

Datacraft Solutions & Pacific Scientific HTL



Pacific Scientific HTL

Part of the Danaher Corporation

Customer Profile: A worldwide manufacturer of Aerospace Safety Equipment

Location: Duarte, California

Products: Fire suppression systems, safety restraints, aircraft assemblies, and military defense hardware

Major customers: Lockheed, Airbus, Boeing, Cessna, Embraer

Employees at plant: 190

Buyer/planners on staff: 13

5000 parts purchased from outside suppliers

Supplier base: 360. Approximately 100 are now participating in kanban

2000 kanban signals generated monthly

The Challenge: Help a large aerospace manufacturer get its high-volume lean manufacturing out from under a mountain of out-of-control paper faxes and management nightmares

The Pacific Scientific HTL Story

Pacific Scientific HTL, an internationally renowned maker of aerospace safety equipment and military defense hardware, adopted lean manufacturing several years ago in an effort to reduce inventory levels and increase the speed of product through their plants. A key component of their lean journey was to institute a kanban system that would govern the flow of materials from their suppliers and through their facility. While visual cues governed their internal production kanban system, fax releases signaled their suppliers.

After a year and a half of using the paper fax release system, it was clear that it simply didn't scale for PS/HTL's 100-plus suppliers, more than 100 fax numbers over 3500 parts on kanban, and 2000 signals sent each month. With numerous points of possible failure—did a fax get sent? was it received? was it legible? was it acted on?—the system encouraged inefficient behavior all around:

- Production Associates would send duplicate fax releases when they weren't sure if a fax went through
- Anticipating demand, Production Associates would overdrive material by sending multiple manual signals at once
- Fax releases were sometimes sent on expired Purchase Orders
- Fax sheets got lost, so buyers were constantly making duplicates
- Suppliers inundated with unreadable or questionable faxes were more likely to ignore them and question the reliability of PS/HTL buyers
- Supplier statements that "I never got the fax" or "You backdated the fax" were not uncommon
- Without a reality-based "expected-on-dock" time and a way to track supplier performance, shipments were often sent too soon or too late
- Without receiving reports, quantity mismatches were frequent. Suppliers could ship a quantity of 1000 for an order of 200 without being held accountable
- Productivity took a definite hit with some staff spending an hour or more per day faxing and being frustrated
- Managers and buyers were too often flying blind as to the health of manufacturing cells and kanbans

In this environment, no one was happy and finger-pointing between buyer, supplier, and Production Associate was inevitable. Clearly PS/HTL needed a way out of the paper fax morass and into some kind of controlled, electronic kanban system. As PS/HTL's Purchasing Manager Cari Gintz says, "What led us to decide to go electronic was sheer frustration and the need to start managing instead of reacting."

First Candidate: A Home-grown System

Gintz turned first to a home-grown system developed by a sister company. It had the right functionality, but retooling it for her facility would have been a major development undertaking. "We'd have had to dedicate MIS resources and spend time we didn't have," Gintz explains. "But it did give me a vision of where we needed to go."



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Second Candidate: A High-end Enterprise Package

PS/HTL next identified a high-end package where electronic kanbans were merely one component of a large-scale end-to-end ERP system. A team of consultants from the software vendor came to PS/HTL to train Gintz and guide her in setting up the system. Four days into the training and a long way from having their kanbans set up, Gintz realized this was application overkill. “I’m a highly experienced systems analyst,” she concluded, “and if I don’t understand it after 4 days, the buyers, planners, and suppliers aren’t going to either.” The package’s sophisticated forecast tools and forced specification of complex parent-child relationships offered no added benefits, only added cost, startup time, and maintenance overhead. Proceeding with the implementation was likely to handicap manufacturing efficiency for months.

In the meantime a 20-minute webcast demonstration of Datacraft Solutions’ Signum product had alerted Gintz to a system that aligned perfectly with what PS/HTL needed: To put in place a system that was easy to learn and use for buyers, planners, and suppliers, and visible enough that everyone involved could do their jobs without constant confusion and supply worries cutting into productivity.

“It did everything I’d seen in the solution from our sister company,” Gintz said, “but without the big development effort at the front end, and the ongoing support headaches on the back end.”

The PS/HTL-Datacraft Solutions Kanban Automation Project

Datacraft Solutions and Gintz approached their work together as a project with measurable goals and a clear, phased implementation strategy. These were some of the specific goals PS/HTL targeted:

- Be assured of getting what’s ordered, and only what’s ordered, at the expected date
- Handle the unpredictable—spikes in demand and other exceptions—predictably
- Get a clear picture of the health of every cell and kanban at any time
- Automatically calculate expected-on-dock delivery dates based on replenishment lead times
- Rapidly bring suppliers on board and provide them visibility of the kanbans they support
- Shorten replenishment times based on true schedules rather than one-size-fits-all guesswork
- Evaluate and motivate supplier performance based on accurate tracking of delivery times and quantities

Phased Introduction: Roll Out by Product Line

PS/HTL decided they would roll the system out in phases, beginning with product lines involving about 20 key suppliers and the most out-of-control paper fax releases, then phase in the remainder once the fax-eating “cookie monster” was under control.

Rapid Training: Datacraft consultants provided initial training to Gintz in a 1-hour session over the web. Gintz, in turn, trained her buyers, and associates, who caught on quickly thanks to the system’s intuitive, visual web interface and its instant window into kanban and cell health.

