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## **MACHINE TRANSLATION AND POSTEDITING: AN OPINION POLL OF THE PROFESSIONAL TRANSLATION MARKET**

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### **Abstract**

Over the years, significant advances have been made in the field of machine translation. This type of translation and the different programs and applications which exist seem to be well known and accepted in the academic world specialised in translation. However, the level of knowledge and acceptance of machine translation seems to be very different in the business world for clients who request translation services. In our paper we present the result of a study carried out on the translation market to ascertain the level of knowledge, acceptance and application by TSPs and end clients of different sectors.

The opinion poll has been carried out through surveys adapted to the three target groups: translation agencies, professional translators and clients/users of professional translation. In the case of TSPs (agencies and translators), information has been gathered on their awareness and provision of machine translation and postediting (machine translation + proofreading), the percentage of assignments carried out through this service, as well as an evaluation of pure machine translation (without postediting) from their perspective and from the perspective of clients. In the case of clients/users of professional translation, information has been gathered on their knowledge and evaluation of machine translation (software translators).

The universe of the survey encompasses agencies of different sizes and from various countries of Europe and America; professional native speaker translators of over a dozen languages (target language of their translations); and clients/users of professional translations of different sizes and from various countries of Europe and America.

The paper ends with a series of conclusions and assessments by the author based on the data obtained, and is open to the participation/comments of other attendees.

**Keywords:** traductology, machine translation, CAT tools, postediting, market analysis, professional translation.

### **1. Introduction. Machine translation on the professional translation market: perspectives, theoretical bases, prior hypotheses.**

The initial motivation which has led us to carry out this study lies in a certain inconsistency which I perceived in my professional experience as a translator and as the director of a translation agency, between the awareness and level of acceptance of machine translation tools and associated services such as postediting or simultaneous machine translation in the academic world, and the level of knowledge, appreciation and implementation on the real professional translation market.

Among the academics and researchers of the fields of traductology, IT and Artificial Intelligence (AI), the idea seems to have been established that such a level of refinement in machine translation tools has been reached that the replacement of human translators by machine translation may occur in the present rather than the future.

However, the daily work of translation service providers (whether translation agencies or professional translators) and clients/users of professional translation services seems to indicate that the use of machine translation is not so widespread or established, and that human translators have not been replaced by artificial intelligence.

The rating of translation tools also does not seem very high among those who require translations in the daily management of their company or legal or administrative needs.

This perception and initial hypothesis, however, needed to be proven with objective data which would offer us a more precise understanding of the situation. This is therefore the basis of our work; undertaking a survey among clients/users of professional translation services such as recipients or beneficiaries of translations, professional translators as providers of human professional translation services, and translation agencies as intermediary agents between translators and clients, thereby being both recipients and providers of human and non-human professional translation services.

Although in some terms we are dealing with are well known among specialists, we should begin by specifying some concepts used in our work, although this is not the place for examining them in-depth.

Firstly, *machine translation* (MT) is understood as translation carried out by computer through software, as opposed to *human translation*. The different machine translation software developed are essentially based on linguistic rules or on text corpora. Some of the most commonly used machine translation programmes today are the renowned Google Translate, DeepL Translator, Apertium, Systran and SDL NMT.

*Postediting* is understood as the translation first carried out by machine translation, but then proofread and corrected by a human translator. Today, the vast majority of translations carried out by machine translation require subsequent proofreading through postediting.

Machine translation must not be confused with *Computer-assisted translation*, *Computer-aided translation* or *CAT*, in which the translation is carried out by a human translator who uses a program to help them in their task, the program proposing translation units based on those previously translated by the human translator. Computer-assisted translation programmes (or *CAT tools*) are usually based on translation memories, with SDL Trados and MemoQ being among the most renowned.

We now return to the aim of this paper, the analysis of the level of awareness and rating of machine translation and postediting among translation service providers (TSPs) and among clients/users of professional translations.

An initial, non-scientific analysis we carried out was observing opinions posted on forums for translators, and also among clients in our experience in the world of commercial professional translation.

In broad terms, our perception is that machine translation (and to a lesser extent the postediting service) is known in general, but does not yet have a sufficient level of acceptance and trust among companies which use translation services, especially among small companies (slightly more among large companies and companies of the new technologies sector). We have also observed the case of clients refusing postediting due to confusing it with pure machine translation or due to not trusting it, demanding human translation.

