SBA
U.S. Small Business Administration

Modernizing the Small Business Administration's Digital Services

A Report by the U.S. Digital Service Discovery Sprint Team

March 6, 2015

Introduction

Every year, the SBA supports hundreds of thousands of American small businesses by expanding their access to capital, helping them receive federal government contracts, providing disaster assistance when needed, and offering general small business counseling services. Each of these mission areas is supported by a suite of digital services.

Because many of the SBA's digital products have not been refreshed since they were first implemented, user experience no longer meets expectations. Additionally, the hardware and software that underpins the SBA's digital services is obsolete. Improving these digital products is a key goal of SBA leadership.

This document provides a set of specific implementation recommendations for improving several of SBA's key digital services. It also includes a general set of technical principles that can guide modernization efforts across the SBA. Finally, the document proposes the creation of Digital Service team inside of SBA that can lead these efforts.

These recommendations were developed by a U.S. Digital Service team, over the two week period from February 23 to March 6, 2015. To develop these recommendations, the Digital Service team worked closely with SBA political leadership, technical staff, contractors, and leaders within the SBA's program offices and the Office of the CIO.

Summary Recommendations

- Align the organization around specific, quantifiable business goals, and measure how well the SBA's digital services are contributing to these goals.
- Transition to a modern technology stack. Core parts of this stack include a modern, industry-standard web application development framework such as Ruby on Rails; a modern, open source relational database such as PostgreSQL; and hosting on virtual machines in the cloud, using an infrastructure-as-a-service provider such as Amazon Web Services.
- Execute a migration strategy with intermediate deliverables shipped on short timelines. Make the deprecation of old databases and web applications an explicit goal of this project, capturing both maintenance and financial cost savings.
- Build a data analytics capability so that SBA can easily measure business metrics related to its digital services. Instrument SBA's digital services to ensure they capture the metrics required to assess each product's success.

- Build a Digital Service team inside of SBA, and task this team with product and technical management of the modernized version of SBA's services. Give this team accountability and autonomy.[1]

A Note About Our Technical Recommendations

Throughout this document, our team has opted to propose specific technologies, products and services that can be used to implement our recommendations. We have based these recommendations on our collective experience building similar products and our understanding of current industry best practices. However, as with all digital services there are multiple ways these solutions could be implemented.

We choose to recommend specific solutions so that future individuals implementing these changes know what choices our team would make if we were to begin implementing these recommendations today. We also believe that these choices are representative of what a startup trying to build similar products would use. It's possible that by specifying these or similar technologies up front, SBA may attract firms with experience using more modern technologies in its contracting process.

We do not believe that success is dependent on making these specific technology decisions. Indeed, these recommendations may change if a technically-competent team provides a compelling reason for a different choice.

Schedule and Cost

We estimate that each individual milestone, below, will take 4 to 12 weeks for an experienced team of two. Scheduling longer milestones increases risk because business priorities are likely to change before the milestone is delivered.

This results in a total estimated effort of 5 to 15 person-years. Since efficiency declines as the team size expands beyond the natural parallelization boundaries of the work, a realistic schedule might be 12 to 18 months for a team of 10.

Applying industry standard consulting rates would result in an estimated cost somewhere between $4M and $9M.

[1] The SBA should set an aspirational goal that within 12 months it has the ability to make and deploy a change to all of SBA's production applications without depending on third parties, should the need arise.

Priorities and Business Metrics

Clearly laying out business goals, including indicators and metrics that define progress against those goals, is important to align the organization on all that it does. With digital products as much as anything else the SBA does, work should be done in service of those goals and different workstreams prioritized based on potential to advance those goals.

The SBA has several specific business goals with readily quantifiable metrics. These include:

Goal	**Metric (as understood by our team)**
Increase lending to small businesses	● Total dollar amount of loans to small businesses, by demographic ● Total volume of loans to small businesses, by demographic
Ensure the federal government contracts with small businesses whenever possible	● Percentage of all federal contracting dollars that go to small businesses, by type of business ● Number of small businesses certified to do business with the federal government, by type of certification
Provide counseling services to American entrepreneurs seeking to start and expand a business	● Number of businesses that receive counselling from SBA, by type of business ● Number of businesses who receive counseling and that go on to receive a loan, win a government contract, or receive a small business certification
Ensure businesses impacted by disasters have timely access to capital to rebuild and restore their operations	● Number of small businesses receiving disaster loans ● Dollar amount of disaster loans given ● Average number of days required for a business impacted by a disaster to receive a loan

The success of the digital products the SBA creates or supports should be measured by each service's impact on these metrics and any others that SBA tracks.

Product Roadmap

At the request of SBA leadership, our Discovery Sprint focused on creating specific implementation recommendations for three products: Contractor Certification, Small Business Search, and Data Analytics.

For each of these products, we discuss the objectives and current state of the product, our proposal for what the “ideal” product would look like, and a technical implementation plan for getting from the current state to the ideal state. Additionally, we propose quantitative metrics that should measured to gauge the success of these products.

Contractor Certification

Current

Small business certifications enable companies to qualify for set-asides and other assistance in government contracting. The SBA recognizes four different certifications, each with its own eligibility requirements and application process:

1. 8(a) Business Development Program (referred to as 8(a) throughout this document), for socially and economically disadvantaged individuals
2. HUBZone, for historically underutilized business zones
3. Women-owned small businesses (WOSB)
4. Service-disabled veteran-owned small businesses (SDVOSB)

8(a) and HUBZone both require “front-end” certification where a business must go through the paperwork and eligibility process up-front to be designated as 8(a) or HUBZone — there are web apps for small businesses to apply and for SBA employees to evaluate the applications for each of these. WOSB qualification is self-reported; only in the case of a protest does SBA verify the supporting documents the business has uploaded into an online repository. SDVOSB certification is also self-reported and only verified in the case of an appeal, but there is no online system to support this verification workflow.

The 8(a), HUBZone, and WOSB online systems are each separately maintained and have cobbled together their own ways of handling physical and digital paperwork. Data across the systems is generally not synchronized, requiring businesses to set up new profiles in each place and resulting in business profiles getting out of sync between SBA databases and SAM.gov. It can take months for businesses to be certified, and businesses often lean on third party private sector consultants for help.

The ultimate purpose of these certification programs is to make it easier for disadvantaged individuals and businesses to win government contracts. However, the current certification product creates a difficult experience for the very companies SBA is seeking to help by making these companies incur tremendous overhead in trying to prove their qualifications for certification assistance.

Ideal

The primary goal of the contract certification products is to streamline certification processes for small businesses, including applications and subsequent reviews. For the business owner, the product should:

- Unify the various certification processes in one web app
- Eliminate duplicated data entry; use business profile data the business has already entered on SAM.gov

- Provide fully digitized application (and eligibility renewal) flows, including document upload management and certification application status monitoring
- Enable application turnaround times in days instead of months
- Give business owners an up-to-date, go-to place for application status and next steps
- Send notifications to business owners when applications change status
- Support both both desktop and mobile access

The other side of the experience is the analyst's—the SBA employee reviewing applications. For the analyst, the product should:

- Allow for assigning cases to analysts
- Provide dashboard and management views of in-progress applications
- Automate repetitive tasks
- Support direct communication with the business owner
- Make document review straightforward
- Provide tools for identifying fraud, waste and abuse

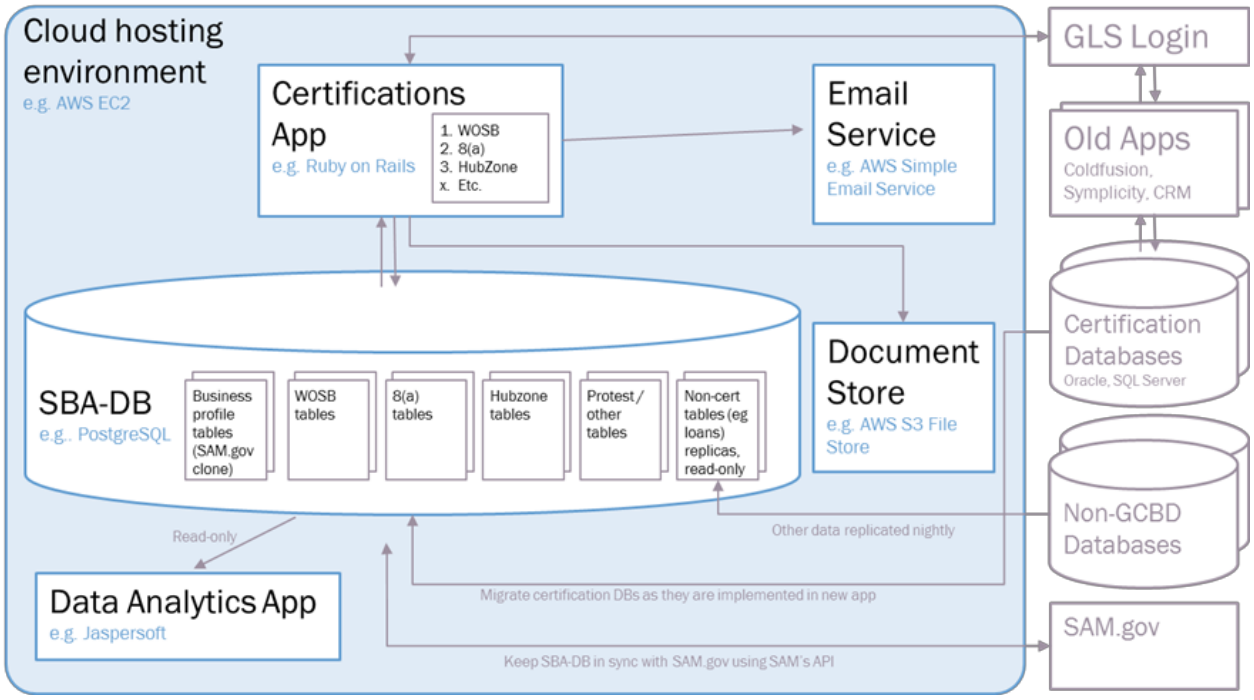
Implementation

Our recommendation is to integrate all the certification processes—8(a), HUBZone, and WOSB, as well as other related workflows—into a single web app, using a modern open-source stack, running on cloud infrastructure. Each certification process will access a shared copy of SAM business profile data, but manage its process-specific data in its own tables. Documents will be uploaded to a secure cloud system but managed and accessed through the app itself.

Our proposed implementation stack is:

- Linux
- PostgreSQL, operated and hosted by Amazon RDS
- Amazon S3
- Amazon SES
- Ruby on Rails, hosted in Amazon EC2, or operated and hosted by a service such as Heroku
- Google Analytics

A diagram of the proposed architecture is below:



First Project: Migrate WOSB to New Architecture

Rebuild the WOSB online repository and deprecate the old WOSBPR app, database, and document store.

We choose WOSB as the first project because it is the simplest to implement from a technical standpoint and is therefore the likeliest to offer a relatively quick win. At the same time, it does require migrating SAM data, integrating with GLS for login, and creating a new document management system. These are all dependencies of the other more complex certification processes, so the work done on WOSB lays the foundation for the other certification app migration efforts. Any of the other certification apps could also be built first, though those migrations are more difficult to execute due to their complexity.

Milestone 1

The first milestone implements the initial migration of SAM data from the SBSS-CCR legacy system.

- Setup new SBA-DB (PostgreSQL)
- Design schema for SAM business profile data (PostgreSQL)
- Create corresponding tables (PostgreSQL)
- Create repeatable ETL (extract-transform-load) to populate tables from SBSS-CCR (PostgreSQL, Ruby)
- Operationalize script to maintain hourly updates (Linux)

Milestone 2

The second milestone focuses on migration of legacy SBA-specific WOSB business data.

- Design schema for WOSB data (PostgreSQL)
- Create corresponding tables (PostgreSQL)
- Create repeatable ETL to populate tables from SBSS-CCR (PostgreSQL, Ruby)
- Operationalize script to maintain hourly updates (Linux)

Milestone 3

The third milestone implements the initial bare-bones certification app, including business owner views, and gets it deployed.

- Create minimal version of new certifications web app, including responsive design for desktop and mobile (Ruby on Rails)
- Integrate GLS login service (Ruby on Rails)
- Implement business owner views and workflows (Ruby on Rails)
- Deploy app (Ruby on Rails)

Milestone 4

The fourth milestone implements and migrates document upload, management, and storage.

- Integrate document storage with application (Amazon S3)
- Implement document upload (Amazon S3)
- Implement document views (Ruby on Rails)
- Migrate WOSB documents to the new storage (Amazon S3)

Milestone 5

The fifth milestone adds the analyst views to the app.

- Design and implement analyst views (Ruby on Rails)

Milestone 6

The sixth milestone adds audit capability.

- Design a schema for audit logs (PostgreSQL)
- Integrate logging into all user actions (Ruby on Rails)
- Implement audit log views (Ruby on Rails)

Milestone 7

The seventh milestone finalizes the migration and shuts down legacy components.

- Rerun all migrations and ETLs to make sure all data is available
- Shut off WOSBPR ColdFusion app
- Drop WOSBPR Oracle tables
- Turn off WOSBPR document storage
- Cancel any associated maintenance contracts

HUBZone Project

Rebuild the HUBZone app as part of the new certifications web app, and deprecate HCTS and the HCTS Oracle database.

Milestone 1

The first milestone migrates the legacy HUBZone business data.

- Design schema for HUBZone data (PostgreSQL)
- Create corresponding tables (PostgreSQL)
- Create repeatable ETL to populate tables from old HCTS database (PostgreSQL, Ruby)
- Operationalize script to maintain hourly updates

Milestone 2

The second milestone implements the bare-bones app, with the initial business owner workflows.

- Implement views and controllers for the business's application process (Ruby on Rails)
- Implement document upload (Amazon S3)
- Integrate e-signature steps

Milestone 3

The third milestone implements the analyst actions.

- Implement analyst views and controllers (Ruby on Rails)
- Implement analyst actions (Ruby on Rails)
- Implement notifications to the business on state change (Amazon SES, Twilio)

Milestone 4

The fourth milestone integrates SAM with the certification app.

- Implement SAM integration for application acceptance/revocation actions (Ruby on Rails)

Milestone 5

The fifth milestone, which is optional, eases self-qualification by automating the employee address mapping process.

