



INNOVATION, CLOUD-POWERED

Danilo Poccia | Technical Evangelist

 @danilop

Massive Mismatches: It Is Out of Control

	Enterprise	Internet
Project Cycles	Years	Hours
Project Life Spans	Decades	Months
Project Frequencies	10^1 - 10^2	10^6
Investment Decision Cycles	Mythical Person Months	Impulse
Implementation Scale	Enterprise	Global
Decision Process	Orderly Centralized	Chaotic Individualized

Hotels



Music



Magazines



Storage



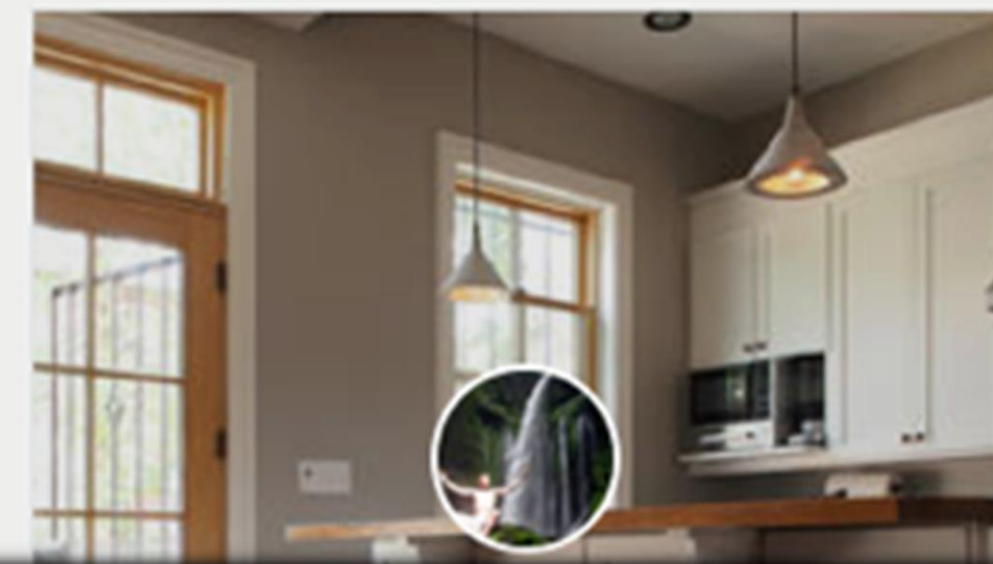
WELCOME HOME

Rent unique places to stay from local hosts in 190 countries.

[How It Works](#)

Start Your Adventure

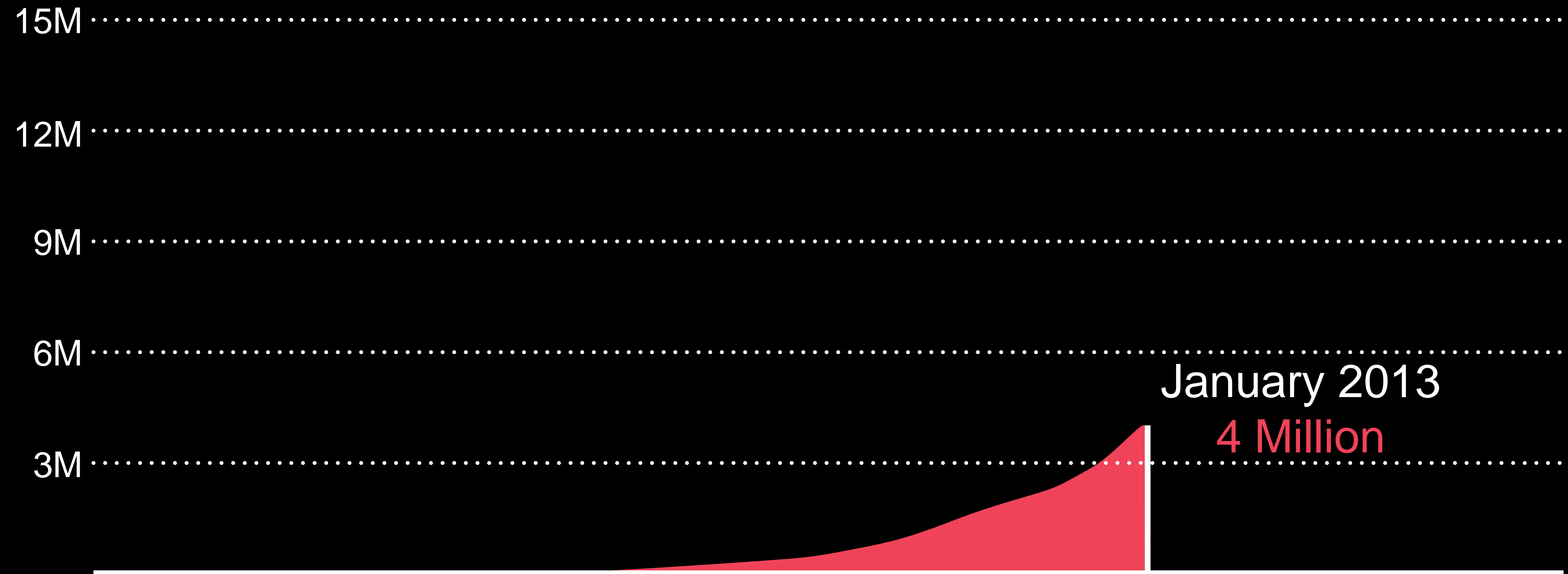
Discover destinations that travellers love.





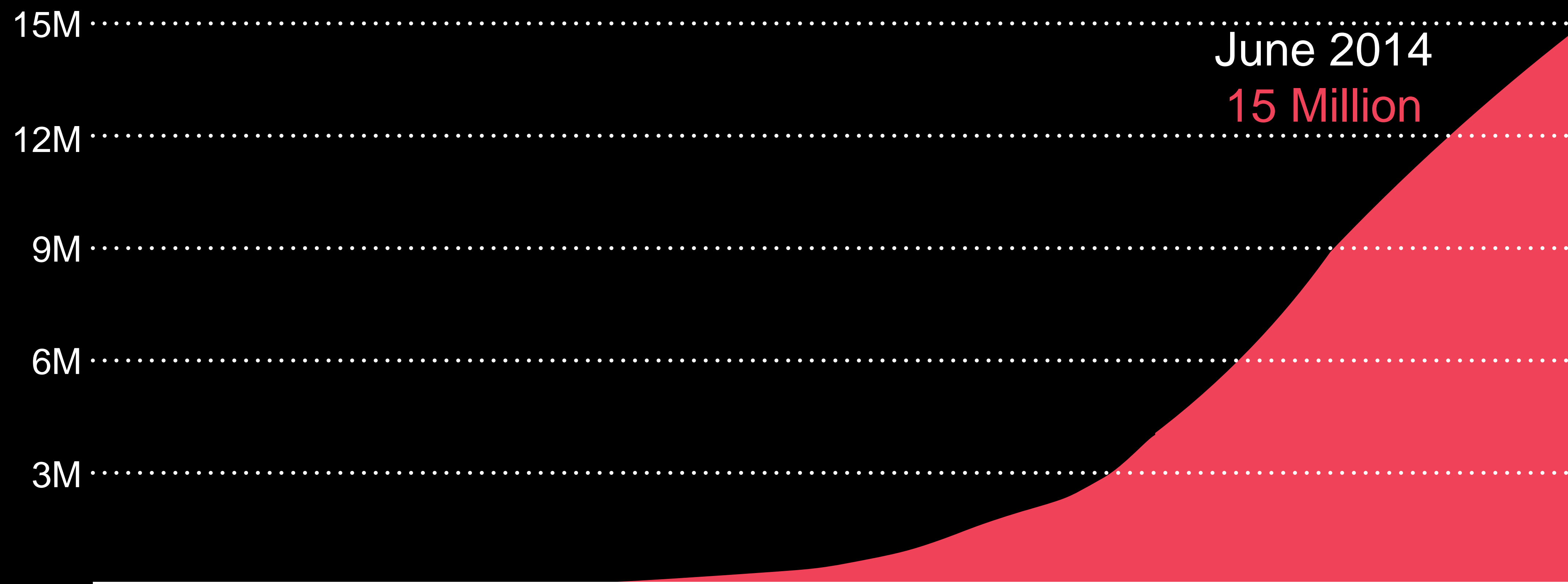
150,000
people are hosted
on any given night

