

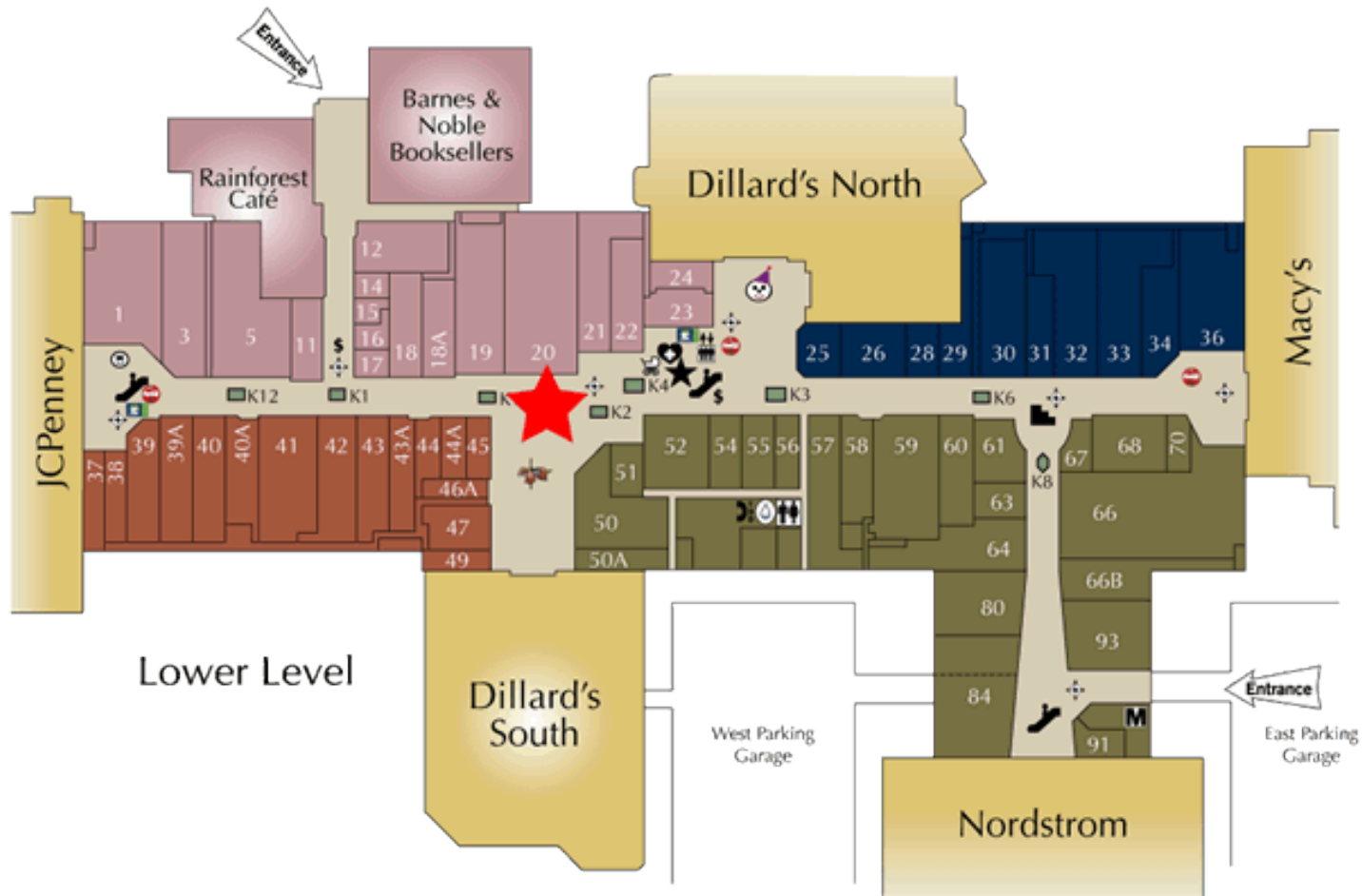


July 10, 2015

# Competition Among Platforms

Malcolm Frank / Cognizant

So where are we with platform evolution?



1997 - 1998





*“The future is already here –  
it is just unevenly  
distributed.”*

William Gibson

# A Story in Three Acts

1. Platforms Compete Against Industrial Models
2. Platforms Go Mainstream
3. The Net New

# Platforms Compete Against Industrial Models

What did we learn?

# What Marshall Said

6 slides used to be here  
(consider yourselves spared)

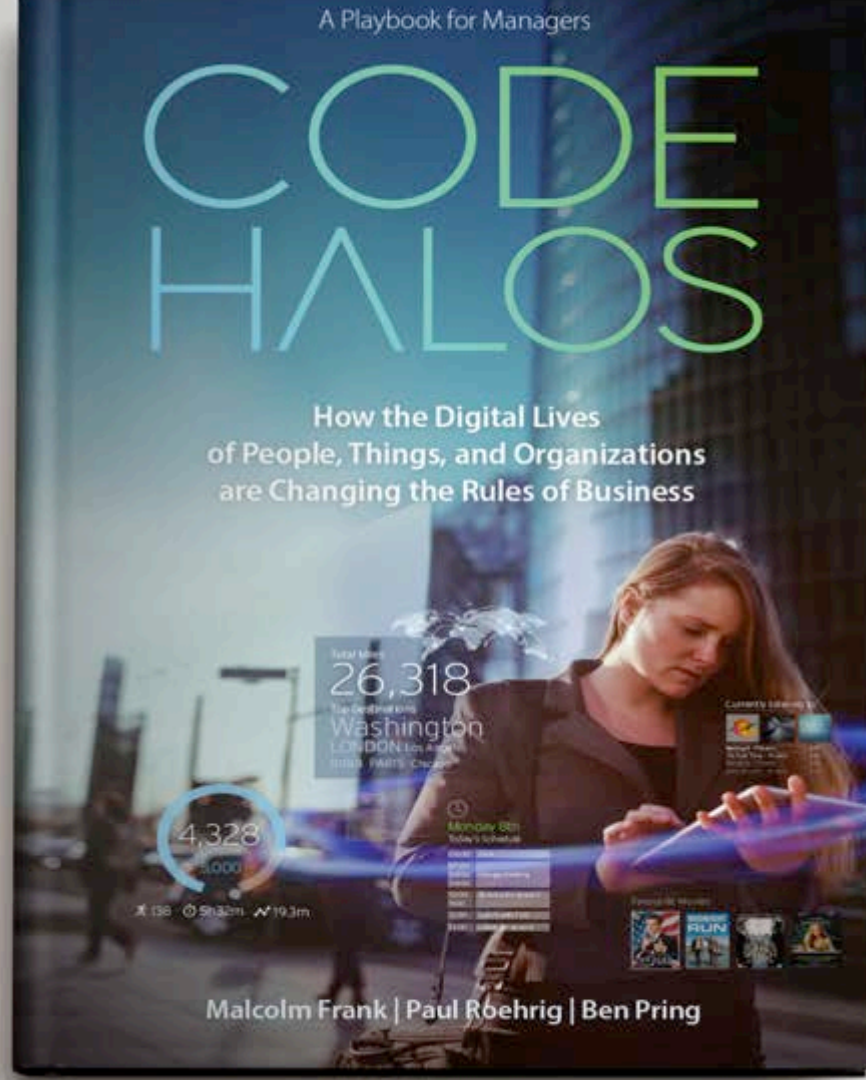


# The Book

Co-authored by  
Malcolm Frank  
Paul Roehrig  
Ben Pring

Published by Wiley &  
Co.

USA Books  
2014 Business Book of  
the Year



# CODE HALOS

## **Competing on Code**

The recognition that every noun - any person, place or thing - has a virtual self as well as a physical self.



# Six Companies, 10 Years, \$1 TRILLION Created

amazon.com<sup>®</sup>



Google<sup>™</sup>

facebook.



NETFLIX

They all did it  
with Code Halos

# Meet the Trillion-Dollar Club

	2003 Value (in Billions)	2013 Value (in Billions)
Amazon	\$23.90	\$180.20
Apple	\$8.90	\$515.40
Facebook	Not yet founded	\$132.00
Google	Private, 4 years old	\$355.20
Pandora	Private, 3 years old	\$6.00
Netflix	\$1.5	\$21.70
<b>Total</b>	<b>\$34.30</b>	<b>\$1,210.50</b>

ⓘ Except where otherwise noted, all financial data is from S&P CapitalIQ. We looked at the maximum market capitalization in each year.

Well, we all know that...

Why does this all matter?

Putting the transition in  
perspective

# Platforms Go Mainstream

## The Coming Platform Boom

Climbing out of “The Chasm”



One can only be staggered by the hubris of modern artists if we compare them, say, to the humble builders of Chartres Cathedral whose names are not even known. The artist ought to be distinguished by selfless devotion to duty; but we forgot about that a long time ago.

(Andrei Tarkovsky)

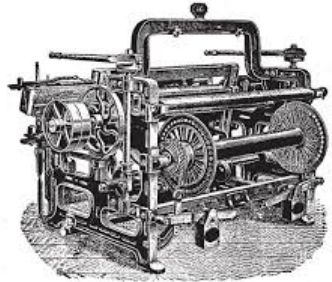
[izquotes.com](http://izquotes.com)



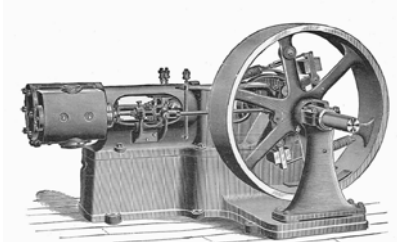
We've seen this pattern  
several times before...



