

IBM Watson

Where digital business meets digital intelligence

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Watson & Cloud Platform Implementations

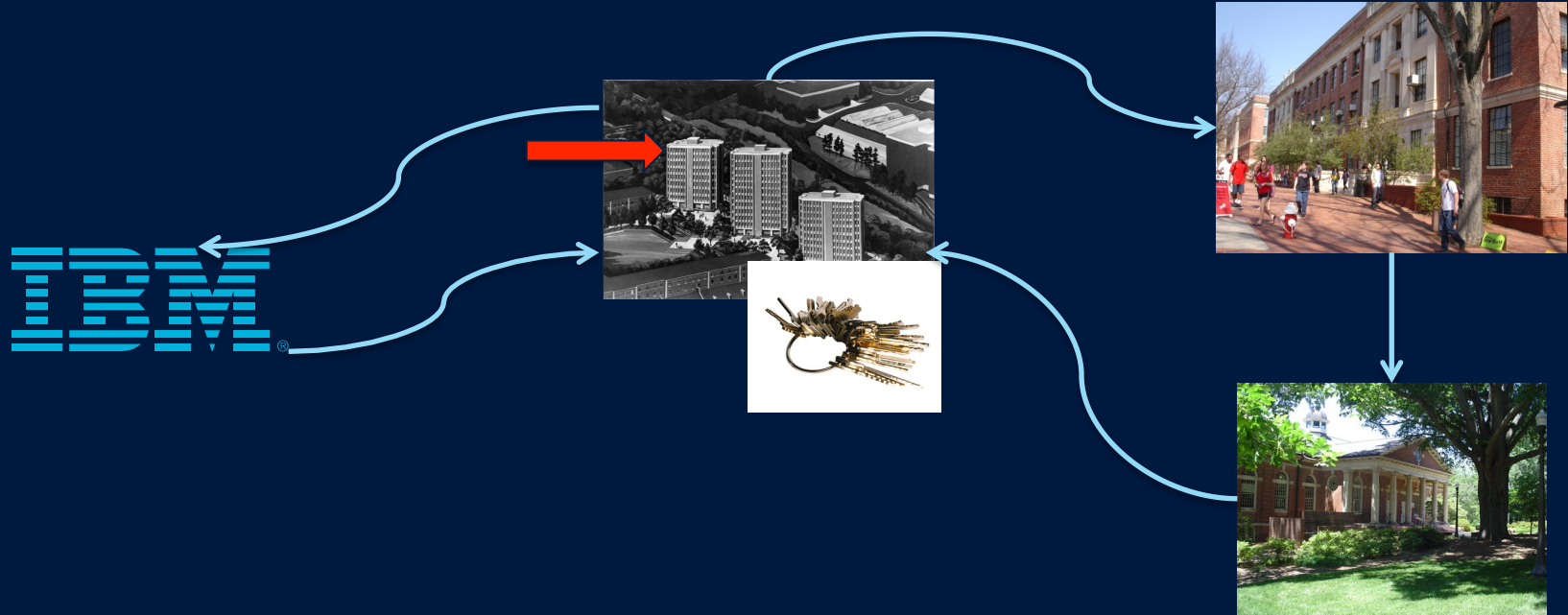


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My NCSU Experience





IBM's
largest site
in North America



12%
of IBM patents are
from RTP



50+
executives on
non-profit boards



256K
square feet of Agile
space by the end of
Q1



31%
of RTP employees have
under 5 years with IBM



An explosion of what we can know

The Third Industrial Revolution is upon us – an information era where we begin to scale human knowledge, with the help of AI systems

Data has transformed every industry, profession, and domain

102,000,000

wearables shipped in 2016, growing to 237,000,000 by 2021

100,000

new cancer articles published every year

80,000,000

MRIs taken every year, up from 3,000,000 in 1980

2,200,000,000

locations generating hyperlocal weather forecasts across the globe every 15 minutes

