

# A greener horizon: Europe's vision for climate-neutral aviation

**Griffith Aviation Reimagined 2023 Webinar Series**

**Session 2: Transformative policy - raising the bar for aviation decarbonisation**

**Thursday 12 October 2023, 3-4:30 pm AEST**

**7-8:30 am CET**

**Rosalinde van der Vlies, Director**

European Commission, DG R&I, Clean Planet

# Europe – Australia – One Planet – Clean Planet

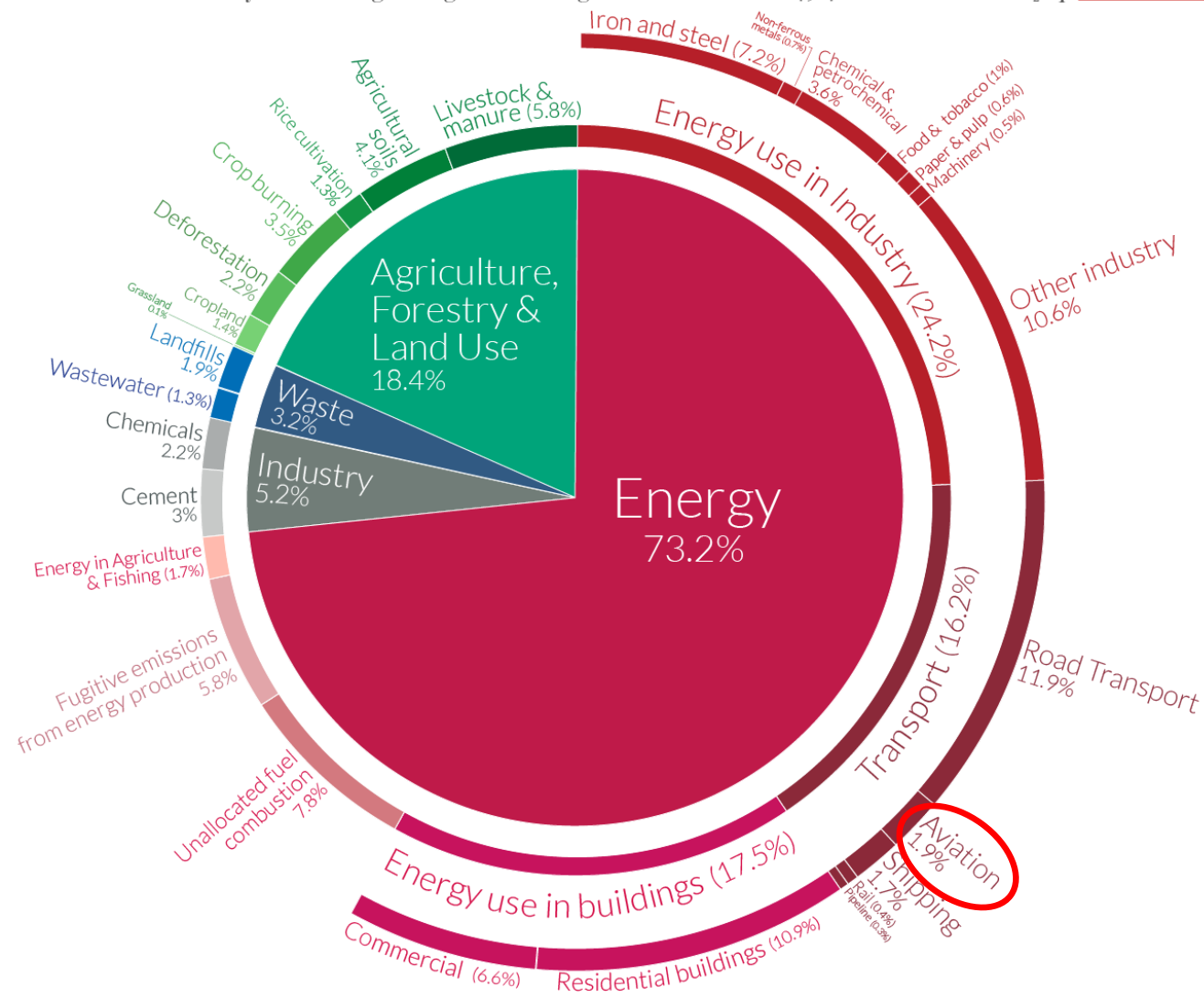


# Raising the bar for aviation climate neutrality

## Global greenhouse gas emissions by sector

Our World in Data

This is shown for the year 2016 – global greenhouse gas emissions were 49.4 billion tonnes CO<sub>2</sub>eq.



