March 13, 2015

Samuel Barksdale
U.S. General Services Administration
1800 F St NW, 4th Floor
Washington, DC 20405

Re: Cloud Computing Services PMO RFI; Solicitation No. QTA00AH15SBI0002

Dear Mr. Barksdale,

The Coalition for Government Procurement ("Coalition")[1] and the IT Alliance for Public Sector (ITAPS)[2] appreciate the opportunity to provide comments on the General Services Administration (GSA) Cloud Computing Services PMO RFI. We believe it is important to consult with the private sector and vendor community as these new vehicles are discussed and developed, and commend your office for doing just that. Please see our responses below in the template you have provided.

The Coalition and ITAPS appreciate the opportunity to provide our memberships' collective feedback to you and would be happy to discuss any of these points further. Please contact Roy Dicharry at rdicharry@thecgp.org and Erica McCann at emccann@itic.org with any questions or comments.

Respectfully submitted,

Roger Waldron
President
The Coalition for Government Procurement

A.R. "Trey" Hodgkins, III
Senior Vice President
IT Alliance for Public Sector

---

[1]The Coalition for Government Procurement ("the Coalition") is a non-profit association of firms selling commercial services and products to the Federal Government. Our members collectively account for approximately 70% of the sales generated through the GSA Multiple Award Schedules (MAS) program and about half of the commercial item solutions purchased annually by the Federal Government. Coalition members include small, medium and large business concerns. The Coalition is proud to have worked with Government officials over the past 35 years towards the mutual goal of common sense acquisition.

[2]The IT Alliance for Public Sector (ITAPS), a division of the Information Technology Industry Council (ITI), is an alliance of leading technology companies offering the latest innovations and solutions to public sector markets. With a focus on the federal, state, and local levels of government, as well as on educational institutions, ITAPS advocates for improved procurement policies and practices, while identifying business development opportunities and sharing market intelligence with our industry participants. Visit itaps.itic.org to learn more.

ITAPS and Coalition Response for Acquisition of Cloud Computing Services Request for Information (RFI)

Responses

Table 1: Administrative Information

#	Question	Response
a	Company/Agency Name	IT Alliance for Public Sector (ITAPS) and The Coalition for Government Procurement (Coalition)
b	File Name	ITAPS Coalition Response to GSA Cloud Computing Services PMO RFI
c	Page Count (including cover)	21

Table 2: Questions for Industry

#	Question	Response
1.	**Current Challenges:** List what barriers you encounter in selling cloud services to government. Examples of potential answers: fixed budget does not allow for usage based billing, contract type, etc.	ITAPS and Coalition members have identified a number of current challenges, from a variety of perspectives (including the Cloud Service Providers (CSPs) and prime/integrator community). As the government's adoption and comfort level with cloud services has grown over the last several years, the barriers to selling cloud services continue to evolve. Early barriers included IT security, control of the assets, and challenges associated with making the leap from legacy application structures to virtualized cloud environments. With FedRAMP established and the maturity of the security framework and requirements understood, the security barrier has been minimized and consistent processes have been implemented. With additional virtualization of applications and higher level of government adoption for various services, barriers will continue to evolve. Today many agencies are struggling with how to migrate to the cloud, what specific services are "Cloud ready", what services provide the best value relative to Cost and end user, and in what order to migrate services to ensure minimal disruption. Solving these challenges has proven difficult as many existing contracts are limited by human capital with the right skills and knowledge to assess these use cases, contract type and other constraints (particularly Firm Fixed Price) and as implementation will likely disrupt existing IT service delivery models. **Lengthy Procurement Cycles; Disadvantageous to On-Demand Provisioning.** The procurement cycles are too long. For example, DHS Enterprise Computing Services has been exploring a Cloud Broker approach to procuring cloud

#	Question	Response

services since September 2013. The ability to covert funds from a fixed asset hardware/software purchase to a recurring service expense can be challenging. Many times, cloud services can be sub-tasked or added to a CLIN on an existing contract and procured faster. A major benefit of cloud computing is the ability to significantly streamline procurement processes and cycle time. However, when government Task Orders are competed, or an end user's requirements need to be vetted and reviewed, the additional procurement cycle time erodes the benefit of the cloud's "on-demand" provisioning. Government agencies should work towards provisioning mechanisms that allow users to readily purchase cloud resources to meet immediate requirements by leveraging commercial cloud service providers, empowering multiple purchasers to access cloud services when needed.

Incremental Adoption and Migration. Another barrier to Cloud adoption has been the incremental adoption of cloud for certain services or capabilities and in doing so, the acquisition of services has involved multiple CSPs for specific purposes. In operating an enterprise approach to IT service delivery, Agencies have expressed concerns related to management of hybrid cloud environments. This has lead to Agencies acquiring services utilizing the best "acquisition fit" provider rather than the best "solution fit".   Included in this are a lack of benchmarking for comparing cloud services that make it hard to distinguish between service offerings. Additionally, many agencies have experienced pain with some of their initial migrations from determining all of the add on services required, to dealing with licensing issues on which enterprise licenses could be leveraged, and from performance issues experienced with lift and shift migrations that did not take into account complexities that need to be accounted for when migrating to a cloud environment. These difficulties have slowed the momentum resulting in agencies taking a very measured approach to migration.

