

Periodic Table of Acquisition Innovations

Remote Acquisitions

Department of Veterans Affairs' Technology Acquisition Center

Virtual Technical Demonstration: Coding Artifacts

Document Title	Page Number (PDF count)
Content Page	1
Solicitation	2-16
Case Study	17-31

The Technology Acquisition Center has a requirement for Appeals Modernization Caseflow Development and Support. The attached Task Performance Work Statement (PWS) describes this effort. The award of this Request for Task Execution Plan (RTEP) is subject to the receipt of funds.

This RTEP is set aside for T4NG Service Disabled Veteran-Owned Small Business (SDVOSB) prime contract holders. In accordance with VAAR 852.219-10 (JUL 2016) (DEVIATION) VA Notice of Total SDVOSB set aside and 13 CFR §125.6, the contractor will not pay more than 50% of the amount paid by the Government to it to firms that are not SDVOSBs as defined by VAAR 852.219-10 (JUL 2016) (DEVIATION). "Other eligible SDVOSB concerns" must similarly meet Federal small business size standards for the NAICS code and must be listed in the Vendor Information Pages as verified. Additionally the Government reserves the right to conduct the evaluation in the most efficient manner. Specifically, for a SDVOSB set aside, the Government shall first evaluate whether the Offeror satisfies the requirement of VAAR 852.219-10 (JUL 2016) (DEVIATION) and 13 CFR §125.6. Thereafter, the Government reserves the right to evaluate only the Task Execution Plans (TEPs) of the Offerors that do satisfy the respective requirement(s). Be advised that consideration for task order award is limited to SDVOSBs that are registered and verified in Vendor Information Pages (VIP) database (<https://www.vip.vetbiz.va.gov/>) at time of submission of offer and at time of contract award. **Offerors are solely responsible for obtaining this verification.**

THIS REQUEST IS NOT AN AUTHORIZATION TO START WORK.

A. Please adhere to the following timelines:

1. Indicate your intention to provide a Task Execution Plan (TEP) via the Virtual Office of Acquisition (VOA) Acquisition Task Order Management System (ATOMS) prior to close of business on May 13, 2019. It is requested that a negative response be indicated as well.
2. If you choose to submit Technical Factor 1 - Case Studies, they shall be submitted via the VOA ATOMS by the date and time listed in ATOMS under TEP Due Date.

B. Instructions:

TEPs shall be submitted in accordance with the Basic Contract Performance Work Statement (PWS), paragraph 7.3.2. Offerors are permitted to provide ONLY ONE (1) TEP for consideration.

VOLUME I: Technical Factor 1 - Case Study Submission

Offerors shall submit up to three relevant case studies for evaluation. Relevant case studies must demonstrate recent (within the past two-years)

T4NG-0441 - Appeals Modernization Caseflow Development and Support

performance of tasks detailed in the PWS, related to product and delivery management, systems architecture, software development, user research, user experience strategy, information architecture, interaction and visual design, static and dynamic content management, content writing, DevOps, and data analytics to continuously improve new and existing software, performed by the Offeror or any proposed subcontractor who will be responsible for at least 30% of your proposed price. Case studies may reflect work completed for Government and/or Commercial clients.

Offerors are strongly encouraged to submit case studies that demonstrate the capability to perform multiple tasks from the PWS. Case studies may include work performed under any combination of tasks contained in the PWS, but more weight will be given to Offerors whose case studies encompass the greatest number of tasks outlined in the PWS. Offerors are also strongly encouraged to provide case studies that reflect work performed creating, developing and maintaining software similar in scope to that outlined in the PWS and utilizing a technology stack similar to the current Caseflow technology stack listed below. The Case Studies shall demonstrate an agile methodology and adherence to practices found within the Digital Services Playbook (<https://playbook.cio.gov/>) and responses shall specifically address how user centered design and user feedback was used during the agile process. Each Case Study submission is limited to three pages in PDF Format.

The current Caseflow technology stack includes the following primary elements:

- Primary stack:
 - o Ruby 2.5, Rails 5.1
 - o React, Webpack, NPM
 - o Git
 - o Postgres/SQL, Redis
 - o AWS: SQS, Cloudwatch, Lambda, RDS, DMS

- Infrastructure:
 - o Ansible
 - o Terraform
 - o Groovy, YML
 - o Docker

Offerors must include the following details for each case study submission:

- A. Client organization name
- B. Period of performance
- C. Offeror's role
- D. Goals and outcomes, including any metrics produced, identifying how

T4NG-0441 - Appeals Modernization Caseflow Development and Support

- outcomes addressed those goals
- E. Technology stack
- F. Delivery Methodology, including how user centered design and user feedback was utilized

In addition to the above, for **AT LEAST ONE** case study, Offerors must also submit at least one Post-mortem report related to one of the submitted Case Studies. Post-mortem report(s) shall be no longer than two pages outlining the issues resolved, how the issue(s) was found, the root cause analysis conducted, and how the issue(s) was addressed.

In addition to the above, for **AT LEAST ONE** case study, Offerors are required to submit artifacts to further demonstrate their capacity to perform the requirements in the PWS. Artifacts must not be created for this PWS. Artifacts should be related to one of projects covered in the case studies. Artifacts may be anonymized as needed to protect PII, PHI, or other proprietary data, but should still demonstrate the vendor's expertise as it relates to the PWS. Artifacts should include at least one from each of the following categories, with a max of 10 artifacts:

- Product Development, as covered in 5.2.1.
- DevOps practices, as covered in 5.2.2
- User Experience, and content strategy and development, as covered in 5.2.3

The Case Studies, the Post Mortem Report(s), and their respective artifacts, shall be provided via a public facing Github Repository the link to which shall be provided via email to David.Melton@va.gov on the due date included in the solicitation. Any additional information, like a password or username, necessary to gain access to the Github Repository, shall be provided with the link.