## Global CO<sub>2</sub> emissions from commercial aviation

Our World in Data

918 million tonnes of CO<sub>2</sub> in 2018

2.4% of total CO<sub>2</sub> emissions from fossil fuels

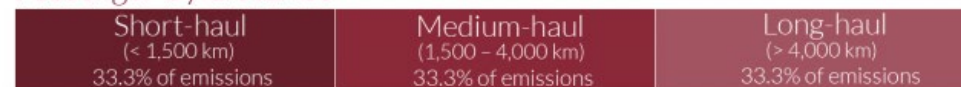
Total commercial aviation



Passenger aviation



Passenger by distance



Passenger by country of departure



Data source: Graver, B., Zhang, K., & Rutherford, D. (2019). CO<sub>2</sub> emissions from commercial aviation, 2018. *The International Council of Clean Transportation*. OurWorldinData.org – Research and data to make progress against the world's largest problems. Licensed under CC-BY by the author Hannah Ritchie.

Global solutions are needed - the intra-European aviation is responsible for **14% of the global aviation GHG emissions** – or **0.28% of global GHG emissions**.



# The path to Climate Neutrality needs Aviation Breakthroughs





# Horizon Europe – Aviation Strategic Research & Innovation Agenda

Strategic research  
and innovation agenda



The proposed European Partners  
for Clean Aviation

Annex to GB decision no. CleanHydrogen-GB-2022-02

CLEAN HYDROGEN JOINT UNDERTAKING

Strategic Research and Innovation  
Agenda 2021 – 2027



Clean Hydrogen  
Partnership



Draft - Vers



Strategic Research and Innovation Agenda



Digital   
European Sky



DRAFT

July 2020

# European Green Deal



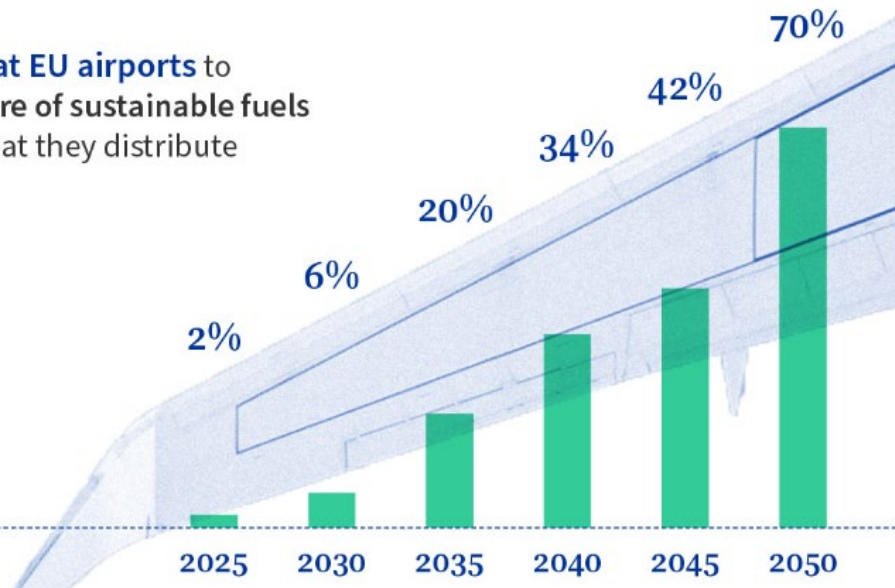
# European Green Deal: ReFuelEU Aviation



