Presenting AlphaTech Companies: Part 1

Multiple speakers

Thank you for your time and appreciate it. I'll wait a second for people to clear out or come in. Hopefully, come in. Alright. Hi, everybody. I'm Jordan Hauer, Co-Founder and CEO of Amass Insights. Firstly, I'd like to thank Bill for putting me first on the docket. Whether that's for better or worse, I don't know, but he'll tell me afterwards. So, we're Amass Insights, we're a data and Fintech company based in New York City. So jumping right in here, we cater to two main groups of people: data providers- or even those that may have never monetized their data before but may want to- and data consumers: typically asset managers of hedge funds and hedge funds we've focused on so far.

Jordan Hauer

So if I'm a data provider, I'm probably asking myself a bunch of the same types of data questions. How valuable is my data? How should I price it? Who would buy that information? And potentially for each buyer it could be a different price. How do I improve my data? How do I better structure it? How do I create research reports? How do I visualize that data better? How do I market it? What are my top competitors doing in terms of marketing and can I get out in front of them and get my data in front of the right people?

And if I'm a data consumer, I'm probably asking myself: how do I discover data when there are just so many providers out there these days? Which ones are are becoming more and more popular, which ones they are actually already stable stakes in my industry, and which ones are completely unknown? Which ones may have a lot of alpha sitting in them and and not being tapped right now? Which ones ones are reliable, which ones may pass my compliance process, and which ones are suitable for my investment BCs and which ones can help me answer questions that I would like to to understand about public or even private companies? And then lastly, what is the value of these data sets within my investment process? How much alpha is it actually adding and how much would I really spend for it?

So our goal at Amass Insights is to answer all these questions. So about us: we are a data and Fintech company as I mentioned and we've built a multisided data market network called Insights, and I'll get into a little bit more about that later. But did you know that--Well, you probably do know that 90% of the data in the world has been created in the last two years, but did you know that only 1% of that is actually being used or analyzed in any form? So what we do at Amass Insights, we source alternative and traditional data sets and we try to match those data providers to the asset managers that fit their research objectives.

So basically, we're a meta-search engine for data sets. So why are we the right people to do this? Well, I'm Jordan Hauer and I pioneered a new type of alternative data several years ago that I called email e-commerce transactional data, in which we gathered consumer email receipts and aggregate them in an anonymized fashion and started to analyze that data and tried to figure out how the quarters for companies like Amazon or Netflix were trending previous to when they ought be announced. And we have deep data technology and hedge fund backgrounds, and we also actually have 18 years of combined experience within the alternative data space before we it was even called alternative data.

So what's our mission? It's very simple: we want to organize the growth data and make it easily discoverable. If you think of the data world as a funnel, all the data is up here and you have down here, you have the data consumers and up here you have all the data. We want it as close to the top of the funnel as possible. We want to understand all the data providers that out there. We want to search, be able to search through them, and make it easily discoverable. So investors can easily find valuable data and the data can make its way down the funnel more efficiently. We don't necessarily want to cover all the different steps in the process, but we want to make the process more efficient. There are a lot of other things that need to be done: obviously delivering the data, analyzing it, putting it into a visualization. We don't cover all of that, but we do cover sourcing and finding data.

So here's actually a somewhat outdated screenshot, which is why I crossed out the 13-k. We actually have over 20,000 data providers that are profiled in our platform. So this is a platform that basically connects data to asset managers. We add about 250 new data providers- probably a little bit more than that- per month- and you might be asking, "Wow, that's a lot of data providers for a small team, how do you do that?" Well, we not only leverage our best network that we've built over the years in the data provider space, but we also have a proprietary sourcing technology that uses NLP and web scraping technologies to more efficiently gather information on providers and find new providers. We also offer providers the ability to log in and do a self-service editing of their profile if they so wish. All this has gathered into 120 meta data fields per provider and we've actually gathered over one million tags in our database, which is all searchable.

So if I'm an asset manager, what does the Amass solution mean for me? I'm probably spending countless hours sourcing, betting, tracking, data cleaning, and analysis. I'm probably also spending all sorts of time going back and forth with vendor communications, trying to understand a provider better. And I probably would like to see a transcentralized repository of all the data that's out there, whether it's internal, external, whether it's on Eagle Alpha, new data exchange, or any of the other platforms that are out there. Well, Amass Insight solution does all this and more. You're able to learn by data providers in a very in-depth way, you're able to be matched automatically based on your research objective, based on your preferences. You're able to retrieve data samples and data dictionaries on the providers that are of interest to you. And lastly, you're able to more efficiently on board that data, whether that's through our legal templates or our compliance processes.

So if I'm a data provider or even a growing tech company, what does Amass Solution mean for me? I'm probably sitting on a mountain of data and trying to decide whether it's valuable or not and whether I could monetize it. I'm also probably wondering who else out there has similar data, is already monetizing it, and how do I stack up to that competition? And lastly, I might even be asking myself, how do I layer on or add on new data sets that are complementary to my product to make my product even better? Well, Insight does all this and more. Amass already built me data profile and I'll be able to go in and edit it or I can ask Amass on my behalf. And once I update that profile, I get inbound matches automatically sent to my inbox, and I'm able to start having conversations with potential buyers immediately.

My trial and onboarding process are much more efficient and I'm able actually to create derivative products, whether in partnership with us, with Amass, or on my own using third-party tools that Amass has relationships with. So here are some additional screenshots from our platform. The one on the left: you've already seen that the data provider's page allows you for quick searching,

filtering, sorting, browsing through our databases, and then, once you decide on the provider to drill further into, you click on the provider, then a very detailed data profile comes up for the provider where you could see every piece of information that we've collected about that provider within those 120 metadata fields, such as you product details, overviews of the company and their products, who they are partnered with--this is an important one--who provides them data and who do they provide data to? Who do they distribute their data through, and who are their sources? What geographies do they cover? What, after the classes, do they cover? How much historical data do they have? And we even have a [inaudible] scoring engine that allows you to more easily sort and prioritize the providers that are the best. And lastly, we also have trial and pricing information. And one thing I forgot got to mention was, on the right side there are those resources as well, so you can download those directly from the profile. That's the data dictionary you see there. You think about the Yelp for data where, instead of looking for delicious food restaurants, you're looking for really valuable and useful data.

So maybe asking yourself, "I've heard of other catalogs out there, how does Amass Solution differentiate itself? Well, we actually have an order of magnitude larger amount of providers in our platform than others. As of this morning, it is 20,525 providers that we've profiled. And we actually have built over the past decade a very pretty complex but proprietary useful taxonomy in order to categorize and characterize those providers in as much detail as possible. We don't favor any provider based on prior relationships, so even if we already know a provider or have a relationship with them, if they're not the right fit for the asset manager we're talking to, we're not going to suggest them. We have an already vast network that we've built over the years and we have a very flexible business model where we can work with data providers and asset managers in many different ways, create win-wins for all parties. Lastly, we're tech first. We're not an event company, we're not a relationship sales company, we're a tech company, data company.

And coming back to the data market network, this is how we envision the data world. You have the information suppliers, we talked about those, over two thousand we've identified. We have the information consumers currently rotating to asset managers, but the reason was because that was the most pressing need there. We're planning on expanding that to others, and then the data tools, which we have not let yet launched, but they basically help people improve the value of their data sets and they also need to get more interaction and transactions within this space. So our plan is to increase the efficiencies in this market and increase the transactions and interactions in this space, increase the flow of data and increase the flow of money. Thank you very much. If you would like to talk to me afterward, please let me know. But if your data provider or asset manager, go ahead and find me on my website. Thank you.

