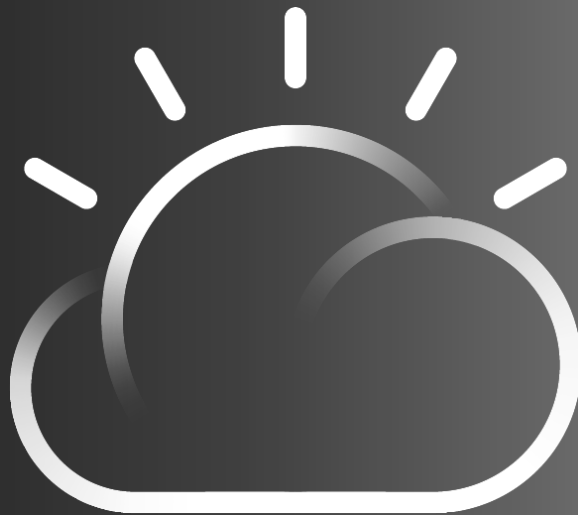


# AI by Design with IBM Watson



**Jaume Miralles**

IBM Watson Data & AI Platform

Spain, Portugal, Greece, Israel CTO

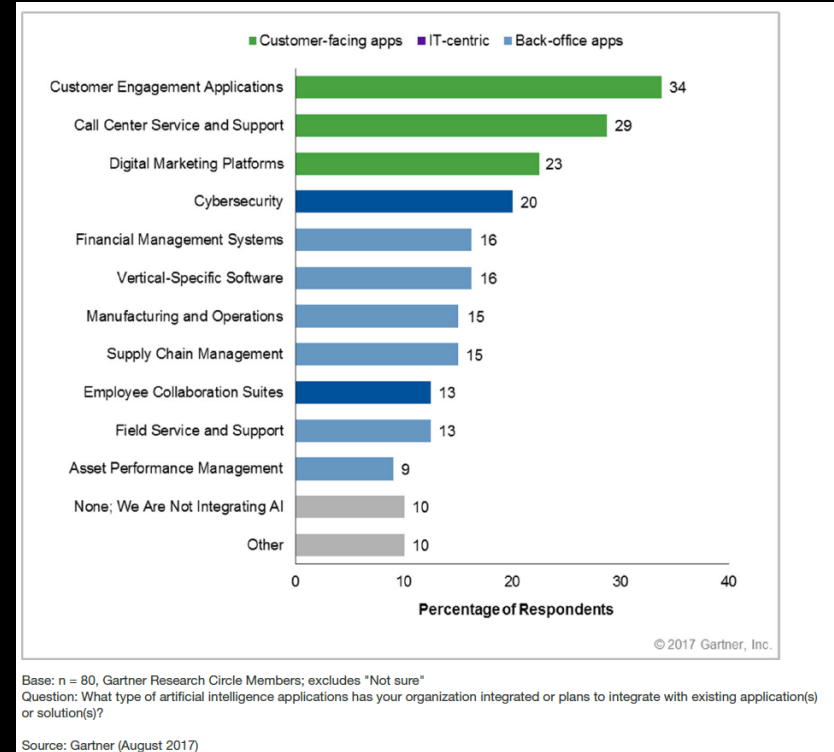
**IBM Cloud**

# Will this make the world happier?



# AI market status

- By 2020, **85%** of CIOs will be piloting AI programs (Gartner), and **75%** of commercial enterprise apps will use AI (IDC).
- Today the majority of AI projects start with **chatbots**, many of which are still in experimentation mode
- To scale AI projects, business need to connect them to their **core business**, and integrate them with the wider **information system** of their organisations



# Why are many businesses not further along?

- Lack of necessary staff skills
- Defining their AI strategy
- Identify use cases for AI
- Funding for AI initiatives
- Security or Privacy concerns
- Complexity of integrating AI with current existing infrastructure
- Determining how to measure value from using AI

(Gartner, November 2017)

# 81%

**do not yet understand the data required for AI**

- MIT Sloan, Reshaping Business With Artificial Intelligence, September 6, 2017,



# To be successful with AI

- Focus on augmenting Customer and Employee happiness

with purpose

augmenting human capabilities

providing the best UX

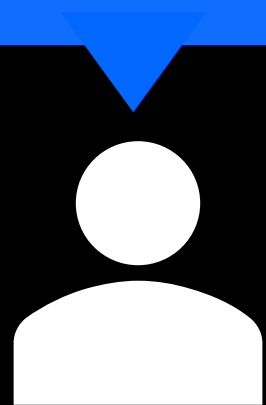
- And then, all the other stuff...

..., skills, budget, data access, quality & governance, right technology & tools, management system , ...



But the real thing is...

It's not about  
AI, but  
cognitive!