****Please note if a submitted Case Study(s) relies on the expertise provided by a subcontractor in Technical Factor 1, that the subcontractor(s) shall be included as a proposed subcontractor in each future proposal Volume for this effort including any resultant award. Additionally, should a Case Study of a proposed subcontractor be used in Technical Factor 1, the vendor shall ensure that the vendor clearly accounts for at least 30% of the proposed price in all future Proposal Volumes and the award. Failure to ensure these conditions may render an Offeror's proposal unacceptable.**

VOLUME II: Technical Factor 2-Written Technical Solution

The Written Technical Solution shall be limited to 15 pages, excluding the cover letter and table of contents, in PDF Format. The due date for the Written Technical Approach will be provided in the advisory notification provided after

T4NG-0441 - Appeals Modernization Caseflow Development and Support

the evaluation of the Case Studies. Within the Written Technical Solution, the Offeror shall provide a detailed approach to the following:

- 1) Overall methodology and approach to building and continuously improving new and existing software.
- 2) Product Development, including working with business stakeholders.
- 3) DevOps.
- 4) User Research and feedback.
- 5) Accessibility.
- 6) Open Source publishing.
- 7) Help Desk Support.
- 8) Approach to Security and Compliance.
- 9) What the Offeror would need from the Government to ensure success and any barriers that would reduce or delay success.
- 10) How success and end user satisfaction will be determined and the strategy for capturing both product metrics and process metrics.
- 11) The proposed Labor Mix and Level of Effort by Iteration supporting the proposed FFP line items. This description shall indicate whether the Labor Category is being proposed for the Prime or a subcontractor including which proposed subcontractor. Additionally, documentation is required to demonstrate the correlation between the proposed technical approach and the proposed Labor Mix and Level of Effort by Iteration, including, but not limited to such things as, User Story sizing methodology, and why the specific team size and composition was chosen to support the proposed technical approach.

Technical Factor 2: In-Person Technical Demonstration (ITD)

The Demonstrations will be held in Washington D.C. The exact date, time, and address will be provided in the advisory notification provided after the evaluation of the Case Studies. The Government will schedule the demonstrations by drawing lots among those Offerors who elect to proceed after Technical Factor 1. The Government will advise Offerors of the date and time of their ITD which is anticipated to be held between June 3, 2019 and June 14, 2019.

The goal of the ITD is to evaluate the Offerors' ability to understand and address user feedback asking for additional functionality in part of the Caseflow application. Offerors will be given a scenario detailing a fictional government problem and will have 4 hours to complete a series of tasks including a presentation at the end describing the work completed. As part of the presentation, each Offeror will also provide responses to one or more hypothetical scenarios (scenarios will be provided at the start of the ITD). Two to three Government employees will be provided to the Offeror's ITD team to, playing the roles of user and stakeholder, and will be available to provide information to the Offeror's ITD team during the ITD.

T4NG-0441 - Appeals Modernization Caseflow Development and Support

This is the opportunity for the team to demonstrate cross-team collaboration, agile methods, user-centered design, iterative development, and process education skills that will be needed to execute the PWS. The process used to manage and respond to this request for additional functionality shall demonstrate the same solutions detailed in the Written Technical Solution.

All supporting digital (including any code developed during the ITD) and non-digital artifacts created during the ITD shall be submitted at the end of the ITD. The submission shall be via a public facing Github repository the link to which shall be emailed to David.Melton@va.gov at the completion of the ITD. Examples of artifacts include training materials, user stories, meeting notes, project plans, and images of non-digital artifacts created during the demonstration (e.g. white board drawings). These artifacts shall be representative of the Offeror's proposed process for documenting work. Evaluators will be present for the entire ITD.

The Government will have the ability to ask clarifying questions specific to the Offeror's technical demonstration after the time allotted for the ITD. These do not count as discussions, unless otherwise directed by the Contracting Officer. No updates will be allowed for the ITD, however the Government reserves the right to enter negotiations on the Offeror's Written Technical Solution or Price Volume.

VOLUME II: Price Proposal

This is a FFP type order with a T&M Line item for travel and materials only. Price data shall be provided in accordance with the Basic Contract PWS, paragraph 7.3.2C. The due date for the Price Volume will be provided in the advisory notification provided after the evaluation of the Case Studies.

Offerors shall submit a price volume which shall include the following:

- Completed Section B and price proposal excel spreadsheet

Section B and price proposal excel spreadsheet: The Offeror shall provide a price proposal volume in Microsoft Excel spreadsheet format. The first tab shall be a summary to include a top-level rollup of the total dollars and percentages by labor, materials, ODCs, and a total Proposed price. Labor shall further be broken out by labor categories, labor rates, and hours. A separate tab shall be used for the Prime and each Subcontractor. The Contractor shall submit a completed Section B, Schedule of Supplies and Services, including all priced line items for the base period and each option period and all optional tasks. Offerors are hereby advised that any Pricing Assumptions which deviate from the Government's requirements or material terms and conditions established by the solicitation, may render the Offeror's proposal Unacceptable, and thus ineligible for award.

T4NG-0441 - Appeals Modernization Caseflow Development and Support

The Government anticipates that the number of iterations and the total price of all CLINs will maximize the Government's investment of about \$45,303,644.57. The estimate is provided for estimation and informational purposes only, and while based on the best information available at this time, it is subject to change and in no way commits the Government. Although the Government's intention is to maximize the value of the provided budget, these Government estimates are provided for informational purposes only and each Offerors' proposed price shall be based on their unique technical approach to accomplishing the tasks in the PWS.

Performance Period	Approximate Estimate per year
Base Year	\$4,634,754.40
Option Year 1	\$9,406,901.43
Option Year 2	\$9,685,808.47
Option Year 3	\$9,973,082.73
Optional Tasks - Base Year	\$1,842,501.60
Optional Tasks - Option Year 1	\$3,795,553.30
Optional Tasks - Option Year 2	\$2,707,614.82
Optional Tasks - Option Year 3	\$3,257,427.82

Price Rounding Issue - The Government requires Offerors to propose unit prices and total prices that are two decimal places and requires the unit prices and total prices to be displayed as two decimal places. Ensure that the two-digit unit price multiplied by the item quantity equals the two-digit total item price (there should be no rounding). If an Excel spreadsheet is submitted by the Offerors, the Offerors shall ensure that the actual values in the spreadsheet cells are no more than two decimal places even if values in the spreadsheet cells are formatted to display two decimal places. All Offerors should propose using an estimated award date of July 1, 2019.