Armando Diaz

Great. I'm Armando Diaz, the CEO and founder of PureStream. I want to thank you Bill, for the opportunity. Air Summit is an incredibly credentialing event and everybody appears to be really grateful for this. I'm also going to avail myself of that caveat earlier to the press that this is totally on our background. So PureStream is an alternative trading system. So for those of you that aren't in the industry, what we are is essentially a stock exchange. We don't regulate ourselves, we don't look Securities. Our only business is matching buyers and sellers. And, as you can see up here in this graphic, what we believe is investment managers are underperforming their alpha, and it's structural and it's unique to institutional investors. It's not a knock against the market. The market works incredibly well. The US market works incredibly well for all its stakeholders, but institutional investors, and I'll show you some data that reflects that underperformance relative to their alpha. So before I get to that data, I thought what would be good is to set a context for an example to

follow through. So imagine you're a portfolio manager, you manage $5 billion, you have conviction enough that you want 5% of your portfolio represented in the security. You send that order to your trader, your trader is faced with a choice. Do I demand 10% of the liquidity in a day--it's going to take me 21 days for this particular security--or do I throttle down my impact and take 42? This is not taking into consideration the impact that asking for five or 10% of the volume will, but what it does represent is all the market risk that portfolio manager is taking.

There's no other asset class that has this risk. Private equity goes through that funnel, decides then implement it in their portfolio, venture capital, same thing. But managing public money comes with taking market risk, with your competitors that they can take some of your alpha and other participants can as well. So here, the costs associated with trading and what might be incremental to some of you is that red line. That red line represents the average reversal after you've implemented at those rates. So you can see quite a bit of efficiency, around 5%, the second set of green dots. Your impact is largely efficient because it doesn't reverse. But look at 10%, it's unnecessary, unneeded essentially.

So what happens when a good or service takes a long time and is unnecessarily expensive? You consume less of it. And that's exactly what equity mutual fund managers are doing, and they have been for quite some time. Now, that doesn't necessarily mean that they're leaking alpha, like I put up there, but suspend your disbelief until you see the next slide. What I do want to talk about is those two red vertical lines. They represent when high-frequency trading became 25% of the market volume, when it became 50% of the market volume. So here it is in terms of alpha leakage, you've got the same two red high-frequency lines, you've got a green line. The green line represents what actual mutual fund returns were. The red represents a decomposition of the same portfolios by factors, and you can see pre-high frequency trading portfolio managers were consistently outperforming their theoretical alpha. Post high-frequency trading, there is a beginning of an underperformance, which is a change from the pattern, and then a significant underperformance relative to the theoretical alpha. Now, one of the things should stand out to you on this slide: the amount of alpha theoretically, that the portfolio managers have is 50% greater than what they had in 2002, yet they're only yielding 5% of it. That's the problem, it's structural.

Now, I want to point to another industry because I do think that, as an industry, we've underinvested in execution, we've overinvested in the pursuit of alpha, and that industry is energy. It's got a similar shape: exploration, production. Look what happened: the US went from the largest importer of oil to the largest exporter of oil, not because it found more oil, it was aware of that oil, it didn't know how to get the oil out. It was a new obstruction technology that led to that renaissance. Something similar awaits us in trading and capital markets. Now, let me give you some very high-level metrics for the market on the left versus the market on the right. The market on the right is what we have, the market on the left was a market that we all remember. The market on the left took three orders to get one trade. That one trade was 2000 shares. So three units of effort, 2000 shares. The market on the right takes 20 orders to get one fill and that one fill is barely 200 shares. So you do seven times the work for one-tenth of the output, that's structural. It's unique to institutions-- retail, done in one cycle--corporate, they price pretty or post the market close. The only people that continuously loop through the auction process of the market are institutional investors. So how does PureStream address this? So the right-hand side, one of the key attributes of any venue is price discovery, sorting the orders, and liquidity discovery. So the first thing that we do is we extract the right-hand side, we just listen to the signal and avoid all of the noise of the quoting.

So if you think about price discovery, price only represents half of price discovery. Sounds odd, right? But if that first trade, a thousand shares for 36.99 was ten thousand, it would be worth 10 times the 1000 in terms of price discovery. So there are two parts to price discovery, the price and the quantity. PureStream uses the entire price discovery. Every other venue is either creating a national best bid or offer, which is just a price, or referencing just a price. We use all the information. What does that enable us to do? It enables us to change the contract with the algorithms, the dominant interface to the market, and that contract changes from what do you want to do at this moment in time to what are you trying to achieve at apparent quantity parent strategy level? And we put a nonsensical example here to drive the point through in terms of the liquidity bandwidth that we create. That 200% relates to each of those transactions that are taking place in the market. What that algorithm is saying is: if I could not impact the market and a thousand trades, I'd love 2000. We have in this example fortunately, another seller, another algorithm, they too want 200%. That algorithm may want 500%, but because this algorithm wants 200%, they're going to match at 200% and after 1000 trades, 2000 exchange between the two algorithms. They don't disconnect, they don't have to refine themselves the way it works conventionally today. 200 trades, we exchange 400 at 37. So the green represents what's happening system-wide, it's virtual centralization. What's happening in purple is what's happening in PureStream. And what's happening in PureStream is effectively, those two algorithms have given each other top-of-book protection for whatever percentage or fraction of the percentage that they want. Now, the throughput--let's revisit that first chart we gave you, where today the choice was 21 or 42, and that certainly may be the right strategy for somebody, but all of a sudden you have the ability now to get that liquidity. This opens up the throughput of liquidity, enabling the institution to be able to realize more of their alpha. I look forward to anybody that's interested in following up in the after-session. Thank you very much.

Thomas Li

Hi, everyone. I'm Thomas, I'm one of the Co-Founders of Daloopa, and let me share with you what we do today. So we offer a very simple proposition to institutional investors. We essentially update everybody's financial models. It's a very, very simple prospect where what we basically say is we don't really care how you build your models, we don't really care if they came from a [inaudible] model, we don't care if your analyst [inaudible] it. Given an excel spreadsheet of any public company, we have the ability to update it all in one place, make no mistakes. It's a relatively simple plug-in, right? So if you have in the background here I basically took and old [inaudible] model with our excel plug-in, you tell us which quarter you want, you click a button, and it just works. It's really that simple. It basically updates clients from long-only to hedge funds, asset managers, private equity, and so on. And that's fundamentally the value proposition. I wish there was more I could explain, but that's really it. So I'll spend a little bit time to walk you guys to like how does this technology even exist in the first place?

