

# THE TRAGEDIES OF FLIGHT: A COMPREHENSIVE CRASH ANALYSIS

## INTRODUCTION:

**1.1 Overview: A brief description about your project.**

**1.2 Purpose: The use of this project. What can be achieved using this. Problem Definition & Design thinking.**

What are the flight crashes? Why the flight crashes are doing?

What is the reason? Can we reduce the flight crashes? definitely we can reduce the flight crashes by take case study about the flight crashes and take analytical thinking about the crashes. This project easier the case study about the plane crashes and this project tells about the factors that causes to the plane crashes.



## AVIATION ACCIDENTS

Before getting too invested in the causes of aircraft injuries, let's take a moment to clarify the terminology. "Aviation accidents" are not solely confined to planes crashing. This category includes other aircraft such as helicopters, ultra-lights, gliders, etc. Aviation accidents may not necessarily involve aircraft crashes. Occasionally passengers fall while boarding airlines, have health issues while onboard, or sustain injuries from turbulence.

If you are injured in any type of aviation accident, you may be eligible for civil damages from the responsible party. The airplane attorneys at Wilson Kehoe have experience flying and understand aviation accidents. This knowledge helps us to determine fault in your case and ultimately helps you through any legal action that needs to be taken.



# Project Report Template

## **1 INTRODUCTION**

### **1.1 Overview**

A brief description about your project

### **1.2 Purpose**

The use of this project. What can be achieved using this.

## **2 Problem Definition & Design Thinking**

### **2.1 Empathy Map**

Paste the empathy map screenshot

### **2.2 Ideation & Brainstorming Map**

Paste the Ideation & brainstorming map screenshot

## **3 RESULT**

Final findings (Output) of the project along with screenshots.

## **4 ADVANTAGES & DISADVANTAGES**

List of advantages and disadvantages of the proposed solution

## **5 APPLICATIONS**

The areas where this solution can be applied

## **6 CONCLUSION**

Conclusion summarizing the entire work and findings.

## **7 FUTURE SCOPE**

Enhancements that can be made in the future.

## **8 APPENDIX**

### **A. Source Code**

Attach the code for the solution built.



## Brainstorm & idea prioritization

Use this template in your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

- 🕒 10 minutes to prepare
- 👤 1 hour to collaborate
- 👥 2-8 people recommended

[Share template feedback](#)



### Before you collaborate

A little bit of preparation goes a long way with this session. Here's what you need to do to get going.

🕒 10 minutes

#### A Team gathering

Define who should participate in the session and send an invite. Share relevant information or pre-work ahead.

#### B Set the goal

Think about the problem you'll be focusing on solving in the brainstorming session.

#### C Learn how to use the facilitation tools

Use the Facilitation Superpowers to run a happy and productive session.

[Open article](#) →



### Need some inspiration?

See a finished version of this template to kickstart your work.

[Open example](#) →

1

## Define your problem statement

What problem are you trying to solve? Frame your problem as a How Might We statement. This will be the focus of your brainstorm.

🕒 5 minutes

### PROBLEM

WHAT IS THE MAIN  
CAUSE OF AIRPLANE  
CRASHES?



#### Key rules of brainstorming

To run an smooth and productive session



Stay in topic.



Encourage wild ideas.



Defer judgment.



Listen to others.



Go for volume.



If possible, be visual.

3

### Group ideas

Take turns sharing your ideas while clustering similar or related notes as you go. Once all sticky notes have been grouped, give each cluster a sentence-like label. If a cluster is bigger than six sticky notes, try and see if you can break it up into smaller sub-groups.

🕒 20 minutes

Aviation accidents can be traced a variety of causes including pilot error, air traffic controller error, design and manufacturer defects, maintenance failures, inclement weather and crew members faults.

#### TIP

Add customizable tags to sticky notes to make it easier to find, browse, organise, and categorise important ideas as themes within your mural.



2

## Brainstorm

Write down any ideas that come to mind that address your problem statement.

⌚ 10 minutes

### TIP

You can select a sticky note and hit the pencil (switch to sketch) icon to start drawing!

