New resources are always needed to help colleges and universities begin new science, technology, engineering, and mathematics (STEM) projects. As faculty and administrative leaders conceive and develop curricular programs and capital construction plans during these times of tight campus budgets, new sources of funds must be sought to pay for innovative projects in science, technology, engineering, and mathematics. Expenses that often fall outside college and university operating budgets include:

- support for new faculty positions
- new and modernized science and engineering facilities
- upgraded laboratory equipment.

Scientists also seek funds for summer faculty-student research and for joint programs with local high schools. Partial funding for these new programs may come from such federal agencies as NSF, NIH, or NASA, but their grants are limited to specific programs and generally won’t cover the total costs of the projects. Thus, private support becomes crucial, and the approaches to securing this type of funding are very different from submitting federal applications.

Why pay attention to private foundations?

In 1995 for the first time, the number of private foundations in the U.S. exceeded 40,000, nearly doubling since 1980. Now there are over 60,000. These foundations’ total assets are approaching $500 billion, and their total annual grants are over $20 billion. Foundations, however, form but a small percentage of overall U.S. philanthropy at about 8 percent. The largest percentage of private donations comes from individual gifts. Foundation contributions are, nevertheless, very significant for two reasons:

- their size and visibility
- their boards are often composed of regional and national leaders.

Foundation grants often provide validation of a curricular or capital program. The following are some practical suggestions for developing compelling cases for STEM programs and for communicating these ideas to foundations. While the focus here is on foundations, many of the same principles and techniques can apply to corporations and individual donors.

The team approach

Expert college and university development officers who are responsible for foundation fundraising have come to realize that they should not try to go-it-alone with foundations. They understand that faculty members should conceptualize programs, deans and department chairs should set academic priorities, and trustees and alumni can open doors at foundations. Because many foundation staff members come from the academic world, they often prefer to work directly with faculty representatives rather than with professional fundraisers.
The team approach gives the college a number of options to consider regarding how and when to approach foundations. The team may be a campus standing committee composed of faculty, administrators, students, and volunteers, coordinated by the director of foundation relations. Or it may be an ad hoc committee specifically assembled for a major fundraising project.

Many campus representatives can participate in creating and submitting successful proposals. The president of the college is always a key member of the foundation fundraising team.

The president can assert, either in the cover letter to a proposal or in a personal meeting at the foundation that the STEM project is an institutional priority and that college funds are also being committed to this timely science program. Such leadership endorsements assure the foundation that the grant will have a significant impact on campus programs.

Preparing the case for excellence

Team members should make internal preparations before submitting any written applications to foundations. The first step is realizing what foundations are looking for in institutions that might be deserving grant recipients. Foundations like to support winners.

They are looking for institutional excellence, which is first revealed in good people, especially in productive faculty and students. Faculty teaching awards, research records, and publications are taken into consideration. External validation, such as NSF or NIH grants or corporate support, is also helpful.

In addition, many projects today are funded with combinations of federal and private grants, and foundation staff members are knowledgeable about the merits of peer-reviewed government awards. Some foundations will provide matching funds for federal grants.

Foundations may also look at student enrollments in STEM courses and alumni achievements in graduate and professional schools. Statistics about graduates’ successes in science and engineering careers are also relevant. Even if a specific proposal requests funds for constructing a new science building, the caliber of the people working in this facility is most important to foundations. Preparing a STEM fact sheet to append to proposals is time well spent. Foundations also look for dynamic, not stagnant, colleges and universities. For example:

- enrollment should be stable
- endowment should be increasing (as the economy permits)
- annual support should be substantial.

Some foundations are particularly interested in diversity, and others may ask about the availability of student financial aid. All of these indicators can help form a foundation’s positive impression of the college, and the general assessment of institutional excellence will affect the analysis of specific STEM proposals.

Preparing the case for need

In addition to excellence, a case for needing the foundation’s support must also be made. Foundations annually receive far more high-quality proposals than they can possibly fund in any given year. They, therefore, look for projects that are essential to the applicants and projects that may also have an impact beyond the specific institutions.

They are impressed by model programs that others can emulate. They also seem particularly interested in collaborative projects, perhaps among several colleges, an undergraduate college and a research university, or colleges and K-12 schools.

Foundations feel that they are getting more for their investment if multiple institutions can benefit. Of course, you should never manufacture a collaboration just to pursue foundation funding. The foundations will see through artificial coalitions. Wait until a genuine opportunity for furthering the college’s mission comes from cooperation, and then seek support for that endeavor.

