

IBM **Watson**

**Künstliche Intelligenz und
Kognitive Technologie
verändern unser
tägliches Arbeiten & Leben**

Ravensburg, 17. September 2018

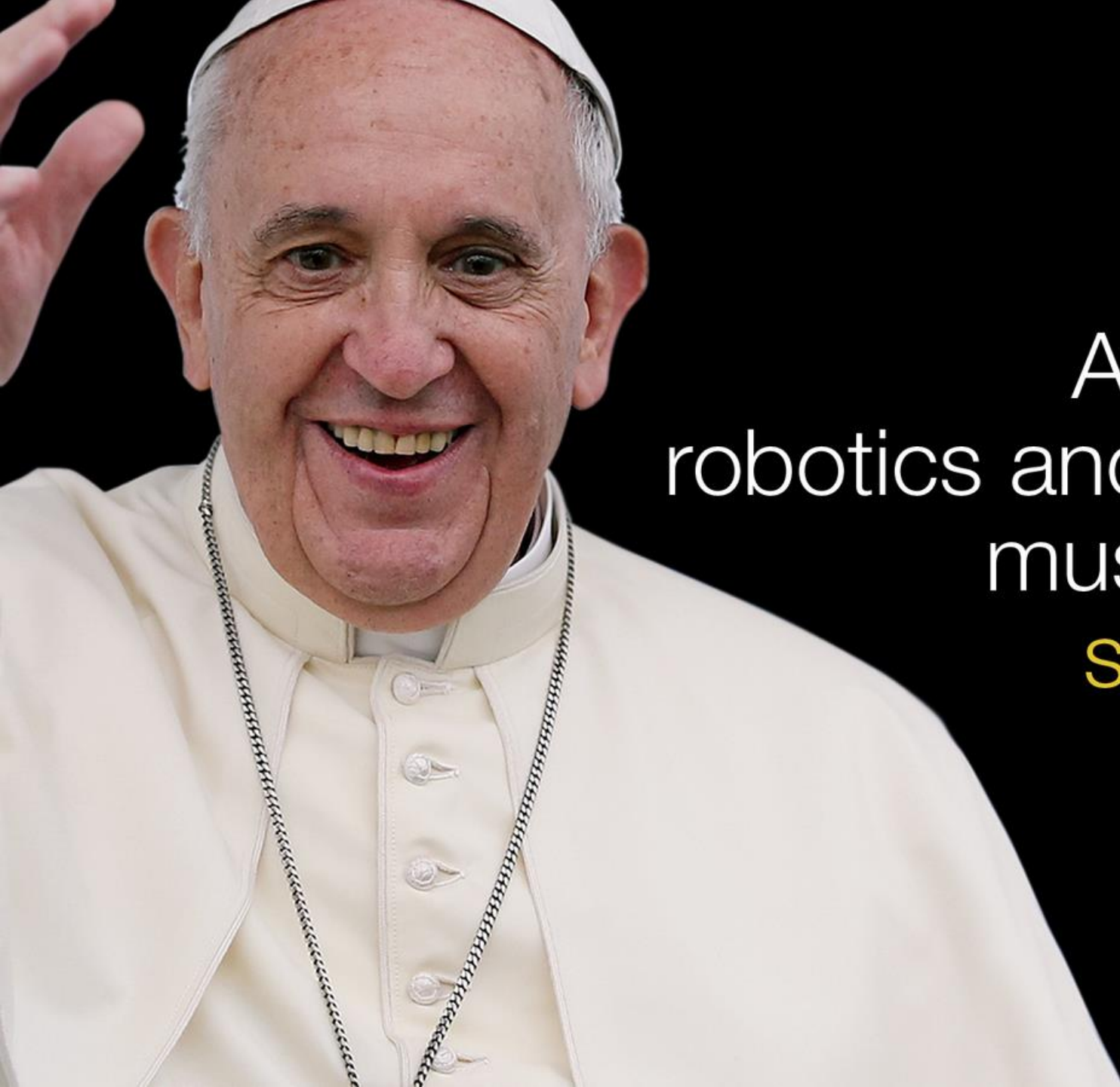




Sven Semet

HR Thought Leader
IBM Watson Talent
& Member of
IBM Corporate Service Corps





Artificial intelligence,
robotics and other **innovations**
must contribute to the
service of humanity.

Pope Francis
Message to the World Economic Forum
Annual Meeting 2018

**We're
entering
a new era.**

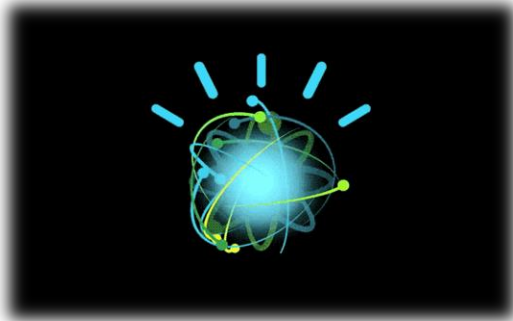
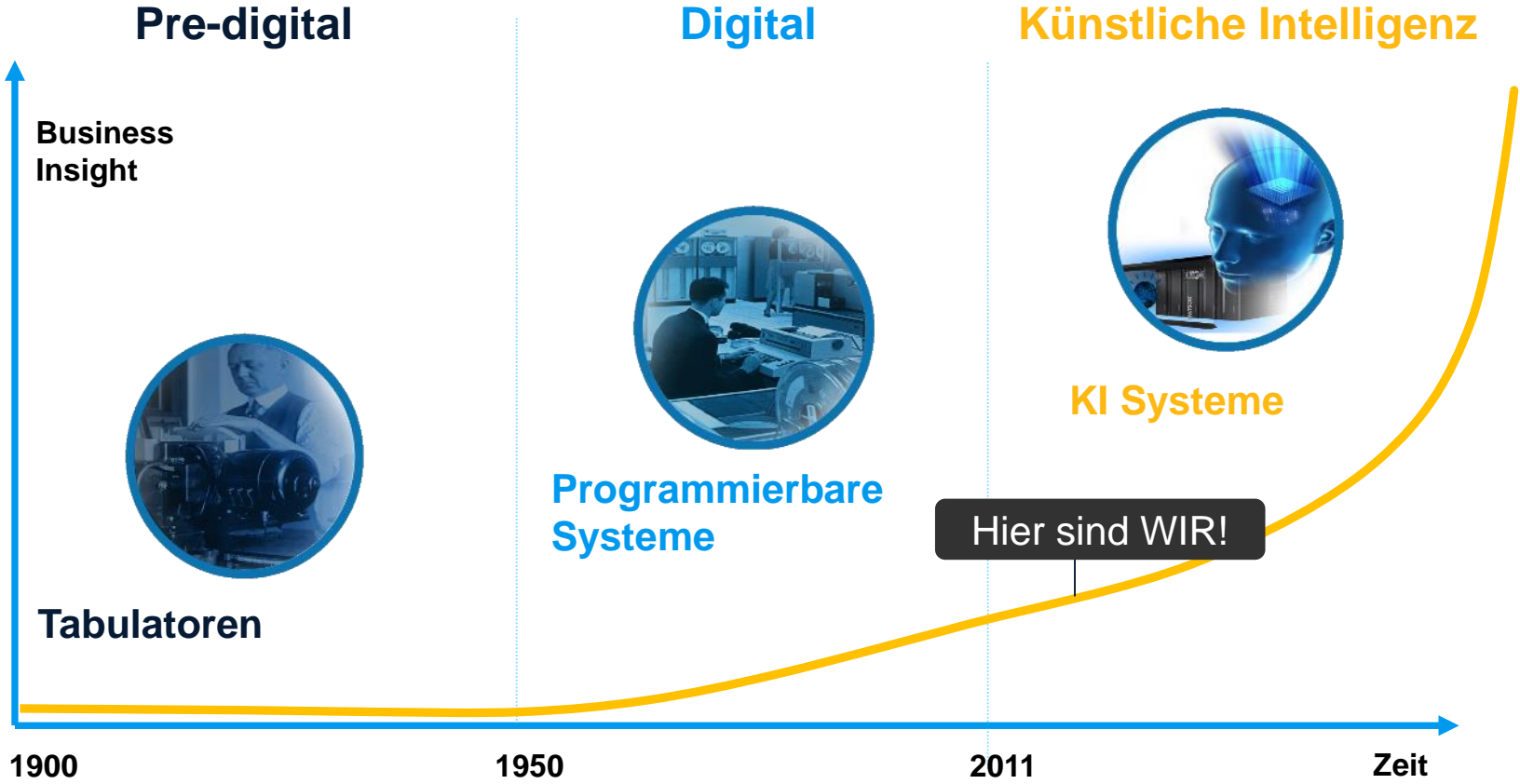
Watson & Cognitive

