

Toward an Era of “BioIntelligence”

By **Nicolas Froloff**]

Life sciences is the next frontier for PLM and Dassault Systèmes (DS) is driving several initiatives to provide answers to the growing complexity in biological and medical research and development.

R&D spending in healthcare is more than that of the automotive and aerospace industries combined. The sheer complexity of drug development, scientific research and patient care, combined with the siloed nature of pharmaceutical activities, prompted DS to consider the benefits that a PLM approach could bring to this sector. Although PLM is not yet the norm in life sciences, this market offers promising opportunity.

After several contacts with a number of pharma companies, DS realized that potential significant synergies could be achieved through collaboration with key partners aimed at addressing the many and varied requirements and challenges facing the pharma industry. Among a number of initiatives in progress is BioIntelligence, an innovative and ambitious long-term R&D project whose objective is to bring together a DS-led consortium of industrial firms, software companies, and academic and government research labs. The goal is to create a “BioPLM” platform dedicated to the discovery and development of new and improved biological products in the life sciences sector, and in particular, in the pharmaceutical, biotech, and phyto-care industries.

The project is viewed positively by the European Community. EU Competition Commissioner Neelie Kroes said: “The systemic modeling and simulation tools in this particularly innovative program will substantially improve the efficiency of biological research. BioIntelligence and the

BioPLM platform that will be developed by it are entirely consistent with key objectives in European research.”

There is a revolution sweeping life sciences. The industry is at a turning point and ripe for dedicated solutions that will transform its processes and help meet the increasing demand for new drugs and treatments. The potential impact on

drug research and development of a PLM platform that fosters new collaborative practices between research labs is huge. Applying PLM “next” practices should enable life sciences organizations to optimize their research phases, improve the efficiency within their supply chains and help companies comply with increasing regulatory constraints. And this is just the beginning! •]

Two questions to Patrick Johnson, head of research at Dassault Systèmes:

Contact Mag: Dassault Systèmes has made a name for itself transforming manufacturing industry processes thanks to PLM. What will PLM bring to the sector of life sciences?

Patrick Johnson: We believe that there is a real potential for PLM to transform the life sciences industry with collaboration, modeling, and simulation. Due to its innovative cross-disciplinary collaborative approach, Dassault Systèmes’ V6 platform is expected to be the foundation for BioPLM and aims at going past what people thought they could do. Given the silos of information in sectors like agrochemicals and pharmaceuticals, V6 can offer a unique framework for managing intellectual property and scientific knowledge as well as promoting collaboration between different research entities. It therefore can help companies manage the complexity of data and adapt their logistics along the product development pipeline.

C.M.: How will PLM have to evolve in order to adapt to the needs of this sector?

P.J.: In industries such as pharma or cosmetics, we are facing new challenges. With life sciences, we are challenged to embrace the complexity of nature. We therefore need to extend PLM as a means to understand this new scientific data in its full variety, scope and size, and to leverage the discovery process of our customers by enabling simulation, analysis, and collaboration on top of it. We are therefore considering a new horizon for PLM 2.0 extending from product to nature and life and fueling our passion for innovation in this new sector.

