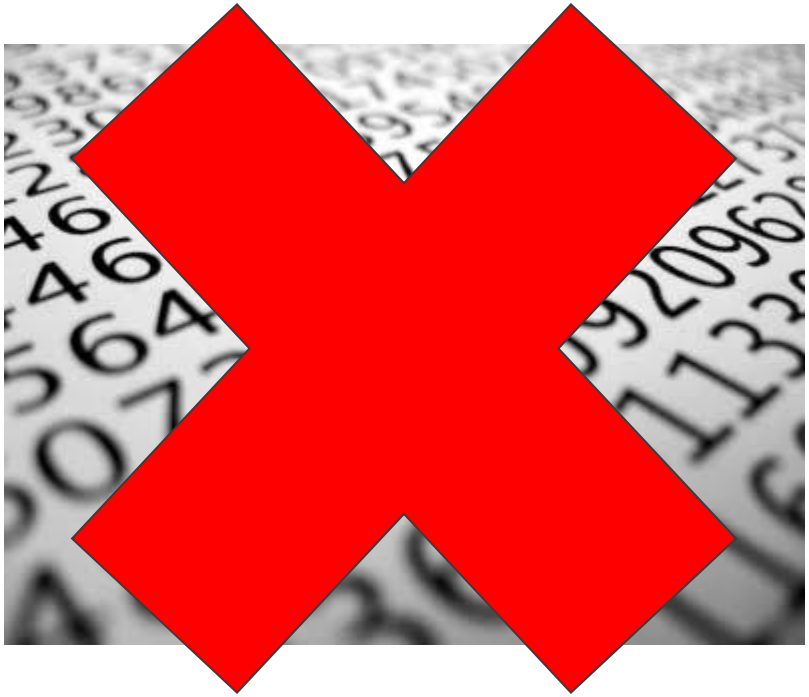
think2012 with Google

Greater with data

Joan Arensman

What we're NOT going to do



What we ARE going to do

1. What has changed?

2. What can you do?

3. How can Google help?

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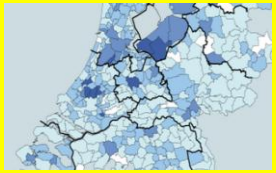
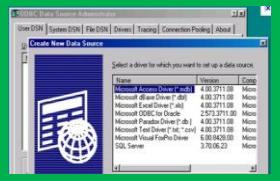
What has changed?

from
small samples
to
full datasets

from
single datasets
to
combinations of datasets



from
database software
to
scalable, cloud-based data analysis



from
reviewing past data
to
examining real-time data

BigQuery: analyzing massive datasets

Google code labs e.g. "adwords" or "open source" Search

Google BigQuery Service (Labs)

A SQL-like tool for analyzing massive datasets

Google BigQuery Service is a web service that enables you to do interactive analysis o
Scalable and easy to use, BigQuery lets developers and businesses tap into powerful

Features

- **Speed** - Analyze billions of rows in seconds
- **Scale** - Terabytes of data, trillions of records
- **Simplicity** - SQL-like query language, hosted on Google infrastructure
- **Sharing** - Powerful group- and user-based permissions using Google accounts
- **Security** - Secure SSL access
- **Multiple access methods** - Can be used by REST API, a command-line tool, a Apps Script

Uses

- Ad-hoc analysis
- Standardized reporting
- Data exploration
- App prototyping

Note: BigQuery is currently in preview and open to a limited number of enterprises and be notified when you can start using BigQuery. For more information, take a look at the

What's New in V2?

Bigquery V2 has many exciting new changes from V1:

- A new REST API
- A new web user interface
- Support for JOIN statements
- Ability to export a table or query result to a CSV file in Google Cloud Storage
- Support for ACLs on collections of tables
- A new object architecture describing tables, groups of tables, and queries. This new architecture is described under *Main Concepts* below.

BBC NEWS TECHNOLOGY

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15 November 2011 Last updated at 07:34 ET

Google's BigQuery service challenges analytics industry

Google has offered businesses the chance to use its servers to crunch huge amounts of their raw information.

The firm's BigQuery service is designed to help organisations identify and analyse trends from their datasets.

Google said small businesses struggled to access such tools in the past.

Experts said that the service had the potential to

Google says high volume data analysis traditionally cost businesses "tremendous" sums

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BBC NEWS TECHNOLOGY

Rapidly crunching terabytes of big data can lead to better business decisions, but this has traditionally required tremendous IT investments. Imagine a large online retailer that wants to provide better product recommendations by analyzing website usage and purchase patterns from millions of website visits. Or consider a car manufacturer that wants to maximize its advertising impact by learning how its last global campaign performed across billions of multimedia impressions. Fortune 500 companies struggle to unlock the potential of data, so it's no surprise that it's been even harder for smaller businesses.

