

Cognitive computing

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Cognitive systems democratize innovation by scaling knowledge.

OR

My version of what is cognitive.



Today we're in the midst of an information revolution.

Health data
will grow

99%

Insurance
data will grow

94%

Utilities data
will grow

99%

Manufacturing
data will grow

99%



88%

unstructured.



84%

unstructured.



84%

unstructured.



82%

unstructured.

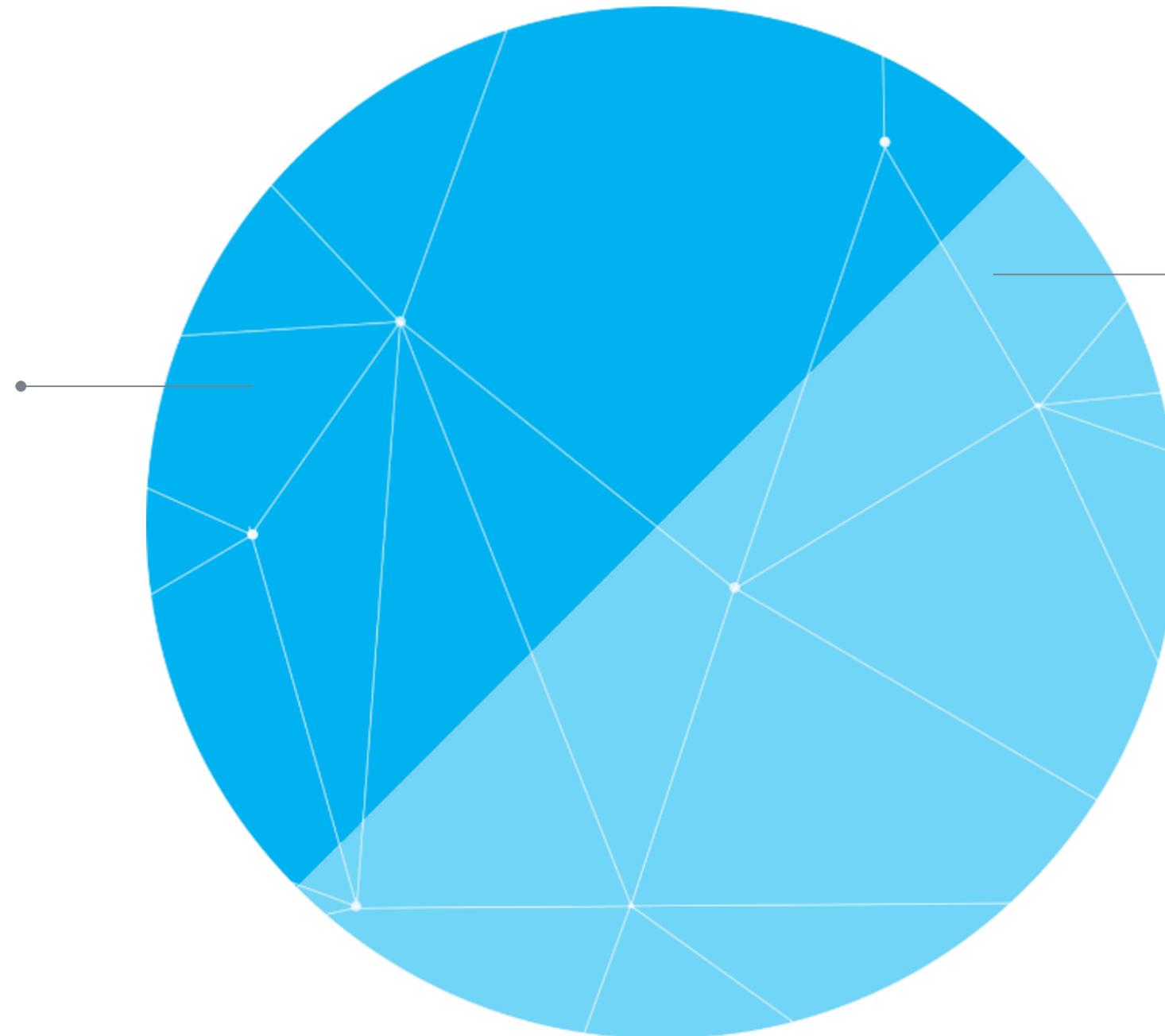
80% of this data has been “invisible” to computers, and therefore useless to us.

Until now.

Cognitive systems are creating a new partnership between humans and technology.

