PART 2A

REQUIREMENT SPECIFICATION

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1.   INTRODUCTION

1.1.   OVERVIEW

a.   The Government Technology Agency (GovTech), on behalf of the Singapore Government, invites Tenderer to submit a complete proposal for the provision of Application Maintenance and Support Services for SharePoint Applications, including SharePoint Administration and SharePoint Webmaster Support Services, and one-time Technology Refresh to upgrade SharePoint 2007 to SharePoint 2013 and Website Re-design Services for intranet portals and common applications for Singapore Customs (Customs), a department under the Ministry of Finance (MOF).

b.   Any proposal to supply only part or parts of the above shall be considered incomplete and deemed invalid.

1.2.   BACKGROUND

a.   Customs' Intranet Portal, SC Connect, was launched in Mar 2011 and is developed on Microsoft SharePoint 2007 platform.

b.   SC Connect provides a common platform for all Customs staff (around 1000) to access up-to-date information, interact and collaborate on ideas through the use of project workspaces, discussion boards and document libraries.

c.   In addition to the SC Connect, a suite of common applications (eg. Room Booking, eCards, Temperature Declaration system, SC Wiki) developed on Microsoft SharePoint 2007, recursive backronym PHP: Hypertext Preprocessor (PHP), are also deployed on SC Connect. These applications are accessible by all Customs staff.

d.   Leveraging on SharePoint 2007 technology platform, Customs had developed the following corporate systems:
    i.   Harvesting Ideas in Virtual Environment (HIVE); and
    ii.   Human Resource Personnel System (HRPS)

e.   Customs had completed the installation and migration of documents and files from the traditional file share server to several File Share Portals on Microsoft SharePoint 2013 in 2016.

f.   A summary of the current SC Connect, File Share Portals, common and corporate systems are provided in Annex A of Part 2 Section A.

g.   The current SC Connect, File Share Portals, common and corporate systems are hosted in Customs' server room located at Revenue House. Please refer to Part 2 Section B for the details of the technical infrastructure.

2. SCOPE OF TENDER

2.1. The scope of the tender shall cover the following:

a. Mandatory

  i. One-time Technology Refresh
   Upgrade of the current SC Connect and common applications from Microsoft SharePoint 2007 to SharePoint 2013; and

  Refer to Clause 3 for the detailed requirements.

  ii. Application Maintenance and Support Services
   Application Maintenance and support services for SC Connect, common applications, and the File Share Portal on both SharePoint 2007 and SharePoint 2013 to commence after the "**Transition Period"** from the incumbent for a period of **one (1)** year. Please refer to Clause 4 and Clause 19 for the detailed requirement and transition plan.

b. Options (mandatory to quote but optional to award)

  i. Application Maintenance and Support Services
   a. Application Maintenance and support services for SC Connect, common applications and the File Share Portals to renew on yearly basis, up to a maximum of two (2) years. Please refer to Clause 4 for the detailed requirement;

   b. Application Maintenance and support services for corporate system, HIVE, to renew on yearly basis, up to a maximum of three (3) years. Please refer to Clause 4 for the detailed requirement; and

   c. Application Maintenance and support services for corporate system, HRPS, to renew on yearly basis, up to a maximum of three (3) years. Please refer to Clause 4 for the detailed requirement.

  ii. Additional Services
   a. Website re-design of SC Connect and common applications and the File Share Portal, to facelift the look and feel, and restructure the information architecture design for better delivery of information. Please refer to Clause 3 for the detailed requirement.

   b. Additional Services for SC Connect, common applications, File Share Portals and corporate systems (if applicable) through service requests man-days. Please refer to Clause 5 for the detailed requirement.

c.   The scope of this tender does not cover the Facilities Management (FM) services for the common IT Infrastructure.

2.2.   The Supplier shall implement the one-time Technology Refresh and upgrade of the applications stated in Clause 2.1(a)(i) within six (6) months upon issuance of Letter of Award (LOA).

2.3.   The Supplier should note that in the exigency of requirements, the Government has the right to re-prioritize the deliverables in the project schedule. This will be done in consultation with the Supplier.

2.4.   The Tenderer shall submit a proposal for the items specified in Clause 2.1 according to the format in Annex 1 of Part 3.

2.5.   The prices quoted for Clause 2.4 above shall be valid for the entire duration of the Contract, including the options that can be exercised at a later date such as application maintenance and support for optional years.

2.6.   The Tenderer shall quote for all mandatory requirement and the options. However, the Government reserves the right to purchase any proposed items by parts from the tender.

2.7.   The Tenderer shall include any additional accessories, tools, hardware and software that are not requested for in this Requirement Specification but are needed for the efficient operation of the SC Connect and common applications, and the File Share Portals specified in this tender (referred to as the System hereupon). It is mandatory that these additional items, together with their costs, are clearly indicated in the tender proposal. Any other items necessary for the working of the System not indicated would be assumed to be an intrinsic part of the System and their cost included as part of the System.

2.8.   The System must comply with the ICT Security and Audit Requirements specified in Part 2 Section B.

2.9.   The Tenderer shall make his own independent assessment and propose the optimal manpower resources needed to meet the service delivery requirements. The Supplier shall provide minimally two (2) different project teams to deliver the scope of work for:

i.   One-time Technology Refresh to upgrade SharePoint applications and website re-de-sign of the SharePoint applications; and
ii. Application Maintenance and support services.

a.   The Supplier shall ensure the resources assigned to the project meet the basic technical competencies and manpower requirements. The curriculum vitae of all key personnel shall be provided and should meet the following expertise and qualifications:

    i.   Degree in Computer Science, Information Technology (IT), computer Engineering or equivalent;

    ii.   At least 3 years of working experience in the IT industry; and

    iii.   Equipped with the following technical skills and knowledge.

Services	Technical Skills requirements
Technology Refresh	At least 1 year experience in upgrading SharePoint, preferably from SharePoint 2007 to SharePoint 2013.
Website Re-design of SC Connect and common applications.	At least 1 year experience in information architecting and usability design for SharePoint 2013.
Application and Maintenance Support	At least 1 year experience in supporting SharePoint 2007 and SharePoint 2013 preferred. At least 1 year experience in SharePoint administration and webmaster support for engineer providing SharePoint administration and webmaster support.

b.   The Supplier shall ensure that personnel deployed for the services have the appropriate skills and knowledge. The Supplier shall not re-deploy the assigned key IT personnel out of this project throughout the Contract.

c.   The Government reserve the rights to request for replacement of the assigned resources. The replacement of the personnel will be at no cost to the Government.

3. ONE-TIME TECHNOLOGY REFRESH SERVICES AND WEBSITE RE-DESIGN SERVICES

GENERAL REQUIREMENT

3.1. The Supplier shall commence the Technology Refresh to upgrade SC Connect and common applications from Microsoft SharePoint 2007 to SharePoint 2013's environment upon the award of the Contract.

3.2. The Supplier shall commence the services to re-design the System (if such option is awarded) after the applications are upgraded from SharePoint 2007 to SharePoint 2013 upon approval from the Government.

3.3. The Tenderer shall submit a high level plan that consists of, but not limited to, the following:

    i. The Technology Refresh, application upgrade and cutover strategy;
    ii. The detailed schedule and estimated time duration/effort for all detailed work activities;
    iii. The estimated efforts required from the users (eg. requirement confirmation, migration verification, acceptance verification and sign off);
    iv. The estimated system downtime required to carry out the Technology Refresh and application upgrade; and
    v. The approach and procedure for functionality testing and data verification.

3.4. After the Contract has been awarded, the Supplier shall submit a detailed plan for acceptance and the Technology Refresh is to commence upon approval from the Government.

3.5. If tools are used in the Technology Refresh process, the Tenderer is required to give detailed explanation on the tools that is proposed for the data migration or application upgrade purposes.

3.6. The Tenderer shall clearly indicate the cost of the tools used in the tender proposal.

3.7. The Supplier shall work with Customs' team to plan and establish a migration communication plan to the users with all necessary information such as user impact and downtime requirements.

3.8. The Supplier shall propose best practices and improvements to the current processes and SharePoint portal and application design during the Technology Refresh stage and upgrade of SC Connect and common applications so as to enhance the overall efficiency and effectiveness to Customs users.

3.9. The Supplier shall provide system support for any issues encountered/reported and propose solutions for the issues throughout the Technology Refresh exercise.

3.10.   The Supplier shall ensure that the Technology Refreshed System complied with the ICT Security and Audit Requirements as specified in Part 2 Section B.

