



UN Economic Commission for Europe 75th Working Party on Transport Statistics

Geneva, 24–26 April 2024

Item 8a: 2020 and 2025 E-Rail traffic censuses

Annex V ex-G and RINF

(follow-up of presentation for item 7 in 74th session)

Alain GALLAIS, Manager of CQ

Eurostat - Unit E.3 - Transport

Content

- **Follow-up of last year presentation: 2 maps for 2020 rail traffic on TEN-T network were published in Regional Yearbook 2023**
- **More relevant and nice maps were made possible from Register of Infrastructure (RINF) managed by ERA, an example was released in a recent Statistics Explained article**
- **New template and organisation imagined for Annex V ex-G (rail traffic flows) on reference year 2025, relying on RINF terminology**

1 Reminder: Annex V ex-G of EU Regulation 2018/643

ANNEX V

STATISTICS ON TRAFFIC FLOWS ON THE RAIL NETWORK	
List of variables and units of measurement	Goods transport: — number of trains Passenger transport: — number of trains Other (service trains, etc.) (optional): — number of trains
Reference period	One year
Frequency	Every five years
List of tables with the breakdown for each table	Table V1: goods transport, by network segment Table V2: passenger transport, by network segment Table V3: other (service trains, etc.), by network segment (optional)
Deadline for transmission of data	18 months after end of reference period
First reference period	2005
Notes	1. Member States shall define a set of network segments to include at least the rail trans-European network (TEN) on their national territory. They shall communicate to Eurostat: — the geographical coordinates and other data needed to identify and map each network segment as well as the links between segments, — information on the characteristics (including the capacity) of the trains using each network segment. 2. Each network segment which is part of the rail TEN shall be identified by means of an additional attribute in the data record, in order to enable traffic on the rail TEN to be quantified.

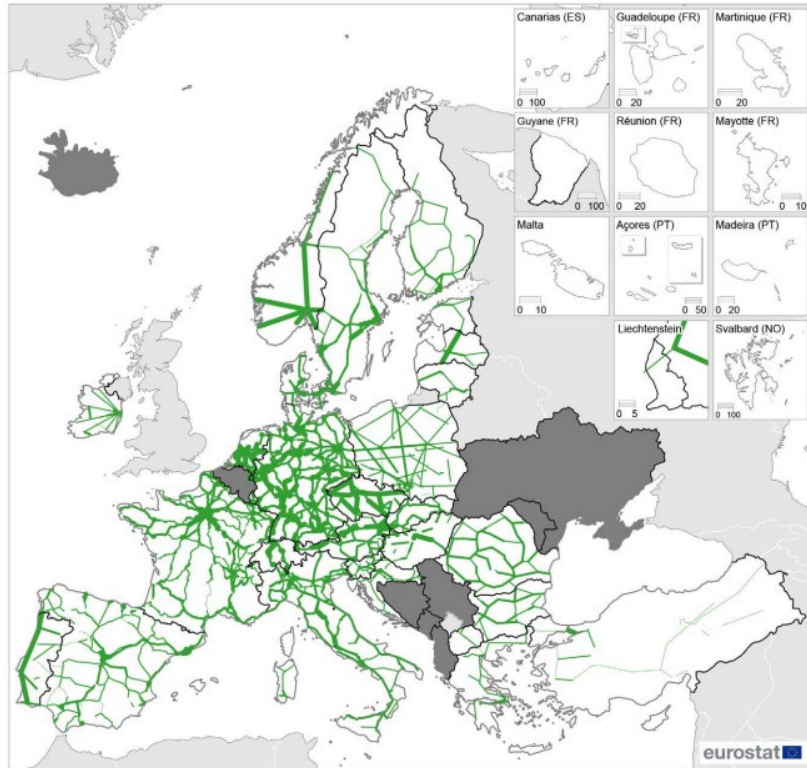
Since reference year 2005, the target is not only to collect data on traffic flows, but to collect them by network segments:

- With characteristics (by principle the same as in Common Questionnaire);
- With geographical coordinates;
- Which can make a map.

