Revamp of Inventory Management Controls, Processes and Procedures

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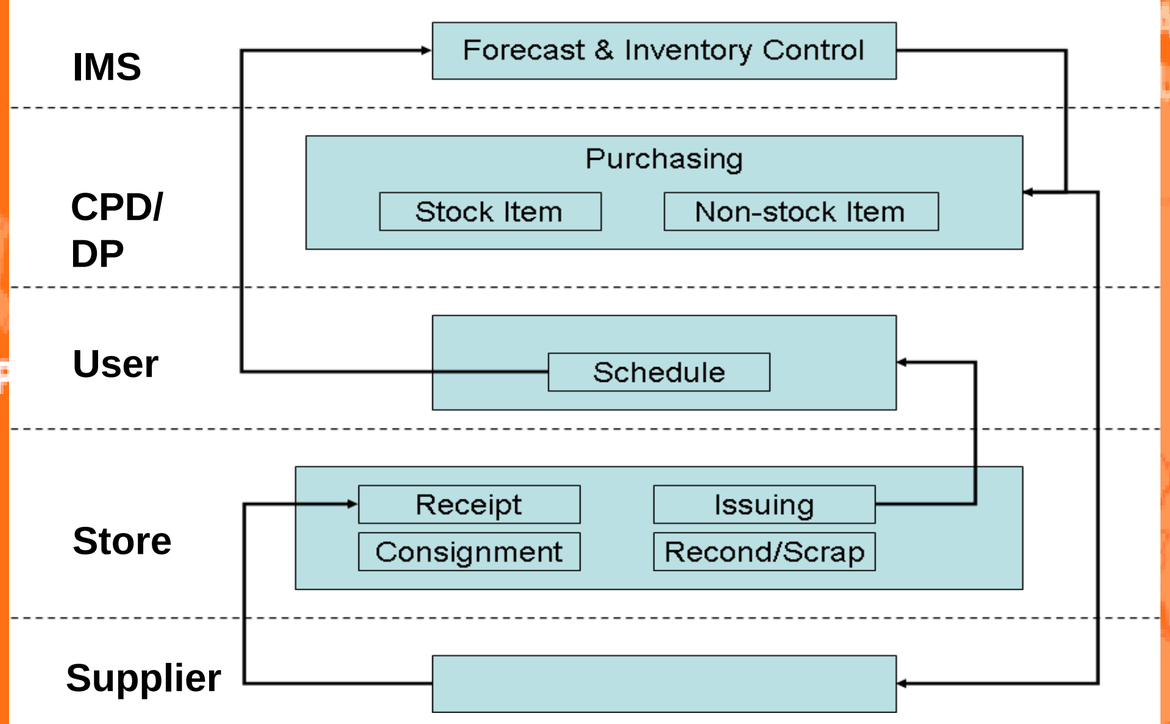
1 Objectives

1. Analyze the main inventory processes, highlight any process inefficiencies and recommend and implement steps to streamline processes.
2. Study the reordering criteria and evaluate its effectiveness against all classes of stock item.

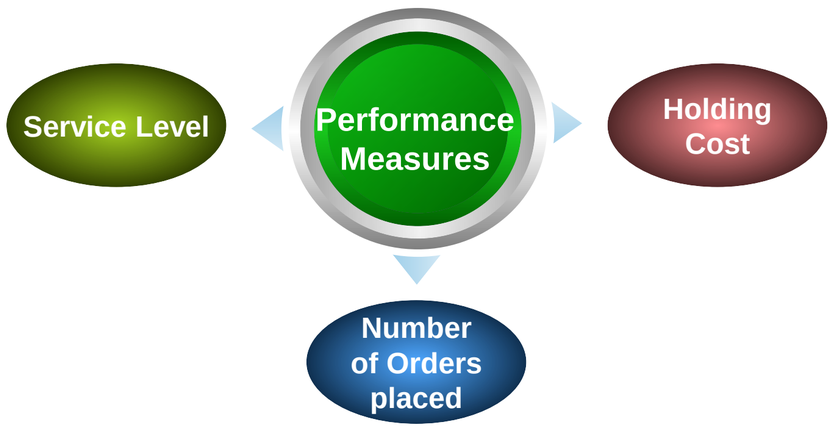
2 Process Analysis



3 Methodology

Built up simulation models to evaluate the various policies with respect to achieving our objective. Parameters modified in the policies are the Reorder Point (ROP) and Reorder Quantity (Q).

Performance Measures



Policies Evaluated

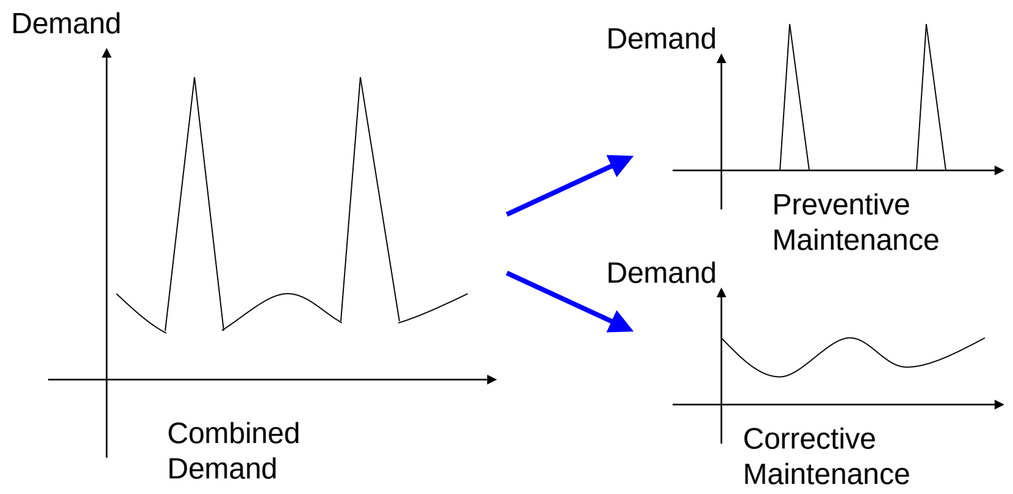
Policy	ROP used	Q used
Policy A	Current ROP	Current Q
Policy B	Revised ROP	Current Q
Policy C	Revised ROP	Revised Q

