SKEYES ENVIRONMENTAL ACTION PLAN

FABEC VFE Workshop
7 DEC 2021

Alexander Vanwelsenaere

member of FABEC

skeyes nice to guide you

1/ CONTEXT

EU Green Deal

Climate neutrality by 2050

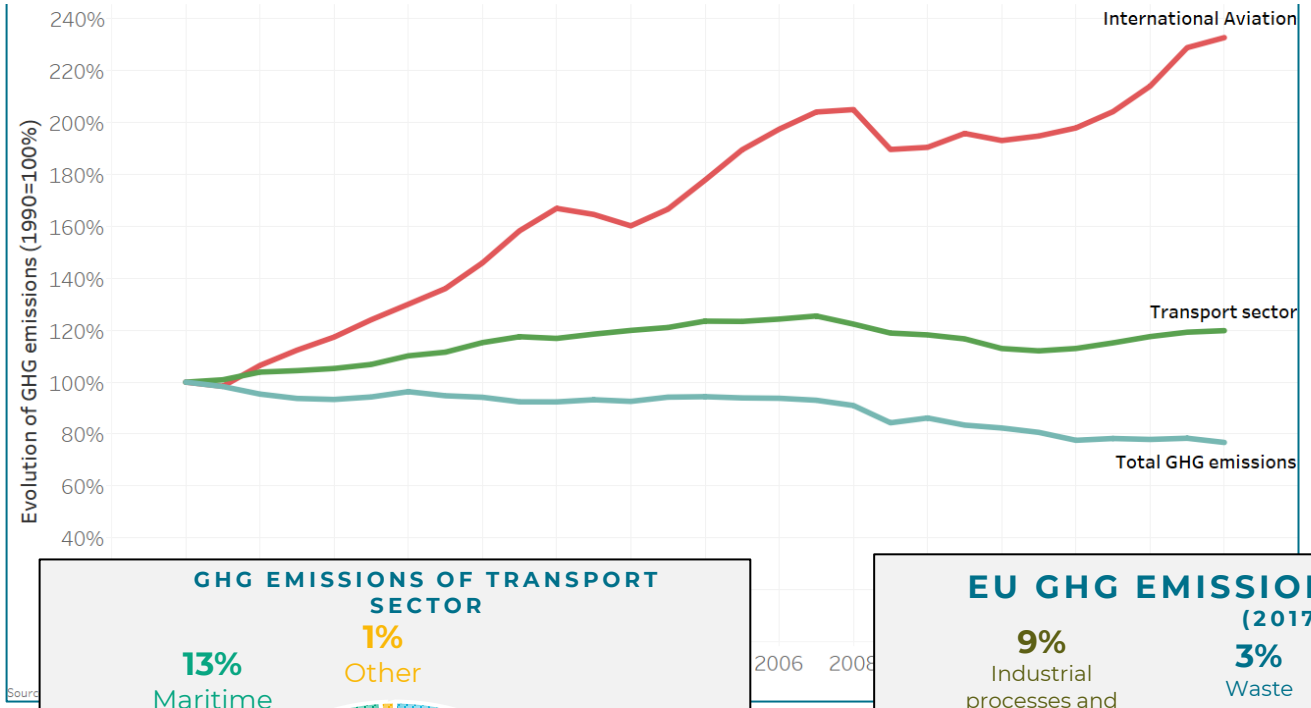
Objective for TRANSPORT:
reduction by 90% GHG

