

Lean Manufacturing - VSM3 – Solution support

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Exercise 1

Q1: Draw the current state map of the company, in all components: material flow, information flow, and timeline.

Q2: Lately, Shirts Spa is having problem in its liquidity. For this reason, the board of directors ask to reduce the fixed capital for catalog shirts at an overall maximum of 525k€. Considering the value of each catalog shirt equal to 25€, propose the improvements for the system without structurally modifying technical data of the system and having a coherent EPE among different stages.

Exercise 1

Shirts Spa

- 5 production stages
- $Ta = 900 \min/day$
- Tailored (infinite variants) and catalog shirts (30 variants)
- D = 1500 p/day
- D std = 1200 p/day
- D spe = 300 p/day

Q1: Draw the current state map of the company, in all components: material flow, information flow, and timeline. **PRODUCTION** 1 order each 3 **CUSTOMERS** CONTROL months **Daily Orders** Supplier. D = 1500 pcs./day (1200 catalog, 300 taylored) Ta = 900 min/day Daily shipping plan Weekly plan Taylored 2 per Once x month day Catalog Many x day COLLAR & **FINISHING** SHIPPING. **CUTTING PACKAGING BUTTONS CUFFS** Staging **© 2** 15000 pcs **© 2** 20000 pcs 10000 pcs 16000 pcs 50000 pcs C/T = 30 secC/T = 8 + 20 secC/T = 28 sec/2 $C/T = 3 \sec(x10)$ C/T = 35 sec/2C/O = 5 min.C/O = 0 min. C/O = 15 min.C/O = 10 min.C/O = 0 min. Uptime = 90% Uptime = 100% Uptime = 95% **Uptime = 100%** Uptime = 100% 100% dedicated 50% dedicated 100% dedicated 100% dedicated 60% dedicated 33,33 days LT= 94 days 13,33 days 10,67 days 20 days 6,67 days 10 days 30 sec 35 sec 28 sec 28 sec 30 sec AV= 151 sec

