

Dis"Card"ing The Paper Kanban



Electronic Web-Based Kanbans Support Lean Manufacturing

By Thomas R. Cutler

Kanban, in general, is based on trust -- namely that suppliers will reliably deliver quality product in the right quantity at the right time. Kanban, a Japanese term for one of the primary tools of a just-in-time system, maintains an orderly and efficient flow of materials throughout the entire manufacturing process. It is usually a printed card that contains specific information such as part name, description and quantity. Kanban is a key element of the lean manufacturing process.



Datacraft Solutions' electronic kanban system provides real-time online data to meet lean manufacturing principles of continued process improvement.

Unfortunately the entire purpose of the lean manufacturing process appears to be quite defeated with a paper (or card) kanban system. Suppliers learn to work successfully with fabricator's and metalworker's lean manufacturing kanban systems, but they also learn the headaches and loopholes. More questions are raised than answered:

- Did a fax get sent?
- Was it received?
- Was it legible?
- Was it acted on?

The lean manufacturing kanban process had produced the antithetical result: a system which encouraged inefficient behavior all around.

- Buyers often send duplicate fax releases.
- Fax releases are sometimes sent on expired purchase orders.
- Suppliers are inundated with illegible or questionable faxes and often ignore them.
- Suppliers frequently report they never receive the fax order.
- Without a reality-based "expected-on-dock" time and a method to track supplier performance, shipments are often sent too soon or too late.
- Quantity mismatches are frequent. Suppliers ship an inaccurate quantity without being held accountable
- Productivity is detrimentally impacted in staff time spent faxing.

Enterprise resource planning (ERP) systems treat kanban as an afterthought and do not fully address all the specific challenges of maintaining it. Many ERP vendors do not utilize a true web-based electronic-kanban system. Most manufacturers are presently using various databases with varying degrees of success to track paper (card) kanban systems. The cost-justification of an electronic web-based kanban can be distilled into three simple factors:

1. Material cost reductions
2. Labor cost reductions
3. Transportation cost reductions.

The top limitations of a paper kanban system are:

1. Inability to link with the mainframe computer system
2. Inability to perform "what if" scenarios on product lines based on increases or decreases in production
3. Inability to easily adjust kanban quantities based on "spikes."

Lost cards can be measured in assembly line downtime and expedited freight fees. Duplicate card costs can be measured by extra carrying costs for excess inventory.

So determined to move away from the numerous downfalls of paper kanban, many buyers and planners are encouraging the immediate acquisition of a web-based kanban, such as the electronic kanban system, Signum, by Datacraft Solutions, Inc. (see "Implementing an Electronic Kanban System").

There are three ways in which a web-based electronic kanban can create a significant culture shift in the manufacturing organization:

1. Gives back to management some of the control or oversight that was lost when the company changed from MRP to a shop-floor kanban system
2. Communications greatly enhanced, with total awareness of material status throughout the manufacturing organization, eliminating urgent production meetings
3. Eliminates problem of not having material available for production due to lost cards.

The key benefits to a web-based electronic kanban can be found in real-time visibility:

1. Reduce non-value activity: lost or duplicate cards; poor communication
2. User accountability and management oversight capabilities
3. Enhanced communication between manufacturers, vendors, buyers, suppliers, and shop floor.

Bottom-line: The kanban process must support the productivity gains articulated in lean manufacturing principles ... web-based electronic kanbans are lean, paper is not.

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Implementing an Electronic Kanban System

Datacraft Solutions, Inc. offers process automation solutions to lean manufacturers through a secure Internet gateway, eliminating the need to install and maintain a complex IT infrastructure. There are no complicated, expensive, time-intensive software implementations necessary; no extensive training requirements; and no internal support headaches.

According to Sam Bayer, president of Datacraft Solutions, "Our customers concentrate on growing their business, not their IT overhead." Getting started with Datacraft Solutions is a simple process from signing up, importing data, to getting to work.

"Our customers access our solutions and fully utilize their powerful features immediately for a low, predictable monthly fee. Consulting services and customized training are also available, and services are scalable so you can design a package that is right for you and your budget," says Bayer.

Datacraft Solutions' focus is to empower small and mid-size companies with the competitive advantages of technology-driven, cost-effective process automation solutions. To realize this vision, Datacraft has built its products and services around a philosophy of facilitating community and delivering continuous support. Datacraft Solutions' Signum web-based electronic kanban system provides real-time online data to meet lean manufacturing principles of continued process improvement.

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