

Preference of End-users for raw and Post-edited NMT in a Business Environment

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SWISS POST 

Swiss Post Language Service

Who we are and what we do

25

in-house
translators
+ pool of
external
translators

Languages

fr-CH
it-CH
en-GB
de-CH

80,000

pages
translated
each year

XTM

as
CAT-tool

**Swiss Post
NMT**

in-house
trained NMT
solution

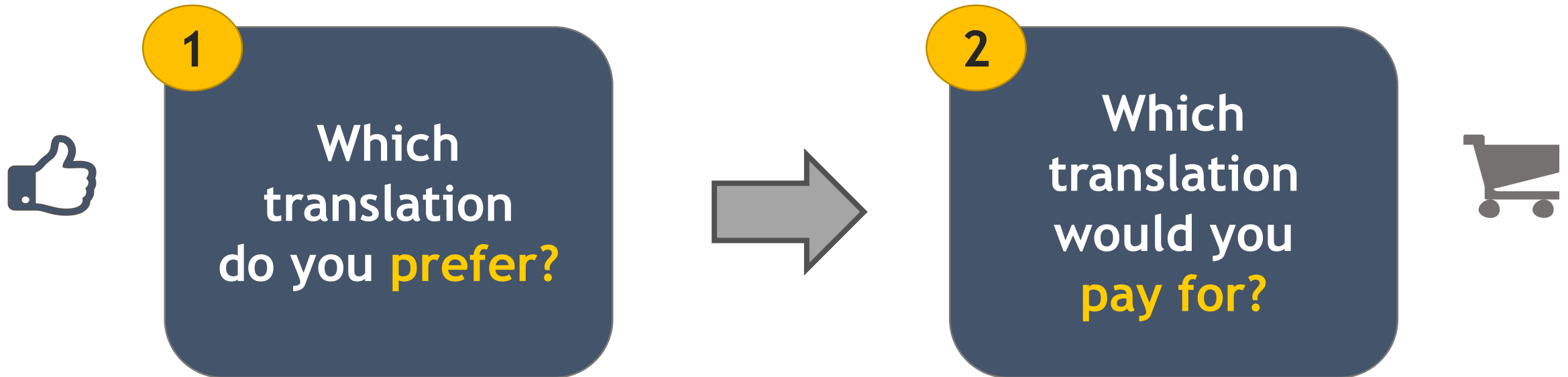
The Aims of the Study

To assess whether end-users of translated texts:

- ❖ rate post-edited NMT more highly than raw NMT
 - ❖ think that Swiss Post NMT produces better results than DeepL
 - ❖ are willing to pay for post-edited texts
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Methodology

Two comparative evaluations of raw and post-edited MT output



❖ Language directions: **DE>FR** and **DE>IT**

❖ MT systems: **Swiss Post NMT** and **DeepL**

Participants

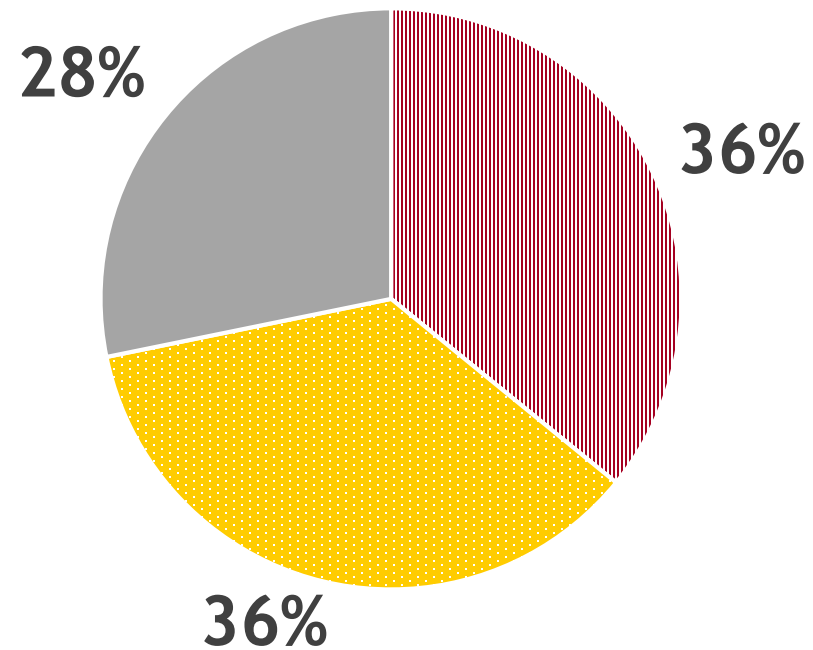


x 24 (FR)



x 16 (IT)

Comprehension of German: B1 to C2



MT usage

- Regularly
- Sometimes
- Never

Test Data

Eight extracts from Swiss Post's manuals for employees (180 segments)

SOURCE

Jedes Team verfügt über eine Leitung Filiale und eine Stellvertretung.

