

Memorandum

Software Technology

April 4, 2023

To: Members of the Board
From: Josh R. Williams, Senior Analyst
Thru: Monica R. Valentine, Executive Director
Subject: **Software Technology Guidance Updates** (Topic D)

INTRODUCTION

At the October 2022 meeting, staff presented an issues paper to the Board that analyzed how other standard-setting bodies previously deliberated the differences between service contracts and right-to-use-assets, and how those positions influenced their cloud-reporting guidance. Additionally, members deliberated whether cloud-service arrangements in the federal environment were more analogous to tangible right-to-use assets or service contracts based on previous FASAB discussions. Members had different opinions on whether multi-year cloud-service arrangements were right-to-use assets or service contracts.

The attached cost-benefit analysis considers the potential user benefits and preparer burdens of four financial reporting options for cloud-service arrangements. Staff is requesting the Board's feedback and preferences on the reporting options.

REQUEST FOR FEEDBACK BY April 14, 2023

Prior to the Board's April meeting, please review the attached cost-benefit analysis and respond to the questions by April 14, 2023.

Please submit responses to Josh Williams at WilliamsJR@fasab.gov with a cc to Monica Valentine at ValentineM@fasab.gov.

NEXT STEPS

Pending Board feedback, staff plans to begin developing an exposure draft for cloud-service arrangement reporting guidance. Staff will initially focus on drafting scope and definitions sections. Additionally, staff will research whether the best course of action is to draft a new standard or amend SFFAS 10, *Accounting for Internal Use Software* as the Board's reporting preferences for cloud-service arrangements will influence the appropriate format for issuing guidance.

ATTACHMENTS

1. Staff Cost-Benefit Analysis
2. Cloud-Service Arrangement Asset Framework
3. FASAB Asset Guidance Framework
4. Right-to-Use Asset vs. Service Contract Example
5. FASAB Software Technology Definitions
6. Intangible Assets Project Plan

Staff Analysis

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CONTEXT

Background

At the February 2022 meeting, staff presented an issues paper that provided a framework for developing reporting guidance updates for software technology assets. Specifically, the issues paper recommended a scope and project plan for developing updates for software guidance based on specific needs identified during research. The scope consists of four major categories of software resources that staff plans to address individually in the following order:

1. Cloud-service arrangements
2. Shared services
3. Internal use software updates
4. Other software technology

Staff is currently focusing on reporting-guidance needs for cloud-service arrangements. Research indicated that federal entities are using cloud services at an increasing rate for operational purposes similar to internally developed software, generally due to the need for less investment risk and more flexibility to alter the amount and type of services received based on current needs. Therefore, it is critical to address reporting guidance for this commonly used software-technology resource to ensure reporting consistency throughout the federal government.

At the April 2022 meeting, staff presented characteristics of cloud-service arrangements along with an asset-guidance framework for which to apply the characteristics. The framework analyzes previous asset-guidance decisions that will assist the Board when deliberating whether cloud-service arrangements can represent assets in the federal government¹. There were three primary takeaways from the discussion:

- The National Institute of Standards and Technology's (NIST) cloud-computing characteristics are widely accepted and used in the federal government.
- Based on the asset-guidance framework, it is appropriate to approach cloud-service arrangements as lease-type transactions that provide a federal entity

¹ See Attachment 3 for asset reporting guidance framework illustration.

access to a provider's software technology resources for the federal entity to use as internal use software for a specified period.

- More research and outreach is needed to develop an informed decision on whether cloud-service arrangements can meet all of the essential characteristics of an asset established in SFFAC 5, *Definitions of Elements and Basic Recognition Criteria for Accrual-Basis Financial Statements*.

The Board supported using the NIST's cloud-computing characteristics for developing financial reporting guidance for cloud-service arrangements. Several members agreed with staff's observation that federal entities widely use the NIST cloud-computing characteristics and that it is practical to defer to the information technology (IT) professionals when describing cloud-service arrangements.

The Board agreed with staff's proposed asset-guidance framework and observation that it is particularly important to continue to research and deliberate whether cloud-service arrangements can meet the essential characteristics of an asset from SFFAC 5. Some members noted that for an asset to exist, the cloud-service arrangement must represent economic benefits and services that the federal government can use in the future. Other members stated that it is critical to determine whether a consumer of a cloud service could control access to the economic benefits and service of the underlying resource and, particularly, if the user could deny or regulate access to others in accordance with the arrangement.

At the June 2022 meeting, two panelists from the General Services Administration (GSA) provided the Board an educational session on cloud-service arrangements. The panelists provided members an overview of the characteristics, service models, and deployment models of cloud computing and discussed ways that federal entities procure and pay for cloud services. Additionally, Board members, staff, and panelists discussed potential financial reporting needs and challenges associated with cloud-service arrangements.

During the August 2022 meeting, the Board continued deliberations on reporting guidance for cloud-service arrangements. Staff presented an issues paper that proposed:

- A framework of cloud-service arrangements that could meet the essential characteristics of an asset for financial reporting purposes
- Potential benefits and challenges of reporting cloud service arrangements as assets in federal financial reports

The Board generally supported staff's analysis on whether certain cloud-service arrangement categories could meet the SFFAC 5 essential characteristics of an asset. Some members recommended more research to better understand how federal entities typically incur costs for long-term cloud-service arrangements. One member recommended more research and deliberation on whether cloud-service arrangements

are typical service contracts or if they are more akin to leases or right-to-use assets. Another member recommended consideration of how other standard-setters made their determinations on asset reporting for cloud-service arrangements.

The Board also generally agreed with staff's analysis on the user benefits and preparer challenges with reporting cloud-service arrangements as assets in federal financial reports. One member stated that the identified reporting challenges were valid but thought that they could be overcome with proper guidance. A few members suggested further research and deliberation on the financial reporting benefits with note disclosure options versus asset recognition in financial statements. One member added that it was important to continue to seek out a wide range of federal financial report users that have an interest in cloud-service arrangement reporting.

During the October 2022 meeting, the Board continued deliberations on reporting guidance for cloud-service arrangements. Staff presented an issues paper that:

- Analyzes how other standard-setting bodies have deliberated the differences between a service contract and a right-to-use asset, along with how those positions have influenced their cloud-service reporting guidance; and
- Examines FASAB's previous discussions of tangible right-to-use assets and service contracts and analyzes whether cloud-service arrangements in the federal environment resemble right-to-use assets or service contracts.

The Board had different opinions on whether multi-year cloud-service arrangements were right-to-use assets or service contracts. One member favored referring to cloud-service arrangements as service contracts because it was difficult to conceive how an entity could exclude others from using an intangible right-to-use asset. Another member stated that cloud services and other types of service contracts possessed a spectrum of right-to-use asset and service components and was concerned that deciding cloud-service arrangements are right-to-use assets could open the door to considering whether other types of service contracts include right-to-use assets.

Several members agreed it was reasonable to conceptualize cloud-service arrangements as right-to-use assets but were concerned that the associated preparer burden and lack of reporting benefits may not justify the need for asset recognition on the balance sheet. The members suggested that disclosures could adequately provide information about the extent that federal entities use cloud-services for mission and operational needs versus purchasing or developing the IT resource internally.

Research

Staff coordinated with several stakeholders to develop this cost-benefit analysis. For example, staff held a working group meeting in March 2023 to discuss potential user benefits and preparer burdens for the different reporting options for cloud-service arrangements. Additionally, staff spoke with non-preparer stakeholders from academia, private industry, audit personnel from the Government Accountability Office (GAO)

Information Technology Center, and staff from the Senate Committee on Homeland Security and Governmental Affairs to understand the kinds of cloud-service arrangement information that could be useful in financial reports.

Staff also conducted internet research on the magnitude and trends of cloud-service costs in the federal environment. Additionally, a few federal entities provided staff a rough estimate of annual cloud expenditures and commitments.

Staff has included the research findings and stakeholder input throughout this analysis to provide the Board a thorough understanding of the cloud-service cost environment and the pros and cons of the financial reporting options.

COST-BENEFIT ANALYSIS

Cost-benefit considerations are essential for the accounting and financial reporting standard-setting process. Federal entities, and by extension taxpayers, primarily bear the costs to implement accounting and financial reporting requirements. On the other hand, federal-entity management, federal-entity program managers, interest groups, private industry, and congress are some of the potential users of financial information that could benefit from improvements in financial reporting.

The assessment of perceived benefits and costs of new guidance is inherently more qualitative than quantitative because it is difficult to quantify the value of more reliable and transparent financial information. It is also difficult to fully measure the total costs and burdens to implement new financial reporting requirements until implementation has occurred. Nevertheless, this paper analyzes expected benefits and perceived costs of each reporting option based on available research and extensive stakeholder input with the objective of striking an appropriate balance of increasing benefits and minimizing costs.

Additionally, staff believes that financial reporting requirements that generally improve transparency and accountability of public resources are ultimately beneficial to the public because it improves oversight and trust between federal programs and the taxpayer that funds those programs. In other words, the existence of total and reliable financial information is beneficial to a democratic society regardless of the need for specific information.

