Automating Customer Request Processing via NLP

LMU München, 01.07.2019



Agenda



About Capgemini

- How I got to Capgemini
- NLP supported Customer Request Process
 - Automated Request Routing
 - Assisted Request Response

20190701_NLP bei Capgemini.pptx © 2018 Capgemini. All rights reserved.

About Capgemini







Name? Matthias Wissel



Education? Master Mathematics – TUM



With the company since? 1st February 2017



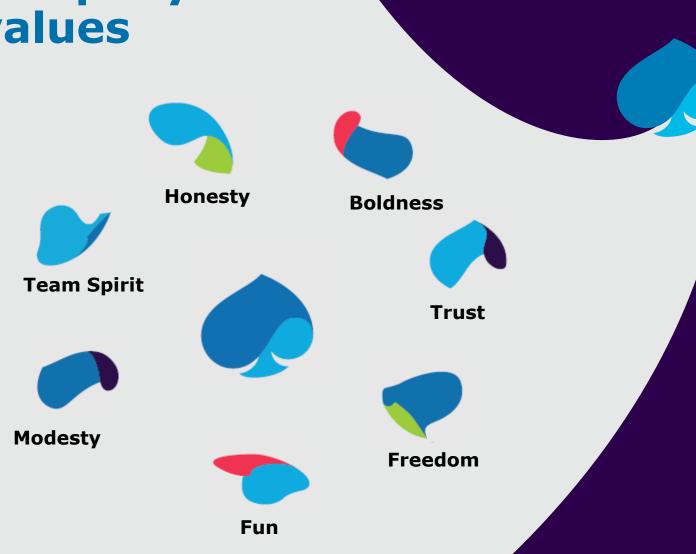
Job title? Data Scientist



Working on? Analytics Platform for Aircraft Maintenance

Your **Speaker**

Our company values



Capgemini in Numbers



Over 40 Countries



Over 200.000 Employees



13,2 Billion Euro Revenue



Mor than 380 Offices world wide



39 Average Age



More than 120 Nationalities

The Capgemini group has four main business areas















Other Managed Services Technology & Engineering Services

The whole world of IT Our areas at Application Services















The whole world of IT Our areas at Application Services

















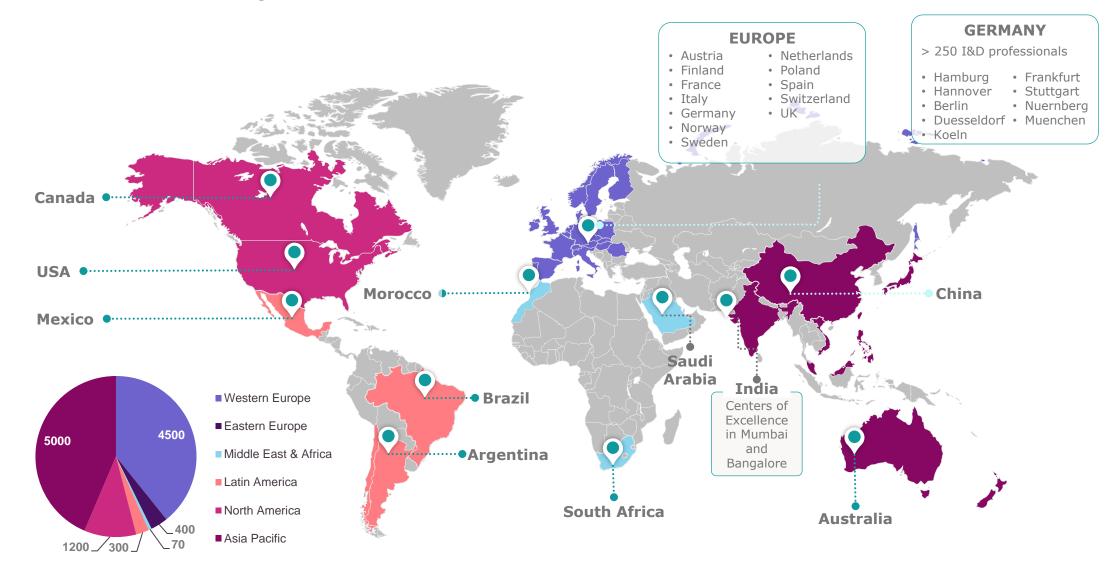




20190701_NLP bei Capgemini.pptx







20190701_NLP bei Capgemini.pptx

Our **Customers**





Agenda



About Capgemini

How I got to Capgemini

- NLP supported Customer Request Process
 - Automated Request Routing
 - Assisted Request Response

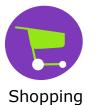
What does my ideal job have?