...was ist eigentlich *Cognitive*?

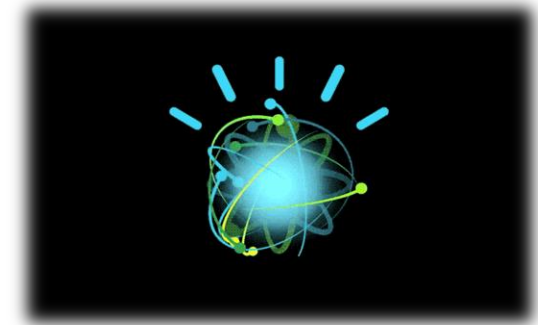
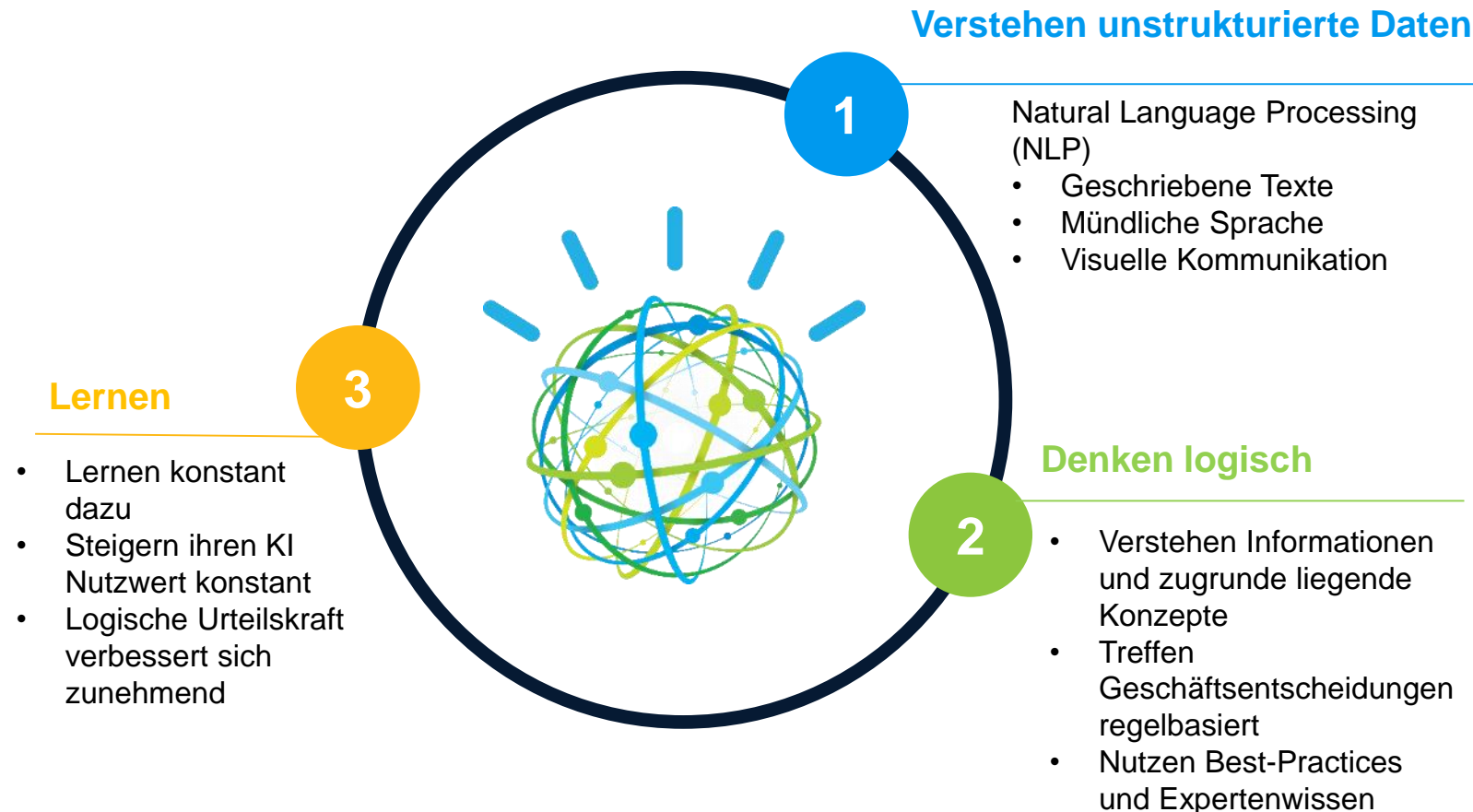