Greenhouse Gases

- Road
- **Aviation = 3.8% EU GHG**
- Maritime
- Railways
- Others

Evolution GHG (Greenhouse Gases) emissions

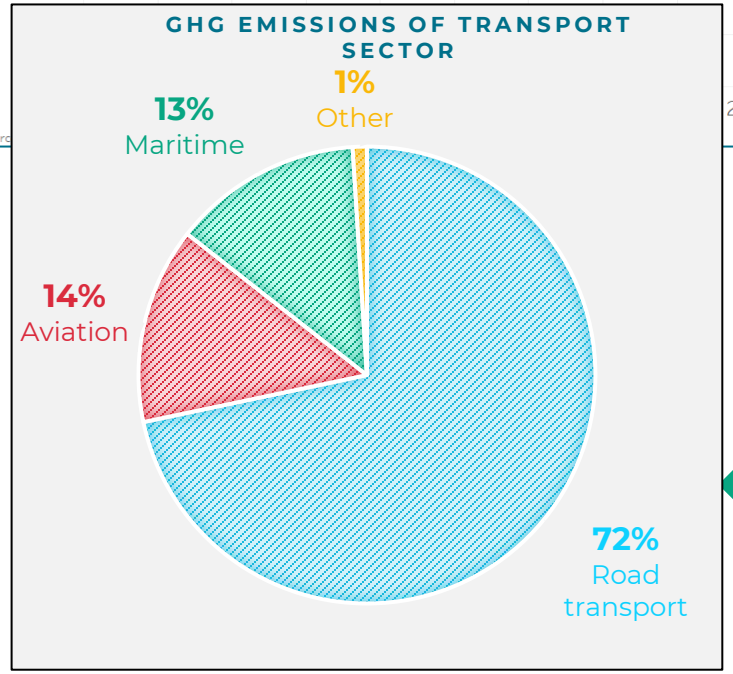
2018 vs. 1990

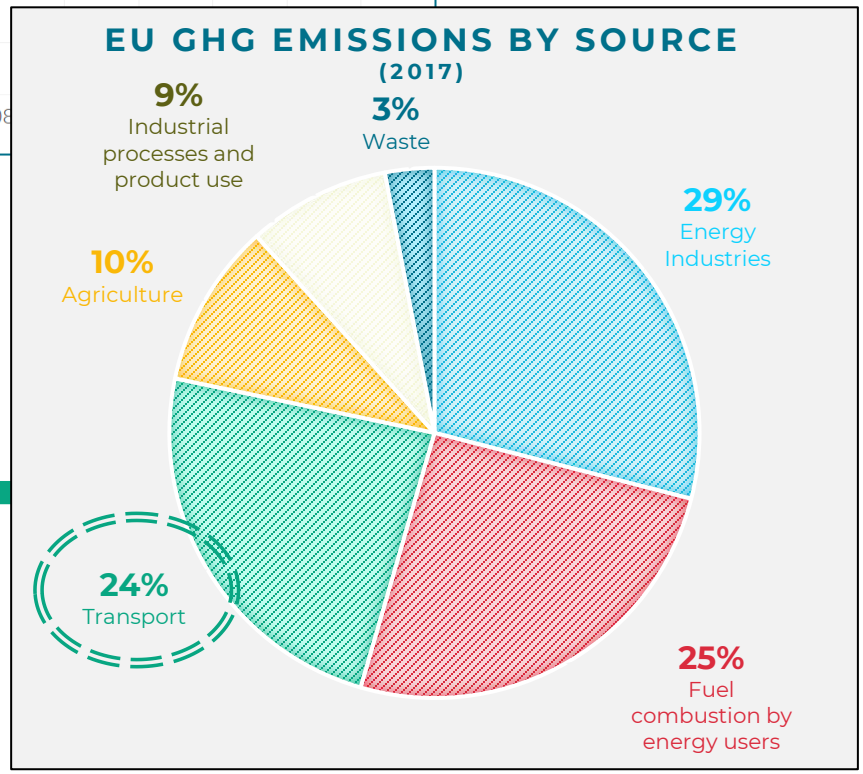


+130% internat. aviation

+20% transport

-20% total GHG





Aviation – How to meet EU Green Deal Targets?

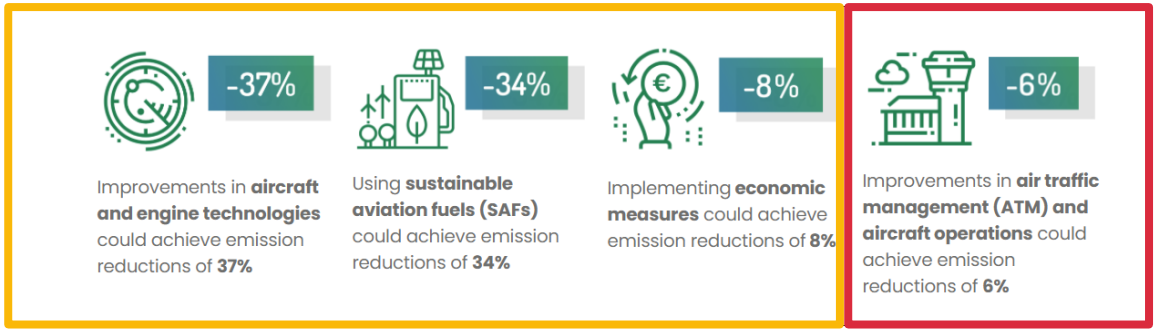
DESTINATION 2050

- Roadmap towards **net zero** CO2 emissions (2050)
- Scope: EU + UK + EFTA (*)
- **EU & industry-wide collaboration**

