



Google  
Developers



Google Cloud Platform

# Here be Big Query

Building Social Gaming Infrastructure on  
the Google Cloud Platform

## Tom Newton

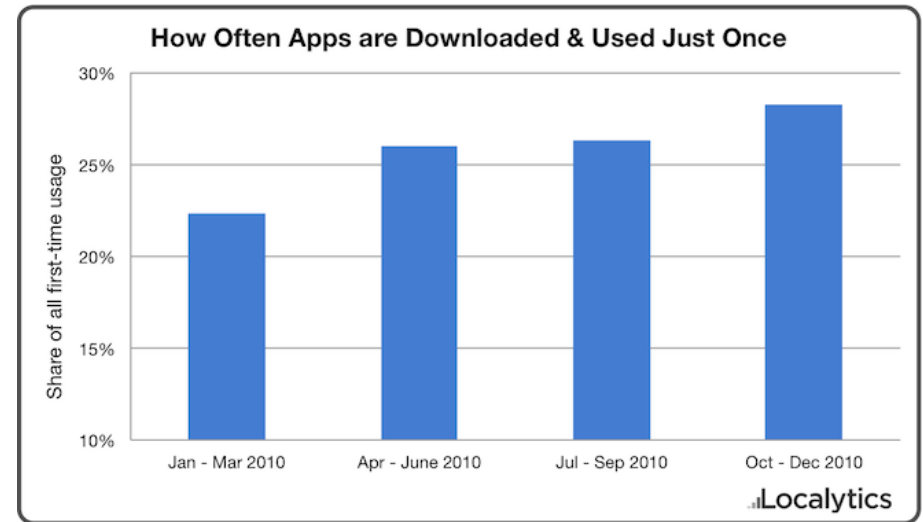
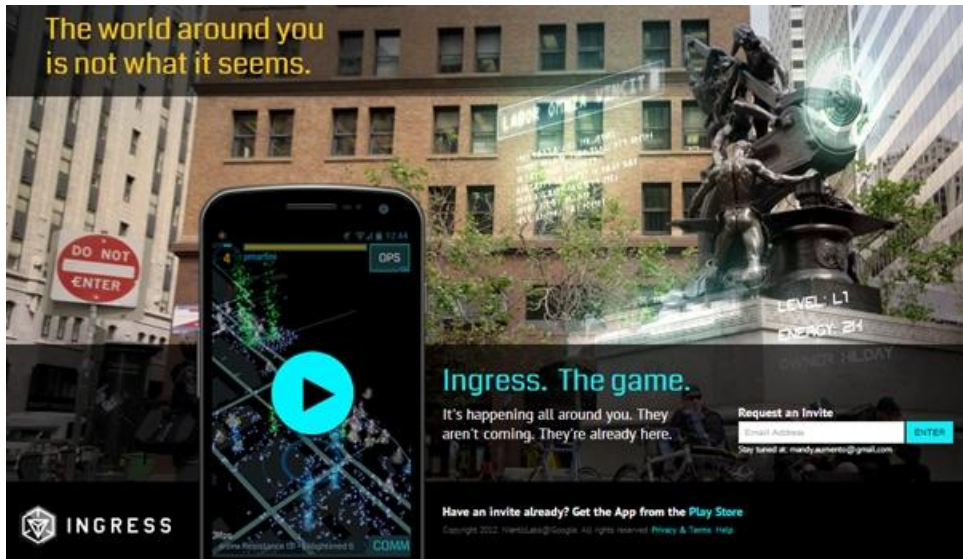
Director of Social Gaming, Gamesys

## Matt McNeill

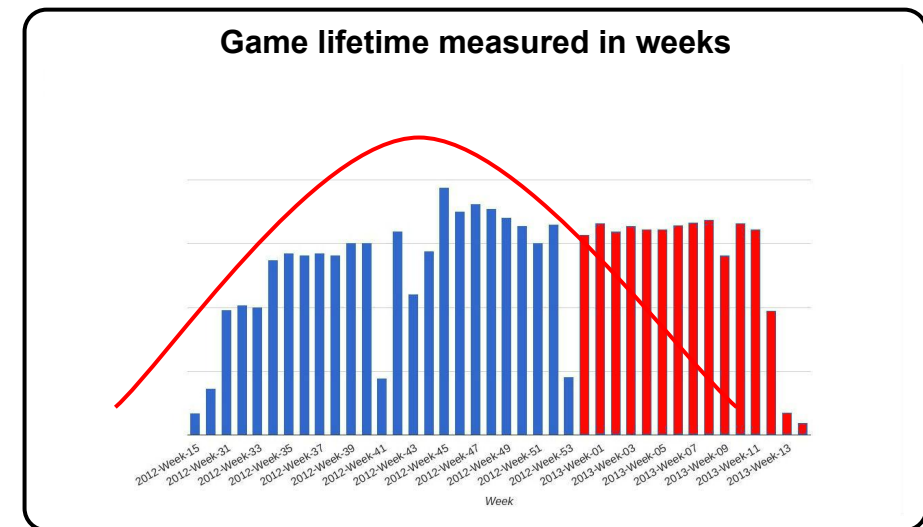
Head of Strategic Customer Relationships,  
Google Cloud Platform, EMEA



# The Life of a Game



1



2



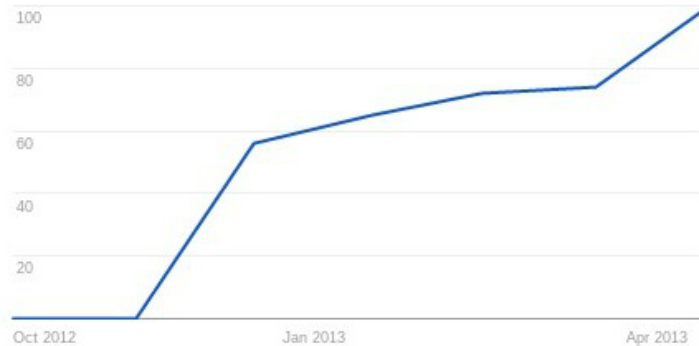
<sup>1</sup> <http://www.localytics.com/blog/2011/first-impressions-matter-26-percent-of-apps-downloaded-used-just-once/>  
<sup>2</sup> Representative sample of usage data from a typical mobile game

# Connected Games are the Future

Interest in connected games has been trending upwards in Google search since Q4 2012

