

SHARING DATA

ON AMAZON WEB SERVICES



amazon

The Amazon logo, featuring the word "amazon" in a bold, black, sans-serif font. A curved orange arrow is positioned below the text, starting under the 'a' and ending under the 'n', pointing to the right.

amazon

amazon **MP3**

Amazon **Prime**™

amazon **cloud drive**

amazon **instant video**

 **amazon**
web services™

amazon **appstore**

amazon **fresh**

amazon **kindle**

A9

amazon **cloud player**

amazon

amazon

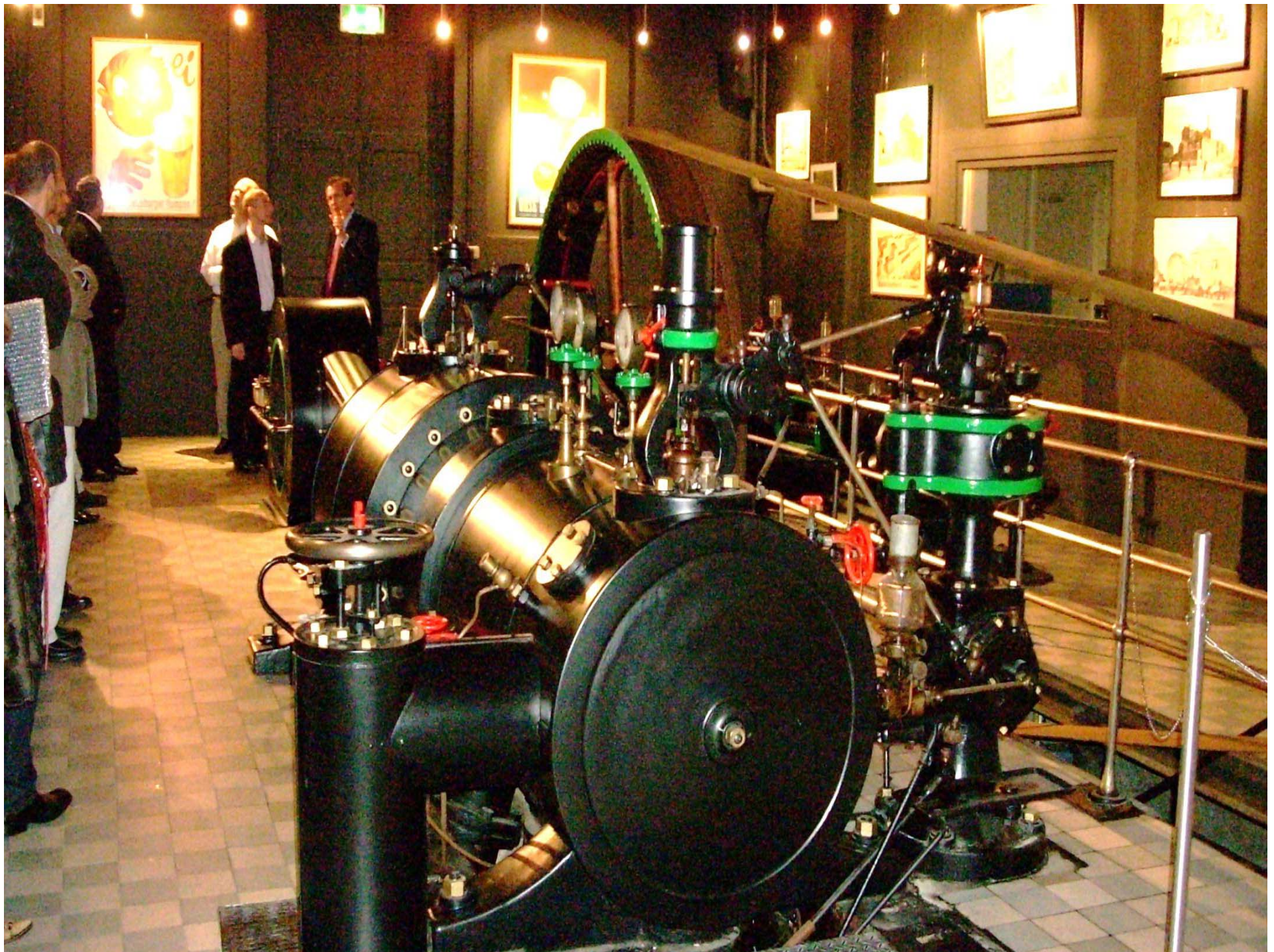

**Consumer (Retail)
Business**

amazon


**Seller
Business**

 **amazon
web services™**

**IT Infrastructure
Business**







When you turn off your cloud resources,
you actually **stop paying for them**



**THE TRADITIONAL
WAY...**



you have to **invest** in **infrastructure**

you have to deal with **infrastructure**



<http://eddie.niese.net/20090313/dont-pity-incompetence/>

capacity planning...

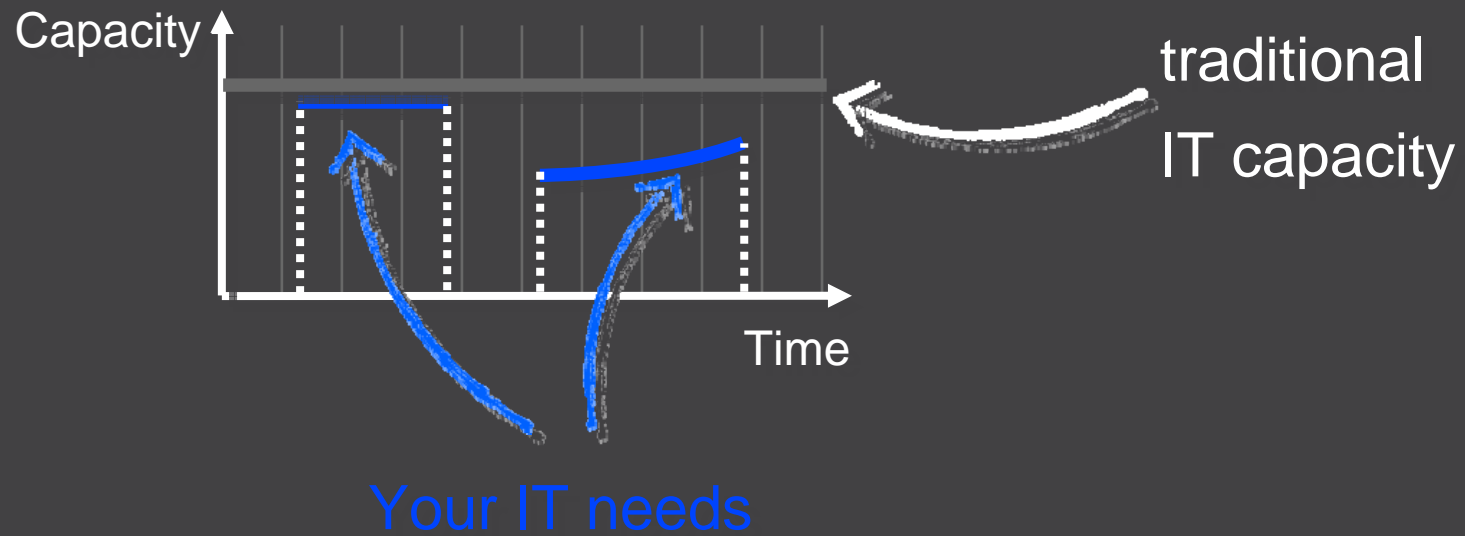


...capacity guessing

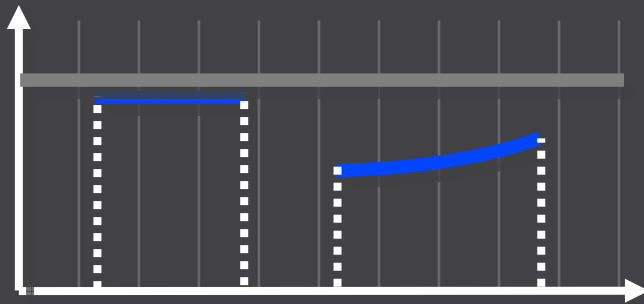


Capacity planning...