But before that, let's look at one simple thing. Just look at the buck at the bottom, basically, that's essentially a value proposition. We just want to get everybody home during earning season in time to have dinner, that's our company's mission. It's very simple. In my former life, I worked at a hedge fund and every time earnings season came around, it was brutal. You just sit there and you update models and the problem was just like it's midnight, I got to wake up at 6AM, I've got another lot of earning to go I'm just like this is crazy, I'm just typing numbers over and over again, somebody has got to automate it. So one day I woke out and I was like, "Yeah, I'm going to do it." So how does it work in the back-end? So in the back-end it's pretty straightforward. So what we've done is we've gone through the process of figuring out a way to using you all sorts of software to machine learning what have you to essentially accumulate all the data that has ever

been disclosed by public companies. So we're not just talking to stop income statements, balance sheets, or what not. We're talking about everything that includes KPIs, operational data, your footnotes, your adjustments, and so on and so forth. If you think about some of the most important data that you care about that a public company discloses, it's usually embedded in management discussions, in guidances, and the footnotes of an investor deck. You have these weird KPIs that you're like, "I know it's somewhere in the 10-Q, I just don't know where." The only way to find it is to read the entire thing, so that's what we've basically done. We've read every 10-Q, we've read every 10-K, we've ready every investor deck. We've painstakingly combed through everything, collected all the data, put in into a database, guarantee the accuracy, and provide you with that data. So essentially, you can just download our excel sheet and just take a look at everything the company discloses. Do a lot of our customers do that? Actually not really. What our customers basically say is, "I have all the data pre-collected, I have a model, I would just want to update my model. But because we have collected the universe of all the company's data, every model that you have, let's say you have the Netflix model, it's most likely going to be just a subset of the data the Netflix has ever reported and, as a result, we're able to update it.

The other cool feature about what we have is because we collect all the data systematically, every single data point is auditable. So if you open excel, you pull up any number, you click on it, it will always bring you to the exact location in which the data is obtained from. So for those of you who's gone through two years of investment banking out of college, one of the most brutal parts of this industry is transparency, figuring out if I can trust my Analyst's numbers. And the most difficult part of the job is if I'm given a spreadsheet of two thousand data points, I have to go into the SEC filing and audit every single data point, and with the [inaudible] that's basically never a problem anymore. We guarantee that we're able to take any one of your models and we will tell you where every single data point is obtained from. So you could have analysts who's left them from five years ago who has built you a salesforce model and you ask yourself a question: where did 2019 free cash flow guidance number come from? We'll tell you that in about five seconds. So again, what does that mean, right? That means that if you wanted to build coverage into new spaces, that becomes relatively straightforward. Because if you want to cover software tomorrow, you want to cover payments or whatever, what becomes relatively easy with us is you can just start with an Excel spreadsheet of every single historical data ever disclosed by the company, every KPI, every guidance, and not only do you have all the data at your fingertips, every single number is auditable, right? So one of the fundamental principles of our business is: we want to give you perfect data, but we don't need you to trust us that we've done a good job. What we care about is providing you with all of the tools that you require to audit through all of them.

We have one other use case that wasn't born out of basically one of the huge pains of industry. So imagine if you're a software analyst, right? And you care about tracking AR across all software companies So you want to look at magic number across all software companies. There are about 250 public software companies out there. The magic number is a number that every software analyst intuitively knows how to calculate. No software company actually discloses that and if you want to compare magic numbers across let's say, every software company, it is doable, it's just very annoying, right? Because you open 250 excel models, you calculate the number, it takes about five seconds, you consolidate it into an Excel sheet, and boom, you have it. And then the new quarter rolls around and you're like, "How in the world am I going to go through 250 companies just to update this magic number industry model?" And then you think about the scope of an asset manager and you want to do the same thing for organic same store sales across restaurants, you want to do the same thing for square footage across hotels, [inaudible] across airlines and so on and you realize that maintaining industry model it is simply not something that is feasible, but it's something that you want to do, right? The beauty of how the

Daloopa data works is that we don't really care if your model is a Netflix model or an industry model that consolidates magic numbers across 250 companies. If you have an excel model, we're going to update it, no questions asked, right? It's all systematic and all pretty straightforward. So I'll turn some time back to Bill. If you guys have any questions, feel free to hit me up after this. [inaudible]. Thanks

Nitin Gupta

Good morning, everyone. My name is Nitin Gupta and I'm one of the Co-Founders of UniQreate. So there have been a lot of interesting sessions this morning and we of course heard a lot of people talk about changing sentiments, regulation driving digital assets such as crypto, or geopolitical events for that matter, right? But each of these events and the topics that we talked about was actually coming down to three very important things, that is time, value, and data, and I thought I will just dig a little deeper into those concepts.

So in 2019 alone, capital markets spent $36 billion to obtain the data. And that is when everything was normal. But then everything changed. With higher uncertainties that actually increased the data cost that was spent in the last three years on data-related functions by more than 15%. And to contain this epidemic of operational risks and data cost surges, we need to insulate ourselves, both from manual dependencies as well as technology complexities. But the important thing is realizing the true economic value of the data and that data is lost exponentially as the time passes.

So how would you extract this data from these documents, which are highly unstructured and a lot of pages of text? There are two ways you can do it, either you can manually extract this with hundreds of people or you can build an automated process using a technology [inaudible]. But before you do either of those, you still have to train the teams to understand the documents well enough. Once your data is extracted, you still need to verify it, and if you need a different tool for each business function, it just multiplies your effort and cost. That is why we created Extract, a smart data extraction product. With Extract, you can just start your process by quickly indicating the data of interest, and that is through a simple selecting click interface. Once your data is extracted and the system recognizes the context, it starts predicting these data points. And with a single click, it takes you to the exact location in the source document so you can verify it.

These steps are all you need to scale across your different business functions, to differentiate your own investment strategy, or to even innovate how you generate alpha and, of course, how you manage portfolio risks. Here are some examples where this new data-centric approach was adopted, and has resulted in tremendous benefits. A global investment manager with more than 100 billion dollars assets under management, and with a shift in the focus, they needed to assess the long-term sustainability into their own investments. But what really slowed them down was extracting those key ESG metrics such as your carbon emissions, gender diversity, or even water withdrawal rates, and that too from a variety of these disclosures and reports of their own private portfolio companies.

The challenge of dealing with these documents, which did not have any standard or structure or layout, or even context, was hard enough. Instead, they were also using a lot of manual and technical processes to address each new metric every single time, which made it even harder. With Extract, they could now build any new workflow in under 15 minutes for any business needs. And how many people did they need to manage this diversity? Just one. With Extract, they could get the consistency of using the same workflow for any type of document. The speed ensured the

data quality as well as the ease of consumption [inaudible] made it even more seamless. With these three steps, you could now build your own unbiased and transparent ESG metrics across all the three key pillars, and the ease of consumption-ready data just makes it even more seamless for you to compare and benchmark this data with any third-party data provider.

In another instance, a capital market research organization needed to gather insights from macroeconomic indicators such as economy rates, growth rates, and inflation. Each country provided a different document, with different statistical approach, with different standards, and that too from more than 200 plus different countries. As a result of this huge challenge, they were very high manual dependencies and the data operations team was very much burdened. Needless to mention multiple data quality issues, ranging from sale data to even the data with questionable accuracy. With Extract, they could now bring down the complexity of managing this diversity of data with a single centralized software and with no technical team. Again, with consistency, speed, and ease they could now realize the true economic value from the data with very little effort.

Today, the speed of technology and ease of adoption are more important than ever. While RPS and traditional machine learning companies scale high on technology use, the obvious tradeoff is added complexity and cost of integration. Verticalized products and in-house solutions on the other hand, are handcrafted for easier adoptions but they do not scale quickly with changing business needs. And that is where we created Extract, where it provides both power and flexibility for you to manage your own data extraction needs. With our focus on asset managers, hedge funds, and data providers, we aim at empowering you to do what you do best, to find those compelling investment opportunities. And going forward, Extract's capabilities will also extend to include various other document formats multi-lingual support, as well as smarter integration options for your systems. My name is Nitin Gupta and I'd like to invite you to start your data intelligent automation journey now, so that you can build your own data without worrying about it, without worrying about POCs or pilots. There are no contracts, no procurement cycles, and not exhausting your budgets. We empower you to be that alpha, and it takes five minutes, so we can get you started and onboarded before you can finish that cup of coffee. Thank you for joining us.

