

Memorandum

Software Technology

October 5, 2022

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

INTRODUCTION

At the August 2022 meeting, staff presented an issues paper to the Board that discussed a framework of cloud-service arrangements that could meet the essential characteristics of an asset for financial reporting purposes along with potential benefits and challenges of reporting cloud service arrangements as assets in federal financial reports. Members generally supported staff's analysis and proposals but requested further research and deliberation on the potential benefits of reporting cloud-service arrangements and whether the arrangements are typical service contracts or if they are more like right-to-use assets.

The attached issues paper provides an analysis of 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. The issues paper will also examine FASAB's previous discussions of right-to-use assets and service contracts and will analyze whether certain cloud-service arrangements in the federal environment resemble right-to-use assets or service contracts. Staff is only requesting the Board's feedback on the analysis for future reporting guidance decisions. At this time, staff is not requesting the Board to make an official decision on whether cloud-service arrangements represent service contracts or right-to-use assets in the federal environment.

REQUEST FOR FEEDBACK BY October 19, 2022

Prior to the Board's October meeting, please review the attached staff recommendations and analyses and respond to the questions by October 19, 2022.

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 continue to engage with the working group, cloud-service providers, and other potential users of cloud-service financial information to research reporting options other than asset recognition and discern any associated financial report user benefits from both internal and external users. Staff will ultimately use all of the research and Board deliberations to recommend a scope and multiple financial reporting options for cloud-service arrangement costs for the Board's consideration.

ATTACHMENTS

1. Staff Analysis
2. Cloud-Service Arrangement Asset Framework
3. FASAB Software Technology Definitions
4. FASAB Asset Guidance Framework
5. Intangible Assets Project Plan

Staff Analysis

Software Technology

October 5, 2022

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 4 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 notes 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.

Research

Based on requests from the August meeting, staff researched guidance and associated deliberation documents from FASAB, the Governmental Accounting Standards Board (GASB), the Financial Accounting Standards Board (FASB), and the International Accounting Standards Board (IASB) to understand how multiple standard-setting bodies have deliberated the differences between a service contract and a right-to-use asset. Additionally, staff noted how those positions have influenced the standard-setting bodies' cloud-service reporting guidance. Staff specifically researched and analyzed the following documents for this issues paper:

- GASB Statement No. 87, *Leases*
- GASB Statement No. 96, *Subscription-Based Information Technology Arrangements*
- GASB Memorandum Issue 6, Paper 1, from November 2018 Board Meetings
- FASB Accounting Standards Update 2015-05, *Intangibles – Goodwill and Other Internal-Use Software (Subtopic 350-40)*
- FASB Accounting Standards Update 2018-15, *Intangibles – Goodwill and Other Internal-Use Software (Subtopic 350-40)*
- FASB Accounting Standards Update 2016-02, *Leases (Topic 842)*
- IFRS 16, *Leases*
- IFRS Interpretation Committee, *Configuration or Customisation Costs in a Cloud Computing Arrangement (IAS 38 Intangible Assets)*
- 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*

- Technical Release 20, *Implementation Guidance for Leases*

Additionally, staff previously held roundtable discussions with both FASB and GASB in order to understand their respective Board's decisions on whether cloud-service arrangements were service contracts or right-to-use assets. Staff has included insights from those discussions in this issues paper.

Staff also continued discussions with accounting and IT professionals to further understand the payment and deliverable criteria of multi-year commitment cloud-service arrangements in the federal environment. Staff has also included insights from those discussions in this issues paper.

ANALYSIS

During the August 2022 meeting, staff presented three categories of cloud-service arrangements that apply in the federal environment. Staff concluded that the pay-as-you-go arrangement would not meet the SFFAC 5 essential characteristics of assets. This is because the arrangements do 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.

Staff also concluded that both the cloud credit and multi-year commitment types of cloud-service arrangements could potentially meet both essential characteristics of assets. Staff believed that there is opportunity to report cloud credit arrangements as a type of pre-paid expense and multi-year commitment arrangements similar to lease assets².

The Board generally supported staff's analysis and conclusions. However, a few members wanted to better understand the payment and deliverable aspects of multi-year commitments. A few members deliberated whether multi-year arrangements represent service contracts or right-to-use assets as that would indicate whether those cloud-service arrangements are assets. One member suggested that the key question for multi-year commitment arrangements was whether they represent a known future benefit or service owed to the federal entity. If not, then it would be a service contract and not an asset.

The member mentioned that other standard-setting bodies appeared to come to different conclusions on whether cloud-service arrangements are service contracts and encouraged further research and deliberation on this specific issue in the future. Another member agreed that it was important to understand how other standard-setting bodies reached their conclusions about cloud-service guidance.

² See Attachment 2 for cloud-service arrangement asset framework illustration.

Review of FASAB and Other Standard-Setter Guidance

Now that the Board has considered whether cloud-service arrangements could meet the essential asset characteristics from its own concepts, staff believes it is important to understand how other standard-setting bodies made their asset determinations. Additionally, staff believes it is important to understand the substance of the resources and transactions before fully considering the benefits and costs of reporting.

Therefore, this issues paper 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 the standard-setting bodies' cloud-service reporting guidance. The issues paper will also examine FASAB's previous discussions of right-to-use assets and service contracts and will analyze whether certain cloud-service arrangements in the federal environment resemble right-to-use assets or service contracts. Note that the analysis is based on staff's understanding of other standard-setting body positions based on public documents and conversations with staff members from those boards.

