February 5, 2020

Jeff Koses
Senior Procurement Executive
U.S. General Services Administration (GSA)
1800 F Street, NW
Washington, DC 2006

Subject: Procurement of Cloud Computing on a Consumption Basis Draft Acquisition Letter MV-20-01

Dear Jeff,

The Coalition for Government Procurement ("the Coalition") sincerely appreciates the opportunity to provide industry feedback in response to GSA's Draft Acquisition Letter on the Procurement of Cloud Computing on a Consumption Basis.

As you know, the Coalition is a non-profit association of firms selling commercial services, products, and solutions to the Federal Government. Our members collectively account for tens of billions of dollars of the sales generated through the GSA Multiple Award Schedules (MAS) program. Coalition members include small, medium, and large businesses that account for more than $145 billion in Federal Government contracts. The Coalition is proud to have worked with Government officials for over 40 years towards the mutual goal of common-sense acquisition.

Coalition members support GSA's efforts to maximize acquisition flexibilities so that Federal agencies can purchase cloud computing on a consumption basis and benefit from the efficiencies and cost savings that cloud services provide. Our members also appreciate GSA's efforts to emulate commercial best practices as much as possible and to address some of the burdens that currently exist for contractors that offer cloud services under the Schedules program.

The following comments address member questions, concerns and recommendations related to the Draft Acquisition Letter MV-20-01.

Contract Modifications

PRC Waiver

To date, the dynamic nature of cloud pricing has made compliance with the Price Reduction Clause (PRC) one of the most significant challenges for commercial contractors offering cloud services through the Schedules. The Coalition supports GSA's decision to waive the tracking requirements of the PRC, and Coalition members believe this waiver would increase competition and reduce compliance burden and associated risk for contractors. By way of background, the Coalition consistently has supported the elimination of the PRC. It is a burdensome, costly, and, ultimately, unnecessary regulation, particularly in the dynamic area of cloud computing. Additionally, GSA's analysis in Attachment B demonstrates that the PRC should be eliminated for other Cloud SINs as well as the rest of the SINs in the Schedules program.

The Coalition is concerned with Section 6(a)(ii) of the memo, which states that a contracting officer awarding a consumption-based cloud computing offering shall "negotiate a rate fixed to commercial prices, through a price list or an index, at the Schedule contract level." The Coalition requests more information on this process, including GSA's definitions for index and commercial price list. Given the dynamic pricing of cloud and that price lists change frequently, GSA may not have the resources and personnel to support the number of price modifications that would be required under this structure.

The Coalition recommends reviewing FAR 8.4 and considering methods to increase competition for cloud services. For instance, competition at the task order level could ensure the desired fair and reasonable pricing for customer agencies. In addition to waiving the PRC's tracking requirements, as a practical matter, we also recommend that the Acquisition Letter waive the Price Proposal template.

Impact on Existing Task Orders

In addition, the draft policy requires that GSA Federal Supply Schedule (FSS) contracting officers awarding and administering FSS contracts for cloud computing on a consumption basis amend the solicitation and existing contracts with the special ordering procedures for cloud computing offered on a consumption basis described in Attachment A to the Acquisition Letter. The Coalition requests clarification whether such amendment would require changes to existing task orders awarded under the Schedule contract prior to the issuance of Acquisition Letter.

Ordering Activity Controls

Consumption-Based Monitor

Coalition members request that the Acquisition Letter define the term "Consumption-Based Monitor" and reconsider including "total units remaining available" as one of the available measures. This data may only be applicable to a limited number of offerings, as such, there is concern that Government customers may not reliably have access to this information given the nature of cloud services.

Limiting Orders to No-year or Multi-year Funds

The Coalition appreciates GSA's efforts to encourage greater use of cloud services on a consumption basis. We are concerned, however, that restricting orders to only those covered by no-year or multi-year funds could be problematic. Generally, we believe as much flexibility as possible should be provided to agencies, within the confines of the Anti-Deficiency Act, and that agencies should be allowed to purchase cloud computing services in any manner that is allowable under Federal appropriations law. GSA's requirements to monitor usage and the establishment of not-to-exceed rates could address concerns related to the Anti-Deficiency Act. As an example, agency customers are currently properly using single year Operations and Maintenance funds for cloud computing services. The solicitation should be structure to maximize flexibility for Government buyers, consistent with contracting officer warrants. The Government can establish mechanisms to support agencies in their transition to the cloud by providing additional training and guidance on the proper uses and justifications when using single year funds.

Given the Government's Cloud Smart policy to drive greater adoption of cloud services government-wide, GSA should not adopt a wholesale prohibition on the procurement of cloud based on funding type. Such an approach would have the unintended consequence of denying cloud computing services to agencies that lack available funds in multi-year and no-year appropriation accounts.