Overly Prescriptive Requirements. It is critical to not exclude any current or future innovative Cloud or Cloud-like technologies through rigid definitions. At times, requirements are written in a manner that precludes vendors from having a realistic opportunity to compete. When the number of bidders is limited due to the unique nature of the requirement, it decreases competition. For example, if requirements are too complex or specific, industry may interpret the need to provide specially designed or modified equipment when in reality the requirement could be met with an existing commercially available product. Not all vendors have the resources to create this new product, which would limit competition and increase prices for the government.

Overly prescriptive requirements could also prevent small businesses from competing even though they have demonstrated their ability to be competitive in providing software and services.

Inflexible CLIN Structures. The static nature of the current CLINs restrict the ability to add and remove individual services. As a result, not all cloud needs can fit into how they are currently structured leading to challenges with

#	Question	Response
		funding and scope. It is imperative that future cloud contracts have the ability to add services and capabilities in order to adapt with technology changes and to keep the contract vehicle relevant. The cloud model is meant for flexibility and on demand usage of which there are two benefits to be had. Often time customers estimate their workloads for development and test purposes, however in real time will most often require changes in the actual services they use on their project. A broader scope, single CLIN approach would alleviate government concerns around over-running and under-running categorized line items within a contract by allowing flexibility to change services in real-time. The cloud model is continually innovating and creating new services on a daily basis. Currently no effective mechanism exists that allows the government to take advantage of product and pricing changes in real-time. The administrative burden required to reconcile invoices to ensure customers are not billed for cloud services that are not yet on the GSA catalog, yet are activated on the cloud provider's rapidly developing portal of services, will inevitably lead to invoicing delays. The current approach reduces the benefits of scale and real-time provisioning that cloud computing offers. At the task order level we advise developing guidelines that advise Contracting Officers how to employ less prescriptive CLINs for cloud and cloud-related services. Using a single CLIN structure for cloud services is a simple, utility-based approach to leveraging the cloud's pay-per-use model. It provides flexibility to offer new CSP services and offerings to users in real-time, and provides users with quick access to the resources they need. It also accommodates fluctuating need, ensuring full utilization and low costs. **Cloud Pricing Models.** It is important to recognize that the pricing structure will have a significant impact on the ease of ordering and speed to implementation. Fixed price contracts do not take advantage of variable (often decreasing) cloud pricing. Government contracts are aligned with the pay as you go utility model but the procurement process does not align to the cloud consumption model. For example, if the government requires elasticity, how do they account for the changes in cloud resources month by month? To account for fluctuating cloud resources, future cloud contracts should mirror the utility pricing model by using a pricing structure that aligns with the consumption patterns of the customer. **Inconsistent Service Definitions**. Cloud features and technical requirements are often defined on a case by case basis across CSPs and vendors. For example, the definition of Recovery Time Objective (RTO) and Recovery Point Objective (RPO) are often comingled when they represent two very separate services. This could potentially lead to over architected solutions or grossly mispriced offers. GSA needs to establish a baseline definition for features in order for CSPs to architect best value solutions.

#	Question	Response
		Restrictive Service Level Agreements (SLAs). Many of the task orders maintain SLAs that are not necessarily aligned with the term of existing Cloud Service Providers. For example, the Cloud market is focused on simplifying the delivery of the underlying infrastructure by committing to a single Availability SLA (e.g. 99.5%) that covers the entirety of the service offering. Agencies often incorporate SLAs such as "Mean Time to Restore" and "Recovery Time Objective" that are dependent on the application being architected in a manner that can fully leverage the elastic and fault tolerant aspects of the cloud. However, in many of these cases, the CSP or Prime is not responsible for deploying the application in the Cloud. This forces the CSP to take on a major risk when committing to SLAs that are derived from prior traditional data center hosting types of contracts. **Price Reductions Clause.** The Price Reductions Clause (PRC) is a major barrier to the direct involvement of large cloud service providers (CSPs) on the GSA Schedule, as it presents significant risk to commercial CSPs that provide utility-like services at considerable scale in a standardized manner. It is critical that GSA recognize that the PRC results in high compliance costs and liability risks for contractors despite the fact that the clause is no longer needed to assure reasonable prices for cloud services due to competition. More has to be done to address the burden of the PRC than proposed in GSA's recent Transactional Data proposed rule. **Inability to Budget/Forecast for a Cloud Pricing Model.** Usage based pricing makes it difficult for the government to predict and budget spend requirements. Cloud computing requires a methodology for estimating annual utility requirements. Suggestions to help budget for cloud services include: • Separate the purchase of cloud infrastructure from managed services. Consider shorter-term contracts for managed services and calculate the projected costs of upcoming IT projects as both CapEx and OpEx options, as this will help determine which budget is appropriate for the scope of managed services projects. • Utilize CSP tools –Use tool that automate provisioning. This allows for optimal resource utilization, scaling down resources when they are not being used. • Build governance mechanisms to monitor and forecast cloud workloads and cost, and reduce risk. Leverage CSP tools that automate provisioning, control access, and provide cloud monitoring/reporting capabilities • Utilize CSP tiered pricing to budget for estimated usage and reduce expenses. **Inconsistent Regulatory and Security Accreditation Standards.** The Office of Management and Budget (OMB) mandate states that agencies must "use FedRAMP when conducting risk assessments, security authorizations, and granting ATOs for all Executive department or agency use of cloud services" (FedRAMP Policy Memo, OMB). Government agencies should leverage industry

