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ANTONIO MORENO

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Anodot: Autonomous Business Monitoring

"The price of light is less than the cost of darkness."

— Arthur Nielsen, founder of market research corporation Nielsen

In December 2019, the halls at Anodot's offices in Ra'anana, Israel, were bustling with end-of year meetings. Anodot provided its clients with an autonomous business monitoring platform that leveraged machine learning to constantly analyze and correlate business parameters, providing real-time alerts and lowering time to detection and resolution of business anomalies. Amit Levi, VP Product and Marketing, just wrapped up a phone call with a major online retailing customer and wanted to meet with David Drai, founder and CEO, to brief him on the call. Drai and Levi often discussed company strategy, though they frequently had different perspectives.

The team started by building an autonomous monitoring system that dealt with growing amounts of data. The solution came from the realization that tedious tasks should be done by machines, while people should focus on creative thinking. While existing Business Intelligence (BI) solutions automated some data monitoring and allowed people to manually analyze the data, Anodot's automated tool also analyzed and correlated the data monitored and generated alerts, freeing analysts and other employees to do more complex tasks and forward thinking. Anodot's solution was used in various industries in order to primarily monitor business health, such as revenue and payments, product usage and customer experience, as well as backend use cases, such as IT operations, AIOps (Artificial Intelligence for IT Operations), and machine learning processes.[1] Every day, Anodot used 30 types of learning algorithms to analyze 6.2 billion data points and 428 million unique metrics.

Anodot had raised $27.5 million in venture capital funding across 4 rounds,[2] and by the end of 2019 had about 100 employees and more than 100 customers, including T-Mobile, Microsoft, King, Nordstrom, and Lyft. The company had offices in Israel and Silicon Valley with remote sales teams worldwide.[3]

As Levi walked to Drai's office, he reflected on the online retailing client's request for help in showing Anodot's value to their CFO, who had the final say on renewing the contract. This was a common situation. Since Anodot's tool had the ability to identify granular business anomalies in real time, such as an unexpected drop in e-commerce sales for particular products or markets due to a technical glitch, fast detection and resolution of the problem meant that the potential financial damage

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could not be easily measured. As Drai and Levi discussed this specific instance, they also contemplated more general issues to be discussed with the rest of the management team. How could they help their customers realize the value of Anodot? They had been working on several tools to show the value in different stages of the sales cycle and post-sale, but it was still hard to measure the actual financial value. In the past year, Anodot had adjusted its strategy to focus on client verticals and use-cases that would benefit most from Anodot. Would this make the sales process any easier? An improved product-market fit, combined with an ability to measure Anodot's value, could increase conversion and retention. Should they narrow down the use cases even more? As the team was thinking about their next funding round, it was important to prioritize their efforts.

The Creation of Anodot

Drai, an entrepreneur with an engineering and computer science background, served in senior technology positions in various technology companies. Drai's role prior to founding Anodot, was consultant CTO at Gett, an Israeli on-demand transportation company that connected customers to ground travel or courier services via a GPS-based app. Over his career, Drai had used many Business Intelligence (BI) tools, such as dashboards, to monitor performance, and was frustrated with the inability to discover incidents in real time. He elaborated, "When I tried to backtrack why we didn't find an incident on time, or see a drop in a graph, I realized we didn't look at the right graph at the right time because we had dozens and dozens of graphs. I wanted an alert that would point me to that drop in the graph. I understood that machine learning needed to be part of the solution." Shay Lang, cofounder and VP R&D, who had known Drai from their service in the Israeli Air Force and always wanted to start his own company, joined Drai to found Anodot.

In 2014 Drai met Ira Cohen, cofounder and Chief Data Scientist, who had a PhD in electrical and computer engineering and was then Chief Data Scientist at HP Software (Hewlett-Packard). They discovered their shared passion for finding a solution to business monitoring. Existing solutions were sufficient for certain types of monitoring and analysis, such as server monitoring, but fell short for more dynamic, sophisticated businesses where there were many data points to monitor, analyze, and correlate. Cohen explained, "By using machine learning, we're trying to make everything as automatic as possible so that the end-user gets value as quickly as possible with a minimal amount of effort."

Tools for Anomaly Detection

In recent years, the amount of available data had grown exponentially, as more companies adopted digital tools and started collecting data, that left them with millions of metrics to measure and analyze to better understand business performance. Within the data were patterns that represented "business as usual." However, "business as usual" was not necessarily constant; higher sales than usual on Black Friday, the day after the U.S. Thanksgiving Holiday, was standard for online retailers. The absence of change might be an anomaly if it broke a pattern that was normal for the data from that particular metric. Departures from "business as usual," known as anomalies, were not categorically good or bad, they were simply deviations from the expected value for a metric at a given point in time. Therefore, an anomaly could indicate a positive business incident just as likely as a potential disaster.

Companies needed anomaly detection to get accurate feedback on the effectiveness of business initiatives so that money and resources could be utilized more efficiently for a company's bottom line. Many real-life business anomalies required immediate action. Since discovering the problem was the first step in resolving it, eliminating the delay between when the problem occurred and when the problem was detected would bring a company one step closer to fixing what went wrong. That was also true for anomalies that represented opportunities to be seized. For example, an unusual growth in

mobile app installations might be due to a celebrity share on social media that had gone viral. Given the short lifespan of such surges, a company had a limited window in which to capitalize on this popularity and turn it into sales.

Shortcomings of Traditional BI Tools

Business intelligence (BI) could be described as an infrastructure that collected and analyzed the data produced by a company's activities. BI could include data mining, process analysis, performance benchmarking, and descriptive analytics. BI usually aggregated the data generated by a company and presented it in dashboards, reports, performance measures, and trends that guided management decisions.

Traditional BI tools were typically retrospective and covered limited metrics. As a result, data analysts struggled to get a real-time, comprehensive view of the business. A human monitoring a dashboard of a few data points might be sufficient for real-time notification. However, this approach was not scalable to thousands or even millions of metrics in real time. BI tools' lack of granularity presented an obstacle; small events important to the business were often overlooked. Levi recalled, "Once when I was an analyst, my CEO asked me: 'Did you see the drop in revenues?' I asked him, 'Where did it take place?' he replied, 'In Italy.' I realized I had not even looked at the data from Italy for the past 30 days. Things like that happened all the time." Avi Avital, VP Customer Success, added, "At one company where I worked, we had more than 40 different monitoring tools. When you have monitoring silos, you might know there is an impact on the business, but you don't necessarily understand the root cause."

