

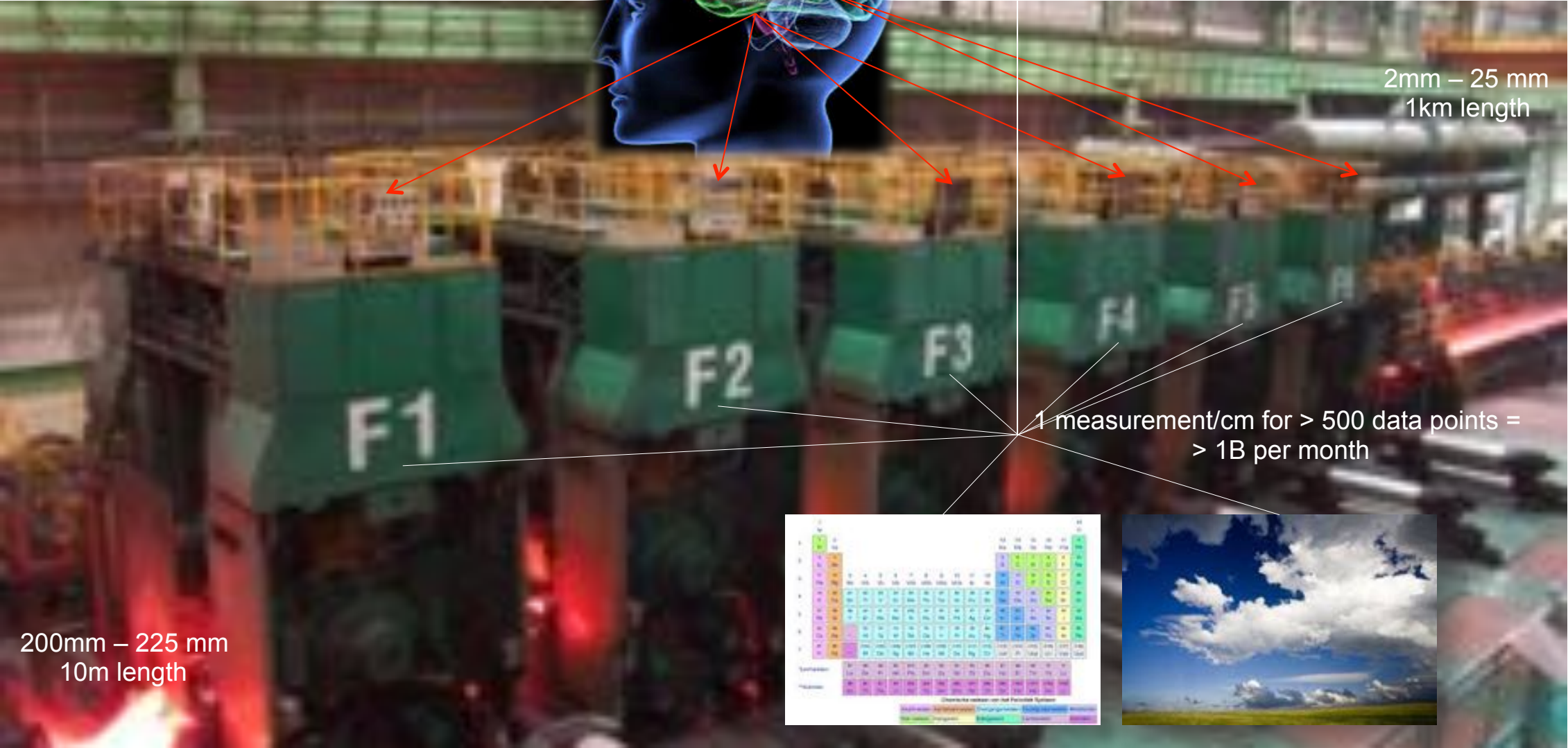


# De Big Data Opportuniteiten

Markten, producten, klanten. Een massa gegevens, onderling verbonden.

NG  DATA

1993...







# Transforming Customer Experience in Financial Services and Telecommunications



An aerial night photograph of a city, likely San Francisco, showing a dense grid of city lights and a large body of water in the foreground. The lights from the city create a complex pattern of yellow and white lines against the dark night sky. The water in the foreground reflects some of the city lights, adding to the visual complexity. Overlaid on this image is the text "BIG Data" in a large, white, sans-serif font. The word "BIG" is in all caps, while "Data" starts with a capital 'D' and has a lowercase 'a'. The text is centered horizontally and vertically, making it the primary focus of the image.

# BIG Data

1998

The logo for Google! BETA. The word "Google!" is in its signature multi-colored font (blue, red, yellow, blue, green, red, blue). Below it, the word "BETA" is in a smaller, grey, sans-serif font.

Search the web using Google!

Google Search

I'm feeling lucky

Special Searches  
[Stanford Search](#)  
[Linux Search](#)

[Help!](#)  
[About Google!](#)  
[Company Info](#)  
[Google! Logs](#)

Get Google!  
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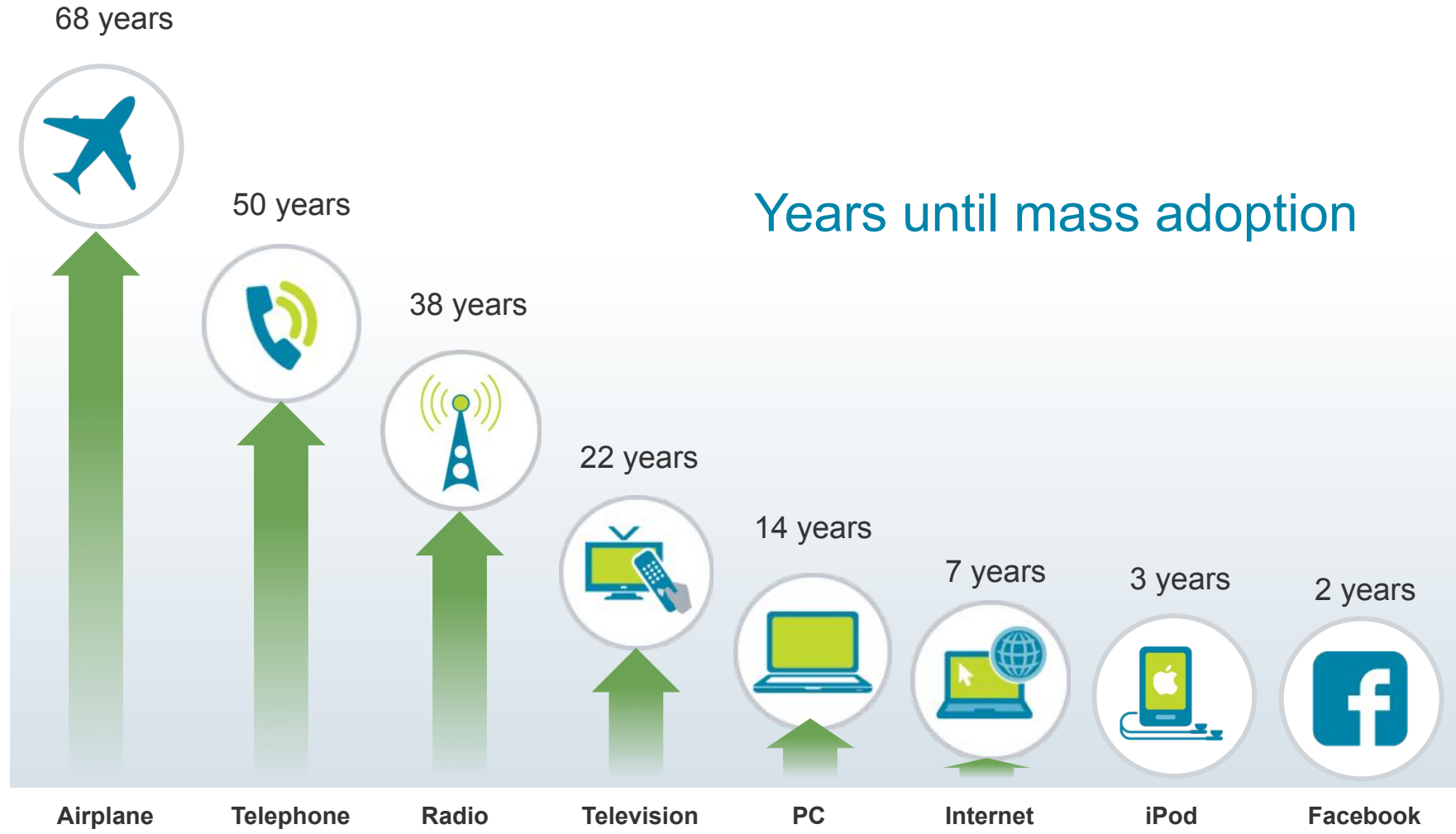
1999



