

The background of the slide features a repeating pattern of small, stylized green human figures. These figures are arranged in a grid-like fashion, with some appearing slightly larger or more prominent than others, creating a sense of a large crowd or workforce. The figures are a solid green color, matching the overall theme of the slide.

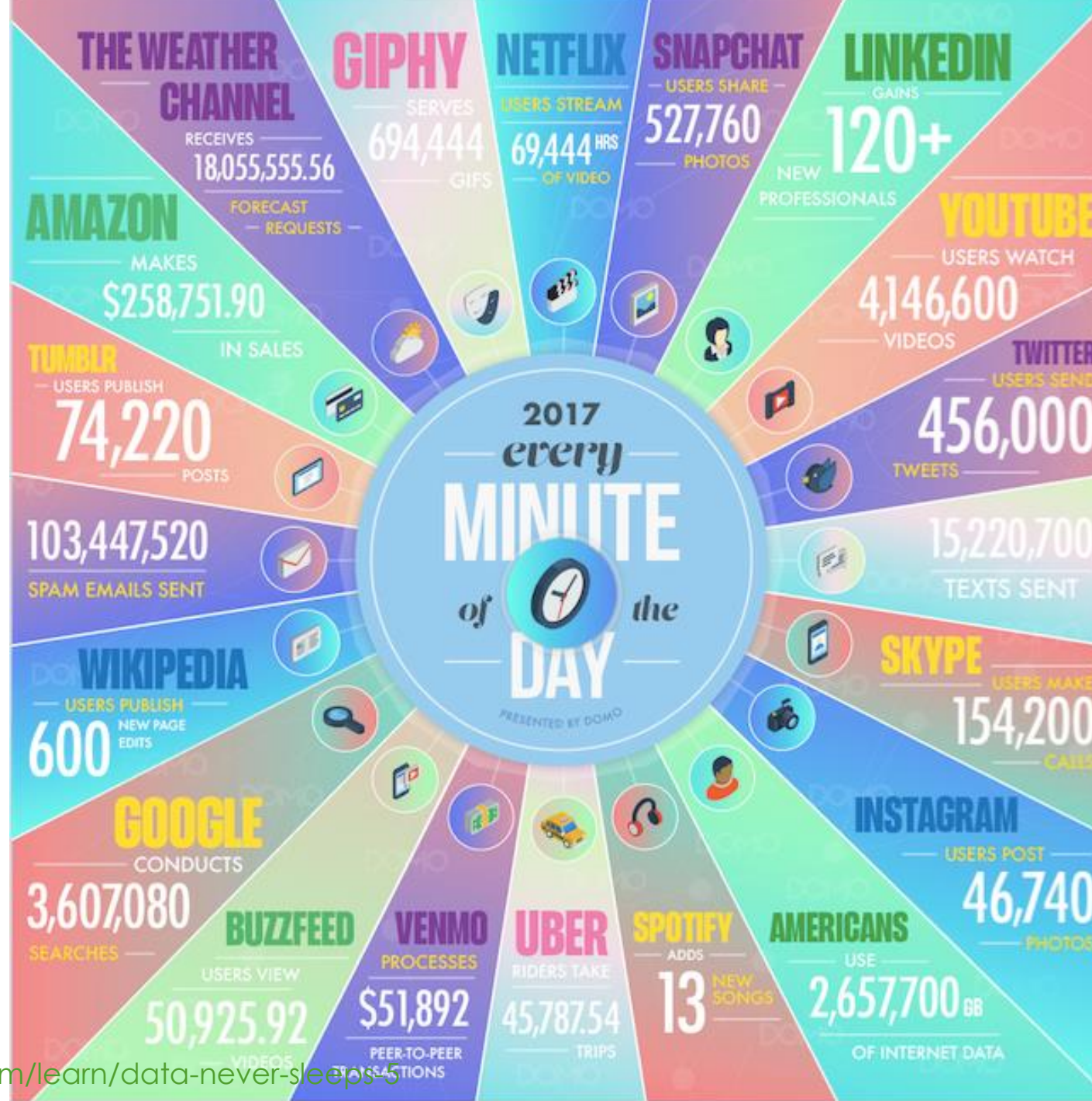
# Ultimate

SOFTWARE

## The Benefits of Artificial Intelligence Technology for Payroll and HR Teams

Patrick Pickren, SR. Dir Product Strategy

*People first.*



# HCM Data

There is a wealth of information in your **employee lifecycle DATA**





The background image shows a person's hands holding a transparent globe. Overlaid on the globe and hands is a network of white lines connecting various circular icons. These icons include stylized human figures, a globe, and other symbols representing data and technology. The overall theme is digital connectivity and data science.

