Big Data generated by People:

How is it being used?

After this video you will be able to..

- List the main advantages of Hadoop, Storm, Spark, and NoSQL to tackle the challenges of unstructured data
- State what a traditional warehouse does and why Big Data pushes for change
- Summarize examples of turning human generated data into value

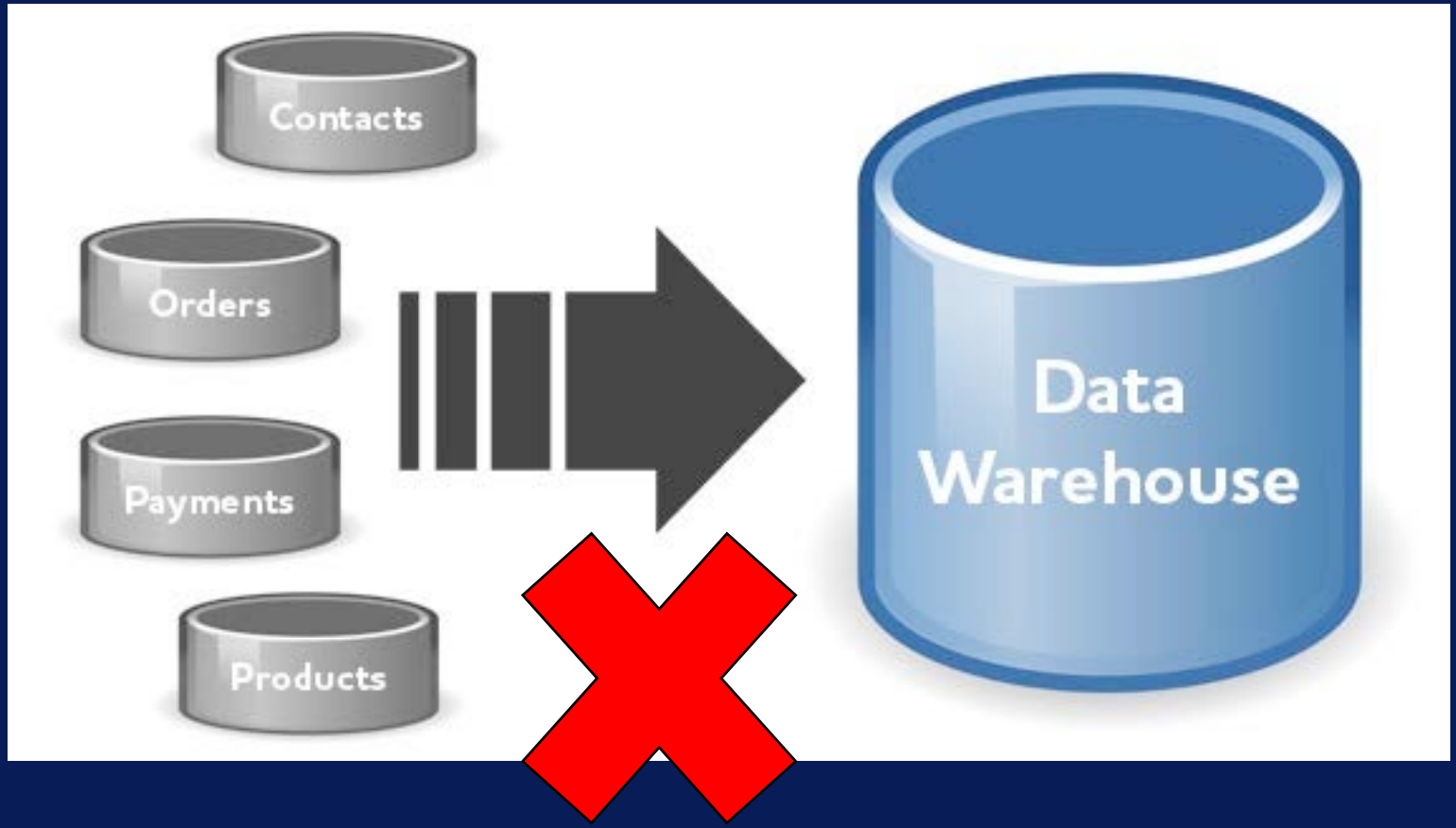
Every challenge is an opportunity!