Total Number of Guests

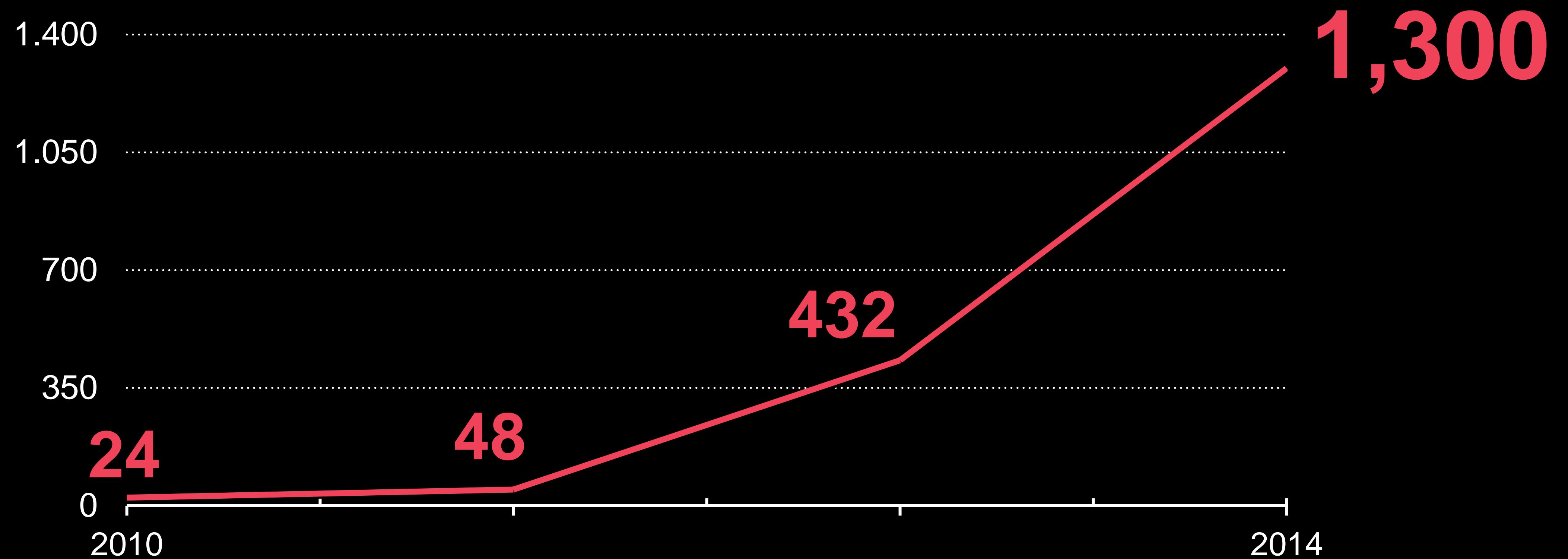


airbnb Total Number of Guests

Up By Over 10 Million In One Year



Total Number of EC2 instances



WHY AWS ?



We have a 5 person
operations team.

AWS allows us to devote our resources
and mindshare to the core business.

**IS AWS ONLY FOR
NEW DIGITAL NATIVE
COMPANIES ?**

LET'S GO BACK IN TIME...

1898

1898

**TWO BROTHERS ACCIDENTALLY
FLAKED WHEAT BERRY**

1898

**TWO BROTHERS ACCIDENTALLY
FLAKED WHEAT BERRY**

Kellogg's

2013

**“Margins are very tight
in our industry”**

Kellogg's

2013

**Analyzing large volumes of data
Running complex simulations
Predict which promotional activities
will be most the most effective**

Kellogg's

REQUIREMENTS

**TB OF DATA
SCALING
BUDGET**



“Speed, performance, and
agility without a significant
investment in physical
hardware”



SOLUTION

**SAP
+
AWS**

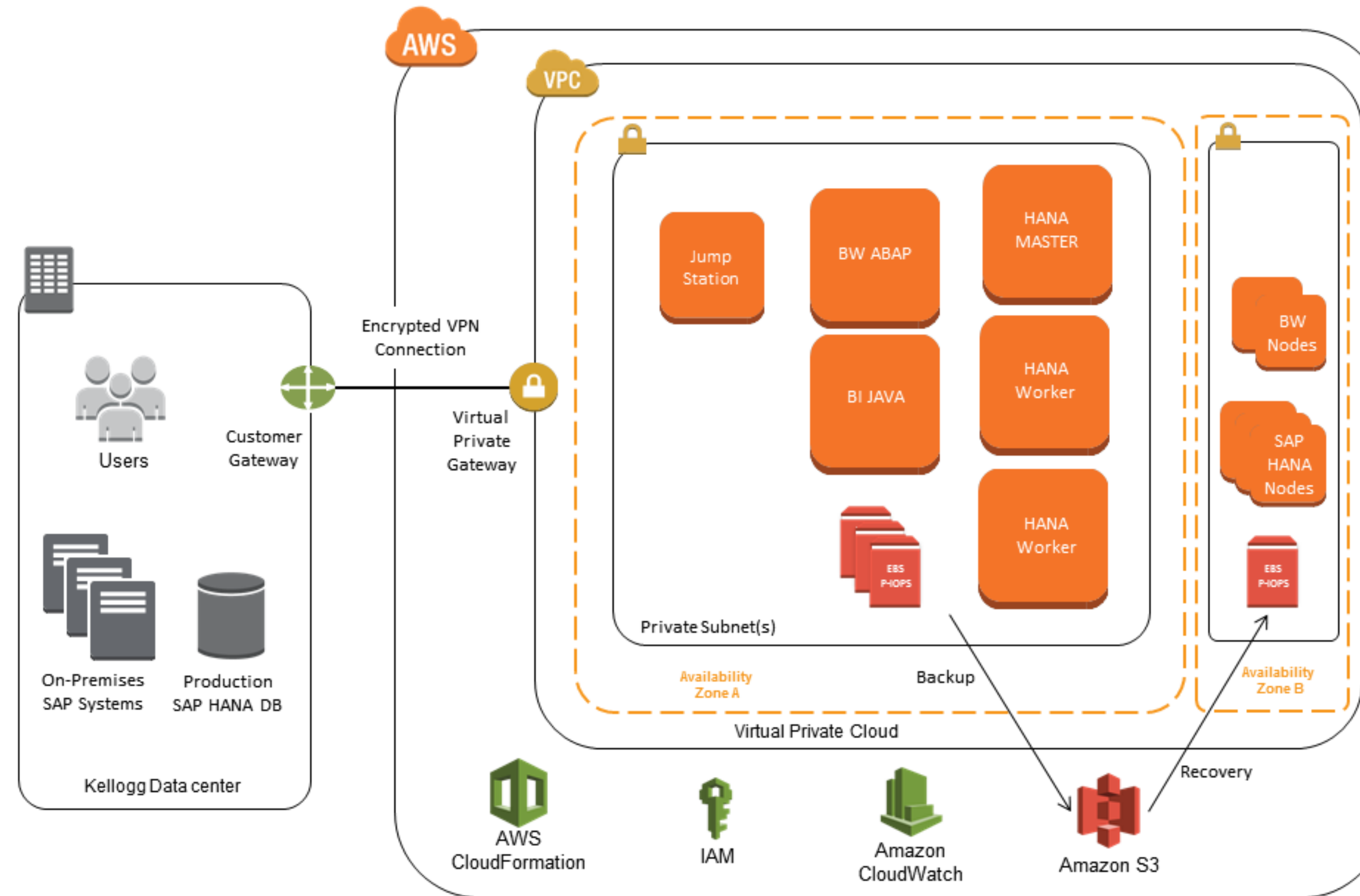
**Accelerated
Trade Promotion
Planning**

**Powered by
SAP HANA**

Kellogg's

**QUICKLY
START
TEST + DEV**

**PRODUCTION
FOR US
OPERATIONS**



**WORLDWIDE
IN 2014**

**FROM
16 TB TO 50 TB**

Kellogg's



COST

“Using AWS saves us more than \$900,000”



AGILITY

“The speed and agility that using AWS gives us lets us develop and deliver business services much more quickly than before”
(dozens of data simulations a day)

Kellogg's

Improve your business agility

Make sure your solution increases your strategic capacity to evolve



Business Agility: Is The Hierarchy Holding You

David A. ...erland , NetApp

+ Follow Comments

Business w... 21st century? A

Is Your Firm Agile or Staid?


	Performance	Agile	Staid	M...
IF				
New Products		8.8	3.2	Percent of products in 2004
Then				
Modified Products		35		
Then				
Growth			40	
Then				
Profit Growth				