Anodot's Approach – Autonomous Anomaly Detection

To achieve real-time anomaly detection at large scale, it was necessary to use machine learning algorithms. Anodot's automated anomaly detection system utilized artificial intelligence (AI) to process each data point once to create a model, which in turn was used to predict the value of the next data point. If the next data point differed significantly from what the model predicted, it would be flagged as a potential anomaly.

Anodot used what were known as "unsupervised" machine learning algorithms. The algorithms learned what normal was, and then applied a statistical test to determine if a specific data point was an anomaly. This was crucial for detecting "unknown unknowns," that is, detecting anomalies which would likely go unnoticed. Once the anomalies were found by these multiple algorithms, an additional layer of machine learning worked to discover the relationships between metrics so that the flood of discovered anomalies could be distilled down to a much more manageable number of correlated incidents. (See **Exhibit 1**) The anomalies correlated across multiple data sources facilitated identification of the root cause of the incident. Anomalies could then either be investigated by human experts or used as triggers for automated business actions. Avital commented, "By using a tool like Anodot, you have coverage of everything. You can send data from different sources and the tool will combine everything into a concise story, one alert that will show you the whole picture."

Customers did not require data science knowledge and could use the system to gain actionable insights. Cohen summarized, "There are two key innovations in Anodot. One is in building a system that can analyze all of the data, while being robust and not creating a lot of false positives, and being able to handle a lot of different peculiarities of the data. The other thing is helping with the root cause investigation by correlating anomalies. Multiple errors are usually a result of one root cause that we can detect." (See **Exhibit 2** for correlated alerts example.)

Competitive Landscape

The Anodot tool was not the only solution in this space. Competitors such as Outlier.ai attempted to offer similar functionality. Outlier.ai was founded in 2015 in California, offering Automated Business Analysis (ABA) by using AI to analyze large data sets. Outlier.ai identified business trends and patterns in order to 'tell' four to five 'stories' a day about unusual business activity (similar to Anodot's alerts), thus reducing the dependency on data scientists.[4] By the end of 2019, Outlier.ai raised $8.4 million in funding[5] and had customers in various sectors, including e-commerce, hospitality, life sciences, and financial services. In 2019, Outlier.ai was analyzing more than four billion metrics.[6]

The Anodot team was not particularly concerned about the competition. Anomaly detection was a new concept to many companies, and more competitors could help educate potential customers about the category. Matt Goodwin, Senior Director of Enterprise Sales, commented, "Our biggest competitors are the client companies themselves, thinking they could just take something off the shelf and customize it in-house. We typically have to combat where they think they have anomaly detection. I would welcome more competitors in the business monitoring space so that people would see that they are actually reinventing the wheel." In certain applications, such as server incident management, IT teams were used to provision monitoring tools, but the use of such a system beyond IT teams was not widespread, and acquiring such tools often implied a discussion of value with the CFO.

The Customer Perspective

Anodot had more than 100 customers, from a range of industries: internet (adtech, e-commerce, gaming, and fintech); telecommunications and others (automotive, leisure, and real estate).

The Sales Process

Anodot's customers within the client company were typically C- and VP-level roles, such as Chief Technical Officer; Chief Data Officer; Chief Information Officer, VP of Data; VP of Analytics; or VP of BI. While these executives were the entry point to a company, oftentimes additional departments also used Anodot's tool. Levi commented, "We aim to the technical user, because it is still a challenge for business users to comprehend the technology. Tech-savvy people first seem to understand where the technology goes. They know that they need this anomaly detection automated, so they are willing to go the extra mile with us."

Anodot's marketing activities included three paths: inbound, outbound, and referrals. Inbound efforts included: hosting webinars; publishing white papers; and holding meet-ups and other events. The inbound team fielded contact from prospective clients while the outbound team targeted specific companies they felt would gain the most from Anodot. Referrals were also popular, for example, from individuals that used Anodot in the past and after switching jobs and companies wanted to continue using tools to which they were accustomed. Goodwin commented on another type of referral, "We've seen a big uptick in customers that believe Anodot helps them solve problems and save money, time, and headache. They bring us to their peer network."

Proof of Concept (PoC)

After successful sales and marketing efforts, customers engaged in a PoC process, which allowed them to use Anodot's tool for the first time in order to validate its value and make sure it was relevant for their use-cases. Often times during the PoC stage, customers would use A/B testing to compare Anodot's performance to existing tools they had been using. The PoC process was crucial to signing a contract and some did not convert, as Goodwin explained, "Some customers will consider the PoC

process as homework, which most people hate. During the PoC, we ask the customer to share a lot of data. For the PoC to be successful, the customer needs to go above and beyond his day job and cooperate with us. In some cases, they have figured out ways to fix problems without having a machine layer do this for them, so some will prefer to maintain the status quo."

In order to use Anodot, the prospective customer had to connect the sources of data they wanted to monitor. The process required integration efforts. Once the data was connected to the Anodot platform, the tool would learn the "normal" evolution of the data, and start to detect instances that were anomalous. The tool was able to learn many frequent seasonality patterns, but some customers had specific contextual information that was introduced manually. For example, retail clients had seasonal patterns such as Black Friday, which would be hard for the tool to learn autonomously. The data collection process was critical, and in many organizations it required a significant effort to prepare the inputs. Anodot invested in features to enable a faster data collection process. Lang explained, "About two years ago, we realized that the most time-consuming stage of the onboarding process was the data collection, so we developed a product within the product, a data collection mechanism. You don't need to write any code, it's only a few steps and you can send us your data. This is one of the key enablers to simplify and shorten the onboarding process."

If the PoC process was successful, customers signed a yearly contract. (**Exhibit 3** summarizes the onboarding and implementation process, which took approximately 9 to 13 weeks.)

Using Anodot: Key Success Factors

Each anomaly type was assigned a score between 0 and 100. With the help of Anodot's customer success team, the customer determined the threshold anomaly score that would trigger an alert, for example, a score of 75 and up. If the user reduced the score, the tool would be more sensitive to anomalies, and if the user increased the anomaly score, the tool would be less sensitive. The process would determine the level of false positives (alerts received when the process was behaving normally) and false negatives (alerts *not* received when the process was not behaving normally). Levi commented, "We aim to get more than 90% accuracy, by developing more capabilities to make our machine learning algorithms smarter." (See **Exhibit 4**) The user could also choose the relevant direction of a metric change, for example, ask for an alert only if a specific metric is dropping or the relevant duration of an anomaly, meaning some short-term anomalies were not important enough to merit an alert.

