



# Projects for Policy (P4P)

## Aviation Safety

Is EU aviation safety research funding well-spent?  
Is it focusing on the right issues?

Austrian Aviation Technology Days  
Wiener Neustadt, 17 October 2018

Andreas Wiesinger  
European Commission  
DG Research & Innovation  
Aviation unit



# What is Projects for Policy (P4P)

This is an initiative which aims to use research and innovation project results to shape policy making. Research and innovation projects funded by EU Framework Programmes deliver invaluable results.

These results are used for economic and social activities, as a basis for further research, or to develop new and better products and services.

But project results can also

- provide evidence for policy development and design
- highlight gaps or barriers in current policy frameworks or approaches
- help develop new opportunities and innovative activities for any area of policy-making across Europe and the world

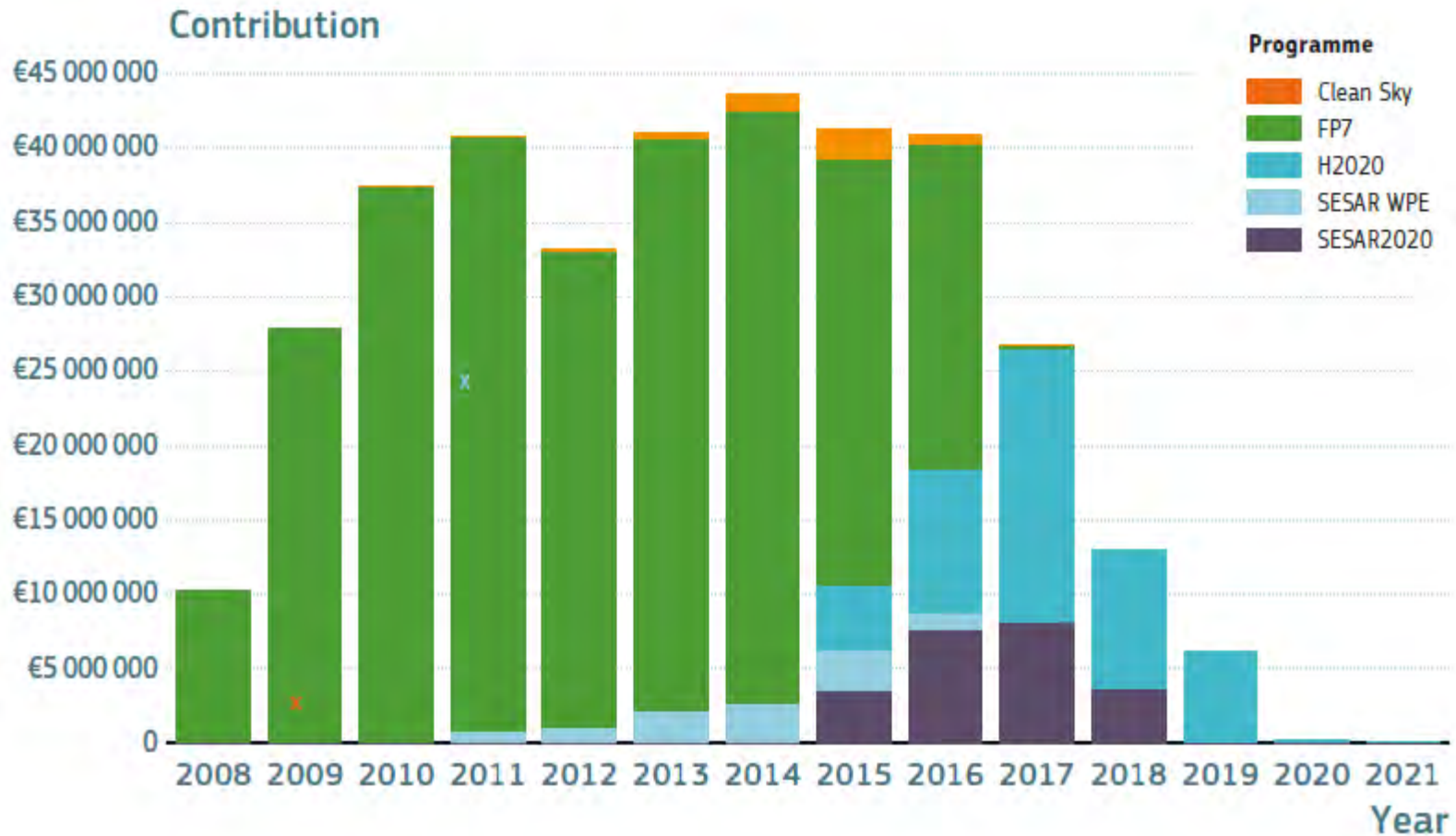
As such, they are an excellent tool for policy makers.