Attachment A Modification Language

Fixed-Price Contracts

Attachment A includes special ordering procedures for FSS contracting officers awarding and administering cloud contracts on a consumption basis. Clause 552.238-XX (e)(1) states the following-

> *(1) All cloud computing offered under this contract, including orders, are considered fixed-price. Prices are established as a fixed discount against a market price list or an index. The discount will remain constant as the price list or index changes.*

Some vendors may offer different discounting depending on whether a customer is willing to make a consumption commitment. Therefore, the Coalition recommends that this verbiage be revised to state (see emphasis)-

> *(1) All cloud computing offered under this contract, including orders, are considered fixed-price. Prices are established as a fixed discount against a market price list or an index. The discount will remain constant as the price list or index changes* ***and may include pricing based on "an agreed to quantity" commitment and pricing with no quantity commitment.***

Ceiling Price

Clause 552.238-XX (e)(2) in Attachment A states that the Contracting Officer should establish a ceiling price for all estimated cloud computing and-

> *(i) Orders using these procedures may not exceed 50 percent of the initial quantity ordered for the same line item.*
> *(ii) If at any time the Contractor has reason to believe that total costs in performing this contract in the next succeeding 30 days will exceed 85 percent of the ceiling price, the Contractor shall promptly notify the contracting officer.*
> *(iii) The Government will not be obligated to pay the Contractor any amount in excess of the ceiling price in the contract, and the Contractor shall not be obligated to continue performance if doing so would exceed the ceiling price set forth in the contract, unless and until the Contracting Officer notifies the Contractor in writing that the ceiling price has been increased for performance under this contract.*

Coalition members have provided feedback on these provisions, which is outlined below.

Order Limitations

The Coalition understands the need for certain controls related to the established ceiling price. It is unclear, however, whether restricting orders from exceeding 50 percent of the initial quantity ordered will be effective from an operational standpoint. Customer agencies may have perverse incentives to exceed this limitation by front-loading anticipated needs in an initial order to avoid the restriction on adjustments later. Further, the 50 percent cap may work against agencies as they seek greater adoption of cloud services. Members report that, as agencies increase migration to cloud solutions, initial estimates are frequently exceeded.

It would be helpful if GSA could clarify why the limitation in (e)(2)(1) is on quantities ordered, rather than funding. Additionally, GSA should consider contract language that prevents additional agencies or offices from joining orders if they were not included under the original award. This restriction would help prevent unexpected quantity increases.

Notification when Total Costs may Exceed 85% of the Ceiling Price

Members report that this requirement duplicates contracting officer requirements to monitor usage and represents a significant tracking and reporting burden. Coalition members report that not all cloud vendors will be able to meet this requirement because it is tantamount to a cost-reimbursable contract.

Payment and Performance when the Ceiling Price is Exceeded

Section (e)(2)(iii) allows contractors to discontinue performance if the customer exceeds the established ceiling price. Members have raised a number of concerns with this approach, namely:

1. Schedule contractors do not have the ability to control consumption.
2. Contractors report that they do not have access to information that would indicate when the Government will or has exceeded a ceiling price.
3. Contractors may feel obligated to continue performance without payment unless and until the contracting officer consents and/or is able to execute a ceiling price increase.

In addition, the Coalition requests confirmation as to whether the Government intends to deobligate funding if the ordering customer has available usage remaining.

Requirements Task Order

Coalition members believe that a requirements task order will reduce upfront proposal costs and could drive lower pricing over the life of the contract. Members also note, however, that a requirements contract needs accurate usage estimates in order to be properly priced. Failure to provide accurate estimate usage could lead to contract disputes and increased administration time and cost. GSA should develop and test its concept of the "Consumption-Based Monitor" before mandating the use of a requirements task order.

Clarifications

Coalition members have submitted several questions seeking clarification on parts of the acquisition letter.

- Is the 85 percent of the ceiling price limit assessed at the line item or is it assessed against the total dollar amount of the order?
- Since the EPA clause is waived, what is the process to increase a ceiling price at the contract level?

GSA's Industry Questions

Coalition members provided responses to GSA's questions. We have organized them as set forth below.

1. GSA is looking for a structure which fits in the fixed price family. How does the pricing vary under a typical contract for private sector customers? Does the price float, such as a fixed discount with caps? How is it best managed? How should GSA adopt this to remain in fixed price?

