



6.3 Financial Management

Once the Cooperative Agreement award has been received and reviewed by the university research office, a notice of award is sent to the Principal Investigator. The notice should contain the award/proposal number, budget period, any cost-sharing requirements, a continuation statement, terms and conditions, the Principal Investigator and key personnel, the sponsor's code for type of funding, period of the award, report dates, and a copy of the full Cooperative Agreement. These are key documents for every ERC.

6.3.1 Developing a Financial Management System/Chart of Accounts

A new center then needs to establish a financial management system in order to allocate and disburse funds and begin work. The system should reflect the interdisciplinary nature of an ERC and the complex program reporting requirements, and should function in compliance with federal, state, and institutional regulations. It's important to work with the university accounting department to design a Chart of Accounts (COA) and determine how the shadow system will interact with existing institutional systems to manage all center sources of support and expenditures. Read the Guidelines for ERCWeb Data Entry to understand the level of detail required. Give careful thought to the coding system as well, since this is the heart of the center's internal reporting structure. For example, some centers establish a "parent-child" account relationship in order to maintain stronger control of subsequent resource distribution. The "parent" account(s) may be sub-divided into various "child" accounts for the purpose of distributing funds to the proper research thrust and sub-thrust areas. Keep in mind that "center control of funds" is a key ERC management principle and impacts reporting in all areas.

Critical Questions

- Does the university provide financial management information in a timely manner? Will reports reflect activity and encumbrances immediately and give an accurate report of funds remaining?
- Do the codes embedded in the university's central system include all of the expense and revenue categories required for ERC reporting?
- Does the general ledger system allow posting of "soft" money or "pre-encumbrances"?
- Is the system interactive or query-only? How are the parameters for queries set?
- Can the center's shadow system be linked with the university system? How will the ERC's system records be reconciled with the central ledger?

The center will need to develop the operating budget and then determine the schedule for routine and in-depth budget reviews. Periodic summary activity reports or spending projections may be required; their frequency will depend upon the complexity of the budgets and the needs of the center management team, thrust leaders, individual PIs, and the university administrators. Evaluate the system from each of these "customer" perspectives to see if the necessary detail is captured. The structure should help to organize, support, and enhance center activity, but not rule the strategic planning process. Ensure that all on the leadership team understand the center budget principles.



6.3.2 Time Periods

In establishing the system and developing budgets, it is essential to understand the reporting time periods (Award and Reporting Years; Current, Prior, and Proposed) and concepts such as funds that are “received” or “promised.” Refer to the [Guidelines for ERCWeb Data Entry](#) and be sure to make use of the glossary. The Award Year will be based upon the award date of the NSF Cooperative Agreement and will be noted in all official correspondence. The Reporting Year is established by the center in the first year of operation to facilitate consistent data reporting due to the fact that the Annual Report is submitted before the Award Year is complete. Once set, these dates do not change over the life of the center. Other sources of funding may have different fiscal periods, and these differences will have an impact on the management of budgets, revenues, and expenses.

Critical Questions

- Which funds can be "rolled forward"? (Must you "use it or lose it"?)
- How is "carry forward" calculated and managed? Is carry forward managed consistently at each partner institution and is it sponsor dependent? Clarification is needed to avoid reporting problems.
- Will you need to budget split fiscal years for revenues and expenditures? How will you reconcile different fiscal years in summary reports for all funds?
- How will you "close" your books at the end of each fiscal year? What steps are needed to ensure that internal re-budgeting decisions are posted within the central system?
- How will you manage grant close-outs and final reporting?

6.3.3 Financial Support

Financial support for the ERC comes from many sources, and the way the institution handles the funds might not match the way the support is reported to the ERC program. It is important to know the type, sector, location, and size of each organization that provides support. It is also necessary to understand the type of support and value of the support that is being provided. The institution may differentiate between grants, cooperative agreements, supplemental awards, contracts, gifts, and membership fees for account setup, and then the ERC program reporting will require additional specificity. Refer to the [Guidelines to ERCWeb Data Entry](#) for specific details.

Key Definitions

Direct Costs – Costs readily identifiable and related directly to the goods or service provided. Examples include salaries (including tuition remission), fringe benefits, general operating expenses such as materials and supplies, travel, facilities, and equipment.

Direct Sources of Support – Funds provided directly to the center and identified as either “Restricted Cash” (for a purpose specified by the sponsor such as an ERC sponsored project) or “Unrestricted Cash” (no specific purpose specified).

Indirect Costs – The overhead cost charged to a grant or contract by the institutional sponsored program’s office. Also referred to as “overhead” or “facilities and administrative costs.”