In any case, the trend will undoubtedly be the increase of the volume of work carried out by machine translation in the coming years. The business volume of machine translation will range from \$983.3M predicted by the *Machine Translation Market Size & Forecast Report, 2012-2022* for 2022 to \$2.2757B predicted by the *Global Machine Translation Market Size, Share, Development, Growth and Demand Forecast to 2023* report published by P&S Market Research for 2023 [see Million Insights (2018); P&S Market Research (2017)].

These perceptions based on experience and on certain forums had to be proven, however, by a more objective method, specifically that of large-scale surveys. Below we will explain the three surveys we carried out.

## **2. Technical description of the surveys carried out and the results.**

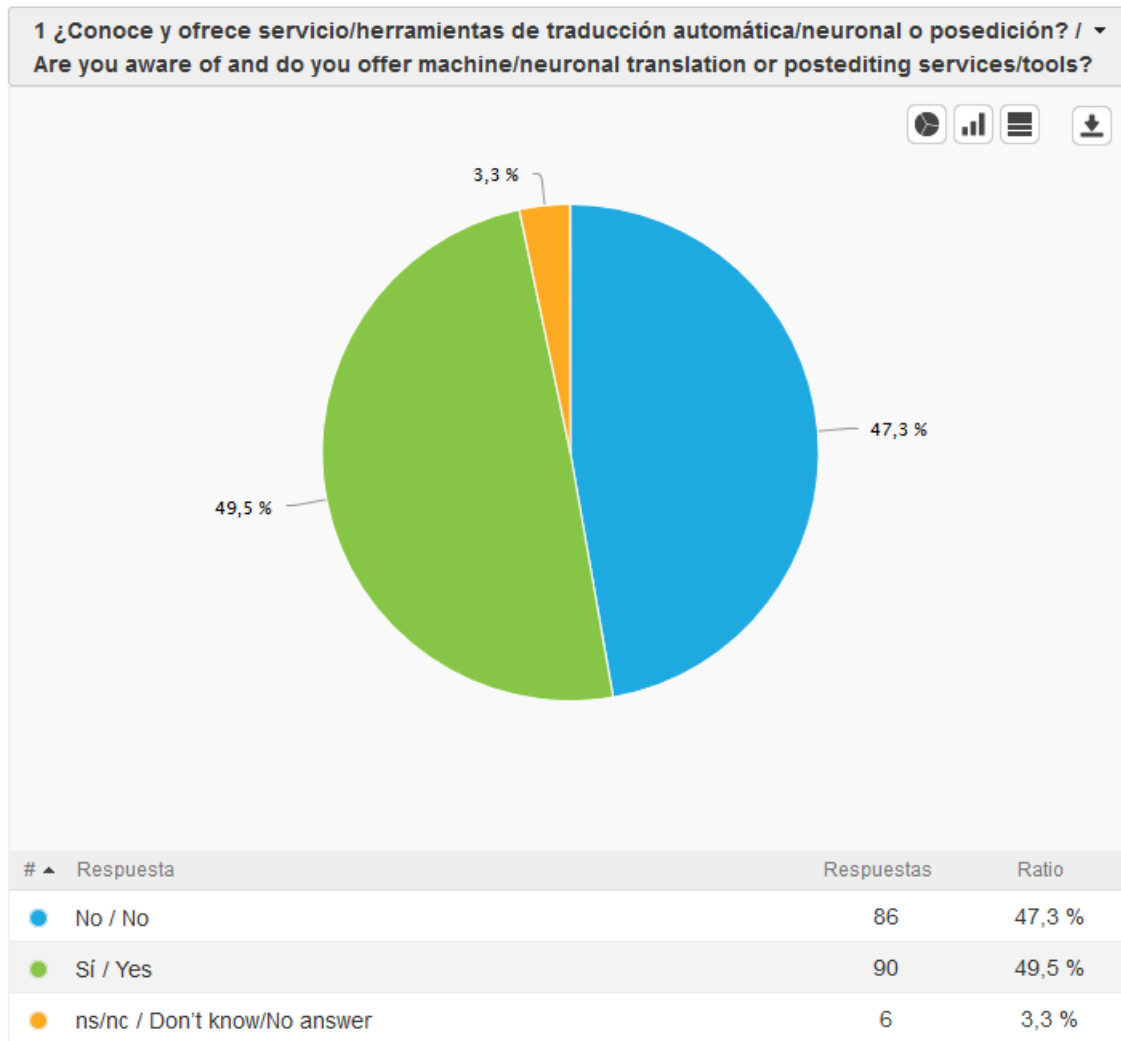
We carried out three surveys of three different kinds of target respondents: professional translators, translation agencies, and clients/users of professional translation services.

