Podcast Interview

Wayne Sumple, Program Manager and
Bob Torrani, Director, Manufacturing and
Supply Chain Initiative of
The Connecticut Center for Advanced
Technology (CCAT)
Interviewed by: John Slanina, SSTI

2008 Excellence in TBED Award Winner:
Improving Competitiveness of Existing Industries

Wayne Sumple, Program Manager
Bob Torrani, Director Manufacturing and Supply Chain Initiative of
The Connecticut Center for Advanced Technology (CCAT)
Podcast Interview

Mr. Slanina: Hello, this is John Slanina with SSTI. I'm speaking today with Wayne Sumple, Program Manager, and Bob Torrani, Director, of the Manufacturing and Supply Chain Initiative of The Connecticut Center for Advanced Technology. This initiative was the 2008 winner of SSTI's Excellence in TBED Award in the category: Improving Competitiveness of Existing Industries.

Thanks for joining us today. Can you provide a brief history and describe the focus of the Connecticut Center for Manufacturing Supply Chain Integration Program?

Mr. Sumple: Sure John, we are really part of the Connecticut Center for Advanced Technology, or we call it CCAT here. It stemmed from an interest from the state of Connecticut that really wanted to help the small manufacturers that are involved in the aerospace and defense industry, by providing them some grant money to do some process improvement efforts. So the main goal for the program, when it first started, was to administer this grant program that basically refunded some of the expenses created by the small manufacturers to do some of these process improvement programs. In addition to that we were also targeted to do some other creative development programs to help small manufacturers in their development of supply chains, and working with their customers and working with their first, second and third tier suppliers.

Mr. Torrani: I think the belief was that Aerospace and Defense is a strong component of the manufacturing base here in Connecticut, and also a strong multiplier to overall economic development – manufacturing in general that is. So starting with the Aerospace and Defense sector was prime. We have some big primes here like Swarovski, Pratt & Whitney, Hamilton Sundstrand that then work through their supply chains to over 1,000 smaller manufacturers. So it was a rich base for opportunities for this program.

Mr. Slanina: Thanks. So what would you consider then the main thrust of your program to be? How then do you advance each of these thrusts?

Mr. Sumple: Well like I said with the first question, one of the primary goals was to administer this grant program. So we had basically a 50-50 match program where if one of the small manufacturers went out and did a lean manufacturing, six sigma; any kind of process improvement project that we would take a look at that project, make sure that it met the criteria that we had developed. Make sure that it really was a program design and develop along the lines of lean manufacturing. When they were completed and done with the project, we would go out and ensure and ask for some results back in terms of what kind of improvement metrics they were able to meet. We call it the Aerospace and Defense Initiative, the ADI Program. That really was the primary program of the initiative.

Mr. Torrani: I think from the beginning we realized that two things, project based improvement was important, not just training. And second that the metrics had to be produced and tracked so that we can understand that the program was working. The other thing I might add is that from the state economic development point of view, productivity improvement has to be balanced with some other activities because it alone could lead to job loss versus what the real intent of job security and job gained. So we augmented the program with two other components. One is market expansion, top lying growth, opportunities for the companies. Things like, Wayne brings a group to the International Air Show in either Paris or Farnborough each year to give them new market opportunities for their products and services. The other is relative to sustaining these improvements; it is a continuous improvement need. So we look a lot at the workforce development in parallel with the productivity improvement.

Mr. Sumple: This might also be a good time to put it into perspective in the state of Connecticut, the state has approximately 5,000 manufacturers and we have calculated that a good 20%, or in the neighborhood of 1,000 of those have something to do with the Aerospace and Defense industry. That's why the program, at least in its first phase, was geared towards Aerospace and Defense companies.

Mr. Slanina: Maybe delving a little bit into the mechanics of the ADI Program. Can you explain a little bit about the application or the process in your reimbursement – external versus internal, that type of thing?

Mr. Sumple: We tried to keep the criteria simple as we could. We wanted it to be aimed at the small manufacturers, as opposed to the larger manufacturers. We used 500 employees as kind of the demarcation line. That's a number that's usually thrown around between the feds and the state in terms of what's a small and what's a large company. We said you needed to have less than 500 employees. We said that you needed to be doing at least $500,000 in Aerospace or Defense business over a two year period, which pretty much included everybody who was in Aerospace and Defense industry. It cut out the big guys that might only have been doing a little project here, a little project there. That's not who we were aiming for. We wanted to make the grant program available to those companies whose Aerospace and Defense was a major part of their program.

What we said was we could match whatever cost they spent on an outside consultant, or an internal consultant, who was leading and running one of these lean or process improvement programs in terms of dollar amounts.

Mr. Slanina: Then how many companies or projects have you been funding in each year?

Mr. Sumple: Bob I think you have those numbers in your hand?

Mr. Torrani: Yes, well the program has just about come to an end. It's lasted for about a little over three years. In that time we've funded 244 different projects at companies. So it made quite an impact.

Mr. Slanina: Thank you. Something that the judges particularly enjoyed from reading your application was looking at the metrics that were included. What are some of the metrics that you used to measure your return on investment?

Mr. Torrani: From the beginning we felt it was important to measure this and compile the data. We kept metrics from every project, and not every project touched all of these metrics, but the metrics have fallen into generally one or two of these five categories I'm going to mention. Those being: fast, efficient, flexible, capable, or compact. Lean practitioners will tell you tell you that these are important in terms of fast as the lead time component. How quickly can you respond to customer demand? Efficient is the cycle time improvement which directly relates to cost incurred. Flexibility is again, the agility of the organization to act quickly and change over, and typically relates to set up time in a manufacturing type process. Capable is the quality component, which in Aerospace has very high demands on quality. Typically we like to see that measured in defect DPMO Defects Per Million Opportunity. Last is compact and space reduction. How tightly knit is the operation, is the factory floor to minimize waste, whether it is energy, motion, rent – it's just better to have a smaller compact factory that's run efficiently.

