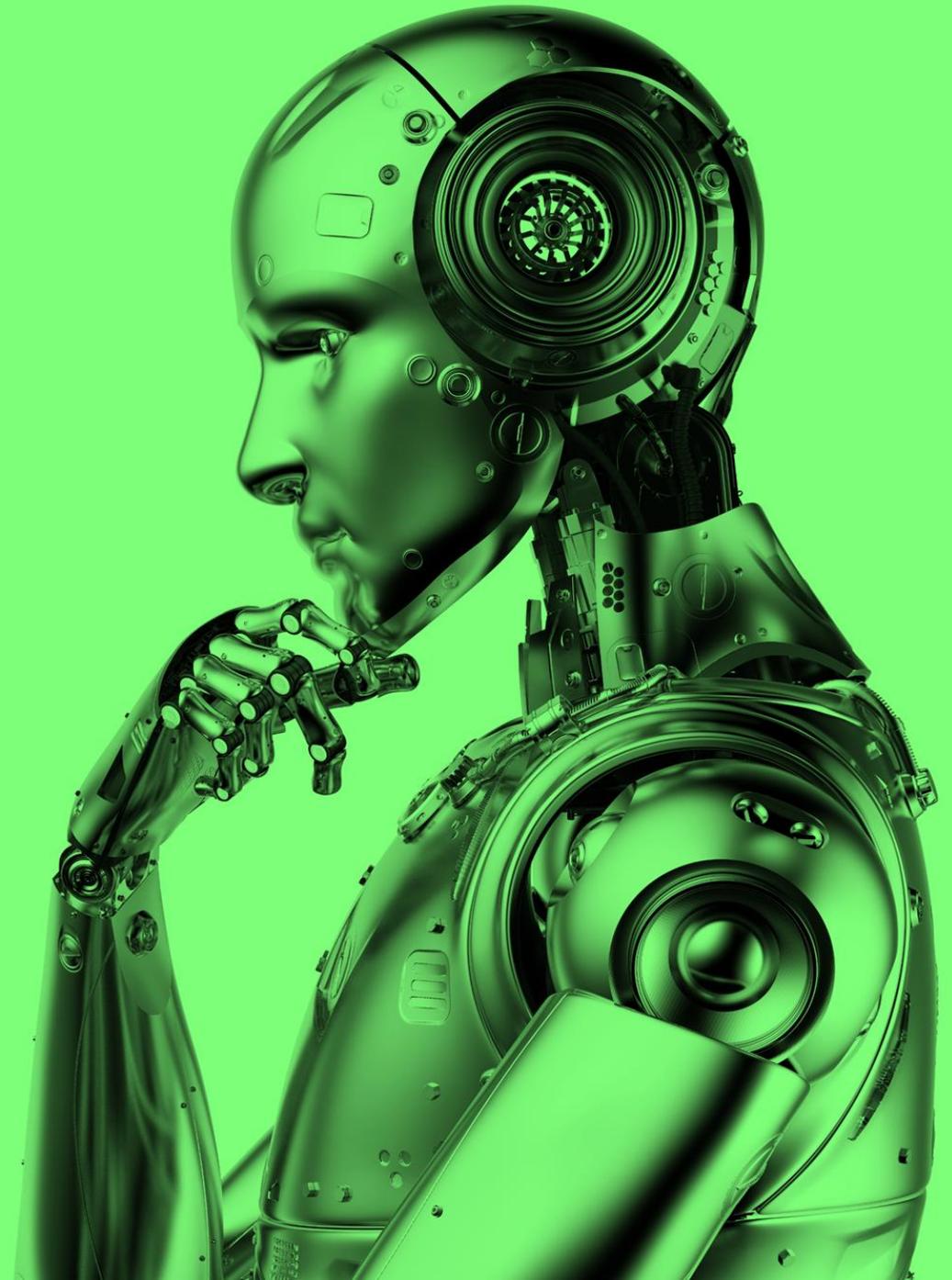


# Service Offering

## Data Analytics

Value creation powered by  
state of the art AI algorithms



# Agenda



Why AI and why now?