Basis for Award: Any award will be made based on the best overall (i.e., best value) Task Execution Plan (TEP) that is determined to be the most beneficial to the Government, with appropriate consideration given to the four following evaluation Factors: Technical Factor 1 Case Study Submission, Technical Factor 2 Written Technical Solution and In-Person Technical Demonstration (ITD), Past Performance, and Price. Technical Factor 2 is more important than Technical Factor 1, which is significantly more important than Past Performance, which is slightly more important than Price. To receive consideration for award, a rating of no less than "Acceptable" must be achieved for Technical Factor 2. The non-Price Factors combined are significantly more important than the Price Factor. Offerors are cautioned that the award may not necessarily be made to the lowest Price offered or the highest rated Technical proposal.

3. Evaluation Approach: TEPs, which include all volumes, shall be subject to evaluation by a team of Government personnel. The Government reserves the right to award without discussions based upon the initial evaluation of the TEP.

T4NG-0441 - Appeals Modernization Caseflow Development and Support

The TEP will be evaluated strictly in accordance with its written content. TEPs which merely restate the requirement or state that the requirement will be met, without providing supporting rationale, are not sufficient. TEPs which fail to meet the minimum requirements of the Request for Task Execution Plans (RTEP) will be rated Unacceptable.

1. TECHNICAL EVALUATION APPROACH. The evaluation process will consider the following:

TECHNICAL FACTOR 1 - CASE STUDY SUBMISSION. Technical Factor 1 shall evaluate the Government's confidence in the Offeror's ability, as evidenced by the past experience and expertise identified within each Case Study, as well as all artifacts provided with the Case Studies, to perform the work required in the Performance Work Statement (PWS).

After the Government completes evaluation of each Technical Factor 1- Case Study Submission, the highest rated Offerors will receive an advisory notification advising them to proceed to Technical Factor 2. The notification will include the due date for the Written Technical Volume and the date, time and address for the ITD. Lower rated Offerors will be advised they are unlikely to be viable competitors, along with a brief explanation of the basis for the advice. The intent of this advice is to minimize proposal development costs for those Offerors with little chance of receiving an award. However, the Government's advice will be a recommendation only, and those Offerors may elect to continue their participation in the acquisition. Offerors who elect to continue their participation shall have 24 hours to provide notification to VA of their intention after which they will be provided the date, time and address for the ITD and the due dates for the Written Technical Approach and Price Volumes.

TECHNICAL FACTOR 2 - WRITTEN TECHNICAL SOLUTION AND ITD. The evaluation of Technical Factor 2-Written Technical Solution and ITD will consider the following:

- a. Understanding of the Problem - Technical Factor 2 will be evaluated to determine the extent to which the Offeror's approach demonstrates a clear understanding of all features involved in solving the problems and meeting and/or exceeding the requirements presented in the solicitation and the extent to which uncertainties are identified and resolutions proposed.
- b. Feasibility of Approach - Technical Factor 2 will be evaluated to determine the extent to which the proposed approach is workable and the end results achievable. It will be evaluated to determine the level of confidence provided the Government with respect to the

T4NG-0441 - Appeals Modernization Caseflow Development and Support

Offeror's methods and approach in successfully meeting and/or exceeding the requirements in a timely manner.

2. PAST PERFORMANCE EVALUATION APPROACH

The Past Performance evaluation will be based upon the average of the cumulative Quality Assurance Surveillance Plan (QASP) Performance Based Service Assessment ratings received for all awarded task orders, the extent to which Small Business Participation goals have been met, and the extent to which the Veterans employment percentage of Veterans employed has been maintained. The Past Performance Factor rating shall be expressed as a numerical score. Offerors may receive a maximum possible score of ten (10) points in past performance, a maximum possible score of five (5) points in past performance in achieving small business participation percentages, and a maximum of five (5) points for maintaining or exceeding Veterans employment percentage of Veterans employed for a total maximum possible score of twenty (20) points.

Offerors are NOT to submit past performance as a part of their TEP.

3. PRICE/COST EVALUATION APPROACH.

This is a hybrid Time and Material (T&M) and Firm Fixed Price (FFP) type Task Order. For the T&M Travel and Material portions, the Offeror shall use the Government-provided estimate for each Task Order Period and apply its proposed fixed handling rate. Proposed fixed handling rates shall not exceed the Offeror's T4NG Basic Contract (Attachment 012, Price Methodology) for the entire Task Order period, inclusive of all options. The government will verify the Offeror's calculation of the total proposed T&M travel and material.

For the FFP portion, the Government will evaluate price by adding the total of all line item prices, including all options. The total evaluated price will be the sum of the T&M line items and the FFP line items for the entire Task Order period, including all options, and optional tasks.

All prices shall be rounded to the nearest cent. The Government reserves the right to correct any rounding errors and/or any mathematical errors identified in the Offeror's TEP.

C. Further Information:

Please post any technical questions you may have regarding this effort to the VOA ATOMS by May 13, 2019 and the Contracting Officer will coordinate a response.

Questions directed to the customer are prohibited.

T4NG-0441 - Appeals Modernization Caseflow Development and Support

If you have any procedural questions, please call or email one of the following:

David Melton, Contract Specialist at 732-795-1143, David.Melton@va.gov

Joshua Cohen, Contracting Officer at 732-440-9696, Joshua.Cohen2@va.gov

D. Clauses/Provisions:

GOVERNING LAW:

Federal law and regulations, including the Federal Acquisition Regulations (FAR), shall govern this Contract/Order. Commercial license agreements may be made a part of this Contract/Order but only if both parties expressly make them an addendum hereto. If the commercial license agreement is not made an addendum, it shall not apply, govern, be a part of or have any effect whatsoever on the Contract/Order; this includes, but is not limited to, any agreement embedded in the computer software (clickwrap), any agreement that is otherwise delivered with or provided to the Government with the commercial computer software or documentation (shrinkwrap), or any other license agreement otherwise referred to in any document. If a commercial license agreement is made an addendum, only those provisions addressing data rights regarding the Government's use, duplication and disclosure of data (e.g., restricted computer software) are included and made a part of this Contract/Order, and only to the extent that those provisions are not duplicative or inconsistent with Federal law, Federal regulation, the incorporated FAR clauses and the provisions of this Contract/Order; those provisions in the commercial license agreement that do not address data rights regarding the Government's use, duplication and disclosure of data shall not be included or made a part of the Contract/Order. Federal law and regulation including, without limitation, the Contract Disputes Act (41 U.S.C. § 7101 *et seq.*), the Anti-Deficiency Act (31 U.S.C. § 1341 *et seq.*), the Competition in Contracting Act (41 U.S.C. § 3301 *et seq.*), the Prompt Payment Act (31 U.S.C. §3901 *et seq.*), Contracts for Data Processing or Maintenance (38 USC § 5725), and FAR clauses 52.212-4, 52.227-14, 52.227-19 shall supersede, control, and render ineffective any inconsistent, conflicting, or duplicative provision in any commercial license agreement. In the event of conflict between this Clause and any provision in the Contract/Order or the commercial license agreement or elsewhere, the terms of this Clause shall prevail. Claims of patent or copyright infringement brought against the Government as a party shall be defended by the U.S. Department of Justice (DOJ). 28 U.S.C. § 516. At the discretion of DOJ, the Contractor may be allowed reasonable participation in the defense of the litigation. Any additional changes to the Contract/Order must be made by contract/order modification (Standard Form 30) and shall only be effected by a warranted Contracting Officer. Nothing in this Contract/Order or any commercial license agreement shall be construed as a waiver of sovereign immunity.