#	Question	Response
		best practices on security such as FedRAMP, instead of including their own unique security protocols. **Not Accounting for a Shared Security Model.** As cloud computing customers build systems on top of cloud infrastructure, the security and compliance responsibilities are shared between the CSP and cloud customers. In an IaaS model, customers control how they architect and secure their applications and data put on the infrastructure, while CSPs are responsible for the underlying infrastructure, including physical security. The level of CSP and customer responsibilities in this shared responsibility model depends on the cloud deployment model (see the *NIST Definition of Cloud Computing* models), and customers should be clear as to what responsibilities fall within their obligation in each model. **Regulatory Questions Regarding the Acquisition of Pay On Demand Services**. Most contracting vehicles do not contemplate the acquisition of pay-as-you-go services like cloud computing. While not a perfect comparison given the regulated nature of the industry, the procurement of IaaS cloud can be more akin to that of utility services. Government agencies can estimate annual use/consumption, budget for the estimated use/consumption, track spend against budget using self-service tools and increase/decrease budget based on actual spend at certain points throughout the year. Alternatively, government agencies can procure a fixed unit of cloud usage credits , purchasing additional credits as certain thresholds are met (similar to the "Limitation of Cost" / "Limitation of Funds" clauses applicable to flexibly priced contracts). **Leveraging Commercial Practices.** Most commercial cloud services, including IaaS cloud, are provided as a commercial item/service. Most of the service terms underlying these services are based on the manner in which the services operate. For example, most IaaS providers operate on a self-service basis with little to no custom administration. The customer provisions the services and tracks usage and other information relating to its account and the service terms reflect this relationship. Consistent with the Federal Acquisition Regulation, contracting officers should leverage the commercial nature of cloud offerings and procure services based on commercial terms, taking into account some modification for the minimum mandatory FAR flowdown clauses applicable to commercial item/service acquisitions. This includes leveraging the commerciality of services to establish price reasonableness, which could help speed up the acquisition lifecycle because there would be no competition requirements.
2.a.	**Scope of potential acquisition contract**: Does your company see value to the Federal	Some companies felt that if existing contracts (such as Alliant) have the ability to provide a broader scope of services to encompass integration and migration, as well as access to multiple cloud services from different vendors, there is no need for yet another Cloud contract. These companies suggest allowing for flexibility in the contract types that can be used for task orders awarded under existing contracts such as the Alliant contract. Cloud business models will continue to evolve and mature for the foreseeable future. This evolution, along

#	Question	Response
	Government if GSA created a new Cloud Contract to replace the expiring IaaS BPA? If yes, please specify the benefits.	with changing customer agency requirements, will drive the need for a variety of different contract types. Based on the needs of the agency customer, contractors are able to provide services under a number of contract types (e.g. Firm Fixed Price, Time and Materials, Cost Reimbursement, hybrid, etc. Utilizing existing contracts, like Alliant, rather than creating a new one results in contract management and cost savings for both government and industry.

However, others felt that a Cloud IDIQ would be preferable to a BPA.

Those ITAPS and Coalition members in support of a new cloud contract believe that a new Cloud Contract can establish a cloud acquisition and management model that enables the Federal Government to fully tap the potential of cloud computing. Existing vehicles include practices and contract terms that inhibit cloud adoption. A new Cloud Contract can facilitate a fast and flexible acquisition process that enables Federal agencies to extract the full scale and flexibility of the cloud. The BPA model is often thought to support transactional procurement behaviors and not custom cloud implementations. Because BPAs are derived from the GSA Schedule the solutions are locked into very specific offerings. BPAs also restrict additional enhancements and customization that are then classified as "open market" as they were not contemplated on the base GSA Schedule. As the GSA Schedule dictates that contractors add their commercial offerings, there is wide variability in the offerings and no standardization of offerings across contractors. This makes requirements definition very difficult as the ordering activity's specifications may favor one contractor and essentially exclude others contractors with offerings without matching specifications.

Another perspective supporting an IDIQ over a BPA is the ability to move away from the Price Reductions Clause. The Price Reductions Clause (PRC) is a major barrier to the direct involvement of large cloud service providers (CSPs) on the GSA Schedule, as it presents significant risk to commercial CSPs that provide utility-like services at considerable scale in a standardized manner. At the same time, the PRC increases risk where customized solutions are provided in the cloud market to meet unique customer requirements.

It is critical that GSA recognize that the PRC results in high compliance costs and liability risks for contractors despite the fact that the clause is no longer needed to assure reasonable prices for cloud services due to competition. More has to be done to address the burden of the PRC than proposed in GSA's recent Transactional Data proposed rule.

Some companies felt that a flexible IDIQ is more accommodating of customization, allows for new technologies to be rapidly introduced, resolves the open market issue, allows more companies to address requirements, and provides for more competitive pricing. BPAs may be more appropriate for transactional acquisition such as storage on demand, but when the requirements stretch into design, development and implementation, a flexible IDIQ is a better choice. |

