aws TRANSFORMATION DAY

Achieving Business Value with AWS

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Moscow

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Agenda

1. **Cloud Value Framework**

2. **Areas of business value**

   - Cost savings
   - Staff productivity
   - Operational resilience
   - Business agility

3. **Resources to get you started**

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Cloud Value Framework

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Cloud Value Framework

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 outages	Deploying new features / applications faster and reducing errors
Examples	50%+ reduction in costs (GE)	Over 500 hours per year of server configuration time saved (Sage)	Critical workloads run in Multiple AZs and Regions for robust DR (Expedia)	Launch of new products 75% faster (Unilever)

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Examples of value realized

COST SAVINGS

DC footprint from 13 to 6 (The Weather Co.)

DC footprint reduced from 8 to 3 by 2018 (CapitalOne)

Migrated from Akamai CDN to Cloudfront to save $140K annually (Allergan)

Over 50% reduction in costs (GE)

DC footprint from 45 to 6 (News Corp)

50% reduction in app costs (Time Inc.)

Cost savings of $20M p.a. (FINRA)

Computational cost reduced by 20%+ (ENEL)

Cloud deployment has saved US$34 million in CAPEX and reduced OPEX by 85% (Samsung)

Cost reduction of $40k p.a. (Dow Jones)

Savings of $1.5M p.a. (Trainline)

30% reduction in OPEX (MacMillan)

HBX is saving $1.8M annually in hosting costs + $250K annually in data-center space (DC Health Benefit Exchange Authority)

STAFF PRODUCTIVITY

Average annual staffing savings of $3m (Adroll)

Energy Marketing business prepared for acquisition in only 6 months rather than 12 (Hess Corp)

Reduced management time by 80% compared to prior cloud platform, and redeployed 3 IT staff to development efforts (iFit)

Performance targets over-achieved by 43–66% (McDonalds)

IT Infra consolidation completed in 20% of expected time (Hearst)

60% of IT working on data proliferation, lack of standards, security hardening all of which AWS is addressing. (Intuit)

Over 500 hours per year of server configuration time saved (Sage)

Reduced DevOps team by 50% with AWS (Avizia)

10% of IT admin time now dedicated to development efforts (Dr. Lal Pathlabs)

OPERATIONAL RESILIENCE

Scaled to handle a 400% increase in page views (Kurt Geiger)

Remediation time reduced from 3 days to 80 minutes (GE Appliances)

8600 transactions/second (McDonalds)

Transfer of over 750 TB of data from pipeline inspection machinery (GE)

Processing over 75 billion market events daily (FINRA)

Critical applications run in multiple AZs, x-Regions for robust disaster recovery (Expedia)

Supports over 300,000 requests per minute to its API (Easy Taxi)

60% reduced downtime (Trainline)

Migration of SAP on Oracle to AWS with zero unplanned downtime across five countries (Kellogg's)

HIPAA & FedRAMP compliance & EHNAC accreditation eliminated need for data center inspections (FigMD)

BUSINESS AGILITY

80% reduction in software R&D times (Apeejay Stya & Svrán)

50% reduction in infrastructure management (Graze)

Calc and reporting time cut from 10 days to 10 minutes (Aon Benfield)

Deployment frequency increased from once very 6 weeks to once every week, soon to be multiple deployments per day (3M)

Clinical simulations 98% faster than on-premise (Bristol-Myers Squibb)

Image processing completed in hours vs 15 days (NASA JPL)

R&D RFS times reduced from 6 months to 1 day (NewsCorp)

Provisioning time cut from 3–4 weeks to 2 days (ENEL)

Test-run time cut to 10 minutes, from up to 2 hours (Yelp)

Launch new products 75% faster (Unilever)

62% increase in speed of deployment (TAOlight)

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Sample Output

Illustrative

COST SAVINGS

	Savings
Server	$1,093,514
Storage	$688,514
Network	$154,640
TOTAL	$1,936,668

Staff Productivity

	Impr	Value
Infrastructure	30%	$405,000
Facilities	80%	$270,000
Application	20%	$337,500
		$1,012,500

Operational Resilience

	Uptime		
	Before	After	Value
eCommerce1	99.00%	99.50%	$1,432,343
			$1,432,343

Business Agility

	KPI	
	Impr	Value
Time to Deploy	22.0%	$656,232
Total Defects	35.0%	$640,360
Customer NPS	50.0%	$1,302,274
Employee NPS	33.3%	$1,751,055
		$4,349,922