SOFTWARE LICENSE, MAINTENANCE AND TECHNICAL SUPPORT:

(1) Definitions.

(a) Licensee. The term “licensee” shall mean the U.S. Department of Veterans Affairs (“VA”) and is synonymous with “Government.”

(b) Licensor. The term “licensor” shall mean the contractor having the necessary license or ownership rights to deliver license, software maintenance and support of the computer software being acquired. The term “contractor” is the party identified in Block 17a on the SF1449. If the contractor is a reseller and not the Licensor, the contractor remains responsible for performance under this order.

(c) Software. The term “software” shall mean the licensed computer software product(s) cited in the Schedule of Supplies/Services.

(d) Maintenance. The term “maintenance” is the process of enhancing and optimizing software, as well as remedying defects. It shall include all new fixes, patches, releases, updates, versions and upgrades, as further defined below.

(e) Technical Support. The term “technical support” refers to the range of services providing assistance for the software via the telephone, email, a website or otherwise.

(f) Release or Update. The term “release” or “update” are terms that refer to a revision of software that contains defect corrections, minor enhancements or improvements of the software’s functionality. This is usually designated by a change in the number to the right of the decimal point (e.g., from Version 5.3 to 5.4). An example of an update is the addition of new hardware.

(g) Version or Upgrade. The term “version” or “upgrade” are terms that refer to a revision of software that contains new or improved functionality. This is usually designated by a change in the number to the left of the decimal point (e.g., from Version 5.4 to 6).

(2) Software License

(a) Unless otherwise stated in the Schedule of Supplies/Services, the Performance Work Statement or Product Description, the software license provided to the Government is a perpetual, nonexclusive license to use the software

- (b) The Government may use the software in a networked environment.
- (c) Any dispute regarding the license grant or usage limitations shall be resolved in accordance with the Disputes Clause incorporated in FAR 52.212-4(d).
- (d) All limitations of software usage are expressly stated in the Schedule of Supplies/Services and the Performance Work Statement/Product Description.

(3) Software Maintenance and Technical Support

- (a) If the Government desires to continue software maintenance and support beyond the period of performance identified in this contract or order, the Government will issue a separate contract or order for maintenance and support. Conversely, if a contract or order for continuing software maintenance and technical support is not received the contractor is neither authorized nor permitted to renew any of the previously furnished services.
- (b) The contractor shall provide software support services, which includes periodic updates, enhancements and corrections to the software, and reasonable technical support, all of which are customarily provided by the contractor to its commercial customers so as to cause the software to perform according to its specifications, documentation or demonstrated claims.
- (c) Any telephone support provided by contractor shall be at no additional cost.
- (d) The contractor shall provide all maintenance services in a timely manner in accordance with the contractor's customary practice or as defined in the Performance Work Statement/Product Description. However, prolonged delay (exceeding 2 business days) in resolving software problems will be noted in the Government's various past performance records on the contractor (e.g., www.ppirs.gov).
- (e) If the Government allows the maintenance and support to lapse and subsequently wishes to reinstate it, any reinstatement fee charged shall not exceed the amounts that would have been charged if the Government had not allowed the subscription to lapse.

(4) Disabling Software Code. The Government requires delivery of computer software that does not contain any code that will, upon the occurrence or the nonoccurrence of any event, disable the software. Such code includes

T4NG-0441 - Appeals Modernization Caseflow Development and Support

but is not limited to a computer virus, restrictive key, node lock, time-out or other function, whether implemented by electronic, mechanical, or other means, which limits or hinders the use or access to any computer software based on residency on a specific hardware configuration, frequency of duration of use, or other limiting criteria. If any such disabling code is present, the contractor agrees to indemnify the Government for all damages suffered as a result of a disabling caused by such code, and the contractor agrees to remove such code upon the Government's request at no extra cost to the Government. Inability of the contractor to remove the disabling software code will be considered an inexcusable delay and a material breach of contract, and the Government may exercise its right to terminate for cause. In addition, the Government is permitted to remove the code as it deems appropriate and charge the Contractor for consideration for the time and effort expended in removing the code.

(5) Manuals and Publications. Upon Government request, the contractor shall furnish the most current version of the user manual and publications for all products/services provided under this contract or order at no cost.

FAR 52.227-01	AUTHORIZATION AND CONSENT (DEC 2007)
FAR 52.227-02	NOTICE & ASSISTANCE REGARDING PATENT & COPYRIGHT INFRINGEMENT (DEC 2007)
FAR 52.227-03	PATENT INDEMNITY (APR 1984)
FAR 52.227-14	RIGHTS IN DATA – GENERAL (DEC 2007) ALT. IV (DEC 2007)
FAR 52.227-16	ADDITIONAL DATA REQUIREMENTS (JUN 1987)

FAR 52.217-7 Option for Increased Quantity—Separately Priced Line Item (MAR 1989)

The Government may require the delivery of the numbered line item, identified in the Schedule as an option item, in the quantity and at the price stated in the Schedule. The Contracting Officer may exercise the option by written notice to the Contractor at any time during the period of performance. Delivery shall be in accordance with the Schedule. The Basic Contract is effective for purposes of issuing this option. All terms and conditions of Basic Contract shall govern the Contractor's and Government's rights and obligations for the full term of this option, if exercised.

(End of clause)

T4NG-0441 - Appeals Modernization Caseflow Development and Support

FAR 52.217-9 – Option to Extend the Term of the Contract (MAR 2000)

(a) The Government may extend the term of this Order by written notice to the Contractor at any time prior to expiration of the period of performance; provided that the Government gives the Contractor a preliminary written notice of its intent to extend at least 15 days before the Order expires. The preliminary notice does not commit the Government to an extension.

