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# WHATS INCLUDED

Customer Requirements (this document)

Appendix A – Award Questionnaire (template to be completed)

Appendix B – Supplier Pricing Matrix (template to be completed)

Appendix C – Call-Off Contract (Part A&B) (Customer specific terms)

– Call-Off Contract (Part C) (Standard Terms and Conditions)

Appendix D – Supplier List for Partnering Possibilities (if applicable)

Any supplier invited to tender who has NOT returned their signed framework agreement for RM1043ii Digital Services 2 will NOT pass compliance check post-bid for this project, and therefore their response will NOT be evaluated. Should any supplier have any questions regarding their status, please contact CCS via the eSourcing suite.

OVERVIEW

|  |  |
| --- | --- |
| CCS Project Lead: | Lucy McCormack |
| Customer: | Dstl/MOD |
| Delivery Location: | Dstl Porton Down |
| Phase(s): | Discovery, Alpha, Beta |
| Project: | DS02- 042 |
| Required Capabilities: | Include, but are not limited to: (mark those that apply) Software engineering and On-going Support  Agile Product Design & Delivery  Front-End Design and Interaction design  System Administration and Web Operations |
| Subcontracting Permitted? | Yes  No |
| Supplier Partnering Permitted? | Yes  No |
| Contract Charging Mechanism (Discovery Phase): | Fixed Price |
| Contract Charging Mechanism (Alpha Phase): | Capped Time and Materials |
| Contract Charging Mechanism (Beta Phase): | Capped Time and Materials |
| Tender Publish Date: | 12/10/2015 |
| Tender Submission Deadline: | 26/10/2015 |
| Proposed length of phase: | Discovery: 18/11/2015 – 01/12/2015;Alpha: 02/12/2015 – 15/12/2015;Beta: 04/01/2015 – 12/02/2015 |
| Proposed Commencement Date of Project: | 23/11/2015 |
|  |  |

LOTTING STRUCTURE

## The Customer has structured this procurement as follows:

|  |  |
| --- | --- |
| **Lot 1** | Software engineering and on-going support, agile product design and delivery, front-end design and interaction design, system administration (and web operations). |

TIMESCALES

The Customer or CCS may change this timetable at any time. The Potential Provider will be informed by email if there are any changes to this timetable.

## It is the Potential Provider’s responsibility to monitor the online messaging facility (e-Sourcing).

|  |  |  |
| --- | --- | --- |
| **DATE** | **WHO** | **ACTIVITY** |
| 12/10/2015 | CCS | **Publish requirements to Potential Providers**  Clarification period starts |
| 15/10/2015 | CCS, Customer & Potential Providers | **Clarification Webinar 14:00**  Invite to webinar will be issued via the CCS eSourcing Suite. All questions and responses will be published via eSourcing Suite. |
| 20/10/2015 | Potential Providers | **Clarification Question period closes**  Please submit all clarification questions by 23:59hrs  Please note that we aim to publish all response to Q&A within 24hrs |
| 26/10/2015 | Potential Providers | **Submission Deadline**  Potential Provider must upload submission to the eSourcing suite by 12:00noon |
| 09-10/11/2015 | Potential Providers & Customer | **Demonstration and Scrutiny**  Face-to-face demonstration.  Code testing not required. |
| 12/11/2015 |  | **Award Notification**  Publish Successful and un-successful Potential Providers. |
| 18/11/2015 |  | **Expected "Commencement Date" for Call-Off Contract/s** |

KEY DELIVERY DATES

|  |  |  |
| --- | --- | --- |
| PROJECT PHASES | START DATE | COMPLETION DATE |
| [Discovery](https://www.gov.uk/service-manual/phases/discovery.html)  Relatively short discovery period to hold project kick-off meeting, inspect and understand existing artefacts, understand user needs in meetings with users and Dstl developers. For the authentication work, this may involve more complicated understanding of existing architecture (PKI, existing ADs). | 18/11/2015 | 01/12/2015 |
| [Alpha](https://www.gov.uk/service-manual/phases/alpha.html)  2 week Alpha to upgrade and improve existing codebase and conduct initial user testing. If existing code is not used, the duration of the Alpha could be increased. Note: the exact duration of this phase will be informed by Discovery and more detailed planning. | 02/12/2015 | 15/12/2015 |
| [Beta](https://www.gov.uk/service-manual/phases/Beta.html)  Relatively long Beta period to ensure there is enough time to engage busy users and enough time for Dstl developers to test out aspects of Lot 1 and 2. It accounts for Christmas leave period too. | 04/01/2016 | 12/02/2016 |
| Live  This is subject to further discussions with MOD ISS and the success of the Discovery, Alpha and Beta. | Click here to enter a date. | Click here to enter a date. |