Objective

This analysis considers potential user benefits and preparer burdens of the following four financial reporting options for cloud-service arrangements.

1. Balance sheet recognition
2. Commitment disclosure

3. Expense disclosure
4. Expense recognition only

The analysis includes a discussion on the prevalence and significance of cloud-services in the federal environment, analysis of reporting options, and questions for the Board. Staff is requesting that members review the analysis, provide feedback, and indicate which reporting option(s) are preferred.

Please note that the reporting options in this analysis address the service/usage costs of cloud-service arrangements. No matter what reporting option the Board chooses, staff will later address guidance needs for pre-payments and other relevant costs associated with cloud-service arrangements, such as implementation, data transfer, and security costs. Additionally, please note that all four reporting options by default also include expense recognition. However, options 1, 2, and 3 provide additional reporting requirements.

Prevalence and Magnitude of Federal Cloud Environment

Since approximately 2009, federal entities have shifted IT resources away from on premise data centers, servers, IT platforms, and software to the cloud environment in order to reduce upfront investment risk and to realize the efficiency, accessibility, and reliability of cloud technology². In 2019, The White House Chief Information Office established a “Cloud Smart³” strategy to drive cloud adoption in federal agencies⁴.

Based on research and working group discussions, staff previously identified three general ways that federal entities procure cloud services along with an analysis of whether they represent future economic benefits or services⁵.

- *Pay-as-you-go* – This type of arrangement does not appear to represent a future economic benefit or service for the federal entity because neither party to the agreement is obligated to continue meeting their requirements (e.g. timely payment and cloud access) beyond the present. Additionally, the future cash flows are purely variable based on usage and therefore the entity cannot know the future amounts.
- *Cloud credits* – The upfront payment by the federal entity requires the vendor to provide future cloud access to the federal entity. Therefore, the upfront payment

² Congressional Research Service, *Cloud Computing: Background, Status of Adoption by Federal Agencies, and Congressional Action*, R46119, March 25, 2020

³ Formerly called “Cloud First”

⁴ CIO.GOV, Federal Cloud Computing Strategy, <https://cloud.cio.gov/>

⁵ See Attachment 2 for Cloud-service Asset Framework

transaction would appear to represent a known future economic benefit or service for the federal entity.

- *Multi-year Commitment* – This type of arrangement requires the vendor to provide a minimum amount of future cloud access to the federal entity for a specified price and period so long as the federal entity continues to meet their requirements throughout the period of the agreement (e.g. timely payment). Therefore, the minimum purchase aspect of this agreement could represent a known future economic benefit or service to the federal entity and would represent known fixed future cash flows.

Research indicates that the trend in the cloud-service environment is a movement away from leasing servers and paying for fixed amounts of storage to the more flexible pay-as-you-go approach⁶.

Quantitative Analysis

Cloud spending has grown significantly in the federal government over the last several years. In 2014, the federal government spent approximately \$3 billion on cloud services⁷. A recent market analysis found that federal cloud spending was \$7.6 billion in 2019, \$9.2 billion in 2020, and \$10.8 billion in 2021⁸. Staff calculates that federal cloud spending grew by 260% from 2014 to 2021. Some forecasters predict that the federal government will spend as much as \$18.6 billion on cloud services in 2024 as agencies continue to modernize IT environments⁹.

The same market analysis also reported that the total awarded contract value for cloud-services in FY 21 was approximately \$23.3 billion, up from \$20.5 billion in FY20. Staff believes that this figure at least provides a rough estimate of the dollar amount for future cloud-services governmentwide. However, the contract terms would not necessarily meet right-to-use asset or liability requirements for multi-year cloud commitments.

Staff researched the FY 21 Financial Report of the United States Government to analyze cloud spending in relation to general operating expenses and internal use software (IUS) capitalization and amortization. The \$10.8 billion that the federal government spent on cloud services in FY 21 is miniscule compared to the total annual gross costs of \$7.3 trillion.

⁶ Forbes, *The 5 Biggest Cloud Computing Trends In 2022*, October 25, 2021, Bernard Marr, <https://www.forbes.com/sites/bernardmarr/2021/10/25/the-5-biggest-cloud-computing-trends-in-2022/?sh=7bf492592267>

⁷ Forbes, *Federal Cloud Spending Blows Past Predictions*, July 11, 2014, <https://www.forbes.com/sites/centurylink/2014/07/11/federal-cloud-spending-blows-past-predictions-2/?sh=d658cacac969>

⁸ GovWin, Deltek, Market Analysis, *Fiscal 2019-2021 Federal Cloud Market Spending and Contract Award Trends*, March 16, 2022, [Fiscal 2019-2021 Federal Cloud Market Spending and Contract Award Trends | GovWin IQ](#)

⁹ GovWin, Deltek, Market Analysis, *New Report: Deltek's Federal Cloud Market Forecast from Fiscal 2022 to Fiscal 2024*, August 24, 2022, [New Report: Deltek's Federal Cloud Market Forecast from Fiscal 2022 to Fiscal 2024 | GovWin IQ](#)

However, the cloud-service costs are much more meaningful when compared to the amount of money that the federal government currently reports for IUS assets in the financial statement notes. Note 6 of the FY21 financial report shows that the federal government capitalized approximately \$4.5 billion for internal use IUS in FY 21¹⁰. Furthermore, Note 6 also shows that the federal government amortized approximately \$2.9 billion for IUS in FY 21¹¹. Staff notes that IUS amortization expense offers a meaningful comparison for annual cloud-service costs since the amortization expense represents the annual cost the federal government incurs to utilize capitalized IUS for operations and mission delivery.

When comparing these figures with the previously stated 2021 cloud-service costs of \$10.8 billion, it is apparent that cloud-service costs represent a significant amount of annual dollars spent on federal IT infrastructure that is currently not visible in the financial reports. For example, \$10.8 billion in annual cloud spending is more than twice the amount that the federal government capitalized for IUS in a year and more than three times the amount amortized in a year. Staff had similar observations for the few federal entities that were able to provide annual cloud-cost estimates.

Qualitative Analysis

The quantitative analysis in the previous section indicates that the federal government is adopting cloud services at an exponential rate. It appears that federal entities typically acquire cloud-services to use the capabilities of a provider's IT resource and expertise instead of purchasing or developing it internally. Reports, articles, and federal IT personnel have indicated that federal entities are adopting cloud technology at an increasing rate for operational purposes similar to internally developed software, generally due to the need for less investment risk and more flexibility to alter the amount and type of services received based on current needs¹².

Regardless of the annual dollar amount spent on cloud services, most federal entities likely acquire cloud services or will in the near future. Research has indicated that both small and large federal entities acquire cloud services for a multitude of benefits. Some federal IT professionals have stated that cloud services are especially appealing to smaller federal entities with smaller budgets because entities can efficiently acquire and access IT resources as needed instead of investing in complex IT infrastructure that would be difficult and costly to develop internally.

Staff spoke with some representatives from private IT industry who expressed interest in financial reports providing information on the different cloud services and models that federal entities acquire to better assess the cloud market in the federal space for market sizing, forecasting, and trends. Therefore, financial reporting could help cloud-service

¹⁰ Subtract \$61.3 billion in capitalized IUS in FY 21 from \$56.8 billion in capitalized IUS from FY 20.

¹¹ Subtract \$38.3 billion in amortized IUS in FY 21 from \$35.4 billion in amortized IUS from FY 20.

¹² GAO-19-58, *CLOUD COMPUTING – Agencies Have Increased Usage and Realized Benefits, but Cost and Savings Data Need to Be Better Tracked*, April 2019, page 1.

providers assess trends and compare cloud technology environments among federal entities.

Furthermore, a few other non-preparer stakeholders expressed a desire for reporting guidance to help federal entities accurately measure cloud-service costs to aid management with future IT purchase decisions. This analysis will discuss these user insights in more detail in the reporting option analysis section.

Current Financial Reporting Issues

A 2019 GAO study¹³ found that federal agencies had challenges with tracking and reporting cloud spending and savings data, including not having consistent processes in place to do so. Some agencies reported difficulties tracking cloud costs because the costs are based on fluctuating usage rather than flat fees. The study also found that federal agencies have challenges in breaking out cloud costs from other costs, particularly when the cloud acquisition is part of a larger contract.

Additionally, the study found that federal agencies used different methods to calculate cloud-spending costs. Some agencies included power usage and full time equivalents while other agencies just included contract costs. Additionally, some agencies included data migration costs while others did not.

Because of these issues, the GAO report concluded that it is likely that agency-reported cloud spending and savings figures were underreported. The report further stated that it was critical to have complete data on spending for cloud services in order to ensure that agencies can provide effective management and oversight of their cloud use, and so that CIOs can be held accountable for the performance of cloud investments.

Staff spoke with a stakeholder from academia with IT government and industry experience who indicated that it is challenging for managers in the federal government and private sectors to accurately measure what they are spending on cloud services due to the intangible nature of the resource, which can lead to wasted taxpayer resources. The stakeholder stated that it is not unheard of for managers in public and private sectors to forget they are paying for cloud services they are no longer using. Another stakeholder stated that some federal entities sometimes unknowingly pay for duplicative and/or unnecessary IT resources because they are not fully aware of what is included in the cloud services they acquire.