## Interest over time <sup>?</sup>

The number 100 represents the peak search interest



1

Enables Social



Reduces Piracy



Enables Measurement





# The Science of Gaming

Tom Newton, Director of Social Gaming, Gamesys

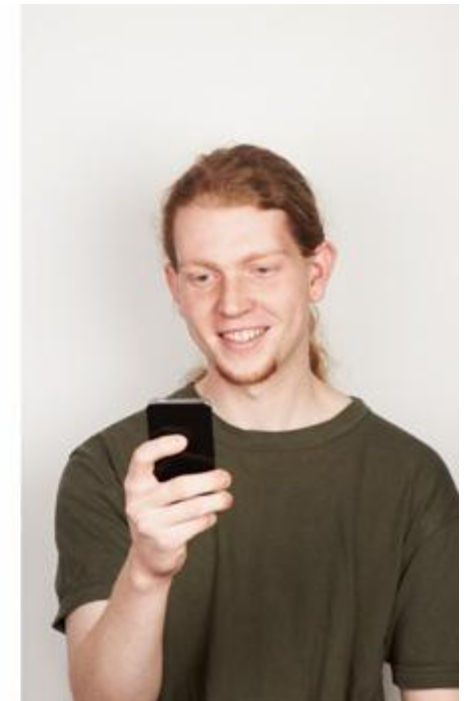
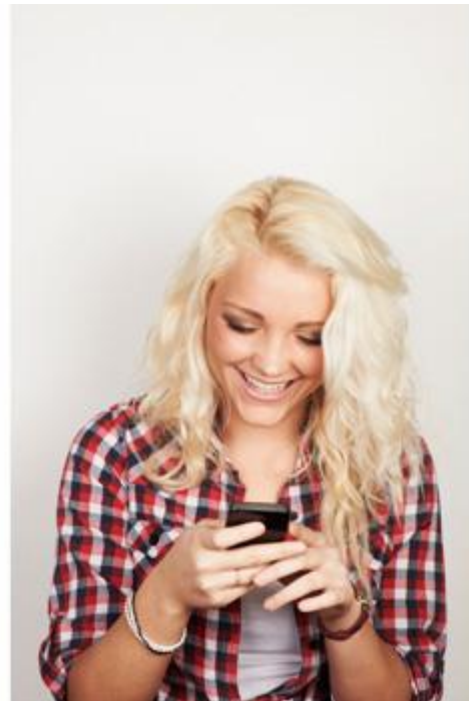
# Who is Gamesys?

- Founded in 2001
- #1 in the UK
- Handle \$5 Billion in turnover annually
- First company to launch real money gaming on Facebook
- Employ 1,000 globally



# Social and Mobile Gaming at Gamesys

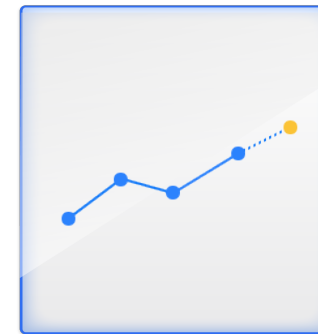
- Started investing in Social in 2011
- 100 people employed on the Social Team today
- Currently operating 5 cross-platform games
- Leader in Social Casino genre, also powering games for PopCap/EA



# Gamesys chose Google



Google Cloud Platform

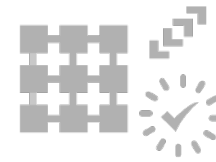




# Why Google?



Scale



Take advantage of the **scalability, reliability** and **availability** of Google's infrastructure

APIs



Utilise the **full range** of Google APIs to access many **powerful and sophisticated services**

Reliability



Google provide **99.95% SLA** and **24x7 phone**, and many other support options



# Inside a Game

- 1 Case Study: Here Be Monsters
- 2 Data, Data, Data: processing and reporting
- 3 Industrialising our systems on the Google Cloud
- 4 Putting it all together





**HERE BE  
MONSTERS**

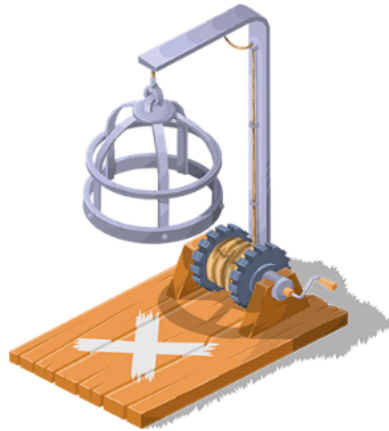
# Travel, Collect, Craft!



