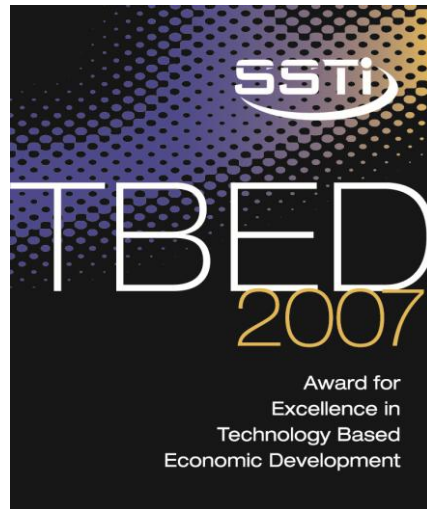


Podcast Interview



Martha Connolly, Director,
The Maryland Industrial
Partnerships Program (MIPS)
Interviewed by: Rhiannon Skipper &
John Slanina, SSTI

*2007 Excellence in TBED Award Winner:
Improving Competitiveness of Existing Industries*

Ms. Skipper: Hello, this is Rhiannon Skipper and John Slanina with SSTI. We are speaking today with Martha Connolly, Director of the Maryland Industrial Partnerships Program. The MIPS program was the recipient of the 2007 Excellence in TBED Award in the category: Improving Competitiveness of Existing Industries.

Martha, can you briefly describe the structure of the MIPS program?

Ms. Connolly: Certainly can. MIPS is a state funded program run through the University of Maryland that really is intended to have University of Maryland faculty participate with Maryland companies, in order to further translational product development. This is a \$2 million fund right now that is aimed at creating academic industrial partnerships so that a Maryland company can work with the University of Maryland faculty, anywhere in the system to access their resources, facilities and expertise.

Ms. Skipper: What is the general size or range of the funding you award?

Ms. Connolly: Typical funding can go up to \$100,000, and it is really very small amounts of funding aimed at doing critical path issues, in terms of product development. So we are trying to place these funds – of course they're limited resources, we're trying to place them strategically so they have the maximum impact for a company that's trying to achieve the next milestone in their product development.

Ms. Skipper: Can you explain your selection process for projects that are funded by MIPS?

Ms. Connolly: Sure. Well the first thing is how we select the companies and the principal investigators that participate, they apply jointly. We select them really looking at the need, and looking for the right match of the capabilities of that faculty member with what a company needs. Once we create those matches, sometimes the companies come in already having worked with a faculty member. Then they apply jointly, and we select them really with two criteria in mind. One, is it a good scientific proposal, and secondly and more importantly, does it have impact for this business. So we're looking to see if it's good science and is it good for business. We want to see very nicely designed experiments, but we want to see that there is a commercial goal in mind and this helps the companies achieve the next milestone in their product development.

Mr. Slanina: Thanks. Have you seen that the MIPS program has partnered with any other organizations and their funding opportunities for downstream assistance?

Ms. Connolly: We certainly have. We actually work with companies of all sizes, so we work with small and large companies. Our funding doesn't go directly to the companies; it goes to the university to do these early stage product development opportunities. So it's early stage commercialization we're aimed at. The companies can be startup companies or larger companies. If they are startup companies these folks generally try to go to whatever sources of non-diluted capital they can find. We participate very actively with other state of Maryland funds such as TEDCO Funds; the state of Maryland also has a venture fund. Smart entrepreneurs access all of those sources, along with the University of Maryland's MIPS Fund to help them do their product development, such as outsource their R&D along with faculty involvement.

We also partner with some of the other federal types of funding mechanisms that companies avail themselves of. That would include ATP Awards; now TIP Awards, in the past ATP, and also the SBIR Awards. The theory really is to have small amounts of state funds sprinkled strategically so that you can then leverage that to create larger either private or a federal investment for continuing that product development.

Mr. Slanina: That's great. As you just mentioned how different size companies participate in the MIPS program can you describe how the level of matching funds required differs by the size of the company?

Ms. Connolly: Certainly, we really structure it so that it's heavily favored towards the startup company's participation. In the case of the startup company MIPS will put in 90% of the project funds, and the startup company has to match with 10% of their own funds with all of the funds going to the university professor to conduct the research. Its goal directed towards commercializing a product. So it's a 90/10 split with startup companies. It goes startup criteria involved companies that has fewer than 12 people, and been in business less than four years. Those are our criteria and they have an insignificant revenue from products. The next level up is a small company where the match now goes to 66/35 with MIPS putting in 65% of the project funds, the company putting in 35%. We can again go up to \$100,000 here when the company would put in approximately \$50,000, for a \$150,000 total project. So it's a 65/35 split those companies have between 12 and 100 employees. Then with larger companies we consider larger companies to be anyone with more 100 employees. That's a 50/50 split. So it's a direct match of company funds to MIPS fund. Again with all of those funds going to the university faculty member to conduct the research.

Mr. Slanina: Are there challenges then in getting individual faculty members and the research partners to participate in the program with companies?

Ms. Connolly: Sometimes there are. Often times a company comes to us and doesn't really know a faculty member with whom they can work. So we create the match. Often times we're in a situation where a faculty member is quite busy, or they're in a popular area of research. For example, they're an MD doing a clinical trial, or particularly busy PI, or department chair. Every once in a while there are time constraints, but we really find that because the faculty members are interested in doing sponsored research activities and this provides real world experience for their students, they are usually quite eager to participate. If we have to do a lot of arm twisting, usually the company is able to do that really better than we can. We rely on the companies also to persuade the faculty members that there's a possibility followed-on sponsored research, there's a possibility that their actions could really see real results out in the marketplace. Typically faculty member are not too hard to convince on this front.