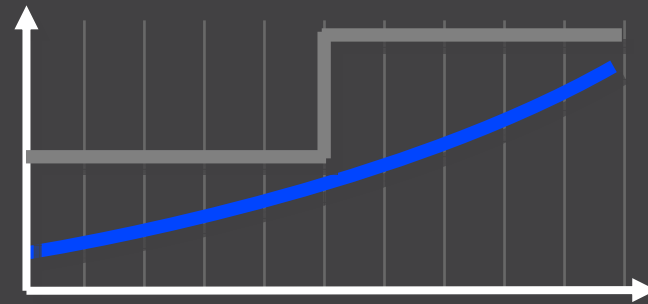
...capacity guessing



USAGE PATTERNS:
TRADITIONAL IT

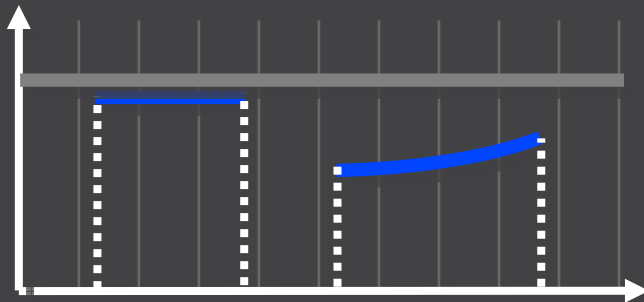


On and Off

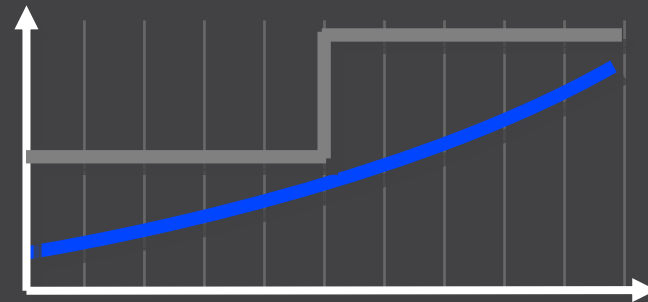


Fast Growth

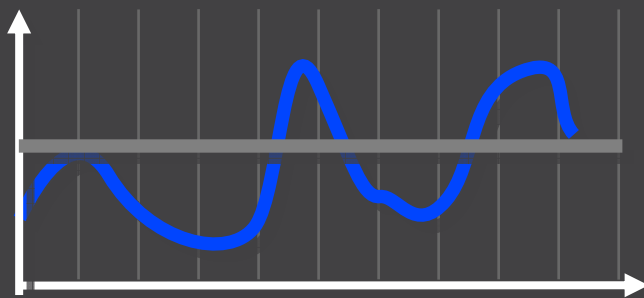
USAGE PATTERNS:
TRADITIONAL IT



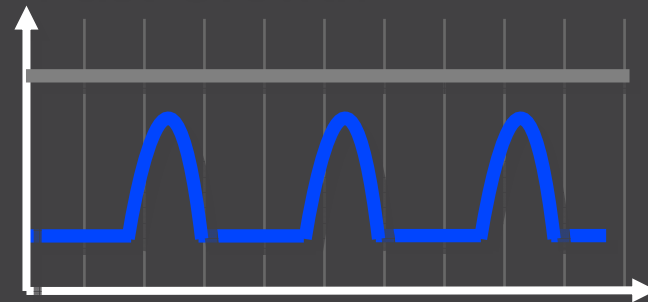
On and Off



Fast Growth

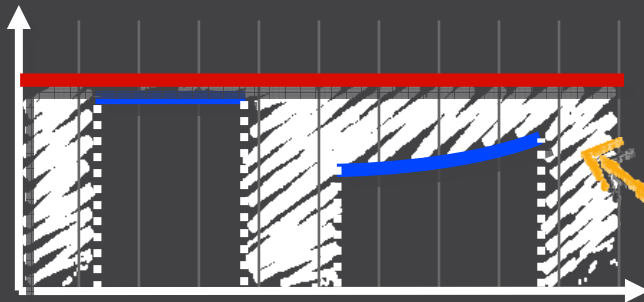


Unpredictable
peaks

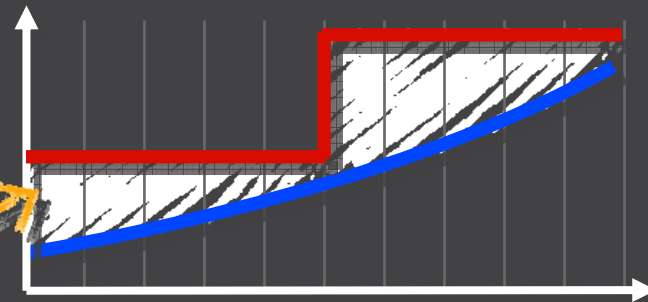


Predictable peaks

USAGE PATTERNS:
TRADITIONAL IT

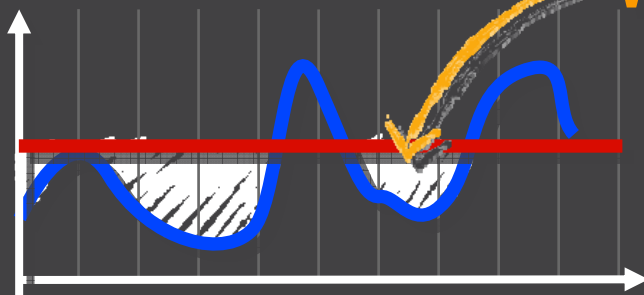


On and Off

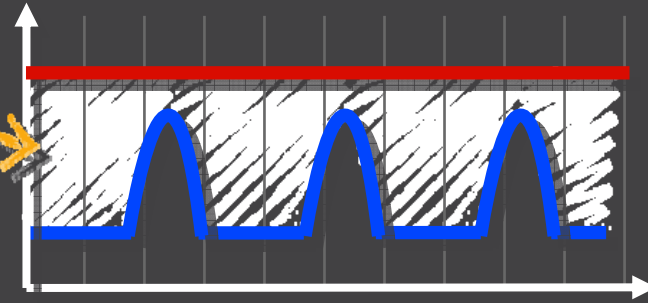


Fast Growth

WASTE

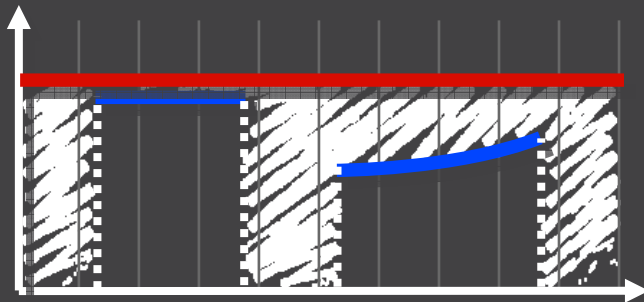


Unpredictable
peaks

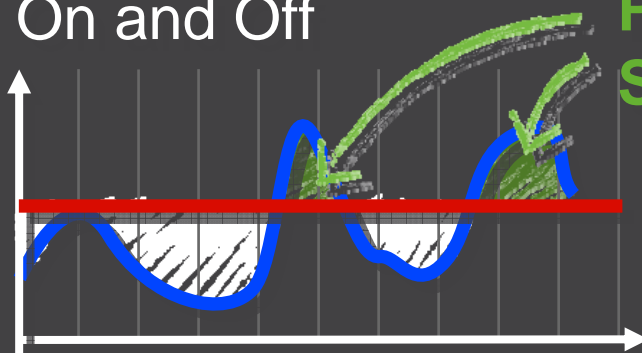


Predictable peaks

USAGE PATTERNS:
TRADITIONAL IT

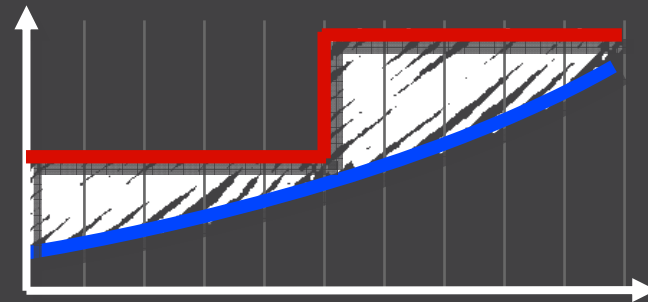


On and Off

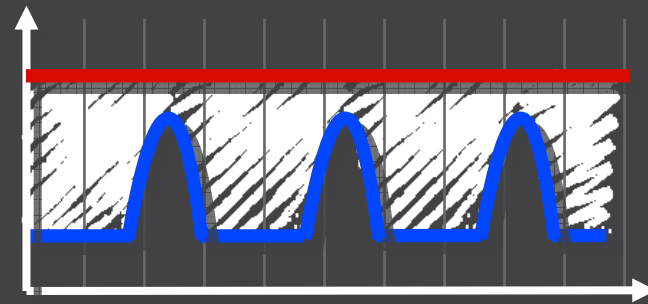


Unpredictable
peaks

Poor
Service



Fast Growth



Predictable peaks

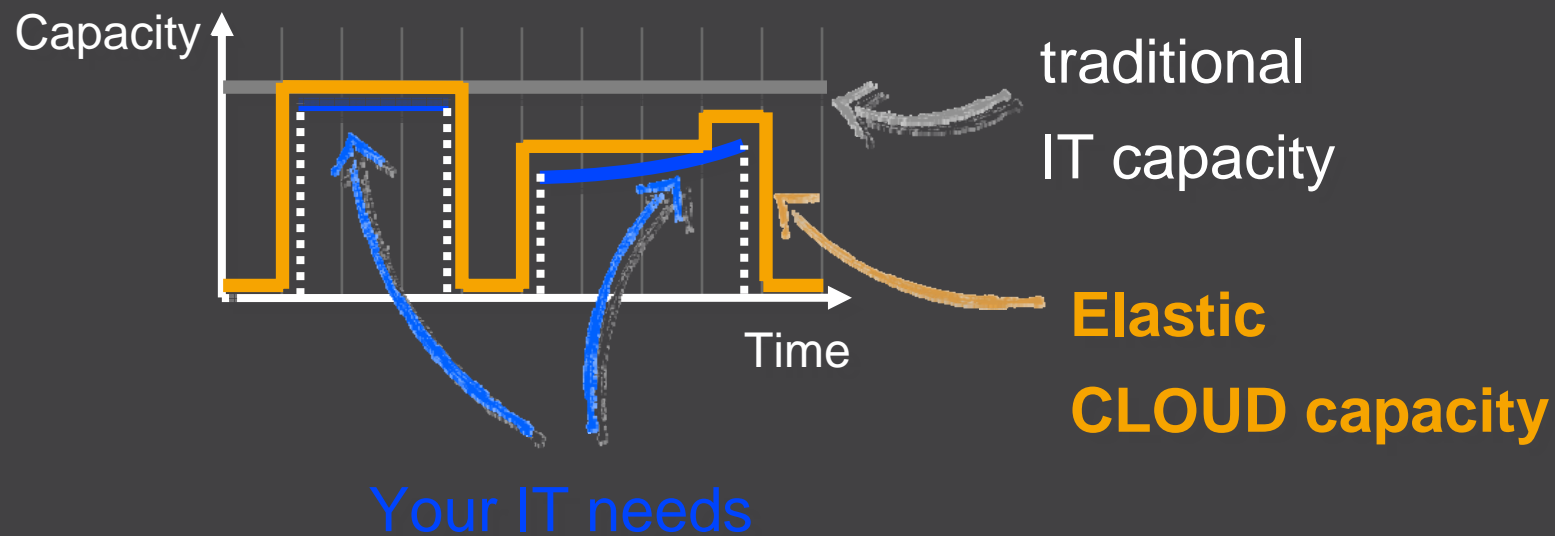
USAGE PATTERNS:
TRADITIONAL IT



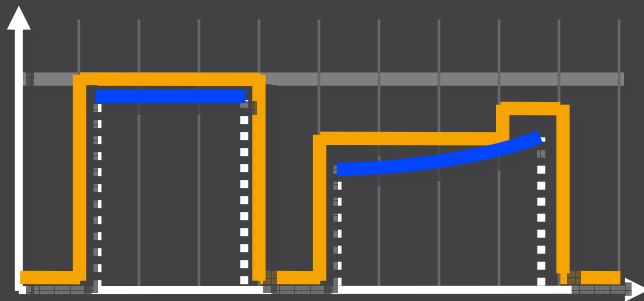
what you **really** need is...

...adjustable capacity

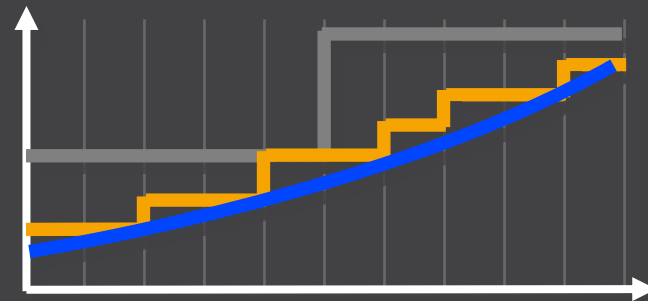




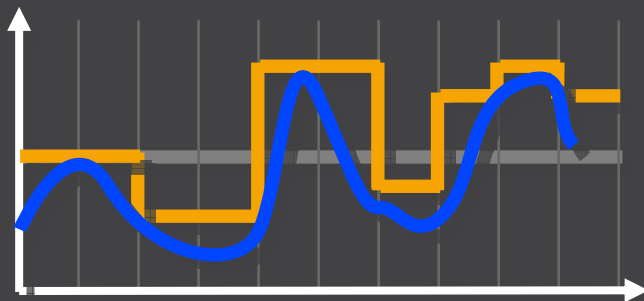
USAGE PATTERNS:
CLOUD COMPUTING with **AWS**



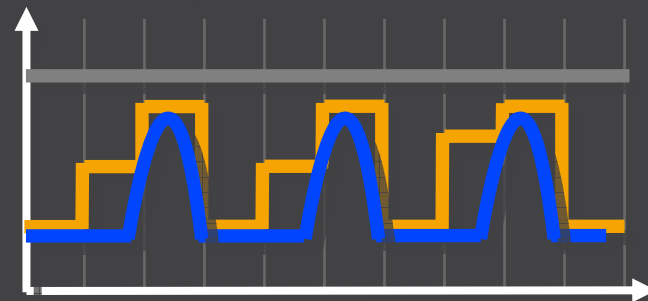
On and Off



Fast Growth

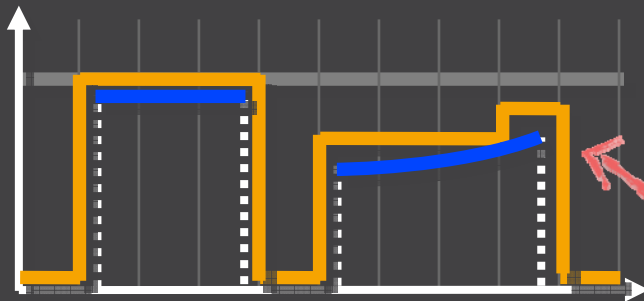


Unpredictable
peaks

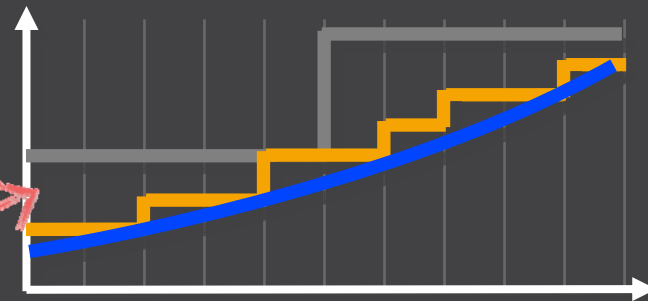


Predictable peaks

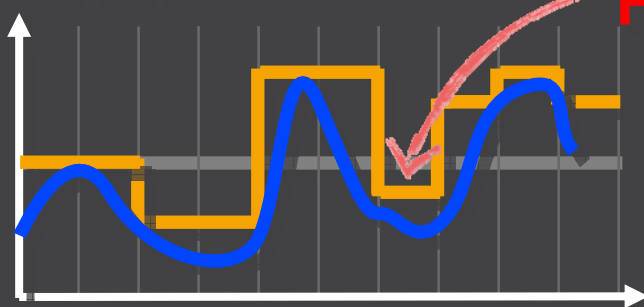
USAGE PATTERNS:
CLOUD COMPUTING with **AWS**



On and Off

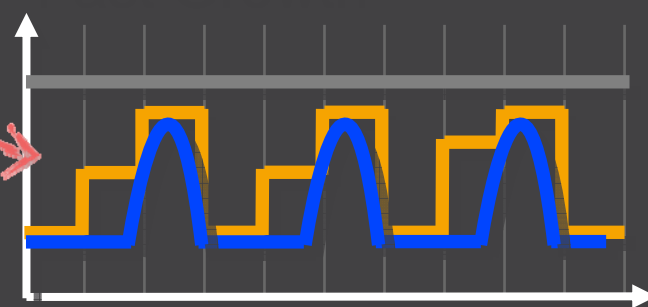


Fast Growth



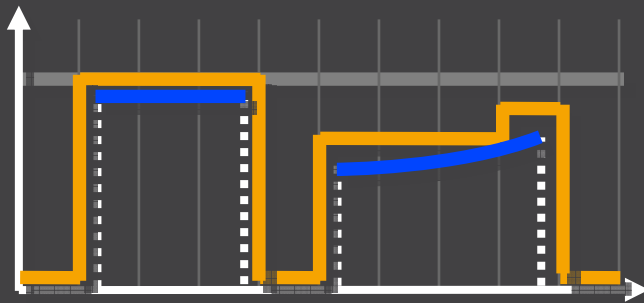
Unpredictable
peaks

Fixed!