- Implement a HUBZone map tool that makes it easy for a business owner to upload addresses of employees to verify residence eligibility requirement (Ruby on Rails)

Milestone 6

The sixth milestone implements an audit log.

- Duplicate audit schema from WOSB (PostgreSQL)
- Integrate logging into all user actions (Ruby on Rails)
- Duplicate or extend WOSB audit log views for HUBZone (Ruby on Rails)

Milestone 7

The seventh milestone finalizes the migration and shuts down legacy components.

- Rerun all migrations and ETLs to make sure all data and documents are available in the new app
- Shut off HUBZone ColdFusion app
- Drop HUBZone Oracle tables
- Turn off HUBZone SharePoint document storage
- Cancel any associated maintenance contracts

Enumerating milestones for further products requires a deeper understanding of product goals and requirements than we currently have. We recommend choosing granular milestones similar to what is laid out for projects 1 and 2 before embarking on these projects. Once three or four of the first project's milestones are reached (i.e. GLS Integration, SBA-DB setup and SBSS-CCR migrations, initial application deployment), other projects can potentially be initiated in parallel.

The milestone planning process is useful for uncovering dependencies and unexamined assumptions, and helps execution teams deliver business value consistently and with low risk.

8(a) Project

Rebuild the app for 8(a) certification as part of the new certifications web app, and deprecate BDMIS, the e8a app and database, and the 8(a) terminations database.

PRONet Project

Rebuild the Pronet app as part of the new certifications web app, and deprecate the old PRONet app and database.

Other Business-Focused Applications

Build workflows for managing Mentor-Protege Approvals and Joint Venture Approvals, and other applications which manage records related to individual businesses.

SBSS-CCR Deprecation Project

Deprecate and decommission SBSS-CCR. This is dependent on migrating DSBS from SBSS-CCR as well. At this stage, SAM needs to push updates to SBA-DB instead of SBSS-CCR.

Small Business Search

Current

One of SBA's primary missions is helping small businesses find and win government contracts. The agency supports this goal in part by helping to enforce a procurement rule which requires the government to award contracts to small businesses if two or more small businesses could are capable of completing the work. SBA provides a search tool called DSBS to support this mission.

Currently, procurement officers and SBA officials use several tools to find qualified small businesses for government contracts. They use commercial tools like Google, the SBA's DSBS search tool, and SAM.gov to search for government contractors.

Small businesses interact with two systems related to small business search: SAM.gov and SBA's "Supplemental Pages" application. Their main business profile is maintained in SAM.gov. Additionally, small businesses may optionally add profile information in a profile SBA maintains. This additional information appears in DSBS search results, but not SAM.gov search results. It is not copied to the business's SAM.gov profile. Small businesses and the public may also use the search capabilities of DSBS and SAM.gov in order to research the competitive landscape of government contractors.

SBA's current search product has several issues:

- The DSBS dataset is limited and incomplete
- The method by which business extend their searchable profiles for both DSBS and SAM.gov is confusing
- The DSBS search interface is baroque and unwieldy
- DSBS results are not returned in relevance order

In addition, no business metrics are captured that can be used to measure or optimize the customer experience of the search tool.

Ideal

Ideally, all small business search use cases would be supported by the SAM.gov product. As per our policy recommendations below, the best-case scenario is that the SBA collaborates with the GSA to implement small business-specific search functionality on SAM.gov, as it is already the primary place that many contracting officers and businesses use to find and manage business profile information. Another collaboration possibility is expanding the GSA's newly launched Discovery tool for procurement market research to index all businesses and small businesses, not just OASIS vendors.

The SBA may choose to revamp its own small business search product. If so, this tool should have a simple interface adapted to the use cases described above. Initially, the product must:

- Include a “Google-like” text entry box with faceting that facilitates exploration rather than selectivity
- Expose only the most commonly used filtering conditions by default, such as NAICS code and small business certifications
- Return results in relevance order
- Tracked and monitor usage so program developers know what to improve

In addition, the product could:

- Provide a better way for businesses to update their profiles, perhaps with a “LinkedIn-like” landing page
- Link profiles to SAM.gov, so that businesses can update their profile in one location
- Increase search coordination with SAM.gov, so that contracting officers using SAM.gov to search for small businesses get the best results possible
- Include additional data such as past performance information
- Include bookmark functionality to help procurement officers (or any logged-in user) track results
- Provide the ability to automatically or manually save queries
- Take government-only data into account for appropriate logged-in users

Implementation

Our proposed small business search product implementation is based on a modern, primarily open-source stack:

- Linux
- PostgreSQL (shared component), operated and hosted by Amazon RDS
- ElasticSearch, hosted in Amazon EC2, or operated and hosted by a service such as Compose.io
- Ruby on Rails, hosted in Amazon EC2, or operated using a service such as Heroku
- Google Analytics

Milestone 1

The first milestone focuses on basic functionality.

- Set up components
- Build and automate an ETL for populating the search index (ElasticSearch)
- Design and build a basic web interface for querying (Ruby on Rails)
- Design and build results pages (Ruby on Rails)
- Design and build individual per-business profiles for drilldown (Ruby on Rails)

- Iteratively tune indexing and ranking to get a good baseline (ElasticSearch)
- Add basic usage tracking

Milestone 2

The second milestone adds personalization features for searchers.

- Integrate single sign-on (ideally using the SAM.gov login information)
- Add bookmarks (Ruby on Rails)
- Add saved searches (Ruby on Rails)

Milestone 3

The third milestone takes advantage of the sign-on capability to include government-only data.

- Update the index ETL to include government-only fields (ElasticSearch)
- Extend the interface pages to include this data for government users (Ruby on Rails)
- Build a new ranking function that takes this data into account, for government users (ElasticSearch)

Milestone 4

The fourth milestone adds profile and personalization options for businesses, and increases public search engine penetration.

- Make sure that business profile pages have static, SEO-friendly URLS (Ruby on Rails)
- Improve the styling of profile pages (Ruby on Rails)
- Add additional fields in the profile that can contain data otherwise inaccessible to searches, such as capabilities (Ruby on Rails)
- Create an edit view for the profile, accessible to the business (Ruby on Rails)
- Update the index ETL to include the new data (ElasticSearch)
- Update the ranking functions to include the new data (ElasticSearch)
- Add branding fields to the profile, such as logo upload (Ruby on Rails)

Success Metrics

The goal of the search product is to increase the suitability and number of small businesses selected for contracting or subcontracting work. This is difficult to measure, but some proxies for whether the product is succeeding might include:

- Small business search query volume
- Number of repeat users
- Click-through rates to results views and outbound links such as company websites
- Usage rates of personalization features
- Relevancy scoring of sample results using user research techniques

Data Analytics

Current

There is currently no automated interface for creating reports from most of the SBA systems. One slight exception is counseling (EDMIS) which has a report generation front end, but the data in EDMIS is less useful than the data in other SBA systems. Generally, reports are generated on demand manually. A request from SBA managers for a specific report is given to a database administrator who formulates and runs a SQL query with results usually delivered in the form of a spreadsheet.

Ideal

The goal of this project is to produce a business intelligence application giving interactive access to reports needed by managers, business analysts, and leadership in the SBA.

Implementation

We will build a front end customized to the needs of the SBA using an open source business intelligence and reporting tool such as Jaspersoft or Pentaho. It will be cloud-hosted in the same environment as the new certification applications, and use data from the newly migrated SBA-DB described in the Certification section. We will migrate and replicate data from existing SBA databases to SBA-DB to be able to create these reports.

There are three major components to this product.

- An ETL process to make existing data accessible and in a useful format for the analytics engine.
- A report designer to allow developers to add new types of reports to the engine.
- A dashboard that give users convenient interactive access to their reports in the form of business graphics and spreadsheets.

Either of the open-source business intelligence packages Jaspersoft and Pentaho would provide support for building these products.

Milestone 1

The first milestone is to install the basic tools needed and begin migrating data.

- Make purchase decision; compare Jaspersoft and Pentaho and any other competitive open-source BI packages
- Install BI software in the cloud-hosting environment where the certification app is running (Amazon EC2)

- Build the data migration tools necessary to replicate some data from existing SBA databases (e.g. loans, EDMIS) to the new SBA-DB using ETL tools within the BI package

Milestone 2

The second milestone is to deliver a tool that can entirely replace one current hand-generated set of reports for a user inside the agency.

- Identify the first app and the data analysis requirements
- Replicate necessary data from existing SBA databases to the new SBA-DB (PostgreSQL)
- Add the database queries to support the first reports to the BI package (PostgreSQL)
- Design and build a visual interface to allow the first customer to set parameters and obtain results in the formats they desire

Milestone 3 and later

After Milestone 2 is met, further milestones consist of satisfying more report requests, until all requested reports can be rendered by this application instead of by custom manually-created queries. At this point the new application shifts from development to maintenance. Although all existing reports are possible to create at this point, we expect changes to this tool to be made throughout its lifetime to support new business intelligence requirements as they arise.

- Identify the next set of customers and their data requirements
- Add the data migration they need
- Add the database queries they need
- Add to the visual interface any controls or display they need

Product completion

The process described for Milestones 3 and later essentially continues for the lifetime of the use of this product. We expect that all reports based on aggregated data can be satisfied by this process. As new business applications are created, new reports will be needed as well, so there is no point at which this product development can be assumed to be finished.

Success Indicators

- **Business value**: reports generated with this tool should meet the business requirements of SBA leadership at least as well as their current system of hand-generated reports
- **Lower Cost**: the number of one-off, hand-generated database queries written to support data analysis requests should be steadily reduced. The product's goal should be that zero such queries should be required.

- **Usability**: the front end must be readily usable by business analysts and produce reports in their preferred formats
- **Interactivity**: reports can be created on the fly and results imported into Excel or viewed within a browser immediately

Technology Principles

The roadmap and implementation plans above are guided by a set of broad principles that help ensure software project success. Understanding these principles will help the above projects succeed.

These are based on the U.S. Digital Services Playbook, with some adjustments to account for the specific circumstances of the SBA. Issues that are unusually acute for the SBA are:

- Lack of automation
- Lack of software and data re-use
- Incomplete migrations of legacy systems
- Lack of modern development tools

Digital Service Play	**Assessment of SBA Progress**
Understand what people need, address the whole experience, from start to finish, make it simple and intuitive	The SBA has made a good start by inviting actual customers in to discuss their use of the product. This mindset needs to be maintained. Products should be designed to reflect user needs, not the organizational structure of the SBA.
Build the service using agile and iterative practices / structure budgets and contracts to support delivery	The SBA needs to move aggressively to short, tightly-scoped product iterations. The focus should be on maintaining a dialogue between all the project stakeholders, rather than trying to comprehensively specify requirements up-front. Short iterations that get to production quickly (in a span of a few months) can let the SBA take calculated risks, learn from its real-world customers, and build value quickly and consistently. Although it's useful to have standards to encode shared knowledge, they do not exempt project owners from exercising their judgment as to whether any individual standard applies to their context. The SBA needs to give individuals the freedom to innovate and try new things and update standards according to lessons learned; otherwise the standards ossify and become roadblocks.
Assign one leader and hold that person accountable	Software products cannot be successfully built without unifying authority, experience, and responsibility. The SBA needs to make each person accountable for the outcomes of their projects and give them the freedom to execute according to

	their judgment. This applies at all levels, from the individual developers up to the eventual leadership of the SBA Digital Service. Leaders within the SBA need to lead by example more than by rule-setting to preserve the agency and morale of the team.
Bring in experienced teams	A general lack of technical experience within the SBA makes communication difficult and puts projects at the mercy of contractors. The SBA needs to hire people with the technical experience necessary to understand, collaborate with, and challenge contractors and hold them to a high standard. In addition the lack of internal technical understanding makes it difficult for SBA's leaders to understand what is possible or practical as product goals are decided. Ultimately, the success and shortcomings of an agency's digital services are the direct responsibility of the agency's leaders. If these leaders do not have experience building and managing successful digital services, it is leadership's responsibility to build a trusted team that does.
Choose a modern technology stack / default to open	A better choice of tools can lead to lower cost-of-ownership and better outcomes for the SBA. In particular, the SBA needs to retain the rights to all data and code, be the account of record for cloud services, and understand how to operate and iterate on its systems without requiring a contractor to be involved. This will help the SBA create transparency and competition in its own contractor solicitations. An easy way to achieve this is to use open-source components for all mission-critical products. If some of the components are shared across products, maintenance cost can be reduced and product consistency can be improved as well. Finally, the SBA needs to be aggressive about choosing modern tools and sunsetting legacy components, to reduce the long-term maintenance burden and improve developer productivity.

Deploy in a flexible hosting environment	Cloud infrastructure has been one of the biggest industry innovations in the last ten years, for good reason. Outsourcing commodity operations functions frees the SBA to focus on building products. To the extent that standard, replaceable cloud components exist for the SBA's technical needs, they should be used. However, the SBA must be careful about becoming dependent on proprietary products that cannot be replaced if the relationship with the vendor sours.
Automate testing and deployments	One of the SBA's biggest drags on productivity is the lack of basic development tools: source code version control, an issue tracker, automated tests, and local development environments. All future projects should adopt an automation-first mindset and invest in developer and operational tooling. Additionally, automated tests should be required for all new application code developed. The lack of a source code control system run by SBA for all employees and contractors to store application code and manage deployments is a particularly glaring problem that should be remedied as soon as possible. As a rule, software teams need to focus on making long-term investments and avoid doing short-term, unscalable work, such as manually generating reports, deploying code, or restarting processes.
Use data to drive decisions	It's important to balance qualitative as well as quantitative goals. Most of SBA's products have easy-to-track proxies for customer satisfaction. These should be chosen upfront to help measure success and guide development. Database schemas should be designed with reporting and auditing in mind. Real-time system metrics should be captured in an off-the-shelf dashboard product to assist developers and operators.

Team and Talent

As digital products are critical to the delivery of the SBA's services, the SBA needs people in-house that can effectively direct and manage them.

Leadership

A key early hire is a digital service lead who takes a strategic, technical executive role within the SBA. This person is responsible for defining product vision and technical vision, building out and managing the in-house digital service team, setting up an effective product development process with employees and contractors, and communicating with agency leadership and the various program offices. Ideally the digital service lead is a seasoned technical lead and senior engineer with full stack web application development experience and has previously worked on deprecating and migrating legacy systems.