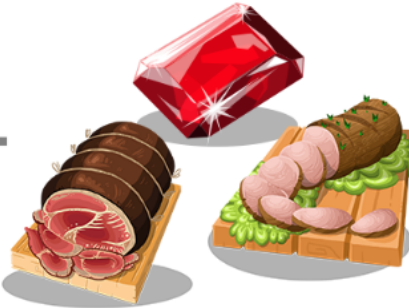
# Trap Monsters



+



+



=



Demo





# Data

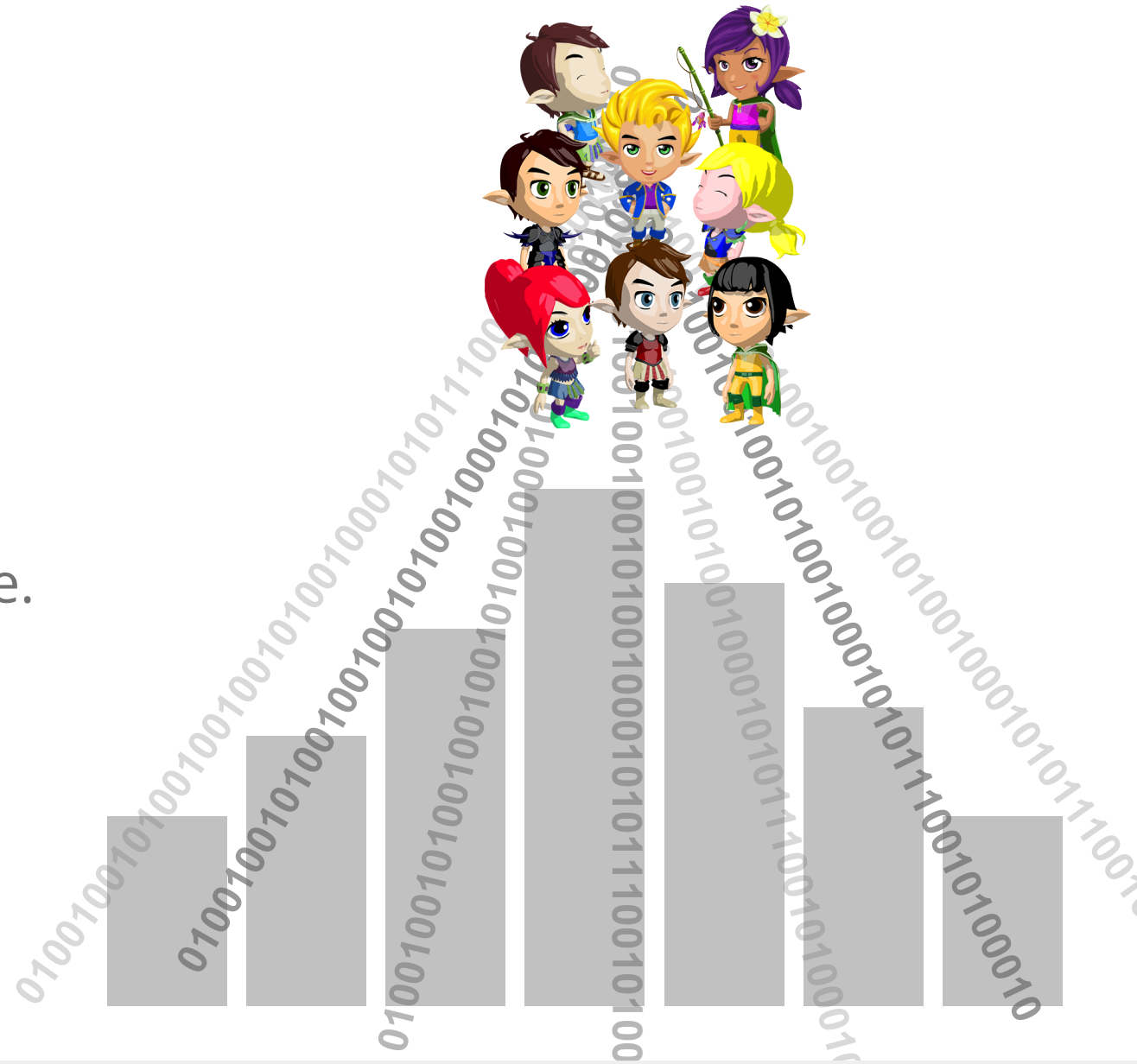
Importance of insight

# Events drive Analysis

Enables deeper ad hoc analysis.

Analysis goes only as far as the data.

Finer the grain, the bigger the volume.



# Be Ready for Success

	Game 1	Game 2	Here Be Monsters ( Beta )
 <b>DAU</b>	600,000+	150,000+	10,000+
 <b>Sessions</b>	45 Million+	8 Million+	1 Million+
 <b>Events</b>	5 Billion +	500 Million +	200 Million +

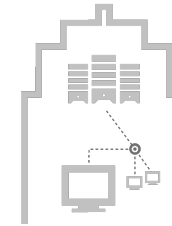




# Why Big Query?



Managed



**Fully managed** architecture, allows **instant project startup**, and **rapid time to insight**

Scales



Grows with your project, **scales horizontally** to **100 Bn's of rows** with **no loss of performance** on **interactive queries**