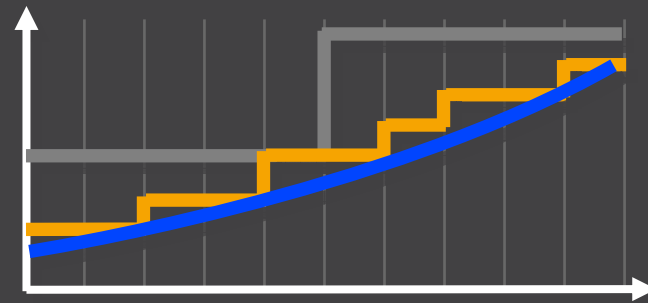


Predictable peaks

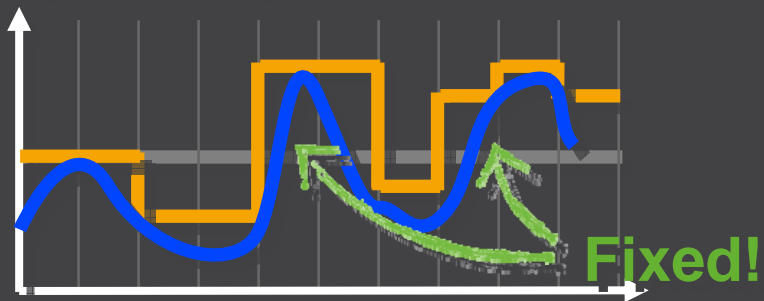
USAGE PATTERNS:
CLOUD COMPUTING with **AWS**



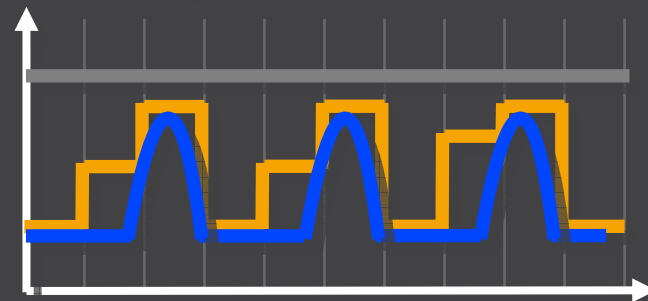
On and Off



Fast Growth



Unpredictable
peaks



Predictable peaks

USAGE PATTERNS:
CLOUD COMPUTING with **AWS**

ON DEMAND

PAY FOR WHAT YOU USE

On-Premise

- \$Physical Space
- \$Power
- \$Network
- \$Servers
- \$Certification

Amazon Web Services

\$0

To get started

NO UP-FRONT EXPENSE

NO INVESTMENT NEEDED

NO TERMINATION FEES


NO COMMITMENTS

CLEAR PRICING MODEL

aws.amazon.com/calculator

Amazon Web Services Simp

calculator.s3.amazonaws.com/calc5.html



SIMPLE MONTHLY CALCULATOR

NEW! - [Introducing Amazon ElastiCache](#) and [New Amazon CloudFront and Route 53 Edge Locations](#)

FREE USAGE TIER: New Customers get free usage tier for first 12 months ☒

Language: English

Services

Estimate of your Monthly Bill (\$ 0.00)

Choose region: US-East (Northern Virg)

Inbound Data Transfer is Free and Outbound Data Transfer is 1 GB free per region per month ☒

Amazon EC2

Amazon S3

Amazon SQS

Amazon SES

Amazon SNS

Amazon Route 53

Amazon CloudFront

Amazon RDS

Amazon ElastiCache

Amazon CloudWatch

Amazon SimpleDB

Amazon VPC

Amazon Elastic MapReduce

AWS Import

+

Compute: Amazon EC2 On-Demand Instances:

	Instances	Description	Operating System	Instance Type	Usage	De Mo
	<input type="text" value="0"/>	<input type="text"/>	Linux/OpenSolaris	Micro	<input type="text" value="0"/> Hours/Month	<input type="checkbox"/>

+

Compute: Amazon EC2 Reserved Instances:

	Instances	Description	OS	Type	Term	Usage
	<input type="text" value="0"/>	<input type="text"/>	Linux	Small	3 yr ter	<input type="text" value="0"/> Hours/Month

+

Storage: Amazon EBS Volumes:

	Volumes	Description	Provisioned Storage	Average IOPS in volume	Snapshot Storage
	<input type="text" value="0"/>	<input type="text"/>	<input type="text" value="0"/> GB-month	<input type="text" value="0"/>	<input type="text" value="0"/> GB-month of Storage

Elastic IP:

Number of Elastic IPs:

Elastic IP Non-attached Time: Hours/Month

Add To Bill

Clear Form

Common Customer Samples

Free Website on AWS

AWS Elastic Beanstalk Default

Marketing Web Site

Web Application

Media Application

HPC Cluster

Disaster Recovery and Backup

European Web Application

AMAZON EC2

ELASTIC COMPUTE CLOUD

Standard
Small



Standard
Large



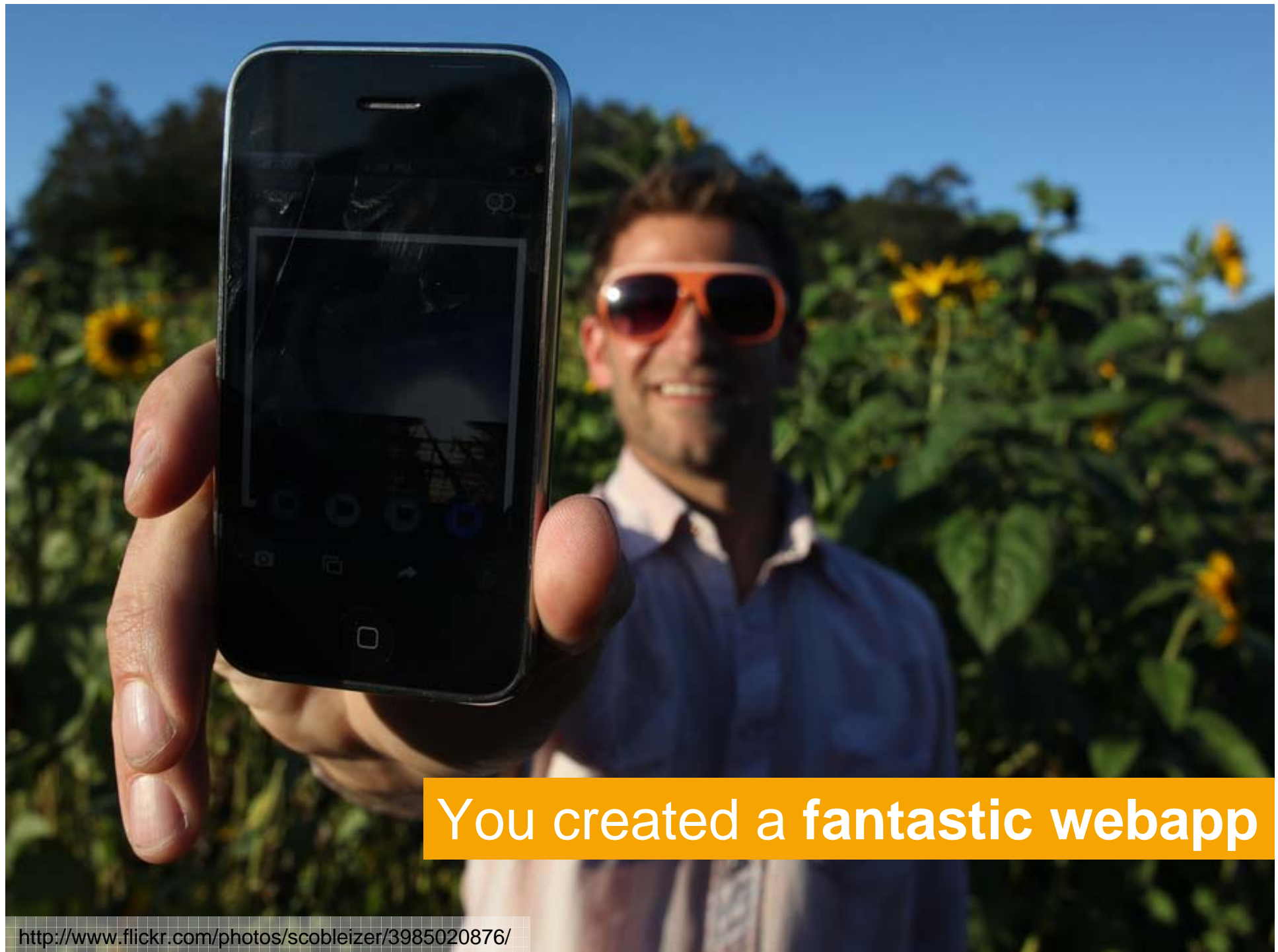
High Mem / High CPU
**Double
Extra Large**



Cluster Compute
**Quadruple
Extra Large
+GPU**



Region:	US East (Virginia) +	
	Linux/UNIX Usage	Windows Usage
Standard On-Demand Instances		
Small (Default)	\$0.080 per Hour	\$0.115 per Hour
Medium	\$0.160 per Hour	\$0.230 per Hour
Large	\$0.320 per Hour	\$0.460 per Hour
Extra Large	\$0.640 per Hour	\$0.920 per Hour
Micro On-Demand Instances		
Micro	\$0.020 per Hour	\$0.030 per Hour
High-Memory On-Demand Instances		
Extra Large	\$0.450 per Hour	\$0.570 per Hour
Double Extra Large	\$0.900 per Hour	\$1.140 per Hour
Quadruple Extra Large	\$1.800 per Hour	\$2.280 per Hour
High-CPU On-Demand Instances		
Medium	\$0.165 per Hour	\$0.285 per Hour
Extra Large	\$0.660 per Hour	\$1.140 per Hour
Cluster Compute Instances		
Quadruple Extra Large	\$1.300 per Hour	\$1.610 per Hour
Eight Extra Large	\$2.400 per Hour	\$2.970 per Hour
Cluster GPU Instances		
Quadruple Extra Large	\$2.100 per Hour	\$2.600 per Hour