Financial Services









Life Sciences



Technology



Products & Retail









Logistics





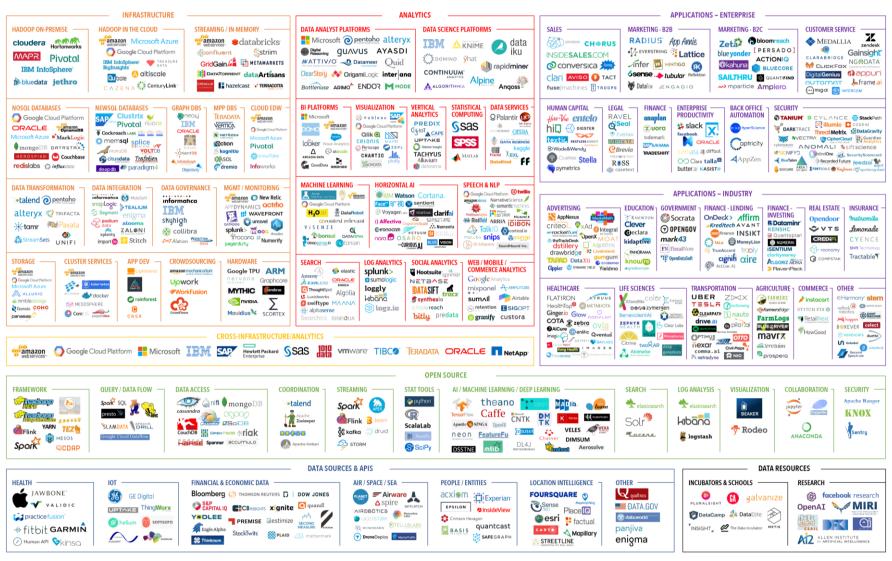


20190701_NLP bei Capgemini.pptx

What does my ideal job have?

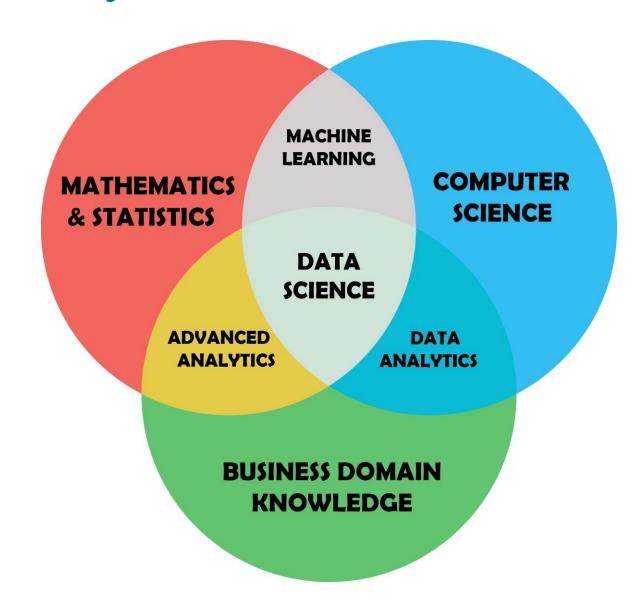


BIG DATA LANDSCAPE 2017



What does my ideal job have?