# 2004: Thefacebook

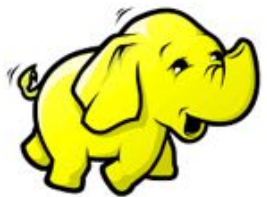


# New channels adopted by the Customer





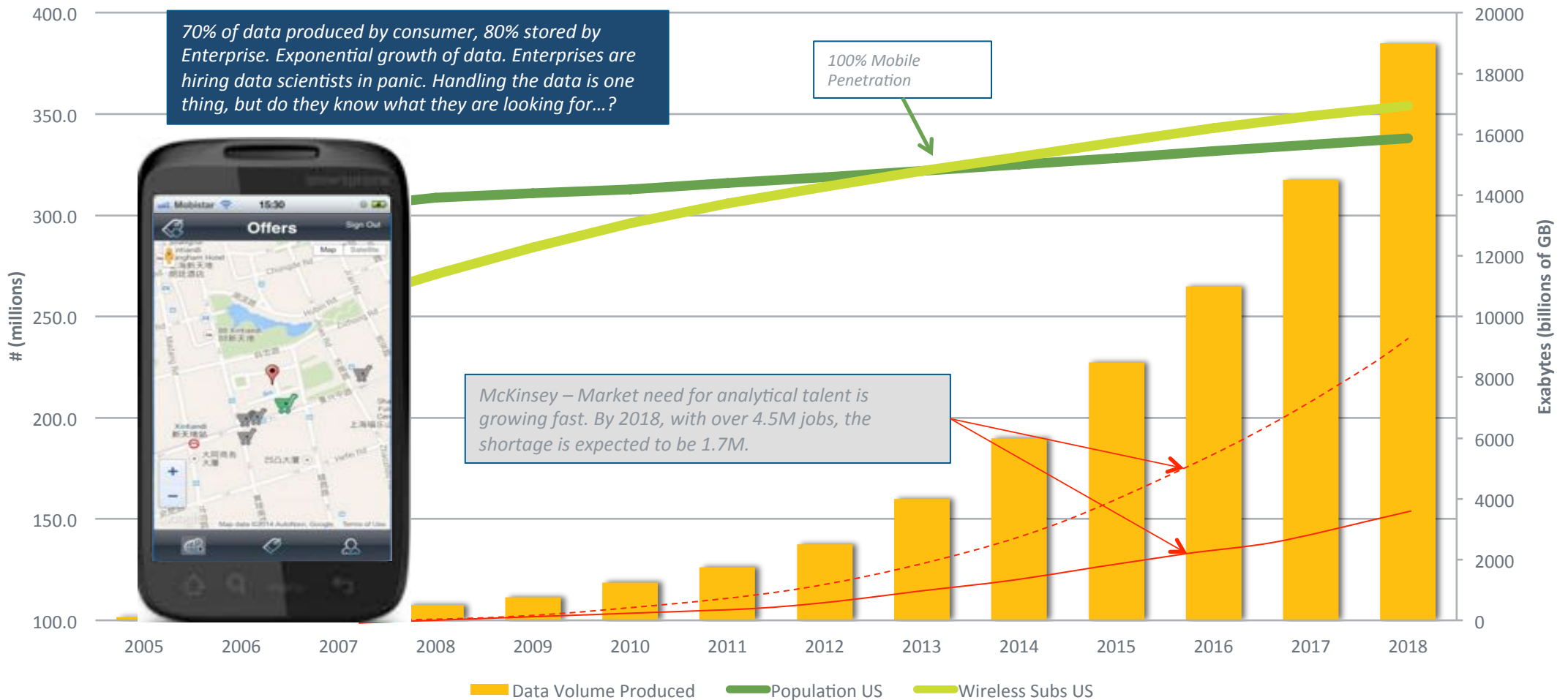
# 2006: Hadoop



Commercial  
Availability 2011

# 2012: The Data “Explosion”

Data Volume Growth



# Data Generation of Today...



EVERY MINUTE...





# The Ultimate Big Data Project...

## NSA PRISM – The Mother of all Big Data Projects



As a data engineer and scientist, I have been following the NSA PRISM raw intelligence mining program with great interest. The engineering complexity, breadth and scale is simply amazing compared to say credit card analytics (Fair Isaac) or marketing analytics firms like Acxiom.

Some background... PRISM - "Planning Tool for Resource Integration, Synchronization, and Management" - is a top-secret data-mining "connect-the-dots" program aimed at terrorism detection and other pattern extraction authorized by federal judges working under the Foreign Intelligence Surveillance Act (FISA). PRISM allows the U.S. intelligence community to look for patterns across multiple gateways across a wide range of digital data sources.

## Meltdowns Hobble NSA Data Center

Chronic electrical outages at the massive new data-storage facility central to the National Security Agency's spying operations have destroyed hundreds of thousands of dollars worth of machinery and delayed the center's opening for a year, according to project documents and current and former officials.



There have been 10 meltdowns in the past 11 months that have prevented the NSA from using computers at its new Utah data-storage center, slated to be the spy agency's largest, according to project documents reviewed by The Wall Street Journal.

One project official described the electrical troubles—as called any fault failures—as “a flash of lightning inside a 2-foot box.” These failures create fiery explosions, melt metal and cause circuits to fail, the official said.

The causes remain under investigation, and there is disagreement whether proposed fixes will work, according to officials and project documents. One Utah project official said the NSA planned this week to turn on some of its computers there.

## Snowden leaks: David Cameron urges committee to investigate Guardian



David Cameron today urged a committee to investigate whether the Guardian is leaking secrets linked to Snowden.

David Cameron has encouraged a Committee which is set up to investigate whether the Guardian is leaking secrets linked to Snowden.



### Current Providers

Microsoft (Hotmail etc)  
Google  
Facebook  
Instagram  
Skype  
Twitter  
AOL  
Apple  
YouTube

Complete list and details on Go PRISM

### Information that can be provided

**MICROSOFT**  
Who's still stuck in 2006.  
**GOOGLE**  
What idiots have put "Google" into Google.  
What idiots have searched their own name the most.  
**FACEBOOK**  
When everyone's birthday is.  
What everyone's baby looks like.  
**INSTAGRAM**  
What everyone's lunch looks like.  
How New York might look in black and white.  
**SKYPE**  
How much time people have wasted saying "Can you hear me?"  
**TWITTER**  
Which celeb is retweeting praise about themselves.  
Who's a peddler (they love it when you spell it like that).  
What Samantha Brick's done now.  
**AOL**  
What your mum and dad's email address is.  
**APPLE**  
Who pooters under 10 minutes of battery life.  
Who hopes they'll contact Steve Jobs by Omega bond.  
**YOUTUBE**  
Cats? Why always cats?

Source: The Guardian, FT, WSJ

# Who's the guy in the middle?





# Trends...



## Netflix Record Billion-Hour Monthly Viewing Rates



A cable executive who has talked to Amazon says that its Prime service, a nascent effort to get into original content, will also lean hard on data-driven approaches to determine its programming. The executive, who asked not to be identified because the discussions were private, said it would change the way that business operates sooner than people thought.

"I think it is a little hysterical to say that Big Data will win the day now and forever, but it is clear that having a very molecular understanding of user data is going to have a big impact on how things happen in television," he said.



# The value of data

Deutsche Lufthansa AG

+

Add to Watchlist

LHA:GR

14.230

EUR

↑

0.115

0.81%



Key Statistics for LHA

Current P/E Ratio (ttm)	6.8744
Estimated P/E(12/2013)	13.0073
Relative P/E vs. DAX	0.4718
Earnings Per Share (EUR) (ttm)	2.0700
Est. EPS (EUR) (12/2013)	1.0940
Est. PEG Ratio	0.5820
Market Cap (M EUR)	6,545.05

TripAdvisor Inc

+

Add to Watchlist

TRIP:US

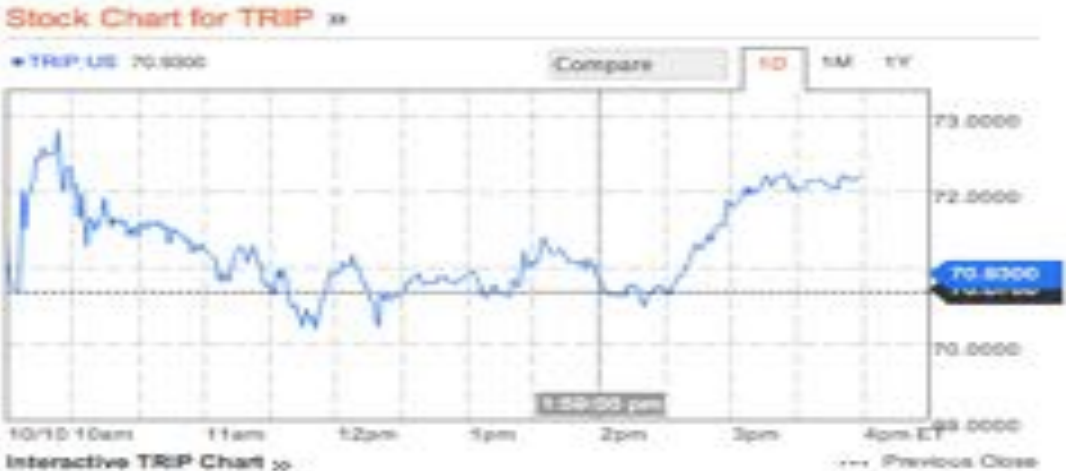
72.2700

USD

↑

1.6000

2.26%



Key Statistics for TRIP

Current P/E Ratio (ttm)	47.0784
Estimated P/E(12/2013)	41.9930
Relative P/E vs. SPX	2.9794
Earnings Per Share (USD) (ttm)	1.5300
Est. EPS (USD) (12/2013)	1.7160
Est. PEG Ratio	2.3996
Market Cap (M USD)	10,327.02