Several federal entities have indicated to staff that cloud-service cost and commitment information is not readily available for reporting. However, some federal IT professionals believe that they already have sufficient processes in place to analyze and manage cloud-service costs effectively and that additional accounting and reporting requirements are not necessary.

¹³ GAO-19-58

REPORTING OPTION 1 – BALANCE SHEET RECOGNITION

This reporting option would require federal entities to recognize multi-year cloud-service commitments as a right-to-use asset with a corresponding liability for future payment on the balance sheet. Preparers would also have to measure the asset and liability at net present value (NPV) and amortize the asset over its useful life. Qualitative and descriptive notes disclosures could accompany the asset and liability recognition.

This reporting option would be very similar to the right-to-use asset reporting requirements in SFFAS 54, *Leases: An Amendment of Statement of Federal Financial Accounting Standards (SFFAS) 5, Accounting for Liabilities of the Federal Government, and SFFAS 6, Accounting for Property, Plant, and Equipment* and GASB Statement No. 96, *Subscription-Based Information Technology Arrangements*.

Staff notes that this reporting option would require the Board to recognize multi-year cloud-service arrangements as right-to-use assets. The Board has previously deliberated whether multi-year cloud-service commitments meet the SFFAC 5 asset characteristics and whether they are more like right-to-use lease assets or service contracts. Staff previously suggested that some multi-year cloud-service commitments, such as software-as-a-service access rights and reserved compute/capacity instances could represent right-to-use assets because federal entities theoretically control¹⁴ the right to access future services of an underlying IT resource as part of the arrangements.

However, Board members appeared to have differing opinions on whether these cloud-service arrangements are right-to-use assets, service contracts, or a combination of the two. Additionally, some working group members believe that federal entities do not exercise control over cloud-service arrangements in most scenarios due to a lack control over the underlying resource and have stated that it would help if the Board first defined and provided a recognition framework for intangible assets in general.

Staff also notes that liability concepts from SFFAC 5 also apply to the balance sheet recognition reporting option. Staff believes that some types of multi-year cloud-service arrangements could meet the essential characteristics of a liability¹⁵ if the arrangement requires the federal entity to pay a fixed dollar amount for access to specific services of a cloud-based IT resource and the provider has delivered by making that access available.

¹⁴ SFFAC 5, paragraph 22 says - To be an asset of the federal government, a resource must possess two characteristics. First, it embodies economic benefits or services that can be used in the future. Second, the government controls access to the economic benefits or services and, therefore, can obtain them and deny or regulate the access of other entities.

¹⁵ SFFAC 5, paragraph 41 says - ... A liability of the federal government has two essential characteristics, which are discussed in paragraphs 42 through 48. First, a liability constitutes a present obligation to provide assets or services to another entity. Second, either a law or an agreement or understanding between the government and another entity identifies conditions or events that will determine when the obligation will be settled.

Benefit Considerations

The balance sheet recognition reporting option could improve transparency and accountability of resource needs for future cloud-service capacity. Additionally, recognizing an asset and corresponding liability on the balance sheet would theoretically provide a more accurate net position for federal entities and the government as a whole. However, staff notes that the multi-year cloud-service commitments are likely not significant enough to materially affect total balance sheet assets and liabilities.

Balance sheet recognition could provide users the ability to compare right-to-use cloud assets with capitalized IUS assets. Therefore, management could compare cost alternatives between IUS investments and anticipated cloud-service costs to aid with decision making on IT resource needs. Additionally, users could compare amortization of each asset type to assess periodic consumption of IUS and cloud IT resources. Finally, users could observe cloud-service commitment trends between fiscal years and compare among different federal entities.

Stakeholder Input

Staff spoke with some non-preparer stakeholders who agreed with the potential benefits of identifying cloud-service commitments in general, but did not have specific opinions on balance sheet recognition. A few stakeholders stated that they do not typically think of cloud services as capitalized or fixed assets.

Some federal entities agreed in theory that recognizing cloud-service arrangements as assets would be beneficial. One working group member stated that fair presentation of financial statements should reflect the future economic benefits and future obligations of agencies resulting from multi-year cloud commitments as agencies continue to migrate from on-premises to cloud services for IT operational needs. Another working group member agreed that users could gain an idea of future cloud resources and associated liabilities from the Statement of Net Position.

Some federal entities did not agree with the benefits of the balance sheet recognition reporting option. One working group member stated that the right-to-use asset framework does not make sense for the way cloud services are typically used in the federal space. For example, cloud services are not typically acquired for a fixed period of performance but are consumed on-demand in incremental periods based on variable usage, like a utility.

Another working group member reiterated concern with cloud-service arrangements not meeting the current FASAB asset and liability concepts because cloud-service arrangements often include a bundle of different capabilities and services without a specific commitment to one particular deliverable. Furthermore, a contract documenting an agreement for future payment and future services does not designate a liability. The working group member also doubts if many cloud-service contracts would provide

federal entities “control” of an underlying resource due to the intangible nature of the resource.

Cost Considerations

The balance sheet recognition option would present federal entities with significant new reporting requirements to identify, measure, and recognize multi-year cloud-service commitments as assets with associated liabilities. Preparers would also have new requirements to calculate NPV on future cost-service cash flows and amortize the right-to-use asset over the useful life of the arrangement.

Because cloud-service arrangements can include a bundle of IT resources, including licenses, security costs, and professional services, preparers could struggle with separating right-to-use components of cloud-service arrangements from service components. Additionally, this reporting option would sometimes require management judgement to estimate the useful life of commitments if the terms of the cloud-service arrangements are likely to extend beyond the current period via options to exercise contract renewals. Finally, this reporting option could also include asset and liability re-measurement requirements due to changes in the duration and payment terms of cloud-service arrangements, or if managers reassess the probability of exercising future options.

Stakeholder Input

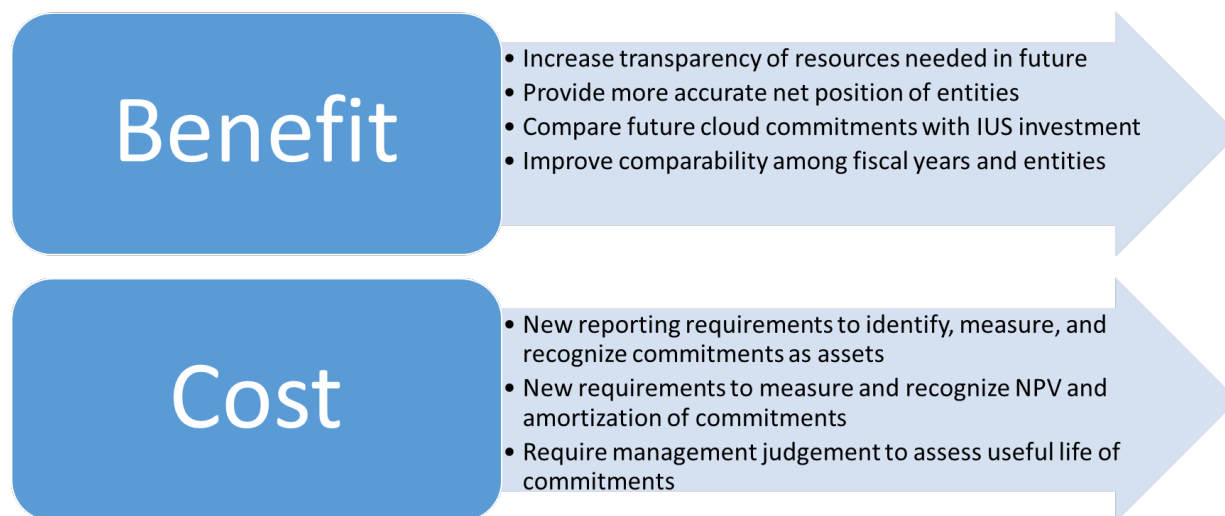
Several federal entities stated that this reporting requirement would be significantly burdensome to implement. Furthermore, federal entities indicated the necessary information is not readily available without manual analysis and that this reporting option would require significant financial and procurement systems investments to identify and track cloud-commitment data. Federal entities also noted the unique requirement to calculate NPV and the ongoing requirement to amortize the right-to-use asset as especially burdensome.

Several federal entities provided specific examples of challenges. For example, preparers would have difficulty separating cloud-based charges from many other types of associated costs. Challenges also extend to measuring the correct commitment term when considering contract options to extend or terminate and the probability that a vendor will extend the period of performance. Finally, this option would likely require more auditor resources to verify the recognized values are complete and accurate.

(Summary Table on next page)

Summary Table

Balance Sheet Recognition



REPORTING OPTION 2 – COMMITMENT DISCLOSURE

This reporting option would require federal entities to disclose the dollar amount of multi-year cloud-service commitments in financial statement notes. The disclosures would include known future fiscal year fixed payments and include qualitative and descriptive disclosures. Additionally, preparers could potentially categorize the commitment disclosures by different cloud services (e.g. infrastructure-as-a-service (IaaS), platform-as-a-service (PaaS), and software-as-a-service (SaaS)) and/or cloud-deployment models (e.g. public, private, community, and hybrid).