Mike McCreesh

Good morning, everyone. My name is Mike McCreesh and I'm representing Battea Class Action Services. I want to give a big thank you to the Air Summit and Bill. I was an alumnus of Air 1.0, so I'm thrilled to be back here today at 6.0 and for many more to come.

So before Battea, I had a 25-year career at Goldman Sachs and I moved to Battea as President three years ago. What was most compelling to me about what Battea was doing was this concept of non-investment alpha. Which is basically the opportunity to put a new PNL line in securities class action recovery- and that number is zero and that number will never go below zero, and that's a pretty compelling opportunity within the space. I like to refer to my old career as in the area of difficult or hard alpha- always competing against really, really great people, really great firms to try to inch out an opportunity. I often refer to this as easy alpha. This is where there's effectively a pile of money over to the side and you just have to reach down and get it, and that's a pretty compelling thing.

What I wanted to explain is securities class action has been around for a while, but it's as much of what it isn't as what it is that's really important. I think once people get to the bottom of what it is, as I mentioned, it's pretty compelling. So again, securities class action, Battea is a provider in the

space. This is all we do. We wake up and do this and we go to sleep and do this. Others in the services have complimentary businesses, but again, we feel that this is a space that warrants you being solely focused on this. The participants, anyone in the markets, our clients are hedge funds, banks, [inaudible], family offices areas, RRA's, insurance companies, anyone involved in the markets. And it is really, for us, the intersection financial markets expertise and big data processing and normalization. The back half of our company is all about crunching and normalized trading and financial data and the front side is making sure that when these courts and these claims, administrative firms, who are not financial entities, are dealing with cases and products that are not simple, there is a big delta in terms of the money that can be recovered based on the expertise of the people doing it, and that's where we think we have a market advantage. Why would someone do this? There is a fiduciary responsibility, it's inherent, but a lot of people feel like tons of money has been settled, some is due to their investors in that name or in that product, and not doing this is letting money walk away.

As I mentioned the non-investment alpha revenue line is on the upside. It will never go negative. And really why allow money owed to your investors to go to others? All of the money in these suits are paid out, so if your investors and your company was owed money and you do not participate--to be clear, that money is going to get distributed, it's just going to get distributed [inaudible] to others and that's something that I think should be near and dear to everyone. The scope of this business--and this is where in the Harvard business school example you want to make sure that there is a viable market. There is about $15 billion that have been settled and will be distributed to investors. That number goes up every time there is a settlement, it goes down every time there's a distribution, but that's a healthy amount of money. There's anywhere between 330 to 400 over the last five years filings, so basically one or more a day, and it's only growing. And these settlements are all products. It started just in a single equity space but there are bonds and FX, and Crypto now in [inaudible] in all of these businesses. And where I get to the key facts, and that to me is where the conversation normally turns from, this might be interesting to why wouldn't I do this? And that is only a third, on average, of the settlements, are claimed. So if there's three of us in a name and, on average, only one of us claims, and since the entire moneys get paid out, that person gets three times what they deserve. So that's pretty compelling for the people who do it. Anonymity in the US, Canada, and Australia- many of the cases are in the US and Canada. Unless you're the lead plaintiff, you are sealed. We know your name as you are represented in the suit and the court knows your name, everyone else is sealed. And that's very interesting for people who don't want to be known as being involved in any lawsuit because they may still be in the name of the stock.

Mike McCeesh

Contingency pricing--so unless something is recovered, you never pay. So someone who says, "I'm not sure the way I trade would be helpful here," then great, then you never pay. So again, that's pretty interesting. And unless you're a self-clearer, there's no real operational lift of data comes from fund admins, from PV's, from custodians, from players who are already in the business of handling your data and handling it properly. And at the end there's really nothing to lose, everything to gain. It's interesting once the conversation is had, you get to the end, there's a ton of my over there. I don't have to have any lift unless I'm a self-clearer. If nothing's ever recovered, I never pay, and I'm going to be sealed, so no one ever knows of this. The answer becomes: why wouldn't I do this? And at the end of today, the answer is: you should do this. But unlike the trading businesses that I've been in, where the last conversation is the important one of what are we going to do and where are we going to do it, the first conversation is the most important, and that is understanding what it is and what it isn't. People like to ask me, "How many

lawyers do you have?" I say, "I have two because we don't sue anyone and hopefully we never do." We're not involved. We're effectively a clearing firm for all of these suits and we are not involved at all in the suit. So it's a pretty compelling business. It really is as advertised and it's really startling to me that so many people don't do this. And I heard one hedge fund tell me, "Not interested," which is kind of interesting because finding money is exactly why they're in business. And that made me realize that just telling the story on a basic level hopefully gets people thinking about: "Do I do this? Should I do this? How do I want to talk about this?" And that's why I would like to engage with you guys later if you're interested in talking further. But thank you very much and thank you, Bill, again for the opportunity.

Bill Stephenson

Alright, we're going to do like a 10-minute break and then if we can just come back in here promptly, we'll do the other next five. Thank you.

Hello, we're going to start here in a minute with our next presentation. If everyone can start taking your seat, please. Thank you. Alright, we're going to have our next presenter come up here and we'll get things back on track. Thank you. Just give it one second for folks to get seated.

Jesse Grief

Okay, so I want of first thank Bill and Air Summit for having me and for having OneChronos here today. It's exciting to present to all of you. I'm Jesse Grief, I'm the COO at OneChronos. We are an ATS, an alternative trading system. As Armando mentioned earlier, there's some kind of nuance to that, but you can think of us as a stock exchange where securities are our bought and sold. So our core premise here is attacking and addressing some of the root cause challenges, or the root cause challenge in electronic trading. It is our strong belief that the largest challenge today is that the role of the institutional investor and trader has changed dramatically over the past two decades, but the auction mechanisms where securities are traded have not, they have not adapted. And because of that, you have all this interesting behavior that takes place in a market that, yes, the capital markets here, and in particular the US equities markets, are some of the largest in the world, but that does not mean that they're not as efficient, that they are as efficient as they could be. And for many of you, it seems like from looking at much of the attendee list, you may be in different roles, like data and certainly alpha generation, but imagine if you were able to squeeze an additional three or four basis points out of your execution, what that would do for alpha generation and what that would do for the capacity of strategies.

So when we look at the marketplace, the issue is not, in our opinion, the prevalence of high-frequency trading. And also high-frequency trading is often thought of as these enormously sophisticated proprietary trading firms, but actually, the bank trading algorithms are enormously sophisticated now because they have to be. So there is this race for speed because of how auctions have been designed and not changed. In particular, the way auctions work in capital markets and in particular in equities is that the person who gets their first, the person or the machine who gets their first, gets to affect that buy or sell, alright? So that creates an enormous incentive to be fast because there is informational asymmetry and a major informational advantage.