2,581,586

Emails every second

10,000

new software vulnerabilities recorded in 2016, up 30% since 2011

600,000,000

forms of malware - with close to 400k variations introduced daily

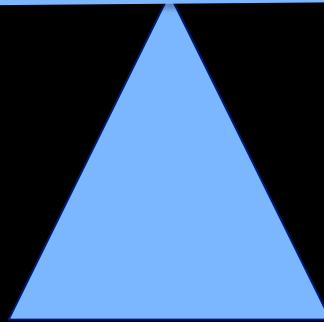
500

hours of video uploaded to YouTube every minute

Grand Challenge



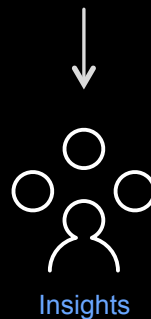
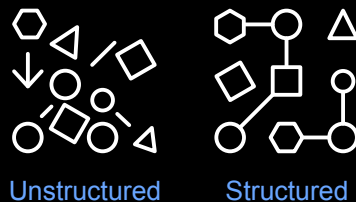
AI for Business Striking the Balance



Watson is AI
for professionals.

Our differentiators:
Learn from small data sets
Own your insights
Embedded in workflows

With Watson you can harness the power of augmented intelligence



Your data + the world's data

Watson can ingest, cleanse, and comprehend every data type. Build off your domain expertise and the largest base of industry offerings in the market.