TOTAL ANNUAL BENEFIT **$8,731,433**

Typical focus

Most compelling benefits

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Areas of Business Value

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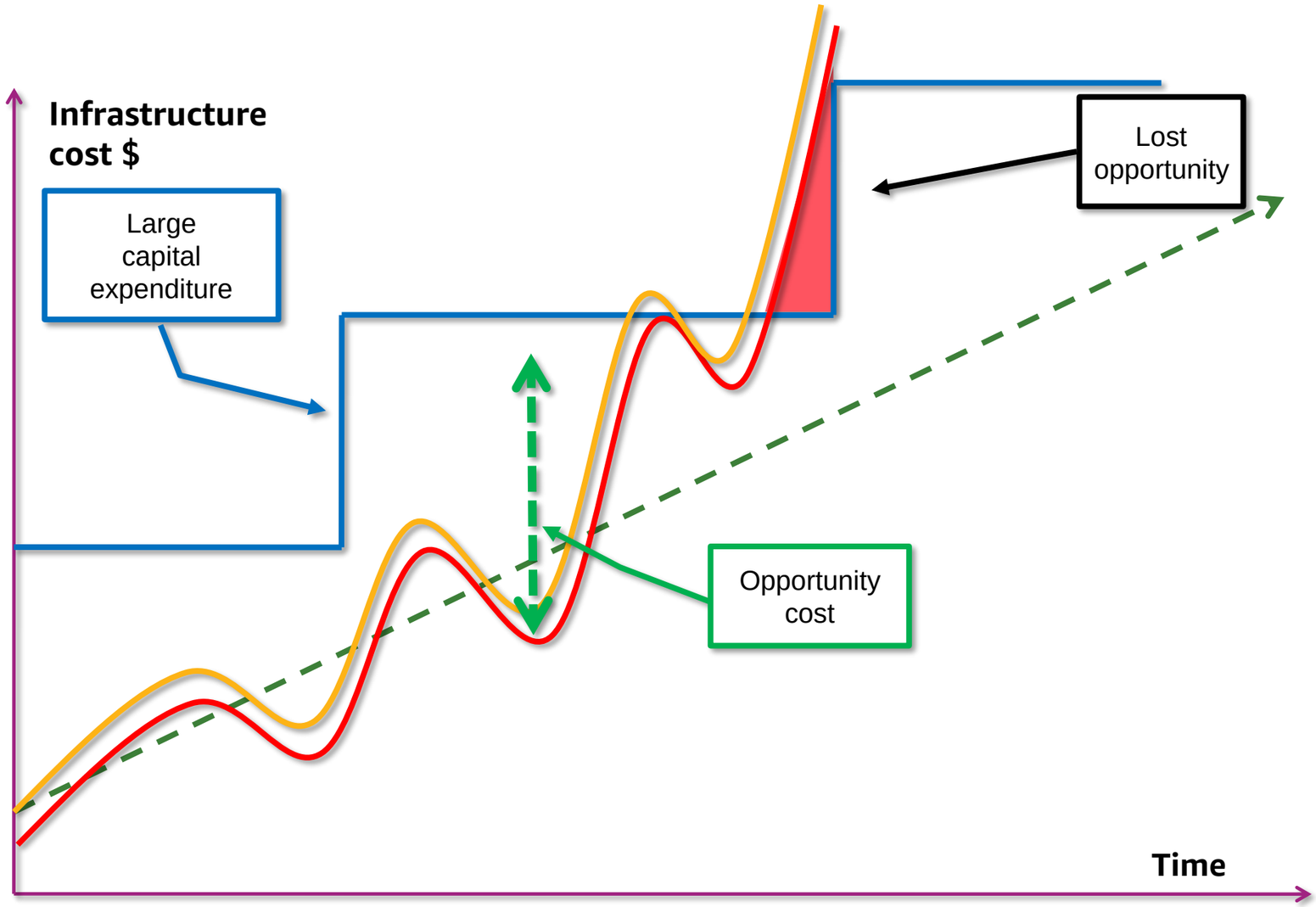
Cost Savings: Economics of the Cloud

Red line



Key:

- Predicted demand
- Traditional hardware
- Actual demand
- AWS

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Cost Savings: Modeling On-Premises Cost

1	**Server Costs**	Hardware—Server, Rack Chassis PDUs, ToR Switches (+Maintenance)	Software—OS, Virtualization Licenses (+Maintenance)	**Facilities Cost**: Space, Power, Cooling
2	**Storage Costs**	Hardware—Storage Disks, SAN/FC Switches	Storage Software Costs (+Maintenance)	**Facilities Cost**: Space, Power, Cooling
3	**Network Costs**	Network Hardware—LAN Switches, Load Balancer	Recurring ISP / Bandwidth costs	**Facilities Cost**: Space, Power, Cooling