So the metrics we collected generally fell into one or two of those categories depending upon the type of project, and that's the compilation we've kept. Some of the numbers in those categories again, would be what we would expect. Lead time improvement on the order of 53% was the number, so half is better again; twice as fast as you were before you did the project, in terms of responding to customer demand. Cycle time improvements in the order of 37% – these are aggregate percentages. Flexibility set up time reductions on the order, 50%, quality level improvements, 48% and space reductions, 39%.

Mr. Slanina: So how have companies participated in this program? How have they been tied into other programs, either at CCAT or other ones across the state?

Mr. Sumple: We try to work with all the other economic development organizations in the state. In the state of Connecticut there happens to be a number of them. There is a Connecticut Business in Industries Association; there is a local MEP which is the CONNSTEP Program which is the local manufacturing and extension partnership. Many of our customers used a program that was put out by our utility company, Northeast Utilities. They had a program similar that we were able to piggyback with called the PRIME Program. They were offering a small dollar amounts if the company did a process improvement program that could be measured in kilowatts. We would pick up the difference between that and what other cost that they had.

Occasionally our state Department of Labor will have monies available to help in training. We would allow the first part of a project that was classified as training to be covered under that program, and then we would pick up half of the remaining cost. So we would try to piggyback as often as we could. We also had a number of clients – we call them clients – a number of SME's that were using the ADI funding and then would learn about some of the other programs that we have here at CCAT. For instance, we had a number of companies that worked with our modeling and simulation organization to help them with plan layouts. We do some simulation things. We had a number of companies work with our laser lab with some of their machining issues and problems. We used the MEP, like I said before, CONNSTEP. We've actually provided more support from a service provider than any other serviced provider in the state, out of our list of available service providers. We think we did a pretty good job of trying to collaborate and work with the rest of the organizations in the state.

Mr. Slanina: Some of the reasons why we are doing these Podcasts is that there are other states and regions that in recognizing your excellence in being an award winner may say, we really want to produce a similar program in our state. So preface this question this way. Is there a critical component of your program, if excluded when attempted to be replicated in another location, would really limit its effectiveness?

Mr. Torrani: I think one of the things is availability of funds to create this incentive. We had the $2 million that Wayne mentioned as the incentive to pay half the cost of the projects. That could be something that prevents people from engaging in this if they don't have the monies to make available. Things are tight right now in the economy and a lot of states are strapped for their revenue streams. It could be a barrier. The thing that we found is that even though it sounded like a real incentive, the real numbers though that the company spent a lot more money than we reimbursed them for. Either they maxed out the $50,000 or $75,000 limits and continued to do projects on their own because they saw the benefit. Or if you looked at what we funded which was just their outside costs, the consultant costs, but if you really checked their total cost which included their internal labor to run these projects, that could be four or five times high than the consultant cost.

The point we make to people is: don't let that incentive scare you. If you can't raise the money to stimulate it that way you can still show companies the return on investment. The kind of gains I mentioned in those metrics and make the business case that this is a good thing to do regardless whether we have money to reimburse your cost, because at the end of the day it's going to be a positive return and a good payback period for you. Companies certainly saw that before they started getting into it and they put their people on these projects.

Mr. Sumple: I think another critical component was the fact that CMSCI and CCAT were recognized as being really a neutral party, unbiased in terms of we weren't providing that consulting service in addition to having the money. We were really able to go into a company and say, listen we've got a pot of money; you need to implement some process improvement. Now some of them already knew that they needed to, sometimes it took a little bit for us to convince them. We needed to show them the numbers to get them started. Some people were way along on their lean journeys, some were just starting. But the point is we were able to say, we have money as long as you meet our criteria, submit a good proposal, you're really going to do something that's going to affect your processes, we will reimburse you 50% of whatever that cost is. We don't care who you go use as long as they're legitimate service providers. We did a courser check of service providers to make sure they really knew what they were talking about in terms of providing lean services, and that they had some experience somewhere along the line. I think that whole unbiased, neutral condition makes a big difference when you go in there trying to tell somebody, and trying to help somebody to do their process improvement programs.

Mr. Torrani: You're not perceived as trying to sell them something.

Mr. Slanina: My last question is: do you have any additional lessons learned from administering this program that you'd like to share?

Mr. Torrani: Yeah, first thing we kept it flexible. We tried to respond to the needs of the manufacturers. So we conducted some in-process surveys and always were open to discussion with small manufacturers to see what met their needs. A couple of things we did were we adapted the program to include these internal experts for instance. We saw that demand pop up as we worked it. The other thing was that initially we weren't getting a lot of projects that had that integration of the supply chain that stretched beyond the internal factory – the four walls and included the customer or subject to your supplier. So we added that extra $25,000 incentive. Keep it flexible and adapt as needed. Don't just lock in it.

The last thing I could offer, and Wayne may have others, but is you can over communicate. It just took what I thought was forever to get the word out. Even though we launched the program in a letter from our governor to all the manufacturers in our database, it had her letterhead, signed by her; you would think people would respond. So many people just missed it, or didn't hear about it and the more communication you can do to launch it and get some buzz going about how good the program is its very important to the success.

Mr. Slanina: Wayne and Bob, thanks so much for talking to us today. If our listeners want any additional information about CCAT, they can find it at www.CCAT.us. For more information about SSTI's Excellence in TBED Awards visit www.sstiawards.org.