A4E AIRLINES FOR EUROPE · ACI EUROPE AIRPORTS COUNCIL INTERNATIONAL · ASD · canso · era european regions airline association

✈ *Airlines / Airports / ANSPs / Manufacturers*

- Published FEB 2021



Some key enablers & technologies beyond ANSP control

Improvements in field of ATM & operations **6%** of all CO2 reductions

→ **Shared responsibility**

→ **ANSPs have a role to play**

→ **skeyes Environmental Action Plan**

(*) European Union (EU), the United Kingdom (UK), and the European Free Trade Association (EFTA, intergovernmental organisation of Iceland, Liechtenstein, Norway and Switzerland)

2/ ROLE OF SKEYES

Scoping the ENVIRONMENTAL ACTION PLAN

What can skeyes do to reduce the environmental footprint of aviation?

Noise is outside scope; however, necessity of trade-offs at lower levels is widely recognised (not all theor. GHG gains might be achievable)

SCOPE ENVIRONMENTAL ACTION PLAN

Collaborate with internal/external stakeholders on **improving flight efficiency**	skeyes can **facilitate** air operators in reducing fuel consumption across the complete flight
Reduce limitations induced by ATM/ANS operations and infrastructure	Using technological advancements, skeyes could **relax constraints** imposed for – for example – the construction of wind farms
Decrease **company carbon footprint**	skeyes can **reduce the footprint** of its infrastructure and equipment (CSR)

3/ ACTIONS BY SKEYES

Pillars of the ENVIRONMENTAL ACTION PLAN

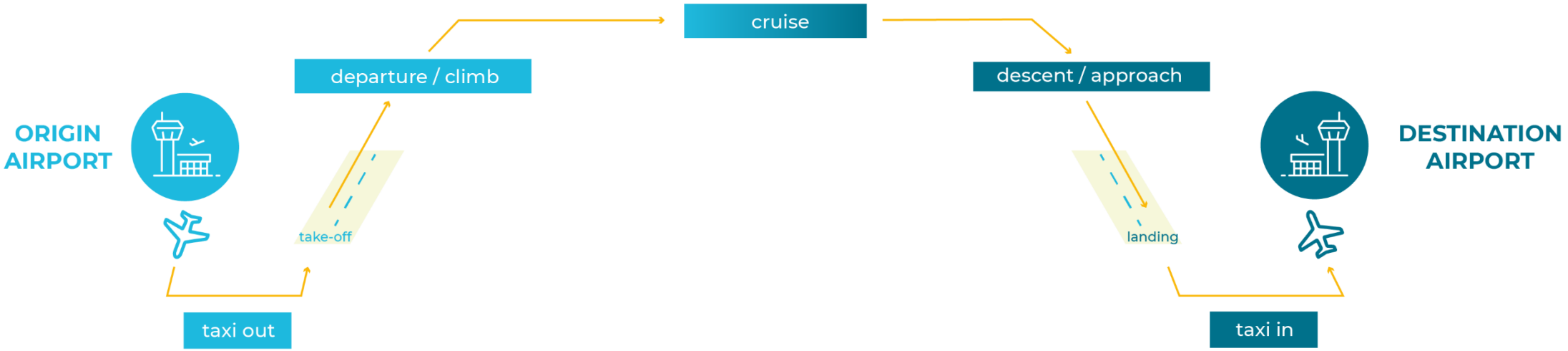
skeyes nice to guide you

		Actions taken already	ENVIRONMENTAL ACTION PLAN
1	Improving **Flight Efficiency**	**EXISTING PROJECTS** CEM ATC ENV Training & Awareness PBN Transition Plan FUA Individual projects	**Flight Efficiency Action Plan**
2	**Monitoring** Environmental Performance	**FOCUS ON CDO**	**ENHANCED MONITORING** Improved & additional indicators Radar visualisation toolset
3	**Transparency** towards the public	**INFORMING THE PUBLIC** BATC (www.batc.be) Annual Reports	**CONTINUOUS IMPROVEMENTS**
4	**Financial Incentives**		**MODULATION OF ANS CHARGES**