# Industrial Revolutions



Loom and Textiles  
1771



Steam and Rail  
1829



Steel and Electricity  
1875



Oil and Mass Production  
1908



Computing  
1975

# The Economic Revolution Three-Step

1

The Burst  
of Innovation

2


The Chasm

3

The Large-  
scale Build-out



We are here in  
the Digital  
Economic  
Revolution



*"...History can teach us a lot. Innovation has indeed always been the driver of growth and the main source of increasing productivity and wealth. But every technological revolution has brought two types of prosperity. The first type is turbulent and exciting like the bubbles of the 1990s and 2000s and like the Roaring twenties, the railway mania and the canal mania before. They all ended in a bubble collapse. Yet, after the recession, there came the second type: the Victorian boom, the Belle Époque, the Post War Golden Age and... the one that we could have ahead now. Bubble prosperities polarize incomes; Golden Ages tend to reverse the process."*

Carlota Perez  
2013

# Industrial Economy

## The Second Industrial Revolution

**Burst of  
Technical  
innovation**

1875 - 1914

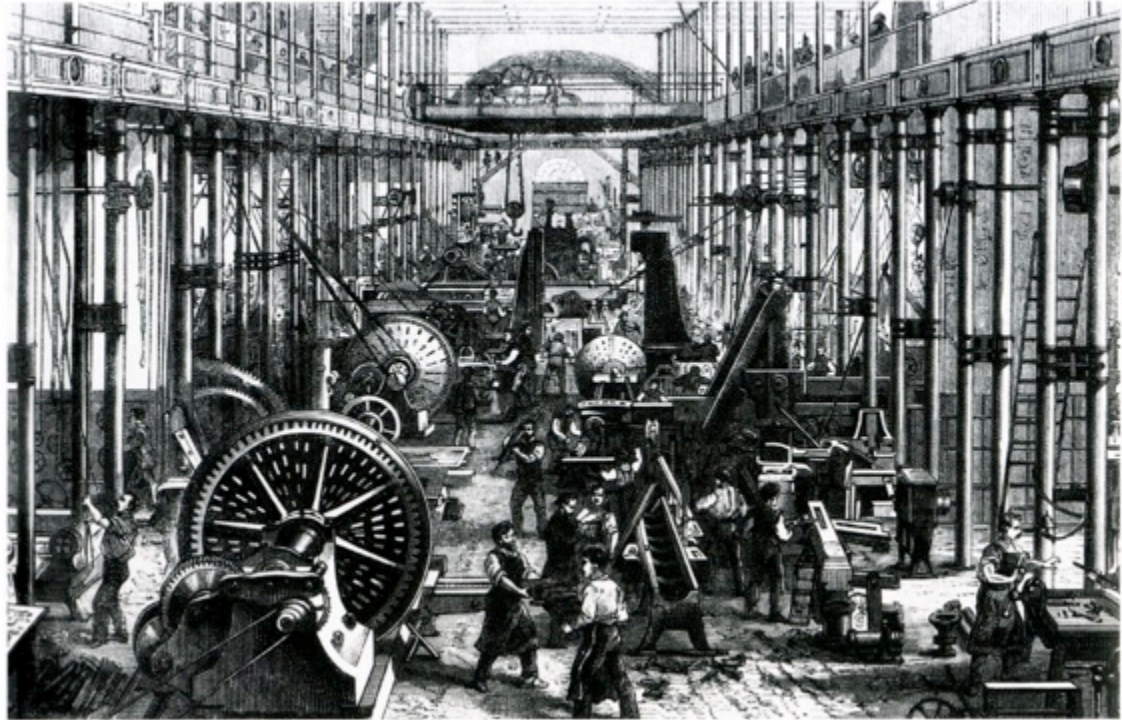
### Highly Concentrated:

- Geographically
- Financially

### Select, and related, industries

- Steel
- Transportation (rail, auto, shipping)
- Oil
- Lighting / Electricity
- Communications
- Finance

### Massive personal wealth creation



# Industrial Economy

**Burst of  
Technical  
innovation**

1875 - 1914

## Highly Concentrated:

- Geographically
- Financially

## Select, and related, industries

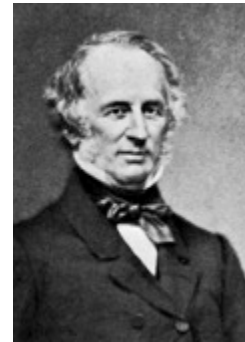
- Steel
- Transportation (rail, auto, shipping)
- Oil
- Lighting / Electricity
- Communications
- Finance

## Massive personal wealth creation

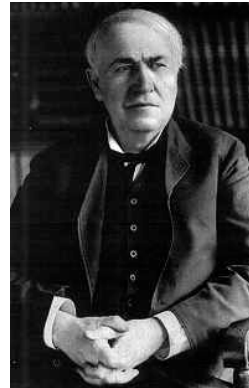
Steel \*



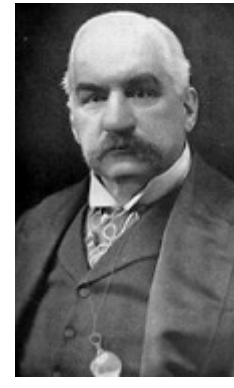
Shipping



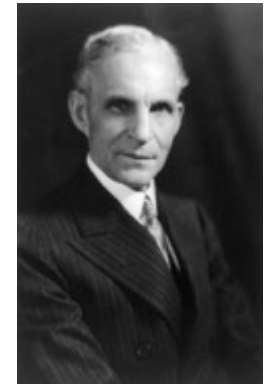
Oil \*



Electricity



Banking \*



Automotive \*

# Digital Economy

**Burst of  
Technical  
innovation**

1985 - 2015

## Highly Concentrated:

- Geographically
- Financially

## Select, and related, industries

- PCs
- Databases
- Enterprise Applications
- Networking
- IT Services
- Mobile Devices
- Social Networking

## Massive personal wealth creation



# Digital Economy

**Burst of  
Technical  
innovation**

1985 - 2008

## Highly Concentrated:

- Geographically
- Financially

## Select, and related, industries

- PCs
- Databases
- Enterprise Applications
- Networking
- IT Services
- Mobile Devices
- Social Networking

**Massive personal wealth creation**





# Industrial Economy

**Burst of  
Technical  
innovation**

1870 - 1929

**The  
Chasm**



**The Great Industrial Build Out 1945 - 2000**



## Highly Concentrated:

- Geographically
- Financially

## Select, and related, industries

- Steel
- Transportation (rail, auto, shipping)
- Oil
- Lighting / Electricity
- Communications
- Finance

**Massive personal wealth creation**



## Highly Fragmented

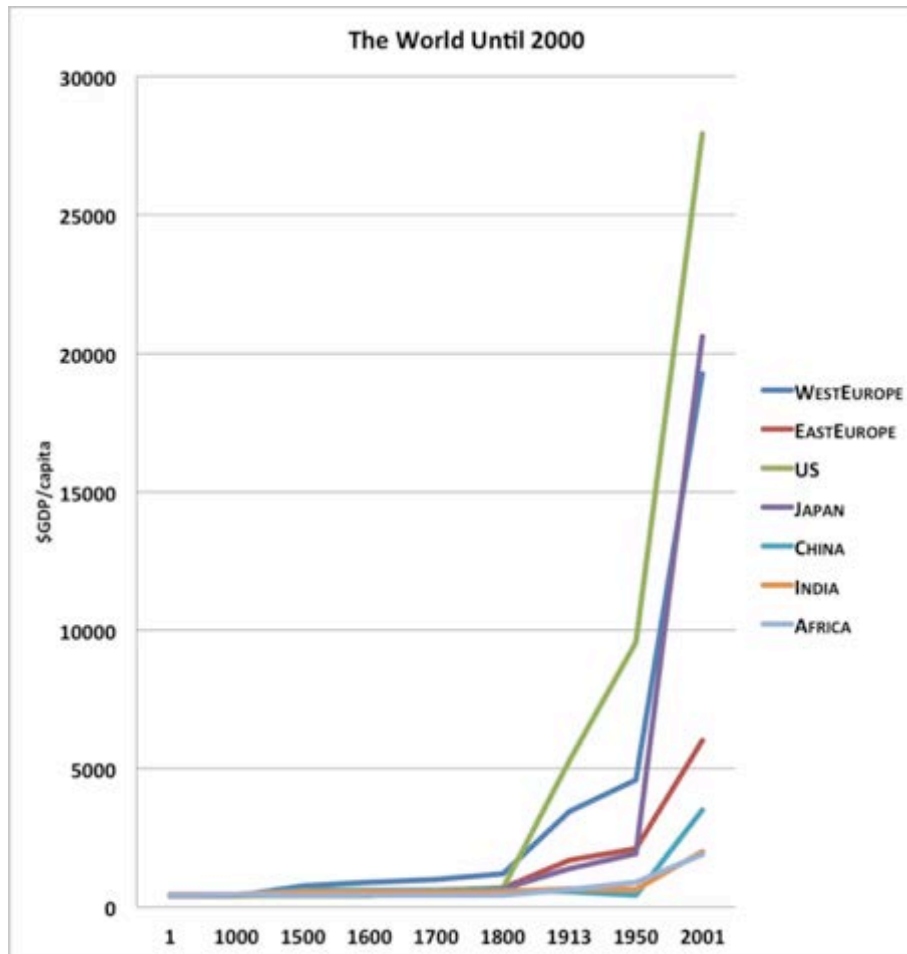
- Geographically
- Financially

## Broad application across industries

- Healthcare
- Transportation
- Retail
- Consumer Products
- Entertainment
- Finance

**Huge Distribution of wealth\***

- Establishment of large middle classes in G7+ nations



# Digital Economy

Burst of  
Technical  
innovation

1985 - 2009

The  
Chasm

The Great Digital Build Out 2015 - ?



## Highly Concentrated:

- Geographically
- Financially

## Select, and related, industries

- PCs
- Databases
- Enterprise Applications
- Networking
- IT Services
- Mobile Devices
- Social Networking

**Massive personal wealth creation**

## Highly Fragmented

- Geographically
- Financially

## Broad application across industries

- Healthcare
- Transportation
- Retail
- Consumer Products
- Entertainment
- Finance

## Huge Distribution of wealth\*

- Establishment of large middle classes in D7+ nations

# Rethinking the Corporation

When Platforms go Mainstream  
in more “traditional” industries

# A new focus for IT

## Focusing on the Core

S&P 500 Revenue  
**\$8,179B**

IT  
—  
**\$175B**  
2.1%

SG&A  
—  
**\$1,327B**  
16.2%

COGS  
—  
**\$4,951B**  
60.6%

---

Which is great ... *and terrifying*



But...there are some things  
we do know...