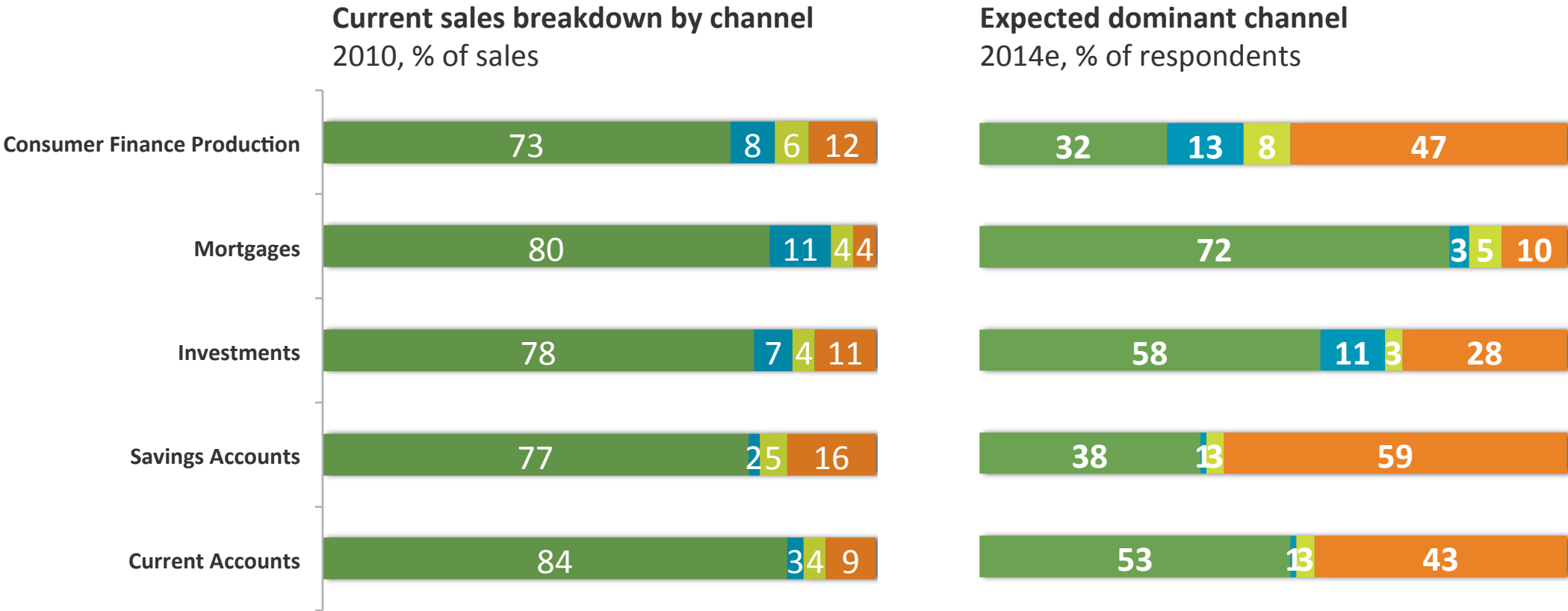
An aerial night photograph of a city, showing a dense grid of streets and buildings illuminated by warm yellow and orange lights. The perspective is from a high angle, looking down on the urban landscape. The text is overlaid on the center of the image.

**BIG Data =  
Strategic  
Challenges**

# Most popular channels in sales Retail Banking

Product Purchasing

Branches
Agents/Brokers
Call Centers
Direct Channels





# Technology Companies

Threats to the “old world” ...



Google Voice, Google Wallet

...

“Facebook targets financial services” *Financial Times* (4/2014)

“Facebook acquiring a Banking License in Ireland” (5/2014)

Launch iPhone: Apple Pay (9/2014)

“Google to start selling auto insurance in the U.S.” *Reuters* (1/2015)

...

# Financial Services

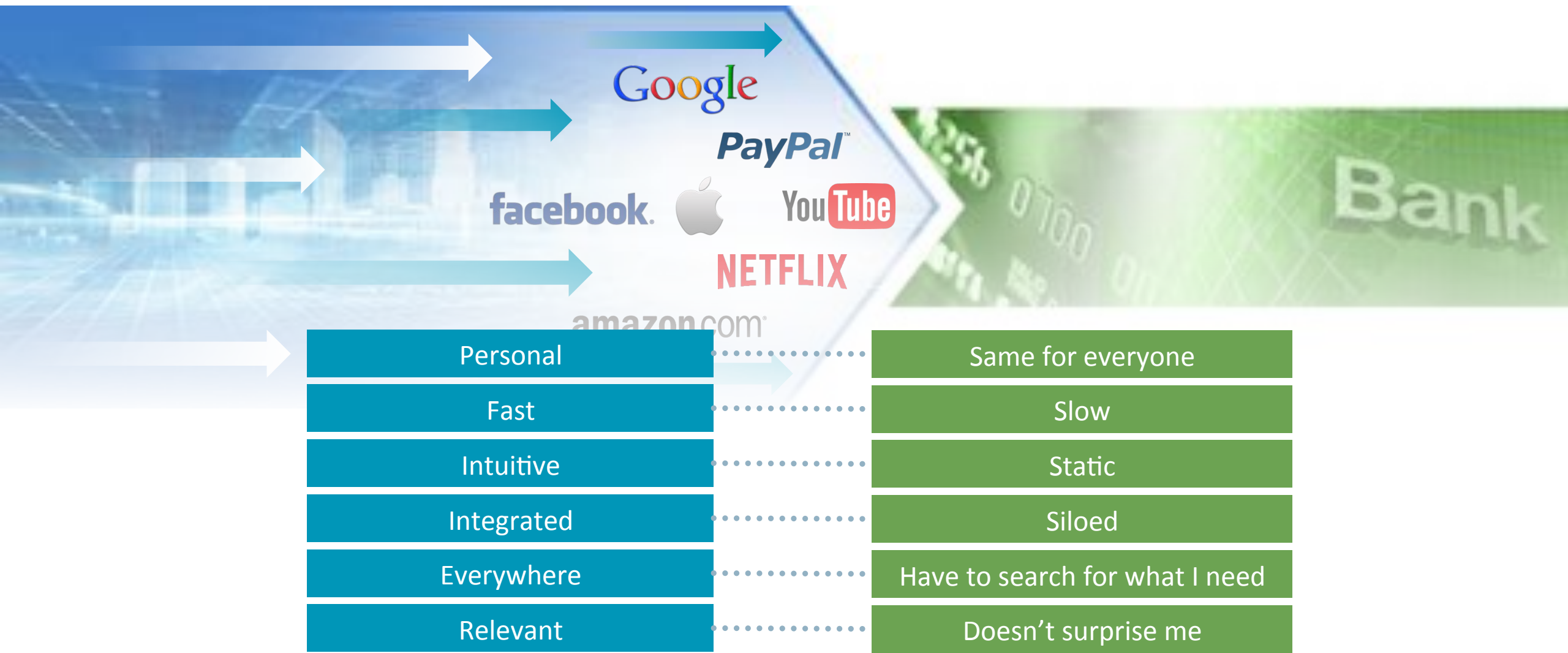
What is the response from banks'?



Do they have one?

