

Accounting for Costs of Computer Software Developed or Obtained for Internal Use

POLICY STATEMENT

The AICPA’s Statement of Position (SOP) 98-1 requires that certain costs associated with computer software obtained or developed for internal use be expensed while others be capitalized. Internal use software is any software acquired, internally developed or modified to meet the University’s internal needs, with no intention of marketing the software externally. At Columbia University, software development projects that are expected to meet or exceed the threshold of \$250,000 are subject to this policy and project costs must be tracked in accordance to ensure compliance.

REASON FOR POLICY:

This policy describes the types of costs that should be capitalized and those that should be expensed and illustrates the correct FAS accounting structure to follow.

RESPONSIBLE UNIVERSITY OFFICE & OFFICER

Office of the Controller, Capital Asset Accounting, Karolina Ball, Manager
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WHO IS GOVERNED BY THIS POLICY

Any University employee who is responsible for purchases of goods or services, requests payment for purchases, and/or responsible for allocation of payroll charges that are related to software development projects.

POLICY TEXT

SOP 98-1 guidance indicates that the decision to capitalize or expense costs of developing or obtaining software for internal use should be based upon the stage of software development and nature of the costs incurred.

Stages of Software Development

SOP 98-1 discusses the treatment of software development costs over three project stages: 1) preliminary project stage, 2) application development stage, and 3) post-implementation/operation stage.

The activities normally conducted during each stage are as follows:

Preliminary Project Stage (Expense Costs)	Application Development Stage (Most costs should be capitalized)	Post-Implementation/Operations Stage (Expense Costs)
<ul style="list-style-type: none">• Conceptual formulation of alternatives• Evaluation of alternatives• Determination of existence of needed technology• Final selection of alternatives	<ul style="list-style-type: none">• Design of chosen path, including software configuration and software interfaces• Coding• Installation to hardware• Testing, including parallel processing phase	<ul style="list-style-type: none">• End user training• Application maintenance

According to the guidance, any costs incurred in the preliminary project stage should be expensed as incurred.

Capitalization of costs should begin when both:

- a. The preliminary project stage is completed, and
- b. Management commits to funding a computer software project and it is probable that the project will be completed and the software will be used to perform the function intended.

Capitalization of costs should end (and amortization begin) when all substantial testing is completed.

Costs to be capitalized

Allowable costs to be capitalized include the following costs incurred during the Application Development Phase:

- External direct costs of materials and services consumed in developing or obtaining internal-use computer software. (Examples of those costs include but are not limited to fees paid to third parties for services provided to develop the software during the application development stage, costs incurred to obtain computer software from third parties, and travel expenses incurred by employees in their duties directly associated with developing software.)
- Payroll and payroll-related costs (for example, costs of employee benefits) for employees who are directly associated with and who devote time to the internal-use computer software project, to the extent of the time spent directly on the project (Examples of employee activities include but are not limited to coding and testing during the application development stage.)
- Interest costs incurred while developing internal-use computer software (Interest should be capitalized in accordance with the provision of FASB Statement No. 34, Capitalization of Interest Cost.)
- Costs to develop or obtain software that allows for access or conversion of old data by new systems (any other data conversion costs should be expensed).

Note that all salary costs for individuals who are charged to the project should be capitalized regardless of the percentage of their time devoted to the project.

Costs to be expensed

Examples of cost that should be expensed as incurred are as follows:

- External and internal computer software costs that are incurred in the preliminary project stage.
- General and Administrative and overhead costs
- End user training costs incurred during any stage (including end user acceptance testing). This includes costs incurred by both the trainer and the trainee.
- Data conversion costs (e.g. purging or cleansing existing data, reconciling or balancing old and new data, creating new/additional data, converting old data to the new system).
- Internal and external costs incurred for maintenance. If costs cannot be reasonably separated between maintenance and relatively minor upgrades and enhancements on a cost-effective basis, such costs should be expensed as incurred.
- Costs related to upgrades and enhancements that do not result in additional functionality.

- Purchased or leased computer software used in research and development activities where the software does not have alternative future uses, and internal-use software if it is either a pilot project or is used in a particular research and development project (regardless of alternative future use).
- Costs related to re-engineering business processes

Other Considerations:

Upgrades and Enhancements

Upgrades and enhancements are defined as modifications to existing internal use software that result in additional functionality; that is, modifications to enable the software to perform tasks that it was previously incapable of performing. Costs for upgrades and enhancements that provide additional functionality should be capitalized or expensed based on the guidance above. Costs incurred solely to repair a design flaw or to perform upgrades that extend the useful life of the software without adding to its capability (i.e. migrating to a web based platform) should be expensed.

