# pmOne

Data driven. Al based. People minded.



### Data driven. Al based. People minded.



### **Management**

Harness the potential of data generated from your processes in production and other areas of your business.



### **DATA**

### Science

Use the latest data science, machine learning and AI methods to create genuine added value.



### Visualization

Use visualization techniques to present complex matters and gain insight into key indicators influencing corporate decisions.



### **CORPORATE**

### **Performance Management**

Improve the quality of your forecasts, automate your financial processes over the long term, and pave the way for key milestones.

pmOne helps its customers get to grips with digitalisation by providing valuable expertise in data management, data visualization, data science and CPM. Relying on a team of more than 100 individuals, pmOne tailors the company's innovative, comprehensive portfolio of services - from maturity level analysis of digital data utilisation, individual cloud strategies and architectures through to implementation, operation and maintenance - to a wide range of customer projects.

The company draws on the latest data science technologies, machine learning methods and recommender systems to provide substantial added value.



### Our partners



2018 Partner of the Year Winner Germany Partner of the Year Data Estate Modernization Award

















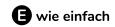
### **ABOUT pmOne**

### We love Analytics – and so do our customers

Would you like to know how our solutions and services can create added value and a competitive edge for our customers? Corporation, medium-sized enterprise, administrative body or institution: we assist customers from a wide range of sectors as they embark on their journey to digitalisation. Read our customers' experiences and results to gain an impression of what we can do for you.

### Our testimonials

"Having a structured business intelligence architecture in the Azure cloud makes it much quicker for all our employees to analyse connections and interrelationships and identify customer requirements. A key prerequisite for us was to be able to cross-link all data. This data is now much more valuable to us, as we can use it more efficiently." KATJA STEGER, Managing Director | E WIE EINFACH



"The solution makes planning simpler and creates added value, as it clarifies our cost/performance ratios. Transparent, efficient and effective cost management processes help the management team with its core tasks. A comprehensive overview of the budget dovetails perfectly with our strategic goals and forms the basis for sustainable cost management." **HERBERT MODER**, Head of Group Cost Controlling | VKB



"Now that pmOne has automated our processing chain, our data is available on a single, uniform platform, allowing our team of 15+ data scientists to get on with their work rather than having to spend time consolidating data."



ANDRÁS KELEMEN, Head of Digital Information Management | Swiss Re

A compact overview of successfully completed customer projects can be found on our german website under pmone.com/usecases



### Successfully completed customer projects





















### **Data Science and Artificial Intelligence**

Production, controlling, marketing and sales: the use of artificial intelligence (AI) and data science methods are changing every sector of the industry. Algorithms work autonomously to identify patterns, relationships and trends, resolve issues and improve their own performance. Our customers can use AI and data science to benefit from their digital data while remaining competitive in industry.

Our data scientists and data engineers have extensive experience in B2B and B2C projects. As well as drawing on established methods from the field of machine learning, they continue to develop cutting-edge AI processes and procedures: from deep learning and reinforcement learning to language, image and text recognition, customer service chatbots and beyond.

### Current top real-world topics



FINANCE ANALYTICS

Optimizing finances as a guarantee for the future



CUSTOMER ANALYTICS
Acquiring and understanding customers and securing their loyalty using AI



INDUSTRIAL ANALYTICS
Improving effectiveness with Al



SUPPLIER ANALYTICS
Paving the way to Sales 4.0 with artificial intelligence

Benefit from efficient process workflows and targeted iteration thanks to our expertise in data science.









### Your point of contact for data science and artificial intelligence

We are on hand to assist you across all project phases – from business comprehension to technical implementation. Contact us and together we will find and develop the ideal solution for your data science and AI issue.



DR. GEORG DROSCHL Head of Artificial Intelligence

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RAPHAEL FOCKEL
Business Development Manager
Data Science

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### USER REPORTS BASED ON DATA SCIENCE AND ARTIFICIAL INTELLIGENCE

## Identifying anomalies in welded components

- Improvement in quality
- Robotic production of metal components
- (+) Simultaneous welding by two robots
- Detection of welding imperfections through the automatic analysis of vibration data

Machine learning (ML)
Artificial intelligence (AI)
Data science
Industrial analytics
Anomaly detection
Sensor data
Acoustic emissions

