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Medical Technologies Company (MTC)

Supply Chain Management
Professional Certificate

Rutgers
The state university of New Jersey

Executive summary

- MTC is recommended to:
 - Simplify supply chain process for kits;
 - Enable DMAIC, EOQ, safety, and cyclical stocks analysis and accommodate production to the results of the above analysis;
 - Simplify logistics process; either sterilize on manufacturing site and deliver to branches/loaners, or enable direct shipments from outsourced sterilization facilities towards the same branches/loaners; another alternative is to replace branches/loaners with smart kiosks (need to compare incremental cash flow);
 - Exercise demand analysis methods, which will justify production quantities and inventory needs;
 - Recommended to maintain in-house safety stock.
- Strategically the company shall separate business processes for differentiated products and routine products.

Medical Technologies Company (MTC)

- MTC is a middle-size producer of medical supplies;
- The company primarily sells directly via sales agents;
- Supply management is organized via branches and/or loaner offices;
- The company outsources medical kit sterilization services;
- Financial results reveal 4% CAGR in sales;
- New tax imposed 2.3% decreases MTC's net income by 10%, mitigation of which is a primary analysis objective for this presentation.



Focal points from the text

- 80% of supplies produced by MTC are routine;
- Sales people get 45% of the sold invoice;
- Surgeons (PPIs) make final decisions regarding supplies;
- Hospitals have administrative staff in charge of cost management.

Supply chain logistics

Problem

- There is no justification of the warehouse planning in the text;
- Kits logistics process from manufacturer to outsourced sterilization, then backwards to manufacturer, and from the latter to branches/loaners to be delivered to surgeons directly, seems over scrutinized;
- Another problematic issue is return of unused kits, which goes from branch/loaner offices to the manufacturer.

Solution & associated risks

- Solution:
 - Simplify logistics process; either sterilize on manufacturing site and deliver to branches/loaners, or enable direct shipments from outsourced sterilization facilities towards the same branches/loaners;
 - Another alternative is to replace branches/loaners with smart kiosks (need to compare incremental cash flow).
- Risks:
 - The manufacturer lacks skills for sterilization; needs to develop;
 - The sterilization outsource may not be willing to organise direct shipments. Less process control, if agrees to organize.

Supply chain operations

Problem

- Production output is not justified. The company produces in fixed 7200 units batches, which is not related with actual demand forecast;
- No evidence of DMAIC analysis;
- No evidence of economic order quantity calculation;
- No evidence of cyclical and safety stocks calculations.

Solution & associated risks

- Solution:
 - Enable DMAIC, EOQ, safety and cyclical stocks analysis;
 - Accommodate production to the above analysis results.
- Risks:
 - Ability of the manufacturing plant to accommodate to changing shifts of production.

Supply chain planning

Problem

- No demand forecasting methods exercised, which leads to high inventory costs.

Solution & associated risks

- Solution:
 - Exercise demand analysis methods, which will justify production quantities and inventory needs;
 - Recommended to maintain in-house safety stock.
- Risks:
 - Underestimation of demand may lead to significant reputational and financial damages.

Supply chain strategy

- Two main strategic shifts are recommended that release significant amount of expenditures from P&L;
- The first shift is related to separating supply chain business processes for differentiated and routine products:
 - on routine products restructure on GOPs, including supply management. Sales people are removed. Cyclical inventory is administered by GOPs. Safety inventory only is kept by MTC in its stock.
 - On differentiated products remain on existing business process. Direct contact, including supply management, with surgeons from salespeople delivers significant value.
- Acquisition:
 - The company may look for acquisition targets in low-tax jurisdiction geographies. The decision may lead to another economy in operating expenditures.