Staff is only requesting the Board's feedback on the analysis for future reporting guidance decisions. At this time, staff is not requesting the Board to make an official decision on whether cloud-service arrangements represent service contracts or right-to-use assets in the federal environment.

GASB Guidance Analysis

GASB has concluded in published guidance that subscription-based information technology arrangements (SBITAs), which encompass cloud-service arrangements, are right-to-use assts. Paragraph B13 of GASB No. 96 states:

- *B13. Based on the research conducted, the Board noted that all SBITAs have the following defining characteristics: (a) they are for the temporary use rather than ownership of IT assets, (b) they grant a government control of the right to use a SBITA vendor's IT assets, and (c) they are exchange or exchange-like transactions. Those characteristics are similar to those of a lease, a contract that also is based on the right to use an underlying asset. Therefore, the Board decided that the definition of a SBITA should resemble that of a lease...*

Furthermore, GASB addressed the issue of SBITAs typically including both a right-to-use asset and service component in paragraph B15 of GASB No. 96:

- *B15. Many SBITAs also include service components, such as routine maintenance and minor updates. However, the primary component of those SBITAs is the right to use the underlying IT assets, rather than the service components. The presence of the service components does not change the fundamental nature of those SBITAs.*

The Basis for Conclusions of GASB 87 discusses what the Board saw as differences in lease contracts and executory contracts. Paragraph B6 of GASB No. 87 states:

- *B6. The Board also discussed whether some or all leases should be treated as executory contracts for accounting and financial reporting purposes. An executory contract requires performance by one party over the term of the contract, in exchange for payments made by the other party as performance occurs. The guidance in Statement 62 for operating leases was based on the notion that those leases should be accounted for as executory contracts. However, the Board believes that performance pursuant to a lease contract does not occur over the term of the contract. Rather, the lessor has satisfied the obligation at the commencement of the lease term when the lessee is granted the right to use the underlying asset...*

An issues memorandum from a 2018 GASB Board³ meeting offers further insight into why GASB came to the determination that SBITAs are right-to-use assets, similar to leases. The following paragraphs are excerpts from the Project Staff Analysis section from the memorandum:

- *...a common understanding about executory contracts is that, in such a contract, neither party has fulfilled its obligations and therefore, no assets or obligations are created at the inception of the contract.*
- *In contrast, at the inception of a SBITA contract, the third-party vendor allows the government end user to obtain control of the right to use the vendor's hardware or software. Therefore, the vendor has fulfilled its obligation at the inception of the contract.*
- *...In a SBITA, the vendor may be obligated as part of the subscription agreement to fulfill additional obligations over the length of the contract, such as satisfying requirements for periodic upgrades, routine maintenance, and other support services. However, the vendor's primary obligation—granting the government end user control of the right to use the vendor's hardware or software is fulfilled at the inception of the SBITA. The government end user's primary obligation is similarly fulfilled by agreeing to pay for that right to use in an exchange or exchange-like transaction. The project staff believes that from the end user's standpoint, a SBITA contract does not meet a definition of an executory contract because neither party has "unperformed."*
- *Many participating stakeholders believe that it makes no difference if the hardware or software resides on-premise or in the cloud, and it makes no difference if a government owns the hardware/software or subscribes to it. They believe that both the ownership model and the subscription model provide*

³ GASB Memorandum Issue 6, Paper 1, from November 2018 Board Meetings

resources with present service capacity, and accordingly, the subscription model should not be treated as a service contract...

Finally, the same GASB issues memorandum offers insight into why the Board determined that SBITA's met its "control" criteria of an asset:

- *...the government end user controls the right to use the underlying hardware or software during the length of the SBITA contract. This is because after the vendor provides access to the end user, it is at the discretion of the end user, within the confines of the contract, to decide when, and to what extent, access is needed.*

Staff notes that based on GASB's determination that SBITA's are right-to-use assets, GASB No. 96 essentially requires that SBITA's be recognized as an asset along with a corresponding liability⁴, similar to leases⁵.

FASB Guidance Analysis

It does not appear to staff that FASB has specifically deliberated whether cloud-service arrangements are right-to-use assets or service contracts. However, based on published guidance, it appears that FASB considers cloud-service arrangements⁶ as service contracts, unless the arrangement provides the consumer the ability to possess the underlying software resource on its own hardware, in which the arrangement is then considered internal use software⁷. Unlike GASB, FASB does not currently appear to offer any scenario in which a cloud-service arrangement could present as right-to-use assets.

The Basis for Conclusions of FASB ASU 2016-02 offers insight into what FASB considers differences in leases and service contracts. Paragraphs BC40 through BC42 state:

- *BC40. Leases are different from service contracts and, therefore, generally give rise to different rights and obligations. That is because in a lease the lessee continues to benefit throughout the lease term from the lessor's performance, at lease commencement, of making the underlying asset available for use by the lessee. The lessee benefits in substantially the same manner that a licensee continues to benefit from a license to intellectual property, and from the licensor's performance that occurs at the start of the license period by making the underlying intellectual property available for the licensee's use, throughout the license period.*

⁴ See GASB No. 96, paragraphs 6 - 15

⁵ See GASB No. 96, paragraph B2

⁶ FASB refers to cloud-service arrangements as hosting arrangements

⁷ See paragraph 3, amendments to 350-40-15-4A – 350-40-15-4C in FASB ASU 2015-05.