### **CHALLENGE**

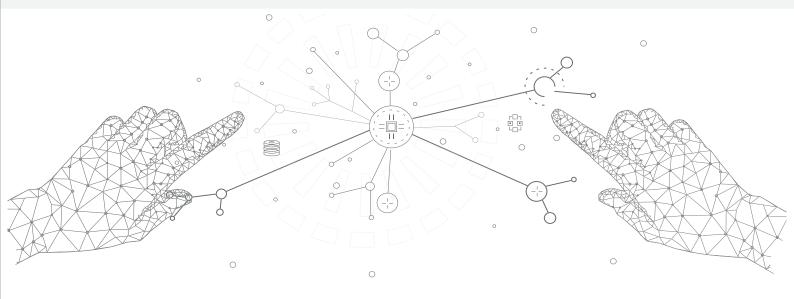
- Optical inspections exclusively detect surface-level imperfections
- Imperfections are identified in highly complex, comprehensive machine sensor data sets

#### **SOLUTION**

• Digital signal processing combined with machine learning

#### **RESULT**

- Improvement in production quality
- Optimisation of the production process
- Early intervention while production is ongoing
- Maximised production yield



### Digital vertical: cloud-based elevator maintenance

- ① This scalable, flexible solution transmits data in real time
- Machine learning allows elevator downtimes to be accurately predicted

IoT Cloud Advanced analytics Data science AI & machine learning Visualization



Microsoft Azure



Power BI

#### **CHALLENGE**

- Use of existing data
- Reduction in elevator downtime
- Elevator maintenance via predictive maintenance

### SOLUTION

- Uniform data structures and formats
- Cloud-based maintenance solution
- Machine learning: Predictive models for elevator performance

- Data transfers in real time
- Maintenance measures implemented before the fault occurs
- Elevators that work reliably

### **Corporate Performance Management (CPM)**

Corporate performance management (CPM) uses digital data and intelligent CPM and BI solutions to influence a company's most critical factors for success. As the decision-maker, you can align your desired strategic and operational goals with your results. Corporate goals have to be clearly formulated and communicated. In doing so, you can harness the potential to optimise your corporate management processes.

Our CPM specialists work with you to develop your own finance platform – your single source of truth – through which to oversee the finance sector. Once this is in place, you can optimize your corporate planning, group consolidation measures and financial governance, and benefit from the latest data science and artificial intelligence methods. Selected CPM solution packages and comprehensive expertise in data management, financial analytics and visualisation combine to form an all-in-one solution – along with advice and training – that you can take advantage of for your business.

### Current top real-world topics



DIGITALIZATION IN CFO

Corporate management and governance



PLANNING & SIMULATION

Pursuit of plans and goals – figures, measures, budget



FINANCIAL REPORTS & CONSOLIDATION

Data gathering, validation, consolidation, disclosure process



**DRIVER ANALYSIS** 

Strategic roadmap, prompt responses to new framework conditions

Benefit from professional corporate performance management processes thanks to our expertise:









### Your point of contact for corporate performance management

CFOs and controllers are faced by major challenges that they will not be able to overcome using existing solutions. Get in touch with us. We will be pleased to help you create your own finance office 4.0 and devise an integrated financial plan in support of your corporate management processes.



HEIMO TEUBENBACHER

Business Development Manager

Corporate Performance Management

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### Mercedes Benz AG | Intelligent plant management

- ① Integration of CPM and BI
- Development, implementation and operation from a single source
- ① Streamlined planning processes for all relevant areas of the group

Business intelligence (BI) Reporting

Data warehouse

Operation services

Corporate performance management (CPM)

### **CHALLENGE**

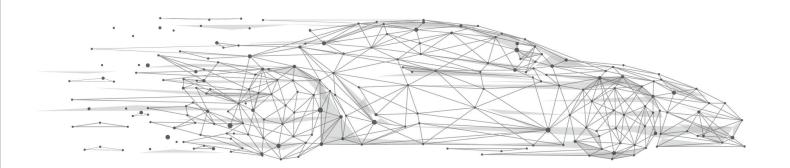
- New strategic and operational direction in the automotive industry
- Development of an efficient IT landscape geared toward achieving targets (cross-departmental)
- Optimization of a wide range of departments by linking them together

#### **SOLUTION**

- Consolidation of a heterogeneous landscape into a centralized BI system for the entire group
- Implementation of CCH® Tagetik for various planning processes pertaining to controlling, HR, ancillary and peripheral activities, IT, quality, environment and other areas

#### **RESULT**

- The new business intelligence solution meets the need for information in all relevant areas
- Linking areas through data improves the planning process in terms of controlling, capacity and production processes. For example, the formulation of new key figures allows for production and manufacturing lines to be optimized



### Versicherungskammer Bayern (VKB) | Integrated cost planning

- Integrated cost planning and cost management for the entire group
- Increased transparency and flexibility, and faster processes for more value

