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Vimeo Uses Anodot to Tap Into User Experience and Optimize Internal Operations

About Vimeo

Vimeo is the world's leading professional video platform and community. With over 200 million members across more than 150 countries, the company helps anyone grow their business by making it easy to create and market high-quality, impactful videos. Vimeo is headquartered in New York City with offices around the world, and is an operating business of IAC. Learn more at www.vimeo.com.

Challenge:
Monitoring a Business in Hyper-Growth

Vimeo has a decade's worth of data and an extensive data warehouse and analytics infrastructure. The company is challenged to identify the critical signals in that data that can be used by Vimeo itself as well as by its customers to improve operations, monetize services, and advance the business. A large component of this challenge is a rule-based monitoring system which wasn't able to understand each KPI's context or dig deeper into its permutations to find hard-to-detect anomalies.

Solution:
AI-Driven Anomaly Detection to Fully Grasp User Experience

Vimeo strongly believes that data is one of its most valuable assets. Integrating Anodot into their analytics infrastructure has allowed Vimeo to leverage product usage insights to give customers the tools they need. And with the advantage of Anodot's real-time anomaly detection, the company can monitor for changes in the system's health metrics for quick alerts on performance issues that might affect customers.

Data is a Key Company Asset

Vimeo serves a wide variety of industries. Monitoring how each of those industries uses Vimeo products, and understanding their user experience, is essential to helping those customers reach their goals. This is where data analytics plays a key role. The company has an extensive data warehouse and analytics infrastructure, including tools like Snowflake, Amplitude, Looker, Apache Airflow, Apache Kafka, BigQuery, and now, Anodot.

Vimeo regularly monitors customer-oriented metrics such as product usage tracking, customer support tickets, and adoption of new features. Seeing spikes or anomalies in these metrics can help Vimeo tune its business to better meet customers' needs; for example, to create templates for areas of high customer interest.

At the same time, internal operations are well served through data analytics, too. Keen observations of anomalies and trends in a range of data metrics help the company grow revenue, reduce costs, introduce new products, and better respond to market conditions and customer needs.

Automation Proves Natural Next Step to Scaling Analytics

Vimeo has been a fast-growth company in recent years, but the pandemic has accelerated the company's growth trajectory. Vimeo Head of Data Lior Solomon underscores how the global spread of coronavirus has driven vast increases in video traffic. "Before the pandemic started, we were already serving billions of events a month. In the first half of 2020, we doubled our traffic in some of our business segments."

The company's growth was a big factor in the decision to adopt Anodot to quickly identify anomalies and trends in the data. "We have ten years' worth of data in our data warehouse and we continue adding to it very rapidly," says Solomon. "The motivation for us to look for an AI-driven automated business monitoring tool and to select Anodot for our toolbox was that the existing monitoring and alerting tools we were using were so limited. They were based on hard-coded thresholds that can't cope with our hyper growth. The threshold approach just isn't scalable because the numbers change all the time."

Solomon was familiar with Anodot from a previous job with a video adtech company. "Serving ads at scale introduces multiple complexities," says Solomon. "I've used Anodot in the past to monitor various metrics including the backend process, data quality, ad spend, fraud, and ad load time. I knew this tool would be good for Vimeo."

His data teams identified the first use case to evaluate the product. "We ended up using a known incident of an increase in CDN (content delivery network) consumption. The evaluation process was to feed the relevant data into Anodot and see if the automatic anomaly model detected the anomaly. We confirmed that the Anodot algorithm identified a known outage that we hadn't identified through our existing monitoring tools."

# Vimeo Pushes Anodot Insights Across Teams for Proactive Incident Management

Once the data team established the value Anodot can provide, they outlined a number of use cases for both internal and external customers. "The data team supports internal stakeholders such as the business intelligence team, the IT infrastructure team, and departments such as Sales, Marketing and Finance. We also cater to external customers with insights they can use to support their businesses," says Solomon.

"Among our many use cases, we are trying to identify product trends, product adoption around the globe, video consumption, marketing spend, and any anomaly in customer behavior, operational cost, and new data trends."

For example, Vimeo Create is Vimeo's new video maker tool. It allows people to easily and quickly create their own video from footage the users have

created themselves or through stock footage Vimeo provides through its platform. During outbreaks of COVID-19, Anodot alerts enabled Vimeo to identify that the "media stock search" event that is triggered every time a user searches for stock footage has been spiking specifically with the terms "fitness" and "education." "Following this insight, we have focused our product development roadmap to create more Vimeo templates that serve the fitness and educational businesses," says Solomon.