Below we indicate the structure of the surveys, questions they included, answers and the universe of the survey.

### **2.1 QUESTIONS FOR PROFESSIONAL TRANSLATORS (TSP)**

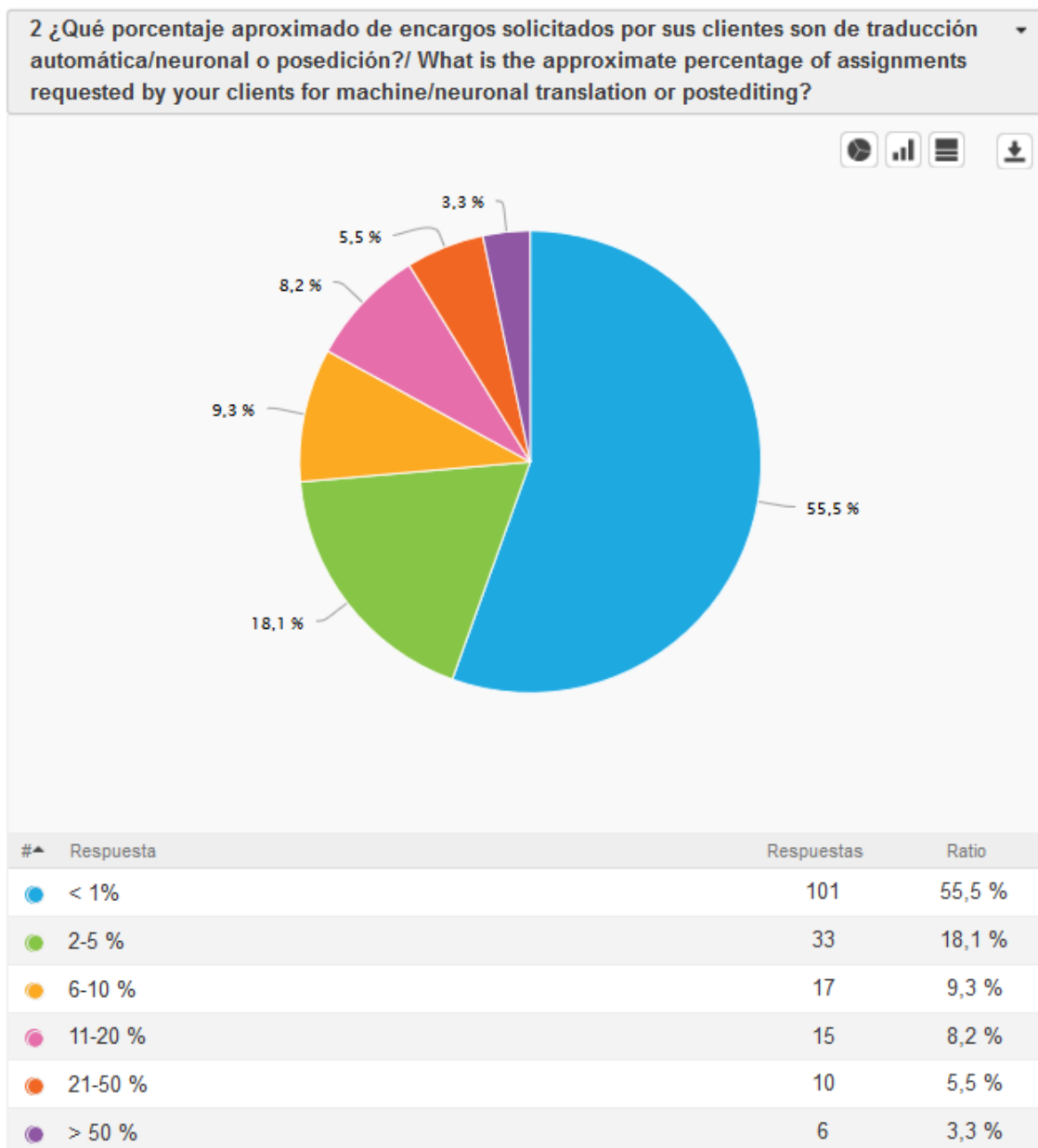
**1. Are you aware of and do you offer machine/neuronal translation or postediting services/tools?**