(b) If the Government exercises this option, the extended contract shall be considered to include this option clause. The Basic Contract is effective for purposes of issuing this option. All terms and conditions of Basic Contract shall govern the Contractor's and Government's rights and obligations for the full term of this option, if exercised.

(c) The total duration of this contract, including the exercise of any options under this clause, shall not exceed 48 months.

(End of clause)

FAR 52.227-19 COMMERCIAL COMPUTER SOFTWARE LICENSE (DEC 2007)

(a) Notwithstanding any contrary provisions contained in the Contractor's standard commercial license or lease agreement, the Contractor agrees that the Government will have the rights that are set forth in paragraph (b) of this clause to use, duplicate or disclose any commercial computer software delivered under this contract. The terms and provisions of this contract shall comply with Federal laws and the Federal Acquisition Regulation.

(b)(1) The commercial computer software delivered under this contract may not be used, reproduced, or disclosed by the Government except as provided in paragraph (b)(2) of this clause or as expressly stated otherwise in this contract.

(2) The commercial computer software may be—

(i) Used or copied for use with the computer(s) for which it was acquired, including use at any Government installation to which the computer(s) may be transferred;

(ii) Used or copied for use with a backup computer if any computer for which it was acquired is inoperative;

(iii) Reproduced for safekeeping (archives) or backup purposes;

(iv) Modified, adapted, or combined with other computer software, provided that the modified, adapted, or combined portions of the derivative software incorporating any of the delivered, commercial computer software shall be subject to same restrictions set forth in this contract;

(v) Disclosed to and reproduced for use by support service Contractors or their subcontractors, subject to the same restrictions set forth in this contract; and

(vi) Used or copied for use with a replacement computer.

T4NG-0441 - Appeals Modernization Caseflow Development and Support

(3) If the commercial computer software is otherwise available without disclosure restrictions, the Contractor licenses it to the Government without disclosure restrictions.

(c) The Contractor shall affix a notice substantially as follows to any commercial computer software delivered under this contract:

Notice—Notwithstanding any other lease or license agreement that may pertain to, or accompany the delivery of, this computer software, the rights of the Government regarding its use, reproduction and disclosure are as set forth in Government Contract No. _____.

(End of Clause)

VAAR 852.219-10 VA NOTICE OF NOTICE OF TOTAL SERVICE-DISABLED VETERAN-OWNED SMALL BUSINESS SET-ASIDE (JUL 2016) (DEVIATION)

(a) Definition. For the Department of Veterans Affairs, “Service-disabled veteran-owned small business concern or SDVSOB”:

(1) Means a small business concern:

- (i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans or eligible surviving spouses (see VAAR 802.201 Surviving Spouse definition);
- (ii) The management and daily business operations of which are controlled by one or more service-disabled veterans (or eligible surviving spouses) or, in the case of a service-disabled veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran;
- (iii) The business meets Federal small business size standards for the applicable North American Industry Classification System (NAICS) code identified in the solicitation document;
- (iv) The business has been verified for ownership and control pursuant to 38 CFR 74 and is so listed in the Vendor Information Pages database, (<https://www.vip.vetbiz.gov>); and
- (v) The business will comply with subcontracting limitations in 13 CFR 125.6, as applicable

(2) “Service-disabled veteran” means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

(b) General.

T4NG-0441 - Appeals Modernization Caseflow Development and Support

(1) Offers are solicited only from verified service-disabled veteran-owned small business concerns. Offers received from concerns that are not verified service-disabled veteran-owned small business concerns shall not be considered.

(2) Any award resulting from this solicitation shall be made to a verified service-disabled veteran-owned small business concern.

(c) Agreement. A service-disabled veteran-owned small business concern agrees that in the performance of the contract, the concern will comply with the limitation on subcontracting requirements in 13 CFR §125.6.

(d) A joint venture may be considered a service-disabled veteran owned small business concern if the joint venture complies with the requirements in 13 CFR 125.15, provided that any reference therein to SDVO SBC is to be construed to apply to a VA verified SDVOSB as appropriate.

(e) Any service-disabled veteran-owned small business concern (non-manufacturer) must meet the requirements in FAR 19.102(f) of the Federal Acquisition Regulation to receive a benefit under this program.

(End of Clause)

E. Attachments:

Attachment 1 – VA DevOps Release Guide

Attachment 2 – T4NG O&IT Contractor BAA Template



The Acquisition that Helped the Department of Veterans Affairs Modernize Its Claims Appeals System

SUMMARY

This case study provides the following information:

- How a coding exercise was used to select a vendor
- How a digital service team met the need for additional development support services
- Lessons learned from conducting this type of acquisition
- Documents used in the solicitation

Level of Acquisition: **Expert**

The acquisition team conducting this was trained in digital service acquisition techniques and the agency's technical evaluation and implementation team is comprised of digital service experts.

By Clair Koroma and Brent Maravilla
U.S. Digital Service, Executive Office of the President

The VA competitively awarded a task order for digital services off of the agency's Indefinite Delivery Indefinite Quantity (IDIQ) contract vehicle called Transformation Twenty-One Total Technology Next Generation (T4NG). A coding exercise was leveraged as part of the evaluation.

Background

Every day, Veterans apply for health benefits from the Department of Veterans Affairs (VA). Those whose claims are denied can file an appeal to the Court of Veteran Appeals by using the VA's Enterprise Appeals Process. However, customers using the system encountered several issues that prevented them from completing the appeals process online. These issues, coupled with other systemic inefficiencies, meant that hundreds of thousands of Veterans endured waiting for long periods of time for a claim to be resolved.

To help resolve the technological inefficiencies in the claims process, the U.S. Digital Service embedded a team at the VA. Their work focused on modernizing the VA's Enterprise Appeals Process to enable efficient adjudication of appeals. On arrival, the team began to quickly develop remedies to fix the system. In order to continue the pace of work, they realized they needed more developer support. They decided to use a vendor to provide the additional developer support services to execute the project on the scale needed.

To ensure they got the right team to assist on this project, they evaluated the offerors with a coding exercise. This case study tells the story.

