



UNIVERSITÉ
DE GENÈVE

FACULTY OF TRANSLATION
AND INTERPRETING

My artificial colleague

Tech-empowered translation

Il mio collega artificiale

La tecnologia al servizio della traduzione

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CONTENTS

- ARTIFICIAL INTELLIGENCE (AI) IN TRANSLATION
- MT USE IN SWITZERLAND
- WORKING WITH A MACHINE OR A HUMAN: PE AND REVISION
- NOT ONLY MT: AI IN CAT TOOLS
- CONCLUSIONS

The background is a solid teal color. In the top-left and bottom-right corners, there are decorative elements consisting of light blue circuit board traces and circular nodes, resembling a microchip layout. These elements are partially cut off by the edges of the frame.

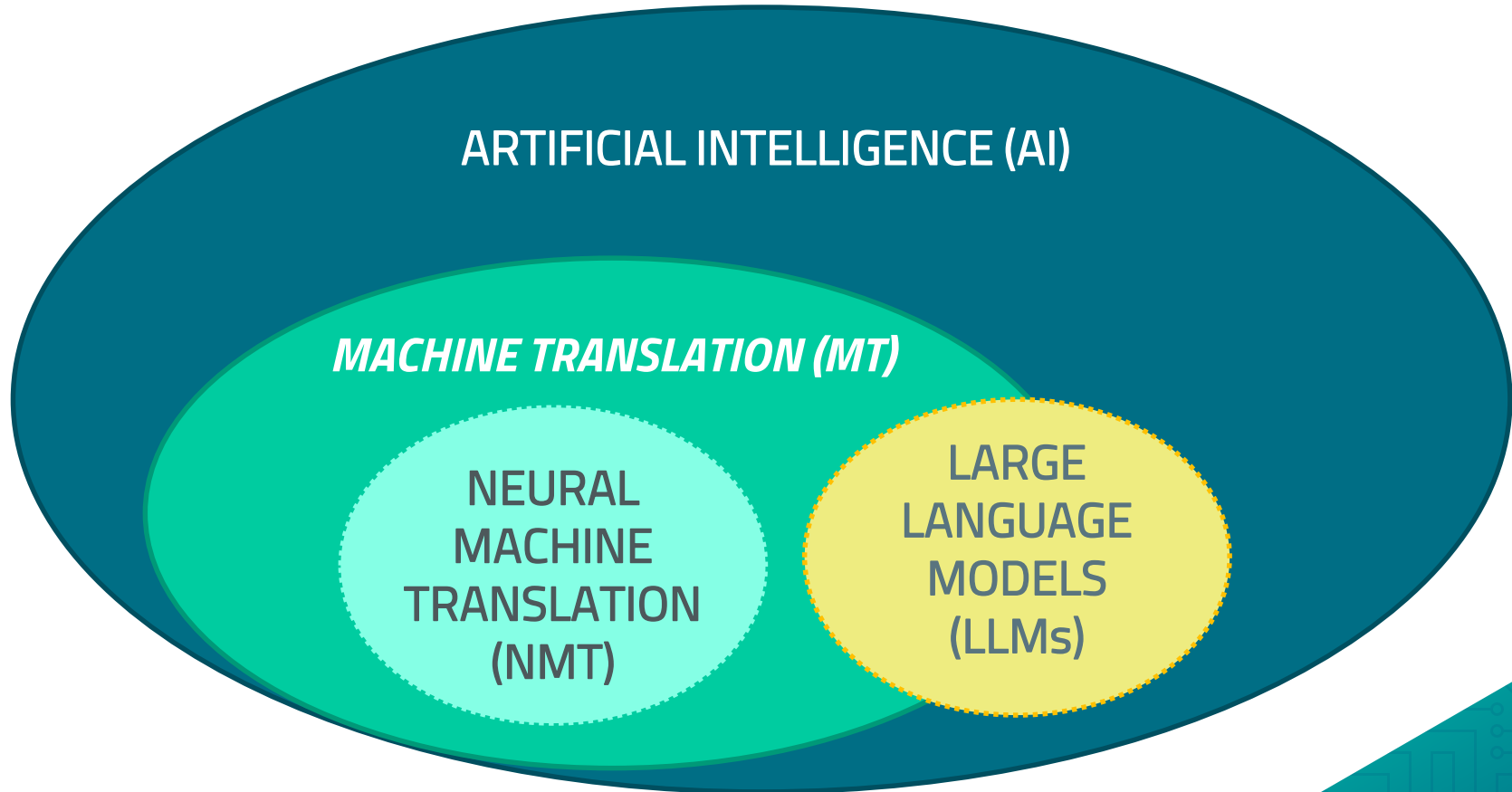
AI IN TRANSLATION



Artificial Intelligence (AI) is a discipline concerned with the building of computer programs that perform tasks requiring intelligence when done by humans.