# Data Science & AI

New technologies can help organizations understand employees like never before, and give leaders good advice

# Everybody's Talking About It

**Big  
Data**

**Artificial  
Intelligence**

**Natural  
Language  
Processing**

**Unstructured  
Data**

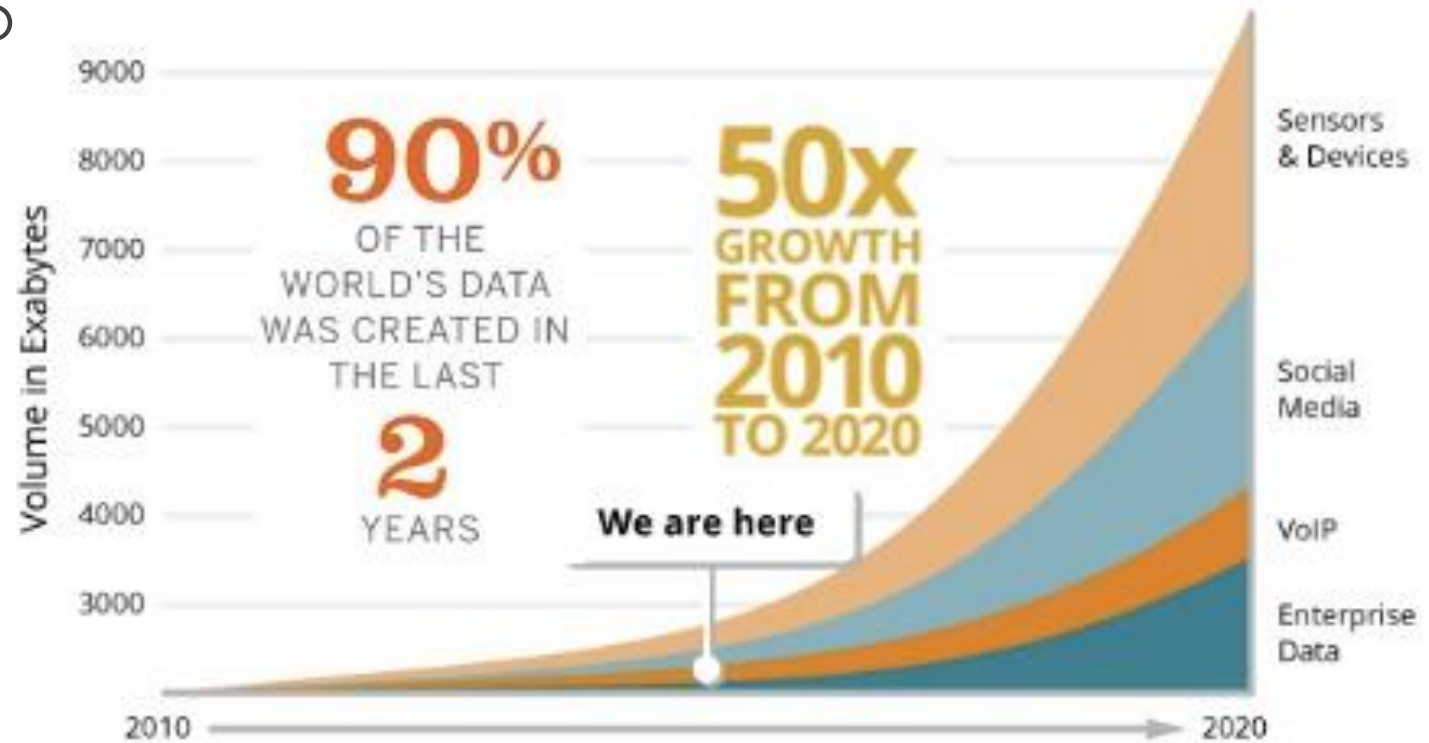
**Machine  
Learning**

**Sentiment  
Analysis**

**Cognitive  
Computing**

# Big Data

- Large data sets that can be analyzed by a computer to reveal patterns and associations
- Big Data sources in HR
  - HRMS
  - Performance Reviews
  - Surveys
  - Hiring Notes, etc.
- We use big data to reveal insights into human behavior and interactions



Source: Familian&I

# Unstructured vs. Structured

- Structured data follows rules
  - Numbers
  - Date Fields
  - Multiple choice questions
  - The *What*
- Unstructured data is free-form
  - Reviews
  - Social media posts
  - Survey open-text responses
  - The *Why*



