment time by more than 75% with AWS Launch Wizard

ZALORA

Serverless architecture with AWS Lambda reduces SAP system refreshes from five to two days

1. [Stuck Waiting at a Red Light with SAP S/4HANA? Rimini Street](#)

2.. ["The Total Economic Impact of Migrating SAP ECC to Amazon Web Services" \(Forrester\)](#)



Clean core + AWS = Innovation

Enabling the 'data driven enterprise'

↑
REVENUE
GROWTH

Empowered
sales teams

Intelligent
decision making

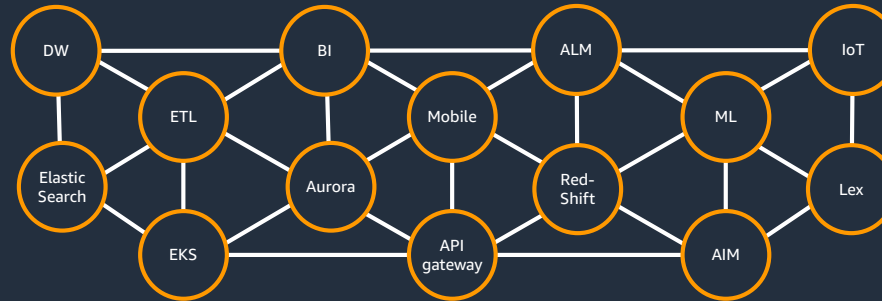
Better relationship
with customers

Increased
efficiency

Products that get
better with time

OPERATIONAL
OVERHEAD

Data-driven
discipline



AWS native

SAP Business
Technology Platform

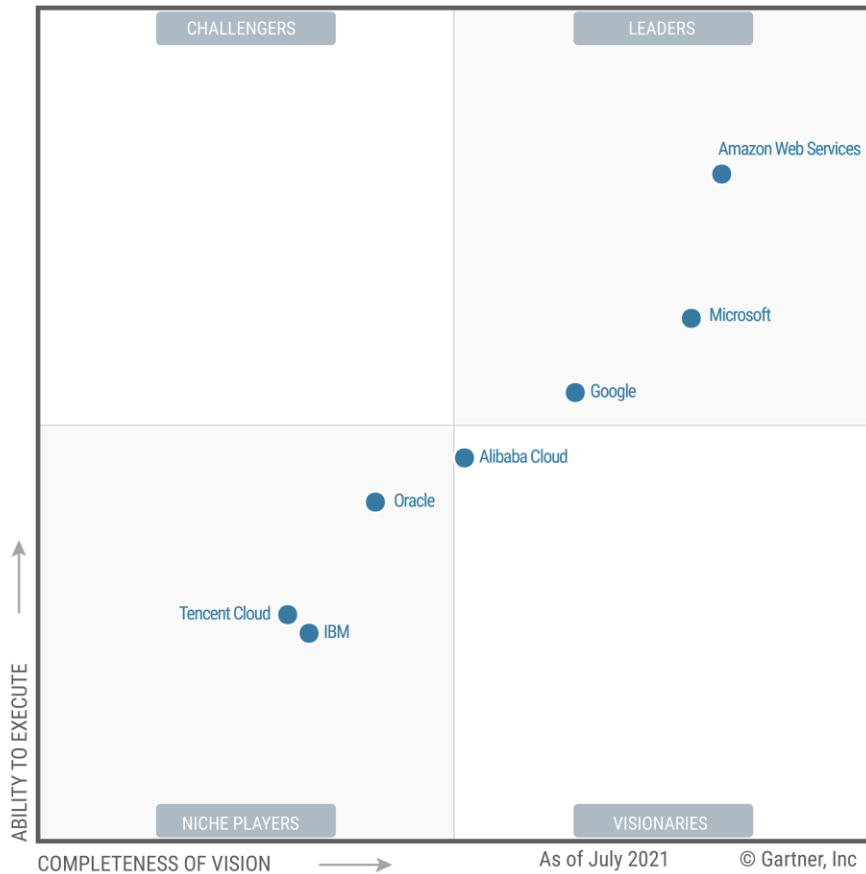


DIFFERENTIATION LAYER
Build to change

APPLICATION LAYER
Build to consume

INFRASTRUCTURE LAYER
Build to last

Figure 1: Magic Quadrant for Cloud Infrastructure and Platform Services



Source: Gartner (July 2021)

Gartner recognizes AWS as Leader for 11th straight year

Positioned highest and furthest in the 2021 Gartner Magic Quadrant for CIPS Leaders quadrant for its ability to execute and completeness of vision

Gartner, Magic Quadrant for Cloud Infrastructure & Platform Services, Raj Bala, Bob Gill, Dennis Smith, Kevin Ji, David Wright, 27 July 2021. Gartner and Magic Quadrant are registered trademarks of Gartner, Inc. and/or its affiliates in the U.S. and internationally and is used herein with permission. All rights reserved. Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose. This graphic was published by Gartner, Inc. as part of a larger research document and should be evaluated in the context of the entire document. The Gartner document is available upon request from AWS.

