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ENT325

Migrating to the cloud: What is the cost of doing nothing?

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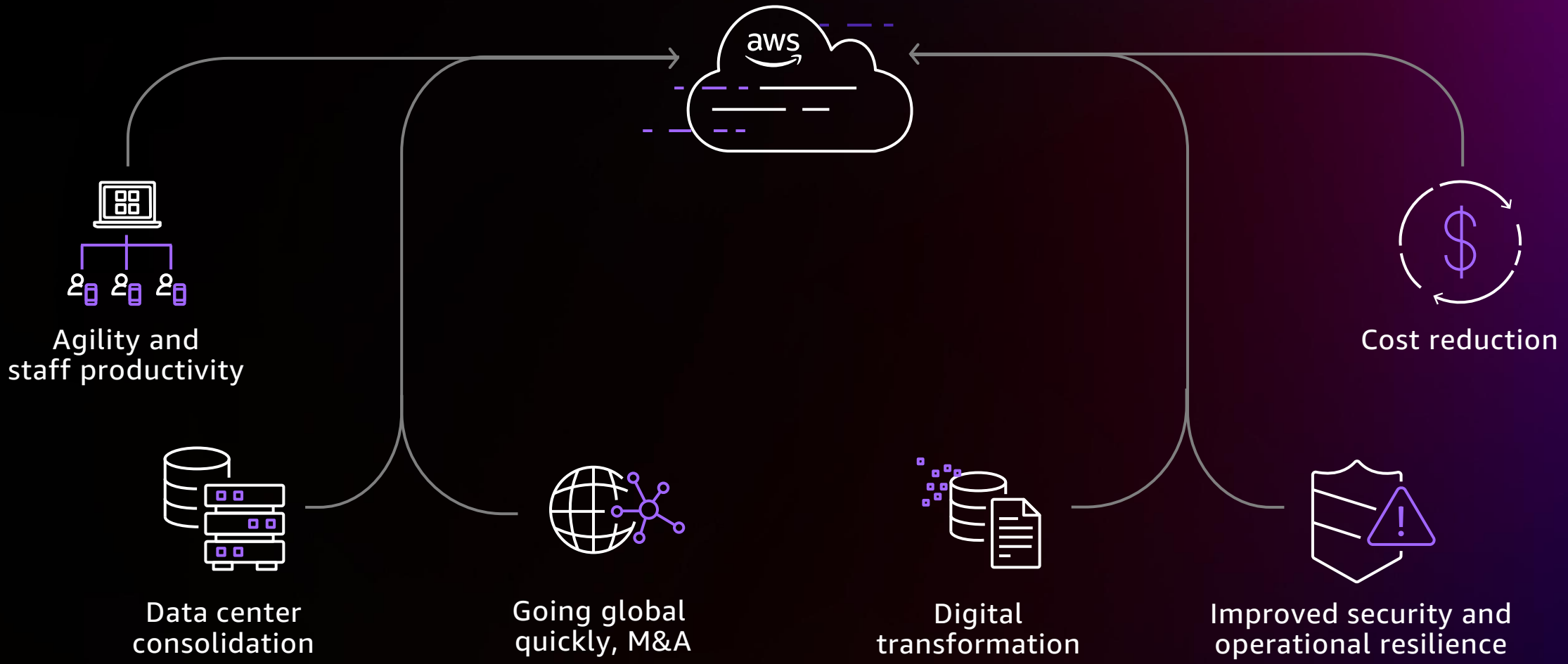
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Agenda

1. Why customers migrate
2. Lessons learned from thousands of migrations
3. The cost of doing nothing
4. Customer reality of a cloud journey

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Why customers migrate



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My why



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Lessons learned from thousands of migrations



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What are the costs of doing nothing?