- Data exploration
- App prototyping

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Two recent McKinsey reports

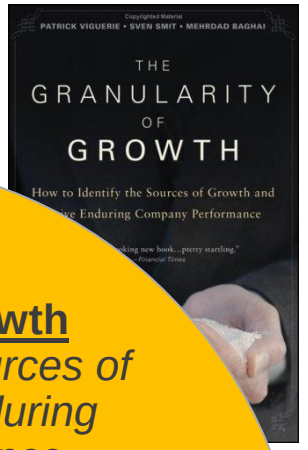
Big Data

The next frontier for innovation, competition and productivity

"The use of Big Data is becoming a key way for leading companies to outperform their peers"

"The United States alone faces a shortage of 140,000 to 190,000 people with deep analytical skills as well as 1.5 million managers and analysts to analyze Big Data and make decisions based on their findings"

Big data: The next frontier for innovation, competition, and productivity



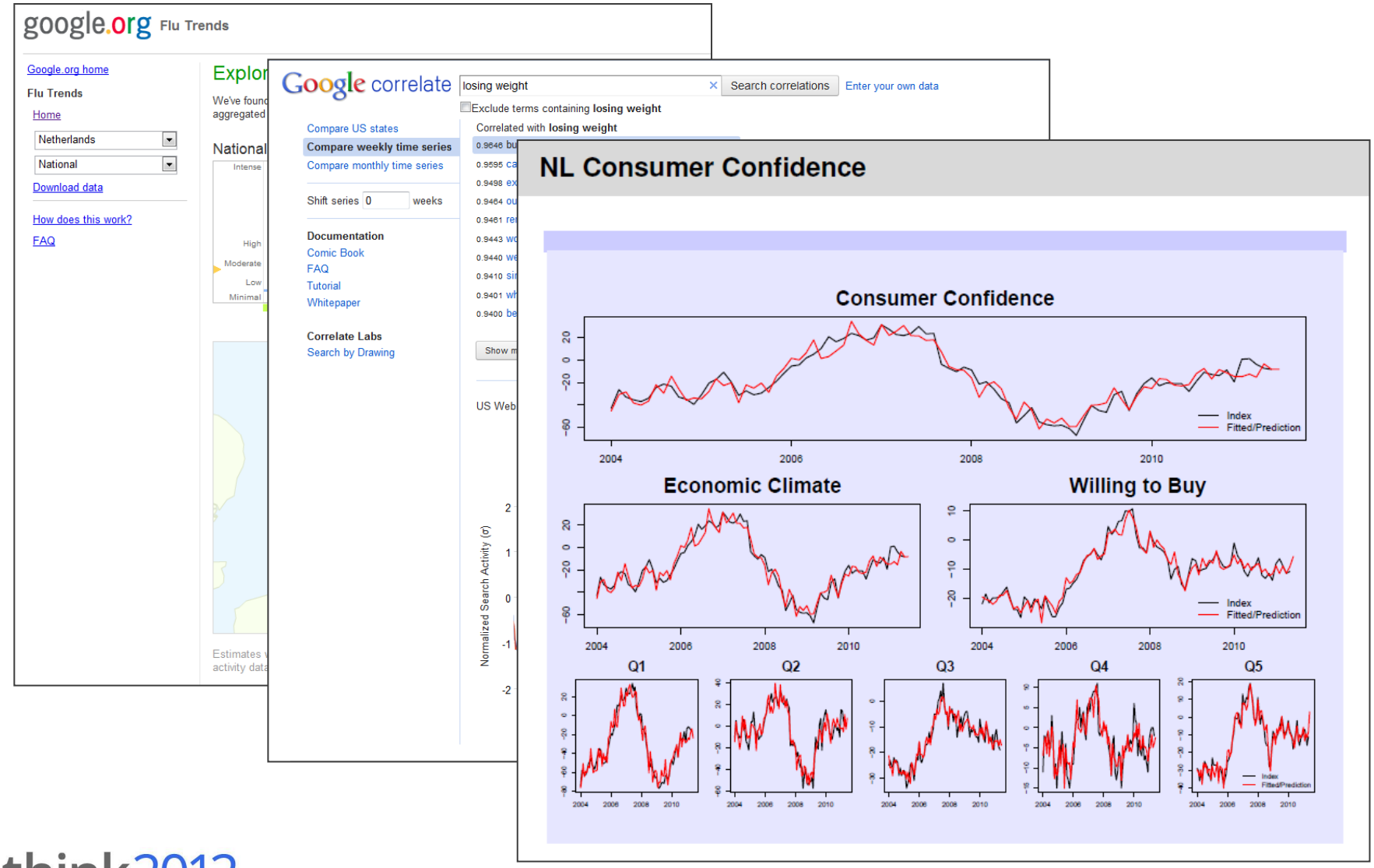
Granularity of growth

How to identify the sources of growth and drive enduring company performance

"Increased market share is seldom a driver of growth. Growth is driven mainly by where a company chooses to compete"

"The key is to focus on granularity: to breakdown big-picture strategy into its smallest relevant components to uncover pockets of opportunity"

Predicting the present



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What best-in-class looks like (our perspective)

FOCUS

- Continuously striving to **reduce complexity** (even at the cost of some minor business gain)
- Clear (and rarely changing) **attribution model**, to provide direction for all Sales/Marketing efforts

TECHNOLOGY

- Close cooperation between IT and Sales/Marketing (with dedicated **developers** in Sales/Marketing)
- **Conversion rate** of the website ultimately drives all Sales success online (and requires permanent testing / improvement above all else)

MINDSET

- Willing and able to **test** every new product, feature or idea fast and at scale, with a true testing culture in place
- Centrally organized, with only a few **key decision-makers** who can react quickly

DATA

- Always looking for new ways to slice and dice ever-increasing amounts of **data**

