

*Technical expertise and  
aviation-related court  
proceedings.*

**FLORENTINO-GREGORIO RUIZ  
YAMUZA. Senior Judge, Spain.**

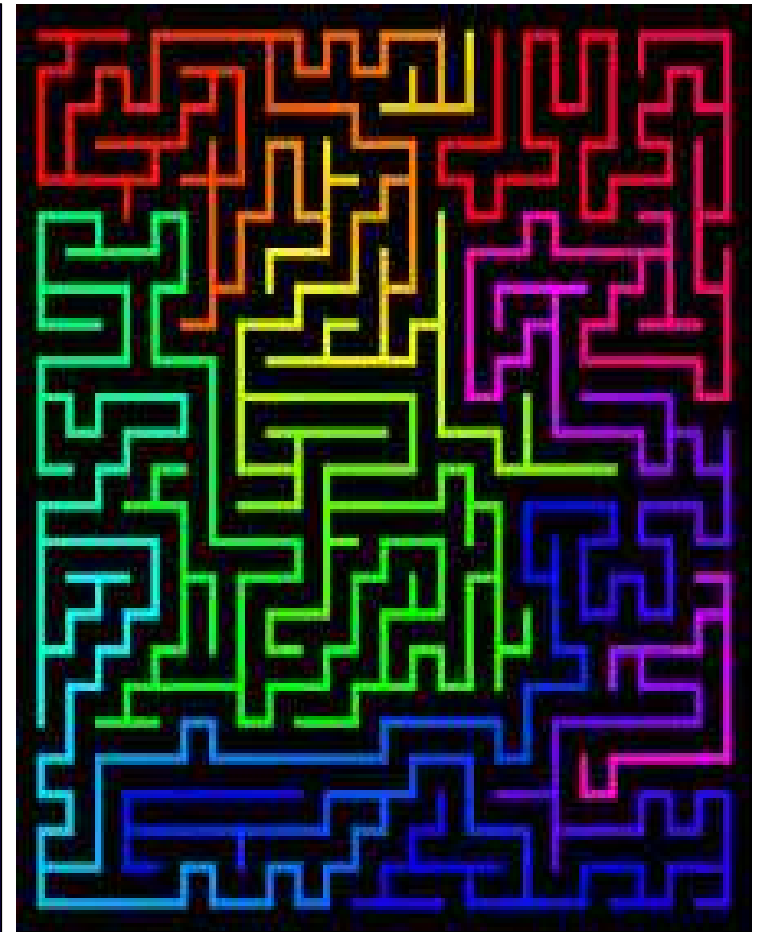
**Roma, Italy, 21-22 November  
2017.**



## 1. Expert evidence in judicial proceedings

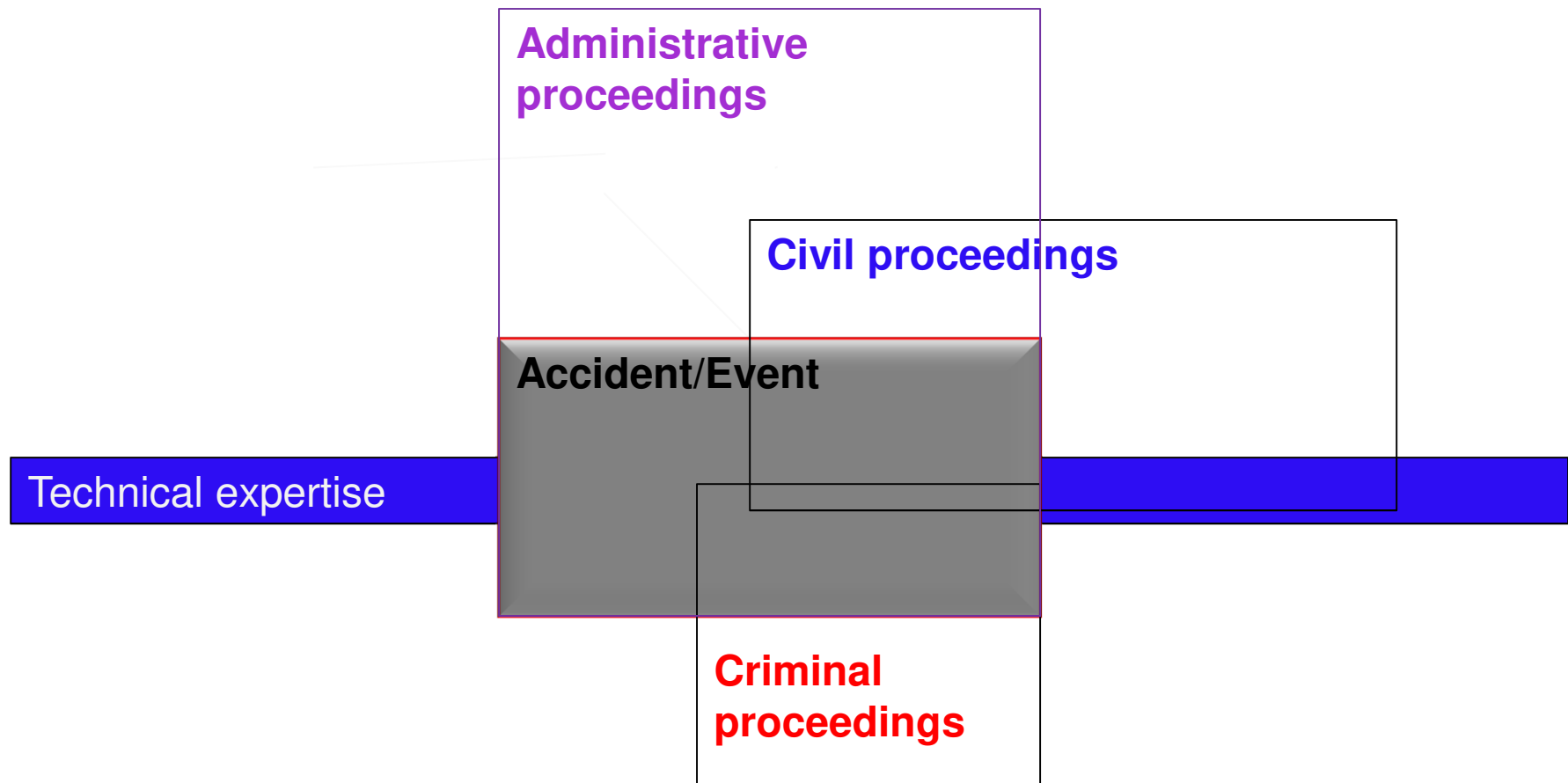
*“We are experts in resorting to experts”*

Forensic (psychiatry, injuries, sexual assault),  
Medical malpractice,  
Analysis of drug seizures,  
Liability in the building,  
DNA tests  
Ballistic tests,  
Tax fraud,  
Traffic accidents  
Workers' Compensation  
Personal Injuries,  
Wrongful Death,  
Negligence,  
Accident at Work  
Defective Product Liability,  
Social Security and Disputed Insurance Claims.



Are we experts in understanding experts?  
Are we experts in understanding legal contexts?

## 2. Role of experts in judicial proceedings



### 3. The Spanish legal framework



**Criminal Procedure Act:** Articles 121 fees, 241 costs, 328 robbery, 335 forgery on documents, 336 crime scene, 339 disappeared corpus delicti, 353 autopsy, 356 substances, 365 value of things, 433 minors.

#### On the expert report 456 and sq.


*The Judge will agree to an expert report when, to understand or appreciate some significant fact or circumstance in the pre-trial proceedings, scientific or artistic knowledge is necessary or appropriate.*

*The Judge will clearly and firmly state the purpose of the report to the experts.*

Investigation stage/Hearing  
Compulsory duty  
Oath  
Samples to be retained  
Disagreeing experts

Pair examinations and reports  
Challenging  
Parties in presence  
Observations and questions  
Report contents