#	Question	Response
		There is value in creating a new Cloud Contract that has the ability to change with evolving technologies and will lead to increased competition. Encouraging and maintaining competition amongst contractors will be critical to achieving success in the future Cloud Contract. Competition creates an incentive for contractors to provide more innovative services at a lower price and also provides opportunities for small businesses to enter new markets. To achieve this competition, we believe it is in the government's best interest to utilize an on-ramp and off-ramp approach. This approach would enable GSA to assess the status of the contractor pool and make whatever adjustments are necessary to ensure an optimal mix of premier contractors is maintained in order to facilitate adequate competition on orders. In an on-ramp scenario, the government would initiate an open season to add new contractors. During this time period, existing vendors should also be able to add new CLINS provided that the substance of the CLINS are relevant. We recommend an open season every 6 to 12 months to remain current with the evolving industry. Of course, there needs to be a barrier to entry to limit the number of vendors on the vehicle. As such, the government would have to establish a basis for adding additional vendors by ensuring each meets certain minimum qualifications or certifications, such as FedRAMP, or by demonstrating past performance similar in scope. In an off-ramp scenario, if a contractor does not actively participate on the vehicle, the government may choose to off-ramp the contractor. As a result, contractors will be more likely to submit responses to task order requests, assuming they have a reasonable chance for award, which would increase competition and response quality. To further hold contractors accountable and encourage competition, GSA may also want to make the bidders and awardees publicly available. In summary, many companies believe that government wide BPA/IDIQ vehicles for common service requirements, such as Cloud Computing, are beneficial when executing a new acquisition to replace the expiring IaaS BPA. Much has changed in the areas of customer requirements, security framework, IT governance, and industrial base maturity of cloud computing. Benefits of replacing the current IaaS BPA include: - Standardization of security framework with more mature NIST and FedRAMP security standards - Opportunity to incorporate lessons learned from implementations - Common acquisition approach for USG agencies that also allows common contracting and business model adaptation by industry - Ability to implement tiered service and business models aligned to customer needs and industry offerings - Build in more flexibility to provide additional service and product offerings, including application migration, consulting, and future

#	Question	Response
		• innovation adoption • Increased competition
2.b.	**Scope of potential acquisition contract**: What cloud product and service categories (e.g. Lots, CLINs, etc.) would your company propose for a new acquisition contract?	Cloud and service categories should be aligned to business/customer use case and complexity of service requirements. The structure should also allow for flexibility and adaptability for changing customer and technology capabilities. Generally speaking, single CLINs for each cloud service category is an optimal approach to leveraging the cloud's scalable pay-per-use model. Simple and effective service categories include: • **Cloud Services.** In essence the provisioning of a CSP account for a certain dollar amount tied to a full menu or catalog of commercially-available CSP cloud services. • **Professional Services.** This consists of the technical expertise to consult in transfer of cloud planning and implementation knowledge to our customers and partners. • **Support.** This includes ready access to customer service agents, help desk engineers, etc. • **Training.** GSA may also want to consider a separate CLIN for CSP training to enable government agencies to gain the skills, knowledge, and expertise to design, deploy, and manage applications on their chosen cloud platform. Specific services may include: **Consulting and Cloud Services (T&M)**: application suitability determination, conceptual planning and implementation, application migration, optimization, and integration. **Planning and Migration Services (T&M/Cost Plus)**: migration of applications and storage infrastructure from one environment to a new environment. **Professional/Engineering Services (T&M)**: additional engineering services needed for enhancement or specialized engineering and development related to current services. **Provisioning Services – Infrastructure (Fixed Unit Rate/Consumption)**: basic infrastructure provisioning of storage, compute, facilities, and operations to include hardware, software, and personnel costs. **Program and Administration (FFP)**: Program administration costs associated with administration, billing, capacity management, information assurance, access management, SLA/performance management, and other services integrated into service delivery and maintenance. **Service/Solution Catalogue (FUR)**: Service catalogue to allow for range

#	Question	Response
		of services and needs as they are identified (i.e. Secure collaboration environments, Identify as a Service, Disaster Recovery as a Service, Security as a Service, SaaS, PaaS, IaaS, etc.) **Collaboration, Migration, and Innovation Services (T&M)**: pilot and evaluation services for innovation and adoption of business model, service, and product offerings to allow flexibility and adaptability aligned to marketplace and technology advances. Additionally, we believe using CLINs will be the most efficient way to sell cloud products and services. However, as previously stated, It is critical for these CLINs to maintain the flexibility to add services and capabilities in order to adapt with technology changes and to keep the contract vehicle relevant. The current CLIN structures forces a model for selling and consuming it that is not reflective of the market. Specifically, the CLIN structures operate under the assumption that IaaS, PaaS, and SaaS offerings are mutually exclusive. For example, as the BPA is currently structured, the Lot 3 offering is not technically pure IaaS because they include applications and databases. At the same time, it does not fit the NIST definition of PaaS. Bundling requirements into service models/lots can also reduce competition when otherwise viable offerors could perform some of the work, but are precluded from proposing because they are unable to accomplish the complete package. To mitigate this, we believe it is critical to include professional services with all three offerings to allow agencies to select what level of managed services they need. We also feel it is important to recommend that the GSA consider a CLIN for marketplaces or other third-party products that are available as part of a CSP's standard service offering. Also, we recommend only including pricing at the Task Order level. Under the current contract, GSA is responsible for maintaining cloud pricing. If, however, GSA elects to only including pricing at the Task Order level the onus would be on the vendor to discount and the agency to evaluate. This will enable government to get at least three bids based on features and will encourage vendors to discount.
3.a.	**Flexibility:** Given that cloud products and services are rapidly changing, what process or structure would your company propose for the acquisition contract to keep current with	New technologies make their way to the market quickly; Cloud capabilities being piloted and tested today within a year may become the market norm. GSA should structure their contract to include provisions that will allow the government to take advantage of technology advancements and changing services to get best value solutions for the government. Static service terms that are found in traditional IT procurements (i.e., terms of use for a particular piece of procured hardware) remain constant because the hardware no longer belongs to the vendor. With cloud computing, the infrastructure evolves with cloud services as they are developed. As briefly discussed above, it is helpful to analogize the cloud service model to that of a utility service operating at a massive scale, such as a large telecom provider. A commercial item service such as this cannot feasibly request