Lessons Learned

1. In a coding exercise, ensure you have the technical talent on the evaluation team that knows how to evaluate quality of code submission.
2. Technical team should have ability to understand and replicate an ideal submission.
3. Determine if it is necessary to have a written submission when doing a exercise. The written portion can present an additional financial burden to the company that may not be necessary if evaluating the code submission will provide sufficient insight into technical ability of company.
4. Consider use of a 2-step (down-select) process in the solicitation to decrease vendors' bid and proposal costs
5. If requiring a written portion, consider when is the best time to require it. In the case of this acquisition, vendor feedback indicated that upfront submission of the written portion was preferred since the code submission was more expensive.
6. Within the evaluation, the Government should be cautious about imposing go/no go wording. For example, stating within Code Quality a requirement that "there are no flagrant misspellings or typos" can become very binary, and lead to unwanted deficiencies.
7. Consider whether your evaluation criteria allows for sufficient strengths and weaknesses.
8. Prior to the solicitation, ensure that your team clearly understands potential deficiencies. For example, must the vendor complete all user stories or are there specific stories that are key? During the evaluation phase, the team realized that ***theoretically*** a vendor could have made an excellent submission even if they had not completed all user stories."

9. Much of the coding evaluation made for a very objective analysis (e.g. Specific security vulnerability identified), which is helpful to both parties for debriefing purposes.

The Problem

The Digital Service team at the VA had two developers on arrival. Those two developers began work on modernizing the VA's Enterprise Appeals Claims system. On delivery, their work would help alleviate the backlog in claims appeals that prevented veterans from getting benefits. As work progressed, it became clear that in order to continue the rapid pace of development, additional developer support was required. Using a vendor to maintain the dev pace was the fastest way to get high-quality support on the project. The vendor that could best meet the needs of the product would have developers with expertise in agile development, user-centered design, User Experience(UX) research, modern technology stacks, and DevOps. The question was how would they find this vendor? More importantly, how could they verify developer acumen in the aforementioned areas **before** contract award? Simple, they needed an innovative evaluation approach.

Finding A Solution

A hybrid VA-Digital Service team, including Contracting Officer Mark Junda, Contract Specialist Brandon Caltabilota (both graduates of USDS' Digital IT Acquisitions Professional(DITAP) Contracting Officer training), Digital Service Expert (design), Kavi Harshawat, and Digital Service Expert (engineering), Shane Russell worked together to devise an innovative evaluation for submissions and unique acquisition strategy that were uncommon in their approach. Leveraging the use an IDIQ vehicle for the VA, the team hypothesized that they could use a code exercise to reach the right vendors. Although unconventional, a code Wil offered the best opportunity for a vendor to demonstrate how they would build a modern digital tool. It also presented the VA team with substantive code upon which the vendor could be evaluated. In theory this would help the VA to successfully identify a vendor who could help continue the pace and scale of the modernization work on the appeals system.

A Unique Contracting Approach

Separate contractual requirements from functional requirements

The VA anticipated that functional requirements will change, which is normal, and therefore separated contractual requirements from functional requirements. Since their contractual requirements indicate a repeatable process that results in working software code, this allows functional requirements to change as user needs change. The functional requirements can change without a modification because the changes to the features are within the general scope of the contract. For example, instead of adding contractual requirements that dictated the specifics of a user story like "the screen shall be blue" the requirement was "backlog of user stories shall be completed by the vendor." This enabled the VA to reference the user stories as a requirement and allow for changes to the backlog as needed without contract modification.

Market intelligence

VA heavily leverages its T4NG IDIQ for software development services.

Next the team had to develop a solicitation for the support services that evaluated vendors based on a coding exercise. Why a coding exercise? This is a common method used in commercial companies to help them selecting the right talent and vendors. It is also a common practice used by established software firms during their hiring processes. Therefore, it made sense to use this method to select the right vendor to provide digital services to the government.

Show Don't Tell

Imagine it's time for show and tell. Two kids show toys that day. The first, showed the class how to build a toy while continuously asking classmates what they wanted the toy to do. She modified it based on their feedback. She even had different classmates try the toy as she was building it and made changes for better functionality. The second, built an amazing toy step by step while the class watched. He never gathered feedback from the class during the build. After several kids tried each toy, most preferred the custom toy. Conversely, the toy built without any mods or changes based on class feedback, was seldom used because many of the kids found that it was difficult to maneuver use its features.

Sadly, the latter experience in this story is very similar to what normally happens when the Government buys IT. A company gives a shiny description of how they will deliver a digital service or tool, but absent a demo of their skillset to deliver it, or incorporation of user feedback as they work on the end product, we often end up with things that do not work for users.

In order to avoid that experience in their procurement, the VA team worked with the Technology Acquisition Center (TAC) to design a RFQ that included a coding exercise. While bidders had to submit a traditional written response that included management approach, technical approach, etc., they also had to demonstrate how they would get the work done.

The following is how the acquisition was executed:

1. The VA Digital Service team designed the coding exercise parameters they wanted tested and then validated that the exercise could actually be run in the environment and timeframe they wanted to include in the solicitation. They used digital service team members from other teams as well as ran the tests themselves to validate.
2. The Request for Task Execution Plan (RTEP) detailing the full requirement was released as a Service-Disabled Veteran-Owned Small Business set aside on the T4NG. It included the coding exercise submission instructions and evaluation approach. At this point the vendors could begin working on the response to the price and the written technical portion. The RTEP also provided guidance on the coding submission and detailed how the submission would be evaluated.
3. After release of the RTEP, VA provided notice that the coding submission information would be posted at a certain date/time.

4. At the appointed time, nine user stories (*See Appendix 1*) were released on the T4NG repository where RTEPs are posted and proposals are submitted. Upon release, vendors had 4 hours to submit questions and the VA had 2 hours to respond to all questions.
5. Vendors had 72 hours, from time of release, to provide a code submission.
6. A detailed evaluation criteria (*See Appendix 2*) was developed to guide offerors on the requirements for successful completion of the exercise
7. The exercise required the offerors to build an online payment system (venmo clone). The clone required extensive security considerations, so there were many opportunities for excellence OR mistakes!
8. The source code for the coding submission and all relevant design assets and documentation were submitted via github repository with a clearly viewable commit history of the entire development process.
9. Offerors formally certified that "the team who developed and designed the coding submission are proposed as key personnel to perform work under the resulting task order barring any unforeseen circumstances"

Evaluate the Right Things

The typical evaluation criteria wasn't going to work. The team consulted with GSA's 18F team about their experiences running a coding exercise to select vendors for their agile Blanket Purchase Agreement (BPA). Some key suggestions from 18F included using automated testing to quickly show weaknesses or strengths in a vendors' code base AND specifying the coding language for the submissions. The team then developed criteria that properly evaluated the quality of the submitted code and design.