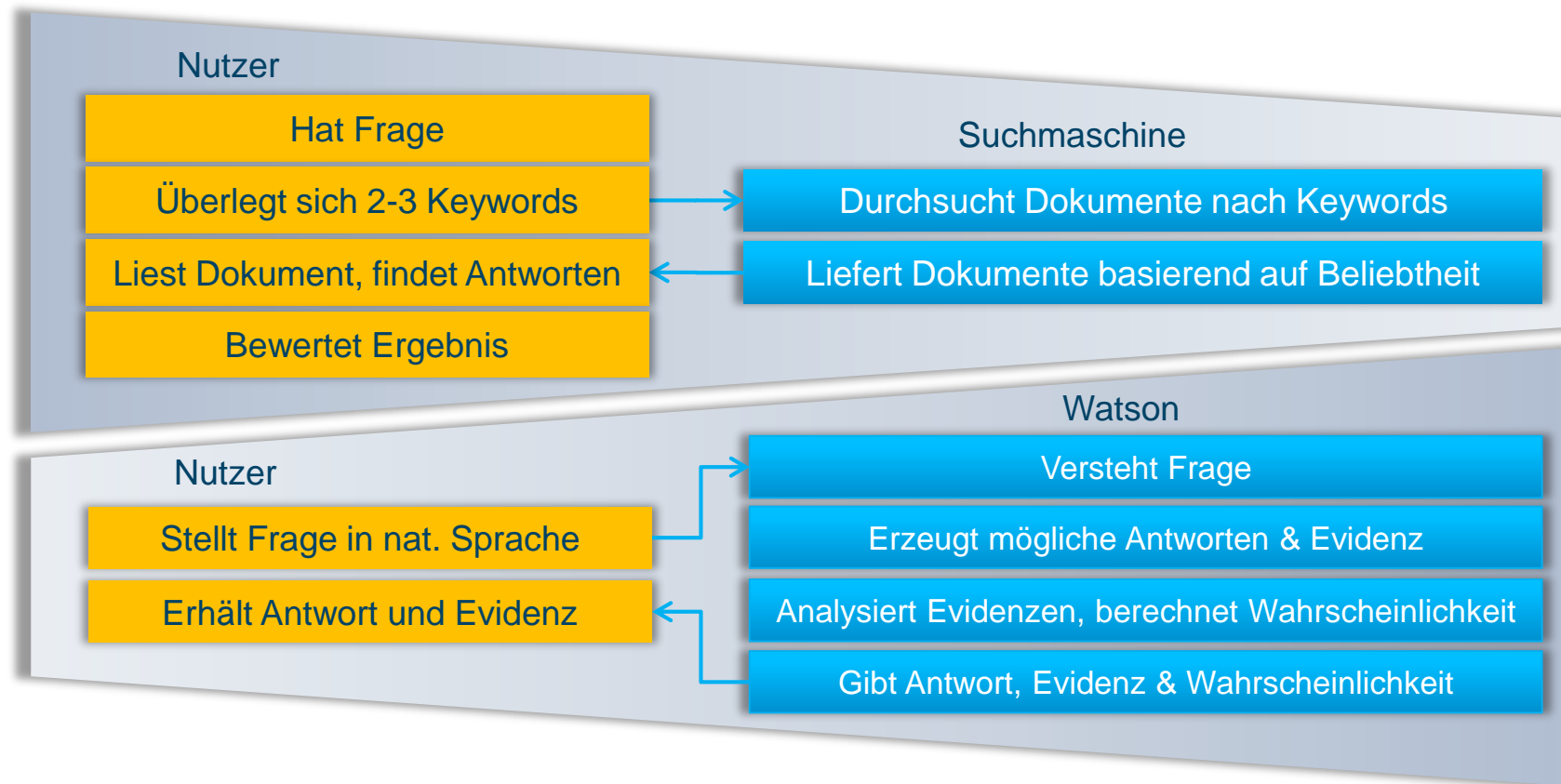
Mehr Business-Insights mit KI Systemen



Drei Kerneigenschaften, die KI Systeme von traditionellen Computer-Systemen unterscheiden



Der Unterschied zwischen herkömmlicher Suche/Analyse und Watson



Das bedeutet somit eine Verschiebung von Tätigkeiten vom Nutzer auf Watson

IBM siegt bei Rateshow “Jeopardy!” mit “Watson“ gegen menschlichen Mitspieler

- Jeopardy! ist eine der beliebtesten Quiz Shows im amerikanischen Fernsehen.
- Im Februar 2011 besiegte das nach dem IBM Gründer Thomas J. Watson benannte Computersystem die beiden bis dahin erfolgreichsten Champions dieser Show.
- Nach dem Sieg von Deep Blue im Jahre 1997 gegen den damaligen Schachweltmeister ist dies der nächste große Fortschritt im Bereich der künstlichen Intelligenz.



