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Inside NASDAQs OMX's Business Model: How CIOs Can Drive Top-Line Growth

Thanks, Maryfran, for that kind introduction. It's good to be with you today. Each year this Summit highlights what's new and what's best in technology, and the role that innovation plays in ensuring the success of our organizations.

Looking over the list of attendees, I was struck by the diversity of your titles and your organizations. You represent a wide range of industries, as well as non-profits and government. Whether you work at a technology company, in retail, or in financial services, and whatever our titles may be, all of us face a similar challenge: how to transform the role of the Chief Information Officer, both as an organization and as each of us, individually, from a near-exclusive focus on the technology function to one that drives the top-line growth – and revenue – of our organization. This focus on top-line revenue applies not merely to those of us in the for-profit sector but perhaps especially to those in non-profits and government as well: you face the challenges of limited resources as keenly as those in private business do.

Today I'd like to approach this subject from my perspective at NASDAQ OMX, because I think it illustrates the journey that the CIO function can – and increasingly, *must* – make.

Of course, every business is unique, and we are no exception. I joined NASDAQ OMX as the organization was beginning a profound and intensive transformation from a semi-regulatory body to a for-profit, public company. In fact, I was hired as a part of that process, because NASDAQ realized that technology was core to the future success of the company and its profitability. Looking back on this experience, it's more accurate to say that we have really made two transformations – first, in the structure of our company and second, starting nearly two years ago in our merger with OMX to form the world's largest exchange company. This merger has permitted us to participate fully in the opening of European markets, giving us a strong European footprint as well as unprecedented access to global markets on which we have built a global commercial financial services business.

Last year, then, NASDAQ OMX became the world's largest exchange by share volume traded – a total of \$23.9 trillion. Our company became part of the S&P 500. Our acquisitions of the Philadelphia Stock Exchange and OMX gave us a global platform for trading for the first time. Our technology now powers 70 exchanges in 50 countries, and these markets account for 1 in 10 transactions traded worldwide.

We're constantly reinventing our business, but thus far we have made remarkable changes: From a single U.S. cash equities market to a company with 22 markets around the globe, covering all major asset classes. From a risk-averse culture to an agile, more truly entrepreneurial culture. From a company in which the technology function focused on cost-efficiency to one in which we work as true partners with other business units within the firm and companies outside our firm.

Of course, the primary role of any CIO or technology function is to deliver a robust and reliable technology solution to the rest of the organization. Whatever else we may do, if we cannot do that, we have failed. Fortunately, at NASDAQ OMX, we have succeeded in this task. Strong technology and technical expertise is the baseline of our work and the foundation for the company's growth.

Delivering cost-effective technology solutions is still a big part of any technology function's responsibilities. At NASDAQ OMX, our technology team has supported the launch of dozens of new products across all of the company's business units. And we provide 99.99+% uptime reliability for our markets, even as they experienced record volumes during the financial crisis. Last fall, the NASDAQ stock market's actual trading volume increased to levels that had previously only been tested in our labs. We were processing over 6 billion shares a day at over 250,000 transactions per second on our INET platform while maintaining microsecond latency speeds. This record of high performance extended across our company, to Europe and all the markets in which we operate. Our markets worked as they should. They did not fail. They performed exactly as advertised. People were able to buy and sell securities quickly and easily - even if the prices were not what investors wished.

Given this critical importance of technology to our company, at NASDAQ OMX, we have always employed the philosophy that we must continue to invest in our technology platform. Technological innovation is one of the most important elements shaping competition among exchanges and we intend to maintain our leadership in this area as a driver of our business success. In fact, we are making more investments in new initiatives this year than in any time during our recent past.

And we have focused on cost-efficiency. For instance, we outsourced our physical data centers and migrated to consolidated, high-speed efficient networks long before our competitors did. We achieved \$150 million in synergies from our merger with OMX; two-thirds of those came within the first 10 months, over a year ahead of schedule. Cost efficiency is vital to the future of our business. Without cost efficiency, we wouldn't be able to maintain our price leadership - and without price leadership, we would lose our edge in attracting clients.

