

JobshopLean2009 Conference

Because the Toyota Production System is Necessary but Not Sufficient for Jobshops

I am pleased to announce that the JobshopLean2009 Conference will be held on September 14-15, 2009, at The Ohio State University, Columbus, OH. This niche conference is all about adapting and enhancing Lean for high-mix low-volume small-to-medium manufacturers, and doing this by leveraging software and technology enablers available in the 21st Century. **For more information, please visit the conference website: <http://iwse.osu.edu/isefaculty/irani/jobshoplean2009.htm>.**

The Agenda for the JobshopLean2009 Conference consists of:

- The Keynote Address to be delivered by Dr. Richard Schonberger
- A hands-on exercise to design a flexible layout for a high-mix forging cell where teams will compete with computer software to arrive at their final solution
- Two parallel sessions on the **People Side of JobshopLean** and **Technology Enablers for JobshopLean** in order to stress the equal importance of both people/culture and technology/tools when implementing Lean in jobshops
- A half-day session where we will play/run the latest version of the simulation/game developed to teach key concepts and methods of JobshopLean to a large group
- Presentations on ongoing JobshopLean projects at a forge shop and a foundry
- A 2-hour moderated Q&A session where attendees can pose questions to the entire audience on how to implement JobshopLean

In addition, we have set aside time throughout the schedule for several networking sessions.

The Registration Fee is \$325 per attendee. This will entitle each attendee to all meals and refreshments, the conference proceedings on CD and our wonderful hospitality. So don't let the economy discourage you from attending this conference! ☺

JobshopLean2009 Conference

Featured Speakers

Dan D'Agostino

Dan D'Agostino is a principal and general manager with the Cleveland division of Definity Partners, where he manages local staff and key client relationships across various industries. With a combination of process improvement expertise and business acumen, Dan thrives on driving sustainable change to fuel growth. He offers exhaustive knowledge of several improvement tools and techniques, such as 5S, capacity planning, cell building, cycle time reduction, continuous flow and TPM. Dan specializes in process improvement programs for a range of industries, including manufacturing, distribution, construction and service. Prior to joining the Definity Partners team, Dan gained valuable operational experience and learned the importance of sustainable Continuous Improvement. Previously, he served as Maintenance Manager and Supervisor for Ferro Corporation, and held various positions at LTV Steel Corporation in Cleveland. Dan earned a Bachelor's degree in Electrical Engineering from the University of Cincinnati and an MBA with a concentration in Finance from Case Western Reserve University. He also completed Dale Carnegie Sales Training, which emphasizes practical principles and processes needed to add value to an organization.

Ron Bone

Ron is currently the Assistant to the President of Atlantic Tool & Die (ATD). Previously, he had been an associate of ATD for 3 years and has many years of experience in a jobshop manufacturing environment. Ron has spent much of his time at ATD implementing 5S and developing the systems and reporting used in their data collection activities. Ron continues to refine these systems today and provides feedback to the associates responsible for implementing Continuous Improvement projects.

Erik Christ

Erik Christ is the Mid-Atlantic Regional Director for Manufacturing and Logistics solutions at ProModel Corporation. Over the last eight years, Erik has helped hundreds of manufacturers accelerate the realization of their Lean and Six Sigma continuous improvement goals, through the successful design and implementation of easy-to-use simulation-based decision support solutions.

Michael Colburn

Michael is the President of Colburn and Associates. He has been a change agent for more than 30 years, working with a broad range of clients in the private and public sectors. In 1997, his firm designed and implemented a workforce development program

for a client that was awarded the Governor's Workplace Learning Award. He has implemented performance management systems that have helped clients achieve goals at the team as well as individual levels. He has facilitated numerous retreats, has coached executive teams to execute their plans and has taught and implemented productivity improvement initiatives for operational excellence. He has conducted Continuing Education workshops and has spoken frequently at college classes, and professional or business organizations. Currently, he is an Assistant Professor at Ashland University where he teaches Human Resource Management and Strategic Management at the undergraduate level and MBA courses in Organization Development and Operations Management. Michael is a past President of the Central Ohio Chapter of the American Society for Training and Development. Michael earned a Bachelor of Science in Industrial and Systems Engineering, a Master of Science in Industrial and Systems Engineering, and a Ph.D. in Adult Education, all from The Ohio State University. Michael is also a registered Professional Engineer in the State of Ohio. He was awarded the Meritorious Service Citation by the College of Engineering of The Ohio State University in 2004.