Indirect Sources of Support – Funding to an ERC faculty member's department for a project that is vital to the ERC's research and is in its strategic research or education plan. These projects are called "associated projects." Only direct costs for associated projects should be reported (no indirect costs or reserves remaining). Indirect support is reported at the project level in Tables 2 and 11 and collectively in Table 9 on ERCWeb.

***Tip:** Include specific language regarding how financial data should be reported in the subcontracts to partner institutions.*

In-Kind Contributions and Gifts – If the center is the beneficiary of in-kind support (new construction, new facilities, visiting personnel time, etc.), the value of these contributions or gifts will need to be determined and recorded. Become familiar with university policy and procedures for recognizing such gifts as revenue and recording them in the property inventory.

***Tip:** Collect in-kind documentation throughout the year and, ideally, as soon as the contribution is received, but definitely before the end of the calendar year. Companies will want their records to accurately reflect contributions for tax purposes. Document the value with a letter signed by the contributor and verify the amount.*

Cost-share – It's important to clarify terms such as "cost-sharing" and "matching," as they may have different interpretations at the agency, program, and institutional levels. Cost-share requirements for the ERC program will be spelled out in the NSF ERC Cooperative Agreement, and the institutional policies will impact how cost-share is implemented and documented. Cost-share certification is required yearly, so it is useful to work with the Authorized Organizational Representative (AOR) of the lead institution to determine how this will be accomplished. The subcontract agreement should specify what is required of the partner institutions.

6.3.4 Budgets/Re-budgeting

An ERC must create and maintain budgets by expense category as well as by function, for reporting purposes and for center management across thrusts and institutions. The requirements are detailed in the Guidelines for ERCWeb Data Entry. Re-budgeting is often required in response to the annual site review or sponsor needs. Although the process can be time consuming and complex, it may be necessary as milestones are achieved, timelines fluctuate, and strategic plans evolve. Effective financial management strategies make best use of total resources and manage cash flow aggressively.

6.3.5 Expenditure Budget Categories

The ERC Expenditure Budget includes the expense categories that match the standard NSF Form 1030. Output of this information is displayed in Annual Report Table 10.

1.
Salaries – Senior personnel
2.
Salaries – Other Personnel
3.
Fringe Benefits
4.
Equipment
5.
Travel
- 6.



Participant Support

7.
Other Direct Costs

8.
Indirect Costs

6.3.6 Functional Budget Categories

The ERC Functional Budget is input to the ERCWeb on several screens and the output is displayed in Annual Report Tables 8 and 8c.

- Research Thrust
- Education Programs
- Pre-College Activities
- University Education
- Student Leadership Council
- Young Scholars
- REU
- RET
- Assessment
- Community College Activities
- Other (explain in narrative)
- General and Shared Equipment
- New Facilities/New Construction
- Leadership/Administration/Management



- Industrial Collaboration/Innovation Program
- Center-Related Travel
- Residual Funds Remaining
- Indirect Cost

Tip: It may be useful to develop initial budgets for each major funding source, documenting the intended use or purpose of separate funds and identifying any restrictions or cost-sharing requirements.

Tip: The return of Facilities and Administration (F & A) funds, also referred to as “overhead” or “indirect,” is a significant factor in the budget of some centers. Take the time to understand how this is calculated at your institution and incorporate this into the budget.

6.3.7 Leveraging Funds

The concept of “leveraged funding” is important for the achievement of ERC goals. By design, projects are highly interwoven and dependent upon one another, and the budget for an ERC does not come solely from NSF. The center’s budget may be complex, reflecting multiple funding sources with different award periods and different expectations. Utilize funds to maximize the return on investment by each sponsor. A mixture of long-term and short-term awards means that the center budget may exceed the limited time frame set for most university budget development processes. Allocations will cross department, college, and institutional boundaries.

Reporting on Associated Projects can be complicated, as there is judgment involved in determining the percentage of the award that is applicable, and the start and end time periods will vary. If the award is split funded and treated as such in the University accounting system up front, then the center will have control of the funds and reporting is more straightforward. If not, then the rules for Associated Project reporting apply.

Key Definition

Associated Project – A project that is central to either the research strategic plan or education strategic plan and that is awarded to the home department of an ERC faculty member. Associated project funds are not controlled by the center and are reported as indirect sources of support. Only direct costs for these projects should be reported (no indirect costs or reserves remaining).

For associated projects whose funding is part of a larger award that includes faculty outside the center, include only the funding percentage that is directly in support of the center’s strategic plan or vision, and only the percentage budgeted for the Current Award Year. It should be documented how this prorating was calculated.