Initial Team Members

Across the initial SBA digital service team there are a few important roles, some of which can be played by the same person or shared among multiple people, depending on the skills of the individuals on the team:

- **Senior Engineer / Technical Lead** (ideally, one per major contracting project): Guides technical direction on contracting projects; tasks and manages contractors, performs code reviews. Has experience architecting, building, and shipping full stack web applications with modern technologies.
- **Design Lead**: Responsible for the user experience and visual design of the SBA's digital products. Starts with user research and guides the design process. Capable of executing individually but more likely to oversee design work by others and approve all final decisions.
- **Product Manager** (ideally, one per major contracting project): Sits with the program offices to understand product goals. Helps translate customer feedback into a prioritized list of features. Partners closely with design and engineering to help the team ship the right product to users.
- **Digital Service Contracting Officer**: In charge of contracts relating to all new digital services and products. Experienced government contracting officer that is trained in the particular nuances of software product delivery via contracting vehicles. Can draw on competent legal counsel for acquisition of digital products.

Other desirable skillsets for at least one person on the initial team include:

- Deep relational database skills (experience with Oracle not required but helpful). Ideally with some prior experience doing database migrations.
- Infrastructure operations skills.

Individuals who have multiple skillsets can be particularly valuable early on (for example, someone who functions as both design lead and product manager), but a team composed of individuals with overlapping skills is entirely sufficient. In either case, it is critical that each person possess strong communication skills and a high degree of empathy.

Filling Out the Team

The initial SBA digital service team will be the best ones to determine how to grow the team over time. It will take deliberate effort to craft the right roles and organizational structures, to source and recruit qualified candidates, and to onboard them in a way that maintains the culture and effectiveness of the team; and the process of scaling the team is a continuous one.

On the specific question of hiring more junior candidates in technical roles, our recommendation is to be open to taking on people with at least 1-2 years of work experience, so that they have some familiarity with industry practices even if they need more structure and guidance around their work.

Ongoing Support from the U.S. Digital Service

The U.S. Digital Service HQ can help in two major capacities:

1. Recruiting. Especially as the SBA is just beginning to build out its in-house digital service team, but also on an ongoing basis afterwards, U.S. Digital Service HQ can help to source and evaluate candidates for the SBA digital service team.
2. Providing an ongoing “technical advisory board”. On an as-needed basis, likely not more than an hour per week, someone from the U.S. Digital Service can advise on technical direction and acquisition strategy, or more tactical issues like drafting or reviewing statements of work and task orders or evaluating contractor proposals. This will be especially important as SBA builds its internal team.

Policy Changes

The team identified several specific policy impediments to improving SBA's digital services. SBA, OMB, GSA and other agencies involved in these uses cases should begin work now towards removing these policy impediments. This work does not depend on SBA building a digital service team. It should begin immediately.

Implement E-Signature Everywhere

The requirement for wet signatures unnecessarily induces significant time delays and other overhead (in cost and convenience, e.g. in postage and physical file storage) for submitting and processing paperwork. Although we should continue to support paper applications, ideally wet signatures are not required and completely digital flows are the default.

Collect Counseling Data

Because small business development centers cannot submit identifying information back to the SBA about the businesses they've served, there is no way of answering basic questions around the number of businesses served or efficacy of counseling services delivered, and no way of tracking the later progress of these businesses through other SBA programs. Ideally SBDCs and other counseling programs submit uniquely identifying information like EINs or DUNS numbers for each business they help, so that the SBA can accurately measure the impact of these counseling programs and understand how they tie into the SBA's other offerings.

Consolidate Business Profile Data and Searching Capability

Today, small business profile information is split across SAM.gov and the SBA's "Supplemental Pages" application and database. The unique business profile information, and any profile updates SBA collects or receives through its certification and counseling work does not get fed back to SAM.gov. In addition, the SAM.gov and SBA's "Dynamic Small Business Search" products have overlapping functionality, and neither is working well at helping users research qualified small businesses to do government work.

Ideally, small businesses would only need to enter profile information in one system with one login. Contracting officers, PCRs and others would only need to do market research using one tool. If policy, regulatory or other obstacles are preventing the GSA team that manages SAM.gov from implementing changes required to better support small business use cases, SBA leadership should work with OMB's OFPP to remove these impediments.

Appendix: About the Team

This document was written by a team of software engineers and product designers at the U.S. Digital Service. The team consisted of:

Eric Benson

Eric is a software engineer who retired from Amazon.com. He worked there from 1996 to 2001, building a variety of customer visible features, including the first version of “People who bought … also bought ....” and A/B testing. A major focus of his work was scaling systems while Amazon’s business was growing exponentially. He also ported their large C++ codebase to Linux from a proprietary Unix system in 2000. Prior to Amazon, he built the ScriptX programming language implementation for Kaleida Labs, and he was a founder and principal scientist at Lucid, Inc. and the architect of Lucid Common Lisp. He is a co-inventor of 5 U.S. patents and has a B.S. in Mathematics from the University of Utah.

Eric Benson recused himself from decision-making as to specific cloud providers or cloud technologies due to a potential conflict of interest.

Tracy Chou

Tracy is a software engineer and tech lead at Pinterest. She was previously at Quora, also as an early engineer there. With initiatives in the workplace and the community, Tracy works actively to promote diversity in the tech industry and has pushed for greater transparency and discussion on the topic with a crowdsourced data collection effort on women in software engineering. She was named Forbes Tech 30 under 30 in 2014 and recently profiled in Vogue for her work. Tracy holds an M.S. in Computer Science and a B.S. in Electrical Engineering from Stanford University, where she was a Terman Fellow and elected to Tau Beta Pi and Phi Beta Kappa.

Evan Weaver

Evan is the CEO of FaunaDB, a distributed database startup. He is the former Architect and Director of Infrastructure of Twitter. At Twitter he led a team of 25, and was responsible for the design, implementation, and integration of all of Twitter's mission-critical database and caching services. The systems he built at Twitter remain in place today. Previously he worked at CBS Interactive and SAP. He holds an M.S. in Computer Science from the University of Delaware.

Charles Worthington

Charles is a product designer and software engineer who has been building the U.S. Digital Service since October 2014. Charles was a Senior Advisor to the U.S. CTO, where he co-authored and did the front end development for the U.S. Digital Services Playbook. Before joining government, Charles built products for clients at Gray Duck Labs and created Preamp.fm, a live music discovery service. Charles has a B.A. from Harvard University.

1. Instructions, Conditions, and Notices to Offerors

1.1 General

This solicitation will follow a three-stage down-select approach. The instructions for each stage are described below.

Offerors shall furnish the information required by this solicitation. Offerors are expected to examine this entire solicitation document. Failure to do so will be at the Offeror's own risk.

1.1.1 Best Value Evaluation

The Government will award a Task Order resulting from this solicitation to the responsible Offeror whose offer conforming to the solicitation will be most advantageous to the Government, price and other factors considered. The Offeror's proposal will be evaluated on a Best Value Source Selection of the Offeror's response to the factors listed in Section 13 of this RFQ. Non-price factors are significantly more important when compared to price.

1.1.2 Discussions/Communications

The Contracting Officer anticipates awarding a Task Order without entering into discussion with Offerors, however, the Contracting Officer reserves the right to engage in discussions if warranted.

The Government may also have communications with Offerors before establishing a competitive range.

1.1.3 Options

The Government will evaluate offers for award purposes by adding the total price for all options to the total price for the basic requirement. The Government may determine that an offer is unacceptable if the option prices are significantly unbalanced. Evaluation of options shall not obligate the Government to exercise the option(s).

1.1.4 Notice of Award

A written notice of award or acceptance of an offer, mailed or otherwise furnished to the successful Offeror within the time for acceptance specified in the offer, shall result in a binding contract without further action by either party. Before the offer's specified expiration time, the Government may accept an offer (or part of an offer), whether or not there are negotiations after its receipt, unless a written notice of withdrawal is received before award.

1.1.5 Point of Contact/Questions

The point of contact for this solicitation is Toni Hoskinson, Contracting Officer, toni.hoskinson@sba.gov and 303-844-2026.

Prospective offerors may request an explanation or interpretation of the solicitation via email to the Contracting Officer at toni.hoskinson@sba.gov. If sending questions via email, prospective offerors are requested to include the solicitation number and RFQ title in the subject line of the email and the company's full name and address in the body of the email.

All questions related to the solicitation are due to the Contracting Officer at toni.hoskinson@sba.gov no later than May 4th, 2015 at 11:59pm EST.

1.1.6 Changes to Solicitation

Notification of any changes to the RFQ (amendments) shall be made within the solicitation and circulated by email by the Contracting Officer.

1.2 Stage One (Completed)

Stage One closed on April 16, 2015, and no further opt-in will be considered. Stage One required the submission of a formal "opt-in" to the solicitation. Industry Partners were required to inform the CO of their affirmative interest in the competition by 11:59pm EST on April 16, 2015, by sending an email to toni.hoskinson@sba.gov or they would not be included in any subsequent solicitation activities. Alliant SB contractors were notified that a non-response in the affirmative would constitute an opt-out.

Those Alliant SB contractors who have indicated interest (opted-in) during Stage One received a copy of the full RFQ and may submit proposals in Stage Two.

1.3 Industry Day

SBA invites Offerors who opted-in during Stage One to attend an Industry Day which will be held as follows:

Location:	SBA Headquarters, 409 Third Street, SW, Washington, DC 20416.
Date & Time:	Thursday, April 30th, 2015, 10am-12pm EST
Conference Line:	Dial in: 888-844-9904 Code: 5003011

The purpose of this industry day is to provide industry insight into the solicitation and provide answers to questions. A maximum of two (2) representatives from each Alliant SB contractor holder that expressed interest in the solicitation during Stage One will be permitted to attend the industry day.

1.4 Stage Two Instructions

1.4.1 Stage Two—Submittal of Proposals

Stage Two will require the submission of the following:

1. Technical Concept Paper (Not to exceed 8 pages)
2. Past Performance/Relevant Prior Experience (Not to exceed 10 pages)
3. Price Submission (No format)

1.4.2 Stage Two—Delivery of Proposals

Proposals for Stage Two are due at 12:00 PM MDT, May 18, 2015. Offerors shall submit one electronic copy of their Stage Two proposal in PDF format via email to toni.hoskinson@sba.gov.

All documents must be submitted electronically as PDF documents and meet the following specifications:

- 8.5 x 11 inches maximum paper size
- Times New Roman Font
- Font size 12 (except for tables, figures and graphics as all text is legible)
- Single-Spaced
- 1 inch margins on all sides
- Include page numbers
- Cover page must reference Solicitation Number

Offerors are cautioned that if any part of their offer exceeds page limitations, the Government may evaluate only through the permitted number of pages. Pages beyond that limit may not be evaluated. Note: Cover page and Table of Contents will not be included in any page limitations.

Only e-mail submissions will be accepted. A facsimile proposal or proposal received through the mail will not be accepted. Please include the following subject line for the email: "Proposal Submission for Solicitation SBAHQ-15-Q-0012". Please note that SBA email has a 5 MB size limit. Submissions may need to be broken into multiple parts.

Late proposals will not be considered. SBA cannot be held responsible for errors, including technological, or delays in the submission of proposals.

1.4.3 Stage Two—Proposal Preparation

Stage Two proposals shall consist of two separate volumes individually titled and numbered as stated below.

Volume No.	Volume Title
I	Technical Concept Paper; Past Performance/Relevant Prior Experience

II	Price Submission; and Recertification of Small Business Size

There is no specific format/template required for Part II – Price Submission, as long pricing is expressed in firm fixed price per iteration. See Section 13.3.3 Factor 3 – Price Submission for additional details. Also see Section 9.3 for instructions on submission of the recertification of small business size.

Each of the parts must be complete in itself so evaluation of each part may be conducted independently, and so the technical part may be evaluated strictly on its own merit.

1.4.4 Stage Two Selections

The Government will evaluate the Stage Two submissions and select the Offerors most likely to submit the highest value solutions, in accordance with FAR 16.505(b)(1)(v)(A)(5)(ii). Those Offerors considered the most likely to submit the highest value solutions will be notified of their selection for participation in Stage Three.

1.5 Stage Three Instructions

1.5.1 Stage Three—Submittal of Proposals

Those offerors selected for participation in Stage Three will be required to submit the following:

1. Performance Work Statement (PWS), including IT Security and 508 Compliance (Not to exceed 30 pages)
2. Agile Development Management Plan (ADMP) (Not to exceed 20 pages)
3. Proposed Quality Assurance Management Plan (QASP) (No Limitation)
4. Price Proposal (No Limitation)

1.5.2 Stage Three—Delivery of Proposals

Proposals for Stage Three are due at 11:59pm EST on the date that is two (2) weeks after the Government provides notice of the offerors selected for participation in Stage Three.

All documents must be submitted electronically as PDF documents and meet the following specifications:

- 8.5 x 11 inches maximum paper size
- Times New Roman Font
- Font size 12
- Single-Spaced
- 1 inch margins on all sides

- Include page numbers
- Cover page must reference Solicitation Number

Offerors are cautioned that if any part of their offer exceeds page limitations, the Government may evaluate only through the permitted number of pages. Pages beyond that limit may not be evaluated. Note: Cover page and Table of Contents will not be included in any page limitations.

Only e-mail submissions will be accepted. A facsimile proposal or proposal received through the mail will not be accepted. Please include the following subject line for the email: "Proposal Submission for Solicitation SBAHQ-15-Q-0012". Please note that SBA email has a 5 MB size limit. Submissions may need to be broken into multiple parts.

Late proposals will not be considered. SBA cannot be held responsible for errors, including technological, or delays in the submission of proposals.

1.5.3 Stage Three—Proposal Preparation

Stage Three proposals shall consist of two separate volumes individually titled and numbered as stated below.

Volume No.	Volume Title
I	Technical Submission
II	Price Submission

There is no specific format/template required for Part II – Price Submission, as long as pricing is expressed in firm fixed price per iteration. See Section 13.4.5 Factor 5 – Price Submission for additional details.

Each of the parts must be complete in itself so evaluation of each part may be conducted independently, and so the technical part may be evaluated strictly on its own merit.

1.5.4 Stage Three – Oral Presentations

Each Offeror in Stage Three will provide an Oral Presentation, which will be evaluated. The Oral Presentations will be scheduled to occur in the week after Stage Three submissions are due.

Reference Attachment 2 for additional information about the Scenario and User Stories for the Oral Presentations.