# Six new competencies in platform competition

1. Mobilization of Everything
2. Digitization of Processes
3. Pervasive Analytics
4. Make it Beautiful
5. From Transactions to Journeys
6. Digital Ethics Matter

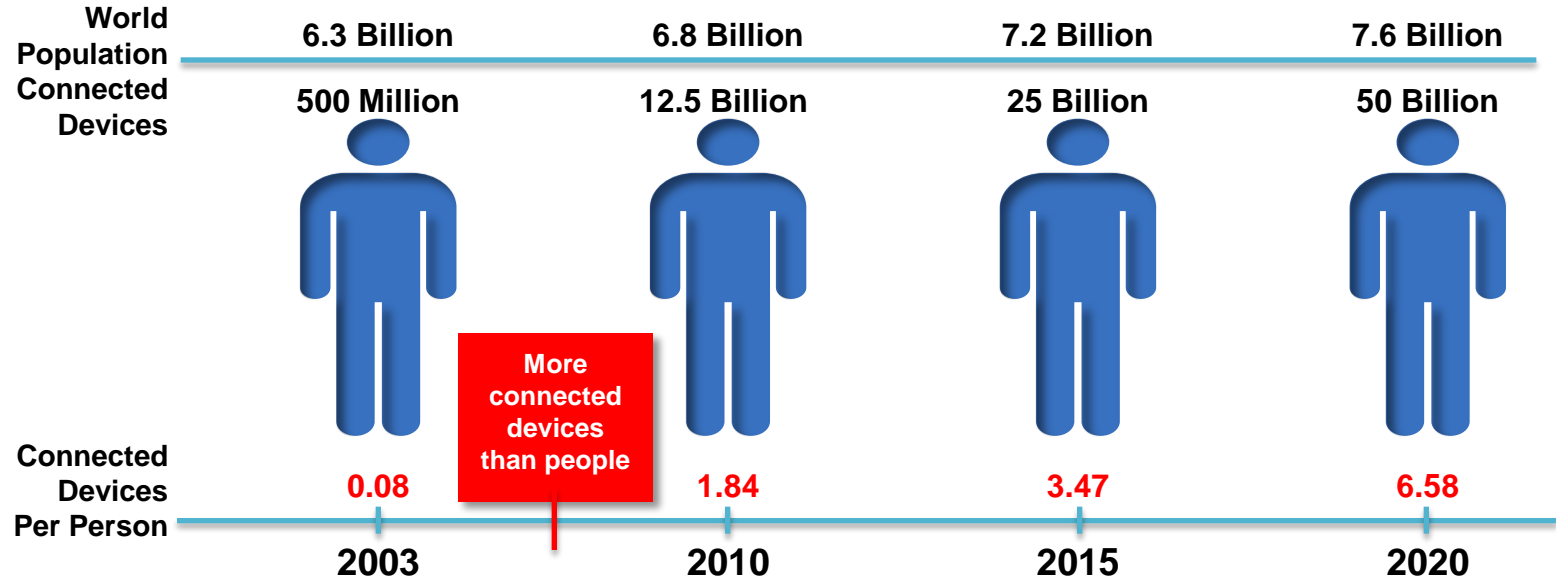


# Six new competencies in platform competition

1. Mobilization of Everything
2. Digitization of Processes
3. Pervasive Analytics
4. Make it Beautiful
5. From Transactions to Journeys
6. Digital Ethics Matter



# The numbers are staggering ...



Source: [https://contractiq.com/Internet\\_Of\\_Things\\_Report\\_2014](https://contractiq.com/Internet_Of_Things_Report_2014)

