



## Proekspert gave us the first-mover advantage in the market

It required extensive insight into the biotechnology industry, a solid connection to the Tallinn University of Technology and a great portion of know-how to create BioXpert® XP - a user friendly and easy-to-operate software providing data collection, presentation, calculations and supervisory control of bioreactors: all in a single product.

### The Challenge

Proekspert was tasked with the development of a software application that would fulfil high security and performance requirements. When Proekspert started up the development of the new version BioXpert® XP in 1997, the first versions had been on the market for five years. The development process continued until 2003. From 2007, Proekspert has mainly focused on support and compatability. Supporting the software on multiple MS operating system platforms during the extensive project life cycle proved to be a real challenge. A broad range of functionality was required and Proekspert had to gain an understanding of the needs of the biotechnology industry and fulfil the strict requirements set for the software. The objective was to create a unique application that put bio-processes under full control, storing data safely during the process. The goal of the solution was to ensure maximum safety and high-level user security. It gave the customer Applikon the first-mover advantage in the market. When entering the project, Proekspert became the pioneering developers in the field of controlling bioreactors.

### The Solution

The resulting BioXpert® XP gave Applikon the opportunity to sell fermentation hardware to a broad range of biotechnology companies that required more complex solutions, going beyond single-thread fermentation systems – but also a solution that was intelligent and easy



We chose Proekspert for the company's strong know-how and because Proekspert is fully up-to-date with the newest platforms.



Arthur Oudshoorn, Managing Director  
Applikon Biotechnology B.V

### THE CUSTOMER

Applikon Biotechnology is a privately owned Dutch company that deals in developing, manufacturing and supplying bioreactor systems for both research and production. **Since its foundation in 1973**, Applikon has grown from a small company supplying laboratory instruments to a **worldwide enterprise** capable of supplying a broad line of bioreactor systems, recognized for their key features: ease of operation and high control accuracy.



to operate. Some of the outstanding features that made BioXpert® XP a highly competitive product include unique electronic signatures and profiles, giving the users specific access to the program functionality. The solution went through a rigorous testing regime, managed by CCFPT (testing and competence center to Proekspert) in cooperation with the project manager from Proekspert. Several hundred individual tests were conducted: from requirement reviews and tests runs in silico (with no real bioprocess present) to real life bacterial environments.

Arthur Oudshoorn, Managing Director at Applikon Biotechnology B.V, characterizes the cooperation with Proekspert as exceptionally valuable.

*"We chose Proekspert because of the company's strong know-how and because Proekspert is fully up-to-date in terms of the newest platforms. The scientific knowledge of the team is on a very high level and Proekspert has a solid connection to Tallinn University of Technology. This has proven to be of great value to Applikon Biotechnology. The development process of BioXpert® XP has exhibited excellent co-development between the two companies and a common effort to reach our target,"* says Arthur Oudshoorn. He also emphasizes the economic benefits of working with Estonia.

*"Before we marketed BioXpert® XP, the bioresearchers and operators in the field could not use the great amount of data generated by the biotechnological processes. Thanks to Proekspert, we have now given them the opportunity to store and use this information in their scientific work and in cooperation with Proekspert our efforts will continue to improve the software, to strengthen Applikon and to support the biotechnical industry."*

**Contact information:**

Niels Knudsen  
Business Development Manager  
AS Proekspert  
151 Söpruse Road, 13417 Tallinn, Estonia  
Mobile (Denmark): +45 30207162



**CASE OVERVIEW**

**Customer:**

Applikon Biotechnology B.V

**Project:**

BioXpert® 3 (BX3)

**Project objective:**

To develop advanced SCADA software for fermentation processes with a wide range of features

**Development life cycle:**

1997-2003 - The primary development phase of BioXpert® 3 (launched as BioXpert® XP).

2007 - Development and support phase

**Project volume:**

50,000 hours

**Competencies:**

- Software developers
- Biotechnology PhD from Tallinn Technical University
- QA engineers
- DCOM specialist
- System architect

**Methods:**

Agile software development process. DCOM technology. Microsoft SQL database technology – MSDE or Express for affordable low end systems and MS SQL Server for high end solutions

**Tools:**

Microsoft Visual Studio, Microsoft SQL Server, Enterprise Architect and Microsoft Office

**Locations:**

Proekspert and Applikon offices in the Netherlands

Proekspert is a value adding provider of software engineering services. We contribute to and assume responsibility for the definition of conceptual solution objectives and design, definition of requirement specifications, project management, solution architecture, software design and development, documentation, QA, updates, training and ongoing support.

Learn more at [www.proekspert.ee](http://www.proekspert.ee)

