

## Appendix A

### Summary of Accounting Rules for Internally-Developed Software Costs

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#### I. Understand the three stages associated with the capitalization of software.

The following are the stages and most common types of costs:

<b>Stage 1: Preliminary Project – MUST BE EXPENSED</b>
<ul style="list-style-type: none"> <li>• Conceptual formulation and evaluation of alternatives</li> <li>• Determining software performance requirements/specifications</li> <li>• Final selection of alternative</li> </ul>
<b>Stage 2: Application Development – GENERALLY CAPITALIZED</b>
<ul style="list-style-type: none"> <li>• Design of chosen path, including software configuration and software interface</li> <li>• Coding</li> <li>• Installation to hardware</li> <li>• Salary &amp; Wages and benefit-related costs if project is not on sponsored funds*.</li> <li>• Testing, including parallel processing phase</li> </ul>
<b>Stage 3: Post-Implementation/Operation – MUST BE EXPENSED</b>
<ul style="list-style-type: none"> <li>• Training</li> <li>• Software application maintenance</li> <li>• Upgrades that do not contribute to additional functionality</li> </ul> <p>Stage three begins when substantial testing is complete and the software is ready for its intended purpose and placed in service. Costs incurred after substantial testing is complete and the software is ready for its intended purpose but before a “go- live” date should be expensed. In addition, after a project goes live, there is typically a “stabilization period,” during which costs should also be expensed, unless the costs result in additional functionality. Additional costs incurred before or after these three stages for business process reengineering and information technology transformation are generally expensed.</p>
<b>Note on the Timing of Costs</b>
<p>The types of costs discussed under each of the three development stages may occur throughout the project. For example, coding and testing often occur simultaneously, and some training may occur during the application development stage. Regardless, for costs incurred after the preliminary project stage, apply the policy to the nature of the costs incurred, not their timing. Appendix C includes additional cost examples and their accounting treatment.</p>

- See Appendix A. II.B. - Payroll and payroll-related costs for employees are allowable on sponsored funds where sponsor terms and conditions require that funds be used exclusively on capitalized projects.

#### II. Capitalization vs. expense guidance

##### A. Costs to expense

All costs incurred in the first stage (Preliminary Project) and third stage (Post-Implementation/Operation) must be expensed. The tubs must also expense the costs related to data conversion from old to new systems, except for costs incurred to develop or obtain software that permits access to and conversion of old data. Conversion costs that must be expensed include purging or cleansing of existing data, reconciling old data with the new data in the new system and creating new/additional data. In addition, general and administrative overhead and training costs in all stages must be expensed. General and administrative costs include: project management salaries, space rental costs and depreciation of equipment.

B. Costs to capitalize

Costs associated with the second stage, Application Development, are generally capitalized with exceptions of sponsor funded payroll and payroll-related costs for internally-developed software.

Generally, application development stage costs which may be capitalized include: external direct costs (i.e., from third-party vendors) of materials and services.

Payroll and payroll-related costs for employees who are working on the second stage of the internally-developed software project are allowable on non-sponsored funds and on sponsored funds where sponsor terms and conditions require that funds be used exclusively on capitalized projects. Payroll and payroll-related costs for employees who are working on the second stage of the internally-developed software project are allowable on non-sponsored funds and on sponsored funds where sponsor terms and conditions require that funds be used exclusively on capitalized projects.

Any capitalization of Harvard labor costs on sponsored awards must otherwise meet the requirements for fabricated assets in the University Policy on [Financial Management of Property, Plant and Equipment](#) (PPE) and its appendices and also meet the requirements in this policy and its appendices.

Non labor (payroll) capitalized costs must be integral to developing the software to be capitalized. Integral costs include any material or supply that becomes a permanent part of the software development, any internal service center charges, and any external shop fees.

Conversion costs incurred to develop or obtain software that allows for access of old data or conversion of old data to the new system must be capitalized. Costs related to actual data conversation from old to new systems may **not** be capitalized.

The capitalization of costs begins when the Preliminary Project phase is complete and the University's management has implicitly or explicitly committed to funding the software project. At this point, it must be probable that the project will be completed and the software will be used to perform the function intended.

Capitalization ceases when substantial testing is complete and the software is ready for its intended purpose, or when the software is placed in service, meaning the software is accessible and ready for live transactions.

In addition, the University **strongly encourages** tubs to use the activity and subactivity segments of the 33-digit coding string to identify the specific development stages and types of costs incurred. For example, the activity and subactivity can be used to identify certain projects and their development stages, respectively. This tracking method is encouraged because it simplifies the cost tracking process and provides systems-based documentation for projects and their costs.

C. Subsequent upgrades and enhancements

Upgrades and enhancements to existing internally-developed software must result in additional functionality (i.e., modifications that enable the software to perform tasks that it was previously unable to perform) or must increase the useful life of the software by at least one year and upgrade individual unit costs must be \$5,000 or more as outlined in the policy.

III. Depreciation

Capitalized internally-developed software is treated as a software asset and generally depreciated on a straight-line basis over four years. Depreciation begins when the software is ready for its intended use, which occurs after all substantial testing is completed, and the item has been placed in service. If the use of one module is entirely dependent on the completion of other modules,

amortization of that module should begin when the modules upon which it is functionally dependent are ready for their intended use. The University's [PPE Policy on Capitalization and Depreciation Procedures](#) contain further guidance.

#### **IV. Impairment**

Capitalized internally-developed software costs should be written off when: 1) the software is still being developed but is no longer probable that it will be completed and placed in service, 2) the completed software is obsolete or no longer in use, or 3) the current economic value of the asset is determined to be less than its net book value.

The University's [PPE Policy on Disposal and Impairment Procedures](#) contain further guidance.