

# A Tale of Eight Countries or the EU Council Presidency Translator in Retrospect

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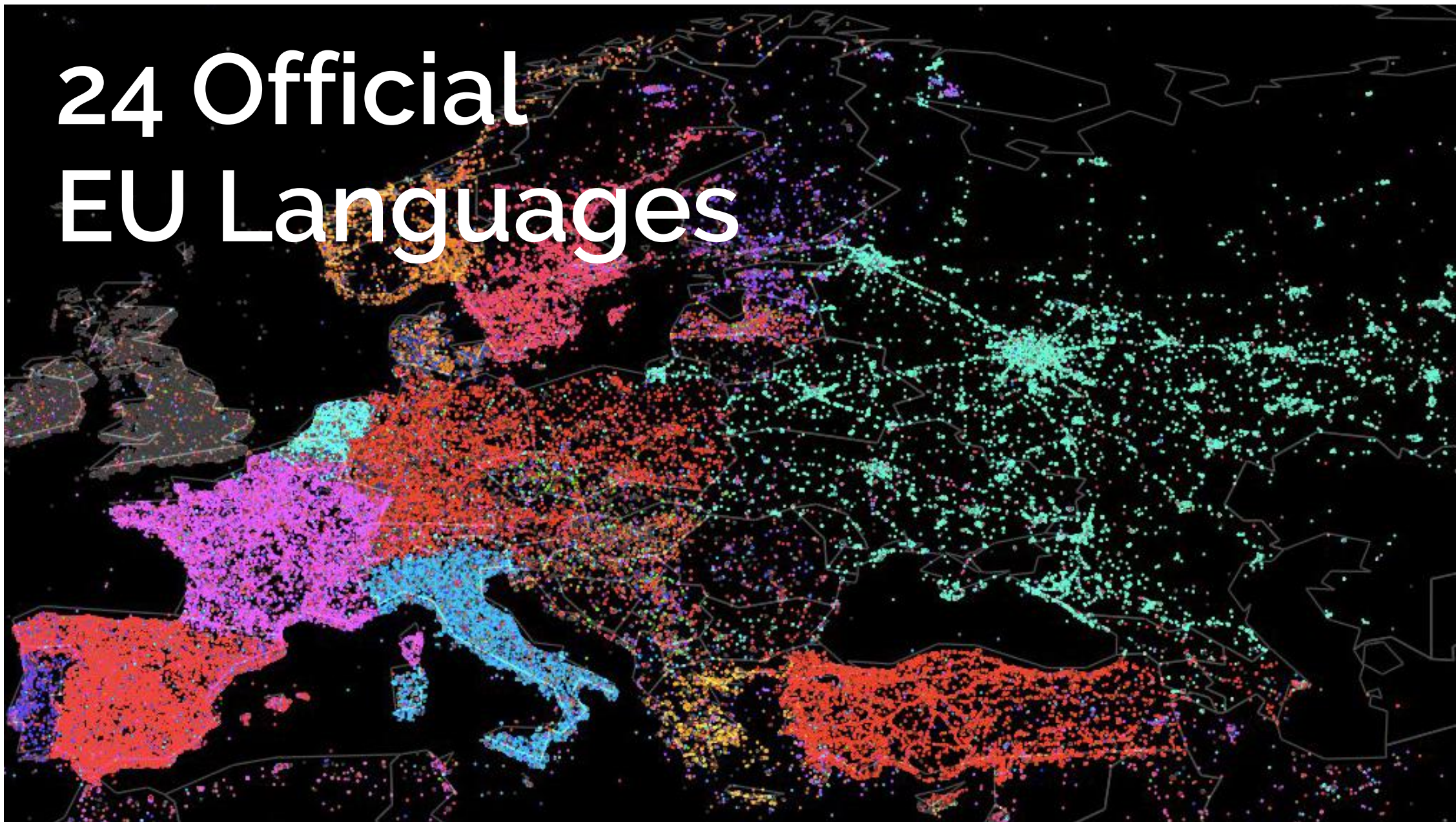
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# 24 Official EU Languages





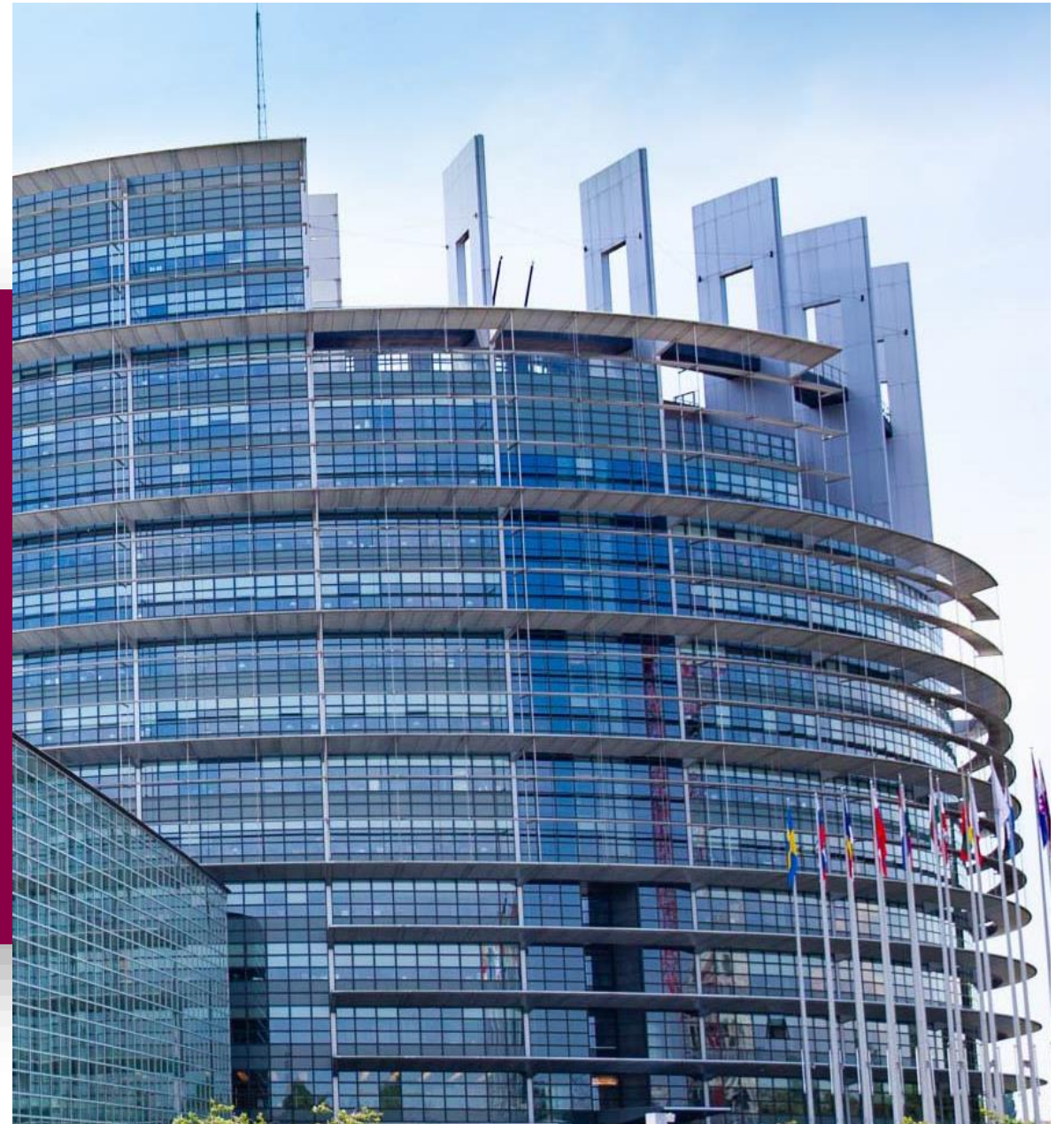
# THE PRESIDENCY OF THE COUNCIL OF THE EU



