The system Microsoft Dynamics AX (Axapta) was provided to the Institute of Management Engineering, Poznań University of Technology by an IT company Integris.

Summary

Country: Poland
Sector: educational
Client's profile
The Institute of Management Engineering, Poznań University of Technology is renowned not only in Poland but also around the world as a scientific-educational centre cooperating with many educational and scientific institutions. The Institute trains future management staff for multi-aspect problems of management engineering, e.g. quality engineering, production management systems, logistics, ergonomics of manufacturing systems and working conditions, etc.

Solution
The implementation of the Axapta system at the Institute was the first in Poland and its goal was to create a modern laboratory fitted with the ERP system. At present the students learn in practice how to manage an enterprise with the use of latest information technologies.

Benefits
- Future managers can practise company management, instantly learning about the consequences of their decisions by means of the system.
- Students learn practically how the MRP algorithm functions and the role of its information inputs, such as the product complexity structure (BOMs), technological itineraries or gross demand.
- Preparation of managing staff for work in companies fitted with modern ERP systems.

„Microsoft Dynamics AX (Axapta) is a very clear and user-friendly solution in comparison with other systems of the same class tested by the Institute"

Prof. dr hab. inż. Marek Fertsch, Head of Institute, (PhD Hab.Eng.)

The Institute of Management Engineering, Poznań University of Technology is the first user of the Axapta system in Poland, which was implemented for educational purposes. Microsoft provided state-of-the-art ERP class software due to the collaboration of Prof. Marek Fertsch, (PhD Hab. Eng.), Head of the Institute and INTEGRIS. In July 2004 the work on the implementation of Microsoft Dynamics AX (Axapta) started to provide training to students as part of the subject 'Production Management (Laboratory)'. Students at the Institute use it to practise and simulate enterprise management with a focus on production and logistics management. As Łukasz Hadaś, PhD, a lecturer at the Institute and the chief person in charge of the implementation says, students have contact with a modern MRP/ERP class system, which increases their value on the job market as future users of such systems in production planning and logistics.

"We wanted the students to have a chance to practise real-life situations, which they may encounter in a regular enterprise, at the highest world standard. The Institute provided computer equipment and the space where it was located and Integris Company provided the most advanced version of ERP class software."

Integris Director

Description of the Institute

The Institute of Management Engineering, Poznań University of Technology was established thirty years ago. Since the beginning it has been involved not only in student education but also in extensive scientific work. The basic scope of the scientific research work of the Institute is management engineering problems, which include considerable theoretical and practical achievements in quality engineering, production management systems, logistics, ergonomics of manufacturing systems and working conditions, etc. The Institute also conducts research on the latest concepts of multi-aspect management of enterprises of different size and structure with the use of latest information technologies.

Years of work and rich experience of the Institute of Management Engineering have resulted in a reputation not only in Poland but also abroad. As part of scientific and educational collaboration the Institute has relations with renowned scientific centers all over the world, which include such well-known institutions as: the University of Louisville, Kentucky, USA; Purdue University, USA; the University of Newcastle, Australia; Universität Gesamthochschule, Kassel, Germany; Tampere University of Technology, Finland; the University of Cambridge, UK; Lancaster University, UK; Noordelijke Hogeschool Leeuwarden, Holland; Universite d'Artois, France, etc.

The Institute of Management Engineering also participates in the European Socrates Erasmus program.

Thanks to the implementation of the ERP class system at the Institute it is possible to examine various aspects of market development trends and to implement such applications, especially in reference to the degree of real internal integration of an enterprise. However, as Łukasz Hadaś, PhD stresses, the staff of the Institute also examine external integration of ERPII systems directed to business partners and the management of the chain of deliveries.

