Predictive Analytics

Customer Successes

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See the Future More Clearly with **Predictive Analytics**

Competing in today’s marketplace means using all types of data. Your organization can identify untapped opportunities and expose hidden risks buried inside Big Data and the Internet of Things – all in real time – with the power of predictive analytics. You can quickly build sophisticated predictive models to mine your data for the insights that will keep you ahead of the pack.

The instrumentation of nearly everything is creating a rising tide of data, both structured and unstructured. Every enterprise realizes data is a priceless strategic asset and a resource for competitive advantage. But data by itself is of little use.

No matter what business you’re in, your future success may depend on one thing: real-time predictive insight. Not just insight gleaned from standardized reports and data but predictive insight buried in data from across your entire organization and beyond – data that you can use the very moment it’s created to help your business thrive.

Successful companies realize the potential of predictive analytics used across business processes, applications, and line-of-business solutions to sustain competitive advantage. Your organization can use SAP® Predictive Analytics software to get insights that drive real-time understanding of the business, and confidently anticipate what comes next to guide better, more profitable, forward-looking decision-making.

[www.sap.com/predictive](http://www.sap.com/predictive)
Become a Data-Insights-Driven Business to **Drive Success**

Organizations can no longer focus solely on delivering the best product or service. To succeed, they must uncover hidden customer, employee, vendor, and partner trends and insights; anticipate behavior and then take proactive action; and empower the teams with intelligent next steps to exceed customer expectations. They must also create new offers that increase market share and profitability, develop and execute a customer-centric strategy, and target the right offers to the right customers through the best channels and at the most opportune time.

SAP Predictive Analytics allows your organization to achieve real-time insights that increase your understanding of customer behavior, improve your response to customers, and deliver tangible business value – ultimately driving your profitability. SAP customers are already reaping the rewards: by reducing the time to transform information into insights and improving the quality of decisions based on those insights to drive higher profitability and growth.

Why not join them?

“SAP Predictive Analytics has allowed mBank to discover individual customer preferences and identify the next best activity for our marketing efforts. Now we are able to initiate more direct conversations, resulting in a better understanding of our clients on a personal level.”

*Bartosz Witorzeńć, Strategic Initiatives Manager, Retail Banking Department, mBank S.A.*
## Search Customer Stories

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Improved Care with SAP Predictive Analytics

“SAP Predictive Analytics will allow us to create better paths of care for our patients. Predicting anything from readmission to mortality to infections is complex. You need lots and lots of data to be able to create those kinds of models.”

Tom Summerfelt, Vice President, Research and Innovation, Advocate Health Care

Company Advocate Health Care | Headquarters Downers Grove, Illinois | Industry Healthcare | Products and Services Largest health system in Illinois

www.advocatehealth.com
Bringing Fleet Management into the Digital Age with SAP HANA® and SAP Predictive Analytics

“We invested in SAP HANA, the Internet of Things, and telematics 10 years ago. Since, we have tripled our portfolio to 1.4 million vehicles.”

Bill Powell, Director of Enterprise Architecture, ARI

Company ARI | Headquarters Mt. Laurel, New Jersey | Industry Travel and transportation | Products and Services Global fleet management | Employees 2,500 | Revenue US$2.4 billion

*At the time of purchase, SAP Predictive Analytics was called the SAP InfiniteInsight solution, which did not include new functionality available since December 2014.
Before: Challenges and Opportunities
• Use innovation as a key to adapt to a changing market and move forward despite increasing size
• Collect data on every aspect of operations – from car ordering to remarketing to driver behavior – to control total cost of ownership for customers and improve driver safety
• Bring more value to customers by moving from a reactive to a proactive state

After: Value-Driven Results
• Real-time data on driver safety, driver behavior, repairs, fuel, and more – helping ARI customers make faster decisions, run more efficiently, and keep drivers safer
• Predictive analysis of data on maintenance, engines, tires, transmissions, and more using SAP HANA® business data platform – helping better inform customers and stay ahead of their needs
• IoT and telematic technology to connect assets, drivers, and vendors, providing deep operational insight
• Geocoding that can determine when a driver is within 400 feet of a required stop – helping determine how much time was spent before getting back on the road
• Less manual contact across processes, for greater efficiency, increased value, and lower costs
• Ability to help customers understand how they spend and why, and how to avoid overspending and downtime