There has been research that has purported that 85% of the economic rents go to the user or the machine or the system that is there absolutely first, and we all split the rest. So how do we correct this? Because in reality, like an institutional investor might be saying, "I want to sell out of

momentum, I want to buy into value, and so I have a bunch of orders that I'm selling these and buying into these," and each of those orders might be, let's say, 500,000 shares. What happens? You send those to your broker, they all get treated individually, without respect to each other. In most cases, that 500,000 shares is broken into these tiny orders. If you can visualize one of the slides that Armando had earlier, it kind of showed that ecosystem of how that works. That 500,000 shares is broken into small child orders that are, in today's case, in list venues like exchanges and dark pools, on average well under a hundred shares and you've lost all the fidelity, all the rich fidelity of that parent order. That parent order really is enriched with information about how you might execute or how you're thinking about trading or the fact that you would buy these names if you could sell these names. There's no way to specify that in a [inaudible]. So we're left with the situation where those tiny orders are sprayed against many different market centers-- call it 45 or 50 different market centers, with the hopes of trading on five of them and, whether you trade or whether you don't trade, you're leaking information to the marketplace. So like what's the answer? What's the right way to transact? Like if I want to buy 500,000 shares, should I buy 800, sell 400, buy 1100 all the way up to 500? Like, what is the right mechanism? So OneChronos is a company that is changing this paradigm to level the playing field for institutional investors and traders and not teach people new fact patterns, but be able to accomplish the fact patterns that people already want to do. The way that we do this is we run periodic auctions throughout the trading day. Periodic auctions have shown to aggregate liquidity and be very positive in terms of price discovery, allowing users to compete on the quality of liquidity rather than the speed of access to it. So in Europe, periodic auctions have been around for some time. They're now over 4% of the market. In the US it's the fastest-growing segment of the institutional trading marketplace and we're excited to be part of this as well.

For each of the auctions that we run, we run an optimization where that optimization process optimizes to get users' orders price improved as much as possible. Ok now, I know that's a mouthful. Price improvement is a key ingredient to execution quality. It's not the only ingredient, but it's agreed by the buy-side and the sell-side that it is a key and core ingredient. We are literally optimizing for people to get price improved. Now, given the fact that we're running a constrained optimization, we allow users to inject their own constraints into our optimization process. You and your firms will always know your flow way better than I will ever know it, and so in that regard, folks can say things like, "I'm interested to trade this limit order, but only when the spread is greater than X, and the greater it is than X, the more size I'm willing to do." Or, "I'm interested to trade this limit order, but only when the imbalance is more than two to one in my favor, and the it is my favor, the more I'm willing to do." Or, "I'm interested to trade this limit order, but only when the quote is really clean based on my definition of cleanliness." So we're not trying to invent the next IPhone here. These are things that people are already trying to accomplish, but by the time it reaches the trading venues that exist out there, the algorithms in those venues are just simple, whoever got their first designed. So this allows for folks to maintain the fidelity of that parent order intention. There are other interesting use cases for multiple symbols, like, "I'd be happy to buy asset A, but only if I can sell asset B at this spread or better." Or, "I'd be happy to buy Apple but only if I can sell any of these thousand name that have a beta of some specified tolerance versus Apple." So the interesting thing about this is now we're in the world that people can specify where they have indifference, right? Like, "I'd be interested to buy this BMW in Black with the sport package for 55K, but I'd be happy to buy it for 50K if it were in grey," right. Imagine being able to submit those simultaneously. You're not overbidding, you're not underbidding, it's capturing your indifference curb, so to speak. And by giving folks the tools to do that, this encourages more truthful bidding behavior. More truthful bidding behavior encourages more efficient markets or more savings for those that are participating in that market. So this type of auction mechanism is called a combinatorial auction. It's actually been around for about 30 years.

Now, it's prevalent in wireless spectrum auctions, natural gas markets, electricity markets, a number of other high-stakes markets-- display ads, for example--and across those markets, over $160 billion are transacted every year through these marketplaces.

Now let's take a look at equities: $460 billion change hand every day. Friday, $600 billion shares traded, $600 billion traded hands. So the challenge however, is that this type of auction- a combinatory auction- is extremely computationally intensive. It used to take hours, now minutes, to run. No one's been able to apply this type of technology to capital markets or equities trading, even though equities trading shares many of the same challenges that those other markets face.

So OneChronos has pioneered the technology, the computer engineering, and the machine learning to offer combinatorial auctions to equity trading and capital markets in the speed, scale, and resiliency required of this marketplace. So we're very excited about this and with that, I'm proud to say this past June 3rd, two weeks ago, we started our rollout go-live process which deploys over the course of this month, where we'll then be supporting all NMS symbols and US equities. And I'm also pleased to say that we are integrated with and excited to get off the ground with more than 15 of Wall Street's largest and most influential banks, brokers, and the liquidity providers. Why? Because their clients asked them to. Anyhow, thank you very much. I'd be very excited to speak with all of you or feel free to reach out to us or your broker. Thanks, alot.

Spencer Reich

Good morning. My name is Spencer Reich and I'm a partner at Booted.ai. Boosted.ai has created a machine learning platform for institutional asset managers where we bring our proprietory finance-specific learning algorithm which makes them accessible to any investment mandate, allowing them to combine their investment expertise to data if they want to analyze their securities, allowing them to provide their goals, [inaudible] their constraints, to bring AI powered insights; everything from idea generation, or dynamic stock screening at the top of the research funnel all the way down to portfolio optimization to risk analytics. A little bit about us, we were founded over 5 years ago. We raised our latest fundraising around series B around the end of last year, I think $35 million with some of our leading partners that includes Smart Capital, [inaudible] Capital, [inaudible] Ventures, RBC, and others. We have over 60 people on the team now, the majority of which are in machine learning, engineering, data scientists, but also finance practitioners like myself, I spent my entire career on the investing side as an analyst and portfolio manager, so helping to implement a lot of the technology with our clients that we're working with today.

In terms of our experience, it really is a blend of the practitioner with technologists. The core of our machine learning team came from Bloomberg. Our CEO, our CTO, the head of our data science group were some of the key founding members within Bloomberg to bring machine learning and machine technology there. And it's really interesting being at Bloomberg, they had a unique perch. They could see what the vast majority of the investment community was doing around their advanced quantitative techniques and even machine learning. And the short answer, there was actually very few firms that had the in-house capability, desire, resources to bring machine learning in-house. That being said, there was an overwhelming curiosity, I think questions from investors, what are you doing around machine learning? And that's where the idea for Boosted was born. It was could we provide this open architecture system for any investor, fundamental, quantitative to be able to utilize our technology and that's effectively what we've built. It's interesting because I think our client base really talks to the diversity of users and types of clients that can access this technology. We have over 50 institutional asset managers on our platform

today that are utilizing live models for a variety of different use cases. About 35% are in the hedge fund space, 45% are in the long-only asset management. The remaining split is between family offices, index providers, pension funds, and we're fortunate to include some of the largest institutions in the world on the platform but also smaller emerging managers and start-up funds as well. And it is a global client base, we support global equities and we have clients around the globe. The voracity of our company is not to replace anything that the human is doing per se in the investment process but really to be a compliment and additive tool and a unique lens from which they can look at the world. So combining their capital markets expertise that are mandated with our machine learning, we think it's going to provide the best solution. And there are a lot of reasons around why our clients are choosing to implement machine learning, particularly in an outsourced way, through our platform, and I think no time is it more important than where we sit today. We're going through one of the biggest regime shifts that we've seen, certainly in the last 15 years and perhaps maybe in the last 50 years, given what's going on with inflation, central banks that are unwinding the vast amounts of liquidity, going from zero percent interest rates just in the beginning to see how high are they really going to go and what are the implications for your investments? And anybody that's been looking at a purely backward looking tool to find out what's worked in the past, it's probably not going to work in the future given the landscape that we have today. So having a tool like ours that allows you to analyze real-time forward looking analysis from the data that you wanted to look at to give you patterns and to give you insights, some of which may not be intuitive and we're not biasing it through our own investment process.