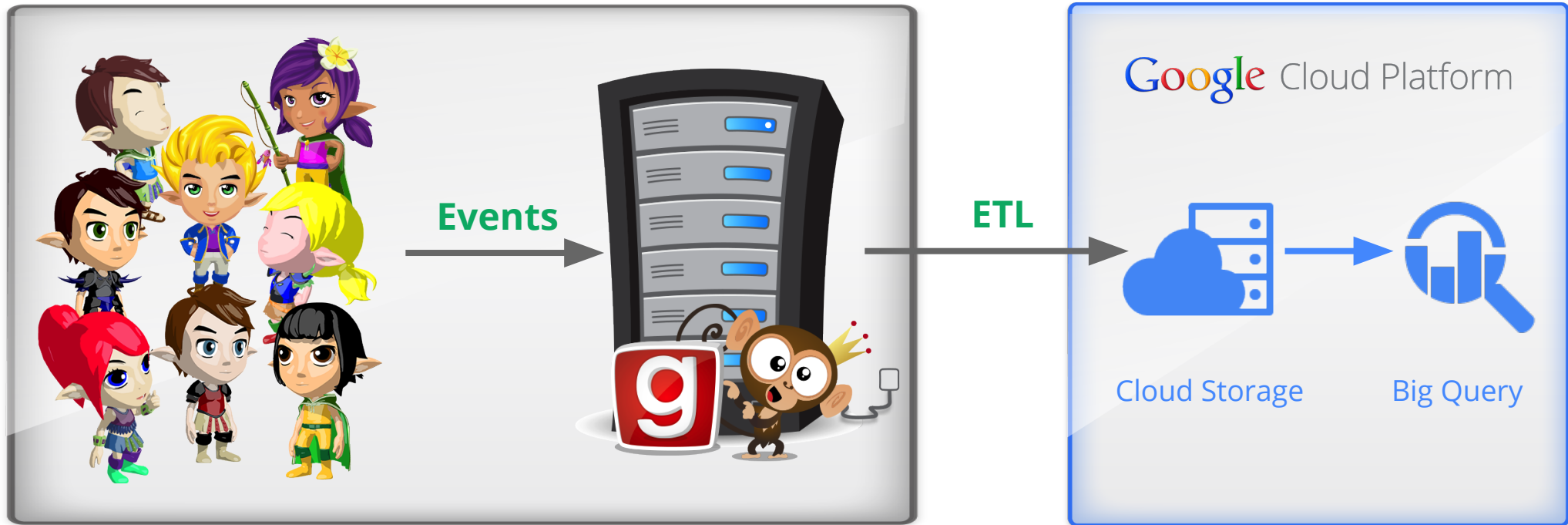
SQL



**Easy to learn**, **no training necessary**.



# Nightly ETL



# Aggregations Drive Reporting



Profiles

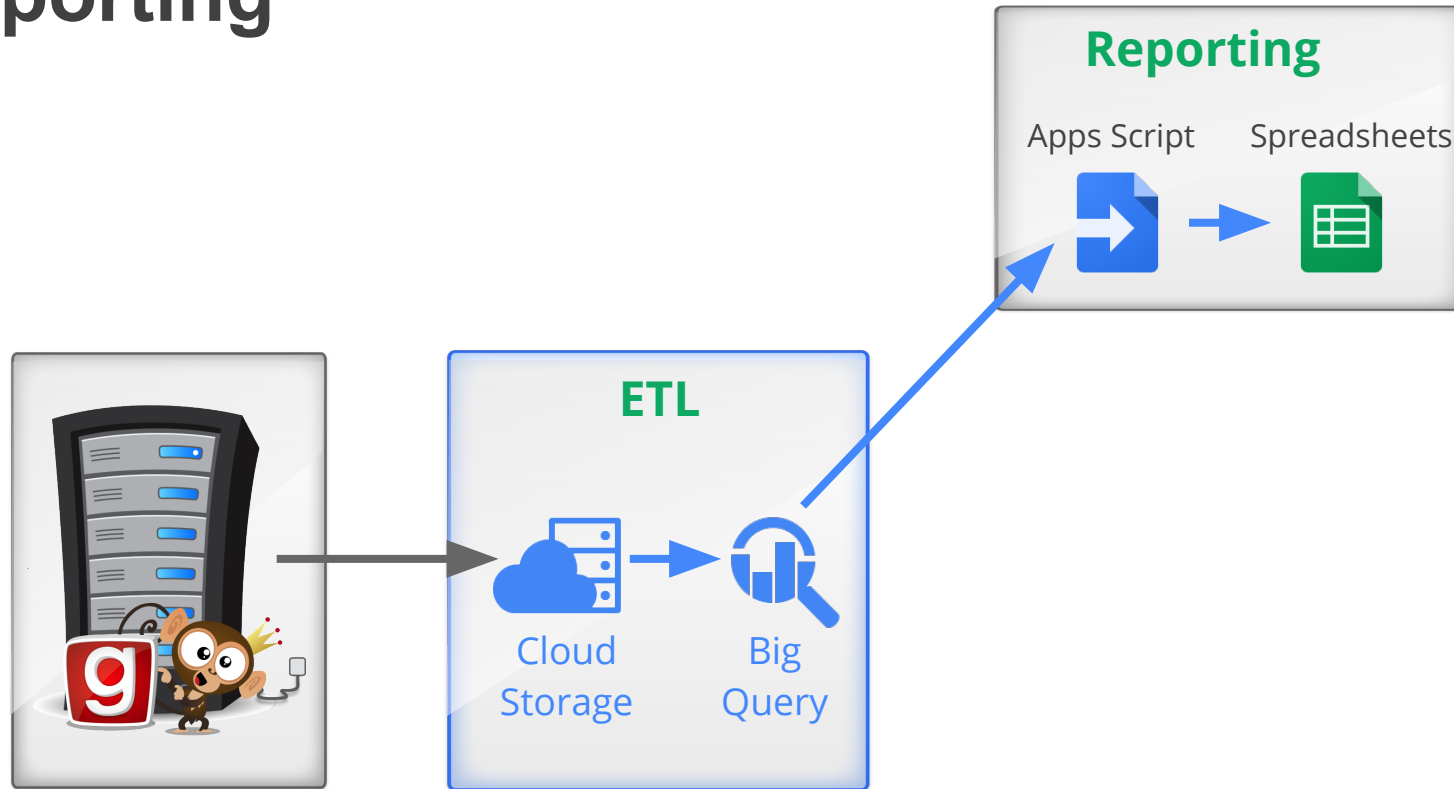


Sessions



Transactions

# Reporting



# KPI Dashboards in Google Spreadsheets

		ACTIVITY DAY									
		8-May-2013	7-May-2013	6-May-2013	5-May-2013	4-May-2013	3-May-2013	2-May-2013	1-May-2013	30-Apr-2013	29-Apr-2013
<b>Net Revenue</b>											
Unique Depositors											
<b>New P2Ps</b>											
Playing P2Ps											
<b>Deposited/Playing P2Ps %</b>											
DAU											
		INSTALL DAY									
		8-May-2013	7-May-2013	6-May-2013	5-May-2013	4-May-2013	3-May-2013	2-May-2013	1-May-2013	30-Apr-2013	29-Apr-2013
<b>DAU Day 2</b>	Installs										
DAU Day 3	Paid										
DAU Day 4	Cross Sell										
	Viral										
<b>P2P Day 2</b>	FB_Source										
P2P Day 3	Other										
P2P Day 4											
<b>Repeat Depos</b>	Day 1 Cnv										
Repeat Depos	Day 1 Cnv %										
Repeat Depos	Day1 Net Rev										
	Day 1 ARPI										
	Day 1 ARPPU										
	Cnv To Date (P2Ps)										
	<b>Cnv To Date %</b>										
	Net Rev To Date										
	ARPI To Date										
	ARPPU To Date										
	<b>Day 2 Installs Retain %</b>										
	Day 3 Installs Retain %										
	Day 4 Installs Retain %										
	Day 7 Installs Retain %										