INTEGRATION

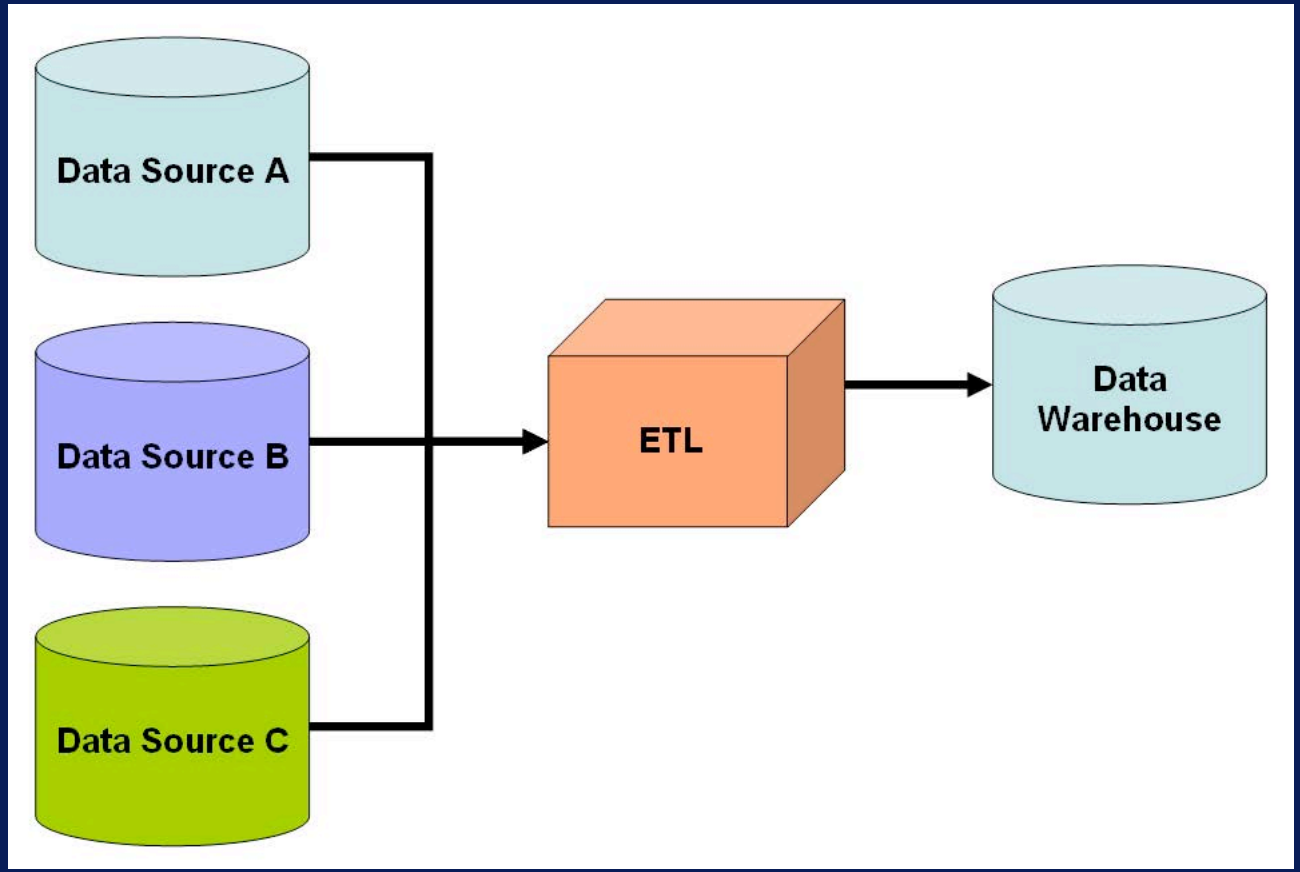
$$V = \frac{\Delta x}{\Delta t}$$

hadoop

$$V = \frac{\Delta x}{\Delta t}$$


Contacts
Orders
Payments