A	B	C
In the private sector, companies plan for consumption based cloud by budgeting in the same manner as they do for other utilities such as electricity, telephone and other Opex (operating expenses). In practice this results in consumption based pricing with a not to exceed ceiling/funding. This structure does not fit within the fixed price family. As far as managing price, suggest that the government implement a structure that allows, at a minimum, an annual review of consumption patterns. Bi-annual would be the preference. For the discounts available under the private sector agreements, these can vary based on the size of the deal, commitment levels, term and other factors. Since the discounts can vary, it would be advantageous for the government to allow for adjustments to leverage discount programs and allow for options such as billing subscriptions to pay in advance for a year for consumption patterns that have been understood and well defined. As noted in this document, pricing for cloud varies and is trending downward, which effects a fixed price cap.	<u>IaaS & PaaS Pay-As-You-Go Model</u> One approach is a "rate card," which is part of the order. The Rate Card has a list of IaaS and PaaS services with fixed prices for each service. There are two approaches to discounts: one discount for all services or a discount for a subset of services. Customer is billed monthly in arrears at the fixed rates for actual usage of the services on the Rate Card for the term of the order. In effect, this pay-as-you-go model operates like a time & material consulting services contract. Government funds the order and is billed in arrears based on fixed rates for the Government's actual usage of the services. The rates do not float. <u>SaaS</u> Fixed prices for annual subscriptions.	To realize the benefits of cloud computing, we recommend GSA consider additional procurement options to fixed-priced contracting to account for fluctuating demand and market pricing. GSA may want to consider contracts that allows end users to pay for services as they are consumed offering pay-as-you-go utility model where customers simply pay for their usage, and to take advantage of pricing schemes where they get significant discounts for "reserved" capacity, and spot pricing among other options. Contracts should also allow the flexibility for prices to fluctuate based on market pricing so that customers can take advantage of the dynamic and competitive nature of cloud pricing. In addition, Cloud Service Providers' (CSP) pricing for the same services may vary according to "regions" (East, West, GovCloud, etc.) and service provider. Thus, contracts should also allow end users to procure cloud brokerage services that provide feature and price comparisons among different CSPs, from a consolidated "vendor neutral" catalog. CSPs offer a mix of pricing models and schemes that include subscription based (e.g. VMware on AWS and VMware on Azure), on-demand, per-use-based, and tier-

		based. In addition to On-demand pricing, CSPs may also offer other pricing schemes. They may offer, Reserve, Subscription, Spot, Code on Demand (CoD), Bare Metal, and Dedicated Host pricing. Furthermore, CSP providers may offer service discounts to end-users when they procure services through their service providers (SP) network (Systems integrators, resellers, etc,). These discounts may further vary depending on the CSP and SP relationship, volumes, and other terms/conditions. Additional factors may focus on areas of expertise (i.e., staff augmentation and training) for adopting a particular CSP, and/or multi-Cloud Service Providers. Finally, considerations should be given to the organization's maturity in adopting modern models of development, security, and operations e.g. DevSecOps.

2. When purchasing cloud on a consumption basis, is it typical for private sector organizations to obtain cloud services entirely on a pay-as-you-go basis or do organizations typically purchase a fixed amount and then have the option to purchase additional quantities on a pay-as-you-go basis?

Private Sector organizations purchase cloud on a consumption basis through a combination of pay-as-you-go or by purchasing a fixed amount with additional quantities on a pay-as-you-go basis. Combinations are a best practice. Firm fixed price awards will need to have the ability to have combinations. Equally important, the CSP is continually adjusting offerings and identifying their own combinations, which might have better value (features and cost) vs. native services. Combinations ensure taking advantage of the consumption model to its fullest. Combinations are necessary. Besides cost, there are business solutions requiring special business	<u>IaaS & PaaS</u> In addition to pay-as-you-go, commercial customers may purchase IaaS and PaaS based on pre-paid monthly or annual commitments. Customer purchases credits either on a monthly or annual basis, and uses the credits for services. Specifically, the credit balance is decremented on a monthly basis based on actual usage of the IaaS and/or PaaS service(s). At the end of the month or year (depending on the structure of the order), any unused credits expire and the unused amount is non-refundable. If customer uses all the credits during the term of the order (for example, during the year term), and wants to continue	Private sector organizations typically use a combination of pay-as-you go, auction (spot), and reserve, depending on the workload they are running. There is no long-term commitment required when purchasing On-Demand (pay-as-you-go, pay-as-you-use) services, and these are recommended for short-term, irregular use, to add burst capacity, short term use (proof of concepts, testing, cyclical processing, etc.), or to model capacity for a new application. Pay-as-you-go is the more expensive pricing scheme. Reserve pricing provides significant discounts (up-70 %) depending on the reservation commitment and is suitable for workloads where capacity

demands or can run off-hours to leverage auctionable unused resources from the CSP. In addition to cloud based consumption, several development activities are also dynamic and require adjustments in firmed fixed price programs and BPAs such as: - Enable Minimal Viable Product to scale to end state - Align agile development	to use the services, it can convert to a pay-as-you-go model.	requirements are well understood, and customers can estimate consumption for a year or longer. Reserve pricing offers price incentives with significant discounts for services paid up front. Spot instances allow customers to use spare computing capacity at significant discounts (up to 90%). Spot instance pricing is more volatile, and instances are automatically terminated once the Spot price exceeds the customer price.