Only the TEN-T network is compulsory for this census; it corresponds to the E-Rail census.

1. First maps published on Regional Yearbook!

Map 11.5: Passenger train movements on the trans-European rail network, 2020
(number of passenger trains)



Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat — GISCO, 08/2023

- ≥ 50 000
- 10 000 – < 50 000
- 1 000 – < 10 000
- < 1 000
- Data not available

Source: Eurostat (transport statistics)

RYP 2023 on **passenger** trains
traffic flows

Freight train movements on the trans-European rail network, 2020
(number of freight trains)



Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat — GISCO, 08/2023

- ≥ 25 000
- 10 000 – < 25 000
- 1 000 – < 10 000
- < 1 000
- Data not available

Source: Eurostat (transport statistics)

RYP 2023 on **goods** trains
traffic flows

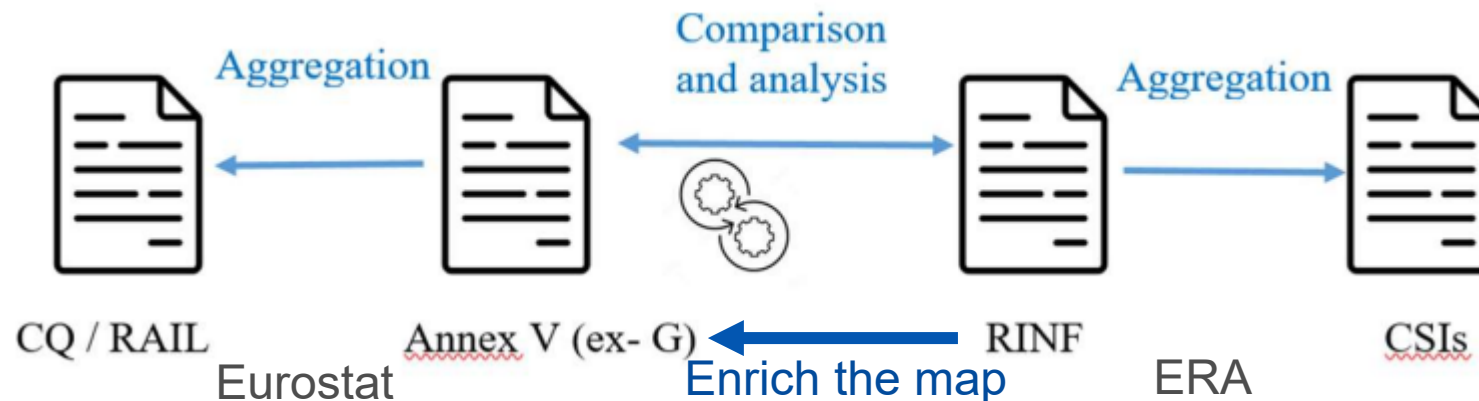
These maps were elaborated on the geographical coordinates provided for Annex V ex-G without the help of RINF.

2. Annex V data not meant for mapping



Annex V does not collect “maps”, but geographical coordinates of starting and ending points. If we draw straight lines, we do not get necessarily plausible networks.

But the detail of RINF is enough (all operational points are there)...



2. Another example: Czechia



- In red: Annex V
- In blue: RINF

2. The delicate issues: “National line” and “Operational Points” for start and end

Country	Network segment identifier	From	To	From latitude	From longitude	To latitude	To longitude	Ten Flag	National line
CZ	CZS10010	Kolín	Česká Třebová	50.02524028	15.21438278	49.89713778	16.44620806	1	540-00_1501
CZ	CZS10011	Praha	Kolín	50.08263889	14.43547056	50.02524028	15.20049389	1	520-00_1501
CZ	CZS10024	Ústí nad Orlicí	Štítý	49.97106417	16.37827083	49.97030889	16.75465556	1	545-00_1591 + 546-00_1302 + 551-00_1331 + 552-00_1341
CZ	CZS10072	Ústí nad Labem z	Lysá	50.65814944	14.02969722	50.19559722	14.8422325	1	440-00_1001 + 440-00_0921
CZ	CZS10073	Ústí nad Labem-Š	Děčín hl.n.	50.65000778	14.04860028	50.77347722	14.20104611	1	441-00_1001