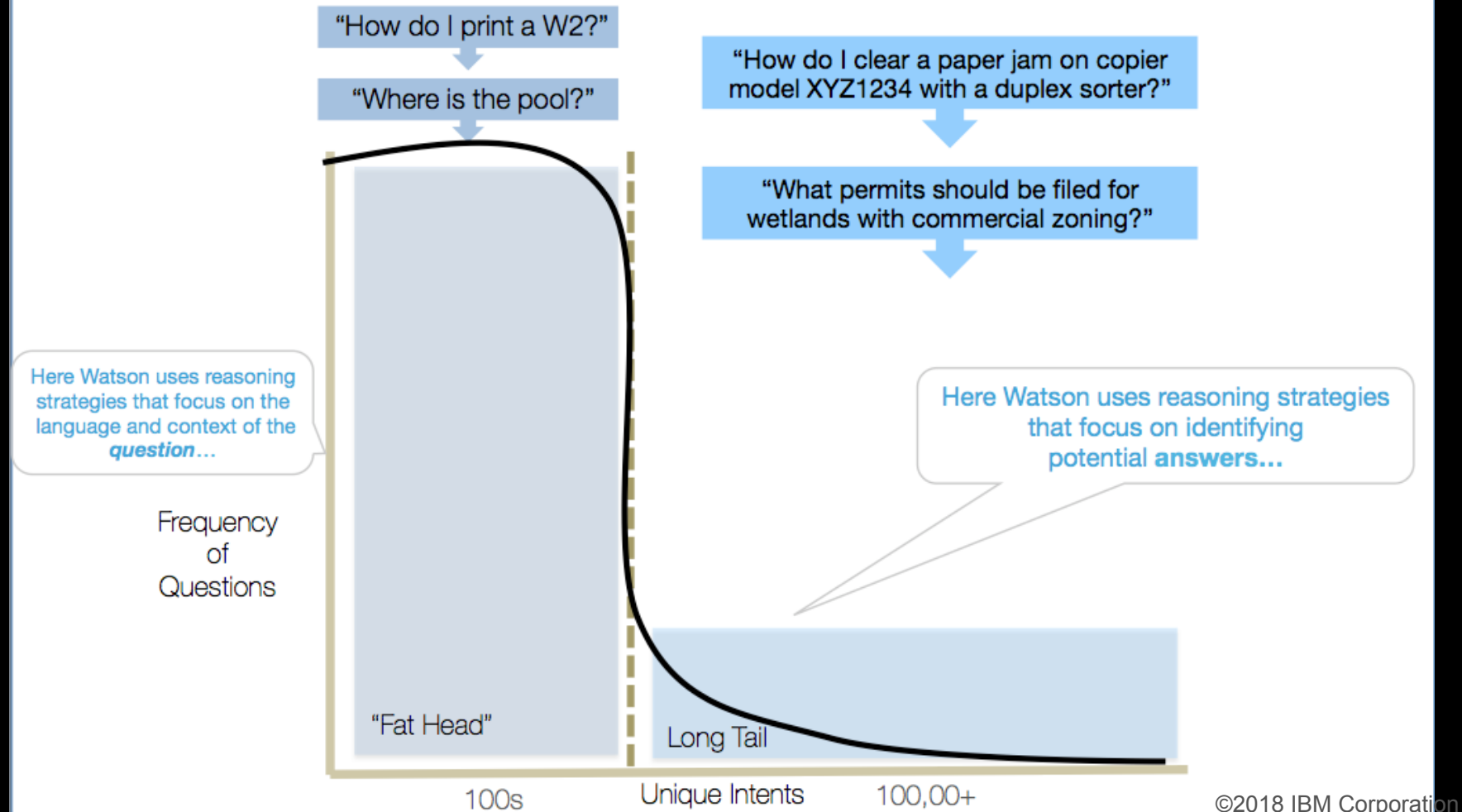
Ingests + transforms

Apply a powerful suite of Watson services and APIs to transform your data into valuable insights. Watson is optimized for robust AI workloads and lives on the IBM Cloud.

Insights + outcomes

Watson extracts meaning to provide deep insights and produces powerful outcomes. Train your AI on what's important to your industry gain knowledge and make the most informed, reasoned decisions.

Data and Usage Drives Functionality Choices for Cognitive Systems



Data, Users, Questions



Men's Polo Shirt

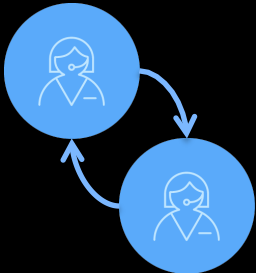
Item#: 1234113

Sizes: M-XL

Colors: Blue, Red, Orange, Yellow, Green



Customer: Can I backorder item 1234113 in size Large color Blue, please?