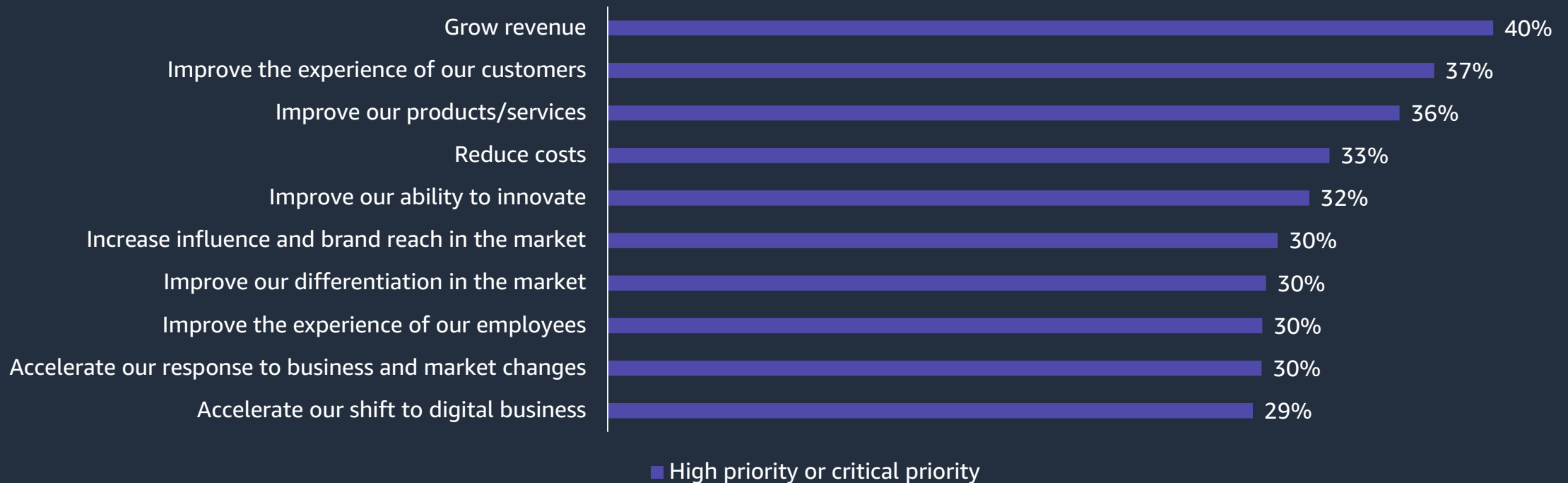
Forrester – Total Economic Impact™ study

Cost savings and business benefits



The big picture: growth, experience, and cost matter

Which of the following initiatives are likely to be your organization's top business priorities over the next 12 months?

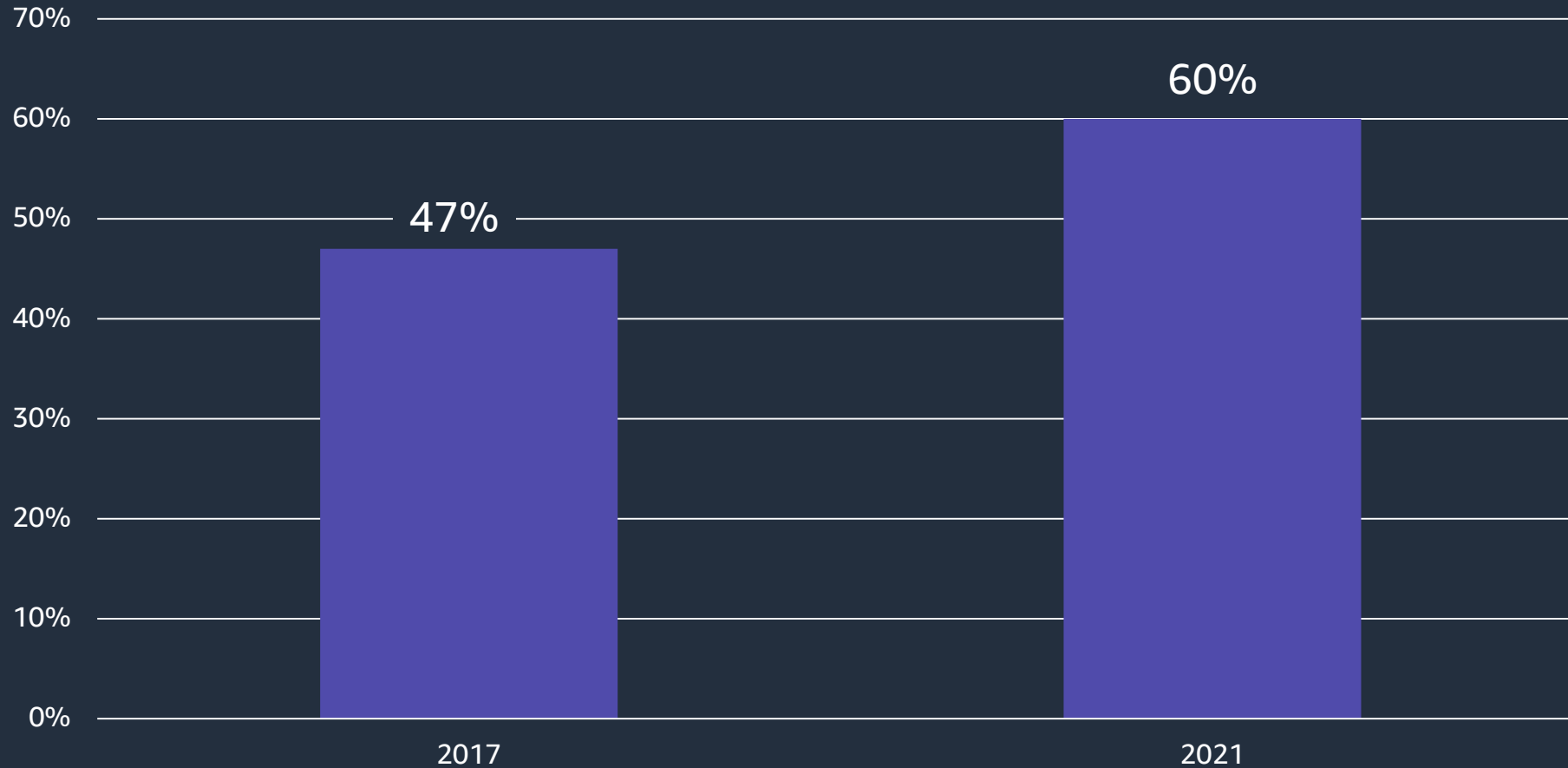


Base: 20999 Purchase influencers (past 12 months/next 12 months); Note: only top 10 responses shown.
Source: Forrester Analytics Business Technographics Priorities And Journey Survey, 2021



B2B buying is getting more complex

Percentage of purchases with four or more people involved



Source: Forrester Research, Inc. Unauthorized reproduction, citation, or distribution prohibited.