# The Current Reality

Comparison traits of the two





# Google Now

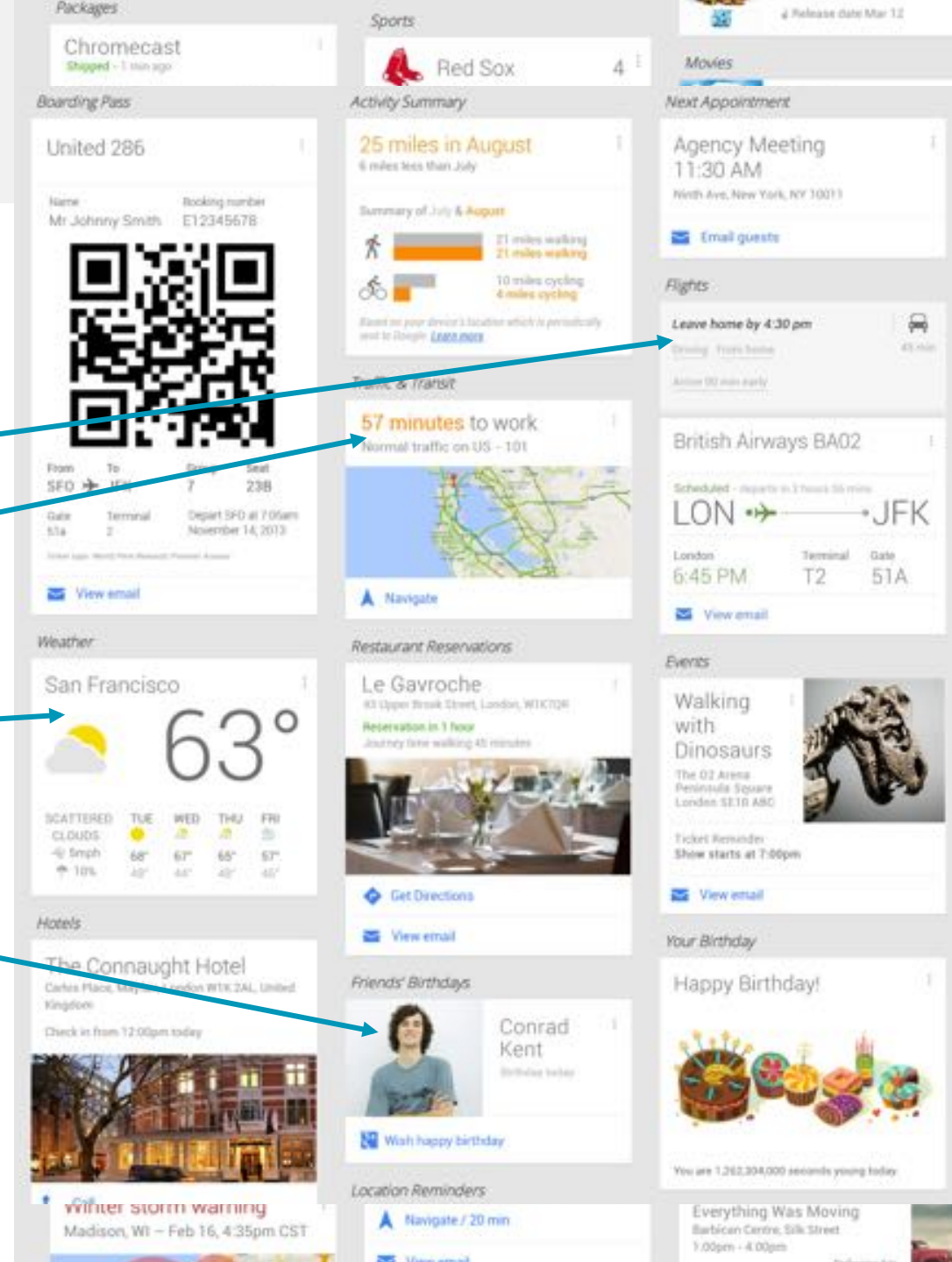
## The Leading Example

connect the dots

real-time

context-aware

hyper-personal



# Vision

Data available is a huge opportunity to lead transformation



- Financial Services and Telecommunications have **many digital touch points** with their customers where they can drive communication
- Financial Services don't want to put communication in the hands of third parties, such as technology companies that could become competition



# The Big Enterprise Challenge

## Data Silos





# The Google/Facebook/LinkedIn Architecture

Customer centric: Profiling, Analytics and Actions @ the Speed of Light

key functions

data capturing & ingestion

streaming ingest  
user identification  
behavior observation &  
tracking

011101010101  
0010101010  
10010100010  
1110101010

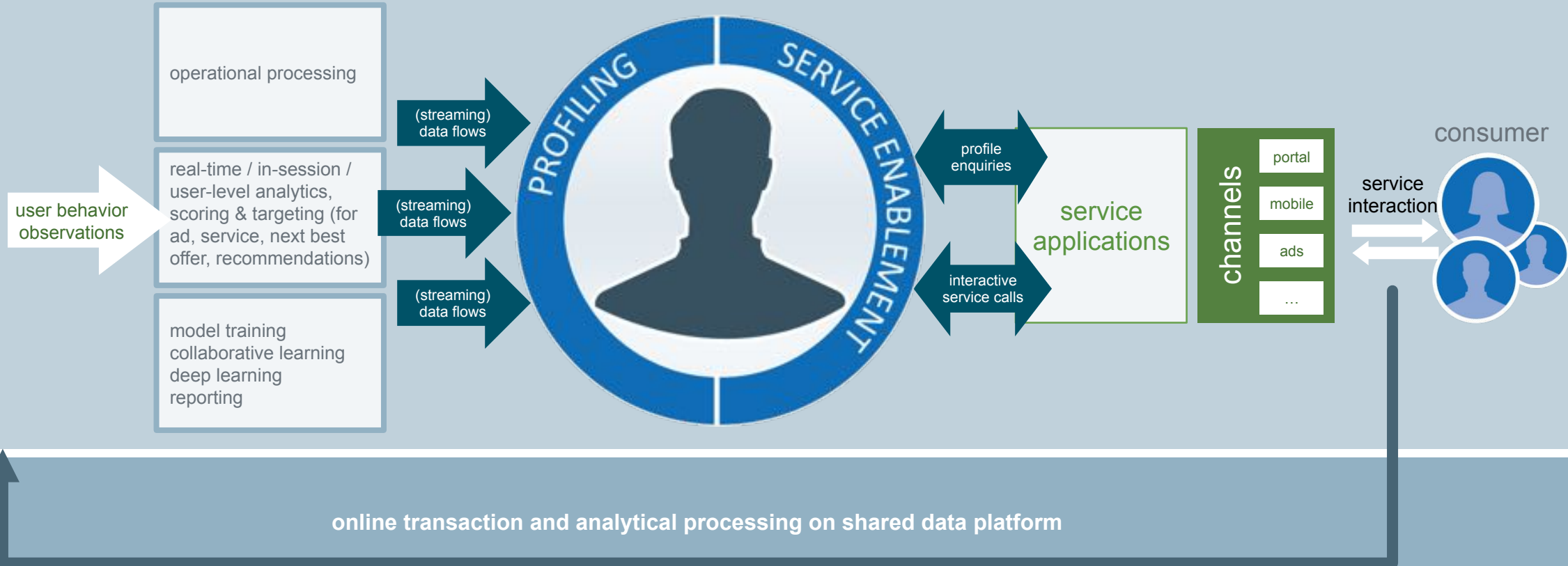
profiling & service enablement

profile establishment  
targeting support: preference learning  
& contextualization  
micro-segmentation  
network analysis

customer experience

service delivery (newsfeeds, timelines,  
search, check-ins, ads ...)