Demo

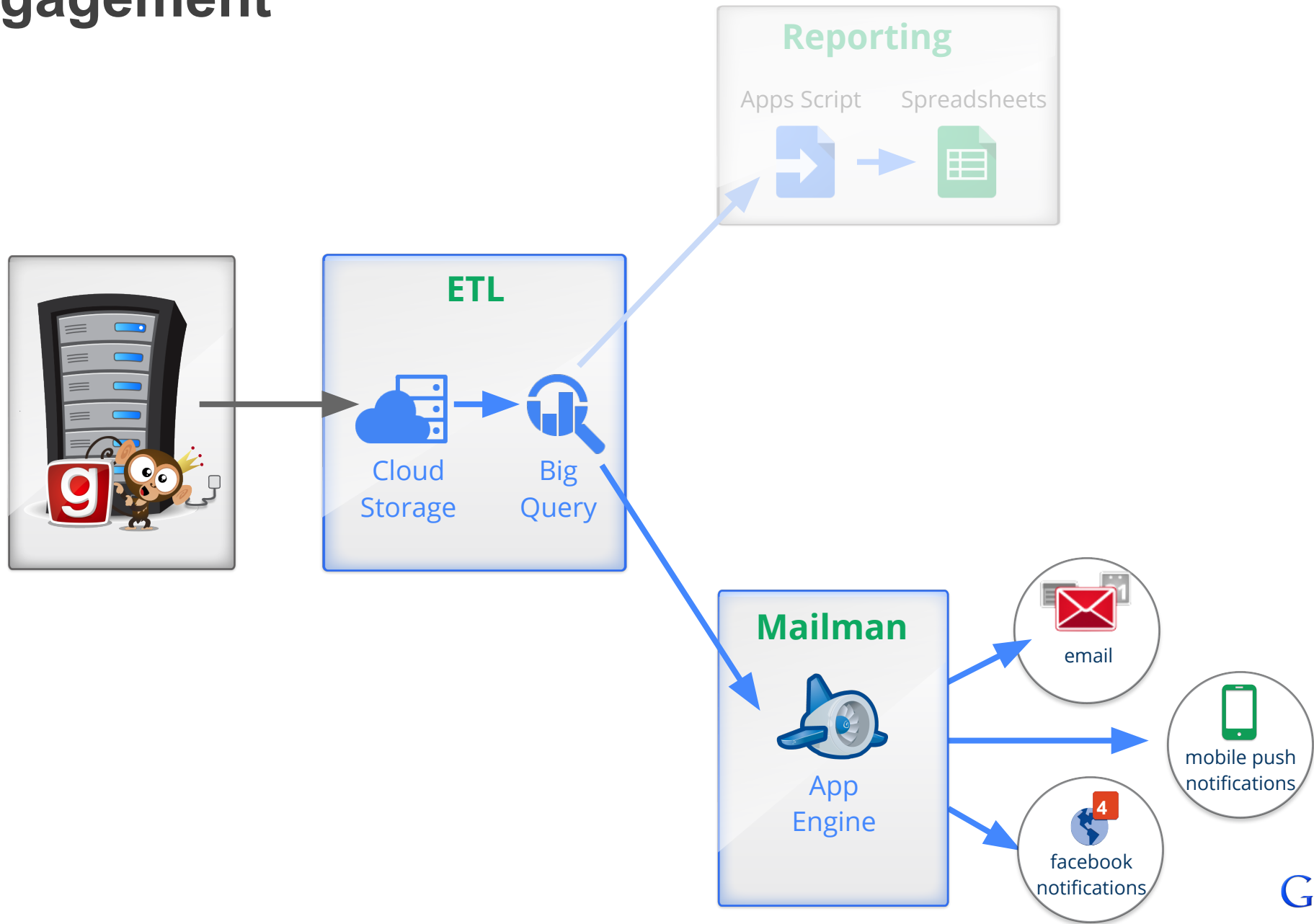




# Industrialise

Data driven tools with App Engine

# Engagement



# Why App Engine?



Productivity



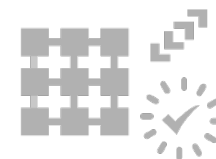
**Focus on solving the problem**, and building the application, **don't need to worry about the plumbing**

Deployment



**One click deployment** makes it easy. **Iterate very fast.** No maintenance overheads.

Scale



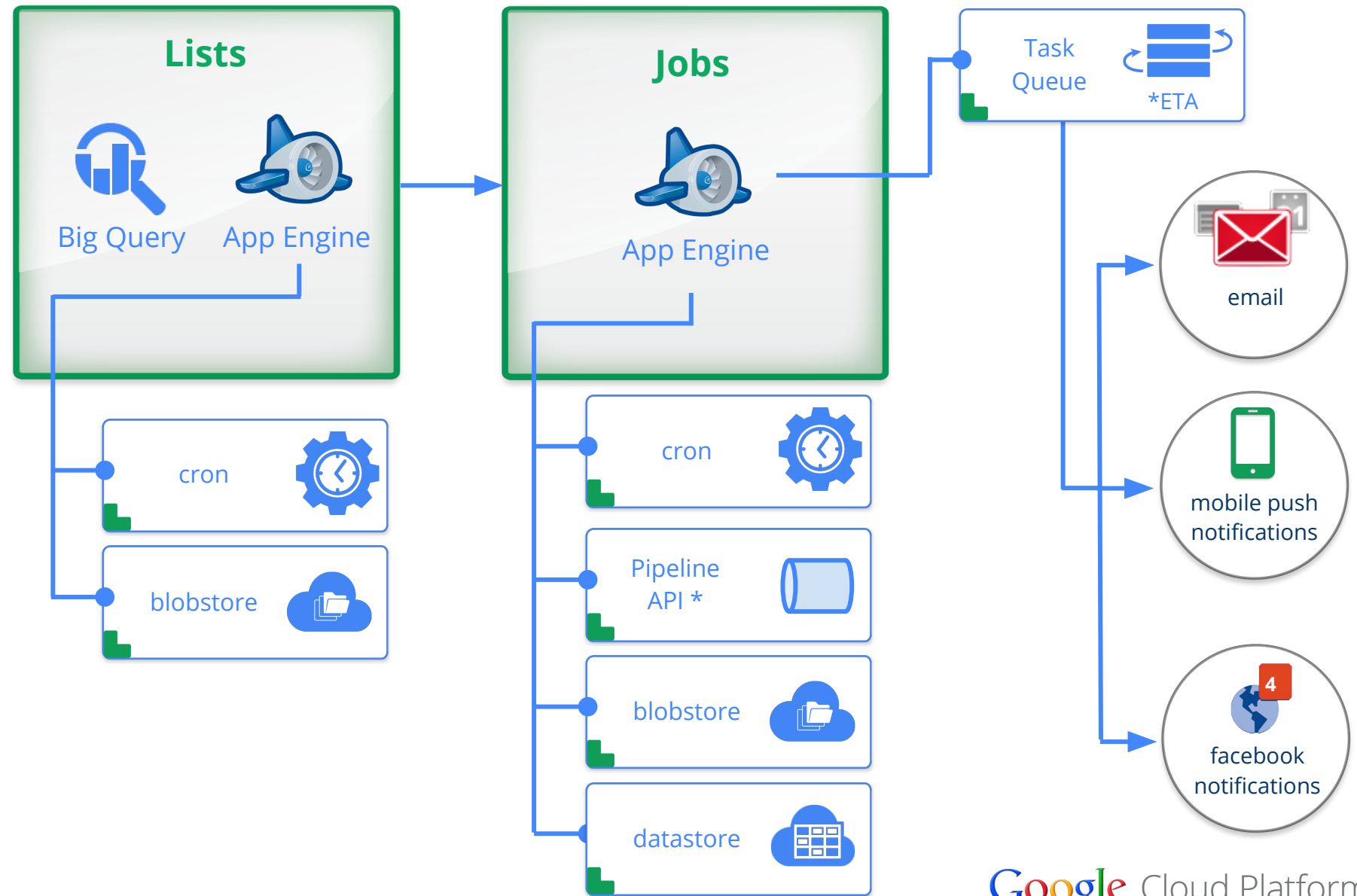
Take advantage of the **scalability, reliability** and **availability** of Google's infrastructure