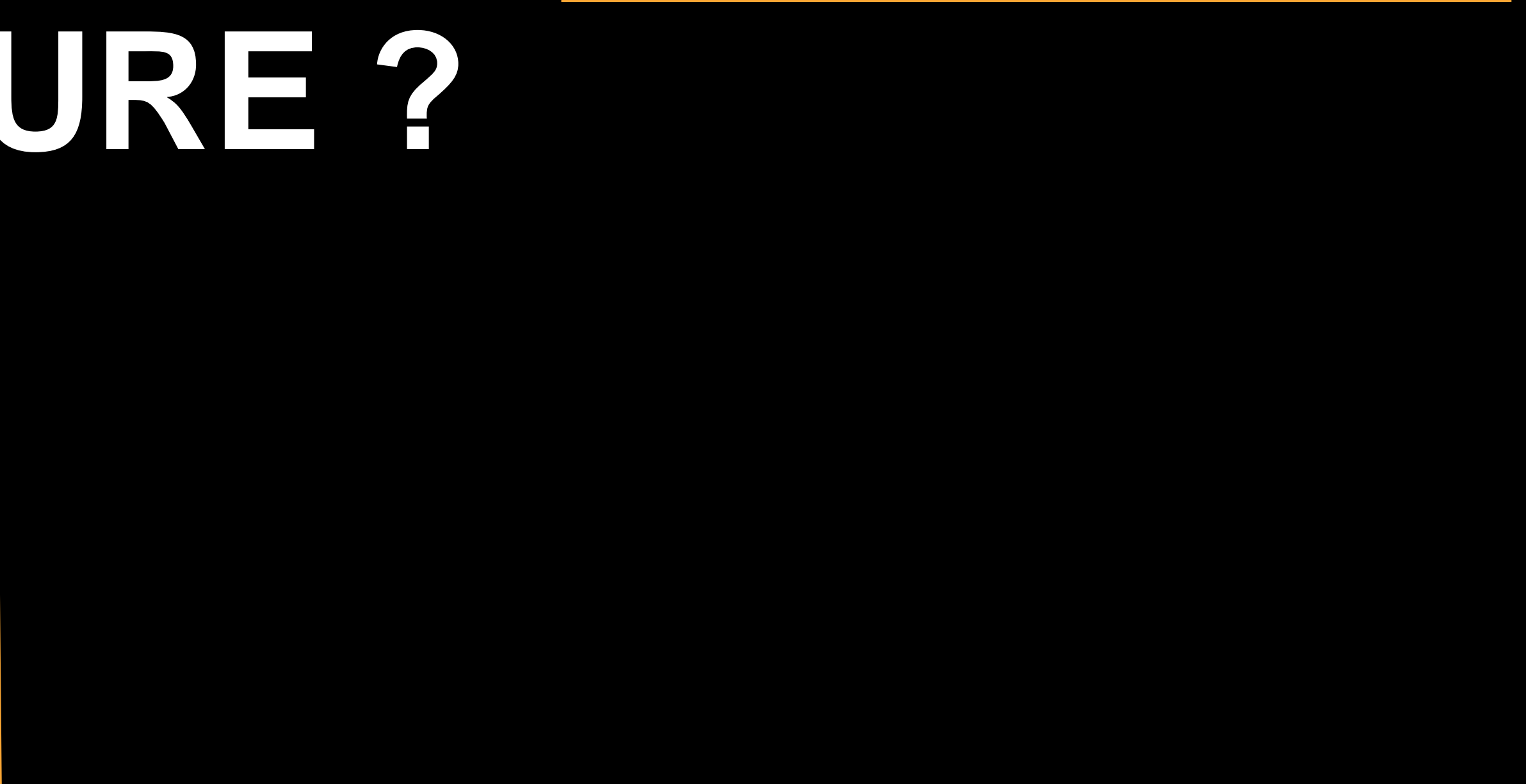
Agility

Understand your business and convert it to knowledge





**HOW TO
MEASURE ?**



AGILITY

**HOW TO
MEASURE ?**

AGILITY

COMPLEXITY

**HOW TO
MEASURE ?**

AGILITY

COMPLEXITY

**HOW TO
MEASURE ?**

ORDER

DISORDER

AGILITY

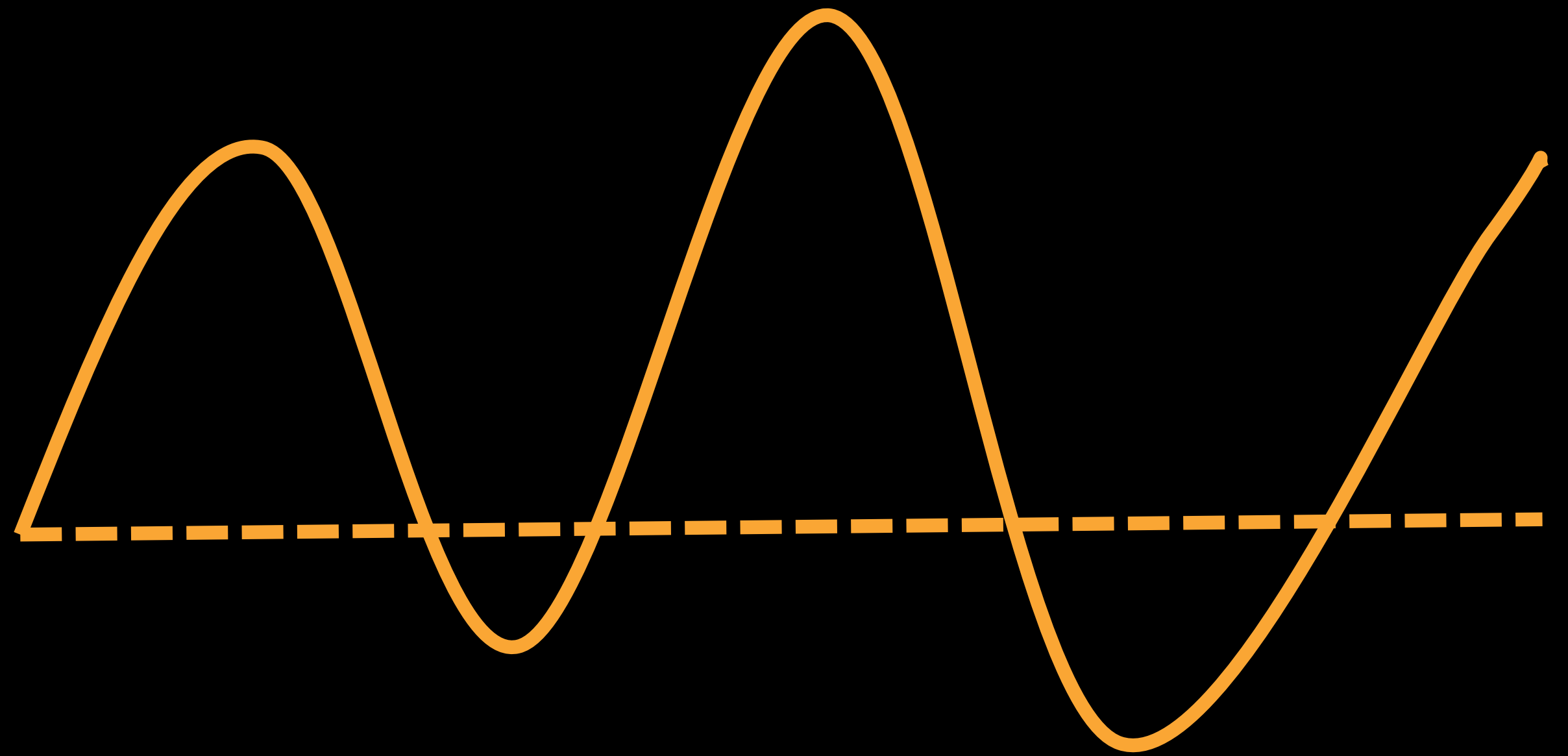
COMPLEXITY

**HOW TO
MEASURE ?**

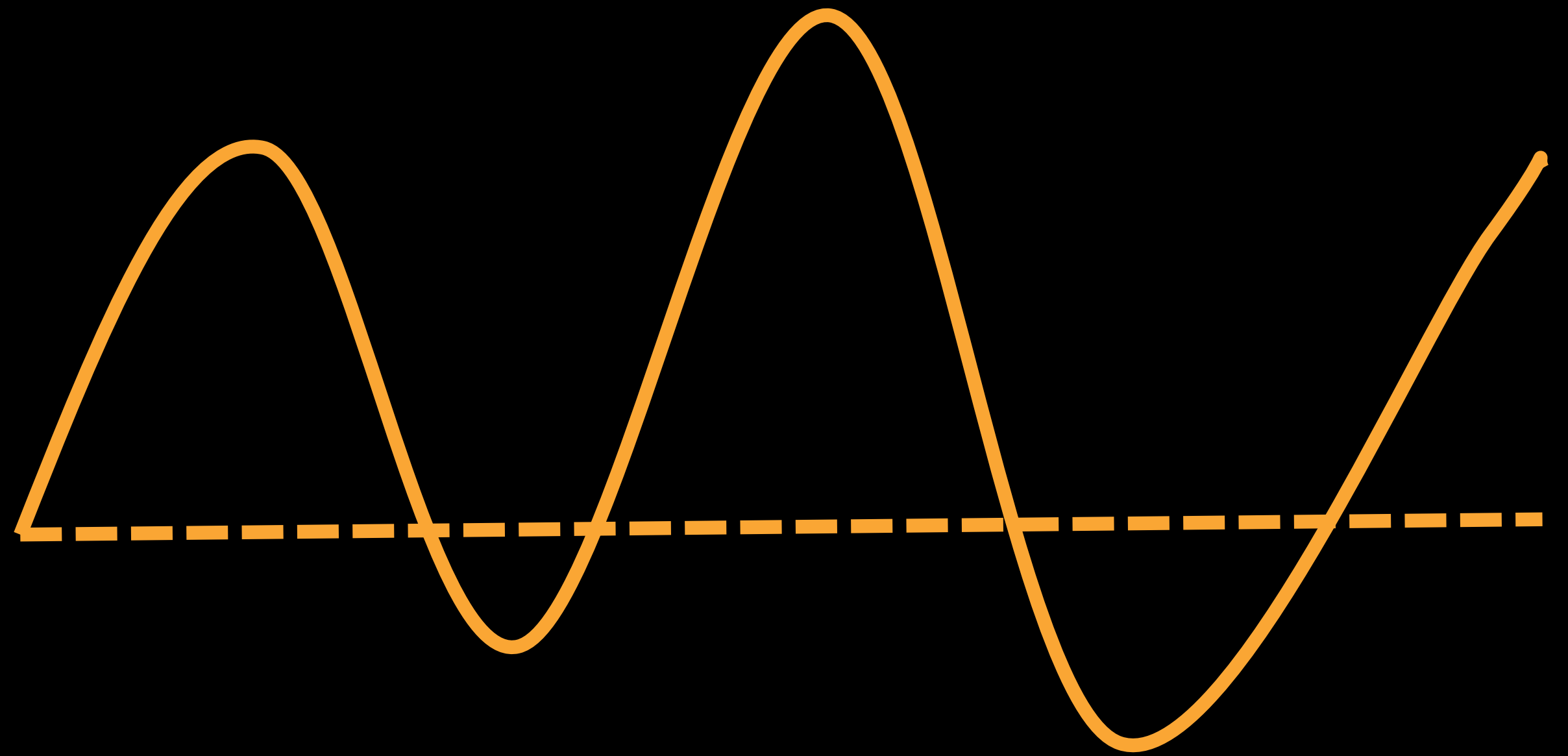
ORDER

DISORDER

ENTROPY

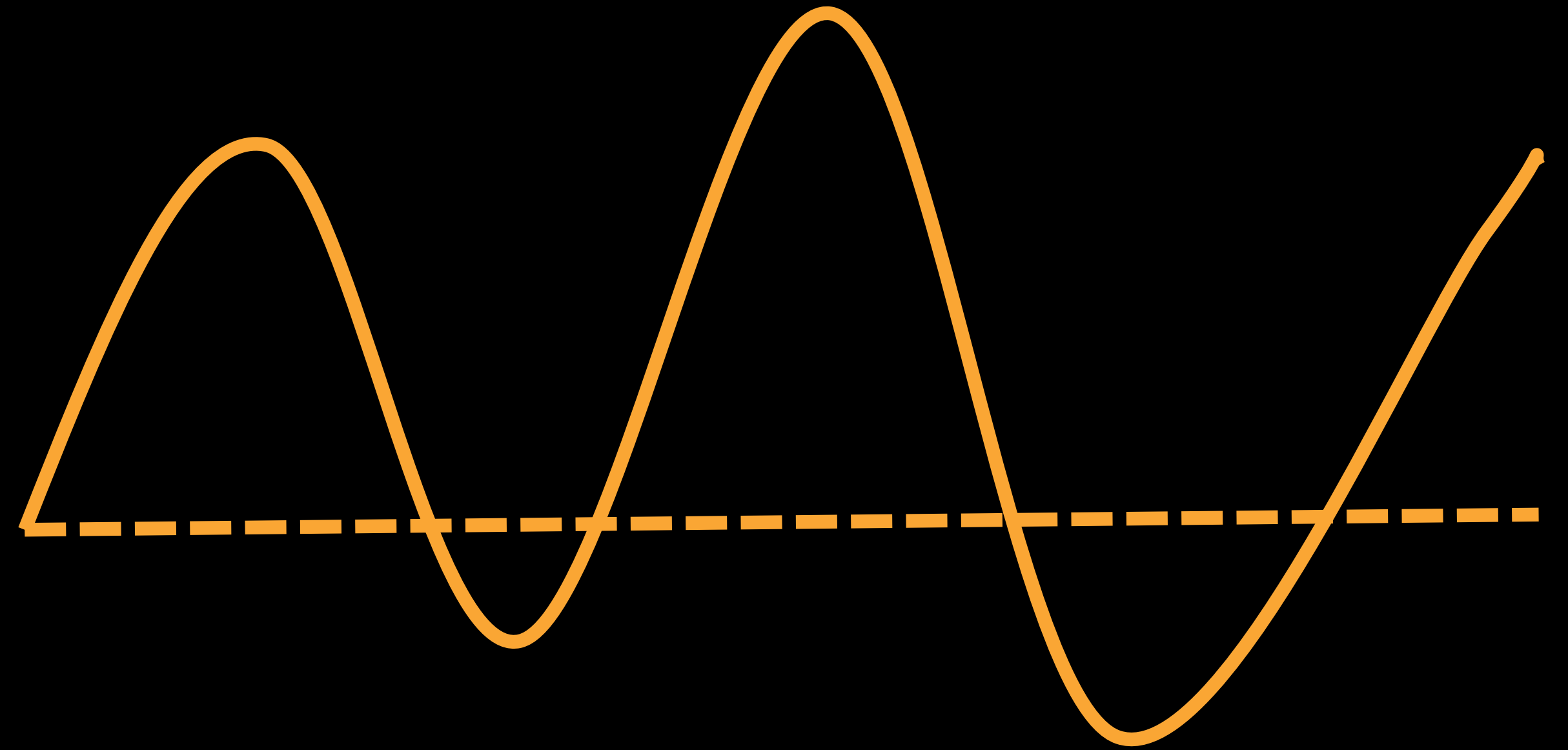


SW ENTROPY



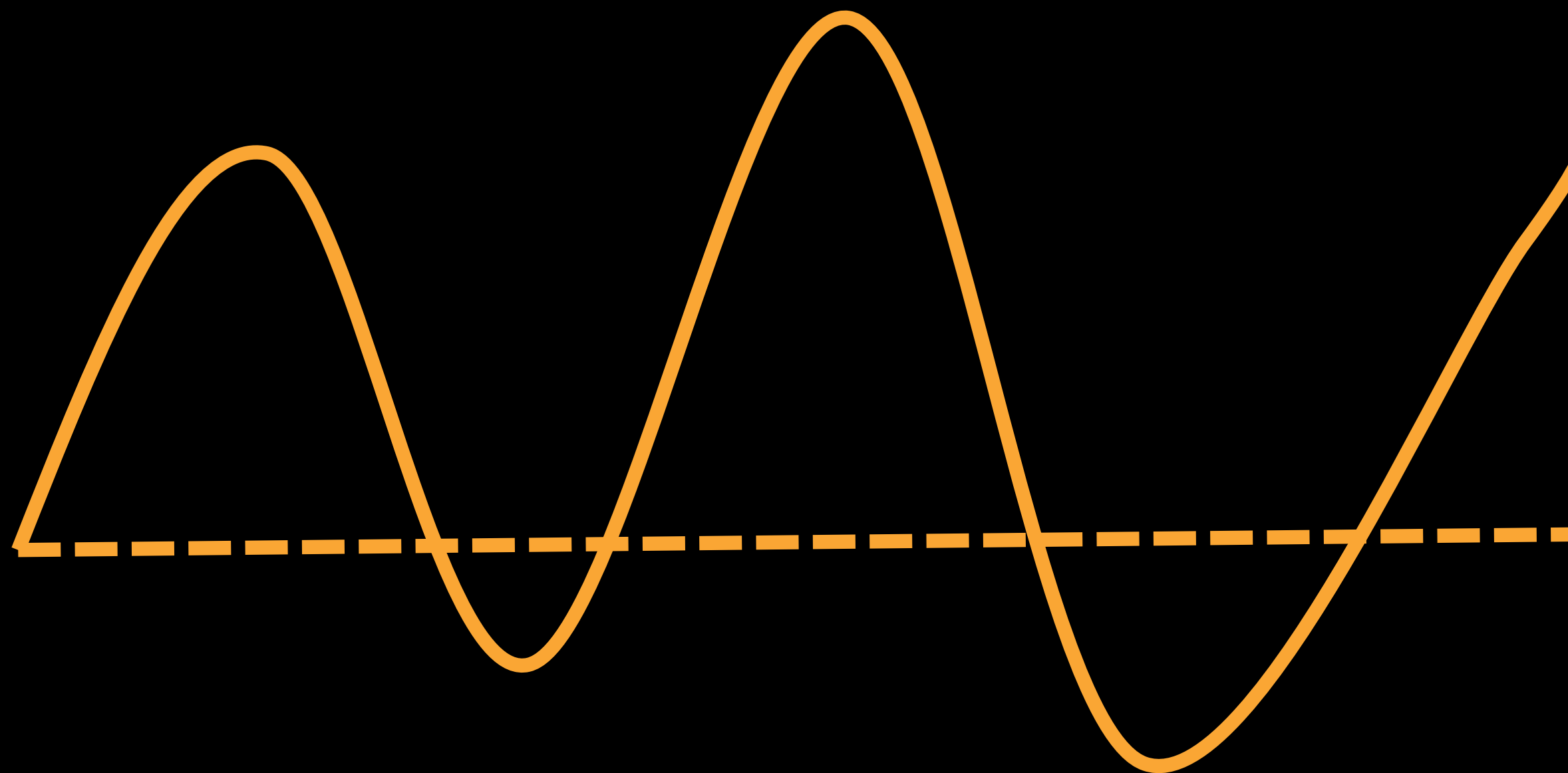
 **NEW FEATURES**

SW ENTROPY



SW ENTROPY

 **NEW FEATURES**



 **REFACTORING**

 **NEW FEATURES**

~~**SW ENTROPY**~~

**NOT JUST
DEVELOPMENT**

 **REFACTORING**

IT ENTROPY

DEVELOPMENT

TEST

PRODUCTION

DEPLOYMENT

GOVERNANCE

