Managing to Learn — A3 Example #1: Acme Stamping

**Acme Stamping Steering Bracket Value Stream Improvement**

**Background**
- Product Family: Stamped-Steel Brackets for Steering Wheels (L & R-hand drive).
- 16,400 brackets/month supplied to State Street Assembly in daily shipments on pallets of 10 trays of 20 brackets.
- Customer is considering adding a 3rd shift. Will only be able to provide a firm schedule on a rolling two-week basis.

**Current Situation**
- Current production lead time for State Street orders: 23.6 days
- Current processing time: only 188 seconds.
- Now operating in two shifts, 20 days per month with average 1.1 hours OT/day
- Large inventories of material and Work-in-Progress between processes.
- Long changeover times; downtime in Welding.

**Current State Map**

**Analysis**
1. Each process operates as an isolated island, disconnected from customer.
2. Push system; (3) Inventory builds up between processes.
4. Each process builds according to its own operating constraints (changeover, downtime, etc.)
5. Plans based on 90 and 30-day forecasts from customer. (6) Weekly schedule for each department. (7) System is frequently overridden to make delivery.

**Goals:**
- Improve profitability while meeting tougher customer demands:
  - Reduce lead time – 23.6 days to ≤5 days
  - Reduce inventories: Stamping – ≤2 days
  - Welding – Eliminate
  - Shipping – ≤2 days
  - Eliminate Overtime on all shifts

**Countermeasures:**
- Create continuous flow in through Weld and Assembly as a Cell (1)
- Establish Takt Time: Base the pace of work through Weld and Assembly on customer demand at Ship (5)
- Set new Weld-Assembly cell as pacemaker for entire value stream (1)
- Establish Build-Schedule for Stamp based on actual use of Pacemaker Cell and pull steel coils from supplier based on actual Takt usage (3)
- Reduce Changeover time in Stamp & Weld; Improve uptime in Weld (4)
- Establish Kanban system, Supermarkets & material handling routes for frequent withdrawal and delivery (2)
- Establish new production instruction system with Leveling Box (6 & 7)

**BENEFITS:**
- Lead Time & Inventory reduction to 4.5 days allowing flexible to meet 3 shift demand of customer without overtime or adding 3rd shift
- COSTS: $295K (estimated) will be recovered in 14 months from new revenue

**Future State Map**

**Follow-up**
- Establish monthly review cycle with management of related departments: PC, M1, Pur, Maint, HR, Fin.
- Create Tracking Center between Stamping & Weld/Assembly Cell
- Track reduction of lead-time, inventory, overtime as well as plan status