2. Evaluation Factors

2.1 General

SBA will conduct two evaluations. The first evaluation will evaluate Stage Two submissions to determine which Offerors will be permitted to submit proposals in Stage Three. The second evaluation will evaluate Stage Three submissions. All information provided in any stage may be used to make the best value determination in Stage Three.

The Government may make award based on initial offers received in Stage Three, without discussion of such offers. Quotes shall set forth full, accurate, and complete information as required by this solicitation package (including Appendices and Attachments). The penalty for making false statements in quotes is prescribed in 18 USC. 1001. Discussions may be utilized if it is in the best interest of the Government as determined by the Contracting Officer.

2.2 Technical Capability Evaluation Criteria

The Offeror's technical qualifications shall be used to determine whether the Offeror has the requisite experience and expertise to perform various types of work as outlined in the Statement of Objectives. The rating definitions provided below will be used for the evaluation of each Technical Evaluation Factor and sub-factor and to assign each proposal with an overall rating. This applies to both stages of the evaluation.

- Outstanding (O) – Significantly exceeds most or all solicitation requirements for this factor or sub-factor or overall. Response exceeds an "Excellent" rating. The risk of unsuccessful contract performance is extremely low. Contains no Deficiencies, Significant Weaknesses, or Weaknesses.
- Excellent (E) – Fully meets all solicitation minimum requirements and exceeds many of the solicitation requirements for this factor or sub-factor or overall OR exceeds a small number of the minimum requirements but to a significant degree or in a valuable way for this factor or sub-factor overall. Response exceeds an "Acceptable" rating. The risk of unsuccessful contract performance is very low. Contains no Deficiencies or Significant Weaknesses.
- Acceptable (A) – Fully meets all solicitation minimum requirements for this factor or sub-factor or overall. Areas where the proposal exceeds the minimum solicitation requirements, if any, are of little or no value to the Government. The risk of unsuccessful contract performance is low. Contains no Deficiencies.
- Marginal (M) – Does not meet all solicitation requirements for this factor or sub-factor or overall. The proposal indicates a superficial or vague understanding of the program goals and the methods, resources, schedules, and/or other aspects essential to contract performance. Response is below an "Acceptable" rating. The risk of unsuccessful contract performance is moderate.
- Unacceptable (U) – Technical proposal has many or significant deficiencies and/or substantial omissions for a factor or sub-factor or overall AND/OR the proposal demonstrates a lack of understanding of the program goals, methods, resources, schedules, and/or other aspects essential to contract performance. Response is below a "Marginal" rating. The risk of unsuccessful contract performance is high.

The terms below are used in the ratings:

- "Deficiency" is a material failure of a quote to meet a government requirement or a combination of significant weaknesses in a quote that increases the risk of unsuccessful contract performance to an unacceptable level.
- "Weakness" means a flaw in the quote that increases the risk of unsuccessful contract performance.
- "Significant weakness" is a flaw that appreciably increases the risk of unsuccessful contract performance.
- "Strength" means the quote exceeds a Government requirement that appreciably decreases the risk of unsuccessful contract performance.
- "Reasonableness", in terms of price, occurs if in its nature and amount, it does not exceed that which would be incurred by a prudent person in the conduct of competitive businesses.
- "Completeness/Accuracy" is when the Offeror's quote is in compliance with the price volume instructions in the solicitation.

2.3 Stage Two Evaluation Factors

2.3.1 Factor 1 – Technical Approach Concept Paper

The Technical Approach Concept Paper should demonstrate the Offeror's ability and expertise to deliver a solution that meets the established needs and purpose of the solicitation. Offeror's proposed solution should align with the goals stated in the Statement of Objectives. Within the Technical Approach Concept Paper, the Offeror should demonstrate its:

1) Technical capability to perform the work, including how coordination with stakeholders will be accomplished.
2) Understanding of and ability to meet the technical requirements expressed in the solicitation.
3) Overall approach and what, if anything, it would need from the Government to ensure success as well as identifying any barriers that would reduce or delay success.
4) Conceptual approach for the transition to a modern technology stack.
5) Knowledge and experience with Agile implementation, including but not limited to the following:
    a. Management of an Agile software development methodology;
    b. User Story management, sizing, and estimation method;
    c. Techniques for release planning;
    d. Plans for engaging end users;
    e. Methods for capturing and applying lessons learned, testing processes, reasons behind the composition of their Agile teams;
    f. Rationale behind the proposed development talent and project oversight (tied to Product Vision);
    g. How they will make resources available within schedule and budget constraints; and
    h. Approach to configuration management.

This factor will be evaluated based on the above, to determine the extent to which the Offeror's proposed approach will ensure successful implementation of the stated objectives. This factor will assess the Offeror's overall approach to the project and what, if anything, it would need from the Government to ensure success as well as identifying any barriers that would reduce or delay success.

2.3.2 Factor 2 – Past Performance/Prior Experience

Offerors shall submit information for not more than five (5) distinct projects completed within the last 3 years that are similar in scope and complexity to this requirement which clearly demonstrate an understanding of and ability to meet the technical requirements expressed in this solicitation. In evaluation of past performance, the Contracting Officer can consider other sources beyond what is provided.

Within the five permitted references, only three are allowed to be submitted for subcontractors.

Preference may be given to Offerors who submit at least one example of past experience with agile software development.

This factor assesses the Offeror's experience performing work that is similar to the work to be performed under this Task Order. Consideration will be given to what aspects of an Offeror's contract history provide the most confidence that the Offeror will satisfy the requirements described in this RFQ. This factor considers the quality of the Offeror's performance on current or completed contracts and evaluates the Government's level of confidence that the Offeror will be able to successfully accomplish this effort. The following points will be considered in assessing the Offeror's ability to perform the Task Order successfully (confidence rating):

- Technical past performance: quality of product, analytical capability and capability to employ sound engineering practices; in particular, prior experience with projects where the Offeror was responsible for the following activities which are considered most relevant to success on this project:
    - Built custom software application development using a modern, industry standard web application framework and relational databases
    - Designed and implemented a user interface for a web application using visual design and user experience best practices, as described in the Digital Services Playbook (https://playbook.cio.gov)
    - Deployed web applications in virtualized hosting infrastructure where resources can be provisioned on demand, in real time
    - Completed a migration from legacy applications and databases to new applications and databases, the end result of which was the old system was deprecated and eventually removed from service
    - Used an agile software development process to deliver incremental results
- Management past performance: adherence to schedule and responsiveness to the customer, and communication between the customer and the Offeror

Offerors shall provide Project Summaries for each effort referenced. Offerors are encouraged to submit any information they consider relevant in demonstrating their ability to perform the proposed effort, including but not limited to how referenced performance is relevant to this RFQ's requirements, illustrates the company's capabilities, and shows the company's ability to ensure quality and mitigate schedule and other risks.

This factor will be evaluated by the Government to determine confidence in the ability of the Offeror and the Offeror team members (e.g., Subcontractors) to perform this effort and to fully satisfy the technical, management, and other contractual requirements based on their record of past performance and prior experience on contracts of similar nature, requirements, size, and complexity using the criteria listed above.

2.3.3 Factor 3 – Price Submission

The price submission shall include the following:

- Firm Fixed Price per iteration

Price will be evaluated to determine whether the firm, fixed price proposed is reasonable. This determination will be based on the review of the Technical Concept Paper in comparison to the total proposed price per iteration. Pricing for Stage Two of this effort is required to be of a unit of measure that is equivalent to the proposed iteration cycle as proposed in the Technical Concept Paper. The technical solution for sizing, iteration time, estimation process, and throughput must correlate to the proposed pricing.

2.4 Stage Three Evaluation Factors

2.4.1 Factor 1 – Performance Work Statement (PWS)

Offerors shall provide a Performance Work Statement (PWS) in response to the Statement of Objectives and this RFQ. The deliverables under this PWS are to have functionality scheduled for an available release without defects.

The PWS shall clearly illustrate the process through which Agile Development of software in small iterations lasting two to five weeks generally results in the delivery of usable software as described in Section 3.2.2 Deliverables. The Offeror must propose a "Definition of Done" that will apply to all User Stories and demonstrates the validation necessary to complete an iteration.

The PWS shall describe how user stories are to be sized, how estimation and determination of sizes shall be accomplished, and how these will correlate to iterations and throughput. Additionally, the PWS should provide a detailed process for working with the Product Manager and End Users to capture user stories, prioritize, and work-off the product backlog. The prioritization effort may include working backlog items across multiple projects concurrently based on team capacity and end user priorities.

The Offeror shall demonstrate in its PWS how the applications, databases, and other products it will produce will meet all requirements for compliance with Section 508 and SBA's IT Security Requirements (see Appendix).

Assumptions, Conditions, or Exceptions – Technical submissions shall include all (if any) technical assumptions, conditions, or exceptions related to any of the requirements or terms and conditions of the Statement of Objectives. If not noted in this section of Offeror's quote, it will be assumed that there are no assumptions, conditions, or exceptions for award, and that the Offeror agrees to comply with all of the terms and conditions set forth in this RFQ. It is not the responsibility of the Government to seek out and identify technical assumptions, conditions, or exceptions buried within the Offeror's submission. The Government reserves the right to reject any quote that includes any technical assumptions, conditions, or exceptions that impact or affect the Government's objectives or requirements.

The Government will evaluate the feasibility of the proposed PWS to meet the Objectives of the Agency.

2.4.2 Factor 2 – Agile Development Management Plan (ADMP)

The Offeror shall submit an Agile Development Management Plan (ADMP) to support the Offeror's proposed approach to agile software development and management of the technical process, scoping and envisioning for the projects, descriptions of resources, management team structure, team makeup, reporting process, financial process, schedule, risk management approach, cost-efficiency opportunities, and prioritization of work. As part of the ADMP, the Offeror shall document the management of the User Story Determination Process for determining the complexity of developing, estimating, integrating, and/or delivering Technical Services from the Initial Product Backlog (see Appendix). This process shall utilize the Offeror's specified methodology to assist the Government in managing the Product Backlog. The plan should be linked to the PWS and should describe the necessary activities to support the agile process. The ADMP shall be in a contractor-specified format.

Offerors shall propose an ADMP which correlates how the stated objectives align with the timeframe for implementation and the Offeror's proposed agile methodology.

The Offeror shall provide a notional release schedule which maps the proposed iteration cycle to the calendar Period of Performance. This release schedule shall include relevant governance process checkpoints such as Technical Reviews and Iteration Releases, as well as agile methodology functions such as Iteration Planning, Iteration Reviews, and Retrospectives.

The Government will evaluate the proposed ADMP to determine if it demonstrates an understanding of the complexity of the effort and how the stated objective aligns with the objectives and timeframe for implementation and the Offeror's proposed Agile methodology including where and how testing, training, security, cut over planning, etc. will be included.

2.4.3 Factor 3 – Proposed Quality Assurance Surveillance Plan (QASP)

Offerors shall describe a proposed Quality Assurance Surveillance Plan (QASP) and Performance Measurement approach, including how proposed performance standards will be monitored, evaluated, and reported. The purpose of the notional QASP is to provide evaluators with an understanding of how measures and metrics will be applied based on the proposed technical solution. The QASP should include an Award Term Incentive Plan as explained in Section 2.5.2.

The Government will evaluate the rationale for the proposed performance standards and performance measurement methodology and assess whether the total solution will ensure that the performance standards are met.

2.4.4 Factor 4 – Oral Presentation

The goal of the oral presentation will be for the Offeror to walk the Government through their proposed solution. It is the opportunity to determine how team dynamics will work as the Offeror is required to utilize a scenario to demonstrate how the proposed Agile Software Development Methodology will function if the Task Order is awarded.

The Government will schedule oral presentations by drawing lots among those Offerors selected for inclusion in Stage Three. The Government will advise Offerors of the date and time for the presentation of their Oral Presentation. The presentations will be recorded.

The Oral Presentation will be evaluated to determine the Offeror's capability and suitability to perform the work required in the Statement of Objectives. Through the walk through of the scenario, the oral presentation will be assessed to determine if the overall solution is feasible, will result in a quality product, and will meet the objectives for digital strategy implementation.

See Attachment 2 for additional information about the Scenario and User Stories for the Oral Presentations.

2.4.5 Factor 5 – Price Submission

Offerors shall submit a price quote, which shall include the following:

- Firm Fixed Price per iteration
- Firm Fixed Price by CLIN
- Supporting documentation
- Assumptions, conditions, and exceptions related to price

Supporting documentation - The price quote shall provide supporting documentation to support the pricing proposed. This shall demonstrate the correlation between the proposed technical solution in the PWS and the pricing submitted. The supporting documentation

shall also include a Basis of Estimate (BOE) which aligns to how the pricing methodology is applied within each iteration. The BOE should include, but is not limited to, such things as:

- Number of Teams proposed
- Size of Agile Teams
- Labor categories used to comprise Team
- User Story sizing

Price assumptions, conditions, or exceptions – Submit all (if any) price assumptions, conditions, or exceptions related to any of the terms and conditions of the Statement of Objectives. If not noted in this section of the Offeror's quote, it will be assumed that the Offeror proposes no price assumptions, conditions, or exceptions for award, and agrees to comply with all of the terms and conditions set forth in this RFQ. It is not the responsibility of the Government to seek out and identify price assumptions, conditions, or exceptions buried within the Offeror's quote. The Government reserves the right to reject any quote that includes any price assumptions, conditions, or exceptions that impact or affect the Government's objectives or requirements.

Price will be evaluated to determine whether the firm, fixed price proposed is reasonable. This determination will be based on the review of the technical solution in comparison to the total proposed price and the backup documentation submitted. Pricing for Stage Three of this effort is required to be of a unit of measure that is equivalent to the proposed iteration cycle as proposed in the Performance Work Statement ~~Technical Concept Paper~~. The technical solution for sizing, iteration time, and throughput must correlate to the proposed pricing.

2.5 Basis for Award

Award will be made to that responsible Offeror whose Stage Three proposal contains the combination of those factors offering the best overall value to the Government utilizing a tradeoff process. This will be determined by comparing differences in technical capability with differences in price to the Government. In making this comparison, the Government is more concerned with obtaining superior technical merit. However, the Government will not make an award at a significantly higher Price to the Government to achieve slightly superior technical merit. The Government reserves the right to make an award to other than the lowest priced Offeror or to the Offeror with a higher technical score if the Contracting Officer determines that to do so would result in the best value to the Government.