#	Question	Response
	industry	consent from each of its customers to update or improve its services. The resulting administrative costs would ultimately increase the price of the utility, in addition to needlessly holding back the release of innovative new services and enhancements. Similarly, cloud service customers should understand that CSP's iterate products continuously to ensure the highest level of functionality, protection and durability. It is also important to understand that while most price changes can come in the form of reductions, there are circumstances where prices can increase. GSA should expand on the success of both Alliant and OASIS in both flexibility and structure as each of these vehicles allow for new and innovative solutions to be provisioned during the contract's period of performance. As described in 2.a, ITAPS and the Coalition believe it is in the government's best interest to utilize an on-ramp and off-ramp approach. The structure of the new vehicle could include different "tracks" or "pools" to divide the areas of various cloud services and therefore companies could qualify for one or all. Tracks could be divided to cover the life cycle of cloud services available and with an eye to remain open/flexible to the rapidly changing market place. The tracks could include "requirements determination", IaaS, Paas, SaaS, Cloud Consulting, etc. Each track would require a company to qualify on the basis of some minimum qualifications in order to get a spot on the vehicle. For example, GSA could require a demonstrated commercial or government sales of the offering. Using this approach, awards would be made to ample number of companies and allow for an ongoing refresh of companies (refer to 2.a). Additionally, some companies believe that the contract should not be linked directly to any specific cloud service. Rather, the contract should allow for prime contractors to onboard and off-board providers and services. This should happen at the task order level and could be performed by requiring the completion of a self-certification worksheet to assess how each vendor's cloud service aligns with NIST guidance and FedRAMP. GSA could enforce with occasional audits. A key part to providing flexibility and supporting the rapidly changing market is to leverage the FedRAMP investments. As offerings such as new SaaS services are approved through FedRAMP, providing a follow-up/On-ramp to allow these offerings to be added to the GSA cloud purchase vehicle would benefit Agencies and industry. This provides a logical flow for new services with an initial check for security aspects prior to addition to the vehicle. As GSA considers their approach specifically for IaaS BPA, it may be beneficial to consider additional cloud model services including SaaS and PaaS to provide an omnibus approach to cloud and/or connectivity between separate acquisition vehicles for evolution of regulatory, process and user capabilities to meet Agency requirements. It is advantageous to the government to provide a CLIN or approach so that new capabilities can be leveraged utilizing comprehensive acquisition vehicles rather than new acquisitions for such

#	Question	Response
		service needs – from a the perspectives of consistency, cost, and time to obtain capabilities. This allows the government to remain aligned with technology advancements and ensure rapid integration of commercially available services. • As indicated in 2b, it is valuable to customers and industry to allow and plan for innovation and adaptability of the infrastructure environment to changing business models and advancements in technical capability and service delivery. To enable this, we are suggesting a CLIN for Collaboration and Innovation services to build in discovery and adaptability to market place dynamics. This may be tied to regular technical roadmap and requirements review (annually/semi-annually) to encourage and incentivize collaboration and continuous optimization of infrastructure and service delivery. We believe that in order to keep current with industry, GSA should permit changes that are applied across a commercial contractor's entity products line (including the associated terms and conditions). Under this model, the government could procure a service catalog of a particular cloud service (e.g., IaaS), that can be updated continuously with the introduction of new services. Or they can consider permitting changes to services (and terms) based on the CSP's commercial practices and have a reconciliation every few months that would finalize/definitize the applicable terms and conditions. This would be akin to how the federal government engages in Letter Contracts. GSA may also wish to develop and implement a tiered ATO approach. By offering different levels of ATO boundaries, GSA would have the opportunity to utilize commercial PaaS/SaaS options hosted in FedRAMP authorized clouds.
3.b.	**Flexibility:** How would you suggest that awarded solutions be "updated" based on a technology change and pricing?	As Cloud technologies continue to evolve, pricing for Cloud solutions continues to fluctuate. Allowing for pricing to remain flexible and developed at the task order level will provide the government customer with the most competitive and current pricing. Whether on a new vehicle or in modifying current acquisition vehicles, GSA should consider a CLIN that allows for the addition of services (Fixed Unit Rate/Fixed Unit Pricing) to enable new capabilities can be constantly added. This approach may also include new bundles to replace existing services so that agencies can evaluate and determine whether to remain with existing service or migrate to a to more advantageous business and pricing model that may leverage economies of scale to meet business and operational objectives. The key to this is providing the flexibility to the government to purchase in multiple ways and take advantage of technical maturity and evolving services in the cloud marketplace. In addition to Collaboration and innovation services CLIN, ITAPS and the Coalition would recommend a process by which Customers and Contractors review service requirements (Technology Roadmap Review). We also would recommend minimum of bi-annual updates to Pricing.