2 seconds
To receive new vehicle data, compared with 2 minutes just 7 years ago

1 TB
Of telematics data handled each month using SAP HANA

96%
Goal of call center interactions handled with a machine learning algorithm

More information
Reducing Customer Churn with SAP Predictive Analytics

“Through the combination of SAP Predictive Analytics, SAP HANA, and SAP Business Warehouse – the foundations of the gisa.Customer Insight application – we are able to quickly and accurately predict customer churn. With this innovative service, we can help our clients launch targeted customer loyalty measures based on individual customer ratings.”

Steffen Hefter, Key Account Manager, A/V/E GmbH

Company A/V/E GmbH | Headquarters Halle, Germany | Industry Professional Services | Products and Services Comprehensive services for the power and energy sector | Employees 400

www.ave-online.de
Objectives

- Expand service offerings to include customer retention measures
- Help energy suppliers enhance customer loyalty and decrease customer churn in a competitive marketplace
- Position A/V/E as an innovative service provider for the utilities industry

Why SAP

- Integrated approach to predictive analytics and Big Data through the combination of SAP Predictive Analytics software with the SAP HANA business data platform and the SAP Business Warehouse application, which offer standardized evaluations, flexible analysis, and visualization of findings
- Ability to process both structured and unstructured source data from the SAP for Utilities solution portfolio

Resolution

- Deployed the gisa.Customer Insight application by GISA in order to rapidly capture, analyze, and graphically evaluate large volumes of data
- Predicted risk of contract termination by transforming unstructured text data such as customer complaints into structured target data based on scaling nominal properties, such as severity level and number of complaints, and applying a logistics regression algorithm
- Calculated individual customer scores based on contract termination probability to design effective customer retention campaigns

80%
Accuracy in predicting contract termination risk

<3 seconds
To identify contract termination risk

<3 minutes
To assess customer value

Near-real-time
Data modeling and forecasting

More information
What Happens When Sales Reps Become Just As Valuable As the Products They Sell?

“We are fluidly evolving with our customers by sensing opportunities and challenges in real time and responding to them just as quickly with the combination of SAP Predictive Analytics and SAP HANA.”

Larry Goryachkovskiy, Lead Analyst, Global Sales Strategy and Planning, Cisco Systems Inc.


www.cisco.com
Before: Challenges and Opportunities

- Realization that a real-time, dynamic approach to sales strategy and planning can help serve customers better
- Lack of real-time insights leading to poor sales execution

Why SAP

- Recommendation engine that creates a personalized view of a rep’s accounts and related product and services information, such as bookings, gold sheet data, headcount, sales pipeline, and supply chain performance
- Consolidation of various data sources from a business function into a single data warehouse and analytics software tool
- Optimization and standardization of reporting across the sales organization to gain real-time visibility into operations

After: Value-Driven Results

- Improved visibility into daily sales targets through informative dashboard analytics, leading to more productive interactions and higher win rates
- Social network analysis that helps find product associations between products in different parts of the portfolio
- Improved visibility into offering overlaps by detecting patterns in historical bookings and transactions
- Recommendations engine that accurately shows customers who are ready to buy a new product and how representatives should pitch to them
- Higher customer satisfaction with focused, relevant sales efforts and faster issue resolution

>$1 billion
Of new revenue created through proactive recommendations

17,000
Sales agents using SAP Predictive Analytics

1
Platform for all data

More information
Reducing Driver Turnover and Building a Safer Workforce with SAP Predictive Analytics

“With the predictive modeling and data visualization of our SAP solution, we're reducing employee attrition in an industry with an annual turnover rate of more than 100%. Now we can better understand our workforce, identify the factors behind turnover, anticipate drivers at risk of leaving, and keep the right people.”