Note: All sections of this RFQ will be incorporated into the contract except the Statement of Objectives, Instructions, and Evaluation Factors.

1. Definitions

AGILE DEVELOPMENT/AGILE SOFTWARE DEVELOPMENT: A proven commercial methodology for software development that is characterized by incremental and iterative processes where releases are produced in close collaboration with the customer. This process improves investment manageability, lowers risk of project failure, shortens the time to realize value, and allows agencies to better adapt to changing needs.

CONTRACTING OFFICER (CO) - The Government official responsible for the execution and administration of contracts on behalf of the Government.

CONTRACTING OFFICER'S REPRESENTATIVE (COR) - An individual designated by the Contracting Officer to act as his/her representative to assist in managing the contract. The authorities and limitations of a COR appointment are contained in the written letter of appointment.

DAY – A calendar day unless stated otherwise. If a deliverable is due on a weekend or holiday, the deliverable shall be considered due the next business day.

QUARTER – A quarter will be defined as the first of January through the end of March, first of April through the end of June, first of July through the end of September, and first of October through the end of December.

BUSINESS DAY – Any day other than a Saturday, a Sunday, a Federal holiday or other day on which the Federal Government by law or executive order is closed. Note: This includes any weather-related office closures if the place of performance is in a Federal Building.

MINIMUM FUNCTIONALITY – The minimum capabilities a product should have to meet the Government's objectives.

AGILE ENVIRONMENT – A team-based setting for IT product development where the Agile development methodology is used.

ITERATION/SPRINT/RELEASE CYCLE – Divisions of time within the Agile development framework. Each iteration is small in scale (i.e., encompasses a single or a few function(s) within a multistep process). Multiple iterations form releases. For more information, see the TechFAR at https://github.com/WhiteHouse/playbook/blob/gh-pages/_includes/techfar-online.md

MILESTONES/EPICS – A necessary step in a process. In this document, used to refer to components of a given project.

STORY POINT – A measurement of work and effort. Story points are used in an Agile development environment to demonstrate how much work was achieved in a given sprint or iteration. For more

information, see the TechFAR at https://github.com/WhiteHouse/playbook/blob/gh-pages/_includes/techfar-online.md

THROUGHPUT – The amount of material or items passing through a system or process; in this document, refers to the work activity of a product development team.

2. Services and Prices

2.1 Brief Description of Services

Services required under this Task Order are to assist the U.S. Small Business Administration with the design and implementation of three products:

- Small Business Certifications
- Small Business Search
- Data Analytics

2.2 Type of Contract

Task Order against GSA Alliant Small Business (SB) GWAC – Firm Fixed Price

This requirement will be solicited under the following North American Industrial Classification System (NAICS) Code: 541512, Computer Systems Design Services, $27.5M. This Task Order will be made in accordance with FAR 16.505 which governs orders placed under Indefinite Delivery contracts as detailed in the GSA GWAC Ordering guide.

2.3 Contract Line Item Number (CLIN) Format

The Offeror shall submit their proposed CLIN structure in a manner that represents agile software development methodology in which iterations are priced.

BASE PERIOD: 6 months	
CLIN 0001, FFP- Completion - The Contractor shall provide services for the Government in accordance with the Performance Work Statement (PWS)	
Length of Iteration	_____Weeks
Price Per Iteration	$XXXXX
Other Direct Costs	~~NTE Ceiling $100,000.00~~ TBD
Period of Performance:	6 months

Firm Fixed Price (Completion):	$XXXXX

Award Term Incentive: 6 months

CLIN 0002, FFP- Completion - The Contractor shall provide services for the Government in accordance with the Performance Work Statement (PWS)

Length of Iteration	_____Weeks
Price Per Iteration	$XXXXX
Other Direct Costs	TBD
Period of Performance:	6 months
Firm Fixed Price (Completion):	$XXXXX

Award Term 02/Option Term: 6 months

CLIN 1001, FFP- Completion - The Contractor shall provide services for the Government in accordance with the Performance Work Statement (PWS)

Length of Iteration	_____Weeks
Price Per Iteration	$XXXXX
Other Direct Costs	TBD
Period of Performance:	6 months
Firm Fixed Price (Completion):	$XXXXX

Award Term 03/Option Term: 6 months

CLIN 1002, FFP- Completion - The Contractor shall provide services for the Government in accordance with the Performance Work Statement (PWS)

Length of Iteration	_____Weeks
Price Per Iteration	$XXXXX
Other Direct Costs	TBD
Period of Performance:	6 months
Firm Fixed Price (Completion):	$XXXXX

2.4 Payment Schedule

The contractor shall be paid upon the completion of each iteration upon its acceptance and verification by the Contracting Officer's Representative (COR). Invoices shall be submitted at the end of each iteration in accordance with the delivery schedule as established in the Performance Work Statement.

2.5 Award Term Incentive

This Task Order shall be Firm Fixed Price/Award Term Incentive. The purpose of the Award Term Incentive is to incentivize superior performance and delivery by offering an additional period of performance. Following the base period, the Government will offer one (1) Award Term Incentive and two (2) additional options pending availability of funds.

2.5.1 Award Term Incentive

An Award Term Incentive of six (6) months following the initial base period of six (6) months is authorized under this Task Order. In order to be eligible for this Award Term Incentive, the Contractor must receive an overall "Excellent" performance rating in the base period.

This Award Term Incentive may only be awarded for an overall "Excellent" performance rating based on metrics that are determined to be in the best interest of the Government.

The Government will appoint an Award Term Determining Official (ATDO) who will provide the official performance review and approval for an Award Term Incentive Option to be exercised. The ATDO in conjunction with the Contracting Officer will make the Government's unilateral decision as to the exclusion of any portion of the performance period from the decision on whether or not to award the Award Term Incentive.

Award Term Incentive Plan

As part of their Quality Assurance Surveillance Plan (QASP), Offerors should propose an Award Term Incentive Plan that explains how the Contracting Officer and the ATDO will

determine whether or not the contractor's performance is "Excellent." This proposal should include the criteria the Contracting Officer and the ATDO should consider and what the definition of "Excellent" should be under these criteria.

Acceptance of this Award Term Incentive Plan is at the Government's sole discretion. The Contracting Officer will notify the contractor within two (2) weeks of award whether or not the Award Term Incentive Plan has been accepted. If it is rejected, the Government will replace the proposed Award Term Incentive Plan with a new version. This new Award Term Incentive Plan will be unilaterally determined by the Government.

2.5.2 Options

In the event an Award Term Incentive is not earned following the base period, the Government has the right to determine whether to extend services by exercising up to three (3) 6-month option periods, and/or a Continuity of Service Clause for transition, and/or an Extension of Services Clause based upon the need at the time.

If an Award Term Incentive is earned following the base period, the Government has the right to determine whether to extend services after the Award Term Incentive by exercising up to two (2) 6-month option periods, and/or a Continuity of Service Clause for transition, and/or an Extension of Services Clause based upon the need at the time.

The options are contingent on continued Government requirements and funding availability for the work identified within scope of this Task Order. The options will be priced based on the accepted price per iteration as proposed, however, the Government reserves the right to renegotiate these options and modify the Task Order prior to awarding the option(s). Options must adhere to the proposed Agile methodology and processes as awarded in the initial Task Order unless an exception is provided by the Contracting Officer prior to award.

3. Statement of Objectives

3.1 Background

One of SBA's primary missions is to assist small businesses and contracting personnel to ensure a fair proportion of contracts are awarded to small businesses. To support this mission, SBA administers several small business contracting programs, under which small businesses can follow particular certification procedures to qualify for certain procurement opportunities; such certification processes are hereinafter referred to as "Small Business Certifications". Some of these certification procedures use web applications managed by SBA.

In addition, to help contracting personnel find qualified small businesses for government contracts, SBA provides a web-based search tool called the Dynamic Small Business Search (DSBS). To search for potential small business vendors, contracting personnel use DSBS, commercial search engines, and the System for Award Management (SAM.gov), which is a GSA-maintained database that contains the basic profile information of every business that wishes to contract with the federal government.

The software applications that underpin SBA's Small Business Certifications, Small Business Search, and Data Analytics systems are outdated. Therefore, the user experience with these products no longer meets the expectations or needs of the Agency. Additionally, the hardware that underpins the Agency's Small Business Certifications, Small Business Search, and Data Analytics is obsolete. The current applications are built primarily in ColdFusion, and interact with several disparate databases (primarily Oracle), hosted primarily on outdated hardware operated by SBA in its own facility. These applications are difficult to change and provide a poor user experience. Additionally, each application currently functions independently. For example, the application and supporting database that allows small business to apply for HUBZone certification are separate from the application and database that allow small businesses to apply for 8(a) certification, even though these applications have similar features and share data.

The United States Digital Service consulted with SBA and provided recommendations on how to modernize their digital services. Based on these recommendations, this Task Order is being issued to improve several of SBA's key digital services. The recommendations are contained within a report, attached, titled "Modernizing the Small Business Administration's Digital Services", which is being provided for reference only and does not constitute the final design requirements; however it is the guideline that SBA will use to ensure successful implementation of the products. Reference: "Modernizing the Small Business Administration's Digital Services" March 6, 2015 – Attachment 1.

3.1.1 General Current Structure

The SBA network is a Microsoft based environment, primarily hosted on-site, with the majority of the systems utilizing a ColdFusion front-end and an Oracle database back-end. The technologies used to develop these systems include but are not limited to the following:

- ColdFusion
- HTML
- JavaScript
- CSS
- jQuery Mobile
- Web Services
- Oracle SQL
- ANSI SQL

3.1.2 Small Business Certifications Current Structure

Small business certifications enable small businesses to qualify for set-asides and other assistance in government contracting. The SBA administers several different small business contracting programs, each with its own eligibility requirements and certification process:

- 8(a) Business Development Program (8(a) Program), for socially and economically disadvantaged individuals, governed by 13 C.F.R. Part 124 and FAR Subpart 19.8
- Historically Underutilized Business Zone (HUBZone) Program, governed by 13 C.F.R. Part 126 and FAR Subpart 19.13

- Woman-Owned Small Business (WOSB) Program, governed by 13 C.F.R. Part 127 and FAR Subpart 19.15
- Service-Disabled Veteran-Owned Small Business Concern (SDVO SBC) Program governed by 13 C.F.R. §§ 125.8 to 125.30 and FAR Subpart 19.14
- Small Business Set-Aside (SBSA) program, governed by 13 C.F.R. Part 121 and FAR Subpart 19.5

The 8(a) Program and HUBZone Program both require "up-front" certification by SBA, where a small business must go through the application process prior to being certified as a 8(a) Program Participant or a Qualified HUBZone Small Business Concern. These certification processes rely on web applications that small businesses use to apply to the programs and that SBA employees use to evaluate the applications submitted.

The WOSB program allows for self-certification and third-party certification. To self-certify as a WOSB or Economically Disadvantaged Woman-Owned Small Business (EDWOSB), a business must, among other things, upload documentation into an online repository (the WOSB Program Repository). A WOSB or EDWOSB that has been certified as a WOSB or EDWOSB by an SBA-approved third party certifying entity must also upload certain documentation into the WOSB Program Repository.

The SDVO SBC program and SBSA program both require self-certification. Documentation to support self-certification as an SDVOSB or small business concern is requested and verified in certain circumstances (e.g. in the event of a protested contract), but there is no online system to support this verification workflow.

The following is a list of SBA's primary systems for managing small business certifications (hereinafter referred to as "certification systems"):

- Business Development Management Information System (BDMIS)
- Electronic 8(a) Review System (E8a)
- HUBZone Certification Tracking System (HCTS)
- WOSB Program Repository (WOSBPR)
- Procurement Marketing and Access Network (Pro-Net)

Currently, these certification systems are each separately maintained, and the various programs have developed their own workflows for handling physical and digital paperwork. Data across the systems is generally not synchronized, requiring businesses to input profile data in each system. This sometimes results in profiles of businesses getting out of sync among SBA databases and SAM.gov.

The majority of these certification systems and their relevant supporting systems are internally maintained and hosted on the internal SBA network. Two exceptions are BDMIS and Accelion, a cloud-based secure file transfer service. The images in Figures 1 and 2, in the Appendix, show a visual of SBA's certification systems.

The key database structure underpinning the certification and small business search systems is SBSS-CCR; this database houses the business profile for all currently and previously SAM-

registered Small Businesses. Each of the primary certification systems is the authoritative source for their program, but it is through the SBSS-CCR database that SBA's certification systems receive and validate the profile for each small business. The small business certification data is then communicated out to the public via DSBS or SAM for search purposes.

3.1.3 Small Business Search Current Structure

One of SBA's primary missions is helping small businesses find and win government contracts. The agency supports this goal in part by helping to enforce a procurement rule which, in general, requires Federal agencies to award contracts to small businesses if two or more small businesses are capable of completing the work. SBA provides a search tool called the Dynamic Small Business Search (DSBS) to support this mission.

Currently, contracting officers and SBA officials use several tools to find qualified small businesses for government contracts, including SBA's DSBS tool, the System for Award Management (SAM.gov), and commercial tools such as Google.

To make their profiles available to contracting officers, small businesses interact with two systems related to small business search: SAM.gov and SBA's "Supplemental Pages" application. A small business's main business profile is maintained in SAM.gov. Additionally, small businesses may optionally add profile information in a profile SBA maintains via the "Supplemental pages". This additional information is part of the DSBS business profile and appears in the DSBS search results, but not in the SAM.gov search results. It is not transmitted to the business's SAM.gov profile.

In addition, small businesses, the public, and contracting personnel may use the search capabilities of DSBS and SAM.gov in order to research the competitive landscape of government contractors.

The SUB-Net Database is an online listing of available subcontracting opportunities. Prime contractors may post requirements to SUB-Net in order to identify potential small businesses to help them meet their subcontracting requirements for government contracts and/or to identify small businesses as contractors for private-sector work. SBA maintains this search site in order to help small businesses grow their capabilities from subcontracting and private sector work to help them be more competitive for federal prime contracting work.

The key database structure underpinning the certification and small business search systems is SBSS-CCR; this database houses the business profile for all currently and previously SAM-registered Small Businesses. Each of the primary certification systems is the authoritative source for their program, but it is through the SBSS-CCR database that SBA's certification systems receive and validate the profile for each small business. The small business certification data is then communicated out to the public via DSBS or SAM for search purposes.