# P4P on Aviation Safety



<https://publications.europa.eu/en/publication-detail/-/publication/b4690ade-3169-11e8-b5fe-01aa75ed71a1>

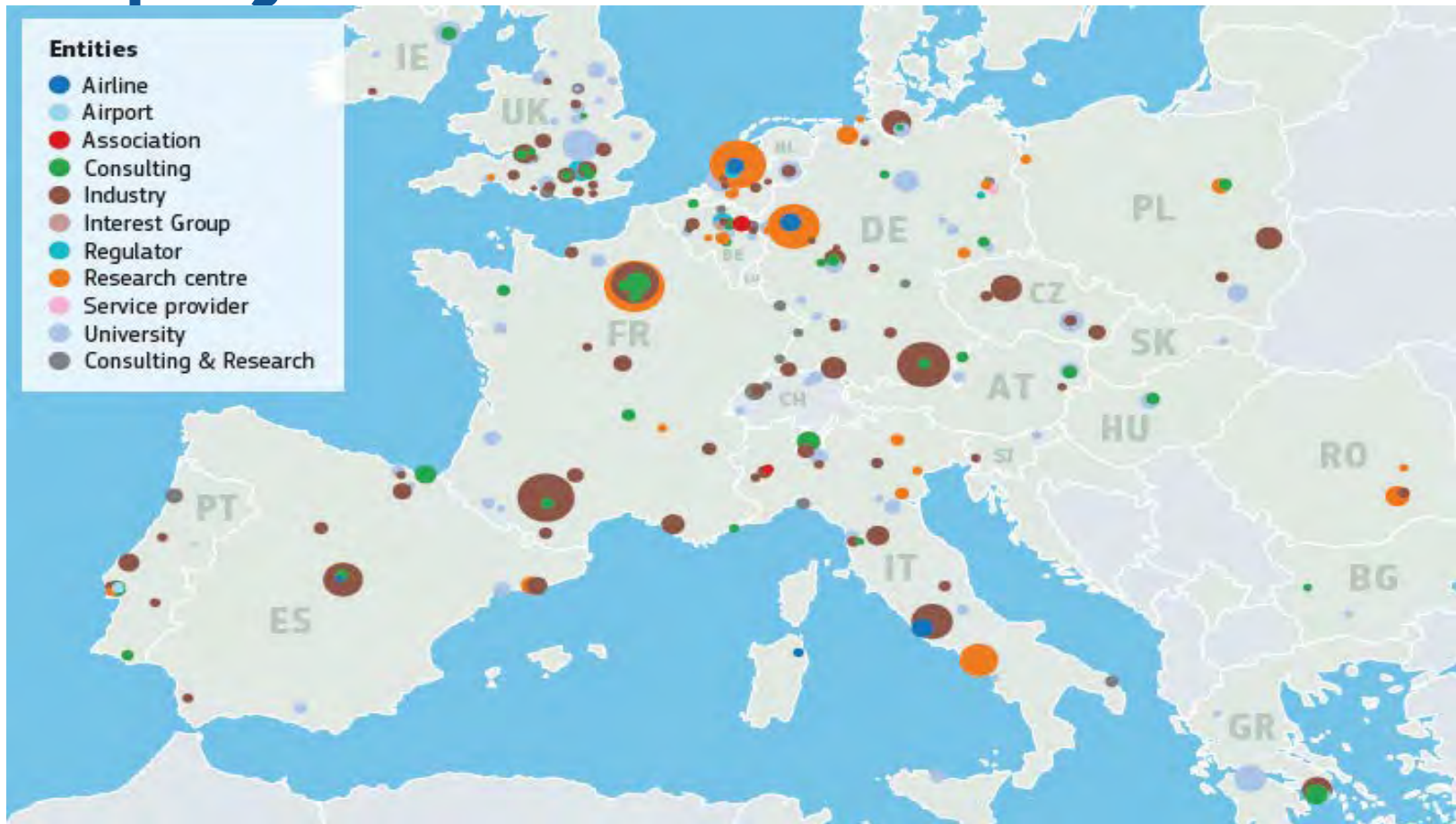
# What EU spent on aviation safety research