Source: Oxford Dictionary of Computing

AI in translation: NMT and LLMs



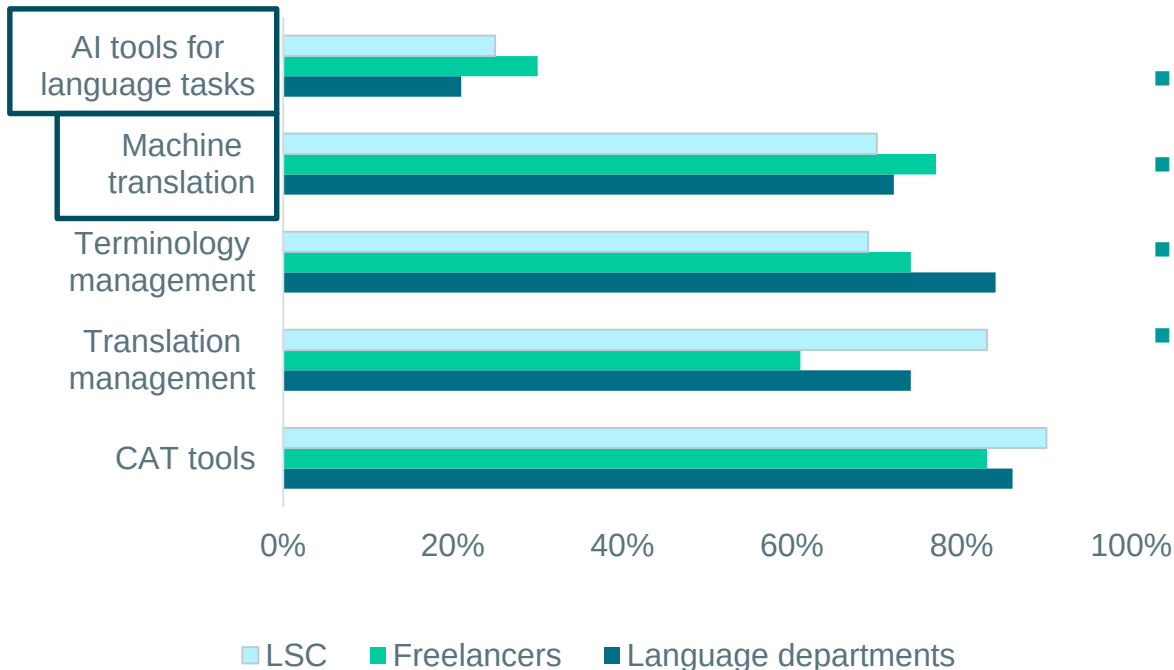
AI in translation: NMT and LLMs

NMT (e.g. DeepL, Google Translate)	LLMs (e.g. ChatGPT, Gemini)
Trained to perform translation tasks	Trained to perform various tasks (including translation)
Customized through training	Customized through prompting
Integrated in CAT tools	Integrated only in some CAT tools
Can provide higher data security	Potentially less secure

European Language Industry Survey (ELIS 2024)