System Setup: Automating the paper system involved translating fax sheets into electronic signals. Signum’s streamlined approach facilitated rapid setup because the system didn’t force defining complex parent/child relationships (though it did offer the choice if needed) or entering a product’s entire bill of materials to get started.

Supplier Training: Together, Gintz and Datacraft conducted training for the initial group of key suppliers, who Gintz describes as “...so fed up with the paper system I knew they’d be willing to try something new.” [more]

☑ Total time from project inception to live launch: 8 weeks.

“What led us to decide to go electronic was sheer frustration—and the need to start managing instead of reacting.”

Tips for Success from PS/HTL's Cari Gintz

"The most critical element in our success was a solid definition of our process flow and Datacraft Solutions' quick grasp of our business processes. We'd done our homework in mapping out the flow, documenting it, and making sure it was well understood by our buyers, associates, suppliers, and Datacraft. We actually produced a Visio flow diagram showing exactly how a card moves from one place to the next and eventually back home.

"Without this pencil work there is no way we could have successfully launched the automation process and supported our high volume of parts and suppliers on kanban.

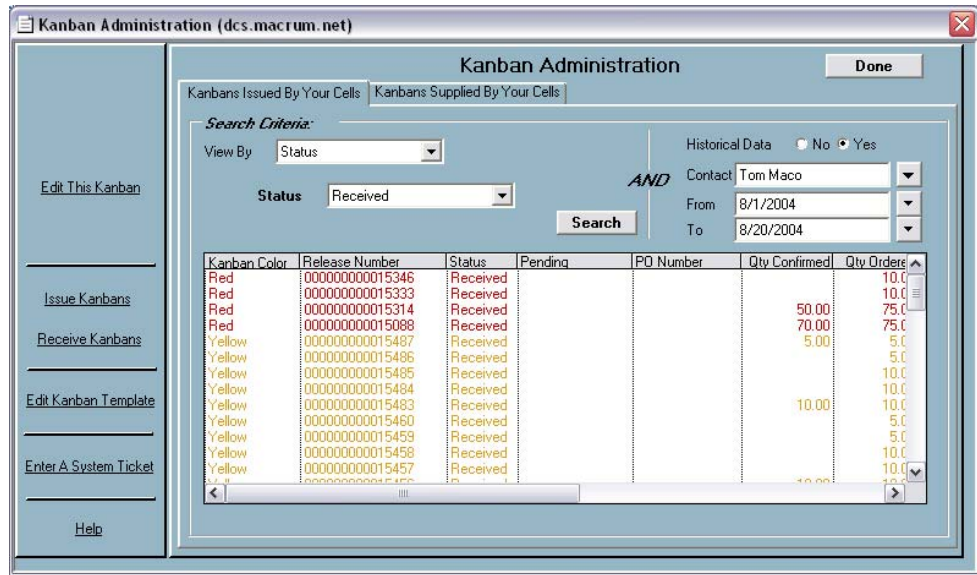
"We decided to work in phases, starting with certain product lines and key suppliers. We were fortunate in that our planners and suppliers had experienced the nightmares of a paper-intensive environment, and were definitely ready for a change! It helped that our suppliers were familiar with kanban.

"If your company is new to kanban, make sure you work with your suppliers so that they understand key concepts such as replenishment time—and recognize that this is not just another new system, it's a partnership."

— Cari Gintz, Pacific Scientific HTL Purchasing Manager

PS/HTL's Kanban Automation in Action

Based on lead times established when a PO is written, the system generates an expected date for the supplier, so deliveries won't come too early or too late.



Signum's Visual Board Provides Color-coded Kanban Administration

The floor associate cell lead does all kanban scanning. Kanban signal status is color-coded and certain. Yellow is healthy, telling the supplier to fill the order with the normal replenishment time. Red means *ship ASAP* regardless of expected date, because parts are out of stock. Green indicates no outstanding signals for the part.

When the supplier gets the emailed link triggered by the kanban scan, they can quickly scan for yellow kanbans. For suppliers without Internet access, Signum can even send the traditional paper fax electronically, recording when it was sent. And the system ensures that suppliers never get a kanban signal on a closed PO.

Unexpected Dividends

The timely knowledge provided by the new system offers some dividends that would have been impossible with even the best paper fax system.

All components are linked to cells, so the manager can quickly scan the Signum database to see the health of every cell by how many bins are red or yellow. Gintz's experienced eye has learned to read the data for trends and even spot performance problems such as associates scanning 2 cards on the same day.

When demand spikes, PS/HTL can put in a special "spike card" to the supplier, without disrupting the normal flow of kanban parts. The system's ability to handle such exceptions is a major productivity enhancer, according to Gintz.

Because suppliers are more accountable and now have their own window into the system, they've begun initiating improvements themselves. After a few weeks on the system, a dial and nameplate supplier figured out that they could reduce their lead time from 20 to 7 days. The visual, open system facilitates supplier communication that was impeded and even obliterated in the paper fax world.

Gintz also cites Datacraft Solutions' tech support as a huge bonus. "I've worked with numerous database systems and have never experienced such a response from MIS people. They don't just say, 'Fill in this vanilla form and make your processes fit'. They listen and really try to understand and respond to our requests."