Foundations have traditionally been interested in providing grants that will leverage support from additional donors. For example, they may announce grant programs for constructing buildings that challenge colleges to raise the balance needed to complete the facility.
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Or foundations may provide three-year support for a new faculty position and challenge the grant recipient to raise enough funds to endow the professorship in perpetuity. If a challenge grant fits in with the college’s overall fundraising goals and if the timetable for completing the matching component is feasible, by all means take advantage of this opportunity.

Start with targeted approaches to a small number of foundations.

One-pagers

An important exercise in the fundraising process is distilling your idea into a “one-page” case. Faculty team members can participate in the fundraising process by supplying ideas and succinctly summarizing their plans for new science and engineering programs in a one-page narrative statement, plus a one-page project budget.

These often challenging descriptions require principal investigators to conceptualize and condense their ideas and needs into a small space. A guide on information to include in the one-pager can be the standard components from a journalistic news story’s lead paragraph— the 5 W’s and an H:

- Who will carry out the project?
- What are its basic components?
- When will it begin and be completed?
- Where is it located?
- Why is it essential?
- How will its goals be accomplished?

Also, “how much will it cost?” can be detailed in the attached budget page.

These one-pagers not only provide an efficient project description that can at some point be expanded into a full proposal, they also supply presidents, deans, or development officers with timely and accurate information about faculty plans and needs. These summaries can be easily reviewed and communicated to prospective donors. One-pagers can streamline the fundraising process.

Identifying prospects

Another necessary pre-proposal activity is identifying a few appropriate foundation prospects. Rather than mining foundation directories or web search engines for the names of hundreds of foundations that have made grants to support biology or chemistry programs, it is far more productive to have development staff members use their skills and resources to identify five to ten foundations that are most likely to support the modernization of a biochemistry curriculum or fund students’ summer research.

Start with targeted approaches to a small number of foundations. Most major foundations now have websites which are generally more up-to-date than printed sources, and the development office will have additional resources to augment the information on these websites.

Development staff members will also know the college’s history with these foundations and can help assess the likelihood of their making a grant in the near future. If the science project is specifically tailored for one campus, start with local and regional foundations. Or if it is a unique or model program, consider approaching national foundations.

Remember, a request to a large national foundation requires a special approach stressing the significance of the applicant’s work to a broad scientific or educational constituency.

Cultivating foundations

Getting to know foundations is essential before submitting anything in writing. The development officers’ term for the process is “cultivation,” emphasizing the importance of tending to plants or prospects before any vegetables or grants are harvested.

Fundraisers can find out how specific foundations prefer to be approached, e.g. letters, phone calls, visits, e-mail messages. Then a personal contact can be made with a member of the foundation’s program staff. Avoid sending form letters to unnamed CEOs of foundations, even if their guidelines suggest that this is their standard procedure.

Use all members of the foundation fundraising team to help make personal contacts. Ask:

- Do any trustees or deans’ advisory board members know persons at foundations?
- Are any alumni working at foundations?
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- What about parents of current students?
- Perhaps some faculty members attended college or graduate school with foundation staffers?

Use this information in appropriate and tasteful ways. For example, a college trustee’s phone call or e-mail message to an old friend in New York with key foundation connections can make a foundation more receptive to a university president’s visit. Personal relationships are the most effective door openers.

Such contacts should not involve bringing undue pressure on a foundation, and they certainly won’t guarantee a grant. They can, however, attract the foundation’s attention to an applicant and help a proposal move to the top of an ever-growing pile of paper on the program officer’s desk. Then, a strong institution with an exemplary project will have a better opportunity to compete for funding.

Preliminary letters

Follow directions exactly to avoid alienating program officers, even if the guidelines for content, format, or number of copies may seem arbitrary. Many foundations have begun to require a two- or three-page introductory letter of intent.

This should not just be a casual note saying, “We would really like to submit a proposal.” The introductory letter is a vital element in the foundation’s screening process in which winners proceed to the invited-proposal stage and applications of losers are rejected.

This letter provides the opportunity to present a case succinctly in an easily expanded version of the one-page project précis. Foundations may also request supporting documents, project budget, or references to accompany the letter.