Attribution model

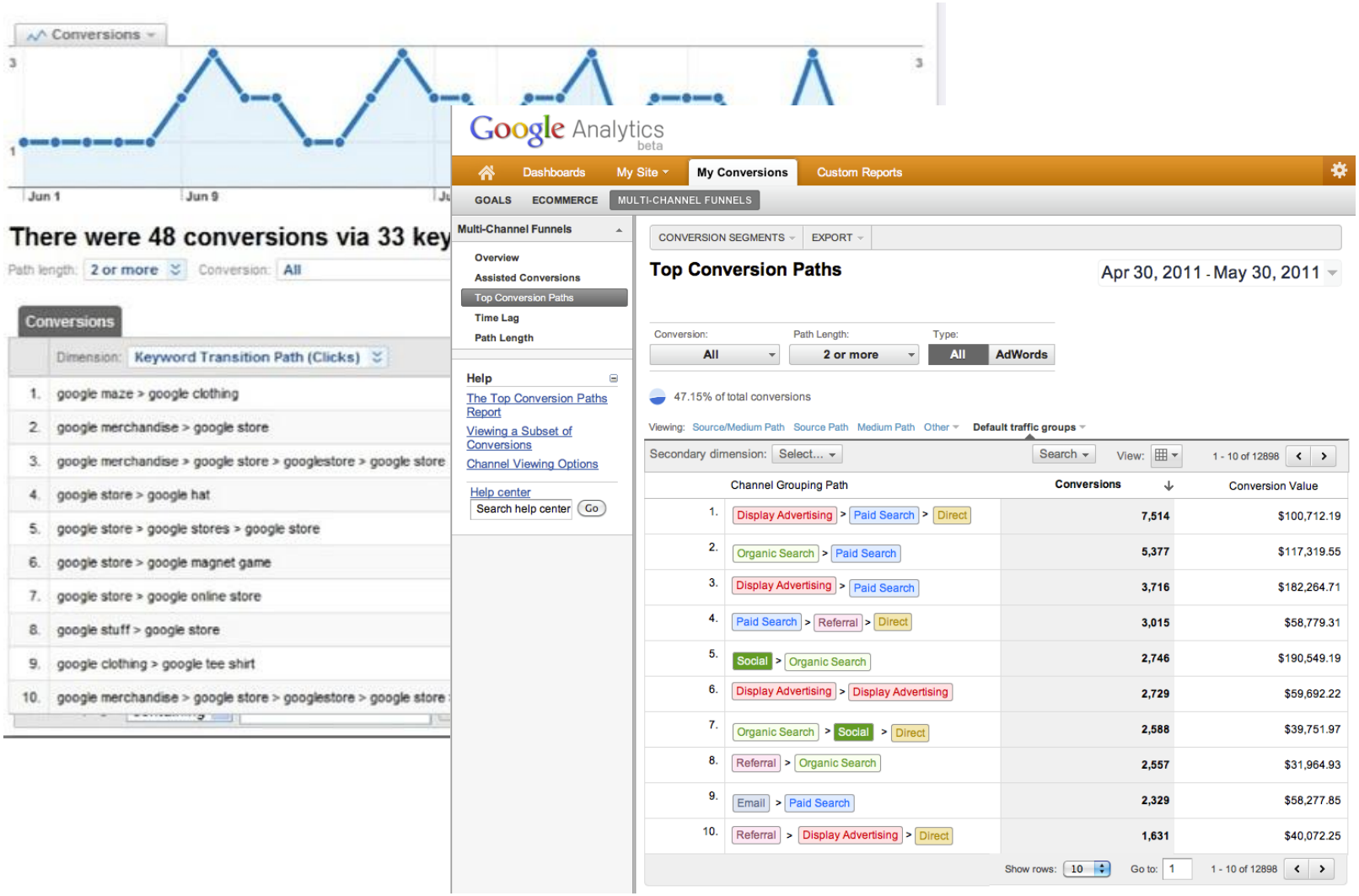
- Last-click attribution

- Attribution model based on search funnel and cross-channel funnel analysis

- Continuous discussion on best attribution model

- One agreed attribution model, which is up for discussion only once a year

Clear attribution model



Dealing with complexity

- Trying to capitalize on every single opportunity

- Lightning focus on the top-x value-driving opportunities

- Adding new features / solutions / systems, while leaving all predecessors in place

- Actively working to reduce complexity as a goal in itself (even at the cost of some minor business gain)

Overriding goal: reducing complexity

The smartest companies consciously try to eliminate variables – even at the loss of some conversions

Cooperation between IT and Sales/Marketing

- No IT expertise or resources in Sales/Marketing

- Dedicated developers assigned to Sales/Marketing teams

- Strictly formal relationship between IT and Sales/Marketing (“change requests”)