#	Question	Response
		The Alliant contract is designed to allow this now. Prime contractors should have the flexibility to make newer versions of cloud services available (as continuous integration is a nature of cloud computing), as long as such changes are fully disclosed. As for pricing, let the marketplace and competition drive pricing of cloud services, versus constantly pre-negotiating pricing of cloud services. Pricing is too fluid from many of the providers at this point. If pricing needs to part of the model, perhaps a "market price" minus X percentage points maybe more attractive.
		For heavily customized solutions, some companies would not recommend awarded solutions to agencies. Instead, they recommend that the IDIQ award be based on other factors such as contractor capabilities, FISMA compliance, and availability of established solutions that will provide a basis for customized solutions.
4.	**Acquisition Structure:** What would you propose as the easiest and most cost effective way for government to offer cloud solutions to all Federal Agencies**?**	Currently cloud solutions are acquired through a variety of vehicles including IaaS, other cloud BPAs (EaaS), Schedule 70, and directly by agencies through individual or enterprise Contracts. In meeting the objectives of the Cloud First and Data Center Consolidation objectives, USG has successfully provided acquisition options for USG agencies. That being said, USG agencies are at varying stages of adopting cloud computing for their infrastructure and service needs, including in utilization of GWAC or other Government-wide vehicles.
		Considerations for more cost effective method for acquiring cloud computing services is highly dependent upon building in flexibility to add services as they become available and needed, potentially as Cloud Catalogue service offerings. This could be accomplished with one GWAC for Cloud Services – IaaS, SaaS, and PaaS. This also needs to be balanced with a simplified method for adopting and acquiring new services in a timely manner, such as Schedule 70.
		Alternatively, GSA could release cloud requirements on existing contract vehicles. Additional contract vehicles which include Cloud scope (the planned NS2020 EIS for example) creates challenges and delays in the evolution of Cloud services and pricing for those service. The Government should work with Industry to provide guidelines, SOWs, and other templates to assist guiding agencies to offer cloud requirements on existing contract vehicles.
		We believe GSA would benefit by leveraging a website to simplify the comparison of offerings and the actual process of purchasing of IaaS, PaaS, SaaS, and associated services. A website store front would effectively become a centralized portal for any government organizations looking for information related to the capabilities and differentiators of CSPs. The storefront educates and increases exposure to program offices looking to acquire services from the GSA program. A website could also provide agencies with critical cloud information, including: • **Sample pricing models** – accounting for duration pricing (monthly/weekly) as well as transaction or consumption-based models

#	Question	Response
		for PaaS/SaaS. • **Offering descriptions –** providing comprehensive details of specific capabilities of each CSP. • **CSP contact information –** including points of contact where GSA can obtain additional information. GSA could establish a FAR 12 IDIQ that would provide a framework for agencies to procure solutions with a bench of qualified cloud providers; competition should drive pricing, or have separate contractor pools for private/public/X Cloud such as XaaS categories. GSA Alliant currently supports cloud implementations and offers flexibility, qualified contractors, and pricing for Time & Material requirements. Using a "Cloud" Hallway like the one described above could help provide the tools for defining requirements. The hallway could help distinguish between IaaS, PaaS, and SaaS so that purchasing entities are clear as to what cloud model they are buying. IaaS is an unmanaged service that is procured as a commercial item, and can be acquired based on the suggestions discussed above. This storefront would also ensure that each vendor has gone through a vetting process and has been authorized to bid on this vehicle. This would eliminate additional vetting and would encourage agencies to solicit bids through this vehicle. To relieve GSA's administrative burden, GSA may wish to consider a separate contract for development and administration of the website. Additionally, utilizing the aforementioned single CLIN line item structure will allow for additional flexibility for end user customers to shift their specific infrastructure usage patterns without a contracting officer having to process lengthy modifications. It also provides the flexibility to avoid overruns and underruns of CLINs and contracts. The monitoring tools provided by a CSP allow for the understanding and forecasting of long-term cloud usage patterns, and also contribute to avoiding the need for contract modifications. Last, the single CLIN approach can better accommodate the many service changes CSPs might have.
4.a.	**Acquisition Structure:** What has significantly changed (since the initial 2010 launch of the IaaS BPA) in the Cloud market that might impact how agencies procure cloud services?	As compared to 2010, buyers are significantly more educated about the benefits of cloud computing; there are more cloud service providers across all service models; there has been somewhat of a "shakeup" of the IaaS market with apparent leaders emerging, and more vendors have received FedRAMP certification for their cloud services. The development of FedRAMP has gone a long way to standardizing cloud security and compliance, and increasing public sector cloud adoption. It is recommended that a new cloud contract maximizes the application and usage of FedRAMP. Similar to leveraging FAR Part 12 for standardizing Terms and Conditions, FedRAMP standardizes security controls in a constructive manner. This is critical because we continually witness how additional security requirements, which were already addressed within the FedRAMP program, add cost and burden to the bidding entity as well as the end user themselves.

#	Question	Response
		Cloud has proven to be ideal for hosting non-business critical applications, such as websites. The success of these early cloud initiatives has significantly increased acceptance rate across the federal marketplace on what is being pushed to the cloud. As a result, agencies are now faced with more complex needs as they move critical applications and services to the cloud.

Specifically, the acquisition and technology environment has changed dramatically since 2010 – positively and negatively, including:

• Adoption and implementation of FedRAMP Cloud Security Framework, including streamlining of certification and implementation of cloud solutions
• Increasing number of service and product providers entering the USG market
• Definition and comparison (Benchmarking) of Cloud offerings across industry is not consistent and thereby introduces ambiguity related to understanding exactly what is being purchased, for what purpose, and whether CSP solutions are comparable/include the same capabilities (i.e. Compute/storage/O&M, security, billing, SLA/Performance management). Additionally, this lack of definition presents a challenge to Customers when evaluating Pricing reasonableness and distinguishing between competitive offerings.
• Service Level Performance (SLA) expectations relative to commercial and government cloud environments - impacts requirements definition and cost
• Limited USG agency cloud adoption and lessons learned related to migration from one model to another (Cost, Performance Management, and Technical implications)
• Lack of tangible examples and associated Lessons Learned of migration of IT services from one provider to another
• Adoption of cloud computing has been more prominent in some aspects of IT service including: data and storage management, basic infrastructure, and email. For more complex IT services, such as mission application hosting, management and development, adoption has been slower.