IoT Cloud Visualization Planning Consolidation Advanced analytics



XL Cubed



Power Query, Power Pivot und Power BI Desktop



pmOne Connect

👀 Wolters Kluwer | CCH° Tagetik

### **CHALLENGE**

- Comprehensive customer data from a range of sources
- Consolidation and analysis of data is a time-consuming process
- Optimal use of data
- Rapid access to current data

#### **LÖSUNG**

- Data warehouse: Integrating the data of different sub-providers
- Based on the Microsoft Azure cloud platform
- User-friendly visualisation with Power BI
- Ready for artificial intelligence and machine learning

### **ERGEBNIS**

- All source systems linked together
- Data is transparent and up to date and can be used straight away
- Rapid, automated ongoing data processing
- Optimization of corporate and customer processes

# **Data Management**

Professional data management enables you to make your company's data available at a high level of quality, at the right time and in the right format for the right person. A fitting combination of methodical, conceptual, organisational and technical measures forms the basis for data-driven, intelligent corporate processes.

To successfully harness the potential of all facets of data management, we develop a vision based on your specific priorities and capacities, apply this to your key use cases in a first step, and then gradually implement it throughout the business.

### Current top real-world topics



ANALYTICS
PLATFORM
Combining busine

Combining business intelligence with big data



ARCHITECTURE & INTEGRATION

Setting your data architecture on the road to success



MODERN DATA WAREHOUSE

Optimum data architecture thanks to cutting-edge



DATA GOVERNANCE

Guaranteeing maximum data quality

Benefit from professional data management thanks to our expertise:









### Your point of contact for data management

We are on hand to assist you across all project phases – from business comprehension to technical implementation. Get in touch with us and together we will find and develop the ideal solution for your specific data management issue.



**DR. BENJAMIN KLÖR**Business Development Manager
Data Management

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### Swiss Re | A modern telematics solution

- An automated platform-based solution
- (+) Easy access & analysis for data scientists
- Added value for insured persons and insurance providers:
  - Calculation of driving risk
  - Lower insurance premiums
  - Clarification of insurance cases
  - Savings on staff costs

loT
Cloud
Analytical platform
Artificial intelligence (AI)
Machine learning (ML)
Data science
Reporting
Visualization



Microsoft Azure



Power BI

#### **CHALLENGE**

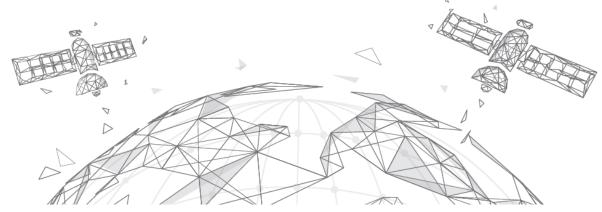
- Taking advantage of digitalization in the automotive sector
- Logging of all vehicle data, e.g. GPS position, acceleration, braking manoeuvres, steering behaviour, etc.
- Quick, informative data processing and usage
- Visual rendering

### **SOLUTION**

- Analytical platform with complete integration into the cloud
- Generation of vehicle data in real time
- Development of an app allowing for mobile data transfer
- Automated data processes (machine learning, data science)
- Visualization via MSFT Power BI

#### **RESULT**

- A win-win for insurance providers and insured persons
- Data is available on a single platform, updated continually and automatically processed
- · Quick, simple access to data
- Targeted use of data for added value in various areas



### Lottery company | Master data management

- ① Data store with master data management solution
- + Quicker data processes and high data quality
- ① Data storage in the cloud with software as a service (SaaS): Dynamic scalability and data availability in real time

Master data management Cloud Software as a service (SaaS) Golden record



Profisee

### **CHALLENGE**

- Complex systems arranged in a heterogeneous software landscape and separate data silos
- Uniform display of relevant data for customers
- Solution allowing for data to be permanently available – even in the event of extensive queries – and reliable IT system performance
- Cost savings to maintain the idea of social success as declared by this lottery company

### **SOLUTION**

- Master data management with a uniform platform in the cloud
- Web systems disconnected from back-end systems; data models and services able to be reused
- Automated creation and management of golden records

- Uniform access to business objects
- Visually uniform display for customers
- Permanent access to current data at a high quality along with quicker responses to market developments
- The lottery company's social success project makes cost savings

### **Data Visualization**

Data visualization is one of the building blocks for creating a data-driven company. When managing, planning and developing products and strategies, clear visualisations based on sound findings allow for insights to be gained quickly from complex data and processes. Various types of visualization and techniques are successful depending on requirements.