Chris Orban, VP Advanced Analytics, Covenant Transportation Group Inc.

Company Covenant Transportation Group Inc. | Headquarters Chattanooga, Tennessee | Industry Travel and transportation | Products and Services Trucking and hazmat transport, equipment brokerage, and lending services | Employees 4,400 | Revenue US$273 million

www.covenanttransport.com
Covenant Transport

Objectives

• Reduce driver attrition despite the industry’s annual turnover rate of more than 100%
• Improve the safety of trucking operations
• Ensure that loans meet underwriting criteria and are administered properly
• Predict the required maintenance on physical assets

Why SAP

• Speed and ease of use of the SAP HANA business data platform
• SAP Predictive Analytics software to run data models in seconds rather than hours and to identify key attrition factors without needing data scientists
• SAP Lumira® software to visualize data, create compelling storyboards, and enable executives to consume data easily

Resolution

• Zero infrastructure and support costs by deploying the solution in a third-party hosted environment
• Significant reduction in driver turnover
• Greater focus on talent development and over-the-road safety
• More comprehensive customer service offerings at a lower rate

15%
Reduction in driver turnover in the first year

<6 months
ROI payoff

Improved
Talent development and driver safety

More information
Renewing Forests and Improving Pulp Production Using SAP Predictive Analytics

“After unifying the IT infrastructure, we searched for a solution that would allow us to apply Big Data analytics, helping us to support the investments that had been made up to that point.”

Wilson Lopes, CIO, Fibria

Company Fibria | Headquarters São Paulo, Brazil | Industry Mill products | Products and Services Production of bleached eucalyptus pulp from renewable tree plantations | Employees 16,738 | Revenue US$3.09 billion

www.fibria.com.br/en
Fibria

Objectives
• Enable projects with vast amounts of data
• Support the company’s business strategy and sustainability goals
• Optimize processes to increase the level of plantation productivity and profitability
• Turn 14 years of data into productive insights

Resolution
• Identified key areas where insights from Big Data analytics should result in biggest operational gains
• Deployed SAP Predictive Analytics software with the SAP HANA business data platform

Benefits
• Better handling instructions for tree clones as a result of acquired knowledge
• Enhanced demobilization and acquisition of assets
• Influential variables in wood consumption identified
• Greater understanding and control of industrial processing variables

ROI
In under one year
Faster
Results by identifying the best analytics projects to undertake
Better
Support for decision-making related to annual forestry plans

More information
Gendarmerie Nationale

Processing Data Quickly for Effective Action with SAP HANA

“As an integrated intelligent analysis platform, our SAP software supports 90,000 users of both the Police Nationale and the Gendarmerie Nationale. And SAP’s in-memory SAP HANA business data platform will enable us to process data that we ignored in the past due to insufficient response times of our existing applications.”

Colonel Vincent Bertrand, Chef de Bureau, SDSI/BOSS, Gendarmerie Nationale

Organization Gendarmerie Nationale | Headquarters Paris | Industry Public sector – law enforcement | Products and Services Public security services | Employees 100,000 (+25,000 reserves) | Revenue €7.7 billion

www.gendarmerie.interieur.gouv.fr
Gendarmerie Nationale

Objectives
• Uphold public order and public safety
• Foster intelligence-driven policing by utilizing the wealth of information contained in a disparate database
• Optimize human and logistics resources

Resolution
• Implemented the SAP HANA business data platform, SAP Predictive Analytics software, and SAP BusinessObjects business intelligence solutions
• Introduced processing of a huge variety of data sources and data formats, including structured and unstructured data
• Introduced support for 90,000 users, including members of Police Nationale and the Gendarmerie Nationale

Benefits
• Reduced cost and optimized resources, for example, with preventive maintenance
• Increased flexibility of existing applications
• Enabled field units to make better decisions on a day-to-day basis with ready-to-use reports
• Gained full compliance with privacy and legal regulations

1,000 hours
Saved per month through better access to data analytics software

Dramatic
Decrease in time needed to run reports – from 4 hours down to seconds

Greater
Efficiency through digital sharing between units

Higher
Quality of information by combining different software systems

More information
GMK Holdings

Building the First Risk Control System powered by SAP HANA in the Commodity Trading Sector

“We run a complex business in which minimizing risk is crucial to success. With our risk control system powered by SAP HANA, we have the visibility and real-time data we need to monitor potential risk efficiently and make business decisions that protect both consumers and our bottom line.”