How AI adds value



Our value proposition



Value delivered

# Why Analytics is more important than ever

Changes in customer behaviour paired with technological advancements and ever exponentially growing data volumes enable companies to embrace AI-driven business models, thus gaining competitive advantages

## CHANGE IN CUSTOMER BEHAVIOUR



### Transparency

Open data and information decrease customer's information asymmetries regarding products, forcing companies to improve service quality to stay competitive.



### Comfort

The appification has moved today's customer journey towards mobile. Interactive and immediate feedback has become the standard for customers.



### Personalization

Today's customers demand the right offer for the right price. Optimizing products on customer demand is key to survive within dynamic markets.



### Trust

Customers want to be assured that their money and, just as important, their data is safe. Data breaches do not only entail bad press but serious reputational risks.

## BIG DATA BOOM



### Devices

New digital devices and applications such as smartphones, wearables or networked devices have accelerated the pace of data generation enabling deeper insights.



### Unstructured Data

85% of today's data are unstructured. This includes texts, pictures, audios and videos. These valuable sources of information are usually not fully utilized.



### Customer Journey

Research shows that customers are willing to pay more for a better experience. Thus, analyzing customer's journey data offers an improve customer experience.



### Data mix

Not just the volume has grown, but also the mix of data sources has evolved. The fastest-growing areas today are user-generated media, M2M and metadata.

## TECHNOLOGICAL ADVANCEMENTS



### Data Management

Improved data management frameworks (Hadoop, NoSQL, Spark, SAP Hana, AWS) enable real/near time processing of ever growing internal and external data sources.



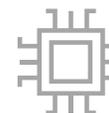
### Machine Learning

Advances of Machine Learning algorithms, such as Deep Learning, have enabled more sophisticated analysis of data, especially unstructured data.



### Open Source

Open source software (Python, R), ML frameworks (tensorflow, torch), models (huggingface) and publications of advances enable disruptions by new competitors.



### Hardware

Specialized data processing hardware, such as GPU or quantum computing, allows the increasingly computing intensive analysis of deep learning models.

# Business Impact of Artificial Intelligence

AI adoption will continue to gain traction in all industries, generating competitive advantages in terms of increased revenue as well as decreased costs and risks for those embracing it