Deep Blue vs. Watson



Deep Blue – Schach 1997

Festes Spielfeld mit regelbasierten Spielzügen

→ Strukturierte Daten

Logik und Taktik

Mathematik und Statistik



Watson – Jeopardy! 2011

Unbegrenzte Anzahl an Fragen in natürlicher Sprache

→ Unstrukturierte Daten

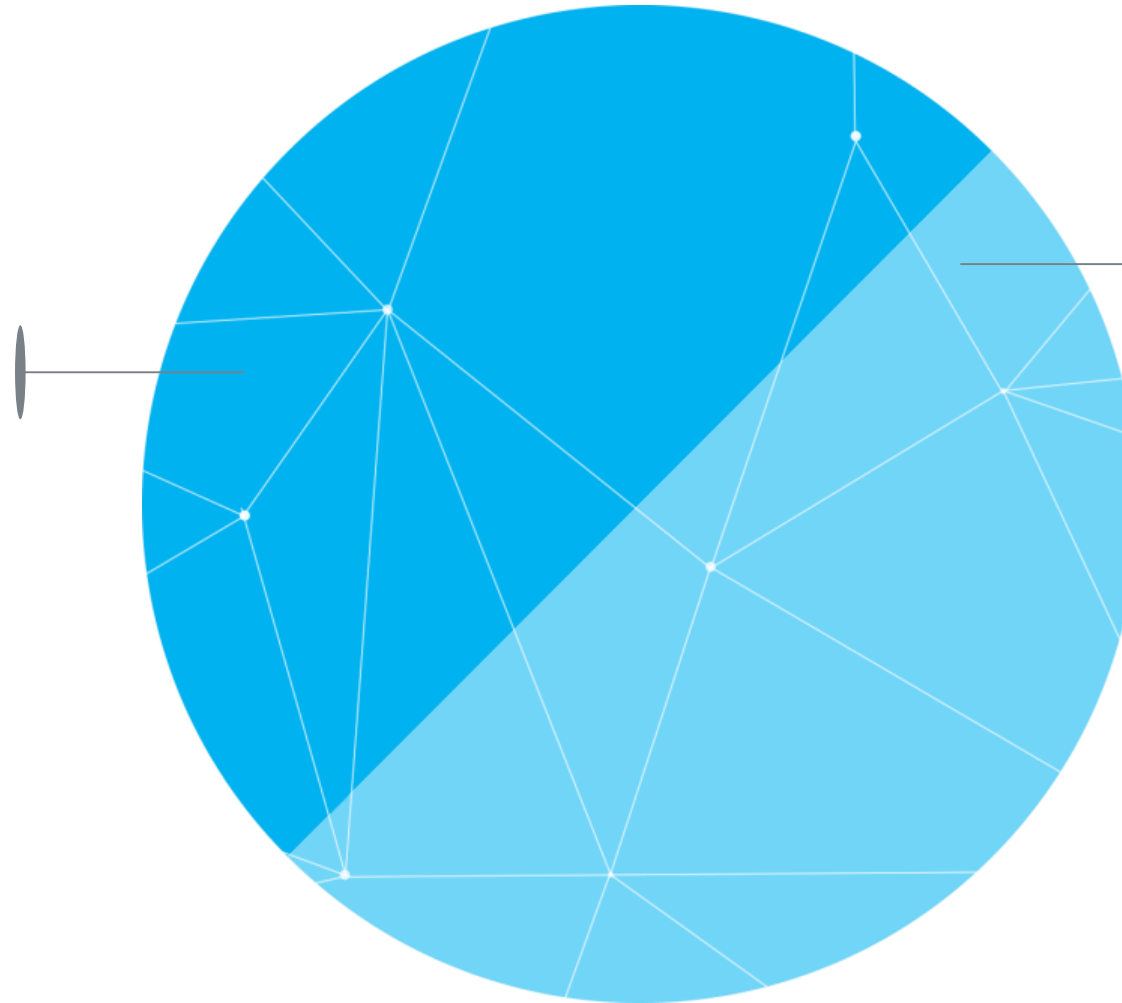
Wahrscheinliche Bedeutung und Kontext

Vielfältige Analysemethoden

Kognitive Systeme ermöglichen neuartige Partnerschaften zwischen Menschen und Technologien

Humans are excellent at:

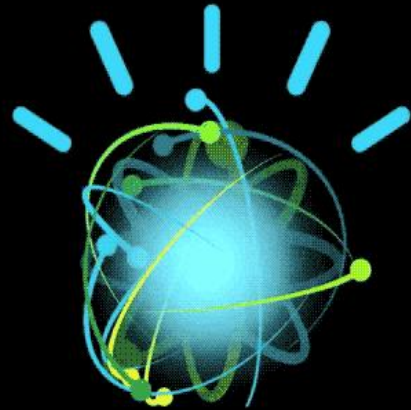
COMMON SENSE
MORALS
IMAGINATION
COMPASSION
ABSTRACTION
DILEMMAS
DREAMING
GENERALIZATION



Cognitive Systems excellent at:

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

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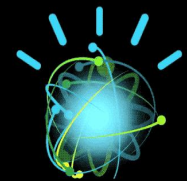
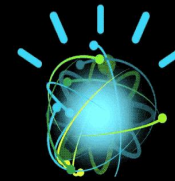
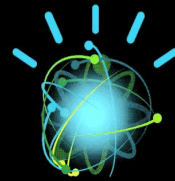
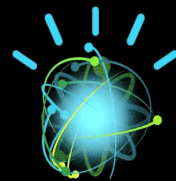
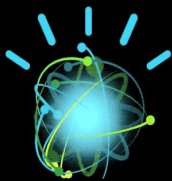
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Mitarbeiter erhalten persönliche Lernempfehlungen von einem kognitiven HR Berater

