# Asprova case study report No.27

## **Pentel Corporation**

Company name: Pentel Corporation Company address: Koamicho 7-2, Nihonbashi, Chuo-ku, Tokyo Founded: March 1946 Capital: 450 million yen Products: Produce and sale painting tools / stationery, touch screen, robot for industry, cosmetic OEM and so on. URL : http://www.pentel.co.jp/



# Asprova was connected with ERP when introducing ERP.

### Decrease the inventory dramatically. Improve promise of order due date.

Pentel Corporation is built with another name, Japan Stationery Corporation to produce and sale stationery , in 1946. "Pentel " and "Pentel painting tools" were released in 1950. The company name is changed to "Pentel Corporation" in 1971, which is the formal name at current. It was awarded the first award of stationery industry, Deming. The products are expanded to other industries, such as touch screen etc. electronic products, robots for industry.

To create production plan automatically, Pentel decided to introduce Asprova in 1996~1997. After several years, Pentel decided to introduce ERP. Meanwhile the data between Asprova and ERP were exchanged automatically. As the result, the inventory was decreased dramatically. The promise of order due date was improved. The content as follows were described by the Mr. Ishii Fumio of Information Systems and Mr. Toshihiro Saito of Planning Office, Ibaraki factory.

### Goal of introducing Asprova Create production plan automatically

There are three departments of stationery in Pentel. One is painting tools manufacturing department which produces crayon, painting tools, correction fluid. The second is pen manufacturing department which produce stationery. The third is a department which produces Sharp pen and withdrawable pen core. We will introduce the production line of correction fluid. At first, the correction fluid is filled to the bottle, then other parts or cap is assembled with the bottle together. Finally they are packed into box and shipped. There are three process in Asprova, Filling, Assembly and Packing.

Pentel started to find a production scheduler system in 1995. Pentel's Mr. Ishii Fumio of Information Systems said that we need to have a meeting with production and sales departments to decide the sales plan of this month. Then the production department create the production plan based on the sales plan. It took about 3 days to create the production plan. So the need a system to help them to create the production plan automatically.

### Support Windows 95 High speed scheduling

Pentel developed a production plan system based on UNIX. To meet the complicated requirements from the factory, the scheduling speed is very slow. The maintenance of master data is very complicated. This phenomenon is lasted until 1995. Meanwhile Windows 95 was released in 1995. Pentel decided to transfer the production plan system to Windows 95. Pentel's Mr. Ishii Fumio of Information Systems said that there must be a good production scheduler in the world and wanted to introduce one. Then Pentel found three production plan software. One is based on UNIX. The other two are based on Windows 95. The scheduling speed of one of the other two was slow. For the given sample data, it took 15 minutes during scheduling. For the same data, it just took 1 minute during the scheduling. What's more, Asprova is a software based on Windows. At finally, Pentel decided to introduce Asprova.





**Pentel Corporation** 

#### Information Systems Mr. Ishii Fumio (Right)

#### Planning Office, Ibaraki factory Mr. Toshihiro Saito (Left)

At first, the aim of introducing Asprova was to create the production plan automatically. Finally, Asprova was connected with ERP system to make the production info of the whole company are shared together. In the future, the production system will be used to be connected with other systems.

#### Advantages of Asprova

- Create production plan automatically
- Decrease the Inventory after connected with ERP.
- Improve promise of order due date after connected with ERP.

### The conveniences for the factory workers is prioritized to comply with the scheduling result from Asprova after using Asprova for a long time Asprova was introduced in 1996~1997. It is used by factory workers. The most difficulty occurred after introducing Asprova.

The reason is that the production sequence from Asprova cannot meet the requirement of the factory. For example, there are three products, A, B and C and three orders for each product. Asprova will make a scheduling result as followed.  $A \rightarrow B \rightarrow C \rightarrow A \rightarrow B \rightarrow C \rightarrow A \rightarrow B \rightarrow C$ But the customer want to get the result as followed.

 $A \rightarrow A \rightarrow A \rightarrow B \rightarrow B \rightarrow B \rightarrow C \rightarrow C \rightarrow C$ Also Asprova cannot meet all requirements from the factory, we had to make full use of Asprova and adjusted the scheduling result manually. Anyway we had to make Asprova work well.

In this way, Asprova was used in Pentel for more than 10 years. During these 10 years, Pentel communicated with Asprova for many times to adjust the settings in Asprova and get a better result.

The production lead time of all orders was decreased by Asprova.

# Introduce ERP to defense the business competition

There was a big change for the use of Asprova after introducing ERP system. Pentel decided to introduce ERP system in different factories in 2003. rather than a main management system, because the inventory management was a big problem for Pentel. Pentel decided to introduce SAP/R3 in Feb. 2004. SAP/R3 was introduced in Oct. 2005 and finished in 2007. All old main systems are replaced by the ERP system. Pentel wanted to improve the production management at the same time.

# Improve promise of order due date after connected with ERP

Mr. Ishii Fumio though that SAP/R3 will replace the Asprova when introducing SAP/R3. He found that SAP/R3 could not replace the production scheduler Asprova. Indeed the introduction of Asprova was very complicated in 1996~1997. But it could not be replaced by SAP/R3. What's more it could be used with SAP/R3 together. The work except production plan scheduling was done by SAP/R3. Asprova was focus on production plan scheduling. The necessary data can be imported form SAP/R3 to Asprova. Asprova will return the scheduling result to SAP/R3. At the beginning of introducing SAP/R3 and using Asprova together in July 2007, it was a little confused indeed. The factory workers could not assign the production according to the scheduling result from Asprova. The unshipped items were increased dramatically and could not be shipped to customer before due date.

Finally, this issue was solved in Nov. 2007 and the unshipped items are decreased by  $1/4 \sim 1/2$ . The promise of order due date is up to  $97 \sim 98\%$ .



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