# 

**CURRENT SITUATION / BACKGROUND INFORMATION**

**Background and Aims**

The team running this contract is responsible for developing services and applications to support defence intelligence analysis. The team has developed an approach to service development and deployment that is based on the government digital services manual within the constraints of ICT network ownership and the remit of Dstl as a science and technology organisation supporting core MOD units. The approach is underpinned by:

* Iterative development
* The importance of user engagement in defining requirements and shaping the product - where our users are MOD intelligence analysts.
* The development community and Ops sharing a common understanding of the different phases of service maturity. This includes the levels of support, availability and testing associated with each phase of maturity.
* Only developing web-based services and applications (initially). The installation of new software is very tightly controlled on the users primary operational (production) networks, so a clear focus on web technologies allows us to maintain control of our deployment setup and schedules.

In addition to the phases of service maturity (Discovery, Alpha, Beta, Live), the team uses a model to categorise the functions of the different ICT networks used to develop, test, deploy and operate the services. The model recognises 3 levels - Bronze (purely development environments), Silver (a testing environment hosting web services accessible by (limited sets of) users from their day-to-day operational ICT) and Gold (a production environment). This setup provides us with Silver environments controlled by development teams and accessibly by users; a crucial combination in the iterative development of services.

Dstl is not responsible for contracts that cover the long-term support and iteration of services - that lies with the equipment procurement programmes within MOD. However, it is responsible for identifying and maturing services and assisting MODs programmes select those services that are technologically and scientifically sound, understand and meet user needs and provide government with value for money.

This contract focuses on one aspect of those responsibilities; understanding and meeting user needs. It aims to build a set of underpinning services to:

* Help users discover potentially useful applications and services.
* Help capture quantitative and qualitative feedback on how and the extent to which services are used.

**Existing Artefacts**

Authentication service

What have we done?

* Developed scripts (Ansible) for deploying and configuring OpenLDAP on a Linux server.
* Developed a lightweight front-end for managing users.

What haven’t we done?

* Written unit and integration tests
* Conducted user testing with developers would look to integrate the service
* Considered the full range of deployment environments
* Considered how we could use existing Active Domain (AD) records or Public Key Infrastructure information to identify and authenticate users. This will be an important part of the work for one of our deployment environments.

Usage Analytics.

What have we done?

* Installed, tested and experimented with ElasticSearch / Logstash / Kibana (known as ELK).
* Thought about how we would require all services to contribute to ELK data store.
* A limited set of deployment scripts.
* Considered the likely use cases for visualising this data.
* Made ourselves aware of, but have not experimented enough with FluentD and other similar software.
* Discussed how usage statistics could help inform procurement decisions for how MOD transitions applications and services from Silver (S&T owned and maintained at best efforts) to Gold (Operationally owned and maintained capabilities).
* Explored other user stories and use cases.

Application & Service Discovery:

What do we have / have we done?

* Built a prototype ‘application store’, including light-weight front-end.
* A lightweight UI that includes Create Read Update Delete (CRUD) for ‘apps’, image upload and the ability to add other metadata about the application including maturity level (Alpha or Beta).
* Written in Python (2.7) Flask.
* Some deployment scripts (Ansible), but not that include serving via Apache/Nginx through WSGI.
* A Mongodb backend
* Optional configuration to interface with OpenLDAP for user authentication.
* A few user demos (with positive feedback).

What don’t we have / haven’t we done?

* More comprehensive and better tested deployment scripts (Ansible).
* More thorough user engagement and testing to inform future work (or project end).
* Enough focus on data services rather than just UI apps.
* A more comprehensive schema to include service categorisation, tagging, user ratings, etc.
* An API to allow automated service discovery.
* Not enough work to ensure we can deploy it on non-internet connected networks.