In order to improve Anodot's product and increase its value to customers, the company developed a tool to collect and analyze customers' feedback on alerts: a 'thumbs up' or 'thumbs down' icon in the interface indicated if the alert was useful. Anodot's internal user experience research revealed that alert feedback grew more than tenfold in 2019. The company used the feedback to improve the learning capabilities of its algorithms. Anodot invested in understanding the reasons for bad feedback. For every 'thumbs down,' a support ticket was opened and Anodot contacted the customer to understand whether the problem was related to machine learning algorithms or to alert settings, and then fixed it. Anodot examined the alerts they created for their customers, as well as customer feedback on those alerts, in order to learn which use-cases were more popular for different customer segments, and also, potentially, to discover new use-cases.

Anodot faced a tradeoff between providing complexity and ease of use. Cohen explained, "It's very easy to create a product where you give the users all the knobs. So we create a cockpit with 1,000 knobs, and users can do anything they want with it, but now it's so complicated that at the end of the day you don't do much with it. You get these power users that know how to turn the knobs, but most users will just back away and not do it." Hadar Fogel, Head of Global Engagement and former Director of Customer Success, elaborated, "Our system is not user-friendly enough, and it can complicate

adoption. If you could just look at it and understand immediately how it works, it would be easier to add more use-cases and more users. That is one of our main challenges."

Fogel described the Key Success Factors (KSF) that maximized Anodot's value: (1) Well-defined use-cases; (2) High-value data; (3) Data granularity; (4) Actionable alerts; (5) Owners (within the customer company); (6) Technical resources; and (7) Momentum. Anodot worked closely with customers in the integration of the solution. Fogel reflected, "It's great when the customer understands the potential of the tool and wants to use it, but for the partnership to be successful, the company needs to do a very good job analyzing what they need and what data to share."

One of the customers that utilized Anodot to its fullest was King.com. Founded in 2003 and acquired by Activision Blizzard in 2016, interactive entertainment company King was a global leader in gaming with more than 200 games and nearly 250 million active monthly users across web, social, and mobile platforms, as of Q4 2019.[7] King had approximately 2,000 employees in multiple locations in the U.S. and Europe. According to King's internal analysis, slow incident detection was the largest contributor to incident impact, and King decided to retain Anodot to reduce time to detection (TTD). Lukasz Korbolewski, Product Owner Business Intelligence, commented, "Simple BI dashboards weren't enough because they depended on people to monitor them, and that was a problem outside of office hours. We also used an in-house alerting system, but the detection mechanisms were basic, and the false alert rate was high."

In 2018, after rolling out Anodot company-wide, King had constant automated coverage for the most important metrics and TTD improved by 71% for simple incidents. In 2019, King adjusted which alerts to emphasize and deployed advanced analytic follow-up on the quality of alerting. This enabled King to further reduce the TTD for simple incidents by 75%. Through constant tuning of alerts, focus on which metrics were key drivers and which were just contextual, King was able to drive the TTD for complex alerts down by 10% in 2018 and an additional 24% in 2019. King also had several mechanisms to quantify the value of Anodot's tool. The company created a risk map and quantified each risk with its monetary value. That, combined with historical incident data and TTD resulted in a quantifiable value for each incident prevented or resolved.[8]

Pricing

Anodot charged its customers by the number of metrics analyzed, in predefined monthly packages, starting at a minimum of 200,000 metrics for the smallest enterprise package and a minimum of 50,000 for a non-enterprise package. The data was monitored continuously, so the number of times each metric was analyzed did not affect the pricing. If a customer used their entire package then added more metrics, they were charged an overage fee. Packages typically jumped from 50,000 metrics to 2 million, and the higher the metric volume, the price per metric reduced in a logarithmic (not linear) pattern. Anodot preferred to keep a simple pricing model and had not changed it since founding the company. It did realize that if many users at a client company used Anodot's insights, it represented a higher value, so they decided to add another layer of pricing based on number of users, but did not always charge this extra pricing component. Drai shared another reason for choosing the metric-based pricing model, "You need a scalable pricing model. If your customers grow and succeed, you want to succeed with them. Our model, based on number of metrics, is scalable and can grow exponentially." The basic contract was for one year, as Anodot needed to allocate resources for Amazon Web Services (AWS). For those enterprise customers who wished to deploy Anodot's tool on-premise, on their own computers and servers, pricing was somewhat higher to reflect the added installation complexity.

In Search of Product-Market Fit

While Anodot achieved early traction with telco companies, it experimented with companies in a range of other industries. This lack of focus resulted in a low conversion rate after the PoC process. Drai reflected, "In the first years of the company, we said yes to everything. It was important because we saw who survived and who churned. In IoT, we had a lot of churn and leads that were not converted, even after a PoC."

By 2018, Anodot had what it considered a low 25% conversion rate after PoC. Drai commented, "It was a trial period for us, while we were searching for product-market fit. Sometimes you need to fail in order to realize what works." The same year, an internal analysis found a gap between the technology's capabilities and customer usage; adoption was low as customers were daunted by the integration process and initially saw limited value. To sharpen its messaging, Anodot adjusted its mission from 'autonomous analytics' to 'business monitoring.' According to Levi, shifts in the analytics field supported the change in terminology. "Monitoring is more proactive," he argued.

Target Industry Segmentation

Even though Anodot's tool supported many use-cases, not all of them were easy to comprehend by prospective customers. The variety often resulted in long and difficult onboarding processes, considerable churn, high friction, and limited value. The team realized they should enable their customers to use Anodot by themselves, at least for the basic use-cases. They decided to choose specific, clear and valuable use-cases, and offer a simple solution to crucial customer problems. Levi commented, "It's hard for our employees to explain what it is we do, making it very hard to scale the company. Since we understood that focus and scale go together, we started this process of focus in order to scale." Debbie Meron, Content Marketing Manager, added, "When I joined Anodot about a year ago, the messaging was too complex and detailed; There was so much that went into what we do that it was hard to give the elevator pitch, and sometimes you don't have enough time to be able to explain in a way that resonates with people."