**The Council of the EU is the key decision maker in the EU**



**Presidency rotation every 6 months**





# Challenges

- Massive amounts of official documentation & texts
- Fast communication of the Presidency work & activities
- Collaboration between delegates, journalists and Presidency staff
- Facilitation of multilingual communication in Europe
- Challenging languages



# Solution

## The EU Council

### Presidency Translator

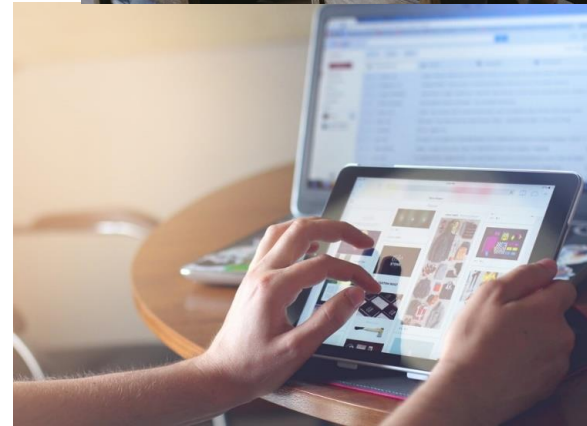
- Secure cloud-based pan-European MT infrastructure
- Customized NMT solution to the Presidency requirements
- Integration of relevant in-domain data & terminology
- Facilitation of multilingual communication in Europe
- Workspace integration of NMT systems



# Powers communication across languages benefiting:



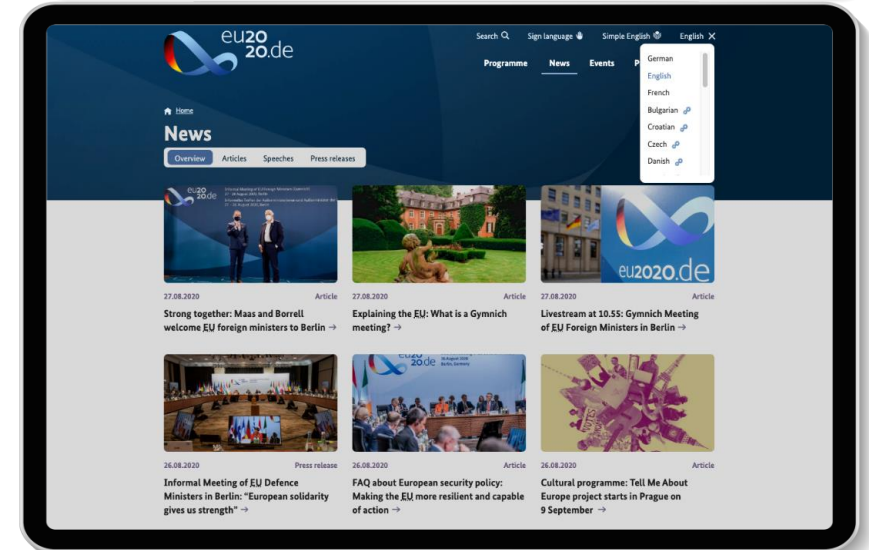
- Presidency staff & delegates
- Professional translators
- Journalists
- Presidency visitors
- All EU citizens