CURRENT ROLES AND RESPONSIBILITIES OF THE CUSTOMER

|  |  |
| --- | --- |
| **Role** | **Responsibilities** |
| **Product Owner** | Responsible for decisions about where the product is going and whether it’s achieving its users needs. |
| **Developer user** | Responsible for testing whether usage analytics solution (technology and documentation) is practical and easy to integrate into services. |
| **System developer/administrator** | Responsible for testing whether usage analytics and application and service stores are practical and easy to deploy, maintain and upgrade. |
| **Users** | Dstl will provide initial user feedback (we have analysts as part of the team) and coordinate further testing with a broader set of users. |

CURRENT TECHNOLOGIES AND LANGUAGES

* See existing artefacts section above.
* The current technology has been shown to users and has received feedback, but it has not been tested by users. It is currently only available on development networks.

REQUIRED OUTCOMES

* An easily deployable web application that allows users to discover Alpha and Beta applications and services hosted within the Silver environment for user testing, exposing a user interface (UI) and API. It will support web data APIs and web applications. Future iterations may include downloadable command line interface (CLI) applications and thick client applications for a range of operating systems.
* An easily deployable centralised logging service to record, serve and visualise how and whether services are being used that is easy for service developers to integrate. This includes log parsers and web accessible interfaces and web-based user interfaces that allow specific sets of users to visualize service usage analytics. The service will need to manage standard web access logs (apache,django, spring, flask, php, web mapping services (WMS/WFS), etc.) and logs from backend data processing jobs and network access.
* These 2 outcomes are underpinned by the implementation of an easily deployable central authentication service that replicates those available within Gold/Live environments. The authentication service may need to integrate with existing AD and/or PKI services.

TEST & DEVELOPMENT REQUIREMENTS

The following criteria will be used for the testing and development:

* Analysts (and automated services - “machines") are able to discover potentially relevant applications and services through a web application and API.
* Analysts and machines are able to access useful information about the applications and services recorded in this catalogue to inform their selection. Useful information includes: service maturity level; dependencies; and information about updates/releases.
* Procurement officers are able to access and visualise service usage data to inform their procurement decisions (services potentially moving from Silver to Gold).
* Scientists and developers are able to access and visualise service usage data to inform the iterative development of services they work on.
* Service designers and developers are able to easily integrate services (access logs and custom logs) with the centralised logging service.
* All service development should target Linux operating systems, prioritizing RHEL and CentOS.
* All service development should assume no connection to the internet.
* All service development should not assume the use of state of the art browsers.
* Test environments may need to include PKI/AD services and proxies to realistically represent potential deployment environments.

REQUIRED CAPABILITIES AND OUTCOMES OF THE SUPPLIER

|  |  |
| --- | --- |
| Required Capabilities and Outcomes of the Supplier | |
| **Capabilities** | **Outcomes** |
| **Software Engineering and Ongoing Support** | Responsible for iteratively developing the web services that underpin the application and services store and coding required to implement the user analytics service. Responsible for generating documentation for services and how they can be integrated with applications/services hosted on Silver. Responsible for ongoing support and iteration throughout Beta. |
| **Agile Product Design & Delivery** | Ensure an agile approach is taken to the development of both services. |
| **Front-end Design and Interaction Design** | Responsible for ensuring all UI and UX components are appropriately designed and implemented. |
| **System Administration and Web Operations** | Responsible for delivering an easily deployable central authentication service. Responsible for ensuring it is easy for developer users to integrate their services with the authentication service, through clear documentation and examples in different (common) languages. |

## 

THE METHODOLOGY

**Physical Location and Development Environment.**

There is flexibility on where and on what network the development work is conducted. The preferred combination is for the team to be located **on the contractor premises** for the majority of the work and development to be undertaken in a contractor owned development environment.

**Availability of code, config and deployment scripts.**

The contractor shall employ a robust version control, branching and release strategy that ensures development of stable code, as well as config and deployment scripts being able to be accessed at any time by Dstl over the internet.

The contractor shall employ continuous integration to ensure a working versions of the service is available (on the internet) during development and testing.

In addition to the above, the project imposes the following methodology criteria:

|  |  |  |  |
| --- | --- | --- | --- |
| **Serial** | **Required** | **Preferred** | **Also interested in…** |
| 1 | The use of version control. | Use of git DVCS with a sensible branching and release strategy. | Your branching/release model. |
| 2 | The use of issue tracking. | Use of an agile issue tracking platform | If using dedicated software, we’re interested in which one so that we can assess how easy it is to import/export stories and issues between yours and ours. |
| 3 | Measurement of test coverage. | Test coverage automated as part of build process. | What tools do you use if any? |
| 4 | Events in place within Agile process that manually check that tests are relevant (even if we have 95% test coverage, are we definitely testing the core bits?) | None. | Good systematic ways you identify of doing this. |
| 5 | Automated code testing. Reports (passes/fails/errors) generated for audit trail per *release* / *RC*. | None. | Any test driven development approaches. |
| 6 | Measurement of code quality.  Code quality reviewed during sprint event.  Code quality metrics reported for releases (not every build) for audit.  Code quality issues added to backlog/tech debt. | None. | What tools/services and standard(s) do you use to measure code quality? |
| 7 | Continuous integration / deployment |  | What tools/services you use to manage your continuous integration and deployment. |
|  | Authenticated access to dev and stable branches of code repo over the internet. | Access to git server for automated cloning. | FTP dump of code. |
| 8 | Configuration management and deployment automation. | Ansible for deployment scripting. | What are you proposing to use if not Ansible? |

GOVERNANCE

A kick-off meeting will seek to develop a road map (including prioritisation) for the subsequent development of the services described above (application store and user activity logging and authentication services).

Governance will be ensured through the events used as part of the Agile methodology. Further detail will be agreed during the Call-Off contract, depending on the Agile approach adopted by the contractor. As an indication though:

* For each of the core services (authentication, application store and user activity logging), each phase will have a phase completion review meeting, during which the team will determine whether or not to proceed to the next phase.
* Where phases comprise multiple sprints, a sprint review will assess progress on the product and backlog.
* Where phases comprise multiple sprints, a sprint retrospective (or equivalent) will assess potential improvements to the sprint methodology. Where Dstl has a member of staff embedded in the development team, that member of staff may observe or participate in this meeting as part of the governance structure.

TERMS AND CONDITIONS

Please note that Customer specific Terms and Conditions apply to this agreement. Please refer to the Call-Off Contract Part A, for further information. Please note that these terms will supersede the standard terms within Call-Off Contract Part C Call-Off Terms and Conditions

The following DEFCON’s apply to this agreement:

defcon 76 (edn 12/06) – contractor’s personnel at government establishments;

defcon 501 (edn 03/15) – definitions and Interpreations (note only to be used when interpreting the defcons);

DEFCON 531 (EDN 11/14) – Disclosure of information;

defcon 608 (edn 10/14) – access and facilities to be provided by the contractor;

Defcon 611 (edn 07/10) – issued property;

DEFCOn 649 (edn 07/99) – Vesting;

DEFCON 659A (EDN 11/14) – security Measures;

Defcon 660 (edn 11/14) – Reportable official and official-sensitive security requirements; DEFCon 703 (edn 08/13) – intellectual property rights – vesting in the authority.

Within the defcons above (including defcon 531) references to the “authority” shall be read as the “customer”.

full text versions of the DEFCONs can be found on the acquisition system guidance (asg) for information on how to access the asg please click the link below:

<https://www.gov.uk/acquisition-operating-framework>

EVALUATION STAGES, MINIMUM PASS MARKS & PRICE EVALUATION

## Evaluation will follow the approach below:

## Technical & Cultural evaluation

* Demonstration, Testing and Scrutiny

## Pricing evaluation

MINIMUM PASS MARKS:

## In order for Potential Providers to progress they must achieve or exceed the Minimum Pass Mark, as defined in the Award Questionnaire.

|  |  |
| --- | --- |
| Stage 1: Technical & Cultural evaluation | All Potential Providers who achieve the required Minimum Pass Mark for a Lot will be added to the Short List, and will be eligible to continue in the Further Competition. |
| **Stage 2:** Practical Demonstration, and Scrutiny of the resources proposed by the supplier | Suppliers who meet the Minimum Pass Marks specified for Part A Supplier Confirmation, and Part B1 Written Submission; will be required to complete Part B2 Practical Demonstration of a particular skill (specified within the Award Questionnaire) in order to evidence capability.  Supplier resources will be required to respond to the Scrutiny questions stipulated within the Award Questionnaire. Each shortlisted Supplier must achieve the Minimum Pass Marks identified in the Award Questionnaire to continue in the Further Competition. |
| Stage 3: Pricing evaluation | For each Further Competition the Customer has a choice as to how they wish the pricing to be evaluated. In this instance the Customer has specified Combined Evaluation as their chosen price evaluation method. For more information please see the Evaluation Guidance document held on the e-Sourcing suite. Please note that pricing will only be evaluated for those shortlisted suppliers that have met the Minimum Pass Marks for the preceding evaluation stages |