

Dr Gregory Whitten, Chairman and Steven O'Hanlon, CEO & President Numerix

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Established in 1996, today, Numerix is the leading provider of innovative capital markets technology solutions and real-time intelligence capabilities for trading and risk management. Committed to out-of-the-box thinking, the exploration and adoption of the latest technologies, Numerix is dedicated to driving a more open, Fintech-oriented, digital financial services market.

Built upon an over 20-year analytical foundation of deep practical knowledge, experience and IT understanding, Numerix is uniquely positioned in the financial services ecosystem to help its users reimagine operations, modernize business processes and capture profitability.

Numerix is led by Dr. Gregory Whitten, who is the Chairman and sole owner of the firm, as well as Steven O'Hanlon – the President and CEO.

Mr. Whitten joined Numerix's board of directors in 1998 as a major investor. In 2001, he became Chairman of the Board. In 2003, he became the Chief Executive Officer and in 2013 he promoted Steve O'Hanlon to succeed him as the new Chief Executive Officer for the company. Mr. Whitten is a former chief software architect at Microsoft, where he worked from 1979 to 1998.

Mr. O'Hanlon joined Numerix in 2002 as Head of Global Sales & Marketing, became President & COO in 2004, and, as noted, was named President and CEO in 2013. Having a passion for entrepreneurship, leadership and innovation, Mr. O'Hanlon has spent his 35-year career in leadership positions, growing start-ups and SMBs (small-to-medium sized businesses) across the financial services technology industry.

Under Whitten's and O'Hanlon's leadership, Numerix has thus far experienced unprecedented growth, with the company today having over 300 employees in 16 countries.

For our year-end edition, CEO Today spoke with Mr. Whitten and Mr. O'Hanlon, to hear about the impact that their roles have had on Numerix's performance, the company's recent achievements and aspirations for 2018 and beyond.

Steve, what were the goals that you arrived with when joining Numerix nearly 16 years ago? Today, as the company's CEO, would you say that you've managed to achieve them?

My functions at Numerix have evolved since I first joined in 2002, so the goals have evolved as well. However, there is certainly connectivity among the objectives I wanted to pursue. All in all, my first overarching

goal for the firm was to develop a fluid business model and partnership network that would grow and change with every evolution of the capital markets, for both sell-side and buy-side market participants. Greg and I have built a unique partnership from the day he stepped in as CEO. Our complimentary skills are one of the many things that have enabled Numerix to flourish. We aspired to build a reputation as the undisputed leading

provider of innovative capital markets technology solutions and to achieve a significant global presence. Developing the industry's strongest pool of quantitative experts, software engineers and technology platform architects was another goal that we worked tirelessly towards.

Today, all of this has been achieved. Numerix is now a global force in Fintech serving 700

clients around the world. Across our 16 global offices spanning the Americas, EMEA and APAC, we have the most advanced technical team in the industry, comprised of 200 quants, PhDs, developers and implementations experts. We've built the deepest trading and risk technology expertise in the industry and continue to advance our analytics offerings through close collaboration with a growing list of Numerix partners, which today stands at 90.

We're also one of the most decorated, if not the most decorated, technology companies in the world—with hundreds of awards won for technology innovation and quantitative leadership.

How have Numerix's service offerings evolved since you joined the company?

Numerix was formed in 1996 as a software house dedicated to the

finance industry. Our technology was designed to help banks achieve more competitive pricing of their derivatives instruments by offering accurate prices faster. As we've evolved, our core solutions have been extended to help banks manage risk more effectively by enabling intra-day and real-time risk analysis.

Today, we are a multi-diversified software development company rooted in Fintech innovation that

addresses pricing, risk and trade management.

We have continued to provide professional services that are sold through our direct and indirect sales representatives. These services include training in the use of our software, risk advisory (providing clients with greater insight into market risk, counterparty risk and model risk exposures), consulting, focused mainly on how a client

can configure products into their organization's environment and business requirements, financial engineering (e.g., assistance on deal structuring and pricing model validation), the integration of software into licensees' trading systems (including data migration, where applicable), and valuation services for cross-asset portfolios of complex financial instruments.

In terms of recent innovations, over the past 12 months not only

have we introduced new products to our solution stack but in working with our clients and partners, we have found new and interesting use cases in which to apply them. Central to this initiative has been the enhancement of the overall business services focus of the platform, with a greater emphasis on business user workflows and standardizing browser-oriented user interfaces. Because of the consistent and powerful analytics foundation of Numerix, we've been able to build unique solutions that address business needs, and allows users to choose from a robust selection of business services applications, or develop and connect bespoke capabilities, data sources and libraries.