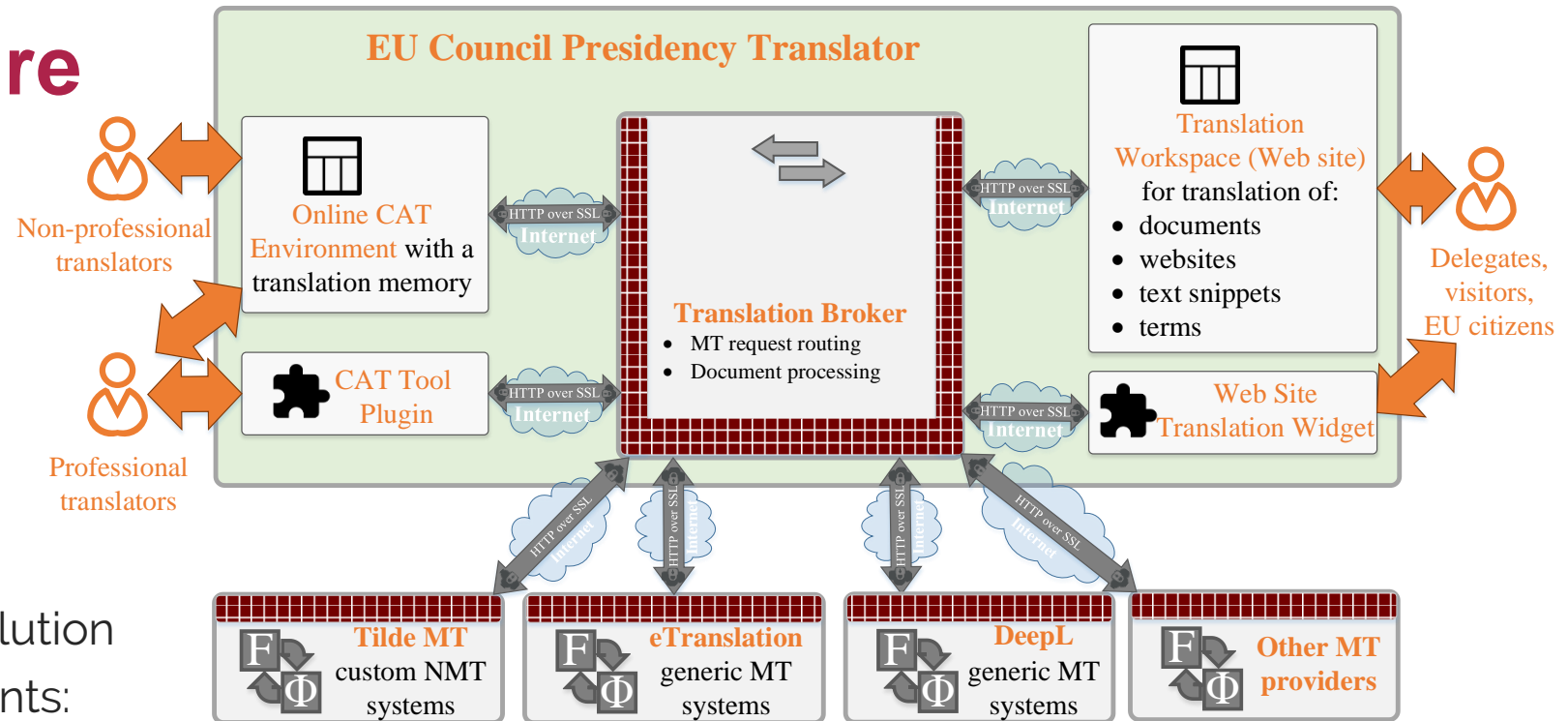


# Functionality

- Online translation workspace
  - Text snippet, document and website translation
  - terminology lookup
- CAT tool plug-in for SDL Trados Studio
- Website translation widget
  - Integrated in <https://eu2020.de>
- Online CAT environment for non-professional translators
- Access to custom and third party MT systems



# Architecture



- Cloud-based solution
- Three components:
  - MT systems
    - Custom systems deployed on Tilde MT
    - Third party systems integrated through interfaces
  - Translation broker
  - Translation interfaces for users



# Machine translation systems

- **Custom MT systems**

- For main translation directions of each presidency
- Keep up with latest NMT technology
- Adapted using in-domain data
- Address country-specific dialects
  - FI↔SV for the Finnish Presidency
  - DE↔EN for the Austrian Presidency

- **Generic MT systems**

- Cover many language pairs
- Provided by:
  - eTranslation (for all Presidencies)
  - DeepL (for the German Presidency)

NMT Toolkit	NMT Architecture	Language pairs
Nematus/AmuNMT	MLSTM	EN↔ET (till 2018), EN↔BG, EN↔DE (for Austrian Presidency)
Sockeye	Transformer	EN↔ET (since 2018)
Marian	Transformer	EN↔DE (since 2020), EN↔RO, EN↔FI, FI↔SV, ET↔FI, EN↔HR, DE↔IT, DE↔ES, DE↔PL, DE↔FR

# Usage analysis – overall statistics

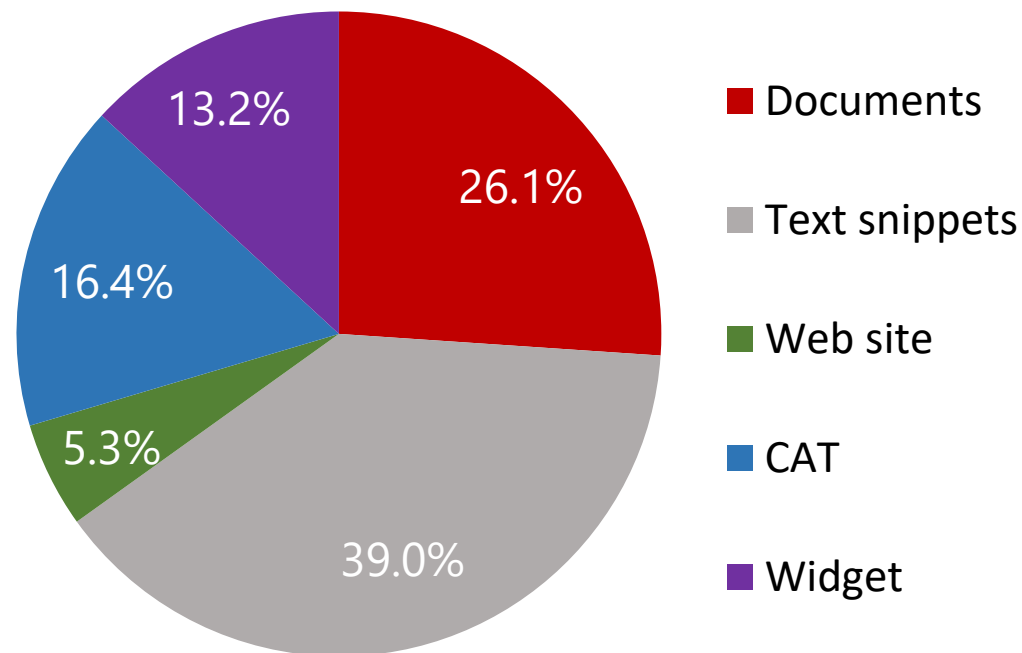
- Total amount\* of translations:
  - **157.7 million words**
  - 14.9 million sentences
  - 4.9 million requests