1. Financial
2. Business agility
3. Resilience

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Financial

- The cost of not migrating is $1,100[1] extra per server per year
- Overprovisioning ratio +84%[2]
- 86% less staff time for innovation

Source:
1 AWS Cloud Economics Study
2 IDC Report: The Business Value of Amazon Web Services, June 2022

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Business agility

On-premises organizations experience:

- 50% slower development times
- 22% slower deployments
- 39% more staff time per deployment



Customers deliver

2.3X

more feature releases/year on AWS than on-prem

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Resilience

- Downtime costs Fortune 1000 businesses $125M-$250M each year[1]
- Customers expect always on, highly available applications
- Downtime can negatively impact an organization's brand



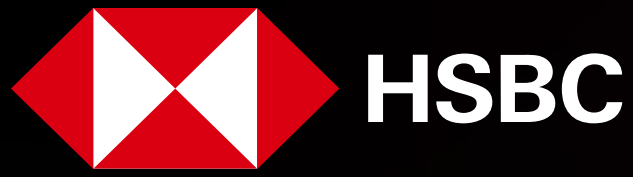
The average hourly cost of on-premises infrastructure failure is:

$100,000
per hour

[1] DevOps and the Cost of Downtime: Fortune 1000 Best Practice Metrics Quantified, IDC

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Security



"We prioritize data privacy and security in our platforms as well as ensuring we observe customer preferences. AWS was chosen because it's great in rich web application services."

— Christopher Bird, global platform CTO of messaging, HSBC's Wealth & Personal Banking



"The maturity of AWS infrastructure and the level of security audits that AWS performs on its data centers and services gave us peace of mind. We knew that the privacy and security of patient and customer data would be the top priority."

— Mark Maalouf, Vice President, Global Digital Health, Teva



"Migrating to AWS was an important step in creating better delivery velocity for our security applications."

— Jon Barcellona, Cybersecurity Engineering Director, Southwest Airlines

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Why speed matters

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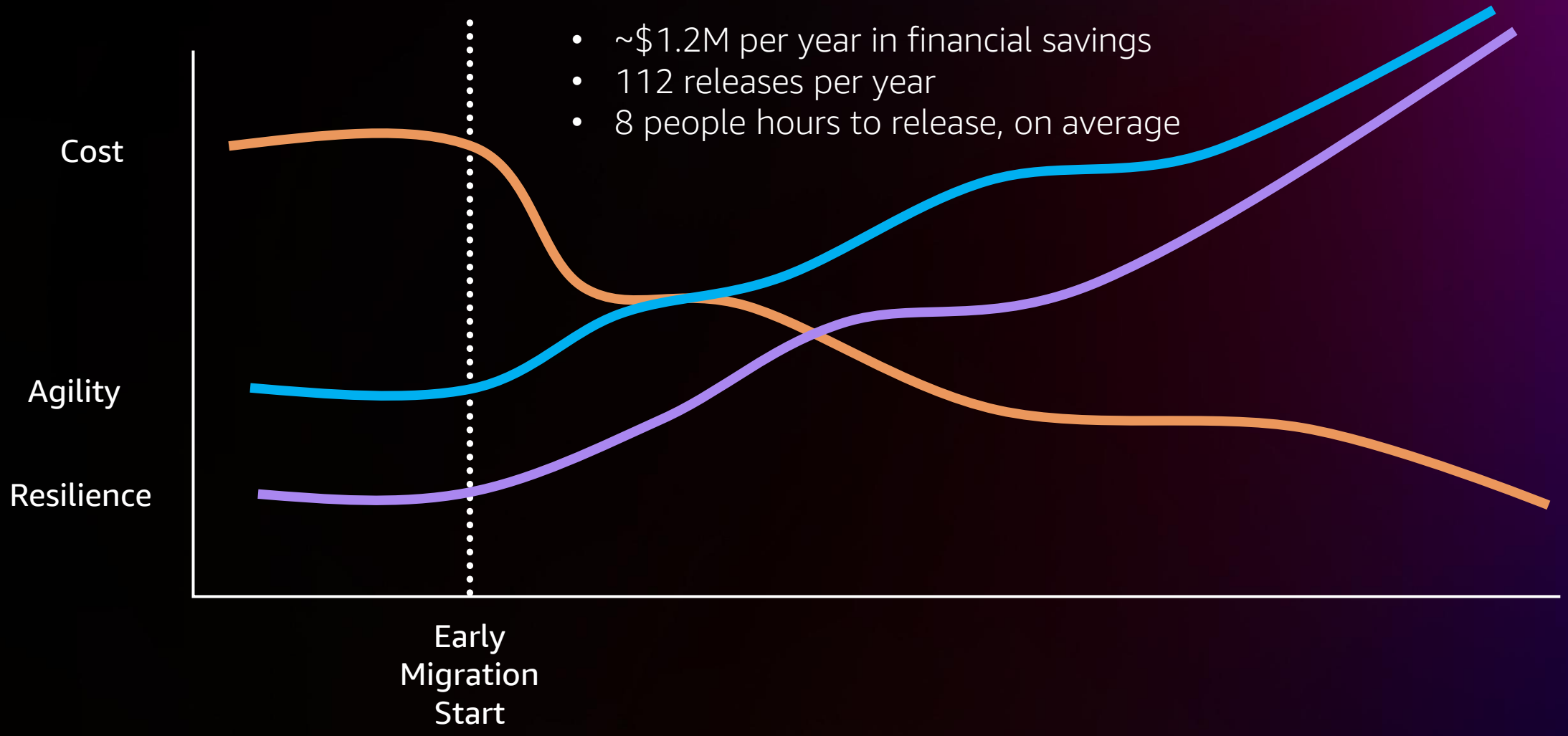
Not starting or starting late