The following is a listing of SBA's primary search systems:

- Dynamic Small Business Search (DSBS) System
- SUB-Net Database

The above systems, in conjunction with supplemental systems and services as shown in Figures 1 and 2 in the Appendix are the source systems used to support Small Business Search.

Today, DSBS is implemented with a ColdFusion web application that exercises stored procedures in the SBSS-CCR Oracle database, which is hosted by SBA internally.

SBA's current search products have several issues:

- The DSBS dataset is limited
- The method by which businesses extend their searchable profiles for both DSBS and SAM.gov is confusing
- The DSBS and SUB-Net search interfaces are baroque and unwieldy
- DSBS search results are not returned in relevance order
- No business metrics are captured that can be used to measure or optimize the customer experience of the search tool

3.1.4 Data Analytics Current Structure

As mentioned above, the SBSS-CCR database is the "main" data store containing information about each small business and business certifications, as applicable.

In addition to SBSS-CCR, there are databases throughout SBA that support and track data resulting from the agency's non-contracting programs, including loan guarantees, disaster loans, and counseling/training services. These systems will be a key element of the data analytics component of this contract.

There is currently no automated interface for creating consolidated reports from most of the SBA systems; the existing systems have minimal functionality to allow for simple search and find reporting. Generally, reports are generated on demand manually. A request from SBA managers for a specific report is given to a database administrator who formulates and runs an SQL query with results usually delivered in the form of a spreadsheet. One exception is the counseling/training database (EDMIS), which has a report generation front end.

3.2 Objectives

Note: The Statement of Objectives will be removed at time of award and replaced with the Offeror's Performance Work Statement. All listed objectives and requirements shall be included as part of the Offeror's Performance Work Statement.

3.2.1 Overview

The objective of this Task Order is to acquire IT services in order to modernize SBA's Small Business Certifications products; modernize SBA's Small Business Search products; and create a Data Analytics tool to enhance reporting capabilities agency-wide. SBA is seeking a contractor familiar with agile software development practices, experience with modern web application frameworks, experience with migrating legacy applications and databases to modern infrastructure, and user experience/visual design capabilities. The SBA intends for this

project to be completed by working in short development iterations of several weeks, each of which will typically result in the delivery of functioning software that can be tested with internal and external users.

The success of these products will be based on ease of use, end user acceptance and adoption, the implementation of industry best practices, and rapid time to market for all development efforts. In order to accomplish this, these services shall be provided via agile software development processes that achieve results through continuous capability enhancement, prompt response to emerging needs, demonstrated reliability, and optimized performance with resource utilization minimized.

Iterations should progressively develop non-proprietary, modern, well-designed web applications that will gradually replace SBA's legacy applications, allowing SBA to decommission its existing systems as features and capabilities are replaced by this new application.

In order to meet this objective, the contractor shall:

- Develop and implement a new web application for Small Business Certifications that meets the needs of small business users applying for certifications and SBA employees and managers that must process these certifications.
- Develop and implement a new Small Business Search tool that better meets the needs of users.
- Build data analytics capability which allows SBA to easily measure business metrics related to its digital services across contracting and non-contracting programs, and instrument SBA's digital services to ensure they capture the metrics required to access each product's success.
- Develop, test, and deploy these new SBA IT systems pertaining to Small Business Certifications, Small Business Search, and Data Analytics in a modern technology stack. Core parts of this new stack will include: a modern, industry-standard open source web application development framework; a modern, open source relational database; and hosting on virtual machines in a cloud environment provided by an infrastructure-as-a-service provider.
- Execute an implementation strategy that supports incremental business function and process migration with intermediate deliverables shipped on short timelines. Deprecate old databases and web applications as features are migrated, capturing both maintenance and financial cost savings.
- Execute a data migration from old databases into the new infrastructure. This migration must ensure data integrity and a seamless transition from the old systems to the new system.
- Maintain a tracking tool and metrics to monitor progress against the Agile Development Management Plan (ADMP).
- Ensure products are compliant with federal Section 508 requirements and SBA IT security requirements, as described in the Appendix. For Section 508 compliance, the Contractor shall indicate for each line item in the schedule whether each product or

service is compliant or noncompliant with the accessibility standards at 36 CFR § 1194. Further, the proposal must indicate where full details of compliance can be found (e.g., vendor's website or other exact location).

- Cultivate a positive, trusting, and cooperative working relationship with the Government and other vendors that support SBA.
- Ensure that SBA maintains ownership of and has ready access to all source code, tests, documentation, deployment scripts, designs, user research documentation, and all other materials related to developing and deploying these capabilities.
- Leverage technology capabilities to meet customer needs with timely and seamless access to the cloud-based infrastructure, business applications, and data. This includes staying abreast of new feature offerings and new and innovative ways to provide technology value to agency customers, including, but not limited to, open sourcing the applications, or the development of APIs.
- Maintain a dialogue between the service provider and all project stakeholders, rather than trying to comprehensively specify requirements up-front. This focus will be assisted by working through short, tightly scoped product iterations in which working software is delivered to users regularly, and adjustments are made based on feedback gleaned from these iterations.
- Lead and collaborate with the COR, workgroups, and stakeholders in requirements sessions in order to develop recommendations and approaches, to be approved by the Government to satisfy the objectives and purposes of this Task Order. Results of these sessions will generate the Product Road Map, Epics, and User Stories, business logic and rules, functionality, and system documentation.

The work to satisfy this SOO has been broken down into several Project Themes which will ultimately make up the Product Road Map. These projects are not necessarily sequential; in fact, as described below, many can move in parallel once the initial steps within Project 1 have been completed.

1) Project 1 – Infrastructure Setup, Database Architecture Design, Redevelopment, Deployment, and Woman-Owned Small Business (WOSB) Program Repository Redevelopment
2) Project 2 – HUBZone Program Certification Systems and Ancillary Processes Redevelopment
3) Project 3 – 8(a) Business Development Program Certification Systems Redevelopment and Ancillary Processes Redevelopment
4) Project 4 – ProNet Project
5) Project 5 – Mentor-Protégé and Joint Venture Approvals Project System Development
6) Project 6 – Small Business Search Project
7) Project 7 – SBSS-CCR Deprecation Project
8) Project 8 – Data Analytics Project

Project 1 is listed first because it is the simplest to implement from a technical standpoint. At the same time, it does require setting up the development, test, and production environments, migrating SAM data, integrating with the SBA's General Log-in System (GLS) for login (or successor system), and creating a new document management system. These are all

dependencies of the other, more complex, certification processes, so the work done on the WOSB Program Repository lays the foundation for the other certifications app migration efforts.

The Initial Product Backlog (See Appendix) provides a detailed breakdown of the desired functionality as identified at this time. The Initial Product Backlog is not a binding document, but rather a representative sample of the functionality that is anticipated will be required to be delivered under this Task Order. The specific user stories will be identified through the agile development process as proposed in the Performance Work Statement (PWS). The Initial Product Backlog provides some guidance on specific objectives that should be included in each project.

The PWS should provide a detailed process for working with the Product Manager and End Users to capture, prioritize, and work-off the Product Backlog. The prioritization effort may include working backlog items across multiple projects concurrently based on the teams capacity and end user priorities.

3.2.2 Deliverables

Deliverables under this Task Order are defined as the completion and acceptance according to the "Definition of Done" of the iterations completed, which are based on the contractor's Agile Software Development methodology. This methodology defines the repeatable process of providing development and deployment services in small iterations lasting two to five weeks which generally results in the delivery of usable software, data, or product, which have little to no inherent defects. Each iteration shall be defined in the Performance Work Statement but should document how planning, requirement analysis (user story building), design, coding, testing, quality assurance, and documentation will all meet the contractor's "Definition of Done".

Each deliverable shall incorporate SBA IT requirements as detailed in the Appendix of this document and the United States Digital Service Playbook standards (https://playbook.cio.gov) and be compliant with Section 508.

Functional Requirements, translated into Epics and User Stories that will be used to populate the Product Backlog may include, but are not limited to:

- Initial application design and implementation
- System configuration to support business processes
- Integration for input and output methods
- Workflow design and implementation
- Overall collaboration of applications
- Enhancements, patches, and updates to applications, data, or cloud systems
- Data import of records collected from legacy systems
- Automated testing
- Training of end users on the systems

3.2.3 Stakeholders

Stakeholders for this project include, but are not limited to, the SBA's Deputy Chief of Staff, the SBA's Digital Service team, relevant personnel in the SBA's Office of Government Contracting and Business Development, the Contracting Officer's Representative (COR) and the Contracting Officer.

3.2.4 Agile Development Management Plan (ADMP) and Key Personnel

Offerors shall propose an Agile Development Management Plan (ADMP) which demonstrates how the Offeror intends to manage, develop, implement, and maintain the requirements described in this SOO and the RFQ. The plan shall include, at a minimum:

- Contact information for all senior leaders and an organizational chart showing the Offeror's organizational hierarchy and reporting structure, with specific designation of individuals as Key Personnel;
- Management resources;
- Technical resources and skill sets required to develop, implement, and maintain the proposed solution; and
- Details on the management of the Offeror's team that will be on-site.

The ADMP and the listing of Key Personnel shall become part of the Task Order upon award.

3.2.5 Kick-Off Meeting/Post-Award Conference

The SBA Deputy Chief of Staff, relevant personnel from the SBA's Office of Government Contracting and Business Development, Contracting Officer, and COR shall hold a Kick-Off meeting/Post-Award Conference in Washington, DC with contractor's team and other relevant Government staff to review and clarify the project's objectives, expectations from the Government, and address any questions the Contractor may have.

The Contractor shall provide and collaborate with the COR on an agenda for this meeting. Discussion topics shall include, but not be limited to: introduction of the Contractor and Government Staff; understanding of the specific tasks and subtasks; project management expectations; agreement on meeting schedules; and agreement on initial delivery dates.

The Kick-Off meeting/Post-Award Conference will take place within 10 days from award and will be scheduled by the Contracting Officer.

3.2.6 System Documentation and Training

The Contractor shall:

- Provide all system documentation and training to SBA staff (in-person, video, and via webinar).

- Develop and provide effective training materials of all deliverables, including, but not limited to, "train the trainer" documentation.
- Conduct "train the trainer" sessions for SBA staff.
- Consult with the COR to determine what is appropriate, effective, and essential for training.

3.2.7 Transition

The Contractor shall:

Provide a Transition Plan and account for Transition Activities as described in Section 4.2.

4. Contract Requirements

4.1 Key Personnel

The following requirements related to personnel must be met:

a) If awarded this Task Order, the Contractor shall assign to perform this Task Order those persons whose résumés are submitted with its proposal and who are identified in the Contractor's proposal as Key Personnel. Not all contractor employees assigned to perform this Task Order will be Key Personnel.
b) If an individual proposed as Key Personnel becomes unavailable during the course of the source selection process, the Offeror will notify the Contracting Officer immediately and provide a substitute and their résumé. The proposal of any Key Personnel not currently employed by the Offeror shall be accompanied by letters of intent signed by the proposed Key Personnel indicating their intent to be employed by the Offeror if the Offeror is awarded a Task Order under this RFQ.
c) The Contractor agrees that during the first six (6) months of Task Order performance, no Key Personnel substitutions will be made unless necessitated by an individual's sudden illness, death, or termination of employment. In any of these events, the Contractor shall promptly notify the Contracting Officer and provide the information required by paragraph (e) below on the proposed replacement for Government approval. No substitutions of Key Personnel shall be made except in accordance with this provision.
d) After the initial six-month period of performance, the Contractor must obtain Government approval of any substitution of Key Personnel prior to removing the approved Key Personnel from performance. All proposed substitutions/additions must be submitted, in writing, to the Contracting Officer at least 30 days (60 days if security clearances are involved) in advance of the proposed substitution and provide the information required by paragraph (e) below.
e) All requests for substitutions/additions of Key Personnel must include a detailed explanation of the circumstances necessitating the proposed substitution or addition, a complete résumé for the proposed substitute or addition including skills, experience, education, training, and security level. As determined by the Contracting Officer, all proposed substitutes/additions must have qualifications that meet or exceed the qualifications of the person to be replaced.

f) The Contracting Officer or his/her authorized representatives will evaluate the request(s) for substitutions/additions of Key Personnel and the Contracting Officer will notify the Contractor, in writing, of approval or disapproval. Disapproval of the proposed individual(s) shall not provide grounds for nonperformance by the Contractor or form the basis of any claim for monies, delivery schedule extension, or any other equitable adjustment.

g) The personnel set forth below as proposed by the Contractor for this Task Order, or identified in the Contractor's proposals as Key Personnel, shall comprise the list of Key Personnel required to perform under this Task Order. The list may be modified in accordance with the above, to substitute or add personnel:

Labor Category	Key Personnel Name

h) At a minimum, a Project Manager must be identified and designated as Key Personnel. There may be more than one Project Manager. The Project Manager will be a direct liaison to SBA's Office of Government Contracting and Business Development. The Project Manager must be a senior staff member and is responsible for the supervision and management of the Contractor's personnel, technical assistance, and interface and compliance with instructions from SBA's COR. Desired skills/experience for the Project Manager include:

a) Experience in technical leadership.
b) Ability to rapidly prioritize competing requirements.
c) Ability to understand and simplify customer requirements.
d) Ability to communicate end user feedback to technical and design leads.
e) Computer Science or Engineering degree or equivalent work experience.
f) Strong communication skills.
g) Proven knowledge of industry standards.
h) Proven knowledge of managing Agile Software Development efforts.

4.2 Transition Plan

4.2.1 Transition Plan

The Contractor shall:

1) Ensure and agree that all deliverables, products, licenses, designs, data, documentation, tests, user research notes, source code, configuration settings and files, and materials developed throughout this Task Order will be the property of the U.S. Small Business Administration.
2) 30 days prior to Task Order base period conclusion, provide a Transition Plan for all deliverables, products, and materials. Should options be exercised, the Transition Plan will be updated 30 days prior to the end of each option period.

3) Coordinate with the COR and potentially another vendor, and implement the Transition Plan according to the COR's direction.
4) Provide assistance to the COR and potentially another vendor to stand-up and ensure the applications, systems, databases, platform, and environments are tested and fully operational.
5) Ensure the transition plan includes a detailed inventory of all files, materials, etc. that will be submitted along with detailed instructions to seamlessly set up the websites, applications, databases, systems, platform, etc. At that time, all files, materials, boxes, etc. shall be clearly labeled, packaged, and indexed according to the inventory.