### Person 1

Human Errors in Aviation	Mistakes by crew members	Air traffic controller negligence
Weather conditions	Improper aircraft maintenance	Aircraft design defects
Instrument flight factors	Glide slope indicators	pilot errors

### Person 2

GPS for aircraft	Human errors in aviation	Weather conditions
Mechanical faults	unconventional landing conditions	aircraft structure collapses
fuel leakage	runway accidents	Instrument flight factors

### Person 3

operational errors	poor team communication	mechanical faults
engine failure	mistakes by crew members	loss of control
glide slope indicators	descent and landing	improper aircraft maintenance

### Person 4

communication misuse	engine failure	operational errors
fuel leakage	aircraft design defects	inclement weather
air traffic controller negligence	GPS for aircraft	pilot errors

### Person 5

runway accidents	unconventional landing conditions	human errors in aviation
poor team communication	mistakes by crew members	loss of control
descent and landing	aircraft design defects	weather conditions

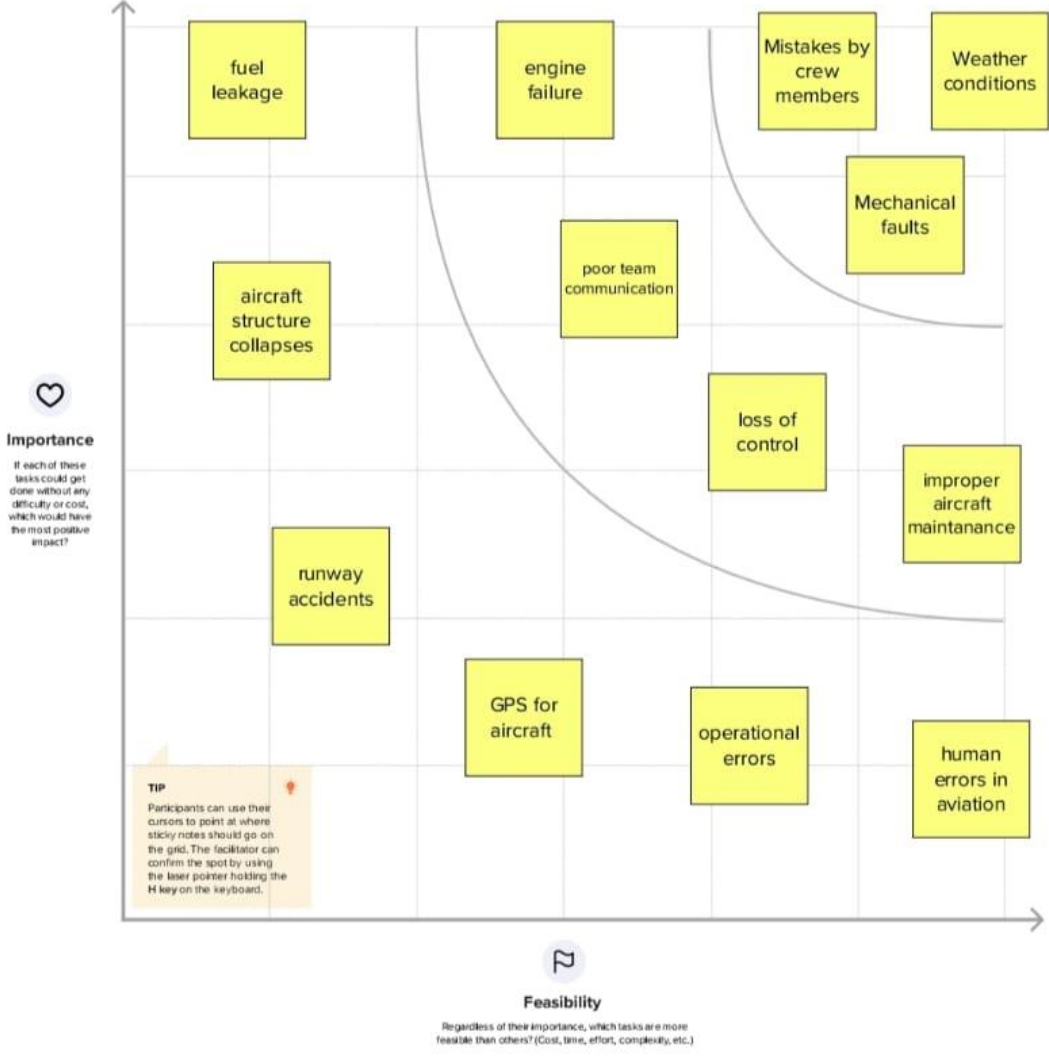


4

# Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes







## Build empathy

The information you add here should be representative of the observations and research you've done about your users.

### Says

What have we heard them say?  
What can we imagine them saying?

Inadequate  
Maintenance  
of the Flights

Pilot errors is  
the number  
one cause of  
Flight  
crashes

Design and  
Manufacture  
r defects

Inclement  
weather

### Thinks

What are their wants, needs, hopes,  
and dreams? What other thoughts  
might influence their behavior?

