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Manufacturers

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The ACM Update & Calendar (and previous issues) are also available for viewing on the ACM website.

“Future WorkForce Opportunities” Fair and TradeShow

ACM's third “WorkForce Fair and seventh Tradeshow took place on October 19th at the Hartford/Windsor Airport Marriott Hotel – *another success!!*

The morning of October 19th featured the “*Future WorkForce Opportunities*” Fair which was attended by 530 students, their teachers and guidance counselors, from 31 schools in Connecticut and southwestern Massachusetts. It was an exciting and energized morning for both the students and the ACM members staffing the display tables. The kids were polite, interested and asked great questions as they learned about future careers available in our industry. The significant increase, this year, in student attendance, points out the value of the Fair; many of the teachers returned after having attended in prior years and three teachers, in speaking with Allen Samuel, used the same description of this event – *awesome!* Many ACM firms staffed their tables with younger workers who related their personal experience in beginning their aerospace manufacturing careers. One school, Oliver Wolcott Technical High School held a side-session, outside the event ballroom, for an in-depth conversation with one of Barnes Aerospace's younger workers.



The “Future WorkForce Opportunities” Fair hosted 530 students and their teachers and guidance counselors

And special thanks to our ACM volunteers who worked so hard in managing the Workforce Fair registration, ushering students into the ballroom in an orderly manner and distributing the ACM tee shirts as students exited – the Fair couldn't work nearly as smoothly without their support. Thank you also to the volunteers who managed the ACM Member and Customer side of the registration area, another effort which made this event successful and problem-free!

The morning's enthusiasm continued on into the afternoon ACM Tradeshow. Members networked with each other and met with customers from Rolls-Royce, UTC, Pratt & Whitney, Pratt & Whitney Rocketdyne, SNECMA, Volvo Aero, and Mitsubishi America. Following late afternoon refreshments and hors d'oeuvres, Paul Murphy welcomed attendees and introduced, for the very first time, a video

produced by ACM, "*Connecticut's Aerospace Alley!!*". As many members frequently promote ACM when visiting their Customers, they now can use this brief video to assist in their effort of encouraging new and added aerospace business for ACM member firms. The video is currently available on the web at <http://vimeo.com/30314439> and shortly will be featured on the homepage of the ACM website; DVD's will also become available for members to mail to, or leave with their customers.

Our featured speaker was Ms. Tess Oxenstierna. Tess is the Managing Director for Aerospace and Defense at the Bank Street Group, a private investment banking firm in Stamford, CT; she offered an in-depth and insightful analysis of the "*Declining Defense Budget and the Implications for Middle Markets*". Slides of Ms. Oxenstierna's presentation are available on the ACM website; go to *Members Only* and the *Business Development Folder*. ®



Networking, an important part of ACM's TradeShow



ACM President Paul Murphy welcomes attendees and 'premiers' the new ACM video, *Connecticut's Aerospace Alley!!* (above)



Tess Oxenstierna of the Bank Street Group addresses attendees at the ACM TradeShow (above)



A complete photo gallery of the WorkForce Fair and Tradeshow may be viewed on the ACM website.



The events of the day were covered by the Hartford Courant (below) and FoxCTNews; please see the following link for the news article and video clip: www.courant.com/videobeta/313a3222-1261-485f-90d8-e0cae3620189/News/WorkForce-Fair; the video is also available for viewing on the ACM website; go to the *ACM News* page.

