



## IKS Case Study: Flextronics International

Flextronics is with more than 15 billion dollar turnover one of the largest EMS suppliers of the world. Companies such as Microsoft, DELL, and Nokia belong to the customers of the enterprise, which is represented with locations in 30 countries on five continents world-wide.

One of the top goals of the company is to deliver products to the customer "on demand" - short delivery times and high flexibility with constant cost reduction. In order to reach this, Flextronics pursued the "Campus" concept, whereby different company divisions are settled at one location in order to be able to offer to the customer everything from one hand.

Mr. Stefan Osswald, world-wide responsible for continuous improvement, explains for this: "In the year 2002 we were searching on the market for a software system, which supports us fast on our way to world class manufacturing based on the Pull principle. We wanted a system, from that all employees of an enterprise benefit, from the material manager up to the managing director".

### Flextronics provides the following main requirements:

- Fast implementation time by a simple IT structure and less training expenditure
- Availability in all languages
- Simplest applications to production level
- Reduction of the planning expenditure to a minimum
- Fast Return on Investment

The **total goals** by the employment of a Kanban system can be summarized in:

- Reduction of the inventory and floor-space requirement as well as overhead costs
- Increase of the inventory turnover and materials availability
- Reduction of delivery lead times
- Reduction of expenditure for planning and scheduling



### Improvement within all areas

After a pilot project in the year 2003 at the location Guadalajara, Mexico, Flextronics began with the world-wide roll out. Meanwhile IKS is world-wide installed in 15 Flextronics sites, whereby particularly an attention is to put here on China, where the language is a very important factor for the acceptance.

"Flextronics could obtain significant savings by the introduction of IKS. The inventory and the required floor-space has been reduced around 50%, the materials availability average is more than 99% at the moment - savings, which go with an enterprise of our size into the millions ", so Mr. Osswald.

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**July 2007**

## IKS Web-Interface

### Link suppliers via Internet

A lot of companies have implemented Kanban systems to link internal areas via „Pull“.

Electronic Kanban offers a lot of possibilities to support such processes, but also manual Kanban can sometimes be realized very easy. So the operators get a good understanding of the Kanban rules and can learn how to handle the Kanban cards.

But if external suppliers should deliver raw material and components via Kanban, the company must decide how the signal will be sent to the suppliers without high human effort.

In the most cases the ERP system supports such Kanban processes not very effective. This is the reason why the usage of a specialized electronic Kanban system makes sense.

There are different ways to include external suppliers in a Kanban system. Kanban signals can be transferred via fax, email or via Internet.

Fax and email are IKS standard since a long time. From today on it is also possible to use the Internet to involve the suppliers into the Kanban system.

The new **IKS Web-Interface** offers the possibility to provide all required supplier information and to design the processes very easy and transparent.

There are two **standard processes** available:

- 1) Providing of an overview which Kanbans must be delivered (Kanban list)
- 2) Visualization of the current customer inventory and an automatic prioritization of the supplier Kanban loops

Item ID	Container	Qty	Last update	Status
1014	3840382C2	300	2/23/2007 9:11:59 PM	Full
1015	3840382C3	300	2/23/2007 9:16:23 PM	Full
1016	3840382C3	300	2/23/2007 9:16:23 PM	Full
1017	3840382C3	300	11/9/2006 10:28:50 AM	Full
1018	3840382C3	300	2/23/2007 4:58:03 PM	Full
1019	3840382C3	300	8/6/2006 9:23:42 PM	Full
1020	3840382C3	300	2/23/2007 4:46:46 PM	Full
1021	3840382C2	300	2/23/2007 4:58:17 PM	Full
1022	3840382C2	300	2/23/2007 4:58:30 PM	Full
1023	3840382C1	300	2/23/2007 4:46:09 PM	Full
1024	3840382C1	300	1/14/2006 4:46:21 AM	Full
1025	3840382C2	300	1/14/2006 9:23:59 PM	Full
1026	3840382C1	300	5/31/2006 12:28:59 PM	Full
1027	3840382C1	300	5/31/2006 12:28:59 PM	Full
1028	3840382C1	300	2/23/2007 9:23:23 PM	Full
1029	3840382C1	300	2/23/2007 10:28:28 PM	Full
1030	3840382C1	300	2/23/2007 9:26:46 AM	Full
1031	3840382C1	300	8/2/2006 10:48:52 AM	Full

**Process No. 1** can be used for example if the supplier delivers the parts at a fix day of a week

**Process No. 2** can be used for example if the supplier has so called consignment stocks at the customer side

The **benefits** of „Web-Kanban“ are

- Easy sending of Kanban signals
- Easy and clear defined processes for the supplier and customer
- A high degree of visualization about the required Kanbans and which parts must be delivered (a main benefit also for the supplier)

