



AI in Supply Chain Management





Presenting today

Driving value creation, I partner with clients to design and implement state-of-the-art supply chains providing competitive edge for portfolio companies. With in-depth expertise in portfolio optimisation, optimisation, customer-centric supply chains, planning, purchasing and artificial intelligence, I empower companies to unlock their full potential and thrive in an evolving business world.

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Executive Summary of 2025 supply chain insights

Footprint

Continuous yet slow progress on footprint resilience measures

Slight shift from short-term inventory buffers to more strategic measures like network redesign

Changing global trade flows are expected over the next 3 years from high-cost to Western countries to Mexico, India, South-East-Asia

Planning

Most Supply Chain organisations are in the middle of an APS implementation

These are multi-year efforts and many projects were launched in 2022/23

While many APS projects get stuck on master data, value caption remains a problem for half the APS projects

Digitization

Planned Investments in Supply Chain digitization are stabilizing even further

Budgets for Supply Chain tech-enabled transformation are divided by 1:2 between people capabilities and technologies

Digital talent is not sufficiently available on the external labor market, so talent development is trending back towards in-house trainings

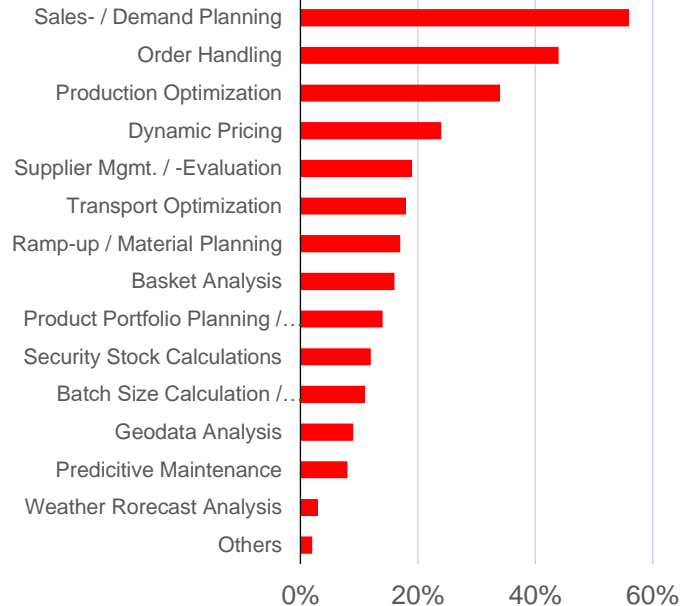
404 Executives have a strong opinion about where to create value in Supply Chain and AI and...

... the value of different **technologies**

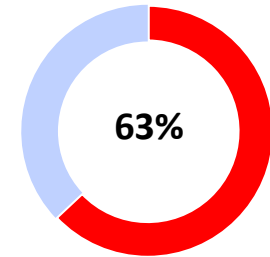
- **AI / Machine Learning**
- **Smart Data**
- Predictive Maintenance
- **Data Analytics**
- **Process Mining**
- **Robotic Process Automation (RPA)**
- IoT Platform
- **Manufacturing Analytics**
- Augmented / Virtual Reality
- Manufacturing Execution Systems
- Rapid Prototyping
- Additive Production
- Blockchain
- others

in order of importance

... the **areas & processes** they will focus on

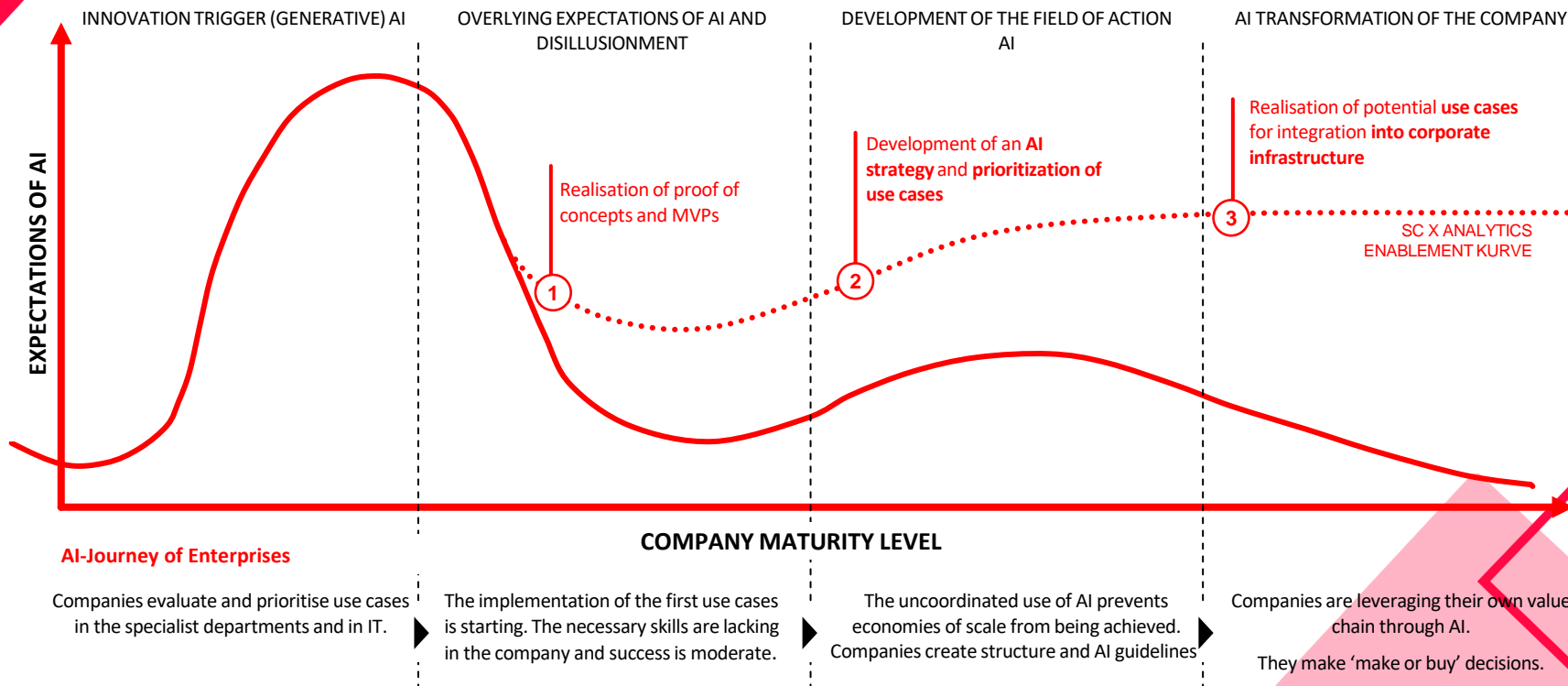


... and the benefits of **Data Analytics**

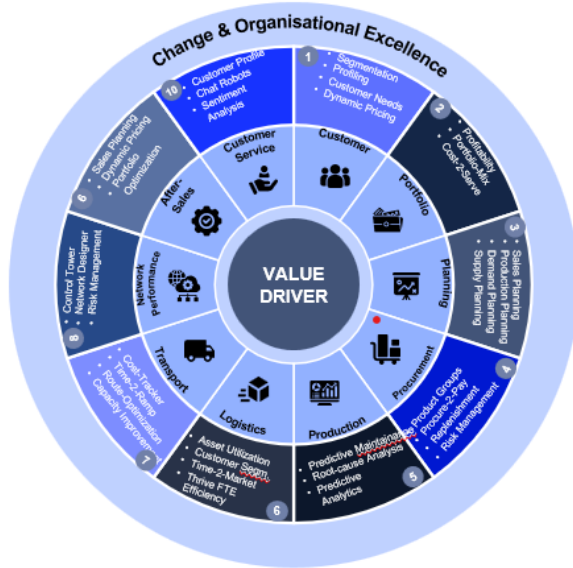


... believe, that Business Intelligence & **Data Analytics** will deliver **fast results**

Why do 70% of all AI projects fail?