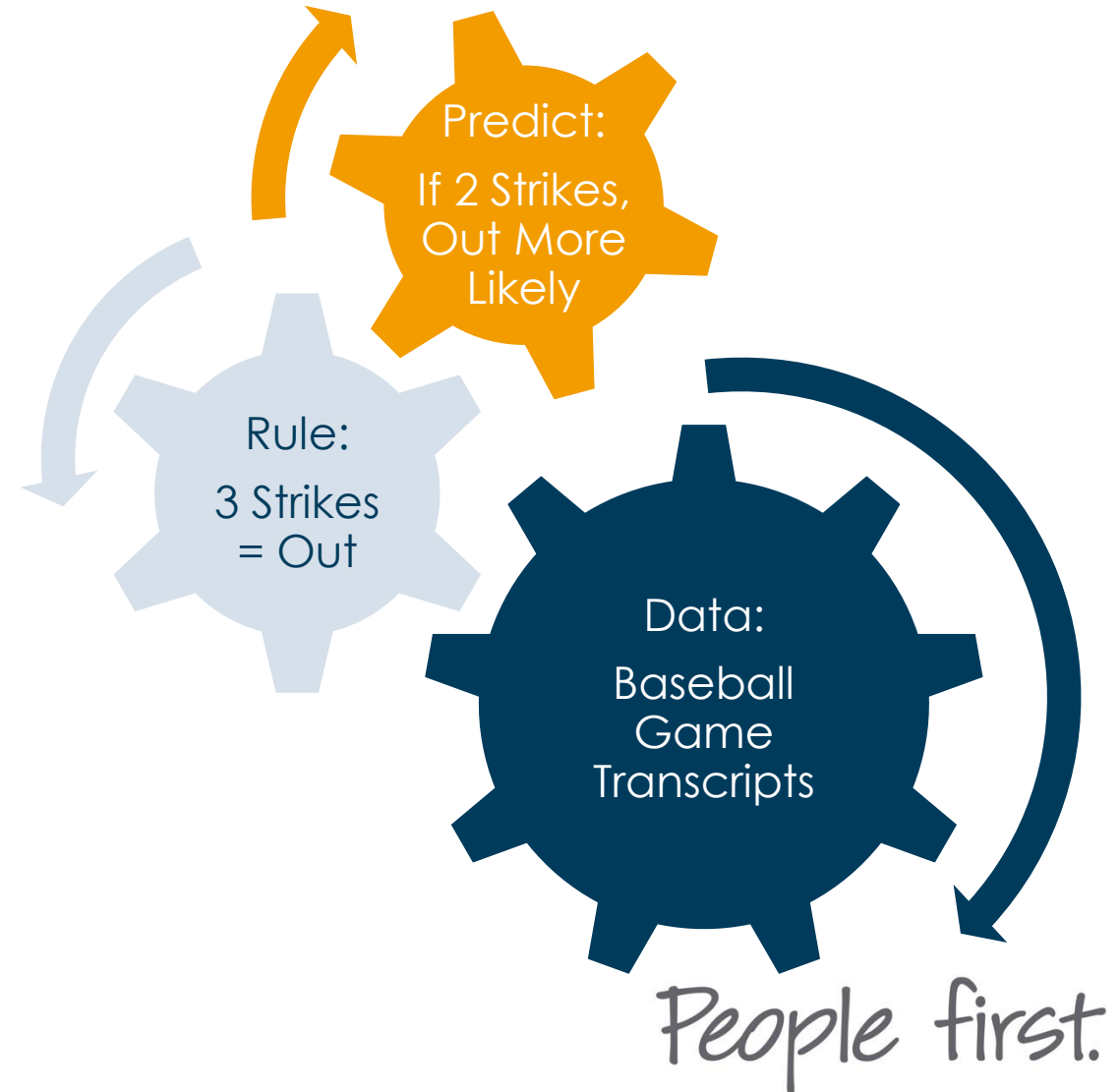
80% of the world's data is **unstructured**

