The Economics of Software Performance Engineering

Making the Business Case

Craig Hanson
Chief Technology Officer
DST Innovis
Craig_hanson@dstinnovis.com
Making the business case

- You will need to prepare the proper materials for those who will be making the go/no-go decision
  - Understand your audience
  - Do your homework
  - Convince a sponsor
The people that you work for speak, think, and dream in a different language. It is the language of the investment banker. The language of the accountant. As you propose to move performance evaluation earlier into the development cycle, you most assuredly will get resistance. That resistance may look like ignorance to the skilled technical thinker, but in fact it is not ignorance at all. It is the natural reaction of an accountant. Why should I invest…I don’t see the return
The tools of the executive

- The people that you work for think in the following terms
  - Profit & Loss Statements
  - Risk assessments
  - Revenue
  - Cost
  - ROI
  - Customer satisfaction

What you are feeling is as simple as a communication problem. Since you are the one holding the great idea and they are the ones holding the checkbook that can make your dream a reality, it’s your job to learn how to communicate. To do this, you have to learn to speak their language.

You see if you approach an executive with this proposal and you speak in your language….Jprobe, Atomics, Utilizations,… Any argument you give will fall on deaf ears, and you will walk away muttering something about the boneheads that run the place. If you approach them with the economic argument why they should proceed. I guarantee they will listen. The burden is on you.
Before you approach any executive with SPE, do your homework.

Start with a heuristic evaluation of the help desk calls.

Quantify the difference in the cost of a feature related issue and a performance issue. Figure out what you are spending supporting performance issues. Determine the costs associated with SPE, How does it fit into the process. You will have to have this well thought out. The person with the plan wins. Especially when the economics are behind it.
This is an example layout for making the economic case. The layout was taken from the book “Making the software Business Case” by Donald J. Reifer. We have found that this is a easy layout for making the case, and there is an accompanying reference book. The issues that are in layout will be your actual case. Others on the panel will discuss in detail the chart of accounts.
When filling in the economic analysis you need to find all of the costs that will incur as well as the costs that you will avoid. Examples of the costs are the costs at the help desk, the costs that are in production support, and refactoring code that has hit the field. Determine your costs per issue and determine the number of issues.
Once you have put science behind each of your costs and benefits, put them in the rolled up model. This will be your first view of how solid your case is. Fill in the intangibles. At times you can put the real costs that are unquantifiable into here.
Finally you can roll up your costs into a five year projection. In this case, you are saying that you will be spending 1.6 million for a return of 6.7 million. Sounds pretty good.
Get an executive sponsor

- Ask someone from finance to look over your financial model.

- Make your case to your management team and your executive.

- Ask your executive to become a sponsor of SPE

This is a very important step. Pass the numbers by a finance person. They will gladly look it over if you tell them that you are looking for ways to reduce costs. This really gets these folks smiling. It also helps when you go to obtain your sponsor to say “Yup, Frank from Finance has looked these over.”

Once all of your homework is done, you can start socializing the concept. Only you can know the politics of your specific situation, but ultimately your entire company will need to be on board. To do this, you will need an executive to be on board and backing you. Someone will need to represent this in the board room, where every decision that requires major spending is made.
This is a book that I highly recommend for reference in speaking the language of the board room.