**Cognitive** is the mental action or process of acquiring knowledge and understanding through thought, experience, and the senses.

A cognitive computer system displays human-like behaviors, meaning it can **understand, reason, and learn**.



**AI is created by using services that give computers cognitive skills.**

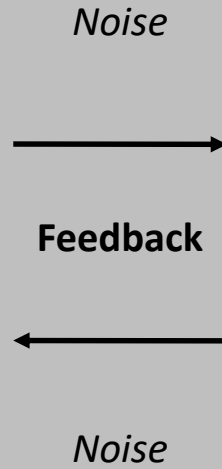
Examples of AI enabling services include machine learning, deep learning, visual recognition, text-to-speech, etc.

**IBM Watson is a full suite of cognitive services.**

**IBM's use of the term AI means augmented intelligence:** systems that help users do their job or live their life better — not replace humans — through the use of cognitive technologies.



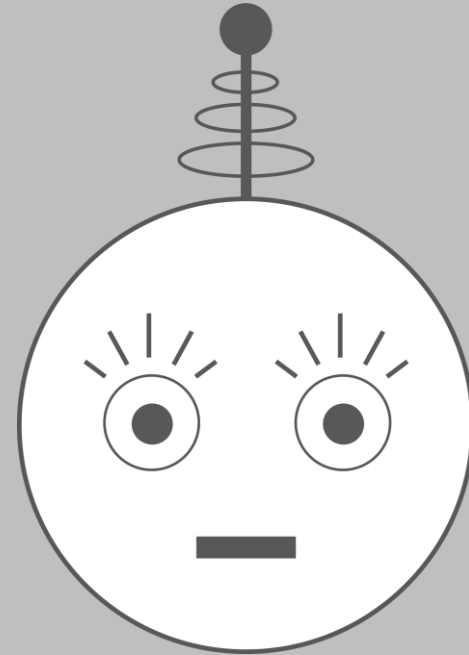
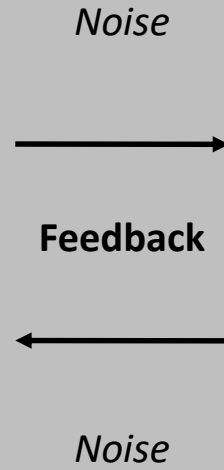
**Inputs**  
**Processing**  
**Outputs**