Dan Luo, IT Director, GMK Holdings Co. Ltd.

Company GMK Holdings Co. Ltd. | Headquarters Shandong, China | Industry Cross-industry | Products and Services Production and process of copper and chicken | Employees 13,000

http://en.gmkholdings.com
Objectives

• Real-time calculation of risk control KPI to provide in-time risk control advice
• Single source of truth for managed and financial reports across all business units to drive daily business operations
• Greater standardization of business processes across all subsidiaries
• Reduction in control efforts and compliance risk
• Increase in cost control with cost calculations based on orders

Resolution

• Important risk control KPIs computed in real time to provide in-time suggestions for traders and the management team
• Centralized platform for material procurement and spot-and-future trading with one-stop risk control
• Coverage from the back end to the front end, with higher efficiency and lower risk
• Consistent financial and managerial reports for real-time decisions

First

Risk control system powered by SAP HANA in the commodity trading industry

45x

Better risk control reports, such as position analysis, profit-and-loss analysis, and funds-used analysis

30%

Reduction in manual efforts using the real-time risk control system

36x

More-efficient data comparison reporting

3–4 minutes

Take-over time with zero data loss on primary system failure

More information
Protecting Our Communities with Predictive Data

“We care about protecting citizens and consider our work an integral part of the fabric of society. With predictive models, we can offer people peace of mind and improve their quality of life.”

Hudson Harris, Chief Privacy Officer, HarrisLogic

Company HarrisLogic | Headquarters St. Louis, Missouri | Industry High tech | Products and Services Software for healthcare clinical operations and delivery systems integration | Employees 220

www.harrislogic.com
Objectives
- Predict whether someone who had been in jail and with a mental health condition would return to jail within six months
- Integrate mental health data with criminal justice data
- Create a user interface that engages and empowers the government user base

Why SAP
- Near-seamless connectivity to the SAP HANA business data platform on Amazon Web Services and strength of SAP Leonardo Analytics capabilities
- Automated analytics and rapid prototyping of its models with SAP Predictive Analytics software

Resolution
- Live predictive models for recidivism and high-volume users
- Tight user experience integration that allows for up-to-the-minute prediction on incoming jail records
- Important predictive factors flagged for clinician and real-time decision support for accurate resource allocation
- Richer insights and fine-grained drill-down paths through data that extends analysis to users wishing to perform ad hoc analysis
- Real-time predictions using a native, logistical regression model

Future plans
Partner with SAP for expansion and growth into new markets, targeting higher education and crisis services

89%
Average rate of crisis diversions in major metro areas

25%
Reduction in behavioral health crisis spend

12,000
Encounters processed per month

99%
Prediction accuracy

More information
Kaiserwetter

Boosting Investments in Renewable Energies

“The integration of SAP Leonardo capabilities helped us, having a digital infrastructure to combine technical and financial data. Capital investors and financing banks are getting the big picture of their assets and portfolios in real time.”

Hanno Schoklitsch, CEO and Founder, Kaiserwetter Energy Asset Management GmbH

Company Kaiserwetter | Headquarters Hamburg, Germany | Industries Professional services and banking | Products and Services Service provider for renewable energy asset and portfolio management, focusing on digitalization to support the financial sector | Employees 30

http://en.kaiserwetter.energy
Before: Challenges and Opportunities
• Catalyze investments in renewable energies for customers around the world
• Meet the ambitious energy targets related to the Paris climate agreement
• Succeed in an industry with opaque markets and investments
• Integrate technical and financial data in one IT solution