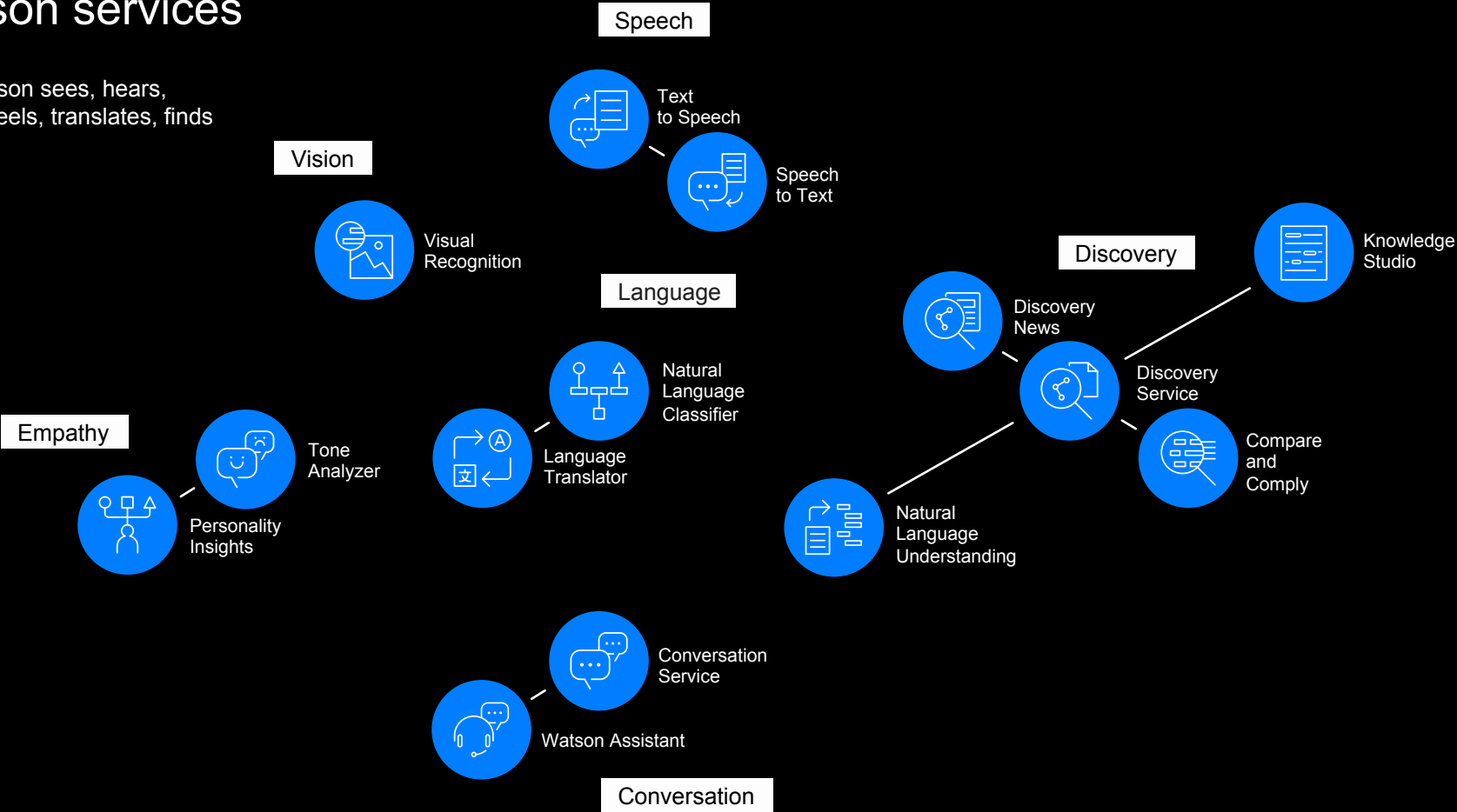


Call Center Agent A: 113 bo bl lg?

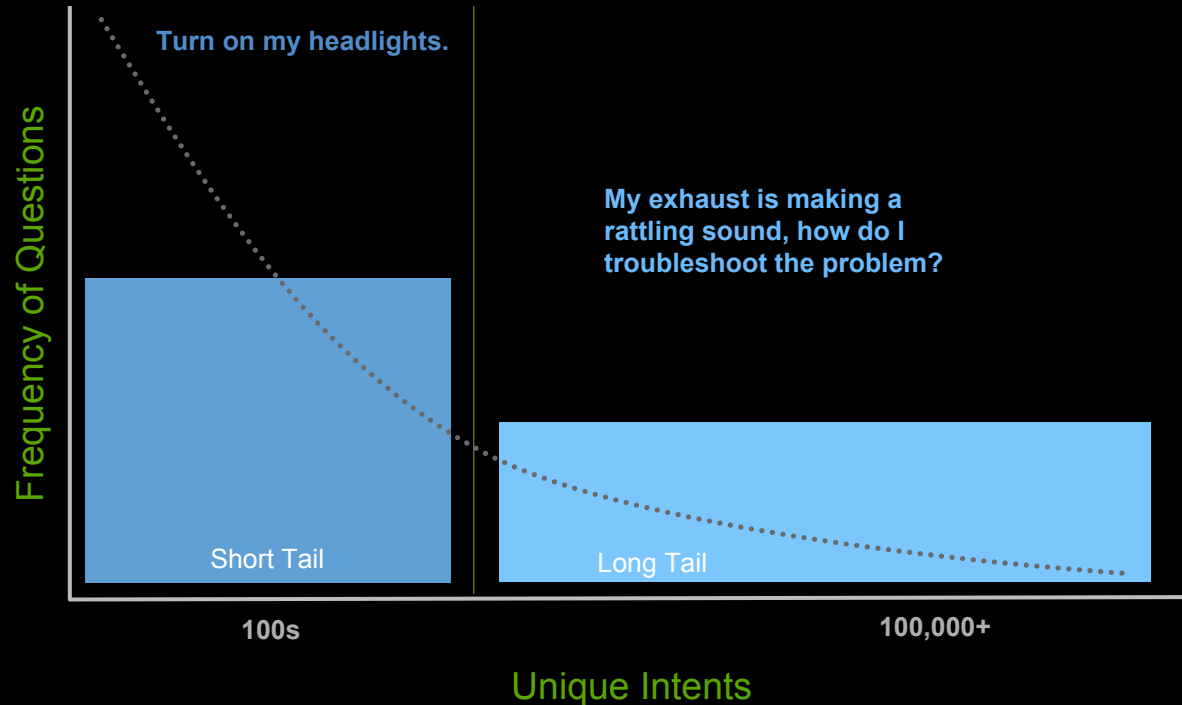
Call Center Agent B: n 113 y/g m oly

Watson services

How Watson sees, hears, speaks, feels, translates, finds



Watson: Handling both Short / Long Tail



Watson Conversation



Here Watson uses reasoning strategies that focus on the language and context of the question.