Superior execution and cost-efficiency are the building blocks of our work - the "price of admission" if you will, to earning the respect of other business units. But our work as technology leaders cannot stop there - and at NASDAQ OMX, it doesn't. Instead, as we have worked to transform the company, we've also earned a "seat at the table" along with the rest of the business lines - because we have *become* a highly profitable business line through continuous innovation.

In the old days, we operated much the same as many companies do with respect to the CIO or technology function: the business line managers would dictate what technical solutions they needed, and we'd go deliver it.

Now, I'd describe our role in the company as being fully engaged in the strategic process of NASDAQ OMX's continuous transformation. As we began this process as a company, we took a new path: we developed a technology roadmap for innovation and success. We have developed far closer partnerships with other business units, based on the success we have had in driving revenue growth. Yet our transformation to a global exchange company is still progressing, and we have a number of important developments scheduled, including new ventures to bring increased transparency and liquidity to derivatives markets around the world.

How were we able to achieve this growth and this position within the company? I'd like to suggest three reasons: first, the importance of a strong technology roadmap as the baseline for growth; second, the ability to build partnerships and trust in other parts of the organization; and third, an example of particular importance to NASDAQ OMX, our expanding global reach.

Our core trading technology is something called INET. It's the common technology used across our U.S. and European markets and is recognized as the most sophisticated financial trading technology in the world, efficient, lightning quick, and scalable. It enables us to work across many different types of asset classes and market structures. Of equal importance, INET also serves as the backbone for GENIUM, our commercial exchange product.

Our technology also plays a critical role in our ability to offer new services that have enhanced our listings business for public companies. Expanded technology offerings have, in fact, built entire new lines of business for the company. Technology is not just a critical function for NASDAQ OMX; it's really the driver of new business for us.

For instance, we pioneered new strategic support services to listed companies – from market intelligence solutions that help companies identify the type of investors who might be interested in their securities to technology that allows members of a corporation's board to collaborate more effectively in a challenging corporate governance environment.

While we are proud of the performance of our technology, we have already made significant enhancements to our INET platform. We have since doubled our throughput and are processing 450,000 transactions per second at even lower latency levels than before. In fact, we are now disseminating nanosecond time stamps on our market data feeds to reflect this trend. And there's more to come!

Following our acquisition and implementation of OMX, with all its implications for globalization of our company and diversification of our product offerings, we embarked on a plan to integrate the INET technology into OMX's strong existing commercial product. OMX pioneered the market technology business, and we were excited by the ability to utilize INET in this way. Over the years, we had received a number of unsolicited requests from other organizations wishing to purchase our technology, but we weren't equipped to take advantage of those offers.

So with OMX we developed a roadmap to build a commercial product offering based on the world-leading INET technology. Of course, on the technology side, the product had to be built as an extension of our own proprietary product and modified for commercial use outside NASDAQ. Beyond our group, though, we knew that we would need a sales arm and a marketing arm to commercialize this product. Working with those other business units of NASDAQ, in turn, led to a virtuous cycle: it enabled our technology team to enhance their own knowledge of both trading and our business as a whole. We've learned to work closely together with the rest of the company on all aspects of innovation, whether in the area of technology or of the structure of our markets itself.

Best of all, then, this effort became a turning point in developing internal partnerships. So the story continues through the transformation of our own technology organization. We have worked tirelessly and proactively to develop close partnerships with other business units in the company and earn their respect. Everyone at NASDAQ OMX knows that technology and innovation are critical – in fact, *indispensable* – factors in our common success.