Mr. Slanina: Great. How then is intellectual property managed if it's created during the participation in the MIPS program?

Ms. Connolly: Well this is pretty clearly laid out in our contract and the philosophy is pretty simple. If the company comes with intellectual property, and for example, we run a clinical trial, or heat and reliability testing, or we test something in the wind tunnel for performance. Then there isn't any new IP generated and we have no interest. If on the other hand, there is IP generated during the course of these projects, which happens from time to time. Then in that case there are two categories where the university creates the IP on its own or jointly is created along with the company where the project manager's working alongside the principal investigator. In either case, the philosophy is fairly simple. The university is not in the business of commercializing a product. This company's come to us with the intent of getting that product to market. So our intent is really to be compensated for our contribution, but not at all to impede the progress of that IP, and having it in the hands of the company. The long and short of it is the company gets an exclusive option to license that intellectual property at the end of the project if there intellectual property created. They don't have to exercise that option, but they certainly can if they want to, and they would have the first exclusive option.

Mr. Slanina: The MIPS program has existed for over 20 years now. Can you describe your outreach efforts to convey your program successes?

Ms. Connolly: This is actually critically important right now in the recession that we're all in and state funds being as constrained as they are. Certainly in Maryland and other states, it is a continual problem and challenges to convey the successes of these programs. We want folks to know that we view this as a way to get into the new economy and to get out of this recession we're in rather than it's a luxury program we can't afford right now. We try to convince them that it's the former. The success of the program really speaks for itself. We have some pretty good metrics to show people, and without going into a lot of math, we can just say that the top selling products now in the 20 years we've been around have sold \$16.6 billion of product.

If you calculate the corporate tax and sales tax on that it certainly more than pays for itself. In addition, some of the other metrics we use, which has been critically important is the fact that we view this as a job creation program. In today's economy that's more, and more important. If you look at our \$2 million fund, and you look at the jobs that the companies project that they will create if these project are successful. We look at that number and then we discount it by 50%, because not every project succeeds. That number, and if you multiply that by the state tax rate which is 4.75%, at an average salary of around \$75,000 we're seeing right about now. That comes out to be just in excess of \$2 million. So if the jobs are created that are projected, it pays for itself in the first year. If those jobs stay around, it becomes a real boon for the Maryland economy.

Our challenge is to continually relay that message that this is an economic development program, a job creation program. It leads to real products, it leads to real economic development for the citizens of Maryland, and that's why they should be investing more, not less in this type of program.

Mr. Slanina: In your application, you discussed how it's so important to convey your successes to state legislatures. Is there one particular quantitative measure that's most effective that you've reported to state legislators that really piqued their interest?

Ms. Connolly: I'll tell you what's the most important to state legislators. That is when I speak to an individual legislator, which is not often because we are precluded from lobbying, but we can provide information. I speak to state legislators one at a time, and I come in hand with the projects that we've done with companies in

their district. That is really the single most important thing that creates an impression on them. These are the folks that vote for them, these are the companies right in their district. We show how these projects lead to direct impact in their district. Nothing works like a particular testimonial of a particularly successful project in their district. We can show that all across the state too in areas that don't have large university presence there, but they've been able to access the university's expertise to leverage that outreach to create some economic development for example on the eastern shore of Maryland.

Mr. Slanina: A lot of the listeners of this podcast may feel, wow this is a really great program; we'd love to replicate it within our communities, within our states. Is there a critical component of the program if excluded when attempted to be replicated in another state would really limit its effectiveness?

Ms. Connolly: I think that there is. I think that one could make an argument that you could do this in an organization, for example that was not affiliated with a university. One of the keys to our success is that we are imbedded within the university system, and that we know our faculty pretty well, and we have good relationships with them. The fact that when we go to get diligence from other faculty members, being part of the university is sort of a professional courtesy to provide the reviews that we need and the diligence on these projects.

I think that credibility might be lost if you were to try to do this program outside of the university setting. While normally you wouldn't think to look to a university to play this type of role, certainly some universities have been increasingly good at this sort of thing. I think you should resist the temptation to not have a dwelling within the university.

Ms. Skipper: We appreciate you sharing today with us these best practices. Are there any additional lessons learned from administering this program?

Ms. Connolly: I think that the length of time that the program has been around certainly contributes to its success. Many of these similar efforts that are newer, you haven't yet seen the longevity kick in, and really the time value of having that over the years that we've been involved in this. I know of four other programs that are fairly similar to MIPS around the country, and they are all quite a bit newer than we are. I would say that lessons learned are: give it some time and really plan for the future by investing in these things now. If you look at some of the key projects that we've done, one great example is Hughes Network Systems, the company in Maryland that brought you Direct TV. They actually

designed delivery of internet via satellite through a professor here in the electrical engineering. His algorithms really began the basis for that entire industry. Really he played a key part in creating the product, which is now called Hughes Net, and also created that whole industry. Without his expertise, where would we be without it in terms of that particular project?

I think that sort of message is important to show people that this is something that if you plan for now, you will reap many times more benefits in the future. That company of course, also hires our graduates and continues to pay taxes in Maryland, and continues to hire folks in Maryland. In this day and age, that is really we think the way to propel yourselves forward in the new economy is by, and you know this very well at SSTI, by standing right on the bleeding edge of new technology-led economic development.

For more information about MIPS, please visit: <http://www.mips.umd.edu/>.
More information about the Excellence in TBED awards is available at:
<http://www.sstiawards.org/>.