~**300-400 years of work** for a productive translator



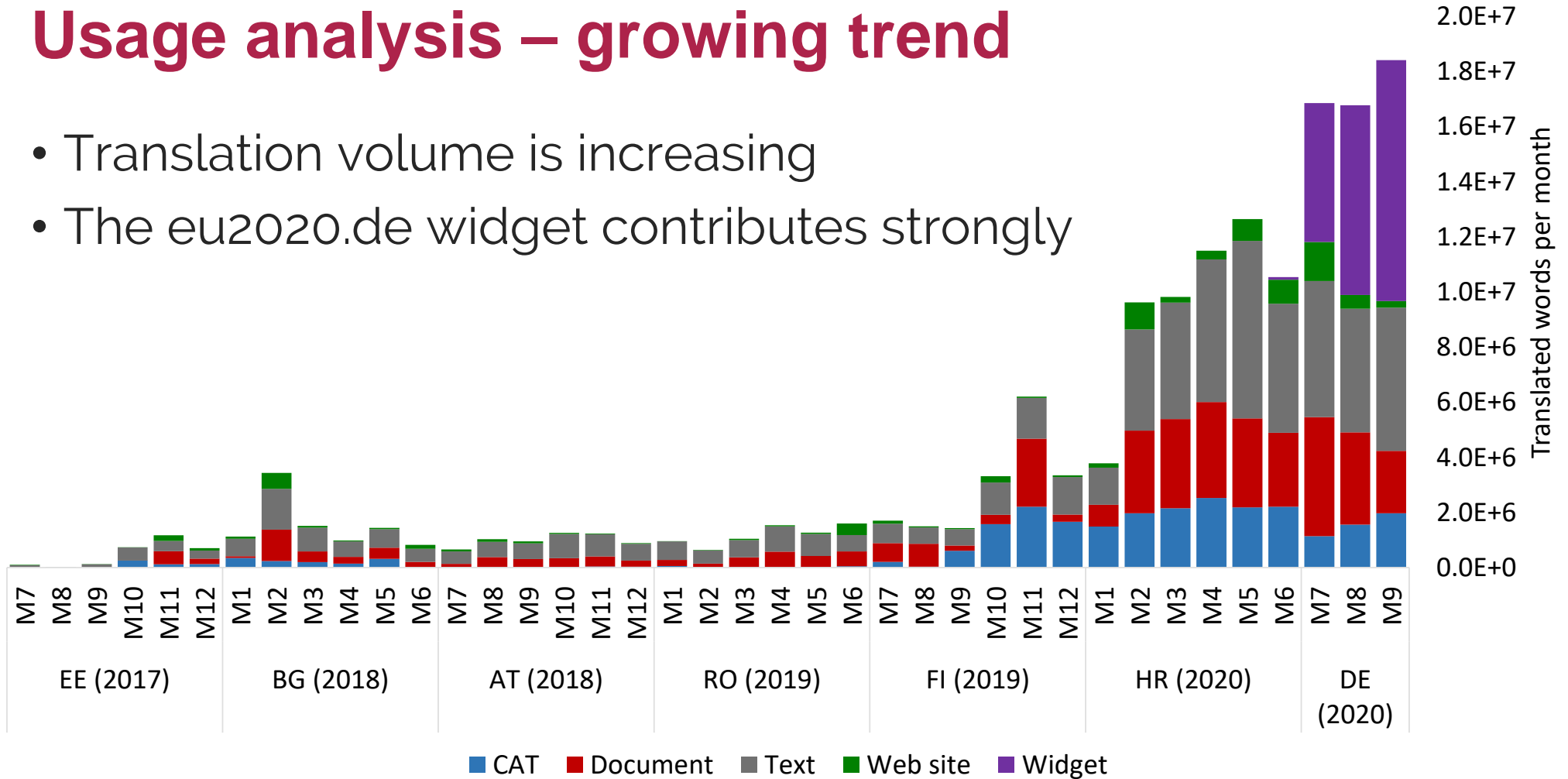
~**1017** books of the size of an average Harry Potter book



\*Since the official launch of the EU Council Presidency Translator in 2017 till September 30, 2020

# Usage analysis – growing trend

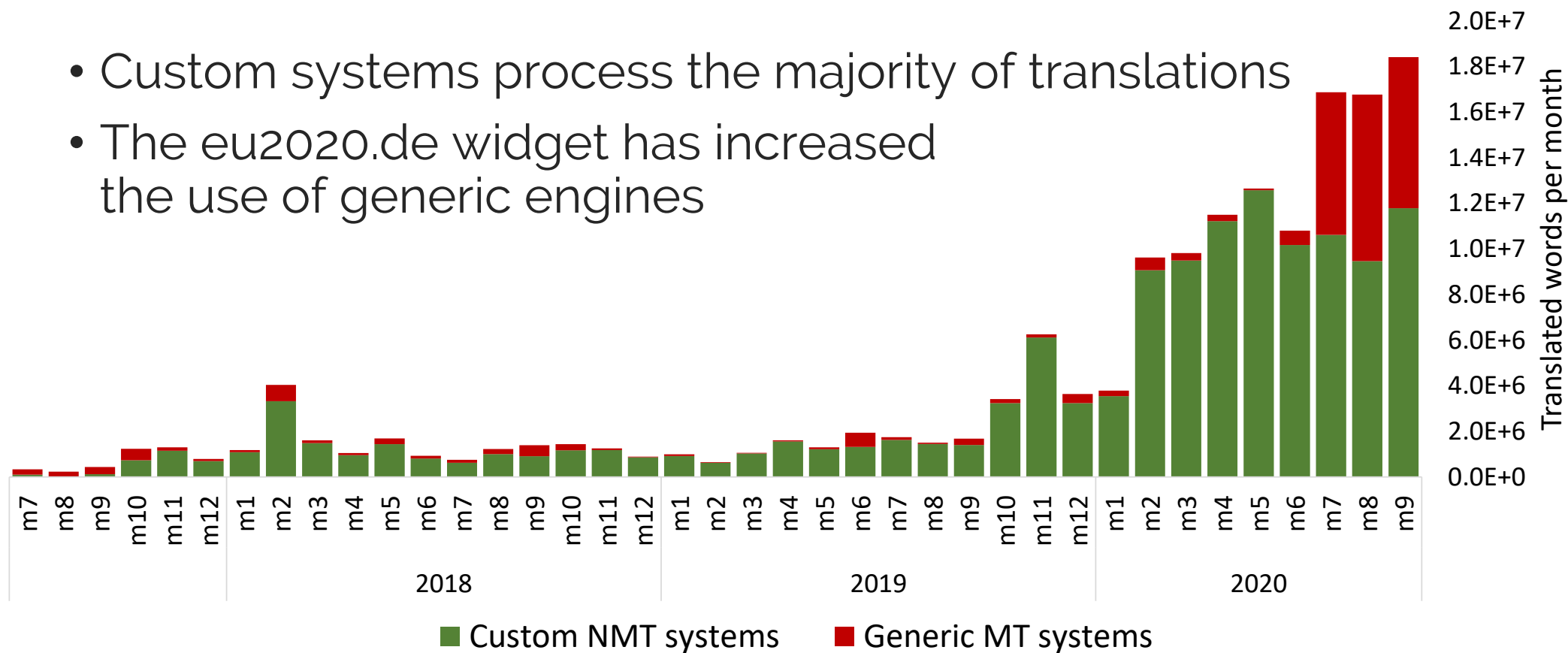
- Translation volume is increasing
- The eu2020.de widget contributes strongly