4.2.2 Transition Activities

The Contractor shall:

1) During the transition to the Government and/or a new contractor, the Contractor shall perform all necessary transition activities, including, but not limited to, continued full services to SBA and other customers; participation, at discretion of COR in five or more meetings with the Government or new contractor to effect a smooth transition and provide detailed information on the operation of all deliverables; training of new personnel (contractor or Government) during transition period, in all system operation and maintenance functions; appropriate close-out of outstanding technical and related work.
2) Final report should include list of accomplishments, documentation, and customized code developed for SBA. Should the Contractor be terminated prior to the end of the scheduled base period, the Contractor shall transfer all project materials to the COR within two weeks of the COR's request.

4.3 Controlled Facilities and Information Systems Security

The contractor must adhere to the IT security requirements described in the Appendix, including all security requirements related to deliverables under this Task Order.

4.4 Section 508 Accessibility Standards Notice (September 2009)

All deliverables (including, but not limited to, electronic and information technology (EIT)) procured through this Task Order must meet the applicable accessibility standards at 36 CFR § 1194, U.S. Architectural and Transportation Barriers Compliance Board (Access Board) under the authority of Section 508 of the Rehabilitation Act Amendment of 1998, unless an agency exception to this requirement exists. 36 CFR § 1194, U.S. Architectural and Transportation Barriers Compliance Board (Access Board) is viewable at http://www.section508.gov. The Contractor shall indicate for each line item in the schedule whether each product or service is compliant or noncompliant with the accessibility standards at 36 CFR § 1194. Further, the proposal must indicate where full details of compliance can be found (e.g., vendor's website or other exact location).

4.5 Non-Disclosure Policies

The work to be performed by and the data released to the Contractor's personnel shall be treated as sensitive and confidential in nature and is not to be discussed with or released to anyone except SBA employees assigned to work with the Contractor and other Contractor personnel working on the Task Order.

The Contractor is responsible for requiring all of its employees working under this Task Order, who have access to privileged information under this Task Order, to execute all Certifications required by the SBA. The SBA, as it deems appropriate, may require additional certifications be completed by the contractor at any time during Task Order performance.

4.6 Potential Organizational Conflicts of Interest

Offerors shall provide a signed statement which describes concisely all relevant facts concerning any past, present, or planned interest (financial, contractual, organizational, or otherwise) relating to the work to be performed under the proposed contract or task order and bearing on whether the Offeror has a possible organizational or personnel conflict of interest with respect to:

1) Being able to render impartial, technically sound, and objective assistance or advice, or
2) Being given an unfair competitive advantage.

The Offeror may also provide relevant facts that show how its organizational structure and/or management systems limit its knowledge of possible organizational conflicts of interest relating to other divisions or sections of the organization and how that structure or system would avoid or mitigate such organizational conflict.

No task order award shall be made until any potential conflict of interest has been neutralized or mitigated to the satisfaction of the Contracting Officer. The vendor will notify the Contracting Officer in writing as soon as any conflict of interest is identified and will propose steps for mitigating the conflict.

Refusal to provide the requested information or the willful misrepresentation of any relevant information by an Offeror shall disqualify the Offeror from further consideration for award of a task order under this solicitation.

If the Contracting Officer determines that a potential conflict can be avoided, effectively mitigated, or otherwise resolved through the inclusion of a special contract clause, the terms of the clause will be subject to negotiation.

4.7 Contractor Use of Commercial Computer Software, Including Open Source Software

Open source software is often licensed under terms that require a user to make user's modifications to the open source software or any software that the user combines with the open source software freely available in source code form pursuant to distribution obligations in the license. In cases where the Contractor proposes to use the open source software while performing under this Task Order, regardless of whether the open source software is delivered, the Contractor shall not create,

or purport to create, any Government distribution obligation with respect to Government computer software deliverables. Prior to using any commercial computer software, including open source software which is considered commercial computer software, the Contractor shall evaluate each license for commercial computer software, and confirm that each of the following requirements is satisfied:

1) A license for a particular commercial computer software shall be compatible with all licenses for other commercial computer software that are or will be linked to, adapted to, integrated, combined or merged with the particular commercial computer software, including when the particular commercial computer software and the other commercial computer software are used with another computer program
2) A license for commercial computer software shall not impose a future Government obligation that is foreseeable by the Contractor
3) A license for commercial computer software shall not be terminated by the Contractor's use of the commercial computer software in performing under the contract
4) Contractor's cost to comply with this requirement presents no additional costs to the Government

If, as a result of the Contractor's evaluation, the Contractor satisfies all of the requirements in the paragraphs above, then the Contractor shall provide a written summary report of the above findings to the Contracting Officer stating that the Contractor has evaluated the commercial computer software use and the commercial computer software license, and made each determination required in the paragraphs above. The Contractor shall request permission from the Contracting Officer to use the proposed commercial computer software. This notification shall include all information regarding the identification and proposed use(s) of the commercial computer software.

If the Contractor is unable to satisfy all of the requirements in the paragraphs above for a particular commercial computer software license, then the Contractor may not use the commercial computer software covered by the particular license without prior written approval of the Contracting Officer. If the Contractor wants to use the commercial computer software for which the requirements in the paragraphs above within this section are not satisfied, the Contractor shall request approval to use the otherwise prohibited subject commercial computer software from the Contracting Officer by providing written notification addressing the following:

1) The name and version number of the software;
2) The name of applicable license(s);
3) A brief description of the technical use and implementing approach
4) A "yes/no" indication as to whether the Contractor has made, or will make, any modifications to the source code;
5) The software website; and
6) An identification of the reason(s) that the Contractor was unable to make the determination in the paragraphs above.

5. Post Award Instructions

5.1 Invoicing

The Contractor shall bill for the ongoing operations as per the payment schedule documented in PWS and the corresponding cost proposal as associated with specific deliverables.

The SBA will reject all nonconforming invoices.

The Contracting Officer, working with the COR, is responsible for determining minimum requirements for the information to be provided on the invoice. For information on what constitutes a valid invoice, refer to FAR 32.905. The minimum information includes:

- Date of Invoice
- Contract #
- Requisition #
- Billing Company name/address - as stated in the award (if this changes in www.SAM.gov at any time during the period of performance, notify the Contracting Officer to process a modification).
- Must include a "Remit to" address (which is complete) as stated in the award. If this changes in www.SAM.gov at any time during the period of performance, notify the Contracting Officer to process a modification.
- Period of performance/services
- Amount Billed for specified work accomplished
- Total Contract value
- Cumulative Billed
- Contract Line item number (CLIN) being billed, for each milestone achieved and list of deliverables as identified in the PWS
- Narrative of performance sufficient to justify the invoice
- Explanation of incentives/disincentives
- Point of Contact for invoicing issues and phone number

Invoices shall be mailed to the email address indicated in block 18a on the SF 1449 of the award documents.

The invoice will contain a statement signed by a responsible official of the Contractor substantially similar if not identical to the following:

> *"I certify that the items above have been delivered in accordance with the Task Order, and that all charges are true, correct, and have not been previously billed."*

5.2 Funding

Funding for performance will be allocated and obligated for each exercised Contract Line Item (CLIN).

6. Inspection and Acceptance

6.1 Overview

The contractor shall ensure proper control and coordination of all deliverables to ensure they are on time. Unless otherwise stated, the Government will review deliverables and notify the contractor of acceptance or non-acceptance within 5 business days. Representatives of the contractor shall meet with the COR and other members of the Government as necessary to review status of deliverables.

6.2 Notice Regarding Late Delivery

The Contractor shall notify the COR, or other authorized representative designated in each Task Order, as soon as it becomes apparent to the Contractor that a scheduled delivery will be late. The Contractor shall include in the notification the rationale for late delivery, the expected date for the delivery, and the project impact of the late delivery. Such notification in no way limits any Government contractual rights or remedies, including, but not limited to, termination.

6.3 Default Acceptance

Notwithstanding the foregoing, any deliverable requiring acceptance by the Government shall be deemed to be accepted by the Government if no written notice of non-conformity has been received by the Contractor within the acceptance period as outlined in Section 6.1.

7. Deliveries and Performance

7.1 Period of Performance

The Period of Performance for this Task Order shall be a base period of 6 months, with one (1) 6-month Award Term Incentive. Two (2) additional 6-month Award Term Options will be included for a total potential period of performance of up to two (2) years as described in Section 2.5.

7.2 Place of Performance

Offerors shall propose the number and composition of on-site (at SBA HQ in Washington, DC) and off-site personnel teams as it relates to their proposed solution.

Any off-site development and test environments need to be compliant with SBA and federal security guidelines as detailed in the Appendix.

7.3 Packaging and Marking of Deliverables

All information and deliverables shall be delivered electronically to the COR, unless otherwise instructed, and shall be marked as follows:

1) Name and Address of Contractor;
2) Task Order Number;

3) Description of item contained therein; and
4) Consignee's name and address.

8. Contracting Officer

8.1 Contracting Officer's Authority

The Contracting Officer is the only individual who can legally commit or obligate the Government for the expenditure of public funds. The technical administration of this Task Order shall not be construed to authorize the revision of the terms and conditions of this Task Order. Only the Contracting Officer can authorize any such revision in writing. The Contracting Officer shall promptly countermand any action that exceeds the authority of the COR.

8.2 Contracting Officer's Representative (COR) Authority

The Contracting Officer may designate additional technical personnel to serve in monitoring the work under this Task Order. The COR will coordinate and manage the activities under the Task Order.

9. Special Contract Requirements

9.1 Title to Materials Shall Vest in the Government

All hardware, software, materials, products, licenses, source code, data, and information produced and/or furnished to the Government under this Task Order shall become the property of and remain with the Government upon delivery and acceptance by the Government. This shall include but not be limited to the following: plans, systems analysis, design specifications, drawings, completed programs and documentation thereof, reports and listings, all tapes, disk files, and other items pertaining to the work and services to be performed pursuant to the Task Order. The Government shall have unlimited rights to use, disclose, reproduce, prepare derivative works, and distribute copies to the public of such hardware, software, materials, products, licenses, source code, data, and information in any manner and for any purpose, and to have or permit others to do so, without compensation to or approval from the Contractor.

All hardware, software, materials, products, licenses, source code, data, and information produced or acquired with Task Order funds, or under the Contractor's control as Government Furnished Property or Materials, shall be turned over to the Government (or a new contractor, as applicable) in good condition. All data and supporting documentation shall be submitted or furnished to the Government, including the website, application, data files, analytic data files (with associated instructions and codebook listing and defining all variables), and public use data files with associated documentation. Analytic files (where source files are reduced in volume and tailored to specific analyses), data analytic programs and results produced under auspices of this project shall be property of the Government. All information and materials including data developed under this

Task Order are the property of the Government and shall be delivered as part of the transition and turnover at the end of the Task Order.

9.2 Limited Use of Data

Performance of this Task Order may require the contractor to access and use data and information proprietary to the Government, which is of such a nature that its dissemination or use, other than in performance of this Task Order, would be adverse to the interests of the Government.

The Contractor and/or contractor personnel shall not divulge or release data or information developed or obtained in performance of this Task Order until made public by the Government, except to authorized Government personnel or upon written approval by the Contracting Officer. The Contractor shall not use, disclose, or reproduce data identified as proprietary, other than as required in the performance of this Task Order. Nothing herein shall preclude the use of any data independently acquired by the contractor without such limitations or prohibit an agreement at no cost to the Government between the Contractor and the data owner which provides for greater rights to the Contractor.

The Contractor shall release all required deliverables and data or other works developed under this Task Order solely in accordance with the terms and conditions of this Task Order. All data collected and remaining in the custody of the Contractor at the close of this Task Order that permits identification of an individual or entity described in the data, or an individual supplying it, must be delivered to the COR or destroyed, in accordance with the terms of the Transition Plan. No copies or parts of data, derivative files (encrypted and/or individually identifiable) may be kept by the contractor.

10. Contract Clauses (Note: all Alliant SB GWAC Clauses are Included in the Task Order)

10.1 FAR Clauses

FAR 52.252-2 Clauses Incorporated by Reference. (Feb 1998)

This contract incorporates one or more clauses by reference, with the same force and effect as if they were given in full text. Upon request, the Contracting Officer will make their full text available. Also, the full text of a clause may be accessed electronically at this address: https://acquisition.gov/far/index.html.

In addition to the clauses below, all Alliant Small Business GWAC clauses are hereby incorporated into this Task Order.

FAR 52.217-9 Option to Extend the Term of the Contract. (Mar 2000)

(a) The Government may extend the term of this Task Order by written notice to the Contractor within 10 days of Task Order expiration date, provided that the Government gives the

Contractor a preliminary written notice of its intent to extend at least 10 days before the Task Order expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended Task Order shall be considered to include this option clause.

(c) The total duration of this Task Order, including the exercise of any options under this clause, shall not exceed 24 months.

FAR 52.227-14 Rights in Data General. (May 2014)

FAR 52.227-15 Representation of Limited Rights Data and Restricted Computer Software. (Dec 2007)

(a) This solicitation sets forth the Government's known delivery requirements for data (as defined in the clause at 52.227-14, Rights in Data—General). Any resulting contract may also provide the Government the option to order additional data under the Additional Data Requirements clause at 52.227-16, if included in the contract. Any data delivered under the resulting contract will be subject to the Rights in Data—General clause at 52.227-14 included in this contract. Under the latter clause, a Contractor may withhold from delivery data that qualify as limited rights data or restricted computer software, and deliver form, fit, and function data instead. The latter clause also may be used with its Alternates II and/or III to obtain delivery of limited rights data or restricted computer software, marked with limited rights or restricted rights notices, as appropriate. In addition, use of Alternate V with this latter clause provides the Government the right to inspect such data at the Contractor's facility.

(b) By completing the remainder of this paragraph, the offeror represents that it has reviewed the requirements for the delivery of technical data or computer software and states [offeror check appropriate block]—

( ) None of the data proposed for fulfilling the data delivery requirements qualifies as limited rights data or restricted computer software; or

( ) Data proposed for fulfilling the data delivery requirements qualify as limited rights data or restricted computer software and are identified as follows:

_____

_____

_____

(c) Any identification of limited rights data or restricted computer software in the offeror's response is not determinative of the status of the data should a contract be awarded to the offeror.