The commitment disclosure reporting option would likely require the same cloud-service data as the balance sheet recognition reporting option. However, this reporting option would not require designating multi-year cloud-service arrangements as assets¹⁶. Therefore, this reporting option would not require balance sheet recognition, asset re-measurement, NPV measurement, or amortization reporting.

Benefit Considerations

The commitment disclosure reporting option would share some of the same benefits as the reporting option 1 (balance sheet recognition). For example, this option could improve transparency and accountability of resource needs for future cloud-service capacity. Cloud-service commitment disclosures could provide users similar abilities to compare future cloud-service costs with capitalized IUS assets to aid in IT resource decision making.

¹⁶ See SFFAC 5, paragraph 57

The primary difference between the commitment disclosure reporting option and the balance sheet recognition reporting option is that the commitment amount would not be presented at NPV and therefore would not be completely comparable to capitalized IUS. Additionally, the reported commitment amounts could include a bundle of different costs present in the cloud-service arrangement, not just right-to-use asset value. However, users could still relatively compare IUS assets with anticipated cloud-service costs to aid management with IT resource decision-making. Additionally, users could observe cloud-service commitment trends between fiscal years and compare among federal entities.

Stakeholder Input

Staff spoke with non-preparer stakeholders who agreed with the potential benefits of identifying cloud-service commitments. Some stakeholders specifically stated that the data could help private industry assess the future cloud footprint in the federal space. Additionally, a few federal entities agreed with the potential benefits of this reporting option largely for the same reasons as option 1. However, one non-preparer stakeholder questioned whether the commitment disclosure reporting option would provide useful information due to the flexible and fast-changing nature of the cloud-service environment. The stakeholder stated that it seemed possible that the future-year commitment information would be difficult to estimate and not reflect how federal entities ultimately acquire and consume cloud-services.

Some federal entities did not agree with the benefits of this reporting option. One working group member stated that identifying future resources for cloud-service needs is more of a budgetary matter. One working group member suggested that cloud information could be more useful presented as deliverables, such as data storage or compute processing capabilities, rather than just cost.

Another working group member understood that there might be a niche interest for cloud commitment information but that reporting them while not reporting any other types of commitments could mislead users of the general financial report. For example, there are many other categories of commitments in the federal environment, such as construction contracts, that would be more significant than cloud-service commitments.

Cost Considerations

The commitment disclosure reporting option would share some of the same preparer and audit burdens and costs as reporting option 1. For example, this option would present federal entities with the same new reporting requirements to identify, measure, and recognize multi-year cloud-service commitments. Additionally, this reporting option would still require management judgement to estimate the useful life of commitments if the terms of the cloud-service arrangements are likely to extend beyond the current terms, such as with option years. However, this option would not require preparers to calculate NPV on future cloud-service costs or recognize yearly amortization of an asset over its useful life. Finally, since this reporting option would not require asset

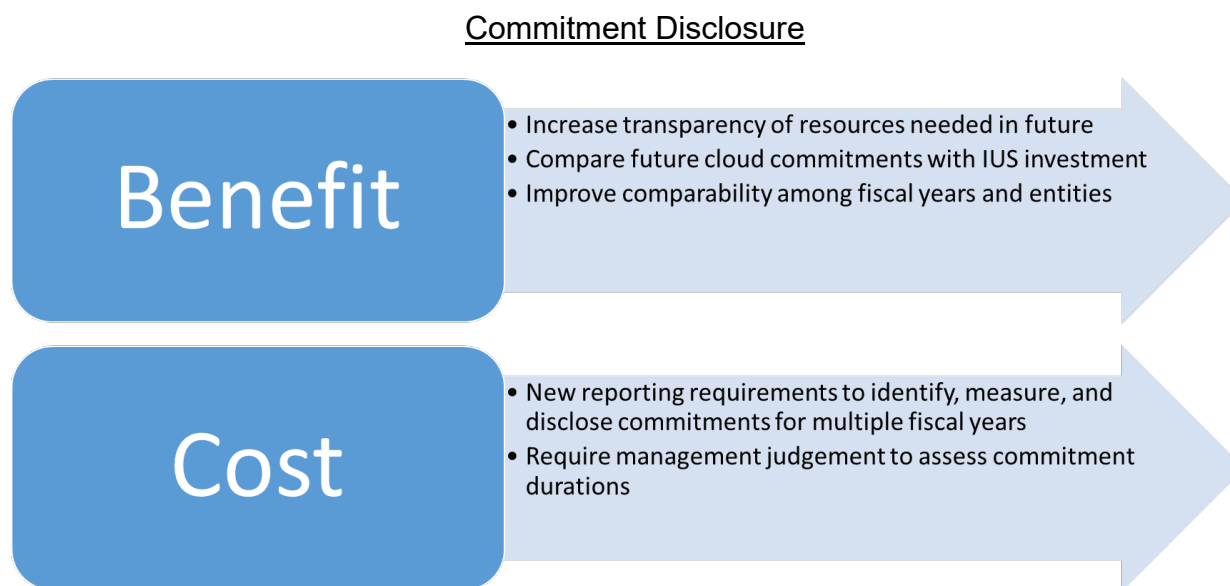
recognition, preparers would not necessarily have to analyze cloud-service arrangements to separate right-to-use asset components from service or other components for disclosing total commitment amounts.

Stakeholder Input

Most federal entities agreed that this option would include the same major preparer and audit burdens to implement as reporting option 1. Several federal entities indicated the information is not readily available without manual analysis and that this reporting option would require significant accounting and procurement systems investments to identify and track cloud-commitment data. For example, federal entities would have to develop a way of identifying and separating cloud-specific arrangements from other IT arrangements.

However, some federal entities indicated that they could already track cloud-commitment data at a high level. Some federal entities even indicated they already track cloud commitments by service levels, such as IaaS, PaaS, and SaaS.

Summary Table



REPORTING OPTION 3 – EXPENSE DISCLOSURE

This reporting option would require federal entities to disclose all cloud-service annual expenditures in financial statement notes. The disclosures could include present and prior fiscal year expenditures and include qualitative and descriptive disclosures. Additionally, preparers could potentially categorize the expenditure disclosures by different cloud services (e.g. IaaS, PaaS, and SaaS) and/or cloud-deployment models (e.g. public, private, community, and hybrid).

Unlike reporting options 1 and 2, this reporting option would include cost information for all cloud-service arrangements, including pay-as-you-go, prepaid credits, and multi-year commitments. However, this reporting option would not include future cloud-service commitments like options 1 and 2.

Benefit Considerations

The expense disclosure reporting option would improve transparency and accountability of annual expenditures for the entire array of cloud services that federal entities acquire. Expense disclosure could provide users the ability to compare annual cloud-service costs with capitalized IUS and associated amortization expenditures. Since amortization represents the use of a long-term IUS asset over the expected period the IUS will provide value, users could compare this information to cloud-service expenditures to compare periodic costs of different IT resources in federal operations. Additionally, users could observe cloud-service expenditure trends between fiscal years and compare among federal entities.

Stakeholder Input

Staff spoke with non-preparer stakeholders who voiced interest with the potential benefits of federal entities disclosing annual cloud-service expenditures because entities appeared to have challenges accounting for cloud-service costs in a consistent manner. One stakeholder suggested reporting guidance should be sufficiently detailed regarding which costs to report in order to ensure consistency across federal entities.

Another non-preparer stakeholder suggested that reporting guidance should ultimately help federal entities procure cloud services in a more cost efficient manner in the future. Furthermore, the stakeholder thought that the expense disclosure reporting option along with robust qualitative disclosure would produce the most useful information because it would help federal entities better understand what they currently spend on cloud services, which could help management make more cost-effective decisions for future cloud and other IT-service purchases. Some other stakeholders specifically stated that the data could help private IT industry assess the current cloud-service footprint in the federal space.

Some federal entities agreed with the benefits for this reporting option. Specifically, some federal entities stated that this information would provide the most detail on federal entity cloud-service needs. Others stated that the information could help assess how much federal entities spend for on-site IT infrastructure vs. off-site cloud-services for operational needs.

One federal IT professional supported implementation of financial reporting requirements for cloud-services and stated that accurate cloud-cost accounting would likely not occur until federal entities were required to track cloud spending. The respondent suggested that the Board consider Technology Business Management (TBM) standards during the guidance development process. Staff notes that other federal IT professionals have mentioned TBM requirements for cloud-service costs. A

recent GAO report indicates that federal entities continue to have issues with fully implementing TBM requirements for all IT spending¹⁷.

Some federal entities did not agree with the benefits of this reporting option. One working group member expressed concerns similar to commitments. That is that annual cloud-service expenditures are very small relative to total annual operating expenditures and other types of expenditures would be more significant but do not require disclosure. Requiring special disclosure of cloud-service expenditures could elevate its importance above other operational expenditures and could mislead users of general financial reporting.

Similar to reporting option 2, one working group member suggested that cloud information could be more useful presented as deliverables, such as data storage or compute processing capabilities, rather than just cost.