Products
Data Warehouse

Traditional Data Warehouse



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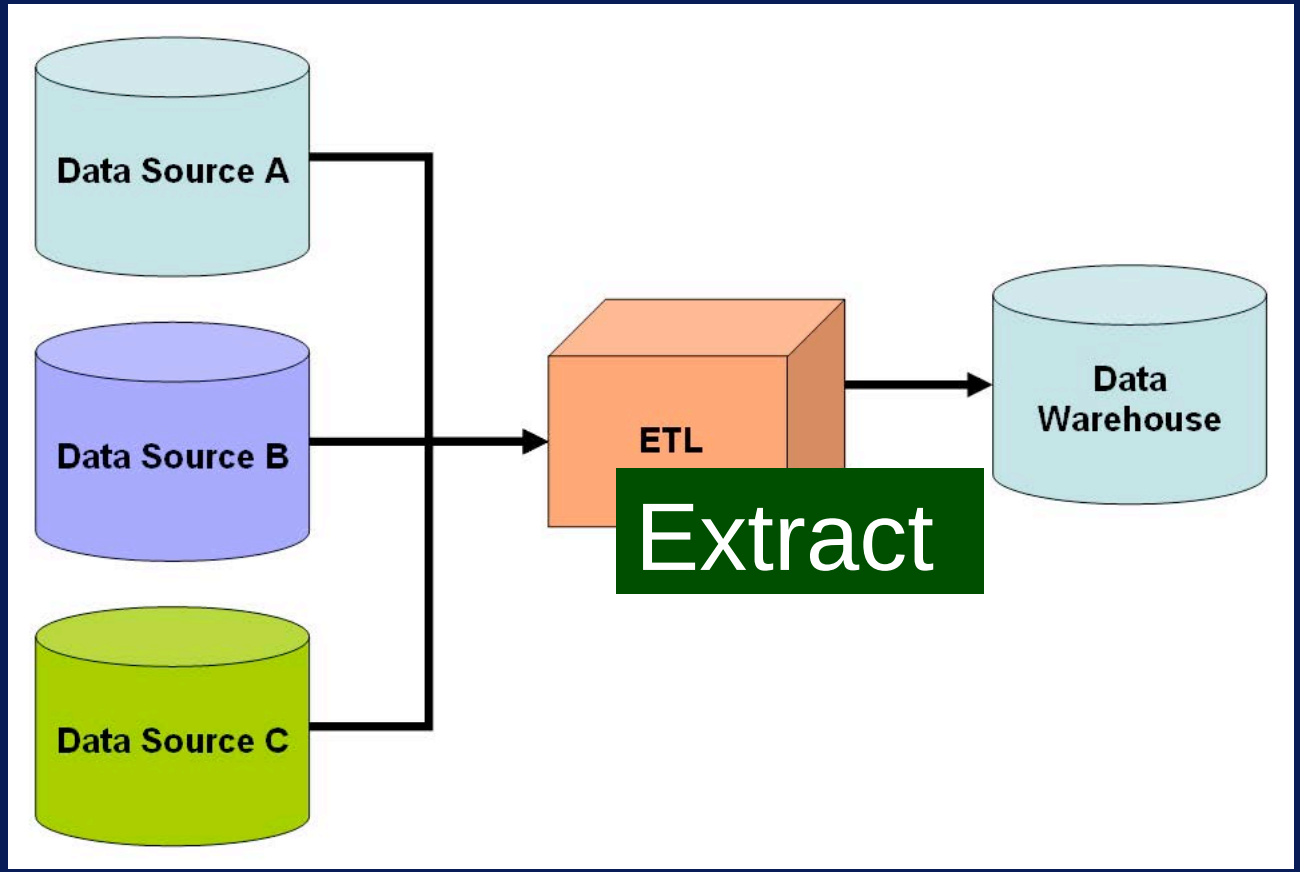