Diagram doesn't include every cost item. For example, software costs can include database, management, and middle tier software costs. Facilities costs can include costs associated with upgrades, maintenance, building security, taxes, and others.

illustrative

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Cost Savings: Case Studies

LIVE NATION

Estimated **18%** Savings,
Realized 40% 1 year after migration,
Realized 58% after 18 months

AdRoll

"We've been able to seamlessly scale our infrastructure, better serve our customers across the globe, and reduce our fixed costs by **75%** and operational costs by **83%**."
– Valentino Volonghi, CTO

GE Oil & Gas

" We've realized a **52%** reduction in costs. That stems from a number of factors... [a push for self-service, dynamic storage, using lower cost VMs]. Ultimately these savings are a byproduct of doing the right thing."
– Ben Cabanas, CTO

News Corp

"Three years on, we've saved over $100 million in avoided capital and are about **65%** in the cloud."
– Dominic Shine, CIO

King County

Saved **$1M** in hardware refresh costs and **$200K** annually in opex costs

Jobvite

Estimated 15%–20% annual opex savings; **realized 35%**

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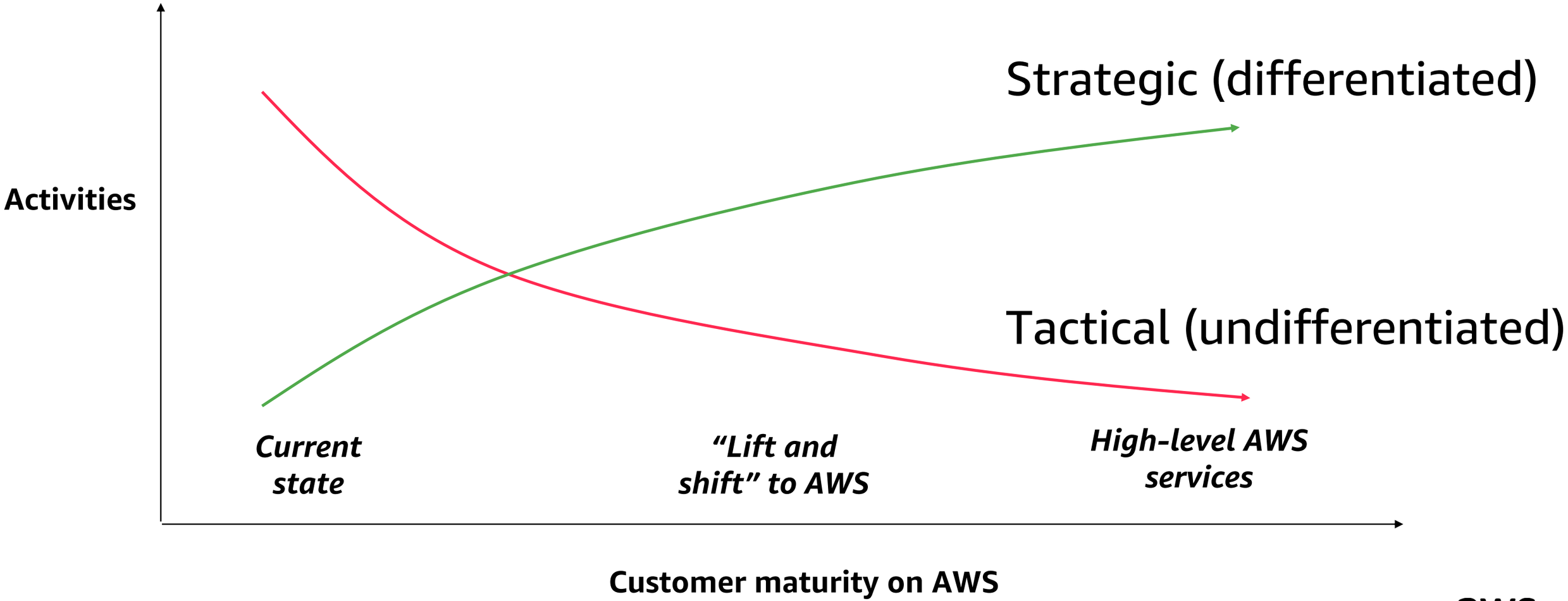
Staff Productivity: Focus on Value-Add Work



