Building a cognitive business

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Disruption is upon us.

The biggest taxi company owns no cars.

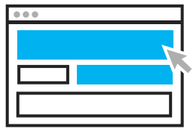
The largest accommodation company owns no real estate.

The largest retailer carries no inventory.

The biggest media company owns no content.

This disruption is fueled by three forces.

The proliferation of different types of data.

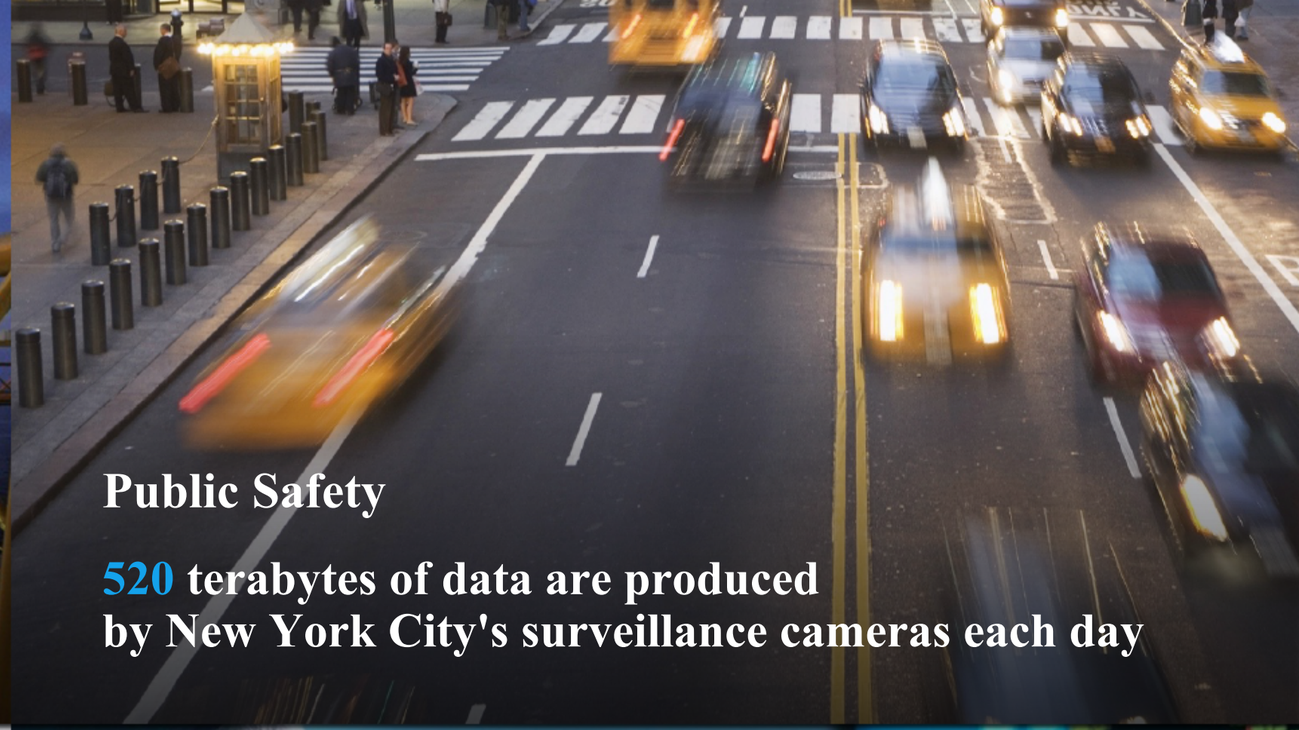


The ability to build business in code with the API economy.

The powerful capabilities and outcomes brought on by cognitive computing.