Manufacturers Woo Teens To Consider Career

Hartford Courant

By MARA LEE, maralee@courant.com

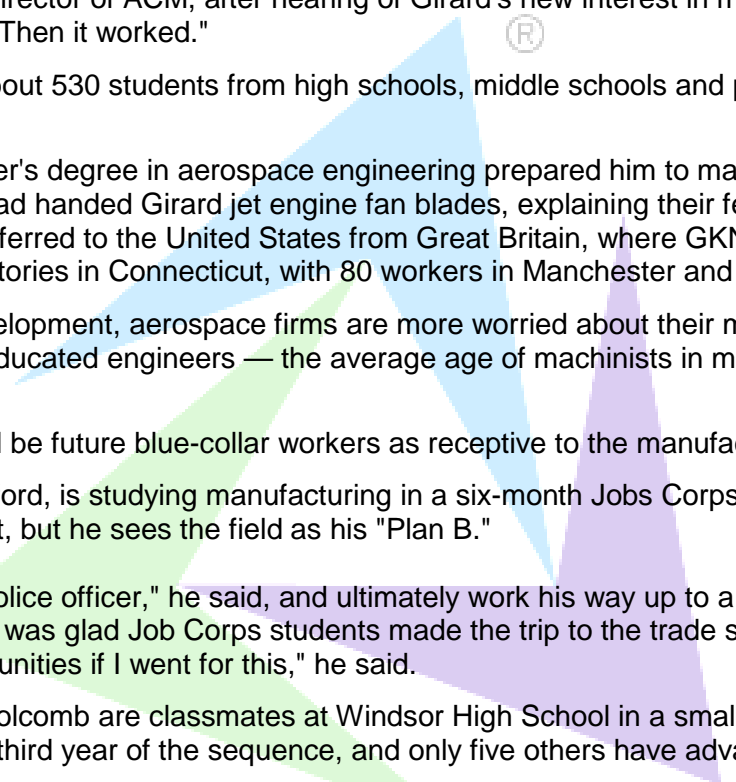
The Hartford Courant

9:50 PM EDT, October 19, 2011

WINDSOR — Before his field trip to the Aerospace Components Manufacturers Trade Show, Andy Girard, a junior at University High School of Science and Engineering in Hartford, had not considered a manufacturing engineering specialty.

Girard, of Enfield, knew he wanted to be an engineer and was attracted to green building. He was intrigued by what he heard Wednesday at the Airport Marriott hotel.

"Some of the companies are really cool," he said. "I like all the companies that have internships."

Allen Samuel, executive director of ACM, after hearing of Girard's new interest in manufacturing, smiled broadly and said, "Then it worked." 

The trade show hosted about 530 students from high schools, middle schools and post-high-school training programs.

Simon Long, whose master's degree in aerospace engineering prepared him to manage product lines for GKN in Manchester, had handed Girard jet engine fan blades, explaining their features with an infectious grin. Long transferred to the United States from Great Britain, where GKN is headquartered. The company has two factories in Connecticut, with 80 workers in Manchester and 60 in Cromwell.

In terms of workforce development, aerospace firms are more worried about their machinist workforce than about their college-educated engineers — the average age of machinists in most Connecticut factories is over 50.

Were the teens who could be future blue-collar workers as receptive to the manufacturers' message?

Darien Martin, 19, of Hartford, is studying manufacturing in a six-month Jobs Corps program paid for by the federal government, but he sees the field as his "Plan B."

"I want to get a job as a police officer," he said, and ultimately work his way up to a homicide detective. Still, he said he was glad Job Corps students made the trip to the trade show. "There would be a lot of different opportunities if I went for this," he said.

Josh Pickens and Tyler Holcomb are classmates at Windsor High School in a small manufacturing class — Pickens is in the third year of the sequence, and only five others have advanced that far.

Pickens plans to go to work as a welder after he graduates in the spring, and was encouraged that employers told him they would hire him right out of high school and pay for more training. "I didn't know they were willing to do that," he said.

Recruiting young workers to manufacturing can be easy if an employer is willing to train on the job. At the GKN table, Jon Tetrenaut, with fashionably shaggy hair and a slim-fit plaid shirt, was an advertisement for the company's openness to youth. Tetrenaut, 22, of East Hartford, started at GKN after he graduated from Cheney Tech's heating and air conditioning vocational program five years ago, but couldn't find any work in the field.

Before he joined, he said, he knew "absolutely nothing" about machining, but Long said that's fine, as long as you have common sense, are mechanically minded and are willing to learn.