Top 40 use cases that demonstrably deliver value alongside the entire value chain



1 Demand Prediction & Market Intelligence

2 Customer Service Excellence / Chat Bot

3 Legal AI

1 Full transparency across the supply chain network from supplier to customer

2 Reduction of operating capital by 15-30%

3 Reduction of planning effort by 15-50%

4 Reduction of costs by 15-20%

5 Boost of EBITDA by 2-4%

About us...



Experience

from C-level function in Industry and partner in consulting

Focus

on Supply Chain for more than 25 years

Trusted

by Fortune 500 companies, SMEs, Family Offices, Private Equity.

Awarded

as a leading consulting firm and employer:



5 offices

30 Senior Professionals

15 years on the market



Driving successful performance improvement transformations, where business meets people and technology



Supply Chain & AI Strategy

Empowering sustainable growth and transformation through tailored strategies that align with market dynamics and challenges



Performance Improvement

Transforming businesses into digital leaders by delivering cutting-edge and client-centric solutions to maximize profit in a digital-first world



Operations & Organizational Excellence

Designing and implementing future-ready organizations with robust structures and efficient processes, driven by outcome-centric transformations



Data & AI

Unlocking the full potential of data and AI to drive smarter decisions, operational efficiencies, and innovation-led growth



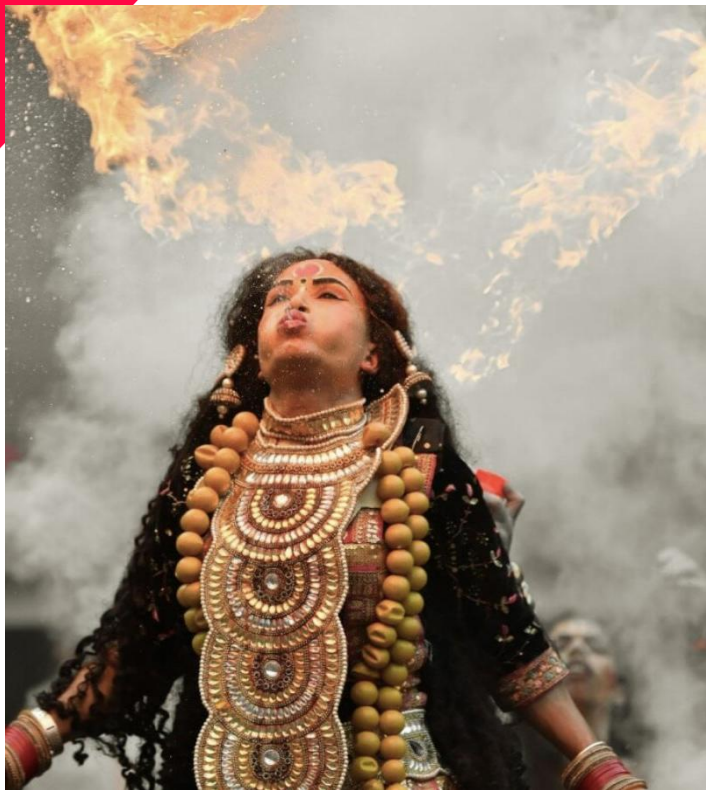
AI Consulting

With our strong consulting background, we specialize in helping organizations maximize the value of their data through advanced analytics such as AI.



Tech Hub Switzerland

We help clients gain a productivity advantage by enabling market access for disruptive tech start-ups in our decision maker network



AI in Supply Chain Management

Top 4 Use Cases +1

How you accelerate value from an advanced digital supply chain

Demand Planning and Supplier Market Intelligence

01

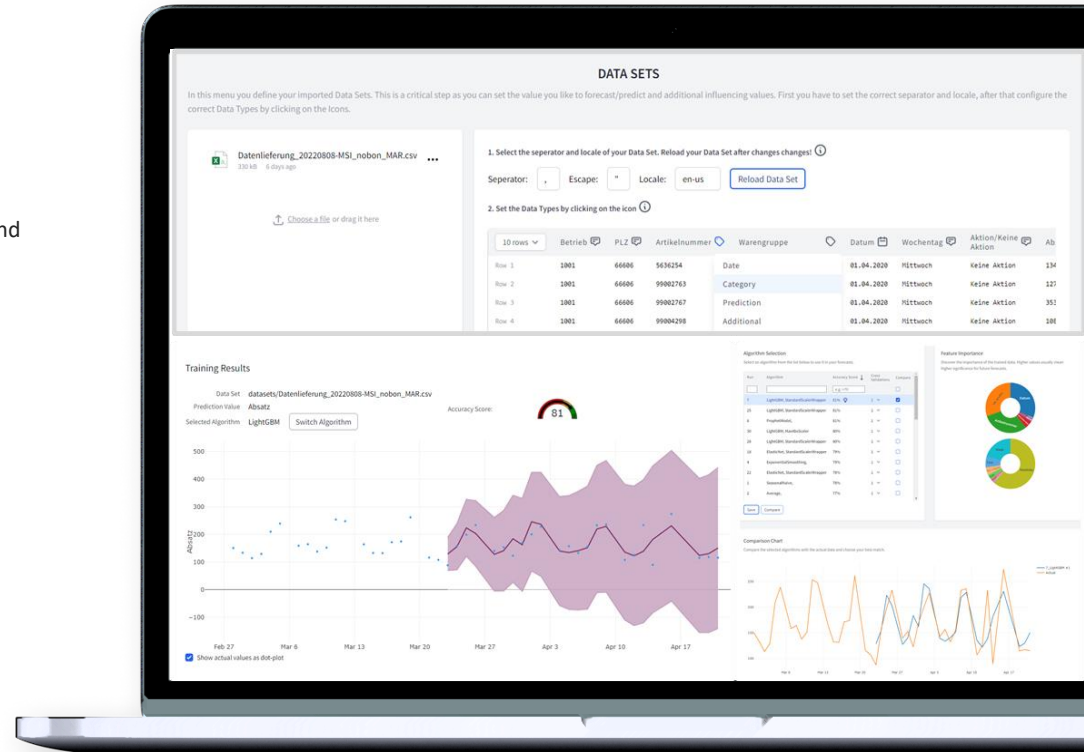
Machine Learning helps to improve the S&OP process

Challenges in S&OP Practice

- The Accuracy Level of sales forecasting not sufficient for supply planning and therefore inefficiencies in procurement, production and logistics
- Manual bottom-up forecasting is very time-consuming for sales and S&OP
- Market volatility and complexity makes traditional planning increasingly difficult

Business Impact with ML assisted demand planning

- Higher accuracy of forecasts by integrating different data sources to predict sales quantities
- Cost Savings in procurement, production and stock
- Machine Learning suite to optimize model performance



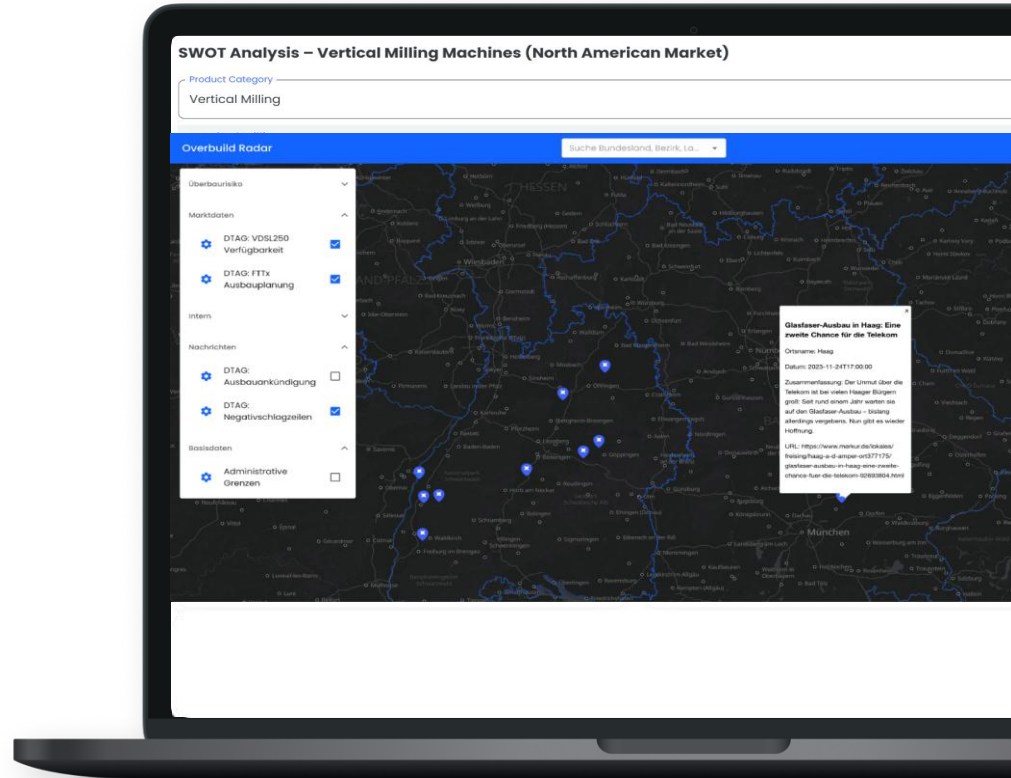
Generative AI for supplier market insights – in real-time