Mobil

Intuitiv

Motivierend

Position und Ziele

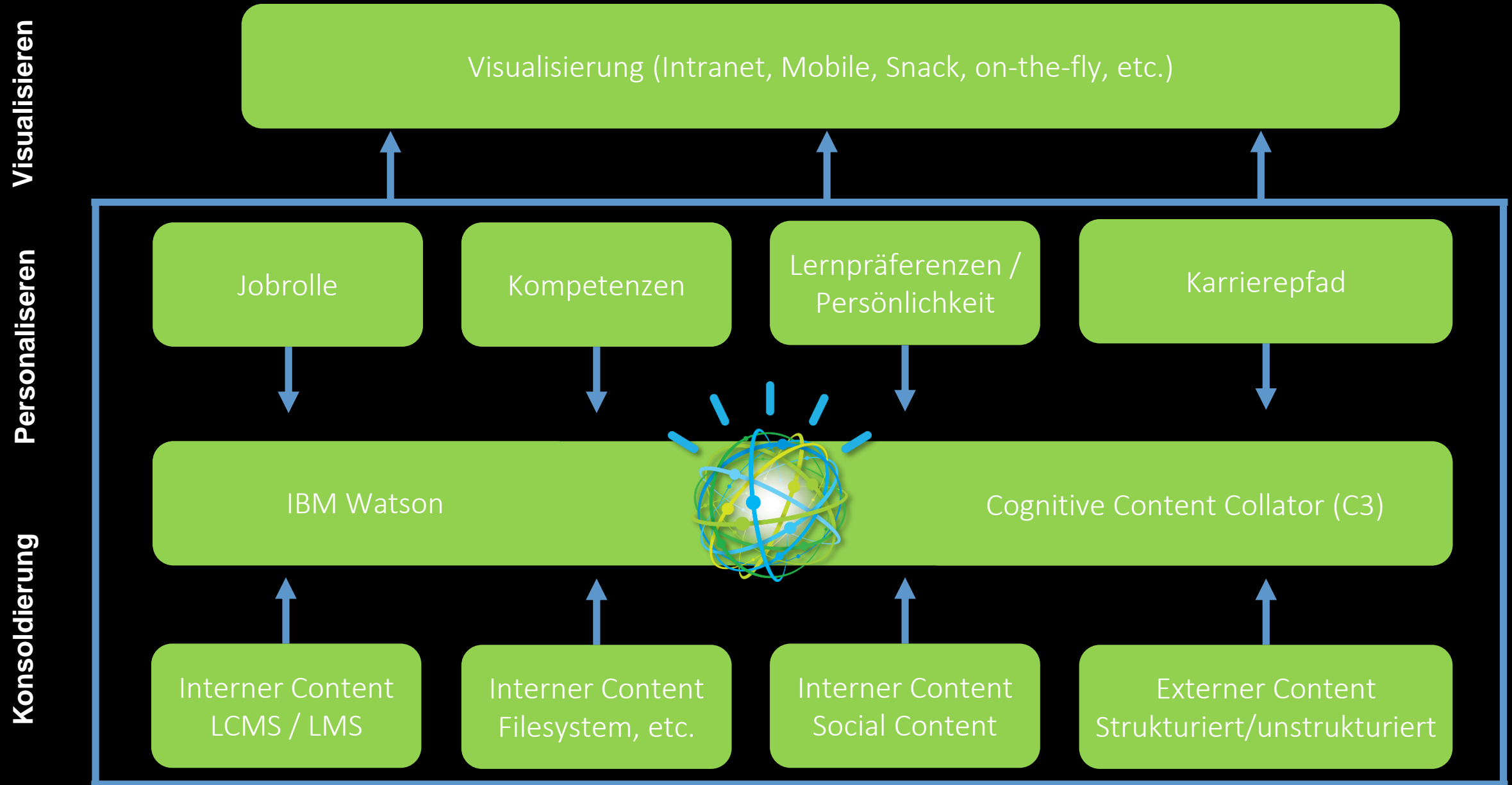
Gruppe

Fähigkeiten

Persönliche Lernhistorie

The tablet screen displays the 'YOUR Learning' interface. At the top, it says 'Welcome' and 'Your Learning Your Channels Browse'. Below that, it asks 'What would you like to learn?' with a search bar. The user profile for Geoffrey Bendz is shown with 'THINK40 PROGRESS' at 26 HOURS. The 'Spotlight' section features three cards: 'What? Can't you "Agile"?', 'Want to develop your Bluemix Skills?', and 'Create plan to improve technical leadership'. The 'Recommendations for Drew Valentine' section shows three course cards: 'The Leadership Capital Index: Realizing the Market...', 'GCG Integrity Training (CTEBA)_All Managers_2016', and 'Interview the IBM Way self-paced learning'.

Personalisiertes Lernen - Architektur



IBM YourLearning – eine Visualisierung

Lernziele, Lerninput, Lernsuche

Aktuelle Lerneinheiten

Verpflichtende Lerneinheiten

Job-rollen-basierte Lerneinheiten

Personalisierte Lerneinheiten

Lernerfolge / -belohnungen

Weitere externe und interne Lernquellen

The screenshot shows the IBM Your Learning dashboard with several sections highlighted by blue boxes:

- Search and Progress:** A search bar at the top with the text "What would you like to learn?". Below it, a progress bar for "Your THINK40 Progress" shows 50 hours completed, with a "View details" link.
- Your Learning Queue:** A section titled "Your Learning Queue" with sub-sections "Learning Queue" and "Completions". It lists items like "C3 Cognitive Content Collator | Making learning..." and "#NewWayToSell2017" with video icons and durations.
- Your Channels:** A section titled "Your Channels" with sub-sections "Your Channels" and "Recommended Channels". It features a card for "Architecting for Disruption: Cloud and Cognitive Enablement for Executives" with various content types like "Live Online Me...", "Video", and "On-line self study".
- Learning Recommendations:** A grid of learning recommendations including "Seeking Insights in the Cognitive Era: One Master...", "The anatomy of digital disruption", "Quantum Computing in 5 Minutes", "IBM Data Science Experience and how we built and run...", "THINK Together: Security in a hyper-connected world", and "Architecture Battles in ACT II".
- Personalized Recommendations:** A section titled "Recommendations for Stefan Berger" with cards for "Cloud & Cognitive Patterns for Executives", "Enabling Innovation as a Service with Bluemix", "Competing Against AWS and Azure Certification...", "IBM's XaaS Capabilities - Driving Client Entry...", "Enabling Innovation as a Service with Bluemix...", "Winning with IBM Cloud Object Storage (Cleversafe)...", and "IBM DevOps Help Drive Innovation Speed...".
- Your Badges:** A section titled "Your Badges" with sub-sections "Your Badges" and "Recommended Badges". It shows a badge for "Financial Selling: Executive Conversations" issued on 24 Oct 2016.
- Learning Programs & Resources:** A section titled "Learning Programs & Resources" with sub-sections "Featured" and "Recommended Badges". It lists various resources like "IBM Design", "Cognitive", "IBM Watson", "IBM Expertise", "THINK", "skillsft", and "Bluemix".

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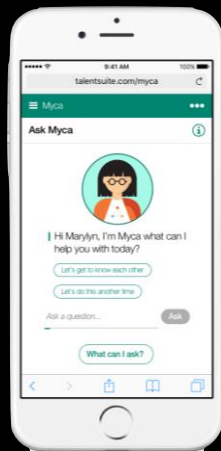
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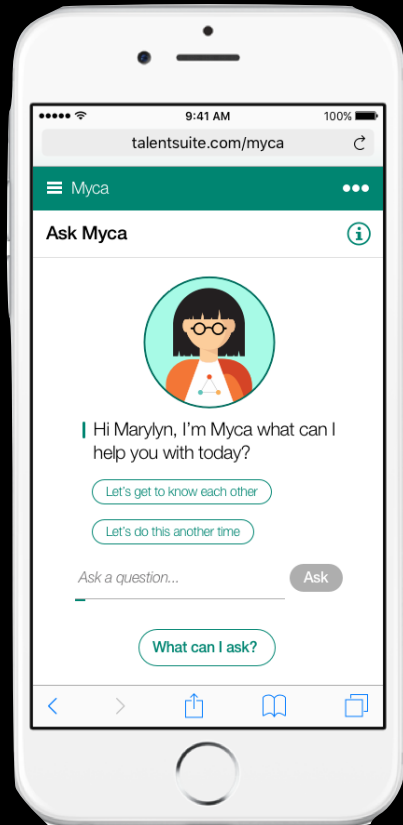
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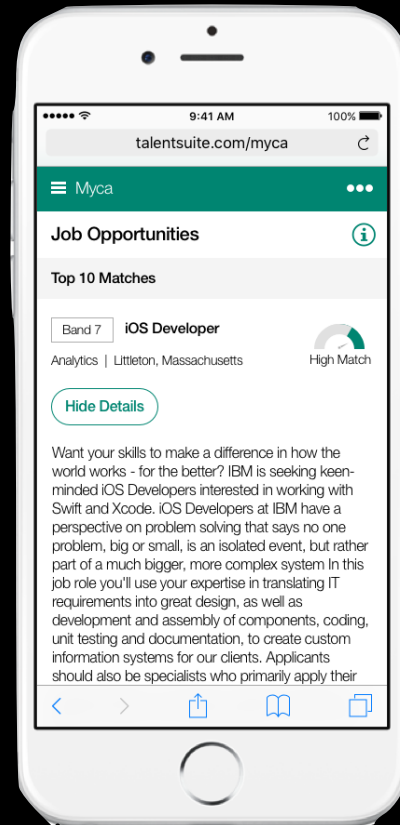
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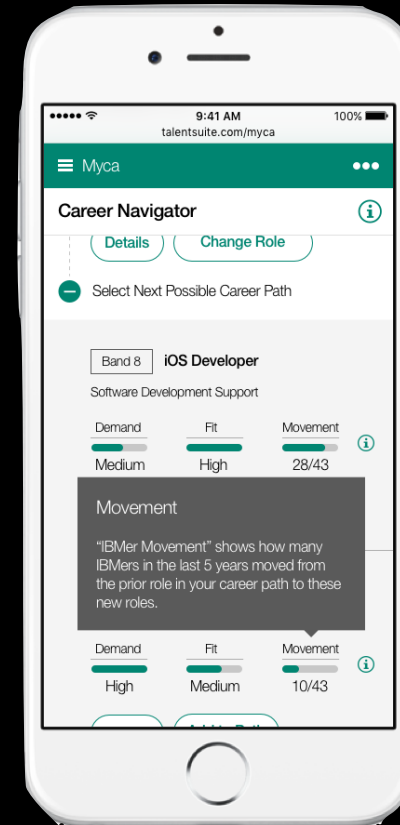
IBM Watson Career Coach (Employee Self Service)