WORKAROUND

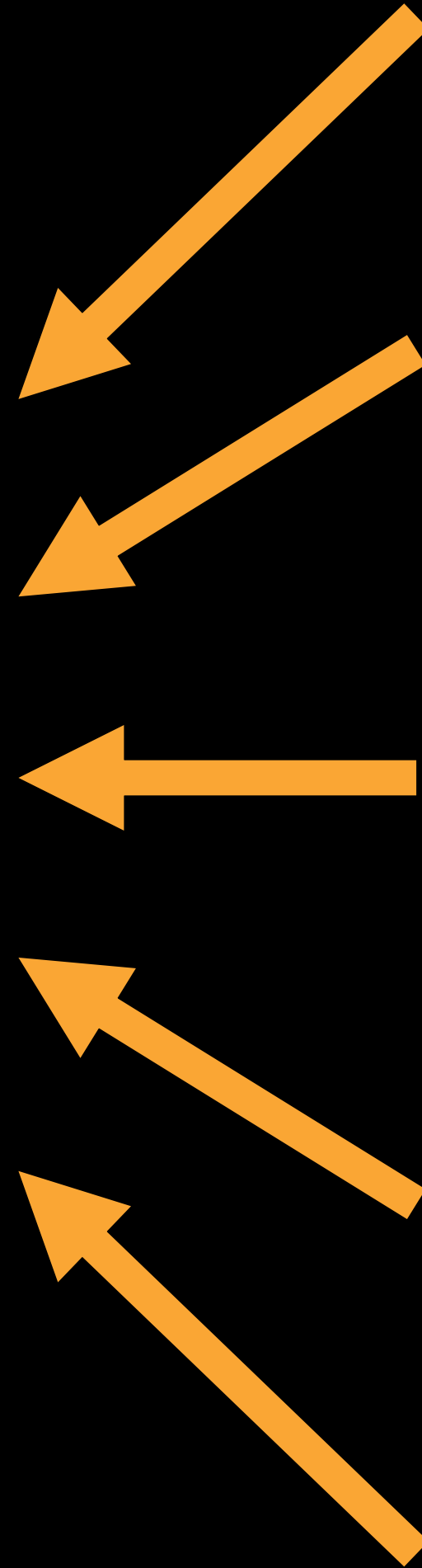
QUICK FIXES

SHORTCUTS

MANUAL

SHORT TERM

IT ENTROPY



A diagram illustrating the factors that contribute to technical debt. On the left, a blue oval contains the text "TECHNICAL DEBT". To its right, five orange arrows point towards the oval, each originating from a text label. The labels, from top to bottom, are: "WORKAROUND", "QUICK FIXES", "SHORTCUTS", "MANUAL", and "SHORT TERM".

**TECHNICAL
DEBT**

WORKAROUND

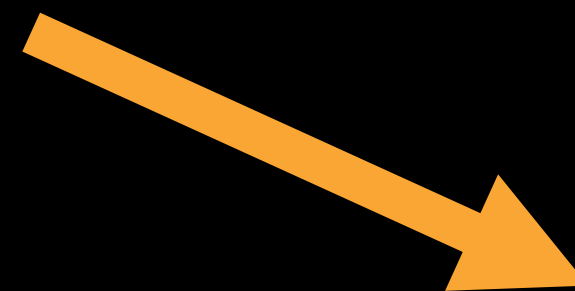
QUICK FIXES

SHORTCUTS

MANUAL

SHORT TERM

**TECHNICAL
DEBT**



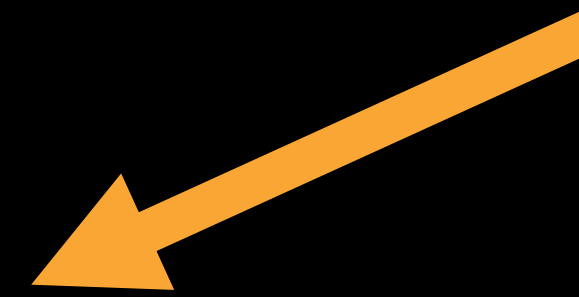
**UNPLANNED
WORK**

```
graph LR; A([TECHNICAL DEBT]) --> B[COMPOUND INTEREST  
(IT'S A DEBT)]; A --> C[UNPLANNED WORK]
```