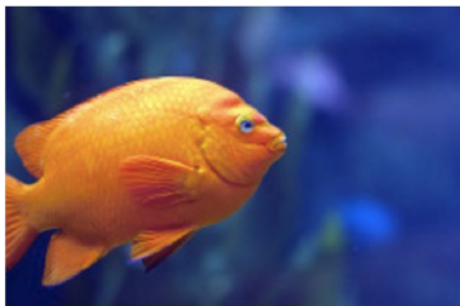
Watson Discovery Service



Here Watson uses reasoning strategies that focus on identifying the most appropriate answer.

Visual Recognition helps people to understand and take action from visual data.

Evaluate



[JSON](#)

Classes	Score
fish	1.00
animal	1.00
aquarium	0.67

Type Hierarchy

- /animals/fish
- /animals

Train

Broken Windshield	Flat Tire	Motorcycle Involved	Vandalism	Undamaged Vehicles
+50	+50	+50	+50	+50
Select	Select	Select	Select	Select

Upload a minimum of 3 (positive) or 2 positive and 1 negative image bundles to train a new classifier.

Name of classifier: Insurance Claims

[Train your classifier](#) [Reset](#)

IBM Watson Knowledge Studio

A cloud-based application that enables developers and domain experts to teach Watson to understand linguistic nuances in unstructured text. Users build custom models in a collaborative environment that can then be used in Watson Discovery, Watson Natural Language Understanding and Watson Explorer.



Teach by Example

Empower domain subject matter experts to teach Watson the language of your industry or organization without requiring deep technical skills or coding.



Engage your Experts

Bring your experts together into a collaborative online environment to teach Watson how to understand the linguistic nuances of your domain.



Use Everywhere

Apply what you've taught Watson in multiple applications by using models from Watson Knowledge Studio in Watson Discovery, Watson Natural Language Understanding and Watson Explorer.

Using and Deploying Watson Knowledge Studio

Build, test, manage, and deploy custom models for domain adaptation

Deploy or export custom models into the following end-points

Custom model *Watson Knowledge Studio*

IBM Watson Knowledge Studio

Back to Workspaces View Details Attribute View Completed

Model Management Assets & Tools Document Annotation

Crash1.txt

- 1 This on-site investigation focused on the performance of the Certified Advanced 208-Compliant **air bag system** in a **2005 Ford Escape** XLT 4x4 sport utility vehicle.
- 2 This two-vehicle crash occurred in July 2014 at 1539 hours in the state of Colorado.
- 3 The crash occurred on a curved portion of a three-lane interstate roadway.
- 4 The **Ford** Escape lost control on an interstate highway and **struck** a **concrete barrier** on the right side of the roadway.
- 5 The impact resulted in sufficient longitudinal deceleration of the **Escape** to command the deployment of the **frontal air bag system** and actuation of the **driver's seat belt pretensioner**.
- 6 The vehicle rotated out from the initial **wall impact** and was subsequently **struck** by a **2013 BYD Qin** pulling a single **trailer**.
- 7 The restrained 48-year-old male **driver** of the **Escape** appears to have sustained a minor facial injury.

Entity	Type	Subtype	Role
ACCIDENT_OUTCOME			
ACCIDENT_CONDITION			
CONDITION			
IMPACT			
MANUFACTURER			
MODEL			
MODEL_YEAR			
PART_OF_CAR			
PERSON			
STRUCTURE			