Cost Considerations

The expense disclosure reporting option would likely be less burdensome for preparers to implement than reporting options 1 and 2. Federal entities already account for annual cloud-service expenditures as general operating expenses. However, the requirement to identify expenditures related to cloud services and especially different types of cloud services and deployment models would likely present new requirements for preparers.

Nevertheless, this reporting option would not require NPV or amortization calculations. Nor would it require preparers to identify multi-year cloud-service commitments amounts or management judgement to determine useful lives of cloud-service arrangements.

Stakeholder Input

It appears that the consensus among working group members is that reporting option 3 would be less burdensome to implement and audit than options 1 and 2. However, several federal entities indicated that the information is not readily available without manual identification of cloud-service contracts and that this reporting option would require significant accounting process changes to identify and track cloud-specific expenditures. For example, some federal entities do not currently identify cloud-service arrangements from other contracts. Categorizing cloud-service arrangements by service level would be even more burdensome.

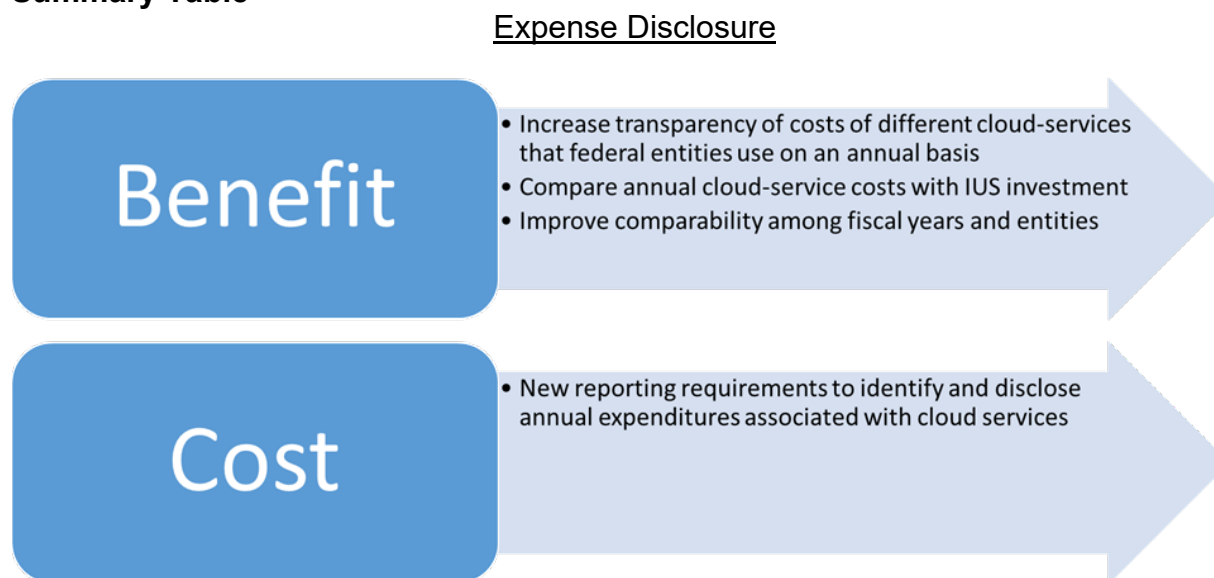
Working group members cautioned that guidance would need specific scope and definitions of cloud-service costs to avoid misinterpretations and disagreements between preparers and auditors. Additionally, auditors would likely need to test more assertions as well as gain an understanding and document controls over the new reporting area. By separately disclosing cloud-service expenditures, auditors would

¹⁷ GAO-22-104393, *Technology Business Management: OMB and GSA Need to Strengthen Efforts to Lead Federal Adoption*, September 29, 2022, <https://www.gao.gov/products/gao-22-104393>

likely need to validate that the amounts in the disclosures are accurate, whereas auditors likely test cloud-service expenses as part of existing audit tests.

However, some federal entities indicated that they could already track cloud-specific expenditure data. Some federal entities even indicated they already track cloud expenditures by service level and deployment model.

Summary Table



REPORTING OPTION 4 – EXPENSE RECOGNITION ONLY

This reporting would only require federal entities to recognize cloud-service arrangement costs as general operating expenditures without any further reporting requirements. Most federal entities already account for cloud-service costs this way.

Benefit Considerations

The expense recognition only reporting option would not result in any new user benefits because federal entities would continue to only recognize cloud-service costs as part of general operating expenditures without any further transparency. However, establishing the reporting requirement in standards would at least establish clear reporting guidance that would encourage reporting consistency among federal entities in the future.

Stakeholder Input

One non-preparer stakeholder understood this reporting option as the status quo but noted concern that it would not lead to improvements in accounting for cloud-service costs in a consistent manner. Some federal entities also noted concern that this reporting option does not offer any information on cloud-service resources and would not offer comparability across fiscal years or among federal entities.

However, several federal entities expressed support for this reporting option. One working group member stated that cloud-service costs are consumed as typical operational expenses and should be classified as such.

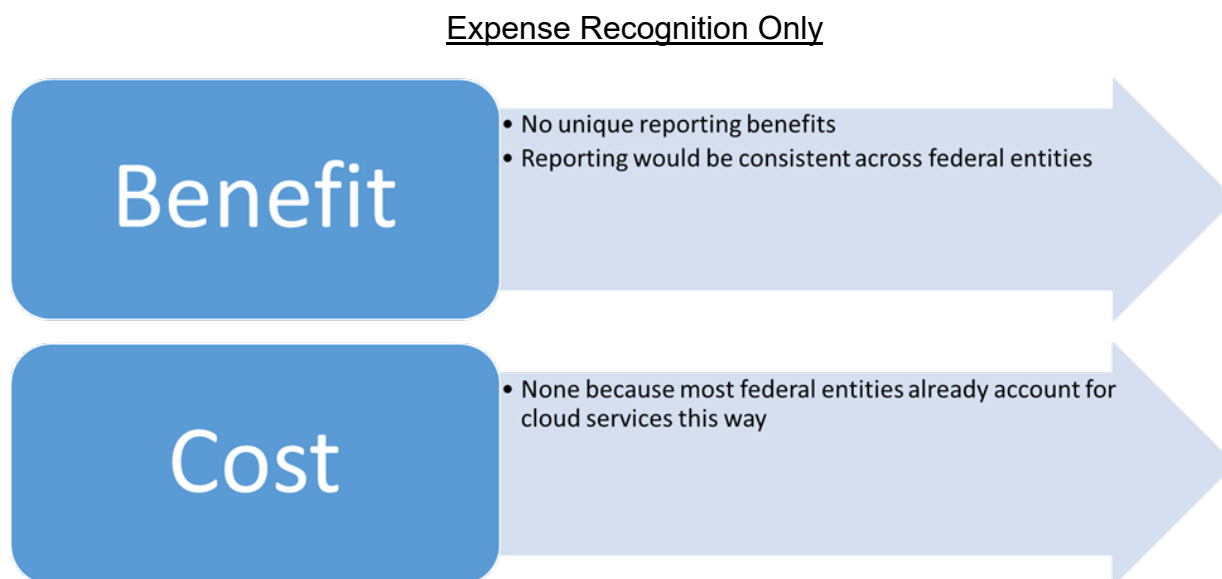
Cost Considerations

This reporting option should not require any additional costs to implement.

Stakeholder Input

Federal entities generally agreed that this reporting requirement would not present with any new preparer burdens or costs because this is how federal entities already account for cloud-services.

Summary Table



ANALYSIS

This section summarizes stakeholder reporting option preferences and provides staff analysis and thoughts.

Summary of Stakeholder Preferences

Preparer Preferences

It appears to staff that most federal entities believe that reporting options 1, 2, and, 3 would all require significant resources for systems and process changes to implement. It also appears that the first three reporting options would add new audit requirements. However, it appears the consensus is that the asset and liability recognition of reporting

option 1 would be most burdensome for preparers while expense disclosure for reporting option 3 would be the least burdensome.

Regarding potential user benefits, several federal entities stated that expense disclosure in reporting option 3 would be most beneficial. One federal entity thought asset and liability recognition would provide the most beneficial information. Some federal entities noted that commitment disclosure in reporting option 2 could be beneficial but it did not appear as any stakeholder's preferred option. Finally, several federal entities stated that reporting option 4, expense recognition only, was most beneficial because they did not think that the other reporting options offered any notable benefits.

Ultimately, after weighing costs and benefits of each reporting option, five federal entities preferred sticking with expense recognition only (option 4), three federal entities preferred the expense disclosure option (option 3), and one federal entity preferred asset and liability recognition (option 1).

Non-preparer Preferences

It appears that the preferred reporting option among non-preparer stakeholders is expense disclosure from reporting option 3, with the commitment disclosure from reporting option 2 being second. As previously stated, non-preparers indicated that both reporting options 2 and 3 could help assess the federal cloud footprint and lead to improved transparency and accountability of cloud-service costs.