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Early start

Annual basis for customer with 1,000 servers



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Summary

The cost of doing nothing	The benefits of migration
Slower Innovation	Faster Feature Releases Faster Adoption of AI/ML
Overprovisioned	Elastic Provisioning Rightsized
Higher Security Burden	Shared Responsibility Model
Brittle Apps	Resilient

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Adnan Haq

Vice President, Global Infrastructure Platforms, Cloud, Data Centers, & DevSecOps
Marriott International

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Marriott International

1927 – 9 stool root beer stand in Washington DC



1937 - In-flight catering debuts with Hot Shoppes



1957 - Historic shift into the hotel business



1986 - **One company, many brands** - From pioneering extended-stay business to launching distinctive brands geared toward the business traveler to increasing its presence overseas, Marriott International broke new ground in its quest to become the #1 hospitality company in the world.

EDITION
THE RITZ-CARLTON
THE LUXURY COLLECTION
ST REGIS
W HOTELS
JW MARRIOTT
MARRIOTT
SHERATON
MARRIOTT VACATION CLUB
DELTA HOTELS
WESTIN
LE MERIDIEN
RENAISSANCE HOTELS
AUTOGRAPH COLLECTION HOTELS
TRIBUTE PORTFOLIO
DESIGN HOTELS
GAYLORD HOTELS
COURTYARD
FOUR POINTS
SPRINGHILL SUITES
Fairfield
PROTEA HOTELS
AC HOTELS
aloft HOTELS
moxy HOTELS
HOMES & VILLAS
Residence INN
TOWNEPLACE SUITES
Marriott EXECUTIVE APARTMENTS
element