3.11.   The Supplier shall ensure that the performance of the upgraded applications shall meet the performance requirement stated in Part 2 Section B. In the event that the response time has been slowed down, the Supplier shall carry out all necessary remedial actions and services at no extra cost to the Government. In the event that the Supplier has diagnosed and provided concrete evidence that the problem is due to components managed by the Government, the Supplier shall be required to work with other vendor(s) to recommend a solution to resolve the problem.

3.12.   The Tenderer shall propose the project team size and structure to support the requirements and shall consist of minimally two (2) dedicated resources, one (1) onsite and one (1) offsite.

3.13.   The Supplier shall be responsible for all the SIT and provide support for UAT by users.

3.14.   The Supplier shall prepare test scripts for the system integration testing (SIT), user acceptance testing (UAT) and provide acceptance reports for the Government's review and approval.

3.15.   The Technology Refresh shall be deemed to be completed when:

   i.   The Government has tested and accepted the System; and
   ii. Upon implementation of the System in the SharePoint 2013 production environment.

UPGRADE FROM SHAREPOINT 2007 TO 2013

3.16.   The scope for the upgrading from SharePoint 2007 to SharePoint 2013 shall include but not limited to the following:

   i.   Application setup, configuration and deployment;
   ii.   Application migration;
   iii. Content and database migration including users verification; and
   iv.   Application performance testing and tuning.

3.17.   The Supplier shall review if the existing SharePoint 2013 system architecture and hardware specification in Part 2 Section B is able to support the application usage requirements as described in Annex A.

3.18.   The Supplier shall highlight any gap in the system architecture and the usage requirement.

3.19.   The Supplier shall identify all potential risks of the existing design and provide an assessment of the risks and proposed measures to mitigate and minimize the risks.

3.20.   The Government will review the assessment and decide which of the proposed measures are to be implemented.

3.21.   The Supplier shall review the existing configuration for both SharePoint Production and UAT environments to propose changes to enhance the overall efficiency and effectiveness of the SharePoint Applications.

3.22.   For the Technology Refresh and application upgrade from SharePoint 2007 to SharePoint 2013, the current user interfaces shall be retained. Should there be any area where changes are required for the user interfaces, the Supplier shall propose and implement new user interface design upon the Government's approval.

3.23.   The System shall maintain a consistent design theme, layout, navigation system and footer for Intranet and the application systems. Changes made to these common areas shall automatically be applied to all webpages.

3.24.   The navigation system shall consist of an automatically generated main-menu for the main pages and sub-menu for subpages. The System shall allow the webmaster to arrange the order of the navigation system.

3.25.   The System shall provide page templates with structured data fields for content entry so as to ensure that consistent branding, usability and accessibility controls are applied across all pages on the Intranet.

3.26.   The System shall come with navigational features such as breadcrumbs, sitemap and tag clouds, to enable users to navigate the System easily.

3.27.   As part of the upgrade, the Supplier shall perform content and data conversion and migration for all existing data, documents and information into SharePoint 2013. The actual data volume to be migrated to the System shall be determined during migration. Please see Annex A for the estimated volume of data, sites and documents etc.

3.28.   The Supplier shall liaise with any third parties (eg. incumbent support team, FM team) for any activities required by the migration works.

3.29.   The Supplier shall ensure that there is no loss of data, contents and documents during data conversion and migration.

3.30.   The Supplier shall ensure that the conversion and migration programs as well as converted and migrated data are accurate and free of errors.

3.31.   Throughout the upgrade, all errors encountered shall be captured in an error log. In addition, an audit log shall be provided to trace the history of all the data conversion and migration performed. The Supplier shall propose a format for review of the error and audit logs.

3.32.   The Supplier shall provide documentary proof to demonstrate the successful completion of data conversion and migration. The users shall be requested to perform

sample data verification only after the Supplier has performed the first level verification and has shown evidence of the said verification.

3.33.   The Supplier shall recommend and propose an effective process for user to verify the converted and migrated data, report issue and monitor rectification for re-verification.

3.34.   The Supplier shall provide the necessary means to correct any inconsistent data.

3.35.   The Supplier shall be responsible for and shall bear the cost of rectifying the data in the System or data in the existing system(s) if any inaccurate data arises due to negligence or error on the part of the Supplier.

3.36.   The Supplier shall at no additional cost, re-run the conversion and migration programs as many times as required until the data migrated are free of errors.

3.37.   The Supplier shall ensure that the operations of existing systems or files are not affected during the conversion and migration exercise.

3.38.   The Supplier shall also take contingency measures to back up the current data in the System before the data conversion and migration is initiated.

3.39.   The Supplier shall develop and submit a Data Conversion and Migration Plan for the Government's approval, one (1) month from the date of the LOA and before the data conversion and migration exercise can be initiated. The Supplier shall clearly illustrate in the plan, how the Government can perform the necessary tests in order to ensure the data conversion and migration have been successfully carried out.

3.40.   The Supplier shall include the following areas in the Data Conversion and Migration Plan:

    i.   Conversion and Migration strategy, activities and schedule related to conversion and migration of existing contents and data to the System, such as data mapping, cleansing, conversion, validation, verification and synchronisation;

    ii.   Carry out any data transformation required to ensure that it is aligned with the new SharePoint database structure;

    iii.   Verification of completeness of data migrated to ensure that there is no data loss and is free from errors in the migration process. The Supplier shall propose a control process for ensuring that there is no data loss between the source and destination;

    iv.   Exception and error-handling processes;

    v.   Support, resources and effort required from the FM team and users;

    vi.   Cutover periods which shall take into consideration the phase implementation (if any) of the new System with consultation and approval from The Government; and

    vii.   Interim measures (if any) during the cutover period, both operational as well as system-related, to ensure a smooth transition from the current to the new System.

3.41.   The SC Connect and common applications' usability and functionalities shall be migrated as it-is from SharePoint 2007 to SharePoint 2013.

3.42.   The Supplier may propose alternative solution to meet the requirements of the SC Connect and common applications. Please refer to Annex A for the detail of the SC Connect and common applications.

3.43.   The Supplier shall ensure existing interfaces with external systems are still functional after the migration to SharePoint 2013. The Supplier shall propose how this can be done.

3.44.   The Supplier shall ensure that the upgrade shall result in no loss of data or functionality, with minimal disruption and downtime to operations.

WEBSITE RE-DESIGN SERVICES

3.45.   The Tenderer shall quote for the website re-design services giving details of the cost by the services to be rendered (eg. Web consultancy, Deliver Design Mock up, Deliver Information Architecture, Implement/Migrate to new webdesign and information architect, User Acceptance). The intent is to review the current website and propose new web-site designs and information navigation that are impactful to be prioritised and implemented within 6 months to allow intuitive and effective use of the website to Customs users. Features that enhance the use of the website could be proposed by Supplier but are subjected to the Government's agreement to procure the additional services.

3.46.   The Tenderer shall provide an implementation plan on schedule of activities including the timeline and block of man-days required to carry out these activities. The plan shall minimally include the following:

   a.   To conduct website consultancy (including usability study of existing SC Connect and common application, FileShare Portals) and deliver an Information Architecture for the revamp System in no more than 2 calendar months.

   b.   To conduct design consultation sessions with Customs users to conceptual and design the new System.

   c.   To provide at least three (3) design mock-ups. The Government reserves the right not to accept any design proposal which is deemed to be inefficient, unintuitive, impractical or inappropriate. It is an iterative process till the design proposal is accepted.

3.47.   The Supplier shall ensure that the System has a consistent look and feel.

3.48.   The Supplier shall ensure that the design and navigation are intuitive to all users.

3.49. The Supplier shall work with Customs team to plan and establish a communication plan to the users with all necessary information such as user impact and downtime requirements.

3.50. The Supplier shall ensure all the data and information are completely migrated to the new Website design and Information Architecture within 6 months from the start of the web-design services.

3.51. If tools are used in the revamp process, the Tenderer is required to give detailed explanation on the tools that is proposed for the migration into the new information architecture.

3.52. The Tenderer shall clearly indicate the cost of the tools used in the tender proposal.

3.53. The Government may subsequently request for additional work to enhance the website. Such work shall be raised through Clause 2.1(b)(ii)(b).

3.54. The Supplier shall provide system support for any issues encountered or reported and propose solutions for them throughout the revamp exercise which include the initial block of website re-design services and subsequent block of web-site re-design services.