Source: IBM



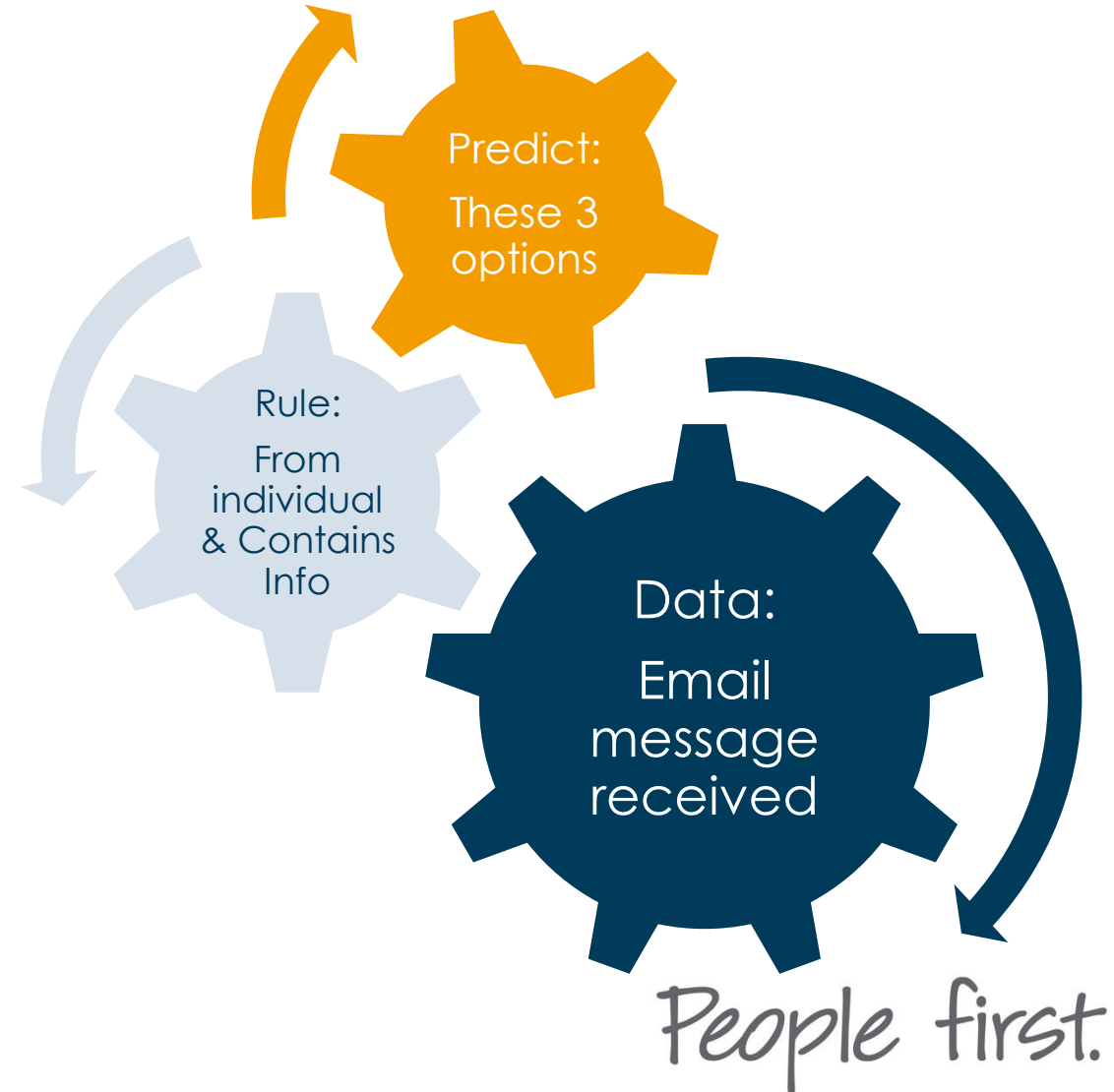
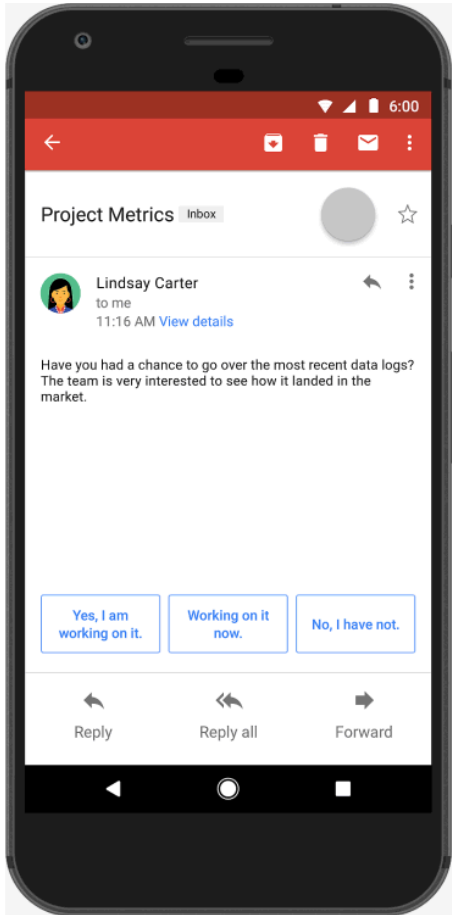
# Machine Learning (ML)

- Ability for computers to learn without being programmed
- Look at data to find patterns to learn from & make predictions about
- A set of identified patterns is called a “model”