Both GKN representatives were impressed by the seriousness of the students. They had figured most teens would be there for the candy and swag. "At least three quarters of the kids were genuinely interested in what we do," Long said.

ACM will host a special meeting featuring

EMILY DeROCCO

President, Manufacturing Institute

(NAM – National Association of Manufacturers)

addressing

Competency Based Education and the National Credentialing Initiative[®]



Everyone is looking to hire new and trained workers.....
..but how can you determine whether a first time employee has the proper background and training?

A panel discussion follows Ms. DeRocco's presentation

Wednesday, November 16th at 8:30am
Trumpf Inc., Customer & Technology Center Farmington, CT

Emily DeRocco is president of The Manufacturing Institute and its National Center for the American Workforce and Senior Vice President of the National Association of Manufacturers. She oversees the education and research arm of the NAM.

Emily previously served as the Assistant Secretary of Labor for Employment and Training (during the Bush administration), managing a \$10 billion investment in the nation's workforce. Her belief is that only by effectively equipping workers with the skills that are needed by employers, and better understanding the workforce needs of business, can we create the high-skilled workforce needed to maintain a globally competitive workforce in the 21st century. She created and led Presidential initiatives to align education, economic development, and workforce development investments and to increase the capacity of the nation's community college system. DeRocco has represented the United States and led delegations in international forums including the G-8 Labor Ministerial, the Organization for Economic Cooperation and Development, the Western Hemisphere Competitiveness Forum, U.S.-Canada Policy Forums, and U.S.-EU Dialogues.

This important meeting is intended for ACM Presidents, General Managers and Human Resources staff.

**Registration is limited to two persons per company –
and restricted to the first 60 persons to register!!
Please RSVP to the ACM Office.**

Business Development

- The Business Development Team will resume their monthly meeting on November 29th at 8:15am at CERC, Rocky Hill.

THE WALL STREET JOURNAL. BUSINESS

Pratt, Rolls-Royce Realign Ties

By KATE LINEBAUGH

OCTOBER 13, 2011, 5:45 A.M. ET

United Technologies Corp.'s Pratt & Whitney unit and Rolls-Royce PLC are ending one aircraft-engine joint venture to start another.

Pratt will pay \$1.5 billion for Rolls-Royce's share in their existing International Aero Engines consortium, which produces the engines that power the Airbus A320 jetliner family.

The two companies plan to work together in a new venture that will develop engines for future narrow-body aircraft using Pratt's geared turbofan technology.

The new venture will go head to head with General Electric Co. to develop more-efficient engines for the single-aisle-aircraft segment, in which the companies expect demand to be around 20,000 new aircraft over the next 20 years. It also comes after London-based Rolls-Royce declined to develop new engines for the latest upgrades to the A320 neo, produced by Airbus, a unit of European Aeronautic Defense & Space Co.

"This is the two companies saying we want to work together for the future despite the fact that we are not participating on the neo," Mark King, Rolls' president of civil aerospace, said in a conference call with reporters. "The new partnership sets the stage for the two companies to develop engines for the next generation of aircraft."

Pratt had all but abandoned the single-aisle market in the early 1990s but began muscling its way back in over the past few years in the face of dismissals from its rivals including Rolls and GE.

Last year, Pratt scored a coup when Airbus selected its geared turbofan engine as one of two engine options for the revamped A320. But this summer Pratt was excluded from a similar move at Boeing Co., which opted to upgrade its 737 instead of investing in a next-generation aircraft.

The new 737 plane exclusively uses an engine from CFM, a joint venture between GE and France's Safran SA.

The new venture will focus on the high-bypass ratio, geared-turbofan technology. The other partners in the previous partnership—Japanese Aero Engine Corp. and MTU Aero Engines GmbH—intend to join.

In the IAE venture Rolls will continue to receive payments for each hour flown by the current installed engines for 15 years and will continue to manufacture parts and 50% of the engines.