RAW Swiss Post NMT

Chaque équipe dispose d'une direction de filiale et d'une suppléance.

PE Swiss Post NMT

Chaque équipe dispose d'une direction de filiale et d'une suppléance.

RAW DeepL

Chaque équipe est composée d'un *directeur d'agence* et d'un *directeur adjoint*.

PE DeepL

Chaque équipe est composée d'un *responsable de filiale* et d'un *suppléant*.

Test Data

BLEU and HTER scores

	DE-FR		DE-IT	
	Swiss Post NMT	DeepL	Swiss Post NMT	DeepL
BLEU	41.52	28.36	37.01	23.92
HTER	15.36	26.19	20.97	31.18

Test Design

Texts	GROUP 1	GROUP 2
1 to 4	Swiss Post NMT	DeepL
5 to 8	DeepL	Swiss Post NMT

First Evaluation

Which translation do you prefer?



Die TWINT-App ermöglicht es auch, Freunden und Familienmitgliedern Geld direkt aufs Smartphone zu senden bzw. anzufordern.

TRANSLATION A	TRANSLATION B
<i>L'application TWINT permet aussi à ses amis et aux membres de la famille d'envoyer ou de demander de l'argent directement sur leur smartphone.</i>	<i>L'application TWINT permet aussi d'envoyer ou de demander de l'argent directement sur leur smartphone à ses amis et aux membres de sa famille.</i>

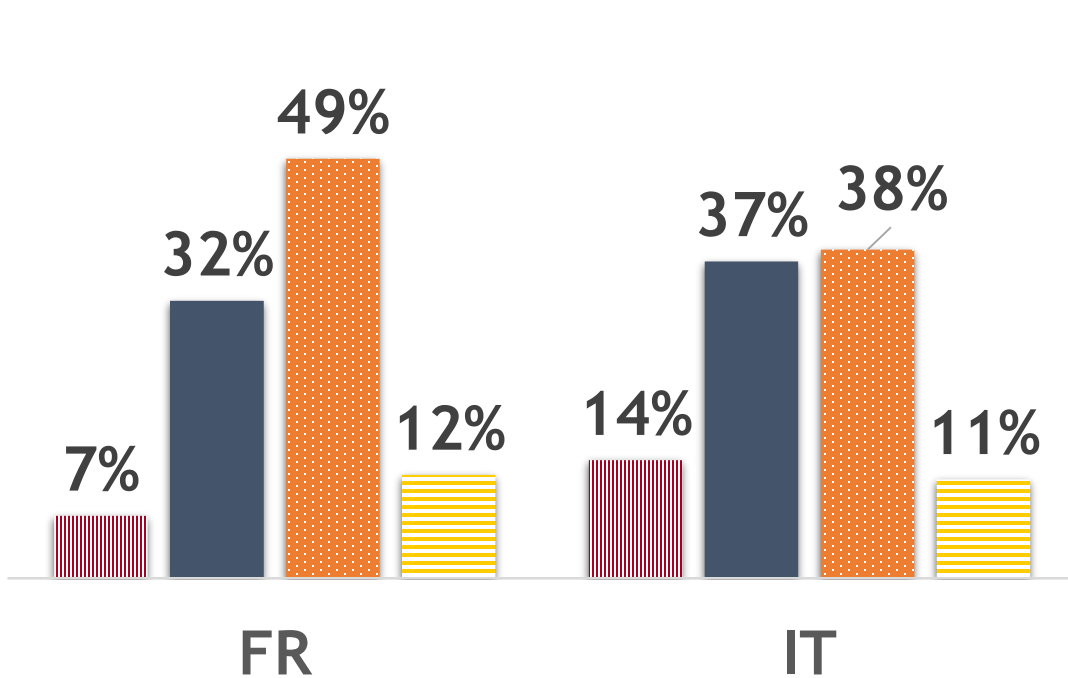
- I prefer translation A
- I prefer translation B
- I like both equally
- Neither of them