The journey  
be free from  
strees

Bon voyage  
and get  
there safe

Safe  
travels

Enjoy their  
travels

THE TRAGEDY OF  
FLIGHT: A  
COMPREHENSIVE  
CRASH ANALYSIS

Wear their  
seat belt at  
the traveling  
time

Take a  
Flying  
lesson

Study  
about plane  
crash  
history

Learn about  
built-in  
safety  
features

Fear of  
heights

Raising of  
heartbeat

May experience  
a brief  
sensation of  
weightlessness

Panic  
attacks on  
Flying

### Does

What behavior have we observed?  
What can we imagine them doing?

### Feels

What are their fears, frustrations, and  
anxieties? What other feelings might  
influence their behavior?

## **AVIATION TYPES**

When trying to understand aircraft crashes, it's also critical to pay attention to the nature of aviation involved. For example, there is a significant difference in flight accident rates between commercial and general aviation.

Commercial aviation includes scheduled passenger flights with larger planes and operates under Federal Aviation Regulation (FAR) Part 121. General aviation typically involves private or chartered flights with smaller aircraft. These types of general aviation operate under FAR Part 135 or Part 95. General aviation accidents occur more often than commercial flights, even though commercial flights are usually more publicized than general aviation incidents. All types of aviation involve complex issues and require specialized knowledge.

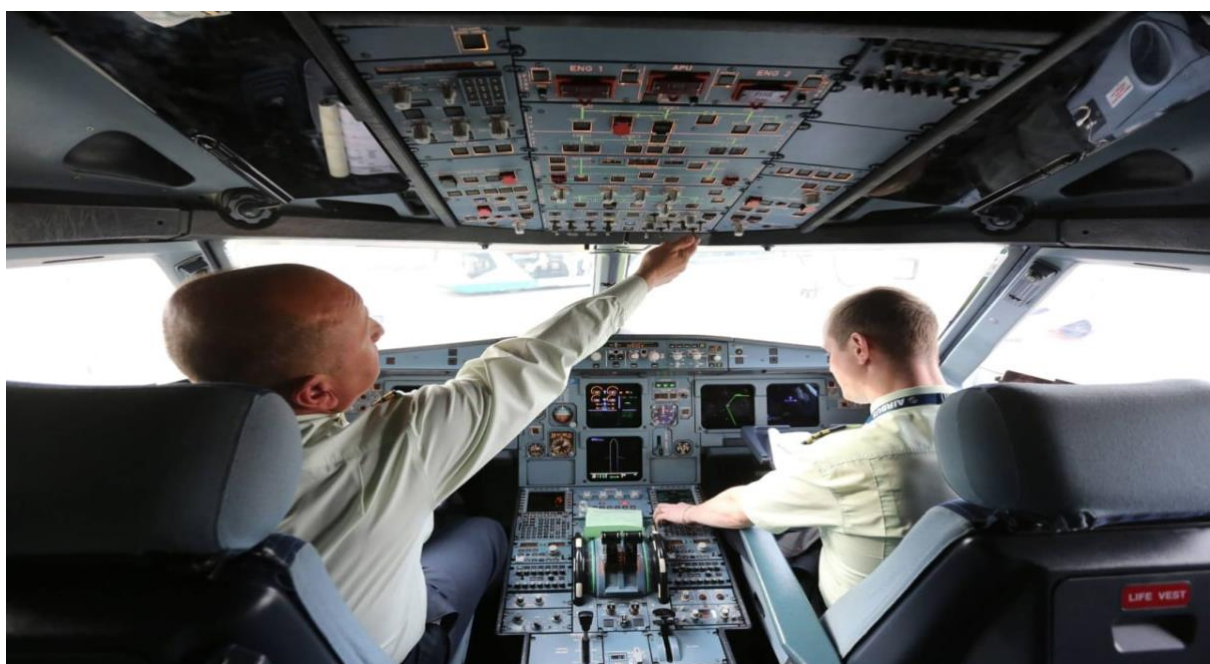
## **WHAT CAUSES PLANES TO CRASH?**

There are many causes of aviation accidents. Determining what causes a plane to crash can often take in-depth research and investigation to understand what happened. Flight track data can be retrieved, air traffic control transcripts can be obtained, and sometimes aircraft record in-flight data that can be recovered after an accident. It's important to have an attorney help obtain as much information as possible shortly after a crash occurs because some data may only be available for a limited period of time.