Alongside traditional variants – bar charts, line charts and other diagrams – our visualization experts use dynamic reports and dashboards that draw on a host of visual elements. Establishing links between the various divisions in the company allows for rapid access to all relevant data. You can also use the cloud to consider external factors in your visualizations, such as current market developments.

### Current top real-world topics



DASHBOARDS & REPORTING

Key facts at a glance and reporting solutions



DATA EXPLORATION & ANALYSIS

Identification of data relevant for making decisions and utilising data science



INFORMATION DESIGN/ CUSTOM UX

User-friendly design and data interaction



**SELF-SERVICE BI** 

Access to relevant data and autonomous data use across departments

Benefit from professional data visualisation thanks to our expertise:









### Your point of contact for data visualization

Get in touch with us and we will assist you in developing your own recipient-specific visualisation solution. Our approach allows you to benefit from our extensive visualisation expertise and visualisation tools, all of which meet the International Business Communication Standards



MICHAEL TENNER
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**DIRK MÜLLER** Sales Manager

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### Insurance industry | Rethinking analytics, data and reporting

- ① Data warehouse in the cloud
- (+) Easy access to and analysis of data
- (+) Added value for the customer:
  - Data warehouse in the cloud
  - Data sets for reporting and analysis are consistent across the group
  - The prerequisites for big data, advanced analytics and the use of artificial intelligence are met

Cloud
Analytics platform
Reporting
Visualization



Microsoft Azure



Power BI

#### **CHALLENGE**

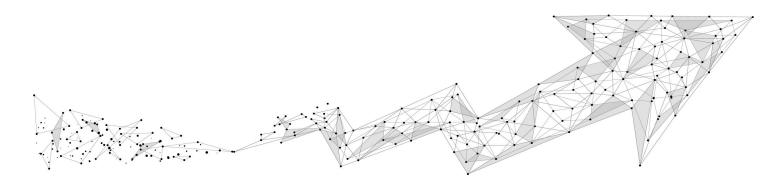
- Upgrading the existing DWH
- Leveraging the benefits of a DWH in Azure
- Safeguarding viability in the future
- Quick, informative data processing and usage
- Compliance with the GDPR
- Visual rendering

#### **SOLUTION**

- Development of a BI/DWH architecture and infrastructure (including data integration)
- Full integration into the cloud
- Incorporation of more than 120 million data sets
- Generation of reliable data in real time
- Composition of informative reports

#### **RESULT**

- Uniform, transparent core figures
- Higher data availability
- BI self-services for departments, allowing for independent resolution of issues
- New data sources can be integrated with ease
- Targeted use of data for added value in various areas
- · High flexibility and scalability



### E wie einfach | Cloud-based data networking

- Data aggregation from a wide range of sources and formats
- Optimum visualization of core figures
- Briefer process cycles
- Improved cooperation
- Satisfied customers

Artificial intelligence (AI)
Machine learning (ML)

Data warehouse Reporting Visualization



Microsoft Azure



Power Query, Power Pivot und Power BI Desktop



Microsoft SQL Server laaS und PaaS-Komponenten



Microsoft Azure Data Lake Analytics-Komponenten

### **CHALLENGE**

- Comprehensive customer data from a range of sources
- Consolidation and analysis of data is a time-consuming process
- Optimal use of data
- Rapid access to current data

### **SOLUTION**

- Data warehouse: Integration of data from different sub-providers
- Based on the Microsoft Azure cloud platform
- User-friendly visualisation with Power BI
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- All source systems are linked together
- Data is transparent and up to date and can be used straight away
- · Rapid, automated ongoing processing of data
- Optimisation of corporate and customer processes

### Product segmentation in the production process

- (+) Data-driven creation of product families
- (+) Optimization of production processes by creating synergies
- (+) Improved utilisation of production sites

Machine learning (ML) Artificial intelligence (AI) Data science Industrial analytics Graph analytics Clustering

### **CHALLENGE**

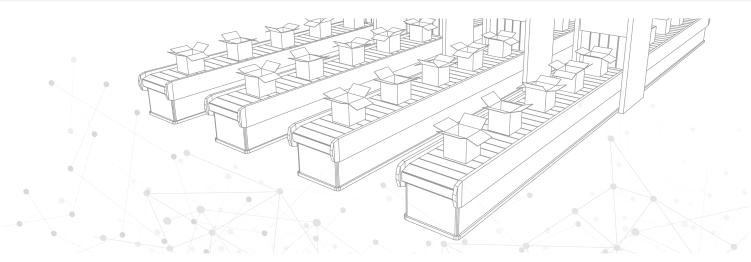
- High volume of products and variants (~67k)
- Complex dependency structures
- · Parts lists as basis for data