processing  
flow



data  
layer

online transaction and analytical processing on shared data platform

# The Big Enterprise Challenge

## Enterprise IT Architecture



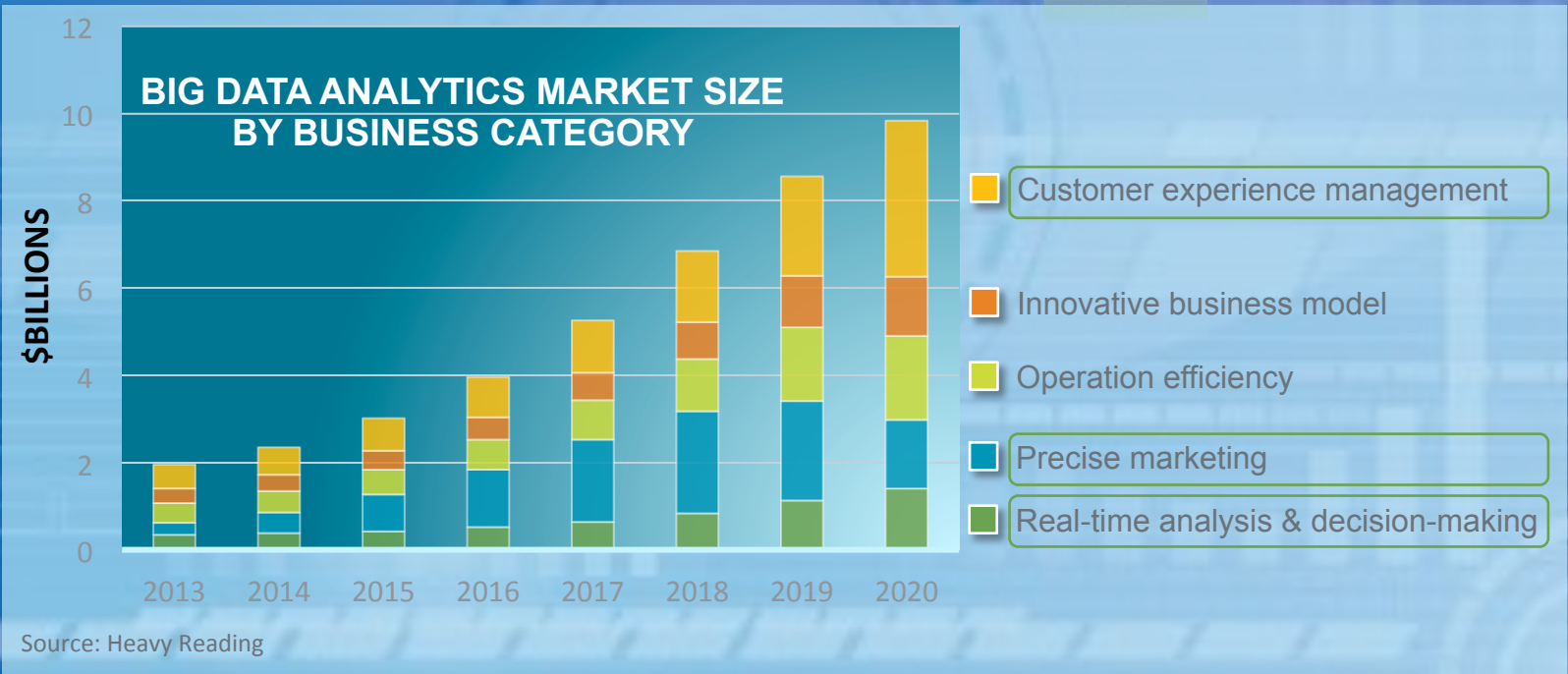
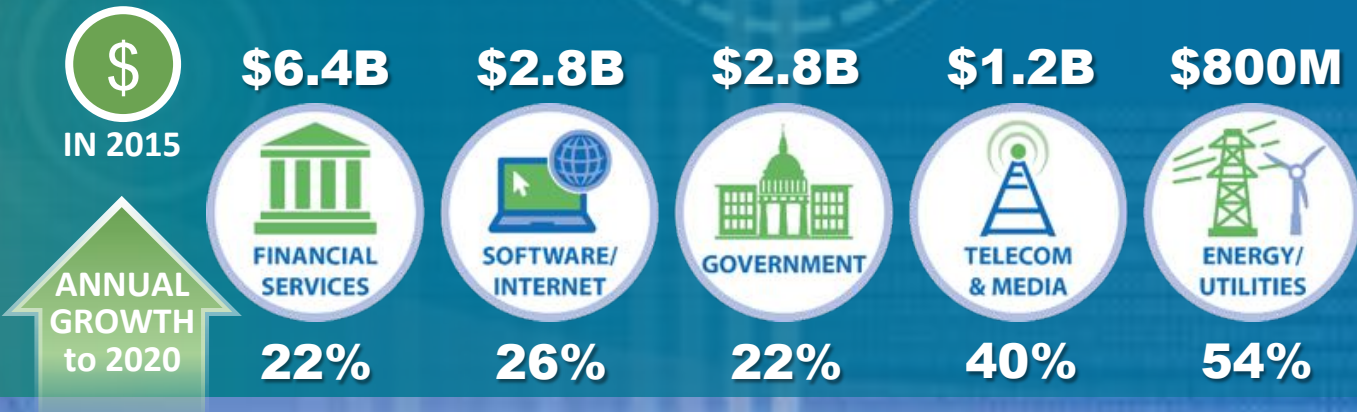
Where is the customer?

# Big Data Market Size

Financial Services will be biggest investor, transforming customer experience

Financial Services firms are projected to spend **\$6.4B** in Big Data-related hardware, software and services in 2015, growing at a CAGR of 22% through 2020.

Forbes: Roundup Of Analytics, Big Data & Business Intelligence Forecasts and Market Estimates, 2014



**50x**  
GROWTH  
FROM  
2010  
to 2020

800  
EB

40,000  
EB

Source: IDC's Digital Universe Study, sponsored by EMC, Dec. 2012



An aerial night view of a city, with the streets and buildings illuminated by warm yellow and orange lights. Overlaid on this image is a complex network of glowing, multi-colored lines (yellow, blue, green, and purple) that crisscross the city, representing data connections or a digital infrastructure. The lines are most concentrated in the central and lower-left areas of the image.

# **BIG Data Marketing The Customer Experience**



# Relevancy – What Customer Experience is All About

... What everybody says, but nobody can deliver...



# How Tech Companies work



over 10x Targeting Precision



"I think it is a little hysterical to say that Big Data will win the day now and forever, but it is clear that having a very molecular understanding of user data is going to have a big impact on how things happen in television," he said.



# How Most of the companies (still) work...



# How Most of the companies (still) work...



- Born in 1948
- Grew up in Great Britain
- Married, w/children
- Successful, wealthy, celebrity
- Loves dogs and the alps



- Born in 1948
- Grew up in Great Britain
- Married, w/children
- Successful, wealthy, celebrity
- Loves dogs and the alps

Understanding Lifestyle and being able to capture and predict behaviour is key to become relevant to your customer

# Impact of Operational Analytics

Impressive Difference in Relevancy – translated in Marketing ROI

*“People belonging to Segment A are likely to buy product X”*



**50%**

INSIGHTS

VS

IMPACT

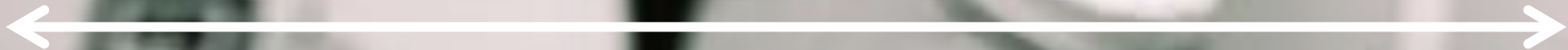
*“Lily selects top 100 people that are likely to buy product X NOW”*



**6500%**



# LAUNCH OF A SALES CAMPAIGN TODAY



**2 WEEKS**

# LAUNCHING A SALES CAMPAIGN TOMORROW

**RIGHT TIME**

**RIGHT MESSAGE**

INTERACTIONS

A

B

C

SEND  
PERSONALISED E-  
MAIL

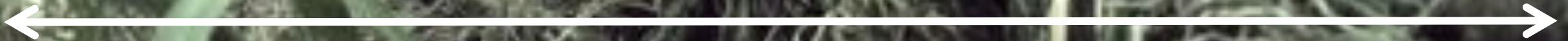
EVALUATE

**RIGHT CHANNEL**

START

CREATE  
DYNAMIC  
TARGET  
PROFILE

**3 MONTHS**





# Put into Practice at the Customer – Example

Increased customer value and reduced helpdesk calls

Predict who is going to call and what their issue will be...  
And take action **before they call**

A personally relevant  
video is delivered  
based on:

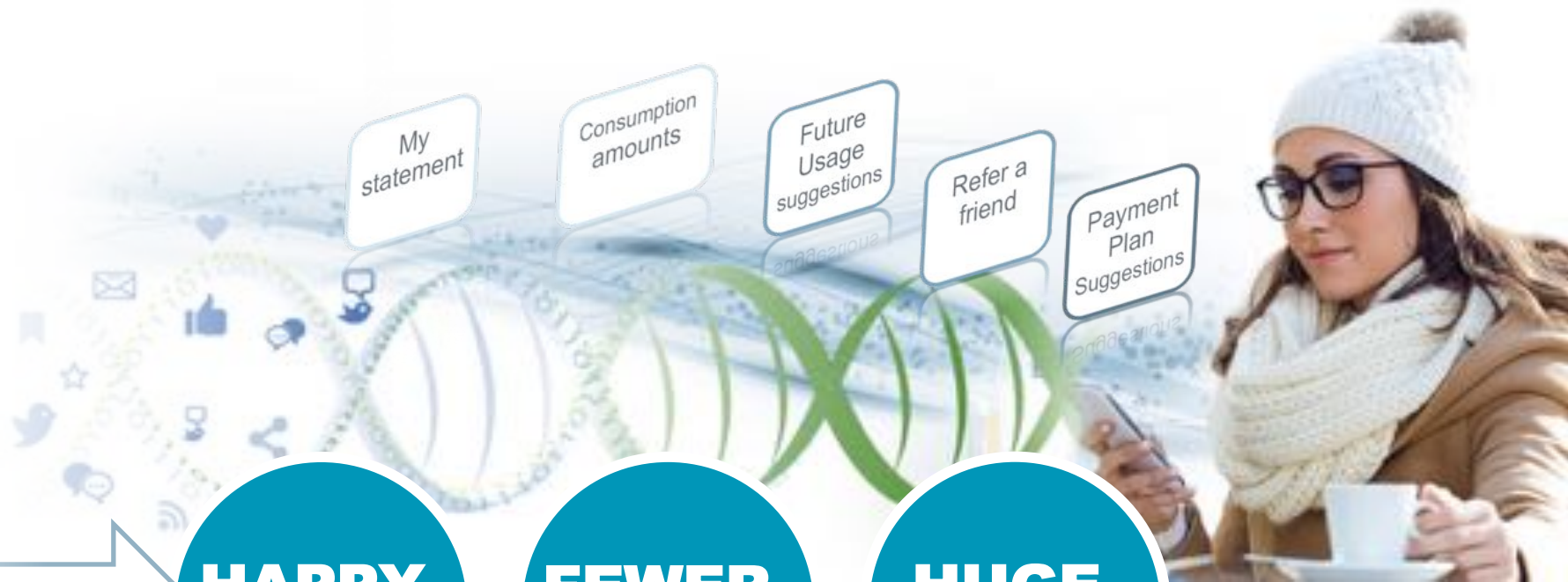
- Customer data
- Specific solution
- Preferred products