Key Features

- Extracting and consolidating relevant information from multiple external and internal data sources like websites, market statistics or internal SRM databases
- User Interface provides out of the box chatbot functionalities, Supplier Performance Dashboards, News Ticker and SWOT/Risk Analysis
- Powerful GenAI Engine with multiple AI Agents, RAG and Knowledge Graph Technology

Business Impact

- 40-80% less research effort
- Real-Time insights into supplier markets
- A tool to make better and faster decisions



Game Changer Agentic AI - A forecast that understands me and vice versa

Key Features

- Multiple AI agents find and qualify information in different sources (e-mail, Internet, ERP, CRM, etc.) and provide planning-relevant events and their information
- LLM-based human-machine interaction: The employee “unconsciously becomes a data scientist” and interacts with the planning system in a natural way (speech, text) and ensures that “relevant” information is used and incorporated into the planning accordingly
- The employee as decision-maker and scenario manager of the planning: The employee evaluates the relevant information and its influence on the planning and ensures that the planning is of high quality.

Business Impact

- 40-80% less research effort
- Real-Time insights into supplier markets
- A tool to make better and faster decisions





Same Parts Management

02

AI-driven technical drawing solution enhancing engineer efficiency in product companies

Key Capabilities

Document
AI

LLM Semantic Search

Key Features

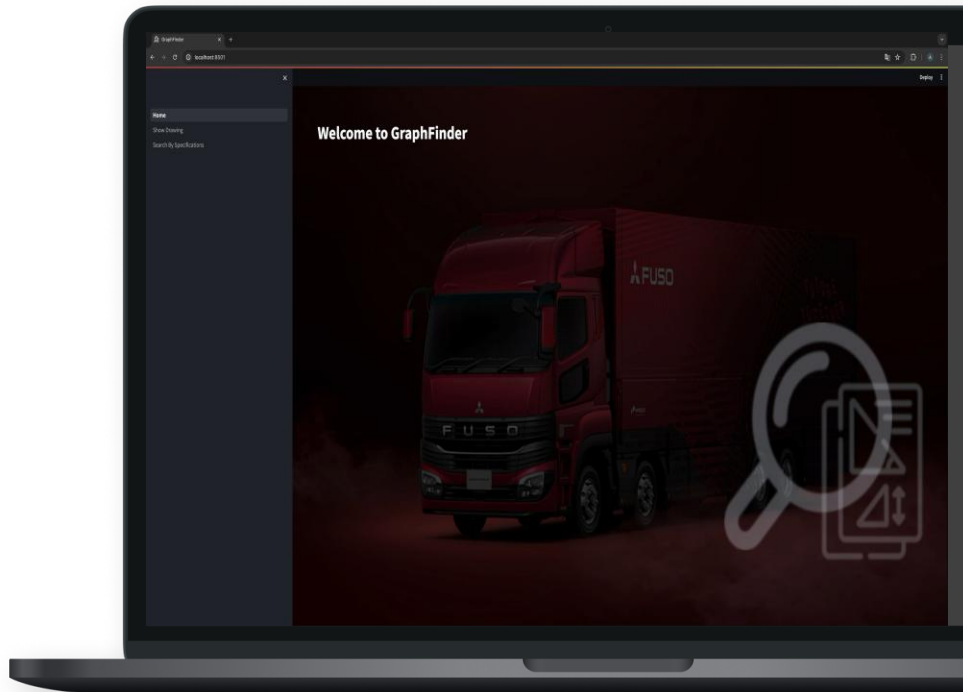
Structures complex technical drawing documents, extracts key information and enables semantic search

Search by specifications and retrieval of relevant documents alongside the corresponding technical drawing

Fully privacy compliant solution: Runs entirely within Virtual Private Cloud using Azure OpenAI Services.

Business Impact

- Enhanced Quality and Accuracy: Reduced errors, consistent information access, and improved compliance
- Cost Savings and Competitive Advantage: Lower operational costs, faster time-to-market



AI-driven technical drawing solution enhancing engineer efficiency in product companies

01 Search by part number or by specifications

02 Select one or multiple different specifications to search by

03 Results are displayed and sorted by relevance to the search parameters

04 Documents containing the corresponding construction graphs

The screenshot shows a web application interface for searching technical drawings. The interface is divided into a sidebar on the left and a main content area on the right.

Sidebar:

- Search By Specifications:** A section with a search bar and a dropdown menu for "DWG NAME".
- TOLERANCES:** A section with a dropdown menu for "UNLESS SPECIFIED" and a button "SHEET METAL".
- DWG NAME:** A section with a dropdown menu for "INSUL, ROOF, A" and a button "INSUL, ROOF, A".
- Match Threshold:** A section with a dropdown menu for "30" and a button "Submit".

Main Content Area:

- Matching files:** A table displaying search results, sorted by relevance. The table has columns for DWG NO., DWG NAME, TOLERANCES U..., Graph Available, and Relevance. A color bar on the right indicates the relevance percentage from 0 to 100.
- assets/pdf/168-499B_page_25.pdf:** A preview of a technical drawing, showing a cross-section of a structure with dimensions and labels.

DWG NO.	DWG NAME	TOLERANCES U...	Graph Available	Relevance
<input checked="" type="checkbox"/> 168-499-114-116	RAIL, A-C	SHEET METAL WORK...	yes	71.7%
<input type="checkbox"/> 168-499-55-60	RAIL, A-C, LH/RH	SHEET METAL WORK...	yes	70.0%
<input type="checkbox"/> 168-499-106/106	RAIL ASSY, SIDE, LH/RH	SHEET METAL WORK...	yes	66.7%
<input type="checkbox"/> 168-499-61-66	COVER, A-C, LH/RH	SHEET METAL WORK...	yes	66.1%
<input type="checkbox"/> 168-499-39	BAR ASSY, REAR STEP	SHEET METAL WORK...	yes	65.2%
<input type="checkbox"/> 168-499-02	INSUL, ROOF, A		no	50.0%
<input type="checkbox"/> 168-499-08	INSUL, ROOF, G		no	45.4%
<input type="checkbox"/> 168-499-07	INSUL, ROOF, F		no	45.4%

Similarity matching algorithms to link 2D images to the corresponding object in a 3D CAD model