- Shared goals and fluid exchange of ideas between IT and Sales/Marketing

Landing pages that work: the BIG ten

Website conversibility

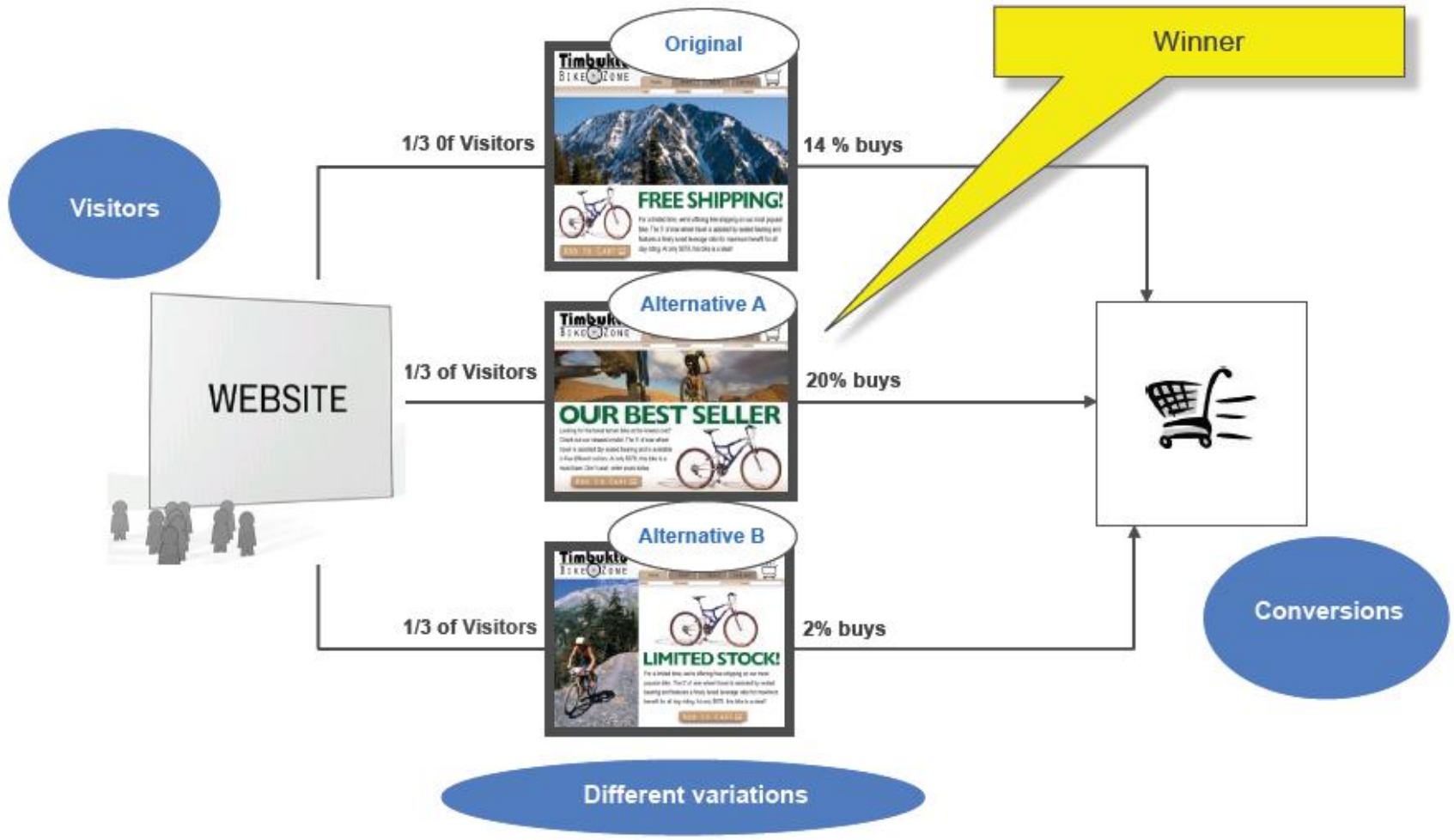
- Optimizing landing pages only

- Continuous website optimization, including landing pages, checkout process, on-site search, etc.