4/ IMPROVING FLIGHT EFFICIENCY

The “ideal” flight profile

Maximum predictability
– for all stakeholders
– across all flight phases



TAXI OUT	CLIMB	CRUISE	DESCENT	TAXI IN
Short taxi and waiting times	‘Direct’ SIDs ‘Direct’ routing	Optimal altitude and speed	‘Direct’ STARs ‘Direct’ routing	Short taxi and waiting times
	Optimal climb speed and ToC	Avoid inefficient route extensions	Optimal Top of Descent and descent speed	
	Minimize unnecessary level-offs		Minimize unnecessary level-offs & holding	

To be completed during consultation

Flight Efficiency Action Plan

Develop a skeyes-wide **action plan** for improving flight efficiency

STEPS

1. Consultation (internal/external)
2. Flight Efficiency WG
3. Flight Efficiency Action Plan
4. Implementation of Action Plan

Cl Cr De
FUA

Cl Cr De
Airspace Redesign

Ta Cl De
CEM

Cl Cr De
Letters of Agreements

Ta = Taxi

Cl = Climb

Cr = Cruise

De = Descent

Cl Cr De
PBN Transition Plan

Cl De
Flight Procedures & AIM

De
AMAN
E-AMAN
XMAN

Ta Cl Cr De
ATC Training & Awareness

De
Increased use of RNP procedures

Cl Cr De
RAD relaxations

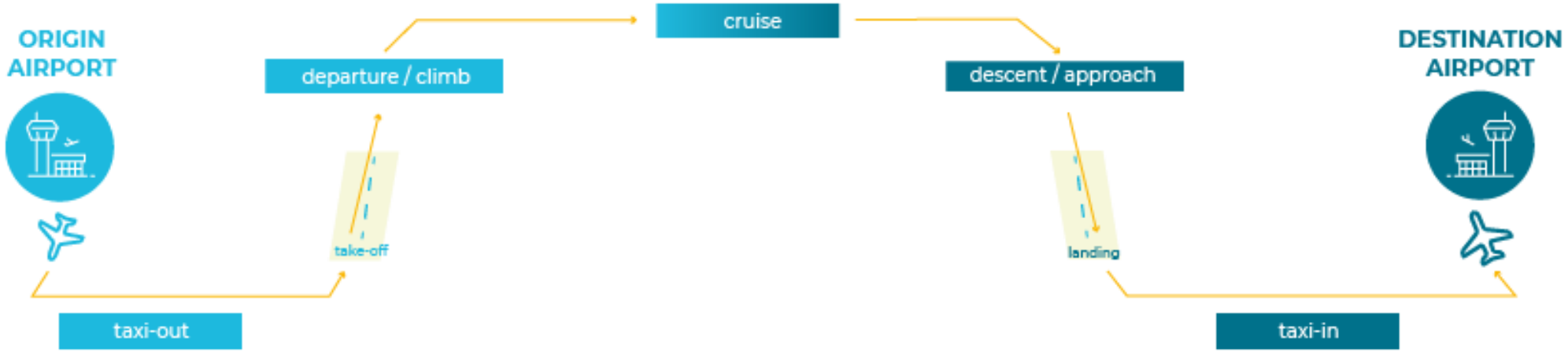
De
Distance-To-Go Information

Ta Cl Cr De
Revision of Standard Working Methods

Cl De
Revision and addition of departure & arrival routes

Ta
A-CDM & Advanced ATC Tower

Local & International collaboration with key stakeholders
(On-going Environmental Working Groups)



TAXI OUT **CLIMB** **CRUISE** **DESCENT** **TAXI IN**

CEM Brussels Airport
CEM Liege Airport
CEM Charleroi Airport

FABEC Standing Committee Environment

RNDSG (CCO & CDO TF)

RNDSG (CCO & CDO TF)

(new) skeyes Flight Efficiency Working Group

(new) EASA-EUROCONTROL ATM/ANS Environmental Transparency Working Group

5/ ENHANCED MONITORING OF ENVIRONMENTAL PERFORMANCE

Flight efficiency indicators

- Growing need for many ANSPs (incl. skeyes) to show **their performance and improvements**

- Many indicators exist, but beware:
  - Technical issues with the indicators (e.g. Horizontal Flight Efficiency: KEA/KEP)
  - Contribution ANSP <> other involved stakeholders
  - Some indicators do not reflect (ANSP) performance at all

This is exactly the scope of the **ATM/ANS Environmental Transparency Working Group**:

goal**: set up indicators that better reflect **ATM/ANSP Environmental Performance