Solution

In July 2004 work on the implementation of Microsoft Dynamics AX (Axapta) at the Institute of Management Engineering started. On the part of the Institute the chief person in charge of the implementation was Łukasz Hadaś, PhD (working under the management of Prof. Marek Fertsch, PhD Hab. Eng.) and on the part of Integris Company – Arkadiusz Zimniak, PhD. Alongside the construction of a database, which was based on the actual technological process standards of a furniture industry enterprise, the implementing staff concentrated primarily on the production module, which was one of the first to be implemented in order to educate students as part of the subject Production Management (Laboratory). In the process of implementation of the application and during the buildup of knowledge about effective use of the system the assumed order of work corresponded to the requirements related with the building of system effectiveness in the optimization of logistic flow parameters. The implementation work also included reproduction of ordering models and methods of calculation of batch sizes.

The next stage of the implementation was action taken to make a reference model for organization and production conditions. Work on the process map of the system also continues, which results from the need to break the barrier of

"Students of the Institute of Management Engineering learn in practice how the algorithm of material requirements planning (MRP) functions, which they know very well in theory, and they learn about a very important problem of configuring logistic flow parameters in an MRP/ERP class system, which Axapta is, and about its influence on the effectiveness of the flow of material streams."

Łukasz Hadaś, PhD (in charge of the implementation of Axapta at the Institute of Management Engineering, Poznań University of Technology)

'segment' thinking. The laboratory classes enable students to see the logic of the MRP system functioning. The problems of IT systems, which are part of the educational activity of the Institute, are elaborately discussed and the focus is not only on their functioning but also on the choice of them, implementation methodology and cooperation with implementing entities. The problems are discussed during classes for full-time and extramural students and in the course of post-graduate studies - for practitioners. In view of such a wide group of recipients, who are either users or potential users of MRP class applications, the quality of functioning of a utility application is of very special relevance. To educate students, who learn in practice how the MRP algorithm functions, instructions for laboratory classes were prepared, which include: defining warehouse items, making a new component list, making a new itinerary, examining the load of production centers, etc.

The students showed the greatest appreciation for the graphic interface of Axapta, especially the tree visualizations of a component list (BOM), the easiness of building new products – combining components by means of drag-and-drop operations in the constructor window and visualizations of production plans in the form of a Gantt diagram.

The Institute showed interest in the methodology of the implementation of the system used by Integris Company, because a presentation of this methodology is to be part the classes on the choice of an application and the implementing entity.

Benefits

The Axapta system has a very wide educational application at the Institute of Management Engineering. The chief benefit for the students of the Institute resulting from the implementation of the Axapta system is undoubtedly the possibility of contact with a modern MRP/ERP class system, which increases their value on the job market as future users of such systems in production planning and logistics. Working with Axapta at laboratory classes they learn about a very important problem of configuring logistic flow parameters in MRP/ERP class systems and about its influence on the effectiveness of the flow of material streams. They also have a possibility to have practice in learning thoroughly how the algorithm of material requirements planning (MRP) functions, about which they have already learnt thoroughly in theory. Apart from laboratory classes in production management Axapta is also used for project practice named Integrated Information Management Systems.

As Axapta is a multi-language system, foreign exchange students also use it for training as part of the subject *Computer Integrated Manufacturing*. The system is also used as part of the post-graduate studies under the name: Modern Production and Logistics Management. During the classes students will also be learning the methodology of implementation of the system used by Integris Company in implementations in manufacturing companies. This action is aimed at education of future managerial staff in a conscious choice of not only an application for IT assisted management but also an implementation partner.

Microsoft Dynamics

Microsoft Dynamics is a family of integrated, adaptable solutions supporting management. These solutions help managers and the staff of

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integris

Integris is a company with the longest experience in the implementation the systems from Microsoft Dynamics family in Poland, it has been awarded the titles: Partner of the Year, Competent Partner, Platinum Disc
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companies to make business decisions. Microsoft Dynamics works in the same manner as widely known Microsoft software, e.g. Microsoft Office, which means the staff learn more quickly and easily how to use the system and it enables concentration on relevant aspects of doing business. As these solutions come from Microsoft, it is easy to make them work with the systems already used in the company. By automation and optimization of the processes connected with finances, relations with the client and a chain of deliveries Microsoft Dynamics connects and brings people, processes and technologies closer thus increasing productivity and effectiveness of the business and it helps to make a success. Więcej informacji na temat rozwiązań Microsoft Dynamics:

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