- No
- Yes. What are they?:
- Don't know/No answer



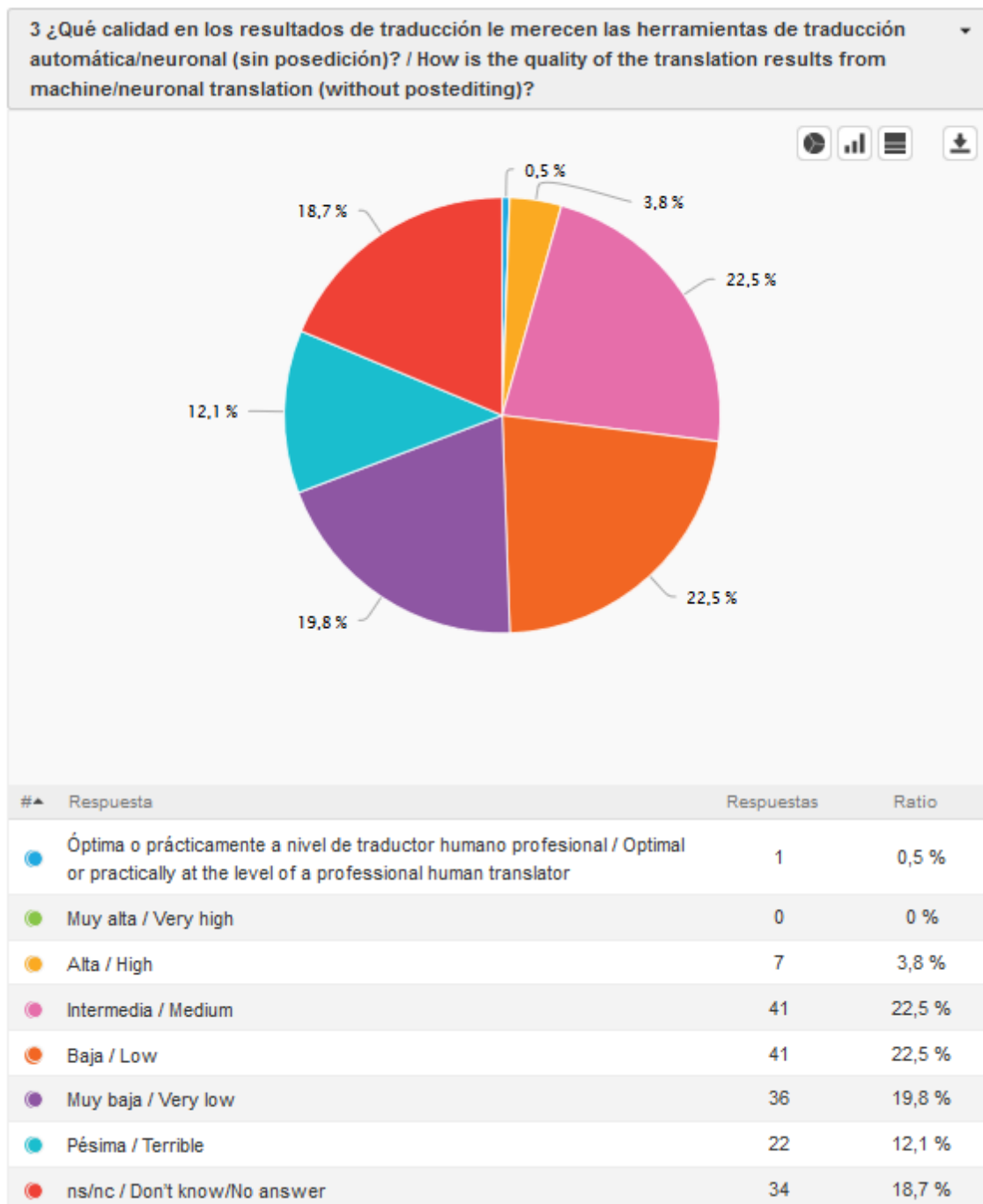
**2. What is the approximate percentage of assignments requested by your clients for machine/neuronal translation or postediting?**