4. APPLICATION MAINTENANCE AND SUPPORT SERVICES

4.1. The Supplier shall provide Application Maintenance and Support Services for the System covering the day-to-day production support and corrective/preventive maintenance. Please refer to Annex A for all the systems to be covered under the maintenance and support services.

4.2. The Government may withdraw any application system from the coverage under Application Maintenance and Support Service by giving the Supplier at least thirty (30) calendar days' notice in writing. The payments to be made for Application Maintenance and Support Service shall be accordingly reduced based on the price of the project/ application system withdrawn.

4.3. The Tenderer shall propose standard yearly support cost required for application maintenance and support services to ensure smooth daily operations of the application systems, such as execution of on-line and batch services and rectification of software bugs, in the format as specified in Annex 1 of Part 3.

4.4. The application maintenance and support service for the System is to commence after the Transition period from the incumbent. Please refer to Clause 19 for the transition detail.

4.5. The Supplier's designated support personnel shall be based on-site and when needed, off-site support shall be provided during after office-hours based on the Service Level Agreements set out in the Problem and Service Request Management.

4.6. The Supplier shall provide at least three (3) support personnel for the Government's selection.

4.7. The Supplier shall provide application maintenance and support services which shall include the following:

    i. Ensure the smooth operation of the entire System;

    ii. Provide corrective maintenance, troubleshoot and isolate defects, including diagnosis and correction of all latent errors in the System;

    iii. Investigate and correct defects in the system as reported by The Government within the service levels. The resolution effort includes resolving errors through developing, testing and implementing changes to the System. Incident reports for Severity 1 problems shall be provided with details on the cause, impact, resolution and preventive measures to be taken;

    iv. Conduct compatibility test for new releases of system software (for example, operating system, browser upgrade and security patches) to the Systems;

    v. Provide solutions for problems encountered by both servers and clients due to installations performed on the System or its associated software;

vi. Recover lost data, restore and repair damaged data and correct erroneous data to the extent possible;

vii. Ensure that all modifications to the System are properly integrated with the necessary components (hardware, software and firmware, etc.) and that the System performance shall not be degraded;

viii. Fine-tune the performance of the System to meet system performance requirements;

ix. Provide System support services, including technical advice and assistance to ensure the continuity and availability and accessibility of the production systems;

x. Implement and enhance operational procedures as and when needed;

xi. Ensure that all program source codes and executable codes are maintained with good version controls (especially the versioning) and regular backups are taken. This is to allow the system to be rebuilt from scratch if required;

xii. For problems pertaining to the System which require third party vendors or external organizations for troubleshooting and rectification, the Supplier shall be the single point of contact to follow up with the third party vendors or external organizations, and provide recommendation and solution to The Government;

xiii. Work with Customs' FM team, or any other third party vendors to implement proposed procedures related to the system. Examples include back-up or recovery services, data verification, application deployment, system monitoring and troubleshooting of user reported issues;

xiv. Produce and update technical and user documentation for the application systems;

xv. Provide advice, guidance and training to Customs users on the use of the System;

xvi. Provide yearly user briefing, updated Frequently Asked Questions (FAQs) and status updates to Helpdesk and FM team in the handling of problems or issues on the System reported by the users;

xvii. Attend and provide assistance to user queries on the use and operation of the System; and

xviii. Monitor and ensure that corrective follow-up actions are carried out in response to audit findings from the Government and to auditor's expectations at no additional cost to the Government.

4.8. The Supplier shall provide the application maintenance and support services described above in Clause 4.7 for both SharePoint 2007 and SharePoint 2013 environments until the completion of SharePoint 2007 Technology Refresh as described in Clause 3.

SharePoint Administration Services

4.9. The Supplier shall provide all administrative support and configuration related to the operation and function of the SharePoint farm and Internet Information Services (IIS) servers.

4.10. The configuration shall be done via the common SharePoint administration interfaces such as the Central Administration. The following SharePoint administration support services shall be provided by the Supplier:

    i.   Administer SharePoint Service Applications;

    ii.   Administer SharePoint Web Applications;

    iii. Administer SharePoint out-of-the-box (OOTB) Farm Services and Configurations;

    iv. Administer SharePoint Access Control;

    v.   Monitor the health of SharePoint System and the Log Files;

    vi. Monitor the heath of SharePoint Database files;

    vii. Cary out SharePoint Farm Troubleshooting;

    viii. Carry out SharePoint Performance Monitoring and Measurement; and

    ix. Provide regular report on SharePoint Health Status and Statistics.

4.11.   The Supplier shall work with third party vendors appointed by the Government or external organizations to conduct impact analysis on new applications/tools/software to be deployed on SharePoint so as to ensure that these applications can fit into the overall SharePoint design architecture, from design to implementation phase. These activities include:

    i.   Conduct feasibility assessment on the new application to fit into the overall SharePoint design architecture;

    ii.   Perform impact analysis of new application design to fit into the overall SharePoint design architecture e.g. integration with SharePoint features such as Alert, Task and People Picker;

    iii. Provide consultancy services and advise the Government on the downstream implications to the existing SharePoint Farm and the appropriate course of actions;

    iv. Support configuration works on existing SharePoint Farm to facilitate vendors to deploy the application; and

    v.   Perform validation during UAT and Production deployment process to ensure that the overall SharePoint farms and their applications are function correctly.

4.12.   The Supplier shall assess and indicate the compatibility of any customized software products provided or recommended by third party vendors as an integral part of the SharePoint administration services. In addition, the Supplier shall state how the current and future releases of such third party software products are supported within the maintenance contractual period.

Webmaster Support Services

4.13.   The Supplier shall provide webmaster support services in response to user's requirements which can be fulfilled by out-of-the-box (OOTB) SharePoint features.

4.14.   The Supplier shall provide SharePoint Webmaster Support Services which includes:

    i.   Create and Administer OOTB SharePoint Sites and Pages such as creating and maintaining simple graphics to enhance the content;

    ii.   Create and Administer OOTB SharePoint Lists and Libraries, Templates, Custom Columns, Features and other OOTB functions/features;

iii. Conduct assessment of web parts, their functionality and impact of using the web part to meet users' requirements;

iv. Source and recommend ready web parts to meet Customs' requirements;

v. Provide guidance and official training periodically to Customs users on the usage of SharePoint and ensure that the user guides are constantly updated;

vi. Assist Customs on SharePoint permission settings and manage access control;

vii. Provide consultancy service to Customs on any issues faced by users and if any new function or existing functions can be modified to meet Customs' requirements; and

viii. Generate and provide monthly statistics which include hit rates, usage analysis, etc.

5.   ADDITIONAL SERVICES

5.1.   The Supplier shall provide additional services (e.g. ad-hoc requests, enhancements, development of new modules, new application installation and maintenance, migration services, configuration and deployment) for the entire Contract Period upon receipt of the Service Requests (SRs) raised by the Government, based on the contracted unit rates for the entire period of this Contract.

5.2.   The Supplier's scope of work for SR shall include:

    i.   Conduct assessment on the SR and submit a proposal to the Government for approval. The proposal shall detail the impact analysis of the change on the existing system environment such as system design, system performance, integration, system availability, etc. The Supplier shall bear all costs in the assessment and preparation of the proposal. The study will be considered as part of the operations support;

    ii.   Design, develop, test, implement and support the changes to the System according to the requirements of the SR;

    iii.   Conduct UAT with the Customs users and/or external parties;

    iv.   Train Customs users on the System changes to enable them to be competent and self-reliant to operate the System;

    v.   Prepare or update relevant documentation to reflect the changes made; and

    vi.   Perform migration services into the new hosting environment or new system, where appropriate.

5.3.   The Supplier shall note that the implementation of a SR may be carried out on a one-time basis or in phases, to be specified by the Government.

5.4.   The SR is considered as completed after the modified System has been implemented in the Production environment and all relevant updated documentation is accepted by the Government. In cases where the Government decides to shelve the approved SR due to some unforeseen reasons, the Government shall determine if the SR can be considered as completed.

6.   SYSTEM MAINTENANCE SCHEDULE

6.1.   The Supplier shall ensure that there are <u>NOT</u> more than **TWO (2)** scheduled downtime for maintenance or upgrade activities in **ONE (1)** calendar month. All scheduled maintenance shall be carried out between 6.30PM to 7.30PM on Wednesday to minimize the impact to the users, or such other time as mutually agreed between the Government and the Supplier.