First Evaluation - Results

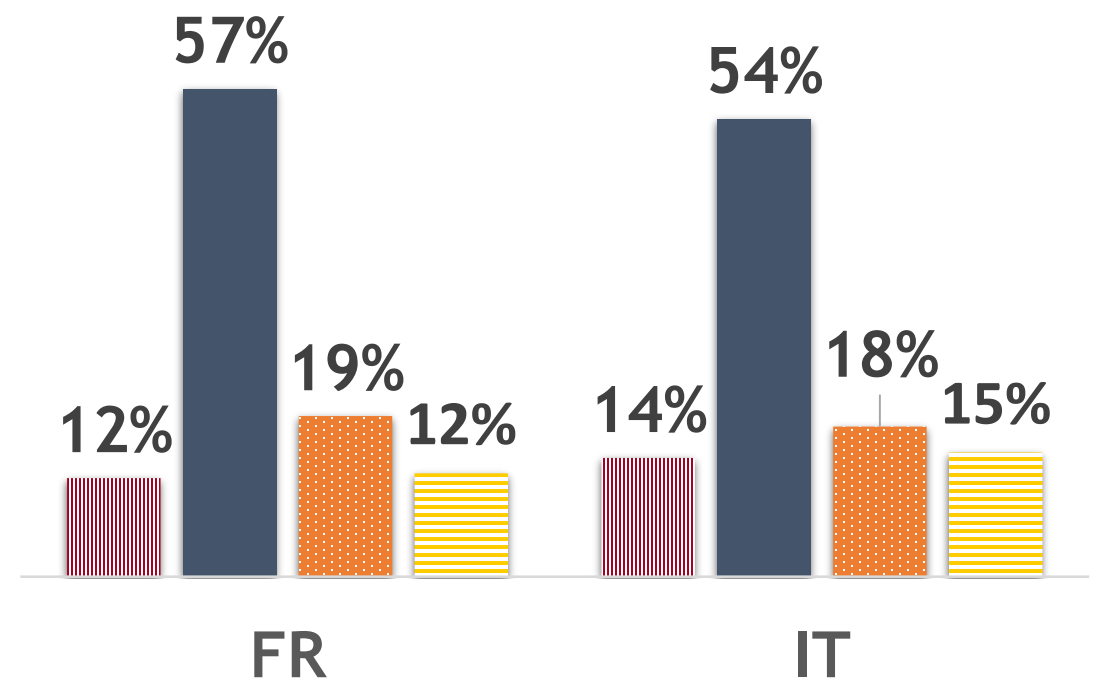
Which translation do you prefer?



Swiss Post NMT



DeepL



First Evaluation - Results

Examples of sentences in categories «Raw better» or «Neither of them»

SOURCE - Hinweis: TWINT-Voucher dürfen nicht [...]

RAW - Remarque: les bons TWINT ne doivent pas [...]

PE - Remarque: les bons TWINT ne doivent pas [...]

SOURCE - TWINT-Voucher stornieren

RAW - Annuler *le* bon TWINT

PE - Annuler *un* bon TWINT

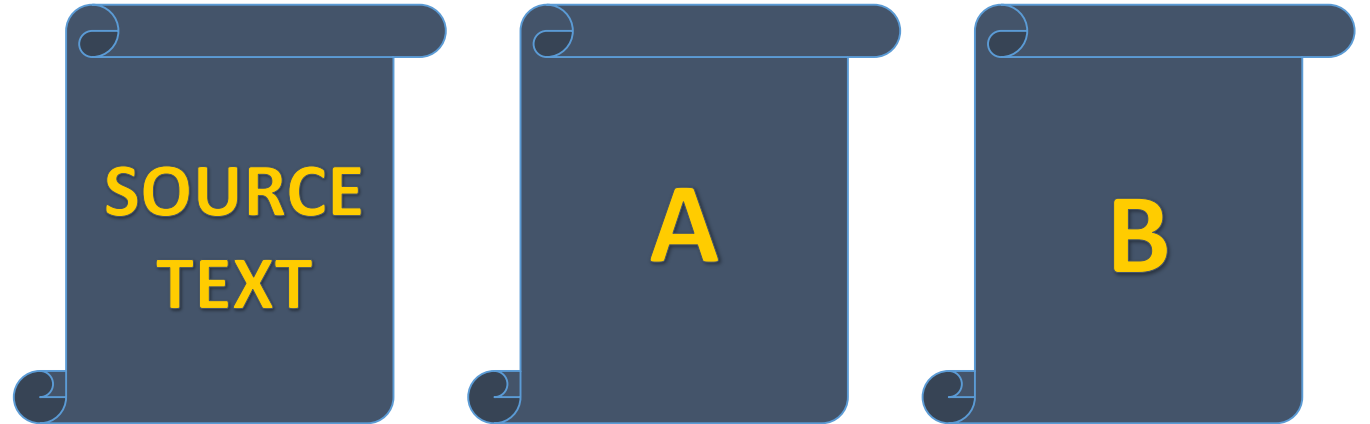
Second Evaluation

Which translation would you pay for?