#### **SOLUTION**

- Conversion of product part lists into graphs that represent sub-components and dependency structures
- Machine learning for the identification of similar products
- Distributed computing via data bricks for the rapid generation of results

#### **RESULT**

- Creation of 100 easy-to-handle product families
- Machine learning used to automatically group thousands of products into product families at short notice – a process that took two years when performed manually for 500 products



### Mondi | Packaging industry

- A forecasting model detects deviations in quality in good time
- A recommendation system provides machine operators with specific proposals on how to optimise their actions

Artificial intelligence (AI)
Data science
Industrial analytics
Advanced analytics
Operational technology

Predictive quality
Predictive maintenance
Industry 4.0
Industrial Internet
of things (IoT)

### **CHALLENGE**

- Increasing global pressure of competition for European production sites
- A range of different products at different production sites
- Natural raw material: Adapting machine setups takes time and effort
- Multiple machine and process parameters: Effects on product quality
- Time-consuming process to guarantee quality along with delays in receiving results

### **SOLUTION**

- Focus on product quality indicators
- Development and implementation of an automated recommendation system with self-learning algorithms:
  - a traffic light system draws attention to deviations in quality
- machine operators receive specific instructions on where to take action
- Visualization: OSIsoft PI Vision (by a project partner)

- Improved process stability: deviations are immediately detected during production
- Optimum machine setups thanks to the recommendation system:
  - new working methods for machine operators
  - Reduction in waste, reworking, night work, system downtime and production costs
- Next step: Scaling of solution by rolling it out to other sites

### Car sharing | Increasing customer activity

- The largest car-sharing provider in Switzerland, with a long company history
- (+) Identification of typical customer groups
- Accurate customer communication that creates value
- ① Increase in customer activity through targeted incentives

Machine learning
Artificial intelligence
Data science
Predictive marketing
Cloud
Analytical platform
Clustering/Recommender system

#### **CHALLENGE**

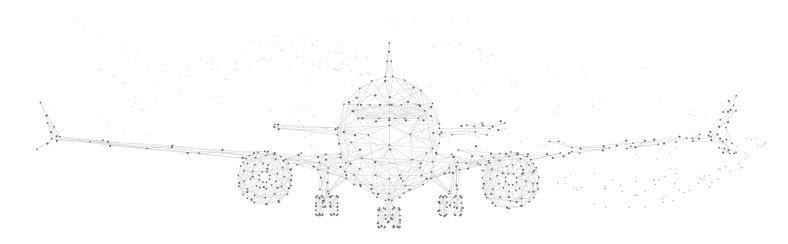
- Targeted customer approach based on the customer's level of activity
- Customer data drawn from various sources and without a central point of contact
- Grouping of existing customers

#### **SOLUTION**

- Central customer database: Customer analytics hub
- Data science method: Customer segmentation (customers with a similar booking process)
- Integration into cloud-based mailing system

#### **ERGEBNIS**

- Global overview of customer base
- Targeted communication along the entire customer journey
- Increase in revenue with suitable services



## Tailored offers in the travel industry

- (+) Identification of typical customer groups
- + Accurate customer communication that creates value
- Satisfied customers receive offers tailored to them. Customers are more likely to book

Machine learning
Artificial intelligence
Data science
Predictive marketing

Analytical platform Cart recovery Clustering / Recommender system

### **CHALLENGE**

- Targeted customer approach to cater for specific travel preferences
- Customer data drawn from various sources and without a central point of contact
- Better knowledge of individual customer requirements

### **SOLUTION**

- Central customer database: Customer analytics hub
- Data science methods: Customer segmentation (travellers with similar demands)
- Cloud-based mailing system optimized by machine learning

- Recognition of future customer requirements
- Targeted communication along the entire customer journey
- Increase in revenue with suitable services

### pmOne - Data Driven. Al based. People Minded.

pmOne helps its customers get to grips with digitalization by providing valuable expertise in data management, data visualization, data science and CPM. Relying on a team of more than 100 individuals, pmOne tailors the company's innovative, comprehensive portfolio of services – from maturity level analysis of digital data utilisation, individual cloud strategies and architectures through to implementation, operation and maintenance – to a wide range of customer projects.

Cutting-edge data science technologies, machine learning methods and recommender systems can all be used to create significant added value.





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