- *BC41. When the lessor delivers (or makes available) the underlying asset for use by the lessee at the commencement date, the lessor has fulfilled its obligation to transfer the right to use that underlying asset to the lessee even if it has other obligations that require continuing performance under the contract (for example, an obligation to provide services). The lessee now controls the right-of-use asset and has an obligation to pay for that right-of-use asset, which has arisen from the past event of the lessor's performance at lease commencement...*
- *BC42. In contrast, in a typical service contract, the customer obtains economic benefits from the service only as the supplier performs the service. The supplier's performance to date does not continue to benefit the customer throughout the remaining service period. However, where it does, for example, by creating an asset for the customer, the customer typically recognizes that asset and any obligation to pay for the services provided. In a typical service contract, the vendor has a remaining obligation to perform until it has provided all of the service to its customer. Consequently, the customer typically has an obligation to pay only for the services provided to date.*

With a few exceptions relating to internal use software and implementation costs⁸ associated with cloud-service arrangements, it appears that FASB's current position is that cloud-service arrangements are service contracts and expensed as incurred⁹.

IASB Guidance Analysis

It does not appear that IASB has issued specific guidance on cloud-service arrangements nor deliberated whether cloud-service arrangements are right-to-use assets or service contracts. However, staff believes that some other guidance pronouncements offer insight into where IASB stands on the matter. Paragraphs B9 and B14 of IFRS 16 explain the criteria to determine whether a contract contains a lease:

- *B9. To assess whether a contract conveys the right to control the use of an identified asset (see paragraphs B13–B20) for a period of time, an entity shall assess whether, throughout the period of use, the customer has both of the following:*
 - *a. the right to obtain substantially all of the economic benefits from use of the identified asset (as described in paragraphs B21–B23); and*
 - *b. the right to direct the use of the identified asset (as described in paragraphs B24–B30).*

⁸ See paragraph 6, amendment to 350-40-25-18 in FASB ASU 2018-15.

⁹ See paragraph 3, amendments to 350-40-15-4A – 350-40-15-4C in FASB ASU 2015-05.

- *B14. Even if an asset is specified, a customer does not have the right to use an identified asset if the supplier has the substantive right to substitute the asset throughout the period of use...*

Furthermore, the IFRS Interpretations Committee recently published a decision¹⁰ addressing whether to capitalize or expense configuration and customization costs associated with cloud-service arrangements¹¹. In the decision, the committee appears to acknowledge that cloud-service arrangements are typically service contracts because they do not provide the customer exclusive control. See excerpt below:

- *The Committee received a request about how a customer accounts for costs of configuring or customising a supplier's application software in a Software as a Service (SaaS) arrangement. In the fact pattern described in the request:*
 - *a. a customer enters into a SaaS arrangement with a supplier. The contract conveys to the customer the right to receive access to the supplier's application software over the contract term. That right to receive access does not provide the customer with a software asset and, therefore, the access to the software is a service that the customer receives over the contract term...*

Even though IASB has not specifically addressed cloud-service arrangement reporting guidance, based on the excerpts above, staff believes that the Board's general position is that cloud-service arrangements are service contracts and do not contain right-to-use assets.

FASAB Guidance Analysis

FASAB has discussed right-to-use assets and service contracts in leases related guidance. Paragraph A28 states of SFFAS 54 states:

- *A28. For purposes of applying this Statement, a lease is defined as a contract or agreement whereby one entity (lessor) conveys the right to control the use of PP&E (the underlying asset) to another entity (lessee) for a period of time as specified in the contract or agreement in exchange for consideration. Leases include contracts or agreements that, although not explicitly identified as leases, meet the definition of a lease (which reflects the substance of a lease). This definition does not include contracts or agreements for services, except those contracts or agreements that contain both a lease component and a service component. A service contract is a contract that directly engages the time and effort of a contractor whose primary purpose is to perform an identifiable task*

¹⁰ IFRS Interpretation Committee, *Configuration or Customisation Costs in a Cloud Computing Arrangement (IAS 38 Intangible Assets)*

¹¹ Like FASB, the IFRS Interpretation Committee decision appears to allow capitalization of some customization and configuration costs associated with a cloud service contract. However, it appears more restrictive than FASB's implementation guidance because customization and configuration costs are capitalized only in the instance that it creates an asset separate from the service contract that could provide the customer future economic benefits and services not associated with the service contract.

rather than to provide a tangible asset. Service contracts include maintenance of equipment or real property, advisory services, communications services, transportation services, and research and development.