Disclosures

The audience should be aware of the following:

- This document is an abridged webinar version of a full case study (Forrester Total Economic Impact of SAP on AWS May 2021).
- The study is commissioned by Amazon and delivered by the Forrester Consulting group.
- Forrester makes no assumptions as to the potential return on investment that other organizations will receive. Forrester strongly advises that readers should use their own estimates within the framework provided in the report to determine the appropriateness of an investment in SAP on AWS
- Amazon reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.
- The customers for the interviews were sourced through Amazon and an independent research panel provider.
- Forrester does not endorse Amazon

Forrester interviewed four organizations in-depth to assess their experience migrating SAP ECC to AWS

Industry	Region	Interviewee	Revenue
Utility	Europe	Senior manager of IT infrastructure	\$500 million
Media	United States	Technology director	\$250 million
Consumer goods	Global	IT director and enterprise architect	\$2.5 billion
Luxury retail	Global	Senior manager of infrastructure	\$1.0 billion

And constructed a composite organization representative of the interviewees' companies:



\$750 million in revenue



5,000 employees



2,000 SAP users



Global organization



Industry-agnostic organization

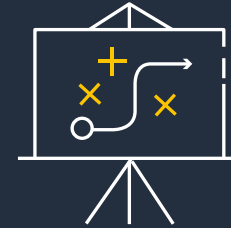
SAP ECC Organizations' Business Challenges



Major gaps in SAP version and a goal to use an in-memory database for SAP



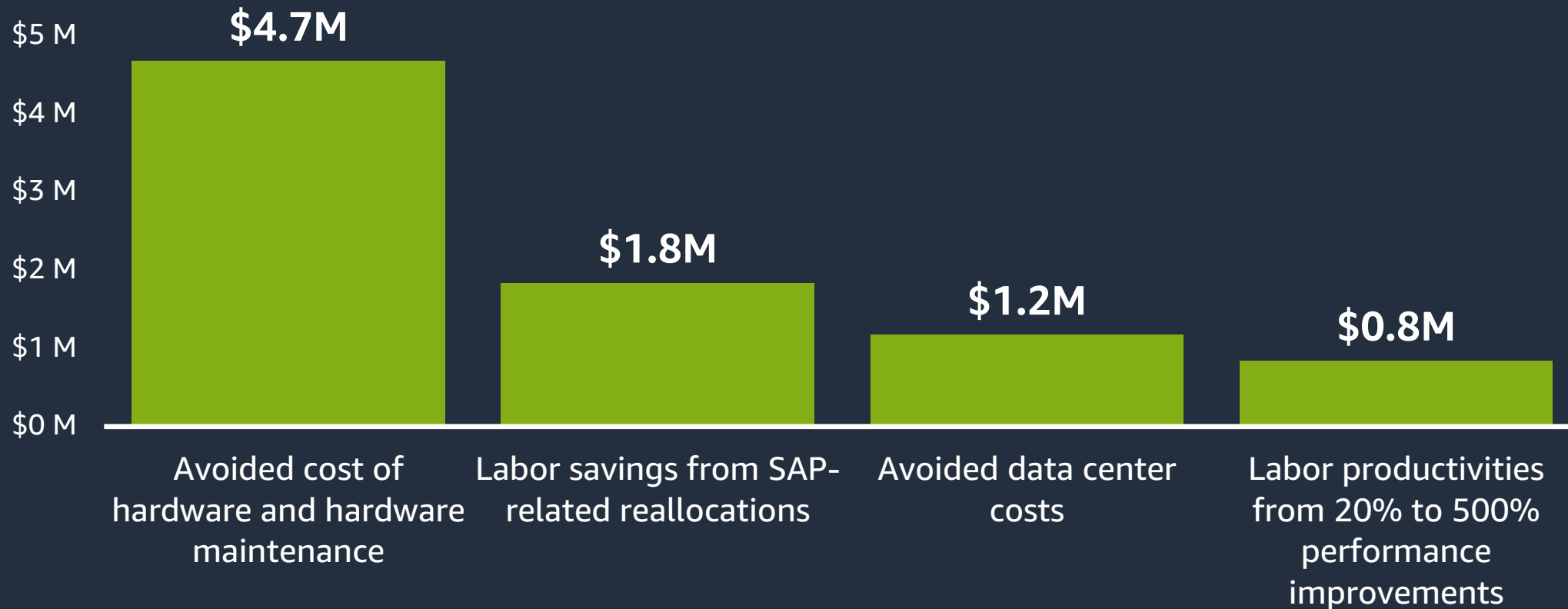
Inability to meet peak demand with large periods with a major excess in resources



Strategy to transition workloads to the cloud

Three-year risk-adjusted benefits

Based on interviews with current customer organizations, as applied to the composite



Source: A commissioned Total Economic Impact study conducted by Forrester Consulting on behalf of Amazon, May 2021



Avoid cost of hardware, maintenance, and data centers

Organizations had to size their SAP infrastructure resources for estimated peak usage, over-procuring on-premises resources significantly and still could fail to meet demand spikes.

“We had to purchase over 200 servers to meet our peaks and they would sit running at less than 10% capacity most of the time.”

**IT director and enterprise architect,
consumer goods**



By shifting to a cloud infrastructure, the organizations were able to pay for resources based on actual utilization —



Each of the organizations also saved the costs of data center space.

FINANCIAL IMPACT

\$4.7M 3-year PV

Avoided cost of hardware and hardware maintenance

FINANCIAL IMPACT

\$1.2M 3-year PV

Avoided data center costs

Source: A commissioned Total Economic Impact study conducted by Forrester Consulting on behalf of Amazon, May 2021



Labor savings from SAP-related reallocations

The interviewees' organizations saw labor savings related to SAP administration and DevOps that exceeded their expectations. This was due to a combination of environmental improvements, including automation, reducing activities related to demand fluctuations, and the benefits of keeping SAP more current.



Each of the organizations was able to redeploy SAP administrative and DevOps staff.



Some of the organizations were able to reduce/redeploy consultant, contract, and employee **staffing by almost 50%**.