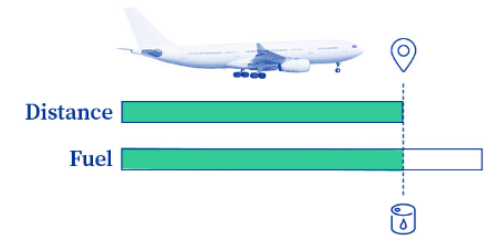
## The ReFuelEU aviation regulation will oblige:

1. aircraft fuel suppliers at EU airports to gradually increase the share of sustainable fuels (notably synthetic fuels) that they distribute

*Minimum share of supply of sustainable aviation fuels (in %)*



2. airlines departing from EU airports to refuel aircraft only with the fuel necessary for the flight to avoid emissions related to extra weight caused by tankering practices (carrying extra fuel to avoid refuelling at a destination airport where fuel is more expensive)



3. EU airports to guarantee the necessary infrastructure to deliver, store and refuel with sustainable aviation fuels

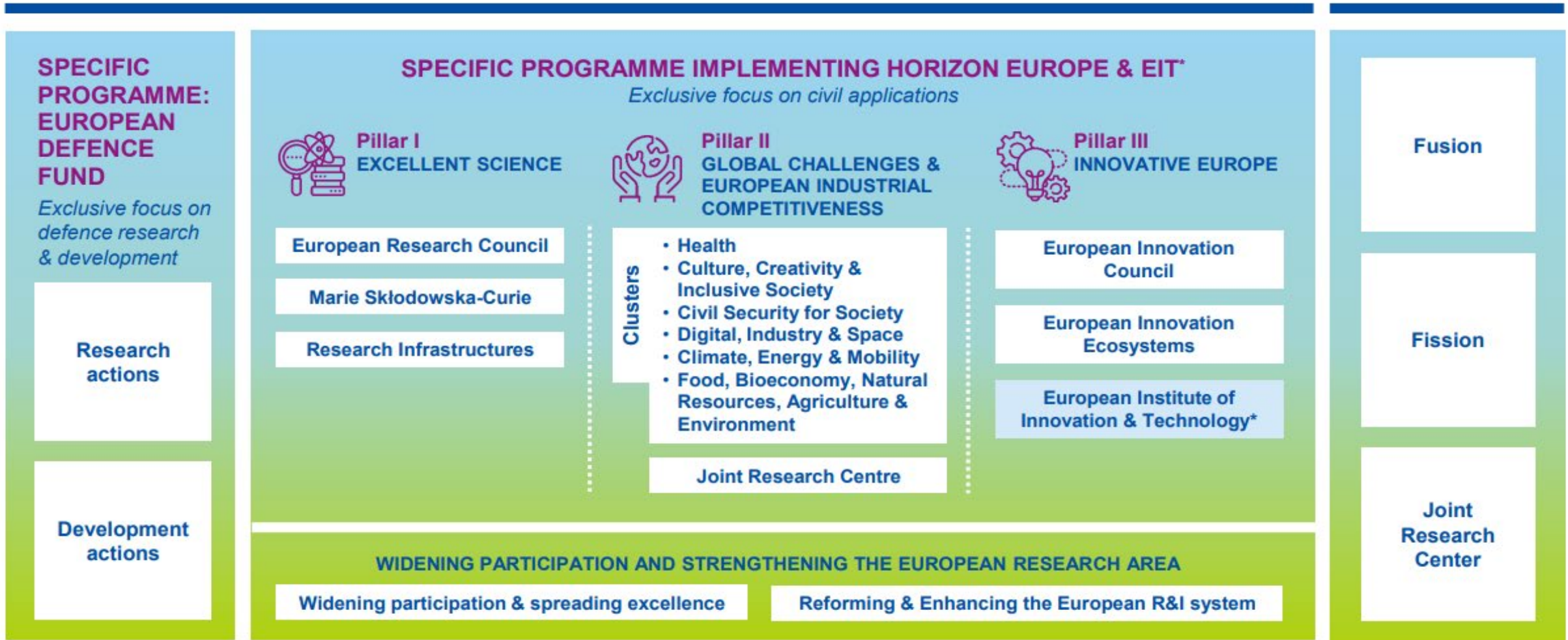




# Horizon Europe R&I programme

## HORIZON EUROPE

## EURATOM



\* The European Institute of Innovation & Technology (EIT) is not part of the Specific Programme



