

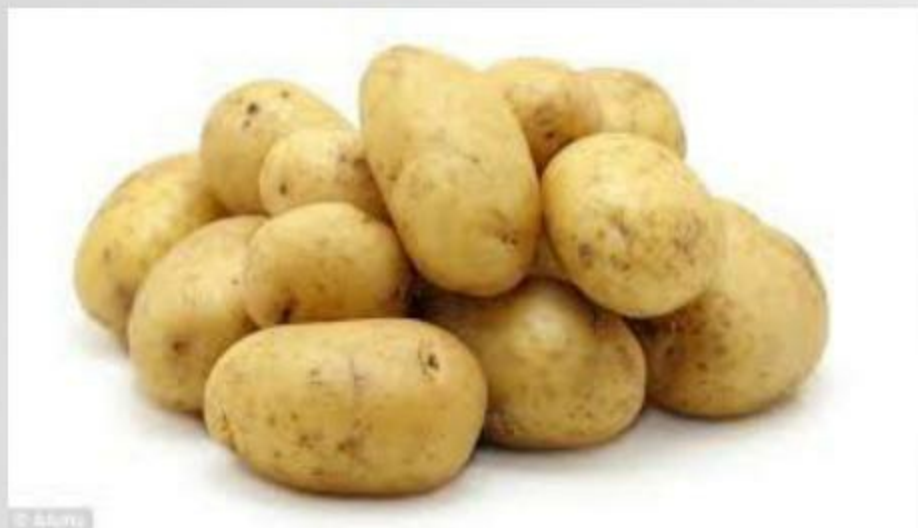
Data

H o w I t ' s C h a n g i n g t h e W o r l d

What

Is the pattern here?

The point of this story is?





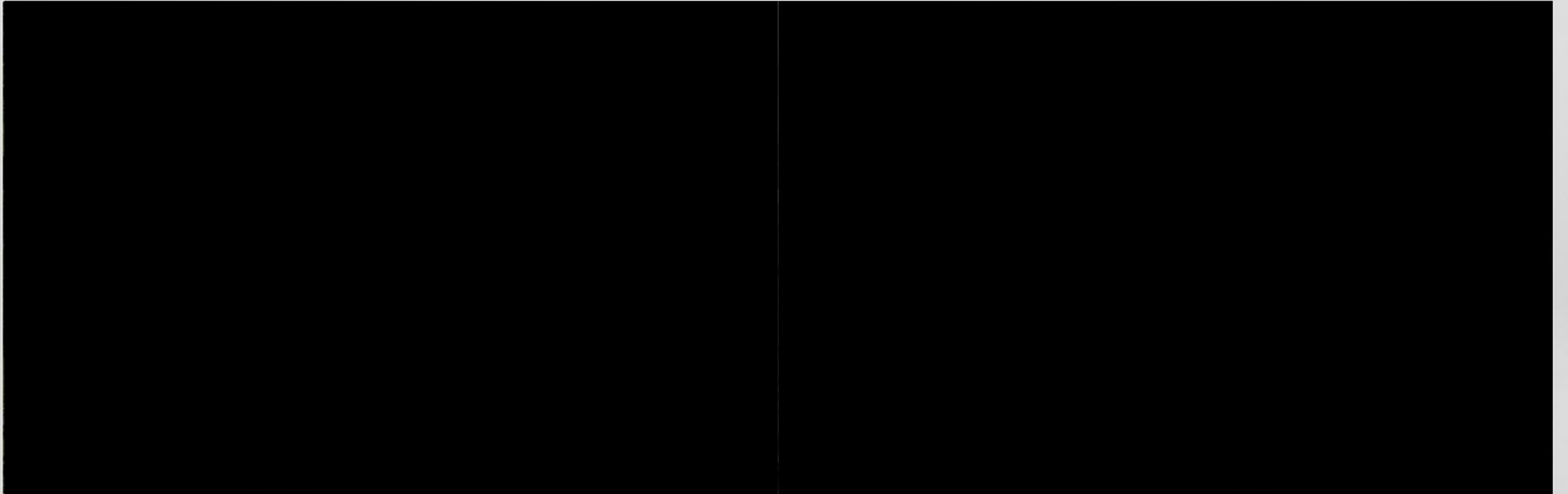
Another Story





Know How Data is **Collected**

Data comes in many forms and is collected in many ways





Transactional

Forms

Data was initially collected through manual forms - think of taxes, purchasing a home etc..Eventually they would be digitized making analytical consumption a lot easier



Phone Calls

Eventually phone calls where being recorded providing a massive source of data but initially very difficult to mine and use from an analytical perspective



Payments

Not just through the use credit or debit cards, payments information would become closely monitored by the vendors themselves



The Web

Google

What we search, what we have looked & what we buy - This data is re-purposed in many ways but real time bidding is an obvious and often a daily reminder of how this data is leveraged.



⌘ Social Media

Facebook

Who your friends are - what you like or dislike.

LinkedIn

Who works where and what you do and what you have done.

