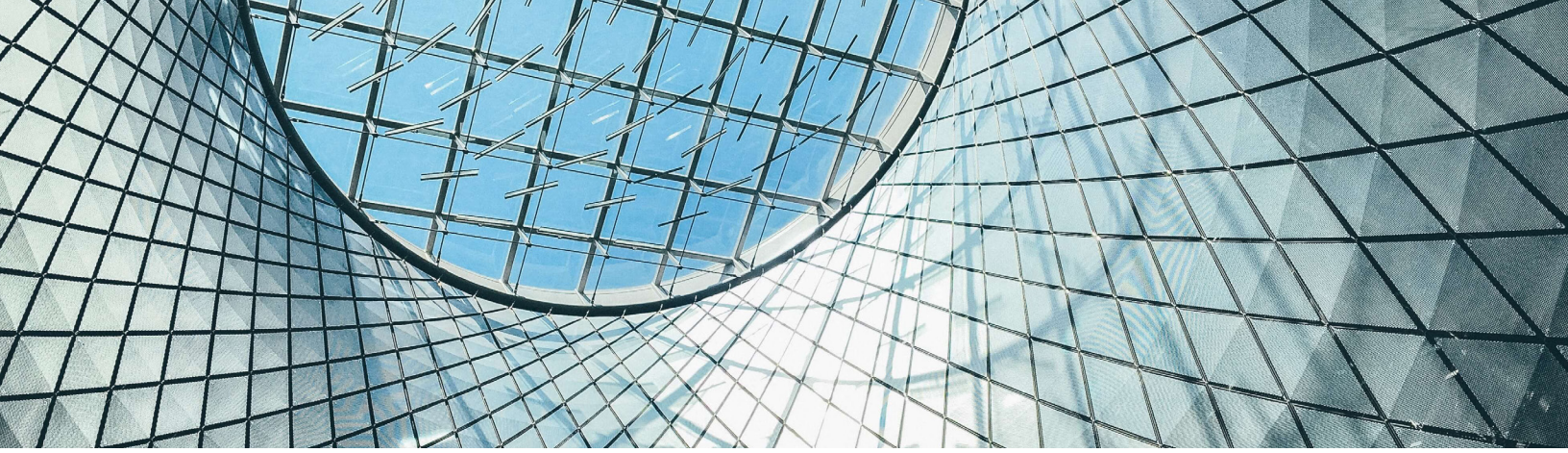

Market Insight Report Reprint

Coverage Initiation: Anonos touts compliant analytics with 'Variant Twin' technology to protect data in use

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by Paige Bartley

Compliance and data teams have long experienced friction as organizations struggle to meet regulatory requirements and simultaneously produce actionable insight. Anonos thinks it has the answer: Rather than focus on controlling data access, data is protected during use by leveraging pseudonymized versions of data sets called "Variant Twins."

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Introduction

Data protection regulations, such as the EU's General Data Protection Regulation (GDPR), were just the first reckoning for many organizations that collect and process personally identifiable information. Consumers are now becoming more aware of businesses' data practices. In 451 Research's Macroeconomic Outlook, Consumer Spending, ESG & Climate Change 2022 survey, 52.6% of consumers in a U.S. population-representative sample indicated "privacy and data protection" to be a very important ESG (environmental, social and governance)-related consideration when making a final decision to purchase from a brand, outranking other common corporate ESG measures such as carbon footprint and social activism.

With organizations struggling to provide customers with engaging, personalized experiences while respecting their data privacy, there is a challenge to process data in a privacy-preserving way. Anonos's foundational intellectual property (IP) is its "Variant Twins" that essentially create pseudonymized digital copies of personal data sets with identical mathematical properties. This allows businesses to securely conduct analytics, data science and information exchange with external parties without exposing any personally identifiable data — moving beyond access controls and enforcing controls over data when in use.

THE TAKE

In the era of data-driven decision-making, nothing stifles an organization quicker than internal friction between business units about data access and use. Data privacy and protection regulations are generally noble in their objectives, but often are met with hostility from business units that depend on processing personal information. Compliance and legal teams, meanwhile, often look to restrict personal data processing. In this sense, Anonos seeks to be a technological peacekeeper by meeting these enterprise stakeholders where they are — providing assurance that data will meet regulatory standards and giving data and analytics teams the functional data sets they need.

