Applications:
What makes Big Data valuable

After this video you will be able to..

- Describe examples from fields where big data has enabled better models which allows for higher precision recommendations or solutions to make the world a better place

What Makes Big Data Valuable?

Big Data

Better Models

Higher Precision

What Makes Big Data Valuable?

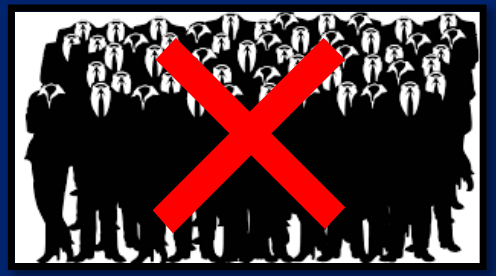
Big Data

Personalized marketing data

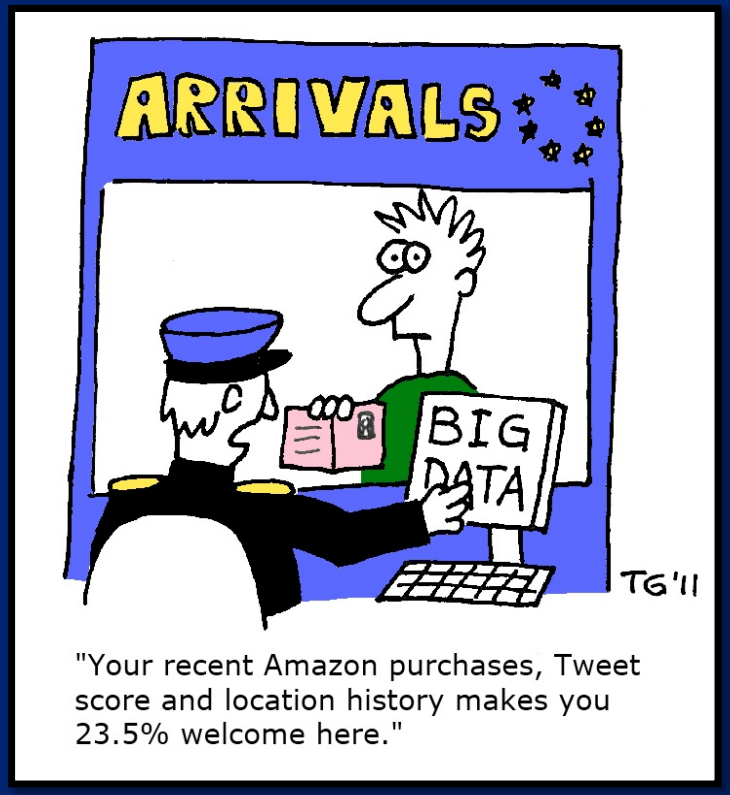
Awesome! Just what I was looking for!

Happy customers!

What Makes Big Data Valuable?



Personalized Marketing



Recommendation Engines

amazon

NETFLIX

Sentiment Analysis

Customer Reviews

6

3.0 out of 5 stars

5 star	33%
4 star	17%
3 star	0%
2 star	17%
1 star	33%

See all 6 customer reviews

I love my new blue plates! Let me write a review.

Sentiment Analysis

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I love my new blue plates! Let me write a review.

Ruined after first wash.

Although I had washed my existing set in my dishwasher (set to air dry) many times without issue, two of the 4 new plates were ruined upon the initial wash. Apparently these are actually clear glass plates with some sort of blue coating, which peeled off during the washing process, leaving me with two partial clear/partial blue plates with visible peeling. I suppose I can try and scrub off the remainder of the blue coating and have usable clear plates, however - if I wanted clear plates that is what I would have purchased. Heed the warning to be very careful when washing these.

Sentiment Analysis

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Wonderful. Exactly what I wanted.

