



HARVARD UNIVERSITY FINANCIAL POLICY

Responsible Office: Financial Accounting and Reporting
Date First Effective: 7/1/2014 under the
Title Accounting for Internally-Developed Software)
Revision Date: 01/01/2019
<https://policies.fad.harvard.edu/>

Appendix C - Examples of Accounting for Certain Types of Transactions for Internally-Developed Software

HUIT processes the following entry to reclassify costs originally expensed to other object codes to a work-in-process (WIP) object code:

EXAMPLE: HUIT has decided to develop a new accounting software application for their finance department. This software is expected to have an economic useful life of four years. Before the software development process was started HUIT estimated a total cost of \$1,215,000, of which \$730,000 was related to capitalizable costs of the second stage, Software Application Development (excluding training and general and administrative costs). Since the estimated capitalizable costs for the second stage of the development process are above the minimum required capitalization threshold of \$500,000 and the useful life of the software is more than one year, HUIT must capitalize the project. HUIT tracked and maintained records of all types of costs charged to the project at each stage.

During the first stage, Preliminary Project, HUIT incurred the following costs:

Evaluating the alternatives	\$ 150,000 (expense)
Designing the chosen option	<u>\$ 350,000 (expense)</u>
Total actual costs incurred in the first stage	\$ 500,000

All the costs incurred during the first stage are appropriately expensed as incurred; therefore, no additional accounting is required.

During the second stage, Software Application Development, HUIT incurred the following additional costs:

Coding the software	\$ 350,000 (capitalize)
Installing the software	\$ 150,000 (capitalize)
Training employees*	\$ 115,000 (expense)
Testing the software	<u>\$ 120,000 (capitalize)</u>
Total actual costs incurred in the second stage	\$ 735,000

The tub initially expensed the entire cost of \$735,000. However, costs incurred in the second stage, except for training costs, must be capitalized. The total costs to be capitalized are \$620,000 (\$735,000 - \$115,000). A reclassification entry must be recorded to move the expenditures to work in process (WIP) on the Balance Sheet. The following are three possible funding scenarios and the entries HUIT will need to record to reclassify the expense to WIP in each scenario:

NOTE: Any expense related to salary and wages as well as benefits, must be reclassified to WIP by crediting object codes 6230, "Recovery of Salaries+Wages, GENERAL" and 6370, "Recovery of Employee Benefits, GENERAL," respectively.

***NOTE:** Training (including training-related travel expenses) as well as general and administrative costs are always expensed, regardless of the software development stage in which they are incurred.

In the third stage, Post-Implementation/Operation, HUIT incurred the following additional costs:

Maintaining the application	\$ 50,000 (expense)
Training users	<u>\$ 65,000 (expense)</u>



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Total actual costs incurred in the third stage \$115,000

All the costs incurred during the third stage (Post-Implementation/Operation) are appropriately expensed as incurred. Therefore, no additional accounting is needed.

Upgrades follow the same guidelines as those for equipment. See the [PPE Policy, Appendix B](#) for additional guidance.

Scenario # 1 - The project is non-sponsored and internally funded (i.e., not debt-financed)

HUIT processes an AP adjustment expensed to other object codes to a work-in-process (WIP) object code, or processes a journal entry to move salary & wages and applicable benefits charged to non-sponsored projects to a WIP object code:

Debit object code 6811, "Non-Sponsored, Work in Progress^Equip>=\$5,000" (HUIT fund)	\$ 620,000
Credit the expense object codes originally charged or 6230/6370 for salaries and benefits	\$ 620,000

Each evening, an automated allocation entry is made to reclassify the amount charged to object code 6811 to object code 1150, "Equip WIP, Non-sponsored" as follows:

Debit object code 1150, "Equip WIP, Non-sponsored"	\$ 620,000
Credit object code 6811, "Non-Sponsored, Work in Progress^Equip>=\$5,000" (Equipment expense contra fund)	\$ 620,000

Also at the end of the month, the following computer-generated entry is made to record equity invested in capital equipment:

Debit object code 9336, "Transfers to/from Funds Invested in Equipment-WIP" (Equipment expense contra fund)	\$ 620,000
Credit 9300 series code "Transfers to/from Unrestricted Designated Balances" (fund 724005)	\$ 620,000

This entry uses the non-operating transfer codes to "zero out" the equipment expense contra fund and record equity in Funds Invested in Equipment WIP (fund 724005).

When the software is ready to be used and placed in service, HUIT notifies FAR via the "**Notification of Completion of Capital Equipment Fabrication or Debt-Financed Purchase**" form. FAR will record the following reclassification entry to transfer the balance from WIP to place in service (PIS):

Debit object code 1032, "CO^Equip, Software, Nonsponsored"	\$ 620,000
Credit object code 1152, "CO^Equip WIP, Nonsponsored, Closed to PIS"	\$ 620,000

FAR creates the following manual journal entry to transfer the WIP equity (in fund 724005) to PIS equity (fund 724001):

Debit object code 9340 "Close Out between Funds Invested in Equipment - PIS+WIP" (fund 724005)	\$ 620,000
Credit object code 9340 "Close Out between Funds Invested in Equipment - PIS+WIP" (fund 724001)	\$ 620,000

Scenario #2 - The project is sponsored



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HUIT processes an AP adjustment expensed to other object codes to a work-in-process (WIP) object code:

Debit object code 6812, "Sponsored, Work in Progress ^Equip>=\$5,000" (sponsored fund)	\$ 620,000
Credit the expense object codes originally charged	\$ 620,000

Each evening, an automated allocation entry will reclassify the amount charged to object code 6812 to object code 1151, "Equip WIP, Sponsored" as follows:

Debit object code 1151, "Equip WIP, Sponsored"	\$ 620,000
Credit object code 6812, "Sponsored, Work in Progress ^Equip>=\$5,000" (Equipment expense contra fund)	\$ 620,000

Also at the end of the month, the following computer-generated entry is made to record equity invested in capital equipment:

Debit object code 9336, "Transfers to/from Funds Invested in Equipment-WIP" (Equipment expense contra fund)	\$ 620,000
Credit 9300 series code, "Transfers to/from Unrestricted Designated Balances" (fund 724005)	\$ 620,000

This entry uses the non-operating transfer codes to "zero out" the equipment expense contra fund and record equity in Funds Invested in Equipment WIP (fund 724005).