The aviation attorneys at Wilson Kehoe can help gather this type of information quickly and efficiently.

## **HUMAN ERRORS IN AVIATION**

Pilot error is the number one cause of aviation accidents. Piloting an aircraft requires lengthy training, a knowledge of the mechanical components of an aircraft, and hand-eye coordination skills to effectively and safely an aircraft. Pilots also have to think ahead. Planning flights, checking the weather, and anticipating changes are all keys to being a safe pilot. If a pilot doesn't plan the flight properly, gets into bad weather, or doesn't anticipate issues then airplane crashes can happen. Occasionally pilots become disoriented, especially while operating in clouds, under Instrument Flight Rules (IFR). Pilot disorientation can lead to stalls or spins that lead to crashes. Having an attorney that understands piloting is important if legal action is needed.



## **MISTAKES BY CREW MEMBERS**

Cockpit Resource Management is key to successful and safe aviation operation in larger aircraft with multiple crew members. This involves dividing up cockpit duties and making sure that each pilot in the cockpit knows their job. Managing a cockpit also involves making sure each pilot feels confident and comfortable in speaking up if something in the cockpit appears wrong or unsafe. Airlines spend hours training pilots on cockpit resource management. It is an important skill. If pilots don't follow good cockpit resource management skills then air crashes can occur.





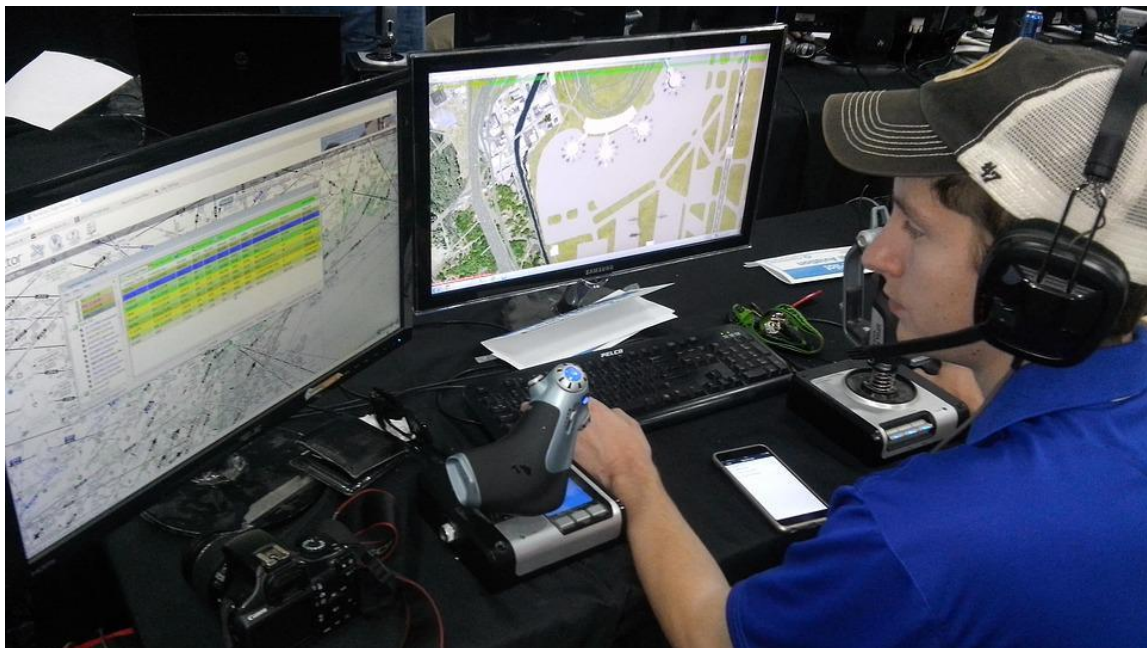
## WEATHER CONDITIONS

Weather is often a key factor in aviation accidents. It's the pilot's responsibility to know and understand the weather along a flight route. Air traffic controllers share responsibility for providing weather information to pilots. If wrong information is obtained or flights are not planned by following the expected weather conditions, then accidents can occur. Obtaining information about the weather after an accident is also important.



## AIR TRAFFIC CONTROLLER NEGLIGENCE

Air traffic controllers play a very important role in aviation safety. Controllers help keep aircraft separated from each other and guide flights through congested airspace. Controllers communicate with pilots giving them flight headings and designating the altitude at which an aircraft must fly. If a controller gives a pilot wrong information or fails to maintain flight separation, then collisions can occur. Air traffic control data and transcripts are retained for a limited period of time after an accident. It is important to request and obtain this information as soon as possible after a collision.



