Functional Test Plan
Project Name: Drone flight planner
Product Owner:
Project Manager:
Document Date: 17/12/2017

1. Functional Test Plan Scope

In Scope	Out of Scope
In Scope: - *Testing of all functional, application performance, compatibility, security and use cases requirements listed in the Use Case document.* - *Quality requirements and fit metrics* - *End-to-end testing and testing of interfaces of all systems that interact with the application*	Out of Scope: - *Functional requirements testing for systems outside the application.* - *Testing of Business SOPs, disaster recovery and Business Continuity Plan.*

2. Functional Test Plan Assumptions and Constraints

Functional Test Plan Assumptions

Assumptions:

- *For User Acceptance testing, the Development team has completed unit, system and integration testing and met all the Requirements (including quality requirements) based on Requirement Traceability Matrix.*
- *User Acceptance testing will be conducted by End-users*
- *Test results will be reported on daily basis using a selected tool. Failed scripts and defect list from this tool with evidence will be sent to Developer directly.*
- *Test scripts are developed and approved.*
- *Test Team will support and provide appropriate guidance to Developers to conduct testing*
- *Major dependencies should be reported immediately after the testing kickoff meeting.*

Functional Test Plan Constraints

Constraints:

- *Developer will receive consolidated list of request for test environment setup.*
- *Developer will support ongoing testing activities based on priorities*
- *Test scripts must be approved by Test Lead prior test execution*
- *Test scripts, test environment and dependencies should be addressed during testing kickoff meeting in presence of a SME and request list should be submitted within 3 days of the kickoff meeting*
- *The Developer cannot execute the User Acceptance and End to End test scripts. After debugging, the developer can conduct their internal test, but no results from that test can be recorded / reported.*

3. Functional Test Team Roles & Responsibilities		
Name	**Roles**	**Responsibilities**
	Project Manager	*(a) Acts as a primary contact for development and QA team.* *(b) Responsible for Project schedule and the overall success of the project.*
	QA Lead	*(a) Participation in the project plan creation/update process.* *(b) Planning and organization of test process for the release.* *(c) Coordinate with QA analysts/engineers on any issues/problems encountered during testing.* *(d) Report progress on work assignments to the PM*
	QA Tester	*(a) Understand requirements* *(b) Writing and executing Test cases* *(c) Preparing RTM.* *(d) Reviewing Test cases, RTM.* *(e) Defect reporting and tracking.* *(f) Retesting and regression testing.* *(g) Bug Review meeting* *(h) Preparation of Test Data.* *(i) Coordinate with QA Lead for any issues or problems encountered during test preparation/execution/defect handling.*

4. Functional Test Entry & Exit Criteria	
ID	**Criteria**
4.1	Entry Criteria: - *(a) Business Requirement Document complete* - *(b) Functional Specification* - *(c) High-Level Design Specifications* - *(d) Software Development Project Plan approved* - *(e) Software Verification Plan approved* - *(f) Software Configuration Management Plan* - *(g) Quality Assurance Plan approved.*
4.2	Exit Criteria: - *(a) All Show Stopper defects or Blockers are fixed and No known Critical / Severity 1 defect is in Open Status.*

	- *(b) The software runs on all the product's supported hardware and software configurations.* - *(c) If any medium or low-priority errors are outstanding – the implementation risk must be signed off as acceptable by Business Analyst and Business Expert.* - *(d) 100% Requirements coverage is achieved.* - *(e) Very few low priority open defects that do not impact software usage.* - *(f) Project Deadline or Test Finish deadline is reached.*

5. Functional Test Cases	
ID	**Test Cases**
5.1	Test Case: User can create a brand new flight plan ***Test Steps:*** 1. *Start the application (https://stupendous-birth.surge.sh/) on any given browser.* 2. *Click on 'Create a new flight plan +' button.* 3. *Perform a click somewhere in map.* 4. *Perform a second click somewhere in the map.* 5. *Click on the 'Flight Description' text field located right below the 'Drone flight planner' title.* 6. *Add text to this field (i. e. 'Flight#1').* 7. *Hit the enter key.* ***Expected Results:*** 1. *The app is displayed smoothly.* 2. *The user is automatically driven to the 'Drone Flight Planner' page were a map occupies the body of the page.* 3. *The first click is represented on screen with a red dot with a halo surrounding it. At the same time the flight gets autosaved and appears at the left of the screen showing the coordinates of the dot and the time when it was updated for the last time (i. e. 'Updated a a few seconds ago').* 4. *The second click is represented by a red dot that is connected to the first one by a straight red line. The autosave feature gets executed once again and next to the first coordinate within the saved flight the number two is shown.* 5. *The field is editable and the legend 'Flight description' that appeared filling the field transforms itself onto a small blue subtitle.* 6. *The text is displayed on screen.* 7. *The saved flight now displays also te saved description above the first coordinate of it.*
5.2	Test Case: User can edit a flight plan ***Test Procedure:*** 1. *Repeat Test Case 5.1* 2. *After creating a flight plan click on it (Click on the flight plan displayed on the left column below the 'Flight plans' title).* 3. *Perform a brand new click in order to update the flight plan.* 4. *Click on the 'Flight description' field.* 5. *Update the flight description. and hit the enter key.* ***Expected Results:*** 1. *Idem Test Case 5.1.* 2. *The previously saved plan is displayed on screen.* 3. *A new red dot appears on screen and get automatically joint to the last saved point.* 4. *The field becomes editable.* 5. *The updated description gets automatically saved and the new description is displayed where the old one used to appear.*
5.3	Test Case: User can delete a previously saved Flight Plan
5.4	Test Case: User can delete 'points' within the Flight Plan