And the last thing to touch on is the time to value. As I mentioned, we have a team of over 60 people, whose entire job is to be that outsource quant analyst quan team to help you digest these and having it run 24/7 to give you insights into what's going on in your portfolio. We try to make machine learning accessible to anybody. So it's a very complex problem, but we take our proprietary finance-specific machine learning algorithms but we make them accessible and complementary to any investment process. So we don't just build one model and then sell those recommendations to everybody. It's really reverse engineered that everything we do is completely bespoke and customized to any end investor, so no two investors will ever have the same recommendations and the same model. Not only the complementary within the investment process, but it's easy to use. So the lowest common denominator is: anybody can use it, you do not need to be a programmer. It's a web-based platform, it's point and click. We have thousands and thousands of data points that come with the platform that are pre-loaded. And, most importantly, it is an explainable AI. Every decision the machine makes, both at a portfolio level all the way down to a single security level, comes with a full list of what are the top features that are allowing it to make that decision on the positive side, on the negative side, and it's dynamic, real-time, giving you that analysis and insight. So high level, how it works, you select all the inputs to any of the models and portfolios that you're ultimately going to bring. What is your investment universe? It could be extremely broad-based global, it could be a targeted one, it could be your own portfolio. What are the data that you want to analyze? So it could be fundamental balance sheet, income statements, it could be macroeconomic, it could be technical. We have a lot of alternative data providers in the room today. You could upload or plug in via APIs, any of the alternative data sets that you're working with to be able to tell you which, in fact, is most predictive and for which stocks. And then finally, what are your constraints and what are your goals? Are you long-only? Are you long-short? Do you have position size limits, turnover limits? Are you trying to be a certain index? Do you have a sharp ratio goal? Whatever it is, the more information you can give the better, because then we can help you select the right algorithm to help you optimize on your problem.

And we break it down into two stages. The first date is all around idea generation. Think about this

as top of the research funnel and what the machine does an excellent job of doing is separating the winners from the losers, which are the ones most likely to outperform based upon your data and goals, and which ones are most likely to underperform, and why? Once we've done a good job of highlighting those winners from the losers, we can then turn it into an optimized portfolio- not because that's how the majority of our clients are trading the systematically, but it gives you intuition about sizing and timing and risk analysis around your portfolio.

So I just want to highlight some of our most popular use cases and this afternoon we're going to be around, and for anybody that would like to learn more, we're happy to do a little bit of a deeper dive. But in terms of the most popular use cases: dynamic stock screening: we work with a lot of fundamental research teams. 75% of our clients are fundamental first investors, helping them to still huge potential investment landscape and what are the ones that they should organize the most likely to be near-term catalyst for their process, most likely to outperform and why. Once you have your portfolio or your list of names within your universe, we call the second one machine learning overlays, because we're not telling you how to pick stocks, not what to buy, what to sell, rather, we will help you optimize those positions for any of your goals: to reduce risk, maximize sharp alpha, whatever it may be, a sizing and timing exercise. AI power hedging baskets have become very popular among our hedge fund community, especially this year, allowing you to go beyond just simple correlation analysis to take machine learning to look at whether you're trying to hedge a single name stock, a basket of stocks or particular risk analyzing through the machine learning, what's the data similarity? What's the price similarity to become a bespoke hedging basket to hedge for any risk you may have? That includes factor analysis as well, so how over or under exposure, to both traditional factors like far risk factors, but then also machine learn factors. So this is also really important- things that go beyond just the traditional risk factors and then you can control for those in a thoughtful way. Alternative data set--so I alluded to this earlier, you can upload any data set you want, whether it's publicly available or bespoke or are something you purchase, and then we can highlight to you the importance of that data set for your universe, how predictive it is and for which Securities, to give you actionable buy and sell recommendations. And then lastly, 25% of our clients are quantitative and they're using fully systematic models that they're building, developing, and researching on our platform. So, with that, please come by this afternoon and say hello. I'd love to talk with you all and thank you again S3 for having us today. I appreciate it. Thank you.

Dan Joldzic

Hello, everyone. I'm Dan Joldzic, CEO of Alexandria. And Alexandria exists to help investors make better decisions. That's our goal. We want to help you make better decisions. So how we do that is by first finding valuable messy data sets, right? So I don't know if you've all heard about the 4Vs, but we look for unstructured textual data sets that are high value, high volume, high velocity, high veracity. We then take that messy data set and we run it through our machine learning algorithms that are trained by analysts. They are trained to draw the same conclusions that an analyst would. What you end up getting is data that is uncorrelated to traditional factors and has substantial alpha, and we've been doing this consistently since 2012, which was our launch.

So why does analyst automation matter? Well, in short, it adds value. So if you could read every single document out there as an analyst, you'd be able to capture more information for the universe that you care about. You'd be able to potentially expand your research coverage, but the simple fact is you can't. We're all research or resource-constrained, so you can't really read all the information out there. You kind of have to pick and choose what you need to look for. But an analyst that thinks you- I'm sorry, an AI that thinks like you can, right? And so here's an example,

and this is a tried and true example. Overall, if you could read every single earnings call for the S&P 500, you identify themes from those calls, you identify if those themes are positive, neutral, or negative, and you then rank the stocks in the S&P 500 universe. You will find that the companies that are more positive will outperform the index by about six and a half percent. The ones that are most negative will underperform the index by about four and a half percent overall, and so this is over a period of 2010 forward, right? So the fact that you could read more, capture more, will absolutely lead to better conclusions, and you can see it's a nice linear line down. So while I'm using S&P here as an example, you can apply this to any portfolio. Like some of you might be sector analysts, well, we do find that if you apply this narrow down to a sector, it will produce similar conclusions: the ones that are more positive outperform, the ones that are more negative underperform, or you can expand that to an international portfolio, right? So we can see that capturing more information on a larger panel can ultimately add value to your existing processes. So how do we go about building an analyst? It actually starts with the analyst.

So over 10 years now, we captured labels from actual analysts. So we didn't take the route of like going or using Amazon mechanical Turk, we didn't go and try to get a bunch of amateurs just to get labels for the sake of labels. We did a much more painful, slower process of working exclusively with analysts. If you are not an analyst, you are not a practitioner in the industry, you do not contribute to our machine learning algorithms. So over 10 years it's been about 600,000 labels overall. So it could have been a million, it could have been 2, but we said no, the input quality matters most of all. So you have all these inputs, you then use machine learning to decompose the text found in these information sources. So we're trying to identify which phrases are found in things associated with positive revenue statements and which phrases are associated with negative cost statements, etc. It's a thematic classification that we end up getting or looking for from the text and then we apply this on the larger sample of data that we have or a larger population of documents that we have, and we're always trying to maximize accuracy to the analysts.

So let me be specific here. The goal is always to maximize accuracy to the analysts. We don't look at prices, we don't try to build the best-looking simulation. Our strategy: we're trying to just maximize accuracy to analysts. And what we find is, when you do that to the prior slide, you end up finding value in various information sources. So we have this AI analyst, if you will, and then we apply it to a bunch of different data sets. This is our current data library, it spans things from news and various publishers of news. We look at new information from the web and social media, we look at long-form documents like earnings calls and filings, we have EAC components as well. This will be a data panel that will continue to grow. Our goal- our name is actually after the ancient library of Alexandria, and we want to index as much textual information as possible, right? That's what we want to do for the modern age, without burning down at any point.

