Capitalization and Budgeting for Robotics/Artificial Intelligence

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Agenda

- Basics of Software Capitalization
- Robotic Processes – Capital or Not?
- Examples of Robotic Process Automation
- Duke’s Budgeting Process
Basics:

- Software thresholds tend to be **higher** than tangible assets:
  - Total **capital cost** must exceed the threshold

- Expected life of the asset must be **greater than** minimum life per the utility’s Policy

- Developed solely for **internal needs** (i.e., not marketed for sale)
The capitalization timeline begins after the **Plan/Analyze** phase is complete, and the following have taken place:

- **Current State Assessment**
- **Evaluation of Alternatives**
- **Determination of performance/system requirements**
- **Vendor selection**
- **Project funding has been approved**
Capitalization Ends:

- Software is ready for intended use
- No longer probable that software will be completed & placed in service: all costs incurred to date expensed
Design (of the selected approach)

Capital Activities

Testing

Software purchase, licenses

Interfaces

Configuration & Coding

Costs to develop data conversion software
Running data conversion programs, cleaning up bad data

Process re-engineering

Training End Users/Train the Trainer

Maintenance costs & Hosting fees

Proof of concept (R&D)

Departmental allocations, overheads
Post-Capitalization - Upgrades and Enhancements:

• Provide new functionality to existing software

• Enables completion of tasks it was previously incapable of performing

• Normally requires new specifications & change to all/part of existing specs
Post-Capitalization - Upgrades and Enhancements Example of Capital:

• An inventory system was previously incapable of sorting by geographical region.
• An enhancement will be added that incorporates a new data feed.
• Additional coding will be needed to allow the system to integrate the new data element.
Post-Capitalization - Upgrades and Enhancements:

- When upgrades/enhancements are NOT capital:
  - Updated look/presentation
  - Creating models
  - Adding locations
  - Minor upgrades/enhancements, maintenance, and bug fixes
An inventory system was previously incapable of sorting by geographical region.

Current data feeds and configuration exist, but a bug in the original system code prevented the system for sorting in this manner.

The 2019 Upgrade will have a patch for this bug.
In an agile project, working software is deployed in iterations, each of which provides a segment of functionality.
Agile Software Development

• An entity should account for software development costs based on the nature of the cost incurred
• Each sprint or development iteration may have elements of more than one traditional “waterfall” project phases below:
  • Preliminary (Plan/Analyze)
  • Development (Design/Build/Test)
  • Post-Implementation (Warranty Support)
Summary
Ways to Get Capital

New software system
Enhancement to existing system
How does this all relate to Robotics/AI?
Where we can all agree:

• Purchase of new software and/or licenses is typically capital
• The initial RPA Software installation allows the organization to automate functions. This software is the platform that allows automation development work to be created.
• “Tool Box”
Considerations for capitalization of the processes:

• **Issue 1**: Is the RPA process a new asset, an enhancement to an existing asset, or neither?
• **Issue 2**: Is the RPA going to be used long enough to meet life expectations?
• **Issue 3**: Is the cost greater than the minimum threshold?
Viewpoint 1:

This development work is a **new software asset** onto itself...it is new code that is written using the RPA software originally installed.
Viewpoint 2:

This development work is an **enhancement** to the original RPA platform system.
Viewpoint 3:

**Not** a new asset or enhancement. The RPA is merely using the software as intended. The costs are therefore EXPENSE!
You’ll have to discuss this one with your Asset Accounting team!
Is the RPA going to be used long enough to meet life expectations?

- Most utilities require a life expectancy of at least 2-3 years, or higher (5 years is common).
- Questions to Ask:
  - Will the RPA last long enough to meet Policy?
  - What happens if the process changes during that time?
3. Is the cost greater than the minimum threshold?

- Companies set thresholds to avoid undue refinement and tracking small assets
- Each robotic process may not exceed these thresholds
- Automations can be aggregated by system or function
Robotic Examples
• Invoice Retrieval
• Account Reconciliations
• Manual JE’s
• Retirement Reversals (Power Plan)
• Labor Distribution Suspense Corrections

“Lighthouse” initiative
• Voucher Look Up Process
• Capitalized Interest Tax Rates
• Quarterly Power Tax
• Fuelworx Inventory Reconciliation
• HFM Reporting Stacks
Duke’s Budgeting Process

• Our Finance Program Office (FPO) is an embedded technology group within Finance that supports our financial systems.
• Much of the “Lighthouse” efforts around RPA are spearheaded by that team. As such their labor is budgeted as usual.
• Additional resource or software needs are funded via the Lighthouse initiative.
• Lighthouse funds are allocated based upon the anticipated value to be delivered (operational and headcount savings or risk avoidance) ~ every 2 months