Yelp

Your favorite places to go

Twitter

Where you are and what you are thinking

Pinterest

What your hobbies are

PeepLe

The people you hate...





Devices

Tracking You

From how you drive, what you eat, when you get up and where you go...



Watching You

What you watch and what you listen to...



Listening to You

What you say...these devices are always listening



Imagery



Satellites

Imagery capture is now at 40-50 cm resolution and can be used to generate 3D images



Planes

Lidar images can create high spatial resolution



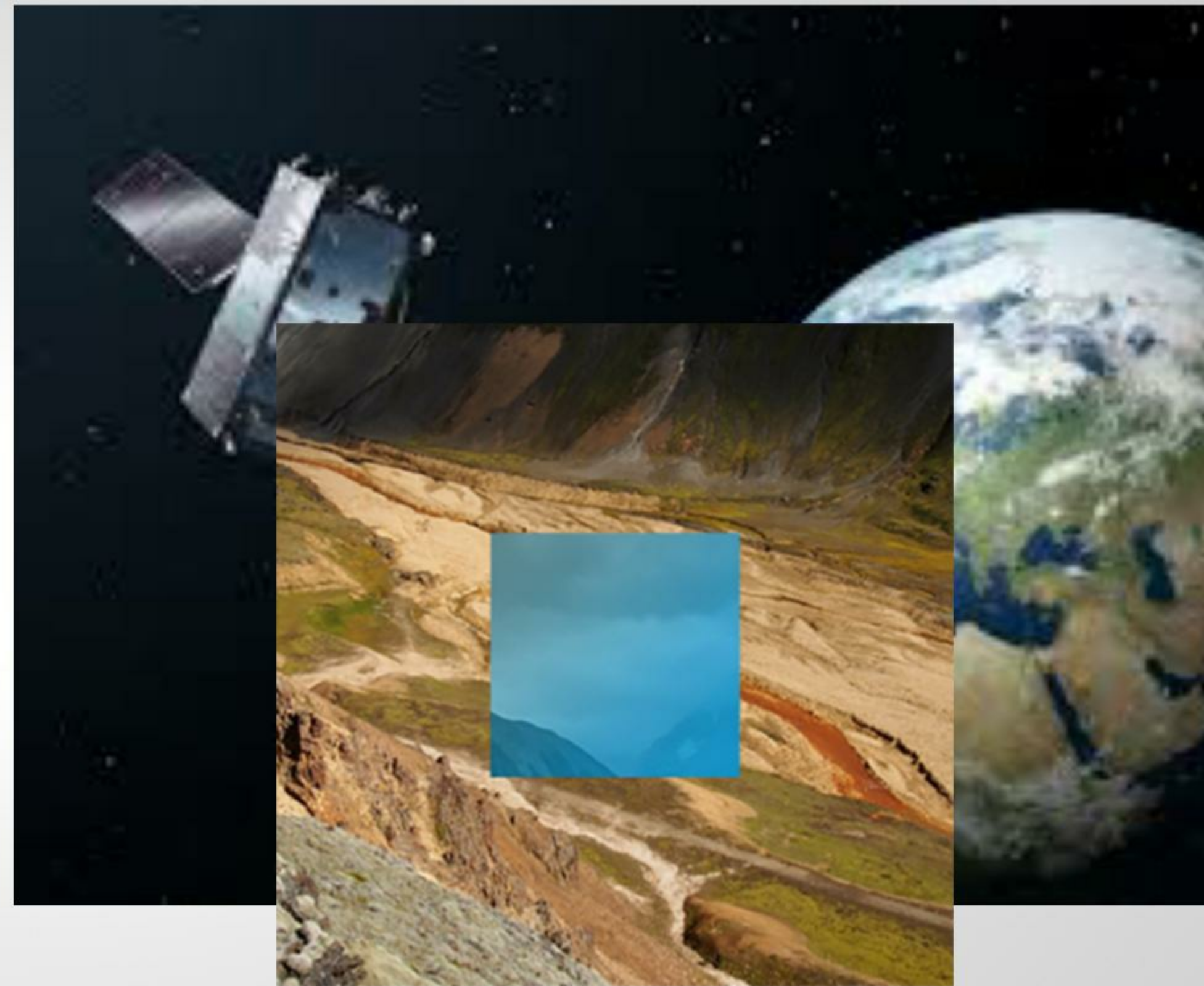
Drones

Can be equipped with a multitude of sensors which captures light, heat, chemicals, magnetic fields etc...



Cars

Provides street view imagery



Challenge


with acquiring & processing all this data

*Lost in the wilderness
searching for data...*






Maybe What you Need

A cluster of several bright red, ripe tomatoes with green stems, representing raw data.

Raw Data is
always good
but...

A bottle of Heinz Tomato Ketchup, representing a derived product.