Anodot's analysis revealed that the most valuable use-cases could be divided into three pillars: (1) Revenue and cost monitoring; (2) Partner monitoring; (3) Customer experience monitoring. (See **Exhibit 5** for a summary of use-cases.) In 2019, the conversion doubled to 50% because the company was more focused on proven use cases. Management felt they could even have a higher conversion of PoCs if they focused on 'safe' projects, but they wanted to keep some level of experimentation to learn about potential opportunities.

Anodot decided to focus their efforts on telcos and digital companies. In choosing two main verticals, Anodot decided to avoid other opportunities such as Internet of Things (IoT), Artificial intelligence for IT operations (AIOps), healthcare, and industrial companies. The main reason for avoiding these verticals was their data maturity, meaning these companies were not collecting enough data, and sometimes were not doing so in real time. Meanwhile digital companies often had digital maturity, having already implemented sophisticated means of data collection and processing. Patrick Welsh, VP Enterprise Sales Americas, commented on digital maturity, "Customers would qualify as digitally mature if they have high volume and velocity of data, and the real time aspects of it are consequential to the business, whether it's with customers and their experience, whether it's with partners and their data, or whether it's around revenue and cost."

More Focus on Telcos

Anodot had achieved success in showing value to telco companies, and there was a debate on whether the company should focus even more exclusively on those companies going forward. Telcos often used metrics such as TTD that made showing the value of Anodot easier than in digital companies, which had more heterogeneous measures of value. Anodot had two separate sales teams with relevant expertise in telcos and digital companies. The telco team had a longer sales process and were focused solely on telcos, while the other team had a bit more leeway when searching for potential customers. Some people worked for both verticals, but the plan was to have only telco-oriented employees working with telcos.

The company considered two strategic options. One, focus only on telco companies, and two, split efforts between telco companies and digital companies. The digital companies segment included several company types, including e-commerce, adtech, and gaming. Each option had its pros and cons.

Anodot already had many customers under the category Internet companies, or digitally mature companies. Yet the company had business goals that would be easier to achieve if it targeted telco companies, since they used more databases and measured more metrics, resulting in a higher average deal price. Drai was pushing towards focusing mostly on telco companies, while Levi was strongly in favor of also selling to Internet companies. Levi explained, "David (Drai) looks at where he wants to take the business, while I examine the current status of the business and what we have. I want to develop the product better to who's currently using it, and he views the trajectory goals for the company and what is needed to support those business objectives."

There were challenges in selling to Internet companies. These digital businesses were quick to buy and adopt new technology, but did not pay as much as big enterprises. Company size was an important factor. Small companies, or companies with low volume of data did not get enough value from Anodot's tool for the price they were required to pay. Not enough data meant few alerts, resulting in very few business insights. Anodot was aware that smaller companies could grow with time and have more data, but still decided not to target them in early stages, because the onboarding process for a new customer was still too expensive.

Drai argued, "My role is to generate revenues and show numbers, which would be easier in the short term with telcos. If we chose to do only telcos today, I could even double the revenues in 2020." If Anodot chose to focus on telco only, the company could have $50 million in annual recurring revenue (ARR) and valuation would be up to four times that. Multipliers in telco were around 4x, since investors usually gave lower valuations to companies selling only to telcos. He elaborated, "The dilemma is what we want to be as a company. What is our identity? What do we believe should be the end goal of the company? Do we want to make a significant effect in the market? I told the team that I am willing to compromise and be less in telco, but I want to see a deep analysis on the others. If we choose this path, there is a short-term price: If we divide our efforts now, we will not be 100% efficient for the short term, in order to be 100% efficient for the long term." (See **Exhibits 6, 7** and **8** for telco business monitoring examples.)

Quantifying the Value of Anodot's Platform

While Anodot had sophisticated customers like King that had established mechanisms to quantify the value of Anodot, most customers did not have such a process in place. One of Anodot's customers' biggest challenges was explaining internally to their stakeholders what value they received from Anodot's tool. Levi commented, "When you get an alert you don't know what would have happened if you didn't get the alert; you don't know what the alert saved for you in dollar terms." He added,

"The need for coherent messaging and the need to empower our customers led us to articulate what we do and to create new tools to showcase the impact of our tools." Goodwin added, "We need to create a content engagement strategy that enables customers to interact with Anodot's brand even when we are not in the room." Examples included:

- **The ROI Calculator**: A comprehensive personalized report for prospective customers that was designed to reveal a company's risk level, uncover lost revenues from incidents, and estimate how much the company could save using Anodot. To use the calculator, a company had to provide information about its operations and current monitoring system (number of metrics measured, method for detecting incidents, and number of data sources monitored). Anodot supplemented company-provided information based on its own data.[9] (See **Exhibit 9** for calculator results screenshots).

- **Impact API**: During the PoC, Anodot was able present what would have happened if said customer had been using Anodot, based on real anomaly analysis. For example, an anomaly that hurt revenues took two days to detect, resulting in a $200,000 loss. With Anodot it would have taken 30 seconds to get an alert, and with a short time from detection to fix, with Anodot the prospective customer could have saved those $200,000. Levi commented, "During the PoC process, in many cases, we can show a dollar value. Once the customer adopts Anodot, there's no 'without Anodot' so, it's harder for us to show a dollar value."

