

Transform Your Future with Better Business Insight Using Predictive Analytics



Dealing with the new reality

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Organizations like yours can **identify untapped opportunities and expose hidden risks** buried inside vast amounts of data – all in real time. You can design complex predictive models, visualize data from internal and external sources, and share insights across your ecosystem by harnessing the power of our predictive analytics solutions.

Predictive analytics has been around for decades. However, new market forces are changing the landscape and creating new opportunities for its powerful application. With data volumes exploding, organizations need to extract the maximum possible value, whether from transactional data typically generated within the enterprise or from unstructured data created by external sources like social

media. The introduction of in-memory technology has dramatically reduced the time and cost of data processing and makes it possible to perform predictive analysis against vast volumes of data in real time. The spectacular growth of the open-source statistical and data mining language “R” has empowered a new breed of data scientists with a vast array of analytical possibilities at their fingertips.



Get ready for a new approach to predictive analytics

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Harnessing big-data analytics

Intuitive modeling and advanced data visualization

Bring predictive insight to everyone in the business

Performance insight and optimization services

An integrated set of analytics solutions from SAP has been designed from the ground up to enable you to fully exploit the new reality – from database to decision. Our solutions enable you to combine the power of predictive processing using the SAP® HANA platform with intuitive modeling and advanced data visualization provided by SAP Predictive Analysis software.

Vast datasets are mined in the database using the numerous native algorithms and R integration available in SAP HANA and SAP Predictive Analysis. With predictive insights embedded and extended into

focused business applications and business intelligence content – including delivery via dashboards, alerts, and mobile devices – analytics goes beyond serving professional data scientists to supporting line-of-business users.

With SAP solutions, you can unlock the potential of big data by providing access to massive amounts of both structured and unstructured data and by enabling complex questions to be answered with blazing speed. In addition, you can take advantage of deep integration with Hadoop for preprocessing and built-in text analysis.

A full range of predictive analytics functionality is at your fingertips – whenever you need to mine vast amounts of structured or unstructured data.



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The volume of digital enterprise information is growing exponentially, and so are the opportunities to capitalize on its potential and gain a competitive edge. SAP HANA combines the depth and speed of in-memory analytics and the power of native predictive algorithms with the breadth of R to support advanced analytic and predictive scenarios.

The predictive analysis library of SAP HANA contains numerous powerful, native predictive algorithms for in-database processing that fully exploit the power and speed of SAP HANA, resulting in quicker insight and faster implementations. Common and specialized algorithms are supported, including K-means, K-nearest neighbor, C4.5 decision

tree, multiple linear regression, ABC classification, and weighted score tables, with additional algorithms added continuously.

R integration available in SAP HANA opens up all the statistical functions available in one of the world's most popular open-source projects to solve business-critical problems in real time. Analysts and developers can quickly and easily connect to and call R functions from within SAP HANA and make the results available for modeling and consumption within seconds. SAP HANA supports preprocessing of data with Hadoop via SAP Data Services software, giving you the flexibility to choose when and where data is processed for a given scenario.



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SAP Predictive Analysis provides statisticians and data scientists with an intuitive, productive environment for data modeling and advanced data visualization. Analysts use its drag-and-drop visual interface for data selection, preparation, and processing. They create models by using native, predictive algorithms and by employing algorithms from R. Users can gain deeper knowledge from stunning, advanced visualizations that reveal hidden insights.

SAP Predictive Analysis integrates with SAP HANA to unlock the value of big data and with SAP BusinessObjects™ business intelligence (BI) solutions to extend predictive insight to thousands of business users. And you can also deploy it as stand-alone software, independent of any other SAP software, enabling data to be accessed from SAP HANA, universes in SAP BusinessObjects BI solutions, SAP Sybase® IQ server, Oracle, and other structured and unstructured sources.

Use intuitive predictive modeling and stunning data visualizations to unlock the value of big data and deliver deeper business insight.



Bring predictive insight to everyone in the business

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In addition to supporting statisticians and professional data analysts, predictive insight can be experienced by everyone in the organization by extending predictive functionality into business applications, business intelligence and collaboration environments, and onto mobile devices. SAP offers line-of-business and industry-specific applications powered by SAP HANA and its predictive functionality. For example, utilities companies use SAP Smart Meter Analytics software to identify energy consumption patterns and perform customer

segmentation. Retailers use predictive algorithms in SAP HANA to hone in on product relationships and their associated financial performance in achieving corporate targets, as well as view store-level performance and conduct what-if demand model scenarios. Sales teams use predictive functionality extended into SAP BusinessObjects BI solutions to generate up-to-date pipeline reports, drill into individual leads, and make projections for the end of the fiscal period.

Bring predictive insight to everyone in the business – in applications, BI solutions, collaboration environments, and mobile devices.



Performance insight and optimization services

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The key to success when empowering business executives to reliably forecast future demand, efficiently assess alternative business strategies, and economically implement optimization solutions is to apply technology in the most effective way. Performance and insight optimization consulting services offered by SAP can help you extend your business beyond transactional efficiency toward optimizing your business performance and evolve your activities from a sense-and-respond orientation to predict-and-act capabilities.

Staffed by leading industry experts, seasoned data scientists, and technology experts, the SAP Services organization has helped hundreds of companies optimize customer segmentation in retail, load management and pricing optimization in utilities, advanced analytics and forecasting for banking, and strategic planning for discrete manufacturing. Our approach is much more effective than simply applying generic rules, common knowledge, and assumptions. With our assistance, you learn how to identify, assess, and forecast alternative business scenarios.

SAP services for performance and insight optimization offer industry-specific predictive modeling to organizations such as retailers, utilities, and banks.



Optimize future outcomes with predictive analytics

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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 team with intelligent next steps to exceed customer expectations. They also need to 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.

Predictive analytics with SAP solutions allows you to achieve real-time insights that increase 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 gained by reducing time to transform information into insights and by improving the quality of decision making based on those insights to drive higher profitability and growth. Why not join them?

“With this [SAP HANA, R, and Hadoop], we have found a way to shorten the genome analysis time from several days down to only 20 minutes.”

Yukihisa Kato, CTO and Director, MITSUI KNOWLEDGE INDUSTRY





Objectives

Solution

Benefits

Quick Facts

Summary

You can put predictive analytics into the hands of business users as well as data analysts and statisticians with an integrated set of SAP® solutions powered by the SAP HANA® platform. Unlock the potential of big data by providing access to massive amounts of both structured and unstructured data and by enabling employees to answer complex questions with blazing speed.

Objectives

- Take advantage of new market forces that are changing the landscape and creating new opportunities
- Unlock the value of big data volumes from structured and unstructured sources
- Reduce the time and cost of data processing by improving technology performance with in-memory processing

Solution

- Big-data analytics using in-database processing and integration with "R"
- Intuitive modeling and advanced data visualization
- Availability of predictive analytics to everyone in the business

Benefits

- Understand how historical sales, costs, and other key metrics translate to future performance
- Compare predicted results with goals
- Reveal the causes of customer satisfaction and employee turnover
- Show how past and emerging trends impact the bottom line
- Find correlations in data for cross-sell and up-sell opportunities
- Locate anomalies and clusters for targeted analysis

Learn more

To find out more, call your SAP representative today or visit us online at www.sap.com.