RESULTS

**HAPPY**  
CUSTOMERS

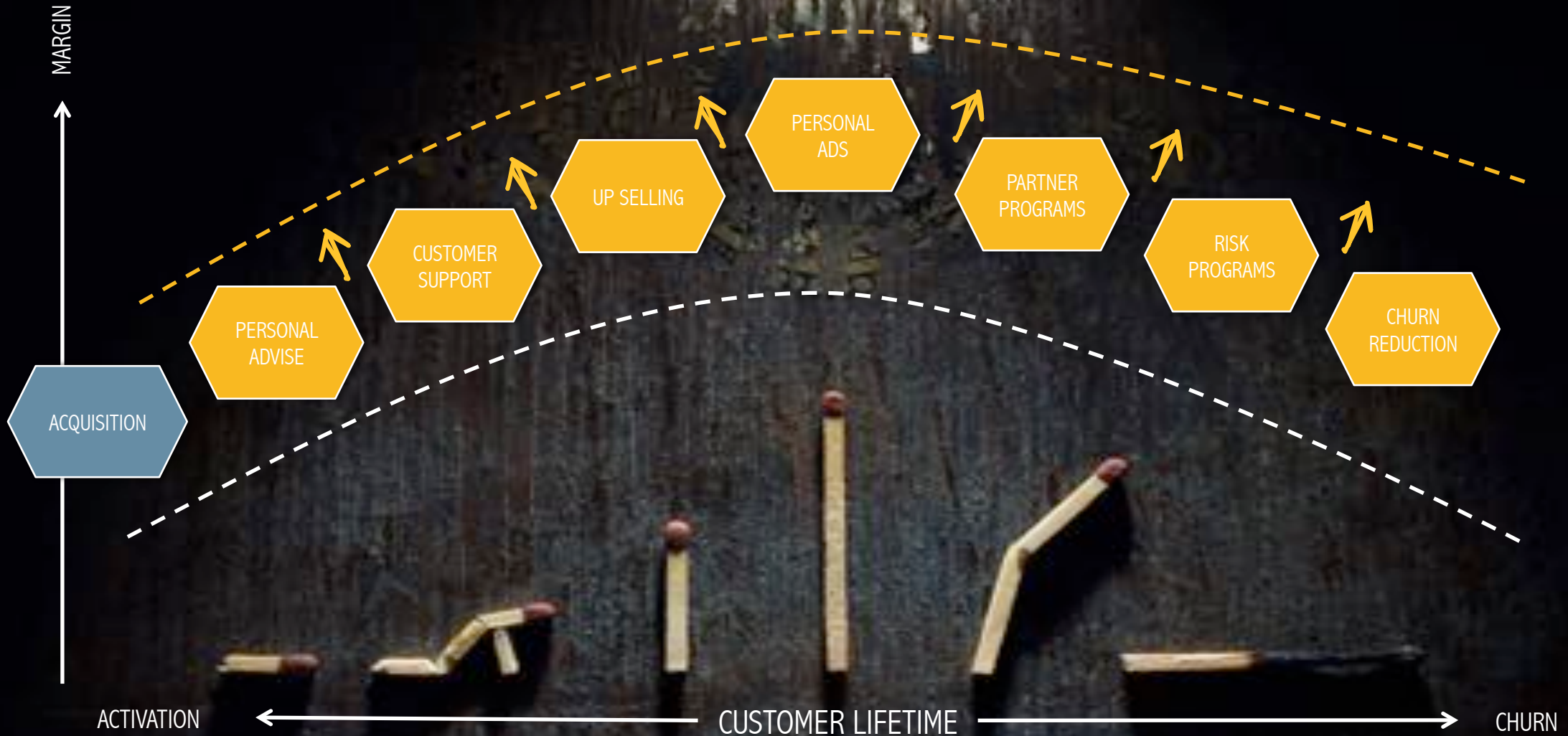
**FEWER**  
CALLS

**HUGE**  
SAVINGS





# Enterprise side of Customer Experience: CLTV



**UPCOMING**

TARGETED TV ADVERTISING

NEW 1-TO-1 EXPERIENCE

*“If at first an idea isn’t absurd,  
there is no hope for it.”*

*- Albert Einstein*



# TARGETING EVOLUTION

THE RIGHT  
**FAMILY**

THE RIGHT  
**PERSON**

THE RIGHT  
**CHANNEL**

THE RIGHT  
**TIME**

THE RIGHT  
**OFFER**

IMPROVED FREQUENCY

IMPROVED SEPARATION







NEW 'KPI' IN TV ADVERTISING???

**INTRUSIVENESS**

**TARGETING  
EVOLUTION**

# Talking to Customers...

## ING STOPT BIG DATA-PLAN TERUG IN KOOL

FINANCIËLE SECTOR PRIVACY

33



**RUBEN MUNSTERMAN** ING gaat klantinformatie voorlopig niet commercieel exploiteren. Het plan is uitgelopen op een publicitaire nachtmerrie.

## KBC investeert half miljard euro in big data



Pieterjan Van Leemputten  
is redacteur bij Data News

18/05/14 om 11:04 - Bijgewerkt om 11:11  
Bron: Datanews

Met 500 miljoen euro wil KBC een databank in elkaar zetten die in real time klantgedrag volgt en analyseert. De helft van het bedrag gaat naar ons land.



Met 500 miljoen euro wil KBC een databank in elkaar zetten die in real time klantgedrag volgt en analyseert. De helft van het bedrag gaat naar ons land.

Van de 2 miljoen euro gaat 1 miljoen naar ons land. Zo is er sprake van een investering van 500 miljoen euro.

## GLOBAL BANKING & FINANCE

TOP STORIES INTERVIEWS **BANKING** BUSINESS FINANCE TECHNOLOGY TRADING NEWS INVESTING

### BIG DATA IN BANKING: HOW BNP PARIBAS IS ANSWERING QUESTIONS WITH ITS DATA

© JUN 15, 2014

By James Elloart, Tableau Software

How much data does the number one bank in the Eurozone collect?

The answer is: a lot. Some experts predict that by 2020, we'll be generating 35 zettabytes of data every year. That's 35 billion terabytes. And right now, approximately 80 percent of all data is stored by enterprises. So it's easy to see why companies are looking for ways to keep up with their data, and even use it to their advantage.

The number one bank in the Eurozone—BNP Paribas—has more than 4,000 physical locations, 200,000 employees, and 15 million customers. Every time one of those customers swipes a card, data is generated. Each time a customer interacts with an online banking system, even more data is generated. Every time a new employee starts or a current employee departs: data. Each bank branch alone generates a wealth of data on customer behavior, profitability, and much more.