## **IMPROPER AIRCRAFT MAINTENANCE**

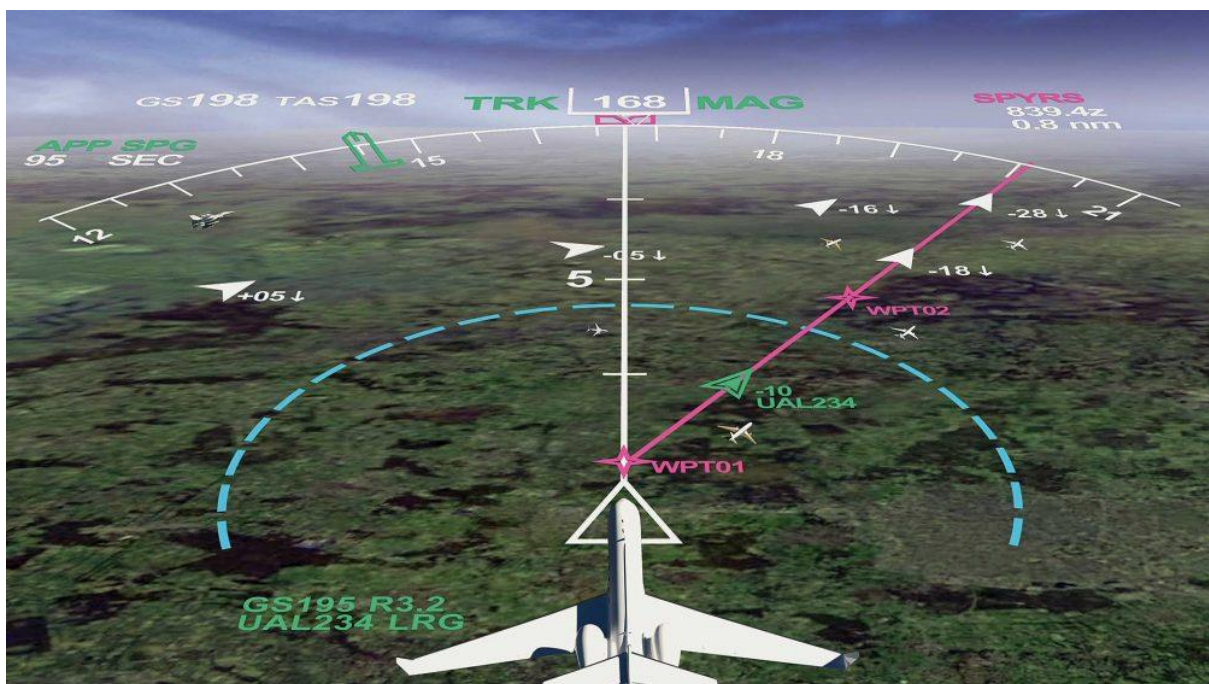
Proper aircraft maintenance is extremely important. There are many rules and regulations governing the maintenance of an aircraft. Airplane mechanics must follow checklists, guidelines, and inspection requirements. Inspection requirements vary depending on the type of FARs the flight is being operated under. It can be difficult to determine if a mechanical issue caused an aircraft to crash. Post-accident inspections are crucial to understanding if a mechanical issue was related to the crash.





## GPS FOR AIRCRAFT

GPS has become the primary navigation system for aircraft. GPS equipment is standard in nearly every aircraft. GPS can be programmed to give the aircraft's autopilot headings and altitudes to follow so that the pilot does not have to hand fly the aircraft the entire flight. While GPS is an essential tool in aviation, it can also be a distraction for pilots, and if not programmed correctly can cause an aircraft to get off an assigned heading or altitude. GPS also can be used in IFR conditions to give pilots the information they need to safely land an aircraft where cloud cover exists over an airport.





## INSTRUMENT FLIGHT FACTORS

Depending on the weather conditions, aircraft will be governed by Visual Flight Rules (VFR) or Instrument Flight Rules (IFR). Flying VFR a pilot primarily uses eyesight and visual cues outside the cockpit to safely fly the aircraft. Operating aircraft under Instrument Flight Rules (IFR) involves specialized knowledge and skill. Flying aircraft within clouds requires pilots to rely on cockpit instruments to safely fly aircraft. Attitude indicators, altimeters, airspeed, and heading indicators are all instruments pilots use to keep an aircraft straight and level while flying in clouds. Understanding these instruments and how pilots use them are often important in finding how a crash occurred.



