**Pull Flow Model in Discrete Assembly**

**Problem**
- 15 days of finished goods inventory with a customer service level of 93% - dysfunctional inventory
- 30 days of stock of raw materials and parts
- Between 1 and 5 days of WIP in production and assembly lines
- Poor line efficiency with 50% of missed planned production

**Root causes**
- Finished goods planning based on order forecast
- Functional layout: preassembly lines separated from final assembly lines
- Operators isolated from each other, supply of large pallet-sized containers, poor operator standard work, low line balancing efficiency
- Delivery to final assembly line by forklifts, under instruction of supervisors

**Solution approach**
- Pull planning algorithm comparing a certain replenishment level with the current stock of finished goods and creating the production orders according to deviations; Daily assembly schedule determined by freezing one day of production in the logistics box
- From one assembly line to two with fewer product references on each; Zero changeover time; Balanced operation time between operators; Small containers on the border of line
- Three Mizusumashi shuttle lines for purchased parts, sub-assemblies and finished goods

**Benefits**
- Payback Period: 5 months
- Savings: £3m/year
- Internal Defects Rate (PPM) -52%
- Productivity (parts/operator) +36%
- Total Inventory Coverage Days 40%