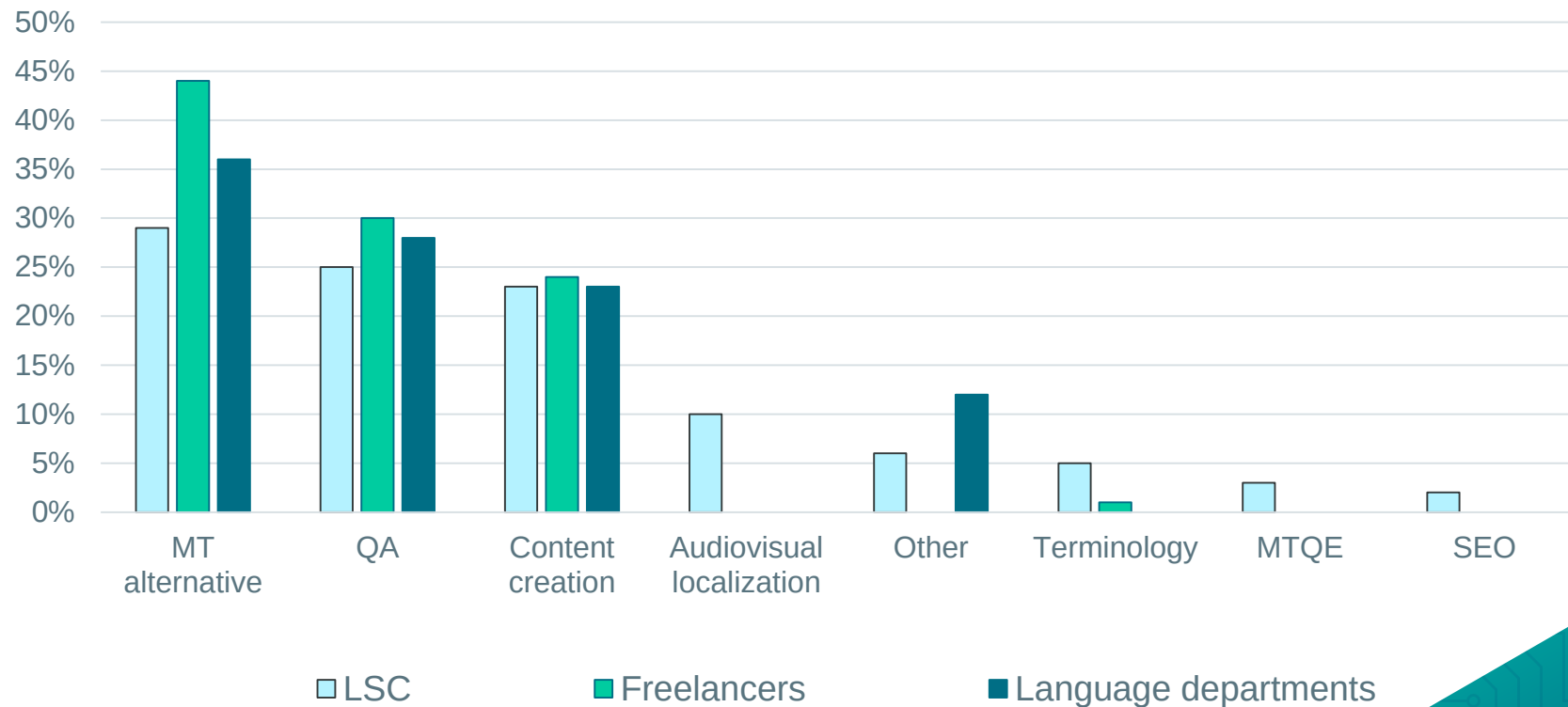
Technology implementation

1776 responses



- Freelance translators, n=919
- Language companies (LSC), n=257
- Language departments, n=78
- Academia, n= 522

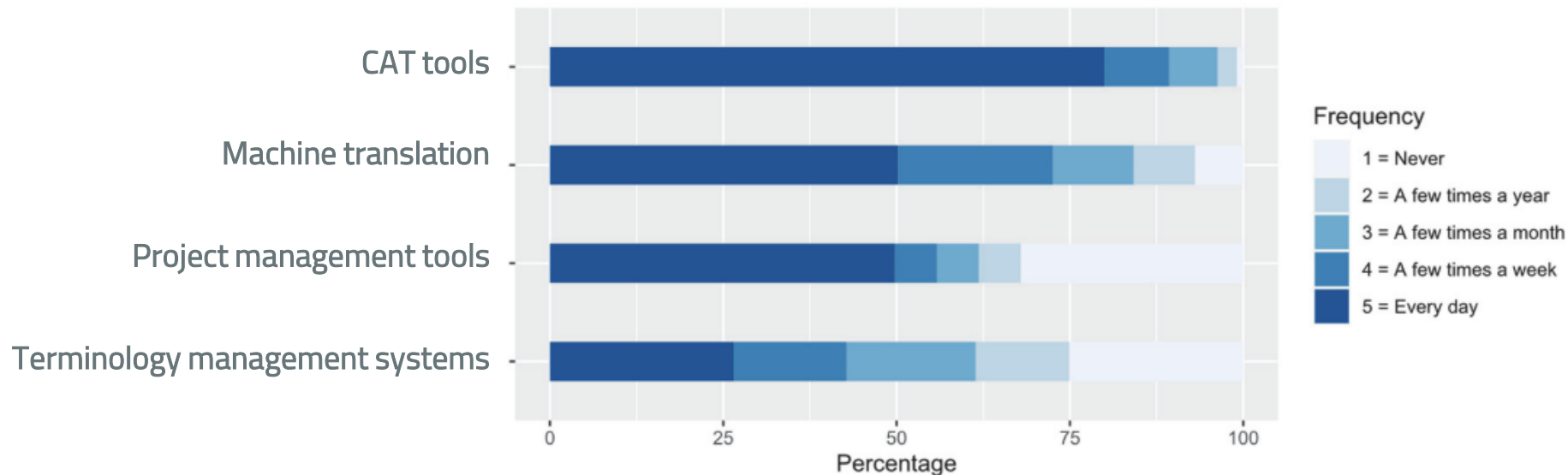
AI use cases (ELIS 2024)



MT USE IN SWITZERLAND

Translation technology use at the Swiss Confederation

N=229, response rate: 45%



Source: Canavese and Cadwell (2024)

MT use at Swiss corporate in-house language services (CILS)