A Derived
Product can
Sometimes be
better



Data Challenge



Quality

Data is ALWAYS very messy and requires a lot of manipulation to be able to use it



Quantity

Volume which is caused by unstructured data requires a special environment as well as skills to process



Linking

Data usually has little value until it has been joined with multiple sources - this is typically the most difficult stage of the process





Lets Look At Some Examples



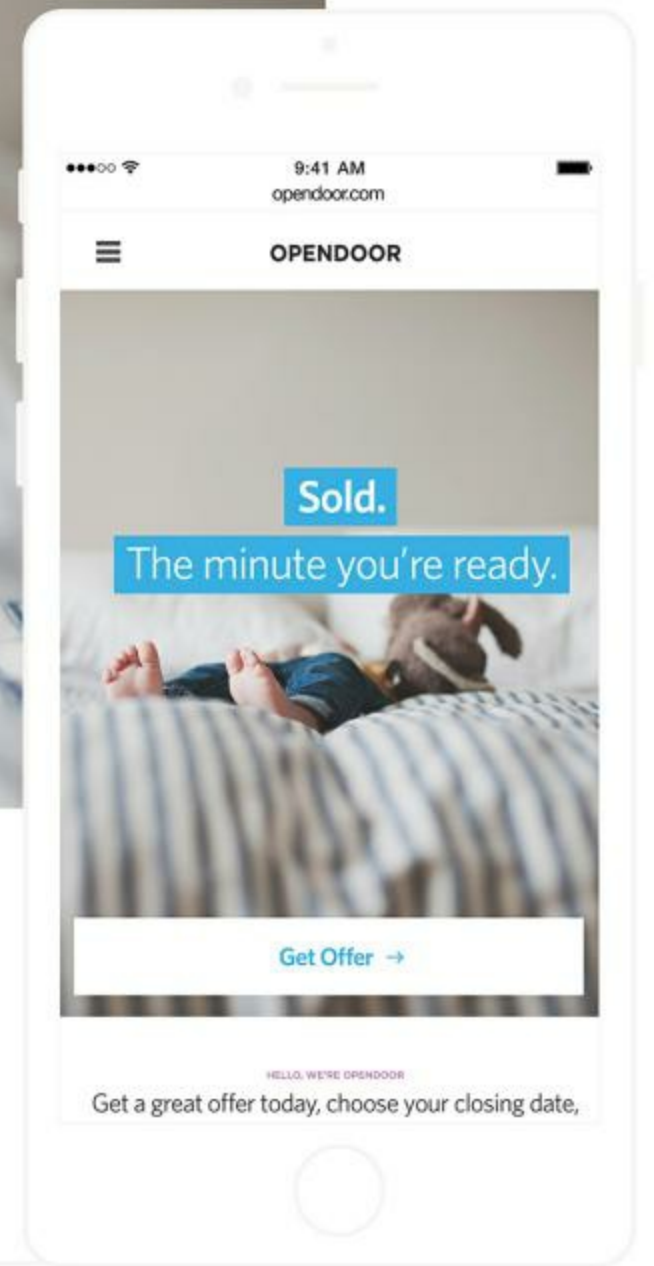
Sold. The minute you're ready.

What's your home address?

[Get Offer →](#)

HELLO, WE'RE OPENDOOR

Get a great offer today, choose your closing date,
and let us take care of the rest.



A collection of red telephone receivers hanging from their cords against a light blue background. The receivers are arranged in a somewhat circular pattern, with some in the foreground and others in the background, creating a sense of depth. The lighting is soft, highlighting the glossy texture of the plastic.

Mattersight[®]

The Chemistry of Conversation

The logo features a stylized blue icon on the left, resembling a flame or a rocket's tail. It consists of three curved, overlapping shapes that suggest motion and energy.

rocketfuel

Artificial intelligence. Real results.



Cambridge Analytica



Female
25-35 Years old
AMEX User



People with high openness and extraversion love new experiences they can share with lots of people.



Female
25-35 Years old
AMEX User



People with low openness and extraversion really value down time spent with their closest friends.

TRUMPING

The Data That Turned the World Upside Down

HG Hannes Grassegger and Mikael Krogerus
Jan 28 2017, 2:15pm

Psychologist Michal Kosinski developed a method to analyze people in minute detail based on their Facebook activity. Did a similar tool help propel Donald Trump to victory? Two reporters from Zurich-based Das Magazin went data-gathering.

An earlier version of this story appeared in *Das Magazin* in December.

OCEAN Personality Model

We use the established scientific OCEAN scale of personality traits to understand what people care about, why they behave the way they do, and what really drives their decision making.



OPENNESS
Do they enjoy new experiences?



CONSCIENTIOUSNESS
Do they prefer plans and order?



EXTRAVERSION
Do they like spending time with others?



AGREEABLENESS
Do they put people's needs before theirs?



NEUROTICISM
Do they tend to worry a lot?



Final Thoughts





Battleground is Data

Data

Processing Power

Machine Learning



Artificial Intelligence

Requires a lot of data



★ *Math*

Neural networks are evolving at a rapid pace but the barrier around compute power has been overcome

🎵 *Compute*

GPU Farms & Cloud have provided us the ability to compute at scale

⚙️ *Data*

Is the primary resource/differentiator to AI



Data As A Service



*Will there be a market to
buy and trade data?*



What will YOU do?



Thank you.

Questions?