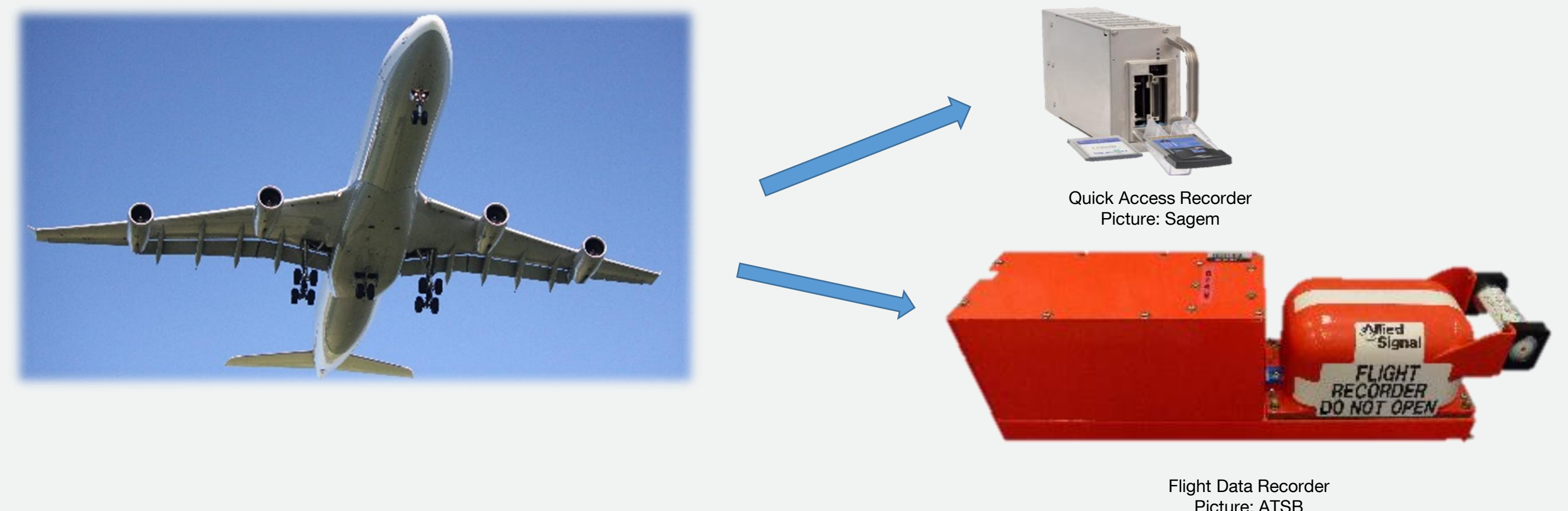


Physical Models for the Prediction of Incident Probabilities

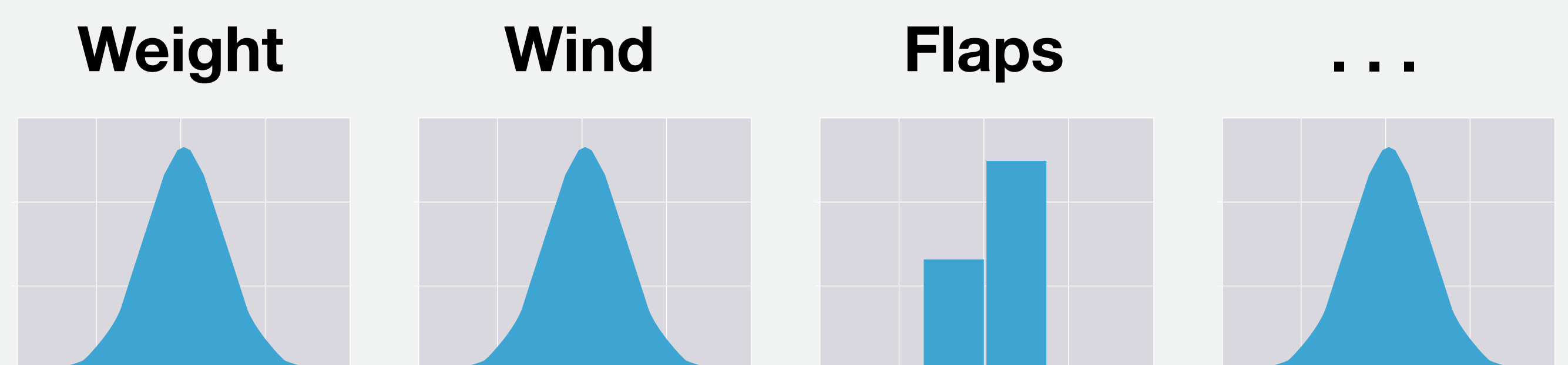
Usage of recorded data from flight operations (e.g. FDM data)

FDM data can be obtained from QAR or FDR directly from the aircraft. Other operational data, e.g. weather, radar can be used.