Our managed services offering also continues to evolve; at clients' requests, we can now work with them to provide a provision of services such as infrastructure management and operational support in addition to cloud services.

Greg, Steve mentioned that today Numerix has a significant international presence. In terms of market competition, where does Numerix stand globally?

Numerix retains a very strong global market position vis-a-vis its competitors. For example, as it pertains to niche markets, Numerix has captured nearly a quarter of the derivatives pricing market globally and over a quarter of the valuation adjustment market. Valuation adjustments, which have grown in importance since the financial crisis, help banks to define the risk-adjusted pricing of derivatives instruments to ensure all market, credit, capital and liquidity risks are being accurately captured.

Over the last two decades, we have supported thousands of clients, including some of the

world's leading capital markets institutions. Our range and quality of financial software is known for driving performance, growth and innovation for our clients, while at the same time enabling them to expand their business.

“Numerix has devoted more than 20 years to the creation, design and implementation of solutions for trading and risk operations, leading today to our Numerix Oneview Enterprise Platform”

With the Numerix CrossAsset model library and calculation engine at its foundation, the Numerix Oneview Enterprise platform includes enabling component technologies that can be leveraged for addressing specific functions within banks and insurance companies. What sets Numerix Oneview apart from its competitors is the consistency of the analytics which underpin the platform. Analytics have always been the heart and soul of Numerix, and continues to be its key differentiator. Reflecting on my work with Microsoft going back to its founding day as chief architect, I've always recognized the same innovative spirit within Numerix, and that has been rooted in our superior analytics.

It's also the platform's flexibility that's help it to standout. The dynamic user interface and customizable user workflow gives users the ability to bridge silos between departments and holistically visualize risk for front office/pre-trade analysis as well as middle office and post-trade operations. Working from a single platform, users can optimize capital, collateral, funding and other variables to maximize enterprise profitability.

As Steve alluded to, we're the company that innovated and pioneered the multi-asset class pricing analytics market. This is something that we've leveraged to pivot the company into the risk management space. Growing

to dominate the market for risk-adjusted pricing post crisis, risk technology innovation has continued to evolve and be the driving force behind the Oneview trading and risk platform. Today, front office risk solutions enable users to be more agile and adaptable in the face of change, and customizable views of risk at the enterprise, portfolio or trade level, is the flexibility users have come to rely on and for which they recognize us.

Greg, from your perspective, what are the things that make Numerix the most prolific and dominant leader in both risk and pricing?

Numerix has devoted more than 20 years to the creation, design and implementation of solutions for trading and risk operations, leading today to our Numerix Oneview Enterprise Platform. Numerix has, uniquely, the industry's only complete next generation pricing, risk, analysis and trade management platform designed for the next evolution of the capital markets.

Throughout our existence, our vision of excellence and industry leadership has always been

based on the two anchors of our business philosophy:

Innovation. We engage in the constant pursuit of greater technology, an effort grounded in our expertise, experience and entrepreneurial thinking.

Partnership with clients. We do not want to be considered just a vendor. We want to be viewed as a trusted partner of our client base, and our close collaboration with our clients gives us a keen view of current and anticipated marketplace needs. This is knowledge we bring back to the workbench.

We maintain our partnership status with clients—and our dominant industry position—by ensuring we always have an acute understanding of their business (products, systems, and regulations), a strong empathy for the issues they face, and the capability to provide solutions that evolve with their evolving needs to transform, achieve goals, and grow.

Steve, that being said, what are the key challenges that the company faces and how do you overcome them?

Our core challenge, unequivocally, is related to the future of the capital markets' regulatory landscape. Will regulatory criteria be relaxed? What are some of the elements that could change? Conversely, what are the elements that are unlikely to change? The future of some of the industry's most sweeping regulations, such as Dodd-Frank and the Basel capital and risk regulations, could be in flux depending on future vision of new administrations and global political initiatives like Brexit.

Despite any predictions, today banks have little choice but to develop a strategy for implementing current and any

future regulations. The big question mark is whether banks follow a hardline interpretation of rules as they are set out now, or go with a more relaxed interpretation, anticipating a regulation scale back. The challenge for a firm like Numerix is to be nimble in its ability to offer flexible and adaptable technology solutions that can be responsive to any current or future direction banks take in reaction to the potentially evolving regulatory environment.

Steve, you spoke earlier about the unique partnership you share with Greg. Does this also relate to the broader leadership team? What makes your team special?