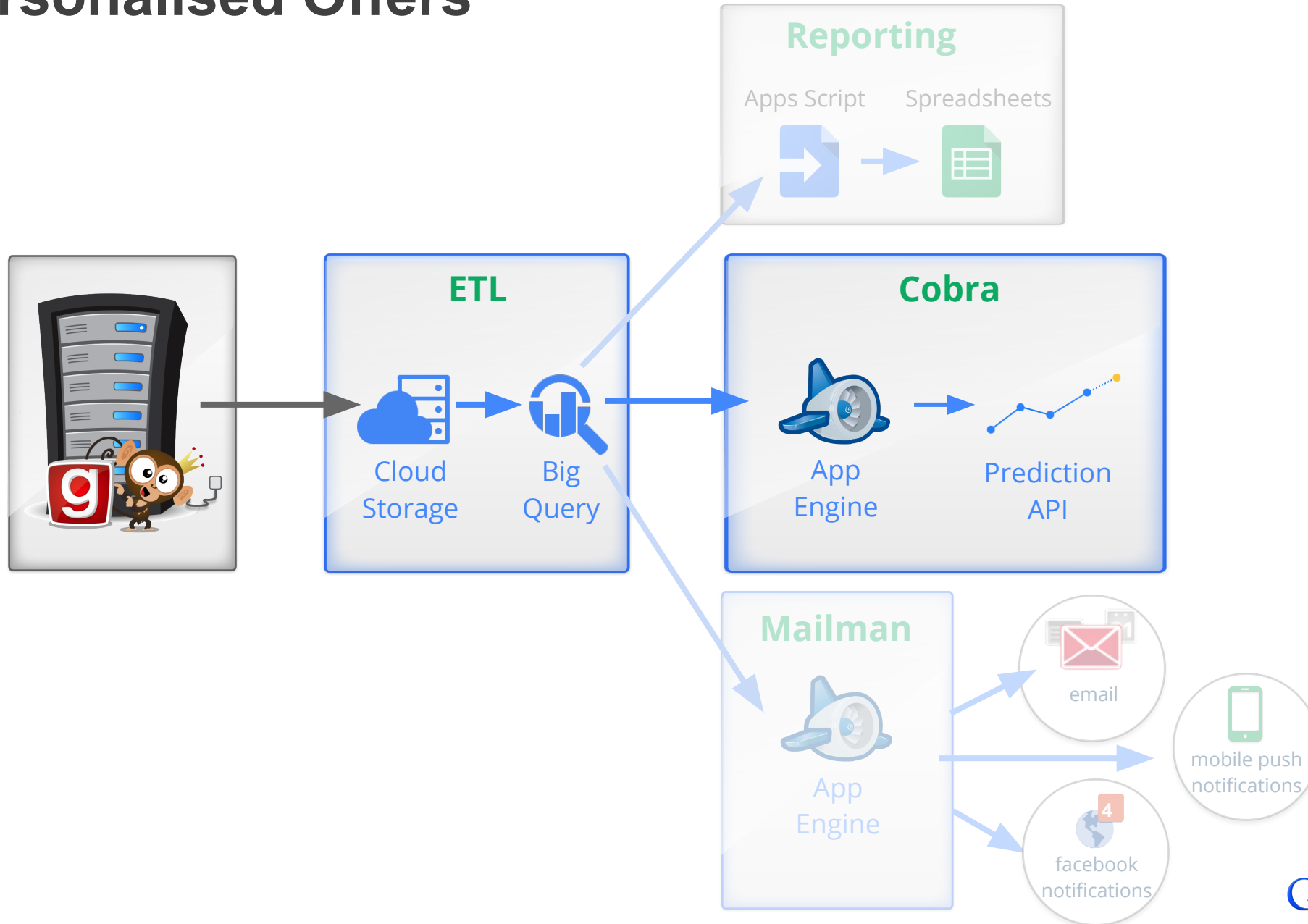


# Mailman

- Automated, scheduled message delivery service
- Designed to improve player retention, and improve life time value
- Allows definition of message recipients based on profile, session and events data

