



# Accelerated Product Development

## PICTURES BEFORE

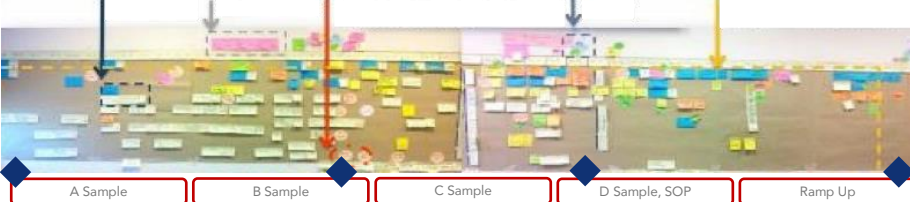
New Product



Celsius 11L



FP 11L



A Sample

B Sample

C Sample

D Sample, SOP

Ramp Up

**Tasks**      **WS**

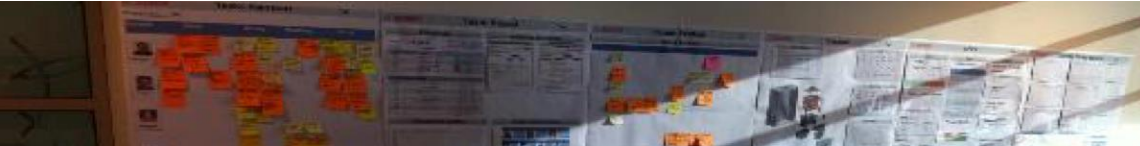
	11L	14L	17L
Max Input (kW)	22	27	34
Min Input (kW)	3	3.5	5
Efficiency (H <sub>2</sub> O)	90	83	86
Weight (kg)	1.5	1.8	2.3
Source	AUP		
AP burner blades	9 (3-H)	12 (4-H)	15 (5+10)
CO DAF INCH (ppm)	15000		
Fan speed	Modulating fan (DC or AC)		
Performance (m3/hPa)	50-330	61-380	77-465
Source	SKC-EDM-linku		
Gas flow (max) (L/min)	5 - 61		
Modulation Voltage	Electric (stepper or solenoid)		
Source	AUP - GIT - Mikum		

**Improvement Opportunities/ Main Losses of Time**

**Gates**

**Different colors main different Functions/ Persons**

## PICTURES AFTER



A Sample

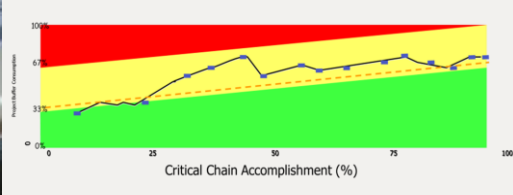
B Sample

C Sample

D Sample, SOP

Ramp Up

**21 Months = 25% Reduction**



Critical Chain Accomplishment (%)

## Problem

- Technical difficulty: develop a new, cheaper, smaller and more efficient water heater
- Extremely long lead-time (28 months)
- Reduction in time-to-market essential to increase sales

## Root causes

- Planning lacking any specific details and includes only the major milestones
- Plan not visible and not known by all stakeholders
- Tasks planned with a lot of safety (buffer)
- Poor integration of functions and suppliers

## Solution Approach

- Optimised Pull Planning with buffers
- Obeya Room (Visual Project Management)
- Daily KAIZEN™ for Engineering and Testing Teams
- Last Planner with supplier integration

## Benefits

**Savings**

**84 man-months**

**Vertical production and market start up**