Rick Dombroski

Rick is currently the Corporate General Manager at Atlantic Tool & Die (ATD), where he is responsible for all manufacturing activity in North America. Previously, he had been an associate of ATD for 12 years and has worked in the jobshop stamping industry for over 25 years. During his tenure, ATD has grown from 3 to 8 manufacturing facilities and now has a global manufacturing footprint that includes production operations in Mexico and the Far East.

Stan Duffendack

Stan Duffendack is Vice President, Process Analytic Services, for Bluespring Software. He has over thirty-five years of experience in information systems and technology. He is a pioneer in the development of software tools for business process modeling, analysis and process improvement. He has worked with organizations in a broad range of industries including aerospace, manufacturing, pharmaceuticals, healthcare, transportation, insurance, banking and government. The types of business processes analyzed have been as varied as hospital patient flow, call centers, insurance claims processing, manufacturing, repair depots, airport terminal design, government permits, and many more. He has developed specialized graph search algorithms and statistical sampling distributions for modeling business processes. These form the foundation for the development of ProcessView™, LeanView™ and other software solutions for the Microsoft Office platform that are in use by over two hundred corporate clients and organizations worldwide. Mr. Duffendack holds a B.S. in Physics from the University of Michigan and a Masters in Industrial Engineering and Simulation from the University of Central Florida. He also serves as the Director of the Information Technology Internship program at the University of Central Florida.

Tricia C. Gerak

Tricia has over 20 years of diverse experience in Accounting, Finance and Sales. She is currently the CEO and co-owner of Precision Component Industries, LLC, a woman-owned business certified by NWBOC. Precision Component Industries, LLC is a high-precision, low-volume manufacturer of components for a variety of industries including defense, oil & gas, aerospace, packaging, and tire uniformity. Prior to that, Tricia spent eight years in the Accounting and Auditing area of Deloitte & Touche, LLP. She provided client services to a broad range of industries including manufacturing, real estate, retail, public utilities, government and not-for-profit. Tricia also has several years of experience with Nestlé USA, where she was the Manager of Sales & Finance. In this role, Tricia provided financial support to the Nestlé USA sales force, primarily for the Nestlé Food Division. Tricia holds a BS in Accounting from the University of Akron, and is a Certified Public Accountant in the State of Ohio. She belongs to the American Institute of Certified Public Accountants, and the Ohio Society of Certified Public Accountants, where she serves as the Small Business Section Leader.

Andy Glaser

Andy Glaser is the Sales Manager for Ellison Technologies, Cincinnati, OH. With 17 years experience in automation (12 at Fanuc Robotics America and 5 at Ellison Technologies), he has been involved with the sale and installation of over 1400 robots. He is the author of *Industrial Robotics: How to Implement the Right System for your Plant* (Industrial Press, 2008, ISBN 978-0-8311-3358-0). Andy has a BS in Ceramic Engineering from OSU (1989) and an MBA from the University of Illinois at Chicago (1995).