Item ID	Status	Qty	Last update
1022	Empty	270	2/23/2007 4:22:26 PM
1023	Empty	290	2/23/2007 9:16:23 PM
1024	Empty	290	2/23/2007 9:16:23 PM
1025	Empty	270	2/23/2007 12:28:28 PM
1026	Empty	270	2/23/2007 9:23:42 PM
1027	Empty	270	2/23/2007 10:28:28 PM
1028	Empty	270	2/23/2007 9:26:46 AM
1029	Empty	270	2/23/2007 9:26:46 AM
1030	Empty	270	2/23/2007 9:26:46 AM
1031	Empty	270	2/23/2007 9:26:46 AM

- The possibility to print Kanban cards on demand and to reduce the manual handling of faxes or emails
- Visualization of the Kanbans that will be delivered by the supplier on customer side
- Visualization of the Kanbans that are in production at the supplier side
- Prioritization of the Kanban orders at the supplier side

**Please contact us for further information or for a presentation of the IKS Web-Interface!**

## IKS PDA Module

### More flexibility for IKS customers

The new wireless IKS PDA Module enables our customers to visualize specific IKS information directly at the shop-floor.

Additionally PDAs can be used to scan the Kanban movements via barcode. Hereby all messages like Kanban status, error messages etc. can be visualized directly on the display of the PDA.

So the easy usage of a traditional barcode reader and the functionalities of a mobile terminal has been combined to increase the flexibility of IKS users.



We offer our customers a complete package containing dedicated mobile terminals and our new developed software. This package will be delivered to our customer pre-installed and tested.

## New manufactus Website

[www.manufactus.com](http://www.manufactus.com)

Since the beginning of June 2007 the new manufactus website is online.

There are detailed information regarding our electronic Kanban system IKS available, but also for our products.



New products are our „eLPMs“ to measure OEE and to force the continuous improvement, and also our „Lean Assessment Tool“ to audit and optimize your individual production system.

## Customer & Partner News

### Automotive supplier Catem uses IKS to manage internal Kanban system

Catem GmbH & Co. KG is an automotive supplier located in Herxheim, Germany.

The company is using the IKS Kanban system to manage their internal Kanban processes. All products that are shipped from the warehouse will create a new Kanban order directly at the product line.

To visualize and prioritize the Kanbans that have to be produced, Catem is using the electronic IKS Kanban Board.

Additionally IKS has been linked to the existing ERP system to reduce the effort of booking material.

### Hansa Metallwerke links external suppliers via IKS supported Kanban

Hansa Metallwerke AG with headquarter in Stuttgart is one of the leading manufacturer of sanitary fittings in Germany.

Objective of the IKS project is the support of the processes which have been defined to link external suppliers via Kanban. The new Kanban processes have been designed with manufactus to realize all special requirements in the best way.

### Main aspects to use IKS are:

- complete visualization of the inventory at production levels
- optimization of inventory levels without compromising the delivery reliability by visualizing of current inventory and lead times
- automatic sending of fax and email reports to external suppliers
- linking of the ERP-system Baan to reduce manual bookings

Since the end of 2006 IKS is in use at Hansa Metallwerke. The goal is to integrate to existing external suppliers and additionally the site in Czech Republic into the Kanban system.

## Special

### Read here 10 typical reasons, why enterprises do not (want to) implement "Lean"

1. I would like to introduce gladly Lean processes, but I get no support of my management.

*There is no doubt that managers do not want to reduce their inventory, improve their delivery reliability and increase their competitiveness, or?*

2. Our coworkers do not have the necessary training, in order to make own (decentralized) decisions.

*Often the leading production responsible persons endorse this step, if they recognize, which progress can be made.*

3. We tried it, but we did not achieve the desired results.

*A "Lean" introduction needs perseverance, patience and care.*

4. With us everything runs in the best way, we need nothing to improve at the moment.

*It is ever better to improve things if the business runs well.*

5. We are already "Lean"!

*This statement is often already transacted, if only some few Lean principles were converted. The realization of "Lean" never ends!*

6. We put so much time and money into our ERP system, new machines etc. So we do not need "Lean" at the moment.

*Which is really afraid, actually is the change.*

7. I do not think that a company gets really the results all the case studies claim.

*There are so much true success stories. Ask us or our partners for more details.*

8. I am too busy at the moment and probable I will never find I the time for "Lean".

*Usually we are too busy with solving problems. "Lean" helps to avoid these problems and provides more time to add value.*

9. It takes a too long time, in order to obtain results.

*The implementation of "Lean" takes a for a very long time, connected with the enormous potential for improvements.*

10. "Lean" may work for other companies, but never for our company.

*"Lean" was already realized in all kinds of companies and in the different industries.*

## About manufactus

manufactus designs und develops innovative software solutions to optimize production and logistic processes.

Our goal is to supply software tools to support internal production processes, optimize the supply chain and to enable the customer to improve the processes continuously. Hereby we strongly support the principles of Lean Manufacturing, Kanban and the Toyota Production System.

By using the manufactus solutions our customers are able to reduce costs in a significant way and to improve the most important Key Performance Indicators.



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