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SaaS-Based Machine Self-Learning Platform providing Real-Time Operations and Supply Chain Reporting to Large Enterprises

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> "When information is live and interpreted, the kinds of actions you take are very different and much improved. Real time intelligent OpsVeda enables new business processes, and allows you to optimize business outcomes."- Sanjiv Gupta

CEOCFO: *Mr. Gupta, what is the focus at OpsVeda today?*
Mr. Gupta: OpsVeda is a Machine Learning platform; a SaaS solution focused on operations and supply chain for organizations. It is a real-time intelligence, full service platform, but primarily focused on supply chain operations for large enterprises in various industries. Typically, large companies focused on high tech, life science, food & beverage, consumer goods, industrials and so on. We are a software company founded over six years ago. We patented an operational intelligence system with a process agnostic data model and machine self-learning many years ago.

CEOCFO: *Would you give us an example of how you are able to help a company and what it means, day-to-day, to be using OpsVeda's product?*
Mr. Gupta: Fundamentally, the large majority of business users are people who make decisions with respect to orders, procurement, manufacturing, quality and shipment. They are working at the transaction level, so specific to transactions, specific to customers or specific to products. They have to make hundreds of decisions every single day. Our big idea was that when someone has to make hundreds of decisions every single day, they need intelligence, geared towards the transactions and situations that need attention - not all the transactions. Therefore, we essentially enable real-time story boards for business users in various functions. These story boards prioritize the day for them. It tells them what they need to do as soon as they come to work- Even before they get their first cup of coffee, they take care of certain business issues, exceptions and certain things that need to be executed right away. Then they go get their cup of coffee and take care of some of the next level issues and eventually before the day ends they take care of things that are going to have an impact downstream. Story boards are very specific to each role and those story boards guide users to take action in order to change outcomes for their business.

CEOCFO: *Would a user pick the kinds of things they want you to show them or is your system able to show they what they might not even realize is important?*
Mr. Gupta: Yes. The users ultimately define what they need to see. But, we have been doing this for over six years and our team has had plenty of domain exposure even earlier. So, we have built solution content specific to roles inside the

organization and to the needs of industries in question. Therefore, there is a lot of pre-configured, out of the box content. The 'leading indicators' of what needs attention are certainly standard across the industry. However, today the system learns. The system learns what needs attention, what are the user's preferences, which exceptions take higher priority and so on. The system learns and adapts itself, based upon data behavior and user behavior, to create the most amount of value for the business.

CEOCFO: *How have you been able to ensure the system is user friendly?*
Mr. Gupta: I myself have come from the industry. I have been in the industry for over two decades. I have worked alongside various companies, have been a customer myself, have been a user myself and have implemented solutions. Then I came to the dark side, which is working for the enterprise software company. I have been on both sides of the aisle. As a user, I always felt that there was an information overload. Today everyone talks about lots of data. Benefits aside, that also means information overload. How do we make sure that they system is user friendly? The entire world is moving towards self service business intelligence. In my personal experience working with business users and having been a business user, I have realized that users do NOT necessarily care about self-service business intelligence tools and building the view of the world themselves.

They would rather consume what is offered to them, so the onus is on the solution provider to make sure that the solution is kind of ninety to ninety five percent fit for the business user out-of-the-box. Therefore, we have focused on that. We tend to have an opinion around what the user needs to do based on their roles and industry. When we create pre-configured story boards for the users we relate it back to our experience in their roles. On top of that, we provide the user with plenty of flexibility. They can drag and drop charts or spreadsheets, add or remove columns, change the look and feel, change the style of the data that they are looking at and so on. So, there is a lot of configurability. However, having said that, do not rely on the user's ability to search the problem. The system has a job to do and the job is to tell the user what he or she needs to accomplish. **This is where machine learning comes in… over time the recommendations become more and more precise, powered by connected real-time data, and the behavior learned from users and data.**

CEOCFO: *2016 was a watershed year for you. How so? What changed over the last year?*
Mr. Gupta: Yes, 2016 was extremely exciting! Two major things happened. One was that the product reached a level of maturity. When we started six years back, we thought we knew exactly what we were doing. However really, once you get to the market you realize that what the business user needs might be slightly different. Over the years the solution has matured and in 2016 I can say we went over the tipping point. In 2015, some of the external influencers took notice of OpsVeda, as Gartner named us a Cool Vendor for Supply Chain solutions. Later that year Gartner included us in the market guide for Supply Chain Visibility Software. They also mentioned us in the market guide for Operational Intelligence Platforms. In addition, with the success of one of our customers on our platform, we also won the SAP HANA Innovation award. I think this drumbeat led to a number of prospects coming to us, not us going to the prospects. Therefore, the demand side became a little bit more predictable. There are many more customer and prospect interactions. Earlier this year we announced that in 2016 we doubled our install base. That was fascinating because it was largely driven by the ecosystem. This in turn led to better recognition of the brand and wider appreciation of the benefits of an operational intelligence system. Some other factors also played a role. There was an enhanced focus on real time intelligence. The focus on efficiency also went up. Expanding data driven decision making across departments also was a focus. When things work, they generally do under a confluence of various factors. Some of those came through for us in 2016.