Key Capabilities

Document
AI

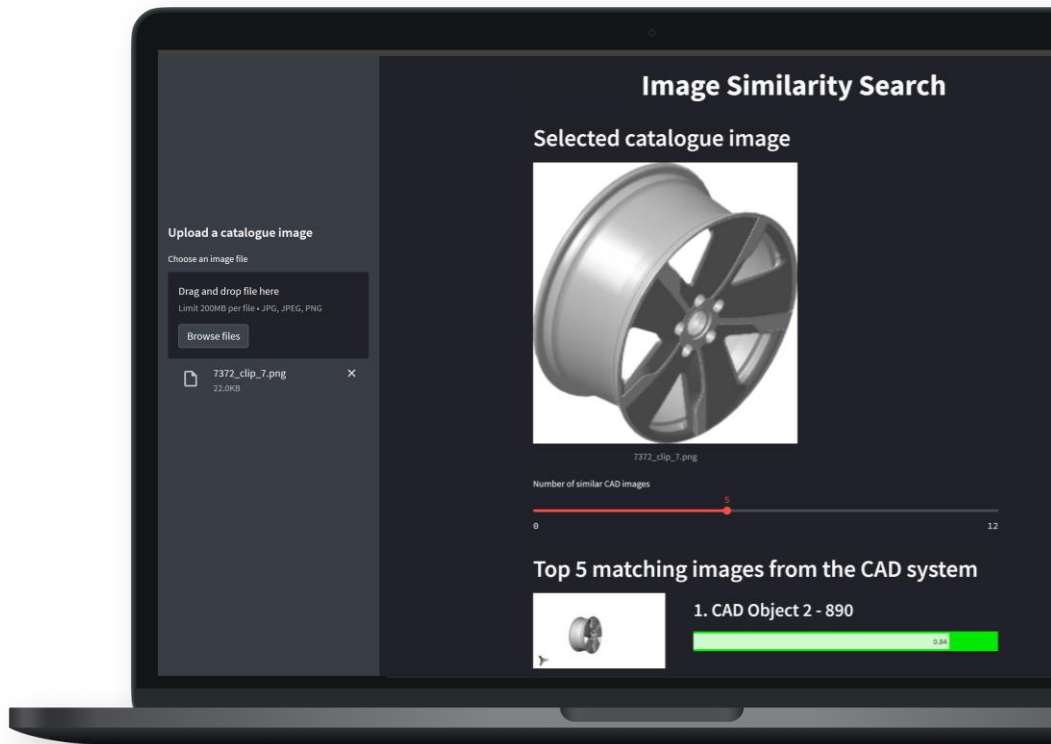
Image
Similarity

Key Features

- Using similarity search to match CAD numbers out of 3D CAD models with part/item numbers of 2D catalog images as part of a broader repair process redesign program
- Deployment of an initial Proof of Concept within 20 project days to validate feasibility of overall concept
- Integrated feedback feature to improve accuracy of the model through continued user input and interaction

Business Impact

- Manual effort as well as personal expertise within the process is greatly reduced
- Setup of a scalable solution that used the proven similarity search capabilities in other steps of the repair and vehicle maintenance process





Supplier Risk Management

AI can aid along the whole document, contract and tender management lifecycle, significantly reducing manual efforts and costs

Legal AI

AI-powered compliance evaluation and risk classification for international rollout of digital vehicle services

Customer Chatbots

AI-powered customer-facing service chatbot to answer questions based on internal knowledge base (e.g., technical sheets, handbooks) to reduce operator workload in the sales process

Document AI

Digitalization and processing of unstructured documents for better and automatic business insights. Advanced NLP techniques for information extraction, text classification and summarization.

Supplier Evaluation and Selection

Generative AI can assist in evaluating potential suppliers, assessing their reliability, quality, and cost-effectiveness, thus helping to make more informed decisions.

Automated Contract Generation

Using AI to draft contracts based on templates, existing contracts, and specific parameters, reducing the time and effort involved in manual contract writing

Predictive Risk Analysis in Contracts

Employing AI to analyze and predict potential risks in contracts, such as liability issues or compliance with evolving regulations

Automated Contract Review and Compliance Checks

Implementing AI to review contracts for compliance with industry standards and legal requirements, ensuring accuracy and reducing human error

AI-Enhanced Contractual Chatbots

Advanced AI-driven chatbots designed to assist business and legal professionals, along with customers, by providing instant support and guidance on contractual matters, clarifying terms, and facilitating smoother contract-related interactions.

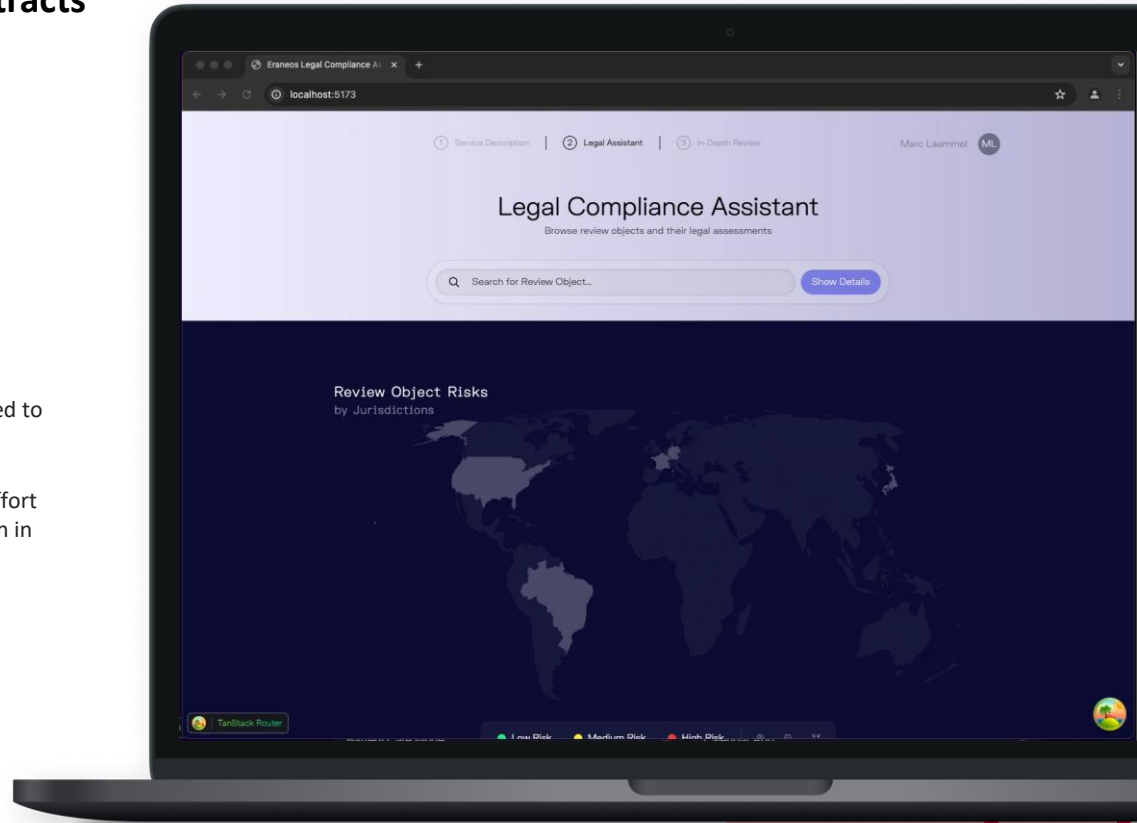
LLM-based risk assessment for supplier contracts

The Solution

- AI assesses the risks associated with supplier contracts. The specifics of the different jurisdictions are taken into account (internal regulations, commercial laws, data protection laws, industry standards,...)
- Global and local risks are visualized and measures are proposed to minimize them.
- The implemented solution significantly reduces the manual effort required to carry out risk assessments and leads to a reduction in the cost of external legal advice.

Benefit

- Identification of risks from 10,000 contracts
- Basis for supplier negotiations
- Reduction of legal fees between 50% and 99%



LLM-based risk assessment for supplier including a heatmap and risk score at a glance

- AI assesses the risks of suppliers
- Risks are assessed on the basis of supplier-specific contracts and requirements
- A list of measures addresses open questions and (potential) risks and thus supports Supplier Manager

A generative-AI-enabled solution supports the risk assessment of all suppliers.

Selection of Vehicle Services

Search Digital Legal Reviews

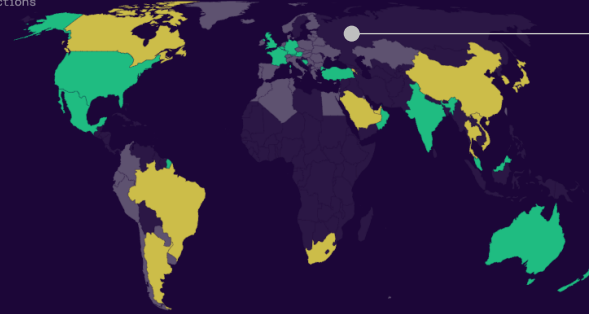
Browse all your legal review processes - no matter if ongoing or long past.