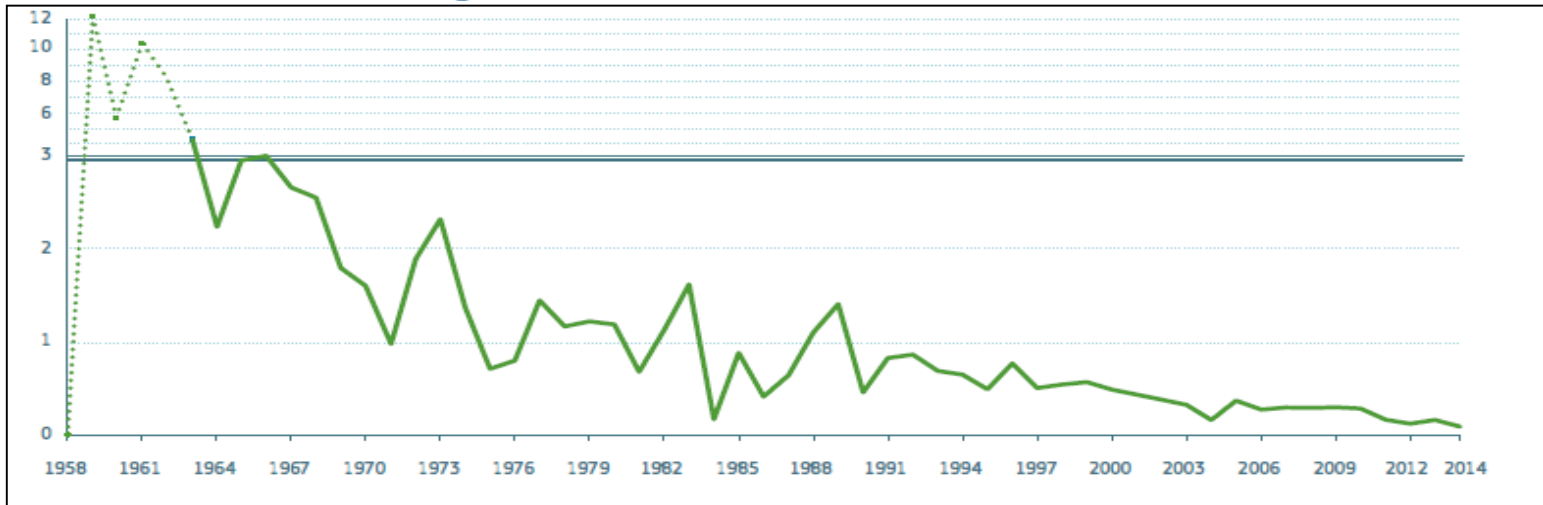
# Where the money went...



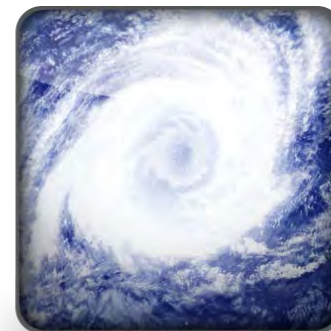
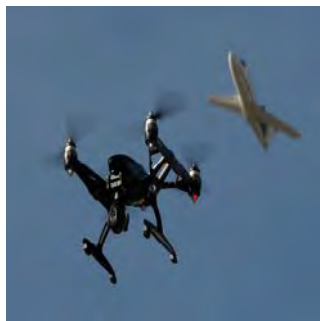
# Where are the beneficiaries of the EU projects?



# Is it working? What's around the corner?



yearly fatal accident rate per million flights





Reviewed 160 Projects  
53 analysed in depth

From FP7, SESAR,  
CLEANSKY 1 & 2, Horizon  
2020

4 independent experts  
Involvement of EASA, DG RTD,  
DG MOVE, INEA,  
CLEANSKY JU







# The three main elements of the EASA's mission

## European Aviation Safety Strategy:

- Policies and objectives from political authorities

EC



## European Aviation Safety Programme (EASP):

- Integrated set of regulations and activities aimed at improving safety

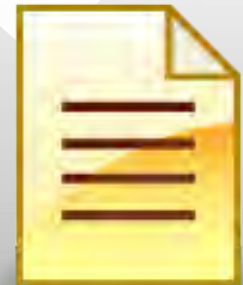
EC



## European Plan for Aviation Safety (EPAS):

- High level safety issues assessment and related action plan

EASA



# EASA's *EPAS* Model

## European Plan for Aviation Safety (EPAS)



### Systemic Issues

Safety Management

Human factors and competence of personnel

Aircraft tracking, rescue operation and accident investigation

### Operational Issues

CAT Aeroplanes

General Aviation

Aircraft upset in flight

Design and maintenance improvements

Mid-air collision

Runway safety

Ground safety

Terrain conflict

Fire, smoke and fumes

Rotorcraft Operations

Systemic enablers

Staying in control

Coping with weather

Preventing mid-air collisions

Managing the flight

### Emerging Issues

Civil drones (RPAS)