Shawn Hendrix

Shawn Hendrix is Senior Vice President of Nissen Chemitec America (NCA) located in London, Ohio. NCA is part of the automotive division of Nissen Chemitec Corporation headquartered in Niihama, Japan. NCA supplies plastic injection molded interior trim parts to Honda, Toyota, and Mitsubishi. Prior to joining NCA in June 2008, Shawn worked at Honda of America for 23 years with his first 4 years being spent in Manufacturing and the last 19 years in Purchasing. Previously, he was the manager of Honda's plastics and stampings procurement departments where he was responsible for annual purchases of over \$2 billion. Shawn has visited over 150 manufacturing plants from large international companies to small jobshops in the US, Canada, Japan, and Brazil. In his last few years at Honda, Shawn was also responsible for minimizing the impact on Honda from financially distressed suppliers. In 2006, he was requested by Honda to work at London Industries as a Contract Associate, later as their Vice President. In early 2008, London Industries and Nissen Chemitec Corporation requested Shawn to permanently remain at the company in the position of Senior Vice President. Honda and Nissen Chemitec Corporation mutually agreed to this change, and Shawn officially joined the company on June 2, 2008, which was the day the company's name was changed to Nissen Chemitec America. Shawn is a 1981 graduate of The Ohio State University with a Bachelor of Arts degree.

Jerry Hoskins

Jerry Hoskins is the President and Founder of Manufacturing Engineering, Inc. (MEI), an engineering services and management consulting company in its 15th year of operation. MEI focuses on the delivery of World Class performance systems through the Lean Manufacturing Toolset. Previously, at Battelle Institute, he was their Director (Southeastern Operations) and Practice Leader (Manufacturing Engineering) where he led a group of 40 professionals involved in improving manufacturing and repair operations. He is a Registered Professional Engineer, and a member of prominent professional organizations, such as the National Association of Manufacturers, Society of Manufacturing Engineers and Association of Manufacturing Excellence. Mr. Hoskins has BS and MS degrees in Mechanical Engineering, both from the University of Kentucky.

Shahrukh Irani

Dr. Shahrukh A. Irani is currently an Associate Professor in the Department of Industrial, Welding and Systems Engineering in the College of Engineering at Ohio State University. He is the Director of the Advanced Manufacturing Interest Group (AMIG), a consortium that seeks to incorporate industry experience across the Industrial Engineering curriculum through a variety of engagements with Ohio manufacturers. In 1995-96, he worked in industry on a Faculty Internship that was partially supported by the Grant Opportunities for Academic Liaison (GOALI) program of the National Science Foundation. Dr. Irani is the Editor of the Handbook of Cellular Manufacturing Systems published in 1999 by John Wiley. In 1996, Dr. Irani was voted Young Engineer of the Year by the Minnesota Federation of Engineering Societies and the Minneapolis Chapter of the Institute of Industrial Engineers. He served as the Director of the Facilities Planning and Design (FAPAD) division of the Institute of Industrial Engineers for 1999-2001 and 2001-2003.

Richard Schonberger

Dr. Richard Schonberger has globally delivered lectures, seminars/workshops, and advisory services on Lean and quality to business organizations since 1981. In 2008 that included ten keynote/plenary presentations on topics related to his research findings on Lean with emphasis on a variety of topics, such as global adoption of Lean, the ergonomic and job/process design benefits of Lean, minimal know-how about Lean in developing countries, and de-proliferation as a Lean methodology. Schonberger began as a practicing Industrial Engineer, followed by an academic career at the University of Nebraska as the George Cook (Chaired) Professor of Management; and later as Affiliate Professor in Management Science at the University of Washington. His honors include 1995 Academy of the Shingo Prize, 1990 British Institution of Production Engineers' International Award in Manufacturing Management and 1998 IIE Production and Inventory Control Award. Additionally, for his early works on Total Quality, Dr. Schonberger was listed on the cover of *Quality Digest* (1995) as one of 24 "New Gurus: Next Leaders of the Quality Revolution." Currently, he is the Director of the "Global Leanness

Studies” and the “World Class by Principles” international benchmarking project. His latest researched book is *Best Practices in Lean Six Sigma Process Improvement: A Deeper Look . . . with Telling Evidence from the Leanness Studies* (Wiley, December 2007). He has authored 14 other trade books and/or textbooks. His 150-plus articles have appeared in a wide range of practitioner and academic periodicals, such as *Harvard Business Review*, *Wall Street Journal*, *Production and Inventory Management Journal*, *Cost Management*, *Quality Progress*, and *Manufacturing Engineering*.