6.3.8 Financial Reporting

The financial reporting for the center will be shaped by the ERC program requirements as outlined in the reporting guidelines and in conjunction with existing institutional policies and the center management needs. Work to understand the ERC program requirements and then determine what variations or additional information may be needed. Maintaining documentation is critical for audit purposes and the ERC leadership team should be able to justify and backup everything that is submitted in the Annual Report. Be sure to also follow institutional retention policies. The following information must be easily accessible either centrally or within the ERC:



- Proposals and revisions or amendments
- Award notice with terms and conditions
- Budget and expenditure detail
- Cost share documentation
- Subcontracts with all associated documentation
- Equipment requisitions
- Service agreements
- Financial reports, including narrative/technical reports
- Invoices
- Project/grant close-out documents
- Agreements and MOUs
- Checks received as payments
- In-kind donations documentation of value
- Industrial relationship correspondence if a membership agreement is not in place.

Tip: Remember that final reports may be required by the university as well as each sponsoring agency as part of the grant closeout requirements. Detailed information on expenditures, residuals, personnel (including person-months per category), technology licensed, patents, publications, and a research progress report may be needed.

6.3.9 Financial Accounting

Financial accounting functions may be performed by the university central accounting office, department and/or ERC staff. There are varying levels of authority required for transaction processing and approvals, so work to confirm institutional role expectations early on and create efficient procedures. Financial accounting tasks include:

- Account set up and maintenance



- Budget creation and maintenance
- Membership and service fee invoicing
- Accounts Payable
- Accounts Receivable
- Expenditure review and projections

Key Definitions

Cash Basis Accounting – records revenue when received, records expenses when paid.

Accrual Basis Accounting – records revenue when earned (but not necessarily received), records expenses when incurred (but not necessarily paid for).

6.3.10 Pre-Award Spending Authorization

A PI may sometimes request authorization to begin spending before the official award has been received by the university. This will require sponsor confirmation of the award amount, start and end dates, and an estimate of when the formal award will be processed. It can be useful to set up accounts and begin spending as soon as notification is received, so look into the institutional requirements for pre-establishment of accounts. Pre-award authorization may also facilitate the distribution of continuation or renewal funds.

6.3.11 Human Resources

The financial management of human resources is integral to center operations. Personnel and positions change over time and the systems should be flexible.

Key Considerations

- Development of position descriptions
- Tracking staff appointments, changes, and terminations
- Payroll processing
- Effort reporting
- Compliance with union requirements
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Negotiation/processing of classified vs. professional positions

- Resolution of Visa/citizenship issues

Tip: Research universities are required to maintain an effort-reporting system that allows faculty, staff, and student employees to certify the portion of their total effort expended in support of each sponsored project. Be sure to understand the institutional effort reporting system when making appointments or salary commitments.

6.3.12 Purchasing

The university will have established policies and procedures for purchasing goods and services that adhere to federal regulations. The cost principles governing expenditures of federal funds and procurement procedures are contained in the Office of Management and Budget publication, [Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards 2 CFR Chapter I, and Chapter II, Parts 200, 215, 220, 225, and 230](#).

Design a system to support the acquisition of materials, supplies, and equipment in a timely and efficient manner. Determine responsibility for processing and tracking purchase documents, approval of acquisitions, and processing of payments. Centralized purchasing functions allow for strict monitoring and control of center funds. Decentralized systems may seem more efficient, but may not facilitate collaborative research as effectively. Decisions regarding purchasing strategies should be made early on and communicated to the entire center leadership team.

If funds are available for physical plant/infrastructure needs, the center will need to manage the funds and be responsible for inventory records and property accounting. In some cases the expenditures for physical plant will also meet cost-sharing commitments. Refer to institutional policies regarding depreciation of equipment, as this is often handled differently at each university.

6.3.13 Audits

The center is subject to both internal and external audits. Audits may be financial and/or operational and the purpose is to show that the ERC is well managed and in compliance with the institutional policies and federal regulations. An auditor may review all records, processes, and purchases. See Compliance section.

Tip: There isn't adequate time to organize your records during an audit; be prepared from the first day of the award setup. Retain as much detailed information as possible.

6.3.14 Proposals and Supplemental Funding Requests

Each university has a proposal submission process that complies with sponsor requirements and state and federal regulations. This is usually managed by the sponsored programs office. An ERC will submit renewal proposals in Years 3 and 6, and may also submit proposals to other sponsors or request supplemental funding from NSF throughout the life of the project. Each of these requests for funding will be managed according to sponsor and institutional requirements. There might be a published solicitation with very specific guidelines, or the funding opportunities might be more open-ended and flexible. Sponsors can include federal, state, or local government agencies, industry, academia, foundations, or non-profit entities. An ERC is expected to supplement the main award with funds from multiple sources, so submitting proposals and managing new awards and supplements is an ongoing activity which ramps up as plans for self-sufficiency develop.

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