"Another product insight we've identified thanks to Anodot is a high interest in stock video and templates pertaining to Father's Day," according to Solomon (see figure below). "We will be ready with more relevant templates for the next observation of this special day."
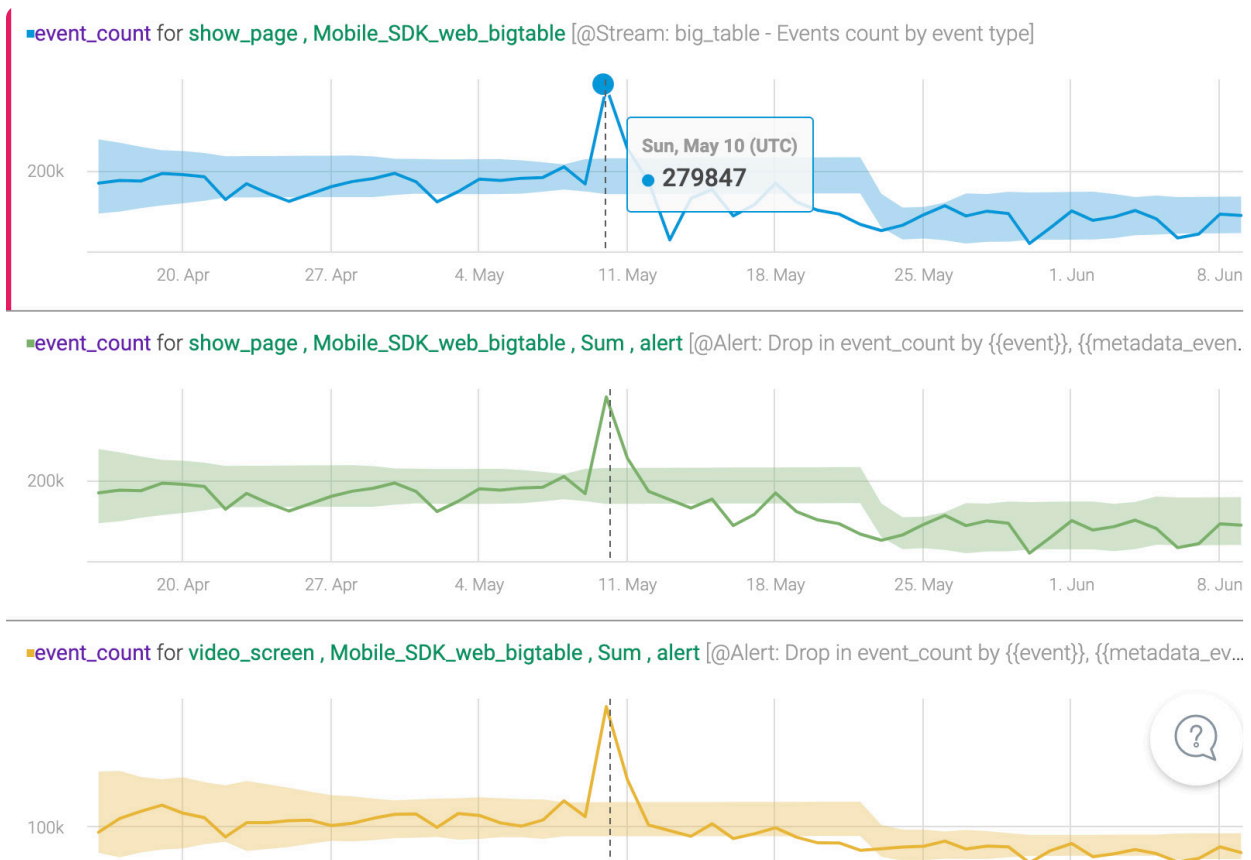
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Operationalizing Anodot

Vimeo inputs data into Anodot in two ways — batch and streaming. In batch mode, static data is ingested from the data warehouse to support non-real-time decision making. For example, in one use case, the BI team uses Anodot to track KPIs such as number of uploads to the platform, hosting cost, or bandwidth consumption through the data warehouse.

As for streaming data input, it is real-time data that is being generated by various Vimeo systems, one of which is the payments transactions API. This latter use case is to constantly monitor the health metrics of the gateway to ensure it is working properly and payment transactions are completed as expected. Alerts can fire almost instantly if anomalies are identified, such as a sudden drop in payments, which helps to prevent loss of revenue from a troublesome payment processing gateway. "Our engineering groups need to know about anomalies immediately when they happen," says Solomon.

The data engineers on Solomon's team work with internal customers to help them set up their data feeds and define the alerts they want to get. "We motivate and empower our employees to set up their own alerts as they are effectively the domain experts for some of those key business metrics. The more stakeholders apply automatic anomaly detection to their key metrics, the more we can focus on the future of our business and waste less time investigating issues retroactively," says Solomon.

Future Plans

Going forward, Solomon sees even more uses for Anodot in the years ahead. "As we further deploy automatic anomaly detection throughout the different business departments, it will be interesting to see how we can apply the anomalous insights into predictive analytics," says Solomon. "This could be extremely useful in order to forecast the behavior of certain business metrics into the future."

"Also, we are interested in exploring the options of using Anodot for our customers, for example, in providing anomaly detection to our customers through our video analytics platform. Perhaps we could provide them the tools to identify anomalies in their viewers' behaviors and in content distribution."

Data is a treasure trove for Vimeo, and certainly something it sees as a differentiator and competitive advantage. Anodot helps the company find those nuggets of insight that would otherwise be overlooked.