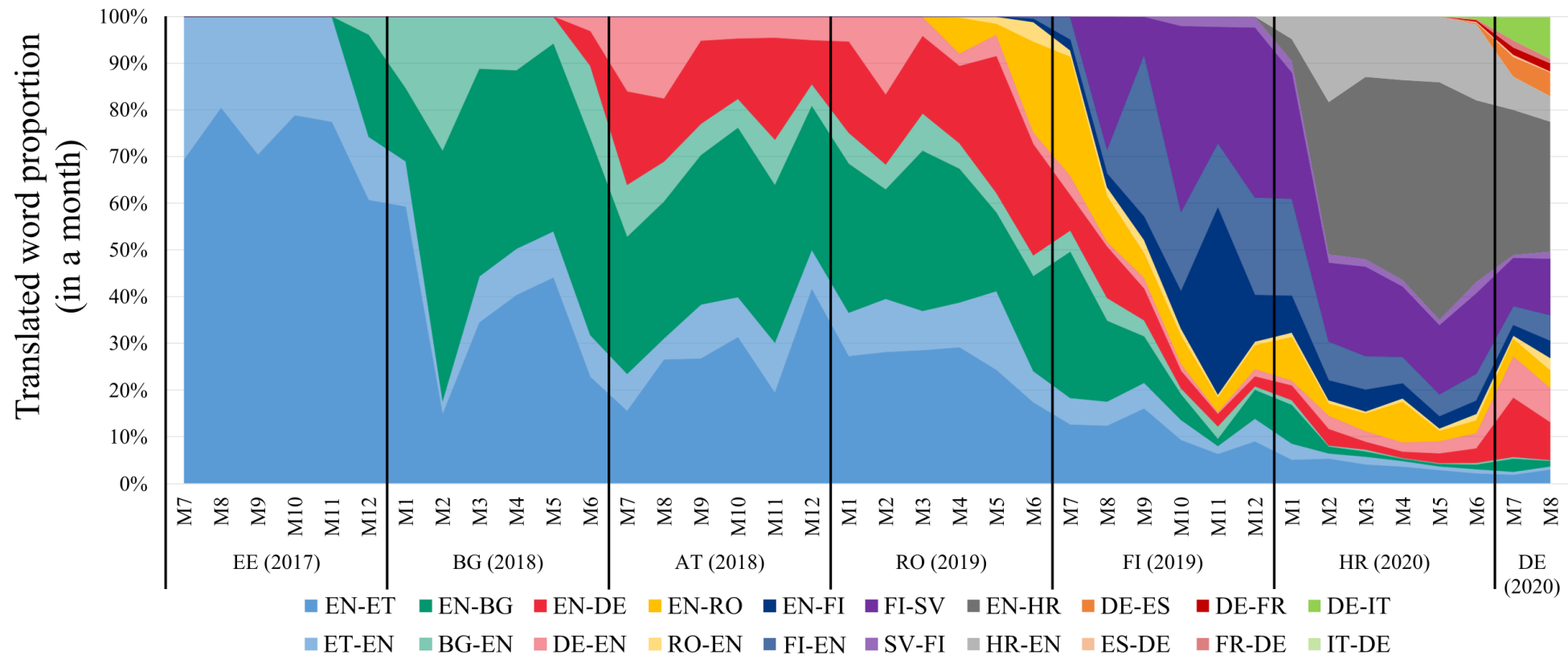
# Usage analysis – custom vs. generic systems

- Custom systems process the majority of translations
- The eu2020.de widget has increased the use of generic engines



# Usage analysis – custom NMT system use over time

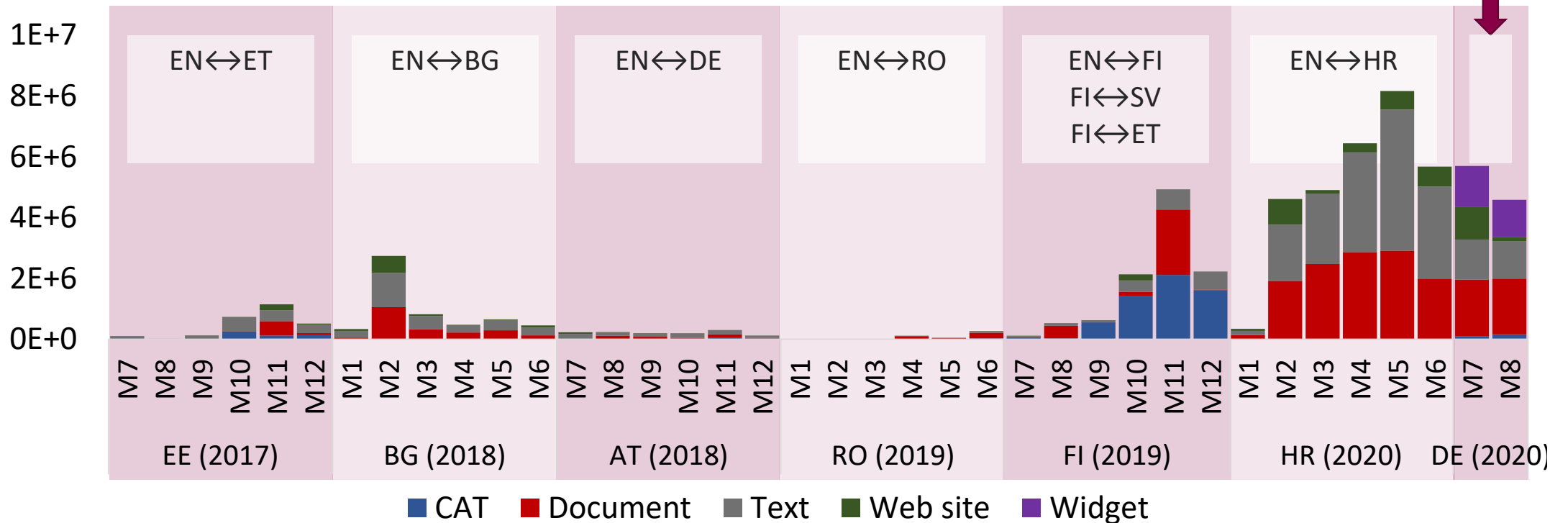
- Users continue using the custom NMT systems long after presidencies conclude