Humans excel at:

COMMON SENSE
MORALS
IMAGINATION
COMPASSION
ABSTRACTION
DILEMMAS
DREAMING
GENERALIZATION



Cognitive Systems excel at:

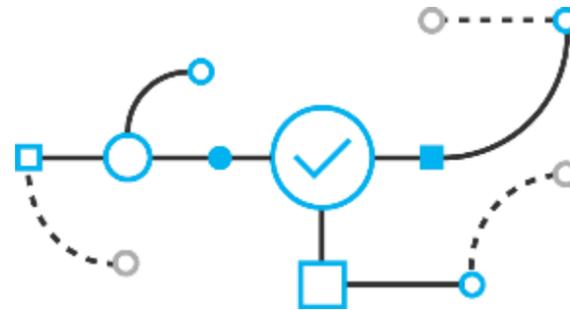
LOCATING KNOWLEDGE
PATTERN IDENTIFICATION
NATURAL LANGUAGE
MACHINE LEARNING
ELIMINATE BIAS
ENDLESS CAPACITY

There are three capabilities that differentiate cognitive systems from traditional programmed computing systems.



Understanding

Cognitive systems understand like humans do, whether that's through natural language or the written word; vocal or visual.



Reasoning

They reason. They can understand information but also the underlying ideas and concepts. This reasoning ability can become more advanced over time. It's the difference between the reasoning strategies we used as children to solve mathematical problems, and then the strategies we developed when we got into advanced math like geometry, algebra and calculus.



Learning

They never stop learning. As a technology, this means the system actually gets more valuable with time. They develop "expertise". Think about what it means to be an expert - it's not about executing a mathematical model. We don't consider our doctors to be experts in their fields because they answer every question correctly. We expect them to be able to reason and be transparent about their reasoning, and expose the rationale for why they came to a conclusion.

Cognitive systems rely on collections of data and information:



Data, information, and expertise create the foundation.

Examples include:

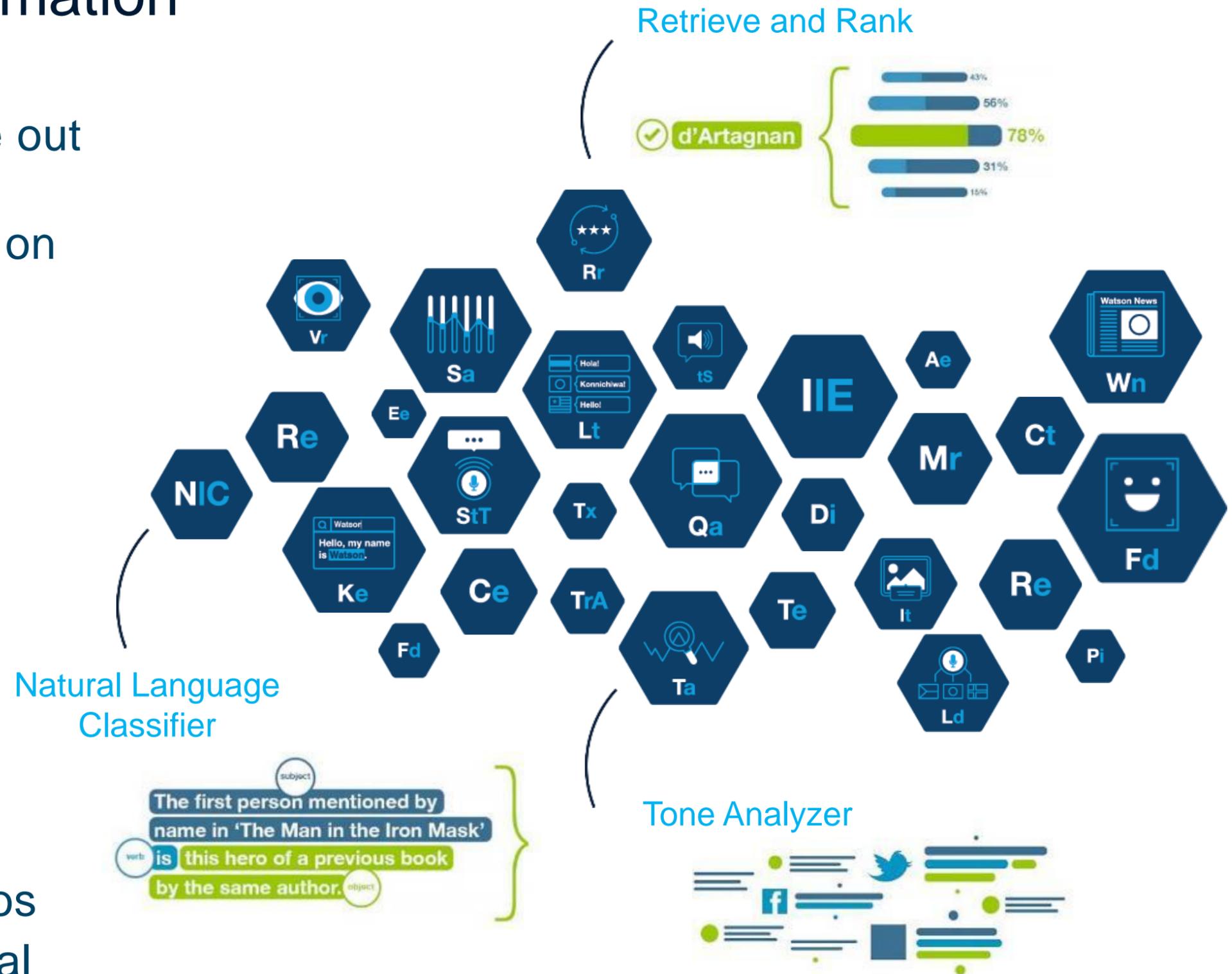
- Analyst reports
- tweets
- Wire tap transcripts
- Battlefield docs
- E-mails
- Texts
- Forensic reports
- Newspapers
- Blogs
- Wiki
- Court rulings
- International crime database
- Stolen vehicle data
- Missing persons data