Safety and security

New business models

New products, systems, technologies and operations

# EU Projects



## Systemic Issues

Safety Management

7

Human factors and competence of personnel

18

Aircraft tracking, rescue operation and accident investigation

0

## Operational Issues

CAT Aeroplanes

Aircraft upset in flight

5

Design and performance improvements

10

Mid-air collision

0

Runway safety

4

Ground safety

0

Terrain conflict

2

Fire, smoke and fumes

2

Rotorcraft Operations

5

General Aviation

Systemic enablers

0

Staying in control

0

Coping with weather

7

Preventing mid-air collisions

0

Managing the flight

0

## Emerging Issues

Civil drones (RPAS)

7

Safety and security

1

New business models

2

New products, systems, technologies and

13

# Gaps Identified

## Gaps 1: SYSTEMIC

Drone Safety Management

Focused Human Factors

General Aviation Safety

Flight Tracking & Rescue

## Gaps 3: EMERGING

New business  
environments

New technologies

Cybersecurity



## Gaps 2: OPERATIONAL

Flight upset

Mid-air collision (no  
functioning transponder)

Ground-handling safety

Terrain conflict

Fire on board aircraft

# Gaps 1: Systemic Risk Areas

Safety management for drones & personal vehicles

Focused Human Factors research (e.g. on flight upset recovery)