Survey (Nov. 2022 – Feb. 2023) for CILS directors or project managers

52 respondents



26 out of 52 CILS

Use MT in their
workflows



DeepL

Most frequently used
MT system



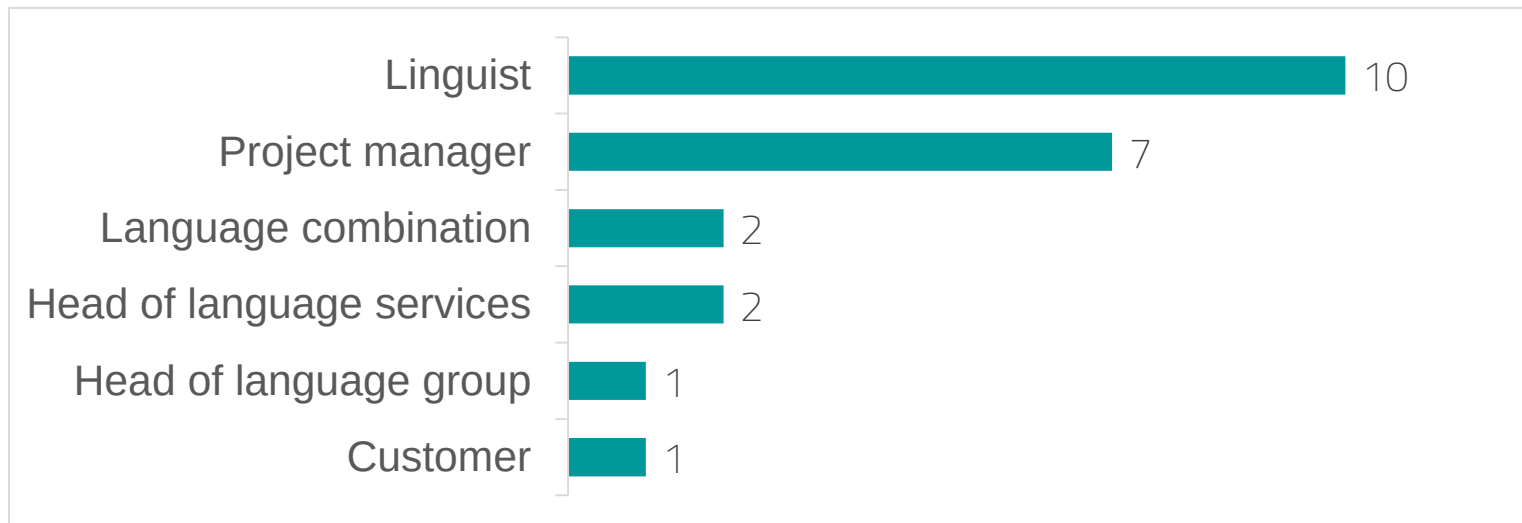
No revision after PE

In 14 out of 26 CILS;
only *Sometimes* in
6 out of 26 CILS

MT use at Swiss corporate in-house language services (CILS)



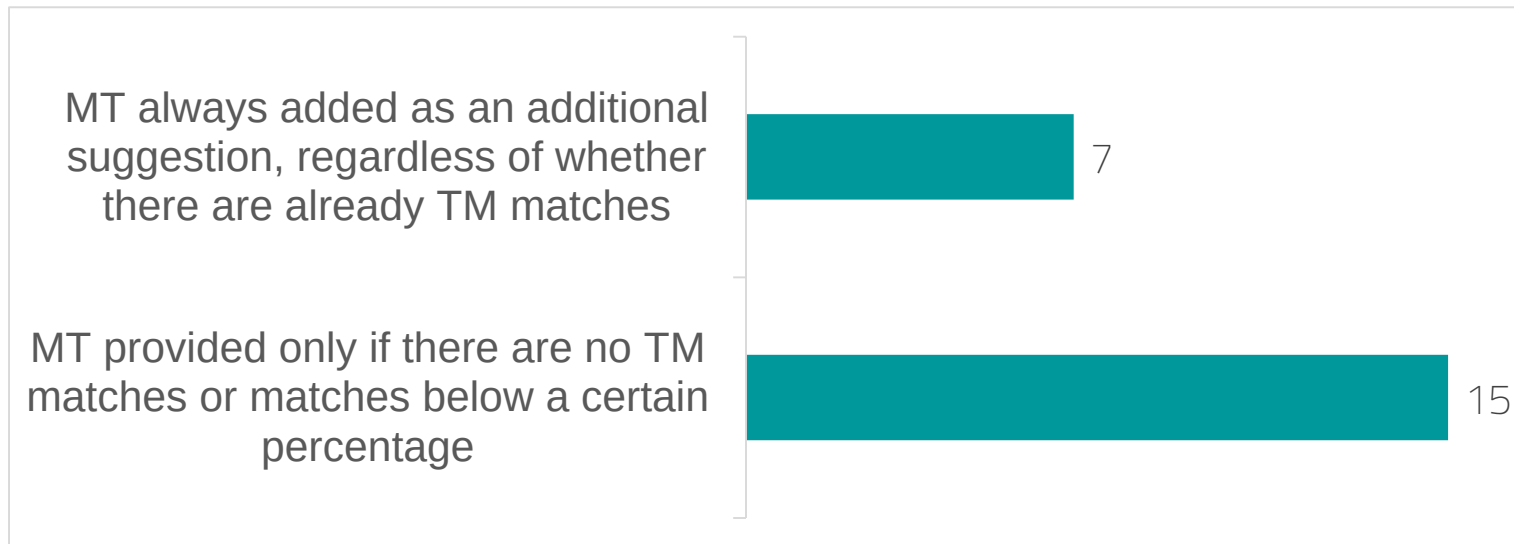
Who decides when to use MT?