FINANCIAL IMPACT

\$1.8M 3-year PV

Labor savings from SAP-related reallocations

Source: A commissioned Total Economic Impact study conducted by Forrester Consulting on behalf of Amazon, May 2021



Labor productivities from performance improvements

Faster response times due to performance improvements led to labor productivities for end users.



Many frequent users performed interactive activities on SAP and consistently saw improvements in response time to requests.



Some users had reports or processes that historically took hours to complete. But with SAP on AWS, the time was reduced to minutes.

FINANCIAL IMPACT

\$839K 3-year PV

Labor productivities from 20% to 500% performance improvements

Source: A commissioned Total Economic Impact study conducted by Forrester Consulting on behalf of Amazon, May 2021



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There are benefits to migrating to SAP on AWS that the customers couldn't quantify



Better decision-making due to faster response times



Increased customer and employee satisfaction



A continuing modernization journey



Having AWS as a partner



Capitalizing on the relationship between AWS, Intel, and SAP

Source: A commissioned Total Economic Impact study conducted by Forrester Consulting on behalf of Amazon, May 2021



Avoiding lost sales and creating better customer experience

One organization (consumer goods) lost sales and potentially customers because of slow response times and lockouts caused by poor performance during high-demand periods.

“Even over procuring all that extra capacity, our events launching new products created spikes that maxed out our SAP environment capabilities with the number of orders per second it could handle.”

“Losing that one sale then cascades into losing the people that they would bring with them down the road.”

**IT director and enterprise architect,
consumer goods**

FINANCIAL IMPACT

\$12K Per minute of
**downtime avoided, not
quantified for modeling**

Avoiding lost sales and creating a
better customer experience

Source: A commissioned Total Economic Impact study conducted by Forrester Consulting on behalf of Amazon, May 2021



Additional Benefits



Additional benefits: Better decision making

“Finance, marketing, and sales have been able to take advantage of faster response times that lead to more analysis [that is] done soon enough to take action. Users have benefited from the breadth, depth, and timing of the current analyses they perform within SAP on AWS.”

Technology director, media company



Additional benefits: Organizational Flexibility

“AWS enabled our flexibility and growth. As we added new markets, we needed to resize our SAP instances. In a physical solution that would have meant new hardware with a large price tag, plus the time the procurement process takes. With AWS it was as simple as changing the instance parameter and we were up and running in less than an hour.”

Senior manager of infrastructure, luxury retail



Flexibility benefits: A continuing ERP modernization journey

“Of the features that we get on the Cloud, being able to spin up environments is one of the biggest. We can spin it up, test that out and then bring it into the regular environment. It’s how we are now moving forward with our S/4 HANA migration. It’s been a really huge benefit for us.”

IT director and enterprise architect, consumer goods

Source: A commissioned Total Economic Impact study conducted by Forrester Consulting on behalf of Amazon, May 2021



The Total Economic Impact™ Of Migrating SAP ECC to AWS

ROI	BENEFITS PV	NPV	PAYBACK
103%	\$8.52M	\$4.33M	14 months

Source: A commissioned Total Economic Impact study conducted by Forrester Consulting on behalf of Amazon, May 2021



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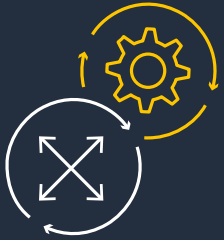
Presenting a compelling case for change

Building a better business case for SAP on AWS



Building a better business case for SAP on AWS

Essential elements



Align your organization and **reimagine what is possible** together



Quantify your cost reducing and business **improving** SAP benefits



Accurately reflect your cloud **journey**

Quantify your cost reduction and business improvement



Cost savings (TCO)



Staff productivity



Operational resilience



Business agility

What is it?

Infrastructure cost savings/avoidance from moving to the cloud

Efficiency improvement by function on a task-by-task basis

Benefit of improving SLAs and reducing unplanned outage

Deploying new features/applications faster and reducing errors

KPIs

- IT spend on app per user
- Total IT infrastructure spend

- VM's managed per admin
- TB's managed per admin

- Application availability
- Total monthly incidents
- Critical (P1/P0) incidents
- Security incidents
- Mean-time-to-resolution (MTTR)
- App resilience rating
- App security rating

- Time to market
- Time to deploy
- Code deployment frequency
- Customer satisfaction
- Employee satisfaction

← **Typical focus (TCO)** →

← **Most compelling cloud benefits (ROI)** →

Quantify your cost reduction and business improvement



Cost savings (TCO)

What is it?

Infrastructure cost savings/avoidance from moving to the cloud

27-42%

Avg. annual ongoing cost reduction



Staff productivity

What is it?

Efficiency improvement by function on a task-by-task basis

Improvement in IT admin efficiency



Operational resilience

What is it?

Benefit of improving SLAs and reducing unplanned outage

20%-30%
Reduction in monthly critical incidents



Business agility

What is it?

Deploying new features/applications faster and reducing errors

3.5x
Faster deployment of new code to production

Cost impact

Value impact



Cost Savings: Deconstructing SAP TCO

Labor



Data Centre Ops



Infra /OS Ops



SAP Basis



SAP Functional Support

- SAP configuration, development and user support
- SAP application installs, refreshes, patches and upgrades
- Operating System builds, patching and upgrades
- Virtualisation Administration
- Physical repairs and replacements

Licensing



Operating System Licensing



Database Licensing



SAP Licensing

- Operating System Licensing, Support
- Database Licensing / Appliances
- SAP Software Licensing

Compute



Servers



Storage

- Compute (CPUs, Memory)
- Disks
- SAN
- Tape
- Backup Licenses
- Hardware refreshes

Virtual / Extended



Hypervisor



Wide Area Network

- Network Devices
- Telco / Internet
- Firewalls
- Load Balancers
- Virtualisation
- Monitoring

Physical



Real estate

















Power



Cooling

- Racks, Chassis
- PDUs
- Cooling
- Utility Bill
- Facilities Maintenance
- Physical Security
- Real estate / Leasing (multiple locations)