Foundation staff or board members carefully review these letters, and they are looking for compelling reasons to invite applicants to proceed to the next stage. Therefore, pay particular attention to this initial part of the application process because it may be as important as the longer written proposal.

Proposals

The full proposal is generally an expansion of the introductory letter. Continue to make a case with facts and figures about the project. It is likely that additional communication with the program officers will take place by phone, e-mail, or in person, and they will have suggestions about information to include in the proposal.

Don’t hesitate to call the foundations for clarification of their procedures. One essential component of the proposal should be an explanation of what will happen after the grant runs out. Explain how the project will continue after the foundation’s support is concluded. If the proposal seeks three-year funding to implement a new mathematics curriculum, how will this program be supported in years four and five?

If the proposal requests a grant to purchase a new spectrometer or magnetometer, how will the instrument’s maintenance costs be covered? There isn’t one specific right answer to these questions. Foundations just want to be sure that all future possibilities are considered and that their money will be invested productively.

Foundations today also seem particularly interested in evaluation of programs and dissemination of results. Be prepared to include descriptions of these plans in proposals. If expenses are involved in hiring an evaluator or in developing a website for disseminating program models, these costs are justifiable items in the budget request to the foundation.

The tone and style of STEM proposals may vary with the expertise of the foundation staff members. If the program officer has a PhD in physics, it is clear that using technical scientific terms will be no problem. In any case, never talk down to or patronize the reader of the proposal.

In general, it is advisable to write as if addressing an audience of informed scientists who are not specialists in the specific field described in the proposal. Consider employing the style of the articles in the front section of Science magazine, rather than the technical style of the research papers in the back of the journal.

Submit proposals well ahead of a foundation’s announced deadline. Most private foundations have small staffs who are inundated on deadline day. If a proposal is received several days before the deadline, that application might receive especially appreciative and careful attention.
Office and site visits
Whenever foundations permit visits to their offices, take advantage of the opportunity to make a case in person. Ask the foundation representatives which STEM team members they would like to see—president, dean, faculty, development officer, trustee. How many should attend the meeting, perhaps two or three?

Invite representatives of private foundations to visit the campus. Seeing effective science programs in action can be extremely compelling.

Follow their lead in arranging this visit. Also, make sure that all representatives are well prepared to discuss, not only the specific proposal, but also any aspects of university organization, curriculum, or finances that may be of interest to the program officer.

Always invite representatives of private foundations to visit the campus. Seeing effective science programs in action can be extremely compelling. Carefully select faculty, administrators, and student participants for the visit and stress concise, informative presentations. This is an opportunity to showcase outstanding individuals who will benefit from the foundation’s grant.

Take time to practice presentations before the visit. Run through and critique the talks and laboratory demonstrations, and avoid long or repetitive speeches. Make sure that the visit focuses on the ways in which the foundation’s support will improve an already high-quality program.

Thanks and stewardship after a grant is awarded. Assuming that the STEM proposal is well presented and effective and that a grant is made in due course, personal relations with the foundation should continue throughout the grant period.

First, several team members, including the president, the principal investigator, and the project administrator, should send thank you letters. The development team member can coordinate the letters so that they address several different aspects of the grant’s impact.

Any requested narrative and expenditure reports must be submitted to the foundation in a timely manner. These are the minimum requirements for grant stewardship. Always send accurate and honest reports. Foundations are generally happy to discuss any changes of plans that result in the course of a multi-year award.

Designate one campus liaison to communicate with the foundation, e.g. the principal investigator or the development officer, who will be responsible for discussing any grant details with the program officer at the foundation.

It is appropriate and productive to stay in touch with the foundation in the years after the grant has been completed. For example, foundations appreciate receiving copies of research articles and books by faculty members whose work the grant has supported. They might also like statistics documenting increased enrollment in new curricular programs started with their grants.

After a number of years, send news of successful scholarship recipients who have become science professors, physicians, or entrepreneurs. Or describe how 600 colleges throughout the world are now using the technology curriculum the foundation’s grant initiated five years earlier.

Why bother with this long-term personalized stewardship? The effort is valuable because foundations have long memories and keep detailed grant files. When the university re-applies to the same donor at some future time, the stewardship materials from the initial grant will provide positive reinforcement for the new proposal.

This long view, which will probably involve many different team members, underscores the importance of treating foundations like individual donors rather than like faceless entities. Framing the STEM case carefully, personalizing submissions, and following up in the years after the grant should improve relationships and success rates with many private foundations.