MT use at Swiss corporate in-house language services (CILS)



MT/CAT tool integration scenario (display of suggestions)



MT use at Swiss corporate in-house language services (CILS)



MT/CAT tool integration scenario (use of suggestions)

MT and TM suggestions in another window (i.e. the linguists can click on a suggestion to use it)

6

Pre-translation of the entire text using MT and TM (i.e. one suggestion per segment, already in the editing zone)

15



WORKING WITH A MACHINE OR A HUMAN : PE AND REVISION

PE and revision at Swiss CILS



Four Key Aspects

Practices

Task satisfaction

Productivity

Modifications (edits)

PE and revision – Linguists' practices

In the professional context of Swiss CILS, how do linguists' PE and revision practices differ?



Survey

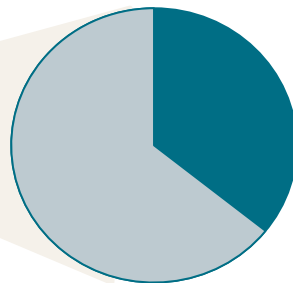


CILS linguists, n=86



Overall strategies

- *Reading strategies*
- *Guidelines*
- *Medium*
- *MT influence on revision procedures*



Same
strategies
(36%)

Different
strategies
(64%)

PE and revision – Linguists' practices

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Survey



CILS linguists, n=86



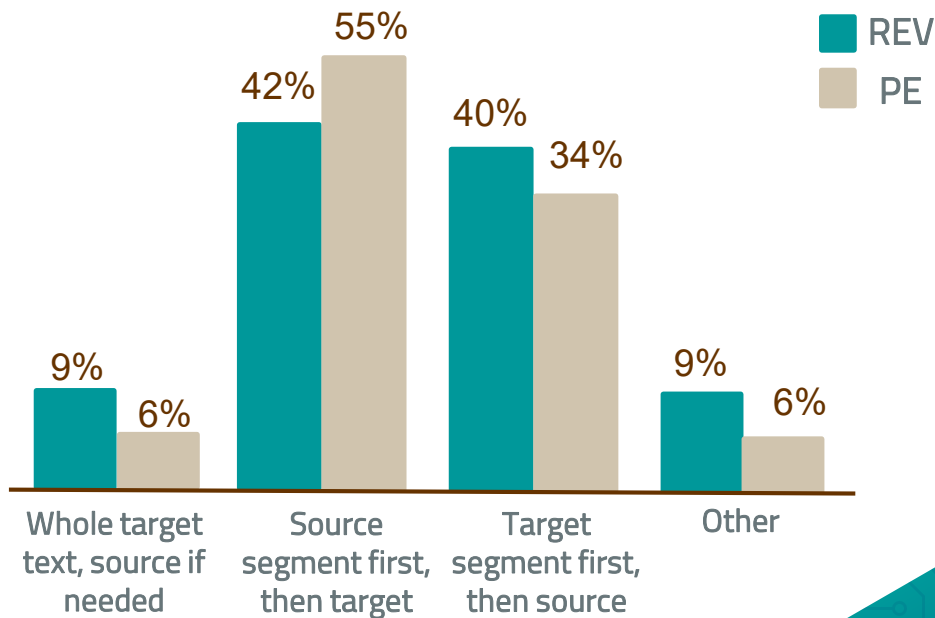
▪ *Overall strategies*

Reading strategies

▪ *Guidelines*

▪ *Medium*

▪ *MT influence on
revision procedures*



PE and revision – Task satisfaction

In the professional context of Swiss CILS, how do PE and revision compare in terms of **task satisfaction** for the linguist who performs these tasks?