You created a fantastic webapp



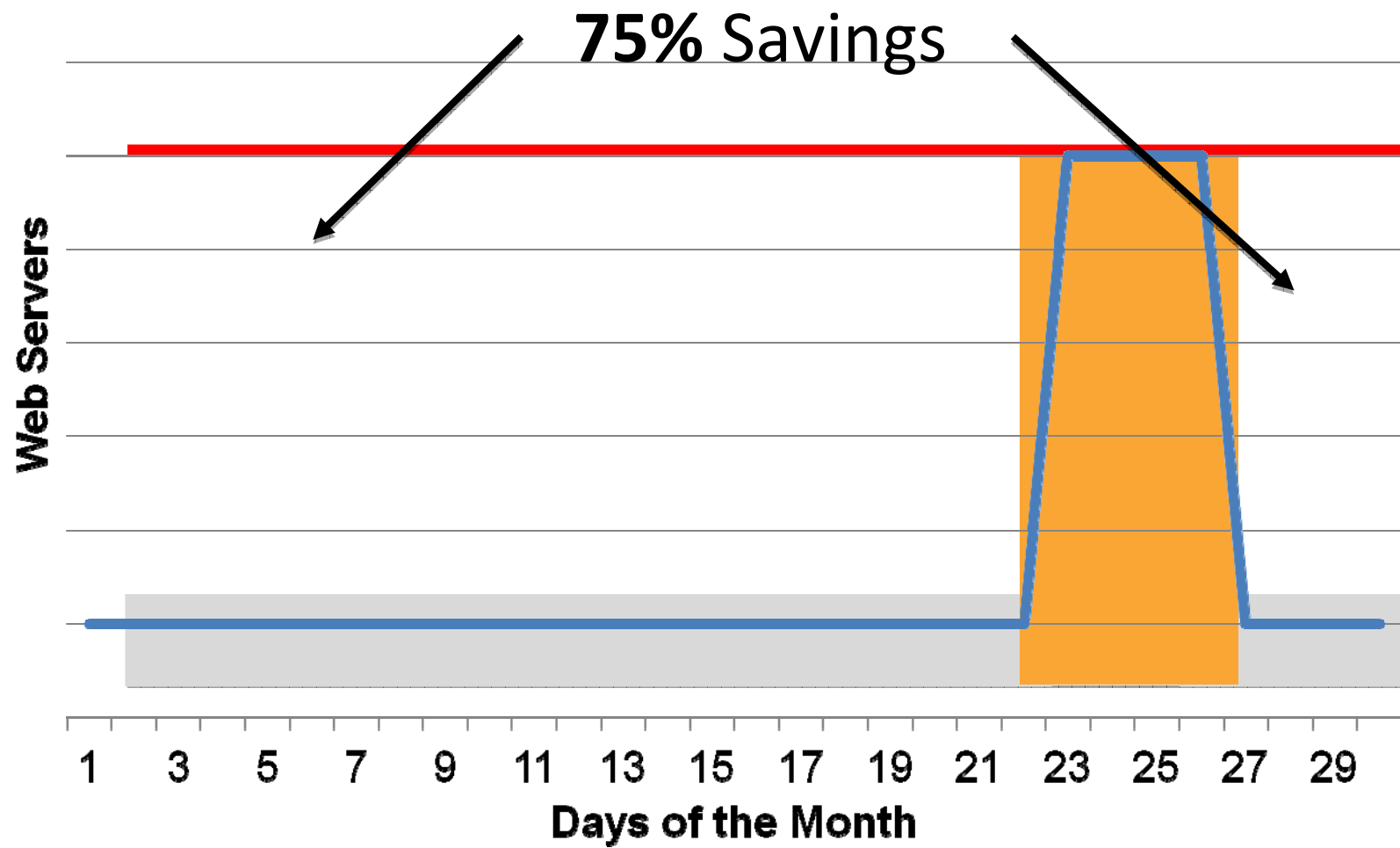
People love it

<http://www.flickr.com/photos/grantrobertson/448648883>



And everyone wants to use it

PREDICTABLE PATTERNS



during a month



UNPREDICTABLE PATTERNS

onoko

Visitors Overview



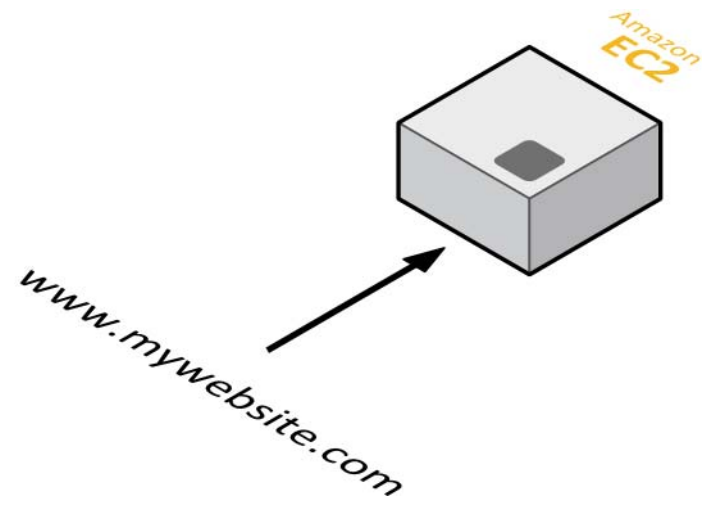
"With AWS, scalability is never a problem, and we have survived — and profited — from massive spikes of up to **5 million additional users a day** without any problems..."



what we really need is...

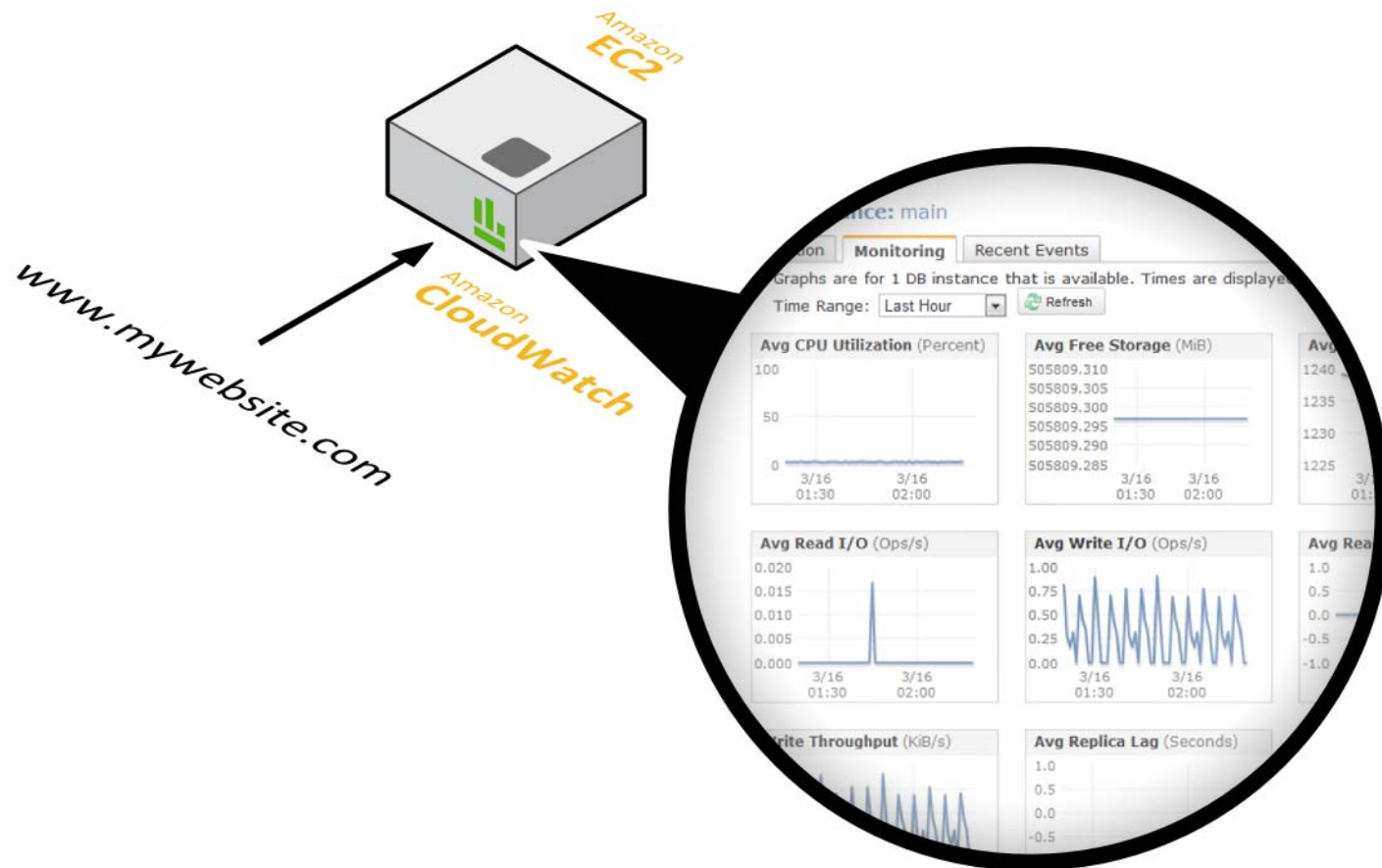
...adjustable capacity

ELASTIC HOSTING



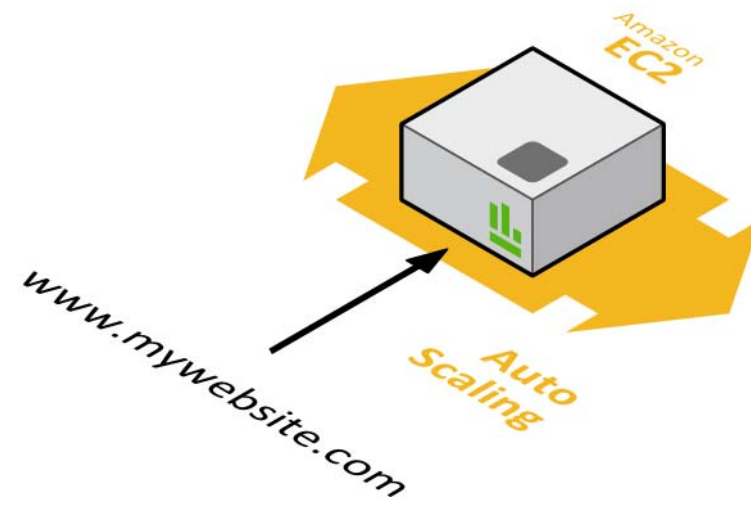
Amazon CloudWatch

Monitoring for AWS resources



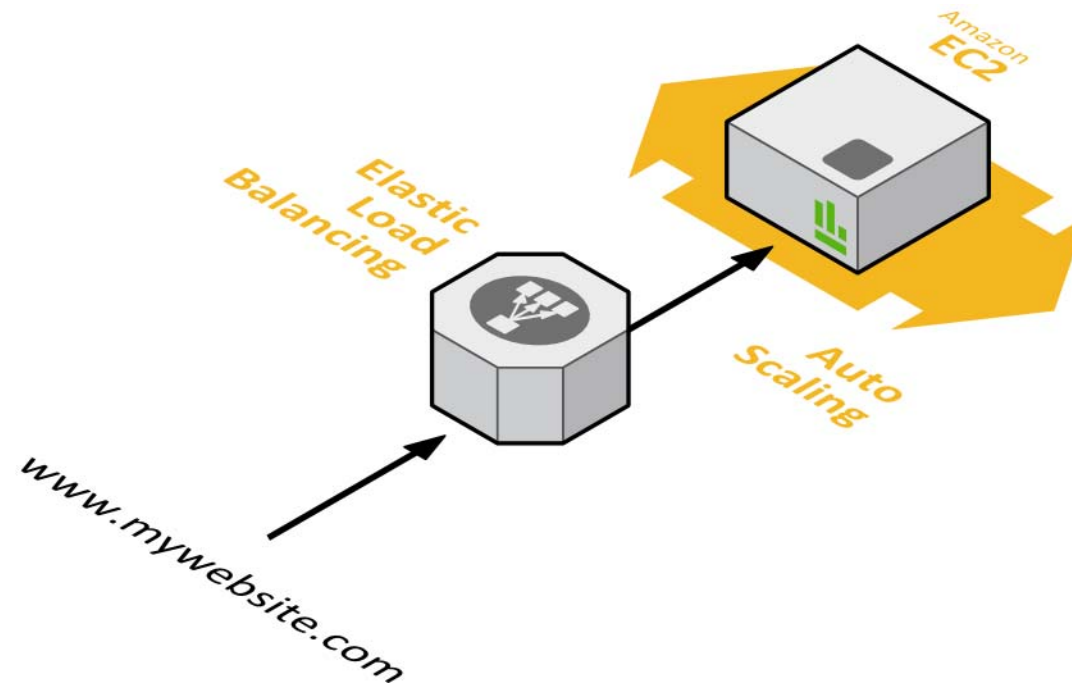
Auto Scaling

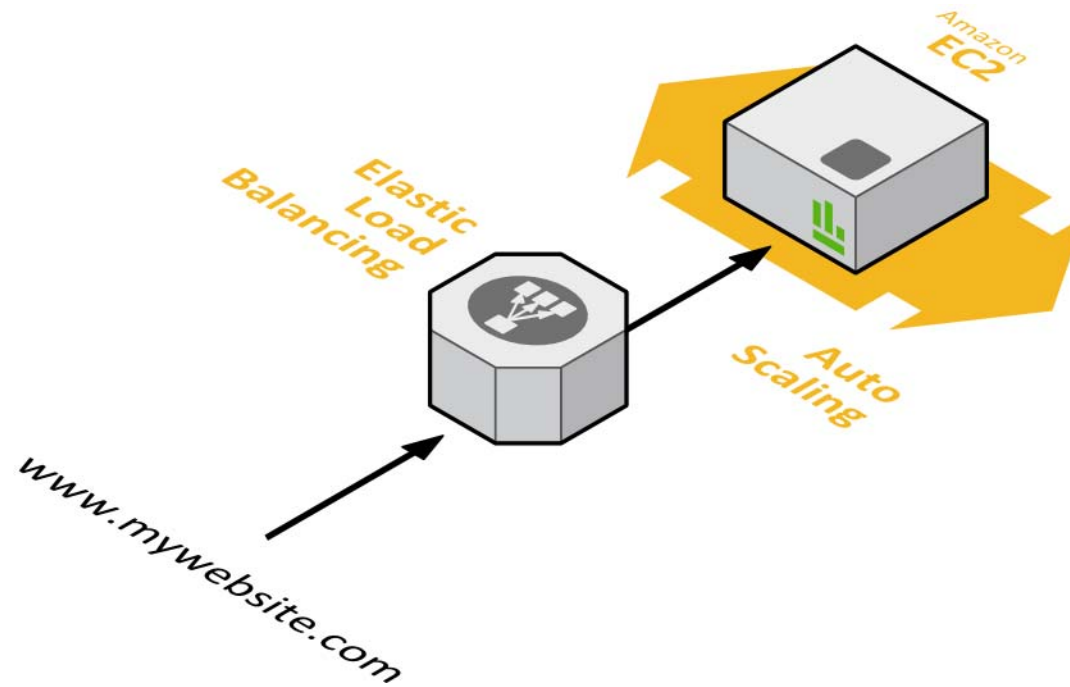
Automatically scale up/down EC2 capacity