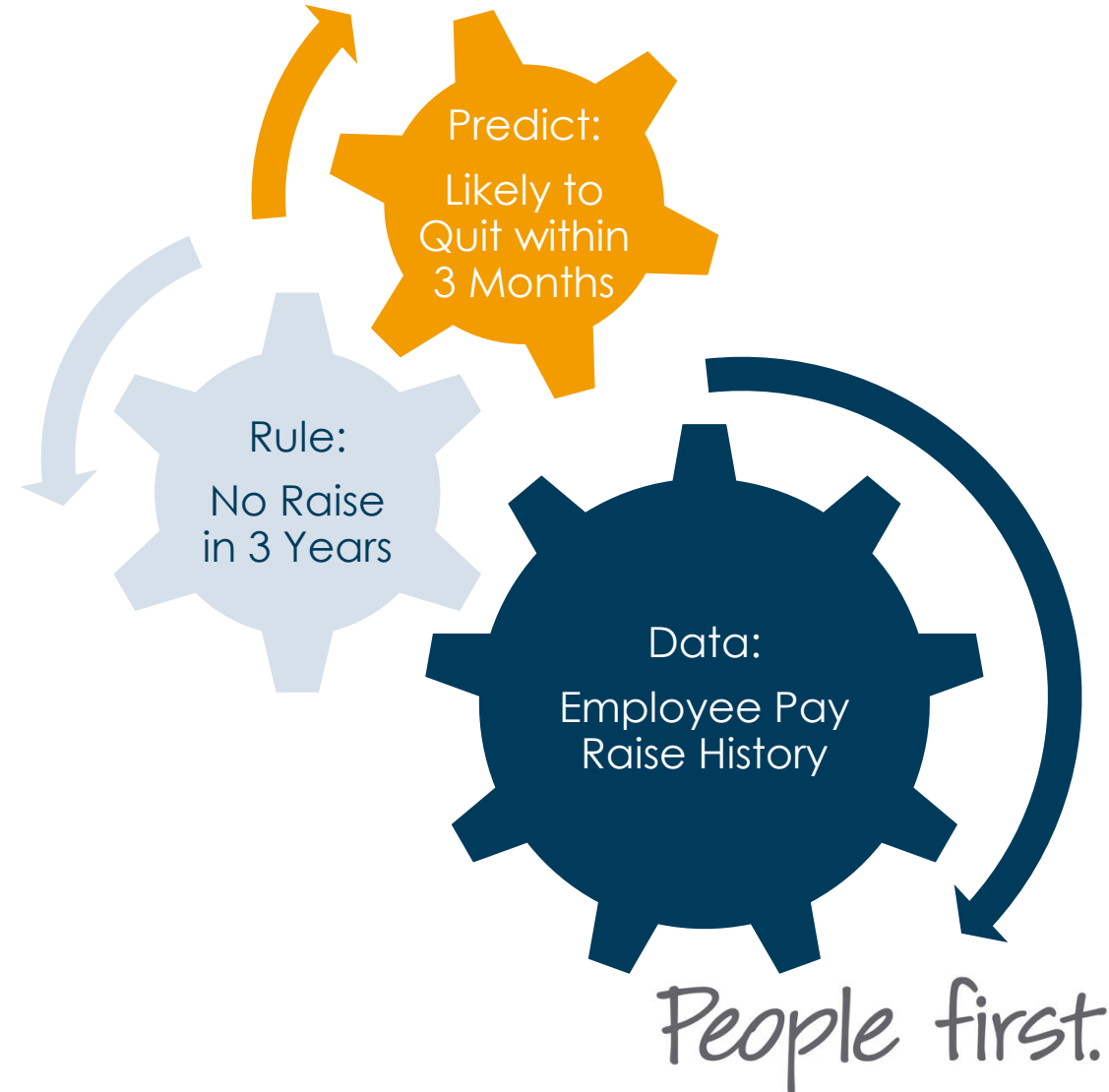




# Machine Learning (ML)



# Machine Learning (ML)



# Natural Language Processing (NLP)

- Ability for computers to derive meaning from human language input (via text or voice)



Consumer: Alexa, Siri,  
Cortana/Chatbots

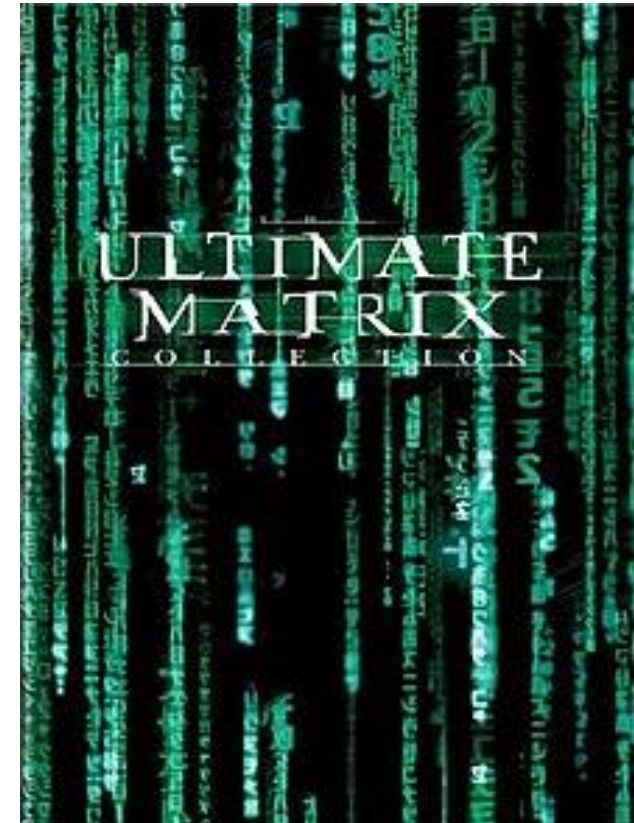
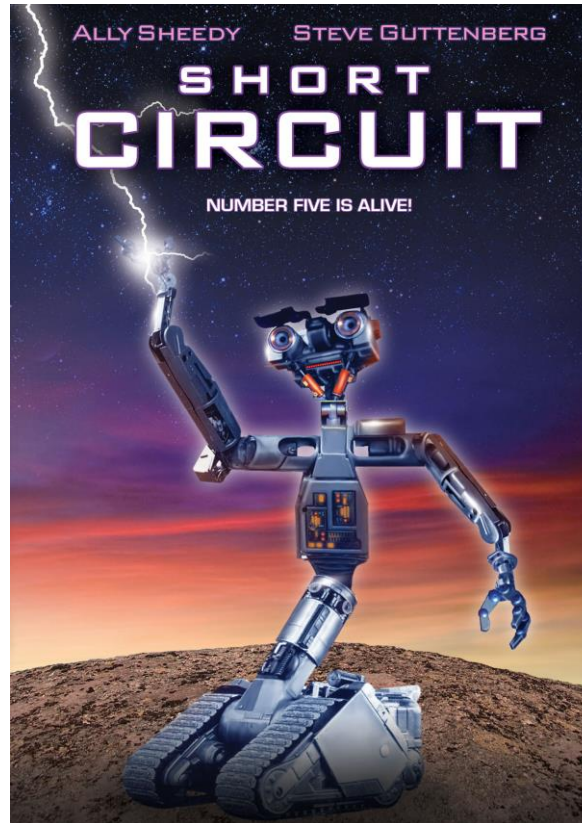