IM Name	National Line	Operational Point Start	Oper	Point Start Latitude	Point Start Longitude	Operational Point End	Annex V
0054	520-00_1501	Praha-Kyje z		50,097564	+14,5429	Praha-Liben	CZS10011
0054	520-00_1501	Praha-Klanovice z		50,087127	+14,6638	P.Bechovice-Blatov	CZS10011
0054	520-00_1501	Kolin		50,025240	+15,21438	Kolin zastavka z	CZS10011
0054	520-00_1501	Uvaly		50,074710	+14,7229	hr.VUSC 0100/0200 04	CZS10011
0054	520-00_1501	Kolin dilny z		50,011245	+15,23457	Kolin ser.n.	CZS10011
0054	520-00_1501	Odb Tatce		50,100665	+14,97920	Poricany	CZS10011
0054	520-00_1501	Odb Cerhenice		50,079771	+15,07129	Pecky	CZS10011
0054	520-00_1501	Cerhenice z		50,077907	+15,07950	Odb Cerhenice	CZS10011
0054	520-00_1501	Praha-Bechovice		50,082252	+14,59849	Praha-D.Pocernice z	CZS10011
0054	520-00_1501	Nova Ves u Kolina z		50,054982	+15,15076	Velim	CZS10011
0054	520-00_1501	Tatce z		50,099418	+14,98471	Odb Tatce	CZS10011
0054	520-00_1501	Kolin vjezd.nav.L		50,008937	+15,24722	Kolin dilny z	CZS10011
0054	540-00_1501	Stary Kolin z		50,011014	+15,29530	Kolin vjezd.nav.L	CZS10010
0054	540-00_1501	Dlouha Trebova		49,935706	+16,42259	Usti n.Orl.mesto z	CZS10010
0054	540-00_1501	Ceska Trebova		49,897138	+16,44620	C.Trebova nav. OS,2S	CZS10010
0054	540-00_1501	Pardubice-Svitkov z		50,031925	+15,72401	Pardubice-Opocinek z	CZS10010

- Is there a “national line” in RINF connecting the start and end of Annex V? Sometimes there are several, therefore it is better to know a priori.
- If yes, which “sections of lines” are to associate to the network segment?