Discovery Service

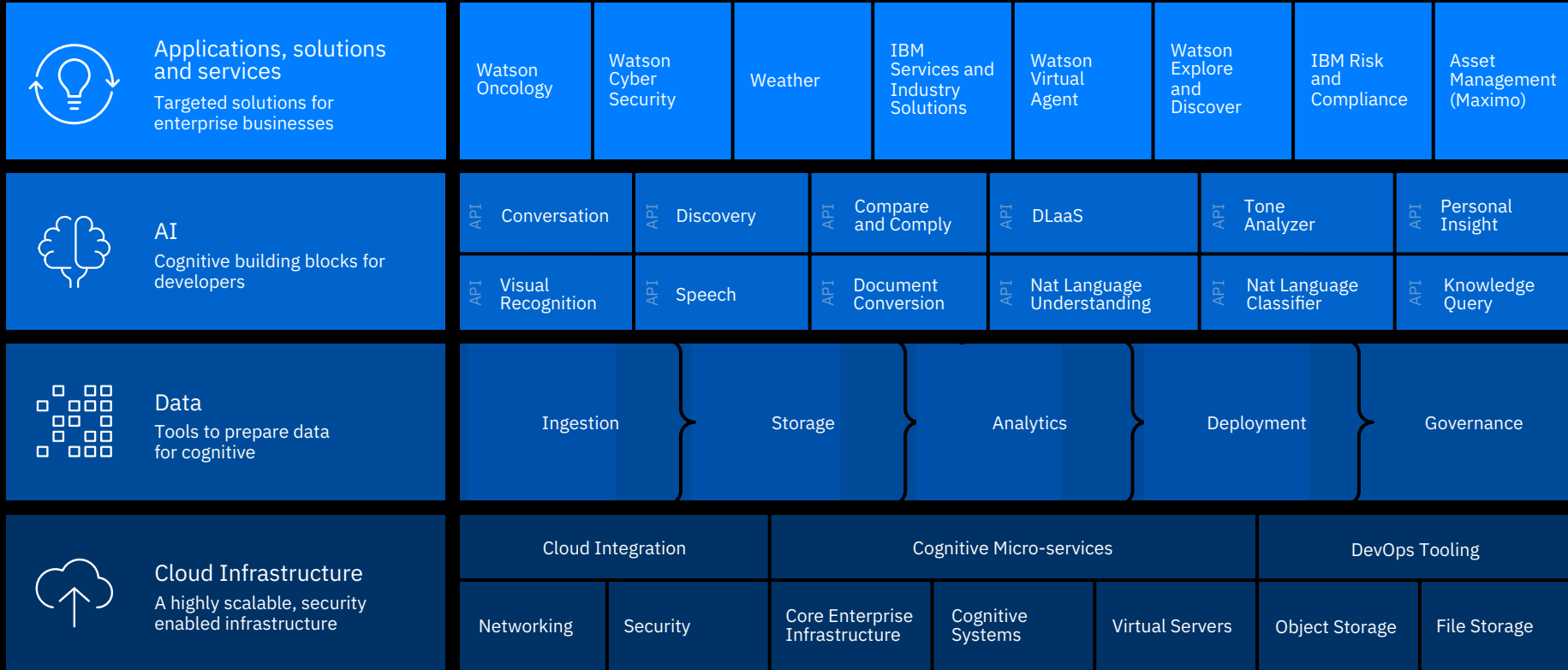


Natural Language Understanding

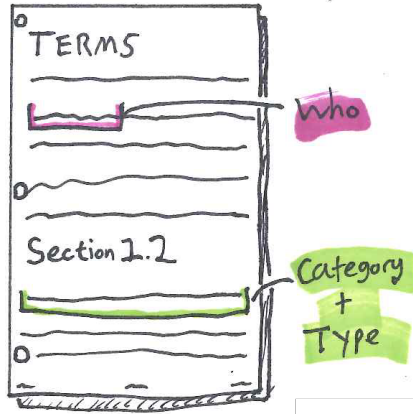


Watson Explorer

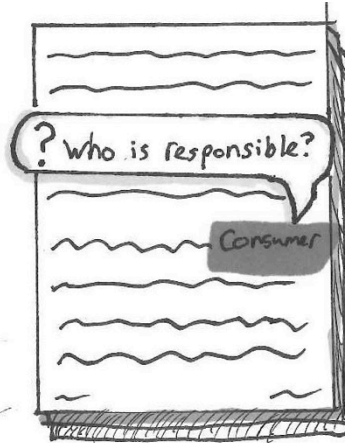
Only IBM delivers an architecture engineered for disruption



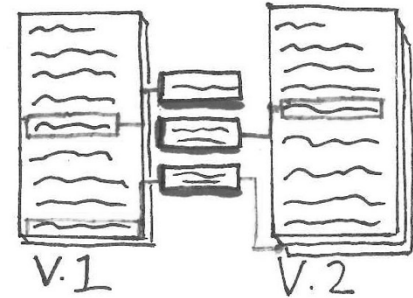
Compare and Comply



A **system to analyze the content of a governing document**, making sense of the specifics of a document (who it pertains to, what kind of statements are within).