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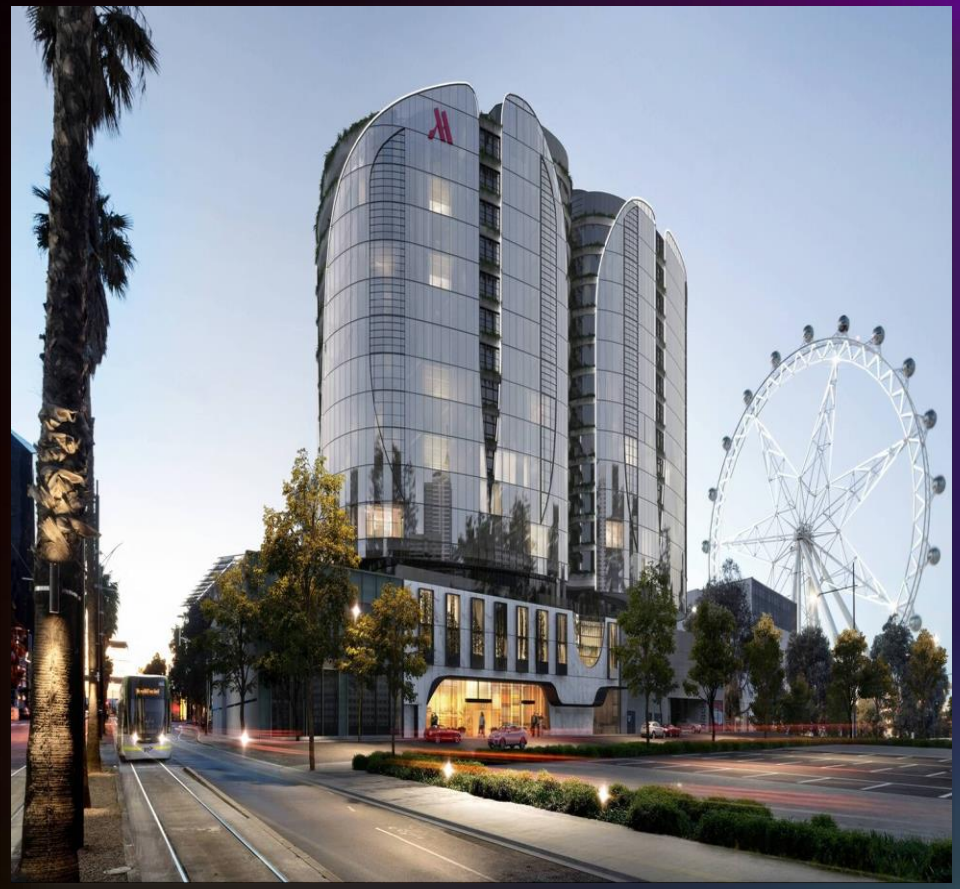
Marriott today

Global Footprint:

- Largest hospitality company
- 30 Brands, 8000+ Hotels, Resorts, Homes & Villas and Luxury Yacht Collection
- 1.4M rooms across 131 countries

Revenue and Operations:

- Ticker: MAR
- Broke all-time high weekly revenue record multiple times in ’22



Pioneer:

- Innovation Powerhouse – Global Property Network Standards and Property Management Systems
- Guest experience

Brand Value:

- Strong Loyalty program and customer base
- Ever-expanding luxury and midscale portfolio including recent acquisition of City Express

NEXT: **Digital Disruptor!**

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To cloud or not to cloud?

	Traditional	Cloud First
IT Operations	• Request driven & manually intensive • Procedural IT functions and handoffs • Focused on SLAs	• Self-service/automated • Teams relying on rhythms & collaboration • Focused on agility & business impact
Applications	• Monolith & Multi-tier architectures • App proliferation • Legacy apps constraining innovation	• Micro Services and cloud native architectures • Rationalized app portfolio • Enabling innovation and speed to market
Infrastructure	• Capital intensive • Fixed capacity • Long lead-times	• Consumption driven spend • Elastic capacity • Rapid provisioning & automation

Like many organizations, Marriott is adopting cloud for rapid response to changing market trends

- **CapEx to OpEx - Recasting spend towards innovation**
- **Improved digital capabilities**
- **Flexibility, agility and and speed to market**
- **Higher return on tech investment**

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Typical beginning of cloud adoption



1. Organic Adoption

Product teams experiment with cloud to overcome infrastructure challenges



2. Reluctant Acceptance

Leaders notice shadow IT and under pressure explore cloud adoption



3. Initial Expansion

Benefits broaden the organic adoption boundaries, but some resistance persists



4. Miscalculations

Continued resistance results in designs that evolve the Data Center on Cloud



5. Initial Challenges

Costs spiral, evolving designs become a tech debt liability. Leaders step in and some fallback on legacy