3. Our understanding is cloud prices can change frequently, perhaps multiple times per day. What are the primary factors for these price fluctuations?

No response provided.	For some CSPs, prices for IaaS and PaaS actually change infrequently. Changes typically involve the addition of new services.	There are a number of factors influencing price fluctuations, primarily market forces (supply and demand), innovation, and CSPs changes to their pricing models. Fluctuations concerning "multiple times per day," may be more closely related to "Spot" instances, which are heavily influenced by any given moment of "spare" capacity.

4. We are trying to better understand pay-as-you-go pricing as we consider how it would be structured on a GSA Schedule contract. Is it typical for a private sector organization to place guardrails around the prices it will pay on a consumption basis? Ex. no more than 10% of a target price; prices pegged to a published price, etc.

In the private sector, guardrails are placed around the budget, the usage of the budget and business case. One may pay for high-value key service costing more if it offers a key competitive advantage to the business. It depends on the context. A commercial company might decide to pay more when in growth mode and have fewer or wider guardrails. In established companies, driving down costs while gaining efficiencies is the metric. Instantiating your TDR pilot can be key and very beneficial to making solid firm-fixed adjustments. Consider allowing bi-annual reviews	Recommended approach: The simplest, most straightforward approach is for GSA and the ordering activities is for GSA to require fixed rates for the specified term of the order.	If looking to procure Managed Services, typical "guardrails" may include guaranteed minimums, ARC/RRC structures, banded pricing, and other risk management best practices. Given that an XaaS model doesn't enable the same flexibility as Managed Services, risk mitigation ("guardrails") might focus more on Reserved or even Spot instances with differing price points for consideration. Contracts should also provide incentives for vendors who help end-users to save costs by recommending and following cost optimization best practices. Cost optimization requires continuous monitoring of service

and mid-program changes/spend to handle different use cases of consumption, SLA, high-end service benefits and monetized services. This can further prevent agencies from over-obligating upfront.		consumption; understanding of the business functions and applications using cloud services; and analysis of costs and usage. Cost optimization typically helps clients obtain significant costs savings during the lifetime of the program.

5. Can you provide sample contracts or contract language for consumption-based cloud computing?

No response provided.	SAMPLE TERMS <u>INVOICING & PAYMENT</u> [CSP] will invoice you monthly in arrears based on your actual usage for the prior month at the rates for each activated IaaS and PaaS Cloud Service as defined in Your order. <u>OVERAGE</u> You are responsible for monitoring Your use of the Cloud Services, and if You exceed the Funded Order Value at the end of any month during the Services Period, You must provide additional funding for Your usage, or You must cease to use the applicable Cloud Services. If you have exceeded the Funded Order Value and You have not ended Your use of the services, You will be subject to overage fees. [CSP] will invoice You for the excess usage of the IaaS and PaaS Cloud Services at the Overage Unit Net Price specified in the rate card of Your order or as seen in the Cloud Portal. You may set quotas, alerts and use other monitoring tools within the Cloud Portal to assist You in managing and tracking Your usage. <u>ADDITIONAL SERVICES</u>	Contract language needs to support the ability to procure services from an established catalog with SKUs at a Fixed Unit Price --On-Demand, Reserve, Spot or other--with a pricing structure that accommodates "guardrails" such as a "Pay [CSP] List Plus/Minus a fixed X%" model. Contract language may also incorporate review of established and awarded Schedule/Catalogue prices quarterly to determine whether or not any adjustments are required.

	If [CSP] adds additional service offerings to the list of eligible IaaS and PaaS Cloud Services within Your Cloud Services Account during the Services Period, You may activate and use those service offerings and the discount will be applied based on the Cloud Service category discount specified in the rate card attached to Your order or as seen in the Cloud Portal. The development, release, and timing of any future features, functionality or service offerings remains at the sole discretion of [CSP].	

Thank you again for the opportunity to provide industry feedback in response to GSA's Draft Acquisition Letter on the Procurement of Cloud Computing on a Consumption Basis. If there are any questions, please contact me at rwaldron@thecgp.org or (202) 331-0975.

Sincerely,

Roger Waldron
President