2015



=



Computational Power

2022



=



Computational Power

2045

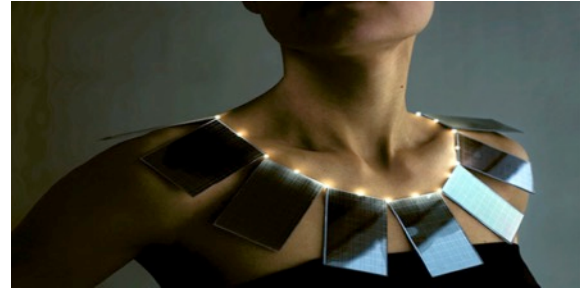


=



Computational Power

# The mobilization of everything

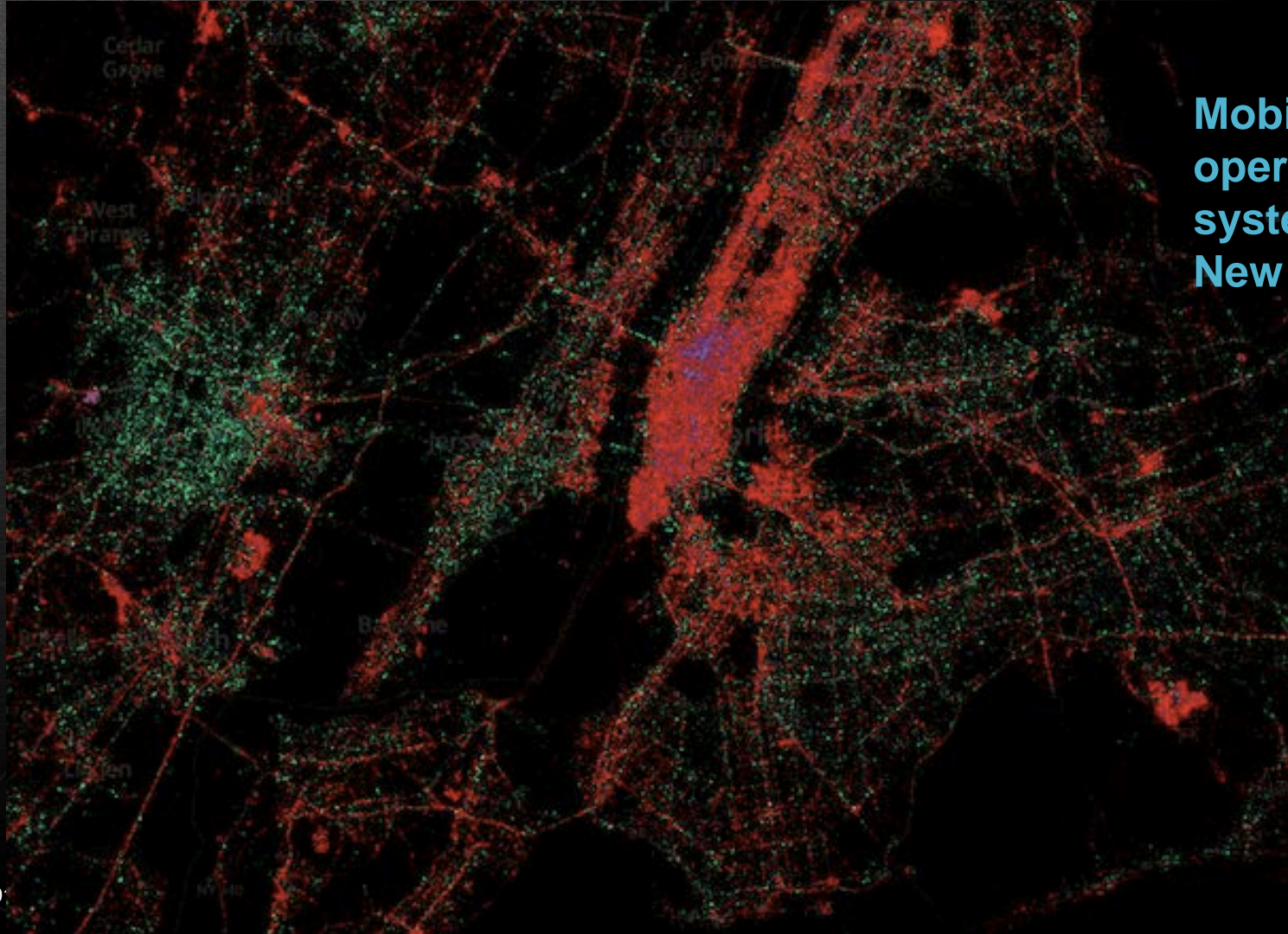


# The mobilization of everything

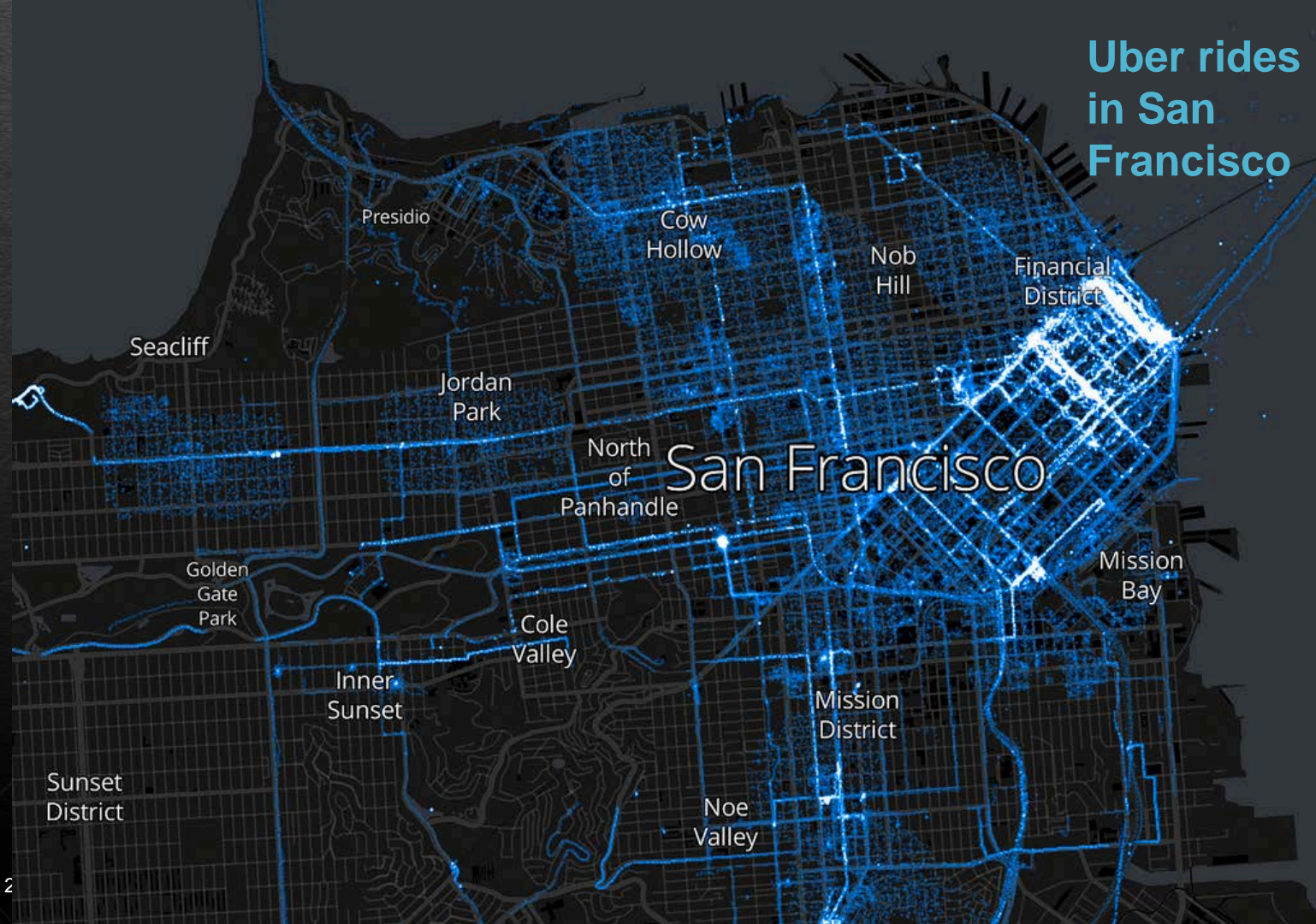




# Mobile operating systems in New York

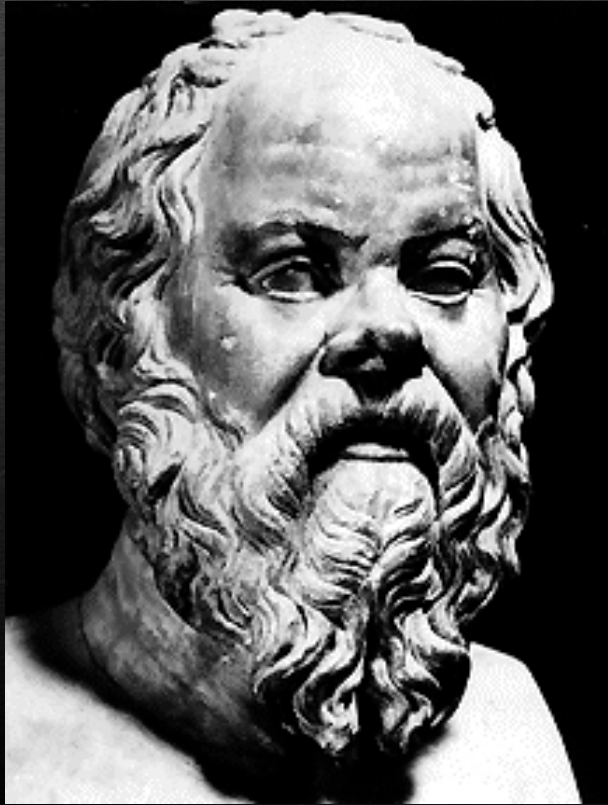


# Uber rides in San Francisco





## Popular jogging paths in Boston



*uninstrumented*

**“The unexamined  
life is not worth  
living.”**

**Socrates**

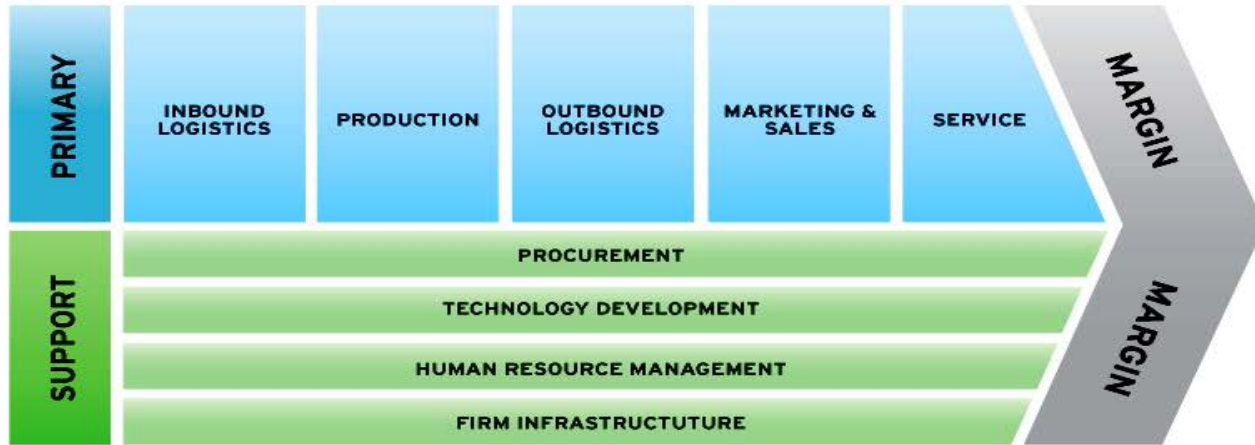
# Six new competencies in platform competition

1. Mobilization of Everything
2. Digitization of Processes
3. Pervasive Analytics
4. Make it Beautiful
5. From Transactions to Journeys
6. Digital Security and Ethics Matter

*“We shape our  
buildings, and  
afterwards our  
buildings shape us.”*



# The Digitization of Processes



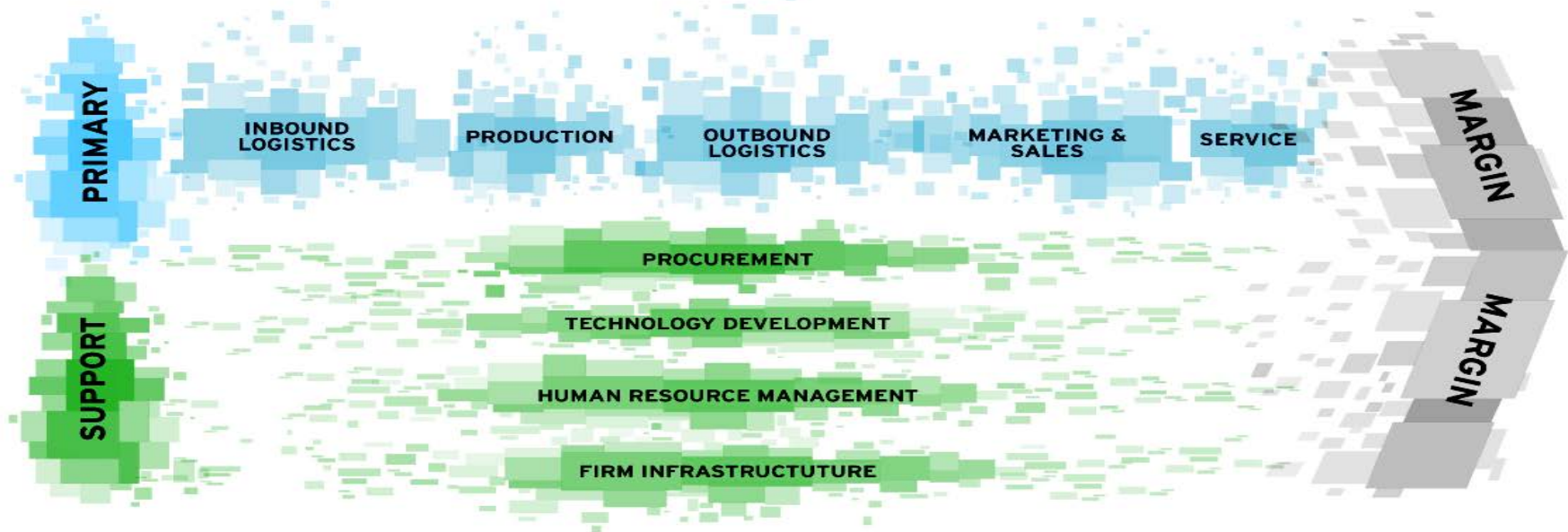
Designed for Widgets...not for Digits

# The Process – Technology Interface

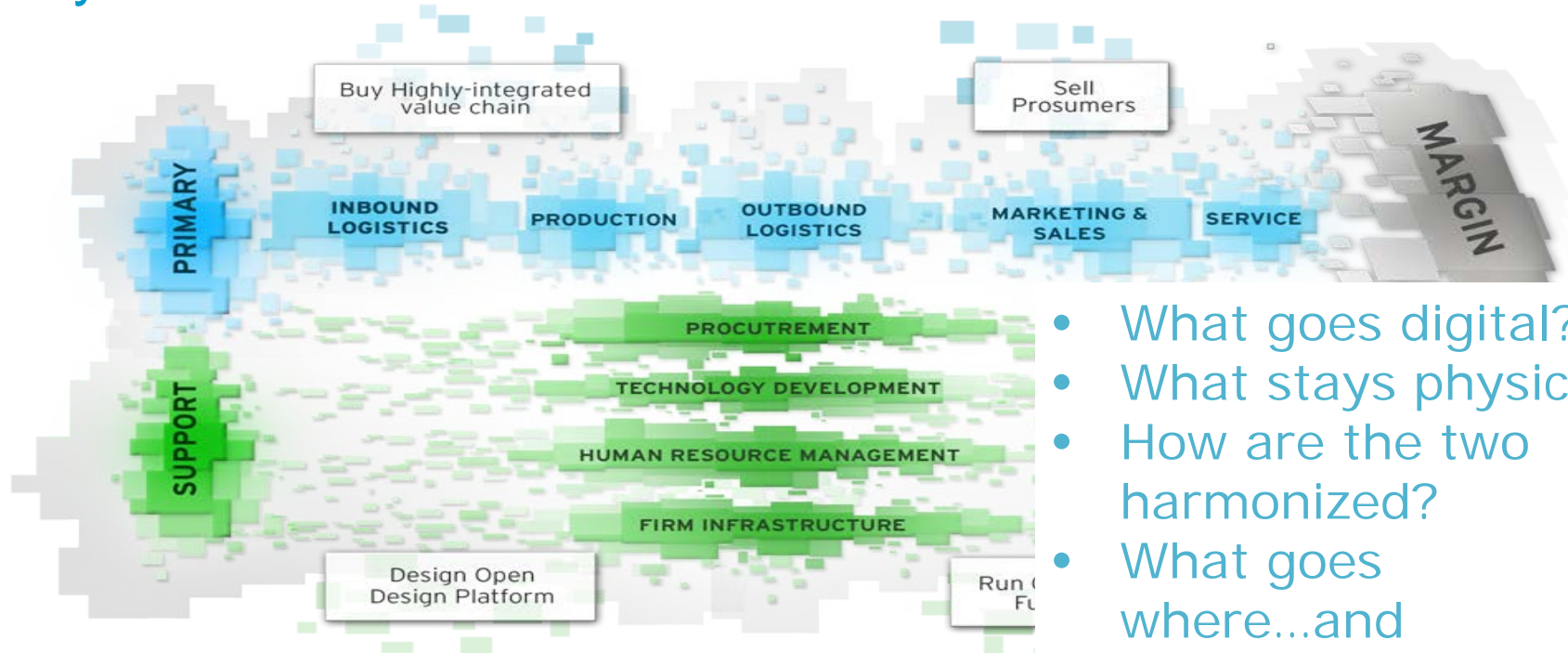




# The Digitization of Processes



# Physical and Virtual Value Chains Harmonized



- What goes digital?
- What stays physical?
- How are the two harmonized?
- What goes where...and when...and how...any by whom?