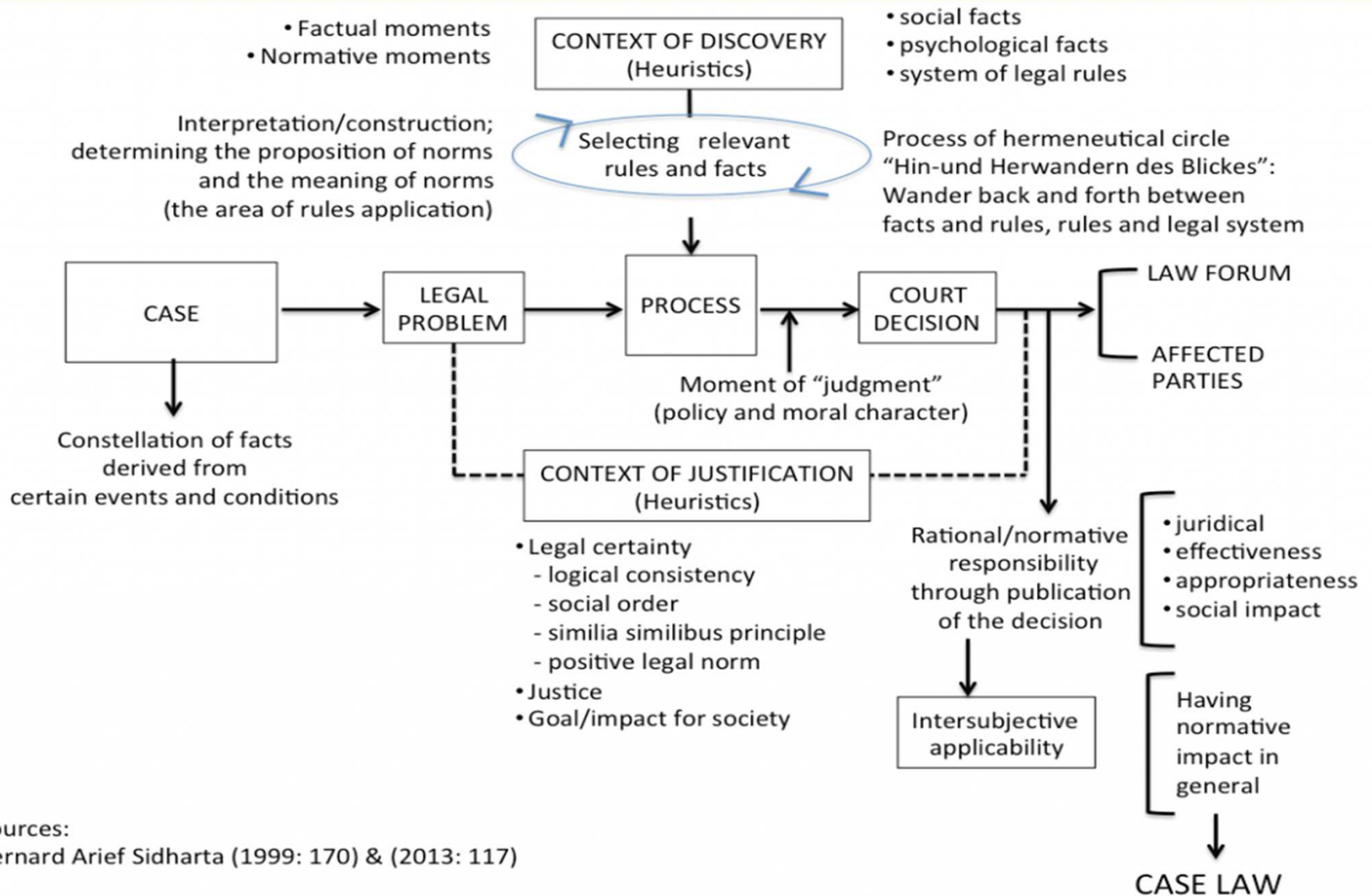
#### 4. What we Judges do expect from experts?

- 
- a. Objective unbiased opinion to matters within his expertise*
  - b. State the facts upon which assumptions are based*
  - c. Make it clear when an issue falls outside their expertise*
  - d. If there is insufficient data then he should inform the court that opinion is provisional*
  - f. Any change of views after an exchange of reports should be communicated to the other side.*
  - g. Any real evidence upon which opinion is based should also be provided*

Mr. Justice Cresswell in *National Justice Compania Naviera SA v Prudential Assurance Company Limited*. Queens Division Commercial Court 1993.

*If you can't explain it simply you don't understand it well enough*

## 5. What the decision-making process of Judges is like?



## 6. Prosecutor Expert course

### Judiciary

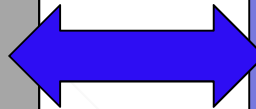
Acquire/increase knowledge regarding aviation operations

Raising awareness on Just Culture issues

Improving channels of communication with experts

Establishing clear parameters for a better understanding of experts' reports

Setting up criteria on what to demand from experts and how to demand it.