CEOCFO: *What is your geographic range today?*
Mr. Gupta: We are primarily in North America. We have begun to expand. In 2016 we onboarded one customer outside of the United States; a Jamaica based company. Since then though, we are now expanding into Western Europe as well. Our development center is in Bangalore, India. Bangalore happens to be the Silicon Valley in India. Since we could not afford engineers in the Silicon Valley of the United States we decided to go to the Silicon Valley of India! Therefore, geographically the team is in North America and is in India, while the customer base is primarily North America at the moment, as we look to become more global.

CEOCFO: *Would a company be replacing something they are using now or would this typically be a brand new idea for the companies that work with you?*
Mr. Gupta: There is always some replacement. If you do not replace anything then it is not a sustainable opportunity. Therefore, we do replace a number or operational reporting and business intelligence solutions that companies have implemented over the years. With the advent of in-memory technology and advancements in certain solution capabilities, the distance OLTP and OLAP systems have diminished. These two systems were separate. They were independent of

each other. There was a significant amount of latency between transaction processes and analytic processing between OLTP and OLAP. This latency could be as high as a week or a day or a few hours. However, today with real-time intelligence sitting on top of the transaction processing systems, the business intelligence and analytics environments implemented over the last decade are getting dismantled. They are beginning to be replaced by systems that are always live, systems that are intelligent out of the box and systems that tell the user what needs attention. OpsVeda is a unique solution. OpsVeda is increasingly replacing various self-service business intelligence tools and a host of ERP based transactions reporting that businesses have implemented over the years. Now, the replacement does not suddenly happen on day one, because change takes time. Therefore, it is incremental. Initially, it goes in as a real time solution, which is meant to improve execution and to improve outcomes for business. Over time, we unseat established BI systems.

CEOCFO: *Are there particular job titles or categories in most of the companies that work with you that make use of this system. Are there some job areas that have not yet understood the value?*
Mr. Gupta: Yes! That is a good question! Typically, our beachhead is the Chief Operating Officer in these companies or the Vice President of Sales Operations or the Vice President of Supply Chain or VP of Logistics. Therefore, logistics, sales ops, supply chain or overall operations. These are the functional areas that typically derive value from OpsVeda. In order to promote our product we do talk to business heads and people who are reporting to these organizations, because those are the users of OpsVeda. However, we also have to interact with the head of the IT applications inside these companies, because there is some level of integration needed between OpsVeda and transaction systems like ERP in order to make the solution real-time. The area where we do not focus upfront is the finance organization. Operations and finance are two sides of the same coin, because when we talk about investment in operations, it has a financial implication. When we talk about customer fulfillment it has a financial implication. When we talk about procurement it has a financial implication. However, typically we do not go to market talking to the CFO of an organization to tell them how we are going to improve their AP or A/R and how we are going to improve their cash flow or their investments in various current assets. Once a customer is deployed we start seeing the finance users begin to use our applications as well; whether it is credit, A/R, A/P or inventory assets. However, we do not typically go to finance users up front. That is because they are generally happy enough with yesterday's data. Therefore, one day old data is probably fine from finance perspective, unless it is a fast moving environment. It is not fine from an operations perspective. Therefore, we go where real-time is of significant value. Once value is delivered there, then the other functions within the organization begin to adopt OpsVeda.

CEOCFO: *What is next for the company?*
Mr. Gupta: This is a question that is quite near and dear to me! We spent six years trying to create real time intelligence for the business user who makes hundreds of decisions every single day. I said that a couple of times earlier. Now, all of this intelligence gets offered in really intuitive story boards that are streaming live and getting refreshed automatically, and people can drill down and make decisions. Now, interestingly some of our most mature customers have come to us and said, "Hey, this is great that all these users are using it. But if the decisions have a pattern, if the decisions have good correlation with the circumstances, why can the system not make the decision for me. Why do I have to rely on the users experience to make the right decision?" It is a long winded way of saying that the system is intelligent, it is detecting the patterns, it is in real time and it knows that eight out of ten times the business user took action A, B and C, in that sequence; let's have the system recommend an optimized outcome and path to that outcome. Therefore, we are adding machine-learning capabilities to our platform. While 2016 was about enhancing the usability of the solution and making sure that mobile is enabled and making sure that certain capabilities are put into the hands of end users for them to be able to extend the analysis, 2017 is all about how to automate the decisions that business users were supposed to make. Therefore, the platform learns from data and from each user action whether it is unearthing the hidden skeletons or making decisions, and eventually initiating those decisions on behalf of the user. Therefore, the short answer is machine learning on the OpsVeda platform and I think that is going to change the game for us and for our customers.

CEOCFO: *What is the takeaway for our readers? What should people remember most about OpsVeda?*
Mr. Gupta: The capabilities of systems have changed. As consumers, we have seen technology change our lives – cab hailing apps, online recommendations, connected appliances etc. All of them have given a new dimension to what we thought was possible. Much of it relies on the capability of systems to make complex computations instantly.
Similar technology is available to the enterprises too. In the enterprise, the adoption of newer technologies has been slow. Nevertheless, it is happening and the impact will be much more pronounced. When information latency shrinks, business processes change, roles change, outcomes change, and companies become much more efficient. The kinds of capabilities we thought were only possible on a daily basis or at the latency of four hours and so on, is now available real time. Systems are intelligent, the data is streaming, systems can make decisions on your behalf, systems can guide you

to make the right decisions without having to do four hours of analysis and Excel spread sheets. Therefore, the key takeaway for business users is that when information is live and interpreted, the kinds of actions you take are very different and much improved. Real time intelligent OpsVeda enables new business processes, and allows you to optimize business outcomes.