New Economies of Scale

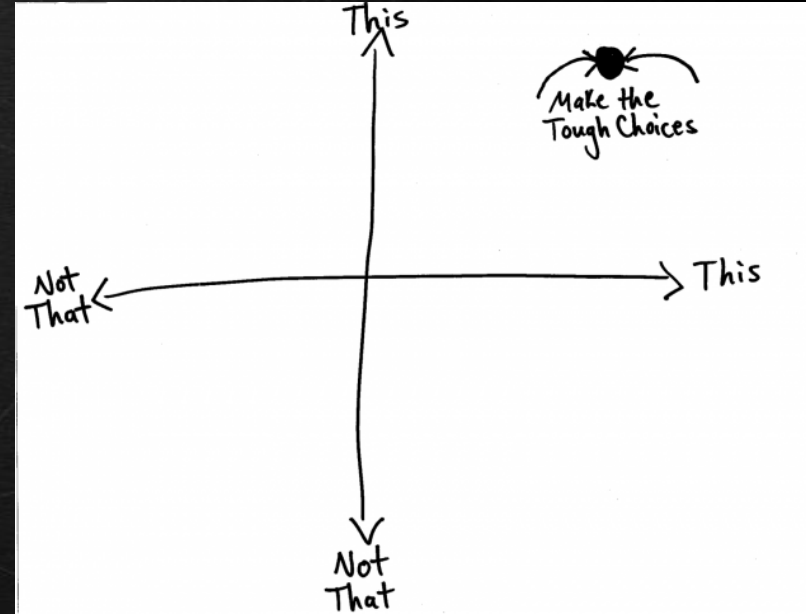
New Economies of Scope

R

Key Learning:  
Pick your (very specific)  
spots to start

Find a process, customer  
experience, or device to  
digitize

Building "the enterprise platform" is  
like "building the mobile enterprise"



# BMW Connected Drive



# Chase Branch of the Future



# Home Depot Code-ifies your home with Wink



# Six new competencies in platform competition

1. Mobilization of Everything
2. Digitization of Processes
3. Pervasive Analytics
4. Make it Beautiful
5. From Transactions to Journeys
6. Digital Security and Ethics Matter

# THE SMAC STACK IS CREATING A **BIG DATA** **QUAGMIRE**

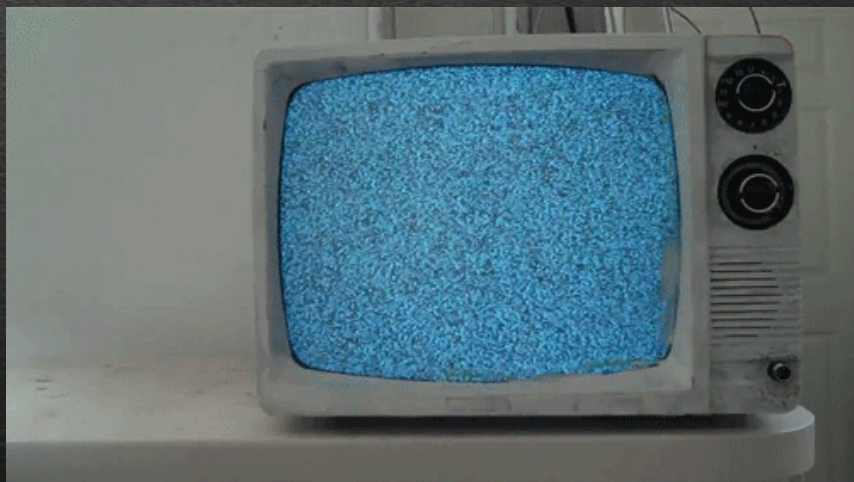




2.5 quintillion bytes  
of data generated each day



90% of the worlds' data was generated in the last two years



Where some only  
see static...

...others see  
business meaning  
(and value)



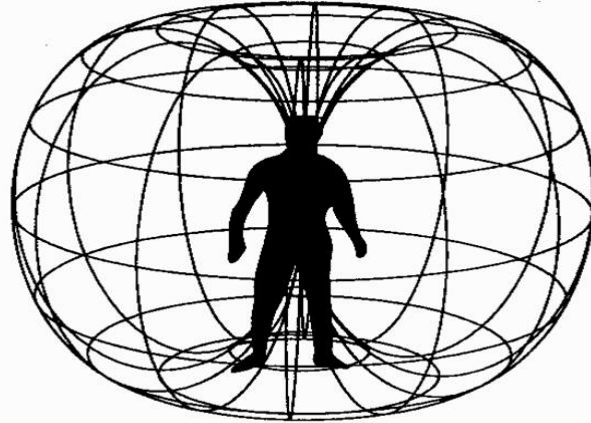
hulu

Google



LinkedIn

amazon

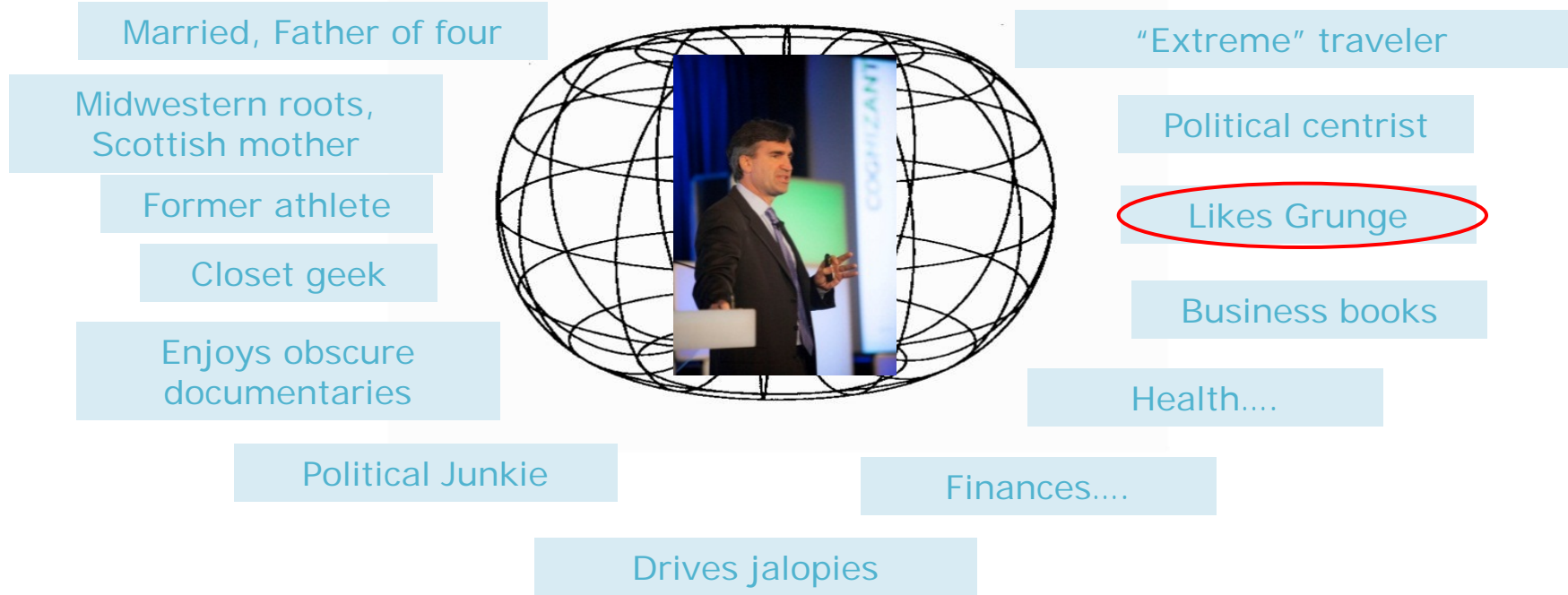


iTunes

facebook

Our virtual life actions  
create a **CODE HALO**

# Amazon, Netflix, Apple, or Google see our code when they “look” at us



# Think musical tastes matter?

Musical preferences and political preferences

Likes Garth  
Brooks

Votes  
Republican



# Think musical tastes matter?

Musical preferences and political preferences

Likes Madonna



Votes Democrat



# Other close music correlations

Likes Justin Timberlake



Likes Pixar films



# Other close music correlations

Likes Jimi Hendrix



Likes Science Fiction





# Other close music correlations

Likes Seattle Grunge



Likes Academy Award winners



What Musical tastes  
also say about you...