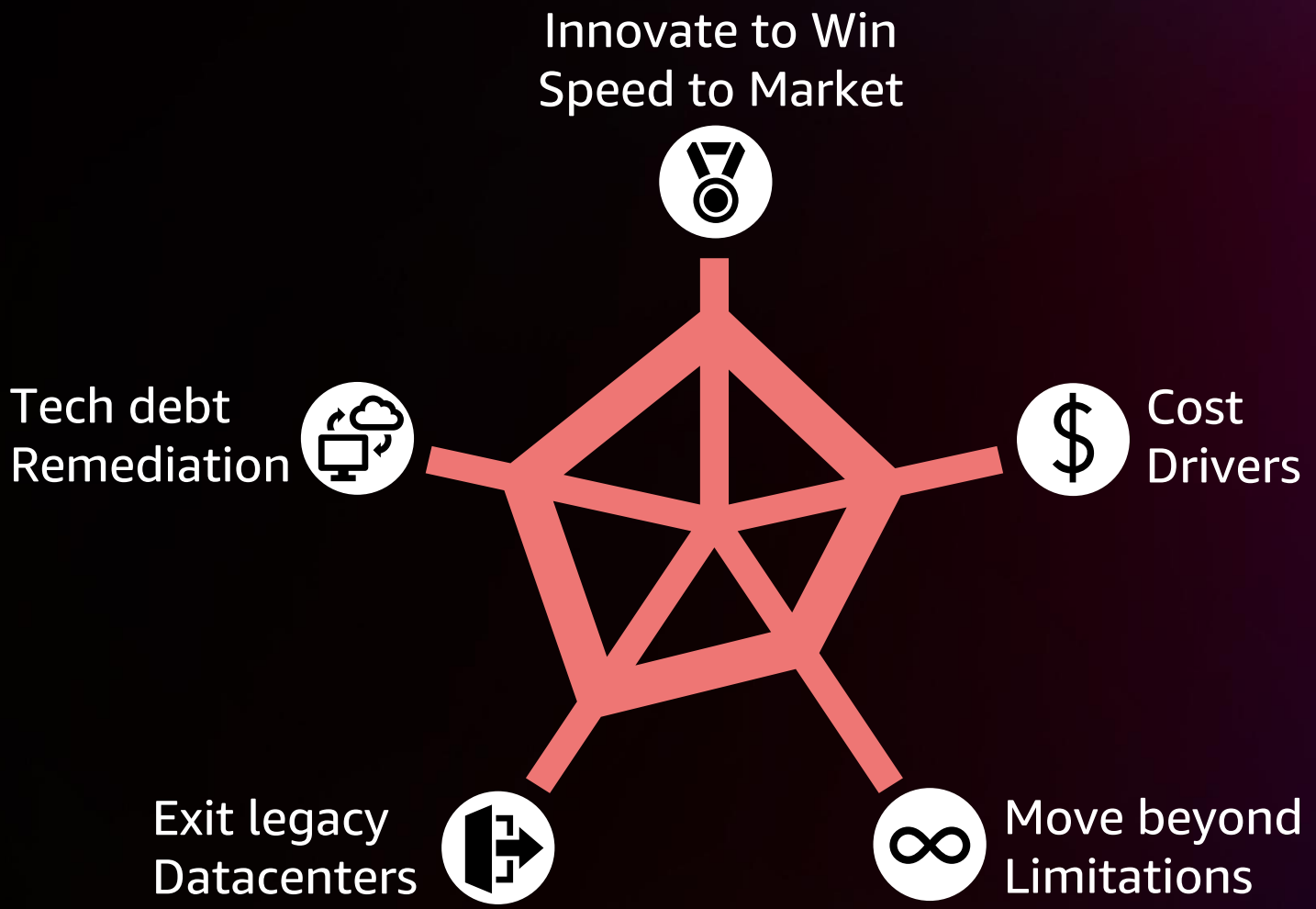
6. Business Case

Costs and savings are overemphasized, governance arrests adoption, decisions are made from a position of weakness

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Identify key drivers to optimize



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Same question, different approaches...

What are you optimizing for?