Great

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★★★★★ **Wonderful. Exactly what I wanted.**

★★★★★ **Great**

Natural Language Processing

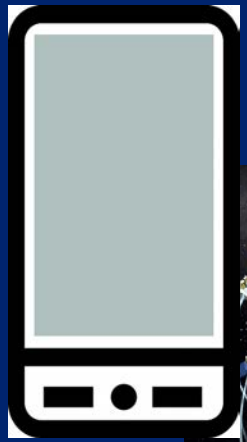
Mobile Advertising

Mobile Advertising

Mobile Advertising

Mobile Advertising

Customer profile
Recent purchases

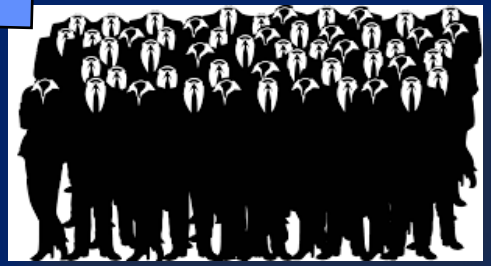


Geolocation data

Consumer Growth to Guide Product Growth

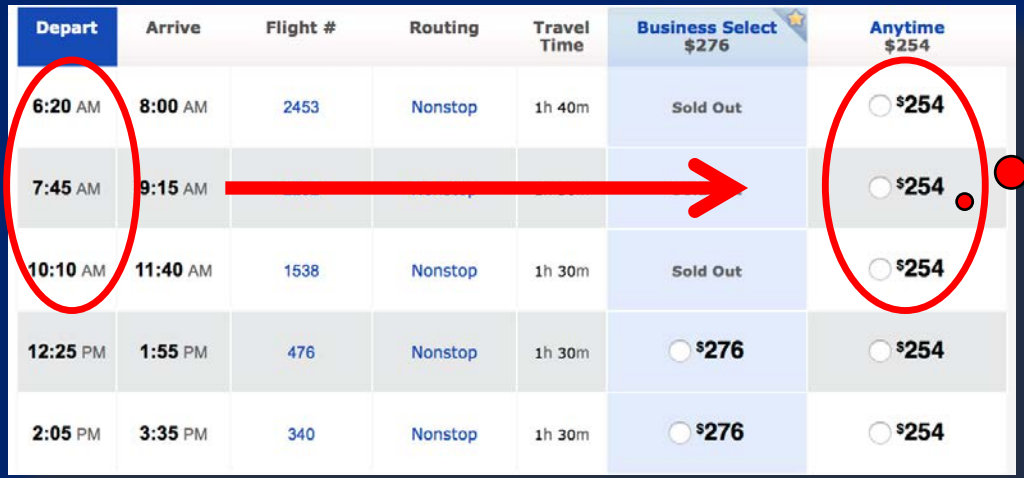
Consumer Growth to Guide Product Growth

Collective Consumer Behavior



Consumer Growth to Guide Product Growth

Flight Schedule



Depart	Arrive	Flight #	Routing	Travel Time	Business Select $276	Anytime $254
6:20 AM	8:00 AM	2453	Nonstop	1h 40m	Sold Out	$254
7:45 AM	9:15 AM					$254
10:10 AM	11:40 AM	1538	Nonstop	1h 30m	Sold Out	$254
12:25 PM	1:55 PM	476	Nonstop	1h 30m	$276	$254
2:05 PM	3:35 PM	340	Nonstop	1h 30m	$276	$254

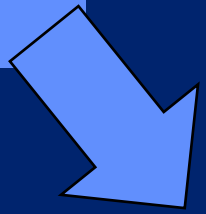
Biomedical Applications

Biomedical Applications

2 billion human genomes sequenced by 2025

Biomedical Applications

2 billion human genomes sequenced by 2025



Up to 40 exabytes in storage!