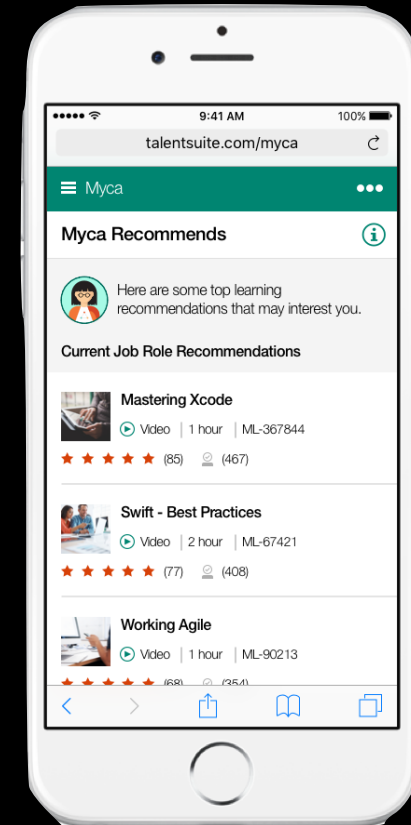
Dialog



Top Positionen



Navigator



Empfehlungen

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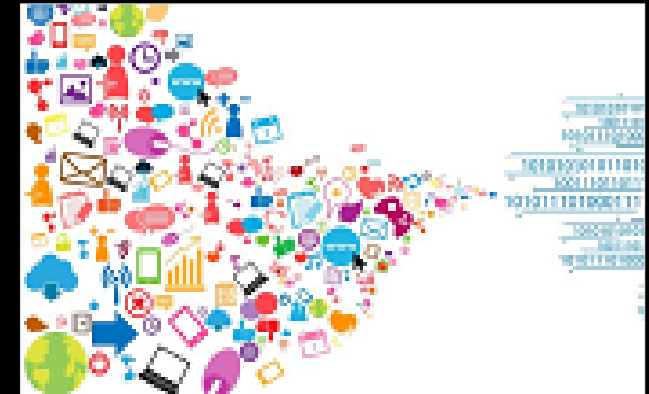
IBM Watson Recruitment



Job "Erfolgs – Matching"



Priorisierung offener Stellen



„Social Listening“

Total Candidates: Showing 1 - 10

Candidate Comparison

Here are the top influencers in order of significance based on past success for this role. These values create the candidate's overall score.

	90 Overall	85 Overall	80 Overall	75 Overall	65 Overall
Greatest Predictive Attributes	A. Bailey	C. Dartmore	G. Radnor	Z. Dekeson	J. Hutchin
Industry (Professional)	Medium Technology IBM, Sr. Manager	Low Fashion DVF, Manager	High Technology Oracle, Sr. Manager	High Technology Workday, Sr. Manager	Medium Internet Ebay, Manager
Company (Professional)	High IBM Sr. Manager	Medium Macy's Sr. Manager	Medium Oracle Sr. Manager	High Workday Sr. Manager	Medium Ebay Manager
Major (Education)	High Political Science BA, Rutgers	High Psychology BA, Harvard	Medium Liberal Arts BA, Rutgers	High Political Science BA, Rutgers	Low Interior Design BFA, Rutgers
GPA (Education)	High 3.8 Political Science BA, Rutgers	High 4.0 Psychology BA, Harvard	High 4.0 Liberal Arts BA, Rutgers	Medium 3.4 Political Science BA, Rutgers	Low 3.1 Interior Design BFA, Rutgers
Certifications (Education)	Medium Leadership Coaching, Public Speaking	Medium Negotiation	Low Project Management	Low None	Low None

Welcome to IBM Watson Recruitment

It's great to have you tackling the recruitment process.

Open Requisition

Sr. Sales Manager (#63BR)
US-New York, NY

Date opened: Jul 15, 2016
Target date: Oct 15, 2016
Days left: 30 of 90

Data last updated on Sep 15, 2016 at 14:56 EST

Priority: **Medium**

Complexity: **Medium**

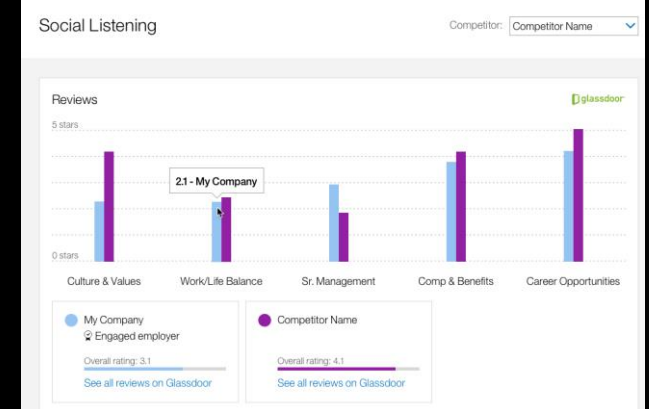
Drivers

- Role seniority
- Functional area
- Time to fill
- Estimated qualified candidate percentage

Application progress: **On target**

15 of 20 Applicants | 30 of 90 Days left

Applicants vs Days open chart showing progress relative to target.