General aviation safety – create a level playing field

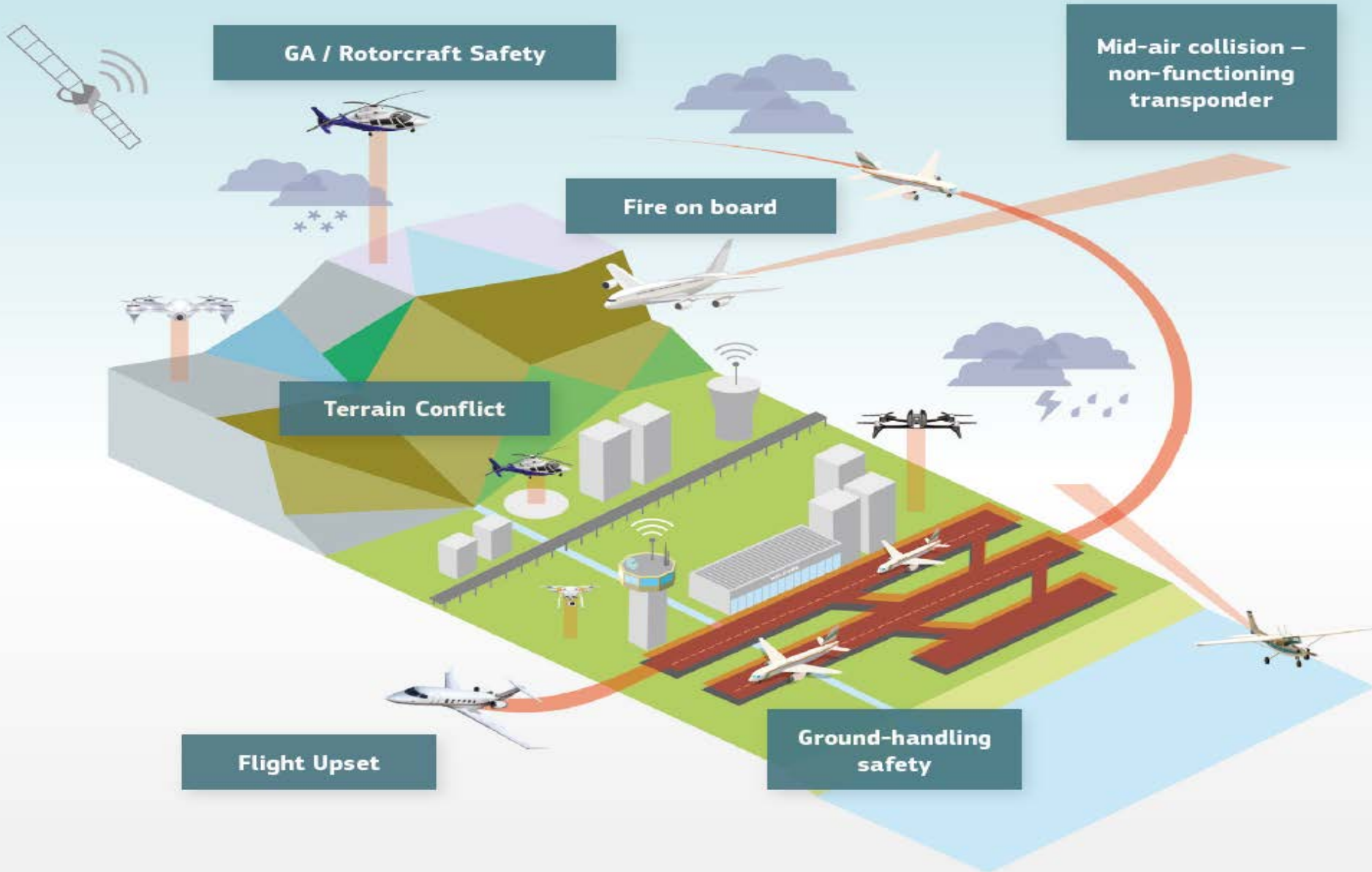
Flight tracking, rescue & survivability

U-space

Blueprint



# Gaps 2: Key Operational Risks

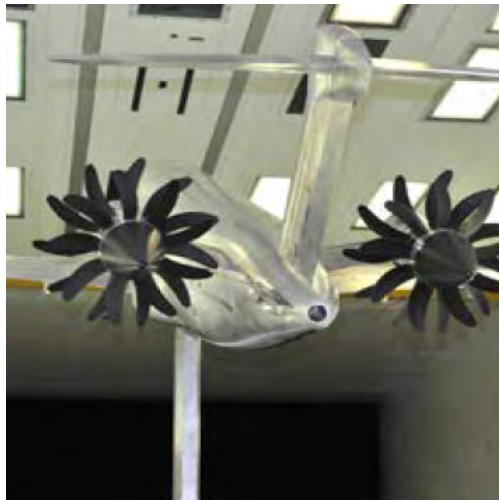


## Gaps 3: Emerging Risks

New business  
environments



New  
technologies



Cybersecurity



# Policy Recommendations

## 10 ways forward

Safety culture across the industry

Sharing safety data and intelligence

Harnessing Human Factors

Towards a risk-based research strategy.

Reducing the operational risk portfolio

Improving post-accident survivability

Safety management for new aviation players.

Collaborative safety & security

New technologies and safety solutions

Europe as a global aviation safety research player

- 
- Sharper focus
  - More industrial participation
  - More effective research
  - Less accidents





## Recommendation 2: SHARING SAFETY DATA AND SAFETY INTELLIGENCE

Safety Data should to be **shared and collectively analysed** in order to yield and disseminate actionable safety intelligence and not compete where safety is concerned.

**This will lead to smarter use of data for increased safety in aviation, and generate the economies of scale needed for big-data and other data-mining approaches.**



## Recommendation 3: SAFETY CULTURE ACROSS THE AVIATION COMMUNITY

Safety Management Systems only work if there is a strong safety culture behind it and should lead to a greater **cross-organisational collaboration** for safety.

Safety culture needs to be led from the top, energised throughout organisations and as well periodically evaluated.



- New EASA Basic Regulation, assigns to the Agency a prominent role in future aviation research coordination.
- The P4P report an important guiding document besides EPAS, ACARE SRIA and the OPTICS report.
- EASA's on-going involvement in Horizon 2020 Aviation Safety research projects and CleanSky2, is of mutual benefit.
- This joint P4P exercise is the cornerstone of a fruitful cooperation with DG R&I in the future.



# P4P Aviation safety: significance for EASA

- EPAS combines the safety action plan, the high priority research plan and the safety promotion plan,  
-> P4P report structure follows the EPAS structure !
- Report clearly shows
  - which safety risks have been addressed
  - and where potential gaps are.
- Regulators to pay attention to the results and recommendations in future policy decisions.
- The 10 recommendations will be taken up by EASA for its future strategy, policy and activity planning.



European  
Commission

*Thank you!*