

enterprise consulting success story

Every Second Counts

Executive Summary:

- Develop an **immediate solution** for an automotive facility to **increase capacity** on one of their production lines with **existing assets** while providing increased flexibility to meet their **customer volume demands** and daily order fluctuations.
- Through the use of optimization tools and PFSA's highly-skilled team, the solution netted an **additional 20 hrs/wk uptime capacity** with **zero capital expenditures** to the customer.
- Increased **flexibility** was needed to handle their customer's daily order fluctuations.
- Significant **labor savings** in both direct and indirect activities.

Engagement Results:

- 11% - 38% improvement in overall average product cycle times
- 20 hrs/wk additional runtime capacity (Over 2 shifts, 5 days/wk)
- 85% reduction in changeover time with dedicated nozzle changer setup and fixed feeder setup
- Reduced labor requirements for kitting preparation and changeover requirements — going from full work orders to KANBAN part replenishment needs
- Zero capital expenditures

Customer's Initial State:

The customer initially set up and ran each product individually on the feeder carts. Their reasoning was the perception that they needed the shortest cycle time out of the machines in order to maximize line capacity.

- Efficiency run rate: 40% - 50%
- 2 shifts/day, 5 days/wk
- 30-45 min changeovers per work order
- Single-sided boards
- Individual feeder and nozzle setups for each product

Customer's Initial Solution Strategy:

- Capital investment may be required
- Capacity increase would be minimal and may not meet necessary targets
- Changeovers are not the bottleneck

Panasonic Solution Details:

Please refer to the next page to further learn how this success story may be similar to your situation and how Panasonic's solutions team can help you today.



Panasonic's Solution Proposal Details:

- Using customer-provided data of past production schedules, observation and volumes of their current operational practices; a proposal was created to address the time consumed for changeover activities – which eliminated changing the feeder carts and nozzle setups altogether.
- A new, optimized fixed feeder setup based on product priorities was established along with a common nozzle changer setup.
- By dedicating materials to specific locations on the feeder carts, parts were now able to be issued in full reels to the production floor (vs. previous kit exact practices) and allowed the option to add additional reels of specific high-usage components to help balance the placements across the feeder tables.
- The result helped improved the cycle time while also reducing the changeover time from 30-40 minutes to less than 5 minutes for screen printer stencil changes and new program downloads across their various production line machines.
- The overall advantage allowed the customer to gain an additional 20 hrs/wk of additional run-tim capacity along with quicker flexibility to switch from one product to another on-the-fly as their customer's orders fluctuated daily with no additional capital asset expenses required.

Product	New Cycle Time Results				Cycle Time Necessary to meet customer demand (Secs)	% Reduction in Cycle Time
	CM602A	CM602C	#/Panel	Avg CT (Secs)		
A	28.9	31.6	10	3.16	4.15	24%
B	44.6	44.5	10	4.46	6.18	28%
C	47.1	47.3	4	11.83	13.31	11%
D	47.5	47.5	4	11.88	13.31	11%
E	42	46.6	4	11.65	13.31	12%
F	66.7	62.5	9	7.41	11.88	38%

Product	Weekly Volume	Current Cycle Time (Secs)	Proposed Cycle Time (Secs)	Current Total Hrs Req'd	Proposed Total Hrs Req'd	Hrs Saved
A	5845	4.15	3.16	6.74	5.14	1.6
B	5832	6.18	4.46	10.02	7.23	2.79
C	3145	13.31	11.83	11.63	10.34	1.29
D	3145	13.31	11.88	11.63	10.38	1.25
E	4128	13.31	11.65	15.27	13.36	1.91
F	4362	11.88	7.41	14.4	8.98	5.42
Changeover Activities	12	2100	300	7	1	6
TOTAL				76.69	56.43	20.26



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