Aircraft manufacturing and air traffic control are among the most stringently regulated industries in the world. Since this is the case, we take the issue of losing aircraft over oceans extremely seriously. Locating a plane of any size in any of the vast oceans on our planet is very challenging. Even when debris of a downed aircraft has been located, finding where the rest of that airplane resides remains a daunting task.

In order to address . By incorporating probability theory and well researched mathematical theories, this model optimizes the probability of locating the aircraft while also minimizing the cost of searching. Fortunately, this model has been developed to be adapted for different needs and extendable past its current . It is possible to adjust multiple parameters that technologies being used, the number of search aircraft being deployed, and the breadth of area being searched, making it applicable in a multitude of scenarios.

After using a strongly researched model to most efficiently dispatch search planes to locate floating debris, another model is applied to find where the plane actually made contact with the water. After this has been calculated, underwater vehicles equipped with sonar searching technologies are deployed in a methodical manner to best search a given underwater area. Each consecutive deployment narrows down the search area to the most probable area of locating the sunken aircraft on the sea floor.

Once the wreckage is located, it is in our best hopes that the black box of the aircraft is still intact in order to better investigate what actually occurred during the last few minutes of flight. Although mathematics cannot always prevent aircraft disasters, it is now demonstrated that it can be used to accurately locate sunken aircraft in a timely and cost efficient manner.