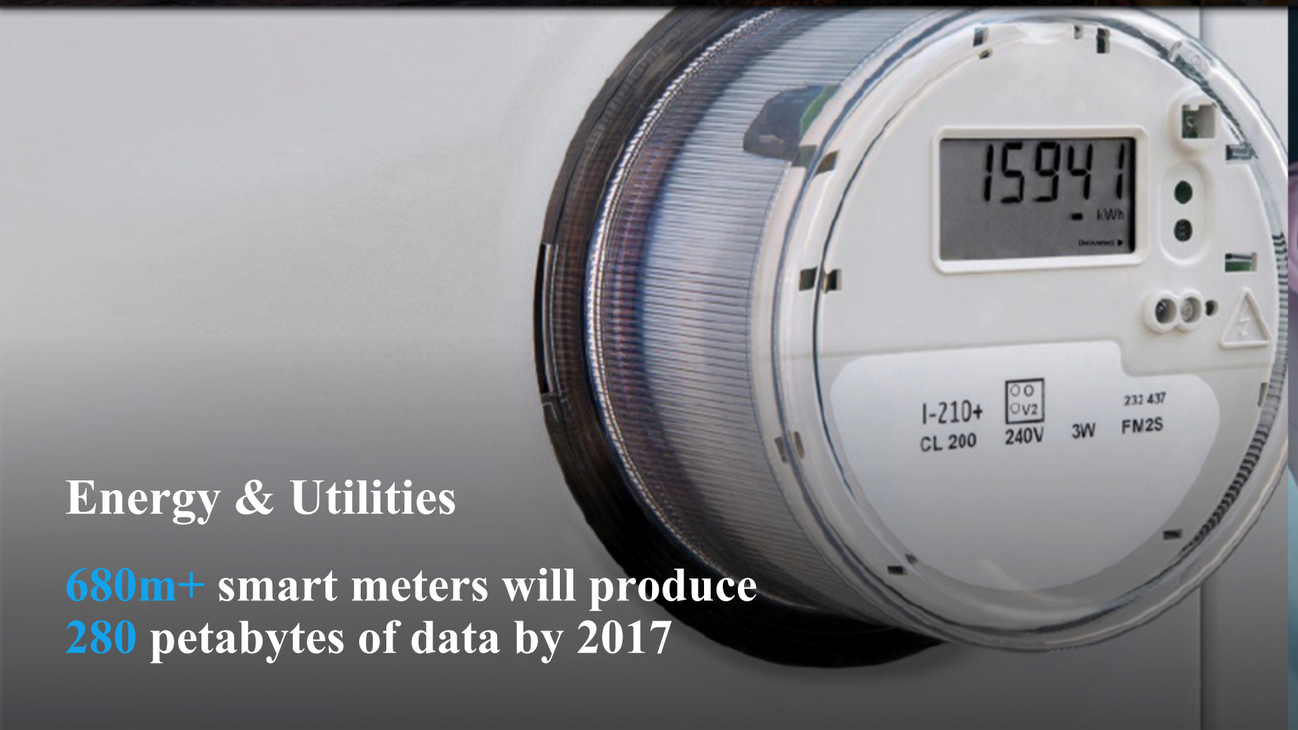
Oil & Gas

80,000 sensors in a facility
produce **15** petabytes of data



Public Safety

520 terabytes of data are produced
by New York City's surveillance cameras each day



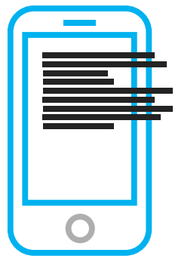
Energy & Utilities

680m+ smart meters will produce
280 petabytes of data by 2017

Healthcare

The equivalent of **300** million books of health
related data is produced per human in a lifetime

More devices are creating more information.

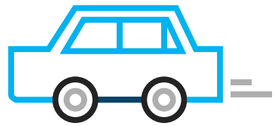


1,200,000

lines of code in a smartphone

80,000

lines of code in a pacemaker



100,000,000

lines of code in a new car

5,000,000

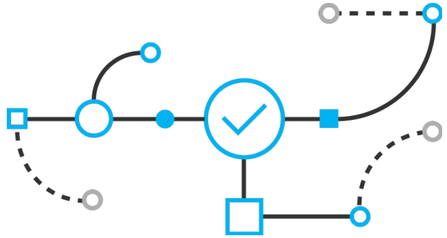
lines of code in smart appliance

IBM

Three capabilities differentiate cognitive systems from traditional programmed computing systems…

Understanding

Cognitive systems understand like humans do.