# Aviation R&I within Horizon Europe

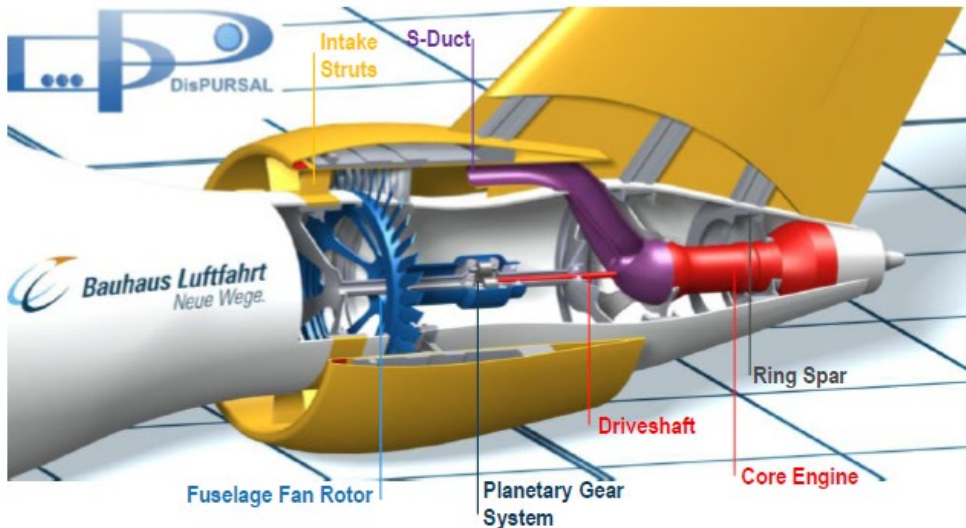
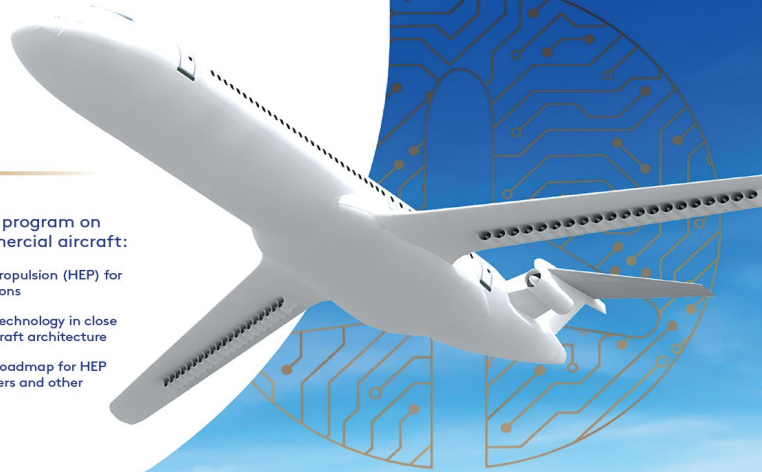