The team used a combination of:

1. Evaluation criteria in the RFQ that was written to allow for innovative approaches to the exercise, and
2. Specific validation that enabled the team to evaluate submissions uniformly against the criteria.

An example of how this approach was used to evaluate submissions is in the following table:

Criteria	Validation
Tests fail when functionality is broken	“(I’d) go into every code base, break something, and then run the (vendor’s) test and make sure the test failed. And I did that with 5 separate things in every (vendor’s) code base” – Shane Russell, USDS
Accounts for high volumes and heavy loads	“(we wrote) a script to load 10,000 transactions into each vendor’s (application?), then load (the vendor’s) webpage. And if it took more than 20 seconds (to load) then they failed and it was a weakness” – Shane Russell, USDS

This combined evaluation approach was only possible because of the visibility that a coding exercise provides. Ultimately, that approach proved to be effective in identifying the best vendor. Submissions were evaluated against seven development categories and four design categories, each with subcomponents (See [Appendix 2: Evaluation Criteria](#)).

Results

The team received six submissions that each took 4-6 hours to evaluate. The rubric and evaluation criteria allowed the technical team to evaluate and select the vendor offering the best value and expertise for the project requirements. This submission style also gave way to well-informed debriefs that likely contributed to zero protest actions on the award. Ability to review code prior to contract award allowed:

1. Test of the submitted code for errors that would be fatal to project success
2. Determination of best code based on hard evidence of work completed in direct response to the RFQ, not just a narrative of how the vendor would accomplish requested tasks.
3. Ability to identify the vendor with the developers that met the VA needs

Task Order Award Details

The period of performance is for a base plus 2 option years for a total awarded amount of \$13,946,873.

Contract Type: This order was awarded as a hybrid Time & Materials (T&M) and Firm Fixed Price (FFP) task order. The development support services are primarily T&M since they meet the main need: providing dev support for the blended government/contractor development and design team implementing the new Appeals system.

Solicitation Time Frame: From identification of need to award took 7 months. This included the entirety of creating and revising all acquisition documents, market research, selection of most suitable contract vehicle, solicitation, evaluation, and award. The evaluation timeframe took about 1.5 months, but some of this was impacted by coordinating team schedules and the newness of writing evaluations based on evaluating software code.

Milestones in Modernizing the Appeals System Since Contract Award

1. Product, Caseflow Dispatch moved from idea (before requirements gathering) to implementation in 5 months. This product ensures that all decisions made at the Board are uploaded to the proper VA systems, and that the claims are properly adjusted. This will close a gap through which thousands of appeals could get lost. The product also standardizes and correctly routes decisions of over 20 categories to over 70 VA offices around the country that use differing mechanisms for managing their work.
2. Prototyped a document reader that can greatly speed attorney workflows at the board, which would have a direct effect on the speed at which the backlog appeals are processed.
3. Automating Form 8, which is a part of the process for transferring appeals from regional offices to the Board of Veterans' Appeals (BVA). This streamlines the process and speed up the rate at which appeals can be transferred to the BVA.

Conclusion

Incorporating a coding exercise into a digital services acquisitions better positions a team to select the right vendor to meet their needs. It allows teams the opportunity to work with a potential vendor in real time to learn about their capacity to deliver the quality of digital services needed. Additionally, it allows vendors an opportunity to learn the maximum amount of details to best respond for an RFQ.

Appendix 1. User Stories

Cashflow is a desktop web application where people can send money to each other, along with a message. It allows for users that use different currencies.

Login

- As a user,
- When I visit the login page,
- Then there will be a form where I can enter my username and password.
- When I enter a valid password for a given username, And submit the form, Then I should be redirected to the account page, logged in.
- Additional Information:
- There should be a database of users that are capable of being authenticated with passwords.
- Users should be creatable by a database administrator.

Failed Login

- As a user,
- When I visit the login page,
- And I enter an unknown username, or a password that does not match the username I entered, Then I should see an error, stating that my username and password did not match, and I should not be logged in.

Account Page - Not Logged In

- As a user,
- When I attempt to visit the account page, And I'm not logged in, Then I should be redirected to the login page.

Account Page - Show basic Information As a user, When I'm logged in and visit the account page, I should see

- My username
- My account balance - the total amount of money I have, listed in my home currency.
- Additional info:
- There are three currencies that can be used to store money: Purple Dollars, Gold Dollars, and Silver Dollars.
- Each user should have a home currency, which is the currency that their balance is stored in.

Bank Transactions

- As a database administrator,
- I should be able to create a transaction to give any user any amount of money
- in any currency from the "International World Bank". The bank has an unlimited amount of money.
- This can be done in the database or via a script, and does not require a web UI.

Account Page - Create Transaction

- As a user,
- When I'm logged in and visit the account page,
- I should see a transaction form with a "Recipient Username" field,
- an "Amount" field, and a "Message" field.
- When I enter the username of a user who has the same home currency as I do,
- And I enter a numeric value into the amount field,
- And I optionally enter a string into the message field,
- And I submit the transaction form,
- Then a transaction will be created for the specified amount from me to the user matching the username field. The entered message should also be associated to the transaction.
- And my account balance should be immediately updated to reflect the lost money that I sent, without reloading the entire page.
- And the next time the recipient visits their account page, their account balance should reflect the money that they received.

Account Page - Show Transactions

- As a user,
- When I'm logged in and I visit the account page,
- I should see a list of all transactions where I have given or received money, along with the usernames, and messages for those messages.
- And transactions should be listed in reverse chronological order, with the most recent transaction on top.
- And the amount listed for transactions where I gave money should be red, and be a negative number. (i.e. -20)
- And the amount listed for transactions where I received money should be green, and have a positive value.
- All amounts should be shown in my home currency.
- When I successfully submit a transaction,
- The transaction list should update without reloading the entire page.
- Additional Info: Transaction amounts should be truncated at 2 decimal places.