Criteria

- ❖ Results of the first part
- ❖ Server (in-house or external)
- ❖ Post-editing
- ❖ Price



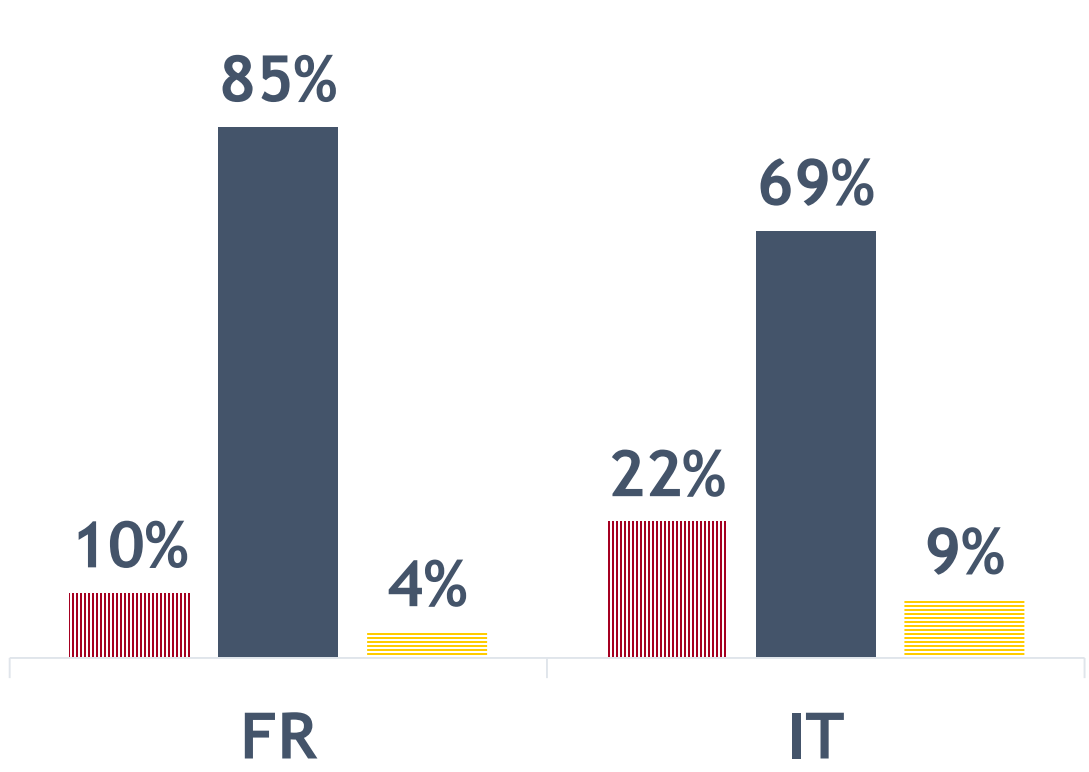
- I would rather pay for translation A
- I would rather pay for translation B
- I would not pay for either of them