HR: "Anything else  
we can discuss?"

*People first.*

# Artificial Intelligence (AI)

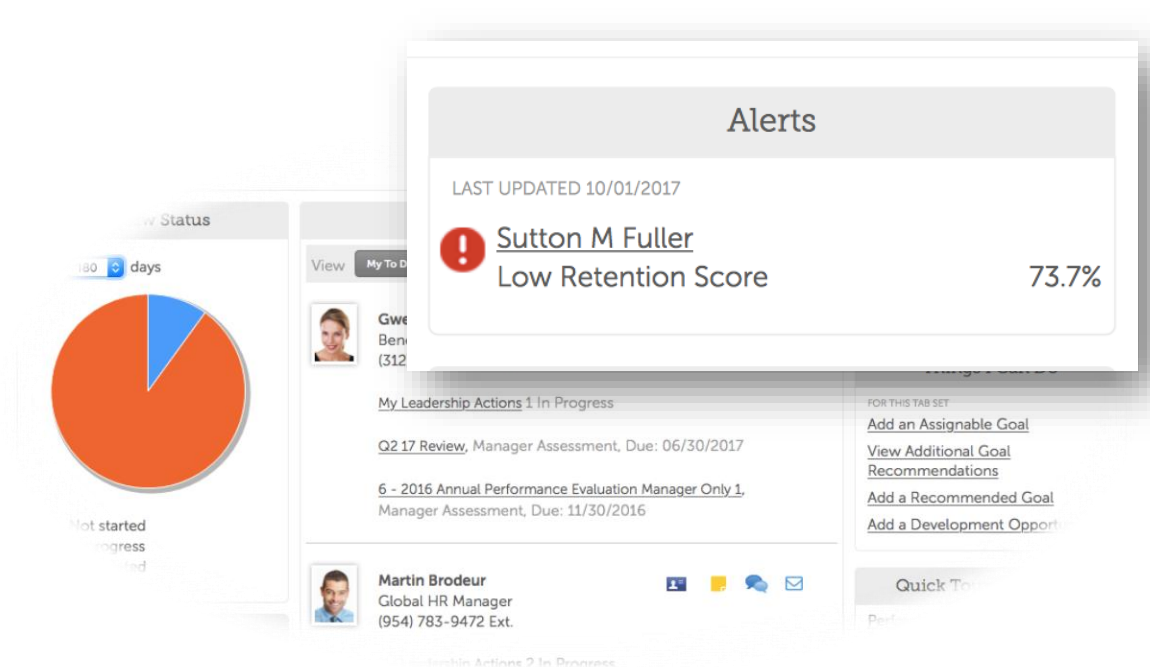
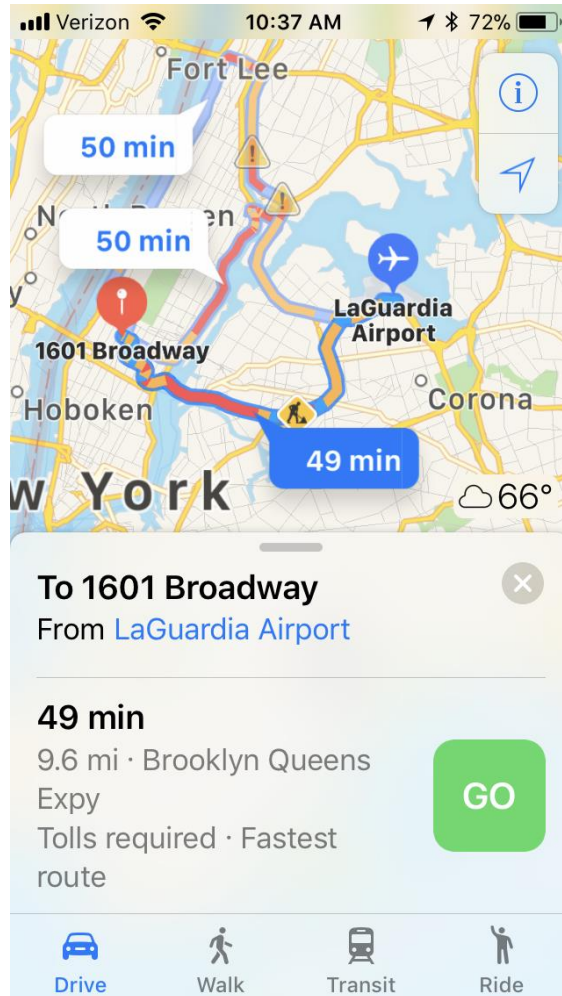
- Capability of a machine to imitate human intelligence





