**Flight plan**

**Step #1: Create a polygona on a map and get the coordinate.**

Done:

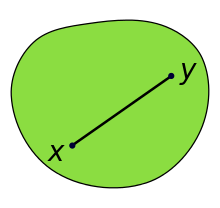
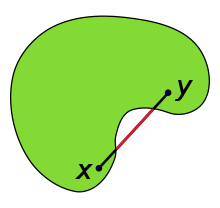
* Create a new page on Vue to do flight plans.
* Could add point.

#TODO: Prevent points from being sent if less than 3

**Step #2: Send the GPS coordinates to the server with the python code.**

#TODO: No idea yet

**Step #3: On python, with the coordinates and the distance between to line create a path.**

**Divide the problem in two:**

* Convex figures (convex in the mathematical sense, [Convex set - Wikipedia](https://en.wikipedia.org/wiki/Convex_set))
* Non-convex figures

**Convex forms:**

Hypothesis: The 2 minimums distance between 3 points are the edges of our surface. (#TODO: Verify in theory if it’s correct)

So now, we will take the ***longest side*** and its ***perpendicular***. And create a grid pattern of the aera perpendicular to our grid pattern.

#QUESTION: longest side or longest distance between 2 points? Which one will make the flight plan the smaller possible?

We’ll choose the **distance** between 2 lines in the program in meters.

To calculate the distance between two gps points we’ll use the client geopi ([geopy · PyPI](https://pypi.org/project/geopy/)) with the function distance.distance(pt1, pt2).

The points of our flight plan will be the crossing of each line or the centre of each cell.

Question:

* How to do a grid pattern?
* Take the longer distance of the polygona and the perpendicular.

Some sources:

* Study a bit of topology (mathematic) [Convex set - Wikipedia](https://en.wikipedia.org/wiki/Convex_set) // [Connexité (mathématiques) — Wikipédia (wikipedia.org)](https://fr.wikipedia.org/wiki/Connexit%C3%A9_(math%C3%A9matiques))