Knowing Without Seeing
Objectives

Strengthen data privacy while enhancing business value

Recent news reports have left people uneasy about data security and wary of privacy violations. Yet, taking advantage of priceless data to fuel decision-making is crucial to success in digital business. With the SAP HANA® business data platform, the data anonymization technology helps you safeguard personally identifiable information while drawing optimal value from your data.

Data is the currency of digital transformation. Big Data and agile analytics are essential to quick, intelligent decision-making that hones your competitive edge. Yet, concerns about the confidentiality of sensitive data have arisen in the wake of highly publicized security breaches that damaged corporate reputations, tarnished brand images, and caused financial losses. New rules for data protection, such as the recently enacted General Data Protection Regulation (GDPR) for businesses active in the European Union, add to the pressure to prevent data breaches and protect the privacy of individuals.

To protect identities while capitalizing on your valuable data assets, you can harness advanced data security and privacy protection with the latest release of SAP HANA. This platform is one of the first to include an embedded, real-time data anonymization capability that lets you readily analyze data without compromising security, while opening doors to new opportunities for innovation.
Eliminate the possibility of identifying an individual

Data anonymization processes data so that no individual record, for example, a person, can be identified in a data set by such means as singling out a record, linking two records, or inferring information. SAP HANA helps you anonymize business data in real time without duplicating it and without exposing details to unauthorized users. Anonymization extends classical security features, including encryption, masking, and authorization. And it helps your organization explore new business models, such as data as a service, for data syndication that complies with security regulations and privacy protections.

Consider, for example, how past regulations prohibited the use of sensitive or personal data in business planning. “Dummy” data had to serve instead, and your planners could deliver only approximations and educated guesses. Because anonymization renders real data disconnected from individuals, data scientists can safely perform productive analytics on the anonymized data. You gain new insight you can use to innovate while staying in complete control of sensitive information.

Bridge the knowledge gap in your enterprise with real-time data anonymization in SAP HANA.
Explore techniques for anonymization

Several techniques already familiar to data scientists, such as randomization and permutation, have proven insufficient to anonymize data completely. The latest release of SAP HANA reflects deep research into more effective techniques and automates the complex computations necessary to carry them out.

In k-anonymity, we aggregate indirect identifier values to make an individual indistinguishable within a group of at least k members. Even with all fields exposed, you can’t identify a single person. You can identify only k people, essentially hiding individuals in a group.

With differential privacy, we add random noise to sensitive numerical values but design the noise elements in each value to cancel each other out statistically in large data sets. You can disconnect individual identities from the values for general use but maintain the values themselves for use in advanced analytics.

To learn how to try out data anonymization techniques and test them on your data, follow the link at the end of the “Quick Facts” section below.

Anonymize data on the fly and in-memory with SAP HANA, using sophisticated algorithms natively embedded in the platform.
Uncover the crucial information you need

Companies in many industries collect a wealth of customer data in the quest to deliver better products and services. With data anonymization, even sensitive and confidential data retains enough meaning that stakeholders can glean insight without compromising security. You comply with corporate, industry, and government regulations for privacy because you don’t expose the identities of individuals. And you can still gain valuable insights, for example, on trends in your data, as you provide transparency and demonstrate your respect for individual privacy.

Data anonymization changes the game in many industries. Insurance providers, for instance, can use anonymized data to construct accurate risk profiles, calculate competitive premiums, and prevent fraud. Healthcare researchers can target clinical trials more effectively and share lifesaving insights without invading patient privacy. Car fleets can optimize fleet management based on anonymized car and driver data. Energy suppliers can fine-tune capacity by using anonymized smart-meter data. And additional possibilities are emerging everywhere.

Eliminate the possibility of identifying an individual

Explore techniques for anonymization

Uncover the crucial information you need

Understand anonymization in context

Enhance your ROI by capitalizing on the value of all your enterprise data, and burnish your image by demonstrating digital responsibility.
Understand anonymization in context

Your users must trust data within your walls, and your external stakeholders, including customers, business partners, patients, and citizens, must trust you to protect against misuse of their data. Current events have eroded confidence on both fronts, but at SAP we address the dual challenge with an integrated data protection and security strategy.

Data anonymization lets you squeeze maximum value from your data while meeting legal and moral responsibilities to protect individual privacy. Robust authentication, user management, and authorization protocols help ensure that users access only the data they have permission to see and handle. Combined with sophisticated encryption for data both at rest and in transit, these techniques give SAP HANA solid security against cyberattacks and unauthorized data access.

Dynamic data masking for tables and views lets you display only what each user is authorized to see. Data scientists can set up test scenarios, and data protection officers can check for proper handling of data. Since access to anonymized data can be recorded in the standard auditing framework, auditors have all the information they need on data access history. And your developers can create innovative applications on SAP HANA, covered by the same 360-degree security strategy, illustrated in the figure on the next page.

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Understand anonymization in context
Add up the benefits

Unifying data from today’s multitude of direct and indirect sources to understand the market and safeguarding data from loss and unauthorized access are business imperatives in every industry. New rules for user privacy focus further attention on data security.

The data anonymization capability in SAP HANA lets you turn the privacy challenge into an opportunity and innovate with confidence. You can explore new business models for adding value, such as data as a service, while safeguarding compliance. And you can maximize the value of your data using the latest anonymization technology to take advantage of insight yielded by sensitive or personal data that you could not legally analyze before.

You can promote digital responsibility in an era in which many competitors have dramatically failed to do so. Show your customers, partners, and employees that you are dedicated to protecting their sensitive and confidential data. Data anonymization is an important cornerstone in a data security structure that helps you meet strict data protection and privacy regulations such as the GDPR.

Avoid fines of up to 4% of global annual revenue or €20 million, whichever is greater, that the GDPR documentation specifies for violations.
Summary
Data anonymization renders data disconnected from individuals, empowering business users and data scientists to “know without seeing.” It is fully customizable and embedded within the security framework and tools of the latest release of the SAP HANA® business data platform. You can anonymize sensitive and confidential data in real time and glean analytical insights from it without compromising data security or individual privacy.

Objectives
• Aggregate and monetize all data to sharpen your competitive edge
• Protect data against cyberattacks and comply with privacy regulations
• Benchmark, plan, predict, and simulate business scenarios using anonymized data
• Improve products and services and increase revenues

Solution
• Embedded techniques to disguise user identities by altering attributes while preserving analytical validity
• Timely delivery of key insights based on formerly unreachable data
• Role-based views for data scientists, data protection officers, and data administrators
• Comprehensive data protection when combined with encryption, masking, and authorization

Benefits
• Demonstrate regard for individual privacy
• Innovate with confidence in compliance with your privacy policies
• Explore new business models such as data as a service
• Increase ROI through wise decision-making

Learn more
For details on data anonymization in the latest release of SAP HANA and ways to try it out, visit us online at www.sap.com/data-anonymization.