# Usage analysis – primary systems of each Presidency

- Usage differs from country to country
- Higher use evident in countries that integrated the Translator in the official Web sites of the Presidency

EN↔DE, DE↔IT, DE↔ES, DE↔PL, DE↔FR

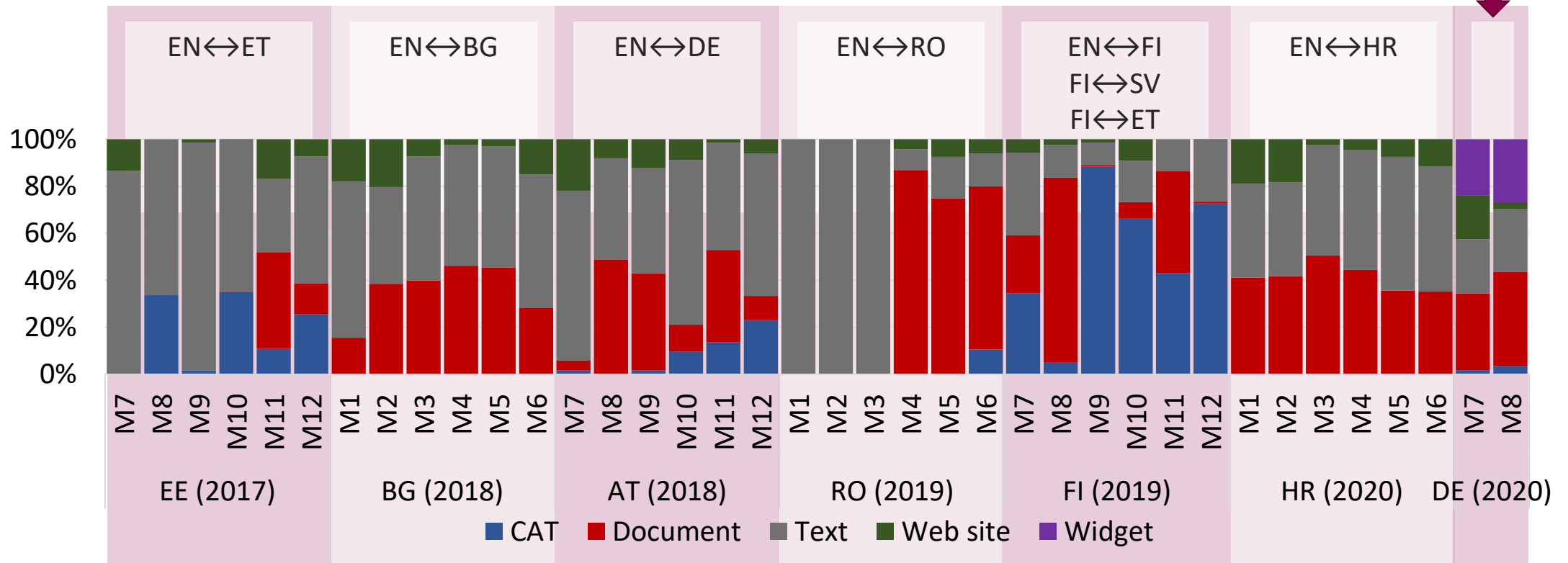




# Usage analysis – primary systems of each Presidency

EN↔DE, DE↔IT, DE↔ES, DE↔PL, DE↔FR

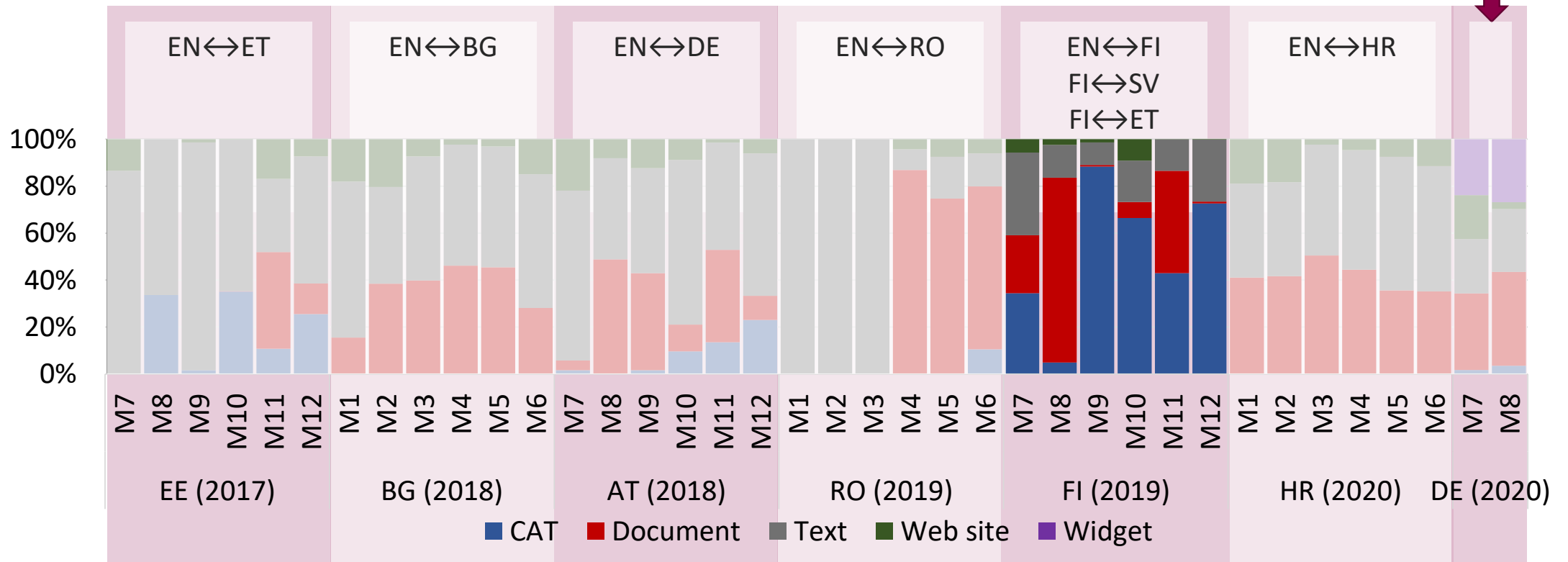
- Primary system usage during each Presidency allows us to analyse the adoption of different interfaces by each EU Council Presidency