As GSA considers appropriate acquisition methods for cloud computing, it is important to engage with Agencies and document lessons learned related to adoption, performance impacts, and migration. It is also important to engage Agencies CIOs relative to what aspects of IT service they believe are most applicable and the barriers they consider to be most challenging. This will ensure the Agencies, the Acquisition community, and industry are more informed and collaborative in meeting the objectives and value of Cloud adoption with the right business and acquisition model to mitigate transition and transformation in wider adoption of cloud computing. |

#	Question	Response
4.b.	**Acquisition Structure:** Provide a one page mock-up of a proposed acquisition contract design that would allow agencies to easily understand how they need to purchase cloud products and services, while at the same time allowing your company to easily match agency requirements to the design of the acquisition contract. For example: how would you apply or modify your commercial pricing structure	*Due to the intricacies of how different companies view the market, individual ITAPS and Coalition members will submit their proposed structures independently of this submission.*
5.	**Professional Services:** What additional professional services would you propose in a new cloud acquisition contract, to provide Federal Agencies with a comprehensive and complete solution under one contract?	Professional services are key additional offering that should be considered for future GSA cloud acquisition approach. Agencies have consistently sought assistance from industry and have struggled with how to acquire the necessary skills to support migrations to the cloud. Cloud related professional service models such as System integration and Management services are a special category that do not meet the NIST definitions, but add value to cloud related services. Key services that should be considered include: • Cloud strategy and implementation services • Setup and management of service structures • Data transfer or configuration between providers • Cloud application migration services • Application assessment and cloud migration planning and design • Full life cycle cloud planning including migration, operations and maintenance, and egress / transition to new vendors • Management and support of applications operating on cloud-based

#	Question	Response
		services

- Multiple supplier integration services
- Helpdesk
- Training
- Cloud brokering and instance management
- Testing services

These services would help with increasing the pace of migration to cloud services, as well as provide a mechanism to add incremental, periodic services as technologies and their needs evolve. The pace of change is rapid and if a comprehensive contract does not provide the ability for flexibility then the desired economies of scale will not be realized.

Additionally, the Cloud Services Integration CLIN may encompass development and test, integration, database development, agile development, continuous integration, replatforming (using PaaS), DevOps, cloud broker development, and related disciplines. The Cloud Migration CLIN may encompass strategies, assessments, discovery, planning, architectures, training, transitions and operations.

We propose that any new contract contain the flexibility for Professional Services to be offered by CSP partners, constructed as a fixed price offering of a day or a week of "Professional Services."This ensures that government customers have a broad range of CSP Partner skill sets, expertise and experience to draw upon for specific professional services needs.

We believe that vendors should engages trusted partners and customers to deliver consultative and knowledge transfer of cloud adoption frameworks. GSA can look to the below offerings to help understand the scope of consultation services needed.

- **Technical Specialists.** Specialty practices for skills transfer, security, compliance, infrastructure architecture, application optimization, analytics, big data, and operational integration.
- **Advisory Services.** Gain assistance with portfolio strategy and planning, cost/benefit modeling, governance, change management and risk management as it relates to implementing the platform.
  Collaboration. Work with partners to with access to all resources needed to accelerate progress and to realize breakthrough results.
- **Proven Process.** Specialists bring best practices and patterns to help teams get the foundation right, deploy new workloads, migrate legacy workloads, and create a modern IT operating model to support your business.

#	Question	Response
6.	**Aggregated Discounts:** Would your company	We recommend pricing should not be established at the umbrella level and allow for market pressures and competition to determine the best price at the task order level for the specific requirement. As such, it would be difficult to commit to and presents risk to apply an aggregate or blanket discount at the

#	Question	Response
	support government wide volume discounts by aggregating at the CLIN (contract line item number) level government wide? (i.e. once a certain dollar threshold is met for a CLIN, all government agencies would receive a percent volume discount) Explain how this would be accomplished.	government wide level. The details depend on vendor agreements, the volume, and other factors; and would therefore require analysis. While we understand the government would like to increase their buying power, perhaps a consideration would be to apply volume discount at the customer agency level. These volume discount thresholds would be identified ahead of time.

However, aggregated discounts make sense for certain aspects of cloud acquisition but may not work in other areas. For instance for CSPs with FedRAMP certified solutions, significantly investments in developing and maintaining the infrastructure for customers with potentially divergent requirements (i.e. logically separated infrastructure within a Cloud vs. use of Government Cloud shared infrastructure) may then expect volume discounts when the infrastructure is limited to their use. Discounts at an agency or department level rather than a government wide level are more appropriate in the IaaS market place. Discounts tied to a combination of volume levels and a time commitment would be received better by cloud providers.

When considering aggregate discounts, other considerations impacting feasibility include consistency of user utilization or dollars spent over a given period of performance, including factors such as surge and minimum level of usage to retain discounts. Additional Influencing factors and limitations related to aggregate discounting, particular related to SaaS offerings, include licensing structures of the components involved that remain constant and are not reduced due to scale of usage (individual user licenses). One key consideration for any government wide level discounts would be centralization of billing and invoicing processing and contracting to reduce overall administrative burden. Volume/aggregate discounting is advantageous to Agencies and industry is interested, however limits exist given FedRAMP, individual Agency needs, and changing regulatory requirements.

