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QUICK SUCCESS WITH LEAN

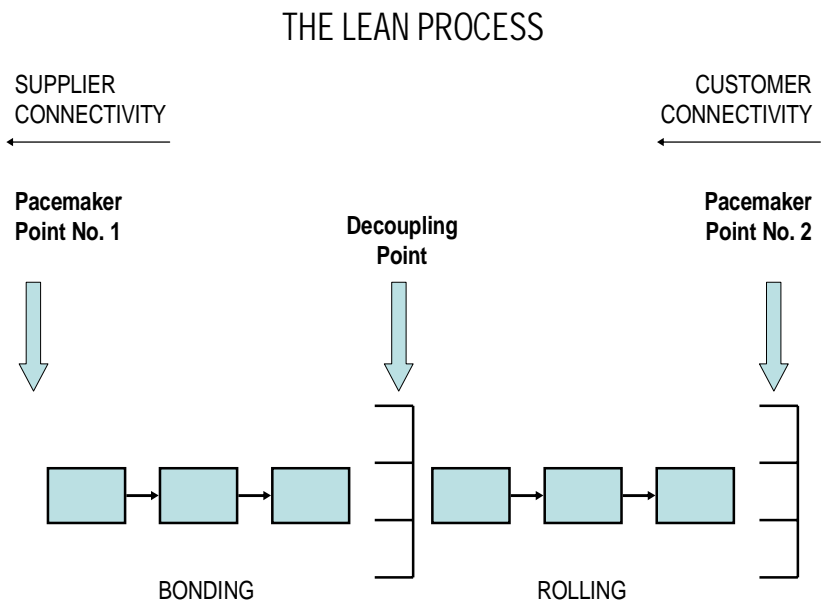
by Bill Belt

One of the companies that we visited in the US in January of this year, a manufacturer of metal coils which are bonded and cold-rolled, offers a good example of how to get **quick success** from a **first Lean pilot**. Its objective was to **react more quickly to customer demand** and to improve company productivity—in short, change 20 year-old ways of working to **avoid moving the factory offshore**.

The pilot was **one of the 3 major families** of multilayered metal used in catalytic converters to reduce automobile emissions. **Five to six major steps** were revealed by value-stream mapping, covering 10 to 15 operations. Also, the **value-stream map revealed a decoupling point** between bonding and rolling. The latter now pulls from an inventory of bonded coils; emptying the square authorizes the bonding of the next roll upstream.

FIFO lanes, squares painted on the shop floor, materialize the decoupling point. Four FIFO lanes were created, one for each subfamily. Every day, the Planning Department indicates which FIFO lane to pull using Kanban cards sent back from the end of the process the preceding day.

Two pacemaker processes were created in the flow. The first is at the start of bonding, which is also the start of the entire process. After it, products moving along by FIFO to the decoupling point. The second pacemaker process is at the end of rolling, which is also the end of the process. It pulls product from the decoupling point:



A « train schedule » which corresponds in Lean to the EPE Interval (see Technical Newsletter No. 22), sets the rhythm for pulling parts out of the FIFO lanes. **To start up quickly, the EPE Interval was set to one day** temporarily.

The next step will be to connect the first Pacemaker Process with raw material suppliers, and the second Pacemaker Process with clients, in order to reduce demand variability for finished goods. **The future connections for plugging in to a Lean Supply Chain** have been installed!

Detailed routings reside in an ERP software package and give the specific sequence of operations to be executed via a Work Order released through the ERP, along with a technical data sheet. But the Work Order does not authorize production, the Kanban Signal (an empty square on the shop floor) does. Numerous **visual management charts** show the current production situation.

At the Top Management level, a **Lean Steering Committee meets every 2 weeks**. At the operational level, a Value Stream Manager (= an internal Supply Chain Manager), covering planning, purchasing and logistics, is responsible for the product family.

An operator receives typically 3 to 5 days of education in all: 1 day of Lean principles followed by 2 days of practice, and another 2 days on value stream mapping. Industrial Engineering supports Production as required: out of the six people in IE, four dedicate 75% of their time to Lean and 25% to standard IE work; it's the opposite for the other two people. IE does a **weekly audit** of the Lean process.

The company uses **macro financial measurements** such as cash flow to measure the profitability of Lean.

Over a 12-month period:

- inventory dropped from \$7 M à \$4 M (- 43%)
- total processing time diminished from 6 to 8 weeks not counting procurement, to 1 week
- non-Quality of the product fell to practically zero
- customer service rose from 75% at the Confirmed Delivery Date to 98%, with zero tolerance in date and quantity

An excellent « Lean » pilot, yet complete, to obtain quick success.

Value Stream Results