Phased Implementation

A software package purchased for internal use may consist of more than one component or module. Implementation of the modules may take place simultaneously or separately using a phased approach. If modules are implemented separately, SOP 98-1 will apply to each of the individual components or modules of the computer system.

- For each component or module of a software project, amortization should begin when the component or module is ready for its intended use, regardless of whether the entire software system will be placed in service in planned stages that may extend beyond the reporting period.
 - o Computer software is ready for its intended use after all substantial testing is complete.
- Separate FAS accounts should be set up for each module to ensure compliance with this requirement.
- If the functionality of a module is entirely dependent on the completion of other modules, amortization of that module should begin when both that module and the other modules upon which it is functionally dependent are ready for its intended use.

Bundled Products and Services

If the contract with the vendor is a bundled arrangement (meaning that it includes several components, such as software development and installation, training, and maintenance), we will need to unbundle the contract costs for accounting purposes to ensure elements are clearly identifiable as capital or expendable costs. The unbundling of the contract should be specified in the purchase order and should be clearly categorized as capital or expendable costs.

Business Process Re-engineering

SOP 98-1 does not address reengineering activities but references EITF Issue 97-13, "Accounting for Costs Incurred in Connection with a Consulting Contract or an Internal Project That Combines Business Process Reengineering and Information Technology Transformation" for guidance.

The EITF states that the cost of business process reengineering is to be expensed as incurred regardless of whether the business process reengineering is undertaken as a separate project or as part of a larger project that includes software development.

Therefore, the cost of the following activities related to re-engineering of business processes should be expensed as incurred:

- Current State Assessment: The process of documenting the entity's current business process, except as it relates to current software structure.
- Process Re-engineering: The effort to reengineer the current business process so as to increase efficiency or effectiveness or to meet new business needs. While some software packages cannot be modified or tailored to the current environment, changes to the underlying business process become necessary for successful implementation.
- Restructuring the workforce: The effort to determine what employee makeup is necessary to operate the re-engineered business process.

CROSS REFERENCES TO RELATED POLICIES

Capitalization of Moveable Equipment: <http://policylibrary.columbia.edu/capitalization-moveable-capital-equipment>

PROCEDURES

These procedures provide guidance for the proper accounting of internal use software projects that have already been approved and budgeted for. For assistance with obtaining project approval, funding or final Trustee approval, please contact the Office of Budget and Management.

To ensure proper treatment of expenses related to the development or acquisition of internal use software in the University's accounting system and financial statements, the following procedures for opening FAS accounts related to the project must be followed:

FAS Account Structure – opening accounts:

- 2 Subsidiary Ledger (SL) Accounts should be established for each project, or under a phased implementation, for each module or component of the software package that will be implemented.
 - o All SL accounts will map to one main GL account.
 - o Since SOP 98-1 applies to each module or component as a separate project in a phased implementation, segregating the accounting for each component will assist in determining when amortization of each module should begin.
 - o For each project, module or component, separate accounts should be established to segregate costs to be capitalized from costs to be expensed.
 - o Each SL account title should list the name of the software, the name of the module and either “operating” or “capital” to identify the nature of the charges to that account.

- To ensure proper treatment in the accounting system, the “operating” account must be set up under building 993 and the “capital” account must be set up under building 999.

Example of Appropriate Account Structure:

SL account Title: PeopleSoft: HR Module Operating Account
 SL account Number: 7-72435
 SL account Building #: 993
 Example of costs:

- Costs incurred during the Preliminary Project Phase
- Training costs
- Costs incurred after testing is complete
- Data conversion costs
- Overhead costs

SL account Title: PeopleSoft HR Module Capital Account
 SL account Number: 7-72436
 SL account Building #: 999
 Examples of costs:

- License Fees (Purchase Price)
- Consultant fees for implementing software
- Payroll and Fringe for employees directly involved in programming and testing during the Application Development Phase

FAS Account Structure – closing/freezing accounts:

- For each project or (module for phased implementations), capitalization of costs will cease when all substantial testing is complete and the system is ready to “go live.”
 - Within 60 days of the “go live” date, the Department must send a request to General Accounting [Link to form](#) indicating that the project has reached production and expenses are no longer eligible for capitalization.
 - The project end date will be added to the SL Capital accounts, placing a freeze on future charges
 - The SL operating account will remain open for at least 3 months from the “go live” date to charge any residual training or maintenance fees. At that time, the account will be closed unless the project team, with Budget Office concurrence, requests an extension.