# Artificial Intelligence (AI)

- Capability of a machine to imitate human intelligence



# **Our Reality: Disruption is All Around Us**

**Business models & people are changing, organization structures can't keep up with change**

# There are now 5 Generations in the workplace—driving change

## Millennials

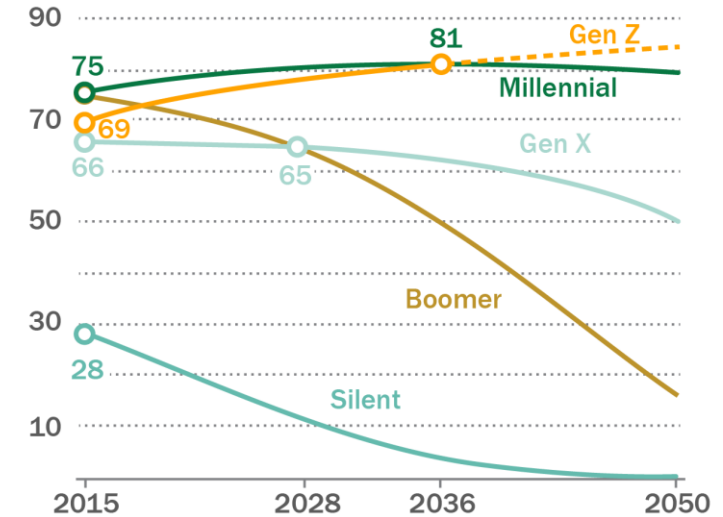
- Projected to be 75% of workforce by 2020
- Cost the US Economy \$30.5B/yr in turnover
- Value **flexibility** (more than pay)

## Gen Z

- The first generation with **no ethnic majority**
- Distrust authority, are **highly competitive**, and are less collaborative than millennials

## Projected Population by Generation

*In millions*



Note: Millennials refers to the population ages 18 to 34 as of 2015.

Source: Pew Research Center tabulations of U.S. Census Bureau population projections released December 2014 and 2015 population estimates

PEW RESEARCH CENTER



# Employees Want to Feel “Whole” at Work

95% of people say the ability to truly **be themselves** at work is directly tied to how they feel about work.

Source: Center for Generational Kinetics and Ultimate Software  
National Study on Employee Experience, August 2016



# And They Want to be Heard

**3 out of 4 employees** say that having their concerns heard and addressed is critical to retention

*... more important than receiving personal recognition for their accomplishments*



***It's time to  
change it up!***

# Data



“The goal is to turn data into information, and information into insight.”

- Carly Fiorina, former executive president, and chair of Hewlett-Packard Co.



# Feedback Beyond Surveys

Surveys have *inherent* limitations...





# PERCEPTIVE TECHNOLOGY

Offers a modern way to collect and understand employee feedback – enabling meaningful, relevant, conversational relationships with your people

# A Winning Data & Employee Game Plan



**Data Science  
Uncovers the  
Unexpected**



**Listen to the Voice  
of your Employees  
(VoE)**



**Take Action to  
Impact  
Outcomes**

Now let's try to understand what you truly value in a workplace. We want to know what's...

Share with us what you care most about  
in your work experience.

Reflect on both your current and former jobs to tell us what you  
value in having a great employee experience.