Dipak Sheth

Dipak is responsible for a small group of experienced Lean practitioners at the corporate level of Eaton Corporation. This corporate Lean group of Eaton leads similar resources within their two business sectors in developing and maintaining standards, developing training, training the trainers and assisting different businesses in deploying Lean. For three of the 20 years at Eaton, Dipak was responsible for all the engineering functions at a large manufacturing plant. For the remaining years, Dipak has been in various corporate roles assisting manufacturing and functional organizations to improve their performance. Before coming to the US, for 12 years in India, Dipak ran his own business of designing and manufacturing special purpose machines and various industrial products for automotive, textile, rubber and non-ferrous metal industries. Dipak has a Masters degree in Mechanical Machine Design from India and another Masters degree in Manufacturing Engineering from the University of Massachusetts.

JobshopLean2009 Conference

September 14, 2009

TIME	TOPIC
7:00 – 8:00 a.m.	<ul style="list-style-type: none"> • REGISTRATION • BREAKFAST • NETWORKING
	Keynote Address
8:00 – 8:50 a.m.	(Richard Schonberger, Schonberger & Associates) Achieving Lean's Mandate – Flexibly Quick Response
<p>Overview of Presentation: Lean too easily burns out, or in the case of smaller Make-To-Order producers, never gets started. In this presentation, Dr. Schonberger will draw on his global studies on “Leanness” to sharply differentiate the essential practice of Lean by small-lot supplier companies compared to their larger customers. One of his key findings is that the natural advantage for smaller jobshop-type producers that adopt Lean is <i>flexibly quick, high-quality response</i>. But numerous obstacles – wrong notions, poor advice, misguided accounting, etc. – stand in their way. Specifically, his presentation will address the following issues:</p> <ul style="list-style-type: none"> • Central Role of Lean: Make-To-Order manufacturers must avidly define and promote, in operations as well as marketing, their special role of providing <i>flexibly quick, high-quality response</i> (while treating kaizen events, waste reduction, the 5 Whys, etc. as useful enablers of Lean). • Starvation of Capacity: Misguided financial and equipment-utilization objectives deny suppliers sufficient fabrication equipment, thus physically hindering quick response to customers. • Balance Sheet Gamesmanship: Suppliers need to place high priority on collaborating with customers to reduce in-channel inventories; otherwise customers push inventory on suppliers' books (an accounting manoeuvre that hides long lead times and high costs for both parties). • De-Proliferation in Product Mix: Make-To-Order works best, and with least overhead, when founded on intensive de-proliferation of product configurations and part numbers (via Design For Manufacture), machine makes, suppliers, <i>even customers!</i> • Employee Engagement and Ownership: Smaller manufacturers need to exploit their natural advantage, including involvement of shopfloor operatives in activities that, in big companies are taken over, at great expense, by technical and managerial people. Jobshop-type producers, by virtue of their size and need for flexibility, are ideally positioned to give shop people first responsibility for equipment setup, material handling, quality control, preventive maintenance, data-based process improvement, and much more. • Choice of Basic Lean Practices: Lean practices such as quick setup, small-lot production, mobile equipment that can be quickly relocated to reconfigure work cells are vital for Make-To-Order producers. However, other Lean practices, especially production planning and scheduling using kanban, level loading and takt time tend to have limited application. 	
8:55 – 9:45 a.m.	(Tricia Gerak, Precision Component Industries) The Other 10%: How Jobshops can Find the True Value of Lean
<p>Overview of Presentation: Lean originated with the Toyota Production System, and has proven itself successful worldwide. However, the most prominent successes have been reported primarily by large companies whose manufacturing model is identical to or similar to that of Toyota. But how does a small manufacturer that specializes in production of small lots or prototyping implement Lean? This presentation will take you through one company's journey to find the true value of Lean in their jobshop environment. They did this by clearly identifying the true issues that concerned a jobshop like them, used those issues to</p>	