Remote Vehicle Status

Show Details →

"Remote Vehicle Status" Risks by Jurisdictions



Low Risk Medium Risk High Risk

Already Assessed Services

17 services

Service Name Description	Service Type Status
Service Name Description	Service Type Status
Service Name Description	Service Type Status
Service Name Description	Service Type Status

Global Risk Assessment

Risk Score

Exception-based Supplier Event Management based upon measures recommended by AI Agent

Developing such a complex solution requires overcoming several challenges:

- Generative AI is rarely used to automate complex risk assessments
- Together with the procurement department , we carried out extensive quality control to ensure that the AI's answers were correct
- For the correct assessment, the AI system must be able to access prepared contextual information
- The AI system is automatically evaluated based on various metrics; a confidence score is calculated for each AI response
- For each AI response, the user is presented with contextual information as sources to increase traceability and trust, but also to easily identify possible errors

Product Description

Country

Risk Score and Summarization

Remote Vehicle Status

Service Description

Show More...

Review Object Risks

Country Risks

Measures

Navigation

Malaysia

29 Assessments

+ New Assessment

Overview

General Requirements

Discovery

01. Data Export

02. Telecoms Law

03. OTA Update

Archetype Requirements

01. Localisation - Global Se...

02. Localisation - Local Bac...

03. Localisation - Local Op...

04. Localisation - Data Loc...

05. Localisation - Local Sto...

06. Regulatory Licensing

07. OTA Update

08. Red Flags

09. Amber Flags

⌕ Back to Top

Jurisdiction Risk Assessment

AI Generated

AI Generated Content
Content within this section has been generated by an AI model. Please note that AI models may not always be accurate.
Generation Date: 06.27.2024



last assessed last month

⌕ Re-do Assessment

§ General Legal Requirements

4 legal requirements

⌕ Expand All

Discovery

Not enough information

01. Data Export

Medium

02. Telecoms Law

Low

03. OTA Update

Medium

§ Archetype Requirements: Remote Access Service

9 legal requirements

⌕ Expand All

01. Localisation - Global Service

Low

Recommended Measures

Declaration of AI content

Detailed Assessment

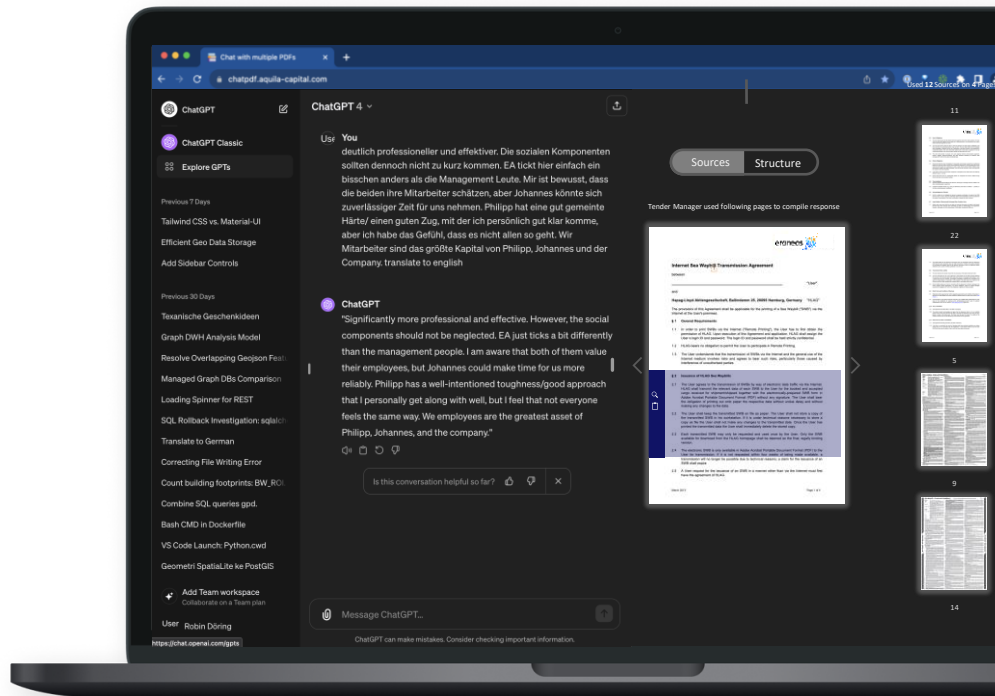
AI supported management of tenders as well as handling of large-scale contracts

Key Features

- You can ask any document or contract related questions. Furthermore, compliance with technical specifications such as engineering drawings can be checked
- Comparison of multiple documents and of documents against guidelines, terms & regulations, picture comparison etc.
- The solution is fully privacy compliant as it uses Azure OpenAI Services. Documents will not be stored anywhere, and no model will be trained on the data

Business Impact

- 35% reduced utilization of procurement managers
- 30% increase in speed in the face of an supply chain event
- On average 3-5 hours of weekly contract related work was automated



This LegalAI solution unifies risk assessments, ensures global legal compliance, and substantially reduces costs as well as manual effort



Resolution Time

Direct initial assessment



Time-to-Market

Up to 60% increased
time-to-market speed



Reduced Costs

Case specific cost reduction
between 50% and 99%



Manual Effort

Experts have time to focus on high-
risk-high-complexity cases



Self-Service

Automated initial assessment with one
click




Legal & Dev Alignment

Compliance during development



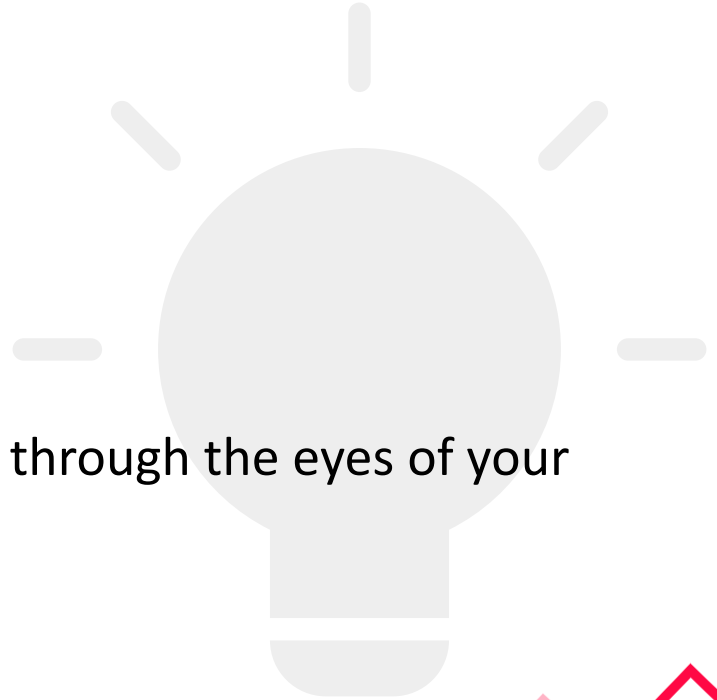
Multi AI Agents in NPS, Customer Service