So what does it look like? You have text coming through and we index it, so some of the things that we index are things like obviously entities. This is from a BP earnings call and you'll see there are two statements made, roughly two to three sentences overall, two rows of data. Very expressive columns here but they're [inaudible]. And we have BP and the first one product demand reduced, we say it's about the company's product and it's negative. Second--gas market is weaker say it's about gas also negative overall, right? You're getting this nice detailed classification from the call. Now you can say, "Well, there are other LP approaches," right? "Like isn't it all the same?" The short answer is no and LP approaches are not the same and we can prove it to you. First, we looked at two open sources and LP sources and these are even better than things like NLTK and Python, like things that are actually devoted or developed for the finance industry. First, Lawson McDonaldson's Dictionary created by two professors from

Nottordame, right? They built a Dictionary by looking at 10-Ks and Qs. Second, Google Earth model applied to the finance domain from academics. Neither one has been trained by analysts but a different NLP infrastructure or tech stack overall, and what does it produce? Well, they're not equal. Alexandria [inaudible] PNL, taking that initial histogram I showed you, and it's showing you the actual cumulative PNL over 10 years, consistent [inaudible] over the 10-year period. You can see [inaudible] and Lawson McDonaldson much closer to each other, a lot less value derived from the classification that you would get from there. This is a section by section classification that we're applying, using [inaudible] or Lawson McDonalson yields drastically different results. Now, we have this [inaudible] analyst, and it does well, but our goal is to take this idea of automation and apply it to the individual analyst level, right? Like we want to automate you, not to replace you, to help you, right? We want to be able to take the things that you find important and significant for your investments and apply it to your universe coverage across the board. So we have a front in interface and sort of train your own model interface that allows you to do that, right? It's built at the universe level, load any universe you want and it gives you some quick highlights, who is positive, who is negative for this particular universe. And to start with, our compositive analyst will tell you, you can also see at the bottom things tend to be when there's top 10 positive, top 10 negative, for the most part follows performance in the right direction as well.

So what we aim to do is allow you to automate yourself. So what that means is you get down into the text and you can start highlighting things that you find relevant. Now, you'll see the defaults were margin and gross margin, which are found inside the text. You can highlight, let's say you think above the high end of our guidance as a kind of significant statement that you want to replicate overall. And let's say you say gross margin expanded and kind of a statement that you care about, and let's just say you want to classify this entire block of text as execution, right? So you say that inside the system and now that is applied universally across your universe and across time. We will apply that backwards, it be applied forward to any you call that comes in, or any [inaudible] as they call, and information source that comes in, and you've just automated one piece of yourself. Now, the more you interact with the system, the more you can automate. So you don't have to highlight things two or three times. If you're looking for an earnings call, it's there for you nicely, and found under your company settings, right? So this came from ADI you'll see I highlighted execution. What you see is execution here on the bottom left, and that theme that you were looking for is now there, right? Of course, you can search through the text as well, but you come back you can also see how that theme trended overtime, right? Execution as a positive from your two classifications seems to be growing, right? So the more you interact with the system, the better the system gets overall, and that is our goal. We want to help you capture more information to maximize your decisions. Thank you.

Matteo Campellone

Hello. Okay, So my name is Matteo Campellone, I'm the Co-Founder of Brain, together with [inaudible] who is also here in the audience. Now, we will give you some examples on how to use our proprietary platform to create alternative data sets.

Disclaimer: Nothing here is investment advice. So a quick word on Brain. Brain is a research-oriented company. Over the years we created several modules which we integrated in a platform of artificial intelligence, but not only artificial intelligence. The idea of the company is that we create algorithms for the use of financial investors. So either property algorithms and strategies and signals or we help the client to build and transform into an algorithm their our own ideas. So, in a very pictorial description of our platform, it can process a large number of different sources of

data, from news, public documents, [inaudible] documents, but also traditional economic and financial time series, and it can elaborate and create a number of products. I cannot go into all of them and all the things that it can do because also a large part of it is based on the customization and what the client wants. Here, specifically one of the outcomes of our platform, which are alternative data sets- here on the left side. I might be able to hint if I am quick enough- to another solution, which is the AI automatic basket algorithm. So our current clients with respect to alternative datasets, in particular, are quant hedge funds that subscribe to our data set and then elaborate them in their own prefatory way, or our data sets are distributed by several international platforms. Also, there are other features of our data sets, which are platforms that are oriented to the quantumental investor, like Point Focal for instance, which embed our sentiment indicator, for example, in their analysis.

So this is a menu of the current data set that we provide, we create with our platform. We divide them in two main areas; one is on the bottom part, asset allocation signals, meaning general signals for the overall market. So, for example, we have a market sentiment indicator which processes the news on the equity markets and gives you a sentiment on the overall market or risk-on risk-off index based on volatility. The single ticker signals, instead are a data set which cover assets at a single ticker level by definition. So, for example, sentiment indicator covers over 10,000 global stocks, or even other assets like crypto or commodities. Here I would like to talk more about the third and fourth in particular, data sets which are based on natural language processing of corporate documents or earnings call transcripts.

So what we do for example language metrics for company filing is one data set that is based on the processing of 10-K and 10-Q documents for US stocks. The idea was started from reading some literature, some fairly recent literature. There where the orders we got here at the bottom of the screen. Claim relevant inefficiencies in the way the market processes information available in these files, in the 10-K and 10-Q, maybe because as we plotted here the complexity as the readability score of these documents has been increasing almost steadily or the length of the document. Anyway, they are paper claims that if you look at this document the result of information which if you can capture systematically you can gain some alpha. The example that they gave in the paper, one of the example is of a company that already had filed some issues in Fusion pumps that we were producing in February 2010, but that issue will actually captured by the more public news, more commonly available news and by the market prices two months later. But this would have been also detectable just by looking at similarities, just measuring how similar, and that you can in a quantitative way, in several ways, between the latest report of that company's 10-K report and the previous one, because these reports are very similar to each other. If you look at the differences in a systematic way, typically these differences are showing you a new potential issue and evidence of risk. So by measuring similarities, let say that there is information you can make. So what we did in this data set, we focus on the whole reports but also some specific sections, for example, the risk factor section or the management discussion section, which are typically more than some [inaudible] to the business and we can measure several things, not only similarities in respect to the previous reports but a number of language metrics. So there are things about the language that you can measure. And I highlighted some of them for example but the number of features is quite large so we provide approximately 50 features, for example, we provide sentiment and sentiment differences with respect to previous reports or other metrics based on the style of language, on the complexity of language. Some of these metrics are not so in tuned with [inaudible] but if it's a beneficial market we can capture them. On [inaudible] for example there are some papers that I will point out later for you if you're interested. These features are the input to their strategy. Here for example we used the same kind of approach. Instead of using 10-K documents we are earnings call transcripts, so we measure a

number of metrics on the earnings call transcript. Here we measure on the left the picture of the similarity of these reports. On the right picture, we focus on a specific kind of language, so how similar the new report is with respect to the previous one with respect to uncertainty of financial words which is more related to risk for example. Another dataset which is the fifth of the list that I presented earlier--I don't want to go back, I'm afraid I'll get lost-- but if we use the language metrics data set as an input for a strategy based on machine learning. So basically, we can train a machine learning model using those features of an input and in this case--and actually is also data set because we can provide the ranking of the stocks based on our machine learning model and just this a fully out of sample back test. So we train the model until 2012 and then we use it on the next year and so on.

