## Deliverables

Below table shows the deliverables proposed by RGP for each required service.

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| **ID** | **Deliverable** | **Table of Contents** |
| 1 | **Project Plan** – project team will follow this plan to design, develop, tests and migrate applications (include content) into the new application platform. *The project may be divided by phases to deliver applications by batches.* | * Project Objective * Project Approach * Project Schedule * Stakeholders * Resource Requirements * Project Controls * Project Organization * Project Communication * Risk Management * Change Management |
| 2 | **Application Requirements Document** – records requirements on applications to be migrated. It defines the scope of applications and acts as baseline for applications acceptance. *There will have multiple Application Requirements Documents if the project is* *divided by phases to deliver applications by batches.* | * Functional Requirements * Non-Functional Requirements * Deferred Requirements * Cancelled Requirements * Requirement Sign-off |
| 3 | **Application Design Specification** – blueprint of an application. *Each new application will have one Application Design Specification.* | * System Architecture * System Processes * User Interfaces * External Interfaces * System Functions * Entity Relationship Diagram and Data Dictionary * Reports |
| ~~4~~ | **~~Application Program Specification~~** ~~– detailed description of low level program design of the application.~~ *~~Each new application will have one Application Program Specification.~~* | * ~~Class Diagram~~ * ~~Classes and Functions~~ * ~~Messages~~ |
| 5 | **Application Test Plan** – allow testers to conduct functional test and integration test on the developed application. *Each new application will have one Application Test Plan.* | * Test Objective * Test Procedure * Test Schedule * Roles & Responsibilities * Resources * Test Cases |
| 6 | **User Acceptance Test (UAT) Plan** – allow user representatives to verify whether developed application meets the requirements or not. *Each new application will have one UAT Plan.* | * Test Objective * Test Procedure * Test Schedule * Roles & Responsibilities * Resources * Test Cases |
| 7 | **Load Test Plan** – load test is an optional test. Only applications which expected to have large data volume and/or large concurrent users required to conduct load test against it. *One Load Test Plan per application that required load test.* | * Test Objective * Test Procedure * Test Schedule * Roles & Responsibilities * Resources * Test Cases |
| 8 | **Application Test Report** – for verification of results of system test. | * Test Summary * Found Issues & Resolutions * Test Results * Conclusion |
| 9 | **User Acceptance Test Report** – for verification of results of UAT. | * Test Summary * Found Issues & Resolutions * Test Results * Conclusion |
| 10 | **Load Test Report** – for verification of results of a load test. | * Test Summary * Found Issues & Resolutions * Test Results * Conclusion |
| 11 | **Training Plan & Materials** – project team will prepare and conduct user training according to the training plan and materials. | * Training Objective * Target Audiences * Training Schedule * Environment, Equipment and Location * Training PowerPoint Slides |
| 12 | **Application User Manual** | * Application Objective * Processes * User Interfaces * Q&A |
| 13 | **Application Deployment Guide** | * Pre-requisites * Service Accounts * Deployment Procedure * Verification Steps * Q&A |

**Feasibility Report**

**Project Documents**

* Project Initiation Document
* Project Plan
* Project Schedule
* Project Organization
* Project Communication Plan
* Project Communication Documents (e.g. Minutes, Status Reports)
* Project Closure Report

**System Test Plan & Results**

**Performance Results**

**SIT Test Plan and Test Result**

**SIT Defect Log**

**SIT Sign-off**

**Acceptance Criteria**

**IT Acceptance Test Plan and Test Result**

**IT Acceptance Defect Log**

**IT Acceptance Sign-off**

**Deployment Manual** – details of the deployments steps, checks points, roll back procedures, with deployment scripts as appendix.

* Deployment procedure
* Deployment Steps
  + Detail commands
  + Check points
  + Rollback procedures

1. PROJECT APPROACH

Our project approach will be tailored to meet Cathay Pacific’s specific objectives and operating preferences. We will leverage our extensive expertise and experience with similar initiatives, and propose to execute this initiative in five steps:

1. Project Initiation
2. Migration Planning
3. Migration Implementation
4. Testing
5. Deployment

## Project initiation

**Step 5**

**Deployment**

**Step 4**

**Testing**

**Step 3**

**Migration Implementation**

**Step 2**

**Migration Planning**

**Step1**

**Project Initiation**

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| --- | --- |
| Step | **Step 1 – Project Initiation** |
| Objective | * To study and identify technical dependency on critical business applications and infrastructure * To determine current recovery time of critical business applications and infrastructure * To identify relationship between critical business processes and applications and infrastructure |
| Key Activities | * Identify key stakeholders of all related channels * Compile dependency matrix on critical IT systems * Form project team |
| Deliverables | * Project Plan * Project Schedule * Project Approach * Project Organization * Project Communication Plan |

## Migration planning

**Step 5**

**Deployment**

**Step 4**

**Testing**

**Step 3**

**Migration Implementation**

**Step 2**

**Migration Planning**

**Step1**

**Project Initiation**

|  |  |
| --- | --- |
| Step | **Step 2 – Migration Planning** |
| Objective | * To Identify New Requirements/Changes on New Features (Optional) * To Investigate interfaces specification of all endpoints/clients, in order to come up a less risky planning to * To identify housekeeping processes in existing middleware * To facilitate and development team to complete PoC on new version of MQ Clients connection * To conduct design and new CorpMQ environment |
| Key Activities | * Work closely with middleware team to study technical documents or operation manuals of existing middleware * Collect and study the interface documents of the client applications * Provide support to application development team to conduct the PoC * Document architecture and configuration |
| Deliverables | * System Architecture * MQ Configuration * Clusters Design * QMs, Queues, Channels * Logging and Housekeeping * HA and Disaster Recovery * Related Interfaces/Messages * Migration Plan |

## Migration implementation

**Step 5**

**Deployment**

**Step 4**

**Testing**

**Step 3**

**Migration Implementation**

**Step 2**

**Migration Planning**

**Step1**

**Project Initiation**

|  |  |
| --- | --- |
| Step | **Step 3 – Migration Implementation** |
| Objective | * To Implement the new CorpMQ according to the system design |
| Key Activities | * Implement and configure queue clustering * Implement and configure remote and alias queues * Implement and configure queue channels * Conduct connectivity tests * Conduct checkpoint meetings |
| Deliverables | * MQ Connectivity Test Result * New CorpMQ Servers |

## Testing

**Step 5**

**Deployment**

**Step 4**

**Testing**

**Step 3**

**Migration Implementation**

**Step 2**

**Migration Planning**

**Step1**

**Project Initiation**

|  |  |
| --- | --- |
| Step | **Step 4 – Testing** |
| Objective | * To verify the upgraded CorpMQ is configured and working properly * To verify impacted applications are working as designed with the upgraded CorpMQ * To modify impacted applications to work as designed with the upgraded CorpMQ, if required * To verify the upgraded CorpMQ has performance as the current CorpMQ * To confirm the upgraded CorpMQ is ready for production |
| Key Activities | * Produce system integration test (SIT) plan and test cases * Plan full regression test * Collect/produce full regression test cases * Plan operation acceptance test (OAT) and produce test cases * Conduct SIT with dummy MQ clients * Conduct full regression test on impacted applications * Conduct OAT * Fix any issues identified during SIT * Fix any issues identified during full regression test * Fix any issues identified during OAT * Implement code changes on impacted application, if any * Monitor the stability, performance and issues of MQ Server during the testing * Produce SIT report * Produce full regression test report * Produce OAT report |
| Deliverables | * SIT Test Plan and Test Cases * SIT Defect Log * SIT Report * Full Regression Test Plan * Full Regression Test Scripts * Full Regression Test Defect Log * Full Regression Test Report * OAT Plan * OAT Script * OAT Issue Log * OAT Report |

## Deployment

**Step 5**

**Deployment**

**Step 4**

**Testing**

**Step 3**

**Migration Implementation**

**Step 2**

**Migration Planning**

**Step1**

**Project Initiation**

|  |  |
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| Step | **Step 5 – Deployment** |
| Objective | * To switch over from existing CorpMQ to the upgraded CorpMQ * To monitor and assure the proper operation of the upgraded CorpMQ and impacted applications during the nursing period * To transfer the maintenance and operation of the upgraded CorpMQ to CX IT team |
| Key Activities | * Plan cut over of the CorpMQ * Conduct and coordinate cut over of the CorpMQ * Monitor the end-to-end processing of the upgraded CorpMQ * Support fixing of any issues after cut-over during the nursing period * Knowledge transfer on maintenance of the upgraded CorpMQ |
| Deliverables | * Cut Over Plan * Fallback Plan * Operation Manual * Project Closure Report |