

enterprise consulting success story

Advantages of Feeder Capacity

Executive Summary:

- Develop a **long-term solution** for a **high-mix facility** to **reduce downtime** associated with kitting/prepping/staging & changeover efforts while **maximizing machine throughput** utilizing current assets.
- Establishing a **hybrid solution** of fixed and exchange cart feeder setups provided the **right balance** between kitting efforts and runtime between small lot sizes.

Engagement Results:

	Product Family A	Product Family B	Product Family C
Reduction in changeover carts	50%	50%	25%
Reduction in changeover time	33%	33%	33%
Reduction loading parts onto feeders	40%	40%	35%
Reduction in cycle time	10%	10%	9%
Increase in line capacity	10%	18%	15%

Current Revenue:

Current Run Hrs/Mo	
SMT 2	200
SMT 3	200
SMT 4	179
Avg \$ Value / Board	\$75.00
Avg Cycle Time (Mins)	1
Total Revenue \$/Mo	\$2,605,500

Proposed Revenue Opportunity:

Proposed Run Hrs/Mo	
SMT 2	180
SMT 3	145
SMT 4	135
Total New Hrs Available	119
Avg \$ Cost / Board	\$75.00
Added Potential Revenue/Mo	\$535,500
Added Annual Potential Rev.	\$6,426,000
Potential Revenue % Increase	20.60%

Customer's Initial State:

- On-Time to Request: 80%
- Current kitting/staging/setup process creating unplanned line downtime due to material availability
- Changeover time: 15 - 30 mins
- High % of unique parts/reaching feeder capacity
- Quality, accuracy, reliability issues
- Asset utilization rate < 50%
- One reel per part number
- Lot sizes varying between 10 and 250

Customer's Initial Solution Strategy:

- Thought fixed feeder setup was not an option because it was attempted when they were a high-volume / low-mix environment.
- Wanted some gain in cycle time improvement & material handling but unsure how much could be gained

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 Factory Solution's team can help you today.

Panasonic's Solution Proposal Details:

- Using customer provided data of production schedules and volumes as well as Panasonic observations during on-site visits, a proposal was created to focus on the reduction of kitting efforts.
- Each line was carefully evaluated to see what part commonality existed.
- Figure 1 shows the feeder tables that were determined to be most effective fixed with specific high usage parts across each of the three production lines.
- Figure 2 shows the benefits gained by assigning specific parts to fixed locations with tape splicing over kitting exact processes.

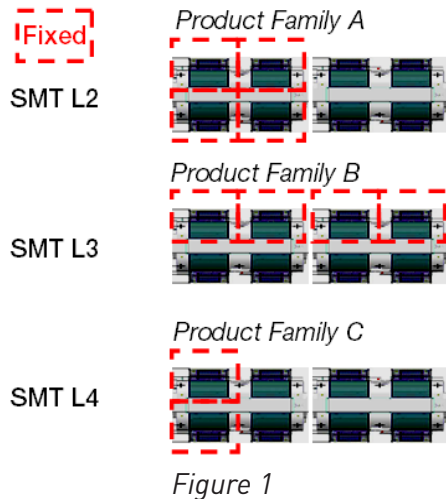


Figure 1

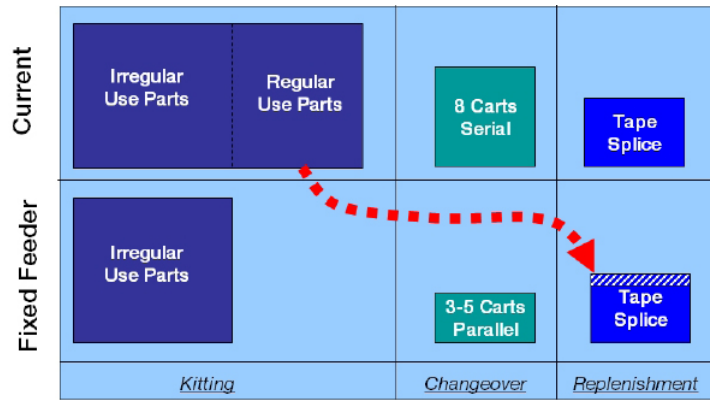


Figure 2

- Product Family A (SMT2) Details:
 - 50% reduction in exchange carts (8 carts \Rightarrow 4 carts)
 - 33% reduction in changeover time (15min \Rightarrow 10 min)
 - Est. 40% reduction loading parts into feeders
 - Est. 10% reduction in overall product cycle times
 - Est. 10% increase in line capacity
- Product Family B (SMT3) Details:
 - 50% reduction in exchange carts (8 carts \Rightarrow 4 carts)
 - 33% reduction in changeover time (15 min \Rightarrow 10 min)
 - 40% reduction loading parts into feeders \Rightarrow 239 kitting/setup man hours
 - 21% reduction in overall product cycle times
 - 18% increase in line capacity: Current 200 hrs to produce \Rightarrow Proposed 145 hrs to produce
 - Increase possibility to produce within 1 shift w/ occasional OT or 2nd shift based on demand spikes
- Product Family C (SMT4) Details:
 - 25% reduction in exchange carts (8 carts \Rightarrow 6 carts)
 - 33% reduction in changeover time (15 min \Rightarrow 10 min)
 - 35% reduction loading parts into feeders \Rightarrow 132 kitting/setup man hours
 - 9% reduction in overall product cycle times (12% if eliminate shuttle tray restriction)
 - 15% increase in line capacity (179 hrs to produce \Rightarrow proposed 135 hrs to produce)
 - Increase possibility to produce within 1 shift w/ occasional OT or 2nd shift based on demand spikes



Panasonic Factory Solutions Company of America,
Unit of Panasonic Corporation of North America
847.637.9600 PFSAmarketing@us.panasonic.com
www.panasonicfa.com