- Single-minded focus on driving more traffic to website, rather than converting existing traffic

- Realization that opportunity through website improvement is (far) larger than driving more traffic

Testing, testing, testing



Testing

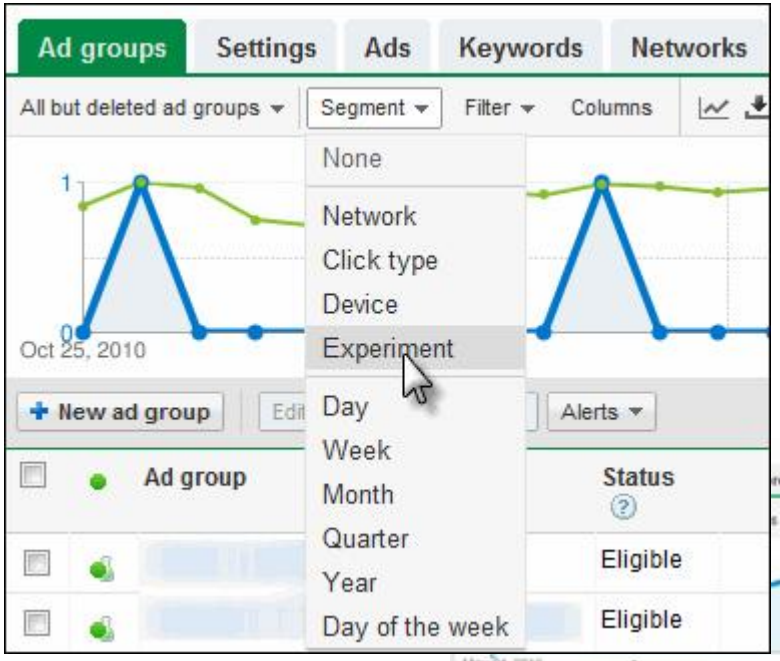
- Occasional testing of new features / products