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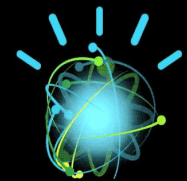
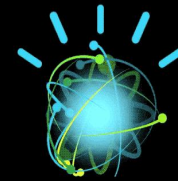
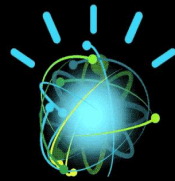
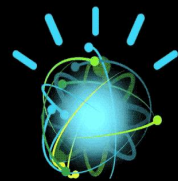
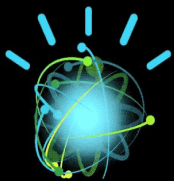
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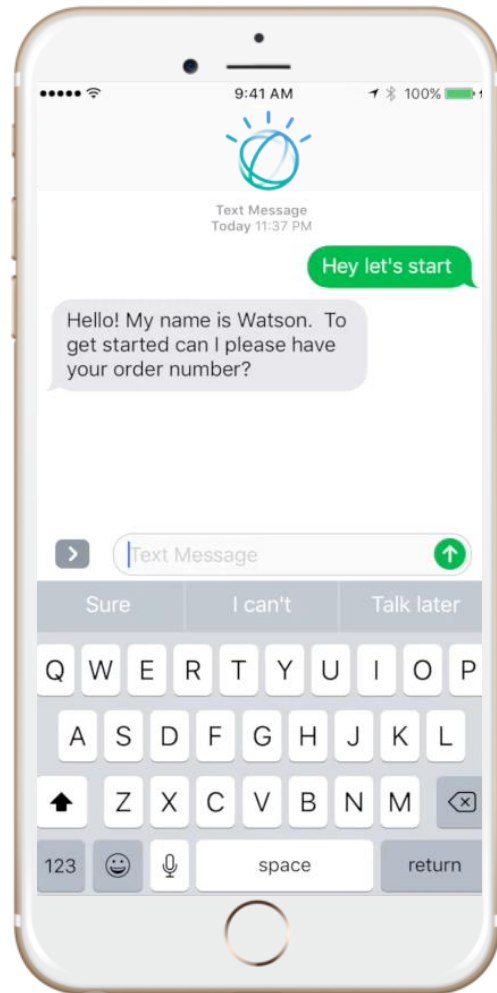
Backup

Employee Engagement:

Applying Cognitive and Robotics to HR Delivery and Employee Experience



Ein autonomer kognitiver Agent (Chatbot)



We believe that all Bots should...

- Understand and speak in natural language
- Have a humanlike personality
- Understand intent
- Include intuitive tooling
- Run across multiple messaging platforms
- Have domain knowledge
- Hook into back-end systems