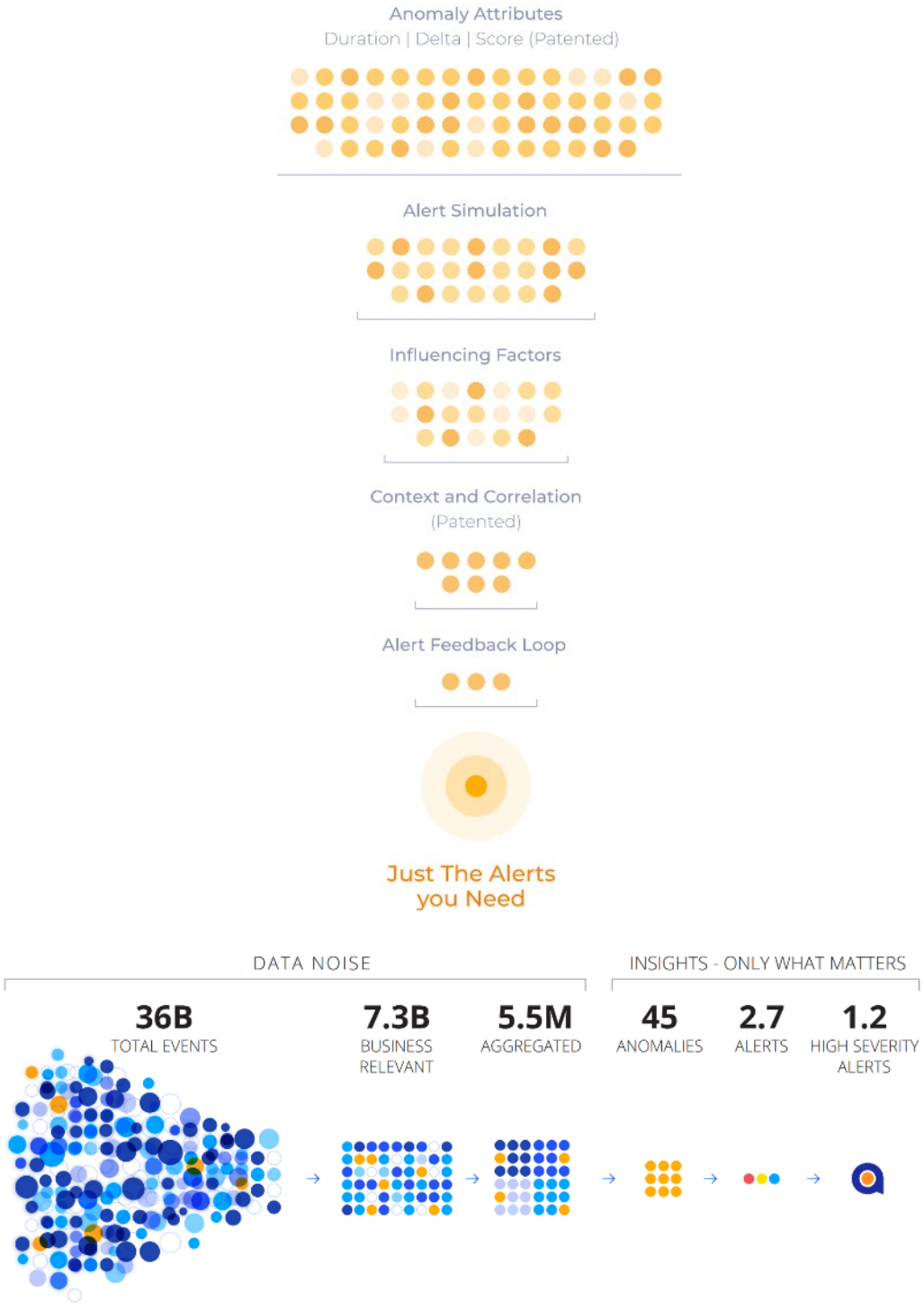
- **Monthly Digest**: A report on usage for customers that included: alert insights, such as number of alerts detected, a comparison to the previous month, and top three measures that triggered alerts; alert feedback; and total company usage, including number of metrics analyzed, number of dashboards created and number of users within the client company. (See **Exhibit 10** for a monthly digest example).

- **Taste of Anodot**: Anodot launched a tool called *Taste of Anodot*, where potential customers could upload a spreadsheet with data for a single metric and have Anodot unearth critical anomalies that would normally be detected in real time. (See **Exhibit 11** for an analysis example). While Taste of Anodot was rudimentary and limited to one metric, the team was hopeful that the tool would help potential users determine the value before committing to a long-term retainer. It could also fix the awareness issue and give people a sense of what Anodot does in a controlled environment. Levi commented, "We expect to double the number of leads that we generate and increase the conversation rate of worldwide visitors. Currently, we mostly convert users that actively request a demo."

The Way Forward

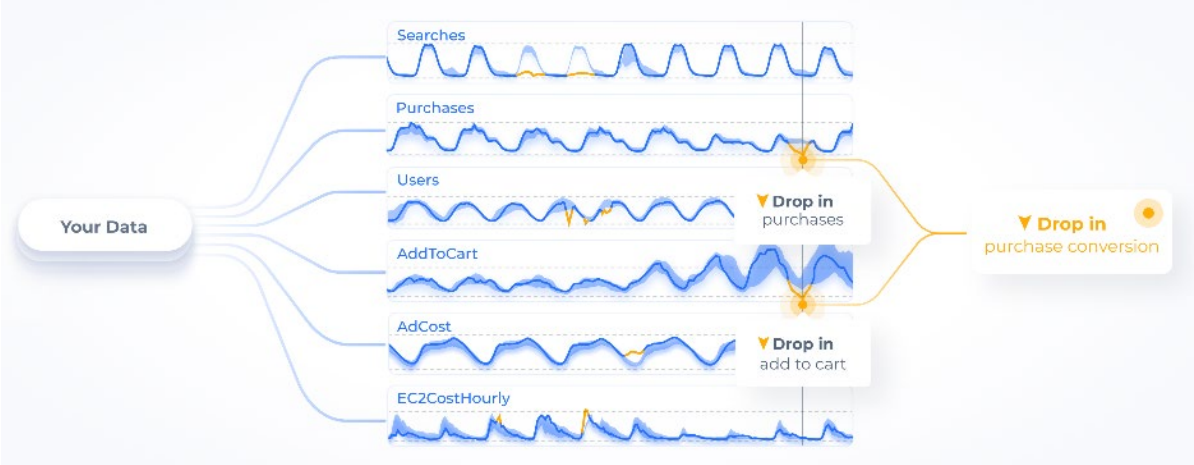
By 2019, Anodot's platform tracked more than 400 million metrics daily, driving four billion autonomous decisions that were translated to less than 1,000 alerts for all its customers. This highly accurate monitoring led to a low incidence of false positives, or false alerts, and customer satisfaction was high. It was time for Anodot's management team to discuss their next steps. What else could they do to help their customers realize the potential value of Anodot? Was it the right decision to focus on specific customer verticals and use-cases? Should they increase the focus on telcos? As the number of customers as well as employees continued growing, the team had ambitious growth plans and were already thinking about their next funding round. More equity would help Anodot grow its go-to-market strategies, as well as its headcount worldwide.