The company's IP is touted as a differentiator that sets it apart from other mainstream privacy-preserving technologies such as data access control and homomorphic encryption. Yet in going to market, Anonos must court distinct enterprise stakeholders with equal deftness, so that each understands the potential. Coordinating internal stakeholder discussions can be a challenge for any vendor, let alone a relative upstart.

Context

Anonos was founded in 2012 by Gary LaFever (CEO and general counsel) and Ted Myerson (president), and spent about 10 years focused on research and development around protecting data in use before going to market. The resulting IP forms the basis of the Anonos flagship technology that creates pseudonymized Variant Twins of personal data sets or other entity-specific information that can be used for analytics, machine learning (ML) and data sharing. Both founders' previous experience in the financial services sector at their prior company, FTEN, involved developing technology to improve the security of financial trading by revealing otherwise-concealed identities in real time. FTEN's technology was acquired by Nasdaq and ultimately deployed in over 100 markets around the globe.

Anonos holds 26 patents, and an additional 70-plus patent assets. The company's overarching goal has been relatively straightforward from the beginning: To reduce the internal friction that commonly exists between enterprise risk-mitigation stakeholders, such as legal and compliance teams, and enterprise data consumer stakeholders, such as data scientists, data analysts and marketers. Using a proprietary mix of data-protection techniques, the Anonos platform produces nonidentifiable "personal" data sets that can be used for data science and analytics, maintaining mathematical integrity of outcomes without exposing any individual attributes or information.

Anonos serves customers in highly regulated industries, including financial services and life sciences, as well as manufacturing and media — verticals increasingly experiencing impacts of data privacy and protection laws because of digital transformation and other modernization initiatives. Common customer attributes include the decentralized handling of personally identifiable data, especially at high scale.

Anonos has raised $70 million in funding, including a $20 million series A round from Edison Partners and $50 million in growth debt financing backed by the company's patent portfolio. The company has a virtual employment model, with 40 employees based across the U.S. and Europe, and is actively recruiting for roles in sales, marketing, customer success and partner program management.

Product

The Anonos flagship software is called Data Embassy. It creates Variant Twins, which are pseudonymized versions of personal data sets using a proprietary combination of techniques and technologies, including a specific method called statutory pseudonymization, as well as the application of synthetic data. The result is nonidentifiable personal data — an abstract digital representation of an individual — that supports business cases such as analytics, data science and data sharing while ensuring privacy by protecting data when in use.

Data Embassy can also be used to pseudonymize other sensitive information, such as trade secrets. Additional business cases for Data Embassy include compliant international data transfer, such as required by the Schrems II ruling, as well as compliance with specific data privacy and protection regulations, such as GDPR and the California Consumer Privacy Act. Use of Data Embassy expands and expedites the processing of data that otherwise would be restricted, allowing businesses to potentially grow revenue via new uses of data.

Anonos reports three key benefits to Data Embassy, which could also be considered differentiators relative to many of the other architecturally divergent products on the market supporting secure processing or analytics.

- **Secure data processing in untrusted environments**

  Data sharing and exchange is an application for Data Embassy when sensitive or personal data needs to be processed in an environment where security and privacy cannot be ensured, such as in a partner or supplier environment. Data Embassy secures data by controlling scope of use regardless of location — within various departments, outside the organization or across international borders — and according to role-based permissions. Because policies are centrally controlled, digitized and embedded within the company's Variant Twins, they travel with the data wherever it flows.

- **Cleartext utility**

  The Variant Twins created by Data Embassy are fully functional data sets that have no additional architectural requirement for processing, which means they can be used in existing enterprise systems and tools. Variant Twins work for batch or streaming data, and controlled relinking to source data provides protection that preserves privacy without loss of accuracy or utility. Because of its confidence in the software's ability to deliver 100% accuracy of results compared with processing cleartext (i.e., text not subjected to encryption, and not meant to be encrypted), Anonos guarantees that result and has a refund policy for fees if accuracy is not met.

- **Enterprise speed to insight**

  Centralized controls that enable decentralized data processing by protecting data when in use reduce complexity and overhead typically associated with setting policies and ensuring data security and privacy. Unlike statutory pseudonymization techniques used in isolation, Data Embassy offers high ease of use for stakeholders such as privacy engineers, data stewards and data protection officers. Because they can dial protections up and down as required, approval times are also reduced significantly, and cleartext utility means Variant Twins can be analyzed for rapid insight and return on investment.

