2018 TFEIP/EIONET Workshop
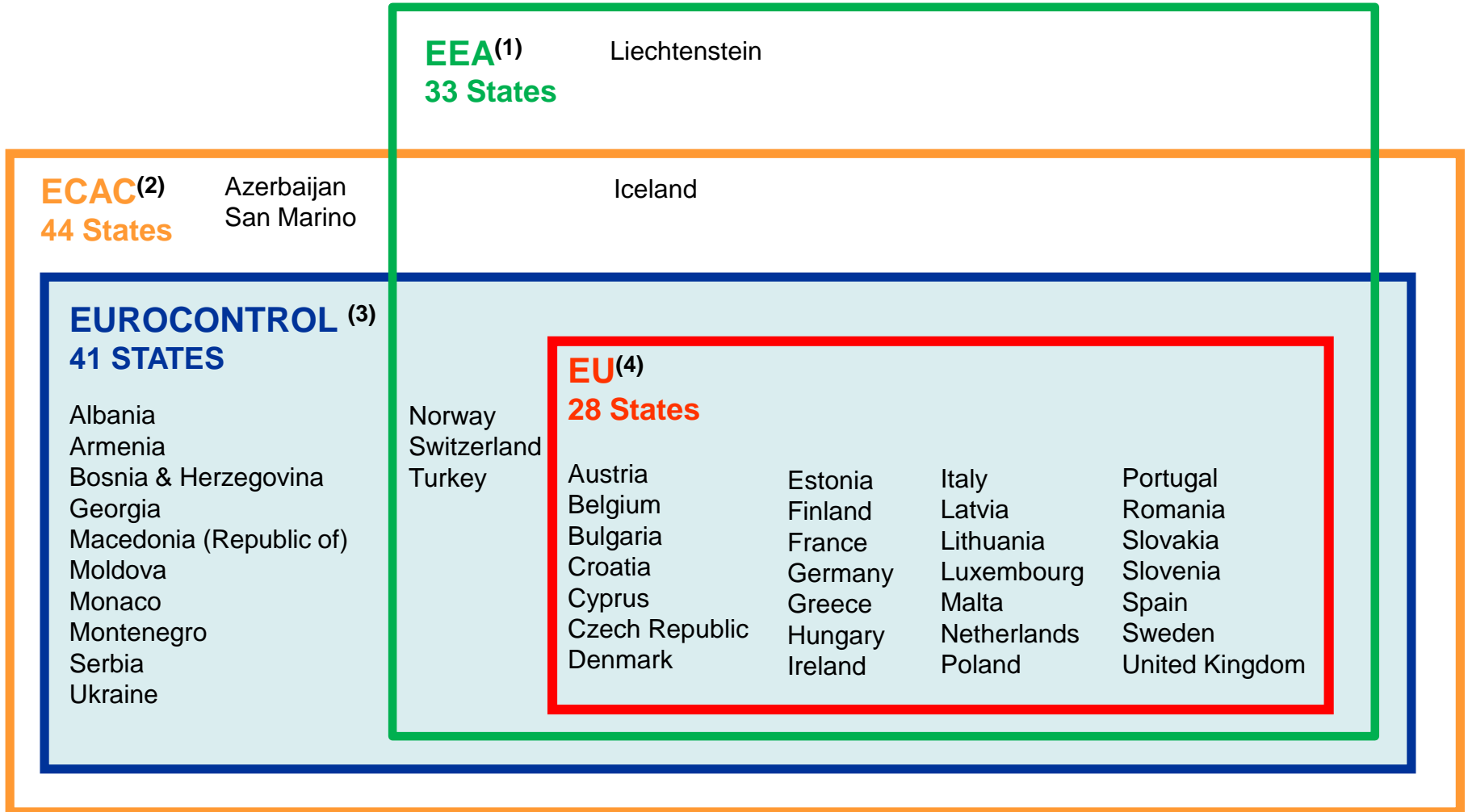# Sofia - Bulgaria
Transport panel

EUROCONTROL Fuel burn and emissions inventory system

Prepared by Robin Deransy,
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for EUROCONTROL
April 26, 2018

EUROCONTROL

EEA[1]
33 States   Liechtenstein

ECAC[2]   Azerbaijan   Iceland
44 States   San Marino

EUROCONTROL [3]
41 STATES

Albania			
Armenia	Norway		
Bosnia & Herzegovina	Switzerland		
Georgia	Turkey		

EU[4]
28 States

Austria	Estonia	Italy	Portugal
Belgium	Finland	Latvia	Romania
Bulgaria	France	Lithuania	Slovakia
Croatia	Germany	Luxembourg	Slovenia
Cyprus	Greece	Malta	Spain
Czech Republic	Hungary	Netherlands	Sweden
Denmark	Ireland	Poland	United Kingdom

Albania
Armenia
Bosnia & Herzegovina
Georgia
Macedonia (Republic of)
Moldova
Monaco
Montenegro
Serbia
Ukraine