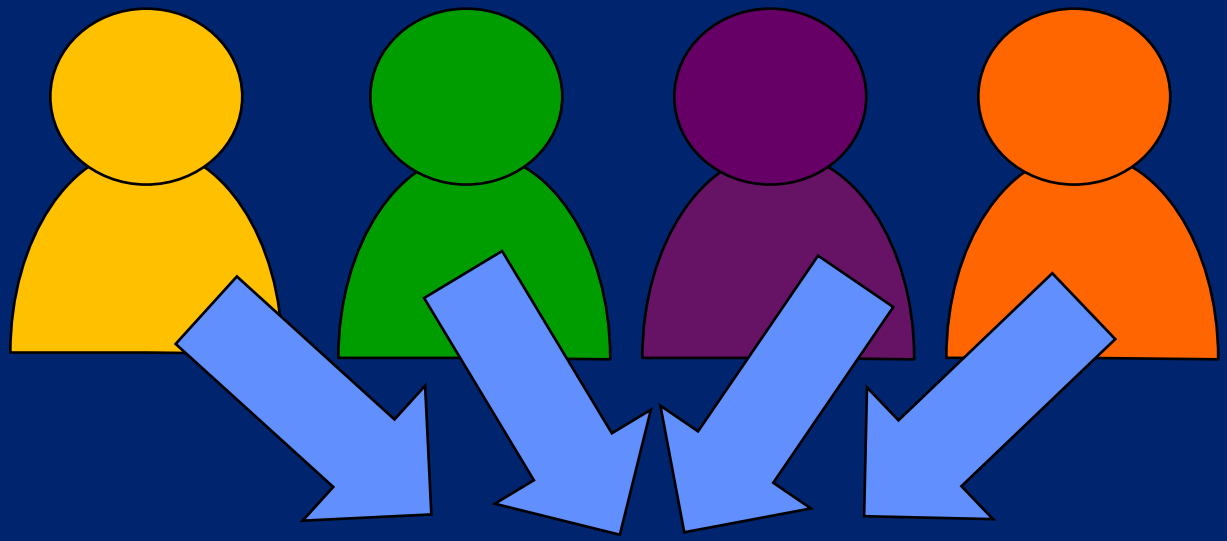
Biomedical Applications

2 billion human genomes sequenced by 2025

Up to 40 exabytes in storage!

Up to 10,000 trillion CPU hours for processing!

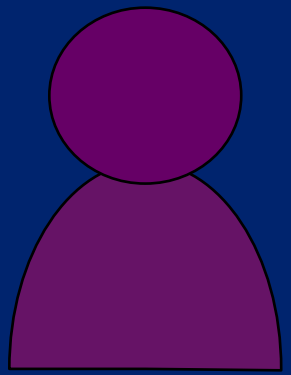
Personalized Cancer Treatment



Common treatment

Personalized Cancer Treatment

Perform large scale analysis of patient genes and tumor growth



Customized treatment

The Biomedical Big Data Challenge

+

Walgreens

How to integrate sources to gain further insight

Big Data-Driven Cities

Smart Cities

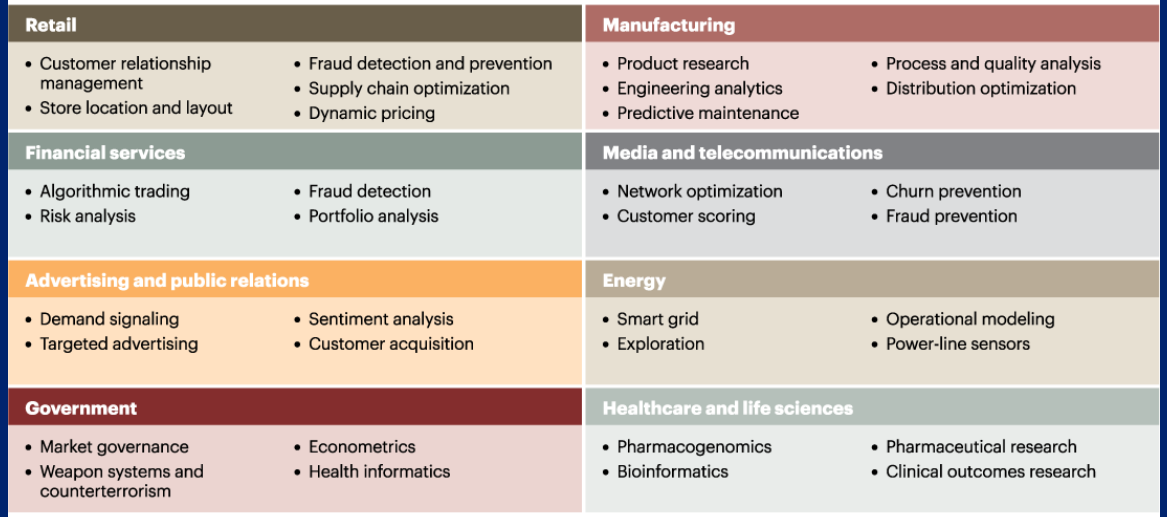
- Use city wide sensor data to
  - Lower energy costs, pollution
  - Improve services, traffic, safety, …