carefully identify 10% of the well-known principles and practices of Lean that applied to them, then ignored the remaining 90% of the well-known principles and practices of Lean that were irrelevant to their jobshop.		
9:45 – 10:00 a.m.	<ul style="list-style-type: none"> • BREAK • NETWORKING 	
10:00 a.m. – Noon	(Shahrukh Irani, The Ohio State University) Teamwork, Post-It® Notes and a Software Budget of Less Than \$100 to Design a Flexible Cell Layout	
<p>Overview of Presentation: Even in a jobshop, it makes complete sense to implement manufacturing cells to produce families of parts with stable demand. But, what if the routings within a part family are dissimilar and the cell is itself a jobshop? For example, in the case of a custom forge shop, how does one design a Flexible+Lean for a multi-part multi-machine forging cell? During this interactive design exercise, we will divide the entire audience into teams and provide each team with a data package. Next, each team will be asked to:</p> <ul style="list-style-type: none"> □ Design the shape and layout for the cell based on (i) internal factors such as operator travel, material handling, storage, etc. and (ii) external factors such as dependence on monuments and other shared machines in other cells, support services, etc. □ Compare the current and proposed layout alternatives using performance metrics such as Spaghetti Diagram, Line Of Sight Efficiency (LOSE), Material Handling Distance, etc. <p>The session will conclude with a discussion on the pros and cons of using software to complement the use of physical mock-ups and pencil-and-paper methods during actual JobshopLean kaizens ex. how to address practical issues that impact cell design and implementation, such as safety, ergonomics of manual loading/lifting and material handling, transfer batch sizes and storage containers, scheduling of machines and operators, etc. HISTORICAL NOTE: The data for this exercise was obtained from the very first JobshopLean project that was done at Ulven Forging Inc., a custom forge located in Hubbard, OR (http://www.ulvencompanies.com/UFL.html).</p>		
12:00 – 1:00 p.m.	<ul style="list-style-type: none"> • LUNCH • NETWORKING 	
	People Side Of JobshopLean	Technology Enablers for JobshopLean
1:00 – 1:40 p.m.	(Jerry Hoskins, Manufacturing Engineering Inc.) Business Improvement: Assessment and Roadmap for Implementation	(Andy Glaser, Ellison Technologies & Shahrukh Irani, The Ohio State University) Above and Beyond Lean: How Flexible Automation and Robotics bring Flexibility and Agility to <i>any</i> Jobshop
	<p>Overview of Presentation: Most companies have major opportunities to reduce cost and improve customer service. Yet, they often find it difficult to determine where to start. This presentation will describe a quick team-based up-front analysis to determine the Current State of your business, determine what a profitable Future State could look like, and offer an implementation roadmap to achieve the Future State.</p>	<p>Overview of Presentation: Without a doubt, Lean <u>is</u> insufficient to help a jobshop to fully leverage their investments in flexible automation and robotics. In the first part of this presentation, Dr. Irani will describe his method for reducing the size of an existing jobshop into fewer workcenters. The end result is a Flexible and Lean facility layout that consists of stand-alone cells, partial cells (aka layout modules) and a “residual jobshop” where only the “Strangers” and “New Business” parts in the product mix would be produced. This lays a sound foundation for the jobshop to go ahead and purchase multi-function machining/turning centers and/or flexible cells to replace a large number of machines in their existing facility. In the second half of this presentation, Mr. Glaser will show how facility design and flexible automation integrate with</p>
1:45 – 2:25 p.m.	(Dipak Sheth, Eaton Corporation) Eaton’s Experiences with Lean Deployment	
	<p>Overview of Presentation: Over the last 30+ years, “Lean” is being deployed worldwide in most of the progressive organizations under many different titles. Still, only a handful, if any, of these</p>	

