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| CCS_2935_SML_AW | HO Logo |
| **QAT Automation, Agile & Dev Ops –** **Lot 2**Example Work Package of requirements |

This is an example and illustrative work package requirement only. It is provided for the sole purpose of supporting the letting of the QAT Agreement The requirement is only representative of the type of work package that may be required – this work package will not be commissioned or delivered.

As part of the commercial bidding process, suppliers are invited to respond to this example work package in order to help inform the evaluation process and their ability to meet the requirements with value for money solutions and services.

The response to this work package will be reviewed along with the full bid response against the published evaluation criteria. There will be a single assessment and score given against each criteria based on the combined evidence i.e. the response to this work package will not be assessed or scored in isolation.

**Suppliers should not raise clarification requests against this work package requirement as part of the formal procurement process. As part of the response to the work package suppliers can include the types of questions or clarifications they would raise if this was to be a ‘live’ requirement**.

QA & Testing for IT Systems - QAT Automation, Agile & Dev Ops

Example Work Package Definition

# Overview

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| Project Name | Project B |
| Work Package Publication date | 01/01/2017 |
| Closing Date for Supplier Proposals | 15/01/2017 |
| QA and Testing, currently provide a testing service within the Home Office and across other government departments. This work package covers the delivery of Test Automation services for a project within the Home Office |

# Background

## Project B is part of the Home Office Border Force change portfolio, delivering new and enhanced systems.

## The scope of testing services to be provided will include Unit/Component (assurance only), System, Systems Integration and User acceptance testing, as well as establishing a professional approach to testing in sprints and integrating releases within Continuous Integration (CI) and Reference environments.

## A key requirement of the service is to define, build & implement an automated test capability, referencing the current QA and Testing automation strategy. This can be used to support each stage of the Continuous Delivery (CD) pipeline within the program and the wider Home Office delivery portfolio.

## This project will be run using a full agile approach to delivery.

# Statement of Requirement

## The delivery & functional changes within scope for Project B include:

* Development of MicroServices to ingest, parse and forward 4 data streams to a storage layer utilising cloud infrastructure services
* Replace existing structured data storage with an unstructured scalable solution to store data streamed in near real-time
* Development of revised user interfaces (replacing existing technology) that must be modular and made available for re-use within other Home Office business areas
* Development of audit and logging functions across the end-to-end solution
* Delivery and management of DevOps services to support the CD pipeline
* Implementation of a CD pipeline utilising Open Source software, Virtualisation and/or Containerisation techniques for environments whist incorporating BDD by default during the development and test process.

## The testing services required are as follows and will cover all changes (as outlined above) in scope for this project:

* Assurance of Unit & Component testing, including but not limited to advice on best practice, coverage levels, reporting and tooling
* Automated acceptance testing following a BDD approach to evaluate the delivered changes against agreed requirements/behaviours
* Infrastructure and deployment testing through each stage of the CD pipeline, demonstrating configuration control, code/feature coverage and impacted components
* Automated Systems Integration Testing (including E2E) of the above applications to ensure the delivered changes function correctly across application boundaries, both for the changed applications as listed above and to other applications with which they interface
* Development of a fully automated regression pack to support future projects within this program.

## Suppliers will have proven delivery ability across all test phases being delivered within this package of work, including in-depth knowledge and practical experience of CI and CD, utilising Open Source tools and cloud based services.

## DevOps teams will have practical experience implementing environment strategies using Virtualisation and Containerisation techniques.

## Strong test management and thought leadership supporting test automation, DevOps and agile testing.

## BDD experience in delivering agile projects, with strong understanding of the Sprint, CI and release testing lifecycle

# Objectives

## The provider will be accountable for the provision of the above services and to promote a culture of collaboration with customer, project, and supplier stakeholders.

## Specifically to:

* Ensure project test requirements are clearly articulated and are fit for purpose
* Deliver a defect management process in-line with a BDD methodology
* Deliver a DevOps & release process to fit with CD, optimising BDD and supporting the various levels/phases of testing as early as possible
* Develop and utilise existing automated test libraries (where applicable) that are merged with the central QA and Testing Agreement.
* Work collaboratively with supplier delivery teams, to ensure that test execution is co-ordinated (across supplier systems / environments, etc) and that defects are managed appropriately
* Ensure that all interface, integration and end-to-end functional and non-functional requirements are appropriately tested
* Work with business and operational stakeholders to ensure that planned testing is understood, agreed and approved as early as possible

## During BDD:

* Facilitate Risk Based Testing Workshops to capture and determine the high priority areas in order to best focus the development effort
* Work with business representatives to prepare and execute test scenarios
* Implement and manage the Defect Management tools and processes, including facilitating Defect Review Boards to ensure that defects are reviewed and prioritised with appropriate stakeholders
* Actively manage and co-ordinate test execution, to include automated testing through the various phases and manual exploratory testing
* To provide regular progress reports, either formally or informally, as required by the project throughout the duration of test execution window
* Record test results and, upon completion of the test activity; prepare the supporting Test Report to help inform project led release decisions
* Identify and agree on risks, issues, escalation process and mitigation

# Deliverables

## High Level Delivery Timelines

* CI & CD pipeline (including environments) 15/03/2017
* System Test 15/04/2017
* Systems Integration (including E2E) Test 30/05/2017

## The following deliverables will be expected at project level:

* Project Test Strategy to include;
* BDD roles & responsibilities;
* Manual Vs Automated testing;
* Environment orchestration, management and scaling
* Coverage & Reporting at each test level and stage of the CD pipeline
* Agile and Release test approaches
* Weekly Test Status Report

# LOGISTICS

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| Location(s) where work will be carried out | Croydon |
| Working arrangements | On site 5 days / week although some flexibility in terms of travel to other UK sites is required.  |
| Security Clearance Requirements | SC  |
| Start Date | 1 February 2017  |
| Expected completion date | 30 July 2017 |

# EVALUATION CRITERIA

## The purpose of this example work package is to help inform the assessment of the full tender response. Evidence from your response to this work package will be considered alongside the responses provided against the tender (using the evaluation criteria sections as below). The quality and relevance of any clarification questions contained within the work package response will also be considered as evidence:

* 2 - Resources & Capability (People, Technology, Knowledge)
* 3 – Service Development
* 4 – Responsiveness
* 5 – Value

# ANNEX ROLE DESCRIPTIONS AND BANDINGS

## The attached covers the roles that are expected to be required across all Lots to be let on the Agreement.



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