Reasoning

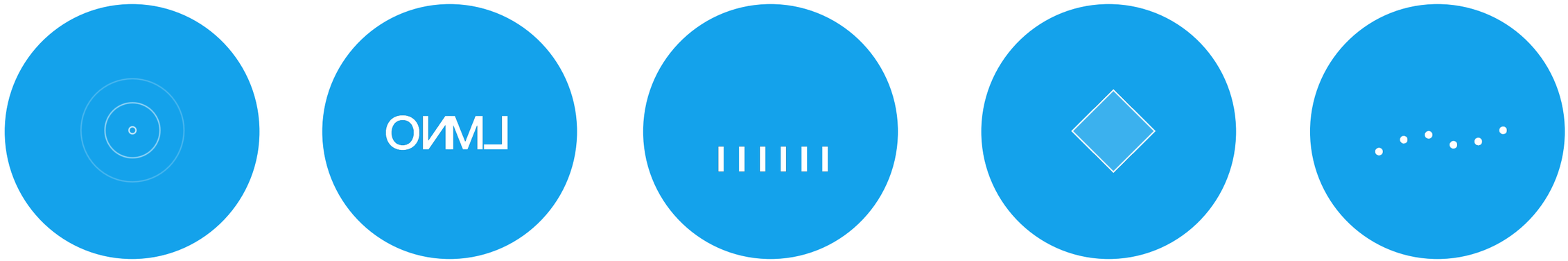
They reason. They understand underlying ideas and concepts. They form hypothesis. They infer and extract concepts.

Learning

They never stop learning getting more valuable with time. Advancing with each new piece of information, interaction, and outcome. They develop “expertise”.

…. allowing them to interact with humans.

Cognitive systems democratize innovation by scaling knowledge.



Sensors Data Analytics Information Cognitive

Ingestion, Integration, Governance

Cognitive systems forge a new partnership between man and machine.

Humans excel at:

Common Sense

Morals

Imagination

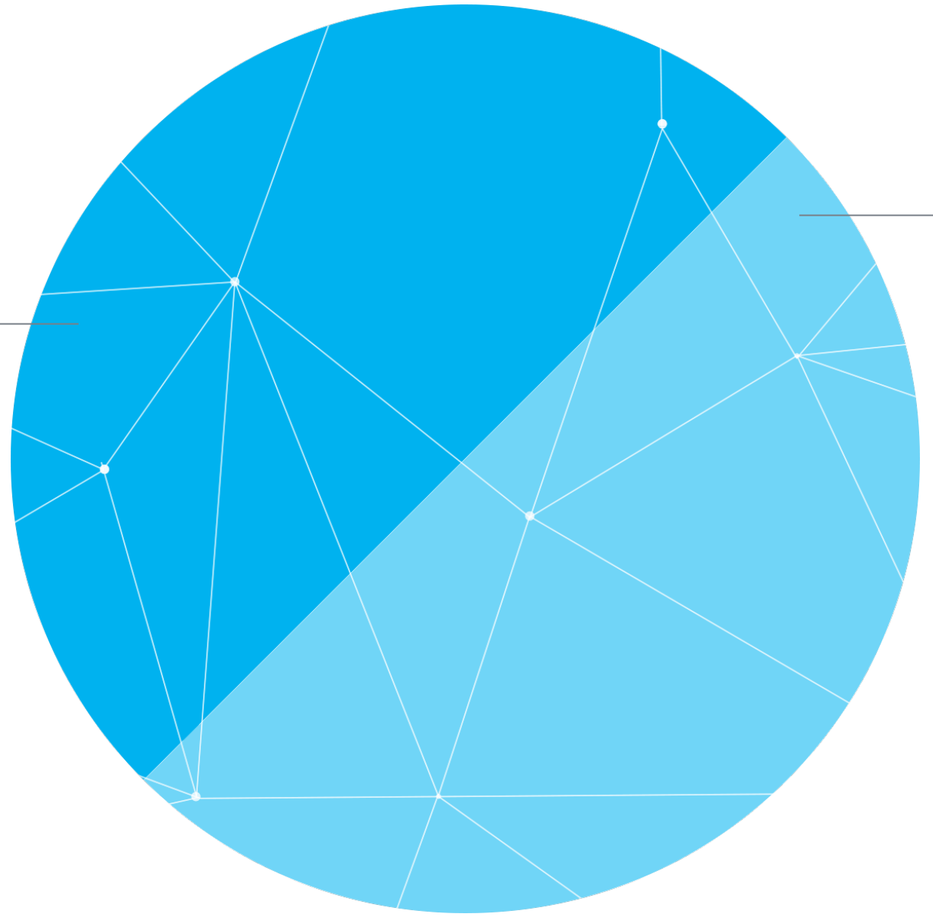
Compassion

Abstraction

Dilemmas

Dreaming

Generalization



Cognitive Systems excel at:

Locating Knowledge

Pattern Identification

Natural Language

Machine Learning

Eliminate Bias

Endless Capacity

Cognitive systems rely on collections of data and information:

Data, information, and expertise create the foundation.

Examples include:

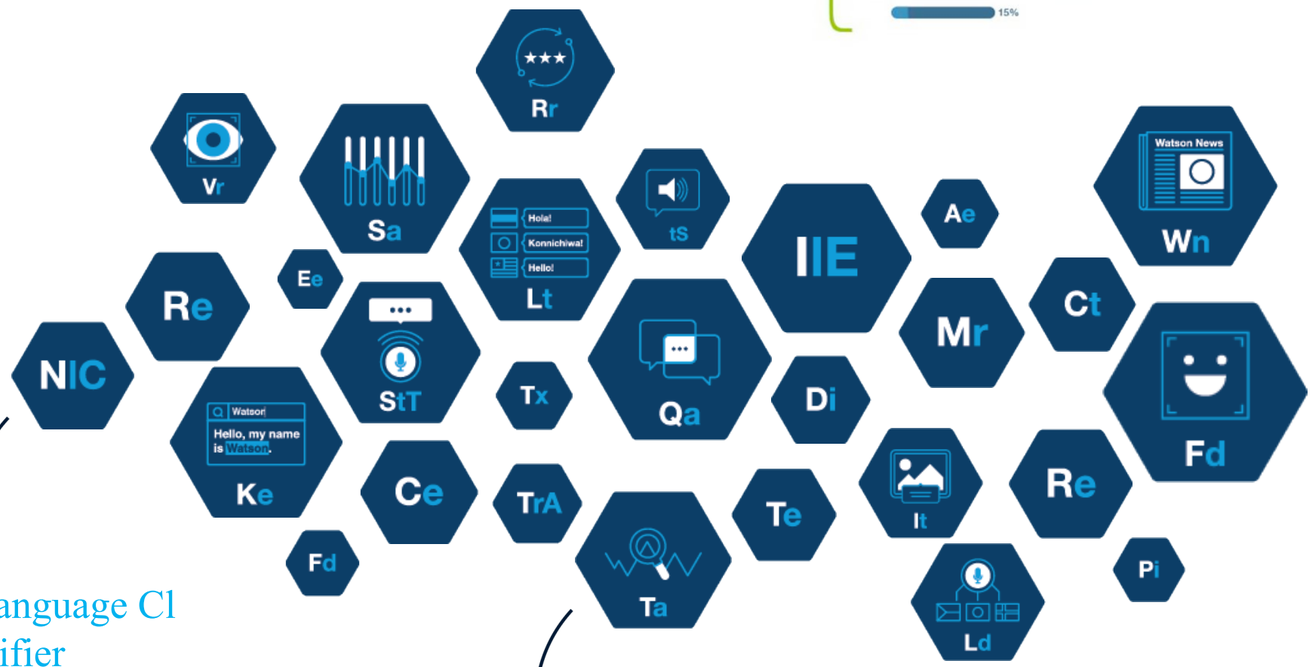
Analyst reports
tweets
Wire tap transcripts
Battlefield docs
E-mails
Texts
Forensic reports
Newspapers
Blogs
Wiki
Court rulings
International crime database
Stolen vehicle data
Missing persons data

…and then leverage Watson APIs to apply cognitive capabilities.