Survey



CILS linguists, n=85

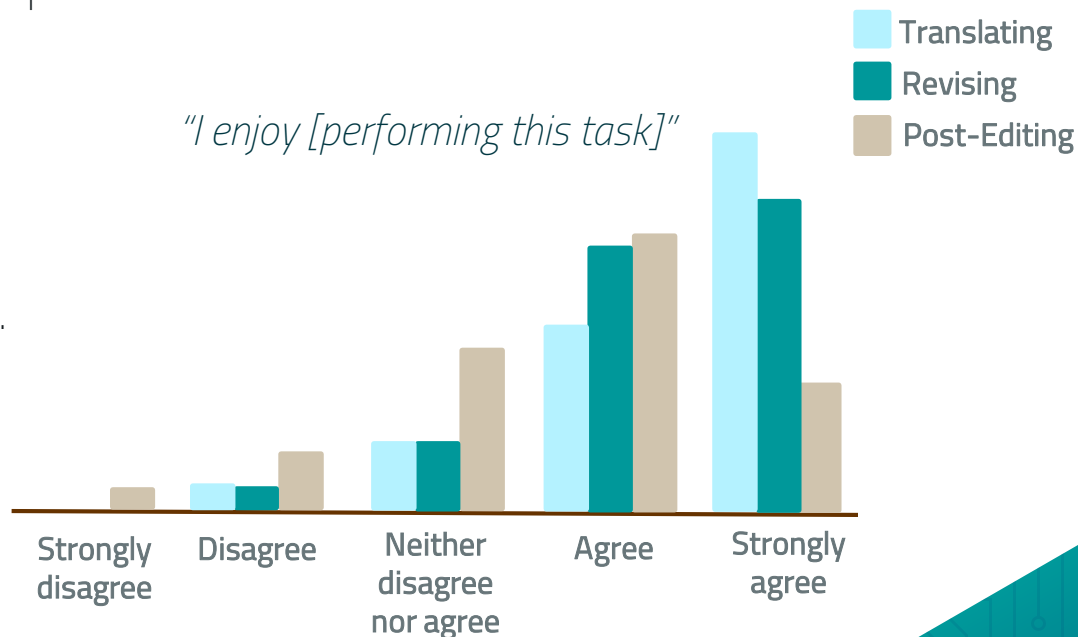


Facets of task satisfaction, e.g.

- Task-specific self-efficacy
- Creativity
- Task complexity
- Control over final quality

Task enjoyment

"I enjoy [performing this task]"



PE and revision – Task satisfaction

In the professional context of Swiss CILS, how do PE and revision compare in terms of *task satisfaction* for the linguist who performs these tasks?



Survey



CILS linguists, n=85



Facets of task satisfaction, e.g.

- Task-specific self-efficacy
- Creativity
- Task complexity
- Control over final quality

Task enjoyment

Hypotheses testing



Revising



Translating



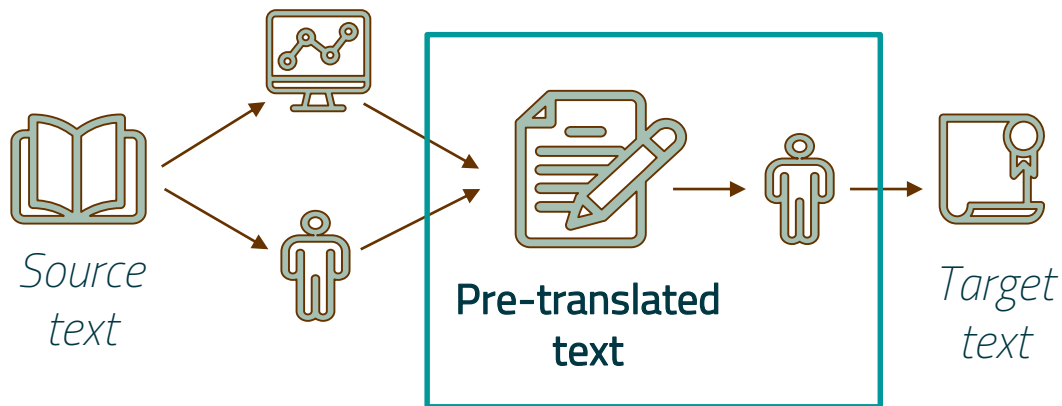
Post-Editing



PE and revision at a partner CILS

An investigation of **PE and revision** in the **same professional setting**

Working on **pre-translated texts**



PE and revision – Productivity

When PE and revision are carried out under the same conditions, how does linguists' productivity compare in these tasks?



Field experiment (productivity test)



CILS linguists (FR=1, IT=3, EN=2)

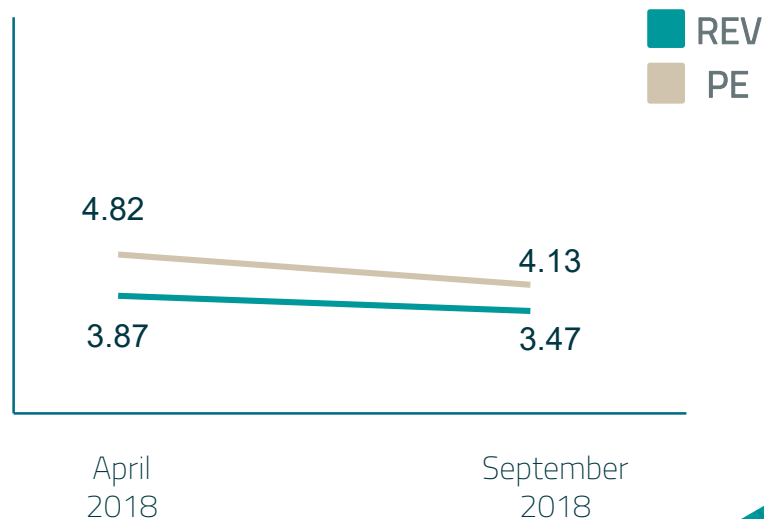


Statistical MT (SMT, April 2018)
Neural MT (NMT, September 2018)