Häufige Anwendungsbereiche



1 Qualität der Einstellungen



2 Abwanderung bei Top-Talenten



3 Erfolgsfaktoren für Vertriebsergebnisse
bzw. Kundenzufriedenheit



4 Einfluss von Engagement auf
Geschäftsergebnisse



5 Optimale Gehalts- und
Anerkennungsmodelle



6 Unfallrisiko



7 Arbeitsunfall



8 Demographischer Wandel



9 Nachfolgeplanung /
Kompetenzentwicklung



10 Produktivitätskennzahlen



MARKETING



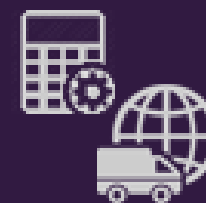
CUSTOMER OPS



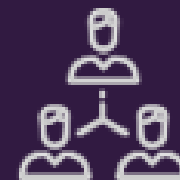
OFFERINGS



TECHNOLOGY OPS



FINANCE



HR

Social Media Targeting

Cognitive Sales Advisor

Watson Virtual Agent

Social CRM

Voice of the Customer

Cognitive Content Enrichment

Cognitive Recommendations

Cognitive Audience Personas

Cognitive Channel Experience

360 View of the Network

Cognitive App Performance Monitoring

Field Services Advisor

Watson Buying Assistant

Spend IQ

Pricing IQ

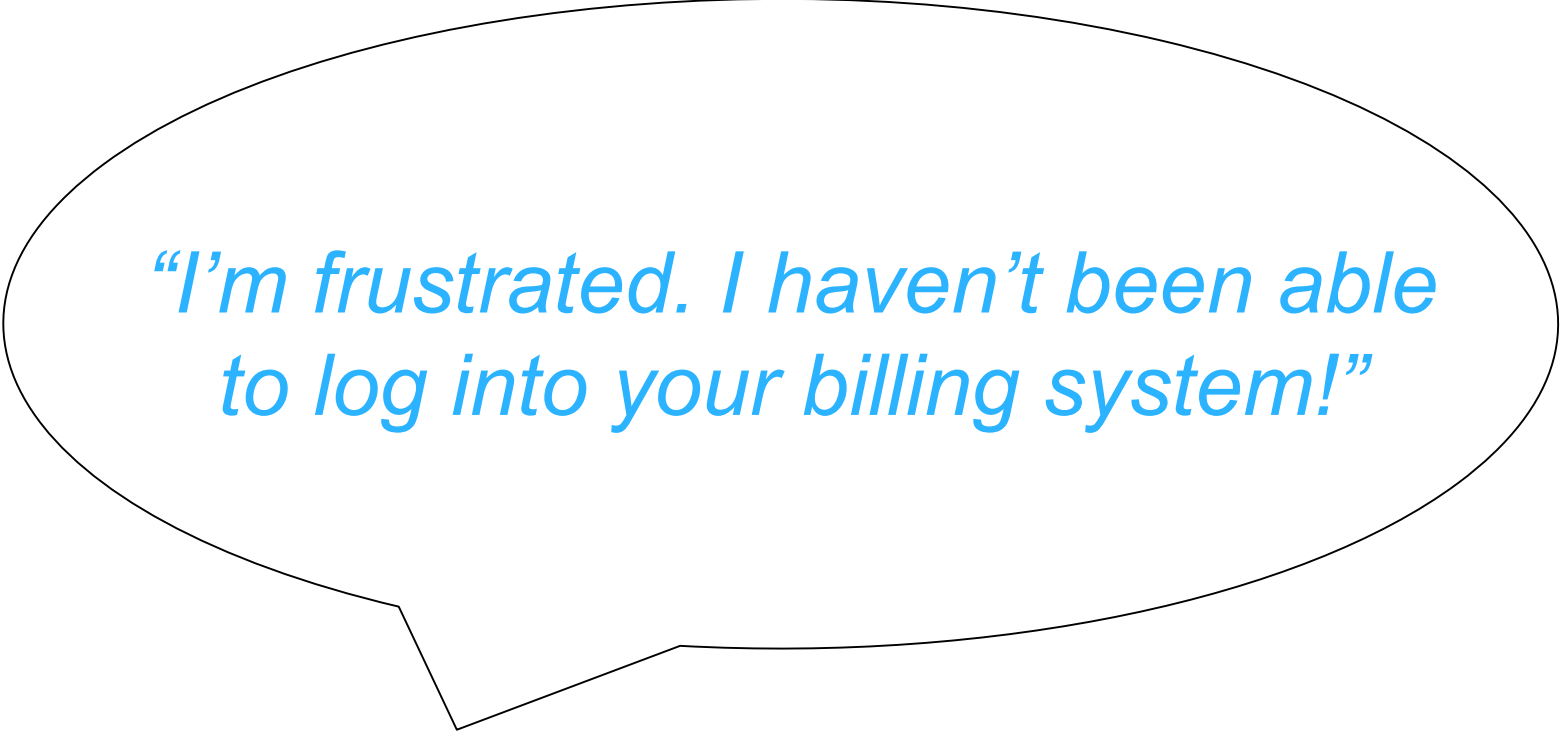
Cognitive Contracts Management

Expertise Finder

Cognitive HR Assistant

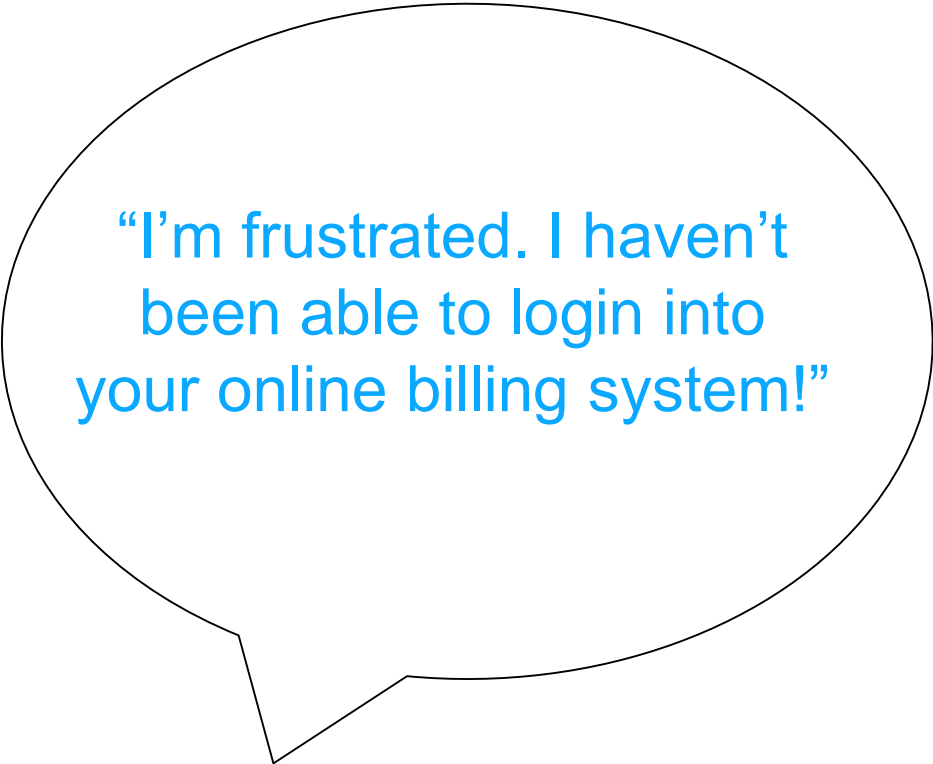
Social Sentiment Analysis

Wie funktioniert das? Ein Beispiel!

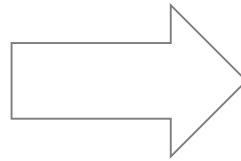


“I’m frustrated. I haven’t been able to log into your billing system!”

Many ways to ask the same question



“I’m frustrated. I haven’t been able to login into your online billing system!”



“I forgot my password”

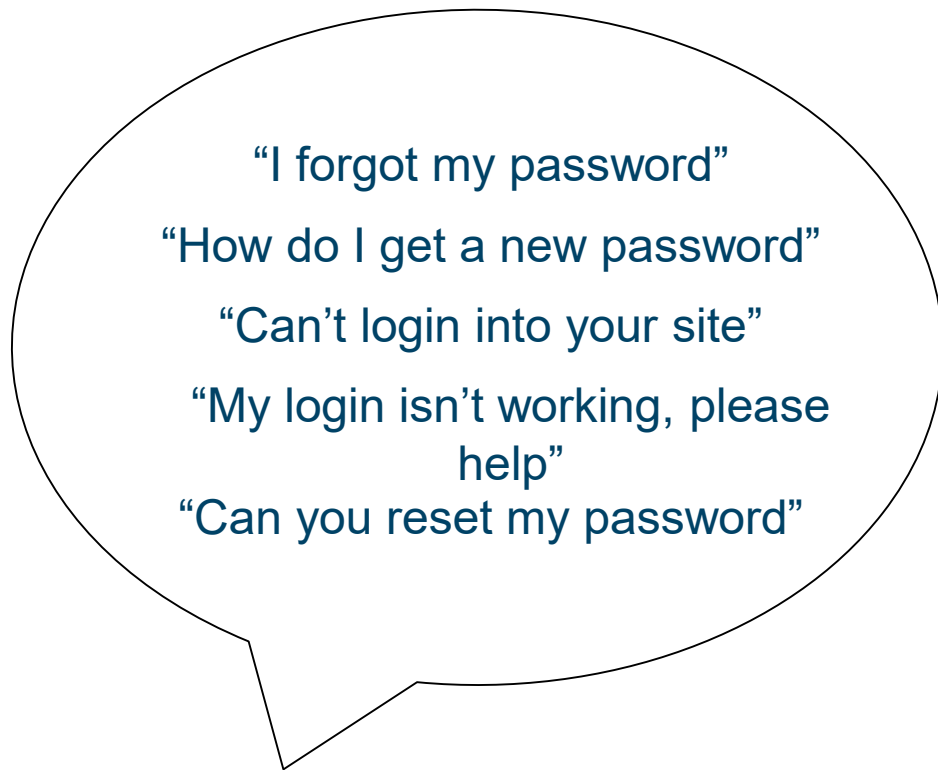
“How do I get a new password”

“Can’t login into your site”

“My login isn’t working, please help”

“Can you reset my password?”

Understanding the customer's intent



Intent = Password Reset

- Watson leverages state of the art Deep Learning techniques to derive intent
- Has read Wikipedia enabling it to understand language and concepts
- Learns over time based on usage
- Handcrafted rules, however, are unable to scale and do not benefit from data