	<p>organizations have been able to achieve the benefits anywhere near the extent to which Toyota has. While many academics are debating and developing various tools for assisting different manufacturing organizations in this endeavor, most practitioners are in agreement that the real challenges are the “soft” issues. Those challenges can be summed up as ORGANIZATIONAL CULTURE, which is very nebulous thing (defined in Wikipedia as “in the form of a cloud or haze; vague or ill-defined”). Different organizations face different cultural challenges. That is why it is difficult to come up with a one-size-fits-all solution to address this issue, or learn from one and copy-paste to another organization and expect the same results. Eaton is a diversified multi-national company that manufactures (a) high-volume products for the automotive sector, (b) specialized single-order hydraulics and electrical systems for the aerospace sector or other special projects; and (c) everything in between. They have learned some lessons that are helping them to steer their approach. The presenter will share highlights of these experiences, and Eaton’s deployment approach going forward.</p>	<p>industrial robotics. He has developed a standardized process for qualifying the application and feasibility of industrial robots in any jobshop, regardless of industry segment (forging, machining, welding, injection molding, stamping, etc.). He will review some of his successful robotic installations in different industry segments and offer technical insights on robotic automation, from the angles of communications, diagnostics, parts handling and die loading/unloading.</p>
<p>2:30 – 3:15 p.m.</p>	<p>(Dan D’Agostino, Definity Partners) Beginning the Lean Journey: The First Steps to Continuous Improvement</p>	<p>(Rick Dombroski & Ron Bone, Atlantic Tool & Die) Leveraging Real-Time Information for Continuous Improvement of Plant Performance</p>
	<p>Overview of Presentation: In the case of a small foundry jobshop, it was clear that the keys to success with Lean were (i) support from the top, (ii) team members/employees who were open to change (or at least not openly resistant/defiant to change) and (iii) a culture that encouraged ‘try-storming’ for ideas even if some failures were encountered during the process. Their immediate bottleneck was the Inspection department. The presenter led this company’s team through a hybrid of training sessions and a kaizen event which was specifically designed to teach them how to identify and eliminate waste effectively. Next, armed with this new knowledge, the team took a “waste walk” to identify the opportunities that were newly visible to them. Thereafter, the group reconvened to lay out all of their thoughts on improvement and categorized each opportunity for improvement that they saw into one of four main areas of improvement – Communications, Flow, Visual Management and Plant-wide Implementation Timeline. Once all improvements were appropriately categorized, each team was assigned a team captain and that individual was responsible for utilizing the rest of the team to accomplish as many of the objectives as possible in the time</p>	<p>Overview of Presentation: Real-time information is critical for evaluating shop floor performance and opportunities for Continuous Improvement. Atlantic Tool and Die (ATD) will describe how it collects data in a real-time environment and uses that data to drive activities to improve overall plant performance.</p>