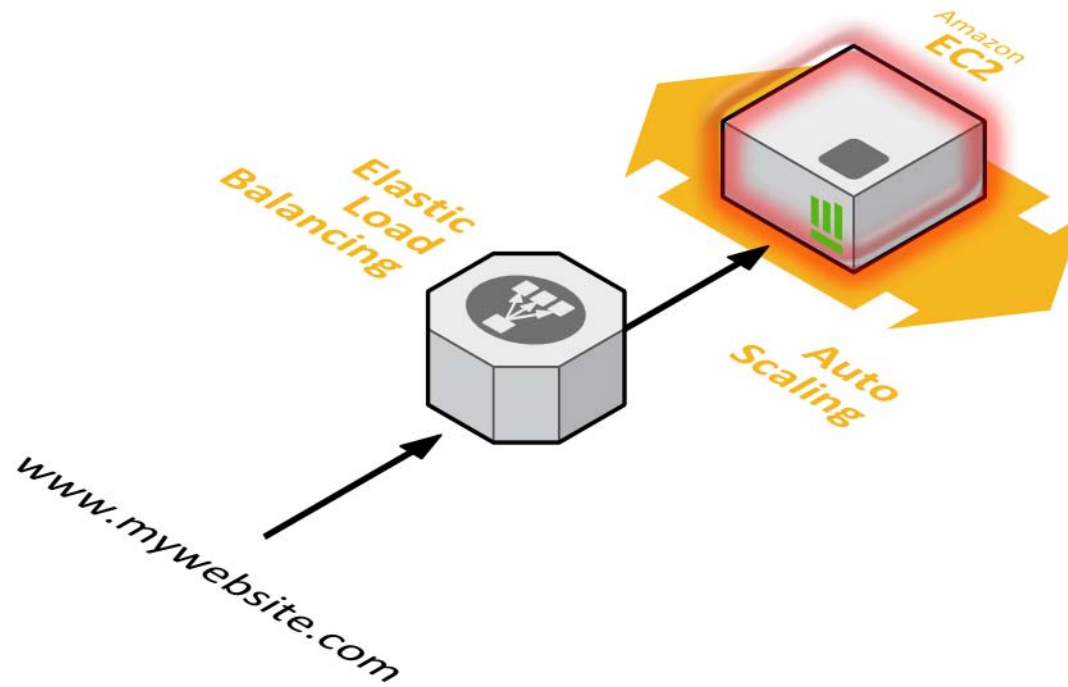
Elastic Load Balancing

Distributes incoming traffic to EC2 instances

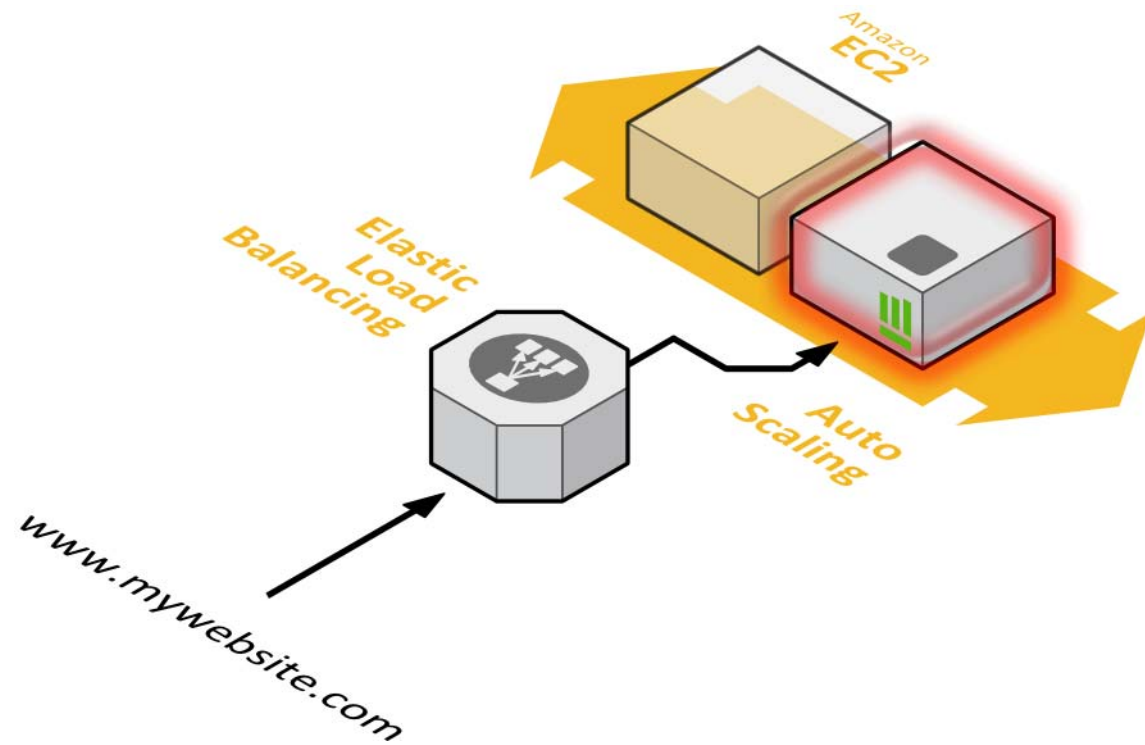




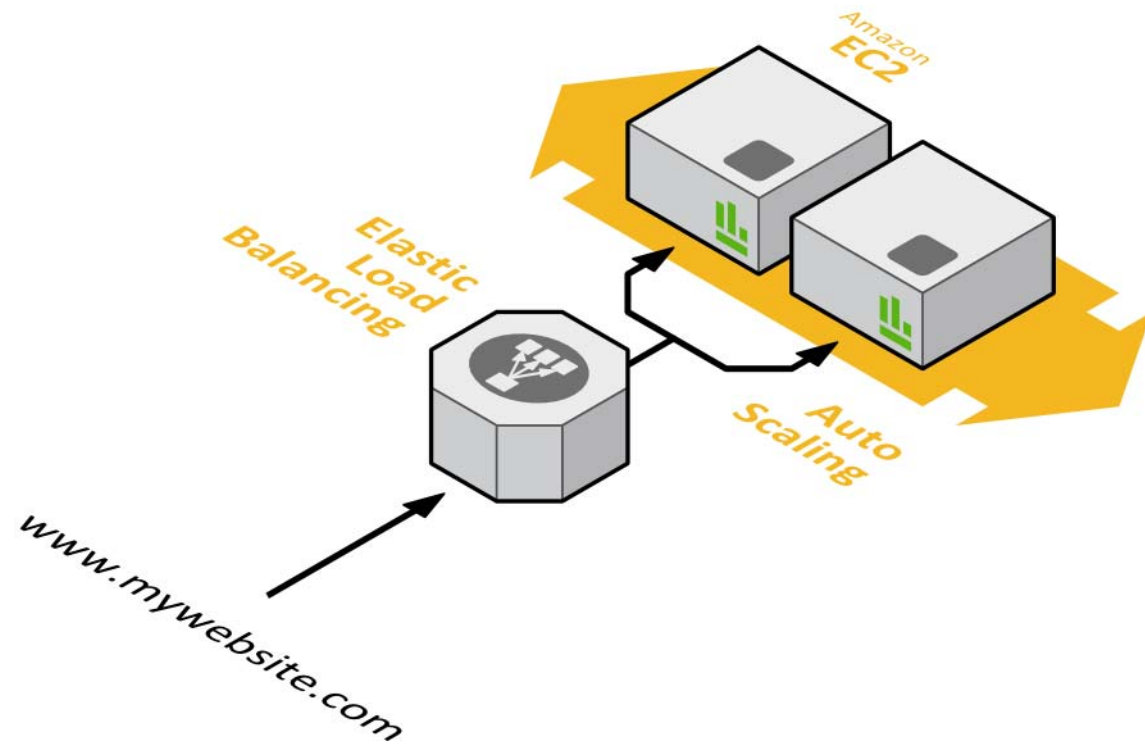
6 am



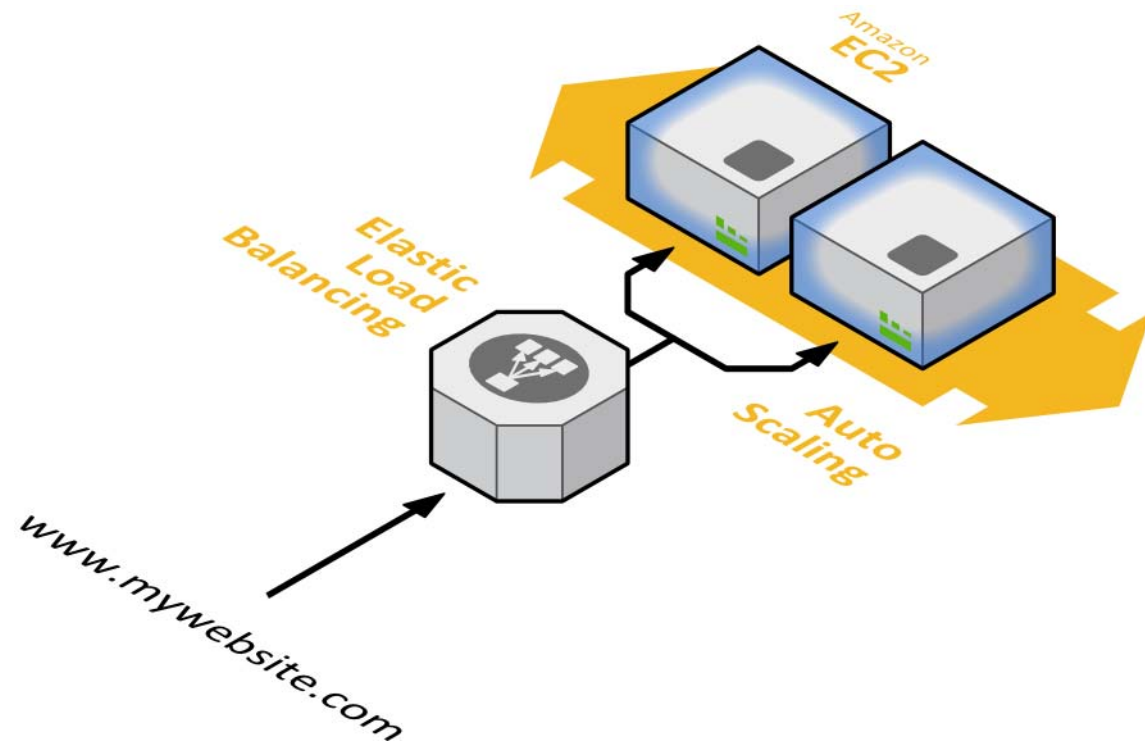
10 am



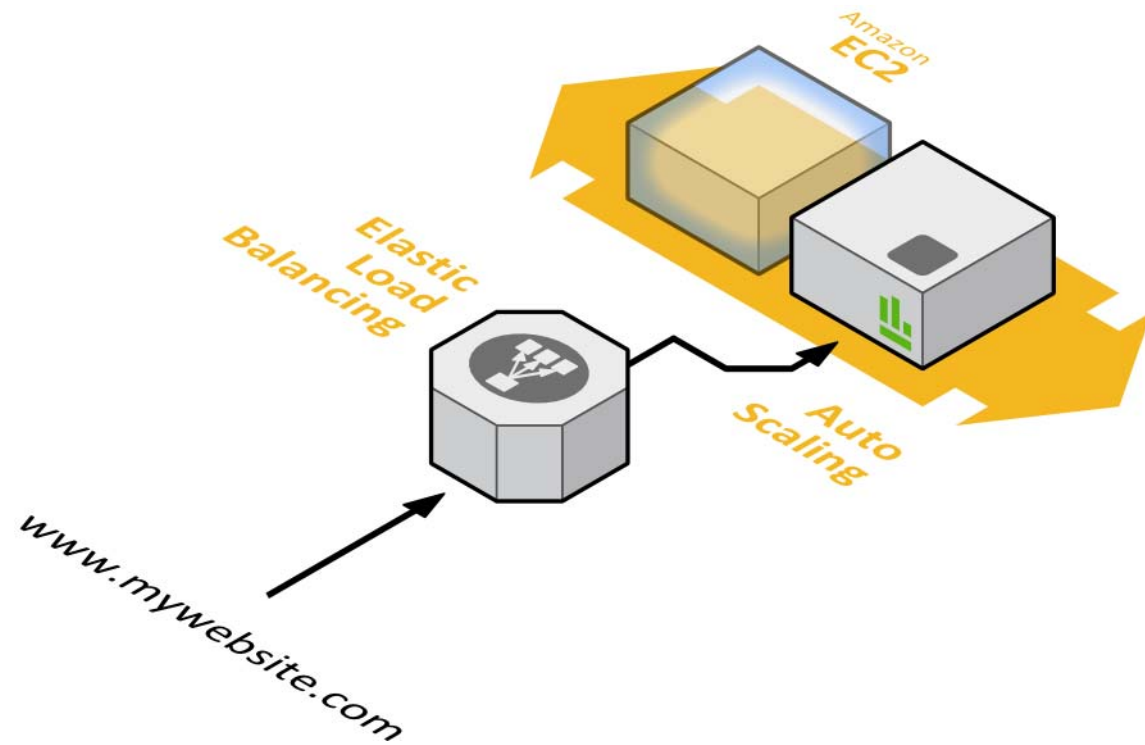
10 am



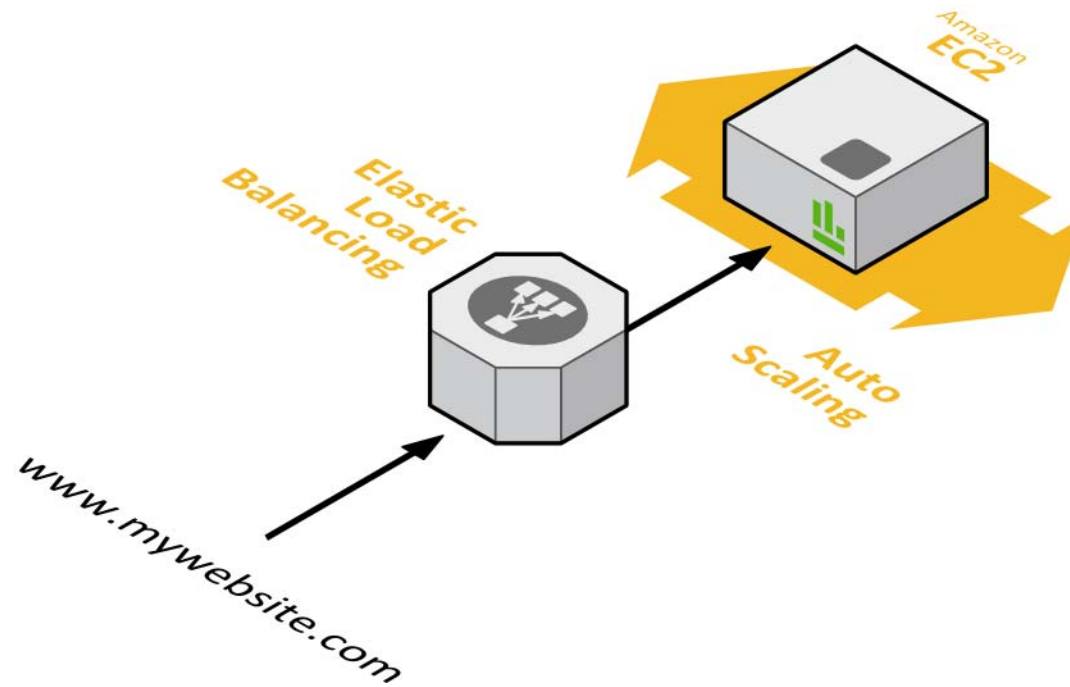
10 am



7 pm



7 pm



7 pm



without elasticity you can't accelerate

DATA STORAGE

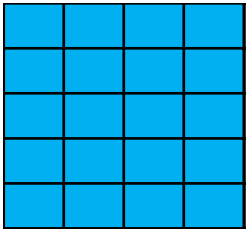
A person's silhouette is shown holding a smartphone horizontally, capturing a photo of a concert stage. The stage is filled with bright, glowing lights and a large crowd of people. The background is a vibrant blue and green, with many bright, out-of-focus lights creating a bokeh effect. The overall scene is dynamic and energetic, representing the constant production of data in a digital age.

We are **constantly** producing more data



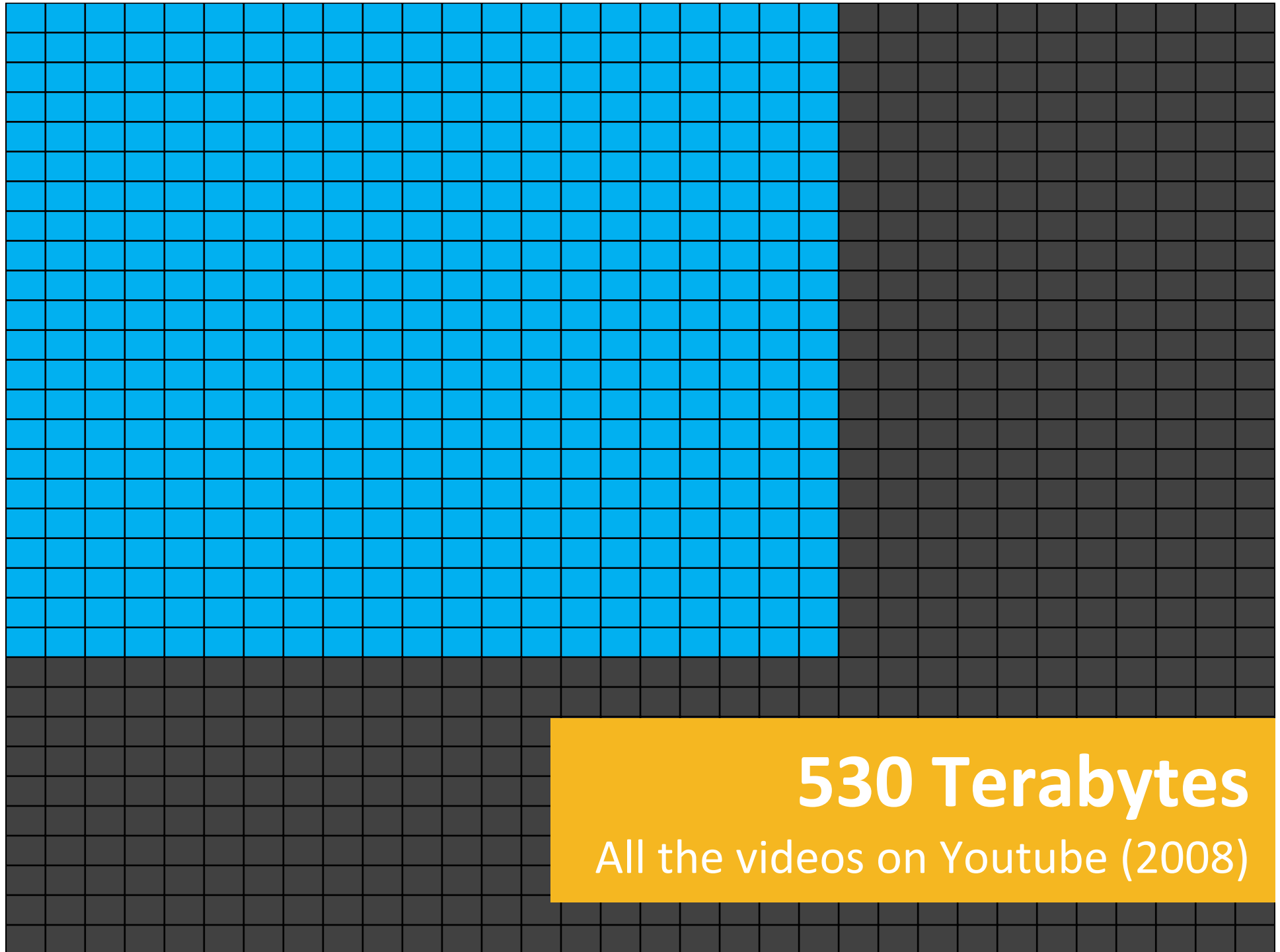
1 Terabyte