Transformation
Top 10 Financial Organization

- Optimized to reimagine IT and new digital revenue channels
- Early adopter resulting in higher custom solutioning
- Very high benchmarks to transform technology
- Manual migrations focused on application modernization
- High transformation cost

Differentiators
Marriott International

- Optimized for Differentiators and enabling rapid innovation
- Modernization of legacy platforms and remediation of riskiest tech debt
- Integrated SaaS solutions to gain velocity and lower TCO[1]
- Velocity - 4500 server migrations in 18 months using AWS migration factory
- Secure & Resilient

Velocity & Cost
$50B Fortune 500 Organization

- Optimized for Cost Reduction
- Rapid datacenter exits due to cost reinvestment opportunity
- Speed - Moving 1500 servers per year
- Standardized migrations using early migration factory models

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[1] Total Cost of Ownership

Marriott’s cloud adoption differentiators

1

Enable
PLATFORMS
Build Once
Reuse Everywhere

2

Accelerate
INNOVATION
Configuration
over Code

3

Differentiate
TECHNOLOGY
Buy Commodity
Build Differentiation



ENABLED ON CLOUD

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Prerequisites to an effective cloud program



Define Clear Success Criteria

Identified key business drivers & acceptance criteria



Define a Common Vision

Deprioritized non-strategic work

Aligned and cascaded priorities across the organization



Favor Simplicity

Reduced overcomplicated multi-hybrid-cloud strategy

Implemented optimizations to keep costs in check

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Cloud adoption benefits

Anticipated Benefits

- Speed
- Automation
- Cost
- Scalability

Observed Benefits

- Catalyst for organizational transformation & innovation
- Talent Upskilling
- Customer Experience
- Non-hosting Cost Optimizations
- Reinvestment Opportunities
- Improved Security & Resiliency

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Remember to identify progress KPIs

WORKLOADS ON CLOUD

0 — 5K (Oct '22) — 35K (2026)

2022 Target: 5K

Run Rate Reduction

Committed	Delivered
$10M	$8.1M

2022 Target: $10M

DATA CENTER SUNSET

0 — 1 (2022) — 7 (2026)

2022 Target: 1

PHASE 1 GLOBAL PLATFORM ROLL OUT

0 — 7 (Oct '22) — 12 (2023)

- ✓ US
- ✓ Singapore
- ✓ Japan
- ✓ UK
- ❑ Germany

MEAN TIME TO PROVISION

DEC '21	JUN '22	OCT '22
30+ days	3 days	~30 mins

DELIVERY MODERNIZATION

AGILE RELEASE TRAINS ROLL OUTs	12

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Marriott's cloud adoption journey

Q4'2021

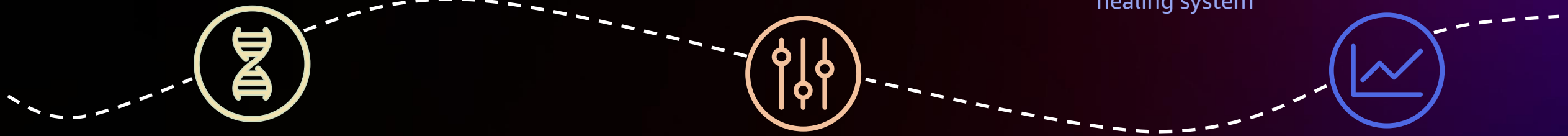
- Kicked-off MiCloud[1] transformation program
- Mobilized AWS Migration Readiness Assessment (MRA)
- Signed AWS Private pricing Agreement and Savings Plan

2022

- Built Migration Factory with AWS ProServ
- Deployed Marriott cloud platforms with foundational automation with AWS ProServ
- Exited 1 data center and moved 1200+ servers with AWS ProServ
- Expanded DevSecOps practices

2023+

- Build Service Catalog and self-service
- Migrate 4500+ servers
- Expansion of DevSecOps and SRE practice
- Machine Learning for cloud spend and other optimizations
- Expand Microservices based designs & self healing system