04

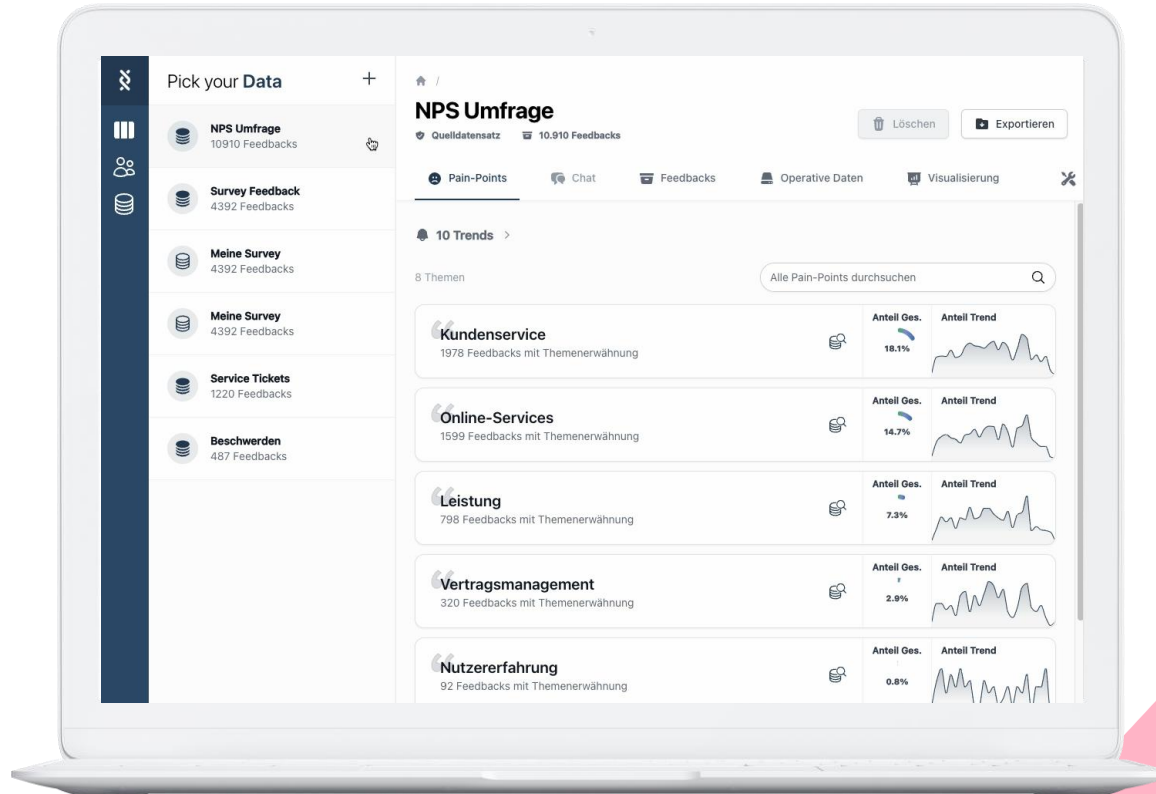


NPS Analytics
From Predictive to Generative AI

How would it be if you could see dissatisfaction through the eyes of your customers and talk to them about it?



What customers tell you without you knowing...



LLM-powered Case Management Chatbot, a tri-dimensional enhancement to case management efficiency

Key Capabilities

LLM Semantic Search

LLM
Chatbot

Key Features

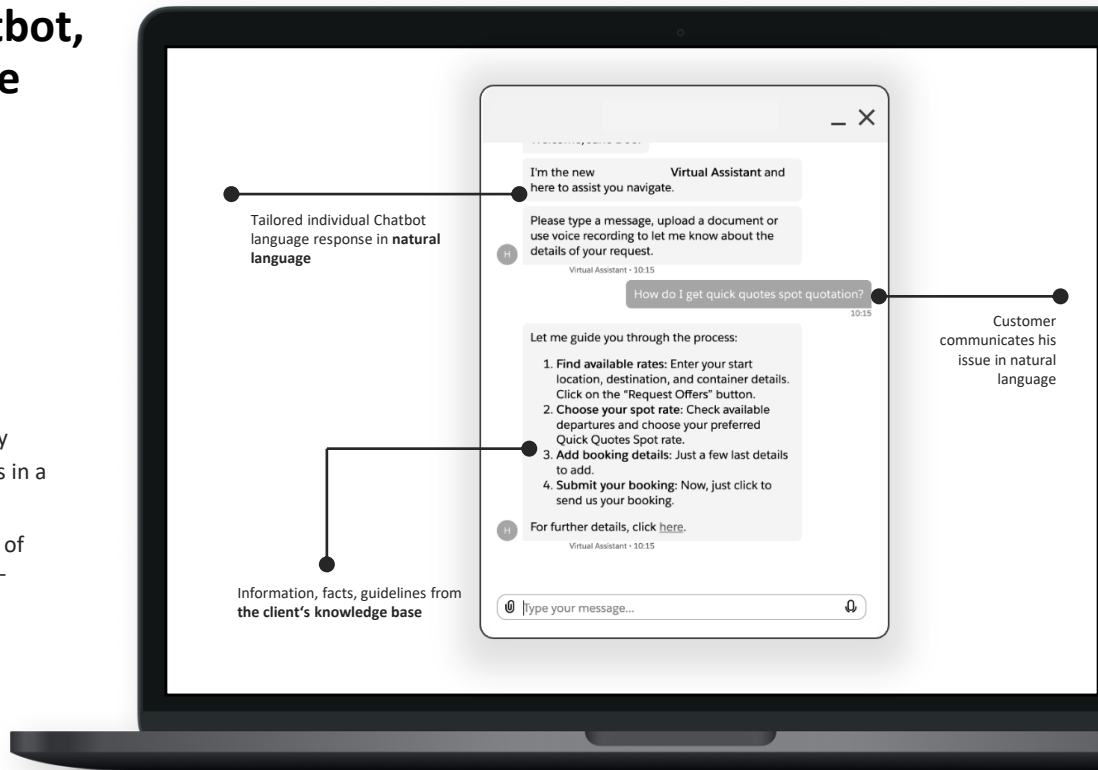
Four chatbot use cases implemented and evaluated:

1. Chatbot responds based on the suppliers knowledge articles
2. Retrieves transactional data autonomously via API calls
3. Identifies user intent based on chat behavior and chat history
4. Detects multimodal input (document types etc.) and engages in a conversation based on this input

Significant improvement in user experience as well as utilization of the chat channel due to natural language capabilities of the LLM-powered chatbot

Business Impact

- 25% productivity gain per live-agent by increasing the overall number of resolved cases per human agent
- Deflection rate, cases resolved by chat, increased from 4% (deterministic clickbot) to 24% with the LLM-enabled chatbot



The Supplier Chat- and VoiceBot guides you safely through the dialog and efficiently implement their needs

Key Capabilities

LLM Semantic Search

LLM
Chatbot

Key Features

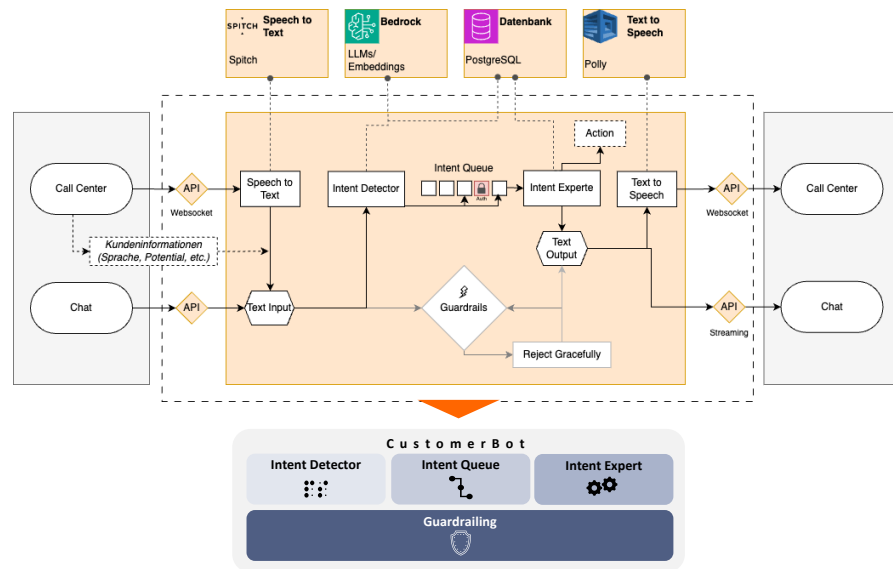
Four core elements of the Supplier Chat- and VoiceBot:

1. Intent Detector: Recognize customer/supplier intent
2. Intent Queue: Prioritize customer/supplier intents
3. Intent Expert: Resolution of customer/supplier intent
4. Guardrailing: Ensuring ethical and safety standards