Furthermore, TR20 offers additional insight into right-to-use lease assets. Paragraphs 7.b., 10, and 18 state:

- *7.b....Although other economic benefits or services may be derived by other parties from use of the public land, such rights are not relevant in establishing the right that was specified in the contract to control the use of this particular economic benefit (grazing rights) derived from the underlying asset.*
- *10...A lease conveys control of the right to use another entity's asset. That right is distinct from the underlying asset. That is, the right-to-use relates to both the right to obtain and control access to economic benefits or services from use of an underlying asset, rather than conveying control of the underlying asset itself. Substitution with an essentially identical asset allows the lessee to maintain control of the economic benefits or services from use of another entity's underlying asset and is consistent with the definition of a lease in paragraphs 2-4 of SFFAS 54.*
- *18...Lease arrangements unbundle the economic benefits and services embodied in leased property and give lessees the intangible right to derive economic services and benefits from tangible assets underlying the lease, which is represented by the recognition of the right-to-use lease asset over the lease term...*

It does not appear that FASAB has deliberated cloud-service arrangement guidance in the context of right-to-use assets versus service contracts¹². The lease guidance only applies to tangible property and therefore intangible cloud-service arrangement are not within the scope. Therefore, the previous excerpts from SFFAS 54 and TR 20 are not completely analogous to cloud-service arrangements. Nevertheless, staff believes the guidance offers valuable insight for future guidance decisions for cloud-service arrangements.

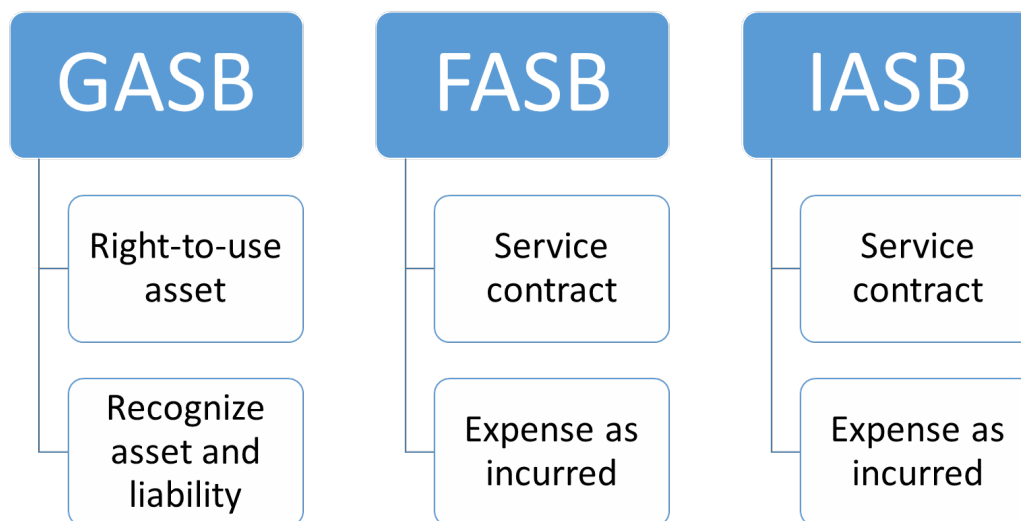
Summary

Staff developed the following chart to depict the general positions that other standard-setting bodies hold regarding cloud-service arrangements:

(Chart on next page)

¹² FASAB has issued cloud-computing guidance in TR 16 that requires preparers to consider the capital/operating lease guidance from SFFAS 6, *Accounting for Property, Plant, and Equipment* if the cloud-service arrangement contains a software license, making it internal use software. However, the new leases guidance in SFFAS 54 excludes software licenses from its scope, which will make the TR 16 cloud guidance obsolete in FY 24. Additionally, staff has observed during research that the TR 16 cloud guidance is essentially obsolete anyway as cloud-service arrangements do not typically include licenses that allow the customer to possess the underlying software on its own hardware.

Cloud-Service Arrangement Guidance Positions



* The above chart is for discussion and analysis purposes only. The chart does not provide any guidance associated with other standard-setter pronouncements.

The reality is that the other standard-setter guidance is more nuanced and complex than the above chart suggests. For example, the standard setters offer guidance on implementation costs and intangible assets associated with cloud-service arrangements. However, staff believes that the chart accurately depicts the broad position of each standard-setting body on whether cloud-service arrangements represent right-to-use assets or service contracts.

Staff Analysis

This section of the issues paper will provide staff's assessment of the other standard-setters' positions on cloud-service arrangements. Additionally, staff will provide an analysis of whether multi-year commitment cloud-service arrangements in the federal environment resemble right-to-use assets or service contracts based on FASAB and other standard-setter positions.

Guidance Comparison

Staff believes that the IASB's assessment of the difference in a service contract and right-to-use asset is irrelevant for FASAB's deliberations on cloud-service arrangements. This is because the guidance in SFFAS 54 and TR 20 suggests that FASAB does not hold the same strict views of what constitutes "control" in a right-to-use asset that IASB does.

For example, IFRS 16 suggests that for a contract to convey the right to control the use of an identified asset, the customer must have the right to obtain substantially all of the economic benefits from use of the identified asset and the right to direct the use of the identified asset. However, FASAB's TR 20 indicates that an entity does not have to

exercise control over the entire underlying asset for a right-to-use asset to exist. The entity just has to exercise control over certain, but not necessarily all, economic benefits or services of the underlying asset.

Additionally, IFRS 16 states that a customer does not have the right to use an identified asset if the supplier has the right to substitute the asset. However, FASAB's TR 20 also disagrees with this point by making it clear that the right-to-use an underlying asset is distinct from the asset itself and that the ability of the lessor to substitute the underlying asset with another identical asset would still allow the lessee to maintain control of the economic benefits or services of the underlying asset.