"By having this opportunity to take the commercial lead on IAE, it gives us a better opportunity to compete in the market and set strategies for meeting customers' needs," said Todd Kallman, president of commercial engines at Pratt.

Last month, United Technologies, based in Hartford, Conn., announced its largest-ever acquisition, a \$16.4 billion takeover of aircraft-components maker Goodrich Corp.

Progressive Manufacturing

- The Progressive Manufacturing Team will meet on Thursday, November 17th at 8:00am at Birken Mfg, Bloomfield. This Team meeting focuses on an issue almost all ACM firms must address – **“How to deal with your Customer’s Continuous Improvement Requirements”**

Customers are promoting “gold standards” for lean and continuous improvement, such as UTC’s “Supplier Gold” program or Rolls Royce “Journey To Process Excellence (JTPE).”

What are the criteria? How are ACM companies meeting the challenge? Are you doing self-assessments to their criteria? Have you had formal visits by customers with similar “lean journey” assessments and support?

This will be an open discussion, so bring your experiences and advice to share; it will be particularly important for those who are relatively new to the process. Eric Schneider of Birken Mfg and Steve Sowa of Pegasus will co-chair this valuable information sharing meeting. If you have involvement with a customer driven and supported effort, please contact Eric Schneider at eschneider@birken.net or Steve Sowa ssowa@pegasusmfg.com ahead of this meeting to help them plan the presentation and discussion.

A Message from John Shook of the Lean Enterprise Institute commenting on “Was Steve Lean?”

I don't know that much about Apple. The only gemba I've visited are lots of Apple stores (I don't know if they're lean but they go far in solving customers' problems) and a few (far from lean) suppliers in East Asia.

Since his death, comparisons of Steve Jobs with great innovators and industrialists have been plentiful, with Thomas Edison and Henry Ford mentioned most often. The Edison comparison is off the mark, since I consider Edison as an inventor first, and businessman second, with little interest nor aptitude for working the bridge between his inventions and commercialization.

Though known as innovators, the secret to the success of Jobs and Ford was not that they actually invented anything like light bulbs. Ford didn't invent the automobile.

Nor did he really invent the idea of flow production or interchangeable parts. Likewise, Jobs didn't invent the PC, the graphical interface, the music player, music, the telephone, the tablet PC. What Jobs did, like Henry before him, was put it all together as a total package. And the packages they developed were innovative and complete beyond imagination.

Instructive parallels between Jobs and Ford come easily. Ford's critical role in the history of lean thinking is well established – he was the first to achieve sustained flow production on a big scale and flow production is the operational aim of any lean operating system. Ford became the richest, most famous industrialist of his time through introducing a breakthrough product. But, what was truly revolutionary about Ford's achievement was that he packaged his breakthrough product with an even greater breakthrough production process and business model.

Both men were also renowned for their infamous flaws. Demanding, abusive, confident to the point of being dismissive of the views of others – not exactly embodying the all-important lean principle of “respect for people.”



The day after Jobs' death, an impromptu memorial appeared along "Entrepreneurs Walk of Fame" in front of LEI, at Kendall Square, Cambridge MA.

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Workforce Development

- The next monthly meeting of the WorkForce Development Team will take place on Tuesday, December 6th at 8:00am at Barnes Aerospace Windsor Division, Windsor. This meeting will review our recent events and begin planning for the next year's training courses. Also, John Kornegay will briefly present the *ConnecticutDream!tDo!t* program and discuss NIMS certifications. Please plan to attend this important meeting.

Note: The Team meetings of October and November were displaced by the Oct 19th Future WorkForce Opportunities Fair and the Nov 16th presentation by Emily DeRocco.

- The following training courses are currently in session. Please advise the ACM Office of your training requirements for courses to begin in early in the coming year.