A 150€ hard drive that holds 230 000 songs



20 Terabytes

Photos uploaded on Facebook each month





1 Petabyte

Data processed by Google every 72 minutes

Kilobytes were stored on floppy disks.
Megabytes were stored on hard disks.
Terabytes were stored in disk arrays.

**Petabytes are stored
in the cloud.**

AMAZON S3

SIMPLE STORAGE SERVICE

Region: US Standard +		
	Standard Storage	Reduced Redundancy Storage
First 1 TB / month	\$0.125 per GB	\$0.093 per GB
Next 49 TB / month	\$0.110 per GB	\$0.083 per GB
Next 450 TB / month	\$0.095 per GB	\$0.073 per GB
Next 500 TB / month	\$0.090 per GB	\$0.063 per GB
Next 4000 TB / month	\$0.080 per GB	\$0.053 per GB
Over 5000 TB / month	\$0.055 per GB	\$0.037 per GB

1b → 5Tb

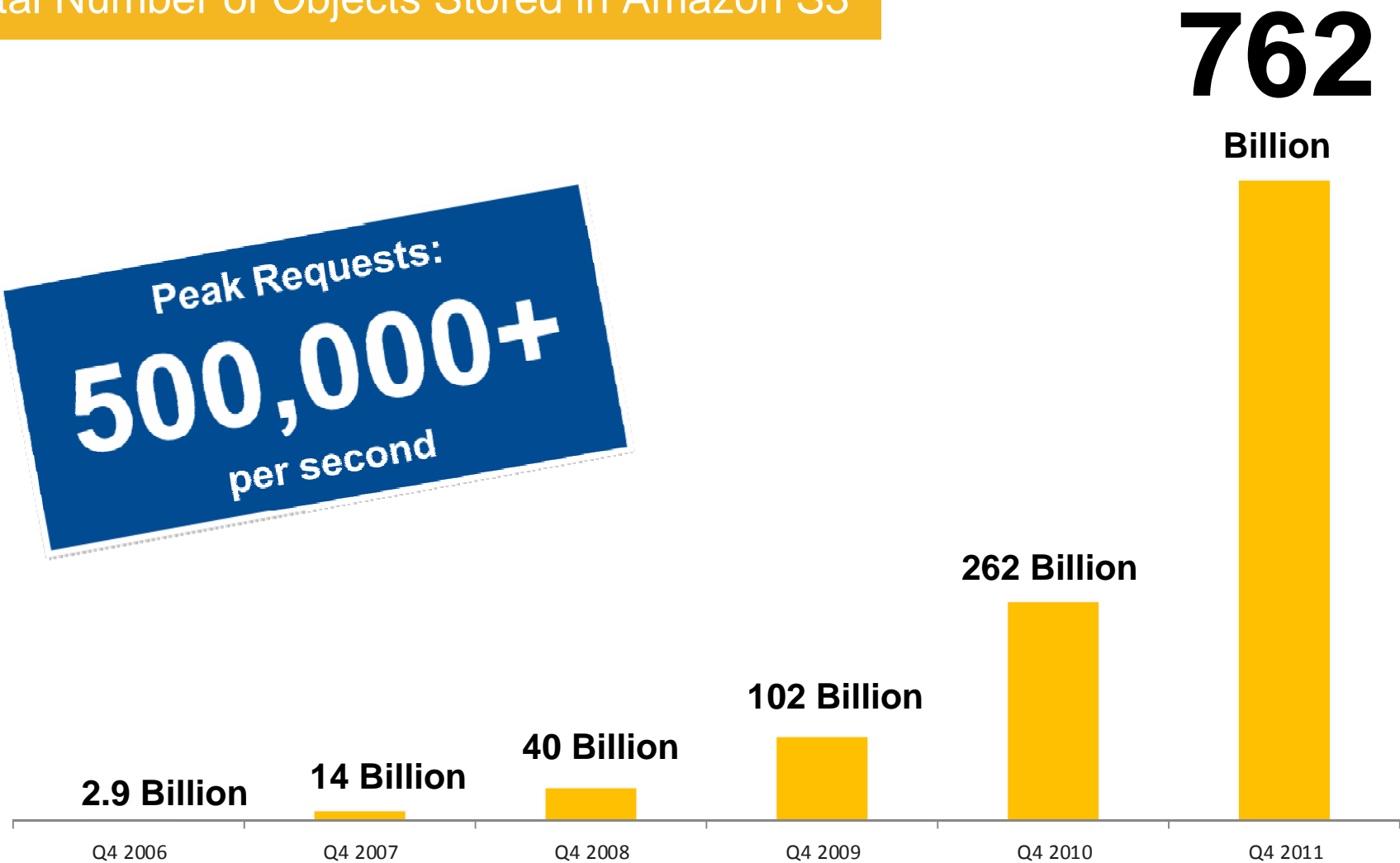
99.99999999999999%

DURABILITY

Amazon S3 Growth

Total Number of Objects Stored in Amazon S3

Peak Requests:
500,000+
per second



www.adoptahydrant.org







Claim responsibility for shoveling out
a fire hydrant after it snows.