SO YOU THINK YOU CAN  
**COMMUNICATE**



**FROM WHEN THE COMPANY IS READY  
TO WHEN THE CUSTOMER IS READY**





**PRIVACY?**

# Living In the DIGITAL AGE...



# I'm Being Followed: How Google—and 104 Other Companies—Are Tracking Me on the Web

ALEXIS C. MADRIDAL | FEB 29 2012, 2:57 PM ET

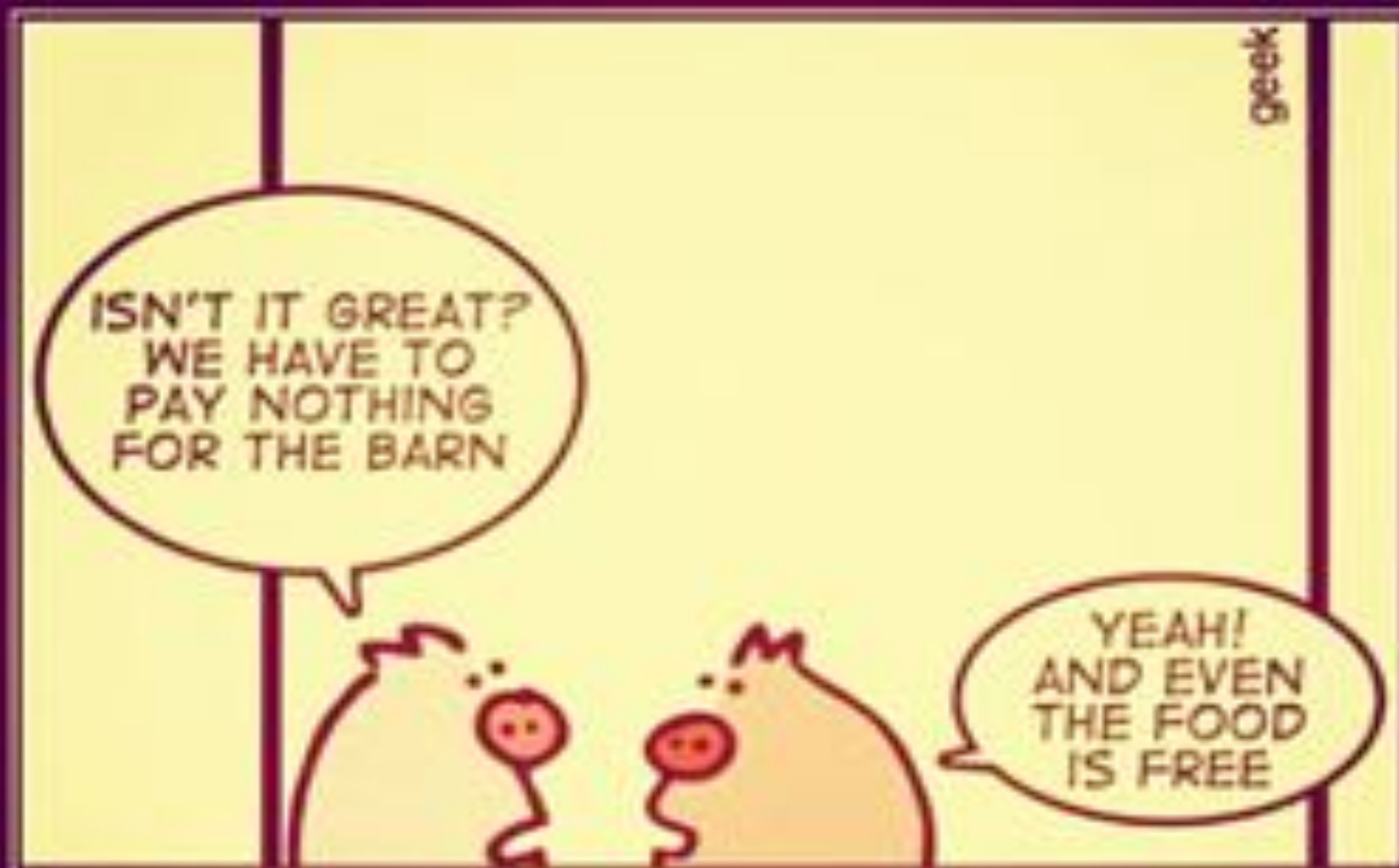


*Who are these companies and what do they want from me? A voyage into the invisible business that funds the web.*









# FACEBOOK AND YOU

If you're not paying for it, you're not the customer. You're the product being sold.



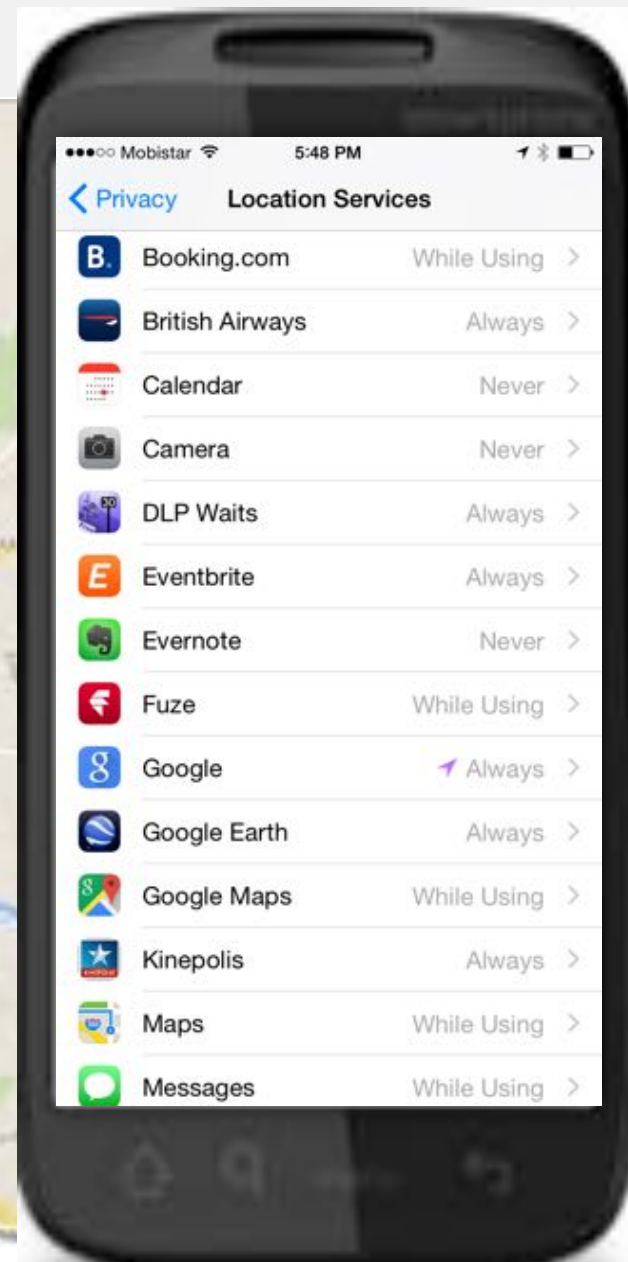
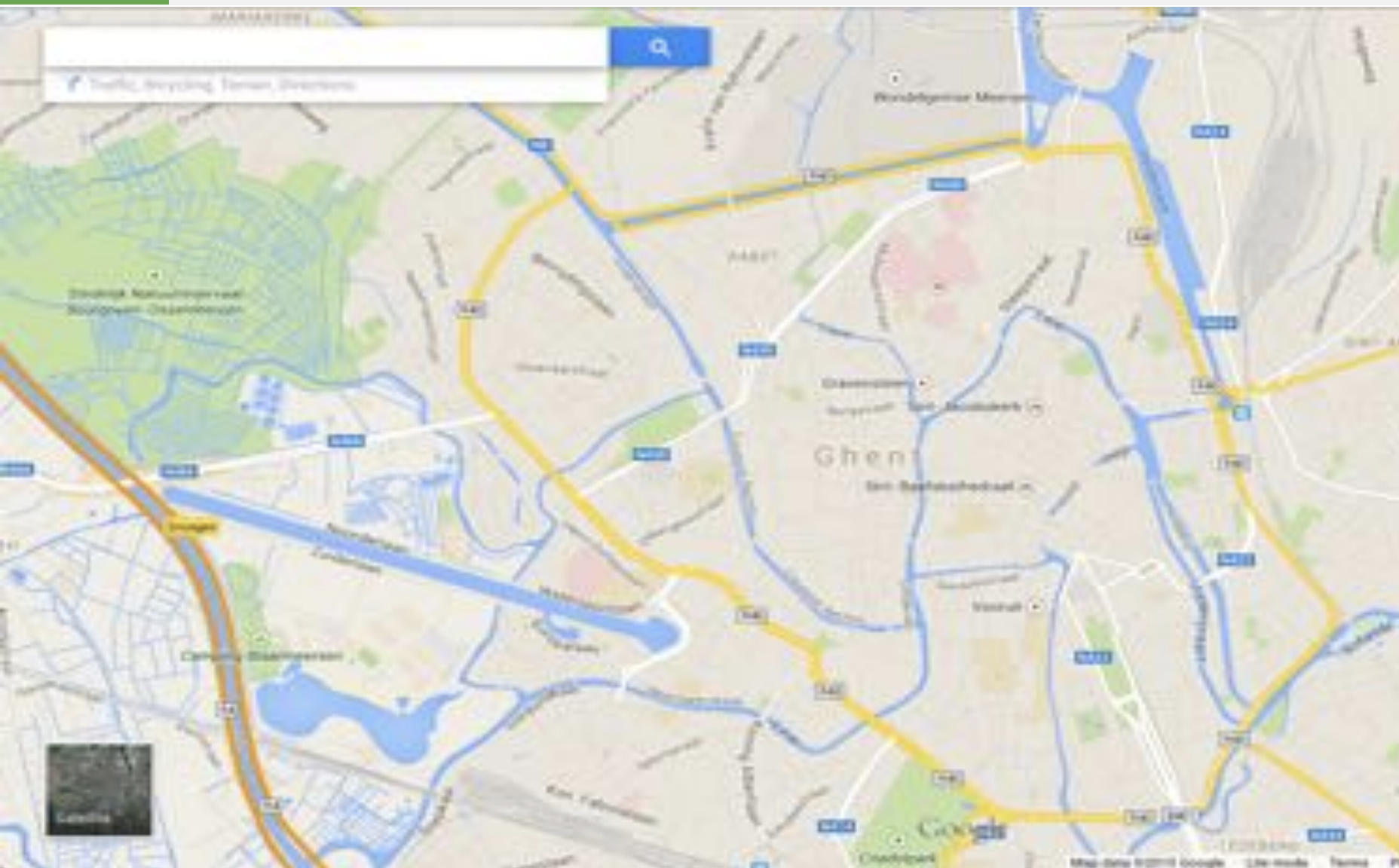