Getting to know Capgemini... and getting a job there

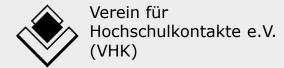


Graduate Fairs

- Akademika Nürnberg
- VHK IT & Automotive München
- IKOM









ExpedITion Events

- ExpedITion Workshop
- ExpedITion Summit





Classical Application

- Cover Letter
- CV

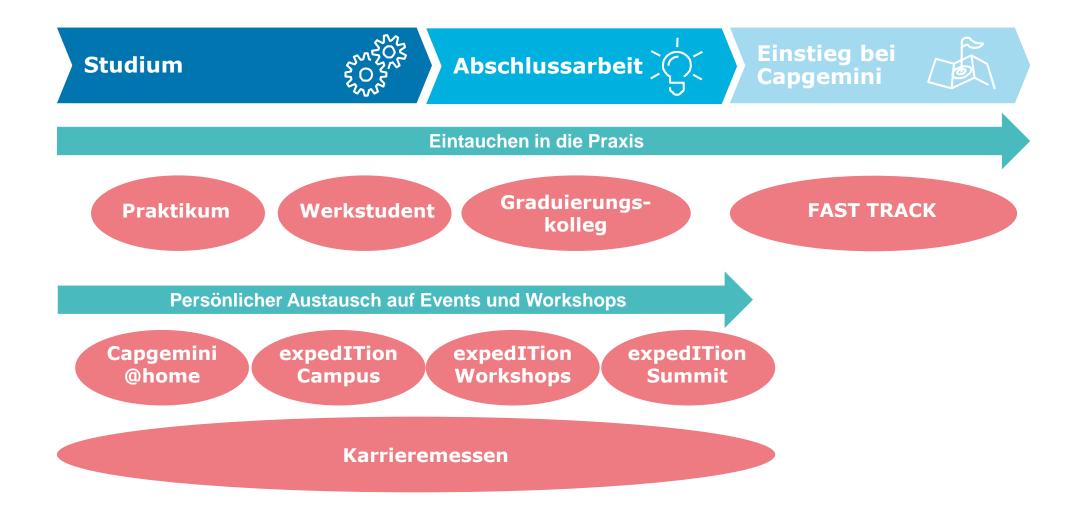


20190701_NLP bei Capgemini.pptx © 2018 Capgemini. All rights reserved.

Unsere Einstiegsmöglichkeiten



17



Unser **Bewerbungsprozess**





20190701_NLP bei Capgemini.pptx © 2018 Capgemini. All rights reserved.

Agenda



- About Capgemini
- How I got to Capgemini

NLP supported Customer Request Process

- Automated Request Routing
- Assisted Request Response

20190701_NLP bei Capgemini.pptx © 2018 Capgemini. All rights reserved.

An example of a possible customer request



Wissel, Matthias

To: customer-support@star-company.com
Subject: Star 1 problem with air conditioning

Dear service team,

For the last few days I have strange sounds coming from the engine whenever I turn on the air conditioning of my car (VIN: 1HGCM82633A004352), a star 1 from 2009. I drive for some time and when stoping at e.g. a traffic light the engine becomes louder and sounds like taking in much more air. When driving without the air conditioning this issue does not occur.

Can you give me some advice on how to solve this issue?

Best regards, Matthias Wissel

Matthias Wissel

Applications Consultant | Insights & Data Germany

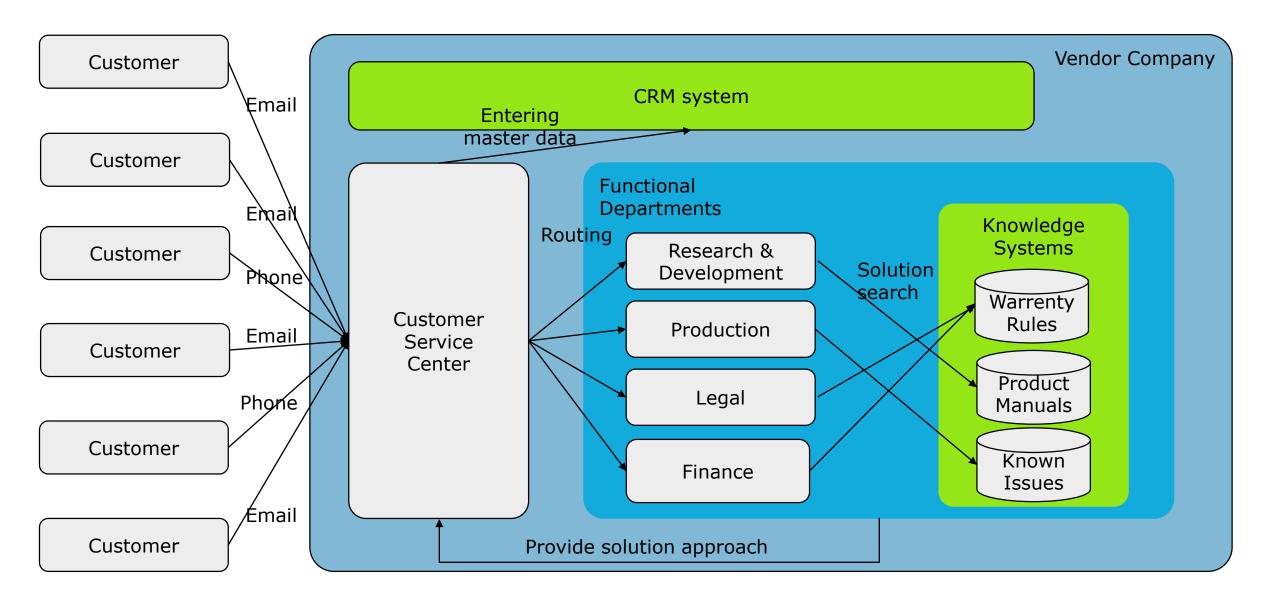
Capgemini Germany | Munich Tel.: +49 89 383381793 - Mob.: +49 151 40250071 www.capgemini.com