Recreational Drug Use



# What Musical tastes also say about you...



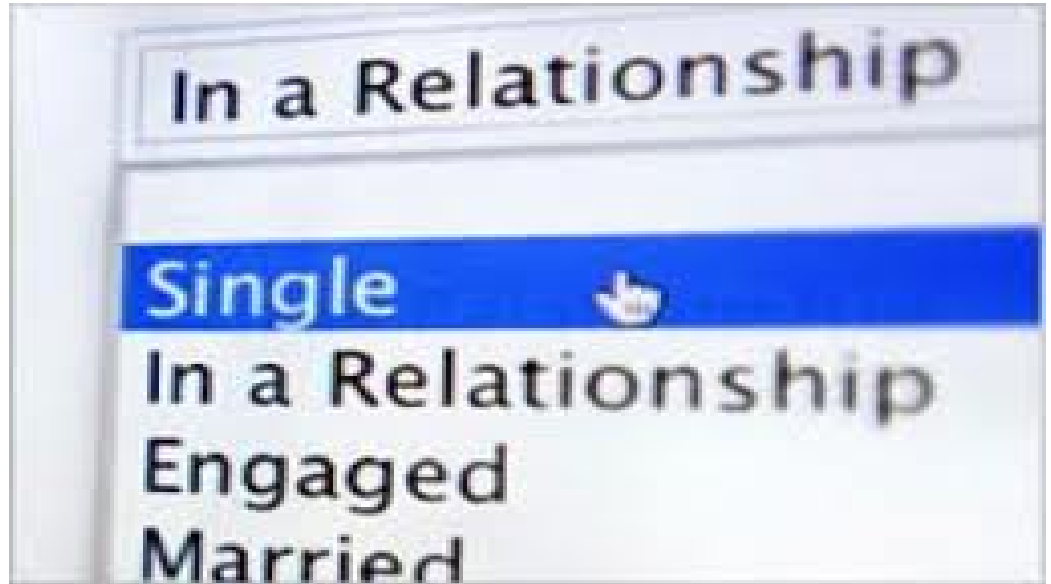
Romance



# What Musical tastes also say about you...



Relationship Status



# What Musical tastes also say about you...



## Family Background



# What Musical tastes also say about you...



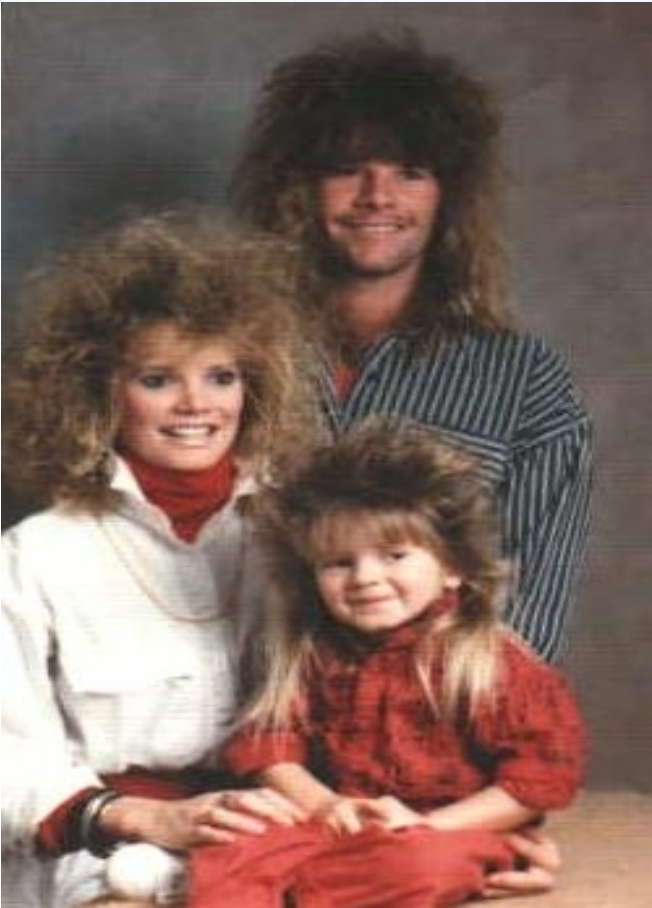
## Family Background



# What Musical tastes also say about you...



## Family Background



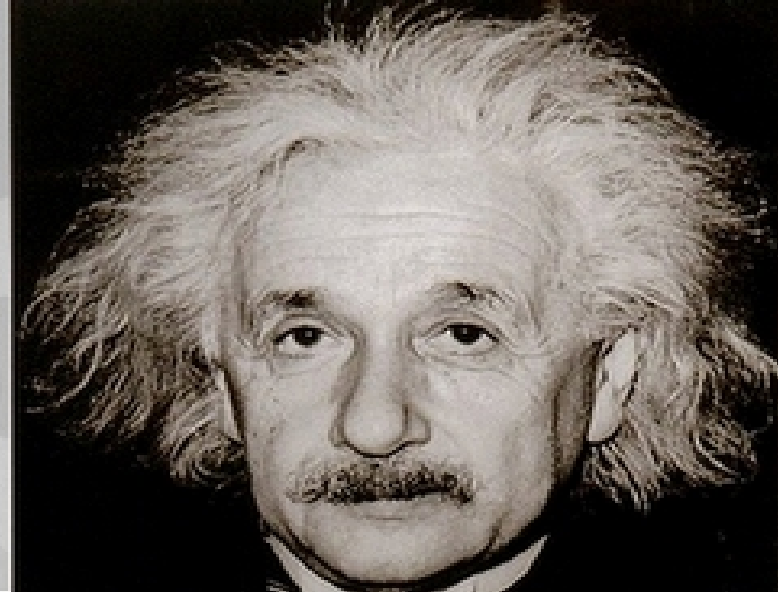
# What Musical tastes also say about you...



Your age



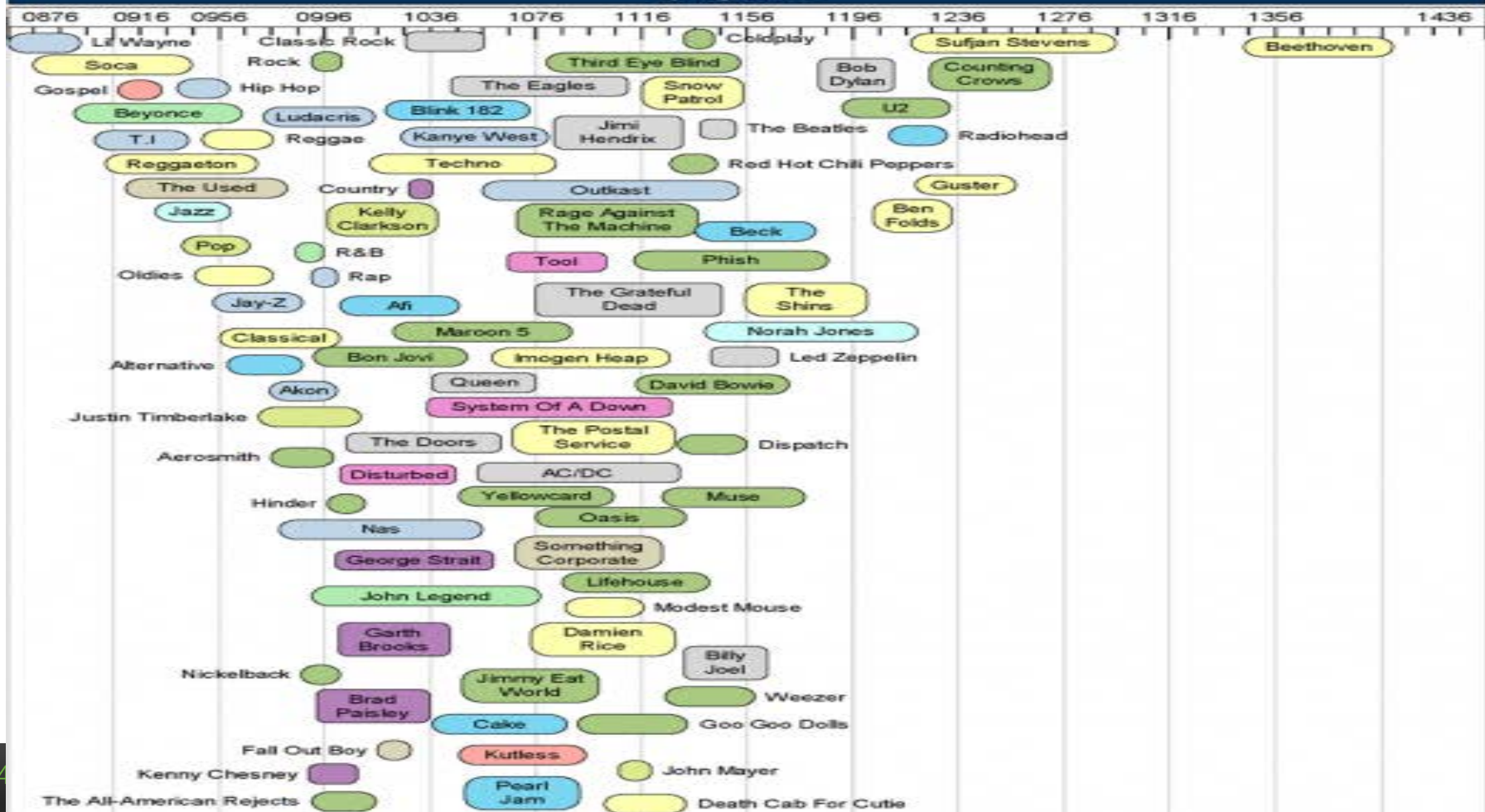
# What Musical tastes also say about you...



Your intelligence

# Musichatmakesyou dumb

By Virgil Gintilis



A man with a beard and dark hair, wearing a dark suit jacket over a maroon shirt, is standing in a modern, brightly lit office or public space. He is holding a black smartphone to his ear with his right hand and looking down at a tablet computer held in his left hand. The background is blurred, showing architectural elements and warm lighting.

How to best understand him?

- Basic demographics?
- How he looks?
- A questionnaire?

# Or knowing his exact needs, experiences and preference?

Google

Search bar with results for "David Bowie" including "David Bowie - What I Am", "Bowie Car Wash", "BBC News - Biography", "David Bowie: Rock US - Photos", and "Bowie: Progress To Be".

**PANDORA**  
Your Stations  
U2 Radio >  
David Bowie Radio >  
UCLA Radio >

- D&AQ judging 2013  
stycolahow #storify  
#dandad2013 #dandad
- How to make #SEO work  
for your company -  
Download our new  
whitepaper bit.ly/dx19k

**Twitter**  
Welcome home David  
The staff posted "Introducing the new weekly redesigned video  
module website" to the blog. The latest Video Video School  
lesson is "Challenge: Startle and the Starvation New".  
View all 12 photos | Photo gallery | Photos | Actions

**iTunes**  
David Bowie albums and videos.

**YouTube**  
Iron Max 3 Official Trailer (HD)  
9/5/11 5:59

**Repins from**  
Mark Wright  
Lisa Richards  
Karan Berry  
Toby Adams

12 Boards 73 Pins 100 Likes Activity



43%

Grande Cappuccino

28.3% Origin Espresso

14.7% Caffé Latte

7.5% Chocolate Tart

4.3% Shortbread Biscuit

2.2% Other



David was tagged in Paul Barnes photo. - with Mark and 4 others.  
4 minutes ago  
Like · Comment · Share

**amazon.com**

Related to items you've viewed

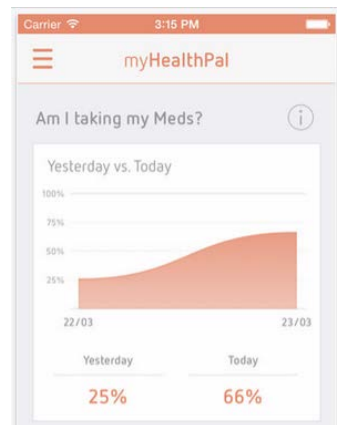


# Quantified Us: A World of Data Donors



“Just like we sign up as organ donors,  
we should become data donors.”