...and then leverage emerging APIs and interoperability to drive information

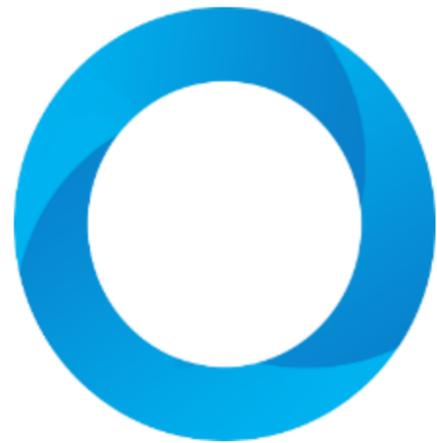
The API economy drives more value out of converged information than the individual entities could ever deliver on their own.

- Hilton and Uber
- Information brokers and large procurement organizations
- Travel sites and providers

- Anywhere value is added with
 - Seamless connectivity
 - Data and functionality combos
 - Integration of internal/external data



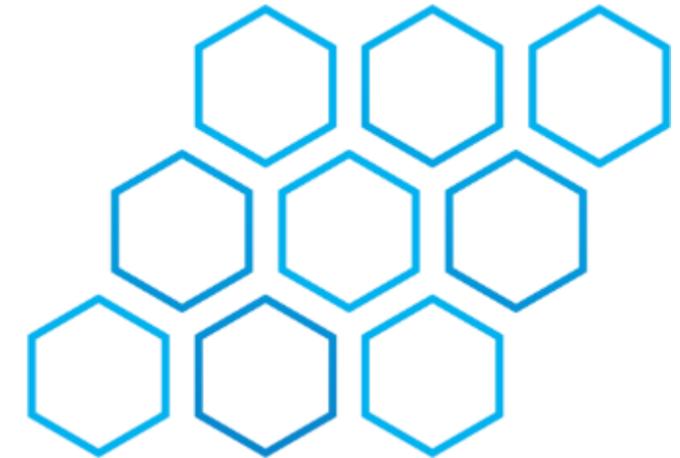
How to get started.



**Develop your use case and
cognitive strategy**



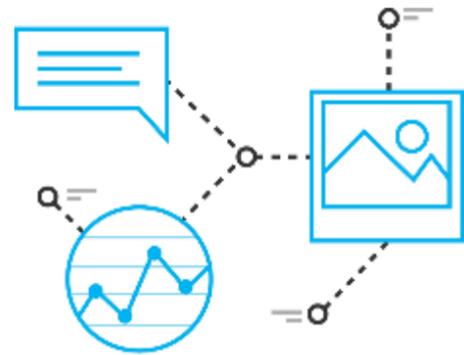
**Scale your expertise with
a converged solution
using data and public API**



Start building for free

Thank you

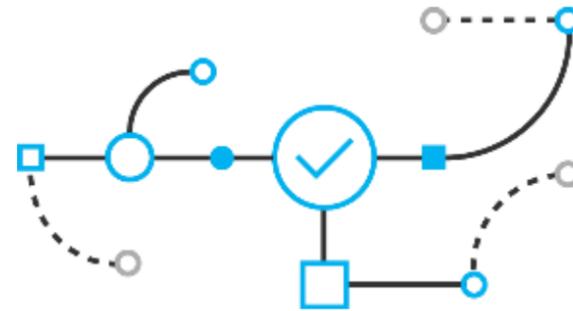
Virgin use cases for cognitive



Concierge

Watson powers a robot in production at Hilton's flagship property allowing guests to interact via voice asking for directions, restaurant recommendations and an array of typical hotel concierge offerings.

Future? Watson in the Walls, Watson powered mobile app and automating "service recovery opportunities"



Cabin, amenity or excursion selection

Watson partnered with The North Face to provide a personalized outerwear suggestion based on a range of factors and customer inputs. This could be used to plan an itinerary or proactively suggest revenue generating activities.



Chef Watson

Originally a show piece to demonstrate Watson's capabilities around "massive data sets" Chef Watson has been used in exploratory efforts by Kellogg's and a global soft drink maker.

Future? Real time menu planning driven by "on hand supplies". Seasonal commodity selection and optimization.