Second Evaluation

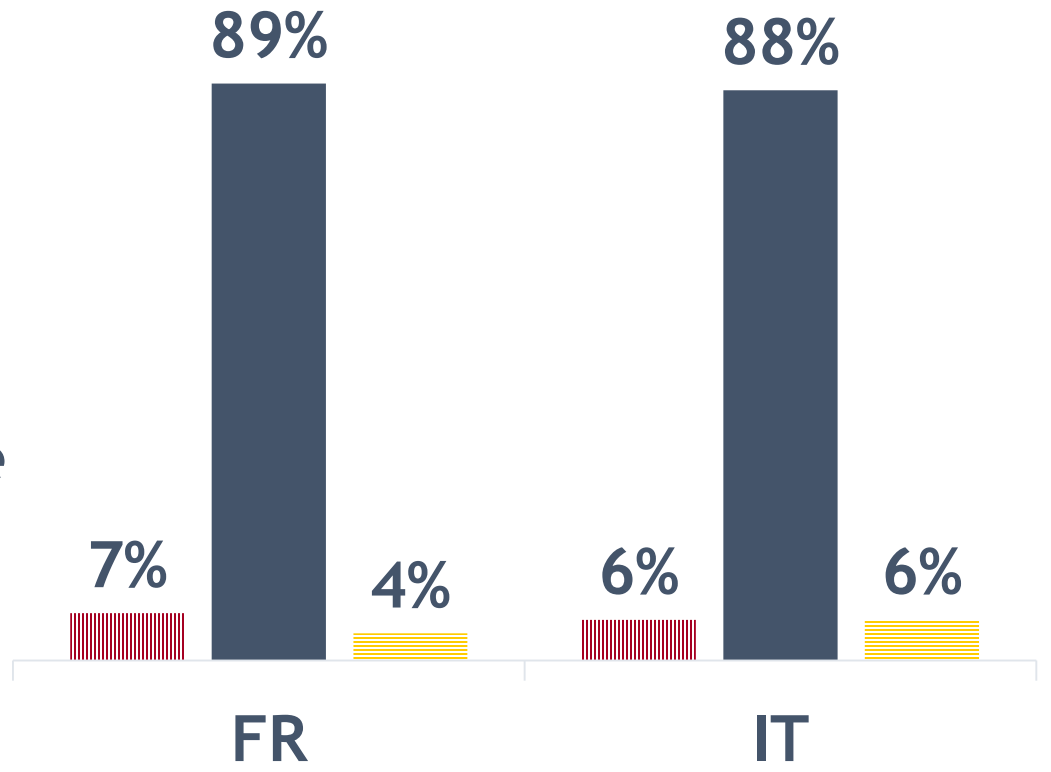
Which translation would you pay for?



Swiss Post NMT



DeepL



Who Changed their Minds?

In the second part



PE/none → raw



raw/none → PE



raw/PE → none



Who Changed their Minds?

In the second part



PE/none → raw (~10%)



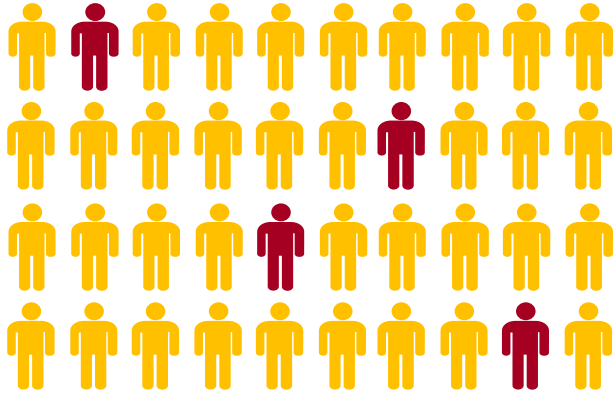
raw/none → PE



raw/PE → none

Who Changed their Minds?

In the second part



PE/none → raw (~10%)



raw/none → PE (~8%)



raw/PE → none

Who Changed their Minds?

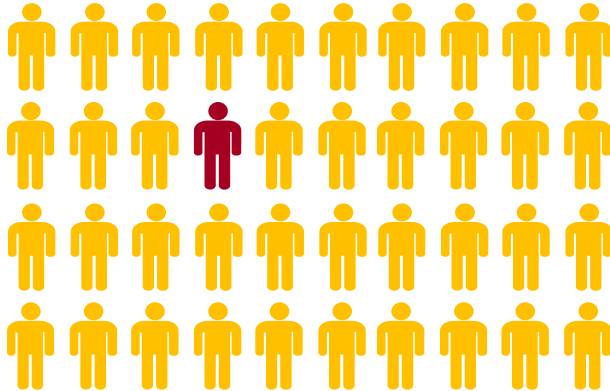
In the second part



PE/none → raw (~10%)



raw/none → PE (~8%)



raw/PE → none (~4%)

Who Changed their Minds?

Swiss Post NMT vs DeepL



PE/none → raw (~10%)

~7% vs ~3%



raw/none → PE (~8%)

~6% vs ~2%



raw/PE → none (~4%)

~2% vs ~2%

To conclude

- ❖ Customized NMT engine delivers better results according to end-users
 - ❖ End-users are willing to pay for post-edited texts in many cases
 - ❖ The pricing of post-edited machine translation should be carefully considered
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Thank you!

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