When the software is ready to be used and placed in service, HUIT notifies FAR via the "Notification of Completion of Capital Equipment Fabrication or Debt-Financed Purchase" form. FAR will record the following reclassification entry to account for the cost as an asset placed in service (PIS):

Debit Object code 1033, "CO^Equip, Software, Sponsored"	\$ 620,000
Credit object code 1153, "CO^Equip WIP, Sponsored, Closed to PIS"	\$ 620,000

FAR creates the following manual journal entry to transfer the WIP equity (in fund 724005) to PIS equity (fund 724001):

Debit object code 9340, "Close Out between Funds Invested in Equipment - PIS+WIP" (fund 724005)	\$ 620,000
Credit object code 9340, "Close Out between Funds Invested in Equipment - PIS+WIP" (fund 724001)	\$ 620,000

Scenario #3 - The project is debt-financed

HUIT processes an AP adjustment expensed to other object codes to a work-in-process (WIP) object code, or processes a journal entry to move salary & wages and applicable benefits charged to non-sponsored projects to a WIP object code

Debit object code 1140, "Equip, Debt-financed, WIP"	\$ 620,000
Credit the expense object codes originally charged or 6230/6370 for salaries and benefits	\$ 620,000

To ensure that WIP equity balances, a monthly entry is recorded by OTM to set up a WIP loan:



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Debit object code 3120, "GOA+Pooled Loans, WIP, Others" (Central Bank)	\$ 620,000
Credit object code 3120, "GOA+Pooled Loans, WIP, Others" (HUIT)	\$ 620,000

This loan balance entry is reversed at the beginning of the following month. OTM records a monthly manual entry to charge interest on the WIP loan using object code 1142, "Equipment WIP, Interest Expense." Interest is manually capitalized to the cost of the project each month based on the prior month's balance.

When the software is ready to be used and placed in service, HUIT notifies OTM and FAR via the "Notification of Completion of Capital Equipment Fabrication or Debt-Financed Purchase" form. FAR will capitalize the WIP, which will automatically generate the following reclassification entry to move the WIP to Place in Service (PIS):

Debit object code 1051, "CO^Equip, Debt-financed, Software"	\$ 620,000
Credit object code 1143, "CO^Equip WIP, Debt-financed, Closed to PIS"	\$ 620,000

The following manual entry is made by OTM to record OTM's loan receivable and HUIT's loan payable:

Debit object code 3030, "CO^Pooled Loans, PIS Equipment" (Central Bank)	\$ 620,000
Credit object code 3030, "CO^Pooled Loans, PIS Equipment" (HUIT)	\$ 620,000

Note: For purposes of simplifying this example, interest expense was not calculated.

Scenario # 4 - Betterment or Upgrade of Internally-Developed Software

A one-time enhancement upgrade is made to a HUIT project which was a WIP, but was placed in service.

A department creates an additional module to a previously purchased capitalized software.

Debit object code 6811, "Non-Sponsored Work in Progress^Equip >=\$5,000" (HUIT fund)	\$ 15,000
Credit the expense object codes originally charged or 6230/6370 for salaries and benefits	\$ 15,000

Each evening, an automated allocation entry will reclassify the amount charged to object code 6811 to object code 1150, "Equip WIP, Nonsponsored" as follows:

Debit object code 1150, "Equip WIP, Nonsponsored"	\$ 15,000
Credit object code 6811, "Non-sponsored, Work in Progress ^Equip>=\$5,000" (Equipment expense contra fund)	\$ 15,000

Also at the end of the month, the following computer-generated entry is made to record equity invested in capital equipment:

Debit object code 9336, "Transfers to/from Funds Invested in Equipment-WIP" (Equipment expense contra fund)	\$ 15,000
Credit 9300 series code, "Transfers to/from Unrestricted Designated Balances" (fund 724005)	\$ 15,000

This entry uses the non-operating transfer codes to "zero out" the equipment expense contra fund and record equity in Funds Invested in Equipment WIP (fund 724005).

When the software is ready to be used and placed in service, HUIT notifies FAR via the "Notification of Completion of Capital Equipment Fabrication or Debt-Financed Purchase" form. FAR process the capitalization, which generates the following reclassification entry to account for the cost as an asset placed in service (PIS):



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Debit Object code 1032, "CO^Equip, Software, Nonsponsored"	\$ 15,000
Credit object code 1152, "CO^Equip WIP, Nonsponsored, Closed to PIS"	\$ 15,000

FAR creates the following manual journal entry to transfer the WIP equity (in fund 724005) to PIS equity (fund 724001):

Debit object code 9340, "Close Out between Funds Invested in Equipment - PIS+WIP" (<i>fund 724005</i>)	\$ 15,000
Credit object code 9340, "Close Out between Funds Invested in Equipment - PIS+WIP" (<i>fund 724001</i>)	\$ 15,000

*Once the asset has been PIS, the tub will want to create a Parent-Child relationship between the original software asset and the upgrade asset