As previously stated, the non-preparers did not show much interest in the asset and liability recognition idea from reporting option 1. These potential users were interested in the commitment and expenditure data that options 2 and 3 could provide and saw option 1 as more of a technical accounting requirement. At least one non-preparer stated that they did not typically think of cloud services as an asset in the general sense.

Potential Burden Mitigation Factors

A few working group members suggested that if the Board were to go with reporting options 2 or 3, both commitment and expenditure reporting could provide similar benefits in required supplementary information (RSI) or other accompanying information and be less burdensome to preparers.

Staff Analysis and Recommendations

Reporting Option 1 Concerns

Staff has concerns with the balance sheet recognition approach in option 1. It appears that initially, the Board wanted to consider implementing similar reporting requirements from GASB 96 and SFFAS 54 for cloud-service arrangements in the federal space.

However, after extensive research, it does not appear to staff that this reporting framework cleanly fits with the current federal cloud environment. Federal entities appear to acquire cloud services in many ways, often in a pay-as-you-go manner based on variable usage with no fixed payment or term commitments. These types of arrangements would not fit the scope of the balance sheet recognition reporting option and would therefore not be subject to the required reporting. This would ultimately provide users an incomplete reporting of the federal cloud-service cost environment.

Additionally, even with multi-year commitments, the cloud-service is often consumed in a variable usage method and staff believes that fixed amortization over the commitment term would often not accurately depict the economic substance of the transaction. For example, staff understands that some types of multi-year commitments, such as reserved instances, provide federal entities with a guaranteed amount of cloud capacity for a specified price for a specified amount of time, such as one or three years. However, the federal entity could theoretically consume the reserved cloud capacity over the entire duration of the commitment or as quickly as needed. In other words, under this reporting option, the federal entity could amortize a multi-year asset over the term of the commitment when in reality the entity could consume the asset in a few months.

While staff still believes that there are likely some right-to-use asset components of cloud-service arrangements, it does not seem as clear-cut as leases due to the intangible nature of the underlying resource. As stated earlier, one working group member indicated that a lack of guidance on general intangible assets makes it difficult to envision asset recognition for cloud-service arrangements. Additionally, cloud-service arrangements often include a bundle of different IT resources and service components that likely make them a blend of right-to-use asset and service contract.

Reporting option 1 in theory would improve transparency of federal net position. However, the amounts of the multi-year cloud-service commitments would be relatively minor compared to other asset categories and would likely have no material effect on total balance sheet asset value¹⁸. Furthermore, while some non-preparer stakeholders expressed interest in multi-year cloud-service commitment information, they did not particularly express an interest in the information presented as a right-to-use asset on the balance sheet. Additionally, staff agrees with one stakeholder's observation that future-year commitment data for cloud-services may not prove very accurate when compared to actual spending on cloud services due to the fast changing and flexible cloud-service environment.

Ultimately, staff believes that reporting option 1 would present significant burdens for preparers and could be more complicated for preparers to assess asset value than with leases. Additionally, the resulting asset value would likely be significantly smaller than that of leases. Staff also believes that the commitment disclosure reporting option would

¹⁸ Although it would likely be significant when compared to IUS capitalization.

provide many of the same reporting benefits with less costly and burdensome requirements for preparers.

Staff Recommendations

When staff weighs the user benefits and preparer burdens of each reporting option, it appears that annual cloud-service expense disclosure (option 3) is the optimal reporting option. Multiple non-preparer and preparer stakeholders believed that this reporting option could help provide transparency and accountability benefits for cloud-service resources in the federal environment. Staff agrees with a non-preparer stakeholder's observation that expense disclosures accompanied by robust qualitative information could help management better understand what federal entities spend on cloud services and therefore help with more cost-effective decisions with future cloud and/or IT-service purchases.

As stated earlier in the quantitative analysis section, while annual cloud-service costs¹⁹ appear to be quite insignificant relative to total operational expenditures²⁰, the annual cloud-service costs are very significant when compared with current IUS capitalization and amortization amounts. Staff does believe that users are currently not privy to the full federal IT resource and cost environment without insight into cloud-service expenditures.

Expense disclosure reporting requirements are not common for federal financial reports. However, the Board has issued previous guidance requiring expense disclosures. For example, paragraph 37 of SFFAS 54 requires preparers to disclose annual intragovernmental lease expenses by major category.

The Board has also addressed expense reporting by category in concepts statements. SFFAC 2, *Entity and Display* states that costs can be categorized by object class in the statement of net cost²¹, which could apply to cloud services. Furthermore, SFFAC 2 suggests that the operational costs to manage organizations and/or programs can be displayed on the face of financial statements or in accompanying footnotes, especially if the information would assist in evaluating an entity's operating performance²².

However, staff notes that some federal entities believed that any reporting benefits from option 3 would not outweigh the costs and burdens to implement, largely because of the relatively small dollar amount when compared to total operational expenditures and other expense categories.

Staff believes the Board should also consider RSI as alternative reporting approach over basic information for reporting annual cloud-service expenditures. Staff believes

¹⁹ Approximately \$10.8 billion in FY 21

²⁰ \$7.3 trillion in FY 21

²¹ See SFFAC 2, paragraph 87

²² See SFFAC 2, paragraph 95

that RSI is a viable reporting option in accordance with paragraphs 73A through 73E.g. of SFFAC 6, *Distinguishing Basic Information, Required Supplementary Information, and Other Accompanying Information*. However, the information would be subject to limited audit coverage.

The summary table below depicts major pros and cons of each reporting option.

Summary Table

Balance Sheet Recognition	Commitment Disclosure	Expense Disclosure	Expense Recognition Only
Future cloud resource impacts on net position	Disclose future resources needed for cloud services	Report all annual cloud-service costs	Consistent reporting across federal entities
Would not report all cloud-service costs	Would not report all cloud-service costs	Would not report future resources needed for cloud services	No transparency on resources attributed to cloud services
Burden to identify and recognize commitments, NPV, and amortization	Burden to identify and disclose commitments	Burden to identify and disclose annual cloud costs	No new reporting requirements

Next Steps

Pending Board feedback on the questions below, staff plans to begin developing an exposure draft for cloud-service arrangement reporting guidance. Staff will initially focus on drafting scope and definitions sections. Additionally, staff will research whether the best course of action is to draft a new standard or amend SFFAS 10, *Accounting for Internal Use Software* as the Board's reporting preferences for cloud-service arrangements will influence the appropriate format for issuing guidance.

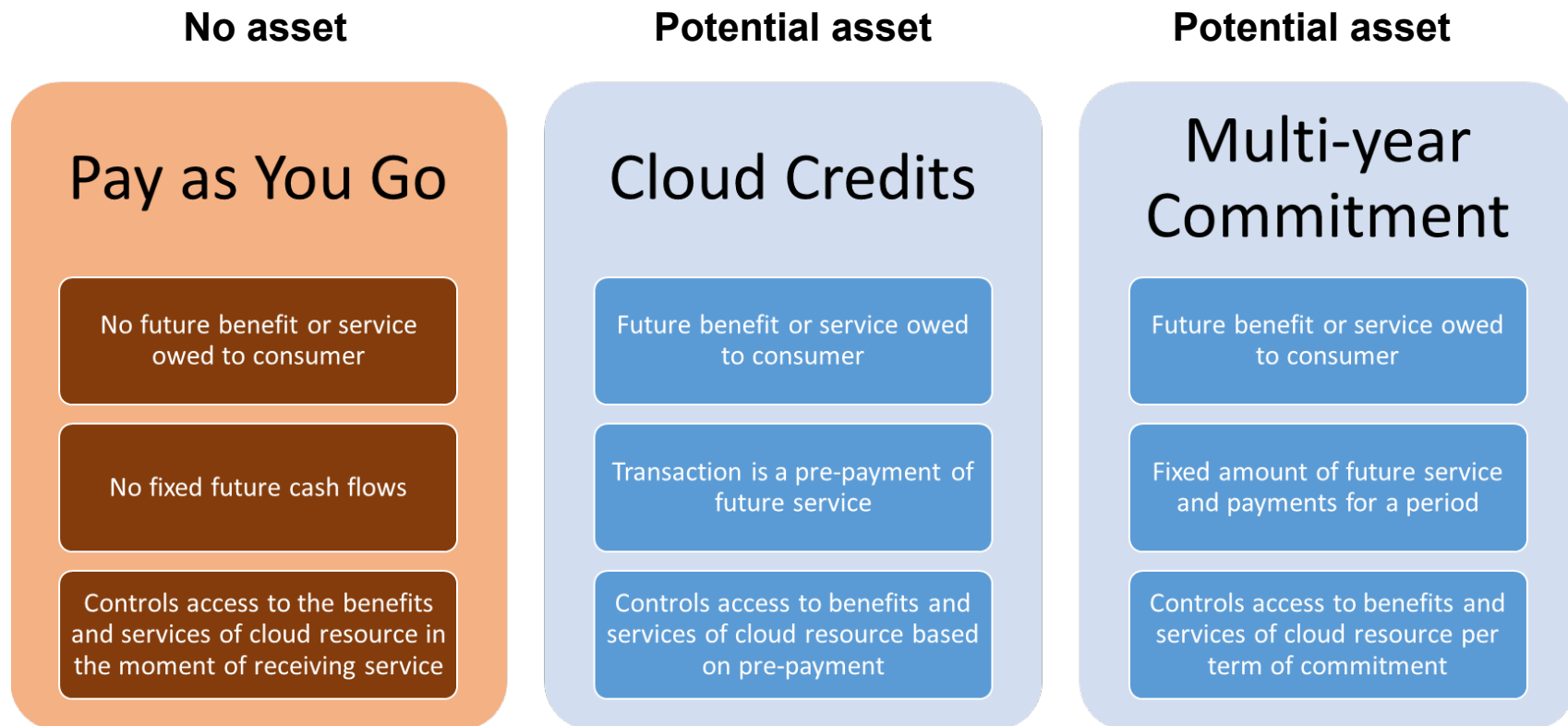
Question for the Board:

1. Do members have feedback and/or need additional information on the cloud-service arrangement reporting options?

Question for the Board:

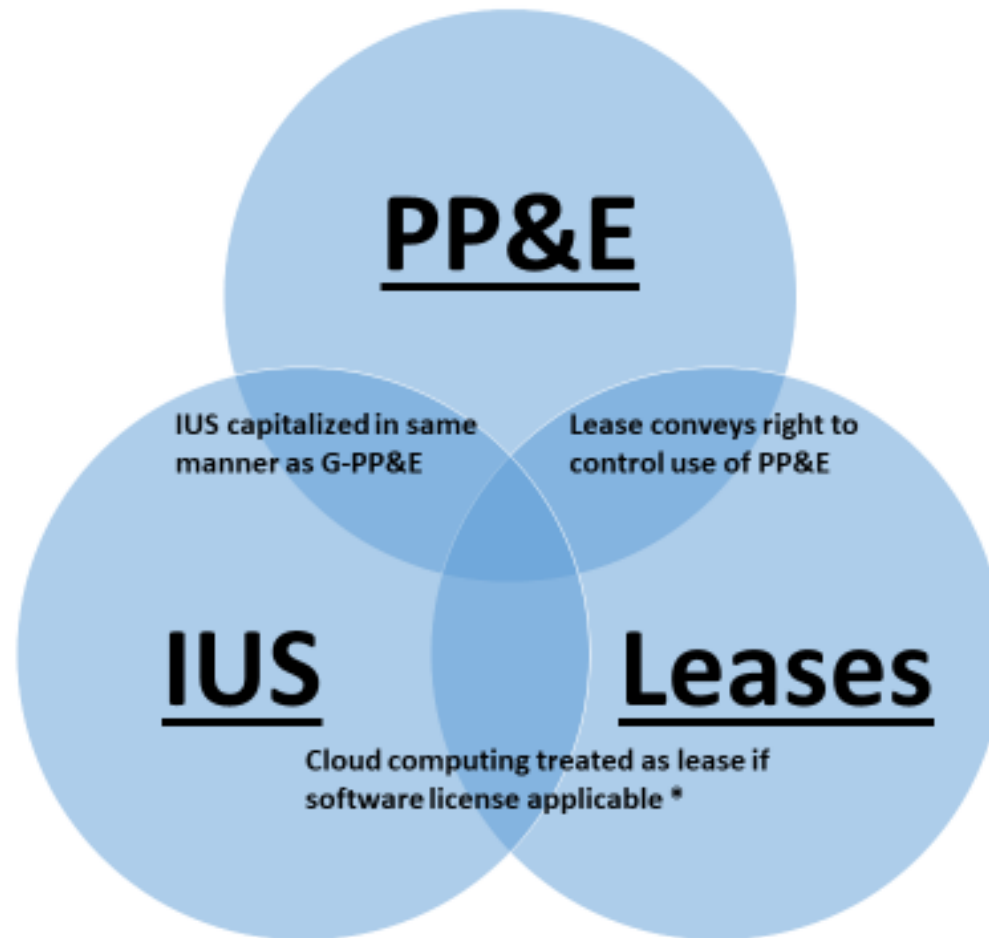
2. Which cloud-service arrangement reporting option do members prefer?

Cloud-Service Arrangement Asset Framework



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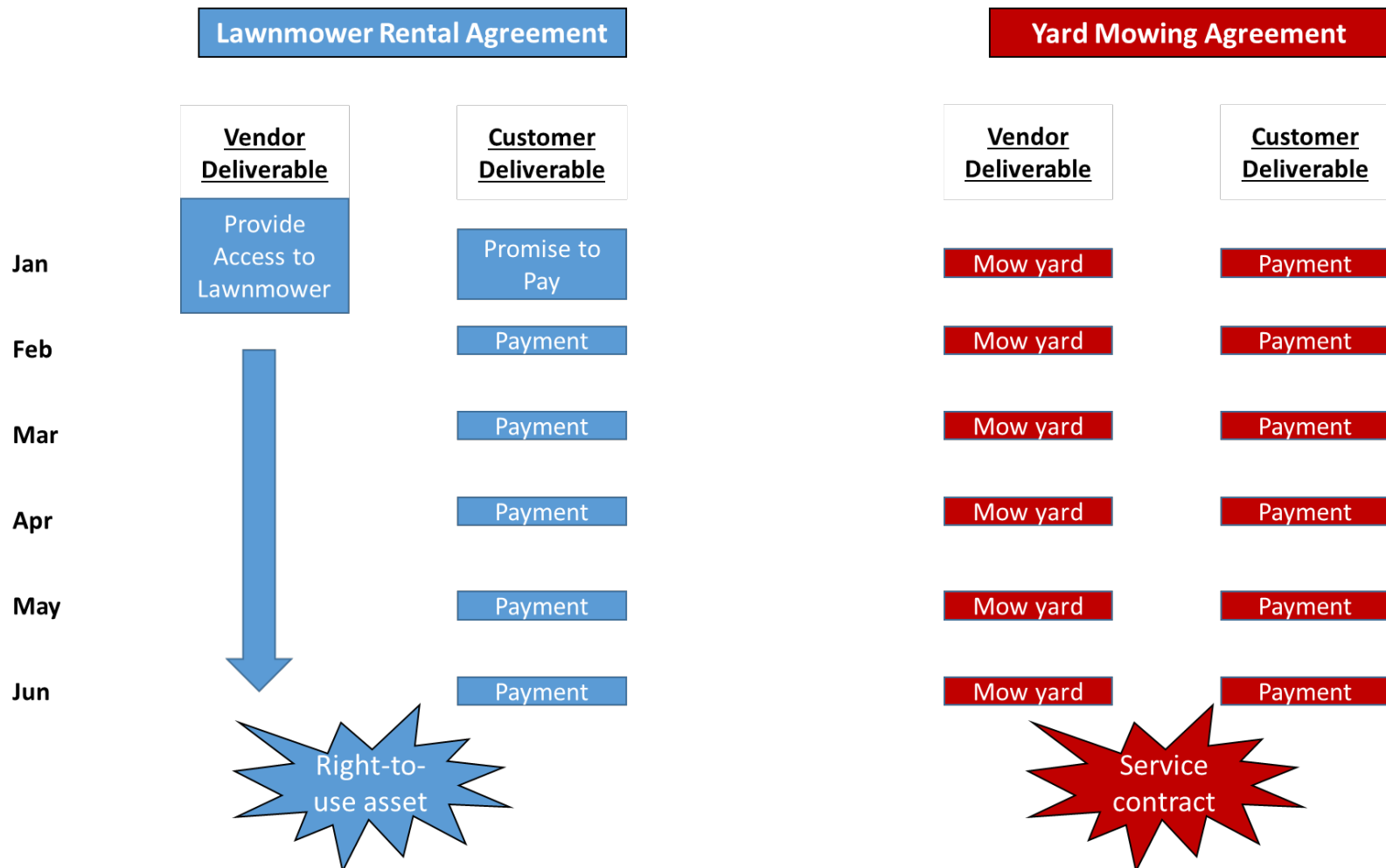
FASAB Asset Guidance Framework



* The cloud computing arrangement guidance was applicable to the old capital lease guidance from SFFAS 5 and 6. Effective FY 24, SFFAS 54 scopes out software licenses from leases guidance, which will essentially make the TR 16 cloud computing arrangement guidance obsolete.

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Right-to-Use Asset versus Service Contract



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Software Technology Definitions

Agile development – an umbrella term used to describe software development methods that incrementally deliver working segments of a product in short iterative cycles instead of delivering a usable product only once at the end of a sequential process. This typically involves cross-functional collaboration among development, operational, and security interests to leverage constant feedback from the end-user in order to improve the functionality of the product through multiple iterations and provide constant support.

Application programming interface (API) - a set of definitions and protocols for building and integrating application software that enables applications to exchange data and functionality.

Application software – a type of computer program that performs a specific function for an end-user.

Blockchain - refers to the technological infrastructure and protocols that allow simultaneous access, validation, and record updating across a network in a decentralized manner. Blockchain technology is used with cryptocurrency and smart contracts, among other things.

Bundled IT products and services - services offered as part of acquiring commercial off the shelf software (COTS), licenses, or cloud services that is separate but complementary to the acquired resource (e.g., training, maintenance, data conversion, reengineering, and rights to future upgrades and enhancements).