Some companies believe that government-wide volume discounts are most appropriate for commodity-based services, and are less applicable to solutions. Current experience with governmentwide discounts on the DHS CDM BPA demonstrates some of the short comings. Because competition occurs at the task order level, customers are receiving discounts far below the "last band" thus rendering the price bands irrelevant. However, contractors are incurring significant expense to build and maintain systems designed to capture and report the data and to track bands based on volume sold. The competition and resulting pricing would occur whether or not the price bands existed. The "prices paid" have no relationship to the BPA ceiling prices. Recommend that instead of instituting this scenario which would require contractor investment in order tracking systems, that GSA allow for robust competition and allow contractors to use the money that would be spent on tracking systems to instead providing better discounts to customers.

Other companies simply do not offer aggregated discounts for government; however, they do offer various discount programs that the government may leverage. |

#	Question	Response
		• **Pay less when you reserve.** For certain types of products, customers can invest in reserved capacity, paying a low up-front fee to receive a significant discount. This results in significant savings. • **Pay even less per unit by using more.** Pricing is tiered for storage and data transfer, so the more any agency uses, the less they pay per gigabyte. Typically the pricing is automatically adjusted within the billing mechanisms whenever such price discounts occur. The discounts are applied at the account level, therefore any usage required would require the consolidation of accounts under what is a called a "Consolidated Master Account".
7.	**Consistent Acquisition Methodology:** Can GSA modify or change how it buys and sells cloud services to be more consistent with how solutions are structured and sold commercially within the limitations of the FAR?	Any resulting RFP should take into consideration the commercial nature of the services being procured. Most cloud service providers (CSPs) operate as commercial item contractors under the Federal Acquisition Regulation (FAR). Accordingly, certain FAR provisions not applicable to commercial item contracts should not be included in the RFP and resulting contract, e.g., FAR § 52.227-14 (Rights in Data – General). A general requirement for a contractor to comply with "all laws, ordinances, and regulations covering work of this character" is also overly broad. For commercial CSPs, only those clauses that are required to implement provisions of law or executive orders applicable to the acquisition of commercial items (e.g. FAR § 52.212-5, as applicable), and that are consistent with customary commercial practices, should be included in the contract. Most cloud service providers have service terms/service agreements that are tied to the manner in which its services operate. This is true with respect to a host of issues, such as warranties and SLAs. The Government Ordering Activity is responsible for the correct classification of its data and the identification of the proper regulatory designations that govern the legal aspects of data security. The Government Ordering Activity should be responsible for selecting the Cloud Service Provider with the proper regulatory classifications for its data. Some ITAPS members believe that GSA should allow for reasonable quantities of cloud services to be readily purchased with a simplified procurement, lest some core benefits of cloud computing (on demand self-serve, rapid elasticity) be lost in the procurement process. This will likely require analysis and special contract terms to allow for simplified procurements. However, other believe that the FAR will not restrict GSA from releasing a contract vehicle that provides for the utmost flexibility while ensuring cloud requirements are met. Using a single line item structure for cloud services is a simple approach to leveraging the cloud's pay-per-use model. Think of procuring cloud services as buying a CSP account that consists of a full menu of CSP cloud services. Users can simply select the services they need from this menu of CSP cloud services line items. Below is an example of a single line item structure approach.

#	Question	Response

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1001	Cloud Services	1,000	Each	$1	$1,000

In this example, each unit of the CLIN ordered—or selected —equates to $1.00 of cloud services ordered and would include a "not-to-exceed amount" on the contract. This structure allows for the maximum customer flexibility in optimizing their cloud requirements.

To demonstrate delivery and use of each unit in this sample structure, CSPs should enable customers to generate detailed billing reports that break down costs by the hour, day, or month; by each account in an organization; by product or product resource; or by customer-defined tags.

Some CSP's offer customers the ability to view billing information at both granular and summary levels. Customers can visualize patterns in spending on resources over time, customers can filter their usage/billing view by service, by linked account, or by custom tags applied to resources. Additionally, these types of billing features allows customers to consolidate payment for multiple accounts within an organization by designating one of them to be the payer account. With Consolidated Billing, customers can see a combined view of charges incurred by all accounts, as well as a detailed cost report for each of the individual accounts associated with the payer account.

Another approach customers utilize has been to have the Unit Price and "Amount" presented as TBD factors upon the Task Orders creation. CLINs would be incrementally funded under a TBD amount as new requirements are added to the contract; and ceiling level will be incrementally funded with each new order. This CLIN approach would look as follows:

CLIN – SERVICES FOR ODC ITEMS:

ITEM NO	SUPPLIES/SERVICES	QUANTITY	UNIT	UNIT PRICE	AMOUNT
1001	Services	1	Each	TBD	TBD

This single CLIN item approach also can accommodate the above described dynamic pricing best practice as well.

| 8. | **General Feedback:** Does your company have any other general feedback about a new GSA centralized cloud contract? | We appreciate GSA's innovative leadership in helping agencies gain easier access to cloud services. The ITAPS and Coalition responses are reflective of differing viewpoints, including CSP's, prime and subcontractors, Cloud Services Integrators and thus we believe that GSA should consider the input from all stakeholders in the market before it sets a standard for a new contract.

In addition, we believe that cloud procurements introduce new contractual challenges that will require IT departments to revise IT legal contracts to reflect Cloud providers and to cover the following issues:
• protection of information
• liability |

#	Question	Response
		- contract termination - dispute resolution - financial stability - introduction of harmful code - compensation for data loss/misuse - change of control - change of terms at the discretion of the provider - information privacy