Course	Date (Start)	No. of Days	Date (End)	Host Company or Location	Participants
BluePrint Reading	9/20/2011	10	11/22/2011	PTI Industries	PTI Industries Technical Metal Finishing ATI Stowe Machining Barnes Airmotive Turbine Technologies
First Line Supervisor's Training	9/21/2011	12	12/7/2011	Aero Gear	Aero Gear Delta Industries Stowe Machine TigHITCO PTI Industries AGC Inc.
Shop Math Level 1	9/22/2011	9	11/17/2011	Barnes Windsor Div	Barnes Windsor Div. Technical Metal Finishing Barnes Airmotive

Seniors Attend ACM Job Fair in South Windsor

Oliver Wolcott
Technical High School
75 Oliver Street, Torrington, CT 06790

On October 19th, the CADD and Manufacturing seniors from OWTS attended the Aerospace Components Manufacturers job fair at the Marriott in South Windsor. The 20 students joined hundreds of other Technical High School system students from across the state in exploring career opportunities in Connecticut's Aerospace Industry. The purpose of the trip was for students to marry their respective trade skills with local businesses and manufacturers. Mr. Ejzak, CADD instructor, and Mr. Lakowski, Manufacturing instructor, organized the trip.

Upon their return, the students wrote a report and made presentations to the class on the employment opportunities that they found at the fair. They also wrote and spoke of their experiences speaking with potential employers. Manufacturing senior, Natasha Phillips, was able to secure an internship with Sterling Engineering (Winsted) before leaving the fair.

ACM is a network of independent Connecticut-based aerospace companies; a non-profit partnership that is part of Connecticut's Industry Cluster Initiative. Working together as a network, member companies collectively offer broader capabilities than they could as individuals. ACM helps capture new business opportunities for Connecticut's aerospace industry. The organizations goals are cost effective manufacturing, fast turnaround times, multi-company teaming, and customer savings in supplier management.



Students with Mr. Allen Samuel, ACM Executive Director

Both students and teachers agreed that it was a worthwhile experience and made them more familiar with what opportunities are out there upon graduation.

Consolidated Purchasing

- The Purchasing Team will meet on Tuesday, November 22nd at 8:00am at Yarde Metals in Southington. This meeting will continue the discussion of the progress toward organizing a local trucking service to assist in improving dispatching, scheduling and reducing delivery costs for materials being moved within the local area. This meeting will also provide Team members the opportunity to tour Yarde Metals and see their newly installed flattening mill operating in Yarde's recently expanded facility. Please be sure to attend this meeting!
- Suppliers having Agreements with ACM are:

	<u>Supplier:</u>	<u>Key Contact:</u>	<u>Telephone:</u>
Shop Supplies, Abrasives, Cutting Tools, etc	Turtle & Hughes	Dave Howard	203-497-1555
Raw Materials: Nickel, Cobalt, Titanium – Sheet, Plate & Bar Stock	Aerodyne Alloys	Kirk Smallidge [®]	860-508-1271

News from ACM Members

Please forward significant company news and announcements to Allen Samuel at alsamuel@acm-ct.org for posting on the ACM website and publication in the UPDATE

“Was Steve Lean?”

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Jobs and Ford shared an unrelenting pursuit of improvement – as long as they were in charge. Daily kaizen practiced by everyone was a hallmark of the approach of neither; they didn't necessarily value the views of the little man, certainly not of the workers who built their products. Ford is applauded for supporting his workforce through such grand actions as instituting his famous \$5 per day pay and establishing the Ford English School to provide his workers with needed education. But those moves – while completely laudable – were mostly self-serving (nothing wrong with that, of course). He needed to attract workers in numbers never before seen. He had done the math and knew he would have no problem paying the unprecedented day rate. The fact that the workers could then afford the products they produced was a nice plus. As for the school – workers learned English and even American manners so they could be better citizens – from Ford's standpoint he was able to attract new (documented, I wondered?) immigrants to work effectively on his assembly lines.

One of the more interesting parallels between the two men can be found in their supply chain thinking. Ford became the most famous proponent of extreme vertical integration. Vertical integration was in Ford's view a way to extend flow from end to end. Note, however, that Ford never extended the integration to dealers, as Jobs later did.