OK

Section 2 of 2

Back

Next

# LISTEN

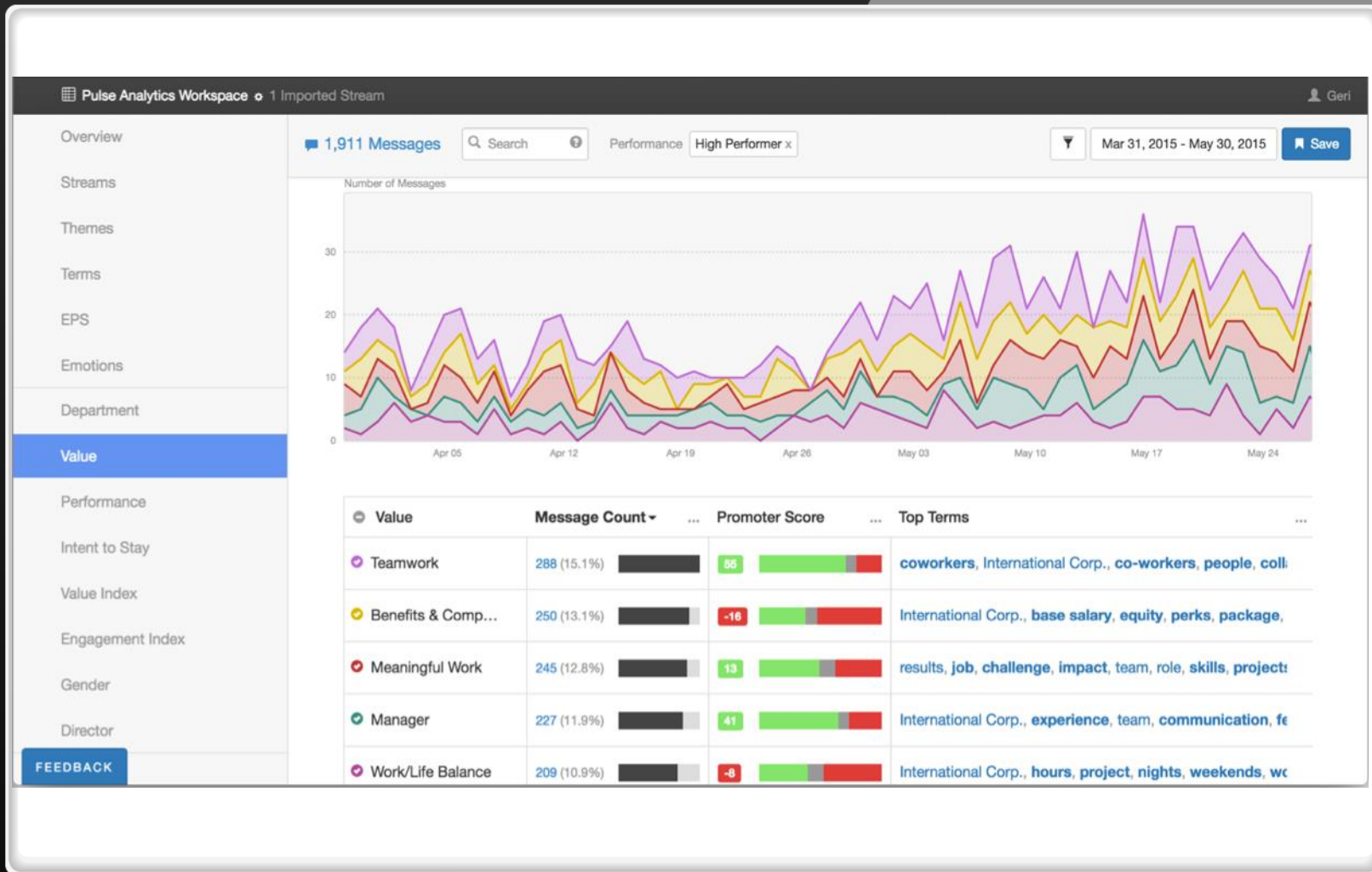
Conversational,  
event-driven  
surveys

# Sentiment Analysis

Helps employers understand not only *what* is said, but also how employees are *feeling*







# UNDERSTAND

Uncover the hidden meaning behind the words

## What are my team's strengths and areas of concern?

✦ statistically significant difference

### Strengths

*Hooray!*

Highest-rated rating questions and ranked as important

My team is united in trying to reach our team OKR's.

4.5

Tagged: Team

[Learning path available](#)

I enjoy being part of the social activities of my team.

4.3

Tagged: Team

[Learning path available](#)

### Areas of Concern

*Focus area*

Lowest-rated rating questions and ranked as important

Adam communicates a clear sense of the direction in which the company is headed.

3.9

Tagged: Senior Leadership

[Learning path available](#)

I am confident that our senior leadership is taking AtoZ in the right direction.

3.9

# ACT

Instantaneous  
recommendations  
enable leaders to  
take action

# What is the outcome?

**35% reduction** in voluntary turnover

**3x improvement** in identifying at-risk employees

**2x improvement** in identifying high performers

A blurred background image showing a crowd of people walking in front of a modern building with a grid of glass panels. The text is overlaid in the center.

Perception users  
**outperformed** the  
S&P 500 by **180%** in 2016





# Demo

Ultimate  
SOFTWARE

*People first.*

**QUESTIONS?**