Supplier /Sales requests can be received via voice (call center) or chat, are processed via speech to text and in the same way as chat messages and returned in the input format

Business Impact

- Supplier and Customer satisfaction beyond expectations, especially for non-tech savvy personas and language dialect compatibility
- Anticipated high acceptance means highly reduced Customer and Supplier Service Agent workload



GenAI ushers in a new era in customer service and logistics



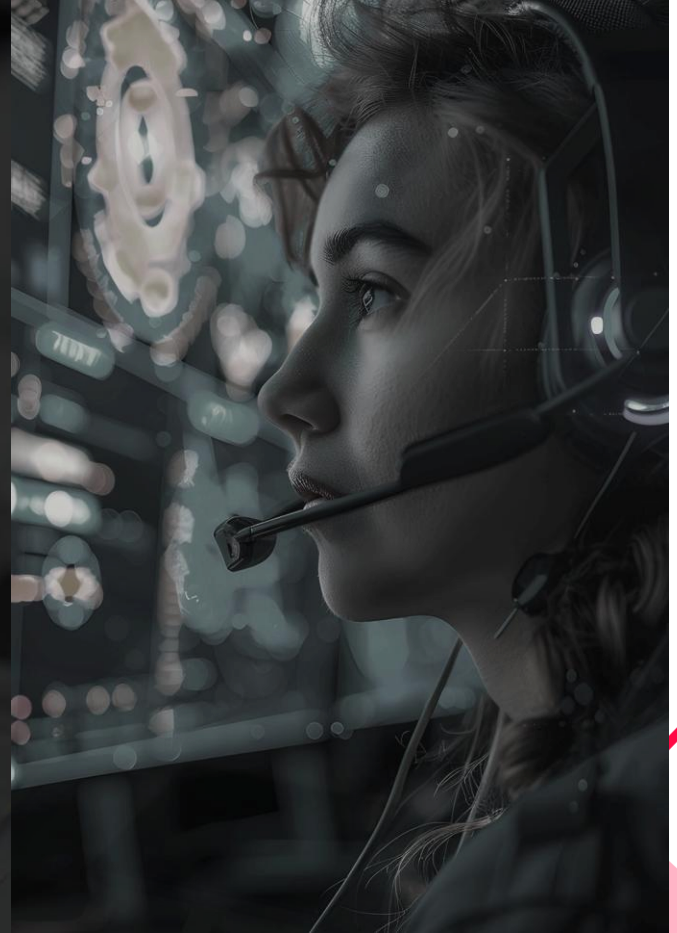
80% of all customer enquiries
are standard and could be automated

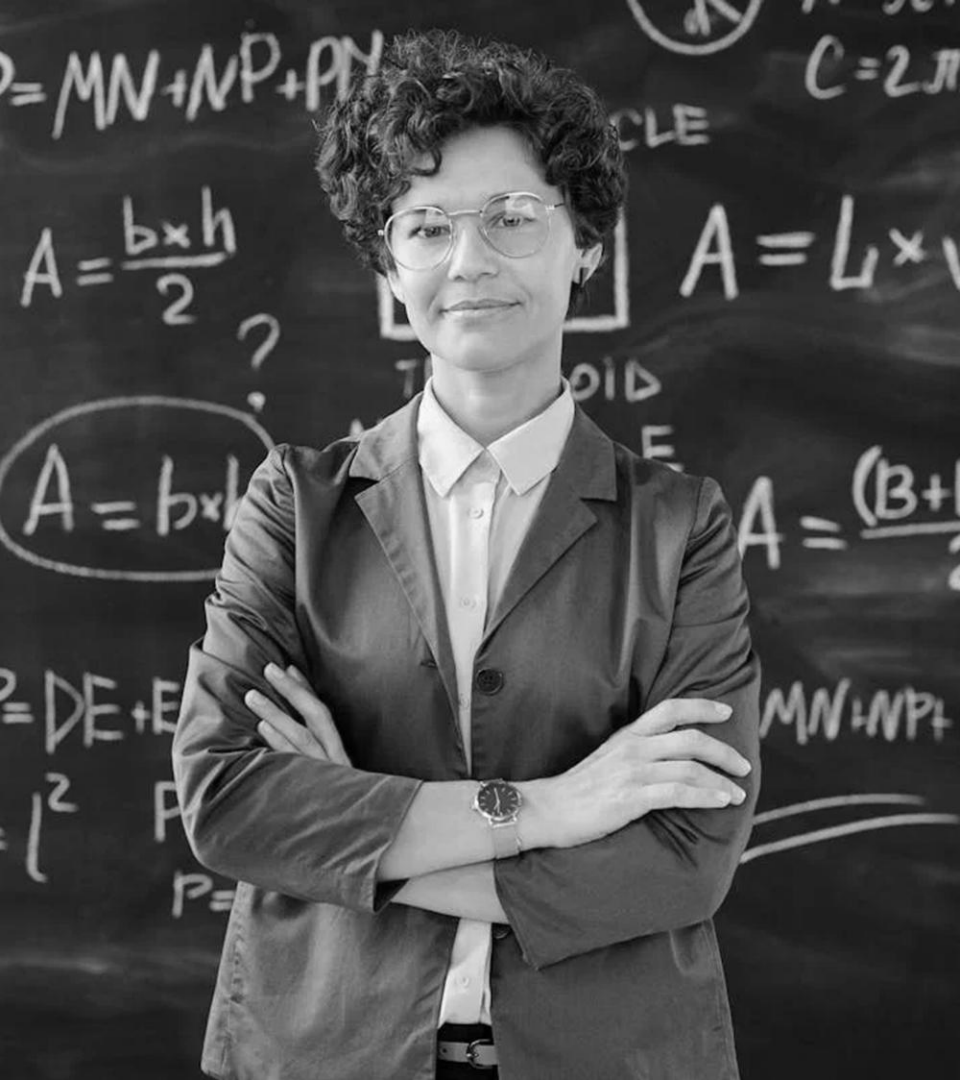


60% time saved by agents
through automation



70% time saving in
data analysis





Bonus Use Case: Multi-Agent Procurement AI

AI as a Procurement Co-pilot: AI generates advice that can be used by service and procurement employees to better negotiate

Approach

The screenshot shows a web application interface. On the left, there is a sidebar with a 'Challenge auswählen:' section containing three options: 'Kernbotschaften extrahieren' (selected with a red dot), 'Kapitelstruktur erstellen', and 'Einstellungen'. Below this is a 'Model' section with 'GPT-4o' (selected) and 'GPT-3.5'. The main content area has a title 'Kernbotschaften extrahieren'. Below it is a 'Prompt' section with the text 'Filtere die Kernbotschaften aus den Informationen heraus:'. This is followed by an 'Eingabe (Daten)' section with an 'Upload' button and a 'Drag and drop files here' area with a 'Browse files' button. A large pink button labeled 'Output generieren' is below the input area. The 'Output' section displays the title 'Einführung Multisim und Voraussetzungen' and a paragraph of German text: 'Die MultiSIM ist eine zusätzliche SIM-Karte, die zu einem bestehenden Mobilfunkvertrag hinzugebucht werden kann. Je nach Tarif können bis zu 7 zusätzliche SIMs (für Privatkunden) oder bis zu 10 zusätzliche SIMs (für Geschäftskunden) genutzt werden. Der Kunde ist auf allen SIM-Karten unter derselben Rufnummer erreichbar und kann gleichzeitig von allen Karten aus telefonieren. Sprach-, Daten- und Messaging-Dienste teilen sich das gleiche Vertragsvolumen.' Below this is a section 'Vorteile der MultiSIM' with two bullet points: '• Paralleles Surfen, Telefonieren und Streamen' and '• Nutzung als SIM oder eSIM möglich'.



Challenge

- › Employees must be able to access the relevant knowledge in a conversation depending on the situation – the breadth of the required information is constantly increasing
- › Investigating the case requires reading comprehensive tickets.