Norway
Switzerland
Turkey

(1) European Environment Agency
(2) European Civil Aviation Conference
(3) European Organisation for the Safety of Air Navigation
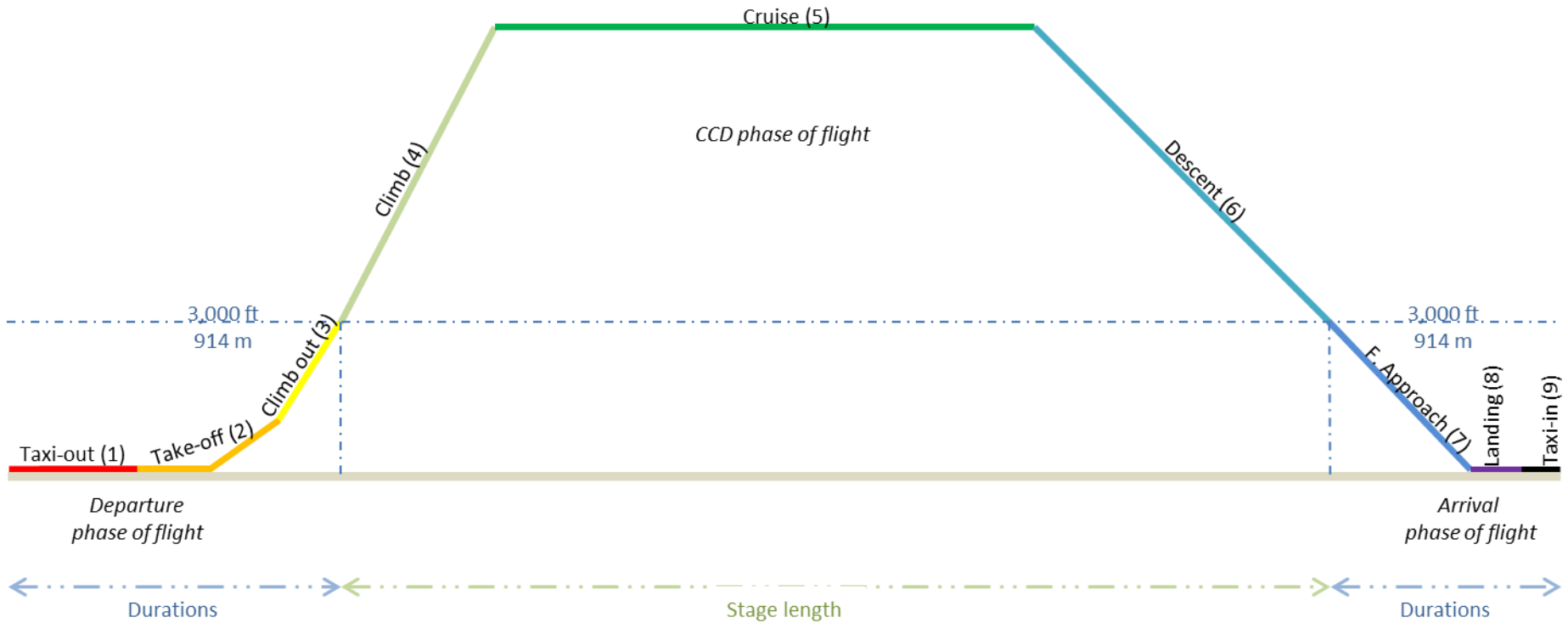(4) European Union

TOPICS

1. Flight data used
2. Aircraft types /Engine types identification
3. Taxi-In and -Out times
4. Methodology
5. Guidebook 2016 – Demo of Annexes
6. AOB

FLIGHT DATA & MODELS USED

- Data source: PRISME Fleet (2005 – 2017)
  - Prisme Flight Database
  - Prisme Fleet Database
  - Innovata Data
  - CODA Taxi-In and –Out times

- Environmental model used: AEM
  - Performance models: BADA 3.14
  - Emissions model: AEM 2.5.4

FLIGHT DATA - Vertical

Cruise (5)

CCD phase of flight

Climb (4)

Descent (6)

3,000 ft
914 m

3,000 ft
914 m

Climb out (3)

F. Approach (7)

Landing (8)

Taxi-in (9)

Taxi-out (1)

Take-off (2)

Departure phase of flight

Arrival phase of flight

Durations

Stage length

Durations

Aircraft types / Engines types

< 2016

ACT_PRF.aircraft_engine v2015			
AIRCRAFT ID	ENGINE_ID	NUMBER_OF_ENGINES	BADA_TYPE
A319	3CM027	2	A319

>= 2016

ACT_PRF.aircraft_engine v2016			
AIRCRAFT_ID	ENGINE_ID	NUMBER_OF_ENGINES	BADA_TYPE
A319-A	4CM035	2	A319
A319-B	4CM036	2	A319
A319-C	8CM056	2	A319
A319-D	3CM027	2	A319
A319-E	3CM028	2	A319
A319-F	8CM058	2	A319
A319-G	6CM044	2	A319
A319-H	3IA006	2	A319
A319-I	3IA007	2	A319
A319-J	1IA003	2	A319
A319-K	8IA009	2	A319

TAXI TIMES

CASE	Taxi –In and –Out Times
Airports with Taxi time provided by CODA	CODA Taxi-in and –out times
EEA or EUROCONTROL Airports with No Taxi time provided by CODA	Taxi times are an average of that airport category which is based on a range of flight movements in a year
Other airports	ICAO Values • Taxi-out = 1140s • Taxi-in = 420s

EUROCONTROL

Mark Whiteley

UROCONTROL

**Pan-European Single Sky
Directorate**

**Environment and
Climate Change Section**

**D3.1
European Aviation
Fuel Burn and Emissions Inventory System
for the
European Environment Agency
(for data from 2005)**

Version 2017.01 (31 August, 2017)

(Contract number: 34.02.01/2016/745806/SER/CLIMA.B3)

For further information

fuelandemissionsinventory @eurocontrol.int

DEMO OF EEA/EMEP GUIDEBOOK 2016 ANNEXES

Thank you!