Why SAP
• Market presence of SAP and reliability of SAP Cloud Platform
• Full scalability with high-security data warehouses around the globe from SAP
• Internet of Things and predictive analytics portfolio, as well as future possibilities with machine learning and blockchain
• Customer-as-a-partner model (OEM), which allows customers to build their own solution with go-to-market, sales, and marketing support

After: Value-Driven Results
• Automated aggregation of technical and financial data from each kind of energy-generating asset, as well as climate factors, using Big Data mining and smart data analytics
• Supported executive-level dashboards with automatic KPI calculations
• Simplified the organizational structures with much higher efficiency
• Allowed for a global approach with geographical independence

Maximized
Asset and portfolio performance
Minimized
Investment risks by creating transparency at the highest level
Maximized
Return on investment

More information
“SAP Predictive Analytics has allowed mBank to discover individual customer preferences and identify the next best activity for our marketing efforts. Now we are able to initiate more direct conversations, resulting in a better understanding of our clients on a personal level.”

Bartosz Witorzeńc, Strategic Initiatives Manager, Retail Banking Department, mBank S.A.

Company mBank S.A. | Headquarters Warsaw, Poland | Industry Banking | Products and Services Retail, corporate banking products and services, wealth management | Employees 6,318

www.mbank.pl
Objectives
• Respond to customer needs as quickly as possible
• Gain insights into customer preferences to support a customer-centric banking experience across all channels
• Optimize the company’s discount program (mDeals) by providing better service to partners and more-targeted offers to customers
• Improve the performance of marketing campaigns by better understanding customer behavior and anticipating future demand

Benefits
• Reduce churn and grow revenue by automating campaigns and offer activation
• Increase sales efficiency and reduce the cost of sales
• Minimize the effort to train employees and identify targeted customers
• Empower mBank’s discount program by personalizing the number and amount of discounts for each customer based on predictive insights

Resolution
• Predictive modeling based on transactional and demographic data
• Precise segmentation, advanced reporting, and execution of real-time, multichannel marketing campaigns
• Context-specific offers across all channels based on customer profiles

10x
Increase in campaign effectiveness

200
Campaign models running every day

Real-time
Marketing campaigns

Highest
Net promoter score in Poland

More information
How Does Mercy Use Big Data to Help Keep Patients – and Nurses – in Good Health?

“Using predictive analytics, we’re able to understand when and how we risk underusing our valuable human resources. Then, we can redirect them where they’re needed and operate at full capacity.”

Kyle Falkenrath, Director of Labor Strategy Alignment and Governance, Mercy

Organization Mercy | Headquarters St. Louis, Missouri | Industry Healthcare | Products and Services Hospital in-patient and outpatient services in clinics and over the Internet | Employees 44,000 | Revenue US$5 billion

www.mercytechnology.net
Before: Challenges and Opportunities

- Harness Big Data to gain oversight into scheduling periods, fill rates, and cancellations
- Use predictive analytics to determine points at risk for leakage of its nurses’ hours and adjust resource assignments accordingly
- Increase ministry outreach and expand the service portfolio

Why SAP

- Universally respected data management and predictive analytics solutions
- Deep insight into the challenges for healthcare providers in the digital age
- SAP HANA business data platform and advanced analytics already operating successfully at Mercy

After: Value-Driven Results

- Elimination of manual report collation thanks to an overview of all resource management factors in one solution
- Insight into performance trends to help forecast care needs by type, location, resource, and cost
- Operational efficiencies to bring affordable services – and more services – to patients throughout the network
- Greater employee satisfaction through predictable and reliable scheduling that helps caregivers plan time off
- Built-in capacity for innovation to stay ahead of emerging issues in the healthcare market

~200 years
Length of Mercy’s legacy of serving its communities

$4.3 million
First-year savings in agency labor costs to fill unexpected staffing gaps

More information
SKYLARK

Making Predictive Analytics and Big Data Part of the Menu

“With SAP Predictive Analytics, it was possible for us to increase the speed of the plan-do-check-act cycle from analysis to verification. I believe it will serve as an important part of the construction of a data management platform.”