# Usage analysis – primary systems of each Presidency

EN↔DE, DE↔IT, DE↔ES, DE↔PL, DE↔FR

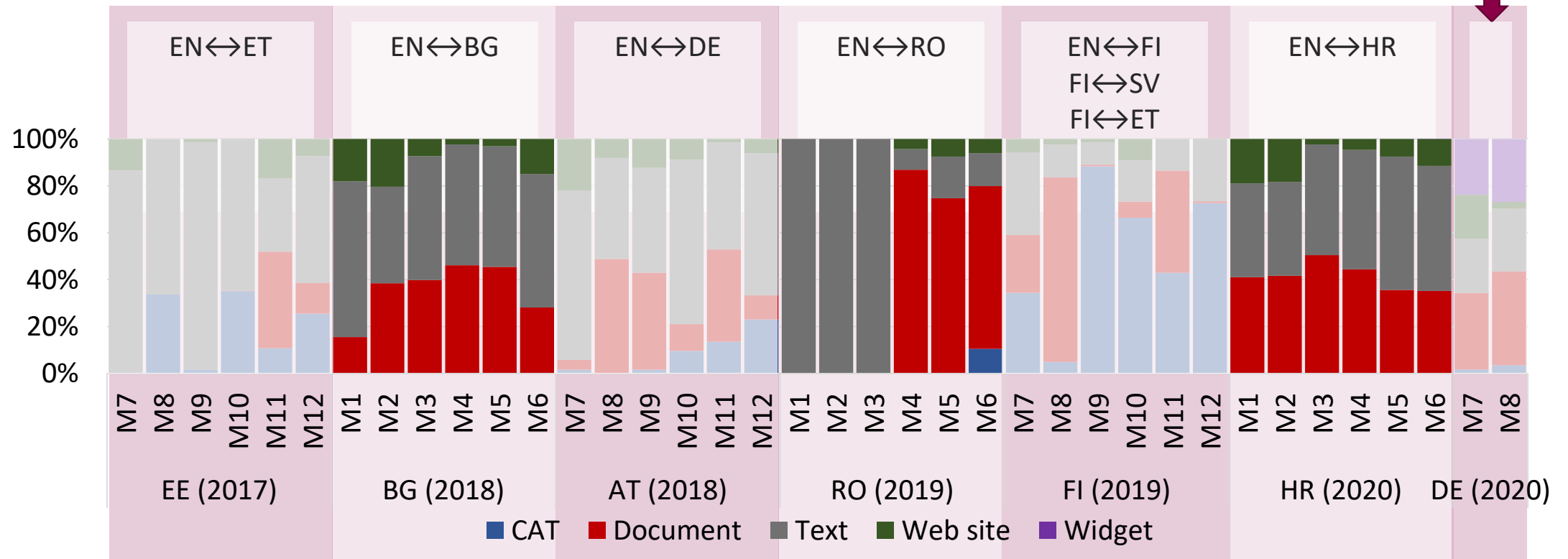
- The CAT tool interface was the most popular in Finland (960 thousand words per month translated on average during the presidency)



# Usage analysis – primary systems of each Presidency

EN↔DE, DE↔IT, DE↔ES, DE↔PL, DE↔FR

- The CAT tool interface was not used in Bulgaria, and Croatia
- In Romania, translators started using the CAT interface in the last month of the presidency