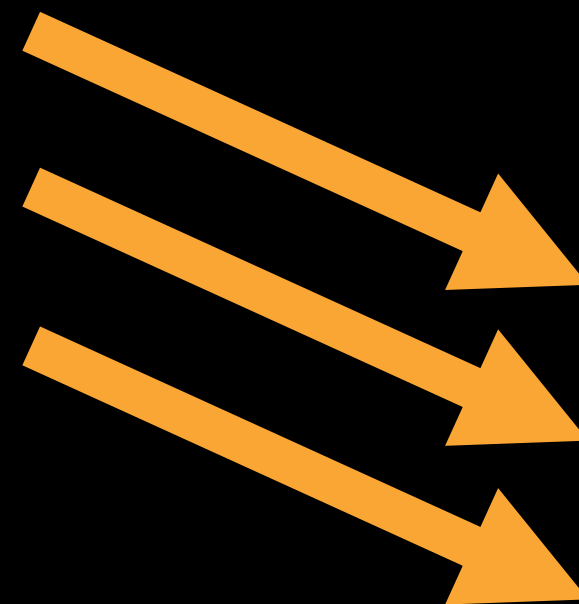
**TECHNICAL
DEBT**

**COMPOUND
INTEREST
(IT'S A DEBT)**

**UNPLANNED
WORK**

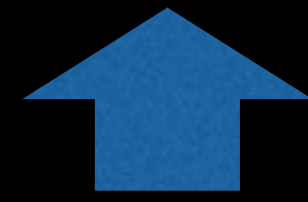


**COMPOUND
INTEREST**

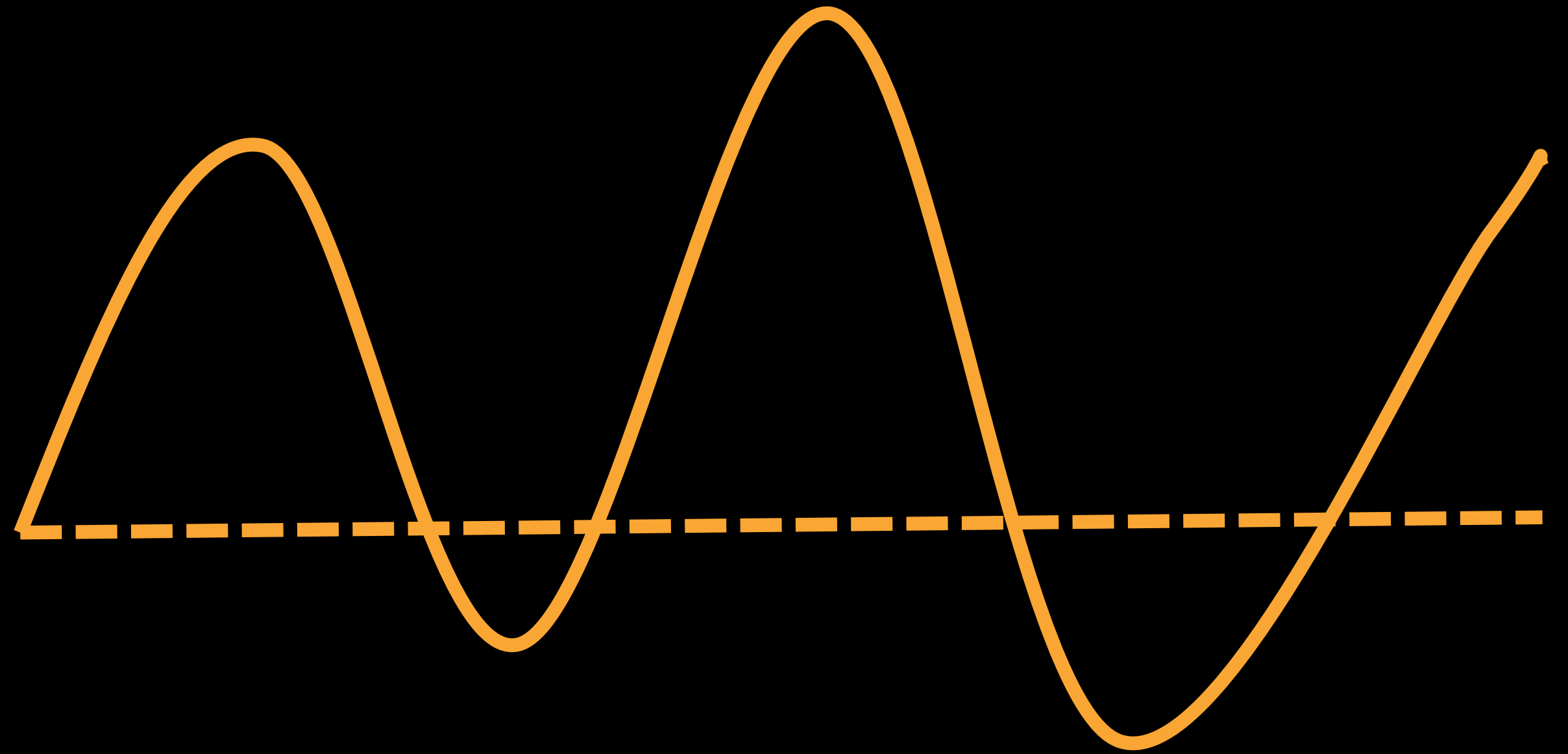


**MORE
UNPLANNED
WORK**

**IT ENTROPY
PARADOX**



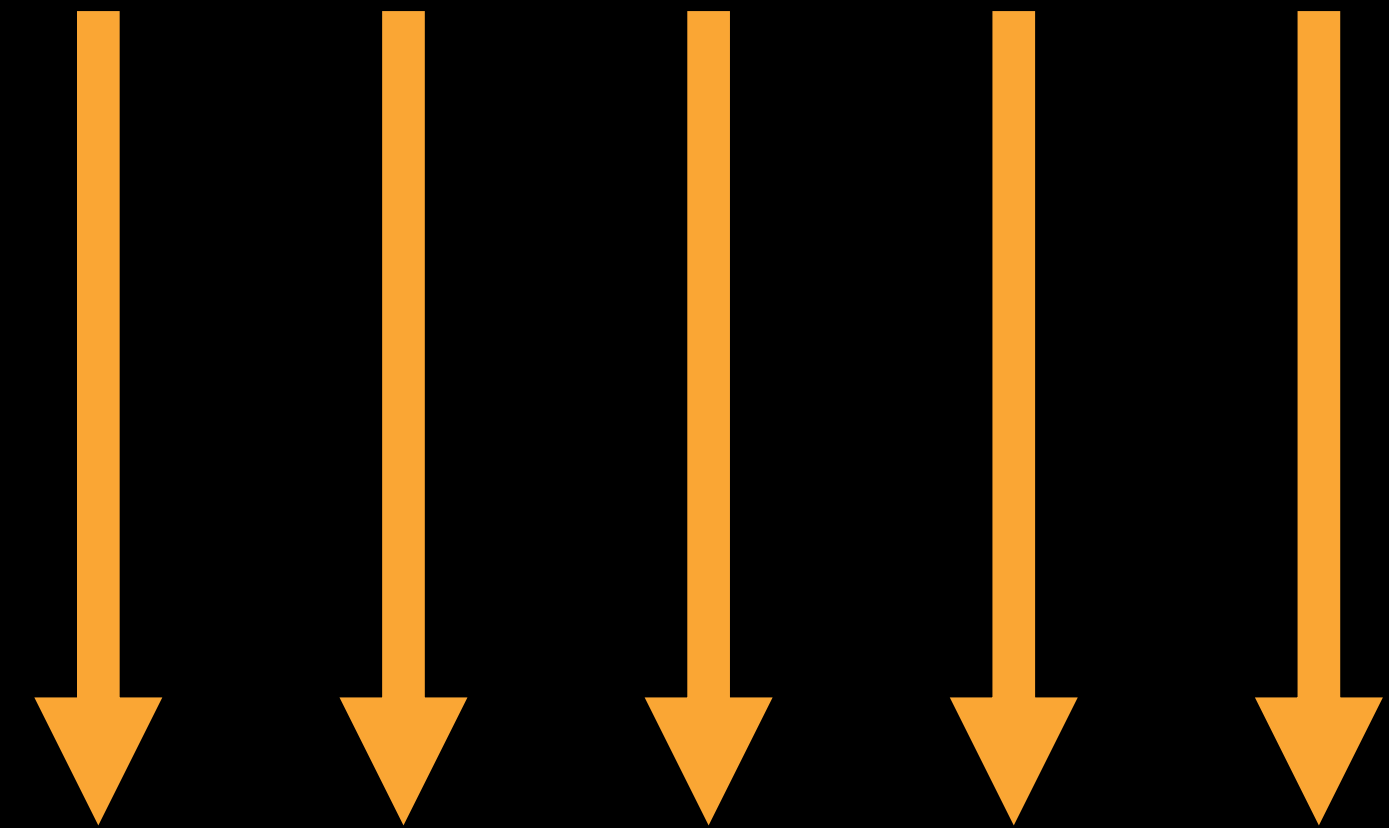
INNOVATION



SIMPLIFICATION

INNOVATION

**IT ENTROPY
~~PARADOX~~**



SIMPLIFICATION

REMOVE WASTE

Waste is anything that does not lead to
direct value for the customer

**ON-PREMISES
INFRASTRUCTURE**

30%

Your
Business

70%

Managing All of the
“Undifferentiated Heavy Lifting”

**ON-PREMISES
INFRASTRUCTURE**

30%

Your
Business

70%

Managing All of the
“Undifferentiated Heavy Lifting”

