Workshop: Kanban pull system

Effective production steering that guarantees minimum inventory level

Target group

Customer service staff, employees responsible for drawing up production plans, production and logistics management, employees responsible for the warehouse and internal logistics, engineers preparing production processes and planning material flow (layouts).

Get the practical insight into solving problems and responding to challenges including:

- Overproduction caused by planning based on forecast.
- Limited availability of manufactured goods.
- Reflecting market changeability (client's orders) in the production system.
- "Ups and downs" (fluctuation) in production orders.
- Delays in production caused by changing priorities.
- Difficulty in synchronizing flow between production processes.
- Difficulty in combining processes in one area characterized by continuous flow.

Overview

Pull system is different from traditional methods of production control in which production schedule clearly defines what and when is to be manufactured in each process. It does not allow for feedback synchronized in time with information from the client concerning their precise needs. Moreover, in traditional manufacturing, moving materials between processes takes place when the delivery process (the process on the top of value stream) finishes processing the product. It results in pushing the material towards the next operation (down the value stream) and generating inventory. Kanban combines and synchronizes production activity of all processes in value stream with regard to actual client's needs (pull system signals replace production plans), ensuring control over inventory and maintaining its optimal level.

Benefits for the company

- **Change** in the way of drawing up current production plans.
- **Manufacturing** only the products that the client needs.
- **Manufacturing** products and components exactly when they are needed.
- **Lowered** inventory level and better control over it.
- **Reduced** product lead time in the system.

Benefits for the participant

- **Familiarity** with pull system rules.
- **Participation** in the design and verification of a pull system for a simulated plant.
- **Ability** to calculate inventory level in the supermarket.
- **Familiarity** with different pull signal solutions (kanban) and rules of designing them.
- **Getting acquainted** with an example of pull system implementation in the plant which hosts the workshop.

AGENDA

		AGENDA
Module 1	9:00 – 10:30 (10:30 – 10:45 coffee break)	▪ Introduction ▪ Presenting the company to the workshop participants – the company representative ▪ The first course of a simulation game ▪ Creating a current state map for a simulated plant
Module 2	10:45 – 12:15	▪ Elements of a pull system ▪ Value stream simulator ▪ The client's demand ▪ Plan For Every Part ▪ ABC product analysis ▪ Advantages and disadvantages of a supermarket offering finished products ▪ Inventory levels in supermarkets ▪ Rules of organizing supermarkets
	12:15 – 13:00 Lunch	
Module 3	13:00 – 14:30 (14:30 – 14:45 coffee break)	▪ Flow management - Kanban signal ▪ Production leveling ▪ Calculating the number of changeovers ▪ Preparing the second course of the simulation game – the participants modify the course of the processes following the rules that were presented to them ▪ Executing the second stage of simulation, discussing the results, comparing the initial and final state
Module 4	14:45 – 16:30	▪ Visit at the production hall ▪ Becoming acquainted with the pull system for finished products and their components: Kanban signals, relocation of Kanban signals, a supermarket with components, Kanban boards, and a FIFO queue. During the visit, the company employees answer the participants' questions ▪ Discussing observations made in the production hall with the company representatives ▪ Final discussion and workshop summary