### Experts

Acquire/increase knowledge regarding judicial proceedings

Raising awareness on National and supranational legal framework

Improving channels of communication with the Judiciary

Reviewing the existing criteria on aviation accident reporting for judicial purposes

Lessons to be learnt from previous cases



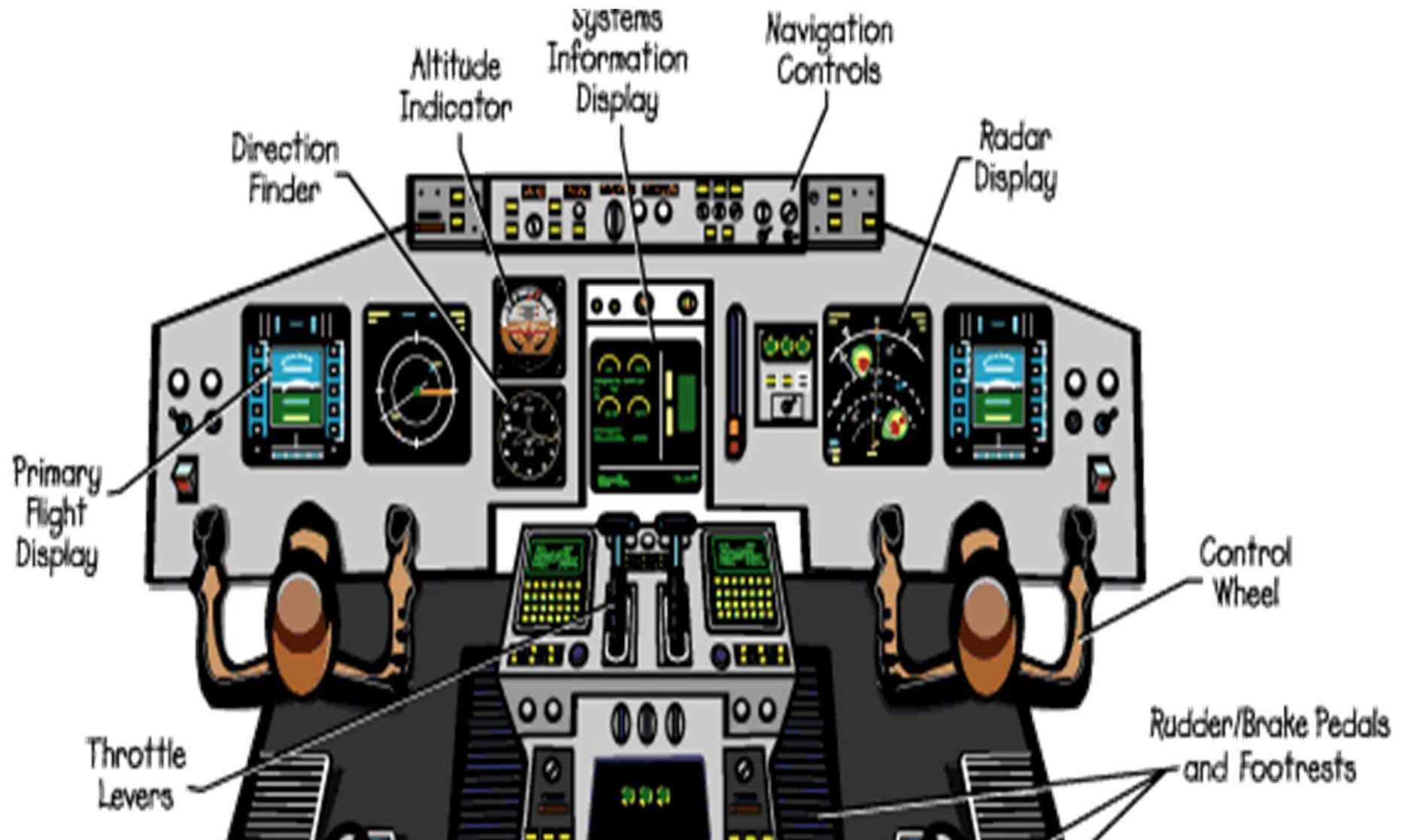
## 8. Prosecutor Expert course (Criteria)