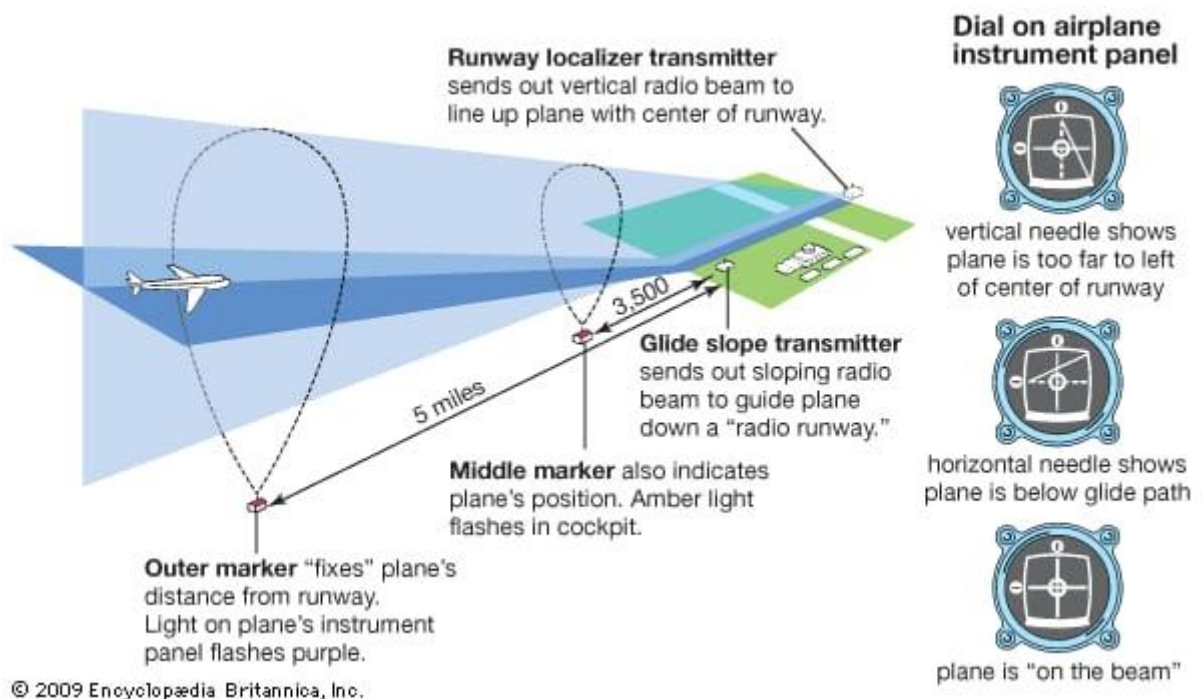
## AIRCRAFT DESIGN DEFECTS

Aircraft designs vary greatly. Airplanes have different types of engines, propellers, wings, and cockpit instrumentation. If any of these components are not designed properly, crashes can occur. Aircraft must be designed to withstand turbulence, weather, and other types of different environments. These designs are usually thoroughly tested before being put into production. Gathering this testing information is important to make sure that the engineers put the design through proper protocols. A defectively designed aircraft can lead to crashes.



## GLIDE SLOPE INDICATORS

Landing an aircraft while cloud cover exists at an airport requires an Instrument Landing System (ILS) or GPS approach. These landing systems will provide a signal to aircraft that gives a glide slope path to follow from the air down to the runway. Keeping the aircraft on the glide slope is extremely important. Getting below the glide slope can cause collisions with terrain or ground obstacles. IFR-trained pilots spend many hours training to properly follow glide slope indicators. Failing to follow a glide slope path can cause aviation accidents.



## **HOW DO YOU INVESTIGATE A PLANE CRASH?**

When one of our airplane accident attorneys joins your team, we use all the resources to figure out the plane crash reasons. This involves bringing in other expert witnesses, including engineers, metallurgists, and meteorologists to analyse the entire case as well. To get the best picture of what happened, we need to know what occurred before the flight, during the accident, and after the accident. Our investigations often involve listening to evidence from the cockpit voice recorder, checking the flight data recorder, reading through corporate policies, inspecting aircraft wreckage, and getting to an accident site itself. We try to leave no stone unturned in the efforts to identify who was responsible for plane crash accident.

## **CONCLUSION**

We can reduce the plane crashes by reduce this kind of mistakes. Although the number of aircraft in operation is constantly on the rise, accident rates are falling, making air transport the safest of all means of transportation.