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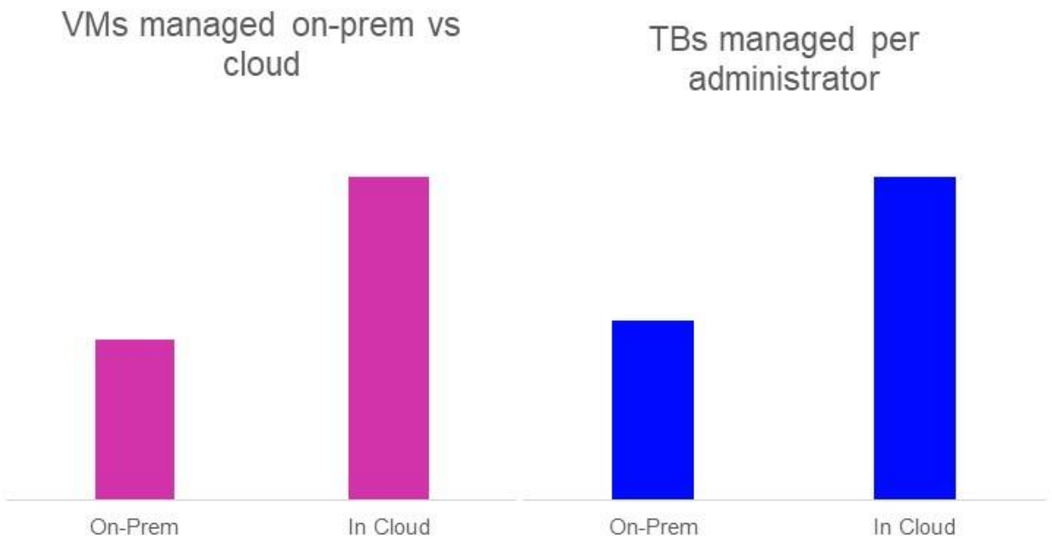
Staff Productivity: AWS Benchmarking Insights

Cloud improves efficiency…



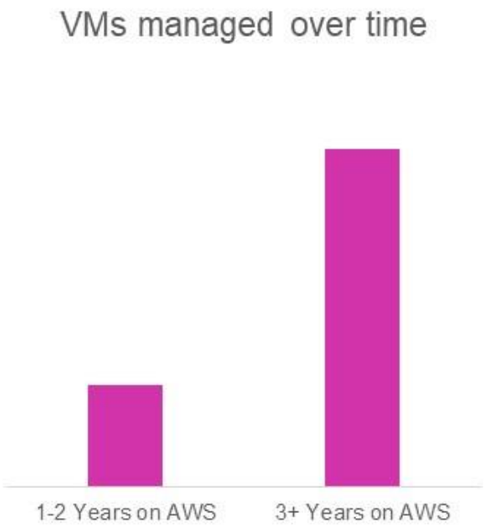
2x

Increase in # of VMs managed per admin

1.8x

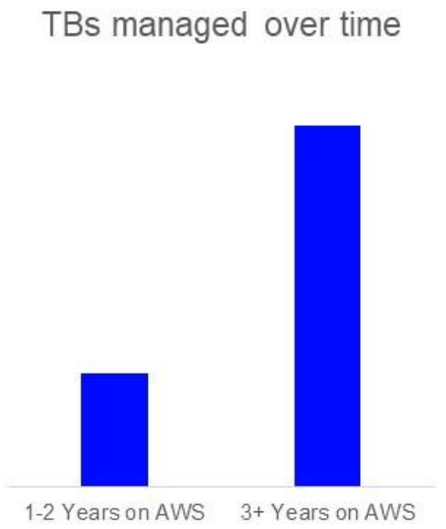
Increase in # of TBs managed per admin

This value accelerates with AWS maturity



3.3x

Increase in # of VMs managed per admin over time



3.2x

Increase in # of TB managed per admin over time

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Source: n = 500 AWS Customers. AWS Cloud Economics Benchmarking, August 2018

Staff Productivity: Example

Illustrative

Server administrator

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 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 / updating

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Staff Productivity: Case Studies

LIVE NATION

50% improvement in IT efficiency. “Tasks around hardware troubleshooting and tuning have been eliminated while capacity planning and procurement have been reduced by 90%“

graze

50% reduction in infrastructure management

“I haven’t had a support callout in six months. Previously we’d have to work late at least once or twice a week. It’s allowed us to refocus people’s efforts onto more strategic tasks.”