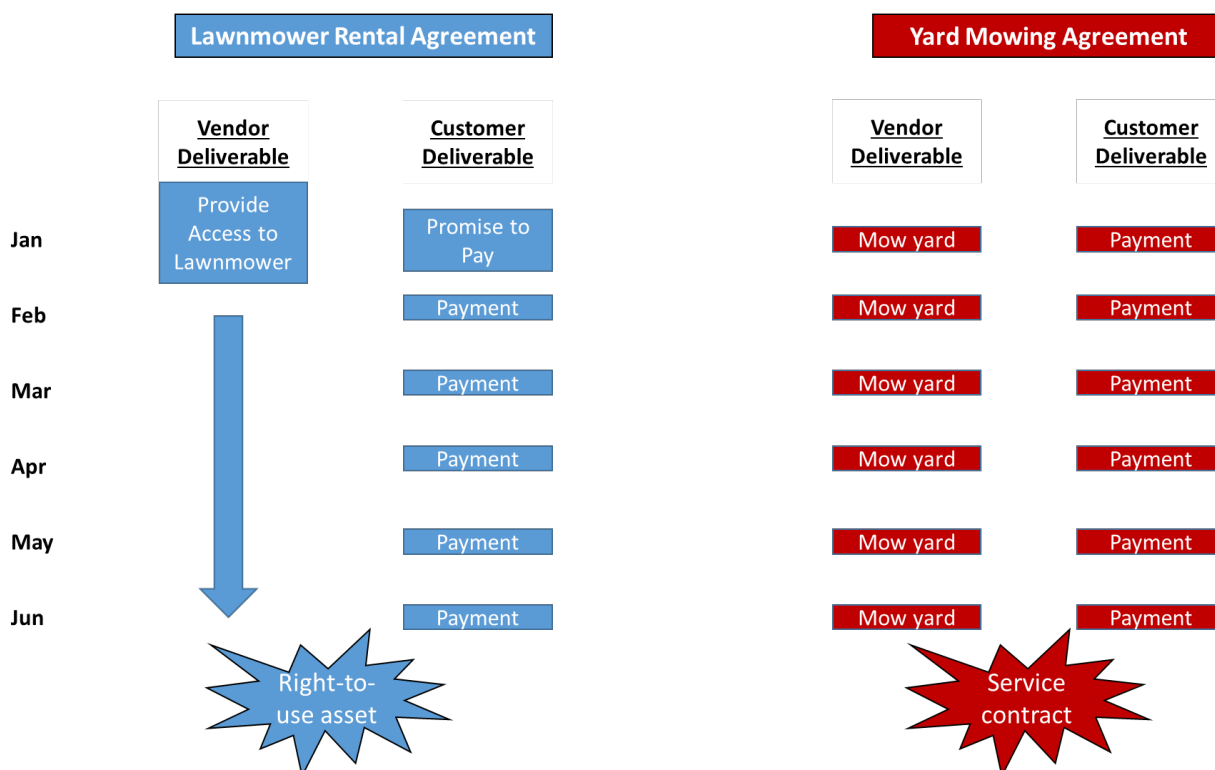
Staff believes the most important issue for FASAB to deliberate is the difference of opinions between FASB and GASB on whether cloud-service arrangements are right-to-use assets or service contracts. Based on the guidance review in the previous section, it appears as if FASB and GASB actually share similar views on the differences between right-to-use assets and service contracts, just not which one applies to cloud-service arrangements.

Both standard-setters appear to agree that when a lessor makes an underlying asset available to the lessee, the lessor has fulfilled its obligation to transfer the right to use that underlying asset to the lessee even if it has other obligations that require continuing performance under the contract, such as providing services. The lessee then controls the right-of-use asset and has an obligation to pay for that right. In other words, with a right-to-use lease asset, the lessee continues to benefit throughout the lease term from the lessor's previous performance of making the underlying asset available for use at the beginning of the term.

However, with service contracts the customer obtains economic benefits from the service only as the supplier performs the service. The supplier's prior performance does not continue to benefit the customer throughout the remaining term of the arrangement. Staff developed the following diagram to portray these different arrangement models using the analogy of a lawnmower and yard mowing service:

(Diagram on next page)

Right-to-Use Asset versus Service Contract



* The above diagram is for discussion and analysis purposes only. It does not provide any guidance associated with other standard-setter pronouncements.

The above diagram shows a six-month lawnmower right-to-use arrangement and a six-month yard mowing service contract. With the right-to-use asset arrangement, the vendor provides the customer access to the lawnmower at the beginning of the term at which point the vendor has fully performed and does not owe the customer anything further. The customer makes a promise to pay for access to that lawnmower at the beginning of the term, and then makes payments throughout the term to maintain the right-to-use the lawnmower.

In contrast, with the yard mowing service contract, the vendor does not fully perform at the beginning of the arrangement. The vendor performs a specific task (mowing the customer's yard) multiple times throughout the term and the customer pays for each service received. In other words, the vendor's prior performance of mowing the yard does not continue to benefit the customer throughout the period or performance. However, the vendor's performance at the beginning of the right-to-use arrangement continues to benefit the customer throughout the term of the arrangement.

Staff notes that the service contract definition from SFFAS 54 can also apply to the diagram. That is that the yard mowing service arrangement would engage the time and effort of a contractor to perform an identifiable task (mow the yard) rather than to provide a tangible asset (access to lawnmower).