**PRIVACY?**

***DIGITAL PRIVACY HAS NEVER BEEN HOTTER  
IMPLEMENTING THE ~~OPTOUT~~ MECHANISM.  
IN***



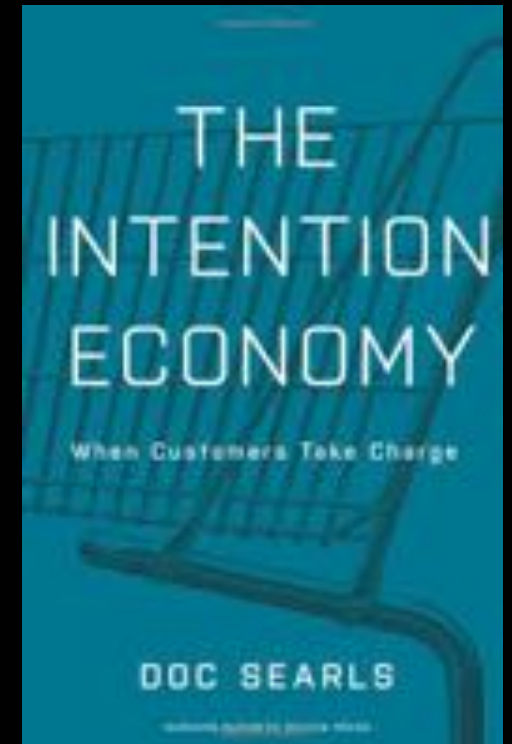
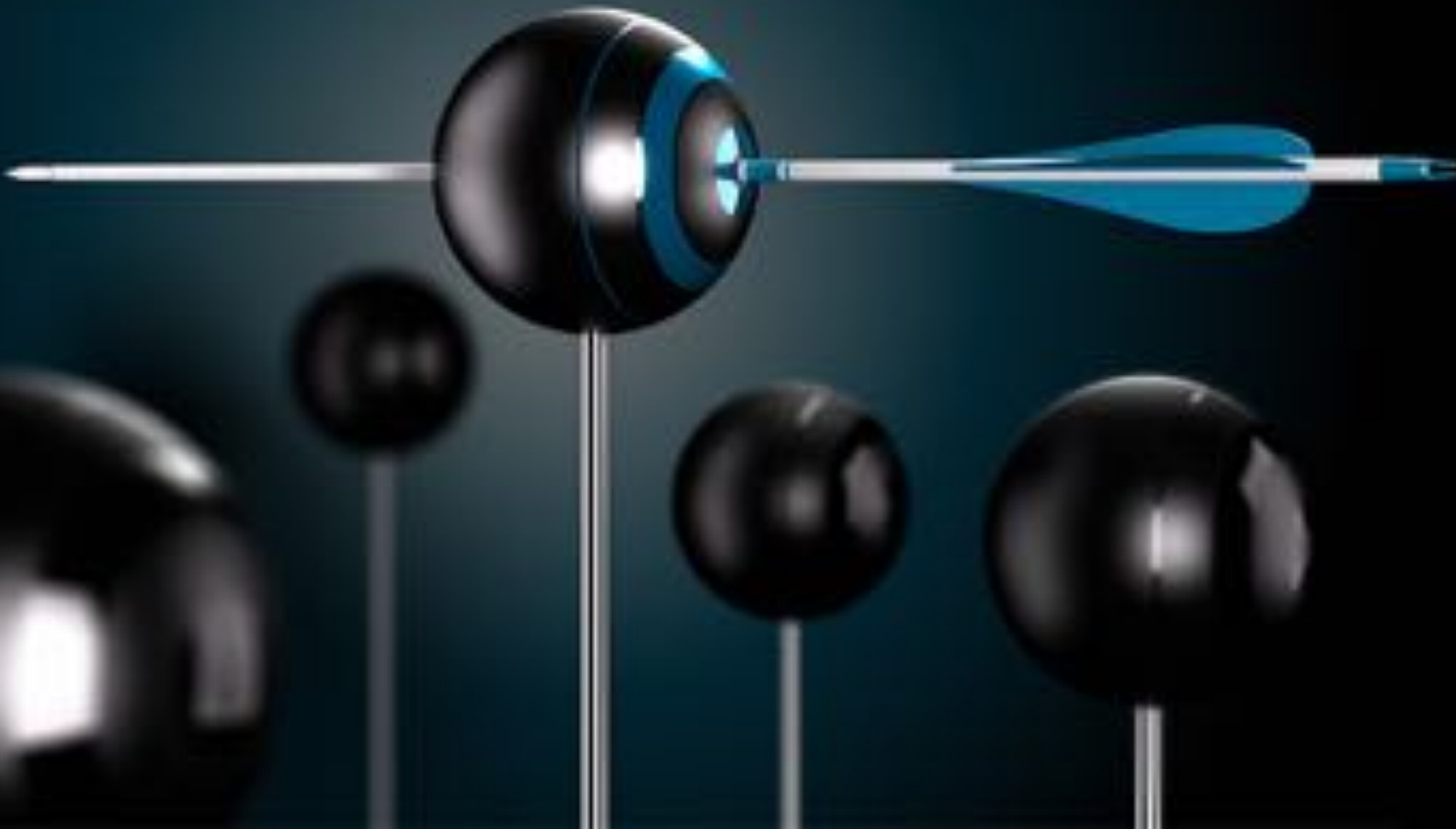
# Did you want to use GPS or OPT-OUT...?



# Customer Takes Charge

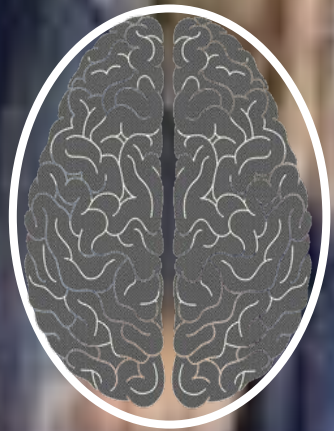
Be patient and

Aim for the Perfect Shot...

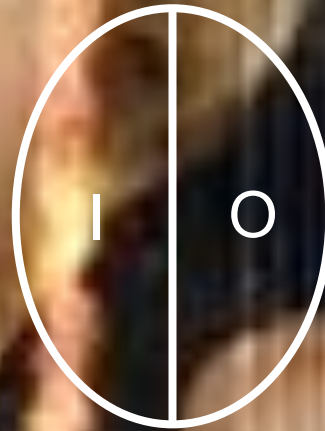




# The Human Brain...



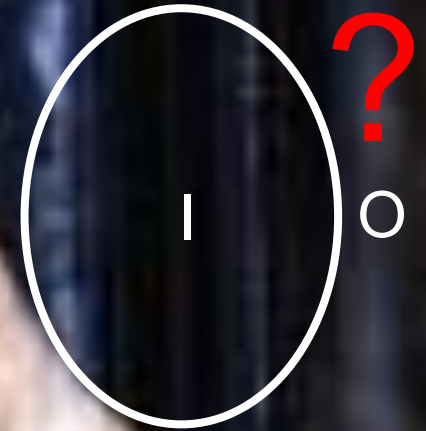
1900



1950

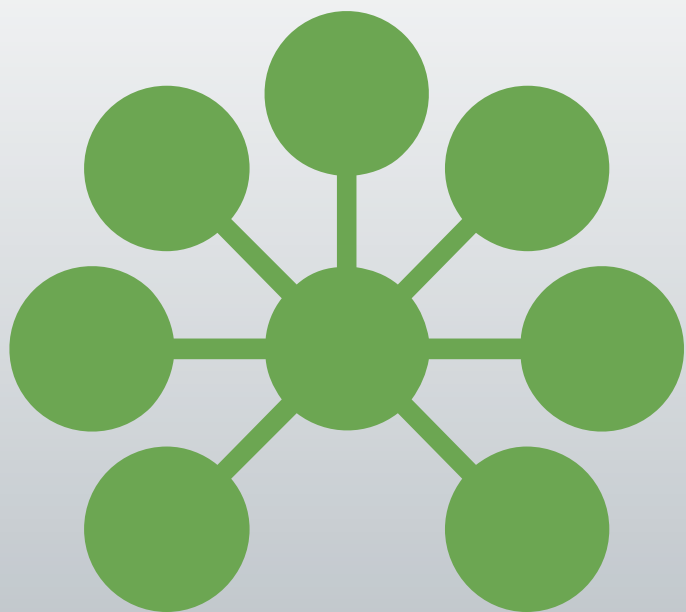


2000



$$\frac{I \text{ (input)} + O \text{ (output)}}{C \text{ (Constant)}}$$





Thank You

NG  DATA