5.5	Test Case: User can go back to the Landing page by clicking on the 'Missions icon'
5.6	Test Case: User can create a brand new Flight Plan by clicking on the '+' sign located on the landing page next to the 'Flight Plans' labelT
5.7	Test Case: User can create a brand new Flight Plan by clicking on the 'create the first one' link located on the landing page below the 'No Flight plans' label
5.8	Test Case: User can Zoom IN the map in order to be more assertive with the drone's route
5.9	Test Case: User can Zoom OUT the map in order to cover more ground faster
5.10	Test Case: User can sort the different flight plans by flight description (alphabetically)
5.11	Test Case: User can sort the different flight plans by creation date (chronologically)
5.12	Test Case: Each and every click that the user makes on the map is represented by a red dot

6. Functional Test Results				
ID	**Test Cases**	**Status**	**Tested By**	**Date Tested**
6.1	Test Case: User can create a brand new flight plan	*Failed See Defect #7.2*	*QA Tester*	*17/12/2017*
6.2	Test Case: User can edit a flight plan	*Pass*	*QA Tester*	*17/12/2017*
6.3	Test Case: User can delete a previously saved Flight Plan	*Failed*	*QA Tester*	*17/12/2017*
6.4	Test Case: User can delete 'points' within the Flight Plan	*Failed*	*QA Tester*	*17/12/2017*
6.5	Test Case: User can go back to the Landing page by clicking on the 'Missions icon'	*Failed*	*QA Tester*	*17/12/2017*
6.6	Test Case: User can create a brand new Flight Plan by clicking on the '+' sign located on the landing page next to the 'Flight Plans' labelT	*Pass*	*QA Tester*	*17/12/2017*
6.7	Test Case: User can create a brand new Flight Plan by clicking on the 'create the first one' link located on the landing page below the 'No Flight plans' label	*Pass*	*QA Tester*	*17/12/2017*
6.8	Test Case: User can Zoom IN the map in order to be more assertive with the drone's route	*Failed*	*QA Tester*	*17/12/2017*
6.9	Test Case: User can Zoom OUT the map in order to cover more ground faster	*Failed*	*QA Tester*	*17/12/2017*

6.10	Test Case: User can sort the different flight plans by flight description (alphabetically)	*Failed*	*QA Tester*	*17/12/2017*
6.11	Test Case: User can sort the different flight plans by creation date (chronologically)	*Failed*	*QA Tester*	*17/12/2017*
6.12	Test Case: Each and every click that the user makes on the map is represented by a red dot	*Failed. See Defect #7.3*	*QA Tester*	*17/12/2017*

7. Addendums & Appendices

7. Functional Defects				
ID	**Summary**	**Priority**	**Tested By**	**Date Tested**
7.1	***Summary:*** No 'Flight description' can be added if the Flight Plan has less than three points in it ***Description***: When a brand new Flight plans gets created and this one has less than three (two or one) points no description can be added to it. ***Steps to reproduce it:*** 1) Open the https://stupendous-birth.surge.sh/ app. 2) Click on the 'Create new flight plan' button. 3) Notice that a map is displayed on screen. 4) Perform one click somewhere in the map in order to generate the starting point. 5) Notice that the 'Flight description' field is not present on screen (should be displayed right below the 'Drone Flight Planner' title). 6) Ergo no 'Flight description' can be added if the Flight Plan has less than three points in it ***Actual Results:***	*Major*	*QA Tester*	*17/12/2017*

	No 'Flight description' can be added if the Flight Plan has less than three points in it. ***Expected Result:*** The user should be able to add a description to the add a description to a new flight plan without taking into account the amount of points in it. ***Notes:*** Please notice that the user can add a description if he saves the plan with one or two points and then reopens it. The 'edit' mode allows the user to add a description if the plan has more than zero points. Please take a look at attachment for further explanation.			
7.2	***Summary***: Flight plan creation fails randomly ***Description***: The application closes when the user tries to perform the first click on the map. This issue was NOT reproduced in every execution. ***Steps to reproduce it:*** 1) Open the https://stupendous-birth.surge.sh/ app. 2) Click on the 'Create new flight plan' button. 3) Notice that a map is displayed on screen. 4) Perform one click somewhere in the map in order to generate the starting point. 5) Notice that the application closes when the user tries to perform the first click on the map. 6) Ergo Flight plan creation fails randomly. ***Actual Result:*** Flight plan creation fails randomly. ***Expected Result:***	*High*	*QA Tester*	*17/12/2017*

	The user should be able to create a Flight Plan at any moment. ***Notes:*** Please notice that this issue appears randomly. The root cause might be related to the connectivity between the app and the database that stores the plans			
7.3	***Summary:*** [UX] The clicks aren't always translated onto dots on screen ***Description:*** The user often has to perform a click more than once to make a red dot appear on screen. The low responsiveness affects the user experience. ***Steps to reproduce it:*** 1) Open the https://stupendous-birth.surge.sh/ app. 2) Click on the 'Create new flight plan' button. 3) Notice that a map is displayed on screen. 4) Perform one click somewhere in the map in order to generate the starting point. 5) Notice that the red dot that should be displayed on screen doesn't appear. 6) Hence the clicks aren't always translated onto dots on screen. ***Actual Result:*** The clicks aren't always translated onto dots on screen. ***Expected Result:*** Each and every click that the user performs should be represented on screen as a red dot. ***Notes:*** Please notice that this responsiveness issue affects the user experience and prompts the user to create a faulty flight plan.	*High*	*QA Tester*	*17/12/2017*

	Please take a look at attached video for further explanation.			