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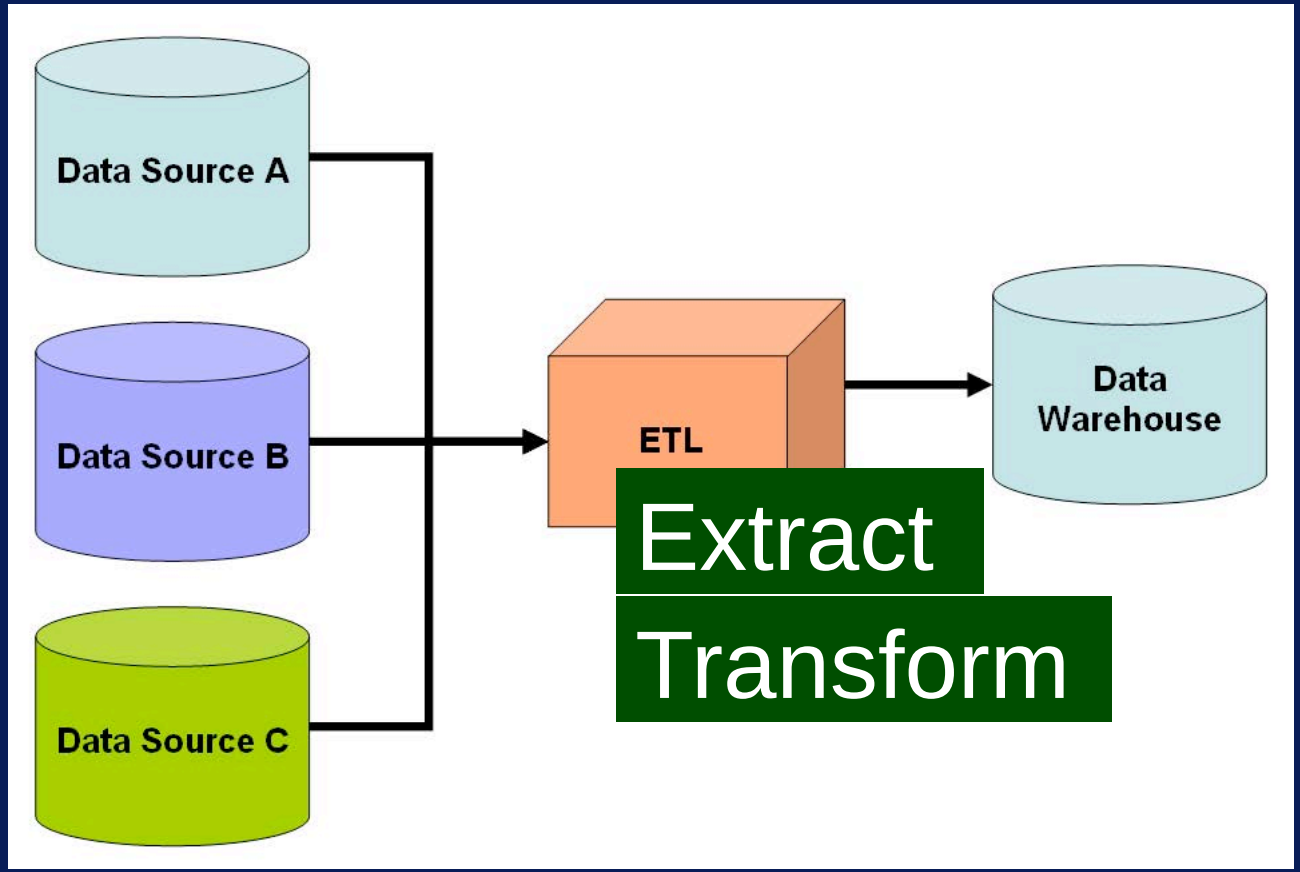
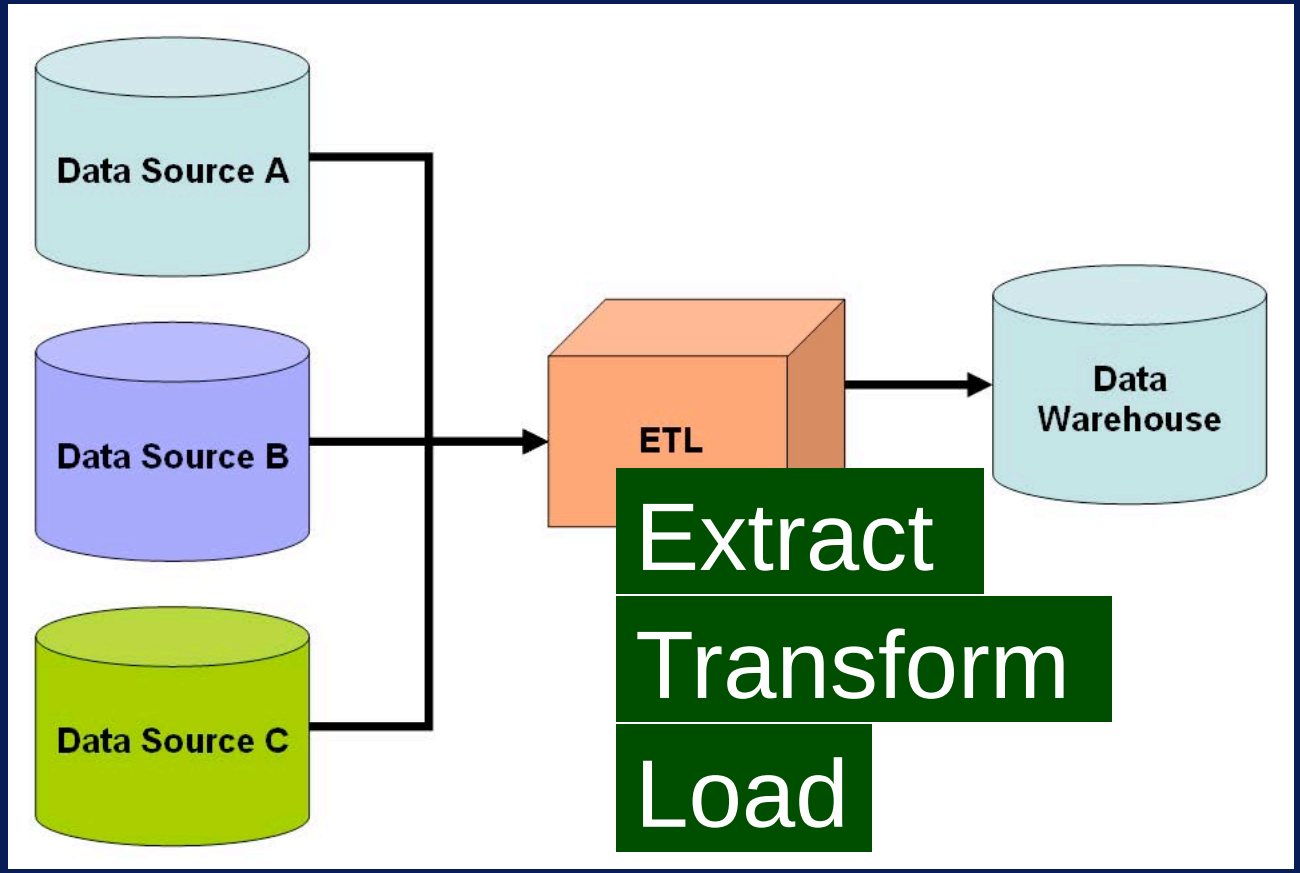