	available. This presentation will provide the full details of the methodology used, results obtained and experiences gained from this weeklong engagement.	
3:15 – 3:30 p.m.	<ul style="list-style-type: none"> • BREAK • NETWORKING 	
3:30 – 4:10 p.m.	(Michael Colburn, Colburn & Associates) Team Accountability: Getting Teamwork to Work	(Stan Duffendack, Blue Spring Software Inc.) Integrated Design and Analysis of a Value Stream under Dynamic Operating Conditions
	<p>Overview of Presentation: Most improvement efforts are done in a team (often cross-functional) environment. Some teams are successful and others are not. There is much more to teamwork than “getting along”. Successful teams also get things done. Effective teamwork is the result of three things: (1) clear expectations, (2) mutual accountability and (3) effective communication. During his presentation, the speaker will offer practical tools to apply each of these teamwork principles. He will also offer guidance on how to deal with performance breakdowns in a direct and positive way in order to support a culture of accountability in your organization.</p>	<p>Overview of Presentation: The performance of a Value Stream (VS) is typically measured, tracked and managed in terms of the <i>actual</i> flow time, process times, resource times and costs. But, what is often not well understood is that it is equally important to know how long the process <i>should</i> take, how much work <i>should</i> be required, and how much it <i>should</i> cost. The inherent trade-off between high utilization of resources, WIP and excessive flow time <i>must</i> be investigated! This can be done using a quantitative process model of a Value Stream to determine expected VS performance under various demand scenarios, throughput capability and queue times at the system bottleneck/s, average order flow times, resource utilization and costs. This quantitative model of the process may then be used to identify opportunities for improvement through quantitative comparison of alternative what-if scenarios recommended by different individuals tasked with improving the Current State of the VS. For this tutorial, an example from the “Bible of Value Stream Mapping” – Rother, M. & Shook, J. (1999). Learning To See: Value Stream Mapping To Create Value and Eliminate Muda. Brookline, MA: The Lean Enterprise Institute. ISBN 0-9667843-0-8 – will be utilized.</p>
4:15 – 5:00 p.m.	(Shawn Hendrix, Nissen Chemitec America) Leadership that Nurtures Future Leaders	(Eric Christ, ProModel Corporation) Facility Consolidation and Workflow Improvement in a Jobshop using Simulation
	<p>Overview of Presentation: The single most-limiting factor that prevents any company from continuing to meet their customers’ expectations in the future is the lack of leadership. This was true in the past, and still remains true to this day. Many companies make detailed plans and spend money to develop technology or products. But, they lack the foresight to make similar detailed analyses and plans to develop their future leaders. The truth is that many leaders refuse to face, or simply choose to ignore the reality, that they will not always be there to lead and shape their organization. This presentation will present some methods for leadership to develop your company’s vision, deploy your company policies (hoshin</p>	<p>Overview of Presentation: A state-of-the-art manufacturer and supplier of plastic materials had evolved into a market leader, providing highest quality products and personal service to their diverse customer base. With a “standard” catalog of several thousand SKUs and an expanding clientele, they had outgrown their current state operations, which were spread out across four small buildings in a congested urban setting. The company embraced Lean as a methodology for improving workflow, and identified a suitable building to house their entire operations under one roof. However, conventional Lean tools could not predict and quantify which potential new layout would perform best, given the high mix of</p>

	<p>kanri), evaluate and select individuals from within the current organization to become future leaders, and make detailed plans to nurture them into becoming leaders capable of sustaining the company's vision for the long-term.</p>	<p>products and variable requirements in their production process. By using simulation to validate their current state assumptions and test potential future state configurations, this manufacturer was able to accurately and objectively identify which new facility layout would be most beneficial, and was able to quantify its impact on lead time, resource requirements, and workflow for any given product any under any possible mix scenario.</p>
5:00 p.m.	ADJOURNMENT	

JobshopLean2009 Conference

September 15, 2009

TIME	TOPIC
7:00 – 8:00 a.m.	<ul style="list-style-type: none"> • BREAKFAST • NETWORKING
	Education and Training for JobshopLean
Important Notice: The venue for <u>only</u> this session will be Room 285 (and Room 291), Baker Systems Engineering, 1971 Neil Avenue. Please ask conference staff for directions to this location. Thank you!	
8:00 a.m. – Noon	<p>(Shahrukh Irani, The Ohio State University) A Pencil-Paper-People-Programs (4P) Simulation to Teach JobshopLean</p> <p>Overview of Presentation: Jobshops must cope with conditions that a Toyota factory typically does not have to contend with, such as non-repetitive non-assembly production, many different manufacturing routings, low-to-medium production volumes with uncertain and/or variable demand, production scheduling with due dates, manufacturing routings with varying setup and cycle times at different workcenters, etc. So how does one teach the employees and management of a jobshop to adapt and extend Lean for their high-mix low-volume conditions? The JobshopLean Simulation is a low-cost interactive simulation developed to teach the following best practices of JobshopLean:</p> <ul style="list-style-type: none"> • Segment the parts into multiple segments based on Volume, Value and Complexity • Identify part families in the product mix • Implement manufacturing cells but also consider other more flexible (but not as lean) layout options, such as Hybrid Cellular Layouts or Virtual Cells • Plan the cells based on Workload vs. Available Capacity • Cull the existing product mix of low-value low-volume products • Try to re-engineer certain routings to eliminate “misfit” operations or to make their flow paths “fit the overall production flow” • Train material handlers to become “Water Striders” • Cross-train employees to attend to multiple machines within a cell or distributed across the facility • Introduce multi-function flexible automation to compact the facility • Schedule with finite capacity constraints in order to manage work releases into the shop and WIP in the time buffers • Use appropriate sequencing/dispatching rules to prioritise jobs at different machines, especially the bottleneck/s • Use performance measures, such as Cash Flow Velocity, instead of Cost Reduction (aka Seven Types of Waste) • Encourage feedback and ideas from the employees • Exploit visual management to facilitate Pull scheduling <p>During this simulation, it will be shown how to seamlessly assimilate the popular “Lean Tools” for low-mix high-volume assembly, such as 5S, SMED, TPM, Visual Workplace, Inventory Supermarkets, etc.</p>