AdRoll

$3M staffing cost savings; reduced operational costs by 83%

INTUIT

“[Our staff] spends 60% of work on things like data proliferation, lack of standards, security hardening … AWS is addressing these needs.”
– Raji Arasu, SVP of Platform and Services

Pharma Services Provider

51% efficiency improvements in compute-related functions; 20% improvement in application development functions

NEWLOG consulting

50% reduction in administrative overhead, including server management and backup operations

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Operational Resilience: Downtime Costs

$1.25 to $2.5B	$500K to $1M	$3.6M	$141	$474K
Annual Fortune 1000 application downtime costs (IDC)	Cost/hr of a critical application failure (IDC)	Average cost of a data breach (Ponemon Institute)	Average cost per lost or stolen record (Ponemon Institute)	Average cost/hr of downtime (Ponemon Institute)

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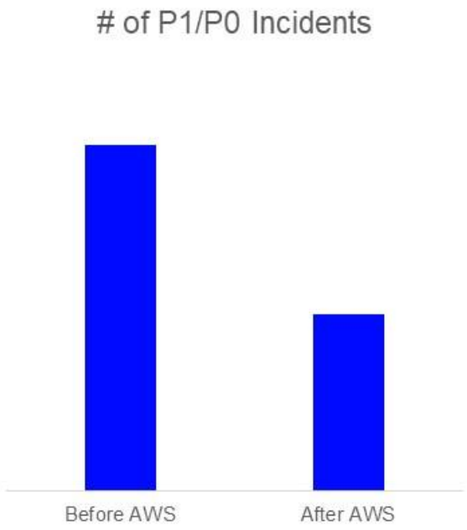
Operational Resilience: AWS Benchmarking Insights

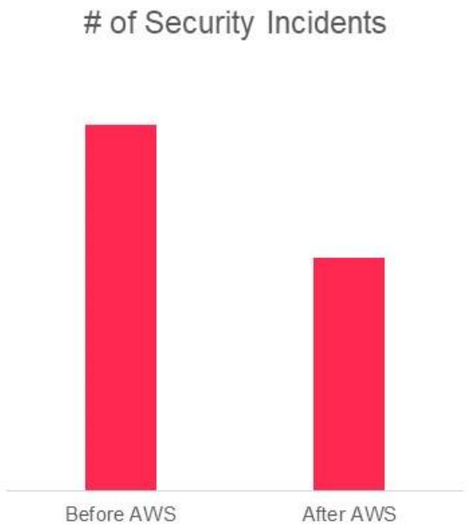
43.4%

Reduction in overall incidents



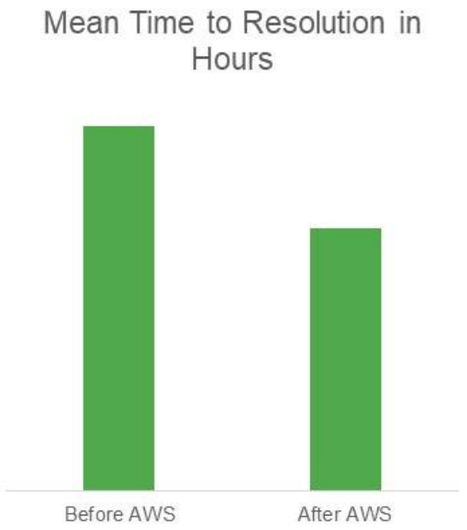
48.7%

Reduction in P1/P0 incidents



36.1%

Reduction in security incidents



27.7%

Reduction in MTTR

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Source: n = 500 AWS Customers. AWS Benchmarking, August 2018.

Operational Resilience: Quantifying cost

Illustrative

Cost Category	% of Total	Definition
Third Parties	1.3%	The cost of contractors, consultants, auditors and other specialists engaged to help resolve unplanned outages.
Equipment	1.3%	The cost of new equipment purchases and repairs, including refurbishment.
Ex-post Activities	1.1%	All after-the-fact incidental costs associated with business disruption and recovery.
Recovery	2.9%	Activities and associated costs that relate to bringing the organization's networks and core systems back to a state of readiness.
Detection	3.6%	Activities associated with the initial discovery and subsequent investigation of the partial or complete outage incident.
IT Productivity	8.4%	The lost time and related expenses associated with IT personnel downtime.
End-user Productivity	18.7%	The lost time and related expenses associated with end-user downtime.
Lost Revenue	28.2%	The total revenue loss from customers and potential customers because of their inability to access core systems during the outage period.
Business disruption	34.6%	Additional economic loss of the outage, including reputational damages, customer churn and lost business opportunities.
TOTAL	**100.0%**	

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Operational Resilience: Case Studies