Email address

- ☒ I haven't signed up yet
☐ I've already signed up

Name (visible to others)

Organization (visible to others)

Home phone number

Mobile phone number

Choose a password

Sign up

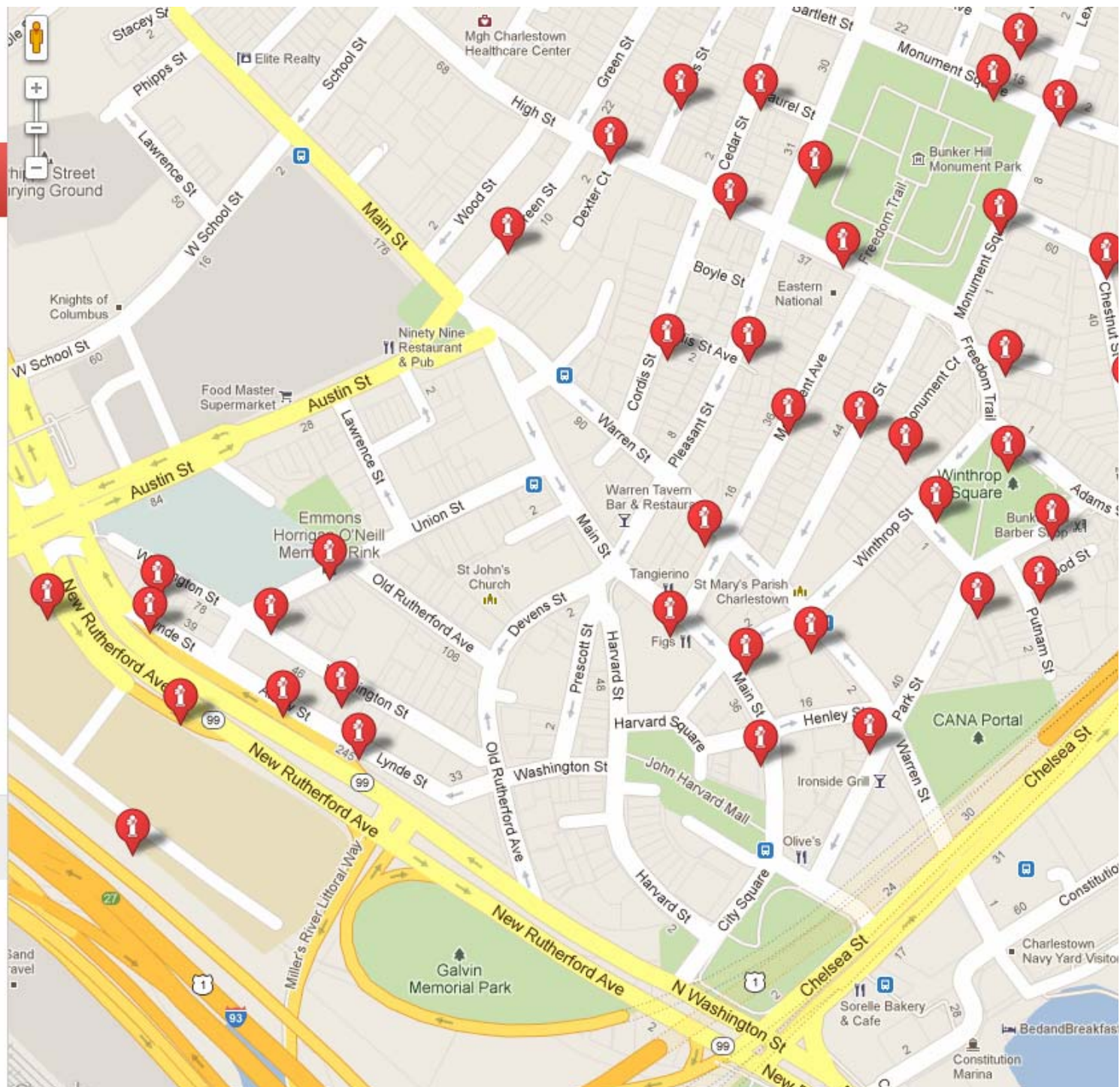
By signing up, you agree to the
[Terms of Service.](#)

CODE for
AMERICA

Built in
BOSTON



Thomas M. Menino, Mayor



www.garbagescout.com

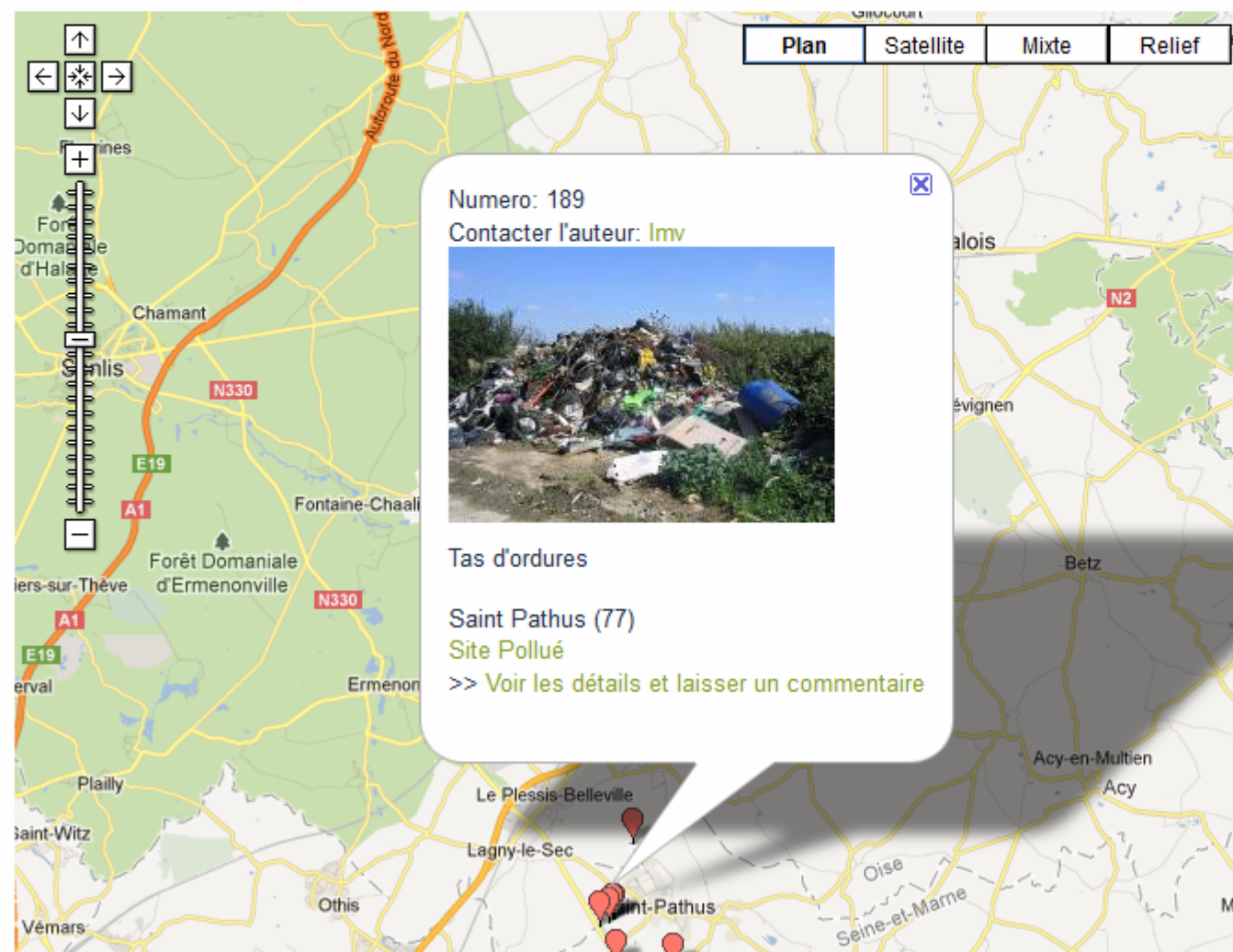


Les Mains Vertes : participez à notre grande opération de nettoyage en 2012 !

Notre projet pour 2012 est de mener une action nationale de grande ampleur pour nettoyer des sites naturels et, par ce biais, de sensibiliser le grand public et les pouvoirs publics sur la question des déchets (réduction à la source et recyclage des emballages...).

Pour cela il faut d'abord cartographier un maximum de sites pollués afin d'organiser les nettoyages.

Rejoignez-nous et aidez-nous à compléter la carte ci-dessous en nous faisant parvenir vos photos !



Map interface showing a polluted site near Saint-Pathus. The map includes navigation controls (Plan, Satellite, Mixte, Relief) and a pop-up window with the following information:

- Numero: 189
- Contacteur l'auteur: lmv
- Image: A photograph of a large pile of trash and debris.
- Tas d'ordures
- Saint Pathus (77)
- Site Pollué
- >> Voir les détails et laisser un commentaire

Compteurs


137
sites pollués

10
sites dépollués

21715
litres de déchets ramassés

326
heures de nettoyage

Participez Vous Aussi !

 Inscrivez vous pour déclarer un nouveau site pollué

Association

L'association Ecologie Urbaine fait vivre ce site.

Nous sommes une Association de loi 1901 qui a pour but la protection et nettoyage de la nature en impliquant les citoyens.

On en a marre des grands discours : on veut plus d'actions et moins de blabla.

Connexion

Nom d'utilisateur : *

www.recovery.org



RECOVERY.GOV

TRACK THE MONEY

Recovery.gov is the U.S. government's official website that provides easy access to data related to Recovery Act spending and allows for the reporting of potential fraud, waste, and abuse.

Connect With Us



Search

Go

Advanced Data Search

Looking For ?

HOME

ABOUT

ACCOUNTABILITY

WHERE IS THE MONEY GOING?

OPPORTUNITIES

NEWS

FAQS & RESOURCES

CONTACT US

SITE INDEX

WHAT IS RECOVERY.GOV?

This website was created under the [Recovery Act](#) to show the American public how Recovery funds are being spent by recipients of contracts, grants, and loans, and the distribution of Recovery entitlements and tax benefits.

[Get Started >>](#)

OVERVIEW OF FUNDING

The American Recovery and Reinvestment Act of 2009 distributes funds in three ways. Since its enactment in February 2009, \$755B has been paid out.

Tax Benefits

\$297.8B

Contracts, Grants and Loans

\$232.4B

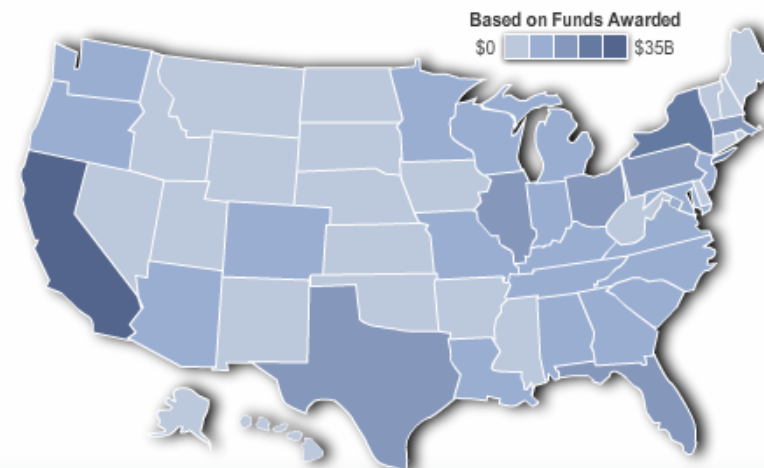
Entitlements

\$224.8B[Source](#)[Text View of Funding](#)

As of 05/04/2012

FUNDING FOR FEDERAL CONTRACTS, GRANTS AND LOANS

February 17, 2009 - March 31, 2012



Roll over map to see Recovery data. Click on a state for more details.