Traditional Data Warehouse



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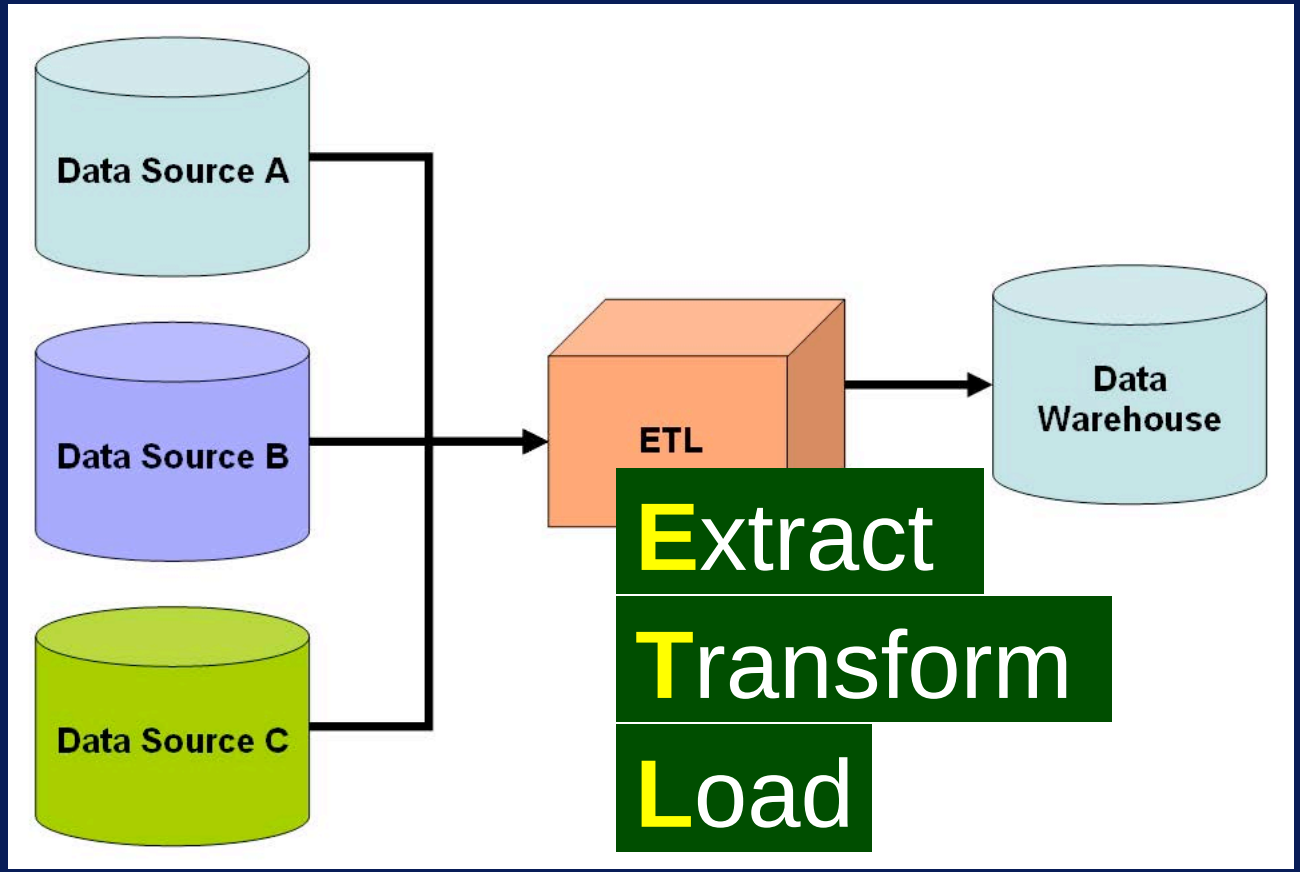


NoSQL Data Storage in the Cloud

Beyond relational databases!

Organize data to suit the problem and objectives!