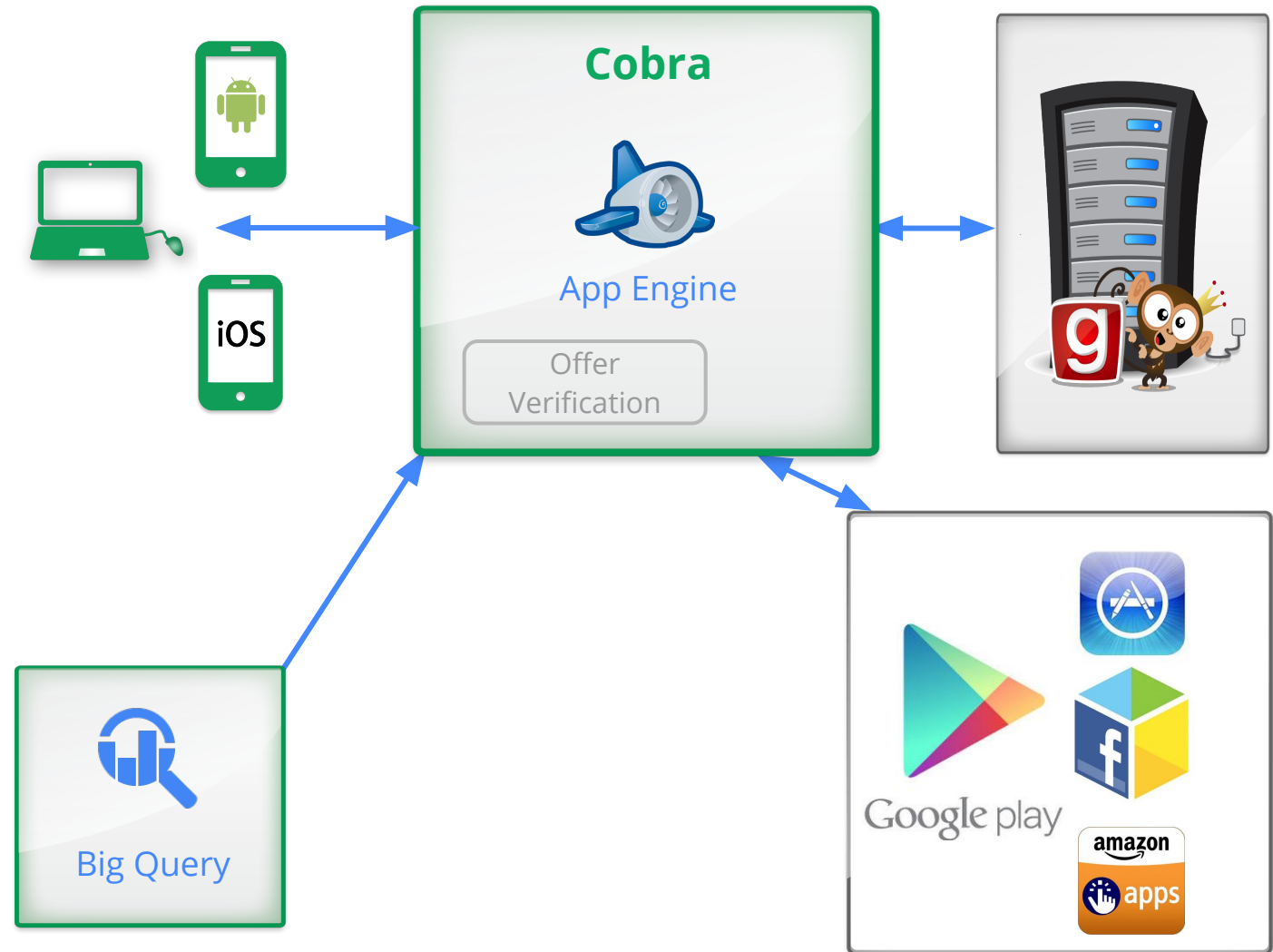


# Personalised Offers

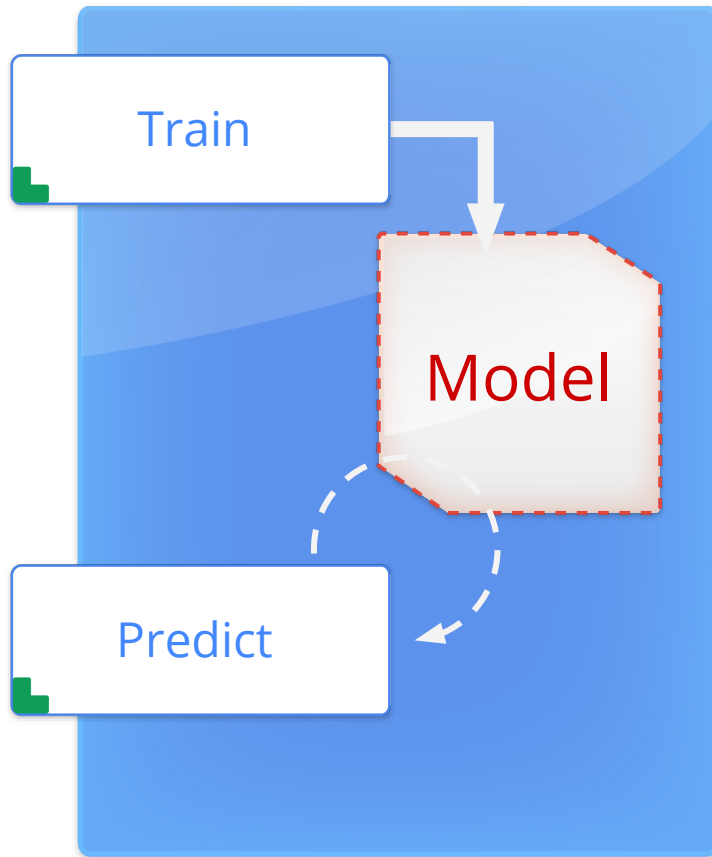


# Cobra

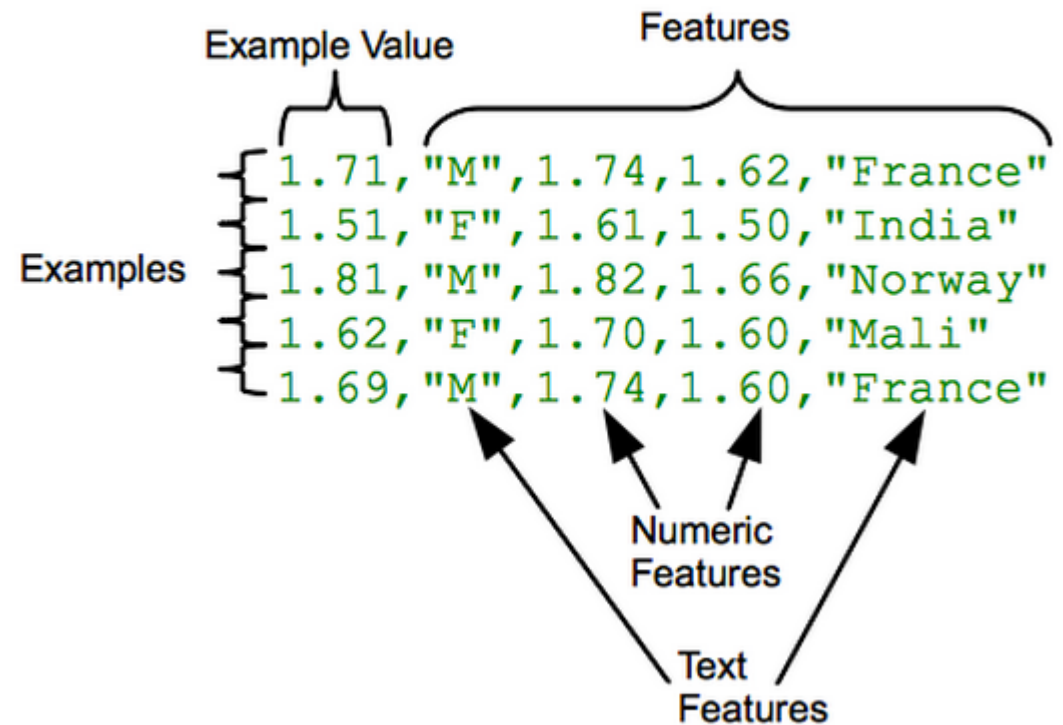
- A real-time offer system
- Builds offers tailored to each user based on their profile
- Built with App Engine, integrated with our games platform
- Support for purchases through Google Play, App Store, Amazon and Facebook (anti-piracy)