Speed (seconds/word)

Quality check by a colleague



PE and revision – Modifications (edits)

When PE and revision are carried out under the same conditions, how do PE and revision compare in terms of **modifications (edits)** made to pre-translated texts?



Product analysis (corpus-based study)



Authentic texts from PE and REV jobs

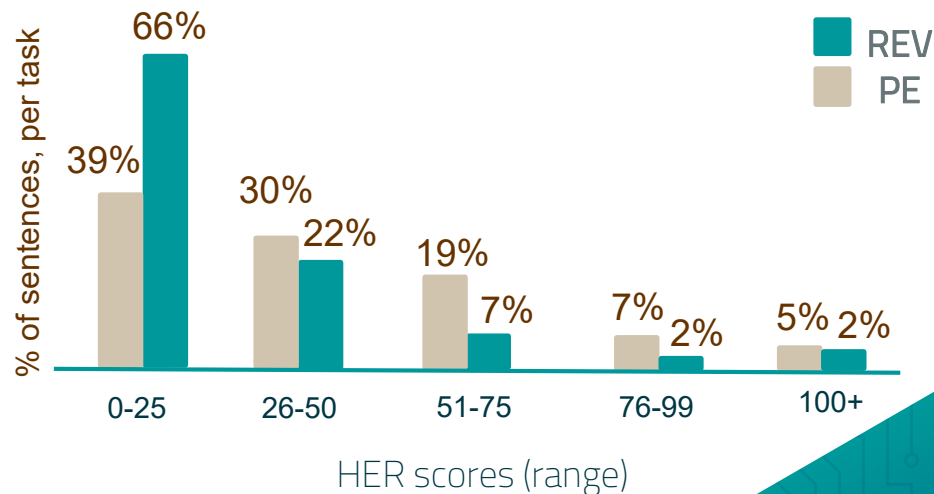
PE → 4,089 triples

REV → 4,933 triples



Amount of editing*

- *Editing actions**
- *Parts of speech affected*
- *Linguistic dimension involved*
- *Edits' necessity and effectiveness*



PE and revision – Modifications (edits)

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Product analysis (corpus-based study)



Authentic texts from PE and REV jobs

PE → 4,089 triples

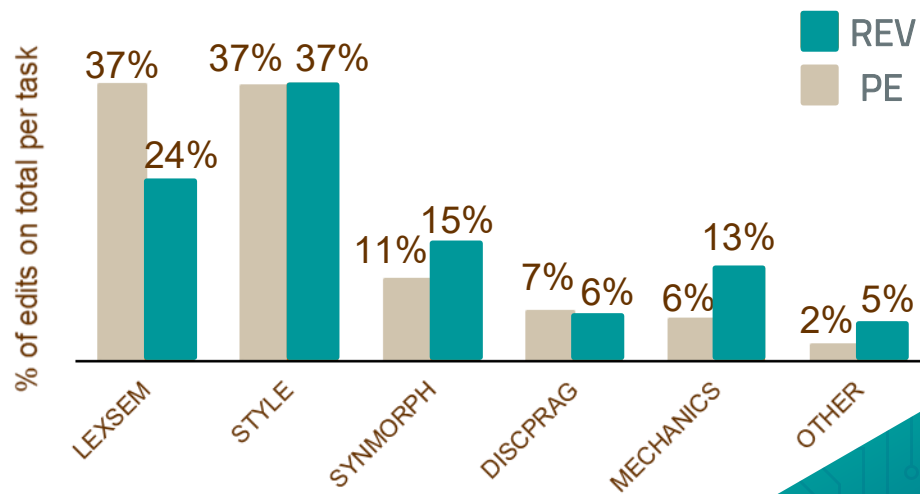
REV → 4,933 triples



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Authentic texts from PE and REV jobs

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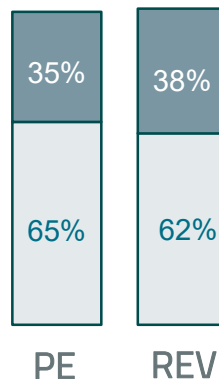
REV → 4,933 triples



- *Amount of editing**
- *Editing actions**
- *Parts of speech affected*
- *Linguistic dimension involved*