**AWS
CLOUD-BASED
INFRASTRUCTURE**

More time and resources
to **focus on your business**

Configuring
cloud assets

70%

30%

Three Steps to Agility

#1



Experiment
continuously

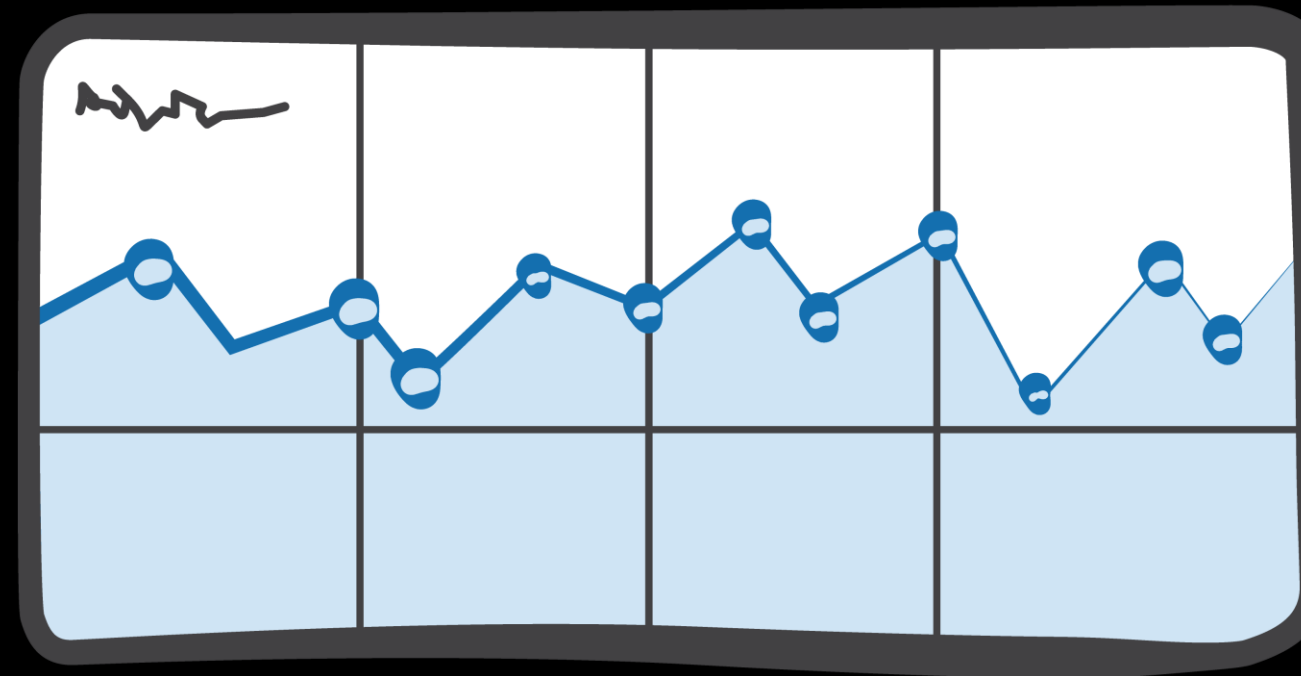
Three Steps to Agility

#1



Experiment
continuously

#2



Measure
relentlessly

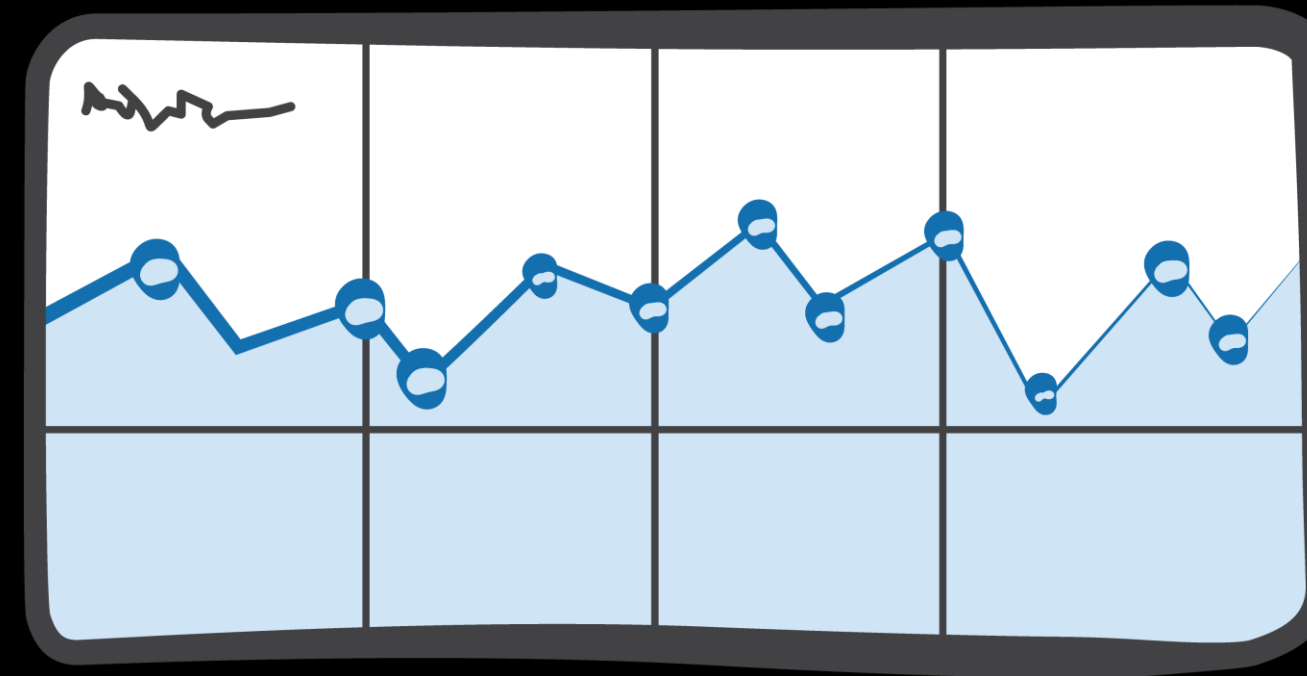
Three Steps to Agility

#1



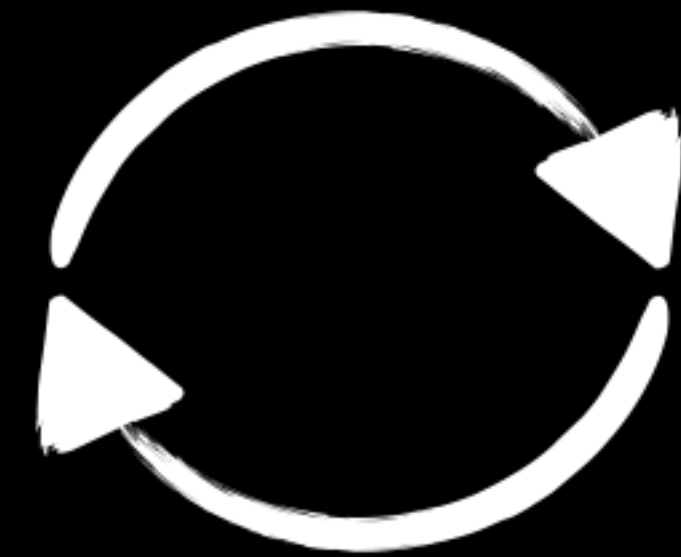
Experiment
continuously

#2



Measure
relentlessly

#3



Learn

What sets *AWS* apart from other providers?

What sets AWS apart from other providers?

Breadth and Depth of Services

**Foundation
Services**



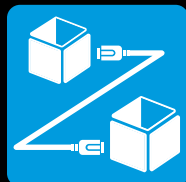
Compute



Storage



Security
& Access



Networking &
Content Delivery

Infrastructure



Regions


















Availability Zones



Edge POPs

Platform Services

Databases	Analytics	App Services	Deployment & Management
 Relational	 Hadoop	 Queuing	 Containers
 NoSQL	 Real time	 Orchestration	 Dev/ops
 Columnar	 Data warehouse	 Transcoding	 Templates
 Caching		 Email	
		 Search	





















Foundation Services

 Compute	 Storage	 Security & Access	 Networking & Content Delivery
---	---	---	---

Infrastructure

 Regions	 Availability Zones	 Edge POPs
---	--	---

Platform Services

Databases	Analytics	App Services	Deployment & Management	Mobile & Devices
 Relational	 Hadoop	 Queuing	 Containers	 Identity
 NoSQL	 Real time	 Orchestration	 Dev/ops	 Sync
 Columnar	 Data warehouse	 App streaming	 Transcoding	 Analytics
 Caching		 Email	 Templates	 Notifications
		 Search		

Foundation Services

 Compute	 Storage	 Security & Access	 Networking & Content Delivery
---	---	---	---

Infrastructure

 Regions	 Availability Zones	 Edge POPs
--	--	---

Applications



Virtual Desktops



Collaboration and Sharing

Platform Services

Databases



Relational



NoSQL



Columnar



Caching

Analytics



Hadoop



Real-time



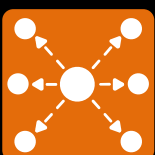
Data warehouse



Data Workflows

App Services

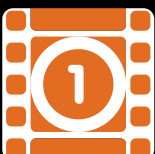
Queuing



Orchestration



App streaming



Transcoding



Email



Search

Deployment & Management



Containers



Dev/ops Tools



Resource Templates



Usage Tracking



Monitoring and Logs

Mobile & Devices



Identity



Sync

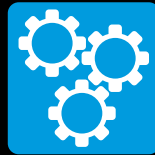


Mobile Analytics



Notifications

Foundation Services



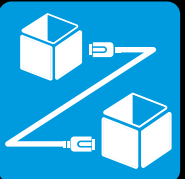
Compute
(VMs, Auto-scaling and Load Balancing)



Storage
(Object, Block and Archive)



Security &
Access Control



Networking

Infrastructure



Regions



Availability Zones



CDN Points of Presence

What sets *AWS* apart from other providers?

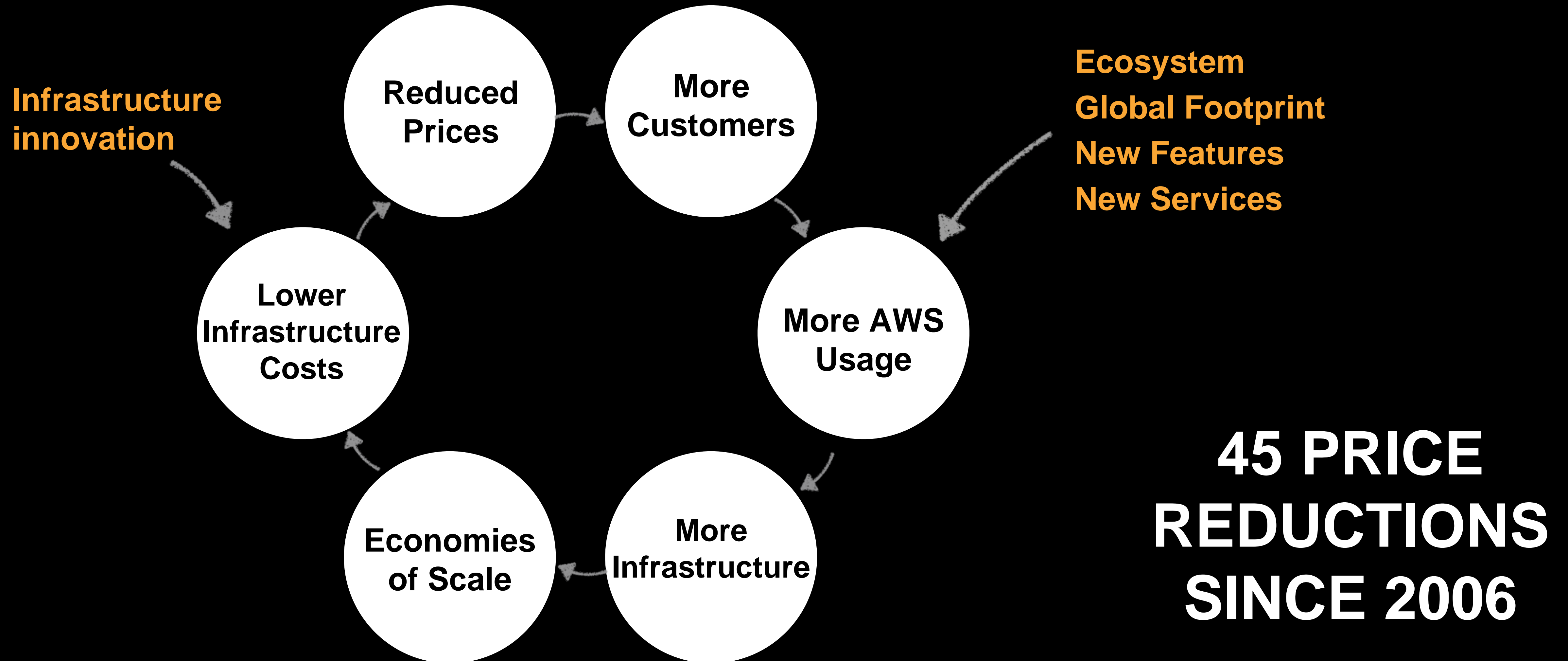
Breadth and Depth of Services

What sets AWS apart from other providers?

Breadth and Depth of Services