It actually shows just an example, but it shows a nice separation of the Queen tiles of the ranking. And it processes not only one feature at a time, but it actually process dynamically the whole features of the model. Sorry, I went backward--Okay, of course, we based all these on a robust and scalable cloud-based infrastructure, I'm not going too much into that. Let me quickly hint at another possible solution available to our platform is thematic selection of stock. So totally different thing, it is not a data set, it is a service, if you want it, and it's customized to the needs of the client. The idea is that our platform is able to be trained to recognize, based on different sources, which can be again 10-K documents, news, transcripts, any kind of corporate documents you want to feed to the platform. You can train the platform to detect how much a document or a sentence is related to a specific theme and then you can recognize if the new document, how much that is related to a specific theme. So the workflow of the service is typical of a machine learning model but is not really to predict maybe-- You train the model, you define that a user, the client, you want to invest, to select companies on a specific theme that you might want to choose and then you train the model to the respective theme. So there is a training phase and then you apply the model to new documents. So you want to scan the whole universe of stock, of corporate documents that you have to see which stock is more related to the theme that you want to select. So this basically helps analysts, I am not saying it substitutes, of course, but it can help analysts scan a large number of documents to find a basket of stocks which are the most relevant with respect to a specific theme. And then you can also intersect that with other criteria. You can have your ranking of stocks with respect to a theme, but you want to might select the ones that have got more lower price earning or higher price earning or whatever higher sentiment and so on. We pre-define a number of themes, just to show you how this can be done, so self therapy and genetic engineering, and so on. Of course, the idea is that this is customizable before the client. Thank you for the attention, you have our contact, and thanks a lot to the organizer again.

Colby Howard

Thank guys. My name is Colby Howard. I am the President and founding partner of Paragon Intel. We'll get this started out with a quick show hands, who here considers themselves an active manager or works for a firm that practices active management? Alright, so we're talking the same language.

We believe in active management and really, what does active management mean in its most fundamental form? It means the person or a group of people making decisions based on data, research, are their own personal experiences, in this case, to buy, sell, or hold stocks in a certain amount of quantities to beat or meet certain performance criteria. Now, that means that each of you is essential to your firm's success. The decisions you make are the reason your firm is successful. We believe in active management.

We also believe that this applies to the companies that you're invested in, because for company executives, the definition of active management is essentially the same. It's people, or a team of people, making decisions that impact strategy, capital allocation, messaging to investors, culture, marketing, sustainability, et cetera, et cetera, et cetera. Executives are the ones making the decisions that will cause their companies to be successes or failures. The old saying that some companies can just run themselves has more and more been driven wrong. I mean, rapid technology changes started this, but then COVID-19 really accelerated it. I mean, look at Delta, Southwest, American, United, they all had vastly different responses to COVID-19 and those were made in real time and humans made those. The IPhone, the Microsoft, Zoom, AW's, CNN Plus, all of those made by humans.

Now what about MA, buybacks, CapEx, dividends? All those are made by executives, and the buck usually stops with the CEO. So here's the question: how much do you know about the CEOs and the C suite running your largest positions? Does the C suite of the company you're invested in know what they're doing? Do we know about their experiences and skill set that indicate how they will perform? Because active management matters but too often there's a blind spot surrounding actively evaluating managers and their skill sets and that's where we at Paragon Intel have spent the last five years making a living. We analyze how executives impact future company performance and we look at which companies will outperform. And just like you running your fund or CEO or running Walmart, it combines data and human insight. We'll start with the data. For every CEO, CFO, and COO, and the Russell 2000, we look at capital allocation history, audit compliance, [inaudible] flags, historical relative performance, their alpha, insider transactions, criminal record, civil record, corporate jet location, public commentary, real estate history, and more. Now, all of that is verified searchable, sortable for each and every client. But the ability to see that all in one place, it's helpful, but I'm guessing not all of you are looking for another database that you have to use yourself. The power of this is the ability to combine all of it into consistent, investable insights. For example, here are two recent examples that we helped our clients with.

Moderna: April 11th, they announced they were hiring a new CFO, Jorge Gomez. Immediately our platform flags that he had five straight years of material impairment filings while at Cardinal Health and at then Fly Serona. He also had two years of late filings, also while at Cardinal and Dense Fly, those two companies underperformed their peers by 40 percentage points and 70 percentage points respectively--pretty underwhelming hire.

Now, our clients on April 11th knew more about this CFO than Moderna did because he starts in May, a day later fired. Why? Allegations regarding certain financial reporting matters. Now, the questions you have to ask yourself are: what's the situation that that they're scraping the bottom of CFO barrel and what's CFO are they going to be able to get going forward?

Then there's Oracle Cerner. At the beginning of 2021, Cerner hires a new CFO with no health care experience, but who had just sold Tiffany to LVMH. The CFO joined the Kansas City company but does not put his Westchester New York home up for sale even after the school year ends. In August of 2021, Starboard, the activists involved, puts in a new CEO who we see as a caretaker. December of 2021, Oracle makes its first flight to Kansas City in over three years to an airport 15 minutes away from Cerner's headquarters. Two weeks later, they announced a $30 billion acquisition of Cerner. It's not one data set, it's not one data point. It's the ability to combine the outliers of all of these and that's what our emails, our narratives, our insights sent to our clients on each of these situations did. That's the data, then we go many steps deeper.

We have the largest library of interviews on executives. Our team of investigative journalists and analysts interviews high-level former colleagues of these executives, people who are not normally on expert networks. We've optimized each and every part of the process. We come out of these- and there are five to seven interviews per report- understanding the executive's strengths, weaknesses, pass initiatives that failed, those that succeed, and most importantly, how this all applies to the company they are currently running. We summarize all of it and our clients get those exact transcripts. Every so often though, our research team sees a situation that is worth diving into more. That's when they take the findings from these transcripts and do the fundamental work and put the two of them together. Let's look at a recent example.

Intel announces the hiring of Patrick Gelsinger. This is the return of the prodigal son. This guy worked under Andy Grove and he's coming back to save Intel. The only issue is: you look at our platform, and he has very little CapEx or acquisition experience, which seems necessary coming back to Intel. Also, while he was CEO of BM, where they underperformed their peers by 413 percentage points, we dove in a bit further. A few weeks later, after interviewing 10 of his former colleagues that worked with him for a combined 72 years, the disconnect between the job he needed to do and his skill set became very clear. People we talked to commented on the scope of the job ahead of him. It's an aircraft carrier plus. They talked about how his history with Intel would actually inhibit him from executing a radical plan. He is not a radical guy. They talked about the surprising lack of experience in a key part of the turnaround. He's never been directly responsible for the manufacturing side of the company that matters most. They talked about where he needs to hire to solve specific problems and overcome his own weaknesses, and that's on the reorganization and CapEx side, and unfortunately, he can't hire. So our research team supplemented these transcripts with their own fundamental work to come out with a short report.

In the end, in order to turn an aircraft carrier, you need to be an out-of-the-box thinker and have creativity; Patrick Gelsinger is not that guy. They touched on future market share losses, declining margins, and falling in earnings growth as they pair back buybacks. Since then, Intel has fallen 16%, while its peers are up on average six percent. We do more than 60 of these reports per year and have a library of over a thousand interviews. External CEO changes, active situation, group sourced client interest- they all drive what we choose to work on and when we don't cover something, our clients more and more look to us for bespoke reports.

Active management matters. The decisions your executives make govern the future performance of a stock. We help our clients put those two pieces together. Our CEO, Ty Popplewell and I will be here to answer questions. Thank you very much.

Bill Stephenson

Alright, so I'm going to call up panel here: leveraging data and technology to create investment alpha, Paul Fahey.