6.2.   The Supplier shall plan the system maintenance schedule and seek approval from the Government via electronic mail at least ONE (1) week in advance before the scheduled downtime. For system downtime that may have major impact to business operations, the Supplier shall seek approval from the Government at least TWO (2) weeks in advance.

6.3.   In cases where additional downtimes are required for system deployment or urgent maintenance of services, the Supplier shall seek approval from the Government before proceeding.

7. STANDARDS AND PROCEDURES

7.1. The Supplier shall maintain a comprehensive set of application-related standards and guidelines so as to ease the maintenance of the System. The guidelines shall include:

     i. Integration / interface standards;
     ii. Migration control procedures; and
     iii. Application problem reporting and escalation procedure.

7.2. The Supplier may propose to adopt its application-related standards and guidelines if such are available. The list of these application-related standards and guidelines shall be provided together with the tender proposal. The application of the proposed standards and guidelines by the Supplier shall be subjected to the Government's approval.

7.3. The Supplier shall maintain a log of all maintenance activities, including preventive maintenance, corrective maintenance and other services. For each activity, the log shall record at least the date, time, details of the fault or problem, corrective and follow-up action, and the service personnel. The Supplier shall propose a format of the Maintenance Log and recommend procedures for its usage. The format and recommended procedures for the Maintenance Log shall be subjected to the Government's approval.

7.4. The Supplier shall ensure that all Severity 1 problems are reported to Customs' designated project manager in accordance to Clause 13.6 and provide Incident Reports on all Severity 1 problems logged. For each problem, the report shall record at least the date, time, details of the problem, analysis conducted, problem causes and proposed solution, problem resolution details and follow-up preventive measures. The Supplier shall propose a format of the Incident Report and recommend procedures for its usage. The format and recommended procedures for the Incident Report shall be subjected to the Government's approval.

7.5. The Supplier shall also provide software update materials and documentation whenever new software releases are made available within one (1) calendar week of their release. All software installations and deployments must first be carried out on Customs' UAT environment. Installation in Production environment shall be subjected to the Government's review and approval.

8. BACKUP AND RECOVERY SERVICES

8.1. The Supplier shall advise Customs' FM team on the data to back up to external media in ensuring that there is no data loss.

8.2. The Supplier shall review the existing backup and recovery procedures and make recommendations to the Government on any possible changes to ensure proper data retention e.g. increasing backup frequency, type of data to back up, etc.

8.3. The Customs FM team will ensure that the backup tasks are successfully executed within the specified window of operation by The Government. The Supplier shall assist the FM team to verify that the System is restored to an operational level whenever data recovery services are performed.

9.   **HELPDESK AND SUPPORT HOURS**

9.1.   The Helpdesk is the first level of support for Customs users. The Supplier shall ensure that all issues and problems reported are resolved and closed with the Helpdesk.

9.2.   Refer to the <u>Support Hours</u> set out in Part 1 Section B.

9.3.   The Supplier shall provide the necessary support after the Support Hours, in some cases on-site support will be needed, without additional cost to the Government for the following situations:

i.   When a System or Network problem is encountered, the Support Hours shall be extended until the problem is resolved; and

ii.   For Systems or Network maintenance, building power shutdown or other forms of maintenance performed by external parties that may directly or indirectly impact the operating environment.

9.4.   The above support services shall be provided by the Supplier as base services. Should the Government require on-site support after office hours in situations other than the ones stated in Clause 10.39.3 the Government will raise Service Requests (SRs) for such services.

10.   SYSTEM AVAILABILITY

10.1.   Refer to the <u>System Availability Level</u> set out in Part 1 Section B for the expected system availability.

10.2.   Refer to the Operating Hours set in Part 1 Section B for the operational hours of the Production Systems and Network Equipment

10.3.   The System shall be proven in design and operation, and shall meet the Standard of Performance with a System Availability Level of not less than <u>ninety-nine point five per cent (99.5%)</u> for each calendar month or part thereof, except during the time when the System is shut down for System maintenance.

10.4.   The Supplier shall ensure all scheduled downtime; including ad-hoc scheduled downtimes are subjected to the approval of the Government.

11.   SYSTEM RELIABILITY

11.1.   The Supplier shall perform error detection and correction to ensure reliability, especially in the transmission of information to the Server in our network. In the event of transaction failure, the data shall be rollback to the beginning of the failed transaction.

11.2.   All the data shall be recoverable to the last successfully completed transaction in event of a System failure. Comprehensive logging shall be enabled to facilitate recovery of data for the System and across other interfacing systems.

11.3.   In the event that the System is deemed to be unreliable by the Government, the Supplier shall investigate the cause of the problem. After investigation, if it was found to be due to components managed by the Supplier, the Supplier shall carry out all remedial actions and services at no additional cost to the Government. In the event that the Supplier diagnoses and shows evidence that the problem is due to components managed by the Government, the Supplier shall be required to propose the necessary recommendations to the Government to resolve the problem.

12.   SUPPLIER'S RESPONSIBILITIES

12.1.   The Supplier shall, within the maintenance period, provide free replenishment of the consumables, for e.g. free release of software upgrades and patches, including the professional services required for these installations, which are to be done during a scheduled downtime or after office hours.

12.2.   The Supplier shall ensure that the support team has the necessary expertise and capabilities in providing prompt and efficient support services to the Government. The Government may request to interview and validate the qualifications of the support team at their discretion. If the personnel is deemed unsuitable, the Supplier is required to provide a suitable replacement with the approval of the Government at no additional cost to the Government.

12.3.   The Supplier shall ensure that the support team is located in Singapore.

12.4.   In the event, the Supplier is unable to perform the following: -

   i.   Service a request, or

   ii. Remedy the defect or error, or

   iii. Successfully implement a temporary correction or bypass within the stipulated resolution time.

The Supplier shall, without any cost to the Government, engage the services of an independent expert to remedy the defect or error and/or effect a temporary correction or bypass.

12.5.   The Supplier shall also be responsible for supporting the Government's appointed vendors in the following activities:

   i.   Providing information and assistance from the perspective of ensuring that the existing System and its base configuration and services are not affected by the deployment of the applications by appointed vendors;

   ii. Providing assistance in ensuring the System's base configurations are applied correctly to allow appointed vendors to deploy their applications; and

   iii. Providing assistance on all matters associated with the System on issues encountered during their deployment and working with the vendors to evaluate and make recommendations to the Government on the appropriate next course of action.

12.6.   The Supplier shall ensure that the deliverables are in accordance with the specified scope of services stated in this Contract. The Supplier shall undertake full responsibility for the quality of work produced by his team and sub-suppliers engaged.

This includes ensuring that there is consistency and uniformity in the different work produced by his team and the sub-Suppliers.

13.   PROJECT MANAGEMENT

13.1.   PROJECT ORGANISATION

a.   The Supplier shall submit a detailed project structure clearly defining the duties and responsibilities of all the personnel assigned to the Contract. The project structure shall include the Project Management Committee chaired by the Government, comprising members from the Management team from the Supplier. The Tenderer is to submit the proposed project team structure in the tender submission.

b.   The Supplier shall designate a Project Manager who will be overall responsible for managing and coordinating the performance and delivery of the Services in the Contract. The Project Manager shall have at least five (5) years of continuous relevant working experience. The Project Manager shall be subjected to the Government's approval.

c.   The Supplier shall monitor and manage effectively any sub-supplier and third party vendor that have been selected in the discharge of their duties to meet the requirements established. All matters that require interface between the sub-supplier and third party vendors shall be coordinated by the Supplier to ensure harmony in the relationship among all parties concerned and establish a common understanding of the Government's requirements.

13.2.   RESPONSIBILITIES OF THE SUPPLIER'S PROJECT MANAGER

a.   The Project Manager shall undertake full responsibility for the quality of work produced by the Project team and sub-Supplier(s). This includes ensuring that there is consistency and uniformity in the works produced by the team and sub-Supplier(s) and ensuring that feedback by the Government is promptly addressed.

b.   The Project Manager shall co-ordinate the various activities and meetings with the Government and external parties.

c.   The Project Manager shall maintain records of all rectification and enhancement activities including proper accounting and administrative records of all services performed.

d.   If the performance of the Project Manager is below expectation, the Government reserves the right to request the Supplier for replacement of the Project Manager. The Government shall not be required to provide any supporting evidence or reason. The Supplier shall provide the replacement personnel within two (2) calendar weeks of notice from the Government.