Strategy

Anonos does not claim to be a comprehensive data privacy management or data governance platform, concentrating on partnerships to complement its privacy-preserving technology that addresses client needs to enforce control over data when in use. Collibra is leveraged by several Anonos customers for broader data governance purposes, as is Amazon Web Services for cloud infrastructure. EY and Capgemini SE are consulting and services partners. One ongoing project of note for the company involves developing a reference architecture to facilitate a data mesh approach that utilizes AWS, Collibra and Anonos in combination. Once developed, the reference architecture will be adapted to new customers in a "build once, fit many" approach to accelerate business outcomes.

Primarily focused on technology, Anonos has a streamlined approach to professional services. The company provides direct support to implement and operationalize the Data Embassy platform within customer environments, but it generally defers to SI and consulting partners for more advanced professional support with multivendor product integrations and architecture.

Anonos frequently gains initial traction with prospect organizations when the enterprise privacy team has a compliance-centric business case. However, sales cycles typically accelerate as soon as stakeholders from analytics and data teams are brought in. Business functions such as marketing often become directly involved in purchase decisions.

Competition

Competition for Anonos is best defined by business outcomes rather than specific technological mechanisms. Secure, privacy-preserving processing or secure sharing of data can be achieved in several ways, with one overarching category being encryption-in-use technologies. Encryption-in-use subcategories include homomorphic encryption, multi-party compute and secure enclaves. Providers include Anjuna, Baffle, Cosmian, Duality Technologies, Enveil, Fortanix, Inpher, Optalysys, Partisia, PreVeil, Sepior, ShareMind, Sotero, USEncryption and Zama.

All three U.S.-based cloud hyperscalers also have some level of encryption-in-use functionality. AWS, with which Anonos shares numerous customers, focuses on a secure enclave technology via its Nitro Enclaves offering — a divergent architectural approach from the Anonos Variant Twins. Microsoft Corp. has secure enclave/trusted execution environment capabilities. Google plays more broadly, using a mix of several encryption-in-use approaches, including homomorphic encryption.

Protegrity broadly emphasizes data security and protection techniques, including for analytics use cases. TripleBlind focuses on privacy-enhancing computation, providing a software-only solution delivered via API. Cape Privacy focuses on scalable and simple-to-use confidential compute. Keyavi Data promotes IP that essentially enables files and unstructured data to "self-secure," which can be used for use cases like data sharing and exchange.

Pure synthetic data providers could compete with Anonos, although it already embeds some synthetic data directly into its Variant Twins as part of its proprietary approach. Synthetic data platforms include Datomize, Mostly.ai and Syntho. Synthetic data sets also can be produced via deep-learning models developed in-house.

SWOT Analysis

STRENGTHS

The Anonos technology is designed to reduce friction between enterprise privacy/risk stakeholders and those that depend on data for insight. The Variant Twin concept is based on extensive IP and produces high-utility pseudonymized data sets that can be used in existing tools and architecture, while maintaining cleartext accuracy and preserving privacy.

WEAKNESSES

Anonos is a focused technology company that is not trying to be a comprehensive solution to all data privacy management and execution needs, which could be considered a weakness to organizations looking for a one-stop shop. While this all-in-one purchase philosophy is perhaps unreasonable, Anonos is pitted against much larger providers that are able to bundle multiple products.

OPPORTUNITIES

Businesses are increasingly looking for supporting technology that will allow them to reduce internal friction over data use — meeting security/privacy objectives while accelerating insight. Regulations will continue to multiply, creating additional compliance requirements. Anonos has the opportunity to expand its partner network to increase deal volume and visibility.

THREATS

The Anonos portfolio of IP and technology could make for a very attractive tuck-in acquisition target, particularly for a large suitor that wants to strengthen its credentials in the data privacy and security space. If the Anonos technology were baked into another larger vendor-specific ecosystem, Variant Twins might lose their agnosticism or ability to be used in multiple tools.

CONTACTS

The Americas
+1 877 863 1306
market.intelligence@spglobal.com

Europe, Middle East & Africa
+44 20 7176 1234
market.intelligence@spglobal.com

Asia-Pacific
+852 2533 3565
market.intelligence@spglobal.com

www.spglobal.com/marketintelligence