- Daniel Kraft, MD



MyHealthPal allows users to **donate their anonymized data in return for a share of the revenues.**

# The Emergence of Digital Healthcare

Through these technologies, a comprehensive patient view can be compiled. Powered by over 400 technologies and 9,000 apps

## Technologies to Track Health Statistics



PORTABLE GENOMICS



blipcare

Withings Aura™



glooko

## Technologies to Track Emotional State

HALO



NeuMitra



## Technologies to Track Behavior



Orit

gear4

curious



ATHOS



Ginger.io

## Technologies to Track Social Environment

my Health Teams

patientslikeme®

GSIT Health

SPHERE

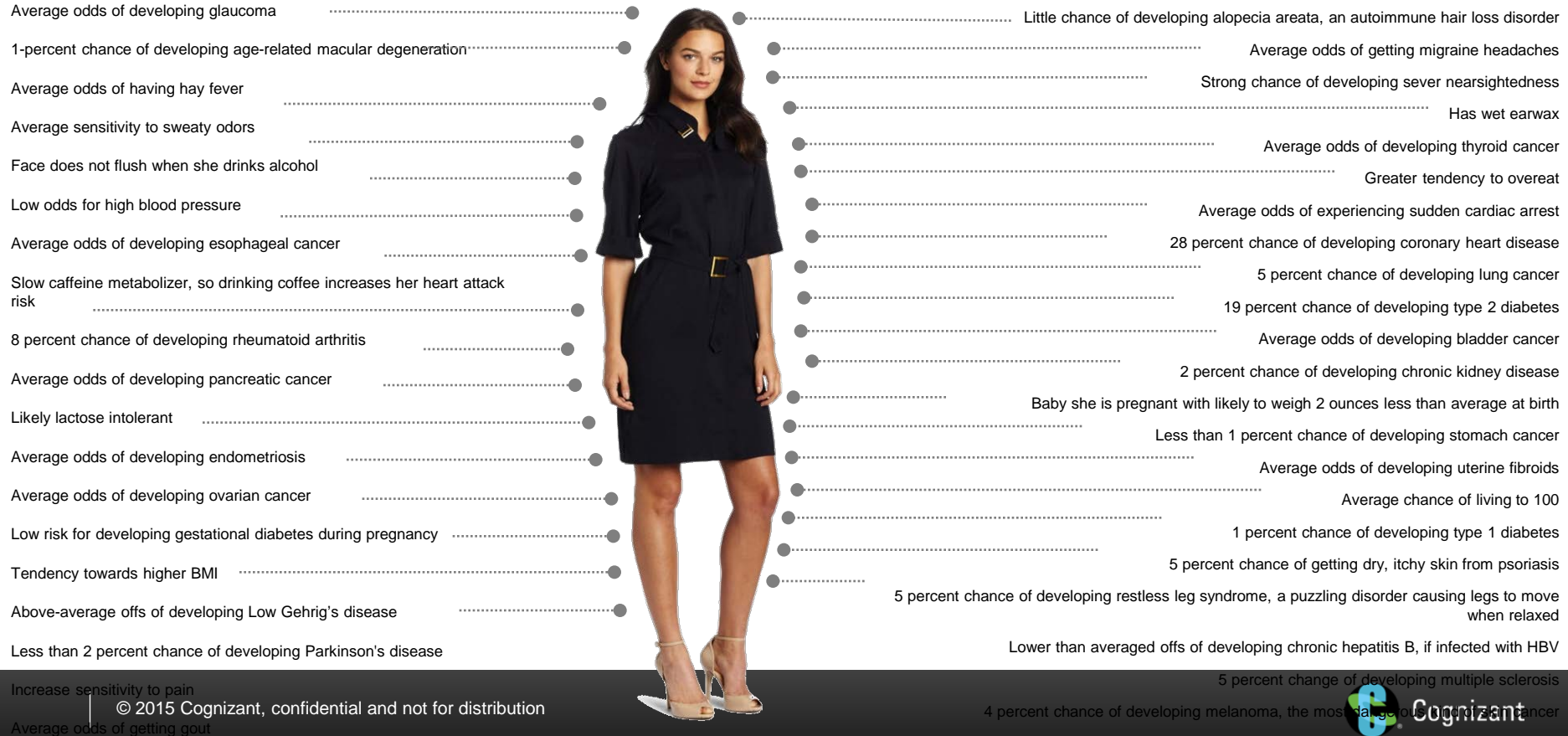
caremerge

mana HEALTH



# ... and a patient "Code Halo"

Combine all of those technologies and a highly-pixelated view of the patient starts to emerge



Increase sensitivity to pain  
Average odds of getting gout

# Six new competencies in platform competition

1. Mobilization of Everything
2. Digitization of Processes
3. Pervasive Analytics
4. Make it Beautiful
5. From Transactions to Journeys
6. Digital Security and Ethics Matter





**Most Customers**

**Most Companies'  
Systems**

**Software as the new  
Brand Battleground**

# Change InfoSet DSO

Alias tables
Join
Field groups
Extras

Field Group
Field

Data fields      Technical name      Field ...

Field Group/data fields      Technical name

- Table
- ▼ Sales
- + Client
- + Sales
- + Sales
- + Material
- + Material
- + Price
- + Batch
- + Material
- + Shipping
- + Sales
- + Iter
- + Iter

Create Object Directory Entry

Object: R3TR A05G DSO

Attributes

Package:

Person Responsible: USER04

Original System: EN3

Original language: EN English

Local Object
Lock Overview

Field Group/data fields	Technical name
Item Data	VBAP-MATNR
Item	VBAP-POSNR
	VBAP-VBELN

- + Relevant for Billing: VBAP-FKREL
- + Higher-level item in bi: VBAP-UEPOS
- + Item for which this iter: VBAP-GRPOS
- + Reason for rejection (c: VBAP-ABGRU
- + Product hierarchy: VBAP-PRODH
- + Target value for outlin: VBAP-ZWERT
- + Target quantity in sale: VBAP-ZMENG
- + Target quantity UoM: VBAP-ZIEME

No field selected:  
Select a field by double-clicking

9:41 AM 100%

PAY STORES GIFT

**Rosemary Valaire**  
Account & Settings

Pike Place  
1912 Pike Place  
Seattle, WA 98101

Today at 9:41 AM  
Stars may take 24 hours to appear

REWARDS

8/12

MESSAGES 2

ACCOUNT HISTORY

Message

**Smoke clearing**  
Hallway

Oct 12, 1:19 PM

**Smoke clearing**  
Hallway

The smoke level is decreasing.

---

Oct 12, 1:18 PM

**Alarm hushed**  
Hallway

The alarm will sound again if the problem does not clear.

---

Oct 12, 1:17 PM

**Emergency**  
Hallway

There is smoke. The alarm is sounding.

Palo Alto 65°

Home

HEATING  
**72**

Upstairs

Overview Accounts Budgets

**ACCOUNTS**

Cash **\$26,578**

Credit Cards **-\$16,390**

**BUDGETS** October

**CASH FLOW** October

Earned \$5,721

Spent -\$8,381

**ALERTS** 8

**ADVICE**

Make sure you have a health insurance plan that works for you

**SPENDING** October

- Home
- Auto & Transport
- Food & Dining

**Budgets** October 2013

**Auto & Transport**

Gas & Fuel **\$144** Left

**Entertainment**

Movies & DVDs **\$65** Over

**Food & Dining**

Alcohol & Bars **\$220** Left

Coffee Shops **\$14** Left

Fast Food **\$11** Over

Groceries **\$883** Left

Add transaction

**-\$2.14**

Starbucks

Expense

Credit/Debit Card from VISA

1	2	3
4	5	6
7	8	9
0	Next	



# Six new competencies in platform competition

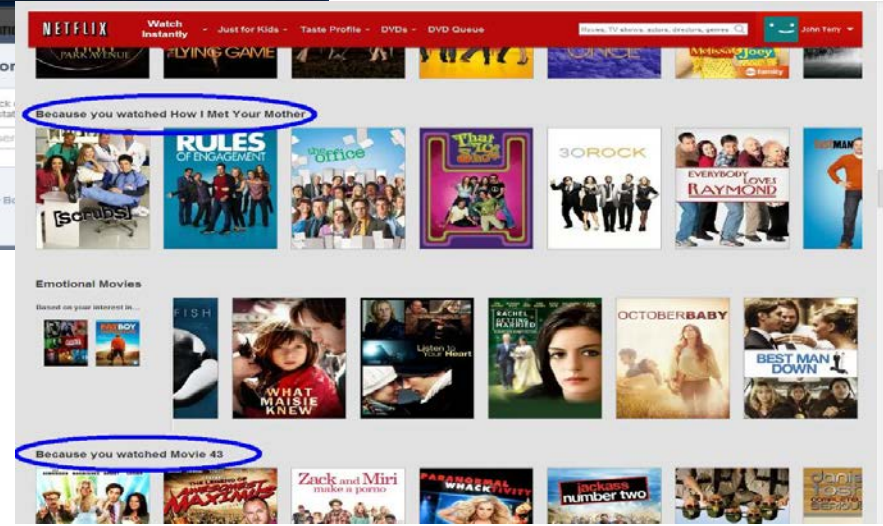
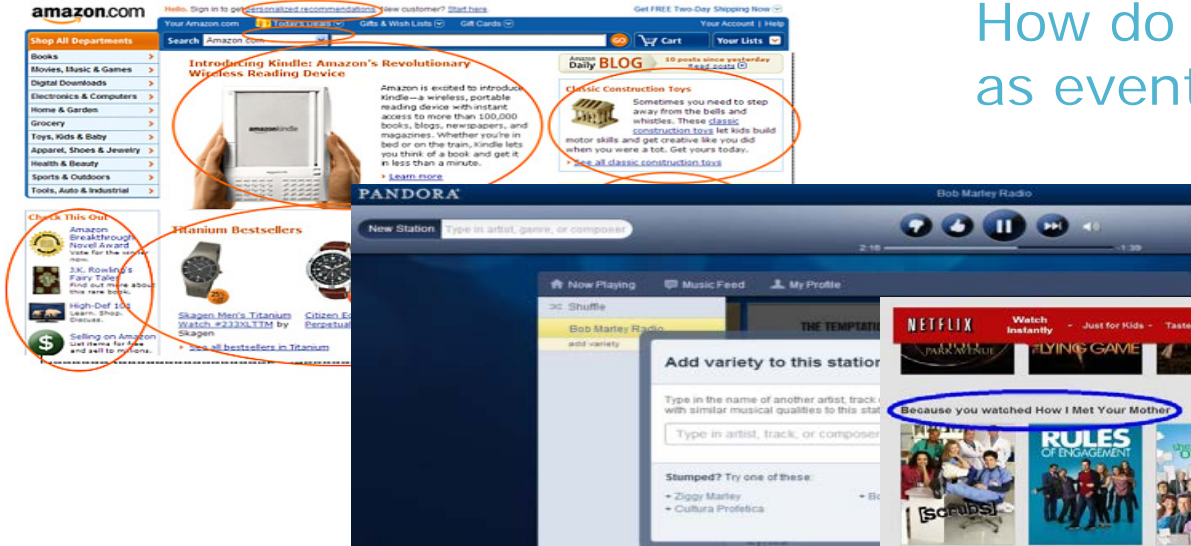
1. Mobilization of Everything
2. Digitization of Processes
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5. From Transactions to Journeys
6. Digital Security and Ethics Matter

# From transactions...



# ...to Journeys

How do you effect events as events are unfolding?