**Inputs**  
**Processing**  
**Outputs**

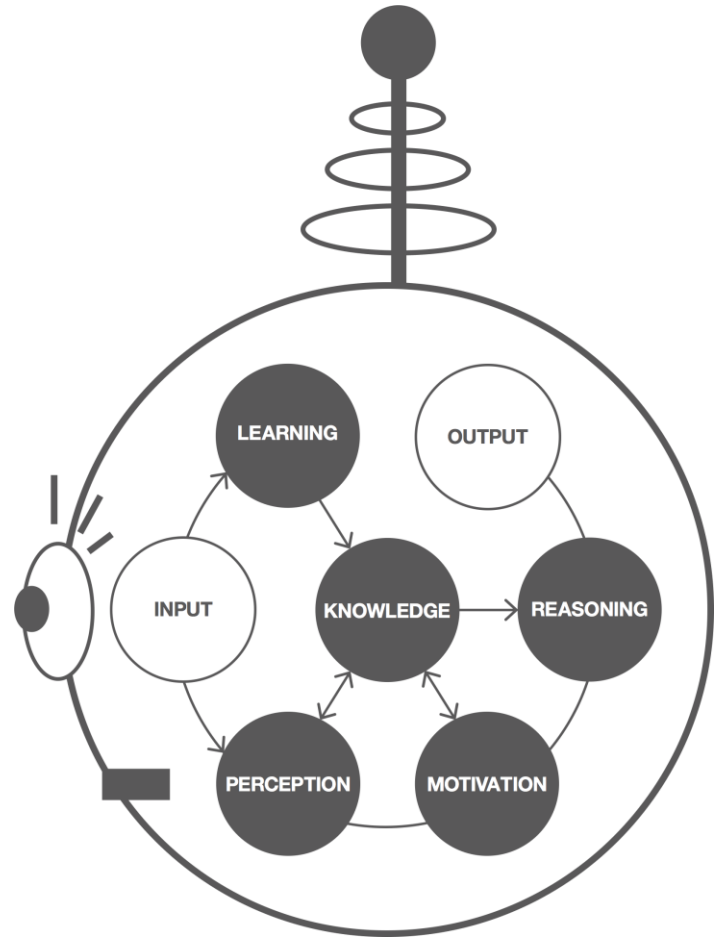


**Inputs**  
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**Outputs**

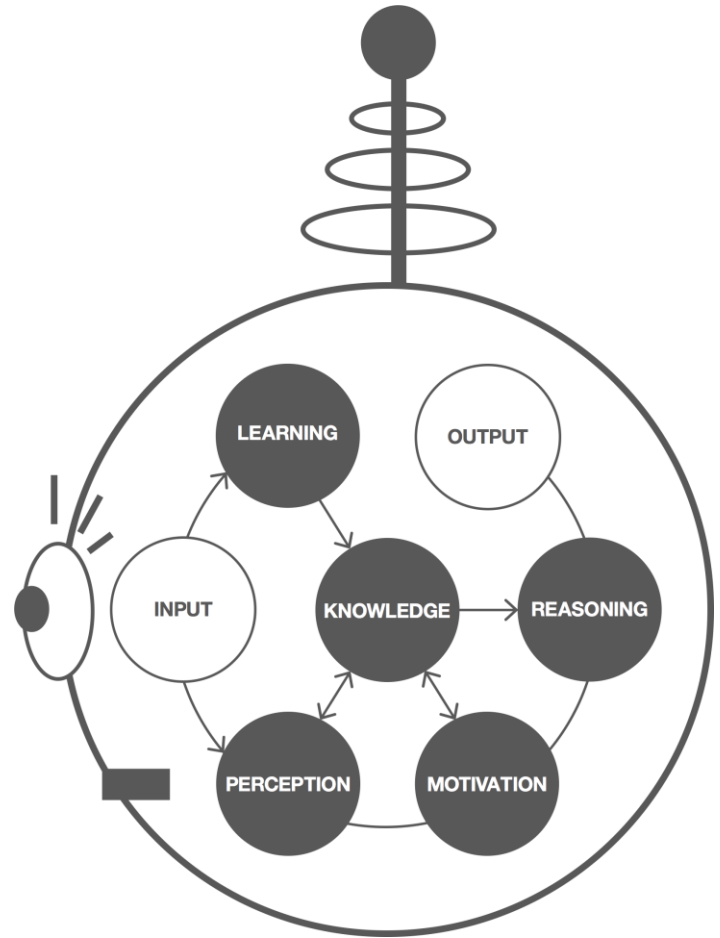


**?**

# What machines need to be able to communicate like us



Strung together,  
these components  
allow the machine  
to **understand**  
**reason and learn**,  
then respond  
cognitively, like us.



# Watson Value Proposition

## AI & Data made easy for Enterprises

- Pre-built services/APIs
- Training of custom models with small data sets and fit for purpose tools.
- Ready to use solutions delivered within 6-12 weeks through Watson Expert Services.
- Platform to deliver full end to end Machine Learning & Deep Learning life cycle.
- Data & IP ownership remains with customers.
- Services & Platform available in public & private cloud.

# AI ready to consume

## Natural language understanding

Built interfaces interacting in natural language with end-users (customers, employees), which understand voice and sentiments, to optimize operations and provide a better user experience

Watson Assistant

## Visual recognition

Extract the meaning of images, to feed analytical applications in the areas of predictive maintenance, logistics, retail etc.

Watson Visual Recognition

## Analysis of unstructured content

Analyze unstructured content, coming from emails, social media, technical documentations etc., to get a 360 view on a question, person, situation etc.

Watson Discovery

# What does transformation look like?



**Inter Versicherung** uses Watson to provide digital assistance to their customers, and shorten the time to subscribe to an insurance contract.



**Belron** leverages Watson to assess car windshield damages 95% faster, and provide automatic quotes for repair to customers.



**Crédit Mutuel** uses Watson to assist their client representatives in prioritizing emails and finding internal information.



# AI & Data Science ready to build

## Data access, preparation and governance

Find data regardless where it is, shape it in an easy and quick way, and share it in governed way, with everyone involved in innovation process.

Watson Studio + Watson Knowledge Catalog

## Development of Data Science and Deep Learning models

Create unique and powerful data models by leveraging best of breed Open Source and proprietary tools.

Watson Studio

## Model deployment and adoption

Deploy models in production, manage their relevance and accuracy over time, and share them with your community for them to be easily re-used.

Watson Studio + Watson Knowledge Catalog

# What does transformation look like?



**Thames Water** is able to:

- Detect leaks with less than 20% failure
- Make alerts on water leaks 3 weeks in advance
- To fix leaks before they become visible on ground level



**Kone** leverages the Watson platform to predict the condition of elevators and escalators, and reduce their downtime



**GroupM** uses Watson Studio to increase digital marketing campaign conversion rates by up to 50%

# Project Debate: IBM Research is moving Cognitive forward

# Conclusions

Cognitive systems will make humans happier...  
... If designed to help humans.

AI services help to build cognitive systems...  
...or just to improve existing applications.

IBM Watson provides pre-built AI services...  
...and the platform and tools to build them for the enterprise