Cost Savings: Sources of TCO savings with AWS

<p>Labor</p>	 Data Centre Ops	 Infra /OS Ops	 SAP Basis	 SAP Functional Support	<p>Reduced</p>	<ul style="list-style-type: none"> Physical repairs, replacements and Virtualisation managed by AWS Significant workforce productivity improvement through automation SAP functional, Basis and Infra / Operating System administration still required
<p>Licensing</p>	 Operating System Licensing	 Database Licensing	 SAP Licensing		<p>Reduced</p>	<ul style="list-style-type: none"> Simplify OS Licensing through AWS pay as you go combined with compute Database Licensing still required SAP Software Licensing still required
<p>Compute</p>	 Servers	 Storage				<ul style="list-style-type: none"> Managed by AWS Right Sizing = pay only for what you need Pay as You Go = Turn it off when you don't need it.
<p>Virtual / Extended</p>	 Hypervisor	 Wide Area Network			<p>Replaced & Reduced</p>	<ul style="list-style-type: none"> Managed by AWS Redundant Global Links & Accelerators Nitro Hypervisor provides bare metal like performance
<p>Physical</p>	 Real estate	 Power	 Cooling			<ul style="list-style-type: none"> Managed by AWS 24 Regions, 77 Regions to choose from HA/DR Built In

Quantify your cost reduction and business improvement



Cost savings (TCO)



Staff productivity



Operational resilience



Business agility

What is it?

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What is it?

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27-42%

Avg. annual ongoing cost reduction

50%-60%

Improvement in IT admin efficiency

20%-30%

Reduction in monthly critical incidents

3.5x

Faster deployment of new code to production

Cost impact

Value impact



Staff Productivity: Example

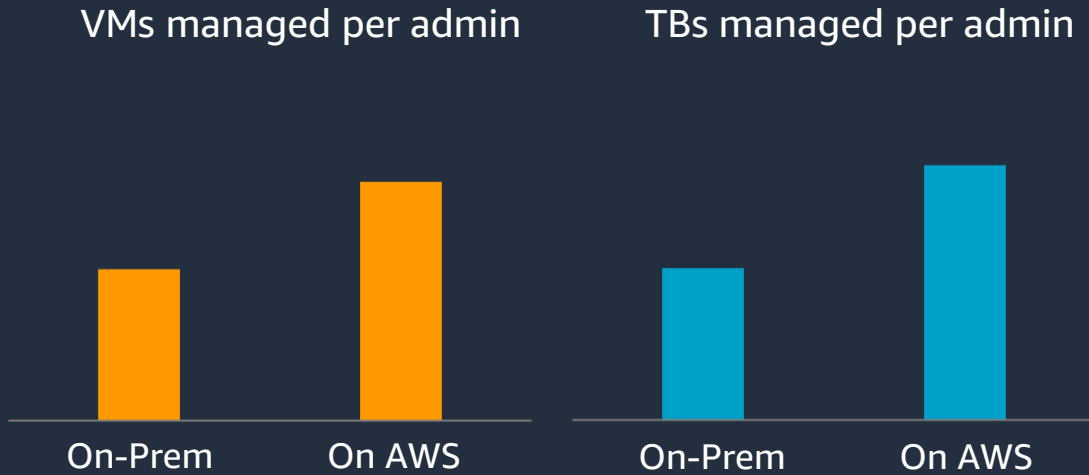
Server Administrator

ILLUSTRATIVE

Task	Typical reduction	Description
Server budgeting and planning	↓ 90%	There is no capital server budget or plan in the AWS cloud
Server purchasing process	↓ 75%	Instance purchasing requires minimal effort in comparison to server purchasing
Long-term capacity planning	↓ 75%	Capacity planning is simply a matter of initiating new instances based on thresholds and much of this can be automated
Project budgeting and planning	↓ 75%	Project budgeting and planning effort should be significantly reduced
Prepare detailed implementation plans	↓ 75%	Implementation plans will be reduced since instance initiation is very straightforward
Arrange repair for hardware in occasion of hardware failure	↓ 100%	Not necessary with AWS
Installing/upgrading/removing software	↓ 50%	Simplify and automate OS patching/updates

Staff Productivity: AWS Benchmarking Insights

Cloud improves efficiency



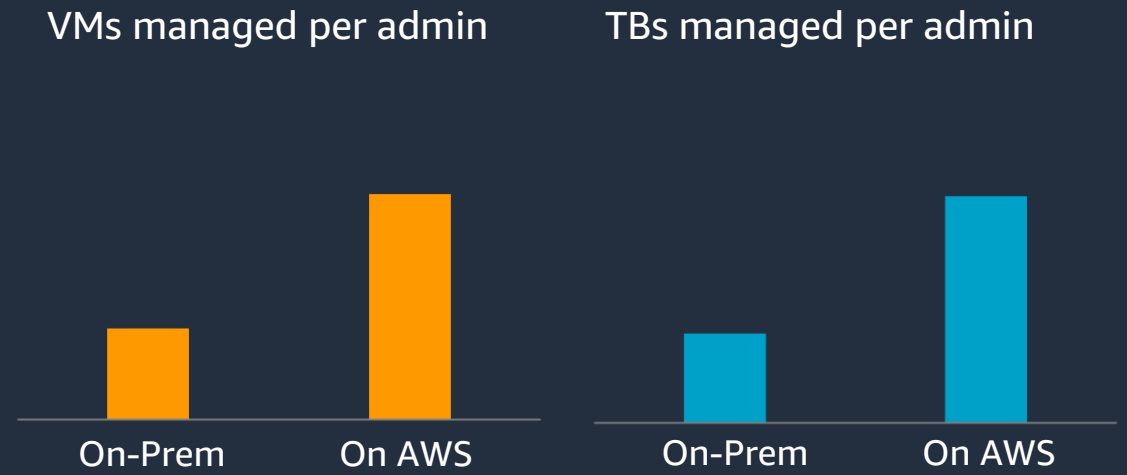
57.9%

Increase in VMs managed per admin

67.7%

Increase in TBs managed per admin

With larger gains for rearchitected applications



147.7%

Increase in VMs managed per admin

153.5%

Increase in TBs managed per admin

Source: AWS Cloud Economics Benchmarking



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Quantify your cost reduction and business improvement