Exhibit 1 Anodot's Alerts Statistics



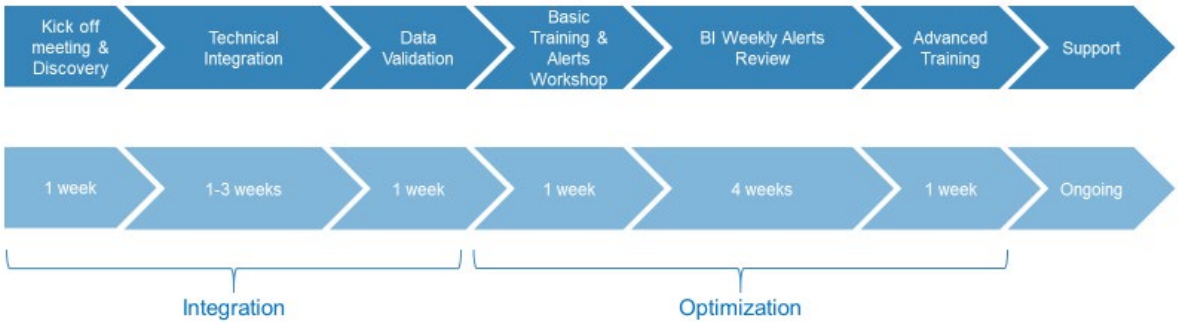
Source: Company documents.

Exhibit 2 Correlated alerts



Source: Company documents.

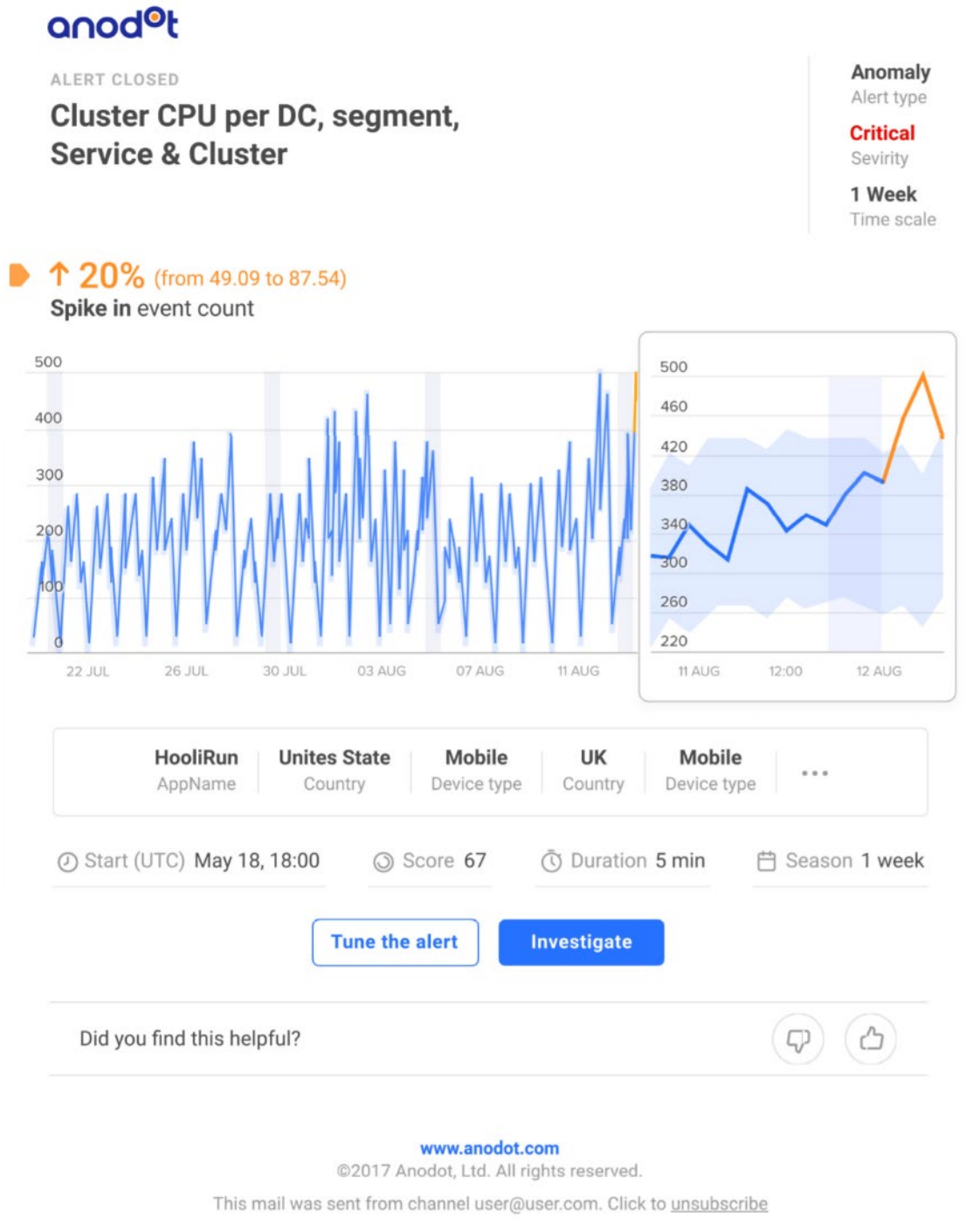
Exhibit 3 Onboarding and Implementation Process



Phase	Goal
Kick Off Meeting & Discovery	- Get the right people (business and technical) - Identify the high value data - Identify the different data sources - Define key success criteria
Technical Integration	- Allocate resources to connect the data pipelines based on the selected integration method - Stream data to Anodot
Data Validation	- Validate data accuracy and consistency (compare source vs. Anodot)
Basic Training	- Go over the key capabilities of Anodot to enable users to search for metrics, create alerts, view anomalies, and create dashboards
Alert Workshop	- Set up the initial key alerts based on our best practices
Alert Reviews	- Weekly review of the alerts to tune them based on customer's feedback
Advanced Training	- Learn the advanced features of the different modules
Ongoing Support	- Support questions, new use cases, new users, QBR

Source: Company documents.

Exhibit 4 Alerts



Source: Company documents.