13.3.   PROGRESS REPORTS AND REVIEWS

a.   The Supplier shall produce the monthly reports which provide information including:

     i.   Performance of service level;

     ii. Progress on major tasks and services carried out;

     iii. Progress of Service Requests and Works Order; and

     iv. Report on problem status.

b.   The Supplier shall inform the Government, at the earliest time possible, of any impending slippage in the delivery dates and any matters likely to impede the progress of the project. Recommendation shall be put forth by the Supplier on the alternatives available.

c.   The Supplier shall submit all formats of the progress report to the Government for approval. The Supplier shall be required to produce ad-hoc progress report when requested by the Government.

d.   All meeting minutes for the progress meetings shall be produced by the Project Manager and presented within two (2) working days to the Government for endorsement.

13.4.   MOBILISATION / REPLACEMENT OF PERSONNEL

a.   All personnel to be mobilized or assigned to the Government shall be subjected to approval by the Government.

b.   The Supplier shall inform the Government and undertake a replacement of personnel at least four (4) weeks before the replacement of the existing personnel in order to ensure proper handing and taking over of duties. Cost for the additional person during this period shall be borne by the Supplier.

13.5.   SYSTEM SUPPORT PLAN

a.   Within fourteen (14) days upon award, the Supplier shall provide the System Support Plan to the Government for approval.

b.   The System Support Plan shall address the maintenance and operation support approach, resources, methodology, dependencies, roles and responsibilities, risks assessment and management, quality assurance, applicable standards, policies and practices, that are necessary for the maintenance and operational support of the System and to ensure that the System adheres to the performance standards.

c.   The System Support Plan shall also provide the projected annual maintenance activities for the System, such as scheduled System Downtime for system maintenance, server capacity planning and performance improvement plan.

d.   The System Support Plan shall be reviewed and updated by the Supplier annually. All revised System Support Plans shall be subjected to the Government's approval.

13.6. PROBLEM MANAGEMENT

a. The Supplier shall follow the Problem Management Procedure endorsed by the Government.

b. Problems and defects can be caused by system error or user input. Supplier shall ensure that the necessary support is provided at all times to ensure the system availability level stated in the Contract.

c. The Supplier shall conform to the following service level agreement:

Severity Type	Description	Response Time	Resolution Time
1	Problem and defect that affect the Application Systems such that required operational objectives cannot be achieved. These include: ▪ Application System unavailable ▪ Any defect that affects on-line programs or Batch Jobs which affects critical services ▪ No bypass possible ▪ More than 1/3 of user base affected Example: ▪ Critical batch jobs or on-line programs that did not function properly (e.g., due to program bugs) and thus performed wrong data update. As a result, negatively affecting and impacting users	15 minutes	Within 4 working hours
2	Problem or defect that affect a particular form of operation but do not affect any operational objectives, with exists temporary workaround solution. Example: ▪ Exceptional business rule/s was/were not taken care of in program(s), which results in incorrect System Application response(s) however there exists a temporary workaround solution that eventually still meets user needs	Within 2 hours	Within 3 working days
3	Problem or defect that have minimal impact to the business flow and Application System usability Example: ▪ User interface design issues such as wrong field tag / description displayed	Within 4 hours	Within 5 working days

d. The "Response Time" shall start from the time or date the problem is communicated to the Supplier's single point of contact, whether from the Helpdesk or directly from the Government user through the telephone or electronic mail and the response by the Supplier to the problem (Refer to Illustration below).

e.   The "Problem Resolution Time" shall begin upon notification of the problem until the problem is resolved and the defect is restored to a satisfactorily working condition (Refer to Illustration below).

f.   The Supplier shall provide ways to perform remote troubleshooting and resolution whenever possible.

g.   The Government reserves the right to vary the Problem Resolution Time when the need arises.

h.   Illustration of Response Time and Problem Resolution Time
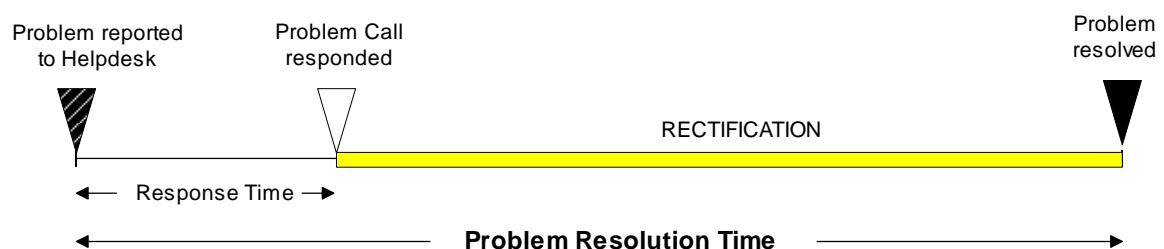
i.   The Supplier shall work closely with all sub-Suppliers and third-party vendors to:

    i.   Resolve all problems and ensure the smooth running of the Systems; and

    ii. Minimize and synchronize system downtime.

j.   The Supplier shall perform a thorough analysis of the problem which includes identification of the cause of problem, the Systems affected, the data or any loss suffered and the recommended solution.

k.   For problem under Severity 1, the Supplier shall brief the Government on the causes, area of impact and lead time for recovery within one hour.

l.   The Supplier shall provide a mechanism or tool, and substantiate to the Government that the Service Levels are met. There must be proper acknowledgement and monitoring of all reported defects and problems by the Supplier. The Supplier shall be responsible to ensure the Government is kept updated on the latest progress of the reported defects or problems.

m.   In the event of dispute on the cause of the problem, the Supplier shall demonstrate and justify if the element within the scope of this Contract is not the cause of the problem.

n.   The Supplier shall conduct review sessions to discuss and track unresolved problems, and carry out rectification efforts to prevent future occurrence of the problems. Frequency of such reviews shall be specified by the Government.

o.   The Supplier shall provide a Problem Management mechanism or tool to enable its staff to log, update and track the status of the problems.

p.   Where problems are communicated to the Supplier through the Helpdesk, telephone or electronic mail from the Government's user directly, the Supplier is expected to log all such problems reported.

q.   The problem log shall record at least the date, time, user who reported the problem, details of the fault or problem, corrective and follow-up action, and the service personnel. The format of the Maintenance Log shall be subjected to the Government's approval.

r.   The Supplier shall also provide an analysis of the problems encountered and propose actions to prevent these problems from re-occurring, and pre-empt similar problems from occurring.

s.   The Supplier shall be measured on its Service Level for production support.

14. SERVICE REQUEST MANAGEMENT

14.1. The Supplier shall use the Service Request (SR) Procedure endorsed by the Government.

14.2. The Supplier shall provide a mechanism or tool to properly track all SRs from the beginning of the request to the closure of the request, SR classifications and SR status.

14.3. The Supplier shall ensure that all proposals for changes to the System are properly evaluated, taking into considerations the impacts to the other systems.

14.4. The Supplier shall ensure that each SR is successfully implemented according to agreed schedule and efforts. If the Supplier cannot meet the pre-agreed schedule, any additional cost incurred shall be borne by the Supplier.

14.5. All SRs shall undergo all required testing, unless otherwise agreed by the Government.

14.6. The Supplier shall provide an assessment of the SR within three (3) working days upon receiving the SR from the Government, unless otherwise agreed by the Government.

14.7. For urgent SR, the Supplier shall endeavour to provide its assessment at the shortest time possible, and within the schedule agreed by the Government.

14.8. The Supplier shall implement the SRs based on the following guidelines:

S/No	Classification	Definition	Elapsed Completion Time
1.	Minor SR	SR requires less than or equal to <u>ten (10)</u> man-days to complete.	Within ten (<u>10) working days</u> unless mutually agreed between the Government and the Supplier
2.	Major SR	SR requires more than ten (<u>10)</u> man-days to complete.	Based on mutual agreement between the Government and the Supplier

14.9. The Government shall prioritize the SRs implementation, raised for Additional Services. For any unforeseen or urgent circumstances, the Government reserves the right to re-prioritize the SRs.

15.   SYSTEM WARRANTY FOR NEWLY DEVELOPED FUNCTIONS

15.1.   The System Warranty shall commence on the date of the successful implementation of SR for newly developed functions.

15.2.   For newly developed functions, the System Warranty period shall be three (3) calendar months or the period as agreed between the Government and Supplier.

15.3.   During the System Warranty period, the Supplier shall at all times and under all conditions be entirely responsible for the satisfactory operation of the System.

15.4.   During the warranty period, the Supplier shall render replacements / investigations / services and any other works required to make good all defects at no additional cost to the Government.