LIVE NATION

3 9's to 5 9's
"We no longer need to worry about data center, server, or hypervisor security…which allows us to focus our attention on securing our applications.

travelstart COZA

Using AWS, Travelstart has seized opportunities in emerging markets and has cut operational costs by 43% and **downtime by 25%**

STITCHER™
RADIO ON DEMAND

Migrated to AWS in 6 weeks with no downtime and improved availability to 99.99%+

CONVERTALE
RECOMMENDATION ENGINE

With its on-premises setup, the availability of its system ran to 98%, but on its cloud infrastructure, this has risen to 99.965%

trainline

Migrated all workloads to AWS to reduce downtime by 60% with an annual savings of £1.2M

MedStar Health

Rebuilt patient engagement portal on AWS and reduced downtime from 120 to <5 min / month

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Business Agility: Track and Measure KPIs

KPI	
New Applications Launched per Year	Mean Time To Resolution (MTTR) in hours
Time to Market for New Applications	Response Time to Defects (hrs)
% of New Applications Launched On-Time	% of Failed Deployments
Time to provision new environment (days)	Customer Retention (%)
Deployment Frequency (revs / yr)	Adoption of New Features (%)
Time to deploy to production (weeks)	"Value" per release ($ revenue potential)
Time to deploy to test (days)	Employee Retention (%)
Features per release	Employee Absenteeism (%)
Total # of Incidents/Defects	Employee NPS / Satisfaction
% of total defects found in test	Customer NPS / Satisfaction

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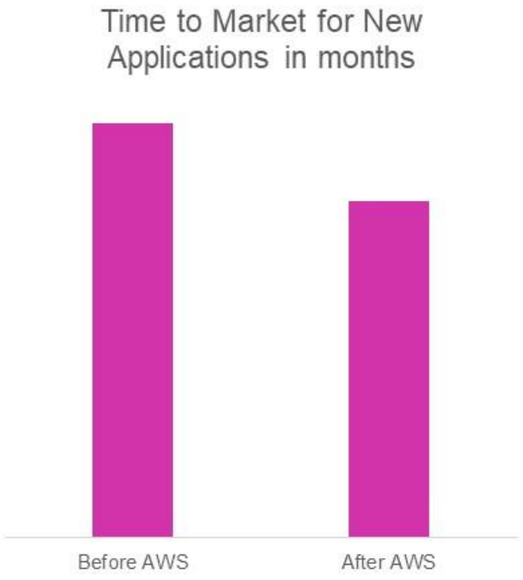
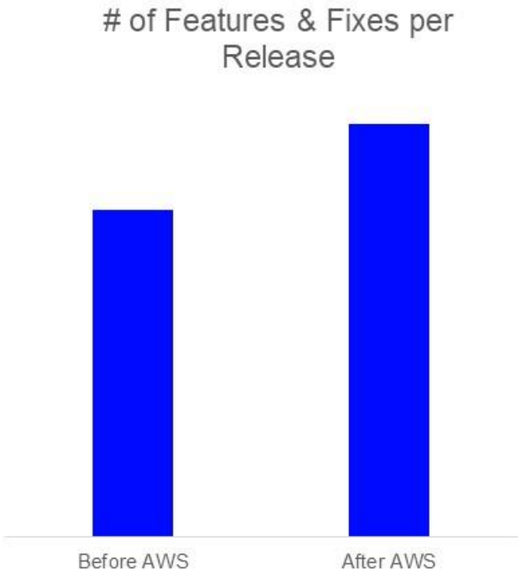
Business Agility: AWS Benchmarking Insights