12:00 – 1:00 p.m.	<ul style="list-style-type: none"> • LUNCH • NETWORKING
Current JobshopLean Projects at The Ohio State University	
1:00 – 1:50 p.m.	(Dan Gallo & Shahrukh Irani, The Ohio State University) Implementing JobshopLean in a Castings Repair Facility
<p>Overview of Presentation: In the case of this castings repair jobshop, it became necessary to “do whatever was needed” to address their most pressing needs! We found it necessary to keep an open mind and implement solutions that were suited to the problems that needed to be solved. Lean, TOC, Time Studies, Scheduling using Visual Boards, Cellular Manufacturing, Equipment Acquisition --- we were not constrained by any one process or toolkit. But, without a doubt, it is the people who are ultimately going to decide whether this project succeeds or fails --- a President who understands the need for and supports daring new thinking, employees in the Weld Upgrade and Inspection departments who are willing to implement their own ideas, department managers who know that communicating with each other and respecting the shipping schedule is essential. In this presentation, you will hear about this project from the talented IE intern from OSU who is providing the project team at the company the much-needed full-time onsite support and education/training on Continuous Improvement that they seek.</p>	
1:55 – 2:45 p.m.	(Sachin Shah & Alwyn Aliwarga, The Ohio State University, & Klaus-Juergen Schmitt, Hirschvogel, Inc.) A Project Management Approach to Setup Reduction
<p>Overview of Presentation: A Setup Reduction project is essentially a combination of Process Improvement and Project Management because multiple processes and resources have to be coordinated. The Smart Chart™ project being funded by the Defense Logistics Agency seeks to (i) unify the numerous charting and mapping tools that are being used for Process Improvement and (ii) speed up a typical project by having the computer automatically do some of the data analyses and diagnoses. Although the first project to validate Smart Chart™ is focused on <i>Setup Reduction on a Forging Press</i>, our experience to date is that Process Improvement is much more than “Process Razing” and “Waste Elimination”. We will describe how we have utilized various Industrial Engineering tools to link Setup Reduction with Information and Decision Flow Analysis, Shopfloor Logistics, Work Design and Project Scheduling.</p>	
2:45 – 3:00 p.m.	<ul style="list-style-type: none"> • BREAK • NETWORKING
3:00 – 5:00 p.m.	(Moderators: Jerry Hoskins, Manufacturing Engineering Inc., & Shahrukh Irani, The Ohio State University) Open Forum
<p>Overview of Presentation: You have attended the JobshopLean2009 Conference. You have feverishly taken notes as one speaker after another provided you many nuggets of advice and wisdom. But, now you have to return and implement some of these ideas at your company. What is it you plan to do? What do you anticipate as being obstacles in your path? Do you have a plan to overcome these obstacles? Would you like to share your ideas with the entire audience and see how they would proceed if they were in your shoes? During this session, every member of the audience will be given an index card on which they must write their name and, in a couple of sentences, describe a key issue/concern that he/she would like to discuss with their peers. Next, all of these cards will be thrown into a jar. We will pick cards one-by-one at random from this jar, and the person whose name appears on that card will be invited to lead the discussion with the entire audience. Everybody in the audience is going to put on their problem-solving hats and guide/advise their peer who has asked them for advice.</p> <p>WARNING! Full audience participation <i>is</i> expected! ☺</p>	
5:00 p.m.	ADJOURNMENT