Now, the division I lead is the largest within NASDAQ OMX, with over 40% of employees. As the organization has developed, we've taken on more leadership roles company-wide. We've brought ideas to the table about how to use technology in a strategic way for the organization, become more involved, formed cross-functional committees, and seen projects through to customer delivery. We've developed a good exchange of ideas, information, and people between the technology function and other business units, including job rotations. New reward systems ensure that employees within the CIO's office are rewarded for direct "P and L" contributions to the success of other business units. This is a model other companies can share.

In a transition like this, the leadership of the technology organization must play a critical role. As leaders of technology organizations, we need to have a detailed knowledge of the business as a whole that we are serving. Understanding other business' units needs builds credibility with them and opens greater possibilities for mutually beneficial partnerships. And of course, none of this can happen without the confidence and trust of the technology organization itself as it moves to a greater focus on commercial success. We, as leaders, must take personal responsibility for that effort and develop and train our people.

As a good example of an area in which the technology team took the lead to ensure cross-functional success for the company as a whole, I'm pleased to report that our QFolio portfolio manager is now the fifth most popular app for the iPhone. It's available for free to help investors watch stocks in real time, read popular stock blogs, build a detailed portfolio, or even access pre-market and after-hours quotes. Here, we took existing services and brought them into a new distribution channel, bringing our technology to a new audience – reaching new customers and reaching our existing customers in new ways they prefer.

All this makes using a smartphone for personal finance seem as real and common as using it for other functions such as navigation or making restaurant reservations. It helps integrate finance, and the services we offer, more directly into people's lives.

Here's the point of that experience: we were not only able to embrace this emerging technology but to integrate it firmly in a business context. Everyone knows intuitively that the iPhone is a pretty amazing device – but we had to move beyond that feeling to build a business app that expanded on our current web offering. Otherwise, devices like the iPhone just remain a cool technology rather than a business opportunity.

Finally, I want to highlight another area in which technology has been the driving force in capital formation and growth at NASDAQ OMX. This is our expanding global footprint, what we term our commercial Market Technology business. This business, fueled by our technology, sets us distinctly apart from any other exchange and is a major contribution of my group to top-line revenue. Around the world, as securities markets are expanding and are being opened to competition, NASDAQ OMX businesses are at the heart of that effort. Technology serves as the impetus for further innovation and facilitates the globalization of trading. Now, our technology powers 70 exchanges in 50 countries including the markets we operate and those to whom we are a technology partner.

In the Nordic countries, we are the market leader, and the incumbent exchange. We have integrated the markets from seven countries onto one platform, raising the profile of NASDAQ OMX Nordics both within the EU and globally. In others, such as London, where we built our “multi-lateral trading platform” or MTF, from concept to trading in under six months, we are very much the challenger. And we relish that role, because we believe - strongly - in competition.

And we're building partnerships around the world. Earlier this year we launched a strategic partnership with the Osaka Securities Exchange, the premier Japanese securities and derivatives exchange. Exchanges in countries as diverse as Singapore and South Africa have recently rolled out our trading technology as well.

Or consider Poland, where the power exchange using NASDAQ OMX technology is helping businesses adapt to the EU's cap-and-trade rules to address climate change. India, again using our technology, has recently introduced trading and clearing of energy derivatives. In Colombia, we have provided a trading platform for the fixed income market and for derivatives, using technology that has been transformative for that market and led to significant growth. We are proud that the Tokyo Commodities Exchange recently went live with a system from us. And so on in markets across the world.

All these elements – building the confidence of other business units, having and maintaining the strongest possible technology base, working together with other business units to add value, and transforming our technology platform into an international business – have contributed to our success. This is how the technology function earned a “seat at the table” in NASDAQ OMX.

I hope that my remarks today are helpful as you think about the CIO role and your own companies and organizations. I'm proud that my team has contributed so much to the revolution at of NASDAQ OMX. But, as you know, in the world of technology transformation and innovation are everyday realities. We work to build every aspect of the business each day.

Thank you for listening, and I look forward to your questions.