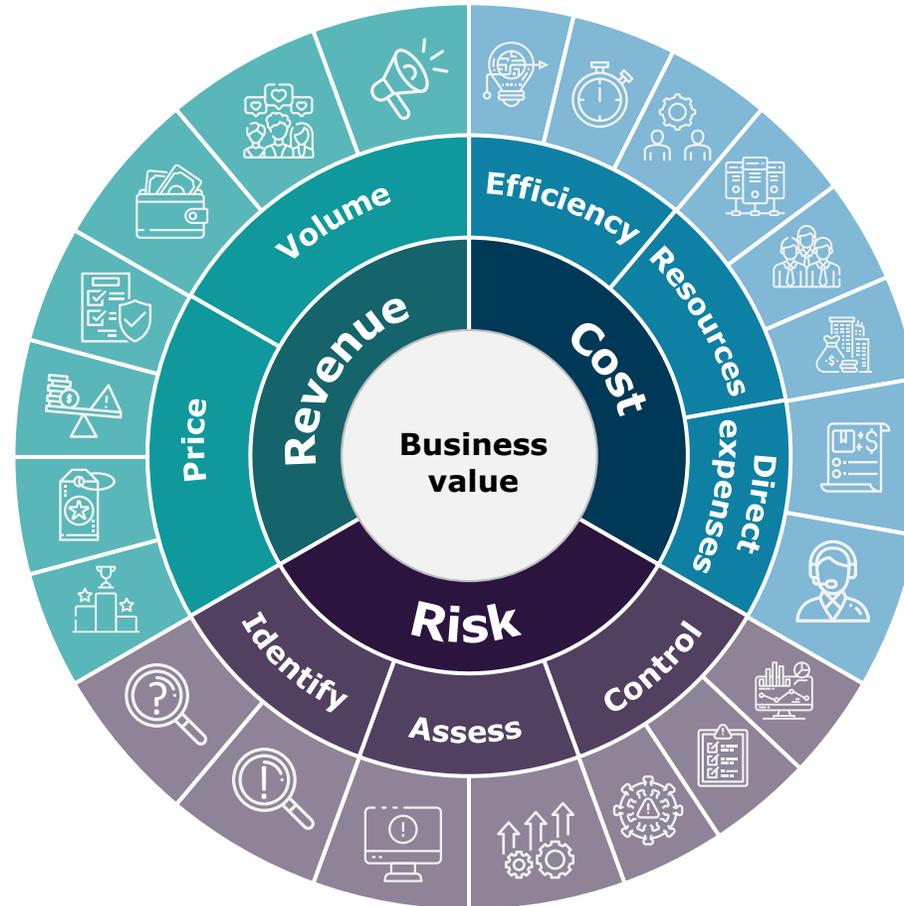
## Revenue

### Increase volume:

- Optimize inventory levels through sale and demand forecasting
- Increase share of wallet through customer-specific up- & cross-selling analytics
- Retain customer base by customer churn modelling
- Identify high value customers using customer lifetime modelling

### Optimize pricing:

- Personalized price optimization can yield between 0.5% to more than 4% return on sales
- Customer-specific **price promotions** are used as a tool for price discrimination thus maximizing profits pro customer



## Cost

- Increase **process efficiency** through process automation of manual tasks such as customer communication using text analytics
- Derive optimal **business decisions** by taking company-specific as well as external constraints into consideration using simulations or optimizations



## Risk

- Uncover the underlying risk **root causes** and contributing factors
- Identify **unknown risks** such as fraudulent transactions using auto-encoders
- **Proactively identify risks** via early warning systems before they become critical

# Our Analytics Value Proposition

We provide a wide range of analytic solutions to generate sustainable business value



## Analytics Strategy

Many companies, enticed by other companies' success stories, are investing heavily into AI initiatives. Yet **85% of these fail**. Many never reach a product level, others lack business user acceptance or trust in AI outcomes.

Instead of running headfirst into AI projects, a more **measured approach** is recommended to ensure a successful outcome of these initiatives.

Based on your business strategy, we identify use cases where AI can add value. Subsequently, we ensure that **organizational, processual** and **technological** prerequisites are in place to scale AI projects successfully.

## Text Analytics

Accelerated by the "**data boom**," an exponential growth of unstructured text data (e.g. social media, customer reviews) holds vast potential. Improved **algorithms performing at a human level** enable an analysis of these information and incorporation into decision making.

We support you in the identification, quantification and classification of textual information in order to continuously monitor trends or potential risks.

This gain of information enables better **customer insights** as well as **cost reductions** through automatization of manual tasks.



## Customer Analytics

Companies increasingly identify a better understanding of their customers as a competitive advantage, yet many still have **limited transparency** of their needs.

By analyzing your internal and external customer information and behavior, we support you in identifying and acquiring your most **profitable customers**.

Furthermore, we derive differentiated profiles of your ideal customers in order to optimize **marketing efficiency**, customer loyalty and sales.

In addition, we identify the causes of your customer **acquisition** and potential customer **losses** in order to derive **optimal interactions**.

## Forecasting

Business forecasting is key for companies to **make informed decisions** and develop mid- and long-term strategies. The precision of these forecasts depends to a large extent on the amount and quality of the data taken into account.

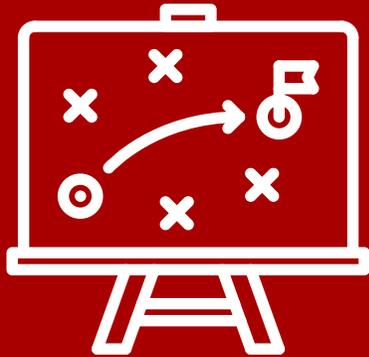
We analyze your historical **time series** (e.g. sales, demand) enriched with external information to extract **trends and patterns** and align them with your business goals.

From these patterns we derive measures to improve process efficiency in order to **increase sales** and reduce costs at the same time.