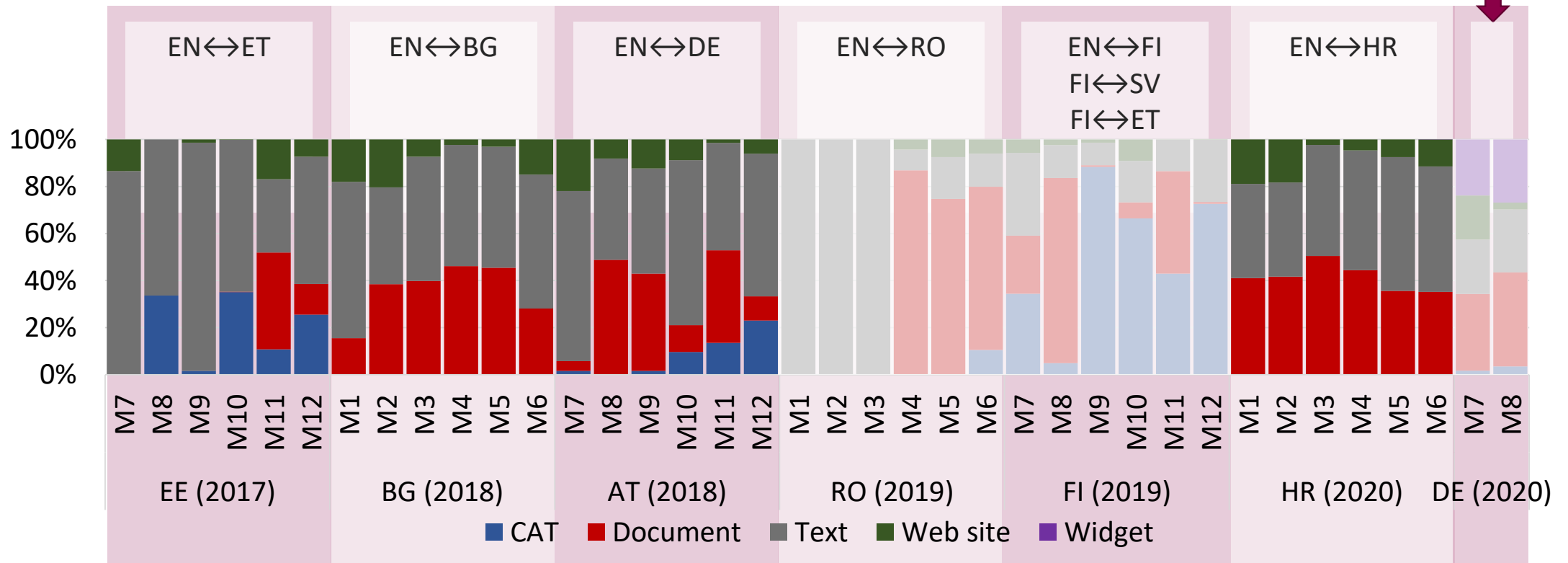




# Usage analysis – primary systems of each Presidency

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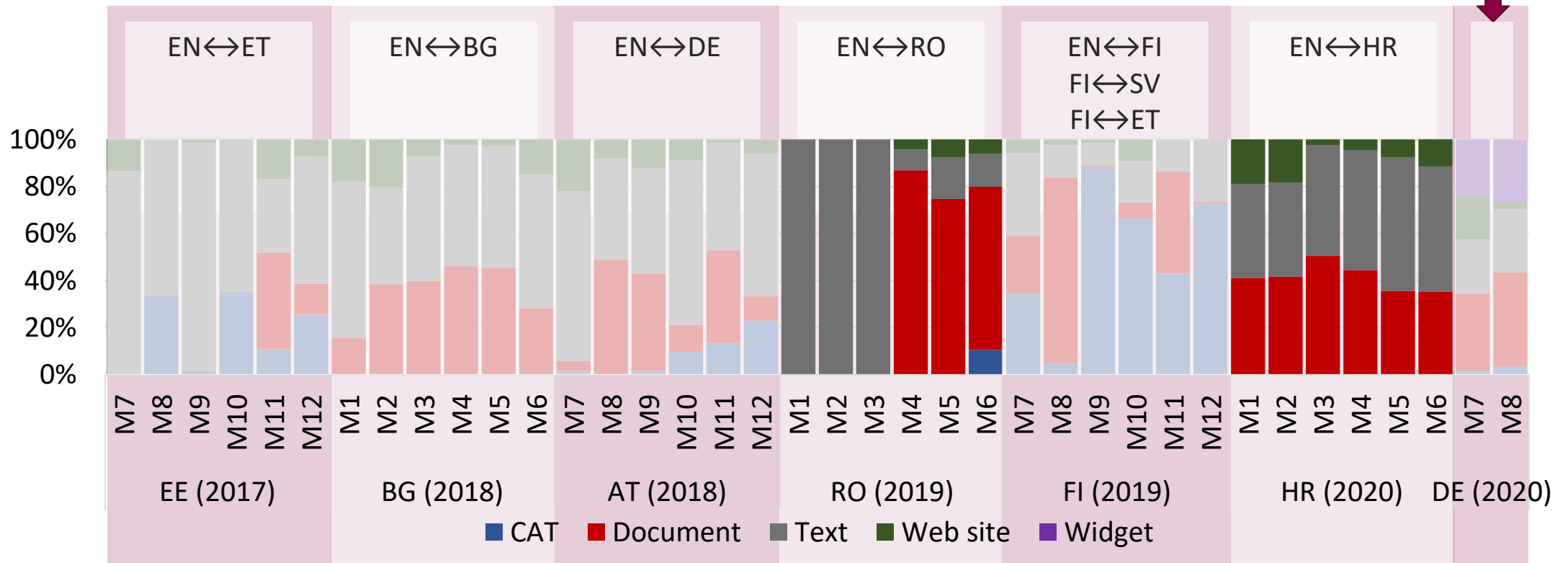
- Text translation was the most popular in Estonia, Bulgaria, Austria, and Croatia
- In Croatia, an average of 2.5 million words were translated this way each month



# Usage analysis – primary systems of each Presidency

EN↔DE, DE↔IT, DE↔ES, DE↔PL, DE↔FR

- Document translation was the most popular in Romania, however the most words were translated during the Croatian Presidency (2.1 million words on average each month)



# Translators' perspective



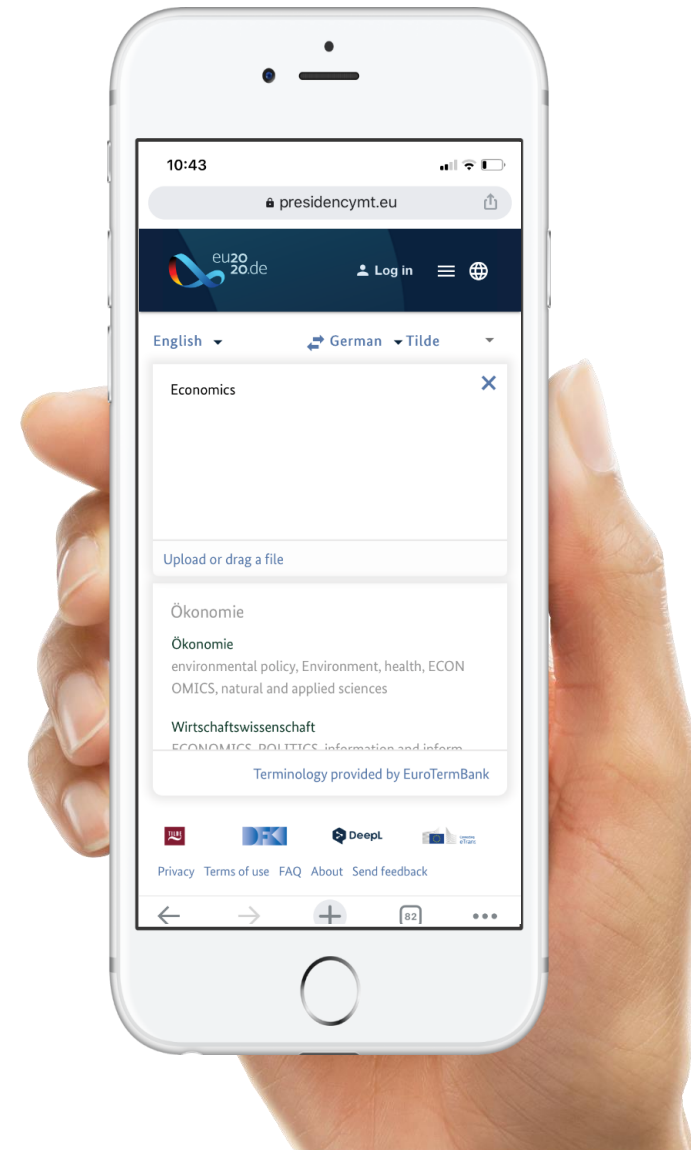
## Contribution

- Collecting language resources
- Testing quality



## Benefits

- Learning about MT
- Working more productively
- Feeling empowered



# Conclusions

- We presented the EU Council Presidency Translator, a secure cloud-based solution that integrates MT systems from different MT providers and implements a wide spectrum of interfaces for end-users
- We presented its functionality and analysis of its adoption by users in seven EU Council Presidencies
- Although the use differs from country to country, we see that there is a need for all types of offered translation interfaces
- The use of the public interfaces depends on how well the EU Council Presidency Translator is exposed to users in the official web sites of the Presidencies
- The use of CAT tool interfaces depends on each country's translation practices

# Thank you!

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