**Leading an ERC: Lessons Learned[[1]](#footnote-1)**

***Bill Costerton, Director***

***Center for Biofilm Engineering, Montana State University***

“The three "pillars" of the ERC program are research, education, and technology transfer. However, it is clear that the first (research) is a *sine qua non* in that there are no educational or technological advantages to be gained from research if it is not outstanding. Experience has also taught virtually all ERC directors that NSF site visit teams place a very heavy emphasis on research when assessing the extent to which an individual ERC has succeeded in its mission. If an ERC is to be a "better idea" center, rather than a "where do we get the money" center, there must be a clear linkage between the strategic plan and research management and another linkage between research management and the management of finance and of education. In other words, decisions about the investment of center resources in specific research projects and in the support of students in specific research areas must be guided by a strategic plan in which the center is united. When that critical time of each year rolls around, when decisions have to be made about whose project gets supported, the director will find him/herself in a situation that will be dictated by choices he/she has made at the outset. Either there will be a clearly stated strategic plan that makes the finance committee's job possible, or there will be a cat fight and the director will make all of the final decisions. If there is a clearly stated strategic plan, the director should be vigilant to discern the real authorship of that plan. Virtually all human groups have a strong tendency to form small "cabals" of insiders—giving rise to the axiom, "All men are equal but some are more equal than others!" The strategic plan of a center can be hijacked by a single strong personality, often the director, who simply tells the troops that this is what he or she has decided. The smaller the cabal, the more NSF money there is for each individual.

To facilitate the growth of an ERC and the realization of its vision, the director should set up effective mechanisms for the intake of new people with new ideas. An informal survey of current directors clearly shows that center‑run grant competitions are a poor mechanism for this intake. Because most center directors have actually sacrificed or heavily modified their personal research programs in favor of the center's interests, these people have both the motivation and the detachment necessary to welcome new talent into their ERCs. In most cases the director is well advised to make the intake of new people—who are necessary for the realization of the center's vision—a very personal affair. They can be scouted, on campus or by recruitment, and their work can be steered towards the center's interests even before they are introduced to the ERC. They can then be invited to give seminars in the center's programs and/or invited to ERC retreats, to see if their fresh ideas strike a responsive note with the center as a whole. They can then be quietly inserted into powerful center committees that modify the strategic plan. Their presence and their fresh ideas can break up the "old boys’ clubs" from within and the center can start to breath fresh air.

An ERC is an excellent power base because it represents a large amount of research money, and it will attract "power brokers" who will hope to become entrenched as a cabal, much like Senate committees in the Congress. The director of an ERC must make a choice as to whether he/she will become the chief power broker ("the meanest son‑of‑a‑bitch in the valley"), the leader of a small and select cabal of power brokers, or the arbiter of power who balances the process for the good of the center.

I have some personal experience with the management of research centers in Canada and Australia and, most recently, in Japan. The primary lesson that I have learned from these experiences is that even the most promising centers, founded on the most talented teams of researchers, needs a constant flux of new people and new ideas to keep its "edge." All these centers have tried to stay ahead of the curve by recruiting excellent graduate students and postdocs, but very few have recruited new faculty members and given them senior positions with real access to center resources. Some of these centers have begun to decline in impact and productivity less than three years after their inception. It is clearly NSF's intent that each individual ERC should continue as a research/education/technology transfer entity long after its support is terminated. The ERCs that we build must be built to last. For this reason, the director of an ERC must resolve to build an effective intake mechanism into his/her center, choose the new team members with exquisite care, and choose research management structures that allow the newcomers to share real power with the old guard.

1. Costerton, William (2000). ERC Best Practices Manual, Chapter 2, Center Leadership and Strategic Direction (first ed.), section 2.3.2.2. [↑](#footnote-ref-1)