It is noteworthy and particularly interesting that GASB and FASB appear to agree on the differences in right-to-use assets and service contracts yet do not agree which one applies to cloud-service arrangements. As stated previously, FASB generally treats cloud-service arrangements as service contracts while GASB considers them right-to-use assets, similar to leases. It appears to staff that the difference of opinion is due to the type of cloud-service arrangement that each Board primarily considered when deliberating guidance.

From speaking with FASB staff, it seems that the Board considered the flexibilities and on-demand usage criteria of pay-as-you-go arrangements when determining that cloud-service arrangements were more akin to service contracts because the benefits are provided and consumed simultaneously. In these types of arrangements, it did not seem that the customer of the cloud service possessed a future benefit or expectation of service from the cloud provider for a set period of time. However, in their dissent of ASU 2018-15, two Board members noted the need for greater understanding of how lease guidance from Topic 842 could apply to right-to-use software arrangements.

On the other hand, it would appear that GASB's guidance focused on subscription-based cloud services that include some type of recurring fixed payment for cloud access over multiple years. As discussed during the August meeting, research has indicated pay-as-you-go, cloud credit, and multi-year commitment models occur in the federal environment. However, staff has observed that most arrangements are charged based on usage.

Staff Recommendations

After speaking further with several IT professionals from different federal entities, staff is of the opinion that certain multi-year commitment cloud-service arrangements are more like right-to-use assets than service contracts. Cloud-service arrangements appear to provide both labor service and access to an IT resource capability, whether that is server, data storage, or software capabilities. However, it appears that the primary purpose of the arrangements is for the customer to gain the right-to-use a provider's IT resource¹³, and the accompanying service components, such as maintenance, updates, and security further enhance the customer's access to the IT resources capabilities.

Several federal entities stated that they often enter into "reserved instance" cloud arrangements. Reserved instances typically involve the customer committing to a minimum usage amount of cloud capabilities on either an annual or a multi-year basis in exchange for the cloud provider offering a significant price discount. Sometimes the customer pays for the reserved instance upfront, partially upfront, or does not pay anything upfront. When the customer does not pay for the reserved instance upfront, the amount owed is typically paid in fixed monthly increments for the term of the arrangement.

¹³ The cloud computing characteristics from *The NIST Definition of Cloud Computing, Special Publication 800-145, September 2011* support this notion - *A consumer can unilaterally provision computing capabilities, such as server time and network storage, as needed automatically without requiring human interaction with each service provider.*

With reserved instances, the provider still delivers the cloud capabilities on-demand in a pay-as-you-go manner by measuring actual usage, like a utility. If the customer exceeds their reserved instance amount or uses cloud capabilities outside of the reserved instance agreement, they are still charged a variable amount on top of the fixed amount. However, the provider has still committed to provide the customer a minimum level of cloud access for a period of time in exchange for a fixed payment from the customer.

Additionally, staff observed a federal entity that executes a multi-year cloud-service contract that includes fixed payments for multiple separate components. The arrangement included separate deliverables, such as cloud capability access, associated software licenses, and labor services for security, maintenance, and enhancements. Some federal entities have indicated that for some software as a service models, they pay for a set number of user access rights to the cloud software on an annual or multi-annual basis, with the payments often times made upfront. These are the only cloud-service arrangement examples that staff have seen in the federal environment that resembles the subscription-based model. The majority of arrangements staff has seen are charged based on usage, like a utility, with federal entities sometimes using reserved instances to lock in savings by committing to a minimum usage in the future.

These scenarios seem to fit with the right-to-use asset arrangement depicted in the diagram. With reserved instances and subscription-like models, the cloud provider is making a certain level of cloud capability available for the customer to use and access as needed for a certain length of time. In these scenarios, the provider has fully performed by promising a certain level of cloud access upfront. Additionally, these scenarios do not appear to fit the SFFAS 54 definition of a service contract because the cloud provider is not directly providing time and effort with the primary purpose to perform an identifiable task, they are working to provide access to a resource.

There are typically accompanying labor services to deliver and/or enhance access to the IT resource capabilities, but the purpose of the arrangements is not for a contractor to perform specific tasks. The purpose of the arrangements is for the customer to have access to the capabilities of an IT resource. An example of a service contract would be paying a contractor to identify IT security flaws or to provide consultative advice on how to implement cloud in the enterprise.

Furthermore, several federal entities have indicated that they have the ability to resell unused reserve instances in a market. Although it seems federal entities rarely resell the reserved instances due to policy and appropriation law issues. In reality, there is risk that the entity will not fully execute the reserved instance. However, staff believes that the ability to resell reserved instances in a market is further proof that those types of cloud-service arrangements represent a future economic benefit or service.

Several federal IT professionals agreed with the notion that while cloud-service arrangements include varying service components, the primary purpose of the arrangements is access to the service capabilities of the cloud providers' IT resource. Otherwise, there is nothing for the contractors to provide services. One IT professional

used the analogy of a hotel to describe cloud-service arrangements. A customer pays for access to a hotel room (cloud resource). The hotel management provides several services along with the room access, such as utilities, cable and internet, and cleaning services. However, the primary deliverable to the customer is access to the hotel room. Without the access to the hotel room, the accompanying services are meaningless to the customer.