Cloud bursting – a configuration in which an application runs in a private cloud or data center and surges into a public cloud when the demand for computing capacity spikes during peak times.

Cloud computing - a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.

Cloud service arrangement – a contract or agreement that provides a federal entity the right to access and use information technology resources provided by a vendor over the internet without the federal entity taking possession of the information technology resource on its own hardware or systems.

Commercial-off-the-shelf software (COTS) – ready-made application software that is purchased or licensed from a vendor to utilize the software as intended for internal-use.

Community cloud - the cloud infrastructure is provisioned for exclusive use by a specific community of consumers from organizations that have shared concerns (e.g., mission,

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security requirements, policy, and compliance considerations). It may be owned, managed, and operated by one or more of the organizations in the community, a third party, or some combination of them, and it may exist on or off premises.

Computer network – A set of computers that are connected for the purpose of communicating data electronically.

Computer system – a combination of functional and related hardware and software components to perform a desired outcome.

Computing infrastructure – consists of essential and foundational compute, storage, and networking resources required to operate and manage information technology environments. Examples include servers, data centers, and routers, operating systems and firewalls.

Computing platform - a group of technologies or that are used as a foundation upon which software applications are developed and implemented. Examples include coding language, middleware, database management systems, operating systems, application programming interface (API), and firewalls.

Cryptocurrency - a digital currency in which transactions are verified and records maintained by a decentralized system using blockchain technology, rather than by a centralized authority.

Data conversion – the process of modifying and converting the format of data to transfer it to a more useful format based on a target system. Data conversion enables the data to be read, altered, and executed in an application or database other than that in which it was created.

Data migration – the process of transferring data between formats or systems.

Development, modernization, and enhancement (DME) - refers to projects and activities that lead to new IT assets/systems, or change or modify existing IT assets to substantively improve capability or performance.

Enhancements – any modification that significantly increases computer system capabilities beyond its original functions.

External-use software - software developed by an entity to be sold, licensed, or made publically available solely for the end user's needs.

Hardware – refers to the tangible parts of computer systems that store and run instructions provided by software and makes the processing of data and supports baseline functions.

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Hybrid cloud - the cloud infrastructure is a composition of two or more distinct cloud infrastructures (private, community, or public) that remain unique entities, but are bound together by standardized or proprietary technology that enables data and application portability (e.g., cloud bursting for load balancing between clouds).

Impairment - occurs when software or another IT asset no longer provides substantive service potential or a significant reduction occurs in the capabilities, functions, or uses of the asset prior to end of its estimated useful life.

Information technology (IT) - the development, implementation, maintenance, and use of computer hardware, software, systems, cloud services, and networks to organize, communicate, and secure information electronically.

Information technology security – a set of strategies, objectives, and methods used to prevent unauthorized access to an organization's IT resources, such as hardware, networks, software, and data.

Infrastructure as a service – the capability provided to the consumer is to provision processing, storage, networks, and other fundamental computing resources where the consumer is able to deploy and run arbitrary software, which can include operating systems and applications. The consumer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, and deployed applications; and possibly limited control of select networking components (e.g., host firewalls).

Internet domain - An identification string that defines a realm of administrative autonomy, authority or control within the Internet.

Internet domain name – The internet address of a website. Domain names usually end in a generic name such as .com, .org, or .gov.

Intranet – a network for sharing information, collaboration tools, operational systems, and other computing services within an organization, usually to the exclusion of access by outsiders.

Internal-use software – acquired or developed software that is operated by an entity strictly for its own administrative, security, operational, or mission needs, with no intent of selling or licensing the software.

Internally developed software - software that an entity is actively developing through internal employees, contractors, or a combination of both. This includes significant modifications that adds additional capabilities to new software and existing or purchased COTS software.

Legacy modernization - rewriting or updating a legacy system to modern computer programming languages, architectures, data formats, software applications, or hardware

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platforms. Legacy systems are often modernized to maintain functionality, add features, or add security.

Legacy system - an old technology, computer system, or application program relating to or being an outdated, inefficient, and/or incompatible computer system that is still in use and may pose inoperability and compatibility issues or risks to other systems without modernization.

Load balancing – the process of distributing traffic and workloads across computing resources in a cloud environment to ensure that no single server or machine is under-loaded, overloaded, or idle.

Maintenance and repair – the process of monitoring, updating, and preserving software applications and IT infrastructure currently in use to sustain computer system security and operability without adding new capabilities or functions.

Operating system – the software that supports a computer system's basic operations by communicating with hardware and directing the processing of programs. Also called system software.

Platform as a service - the capability provided to the consumer is to deploy onto the cloud infrastructure consumer-created or acquired applications created using programming languages, libraries, services, and tools supported by the provider. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, or storage, but has control over the deployed applications and possibly configuration settings for the application-hosting environment.

Private cloud - the cloud infrastructure is provisioned for exclusive use by a single organization comprising multiple consumers (e.g., business units). It may be owned, managed, and operated by the organization, a third party, or some combination of them, and it may exist on or off premises.

Prototyping – the activity of creating working models of software applications used to gather end-user feedback for further design and implementation considerations for the final product. Prototyping can be utilized as part of agile development methods.

Public cloud - the cloud infrastructure is provisioned for open use by the general public. It may be owned, managed, and operated by a business, academic, or government organization, or some combination of them. It exists on the premises of the cloud provider.

Robotic process automation – software automation technologies that imitate mundane rules-based business processes traditionally performed by humans, such as extracting data, filling in forms, and moving files.

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Shared service - a mission, operation, or administrative support function provided by a federal entity to other federal entities (interagency) or to separate components within the same entity (intra-agency).

Software - a set of instructions that tell a computer to operate and perform specific tasks. Software is often used to describe the intangible functional aspects of a computer and includes application and operating system programs, procedures, rules, and any associated instructions pertaining to the operation of a computer system or program.

Software as a service – the capability provided to the consumer is to use the provider’s applications running on a cloud infrastructure . The applications are accessible from various client devices through either a thin client interface, such as a web browser (e.g., web-based email), or a program interface. The consumer does not manage or control the underlying cloud infrastructure including network, servers, operating systems, storage, or even individual application capabilities, with the possible exception of limited user-specific application configuration settings.

Software-hardware integrated asset – application software that is integrated into and necessary to operate general PP&E and does not serve another purpose separate from the hardware. Also referred to as “integrated or embedded systems”.

Software in development – the accumulated cost of developing an internal use software asset that is not yet complete. Similar to construction in process (CIP) for PP&E.

Software license - a legal instrument governing permissions and restrictions for use of a software application, source code, or related product. A software license is a product that gives the consumer various intellectual property rights over a vendor’s underlying software resource. The acquired license in this scenario generally allows the consumer to possess the underlying software resource on their own hardware and/or IT systems. A license can apply to individuals or entire organizations and can provide perpetual or term-based rights.

Thick client – Thick clients IT devices are full featured computers with all the standard hardware and locally installed operating system and applications.

Thin client - Thin clients are IT devices that connect remotely into a separate server or data center that does all the work in a virtual environment.

Update – a way to fine-tune a product to keep it running in an optimal manner. Software updates usually consist of small and frequent changes to correct security issues or coding bugs.

Upgrade – A new version of software that replaces the old product and is used for significant changes and/or major improvements.

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Waterfall development model – a non-iterative development method that breaks down activities into sequential and exclusive phases where each phase depends on the deliverables of the previous one and a usable product is produced after all phases occur. Also referred to as “Linear development model”.

Web applications – an application software that is accessed through a website.

Web page – a document written in hypertext that can be viewed by an internet browser.

Website - collection of internally or publicly accessible, interlinked web pages that share a single domain name.

Intangible Assets Project Plan																																			
Activity	Status	Oct 20	Dec 20	Feb 21	Apr 21	Jun 21	Aug 21	Oct 21	Dec 21	Feb 22	Apr 22	Jun 22	Aug 22	Oct 22	Dec 22	Feb 23	Apr 23	Jun 23	Aug 23	Oct 23	Dec 23	Feb 24	Apr 24	Jun 24	Aug 24	Oct 24	Dec 24	Feb 25	Apr 25	Jun 25	Aug 25				
Intangible Asset Research																																			
Pre-Research	Complete																																		
Technical Plan Approval	Complete																																		
Form Task Force	Complete																																		
Task Force Survey	Complete																																		
Further Research	Complete																																		
Present Research to Board	Complete																																		
Software Guidance Update																																			
Request Board Approve Project	Complete																																		
Develop Scope and Project Plan	Complete																																		
Develop Guidance Issues Papers/ED	Current																																		
Issue ED for Comment	Scheduled																																		
Issue Podcast on ED	Scheduled																																		
Publish articles on ED	Scheduled																																		
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Intangible Asset Working Definition																																			
Request Board Approve Project	Complete																																		
Develop Working Definition	Complete																																		
Intangible Asset Guidance																																			
Develop ITC or PV	Scheduled																																		
Issue ITC or PV for Comment	Scheduled																																		
Present Comments to Board	Scheduled																																		