



What excites me is knowing that through data manipulation and data visualization, organizations can model their data and integrate knowledge across the enterprise and drive real change in terms of how people work.

Microsoft's **MICHAEL NAIMOLI** Talks about the Technology Revolution in the Pharmaceutical Industry

After 11 years as a biopharmaceutical scientist, Michael Naimoli brings his experience with the industry's approach to technology adaptation to Microsoft to develop innovative solutions for the life sciences. As U.S. Life Sciences Industry Solutions Director, Mr. Naimoli draws on his background in the areas of product and process development, drug discovery, manufacturing, and quality assurance to generate a channel for new business development.

The pharma industry is a high-tech industry and, like any high-tech industry, innovation is a key differentiator for companies, which allows for competitive and commercial advantages.

TECHNOLOGY PROGRESSION

You began your career as a research scientist and have spent time helping move companies forward on technology. How has technology helped improve processes?

NAIMOLI: In my previous life I was a biopharmaceutical scientist, and most of my career was spent in the manufacturing of monoclonal antibodies for Phase III and commercial products, specifically in the area of protocol development and technology transfer for products from the R&D organization into the large-scale manufacturing organization. At GSK, I was part of a team that was responsible for the transfer of that technology and methodology into a new biopharmaceutical technological facility. This was in the early to mid-1990s and the challenge was to transfer the methodologies and processes developed by a number of different R&D organizations into one area. It became clear that we would need to establish a more collaborative environment in which to do this, so we established metrics teams and collaborative Internet sites. Today, technology allows a company to become fully integrated across the enterprise enabling greater collaboration and access to information.

CREATING FUSION

Is there real progress within the industry to fold technology into industry processes?

NAIMOLI: The pharma industry is a high-tech industry and, like any high-tech industry, innovation is a key differentiator for companies, which allows for competitive and commercial advantages. There are some great examples of the fusion of technology across different sectors of the life sciences resulting in some innovative products. Drug-eluting stents are a great example of pharma products being fused with medical device products. But the life-sciences R&D process is as much an information and risk-management problem as it is a scientific problem.

This is an area where there are additional opportunities for innovation within the industry.

IMPROVING PROCESSES

What is the greatest potential for technology implementation in the pharma R&D process, as well as the broader pharma business?

NAIMOLI: One area of great potential is strategic management of the pharmaceutical portfolio management process, which can be done through business intelligence technology. We would like to see information workers and decision makers within the pharma organizations spend less time looking for data and more time acting on data. Pharmaceutical research is often applied science undertaken by resource-constrained organizations. Managing the pharma portfolio has to be exercised in a timely and informed manner. This can be done through solutions that enable pervasive business intelligence throughout the organization by taking years of historical project management and portfolio data and helping companies to visualize this knowledge in a way that's meaningful. In so doing, it becomes possible to apply resources against appropriate projects and kill those that are draining precious resources.

AN EVOLUTIONARY PROCESS

What are some of the biggest technology changes you've witnessed in the industry?

NAIMOLI: The Internet provides a tremendous amount of access to a world of scientific information, which has changed the way people work. There's been a similar explosion within organizations. Managing the organizational knowledge in the company is as big of a challenge as the work required to generate that knowledge in the first place. There's a tremendous need to make sure that information gets to the desktops of the people who make decisions.

If we can get the right data to the right people at the right time they will spend less time looking for

CAREER Highlights

Michael Naimoli is U.S. Life Sciences Industry Solutions Director for Microsoft, and he has extensive insight into the challenges the industry faces with regard to document regulation and submission management as well as other quality control and business challenges. Before joining Microsoft, Mr. Naimoli spent 11 years in the pharmaceutical and biopharma industries and while at GlaxoSmithKline he was instrumental in developing and validating analytical methods to support GMP production of human monoclonal antibody products for use in clinical trials. He also led the development of the technology requirement definitions for the facility's QA/QC lab, and he was a senior contributor to the team accountable for the transfer of technology from GlaxoSmithKline R&D to full-scale manufacturing.

information and more time acting upon information, which produces great economies.

BLENDING SCIENCE AND TECHNOLOGY

What excites you most about the blending of science and technology?

NAIMOLI: When I think of the information and content management capabilities now available to the industry, the tools to manage information and content, and about how scientists work, what really excites me is knowing that through data manipulation and data visualization, organizations can model their data and integrate knowledge across the enterprise and drive real change in terms of how people work. Computer-animated design has made a tremendous difference to the engineering and architectural industries. If we can take that same discipline and apply powerful visualization tools and computer animated designing tools to the life-sciences' discovery process, then we would be in a great situation. Rather than taking different targets and throwing them against the wall to see what sticks, we'd have the data modeling to know what works.

For example, we are working closely with our product teams out in Redmond, Wash., on Microsoft Surface Technology, a new category that enables users to interact with digital content through gestures, touch, and physical objects. Solutions such as this present huge potential advantages for bench scientists. We would love to be able to take a scientist's bench and turn it into an information console so that a researcher can pull all of the information out of the enterprise and still work with data in a way he or she is familiar. When this might happen is a different story, but this is a technology application that excites me. I see real potential for surface computing at the research bench level. ♦

PharmaVOICE welcomes comments about this article. E-mail us at feedback@pharmavoices.com.