One federal IT professional that staff spoke with was strongly of the opinion that cloud providers provide a service. Their reasoning was that from the customer's perspective, they are acquiring cloud services from a catalogue of a variety of generic options for different IT needs. The customer has no control over the underlying IT resource they are temporarily using and does not even know or care what IT resource is providing the services. They did however acknowledge that federal entities usually acquire cloud-services to ultimately use the capabilities of a provider's IT resource instead of purchasing or developing it internally.

Staff understands this position from a practical standpoint. It appears that a big selling point of cloud-service arrangements is that the provider handles many of the management responsibilities of the IT resource for the customer. Additionally, it appears that cloud providers have to devote considerable effort to delivering access to the IT resource in real time, as the customer demands it, by pooling their resources for the most efficient use¹⁴. It seems that for many cloud-service arrangement models, the underlying IT resource providing the capability is constantly changing. One could argue that the provider is providing a service by working to make the IT resource available in real time.

However, if staff considers existing FASAB guidance from SFFAS 54 and TR 20, it seems most appropriate to label these multi-year cloud-service arrangements as right-to-use assets. The guidance in TR 20 makes it clear that a right-to-use asset conveys control of the right to use another entity's asset and that right is distinct from the underlying asset. Furthermore, the right-to-use relates to both the right to obtain and control access to economic benefits or services from use of an underlying asset, rather than conveying control of the underlying asset itself. Additionally, TR 20 also would suggest that the cloud provider's ability to substitute the underlying IT resource providing the capabilities is irrelevant because substitution with an essentially identical asset still allows the lessee to maintain control of the economic benefits or services from use of another entity's underlying asset.

In other words, if staff relies on a guidance framework already established by the Board concerning right-to-use assets, it does not seem to matter that the customer does not control the underlying asset or even if the underlying asset changes. As long as the

¹⁴ The cloud computing characteristics from NIST 800-145 support this notion - *The providers computing resources are pooled to serve multiple consumers using a multi-tenant model, with different physical and virtual resources dynamically assigned and reassigned according to consumer demand. There is a sense of location independence in that the customer generally has no control or knowledge over the exact location of the provided resources...*

customer maintains control of the benefits and services of an underlying asset, they have control of a right-to-use asset.

Staff has made the argument that certain cloud-service arrangements could be considered right-to-use assets based on a review of other standard-setter positions coupled with the Board's prior positions on right-to-use assets from SFFAS 54 and TR20. However, staff believes a big takeaway from this analysis is that there is not a simple answer as to whether cloud-service arrangements are right-to-use assets or service contracts. This is evidenced by the fact that other major standard-setting bodies have taken different positions on this question for seemingly the same resource.

Staff believes it is also important to consider user benefits when making financial reporting requirements and the potential reporting benefits should be one of the primary drivers in the Board's eventual decisions for cloud-service arrangement reporting guidance.

Next Steps

Staff believes that the deliberations from this and the past several Board meetings have laid the foundation for a reporting guidance framework for cloud-service arrangements. However, per the Board's prior requests, staff still plans to:

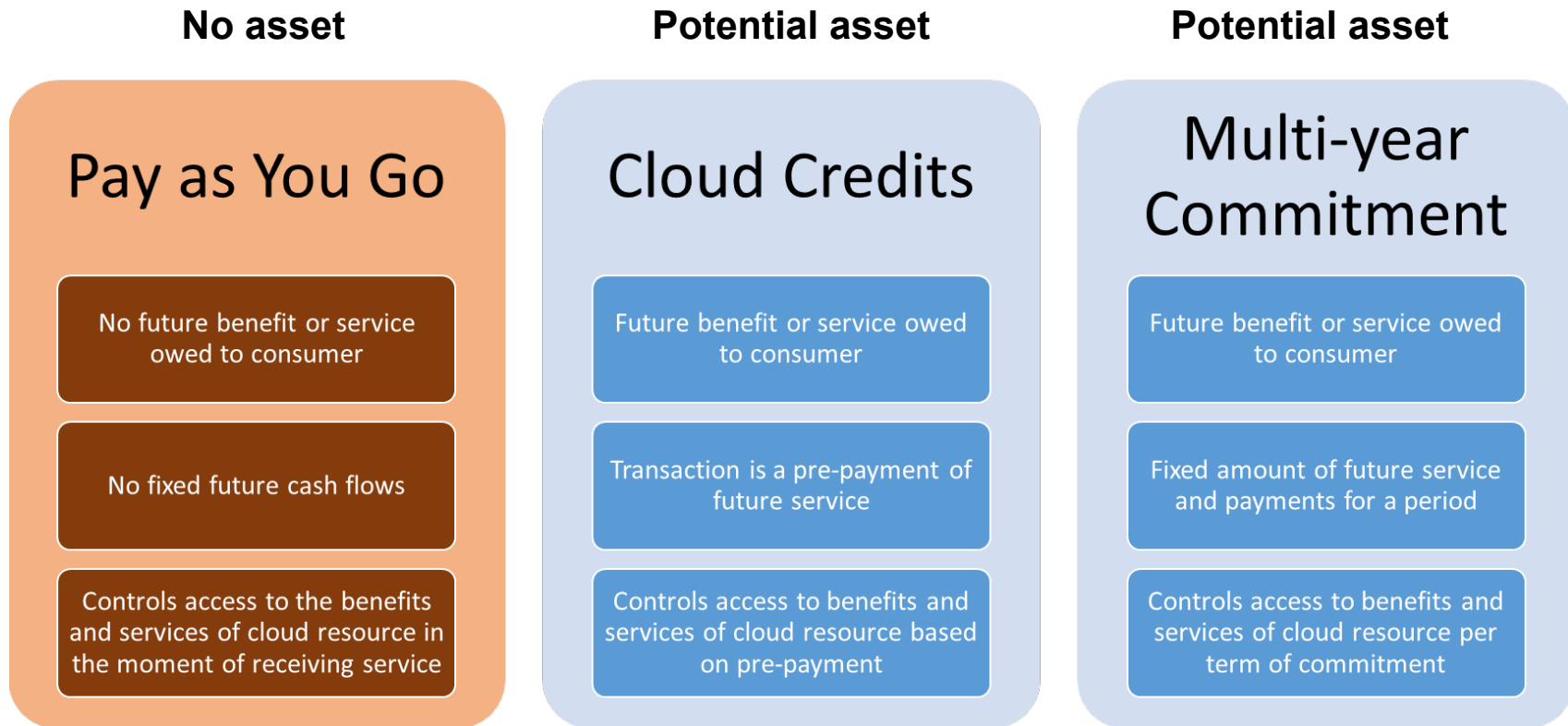
- Identify benefits of reporting cloud-service arrangements in ways other than recognizing an asset in financial statements
- Seek out the views of a wider range of federal financial report users that may have an interest in cloud-service arrangement reporting