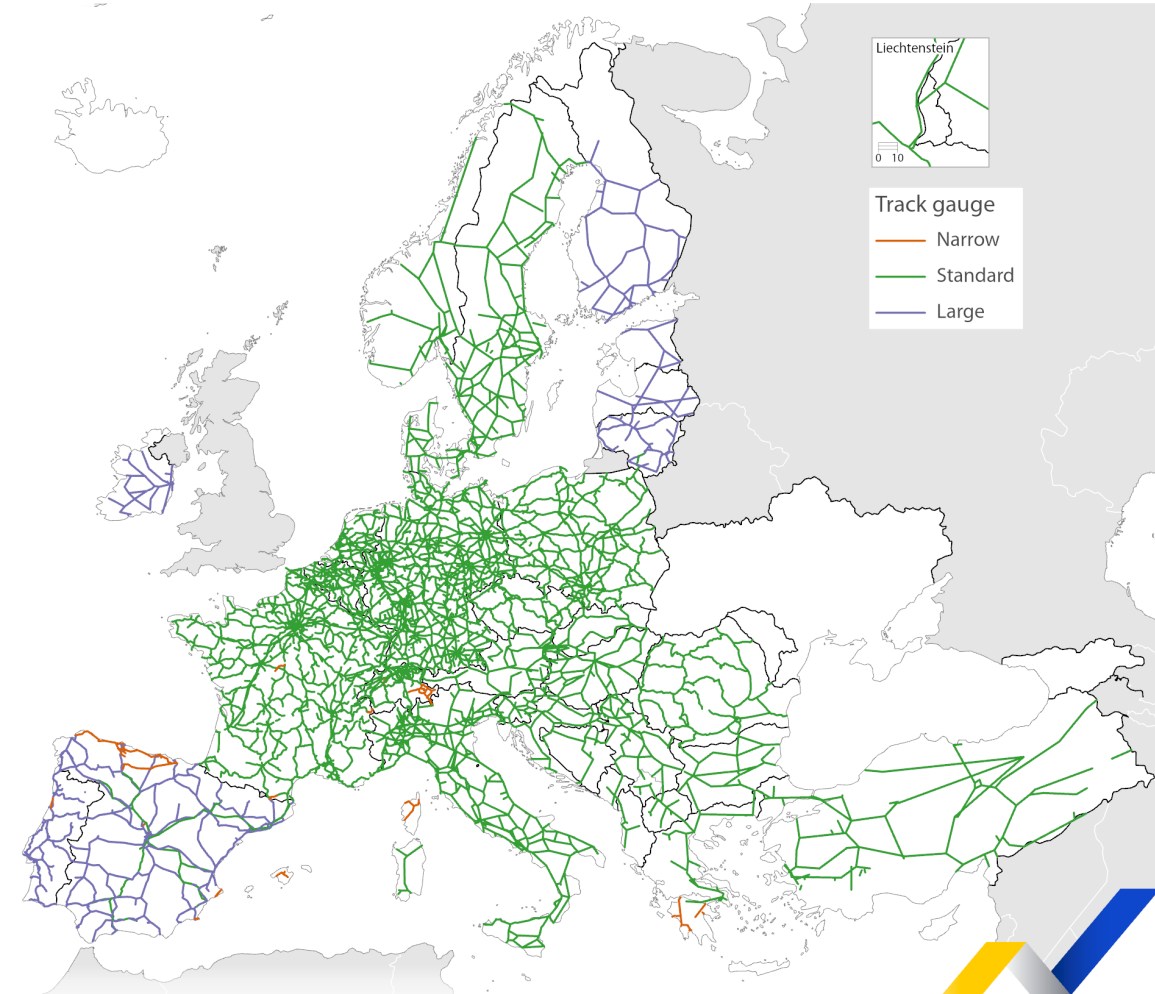
2. A nicer map in the recent SE article on the railway network in Europe

Thank you to UIC for some time series and to ERA for some geometry (from RINF).

This publication should be updated every year, from CQ.

The network map could also be updated every 5 years, from Annex V... but possibly every year, from RINF!

Railway lines by track gauge, 2020



eurostat 

Note: Annex V is mandatory on the rail Trans-European Network (TEN) only.
Source: Annex V of Regulation (EU) 2018/643 on rail transport statistics, characteristics of network segments, enriched by the Register of Infrastructure (RINF) managed by the European Union Agency for Railways (ERA).