There is no doubt that leadership is the primary driver of organizational success. I think the single most unique characteristic about Numerix's leadership team is its solid cohesion and the strength of interpersonal relationships. Unlike other senior executive teams that often get caught up in politics and cause progress to get mired in partisan quicksand or individual motivations, we trust each other, and share a devotion to the good of the company. I also think that the cohesiveness of the leadership team is something all Numerix employees have observed.

And Greg, with such a successful 2017 behind you, what are your plans for Numerix in 2018 and beyond?

Our goal is to continue disrupting our industry. One way we will do so is to cement our position as a dynamic financial technology company that provides a next generation risk platform that is unmatched. This will also help us with our continued efforts to pivot to a Fintech leader. We've needed to evolve in the market, being seen not just as a pricing

and risk calculations company, but also as a provider of trading and risk managing systems that help capital markets firms transform.

As this is a crowded space, we need to focus more than ever on our key differentiator, which continues to be, as noted earlier, our unrivaled analytics. What's more, this year we have been a strong industry advocate for creating and driving change, and shaking up technology legacy inefficiencies as evidenced in our many thought leadership activities.

In terms of immediately actionable strategies to advance our near- to mid-term goals, we will continue to expand the applicability and diversity of our Oneview solution stack and deployment strategies. We also plan to leverage our unique cross-asset real-time risk and portfolio management solution to capture significant market share in the buy-side market, with a focus on global macro hedge funds. Additionally, we will place an emphasis on growing our strategic network of trusted partners as part of an increasing effort to sell more of our capabilities to more markets.

How do you plan to execute on your growth plans?

One of our main growth strategies is to sell more to existing customers, and I think Steve would agree, that this is something that benefits our customers just as much as it does Numerix. In working with them, we oftentimes find gaps in their current technology architectures that can sometimes be due to changes in their market environment or by new challenges or opportunities they face. We try to help them overcome, profit or otherwise benefit from these circumstances as they arise.

We also actively look at market and product development. We seek to devise ways to create business opportunities in new markets—offering our products and services to prospects in what for us are untapped geographic regions. Numerix has a culture of innovation, and as such we constantly pursue product innovation for both improving existing products and introducing new ones. Thus, we have gained a reputation as a company that is on the leading edge of our industry. Rather than being a passive company that keeps up with advancements, we are a company that leads the advancements. It makes us more attractive to clients and prospects and, therefore, helps to allow for growth in sales and market share.

The core of our client base has always been the sell-side; but we lacked strength penetrating the buy-side market. As part of our strategy to successfully access that market, we acquired a company that offered us a solution to immediately begin working with a range of new buy-side institutions, including hedge funds who operate global macro style strategies, as well as endowments, pension funds and sovereign wealth funds.

Last but not least, we pay close attention to partnerships. In Numerix's experience, building the right strategic partnerships with other technology firms fuels our bottom line, makes our business more efficient, and helps us grow our customer base. We have established alliances with over 90 companies from around the world in the financial and technology services industries, from leading systems providers and data vendors to consultants and valuation specialists. A strategic partnership, or an alliance, can give you an opportunity to access a broader range of resources and expertise to help you with your own—and your clients'—success.

Greg, you mentioned that earlier in your career you worked with Microsoft. Tell us more about your biggest personal achievements.

Prior to joining Numerix, I spent 19 years at Microsoft during which time I developed Microsoft's common cross-language compiler and runtime technology, BASIC. This helped to perpetuate enterprise-wide software and architecture strategies for the Office, Back Office and Windows product lines. I can honestly say that my experiences as the chief architect of Office applications and chief architect of languages at Microsoft has absolutely been instrumental to Numerix as it continues to lead the market in cross-asset analytics.

Having earned a PhD in Applied Mathematics from Harvard, this was also a crucial accomplishment that has enabled me to succeed with my work at both Microsoft and Numerix.

Steve, how about you?

Throughout my career, I have had a passion for entrepreneurship, leadership and innovation. I believe this is reflected in many ways through the Fintech industry's recognition of my personal achievements, such as being named Fintech Person of the Year by the Financial Technologies Forum, as well as CEO of the Year by Waters Technology's American Financial Technology Awards. I've also been incredibly honored to be ranked annually on Institutional Investor's "Tech 40" List. I am very proud that influential industry members include me as being among Fintech's leadership elite. I feel strongly that I owe my success to Numerix's own achievements and its firmly planted position as the most prolific and dominant leader in its space.