

SEMINAR SERIES

Department of Quantitative Analysis and Operations Management
College of Business, University of Cincinnati

Time Phasing Safety Stocks for Production Planning

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University of Dayton**

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1:30 p.m.

218 Lindner Hall

Safety stocks are commonly used in inventory management for tactically planning against uncertainty in demand and/or supply. The common approach is to plan a single safety stock value for the entire planning horizon. We introduce a new line of research in inventory management: the notion of time phasing safety stocks. We assert that time phasing of safety stocks over the planning horizon makes sense because larger safety stocks are appropriate in times of greater uncertainty while lower safety stocks are more appropriate when demand and/or supply are more predictable. We demonstrate that significant savings can be achieved by time phasing safety stocks and provide a simple procedure for incorporating them into production planning systems that minimizes safety inventory. We then illustrate a planning system feature, which supports decision making in production planning by showing the inventory implications of safety stock plans.

Michael F. Gorman (PhD, Indiana University, 1994) is an Associate Professor in Operations Management and Decision Sciences, University of Dayton and the President of MFG Consulting, Inc. He has a 10-year rail career at BNSF Railway where he held positions in Supply Chain Solutions, eBusiness, Operations Research and Finance. He has received numerous recognition awards at BNSF for his work, and has won teaching awards from Indiana University. His field of specialization is in transportation asset pricing, investment and allocation decisions under uncertainty. He has published applied optimization research in *Interfaces*, *Annals of OR* and *Manufacturing and Service Operations Management*, among others. He has been a finalist for the Wagner Award and a semifinalist for the Edelman Award of INFORMS. He has served in the capacity of treasurer, secretary, vice chair and chair for the Rail Applications Special Interest Group (RASIG) of INFORMS. (Email: Michael.Gorman@udayton.edu).

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