Relentless Focus on Cost Reduction

The AWS Price Reduction Philosophy



What sets AWS apart from other providers?

Breadth and Depth of Services

Relentless Focus on Cost Reduction

What sets AWS apart from other providers?

Breadth and Depth of Services

Relentless Focus on Cost Reduction

Customer Driven Innovation

Small, “Two Pizza” Teams

Small, autonomous teams
Roadmap ownership
Decoupled launch schedules

Get Core Functionality in the Hands of Customers, Quickly

Operational stability
High scale
Limited initial feature set

Iterate Based on Customer Feedback

A RAPID PACE OF INNOVATION

+24

Amazon EBS
Amazon CloudFront

2008

+48

Elastic Load Balancing
Auto Scaling
Amazon VPC
Amazon RDS

2009

+61

Amazon SNS
AWS Identity & Access Management
Amazon Route 53

2010

+82

Amazon SES
AWS Elastic Beanstalk
AWS CloudFormation
Amazon ElastiCache
AWS Direct Connect
GovCloud

2011

+159

AWS Storage Gateway
Amazon Dynamo DB
Amazon CloudSearch
Amazon SWF
Amazon Glacier
Amazon Redshift
AWS Data Pipeline

2012

+280

Amazon Elastic Transcoder
AWS OpsWorks
Amazon CloudHSM
Amazon AppStream
Amazon CloudTrail
Amazon WorkSpaces
Amazon Kinesis

2013

+345

Amazon Cognito
Amazon Mobile Analytics
Amazon Zocalo


2014

SAP HANA ON
AWS MARKETPLACE

SAP HANA One on AWS Marketplace

https://aws.amazon.com/marketplace/pp/B009KA3CRY

Reader

awsmarketplace

Amazon Web Services Home

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Shop All Categories ▾

Search AWS Marketplace

GO

Your Software



SAP HANA One

on **SUSE Linux Enterprise Server 11 SP2**

Sold by: SAP

Perform real-time analysis, develop and deploy real-time applications with the SAP HANA One, an instance of SAP HANA in-memory platform on AWS. Natively built using in-memory technology and now deployed on AWS, SAP HANA One is designed to accelerate transactional processing, operational reporting, OLAP, and, predictive and text analysis while bypassing traditional data latency & maintenance issues created through pre-materializing views and pre-caching query results. Unlike other database management systems in the market today, the SAP HANA One on AWS streamlines both transactional (OLTP) and ... [Read more](#)

Customer Rating

★★★★★ (14 Customer Reviews)

Latest Version

Rev 70.0; based on SAP HANA SPS7 (Other available versions)

Base Operating System

Linux/Unix, [SUSE Linux Enterprise Server 11 SP2](#)

Delivery Method

64-bit Amazon Machine Image (AMI) ([Learn more](#))

Support

[See details below](#)

AWS Services Required

Amazon EC2, Amazon EBS

Highlights

- This version of HANA One Rev 70.0 has in built in SPS7 with all new features of HANA Rev 70. The upgrade packages are available for newer versions of HANA. SAP

Continue

You will have an opportunity to review your order before launching or being charged.