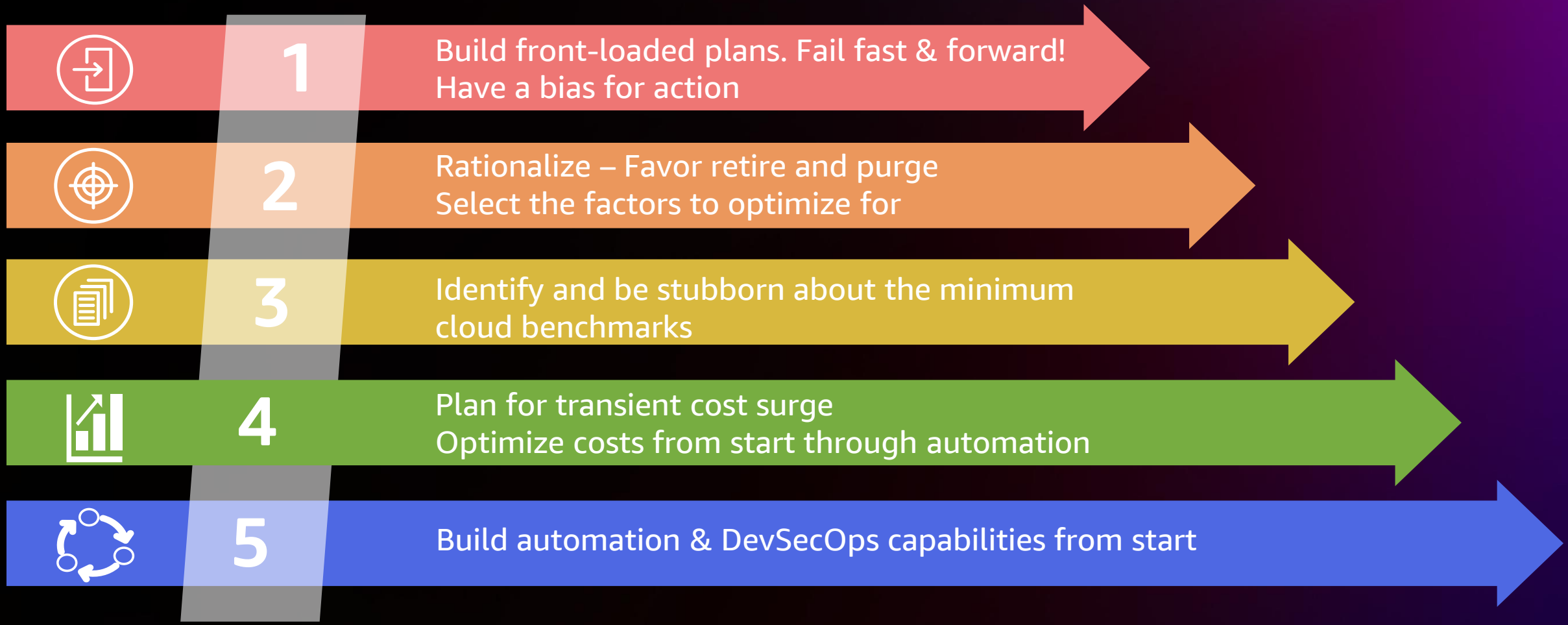


Maturity Stages	Tactical	Operational	Efficient
	▪ Baseline Platform ▪ Reactive but Reliable Engagement ▪ Low Agile maturity ▪ Clear vision & socialization	▪ Target state Org (engineering, SRE, DevSecOps) ▪ All workloads consolidated on public cloud ▪ Service Orchestration (CI/CD, Service catalog) ▪ Agile culture, stability and limited modernization	▪ Microservices architecture ▪ Advanced Data Analytics, AI/ ML ▪ Self Healing Systems ▪ Shortened innovation cycles

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[1] Marriott International Cloud

Key lessons



Be stubborn on the vision and flexible on the details

Jeff Bezos

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Cost of doing nothing



COSTS	$10M+ in annual run rate reductions	80% compute wastage	$50M+ in lost reinvestment opportunities
RESILIENCY	Design complexities of physical hosting	High fixed cost of DR infrastructure	Limited data & security options
INNOVATION	2x slower product innovation	30+ day cycles for standard infrastructure	Use of modern low / no-code options

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Questions?

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Thank you!

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