Olof-Palme-Strasse 14, 81829 Munich, Germany

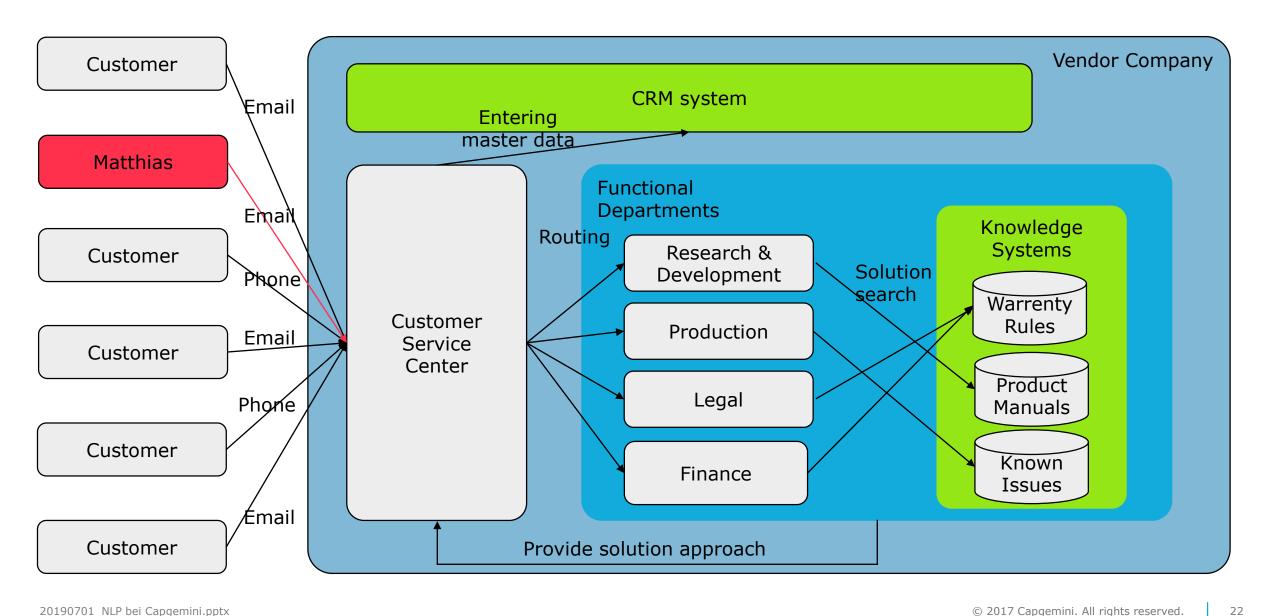




21



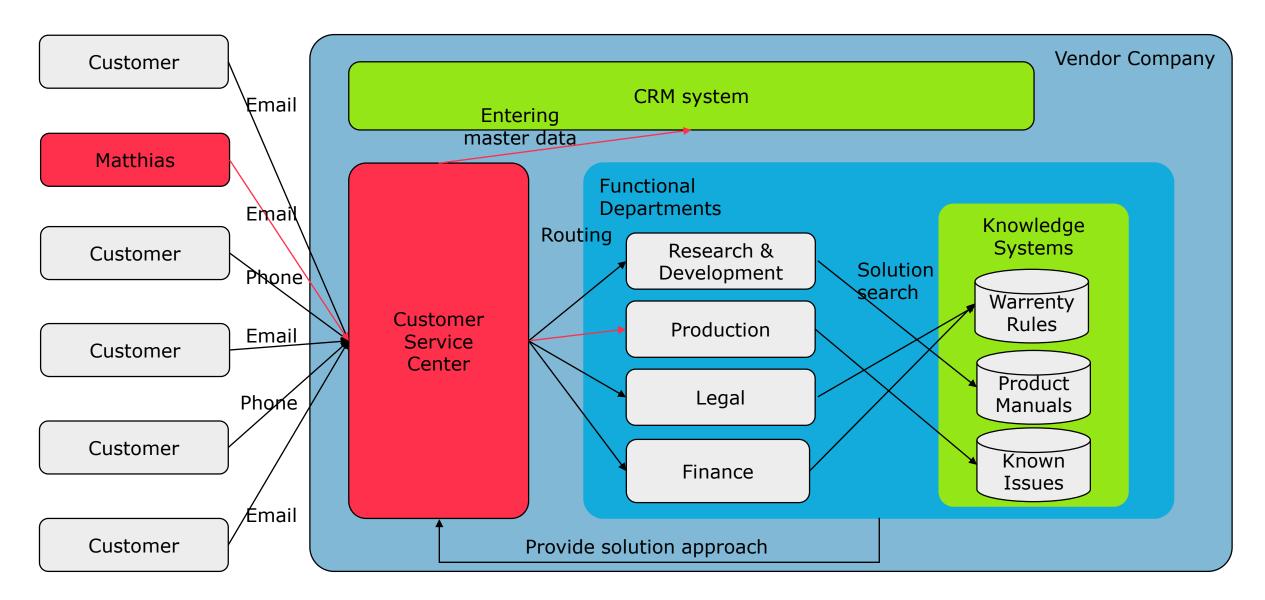




20190701_NLP bei Capgemini.pptx © 2017 Capgemini. All rights reserved.