15.5.   The Supplier shall unconditionally guarantee that the amended Application supplied comply with the Government's specifications and that all changes performed to the application shall be free from all defects including but not limited to defects arising from faulty and inferior system design, and coding and shall be of the highest quality and fit for the purposes set out in the requirement specifications and additional requirements agreed upon between the Government and the Supplier.

15.6.   The Supplier shall bear all costs including but not limited to overseas phone calls / fax, air freight charges, the cost of testing or examining incurred in repairing or replacements of defective programs due to defects if such defects are discovered within the System Warranty Period, without prejudice to any other claim which the Government may further lodge.

15.7.   Time shall be of essence in rectifying the defects reported to the Supplier during the System Warranty Period. In the event that any of the programs is found to be defective within the System Warranty Period, the Supplier shall use its best effort to rectify the defects within the days stipulated. The Supplier shall not be relieved of his obligations stated herein until the Government is satisfied that the repaired programs / changes perform satisfactorily. Where the Supplier fails to remedy the defect within the time stipulated by the Government, the Government may have the programs / changes rectified from other sources and all costs and losses incurred by the Government in this regard shall be borne by the Supplier. The Government has the right to extend the Warranty Period if all defects are not fixed by the end of the Warranty Period.

16.   DOCUMENTATION

16.1.   All documentation shall be in good, simple and concise English using accepted technical terms and symbols.

16.2.   All documents, except for the standard documentation that accompanies the appropriate hardware and system software, shall be made available in hardcopy and software in the Government's approved format for ready reference and subsequent maintenance. All such documents shall have comprehensive indexes to facilitate quick reference. For maintainability, all such documentation must be converted to the latest version of the documentation tool which was used, if so required by the Government.

16.3.   All documentation provided shall be of the same version of the software proposed. The Supplier shall provide any revised editions, supplementary materials or new publication relevant to the System and documentation on enhancements at no additional cost to the Government.

16.4.   All documents produced by the Supplier in fulfilling this Contract, shall become the property of the Government. The Government reserves the right to reproduce, at no cost whatsoever, any documentation supplied with the System for its own use. Prior approval must be obtained from the Government for any reproduction and distribution of documents produced by the Supplier.

16.5.   The Supplier shall be responsible for the provision of adequate and suitable documentation in respect of the System. All documentation shall be completed and delivered to the Government within the specified project schedule.

16.6.   The Supplier shall provide the SharePoint documentation as stated in the IDA QMS Systems Analysis, Design & Development Procedure or its equivalent (subject to Government's approval), and other technical documentation such as database designs and message queue designs.

16.7.   The Supplier shall provide satisfactory answers to any reasonable queries raised by the Government concerning any information stated in the documentation.

16.8.   All documentation formats shall be subjected to approval by the Government.

17.   QUALITY ASSURANCE

17.1.   The Supplier shall be required to align its quality processes and procedures with IDA Quality Management System (QMS) and the Government standards, policies and procedures.

17.2.   The Supplier shall ensure proper change control of the systems defined within the scope of tender and documentation. For example, Supplier shall ensure all program source codes and executable codes are to be properly maintained (especially the versioning).

17.3.   The Supplier shall prepare a Quality Assurance (QA) plan for approval by the Government to ensure that the deliverables in this scope of tender are of quality. The Supplier shall execute the QA plan to the satisfaction of the Government.

17.4.   The QA plan shall define how the quality of the System would be assured. It shall provide the mechanisms to ensure that the services provided adheres to sound technical principles and established industry standards.

17.5.   The QA plan shall include the following areas:

   i.   Quality assurance activities and procedures to ensure that the deliverables in this scope of tender are of quality;

   ii.   Standards, practices and conventions to be applied to services provided;

   iii.   Duties and responsibilities of project personnel pertaining to quality assurance; and

   iv.   Fault reporting control and progress reviews.

17.6.   The QA plan shall be reviewed annually. The Supplier shall update the QA plan and submit to the Government for review.

18.   SECURITY CLEARANCE

18.1.   All Systems in the scope of tender are classified as "CONFIDENTIAL" and the Supplier's personnel shall be subjected to Government security clearance. The Supplier shall ensure that only appropriate personnel are assigned to the Government and they are security cleared to the appropriate level before commencing work. The Government shall be entitled to object to any of the Supplier's personnel for the purposes of providing the Services under this Contract at the Government's sole discretion.

18.2.   The Supplier shall fully comply with any written instructions on information security matters (including ICT Security Best Practices) that may be issued by the Government.

19.   TRANSITION PLAN

19.1.   Within <u>fourteen (14)</u> days from the issue of the LOA, the Supplier shall produce a detailed Transition Plan to take over the responsibilities of the Application Maintenance and Support Services from the incumbent for the Government's approval.

19.2.   The detailed Transition Plan, should cover the following information:

    i.   Define an overall schedule of activities for the transition;

    ii.   Identify and document the Government's resources in the scope of Services;

    iii.   Identify and document the Supplier's resources that will be added to the Government's environment;

    iv.   Identify and document the facilities and layout of the Government's IT resource setup;

    v.   Identify the training materials, documented common error messages and other necessary information for Helpdesk operations;

    vi.   Define the roles and responsibilities of all parties;

    vii. Define the critical operational scenarios and the corresponding process workflow; and

    viii.   Define the work-in-progress i.e. on-going tasks, other pending tasks and problems that have not been resolved or followed up by the existing vendor.

19.3.   The Supplier shall ensure that the entire transition phase is as transparent as possible to the Government, with no disruption of services.

19.4.   The Supplier shall include in the Transition Plan a "Transition Period" of familiarization and co-existence support with the incumbent for a period of not less than two (2) calendar months, at no additional cost to the Government.

20. EXIT PLAN

20.1. The Supplier shall propose and submit an Exit Plan within three (3) calendar months upon being informed by the Government. The Exit Plan and the detailed schedule shall be subjected to the Government's approval.

20.2. The Exit Plan shall include but not limited to:

  i. Processes and procedures;

  ii. Roles and responsibilities;

  iii. Definition of major milestones;

  iv. Schedule for hand-over of outstanding tasks;

  v. Contact list of vendors providing 2nd level escalation support;

  vi. Application/Systems documentation;

  vii. Operation manuals; and

  viii. Security procedures.

20.3. The exit transition period shall be managed and supervised by the Government.

20.4. The Supplier shall be responsible for conducting a detailed handover of the complete system to the new vendor at no additional cost to the Government. The handover shall be conducted concurrently with the ongoing support required of the Supplier without affecting the Service Levels. For those un-completed SRs, the Supplier shall work with the new vendor to ensure that there is no disruption to users' operations.

ANNEX A

The System consist of

   i.   Intranet Portal, SC Connect, and common application;
   ii.   File Share Portal; and
   iii.   Corporate applications
          a) Harvesting Ideas in Virtual Environment (HIVE); and
          b) Human Resource Personnel System (HRPS).

