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Subject: Job Shop Lean and PFAST

Professor Irani,

You and your team are on the cusp of success through the implementation of Job Shop Lean Concepts and the exploitation of the Production Flow Analysis Simplification Toolkit. Since 2001 you have made great strides in not only developing these concepts deeply but also broadly.

The concepts of Job Shop Lean are more closely aligned with many of the high mix, low volume manufacturers such as forges. Over the past six years I have marveled how well matched these concepts are in the forges that have partnered with you and your students. Although you have interacted with a only small fraction of the domestic forging industry – Turbine Engine Components Technologies, Intercontinental Manufacturing, Ulven Forging, Consolidated Industries, Weber Metals, Trinity Forge, SIFCO and soon Bula Forge and Canton Drop Forge – on a direct project basis, we have seen significant results with respect to lead time reduction, quicker inventory turns, reduced work in process, reduced inventories, reduced infrastructure footprints, and improved workplace hygiene. These benefits were accrued by drilling down into these companies in focused 90 day projects agreed upon by all of the project stakeholders including the interns.

Branching out from these intense efforts your development of training materials, seminars, and Lean Advisory Tools has also been effective. With the “mix and match” modular capabilities of this suite of educational materials you can reach a far greater audience than the few folks that were immediately affected by the interns. In essence these educational materials broaden the reach of Job Shop Lean in training folks peripheral but critical to the value streams that are improved by Job Shop Lean. Additionally, we have witnessed the translation of lean concepts in the “front office” of companies as demonstrated by your foray into Administrative Lean at Ulven Forging. Having traveled all over the nation seeing thousands of office buildings scattered along the interstates, I believe that the opportunities abound for administrative lean in industry, academia, and government.

Underpinning your Job Shop Lean Concepts is the Production Flow Analysis Simplification Toolkit (PFAST). Although a suite of algorithms that will probably not be “shrink wrapped,” it is in all probability best used as a diagnostic tool for characterizing the flows within a factory. Coupled with teams of trained industrial engineers, PFAST could analyze data around the clock for companies scattered around the country. Columbus, Ohio could serve at as the nerve center for analyzing these value streams and recommending improvements. One could envision future generations of PFAST which would continually optimize product flows with recommendations emailed to plant managers to reconfigure cells for dynamic product flows. With some more strategic planning, PFAST can become more than a number crunching value stream analysis tool. Although it is a viable tool in focused applications, more opportunities may lie beyond the original intent of PFAST.

Critical to the success of this “enterprise” is your ability to clearly and concisely communicate the value of Job Shop Lean and PFAST. Paralleling this improved communication will be a quick, in-and-out consulting process, which appeals to small and medium enterprises and operating divisions of larger corporations. If you can get in quickly, execute the project at hand and deliver results rapidly, you will have more than enough business.

Keep moving!



Jon D. Tirpak, PE, FASM  
Executive Director