Cost savings (TCO)



Staff productivity



Operational resilience



Business agility

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Avg. annual ongoing cost reduction

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50-60%

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20%-30%

Reduction in monthly critical incidents

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3.5x

Faster deployment of new code to production

Cost impact

Value impact



Operational Resilience: Downtime & Security Costs

**\$1.25B
to \$2.5B**

Annual Fortune 1000
application downtime
costs (IDC)

**\$500K
to \$1M**

Cost/hr of a
critical application
failure (IDC)

\$3.6M

Average cost
of a data breach
(Ponemon Institute)

\$141

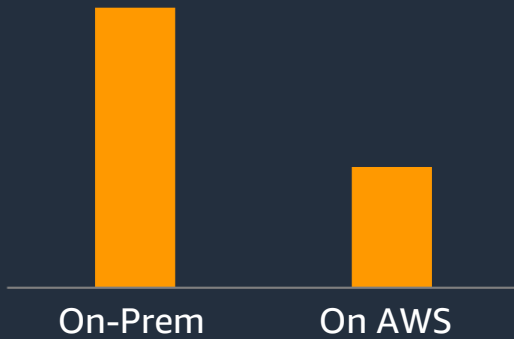
Average cost per
lost or stolen record
(Ponemon Institute)

\$474K

Average cost/hr
of downtime
(Ponemon Institute)

Operational Resilience: AWS Benchmarking Insights

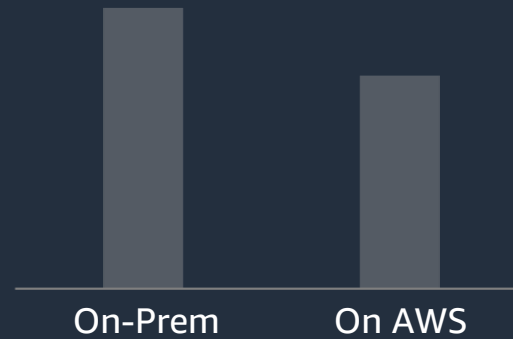
Downtime in minutes



56.7%

Decrease in
downtime

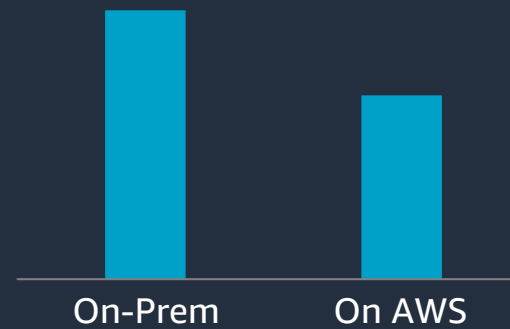
of total monthly incidents



24.1%

Decrease in total
monthly incidents

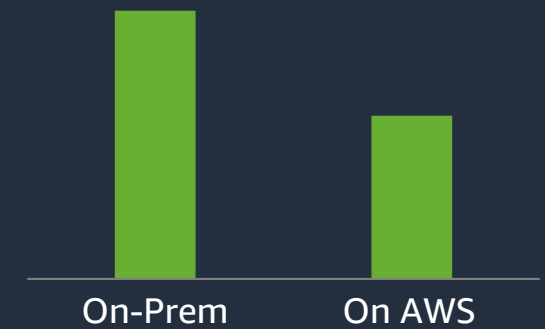
of critical incidents



31.8%

Decrease in critical
(P1/P0) incidents

Mean time to resolution in minutes



39.3%

Decrease in mean
time to resolution
(MTTR)

Quantify your cost reduction and business improvement



Cost savings (TCO)

What is it?

Infrastructure cost savings/avoidance from moving to the cloud

27-42%

Avg. annual ongoing cost reduction



Staff productivity

What is it?

Efficiency improvement by function on a task-by-task basis

20-25%

Improvement in IT admin efficiency



Operational resilience

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Business agility

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3.5x

Faster deployment of new code to production

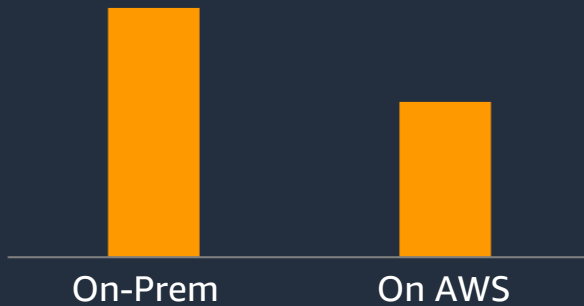
Cost impact

Value impact



Business Agility: AWS Benchmarking Insights

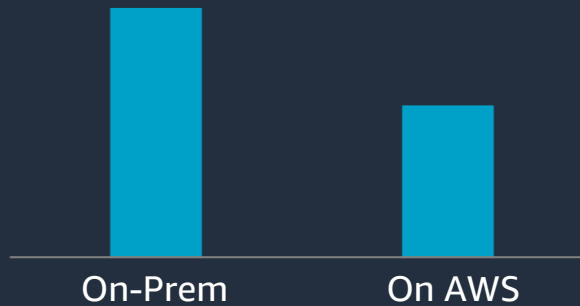
Time to market for new applications in days



37.7%

Decrease in time to market for new features/ applications

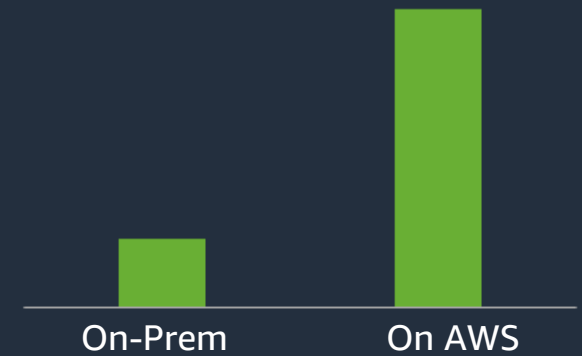
Time to deploy codes to production in days