Exhibit 5 Business Monitoring Use-Cases

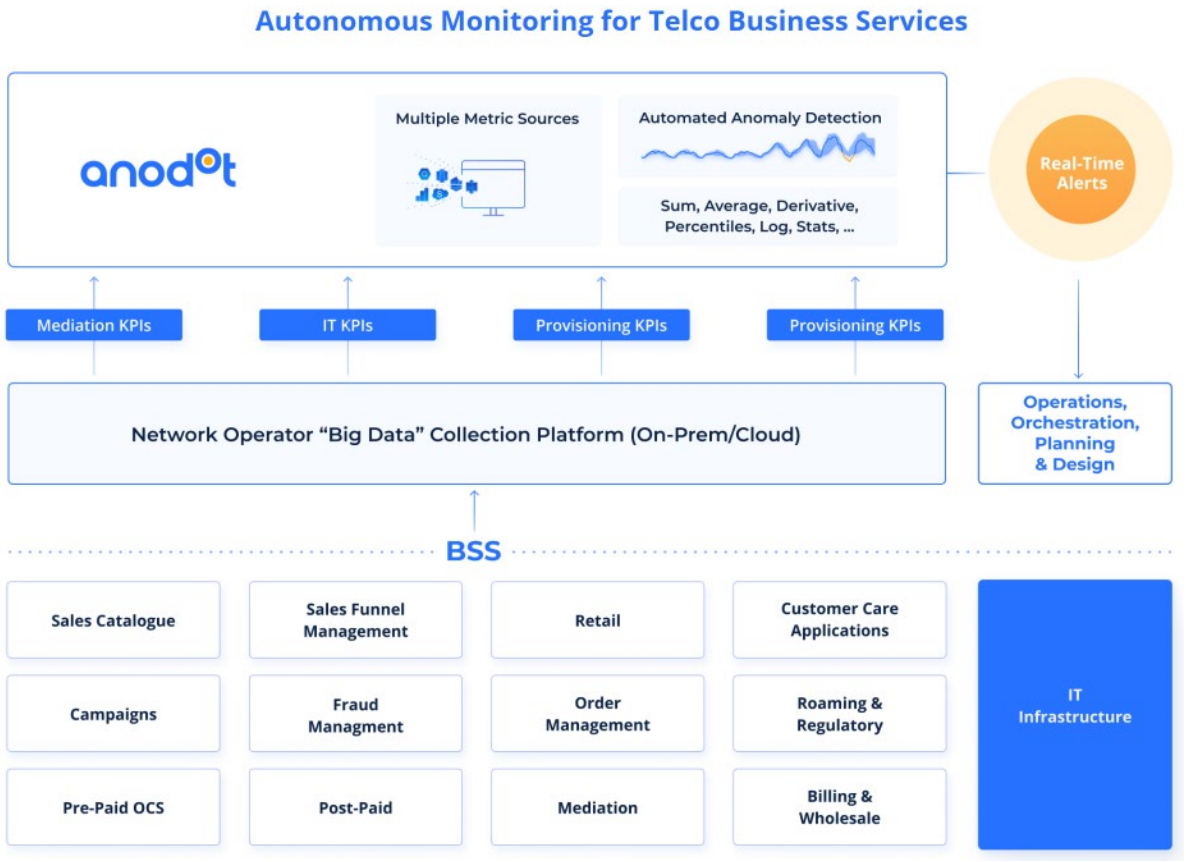
- Revenue and cost included monitoring of marketing costs over various channels and campaigns or monitoring of revenue streams (micro-transactions, subscriptions, or partners) across segments, plans, products, and payment providers. Both marketing and revenue streams could be complex and diverse, so monitoring it manually was nearly impossible. This monitoring was necessary to ensure a consistent revenue stream and identify impactful issue as soon as they appeared.

- Partners monitoring included 3rd party tools and platforms that supported and enabled the business, including: APIs, recommendations, payments processing vendors, ad performance, cloud costs and the like. Partners monitoring was important since visibility towards 3rd party services was very limited. Also, degradation in level of service of a 3rd party could result in bad customer experience, loss of data and in many cases actual loss of revenues.

- Customer experience monitoring meant monitoring the customer journey, experience, and engagement with the app. KPIs were around usage, retention, conversion rates and flows. Monitoring it was crucial to ensure a seamless experience throughout the customer journey, from awareness to acquisition, retention, upsell/cross sell, and advocacy. This was especially important when adding new features, monitoring A/B tests, releasing new versions, changing customer support processes, and purchase funnel analysis.

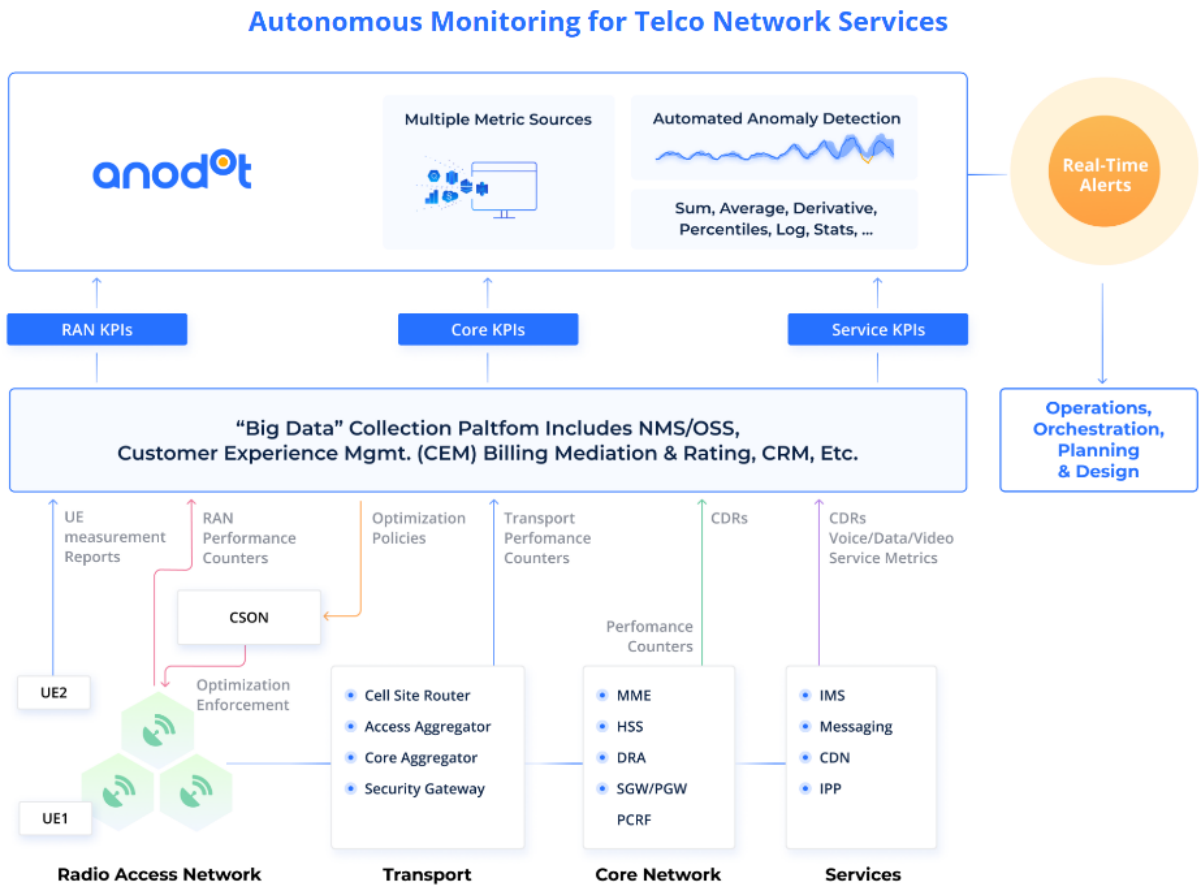
Source: Company documents.

