

Drilling the Data: Students Use Six Sigma DMAIC to Improve Dental Practice
Inventory Management

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WEB APPENDIX

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Figure 1: SIPOC of the Inventory Management Process

SIPOC Chart

Suppliers	Inputs	Process	Output	Customer
Providers/assistants	Forms/information	Needed items are identified	Needed items list	Clerk
Clerk	List of items	Clerk places order	Verified order	Supplies
Suppliers	items	Order is received	Shipment documented/PO (Purchase Order) generated	Clerk
Clerk	Shipping documents	Order unpacked	Verified supplies	Clerk
Clerk	Verified supplies	Order is distributed	Stocked supplies	Providers
Clerk	Document Purchase Order	Invoice is paid	Receipt	Suppliers

Figure 2: CtQ Diagram of Customer Requirements

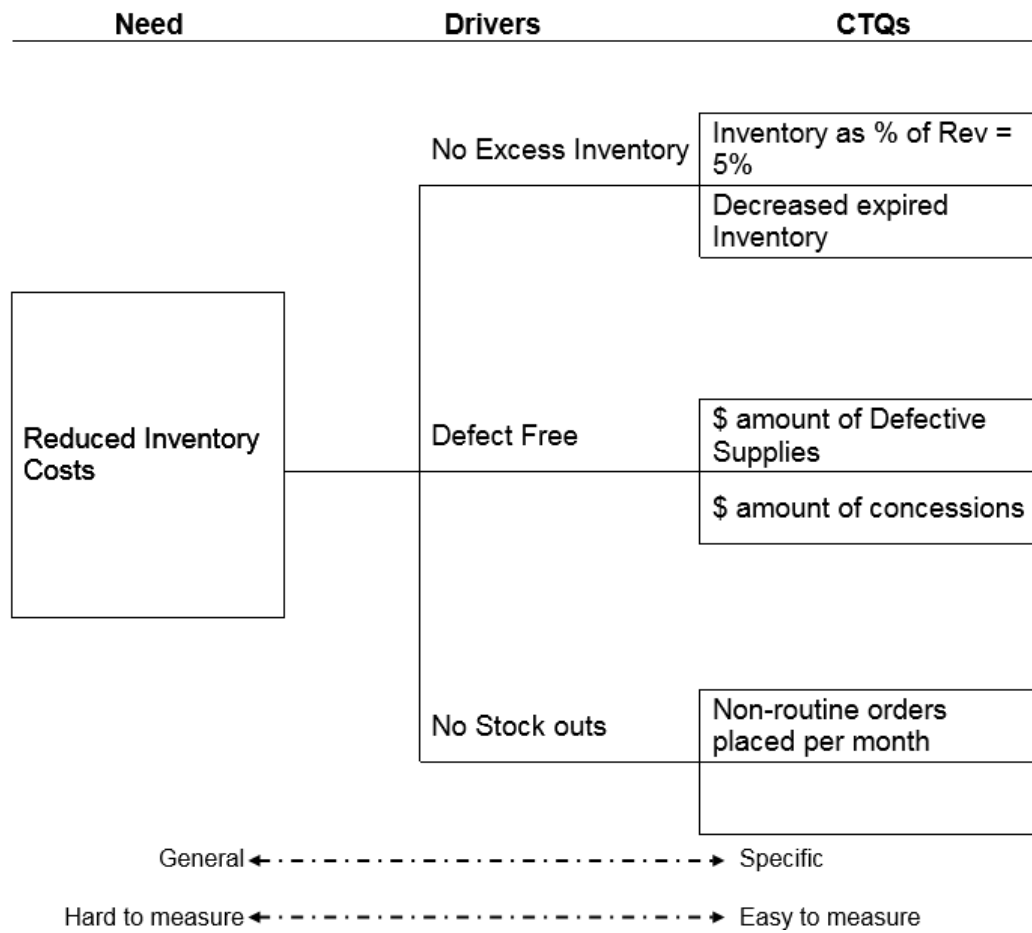


Figure 3: Prioritization of Focus to Improve the Inventory Management Process.

Prioritization Matrix

Specific measure	Importance rating	Needed items are identified	Clerk places order	Order is received	Order unpacked	Order is distributed	Invoice is paid
%of revenue	5	9 45	9 45	1 5	1 5	1 5	9 45
Amount of expired supplies	5	9 45	5 25	5 25	5 25	5 25	1 5
Number of non-routine supplies ordered	3	9 27	9 27	5 15	1 3	1 3	1 3
Number of defective supplies	1	5 5	1 1	1 1	1 1	5 25	5 25
Total	14	122/14= 8.7	98/14= 7	46/14= 3.2	34/14= 2.4	58/14= 4.1	78/14= 5.6

Figure 4: ImR Chart of the Number of Inventory Orders Placed Monthly.

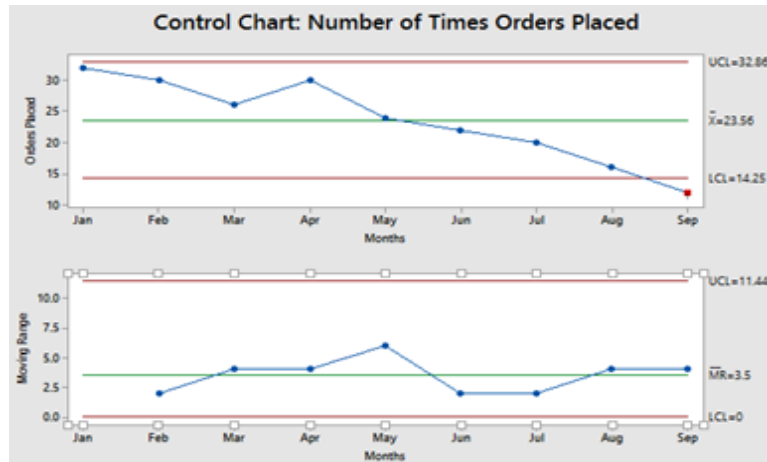


Figure 5: The Possible Causes of Excess and Expired Inventory