This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 875006

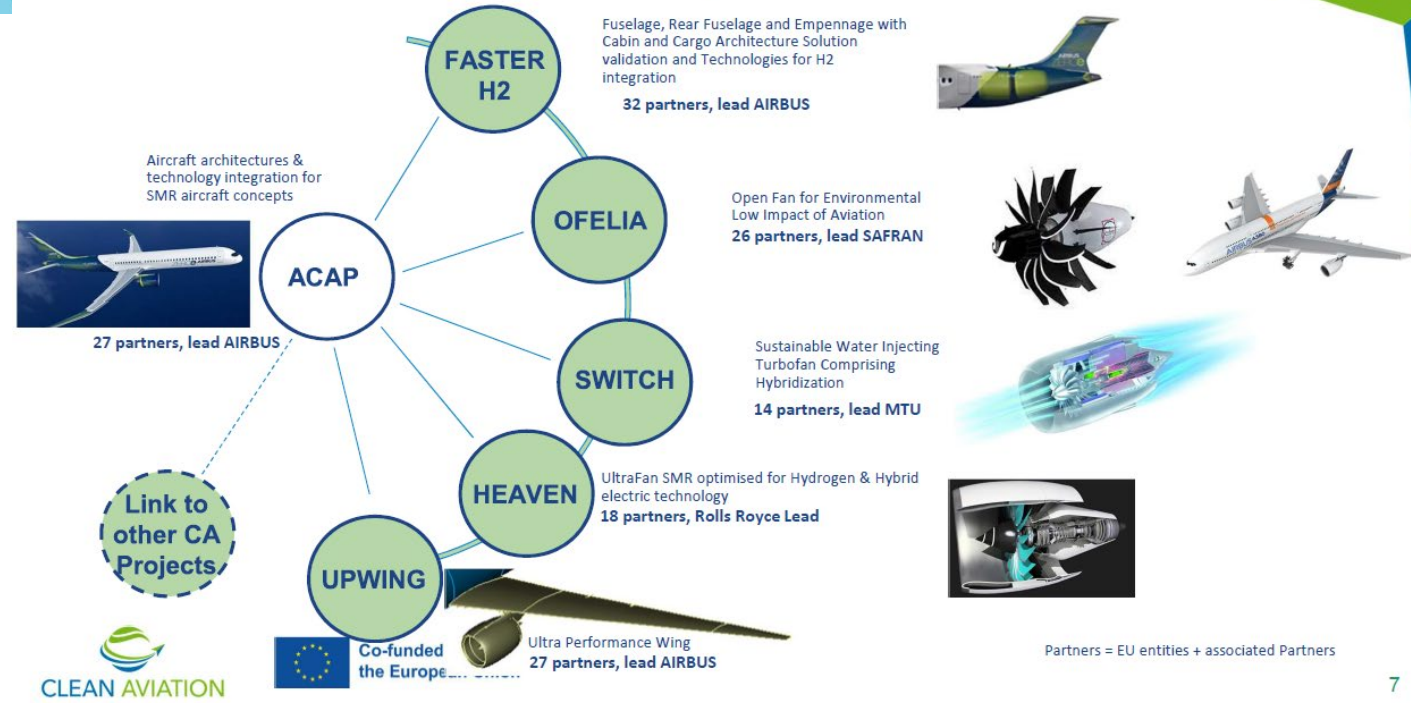
## GETTING HYBRID ELECTRIC

An ambitious 4-year technological program on hybrid electric propulsion for commercial aircraft:

- A holistic approach toward hybrid electric propulsion (HEP) for the reduction of commercial aircraft emissions
- An in-depth analysis of hybrid power train technology in close connection with propulsion system and aircraft architecture
- The ultimate goal to elaborate a European roadmap for HEP development, in connection with stakeholders and other on-going projects
- A powerful multidisciplinary consortium



## SMR ACAP and SMR Projects



# Horizon Europe for Australia & New Zealand

## Horizon Europe for Australia & New Zealand



Horizon Europe is the European Union's key funding programme for research and innovation, with a budget of €95.5 billion for the period of 2021-2027. Horizon Europe for Australia & New Zealand is a series of events – Horizon Europe Launch, Horizon Europe Info Day & Horizon Europe Proposal Writing Camp.

**LEK**

AVIATION WHITE PAPER

### Scenario Analysis of the Future of Australian Aviation

Prepared for the Department of Infrastructure, Transport, Regional Development, Communications and the Arts

Final Report

September 2023



LEK Consulting Australia Pty Ltd | Level 26, 88 Phillip Street, Sydney, 2000, Australia. Phone: +61 2 9323 0700





# Thank you!



© European Union 2023

Unless otherwise noted the reuse of this presentation is authorised under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.

All images © European Union, unless otherwise stated. Image sources: © ivector # 235536634 # 249868181 # 251163013 # 266009682, # 273480523 # 362422833 # 241215668 # 244690530 # 245719946 # 251163053 # 252508849, © shooarts # 121467308, © Eucalyp # 359818614, 2020. Source: Stock.Adobe.com. Icons © Flaticon – all rights reserved.