Connections between data

Connections between data

Key-Value pairs

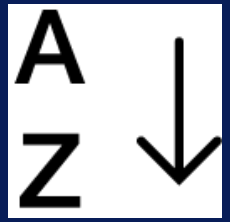
MULTIPLE DATA SOURCES

VALUE

MULTIPLE DATA SOURCES

Retrieval and Storage

Pre-Processing



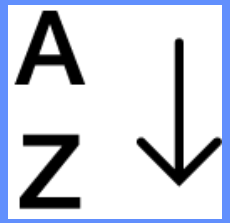
Analysis

VALUE

MULTIPLE DATA SOURCES

Retrieval and Storage

Pre-Processing



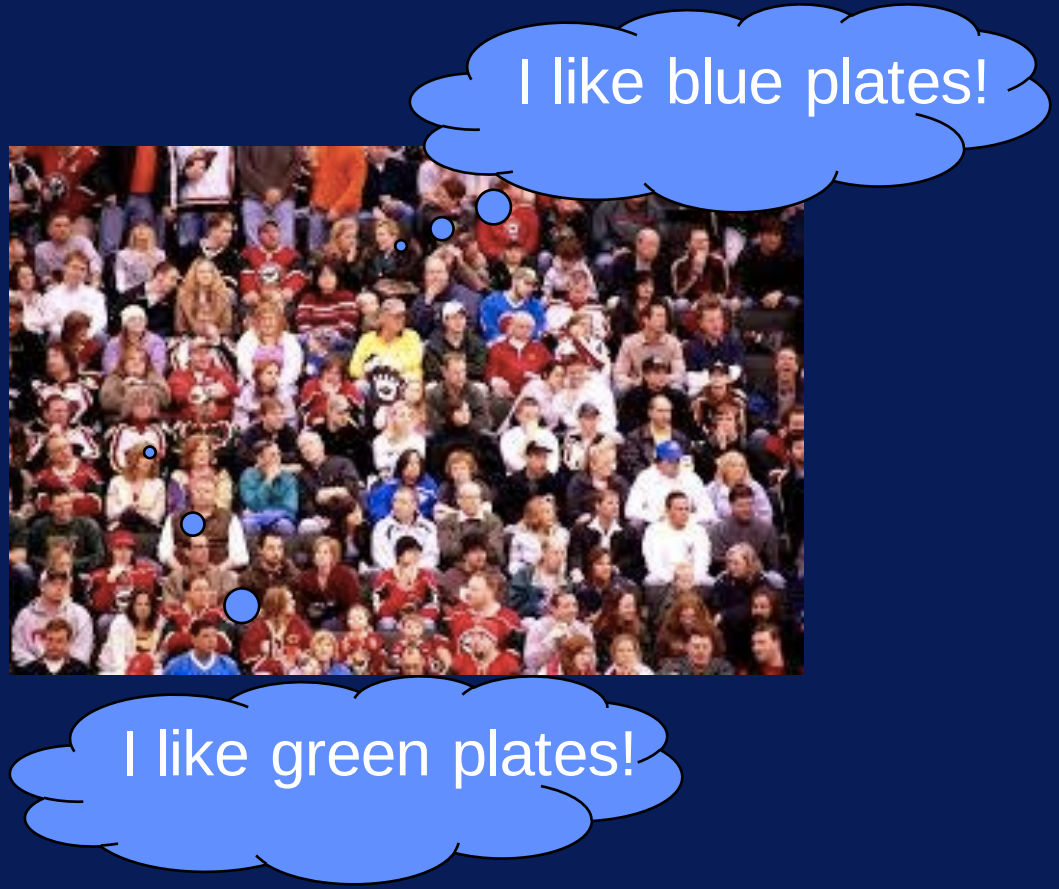
Analysis

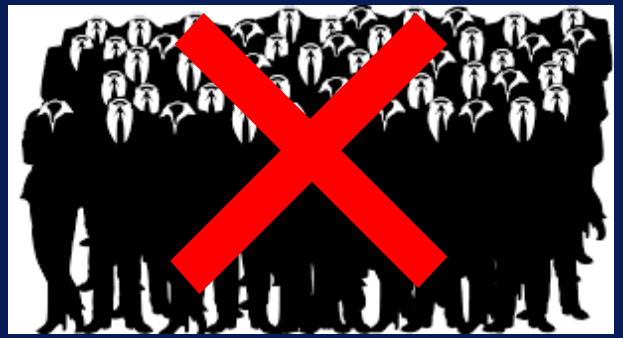
Layers

VALUE

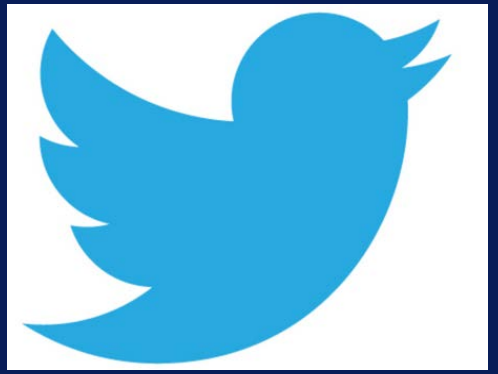
Value in Action

Sentiment Analysis





Guess, how much Twitter data companies analyze everyday to measure “sentiment” around their products?