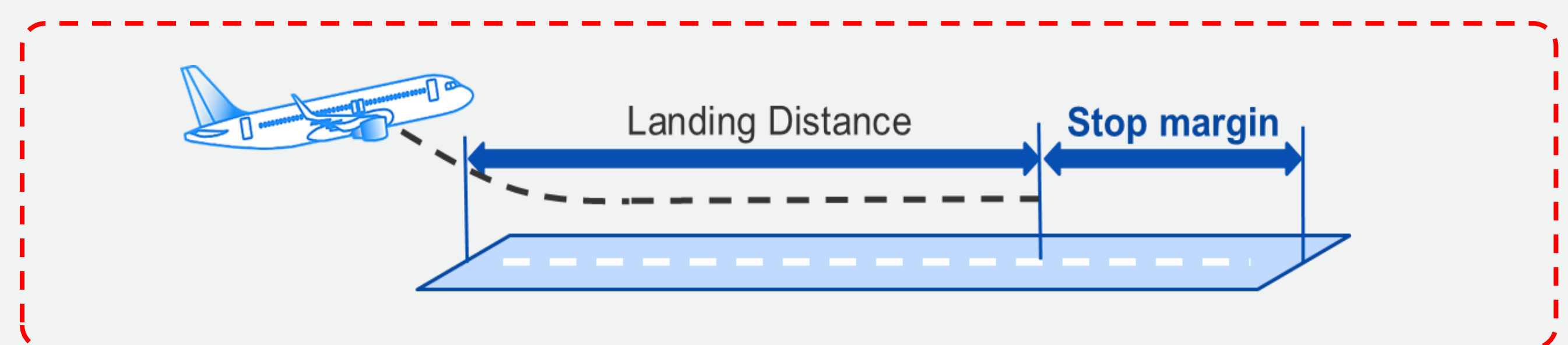
Extraction of contributing factors from the data

For each contributing factor, a distribution can be generated from the data. They serve as the input to the model.



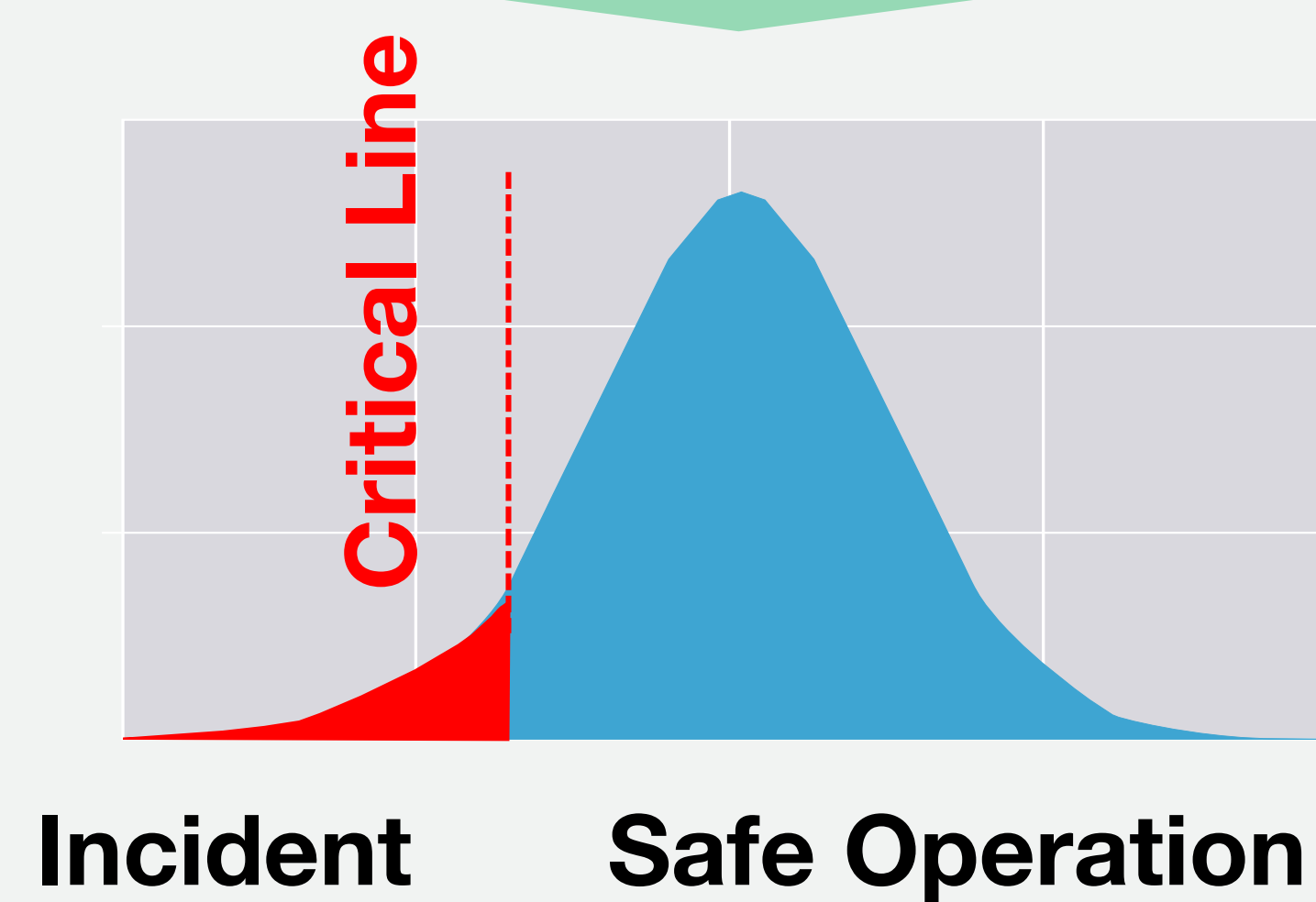
Incident Model, incorporating physics and system logics

A model of the aircraft is created based mainly on physical relationships describing the motion of the aircraft (similar to flight simulations). The distributions are propagated through this model.



Model Output: Incident Probabilities

An output distribution is obtained from the model. The area of both the safe operation and the incident can be quantified.



Input into the Total System Risk Observatory

With the Risk Observatory (RO) developed in P4 the incident probability can be shown to RO users as a trend in time and serve as input to risk models estimating accident risk.