- Minimum 10 years operational experience (ATCO, pilot) and not more than 3 years after retirement .
- Independence (of any union and management/employer activities), impartiality and integrity (clear judicial records); Peer recognition through recommendation/endorsement by the national professional association.
- Attended the EUROCONTROL – IFATCA – ECA Prosecutor Expert Course (Basic followed by the Advanced course); Attended regularly conferences/events;
- Effective communication skills (verbal/oral and writing)
- Demonstrable motivation to engage in Just Culture related national and European activities
- Demonstrated technical, operational knowledge and experience as well as demonstrated applied knowledge or experience in the field of safety and human factors
- Basic knowledge of the national prosecution function or previous experience with judiciary in a Just Culture context would be an advantage;



## 9. Expert evidence in aviation-related cases (I)

Why is so important the expert role in the field of judicial cases related to aviation-railway (or railway and in other fields)



## 10. Expert evidence in aviation-related cases (II)

### Eficient expert reporting

Offer concisely and clearly the information relevant to the problem at stake.

Answer the questions as simply as possible.

Provide data in a clear and understandable manner.

Start from the beginning. Judges may know nothing about aviation issues, they deal with lots of construction issues or medical malpractice getting basic knowledge in those fields but rarely have to try aviation-related cases.

Judges would like to find solid foundations for their assumptions.

Normally there is no need to get to know all remote and immediate causes or every single detail but to have a basic and comprehensive enough, explanation about regulations, functioning, circumstances, rules of experience and causes.

Handling synergy and conflict with other experts



## 11 Cases from real life (I) Airbus A400M Atlas crash. Sevilla, 9 May 2015

### *Software issue*

Nature of the facts → required expertise/expert teams

Three out of four engines failed during departure.  
Management new software of engine-fuel supply?  
Torque calibration parameter accidentally wiped?

Conflicting interests

Airbus

CASA

Software providers

Manufacturing

Software installation

Procedures/human factor

Concurring investigations

Spanish Authorities

Spanish Judiciary

BEA Agency

Expert teams

## 12. Cases from real life (II). Ryanair FR9672. Rome, 7 September 2005

### Lost pathway

#### RYANAIR UNSTABLE APPROACH – THE SEQUENCE OF EVENTS

##### 1. Flightpath after diversion to Fiumicino

##### The facts → required expertise/expert teams

Boeing 737 approaching Ciampino lost situational awareness and diverted to Fiumicino with adverse weather.

The crew began to miss ATC instructions and descended below assigned altitudes, getting into conflict with other traffic. The crew was not able to approach Fiumicino as well and finally diverted to Pescara, where the airplane landed safely with just 1520 kg of fuel remaining.

##### ASNVR Report

**Primary cause** → the incorrect operation and conduct of flight by the flight crew in adverse weather at the unplanned and unbriefed diversion to Rome's Fiumicino Airport.