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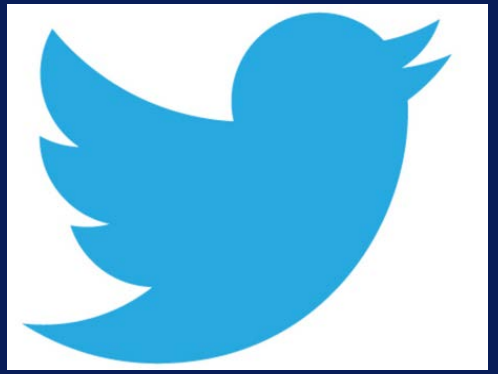
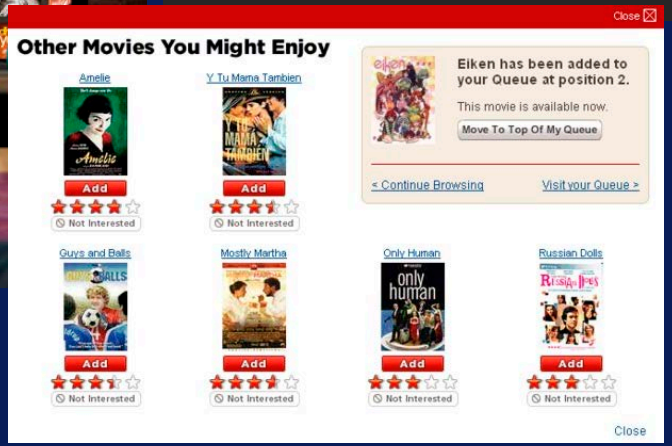


Answer: 12 Terabytes/Day

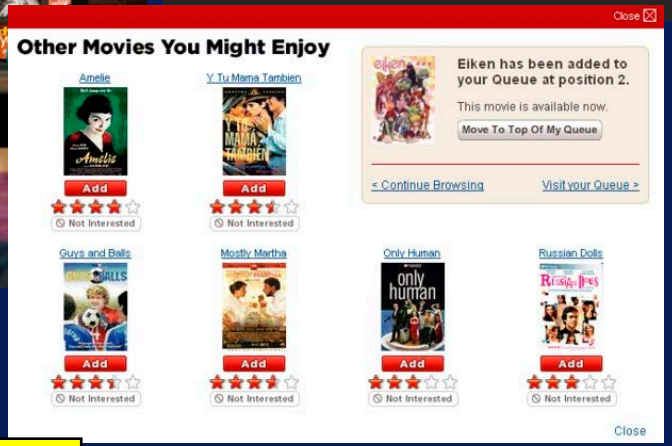
You would need to listen continuously for ~ 2 years to finish 1 TB of music !