FAR 52.237-3 Continuity of Services (Jan 1991)

11. Documents, Exhibits, Attachments

11.1 Listing of Attachments (Separate Documents)

Attachment 1- Modernizing the SBA's Digital Services

Attachment 2 – Oral Presentation Scenario and Example User Stories

11.2 Listing of Appendix Items (Included within this Document)

- Initial Product Backlog
- Figures 1 and 2, Office of Government Contracting and Business Development Systems
- IT Security Requirements

Instructions:

The Oral Presentations will last for up to 90 minutes, including presentations and questions and answers. Offerors will have up to one hour to present their Oral Presentation. The Government will then have 30 minutes for questions and answers following the presentation. Please inform the Government if you need any special equipment to conduct the Oral Presentation. The Government may make a recording of the presentations to be included in the solicitation file. Oral Presentations are not considered discussions, but are the opportunity for the Government to assess the how effectively the proposed solution can be implemented at the U.S. Small Business Administration. In the event revisions to the proposed solutions are required, the Government will provide further instructions.

Scenario:

Utilizing the proposed technical solution, walk the Government through how your company will evaluate the scope, create user stories, design, develop, test, and implement the following Epics into releasable product. These Epics are intended to be a sample snap shot of how the initial task will be broken out. The Oral Presentation should convey to the Government how the proposed Agile methodology, management plan, award metrics, and deliverables will be executed should your company receive the award.

For the purposes of the presentation, assumptions about technical decisions, Government acceptance, and priority may be made by the Offeror in order to provide a complete scenario walk through. These assumptions will not be considered part of the final proposal, unless they directly contradict anything provided in the Offeror's proposal.

Example Epics:

Priority	I want…	So that…	Potential User Stories	Ranking
1	To establish a new modern technology stack and cloud based- Database Platform	SBA can build and unify the various certification processes in one system		**High**
2	Migrate System for Award Management (SAM) data from the SBSS-Legacy System	Data can be managed in a way that eliminates duplications, and SBA can use data already entered in SAM.gov	• Design schema for SAM business profile data • Create corresponding tables • Create repeatable ETL (extract-transform-load) to populate tables from SBSS-CCR • Operationalize script to maintain hourly updates	**High**
3	Migrate legacy SBA-Specific Women Owned Small Business Data	Data can be pulled from SBA systems and managed in a way that eliminates duplications and establishes a design schema		**High**
4	Create a user friendly Certification	Business owners can complete certification	• Create minimal version(MVP) of new	**High**

	application that works on both desktops and mobile devices for Women Owned Small Business	requirements in days instead of months. They should have an up-to-date, go-to place for certification status and next steps. Business owners should get notifications when certification statuses change.	certifications web app, including responsive design for desktop and mobile • Incorporate automated testing processes into the application so that it reduces the time necessary to do User Acceptance testing and decreases chance of human error.	
5	Have the WOSB Certification application product assist SBA analysts	Certification reviews can be processed quickly, accurately and minimize the amount of manual time being spend on the process. This product must be able to identify fraud, waste and abuse quickly so that ineligible companies are identified.		**High**
6	Migrate appropriate legacy data into new application	Analysts have the ability to reference previous status, applications, certification and history related to the program.		**Medium**
7	Add and automate audit capability in the new application	SBA has a record of all certification process transactions		**Medium**
8	Shut down legacy systems	There are no redundant databases at SBA		**Medium**

1. Appendix

1.1 Initial Backlog Items

1.1.1 General

This section provides information on the current state of required functionality anticipated to be delivered under this Task Order.

Consistent with Agile development methodology, these backlog items are intended to guide Offeror proposals by indicating some of SBA's anticipated needs. **Nothing in this section should be construed as a complete statement of functionality the SBA will require; rather, these details constitute a <u>partial</u> statement of minimum functionality needed.**

The contractor will be responsible for using an agile development approach to deliver this functionality, and all other functionality that will be necessary for achieving the objectives laid out in this RFQ.

1.1.2 Certification projects (includes the Woman-Owned Small Business, 8(a), HUBZone, and Pro-Net Projects)

The goal of the Certification projects (including the WOSB, 8(a), HUBZone, and Pro-Net projects) is to integrate all the SBA contractor certification processes—8(a), HUBZone, and WOSB, as well as other related workflows (including any still performed by Pro-Net)—into a single web application, using a modern open-source technology stack, running on cloud infrastructure. Each certification process will access a shared copy of SAM.gov business profile data, but manage its process-specific data in its own tables. Documents will be uploaded to a secure cloud system but managed and accessed through the app itself. Once the cloud system is ready, the existing databases, applications, and document stores for the current certification systems will be deprecated as appropriate.

Pro-Net is an SBA internal system where the results of status determinations (e.g. size determinations) are recorded. This system interfaces with the underlying SBSS-CCR database to convey the findings of such determinations, which in turn, are searchable via the Dynamic Small Business Search (DSBS) and fed back into the System for Award Management (SAM), via the regular updates from SBSS-CCR to SAM.

A partial list of minimum functionality needed includes the following capabilities:

- Tracks the completion of a contracting certification application package for applicant and SBA employee
- Integrates with SBA electronic systems so that data does not have to be re-entered, for both applicant and SBA employee
- Organizes the certification package to support eligibility determinations, for both applicant and SBA employee
- Implements a solution that generates SBA forms and a complete certification package based on small business contractor questionnaire answers
- Generates the certification package and documentation

- Includes electronic signature capability that leverages encryption
- Includes business intelligence to support eligibility filtering and decision making
- Uses data inputs to generate forms and supporting documents
- Integrates with a document management system that includes workflow to track the completeness of documents
- Generates contracting certification materials that are compliant with SBA operating procedures
- Implements a solution that utilizes intuitive questions and answers to navigate the user completing SBA forms based on SBA rules and regulations
- Any changes in the data fields used to generate application documents will result in an automatic change to those documents
- Tracks and alerts the applicant and SBA employee if any documents are missing
- Includes workflow that tracks documents required at each stage (e.g., at time of application, decision and annual renewal). Provides this for both applicant and SBA employee
- Provides audit tracking of users that view or edit a record, for both applicant and SBA employee
- Leverages software development best practices so that the software can be updated as there are changes to SBA programs and SOPs
- Allows SBA personnel to access documents that should be maintained based on SOP requirements
- Determines eligibility for an applicant based on a decision tree that considers the certification guidelines and key eligibility criteria as defined in SBA's regulations and the relevant SOPs, and provides validation of same eligibility for the SBA employee automatically
- Generates a closing checklist for applicant and SBA employee that identifies requirements for completing certification applications
- Tracks and reports applications as they move through the various stages of the certification workflow to identify bottlenecks within certification processing

1.1.3 E-Signature

The certification systems implemented should have the following e-signature functionality at a minimum:

- Support electronic signature solutions that are technology-neutral and scalable to up to 100,000 new signatures a year.
- A process for identity establishment.
- Allow signatures to be maintained in a document management system.
- Support cryptographically based digital signatures created with a private cryptographic key that corresponds to the public key specified in a digital credential that is recognized by the Federal Bridge Certification Authority at Medium Hardware or High assurance, or by the COMMON Policy at the Common Hardware assurance level (at Level of Assurance 2 and higher).
- Include an evidence of intent to sign that is included both in the record being signed and in the on-screen signing process. Such evidence of intent to sign shall be clearly provided in both places, pursuant to an appropriate signing ceremony that makes it

unmistakable to the signer (i) that he/she is signing the record (not doing something else), and (ii) the reason he/she is signing.

- Support electronic signature solutions that track the reason for signing.
- Portable so that signing is not dependent on location, but can occur at several and changing places.
- Include a signature process for multiple signers on same record.
- Include a signature process for in-person transactions and for remote transactions.
- Support an electronic signature solution that requires the signature to be made a part of the record and complies with acceptable recordkeeping requirements established by the National Archives and Records Administration (NARA).
- Implement an electronic signature solution that utilizes a cryptographic signing process whereby a hash of the content of the record being signed is incorporated into the signature data, so that there is an intrinsic relationship between the signature and the record signed. The signing data shall be either attached or appended to the record signed, or a database-type link shall be established between the signature data and the record signed.
- Include an electronic signature process that validates, identifies, and authenticates the signer.
- The signer to be identified and authenticated by reference to a digital certificate issued at Level of Assurance 2 or above, and contains the public cryptographic key that corresponds to the private cryptographic key used to create the digital signature for the record.
- Electronic signature process that establishes integrity of signed record and defines an attribution process. The attribution process shall establish and confirm that a specifically identified person is the source of a record or signature.
- Support the initial establishment and verification of identify to provide adequate linkage to a digital signature process and solution (at a level of assurance of 3).

1.1.4 Document Management

The certification systems implemented should have the following document management functionality at a minimum:

- Allows business rules/controls to be defined for validating a contracting certification application based on SBA criteria
- Tracking of communication
- An online training and support manual for each project
- Maintenance of Electronic Records. The Contractor shall maintain records electronically for as long as SBA record retention policies require
- The Contractor shall support identity Federation standards which include:
- Web services-based Federation which includes enabling the sharing of identity information between security domains;
- Security Assertion Markup Language (SAML) 2.0 or the current standard;
- The Internal Revenue Service (IRS) shall be the preferred identity provider.
- Roles-based user profiles
- Tracks all forms of documents SBA will accept for uploading --.pdf, xls, word, etc.
- Support checklists that can be automated using the built in workflow functionality.
- Track data based on set categories. Document exceptions will be flagged and tracked for future reporting.

- Utilizes workflow to track the grant of initial certification and ongoing renewal. information sharing/collaboration;
- Search capability;
- Allows the SBA to define the risk management metrics for waste, fraud and abuse. The system shall also display the metrics using a dashboard
- Uploading of all contracting certification forms and documentation including but not limited to those listed in the Form 1010
- Uploading of documents in Word, .pdf., and Excel formats
- Allows a user to submit the package using a "wet signature" or electronic signature.
- Prints a certification application and stores it in alternate formats (i.e. pdf, Word)
- Offers notification functionality
- Evaluating and tracking of portfolio trends and performance via a dashboard;
- Workflow for data analytics and intelligence
- Supports electronic signature.
- Integrates with the to-be environment outlined in this document.
- Provides data store/warehouse capabilities of stored electronic documents.
- Provides data and business analytics that will be used to support the organizational strategic goals, including managing workflow in a timely manner.
- Archive data that can be retrieved based on a small business contracting entity.
- Support tracking documents using a workflow tools that alert if documents are missing.
- Support the virtual retrieval of documentation.

1.1.5 Mentor-Protégé, Joint Venture Approvals, and other Applications Project

The goal of this project is to build workflows for managing Mentor-Protégé Approvals and Joint Venture Approvals, and other SBA government contracting-related applications which manage records related to individual businesses.

The Mentor-Protégé, Joint Venture Approvals and other Programs project would support the automation of the current paper-based processes for the 8(a) Business Development Program's Mentor-Protégé and Joint Venture agreements review and approvals process. This project would allow applicants to apply for approvals of Mentor-Protégé Agreements and Joint Venture Agreements electronically, including document submission, allow signature, allow separate workflows to support District Office and Headquarters review of agreements, provide reports on activities of approved Mentor-Protégé and Joint Venture arrangements, and have the approved Mentor-Protégé and Joint Venture Agreements searchable by contracting officers (likely via the new Search system). The Mentor-Protégé system may need to expand based on the potentially expanding scope of the mentor-protégé process at the SBA.

1.1.6 Small Business Search Project

The goal of this project is to produce a small business search tool to help SBA officials, procurement officers at other government agencies, and other users find small businesses to perform government contracts. As a partial list of minimum functionality needed, the tool should be able to:

- Scrape the web and other data sources for additional data on the firms already in the SAM.gov/DSBS databases
- Scrape the web and other data sources for data on small businesses not in the SAM.gov or DSBS databases
- Take data, words and information from all available web-based content pertaining to the roughly 28 million small businesses in the United States, distinguish between those same small businesses with similar identifiers (e.g. distinct businesses that happen to have the same name), eliminate the low-value information for each business, and attach the high-value information to a profile for each business that can then be searched by the new search tool and be viewed by SBA employees and federal contracting officers. SBA will own the data collected in this manner.
- Replace the current Dynamic Small Business Search with modern, more intuitive search functionality
- Integrate publically accessible data from external sources of information about individual firms
- A "Google-like" text entry box with faceting that facilitates exploration rather than selectivity
- Expose only the most commonly used filtering conditions by default, such as NAICS code and small business certifications
- Return results in relevance order
- Track and monitor usage so program developers know what to improve
- Provide a better way for businesses to update their profiles, perhaps with a "LinkedIn-like" landing page
- Link profiles to SAM.gov, so that businesses can update their profile in one location
- Increase search coordination with SAM.gov, so that contracting officers using SAM.gov to search for small businesses get the best results possible
- Include additional data such as past performance information
- Include bookmark functionality to help procurement officers (or any logged-in user) track results
- Provide the ability to automatically or manually save queries
- Take government-only data into account for appropriate logged-in users

1.1.7 Data Analytics Project

The goal of this project is to produce a business intelligence application giving interactive access to reports needed by managers, business analysts, and leadership in the SBA. The data involved is not limited to the data collected through the contracting certification and small business search application; rather, it includes all data on small businesses that is collected by the SBA. A partial list of minimum functionality needed includes:

- A front end customized to the needs of the SBA using a business intelligence and reporting tool. It should be cloud-hosted in the same environment as the new certification applications, and use data from the newly migrated database developed for use by those applications.
- An Extract Transform Load (ETL) process to make existing data accessible and in a useful format for the analytics engine.
- A report designer to allow developers to add new types of reports to the engine.

- A dashboard that give users convenient interactive access to their reports in the form of business graphics and spreadsheets.
- Reports generated with the data analytics tool should meet the business requirements of SBA leadership at least as well as their current system of hand-generated reports
- The number of one-off, hand-generated database queries written to support data analysis requests should be steadily reduced. The product's goal should be that zero such queries should be required.
- The front end must be readily usable by business analysts and produce reports in their preferred formats
- Reports must be able to be created on the fly and results imported into Excel or viewed within a browser immediately

1.2 Figures 1 and 2 – Office of Government Contracting and Business Development Systems