Pricing Details

For region

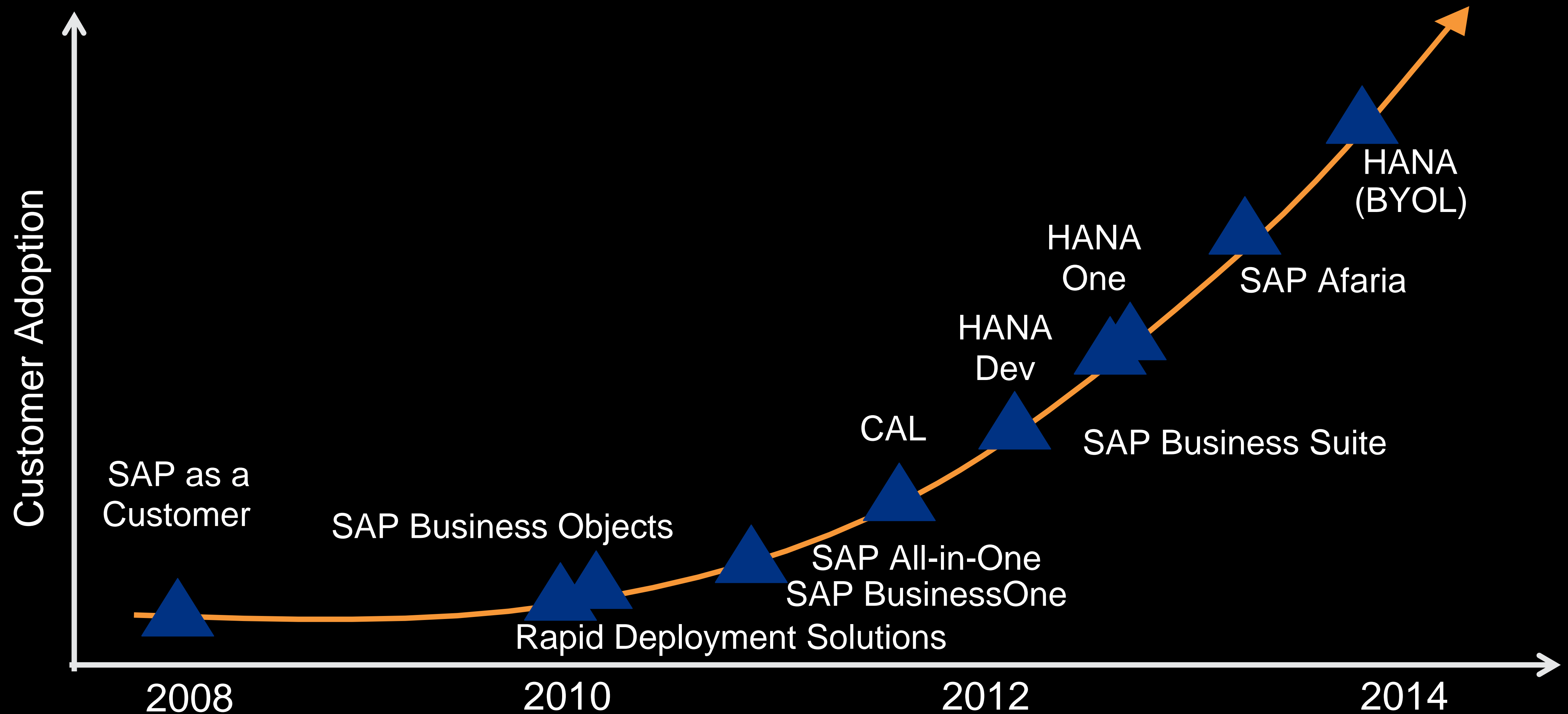
US East (Virginia)

Hourly Fees (includes SUSE Linux Enterprise Server 11 SP2)

Total hourly fees will vary by instance type and EC2 region.

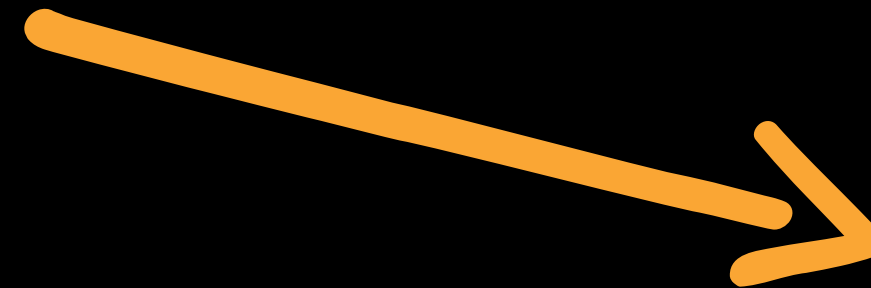
EC2 Instance Type	EC2 Usage	Software	Total
cc2.8xlarge	\$2.10/hr	\$0.99/hr	\$3.09/hr
c3.8xlarge	\$1.78/hr	\$0.99/hr	\$2.77/hr

SAP & AWS Relationship – Key Milestones



How Customers Use SAP on AWS

1 Production Support Systems
(Development & QAS)



2 Non-Production Systems
(Training, PoC, prototypes)

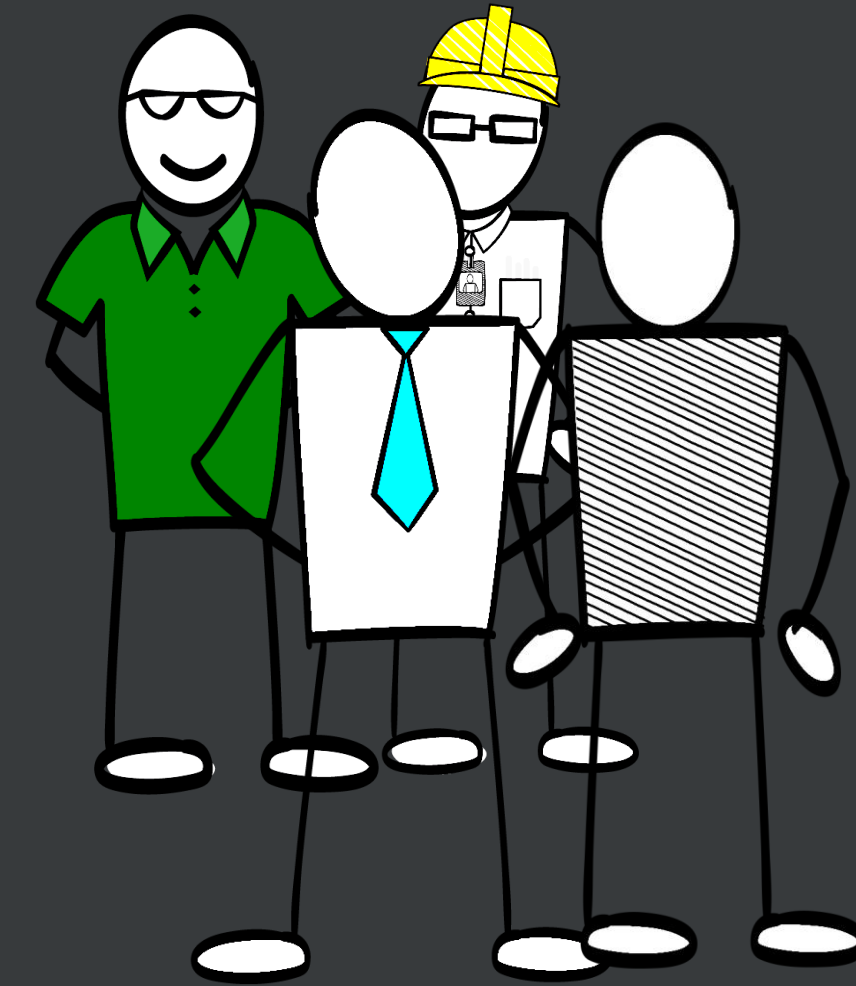


3 Production Systems and
Disaster Recovery (DR)





+



=

EPIC COLLABORATION

“If you want to increase innovation, you have to lower the cost of failure.”

Joi Ito

Director, MIT Media Lab



INNOVATION, CLOUD-POWERED

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 @danilop