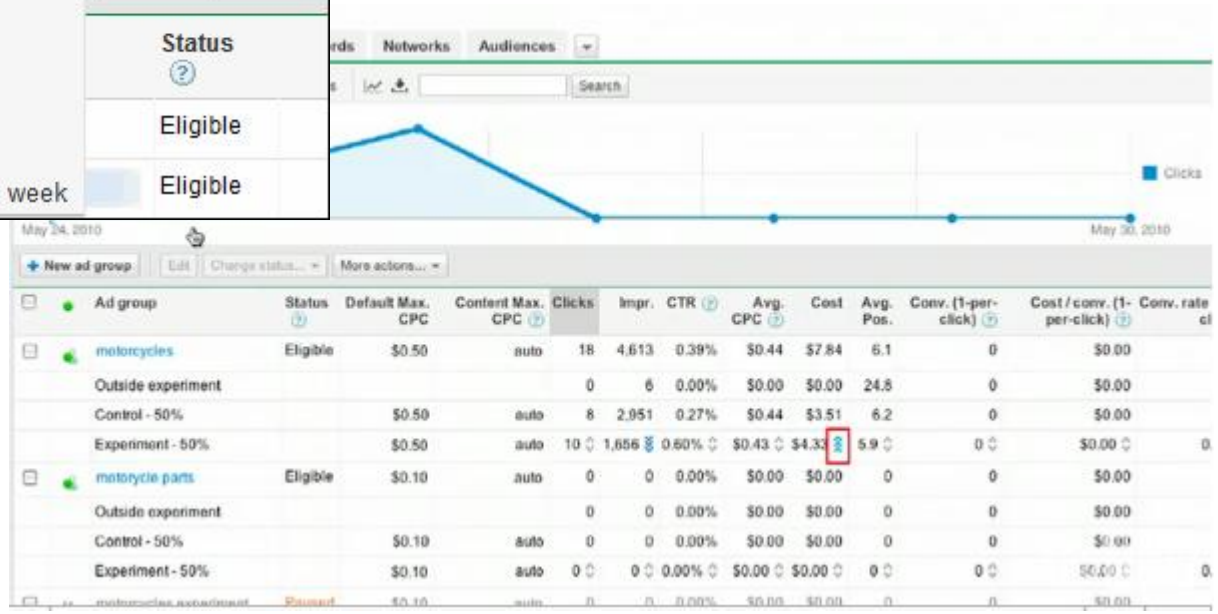
- Continuous testing, engrained as a culture

- No testing at all for fear of tampering with the “money-making machine”

- Test on small samples of your core revenue-driving systems (1%, 20%, etc.)

AdWords Campaign Experiments





Few key decision-makers

- Limited freedom of movement for online Sales/Marketing staff

- Allowing online Sales/Marketing staff the freedom to capitalize on opportunities quickly

- Never-ending discussions based on yet more data

- Having a clear decision-maker in the room, who charts the course

Single decider

“All meetings should have a single decider”

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Lots (lots!) of tools/resources

Externally available:

- Google Analytics
- BigQuery
- Prediction API
- Insights for Search
- Google Correlate
- Google Refine
- Keyword Tool
- …

Google internal:

- Benchmarking
- Query categorization
- Destination analysis
- Top queries
- Top rising queries
- Query volumes
- Auction metrics
- …

Three ways to analyze data

Hypothesis-based

Examining outliers

Structured monitoring

Which combinations of data add most value?

Data usually accessible to **agency** only

*Data usually accessible to **company** only*

- **ROI**
- **profit**
- **inventory**
- **…**

*Data usually accessible to **all** (AdWords)*

- **impressions**
- **clicks**
- **conversions**
- **CTR**
- **CPC**
- **…**

*Data usually accessible to **Google** only*

- **market size**
- **top queries**
- **query coverage**
- **auction depth**
- **…**

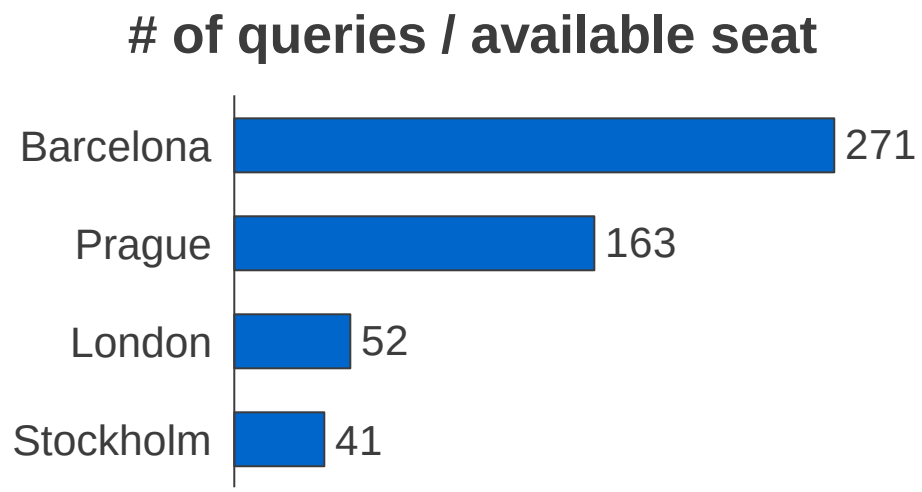
Third party data

Example: airline seats

# of queries per destination (from Google)

/

# of seats per destination (from airline)



*We have now combined **demand** (queries) with **supply** (seats)*

Let's continue the conversation…

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- …

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Third party data