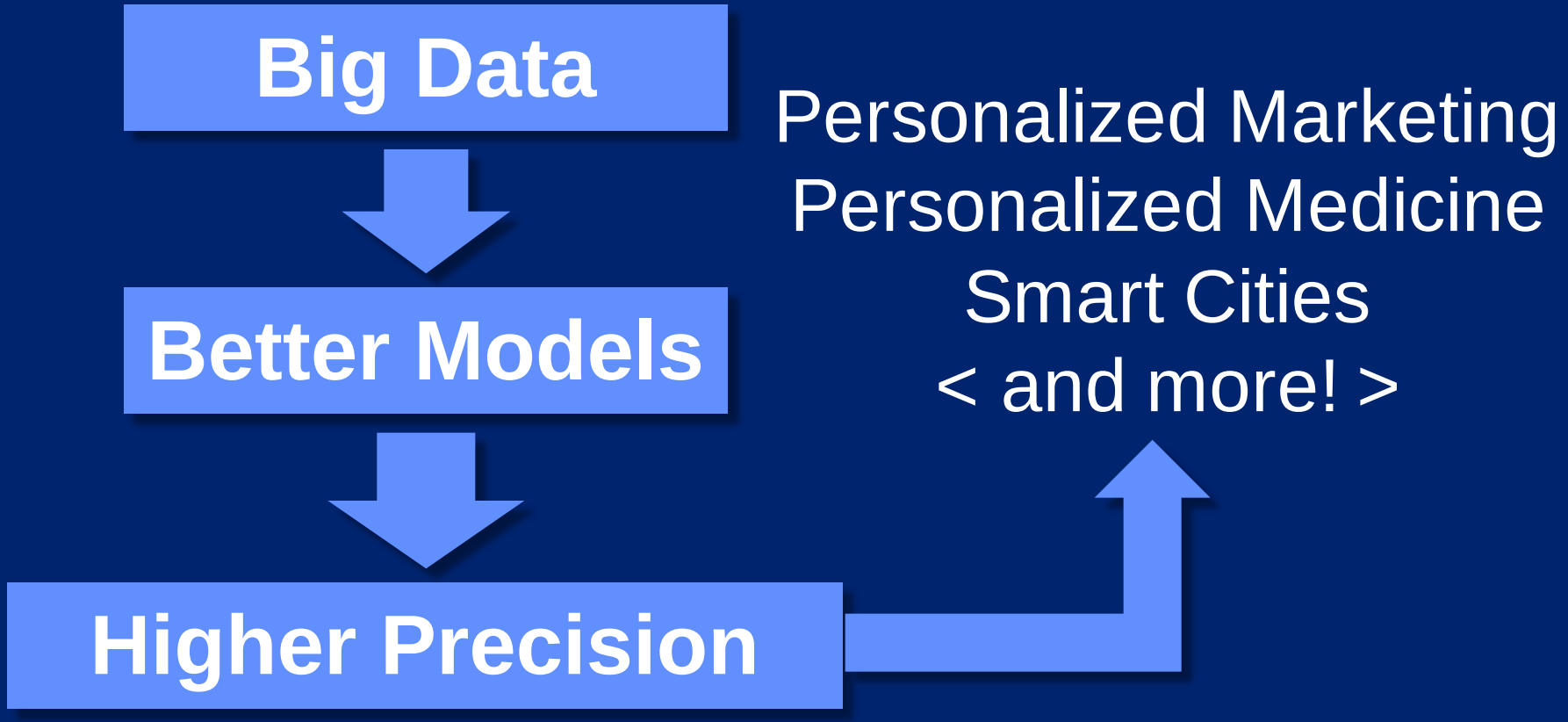
How are other applications using Big Data?

Figure 4

Industries are using big data to transform business models and improve performance in many areas

Illustrative



Source: A.T. Kearney analysis

Smart and personalized business!