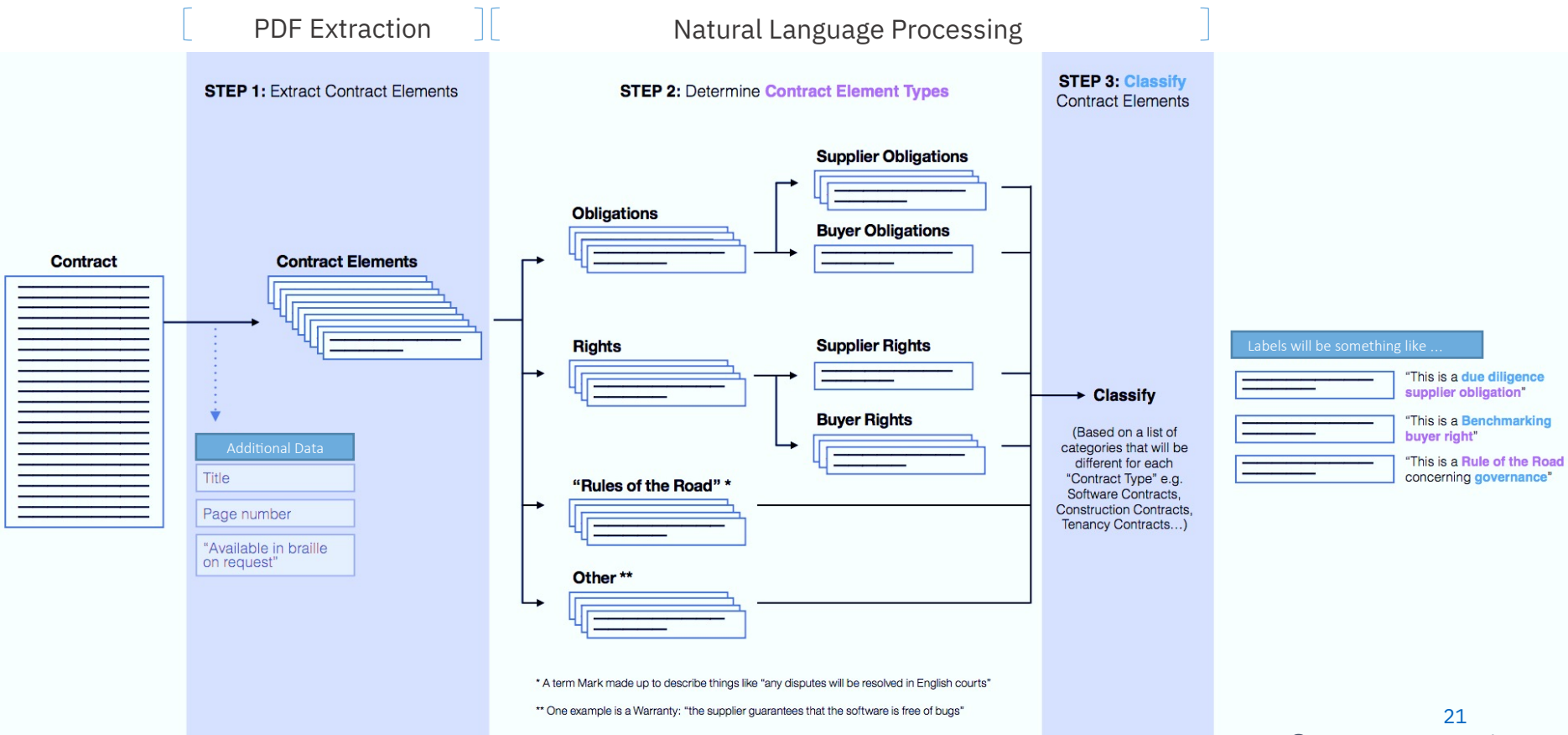


The ability to **query the parsed semantic elements of a governing document**, and locate relevant sections and passages.



The ability to **compare a governing document to a corpus of documents**, along with suggestions on how to adjust the document accordingly.