39.3%

Decrease in time to deploy to production

Code deployment frequency

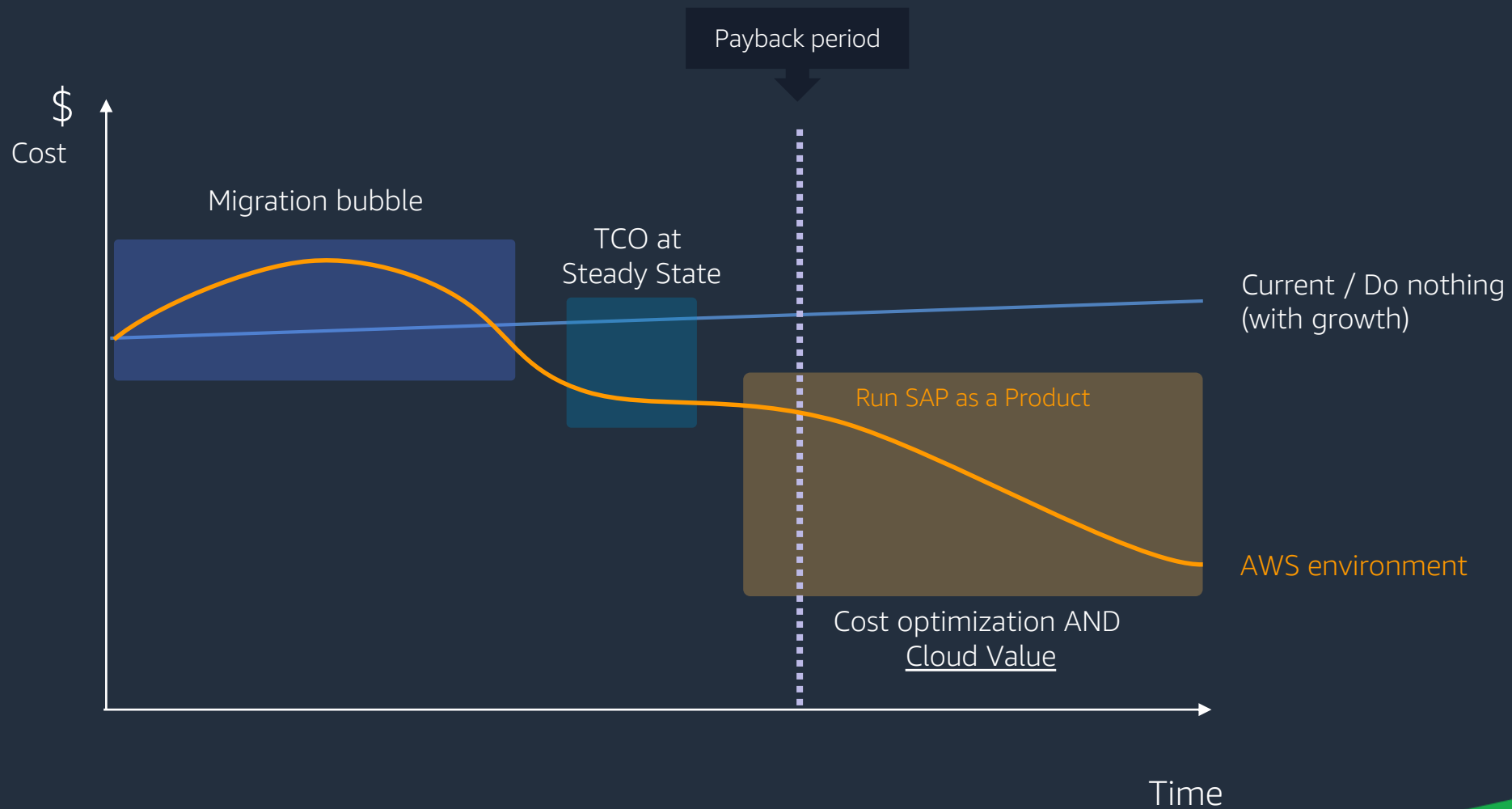


341.5%

Increase in code deployment frequency

Accurately reflect your cloud journey

Realistically anticipate costs and savings through time

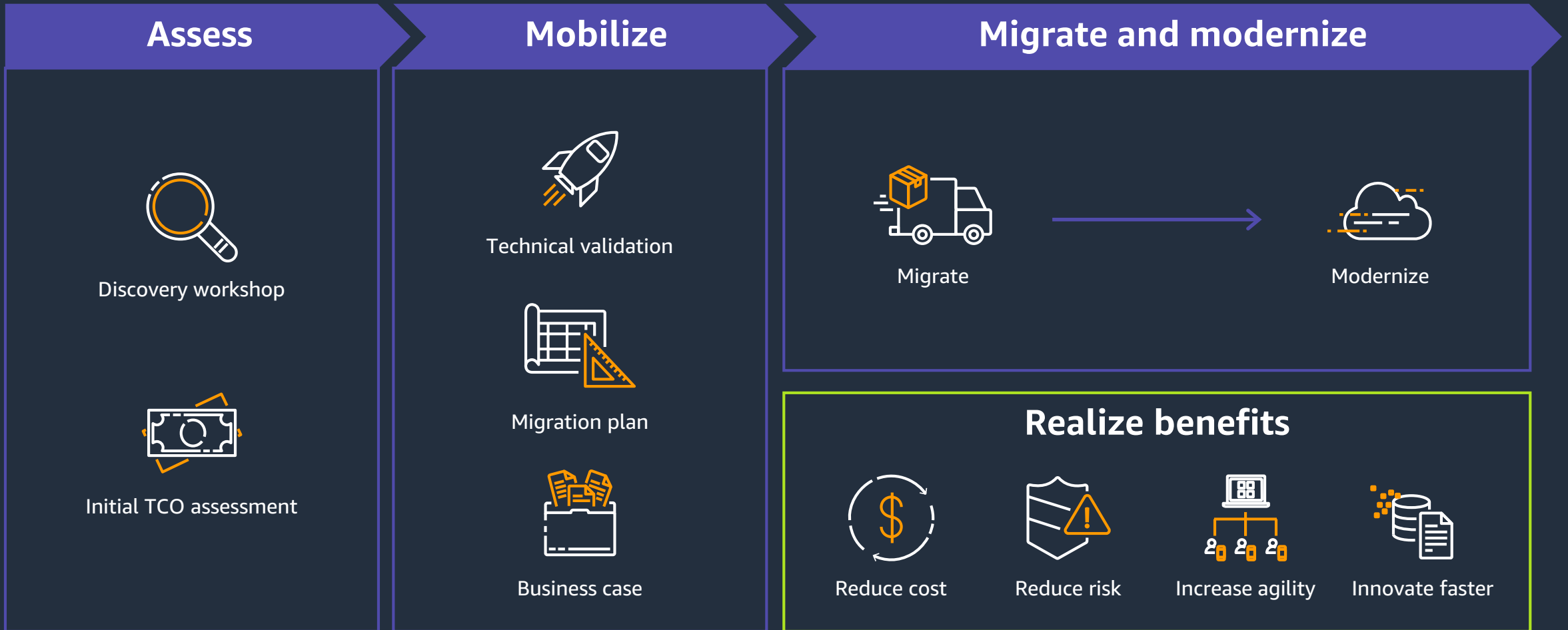


How AWS can help

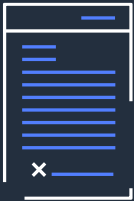
Assisting you on your cloud migration journey



Proven model for SAP migration and modernization

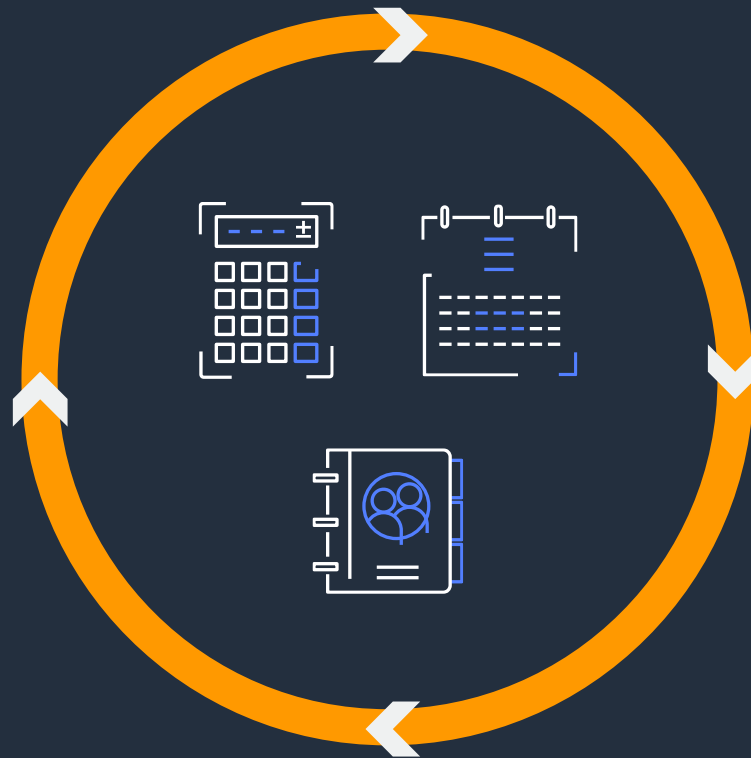


How we build business cases



Directional

- 1-2 days
- High-level, directional
- Limited customer data
- Presentation
- Simple opportunity Calculator or simple TCO calculator
- $\pm 30\%$



Detailed

- 4-10 *elapsed* weeks
- Low-level, detailed
- Broad customer data
- Presentation
- Multiple tools
- Multiple Excel outputs
- $\pm 5\%$

**We can help – AWS Cloud
Economics Team**

AWS Pricing Calculator – Create and Share Estimates

The screenshot shows the AWS Pricing Calculator website. At the top left is the AWS logo and 'pricing calculator'. On the top right are links for 'Feedback', a language dropdown set to 'English', and 'Contact Sales'. The main heading is 'AWS Pricing Calculator' with the subtext 'Estimate the cost for your architecture solution.' Below this is a paragraph: 'Configure a cost estimate that fits your unique business or personal needs with AWS products and services.' To the right, there is a 'Create an estimate' section with a 