# Prediction



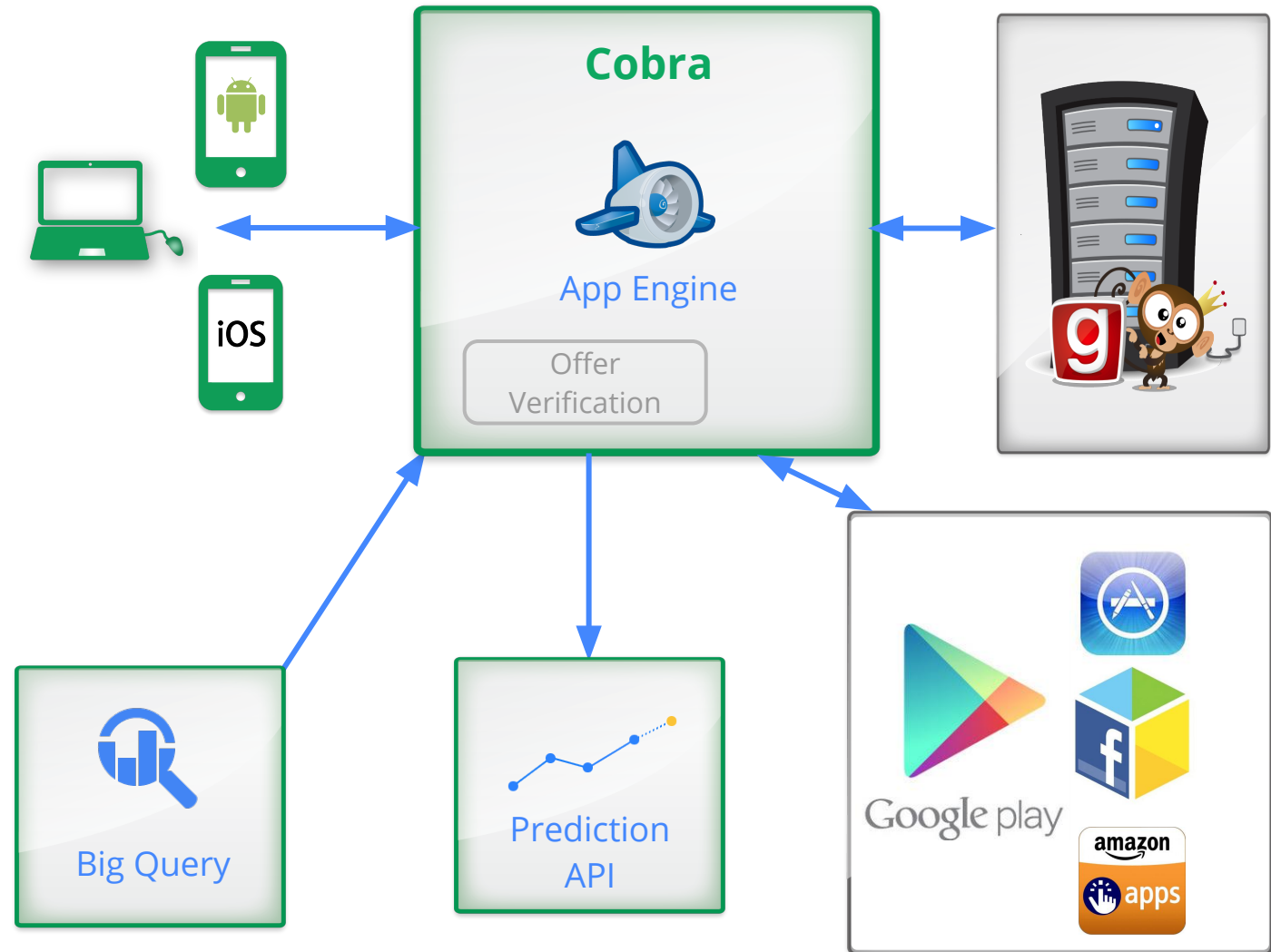
## Sample Training Data



# Cobra

With prediction:

- Update our prediction model with data as users redeem offers
- Eventually using the Prediction API to help improve the quality of offer conversions.

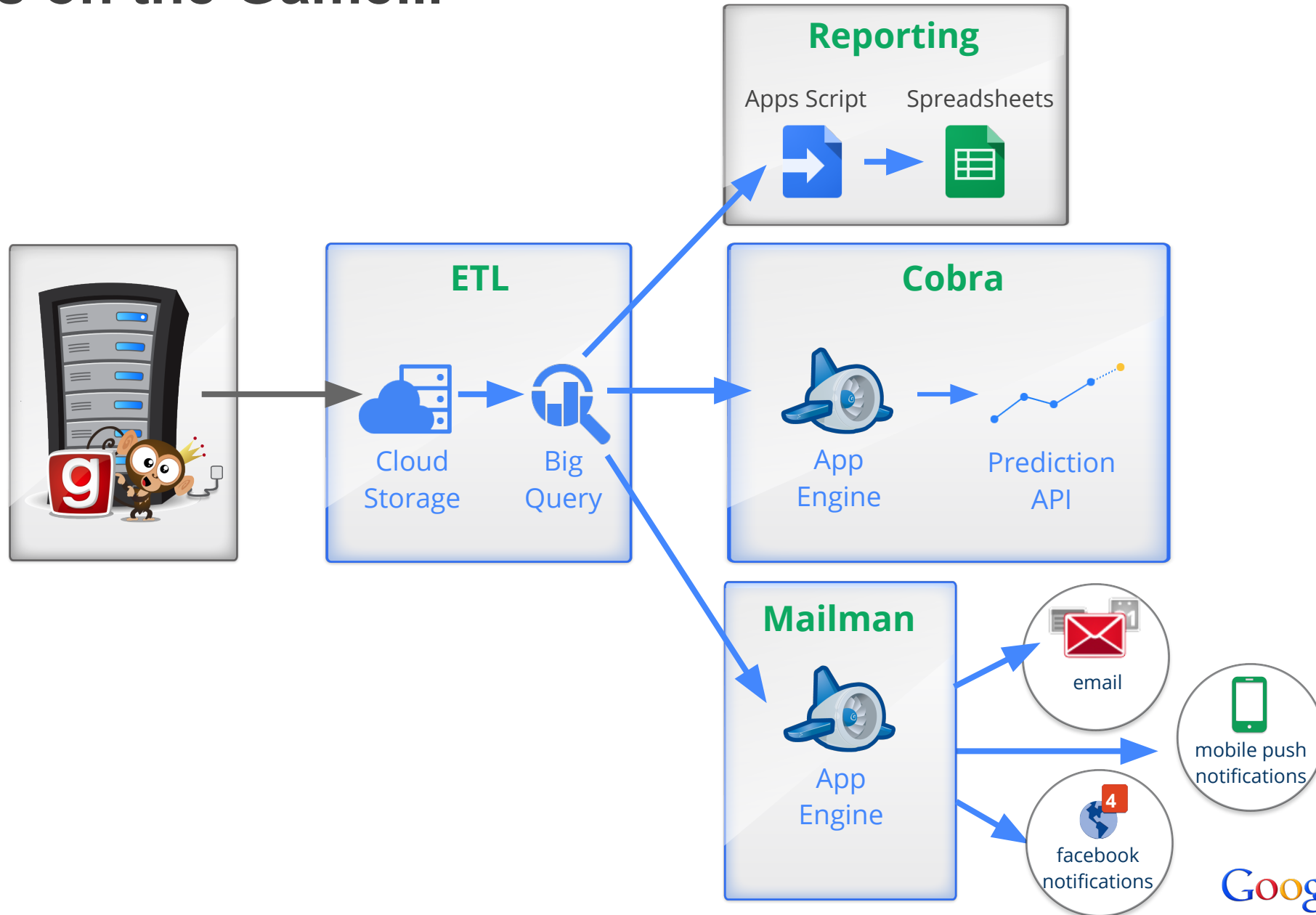




# Putting it Together

A single, scalable, platform for rapid innovation

# Focus on the Game...



# Google Cloud - A Platform for Success

Technology

Marketing

Analytics





# Build. Store. Analyze.



[cloud.google.com](https://cloud.google.com)  
[developers.google.com](https://developers.google.com)  
[cloud.google.com/newsletter](https://cloud.google.com/newsletter)  
[googlecloudplatform.blogspot.com](https://googlecloudplatform.blogspot.com)

# Questions ?