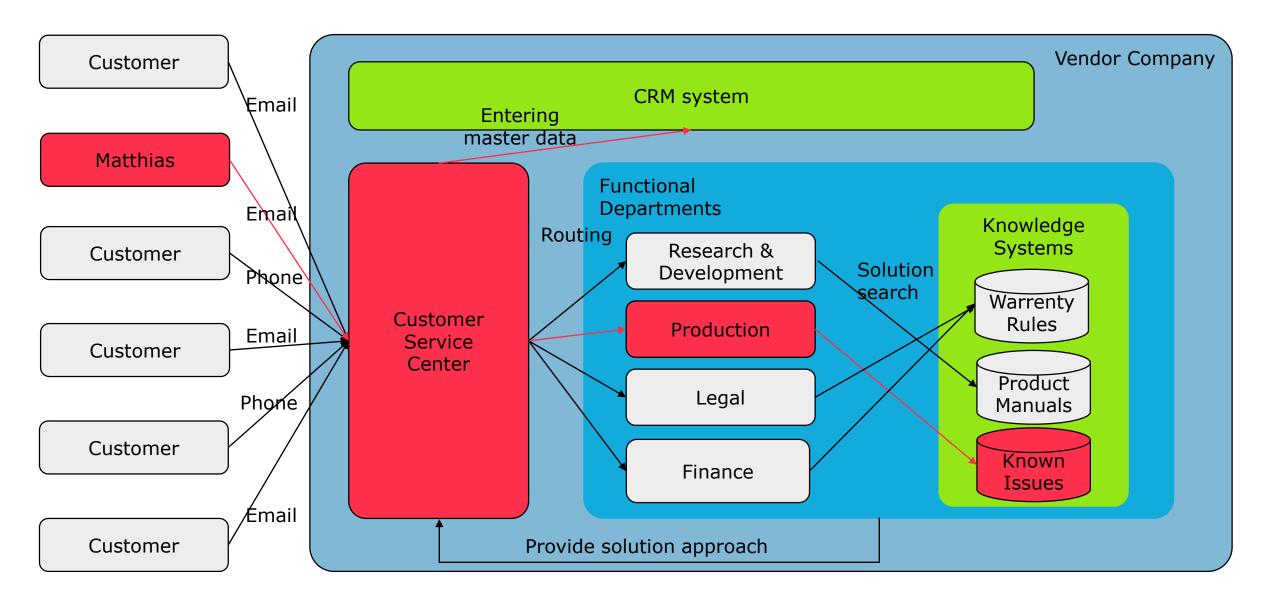


23





24



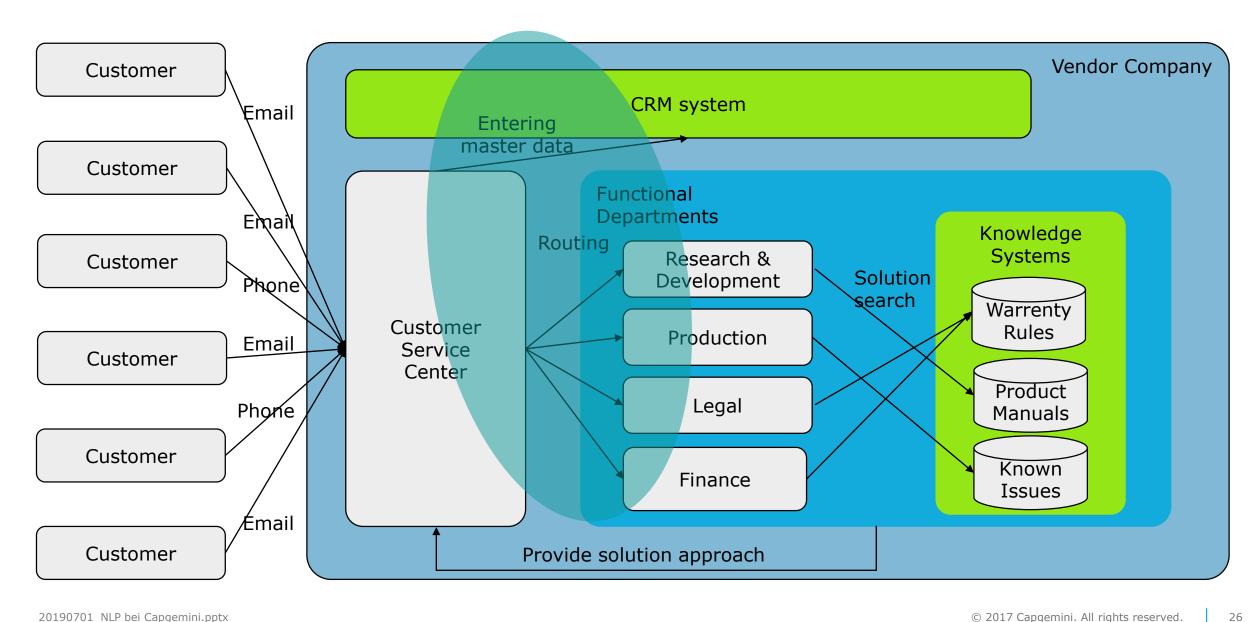
Agenda



- About Capgemini
- How I got to Capgemini
- NLP supported Customer Request Process
 - Automated Request Routing
 - Assisted Request Response

Automated request routing





20190701_NLP bei Capgemini.pptx © 2017 Capgemini. All rights reserved.

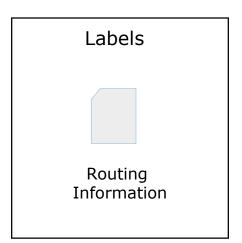


The extraction of master data and routing are seperate tasks which are handled by individual models

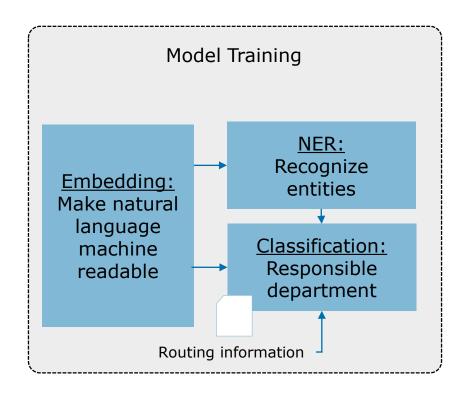
Data Retrieval

Training Data

Customer
Emails



Model Creation



Model Deployment

Route created issue ticket to functional department

And track progress in CRM system

Insert Master Data into CRM System

Extracted Master Data



Wissel, Matthias

To: customer-support@star-company.com
Subject: Star 1 problem with air conditioning

Dear service team,

For the last few days I have strange sounds coming from the engine whenever I turn on the air conditioning of my car (VIN: 1HGCM82633A004352), a star 1 from 2009. I drive for some time and when stoping at e.g. a traffic light the engine becomes louder and sounds like taking in much more air. When driving without the air conditioning this issue does not occur.

Can you give me some advice on how to solve this issue?

