

# The Beer Game: Using Highly Interactive Technology to Teach Systems Thinking

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**Abstract.** Despite its importance (as recognized by INCOSE) Systems Thinking is taught by few academic institutions. This is perhaps because it is conceptually challenging, because it is not well-understood, because it does not lend itself to conventional engineering analytical techniques, or because it is difficult to get students to relate to the principles. In this highly-interactive presentation, we will explain several basic concepts of systems thinking, discuss fundamental teaching principles, present several systems thinking lessons, and engage in interactive demonstrations that both drive home the lesson points and demonstrate stimulating and exciting instructional techniques. **PURPOSE:** Participants will learn some of the fundamental concepts of Systems Thinking and how to teach Systems Thinking in an exciting, relevant, thought-provoking way.

## Biography

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Dr. Monat is a Director and Adjunct Assistant Professor in the Corporate and Professional Education Department at Worcester Polytechnic Institute, Worcester, MA, where he teaches courses in Operations Risk Management, Systems Thinking, System Optimization, Operations Management, and Project Management. Dr. Monat has both management and teaching experience in the medical device, separations, food & beverage, consulting, and environmental industries, having served as President of Harvard Clinical Technology, President of Business Growth Specialists, Inc., as Sr. Vice-President of Pall Corporation, and in a variety of positions for Koch Membrane Systems, Inc. He is the author of more than 40 papers on separations technology, chemical reaction kinetics, productivity, sales management, risk management, project management, and decision analysis. Dr. Monat's current research interests include quality in both service and manufacturing environments, corporate productivity, employee performance metrics, business applications of logistic regression, self-organization and emergence, project risk management, and operations risk analysis. He is currently a risk management consultant to the electric power industry. He has a B.S. in Aerospace and Mechanical Sciences from Princeton, and an M.S. and Ph.D. in Civil Engineering from Stanford.