Predict Customer Behavior



Personalized Recommendations

Predict Customer Behavior



Personalized Recommendations

Happy Customer

+

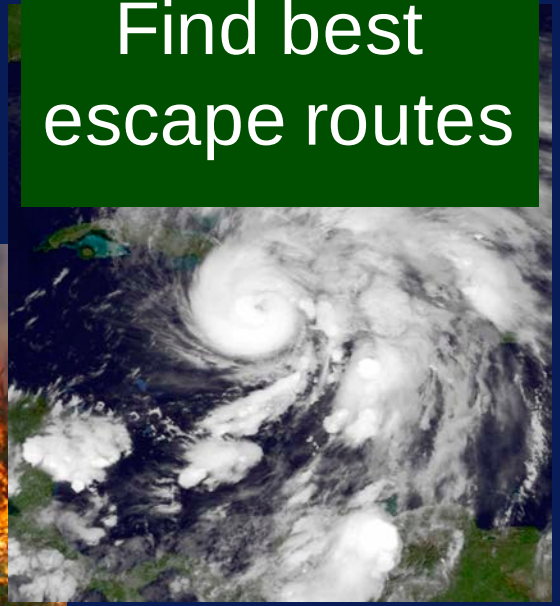
More Profit

Collective Disaster Response

Nepal Earthquake

Find best escape routes

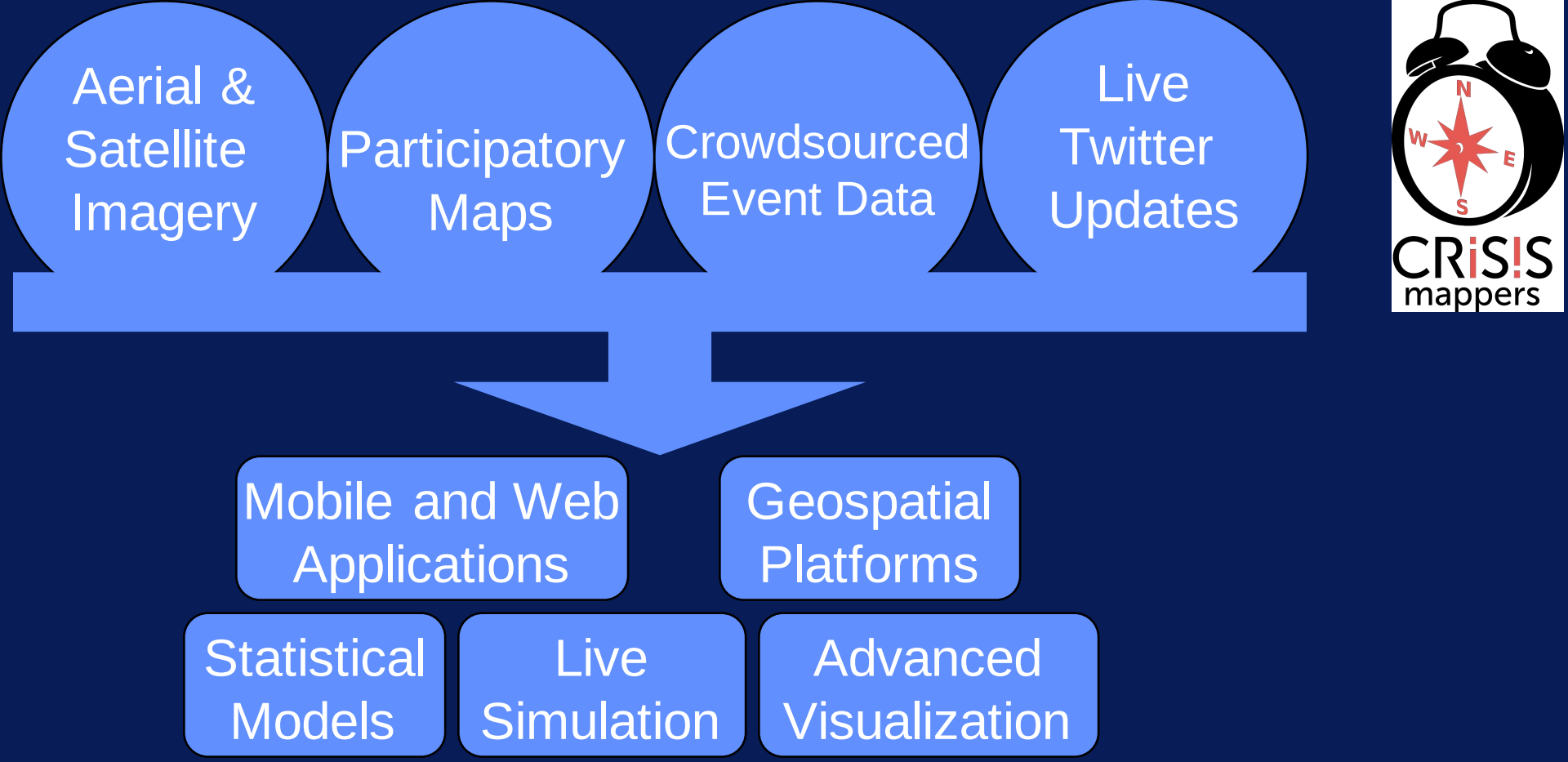
Super-storm Sandy

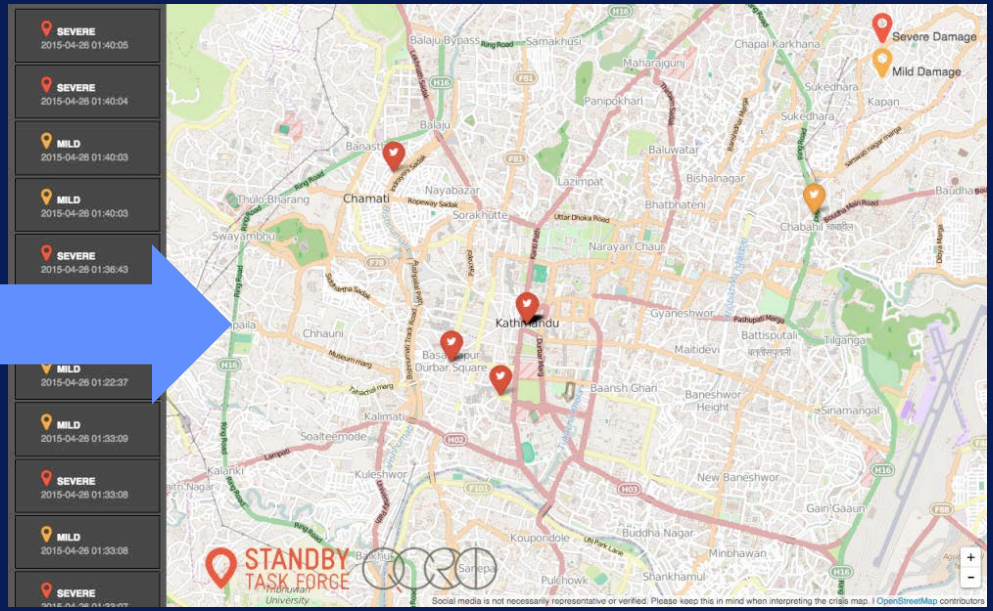


Predict and Evacuate

Wildfire

crisismappers.net


Aerial & Satellite Imagery
Participatory Maps
Crowdsourced Event Data
Live Twitter Updates
Mobile and Web Applications
Geospatial Platforms
Statistical Models
Live Simulation
Advanced Visualization



Nepal Earthquake 2015

CRISIS mappers

Can you list 3 things you can do from Big Data analysis

Unstructured People Generated Data

Emerging Big Data Tools and Approaches

Better decisions, Increased productivity, profits and societal impact