Best regards, Matthias Wissel

Matthias Wissel

Applications Consultant | Insights & Data Germany

Capgemini Germany | Munich

Tel.: +49 89 383381793 - Mob.: +49 151 40250071

www.capgemini.com

Olof-Palme-Strasse 14, 81829 Munich, Germany



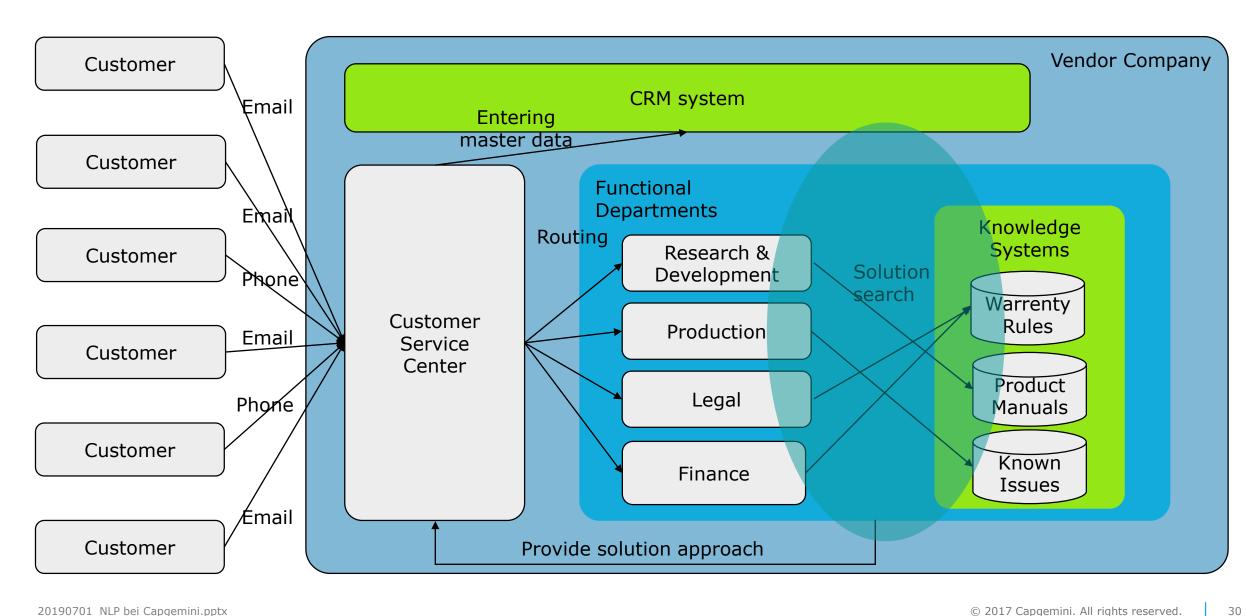
Agenda



- About Capgemini
- How I got to Capgemini
- NLP supported Customer Request Process
 - Automated Request Routing
 - Assisted Request Response

Assisted request response

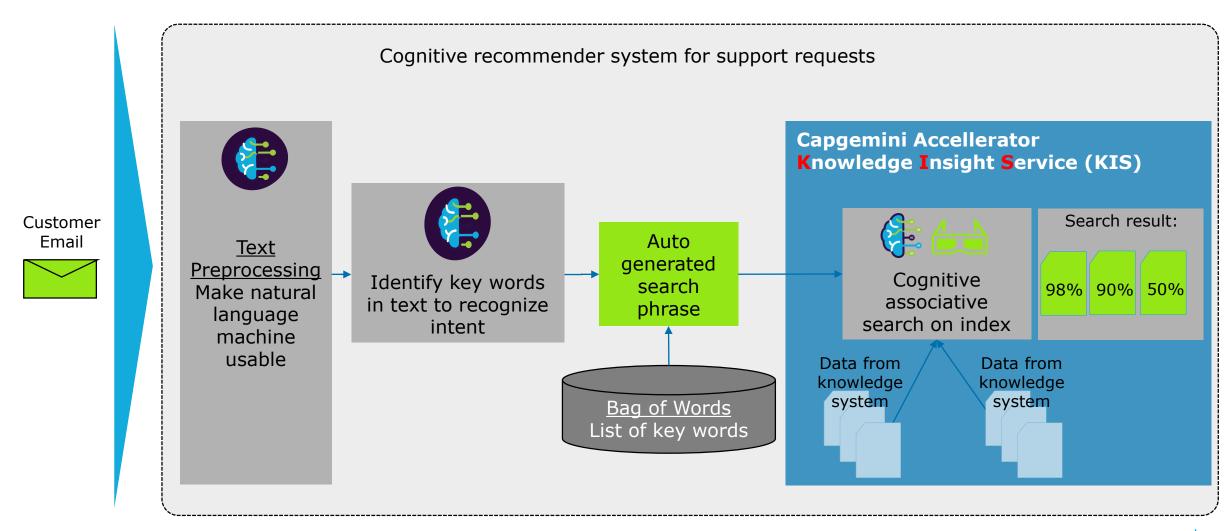




20190701_NLP bei Capgemini.pptx © 2017 Capgemini. All rights reserved.