Yutaka Sera, Director of the Insight Strategy Group, Marketing Headquarters, SKYLARK Co. Ltd.

Company SKYLARK Co. Ltd. | Headquarters Musashino City, Tokyo | Industry Consumer products – restaurants | Products and Services Food service and other peripheral businesses | Employees 4,395 full-time employees and 81,108 crew members | Revenue ¥351 billion (December 2015)

www.skylark.co.jp
Objectives
• Increase the accuracy of one-to-one marketing to improve customer satisfaction and ROI
• Accelerate demand prediction with a better-advanced analytics platform

Resolution
• Advanced analytics platform constructed with SAP Predictive Analytics software
• Tests conducted using actual data
• Successful launch led by the marketing department

Benefits
• Improved accuracy of various campaigns and measures involving coupons
• Big Data digital platform able to handle more than 10 billion records
• Faster completion of analysis tasks

80%
Reduction in analysis time

3 days
Up-front testing period using actual data

Increased
Speed of the plan-do-check-act cycle

More information
Building Sales and Customer Loyalty with SAP S/4HANA® Enterprise Management

“A huge digital transformation is occurring within Snow Peak since we introduced SAP software. The knowledge that our staff members have accumulated has been made visible and can be shared.”

Tohru Yamai, President, Snow Peak

Company Snow Peak | Headquarters Sanjo City, Japan | Industry Retail | Products and Services Equipment and apparel for camping and backpacking | Employees 198 | Revenue ¥9.22 billion (US$8 million)
Objectives

- Broaden and deepen customer relationships
- Use customers’ buying-history data to improve their shopping experience
- Centralize and unify business information of many kinds and make it available in real time

Why SAP

- Software vendor known for continuous innovation of its product suite
- Real-time data availability with in-memory computing
- Technology platform with built-in analytics to support growth
- Comprehensive, integrated ERP that supports all aspects of the business

Resolution

- Deployed the SAP S/4HANA® Enterprise Management solution
- Used SAP Hybris® solutions and SAP Predictive Analytics software to manage its customer points program and make product suggestions to its members
- Coalesced information about customers and used it for more-effective targeting of event invitations

Benefits

- Improved the ability to analyze customer behavior and obtained results sooner
- Inspired and equipped employees to come up with new solutions to help the business
- Optimized inventories and increased sales

Snow Peak
Combating Drug Abuse Using SAP Predictive Analytics with SAP HANA

“This is still a work in progress, but what we want is to take these mountains of data that are in different places and turn it into information, turn that information into knowledge, and hopefully turn that knowledge into policy. SAP has been a valuable partner in this endeavor.”

Joshua L. Martin, Chief of Staff, Government Efficiency and Financial Planning and Management and Performance Hub, Indiana Office of Management and Budget, State of Indiana

Organization State of Indiana | Headquarters Indianapolis, Indiana | Industry Public sector | Products and Services Legislation, regulation, and citizen services | Employees 28,000 | Revenue US$30 billion

www.in.gov
State of Indiana

Objectives
- Combine data in new ways to gain insight into trends
- Conduct a study to better understand reasons for the state’s drug abuse crisis
- Visualize issues and use prediction to understand drug use change over time

Why SAP
Analytics solutions that provide the insight and analysis needed by the program

Resolution
- Used SAP Predictive Analytics software with the SAP HANA business data platform as part of the Management and Performance Hub (MPH) initiative to examine the drug abuse crisis in ways not possible before
- Combined large, disparate crime-lab data sets to normalize data using Drug Enforcement Administration drug classifications in SAP HANA

Benefits
- More-accurate monthly planning with rolling forecasts
- Enhanced ability to predict product failure for better customer service and better control over financial implications

Improved
Insight into drug abuse trends, finding drug use types on the rise and predicting where hot spots could arise

Identified
Trends allowing state employees and officials to visually see the drug abuse problem that has occurred over time and help find ways to provide targeted help where it’s needed most

Uncovered
Other crime factors before unseen, such as a growing trend in pharmacy robberies

More information