'Create estimate' button. Below that is a 'Getting started' section with links for 'What is AWS Pricing Calculator?', 'Getting started', and 'Generating your estimate'. At the bottom right is a 'More resources' section with links for 'User guide', 'FAQs', and 'Pricing assumptions and variations'. A 'How it works' diagram is centered on the page, showing a four-step process: 1. 'AWS Pricing Calculator' (Estimate the cost of AWS products and services), 2. 'Add services' (Search and add AWS services that you need), 3. 'Configure service' (Enter the details of your usage to see service costs), and 4. 'View estimate totals' (See estimated costs per service, service group, and totals).

<https://calculator.aws>



Proven partners to support your SAP journey

68

AWS SAP COMPETENCY PARTNERS

Streamline migration and innovation with AWS
Partners that have proven SAP on AWS customer success



Summary



Learn more and start your SAP on AWS journey



Complementary
discovery workshops



Explore the AWS
Migration Acceleration
Program (MAP)



Work with AWS
Professional Services
SAP/ERP Specialty Practice



Work with an AWS SAP
Competency Partner

aws.amazon.com/sap

Call to Action

Learn more:

- Download “Total Economic Impact™ Of Migrating SAP ECC To AWS”
- AWS Pricing Calculator: <https://calculator.aws>
- Try AWS for free: <https://aws.amazon.com/free>

Brian Griffin

Professional Services SAP Practice CTO
Amazon Web Services



Q&A





Thank you!