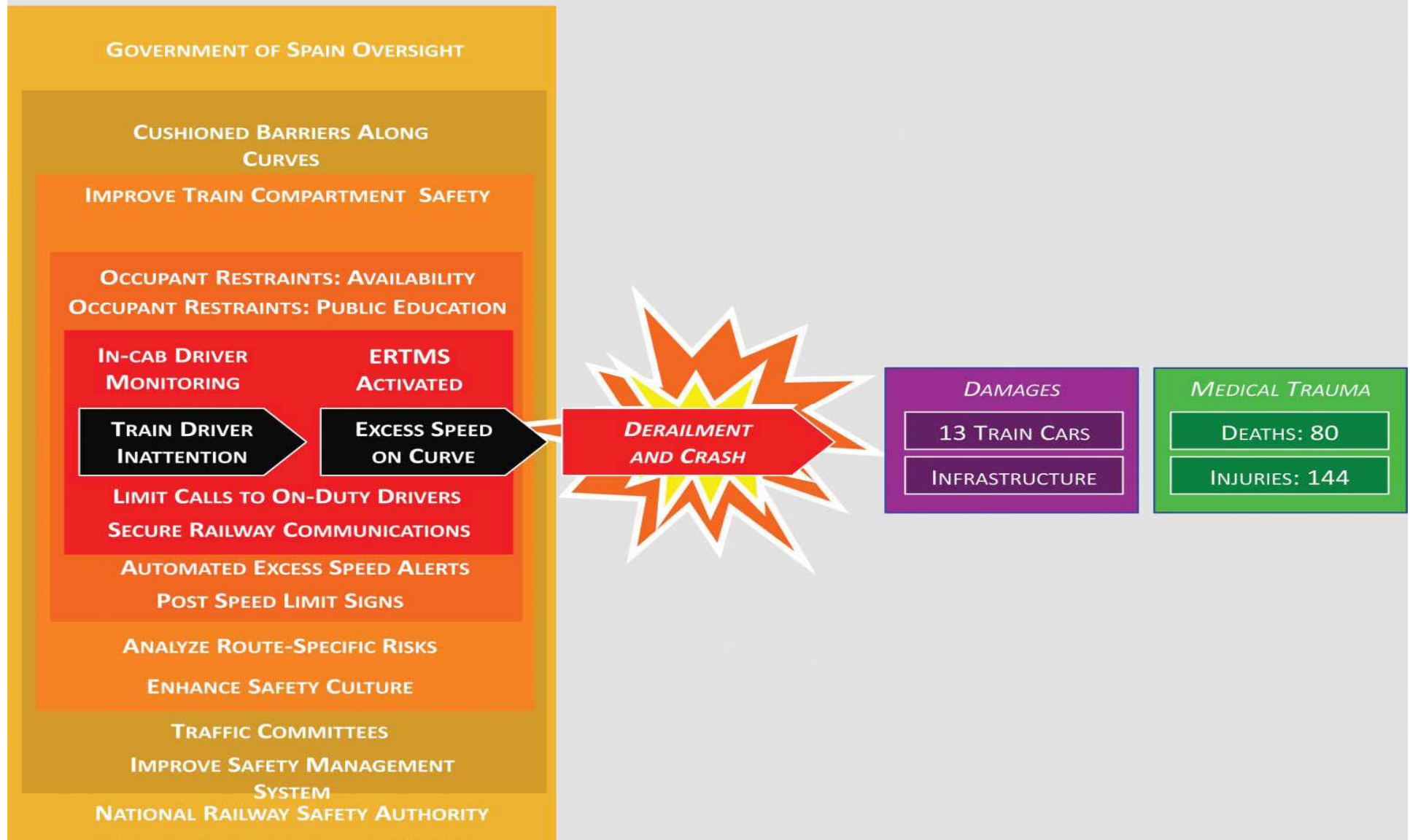
##### Contributing causes →

- The captain's state of mind, illness
- The limited experience by the first officer
- Poor cockpit resource management and crew cooperation
- Inappropriate information provided by air traffic control in non-standard language
- Inadequate analysis of weather data by the flight crew
- Incorrect use of onboard weather radar by flight crew
- Absence of timely available ground radar based weather data in the Rome approach sectors
- Absence of the minimum safe altitude warning on the approach radar of Rome's air traffic control

## 13. Cases from real life (III). Alvia Train. Angrois 24 July 2013

### Overspeed

#### “Upstream” Risk Landscape





## **14 Annex. Internet sites**

### **Use of expert witness in aviation cases**

<https://www.americanbar.org/content/dam/aba/administrative/litigation/materials/2012-aviation/2012-aviation-use-expert-witnesses-aviation-cases.authcheckdam.pdf>

### **Slide 2 Maze pic hyperlink. *Ten things you need to know about expert evidence***

[https://www.eversheds-sutherland.com/global/en/what/articles/index.page?ArticleID=en/Construction\\_And\\_Engineering/10\\_things\\_you\\_need\\_to\\_know\\_about\\_expert\\_evidence](https://www.eversheds-sutherland.com/global/en/what/articles/index.page?ArticleID=en/Construction_And_Engineering/10_things_you_need_to_know_about_expert_evidence)

### **Slide 5. Expert witness pic hyperlink. *Expert evidence. The role, duties and responsibilities of the expert witness in litigation***

<http://www.terrafirmachambers.com/articles/ExpertEvidence-RoleDutiesandResponsibilitiesoftheExpertWitnessinCourtProceedings.pdf>

### **Slide 11. Airbus A400M Crashes During Test Flight**

<http://aviationweek.com/defense/airbus-a400m-crashes-during-test-flight>

### **Slide 12 Ryanair FR9672 losses its pathway**

<http://avherald.com/h?article=41a5f274>

### **Slide 13 Alvia train derailment**

[https://www.researchgate.net/publication/289686478\\_Disaster\\_complexity\\_and\\_the\\_Santiago\\_de\\_Compostela\\_train\\_derailment](https://www.researchgate.net/publication/289686478_Disaster_complexity_and_the_Santiago_de_Compostela_train_derailment)  
<http://root-cause-analysis.info/tag/derailment/>