Technical Approach

- › Generative AI analyses the employee's conversation in real time and recognises the customer's concerns in the context of previous customer history
- › AI module controls suggestions based on background information or other AI models, e.g. for affinities



Value Contribution

- › Reduction in ticket handling time
- › Better information content in the conversation, for example, also on upselling and cross-selling options

AI-based training for procurement employees: AI-generated training modules based on real supplier conversations and integrates them into everyday work situations

Approach

The screenshot shows a web interface for creating quizzes. On the left, there are navigation options: 'Challenge auswählen' (with sub-options 'Kernbotschaften extrahieren', 'Kapitelstruktur erstellen', 'Lernmappe erstellen', and 'Quiz erstellen'), and 'Einstellungen' (with sub-options 'Model' and 'Kreativität (Temperatur)'). The main area is titled 'Quiz erstellen' and contains a 'Prompt' section with instructions in German. Below the prompt is an 'Eingabe (Daten)' section with a 'Lernmappe' option and a text input field. A large orange button labeled 'Output generieren' is positioned below the input. The 'Output' section displays a sample conversation between a 'Kundendienst' agent and a 'Kunde' regarding SIM cards, followed by a question: 'Wie viele zusätzliche SIM-Karten können Privatkunden maximal buchen?'. The interface is clean and modern, with a light blue and orange color scheme.

Quiz erstellen

Prompt

Du unterstützt uns bei der Erstellung von Quizzes und Lernabfragen.
Dafür erhältst du Informationen zu einem Thema, die du in ein Quiz umwandeln sollst.

Bitte erstelle für die folgenden Informationen ein fiktives Kundengespräch. Der Kunde ruft an und der stellt Fragen. Darauf hin werden die Fragen als Multiple Choice Frage erstellt es durchaus anspruchsvoll.

Eingabe (Daten)

☒ Lernmappe
Einführung Multisim und Voraussetzungen Die Multisim ist eine zusätzliche SIM-Karte, die zu einer ...

Output generieren

Output

Fiktives Kundengespräch

Kundendienst: Willkommen bei der Telekom-Hotline, wie kann ich Ihnen heute weiterhelfen?

Kunde: Hallo, ich habe einige Fragen zur Multisim. Könnten Sie mir bitte erklären, wie viele zusätzliche SIM-Karten ich als Privatkunde maximal buchen kann?

Kundendienst: Natürlich! Lassen Sie mich Ihnen dazu eine Frage stellen:

Wie viele zusätzliche SIM-Karten können Privatkunden maximal buchen?

• ☐ Bis zu 2



Challenge

- › Employees are now being taken out of the service centre en bloc for training
- › Training is generally valid and only partially tailored to the individual learning needs



Technical Approach

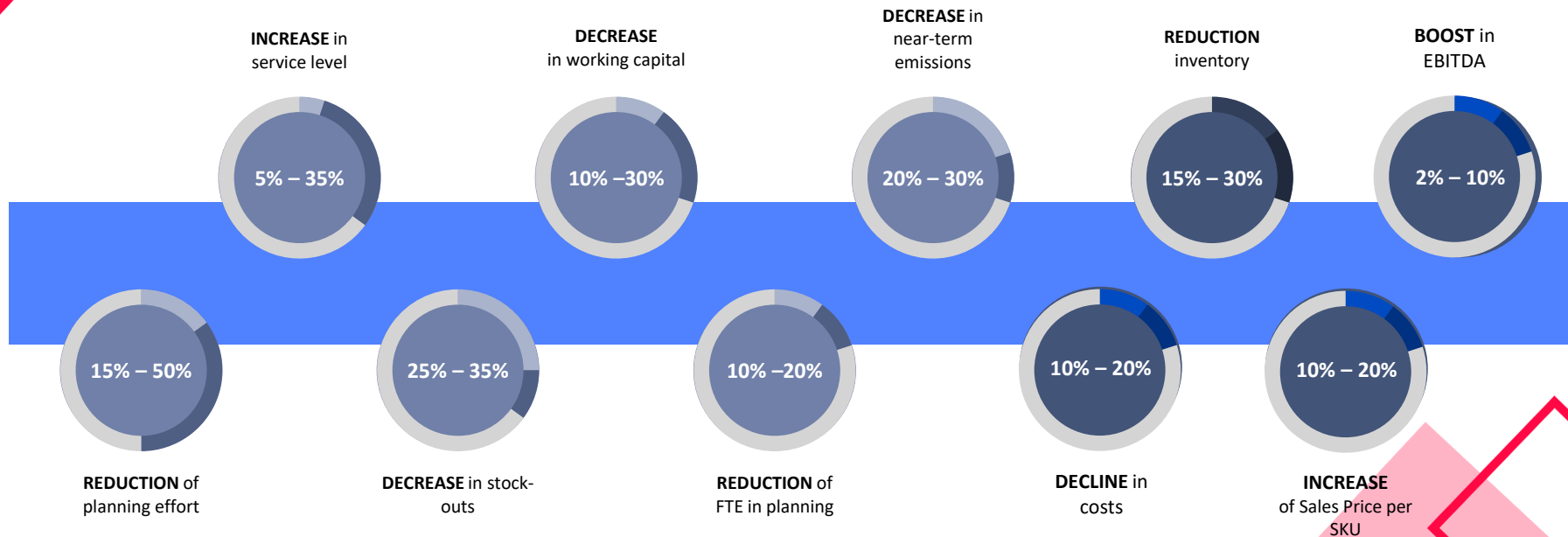
- › Generative AI analyses the employee's conversation history and recognises individual needs
- › Fictitious customer conversations are generated for training. These are based on conversations and internal company information about products, etc. (stored via an RAG system)



Value Contribution

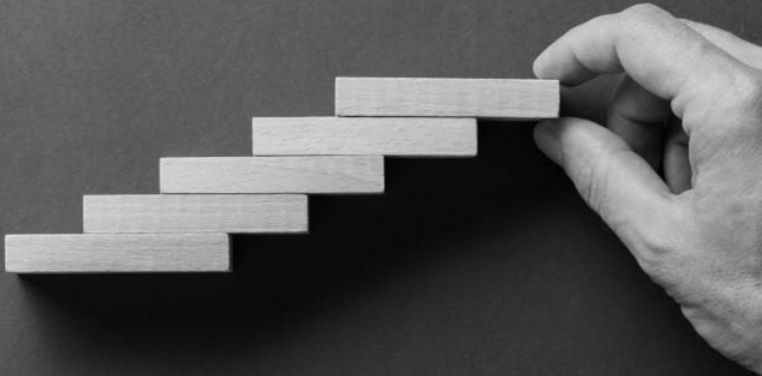
- › Reduced effort to create training materials
- › Higher training quality through dynamic training content

Operational efficiency, cost reduction & increase of sales prices are the dominant motives for value creation in Supply Chain



« What are the motives for digitalization at your company? »

Next Steps



**In the ideation workshop, we will find together
the AI potentials where it is worthwhile/not worth
investing**

Ideation-Workshop

Duration max. 4 hours

3 Voucher

only for active webinar participants

first come first serve ...

E-Mail an achim.schwichtenberg@scxpartner.com

SCOPE

Goals
Reduce costs
Accelerate processes
Increase product quality
Increase sales
Promoting sustainability

State & Trends of AI

You will learn about the contribution AI is making to retail and other leading companies. We present real-world examples and your team understands how disruptive AI can be in the short and long term.

Evaluation of AI potentials

With these inspirations, we go into an idea workshop to identify AI opportunities for Denner. With subject matter experts, we discuss a prepared list of AI examples and evaluate the business value and feasibility for each case.

Results and recommendations

The results of the workshop will be documented (description of the use case, estimated business value, investments, recommendations) and presented to management.



Contact me.

Driving value creation, I partner with clients to design and implement state-of-the-art supply chains providing competitive edge for portfolio companies. With in-depth expertise in portfolio optimisation, optimisation, customer-centric supply chains, planning, purchasing and artificial intelligence, I empower companies to unlock their full potential and thrive in an evolving business world.

Achim Schwichtenberg, Managing Partner

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Thank you for your time!

We appreciate your time and attention. If you have any questions or next steps to discuss, feel free to reach out. Looking forward to
Looking forward to staying connected!