[Territories](#)[Source](#)[Text View of Map Data](#)

As of 4/30/12

See Projects in your Neighborhood

Go

**MAP GALLERY**

FEATURED STORIES



New Deal Buildings Get Recovery Help

Historic public structures get funds for needed repairs and restoration.

[Read more about historic buildings getting Recovery](#)

SEARCH FOR A RECIPIENT

Go

RECOVERY FUNDED JOBS AS

RECOVERY ON TWITTER

@Quentin Cantu: I'll leave the pun potential to the others.
@RecoveryDotGov <http://t.co/F1o5n4Cb> #stimulus <http://t.co/w7bK82ii>



RECOVERY.GOV

TRACK THE MONEY

Recovery.gov is the U.S. government's official website that provides easy access to data related to Recovery Act spending and allows for the reporting of potential fraud, waste, and abuse.

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SITE INDEX

[Home](#) > [Where is The Money Going?](#) > [Recipient Data](#) > [State Summary Page](#)

STATE/TERRITORY SUMMARY - CALIFORNIA

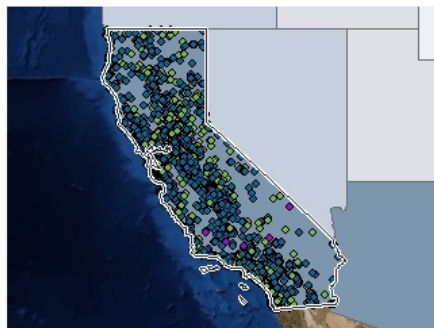
States

California

Go

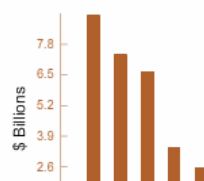
\$33,385,020,193 [View State Recovery Site](#)[Certification](#)

Contract, Grant And Loan Projects

[View Interactive Map](#)

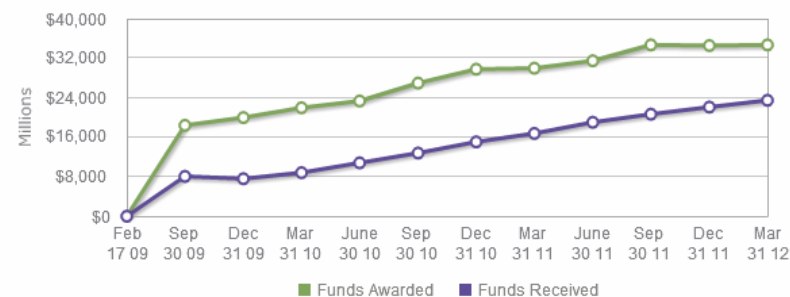
	# of Awards	Funds Awarded
Contracts	5,683	\$4,156,705,014
Grants	18,212	\$25,277,802,956
Loans	67	\$3,950,512,222

Breakdown Of Funding

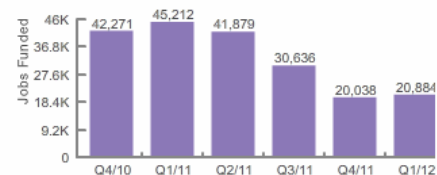


\$1.1 million

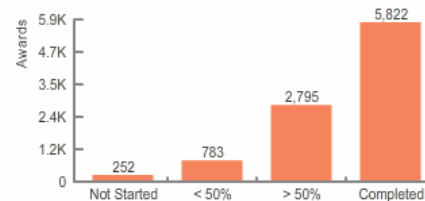
Funding By Quarter

[Text View of Funding by Quarter](#)

Estimated Jobs By Quarter

[Text View and More Details about Estimated Jobs](#)

Completion Status For Prime Awards

[Text View and More Details about Completion Status](#)

Top Cities

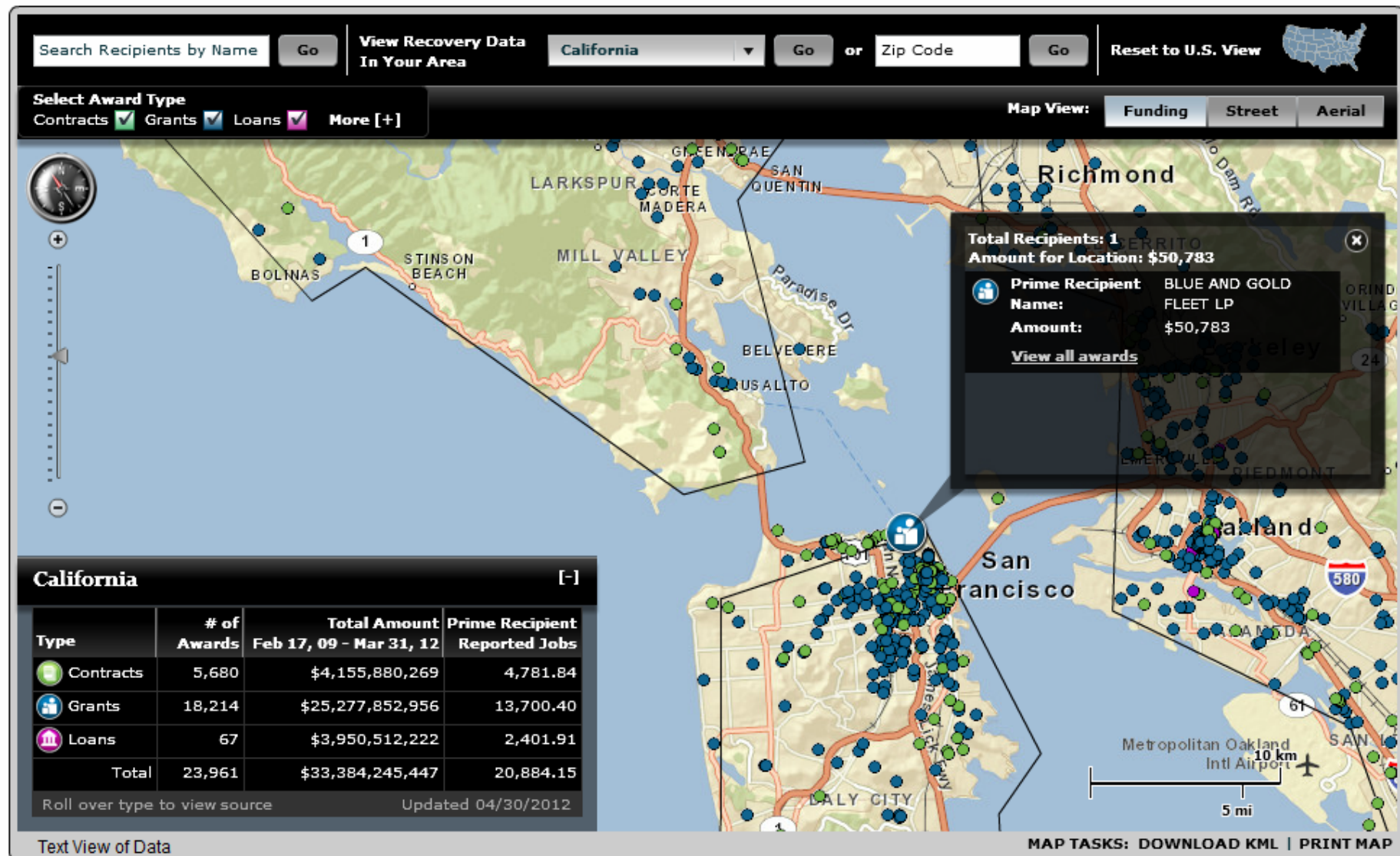
City Name	Total Amount
Sacramento	\$5,169,163,474
Los Angeles	\$3,338,820,942
Oakland	\$2,007,594,285
San Francisco	\$1,418,670,152
Santa Margarita	\$1,189,322,700

[More Details on All Cities](#)

Top Recipients

Recipient	Funds Awarded
CALIFORNIA HIGH SPEED RAIL AUTHORITY	\$2,552,556,231
TRANSPORTATION, CALIFORNIA DEPARTMENT OF	\$1,531,211,873
SUNPOWER CORPORATION	\$1,357,124,402
MOJAVE SOLAR LLC	\$1,124,110,000

RECIPIENT PROJECTS



Recovery.gov and Treasury.gov



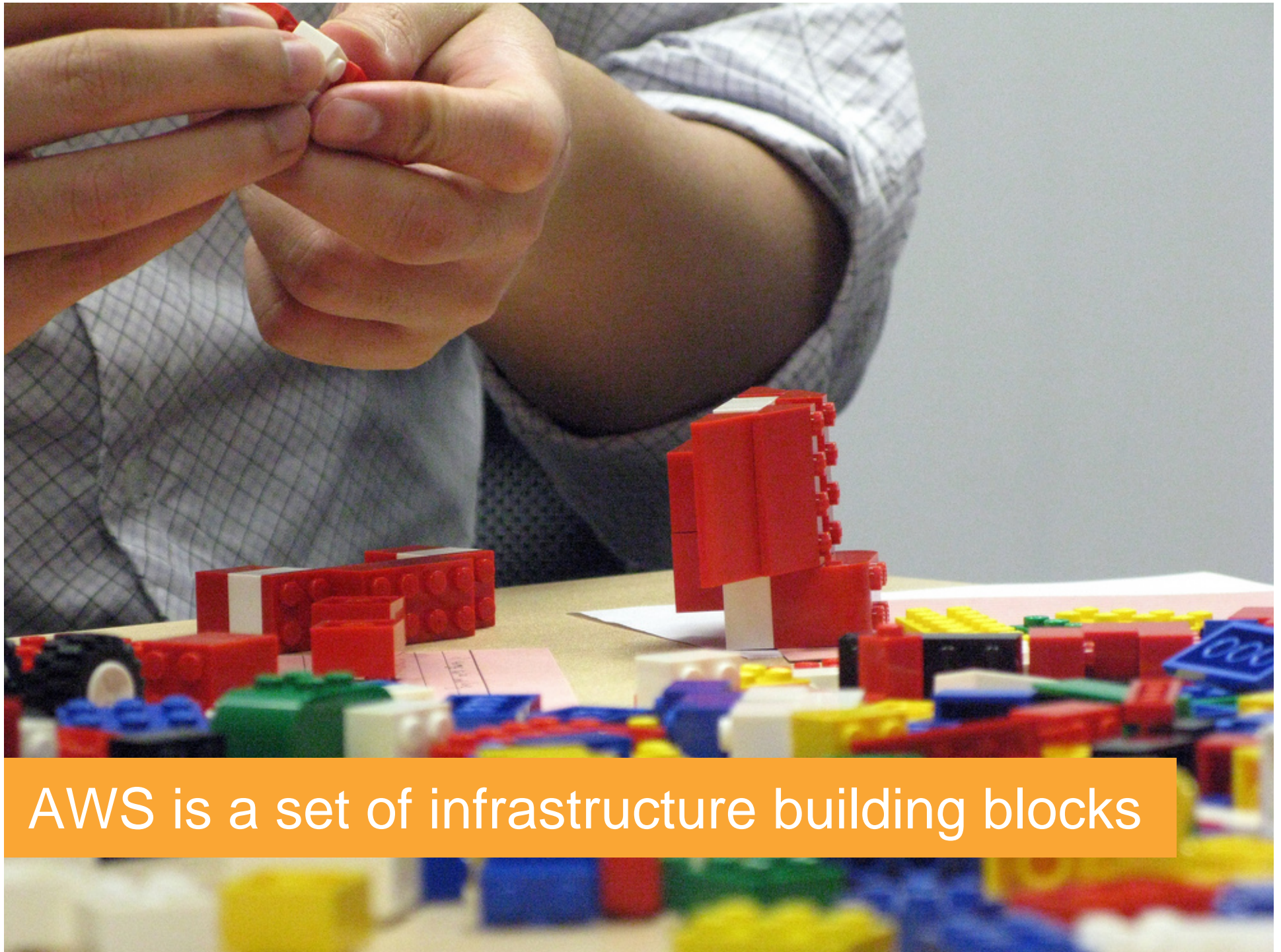
First government-wide system to move to the cloud

Savings of over \$750,000 in current budget cycle



"Cloud computing strikes me as a perfect tool to help achieve greater transparency and accountability. Moving to the cloud allows us to provide better service at lower costs. I hope this development will inspire other government entities to accelerate their own efforts. The American taxpayers would be the winners."

- Earl E. Devaney, the Board's Chairman.



AWS is a set of infrastructure building blocks

INNOVATE

« Want to increase innovation?
Lower the cost of failure »

Joi Ito



A prototype shouldn't require big investments...



... it should be cheap and validate ideas

AWS lowers the cost of innovation

Testing a new idea is cheap

**INFRASTRUCTURE
IS NO LONGER A BARRIER**