Edits' necessity and effectiveness

■ Optional
■ Necessary



Task	Effectiveness score (min. -2, max. 2)
PE	1.57
REV	1.46



NOT ONLY MT: AI IN CAT TOOLS

Latest AI additions in CAT tools



Trados

- **AI Assistant**

Pre-defined prompts

e.g. *Translate this sentence*

+ custom prompts

e.g. *The target sentence should not exceed
the length of the source sentence*

Trados

■ AI Assistant

The screenshot displays the Trados Studio interface with the AI Assistant feature active. The top bar shows the 'OpenAI provider for Trados' and various toolbars including 'Résultats de la traduction', 'Correspondances de fragments', 'Recherche contextuelle', 'Commentaires', 'EQT', 'Messages', 'Reconnaissance terminologique', and 'Recherche dans la base terminologique'. The main workspace shows a bilingual comparison between German and French text. The AI Assistant panel at the bottom shows a 'Reduced length' prompt and a translation suggestion for a sentence about Elisabeth Baume-Schneider.

OpenAI provider for Trados

Résultats de la traduction - OpenAI provider for Trados | Correspondances de fragments - OpenAI provider for Trados | Recherche contextuelle | Commentaires | EQT | Messages | Reconnaissance terminologique | Recherche dans la base terminologique

NZZ_augen.docx

German	AI Assistant	French
1 Wie viel darf eine Augenoperation kosten?	NMT	Combien peut coûter une opération des yeux ?
2 Im grössten Streit der Gesundheitspolitik erzwingt Baume-Schneider einen Kompromiss	NMT	Dans le plus grand conflit de la politique de santé, Baume-Schneider impose un compromis
3 Unter dem Druck von Bundesrätin Elisabeth Baume-Schneider können sich Ärzte, Spitäler und Krankenkassen erstmals auf neue Tarife für ambulante Leistungen einigen.	NMT	Sous la pression de la conseillère fédérale Elisabeth Baume-Schneider, les médecins, les hôpitaux et les caisses d'assurance maladie peuvent pour la première fois s'entendre sur de nouveaux tarifs pour les prestations ambulatoires.
4 Auf dem Spiel stehen 14 Milliarden Franken im Jahr.	NMT	
5 Und es gibt noch ein Problem.	NMT	
6 Ist das nun der grosse Durchbruch?	NMT	
7 Er zögert kurz.	NMT	
8 «Ich hoffe es.»	NMT	

AI Assistant

Prompt : Reduced length

Translation Suggestions : 1

Sous la pression de la conseillère fédérale Elisabeth Baume-Schneider, les médecins, les hôpitaux et les caisses d'assurance maladie peuvent pour la première fois s'entendre sur de nouveaux tarifs pour les prestations ambulatoires.

Connection : test

Partial Tag Text

AI Assistant | Smart Review

Traduction de langues source mélangées

Trados

- Smart Review

AI-driven review

1	Getting Started	Erste Schritte	✓	CM	H+
2	Finding a location for your photo printer	Aufstellungsort für Ihren Fotodrucker finden	✓	CM	H+
3	Place the photo printer on a flat, clean and dust-free surface, cf in a dry location cf , and cf out of direct sunlight cf .	Platzieren Sie den Fotodrucker auf einer flachen, sauberen und staubfreien Oberfläche, und stellen Sie ihn an cf einem trockenen Ort cf auf, der cf keinem direkten Sonnenlicht cf ausgesetzt ist.	✓	CM	LI

The term 'photo printer' was translated as 'Fotodrucker' instead of the specified term 'Digitalfotodrucker'. This is a term error with a major severity because it does not follow the termbase recommendation.

System Smart Review Model azureOpenA...

> Previous Estimations

- Trados Copilot

LLM trained on product documentation

memoQ

- **AGT: Adaptive Generative Translation**

Combines MT with TMs and other resources using an LLM

Instant domain adaptation

No custom prompts

- **Globalese by memoQ**

Combines custom NMT with an LLM

Custom prompts

Phrase

- **Next GenMT**

Combines GPT-4o with proprietary MT technology

- **AI actions**

Pre-defined prompts to improve content (before and after translation)

- **AutoLQA (Language Quality Assessment)**

AI-powered LQA (according to DQF-MQM framework)



CONCLUSIONS

Key takeaways

- Do not refer to PE as *revision of MT output*
- NMT or LLM: choose the right technology based on your profile and use cases
- Collaboration, not competition: AI as a new colleague...at your service



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Grazie della vostra attenzione!

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Girletti, S. (2024b, in press). "Beyond the Assembly Line: Exploring Salaried Linguists' Satisfaction with Translation, Revision and PE Tasks". *Revista Tradumàtica*.

**Umfrage zur Berechnungsmethode von
Preisen für Übersetzung, Revision und
Post-Editing**

**Enquête sur les méthodes de tarification
de la traduction, de la révision et de la
post-édition**

**Indagine sui metodi di determinazione dei
prezzi della traduzione, della revisione e
del post-editing**