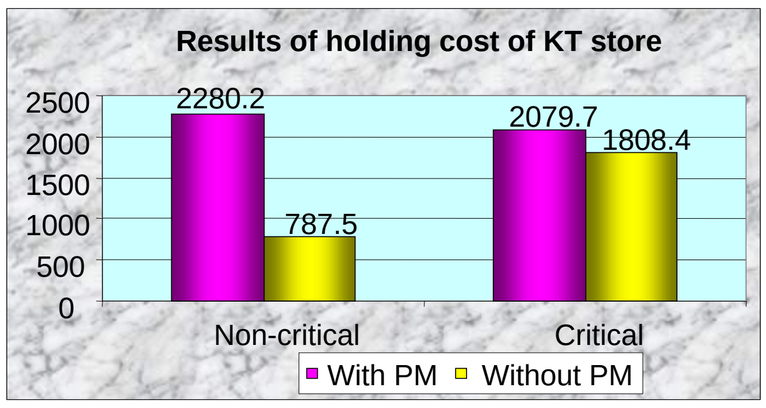
Data

- 100 items for each of the 4 stores of PSA
  - –Selected according to ABC classification
    - A: 20%, B: 30%, C: 50%
  - –Classify item according to criticality
    - Critical – desired 99.7% service level
    - Non-critical – desired 95% service level
- Service level
  - –By line item: order fill rate

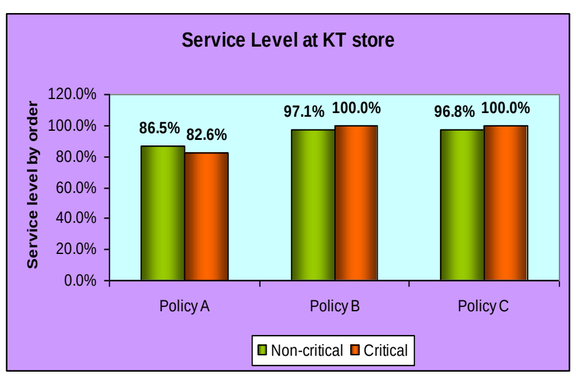
Examining Demand Variation

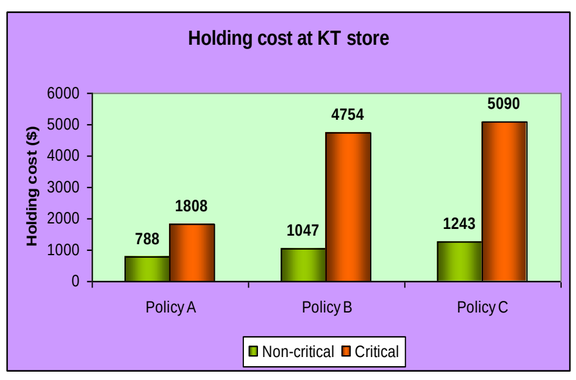
Separation of demand types can help us estimate demand variation more accurately.

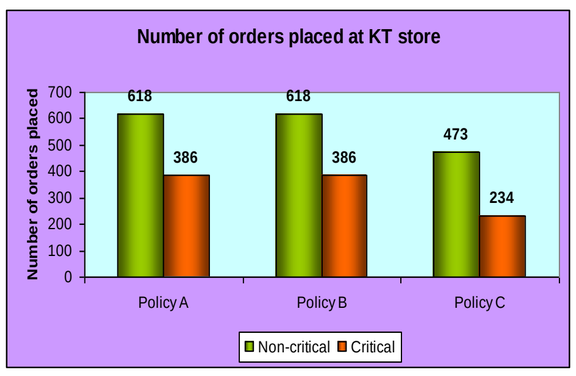


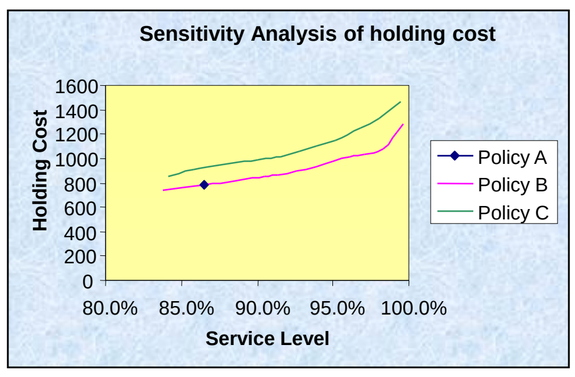


4 Results









A small number of high value items contribute a big portion of total holding cost. It is recommended that PSA should carefully schedule PM for equipments that use these items such that random breakdown can be minimized.

Stores	Number of selected Items	Total number of items	% of selected items	% holding cost	% demand
BT	2	34	5.88%	86.10%	28.47%
KT	4	34	11.76%	68.90%	16.07%
PPT	4	26	15.38%	89.06%	44.13%
TPT	4	46	8.70%	71.15%	20.65%

5 Conclusions

- Accurate PM planning can help to reduce inventory holding cost.
- Proper data recording would enhance the demand forecast accuracy.
- Policy B is the best assuming holding cost and service level are the only performance measures.
- If number of orders placed per year is also an important performance measure, Policy C is the best policy to use.

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