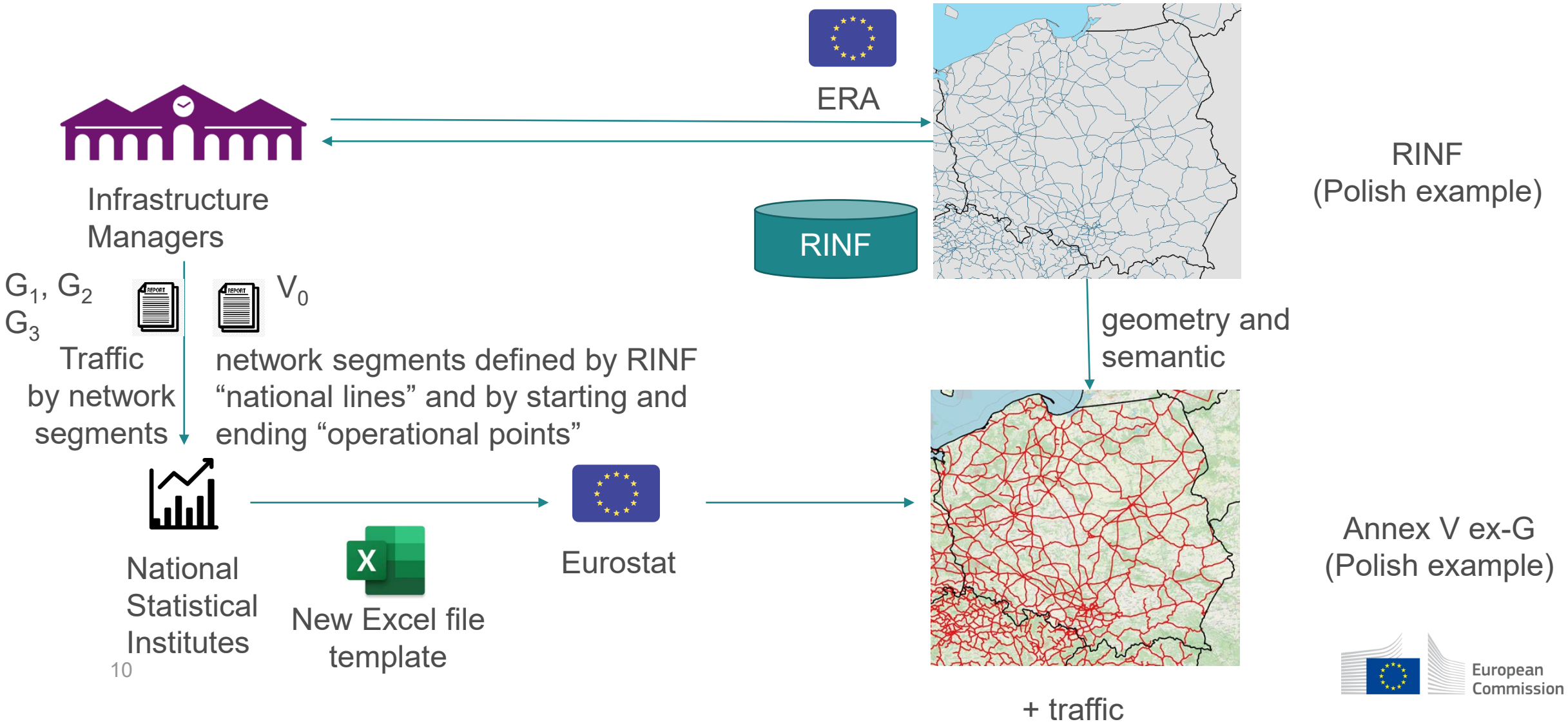
Cartography: Eurostat — GISCO, 03/2024
Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
This designation is without prejudice to positions on status, and is in line with UNSCR 1244/99 and the ICJ Opinion on the Kosovo Declaration of Independence.

3. New template for Annex V network segments on reference year 2025

Country	Network segment identifier	consistent with RINF		decimal degrees				Ten Flag 3 = core TEN-T 2 = extended core TEN-T 1 = comprehensive TEN-T 0 = off TEN-T	Length in km	Electrified segments 1 = electrified 0 = not electrified	Type of current (AC/DC, frequency, voltage) 50 Hz 25 kV 16.7 Hz 15 kV DC 3 kV DC 1500 V DC 1250 V DC 850 V DC 800 V DC 750 V	Passenger only / freight only / passenger and freight	Number of tracks 2 = 2 tracks and more 1 = 1 track	Track gauge in mm	dedicated high speed / upgraded high speed / conventional	consistent with RINF	
		From	To	From latitude	From longitude	To latitude	To longitude									Infrastructure Manager	National lines
CZ	CZS10010	Kolin vjezd.nav.	Ceska Trebova	50.02524028	15.21438278	49.89713778	16.44620806	1	52	1	DC 3 kV	passenger and freight	2	1435	conventional	0054	540-00_1501

- 3 or 4 variables could be enough for the network under interoperability directive (the name or code of the Infrastructure Manager is redundant with the national line, but makes the description clearer)...
- But we would also appreciate a full description of the network out of interoperability directive (including candidate countries)!
Even without data on traffic flow.

3. What Eurostat will do on traffic by network segments for reference year 2025 (for EU+EFTA)



Thank you

alain.gallais@ec.europa.eu



© European Union 2022

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.