The solution consits of two main components – automated creation of searches and an intelligent solutions database



20190701_NLP bei Capgemini.pptx

Recognized key words to create the search phrase



Wissel, Matthias

To: customer-support@star-company.com
Subject: Star 1 problem with air conditioning

Dear service team,

For the last few days I have strange sounds coming from the engine whenever I turn on the air conditioning of my car (VIN: 1HGCM82633A004352), a star 1 from 2009. I drive for some time and when stoping at e.g. a traffic light the engine becomes louder and sounds like taking in much more air. When driving without the air conditioning this issue does not occur.

Can you give me some advice on how to solve this issue?

Best regards, Matthias Wissel

Matthias Wissel

Applications Consultant | Insights & Data Germany

Capgemini Germany | Munich Tel.: +49 89 383381793 - Mob.: +49 151 40250071 www.capgemini.com

Olof-Palme-Strasse 14, 81829 Munich, Germany

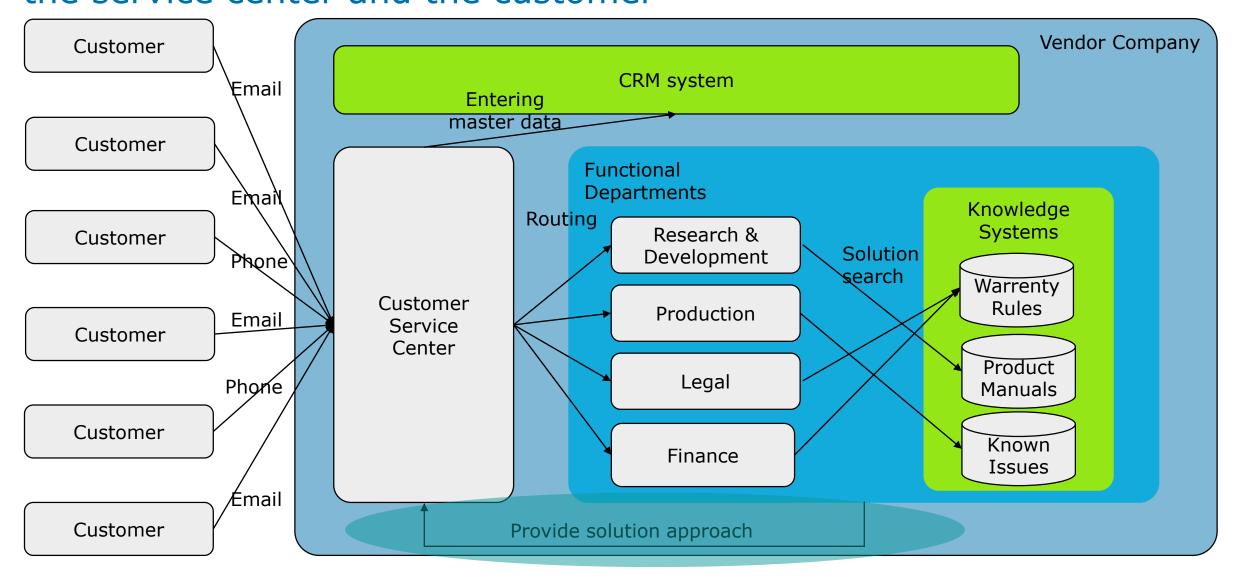


20190701_NLP bei Capgemini.pptx © 2017 Capgemini. All rights reserved.

Finally, the solution approach can be suggested to the service center and the customer



33



20190701_NLP bei Capgemini.pptx © 2017 Capgemini. All rights reserved.





Ask now!













People matter, results count.

This message contains information that may be privileged or confidential and is the property of the Capgemini Group.

Copyright © 2017 Capgemini. All rights reserved.

About Capgemini

A global leader in consulting, technology services and digital transformation, Capgemini is at the forefront of innovation to address the entire breadth of clients' opportunities in the evolving world of cloud, digital and platforms. Building on its strong 50-year heritage and deep industry-specific expertise, Capgemini enables organizations to realize their business ambitions through an array of services from strategy to operations. Capgemini is driven by the conviction that the business value of technology comes from and through people. It is a multicultural company of 200,000 team members in over 40 countries. The Group reported 2016 global revenues of EUR 12.5 billion.

Learn more about us at

www.capgemini.com