Using deliberations from the Board meetings, staff will then recommend for the Board's approval a scope and multiple financial reporting options for cloud-service arrangements based on a holistic consideration of factors.

Question for the Board:

1. Based on staff's analysis, do members have any thoughts on whether cloud-service arrangements are right-to-use assets or service contracts?

Cloud-Service Arrangement Asset Framework



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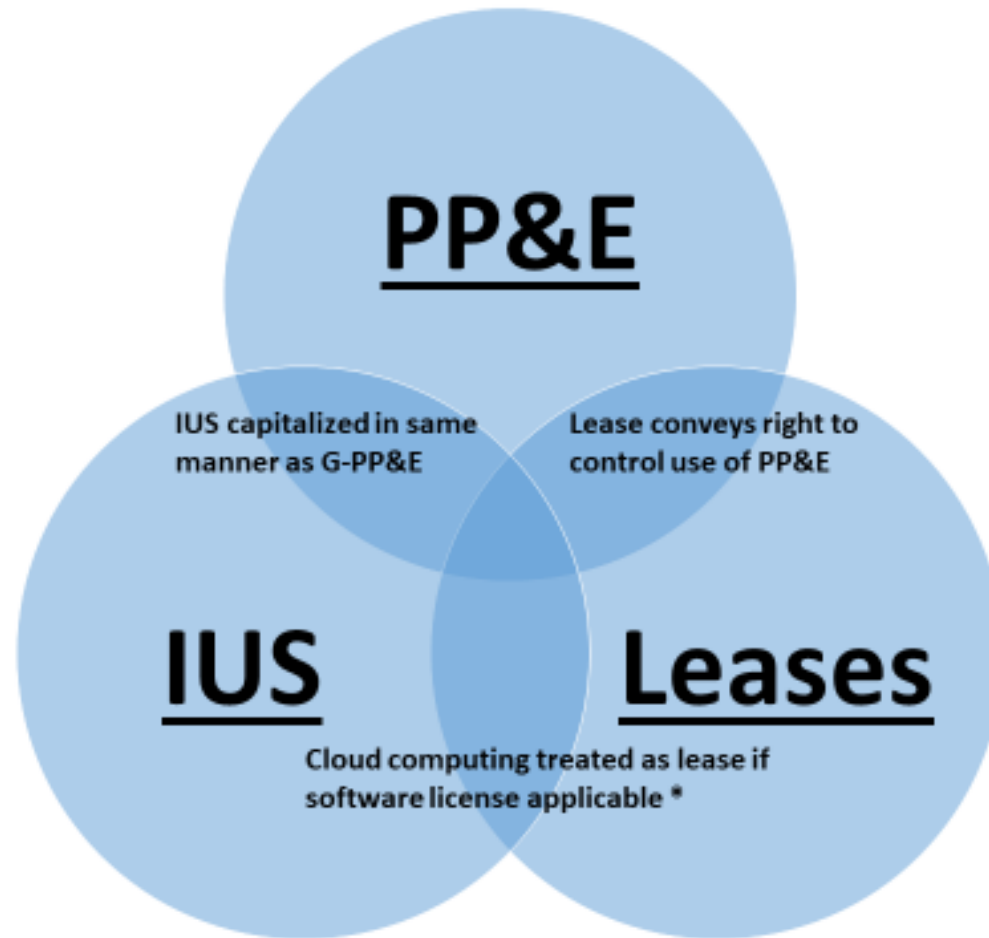
Waterfall development model – a non-iterative development method that breaks down activities into sequential and exclusive phases where each phase depends on the deliverables of the previous one and a usable product is produced after all phases occur. Also referred to as “Linear development model”.

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.

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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