Similarly, Jobs famously kept far more operations in-house than anyone in his industry. He did hardware design, software, operating systems, web services, consumer devices, even retail, insisting on seamless integration throughout. And he held to that approach during an era when it was thoroughly discredited within his industry, and beyond, a time when academic theorists, consultants, and industry practitioners all preached the virtues of greater outsourcing of operations to focus instead on a few core competencies. (Interestingly, the Macintosh was first produced at a new state-of-the-art facility – reportedly using "just-in-time manufacturing" – in Fremont CA, walking distance from the NUMMI plant, starting in early 1984, exactly the same time Toyota and GM were preparing to reopen the old GM factory there.)

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“Was Steve Lean?”

--continued from Page 8—

Regarding the production supply chain specifically, Jobs - unlike Henry Ford - did not try to keep his component manufacture in-house and is usually dismissed as simply following his industry's model of chasing lowest global piece price. Actually, however, Jobs followed a modified vertical integration model not at all unlike Toyota. Toyota followed neither the extreme vertical integration model of Ford in actually owning his suppliers nor the modular supply model of Dell and others of shopping contracts around to the lowest bidders. Rather, Jobs chose to work closely with a small number of suppliers with whom (as I understand it) he would develop close relationships. This approach flew directly in the face of the Dell model which was the darling of investment analysts and MBA professors. Not unlike Ford's actions with his workers, Jobs motives, weren't altruistic; his objective was control of the situation.

That takes us back to that charge of the most "unlean" of practices: Jobs' apparent lack of respect toward the workers who built his products on the other side of the world. While structurally Jobs' supply chain had striking similarities with Toyota's, in the case of the latter, great effort was expended to extend respect in the form of engagement of all employees, including factory workers. No old Fordist "check your brain at the door" -- engagement of the entire person in daily kaizen was encouraged and expected by Toyota.

But, the most thought-provoking parallel between the two men was in their approach and phenomenal success with product-process innovation. Jobs, like Ford, was convinced he knew what his customers needed better than they did.

Ford is often quoted as saying: *"If I had asked my customers what they wanted, they would have said a faster horse."*

Similarly, from Jobs: *"You can't just ask customers what they want and then try to give that to them. By the time you get it built, they'll want something new."* Jobs liked to quote Wayne Gretzky as pointing out that you don't skate to where the puck is, you skate to where it will be.

Both men made decisions based not on market research or customer feedback but a vision of what their products would do for people. They were solving for [customer need](#), not want. By the way, Toyota also traditionally put more product decisions in the hands of chief engineers, relying much less than competitor companies on formal market research – no focus groups, please!

And, interestingly, products introduced by Jobs as well as Henry Ford and Toyota chief engineers were phenomenally successful, less because they introduced breakthrough technology but because they *left out* unneeded technology to create simple, user-friendly (which would have been said of the Model T had the term been around then) products and customer experiences.

Ford's Model T was already a huge success before he figured out how to make masses of them cheaply with his assembly line. In addition to affordable personal mobility, the Model T provided a deeply personal connection with its users. It was personified, given names, treated like a member of the family. There is a lot in common between the human-like bond created by the Tin Lizzy with its hand crank starter in 1907 and the Mac with its simple cursive, lower case "hello" start-up screen only 80 years later.

Steve Jobs and Henry Ford are important not because of any specific technical invention. Far more importantly, Jobs in his era and Ford in his grasped the social and technical situations of their respective eras so deeply and thoroughly that they were able to integrate product, process, and even business model in ways that were transformative for their customers, companies ... even the world. One of Jobs famous quotes was, "Stay hungry, stay foolish." Never be satisfied, always have fun. Sounds pretty lean to me.

Of course, whether or not Steve Jobs was lean is not an important question. But, how we think about that question may say a lot about what we think lean is. So, what do you think – was Steve Jobs lean?

John Shook
Chairman and CEO, Lean Enterprise Institute, Inc.