Exhibit 6 Autonomous Monitoring for Telco Business Services



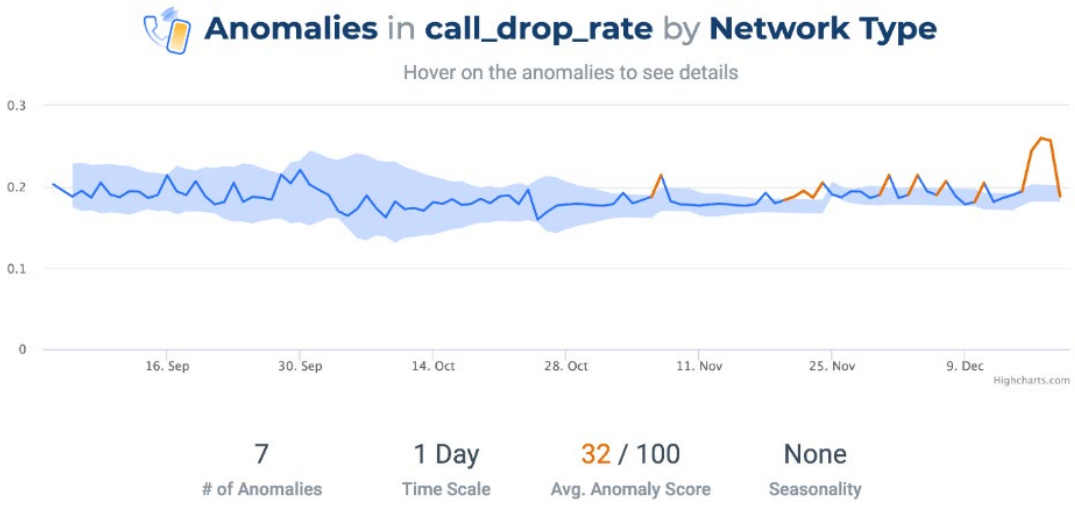
Source: Company documents.

Exhibit 7 Autonomous Monitoring for Telco Network Services



Source: Company documents.

Exhibit 8 Example: Anomalies in Telco Network Services



Source: Company documents.

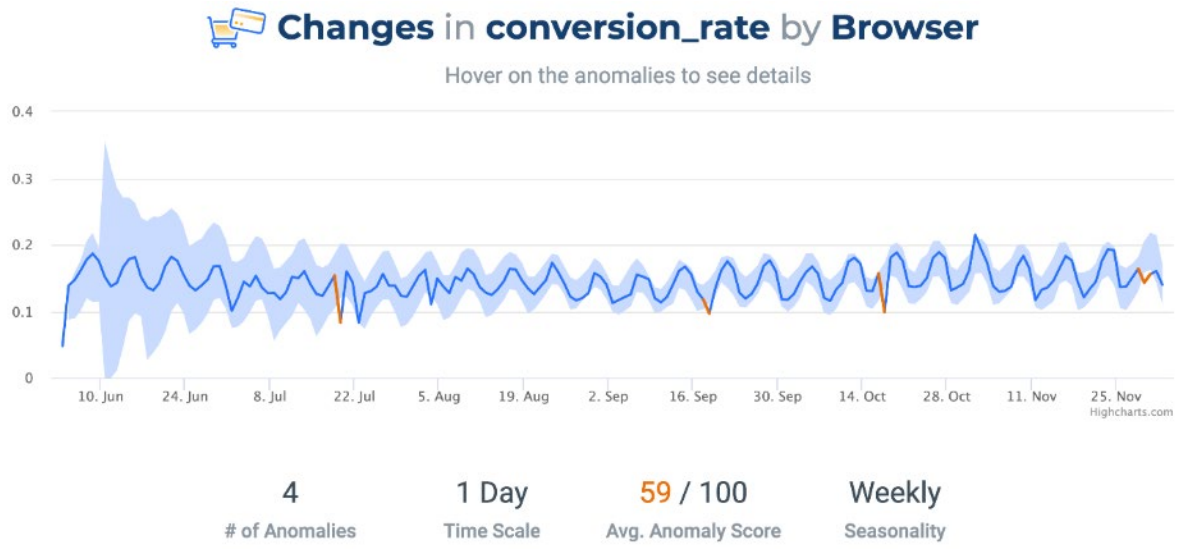
Exhibit 9 Anodot's ROI Calculator

Source: Company documents.

Exhibit 10 Anodot's Monthly Digest Example

Source: Company documents.

Exhibit 11 Taste of Anodot Analysis Example - Changes in Conversion Rate by Browser



Source: Company documents.

Endnotes

[1] https://www.anodot.com/about/. Accessed February 2020.

[2] https://www.crunchbase.com/search/funding_rounds/field/organizations/num_funding_rounds/anodot. Accessed December 2019.

[3] https://www.anodot.com/about/. Accessed February 2020.

[4] https://outlier.ai/automated-business-analysis/. Accessed May 2020.

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[6] https://solutionsreview.com/business-intelligence/outlier-nabs-new-funding-to-automate-business-analysis/. Accessed May 2020.

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[9] https://www.anodot.com/business-monitoring-value-calculator/. Accessed February 2020.