# Value delivered

## Analytics Strategy



*“Focusing solely on what you can potentially do better than any other organization is the only path to greatness.”*



### AI Maturity Assessment

Assess your current AI readiness and capabilities along the dimensions data, processes, technology and organization. This enables you to prioritize investments towards AI skills, processes and technologies needed to implement, operate and maintain value adding AI-based systems successfully.



### AI Target Picture

A goal without a plan is just a wish. Specifying the AI initiatives' goals, milestones and benefits along the dimensions: data, processes, organization and technology, enables a company wide understanding by all stakeholders to strengthen user acceptance of the initiative.



### Use Case Elicitation

Every company is individual and so are their AI needs and context factors. Based on your business strategy, functional needs and AI capabilities combined with our industry expertise we identify, specify, evaluate and prioritize value adding AI use cases ensuring optimal business value.



### AI Roadmap

The AI roadmap summarizes previously made analytics strategy as well as dependencies and assumptions. Aggregating and committing these in a concrete plan enables not only progress tracking but also increased transparency, thus the long-term success of AI initiatives.

# Value delivered

## Text Analytics



*“If you want to understand your customers, then you have to be able to possess a strong capability to analyze text.”*



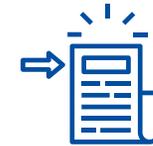
### Semantic Search

Advances in NLP algorithms enable search results comparable to an expert, not just matching keywords, by determining the intent and contextual meaning of search queries. This allows you to automatically process vast amounts of documents and find relevant answers quicker.



### Summarization

To further improve task efficiency, AI based summarization algorithms reduce manual efforts by capturing the essence of documents or text passages, while being comprehensive and concise in articulation, thus giving you the main content of large documents within few sentences.



### Topic Modelling

With the exponentially growing amount of textual data, it gets increasingly difficult to exhaustively identify all relevant documents and desired information. Topic modelling algorithms enable you to automatically analyze and classify vast amounts of texts or documents.



### Sentiment Analysis

Sentiment analysis identifies the general mood, opinion or emotion within textual content. This allows an automated analysis of whether or not a statement, tweet, product review, customer review etc. is positive or negative and to initialize according follow up processes.

# Value delivered

## Customer Analytics



*“Customer data will be the biggest differentiator in the next two to three years. Whoever unlocks the reams of data and uses it strategically will win.”*



### Customer Lifetime Value

CLV enables customer segmentation according to their profitability throughout their entire relationship with the company. Having a company-wide consistent and customer specific way to assess customer value enables more efficient processes while increasing customer profitability.



### Customer Churn

Retaining your customers costs four times less than acquiring new ones. Customer churn predictions enable a proactive churn identification and timely mitigation, thus increasing revenue in an ever-competitive business environment.



### Next Best Offer

Consumers are flooded with unwanted, generic marketing messages in their email inbox, online and by phone. AI based recommender algorithms identify personalized offers leading to higher marketing conversion rates, improved customer satisfaction and less customer churn.



### Lead Generation

Lead generation is often cited by marketers as the top challenge due to ever growing internal and external information sources. AI based lead generation enables marketers and salespeople to generate better leads, better qualify them, thus increasing conversion rates.

# Value delivered

## Forecasting



*“The goal of forecasting is not to predict the future but to tell you what you need to know to take meaningful actions today.”*



### Sales Demand

Traditional demand planning solutions lack accuracy due to solely relying on historical sales data. Advanced solutions enable an analysis of increasing data volumes generated from businesses and external sources to help you optimizing supply chains while minimizing back-orders.



### Interest Rates

Interest rate forecasting has a crucial importance regarding business decisions, as it affects the viability of business models as well as the valuation of financial assets. Advanced AI models enable a more precise forecast of interest rates, thus enabling better informed decisions.



### Revenue Projections

Revenue projections have far-reaching implications as they drive annual budgeting and planning cycles. If forecasts are inaccurate, targets cannot be met thus leading to poor financial performance. Leveraging AI algorithms analyzing financial and non-financial data enables improved and more accurate financial planning and budgeting.



### Cash Flow

For companies operating in fiercely competitive environments, poor cash flow management can be fatal. AI based cash flow forecasting reduces uncertainty leveraging scenario analysis (i.e. best-, worst-, probable-case), thus enabling you to make better informed business decisions.

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