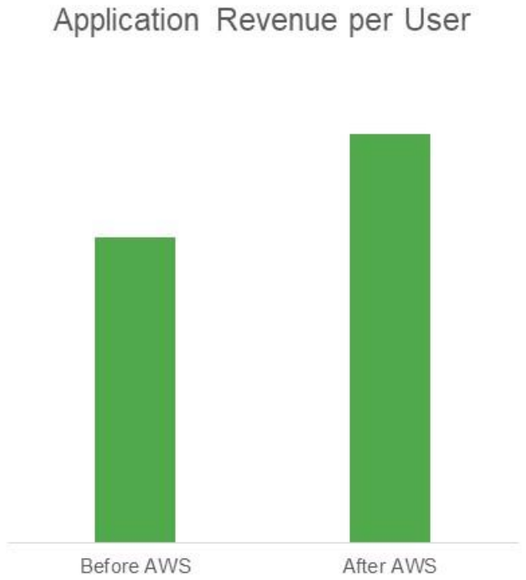
2.5 months

Accelerated time to market



26.4%

More features & fixes per release



33.8%

Increase in Application Revenue per User

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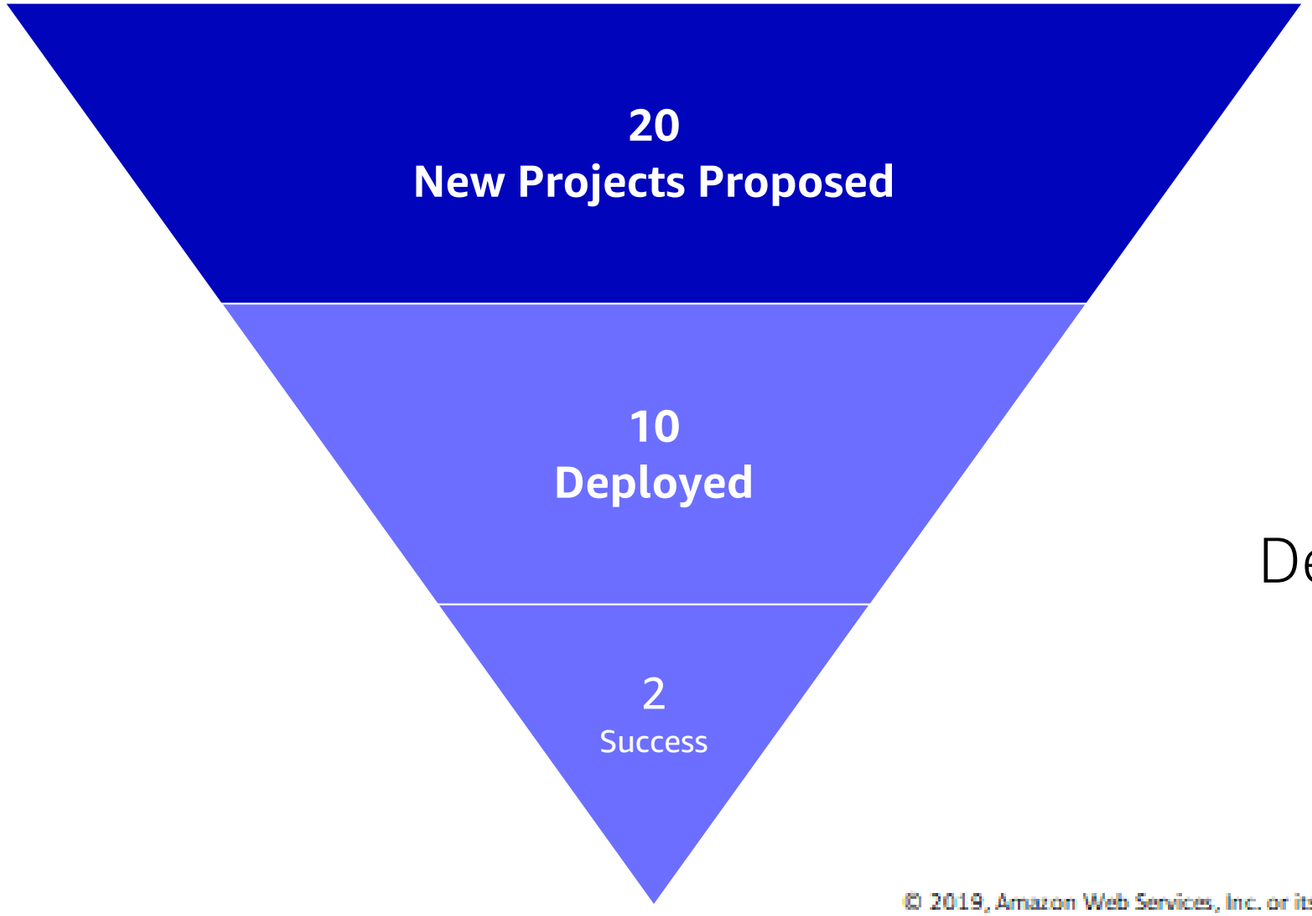
Source: n = 500 AWS Customers. AWS Benchmarking, August 2018.

Business Agility: Innovate faster while Reducing Failure Costs

Project Funnel



Increase the number of new projects in the funnel

↓

Increase the speed by which projects move through the funnel

↓

Decrease the downside impacts of project "failures" and shut them down quickly

↓

Keep costs low for the successes

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Business Agility: Case Studies

10x more experiments.
"When you know you have the ability to quickly deprovision, it makes you bolder to say yes and try new things."