How Discovery Element Classification Works



An integrated platform of tools,
services and data that helps
companies accelerate their shift to
become data-driven organizations

Drive governance policy
effectiveness while tracking
how data is used and its value
to the company

Access powerful tools to
prepare data to tease out the
insights they're looking for,
without IT involvement

Data Steward

Data Scientist



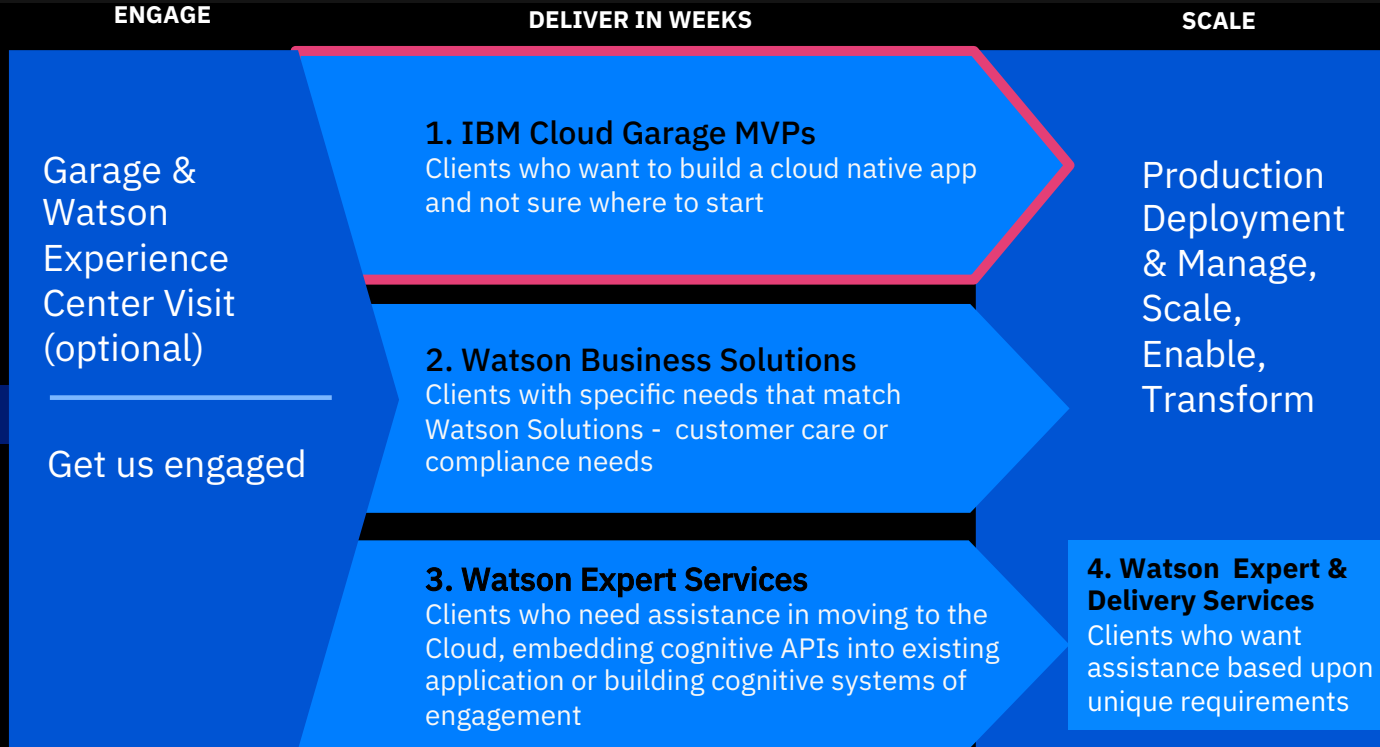
Data Engineer

App Developer

Easily build data pipelines that
power dashboards and data
platforms while ensuring high
quality

Make the insights immediately
actionable and add
intelligence to apps in
straightforward manner

WATSON EXPERT and DELIVERY SERVICES & IBM CLOUD GARAGE TOGETHER



Customer Stories



Oil and Gas Company

- Off-shore platforms
- 80K sensors, 1M docs, 30 years of expert experience
- Reduced expert knowledge search time by 75%

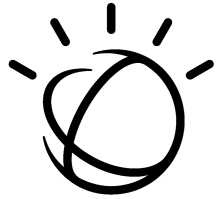


Bank

- Assisting clients with 59 financial products
- 30K daily calls, 6,500 branch locations, 60,000 employees
- 85% customer satisfaction rating
- 100% Brazilian Portuguese

Guiding Eyes for the Blind

Currently only 37% of dogs born into the program become successful guide dogs for the blind



**IBM Watson
and Cloud**



**NCSU Computer
Science and Vet
Behavior Experts**

Increasing the success rate of guide dogs



What's Next?



Get started
with Watson

www.ibm.com/watson