Account Page - Validate transaction

- As a user,

- When I'm logged in and I visit the account page,
- When I try and submit a transaction with a username that does not match any user in the database,
- Then I should see an error, telling me that the user was not found.
- And a transaction is not created.
- When I try and submit a transaction with an amount greater than my account balance,
- Then I should see an error, telling me that I do not have enough money to complete that transaction.
- And a transaction is not created.
- When I try and submit a transaction with an amount with no username or amount filled in,
- Then I should see an error, telling me that I need to fill in the required fields.
- And a transaction is not created.
- **Additional Info:** Unsuccessful transactions should not update the displayed account balance.

Account Page - Create Transaction Requiring Exchange

- As a user,
- When I successfully submit the transaction form from the account page,
- And the recipient has a different home currency than me,
- Then two transactions should be created,
 - 1) From me to the bank in my home currency
 - 2) From the bank to the recipient in the recipient's home currency
- The amount of 2) should be based on an exchange rate from my home currency to the recipient's home currency (see additional information below).
- And I should see just one transaction from myself to the recipient in the transaction list. The amount should show up in my home currency.
- As a recipient of the transaction,
- I should see one transaction in my transaction list, with the amount displayed in my own currency.
- **Additional information:**
 - The exchange rates are as follows:
 - 7.25 Silver Dollars = 1 Purple Dollar
 - 2 Gold Dollars = 1 Purple Dollar
- The bank, as a nonprofit, will exchange money without taking a percentage of the transaction.
- Transaction amounts should continue to be truncated at 2 decimal places. The system should round values such that the bank does not lose fractions of money on transactions.
- **Security Concerns**

- Users should not be able to steal money from the bank or each other.
- All transaction data is considered private between the receiver and the sender.
- Users should not have access to transactions where they are neither the sender
- or receiver.

Appendix 2. Coding Exercise Evaluation Criteria

Traditional Requirements

A detailed description and diagram of the Offeror's approach to architecting and implementing a secure, scalable, automated, fault-tolerant system that supports the ongoing integration of developed appeals-centric features and products in accordance with PWS paragraph 5.2.1.

A description of the Offeror's approach to applying the design and development principles that will be used for the coding submission across the life of the task order to meet the continuous deployment requirements defined in PWS paragraph 5.2.2.2 for the products defined in PWS paragraph 5.2.1.

The Offeror's detailed solution of the planned management methodology for executing the effort, including a proposed staffing approach, key personnel retention, security clearance considerations, and details of how the proposed effort will be assigned within the Offeror's corporate entity and among proposed subcontractors.

Innovative Requirements

Coding Submission: The Offeror shall **develop** an application adhering to the requirements defined in Section B(3)(a)(3) Coding Submission and, in addition, shall be evaluated by the Government in seven categories as follows:

Security

- No blatantly exploitable vulnerability or failed automated security checks
- No other vulnerabilities discovered
- Threat mitigation techniques implemented

Testing

- Automated tests written
- All tests pass
- Not missing an entire category of tests (feature or unit)
- Code coverage meets standards set by SimpleCov
- There are JavaScript tests, if appropriate
- The tests are easy to read/understand
- The tests are well organized
- There is no duplicated/unnecessary testing
- Tests fail when functionality is broken

Database/Data Modeling

- Data is organized into logical objects
- Data is not stored in multiple places, without reason
- Indexes are present for primary operations so that tables can handle 100,000 or more rows
- Data is pragmatically normalized
- Data is easy to query/understand

- Naming is clear with consistent conventions
- Correct data types are used
- Proper constraints exist
- Seed data exists, when applicable

DevOps

- Deployed solution
- Deployed solution does not require repeated manual configuration
- Deployment automation is testable without a host machine (e.g., using Vagrant, etc.)
- Development Environment setup is repeatable and not error prone.
- Deployment automation is well written and organized

Code Quality

- There is no duplication of logic
- Controllers split based on restful resources
- JavaScript is encapsulated
- JavaScript is written in its own file, in-markup JavaScript is limited
- There are no flagrant misspellings or typos
- Makes use of SASS variables
- Uses bourbon to reduce code involved in advanced CSS, if relevant
- Classes and methods are terse and do one thing
- The code is easy to understand (comments can help)
- The code is easy to change and maintain.
- Commit messages are clear. Why changes are made is explained, if relevant.
- Uses rails features and conventions when relevant
- Keeps business logic outside of controllers, in models and service objects
- There is limited logic in ERB templates, formatting logic is delegated to helpers
- Avoids creating unnecessary boilerplate files and code
- Passes all automated linters

Application Quality

- Edge cases are properly handled
- Uses restful routes with short, readable URLs
- The root goes to account page
- Accounts for high volumes and heavy loads
- All interactive elements are in a sensible tab order (for accessibility)
- Page is accessible and 508 compliant
- Incorporates CSS animations
- Follows visual design documents
- Appropriate HTTP response codes are used
- Does not generate HTTP 500 status

Documentation

- Assumptions are documented
- Includes development environment setup documentation
- Technical decision making and architecture documented, including a diagram of major infrastructure components.

Coding Submission: The Offeror shall ***design*** an application adhering to the requirements defined in Section B(3)(a)(3) Coding Submission and, in addition, shall be evaluated by the Government in four categories as follows:

Visual Design

- Color palette and contrast
- Consistency in fonts, colors, weights, spacing
- Hierarchy of information
- Creation, delivery, and quality of visual assets such as icons or images
- Creation of a visual system, style guide, or re-usable visual patterns
- Minimalism
- Use of USWDS visual style (typography, color palette, grid relevant interface components)
- Extension of USWDS where appropriate

User Research

- Spoke with one or more users
- Prepared and conducted formal usability studies
- Documentation of findings
- Presentation of findings
- Used feedback to improve the application
- Choice and appropriateness of research methods

Interaction Design

- Designed using wireframes, sketches or high fidelity mockups
- Demonstration of design iteration
- Clear errors messaging and follow up actions
- Affordance and discoverability
- Progressive disclosure
- Indication of system status
- Mapping of interaction inside and between pages
- Consideration of alternate design directions
- Organization of information
- Fidelity of design assets delivered to developers
- Use of common interaction design patterns

Thoroughness

- Includes interaction, functionality, and design not specified in the coding submission instructions
- Handling of edge cases
- Page titles and section headings
- Pagination
- Motion design and animation
- Design coherence
- Error prevention
- Contextual help and documentation
- Ease of implementation