"More than 80 percent of IT expenditure at AFG was consumed by IT operational costs … Today, 60% of our IT expenditure is dedicated to innovation."

Provisioning time reduced from 4 weeks to 2 days

"We are able to use AWS to reduce the time required to deploy infrastructure from weeks to days or hours."

"Our projects no longer last years – they last months. Which means that we can deliver new features to our customers much faster than we had before."

Deploy instances 90% faster

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Resources to get you started

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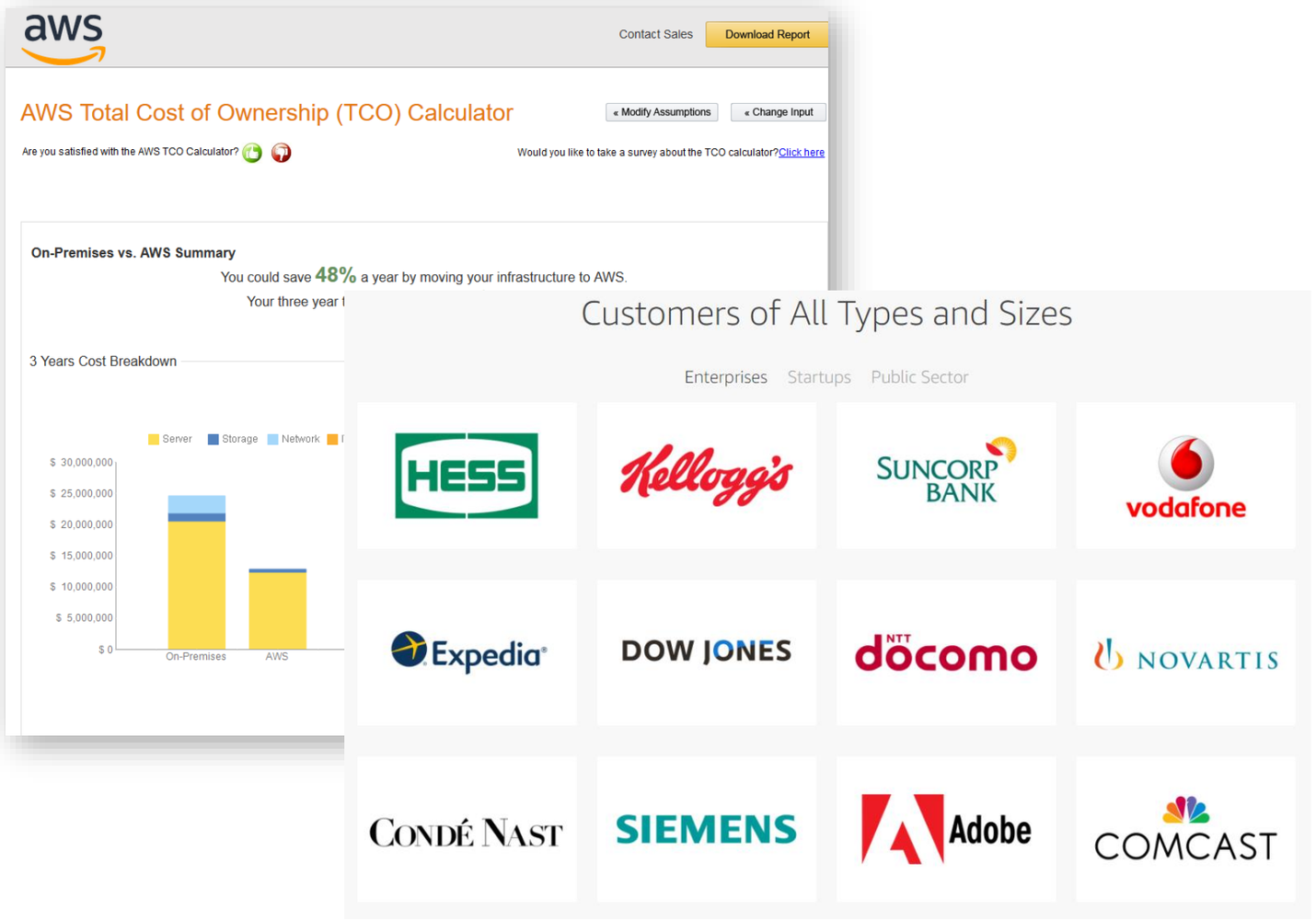
Resources to Get You Started



AWS TCO Calculator

https://awstcocalculator.com

AWS Economics Center

aws.amazon.com/economics/

Case Studies and Research

aws.amazon.com/solutions/case-studies

Value Realization Studies

Available now

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