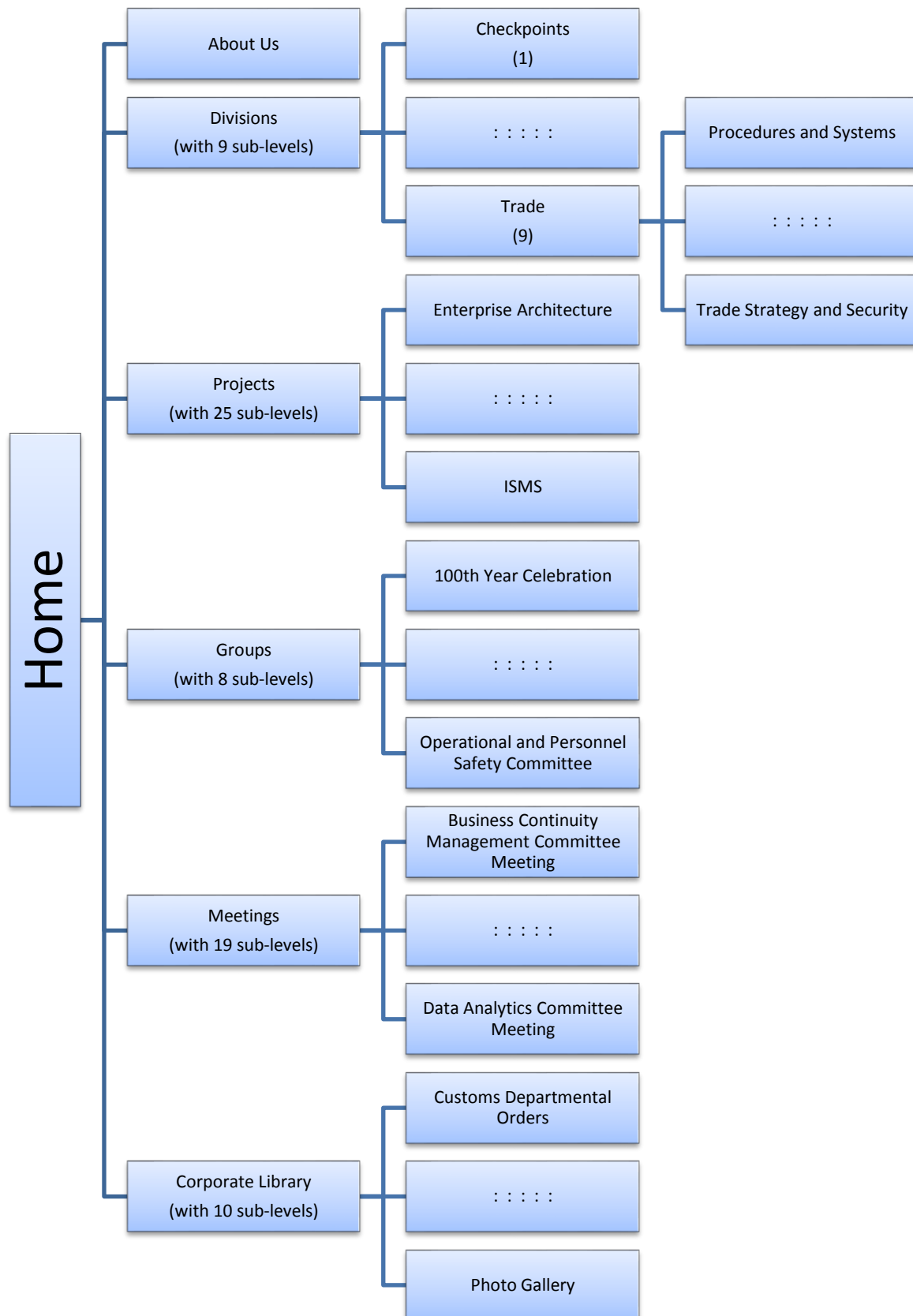*Please note: all details below might change or vary due to usage or policy/process changes*

1. Intranet Portal SC Connect and common

1.1 SC Connect, was launched in Mar 2011 and is developed on Microsoft SharePoint 2007 platform.

1.2 List of common applications

Applications	Description
Resource Booking System (Customized)	The system facilitates the booking of meeting rooms and available resources for staff functions or meetings. The user-friendly system designed to make room booking easy and convenient.
eCards	The system facilitates the creation and sending of festival eCards.
Events Calendars	The Calendar of Events is an online calendar for Customs to share information on important dates, appointments, meetings and corporate events. In addition, a user may register for an event on the calendar.
eSurvey	The system that allows Customs staff to create surveys.
Rules Inventory System	The system allows Customs to track rules / sub-rules scheduled for review. Upon review, the respective officers will be able to update any changes performed for each review.
Temperature Declaration System (TDS)	The Temperature Declaration System is a web application that allows users to record and monitor the temperature and other key symptoms or details of the officers in the event of a situation, such as flu, influenza or SARS outbreak.
SC Wiki	SC Wiki is a social software platform that connects staff across Customs by harnessing the collective knowledge of individual Customs officers. In

1.3 Navigation Structure for SC Connect

```
Home
├── About Us
├── Divisions
│   (with 9 sub-levels)
│   ├── Checkpoints (1)
│   ├── : : : : :
│   └── Trade (9)
│       ├── Procedures and Systems
│       ├── : : : : :
│       └── Trade Strategy and Security
├── Projects
│   (with 25 sub-levels)
│   ├── Enterprise Architecture
│   ├── : : : : :
│   └── ISMS
├── Groups
│   (with 8 sub-levels)
│   ├── 100th Year Celebration
│   ├── : : : : :
│   └── Operational and Personnel Safety Committee
├── Meetings
│   (with 19 sub-levels)
│   ├── Business Continuity Management Committee Meeting
│   ├── : : : : :
│   └── Data Analytics Committee Meeting
└── Corporate Library
    (with 10 sub-levels)
    ├── Customs Departmental Orders
    ├── : : : : :
    └── Photo Gallery
```

Above is a sample of the navigation and does not cover all. Please refer to Part 2 Section B for the detail system architecture.

1.4 List of Customized webparts / products

Webparts	Description
My Tasks / My Alerts?	To display all the user tasks and alerts within the Intranet site.
	External applications will be able to insert tasks into the Intranet by consuming the MOSS Lists.asmx web service.
Calendar of Events	To display events from the corporate event calendar (which is implemented with the SOEasy corporate calendar).
Telerik Radeditor	Cross-Browser Rich Content Editor from Telerik
XML Webparts	Used for XML, and XSL Transformation of XML
Content Editor Webpart	Use for formatted text, tables and images.
Form Webpart	Use to connect simple form controls to other webparts.
Image Webpart	Use to display pictures and photo
Page Viewer Webpart	Use to display linked content, such as files, folders, or Web pages. The linked content is isolated from other content on the Web Part Page
About Us Web Part	About us webpart
Article Publishing Web Part	Use for Publishing Article
Carousel Web part	The carousel webpart sequentially display the image contains.
Contact List Web Part	Contact List webpart
Corporate Announcement Web Part	Used for Corporate Announcement
Customer Centric Topic Web part	Used for Customer Centric Topics
Discussion Web Part	Used for discussions
Employee Search Web Part	Used for Employee Search
Highlights Web Part	Used to Highlights
I want know About Web Part	Used for I want know Abouts
Intranet Updates Web Part	Used for Intranet Updates
My Links Web Part	Used for Singapore customs My Links Web Part
My Task Web Part	Used for Singapore customs My Task web Part
Photo Gallery Web Part	Used display photos in Gallery
Quick Link Web Part	Used for Quick Link web parts

Webparts	Description
Quick Poll Web Part	Used for Quick Poll web parts
File Share Portal Links Web Part	Used for File Share Portal

Support Calls and Service Request

1.5 Below is the statistics of the Support Calls and Service Request that is requested/logged by Customs yearly.

Enquires	292
Issue Log	7
Service Request	3

2.   File Share Portals (FSP)

2.1 FSP was launched in 2016 and is developed on Microsoft SharePoint 2013 platform. There are total of 2 production SharePoint farms, 3 portals.

Portal 1 :- Fs.customs.gov.sg	• This portal serves as the Branch file share portal • Each branches have their own site collections, there are estimated 30 site collections • Access to each Branch site is restricted to branch officers only • Access is open to all officers in Customs (est 1000)
Portal 2 :- Fs2.customs.gov.sg	• This portal serves as the Individual file share portal, allowing officers that are on shared machine is able to upload their working files • Access are restricted individual upon request
Portal 3:- ICON.customs.gov.sg	• This portal serves only a dedicated group of users and machines. • Access are control by Machine IP and user ID

2.2 List of Customised webparts

Webparts / Product	Description
DeliverPoint SharePoint Permissions Management By Lightning Tools (https://lightningtools.com/products/sharepoint-	Displays users permissions accurately even when permissions are granted through Active Directory groups. Copy, Transfer, Delete, Grant permissions are just some of the features for bulk permissions

permissions-management/)	management.

<u>Support Calls and Service Request</u>

2.3 Below is the statistics of the Support Calls and Service Request that is requested/logged by Customs yearly

Enquires	
Issue Log	10
Service Request	1

3. Corporate Applications

   3.1   Harvesting Ideas in Virtual Environment (HIVE)

   <u>General information</u>

   3.1.1 HIVE system is a central avenue that facilitates the documentation, tracking and progress reporting of key Customs' workplan initiatives. Customs' strategy map, strategic objectives, initiatives, key performance indicators (KPIs) are tracked within the HIVE system.

   3.1.2 Customs' strategy map comprises of the various strategic objectives for Customs. In the work plan for each financial year, Customs business units define KPIs and target performance for each KPI to achieve the strategic objectives. Initiatives and projects are also defined during the annual work plan process.

   3.1.3 Customs staffs are allocated different access controls by the administrator (i.e. they have restricted access and can only view and modify contents from their own division's workplan). The system also allows them to subscribe to projects/initiatives to keep abreast of their updates and progress.

   3.1.4 Representative from various branches (about 100 officers in total) to manage their workplans, projects/initiatives, KPIs, targets and results.