How do you manage overall patient journeys – based on the culmination of all transactions?

# Six new competencies in platform competition

1. Mobilization of Everything
2. Digitization of Processes
3. Pervasive Analytics
4. Make it Beautiful
5. From Transactions to Journeys
6. Digital Ethics Matter



# Steps to Build – and maintain – Trust



**Don't Snoop**



**Default to opt-in  
and opt-out**



**Give individuals a  
delete button**



**Some correlations  
are creepy**



**The law will never  
catch up**



**Appoint a Chief  
Digital Risk Officer**

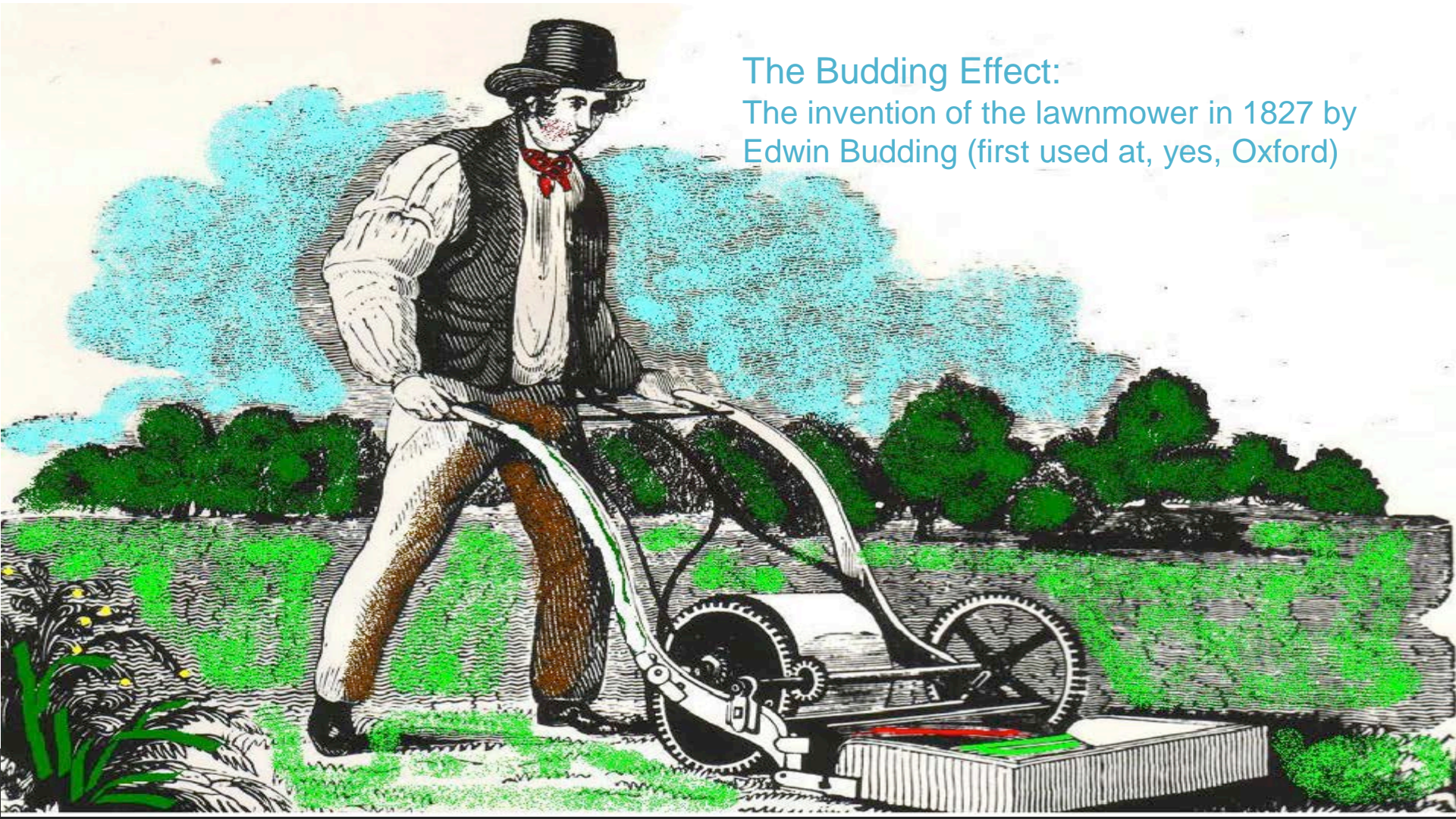
# The Net New

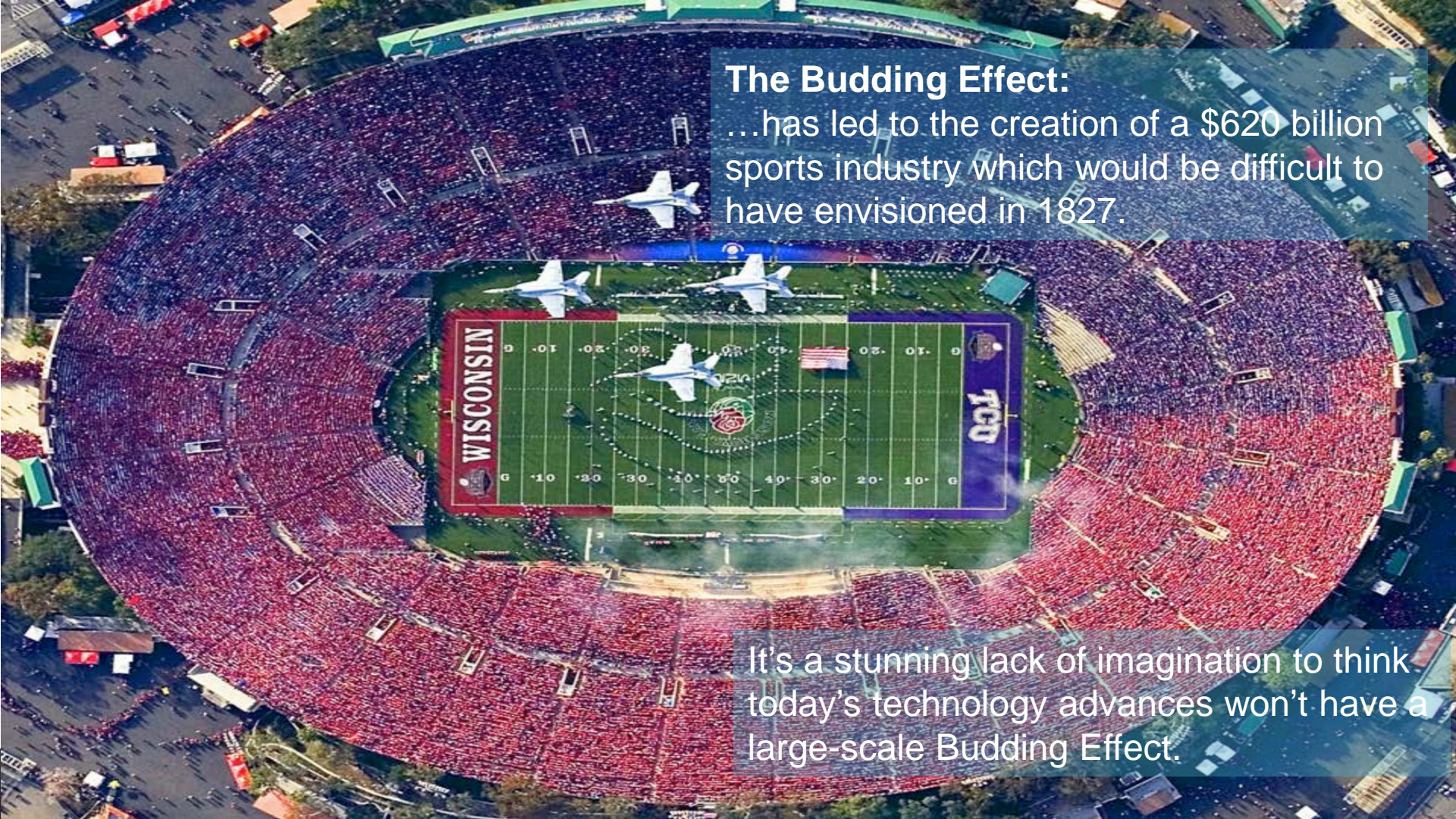
The Budding Effect  
And  
Building the Industries of Tomorrow

# The Budding Effect

Creating New Ways...and Net New

The Budding Effect:  
The invention of the lawnmower in 1827 by  
Edwin Budding (first used at, yes, Oxford)





## The Budding Effect:

...has led to the creation of a \$620 billion sports industry which would be difficult to have envisioned in 1827.

It's a stunning lack of imagination to think today's technology advances won't have a large-scale Budding Effect.

# The Budding Effect



## Electricity gave us:

- Telecommunications
- The Movie Industry
- Radio
- Television
- The Transistor



## The Automobile gave us:

- Suburbia
- McDonald's
- WalMart
- Holiday Inn
- Formula One / NASCAR

## The Budding Effect:

creating –  
simultaneously – the  
obvious and the  
unimaginable.

If history holds, the  
digital revolution will  
drive the largest Budding  
effect yet...creating large  
industries by 2045 that  
we don't foresee in 2015

But that's a really big topic...

...and we're out of time

# Summary

1. We are about to enter the great digital build-out
  - More “traditional” industries move to platforms
2. Their starting point is different
  - Managing hybrid and model transitions
3. The Six Key Competencies
  - Best practices are emerging
4. The Budding Effect
  - In ten years we’ll look back at this conference and laugh



---

# Thank you