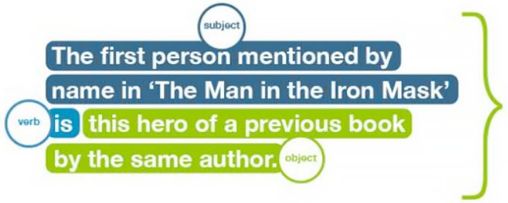
50 underlying technologies

Entity Extraction
Sentiment Analysis
Emotion Analysis (Beta)
Keyword Extraction
Concept Tagging
Taxonomy Classification
Author Extraction
Language Detection
Text Extraction
Microformats Parsing
Feed Detection
Linked Data Support
Concept Expansion
Concept Insights
Dialog
Document Conversion
Language Translation
Natural Language Classifier
Personality insights
Relationship Extraction
Retrieve and Rank
Tone Analyzer
Emotive Speech to Text
Text to Speech
Face Detection
Image Link Extraction
Image Tagging
Text Detection
Visual Insights
Visual Recognition
AlchemyData News
Tradeoff Analytics

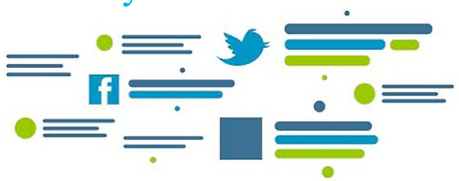
Retrieve and Rank



Natural Language Classifier



Tone Analyzer



Watson at work in the world.

Watson at work in the world.

"Thomson Reuters to deploy IBM Watson technology”
- InfoTechLead

"IBM's Watson Lands A Job With KPMG.” -InformationWeek

"How Can I Help You? IBM's Watson Powers Hilton's Robotic Concierge" - Fast Company

"Woodside to tap into IBM's Watson” - CIO

"SoftBank's Pepper robot is getting an intelligence boost from IBM's Watson"- The Verge

"IBM’s Watson Helped Pick **Kia’s** Super Bowl ‘Influencers’”
- Wall Street Journal

"IBM’s Watson Now Powers AI For Under Armour”
- TechCrunch

"IBM and Apple can put Watson's A.I. insights inside Apple Watch"- ComputerWorld

"The North Face Uses IBM's Watson to Make Online Shopping Smarter" -The Street

"Medtronic, IBM team up on diabetes app to predict possibly dangerous events hours earlier."- The Washington Post

The market is validating the benefits of cognitive.

"IBM Crafts a Role for Artificial Intelligence in Medicine."

THE WALL STREET JOURNAL.

"[Watson] is specifically designed to support the development of a broad range of enterprise solutions."

Deloitte.

"No doubt, Watson has the means to radically change the industry. "

IDC: IBM's Go-to-Market Transformation – Deeper, Wider, Newer (#AP257527, April 2015, Chris Zhang, Sabharinath Balasubramanian, Mayur Sahni)

IDC

"IBM Watson represents a bold technological and visionary step"

FROST & SULLIVAN

"What is distinctive about IBM is the breadth of its effort to create Watson tools … for a wide range of developers."

The New York Times

"…it's not just AI algorithms themselves that have improved, but the ability to deliver them"

WIRED

"The worldwide cognitive software platforms market will grow to $30 billion by 2018, at a CAGR"

IDC: Worldwide Cognitive Software Platforms Forecast, 2015-2019: The Emergence of a New Market (#258781, September 2015, David Schubmehl)

IDC

"IBM's [Watson] can help banks with complex financial operations and attack important health care problems."

FAST COMPANY

'You can't do this without Watson. -Former Sun CEO Scott McNealy. His startup, Wayin, uses Watson to trawl and drag photos.

CIO


Bumrungrad
International
HOSPITAL


Medtronic


woodside
IBM


SoftBank
Robotics

What will you do with Watson?