   3.1.5 Projects/initiatives can be stretched or extended across more than one financial year. The system allows continuity in the tracking of these cross financial year projects/initiatives.

   3.1.6 Workplan projects/initiatives that are owned by multiple divisions/branches can be tracked and managed.

   <u>System overview</u>

   3.1.7 HIVE developed using MS SharePoint and MS SQL solution and is deployed in the SharePoint 2007 Farm as a web application.

3.1.8   HIVE comprise of the following functions:

Function	Description
Corporate Strategic Objectives Management	This function allows the administrator to create and manage Customs' corporate strategic objectives defined from Customs' strategy map.
Corporate KPI Management	This function allows the branch representatives to create and manage Customs' corporate KPI
Workplan Management	This function facilitates the creation and submission of work plans by the divisions before the start of the new financial year (FY). Branch representatives are able to define the relationship between the Strategic Objectives and the Division Objectives to support strategic alignment. For each workplan, branch representatives can - capture the division's KPIs, targets and their corresponding unit of measurement - create and submit one or more projects/initiatives
Division Strategic Objectives Management	This function allows the branch representatives to create and manage Customs' division strategic objectives defined from Customs' strategy map.
Division KPI Management	This function allows the branch representatives to create and manage Customs' Division KPI
Division Initiatives Management	This function allows the branch representative to create and manage Customs' division Initiatives. It also allows the branch representative to upload Post-Implementation Review document to close the initiative in HIVE.
Milestones Management	This function allows the branch representatives to define the milestones for each project/initiative. The overall percentage completion of a project/initiative is auto-computed based on the average of the milestones' percentage completion.
Search	This function allows user to search and display all the common categories of KPIs and projects/initiatives from the work plans, without having the users to access individual work plan to get such common information.
Subscribe to Initiative Updates	This function allows users to subscribe or unsubscribe to updates of all the projects/initiatives. The list of projects/initiatives, division strategic objectives, progress status and division that the user has subscribed to will be displayed.

Function	Description
Reports Generation	This function allows the generation of the following reports (Real Time): - Quarterly update on Customs' performance (KPIs); - Quarterly update on Customs' performance – Progress of Initiatives; - KPIs that had not met target; - Special highlight of initiatives; - Value Creation
Administrative Module	This function allows the administrators to perform the following: - RAG Threshold Settings - Re-Open Closed Initiative - Quarterly Alerts Settings - Initiative Alert Update Settings In addition, the administrator is able to manage access control of users and keep track of the audit trail.
Interface with Customs Intranet and HR staff database	The system will trigger alerts to relevant parties, via the SC Connect alert feature, when • changes are made to projects/initiatives and KPIs • before a milestone is due. The system interfaces with the HR staff database to retrieve basic staff profile and Customs organisational hierarchy (e.g. division and branch names) information. The system also interface with Customs AD and SOE AD.

Support Calls and Service Request

3.1.9   Below is the statistics of the Support Calls and Service Request that is requested/logged by Customs yearly.

Enquires	0
Issue Log	15
Service Request	2

3.2   Human Resource Personnel System (HRPS)

General Information

3.2.1   HRPS is a Personnel System for staff posting, management of staff information and reports generation.

3.2.2   The system allows all Customs staff (up to 1000 officers) to do some restricted queries and updates of their personal information like mobile number, in the Staff Directory.

3.2.3   There are about 50 HR officers who will be using all the functions of the system, based on access control.

System overview

3.2.4   HRPS developed using Microsoft Framework and MS SQL solution. It is deployed in the SharePoint container. A HRPS site is created under the site collection to house the system.

3.2.5   HRPS comprise of the following module:

Module	Description
Enquire/Maintain Officer Details	This module allows HR officers to query and maintain staff directory by creating and updating the relevant officer information that is localized in Customs. Officers' information can be exported or printed. HR officers are able to export, import and mass update officer information in HRPS.
Maintain Rank	This module allows HR officers to query and maintain rank information that is used in Customs
Maintain Designation	This module allows HR to query and maintain designation information that is used in Singapore Customs
Maintain Location	This module allows HR officers to query and maintain location information that is used in Singapore Customs
Maintain Application Settings	This module allows HR officers to query and maintain application settings information that is used in HRPS
Manage Access Control	This module allows HR officers to maintain a list of user groups and the users assigned to each group. The items available for maintenance are: • Group (Roles) • Users
Security Screening	This module provides the means to track the security screening process for officers in the event of: i. Expiry of their current security clearance. ii. Changes in their division, branch or designation which may require different security clearance.
Staff Posting	This module allows HR officers to see if there are officers who

| Module	Description
	are due for a posting change. It also allows HR officers to manage and maintain a series of rules used to identify officers who are due for new posting
Mentorship	This module provides the functionality to manage and track a series of mentor-mentee relationships. Mentees will consist of new staff as well as select individuals who have the propensity to assume higher appointment in the organisation. Mentors will submit reports periodically via the system. Mentors and mentees will submit a feedback about the mentorship programme. Reminder alerts will be send if no submission.
Reports	This module allows HR officers to generate reports from the system and can export into Microsoft Excel. There are a total of 16 reports

3.2.6   HRPS have interfaces with other systems as follows:

i.   Government HR Management System (HRMS)

Automatically download a series of raw data files output from HRMS and store it on Customs' servers using the STP protocol.

Import and parse the raw data from the downloaded data files into HRPS through a scheduled Data Import Engine application.

The diagram below illustrates the data import process:
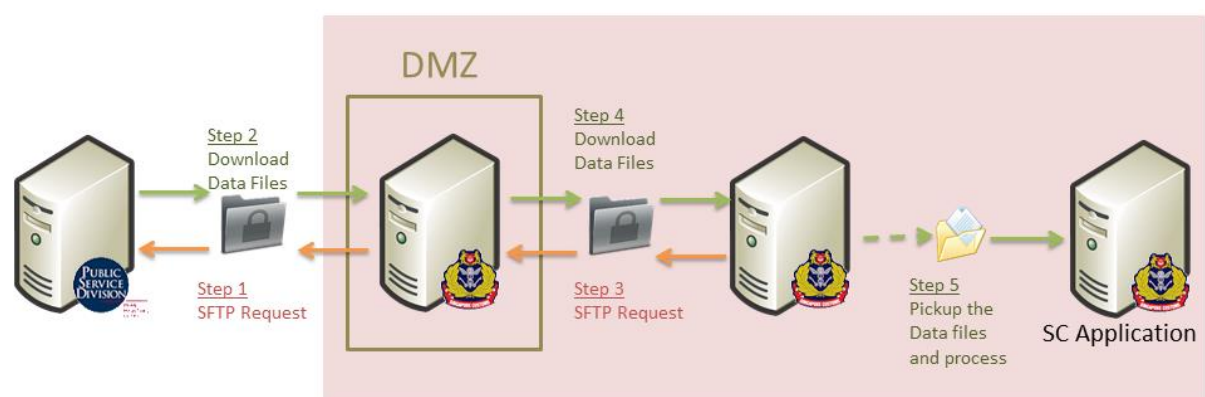
ii.   SharePoint User Profile

Users Profile in SharePoint is extracting officers' information from HRPS. Some information (eg. Subject Domain, mobile) will also be updated from SharePoint to HRPS.

iii.   Web Service Consume Process

The following diagram shows the process for consuming the Web Services by Customs' application.

HRPS   Web Services   SC Application
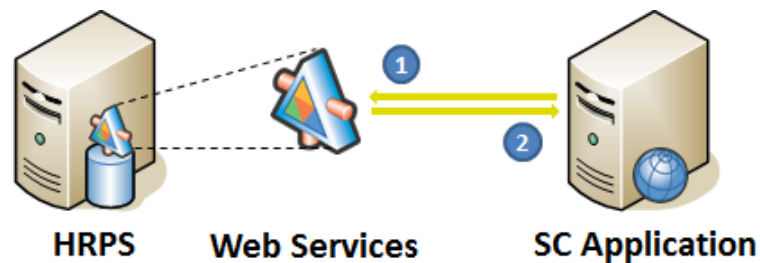
Support Calls and Service Request

3.2.7   Below is the statistics of the Support Calls and Service Request that is requested/logged by Customs yearly

Enquires	10
Issue Log	6
Service Request	0

3.3   General Information – External Maintenance Schedule

As an estimate, there may be quarterly building power shutdown or other external maintenance activities that may impact the SharePoint operating environment.