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Managing Slow-moving, Irregular Demand



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Motivation / Background



For one critical customer, Optimas must maintain a 99% service level with 24-hour turnaround.



All SKUs for this customer are slow-moving with irregular demand patterns.



The current inventory management system is not effective for these demand patterns.

Key Question / Hypothesis

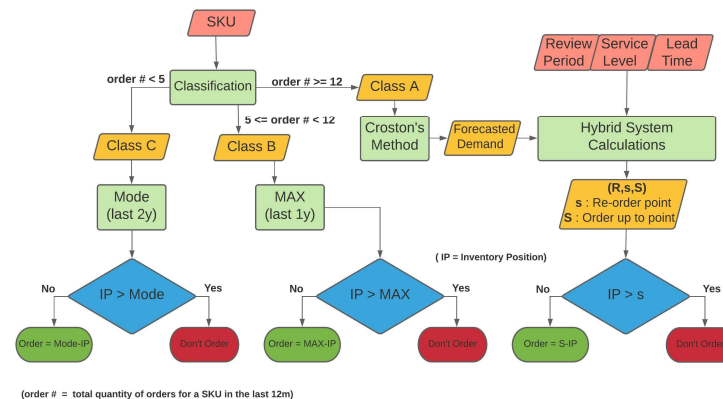
For slow-moving items with irregular demand, what are the best stocking policies to maintain high service levels while minimizing net working capital requirements?

Relevant Literature

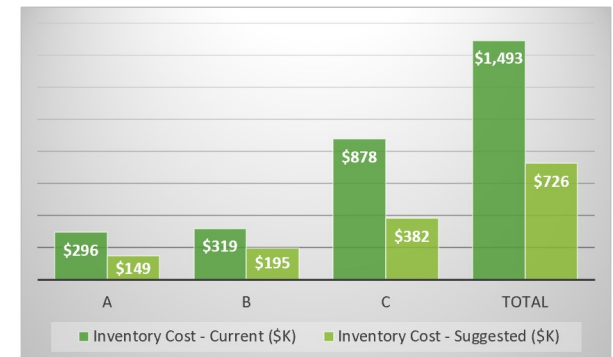
Croston, J. (1972). Forecasting and Stock Control for Intermittent Demands. *Operational Research Quarterly* (1970-1977), 23(3), 289-303. doi:10.2307/3007885
 Silver, Pyke, & Peterson (1998). *Inventory Management and Production Planning and Scheduling*. Wiley.
 Teunter, R. H., Babai, M. Z., & Syntetos, A. A. (2010). ABC Classification: Service Levels and Inventory Costs. *Production & Operations Management*, 19(3), 343-352. <https://doi.org/10.1111/j.1937-5956.2009.01098.x>



Methodology – Problem



Results



Expected Contribution



Develop a method to improve inventory levels by reducing inventory costs while maintaining high service levels.



Provide a list of SKUs ordered least often, and recommend contract negotiation strategies to share risk in the future for these SKUs.



Provide full Python code, which can be run on its own with future data, or Optimas may integrate the logic into their existing software.

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