- < 1%
- 2-5 %
- 6-10 %
- 11-20 %
- 21-50 %
- > 50 %
- Don't know/No answer



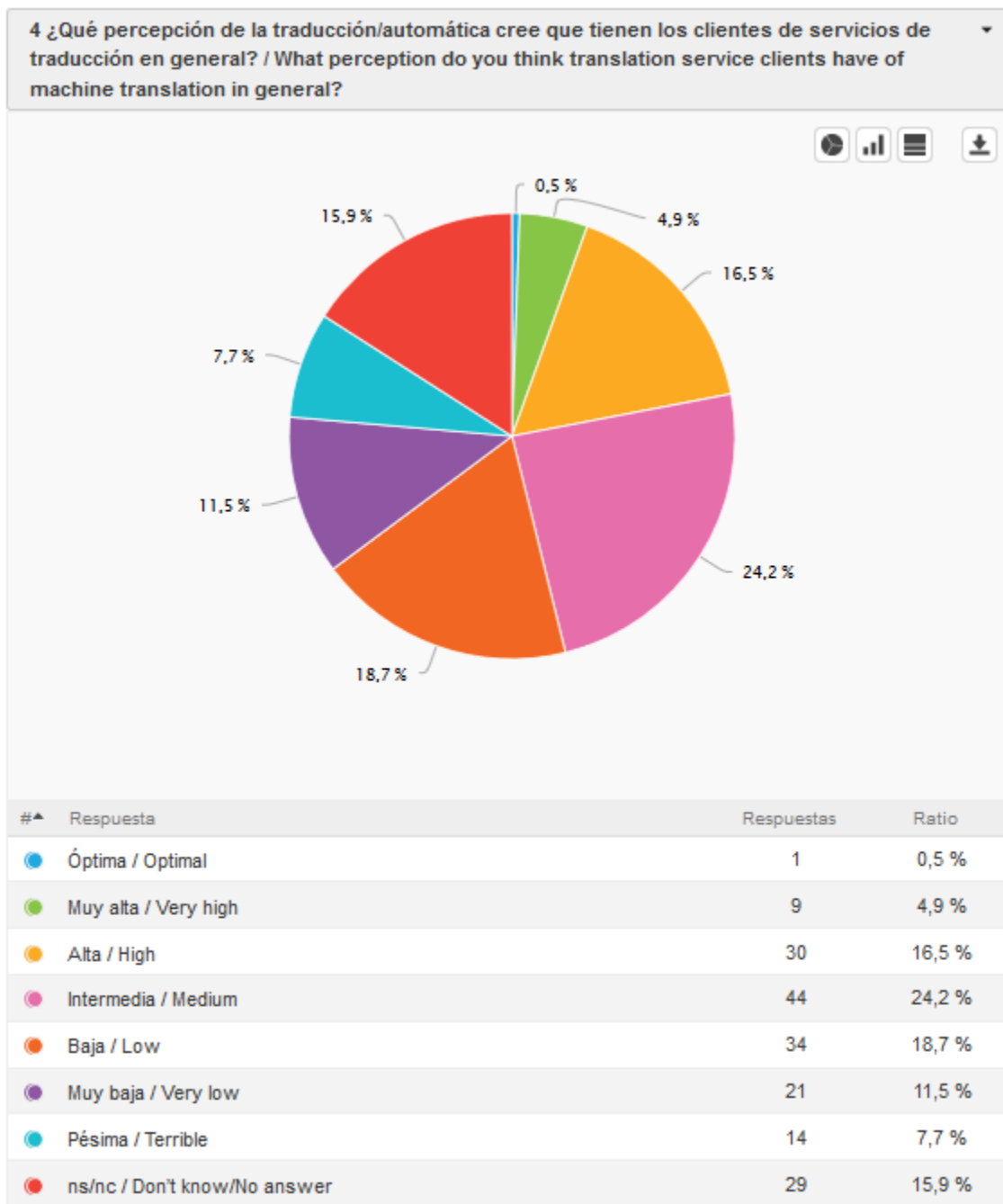
### 3. How is the quality of the translation results from machine/neuronal translation (without postediting)?

- Optimal or practically at the level of a professional human translator
- Very high
- High
- Medium
- Low
- Very low
- Terrible
- Don't know/No answer



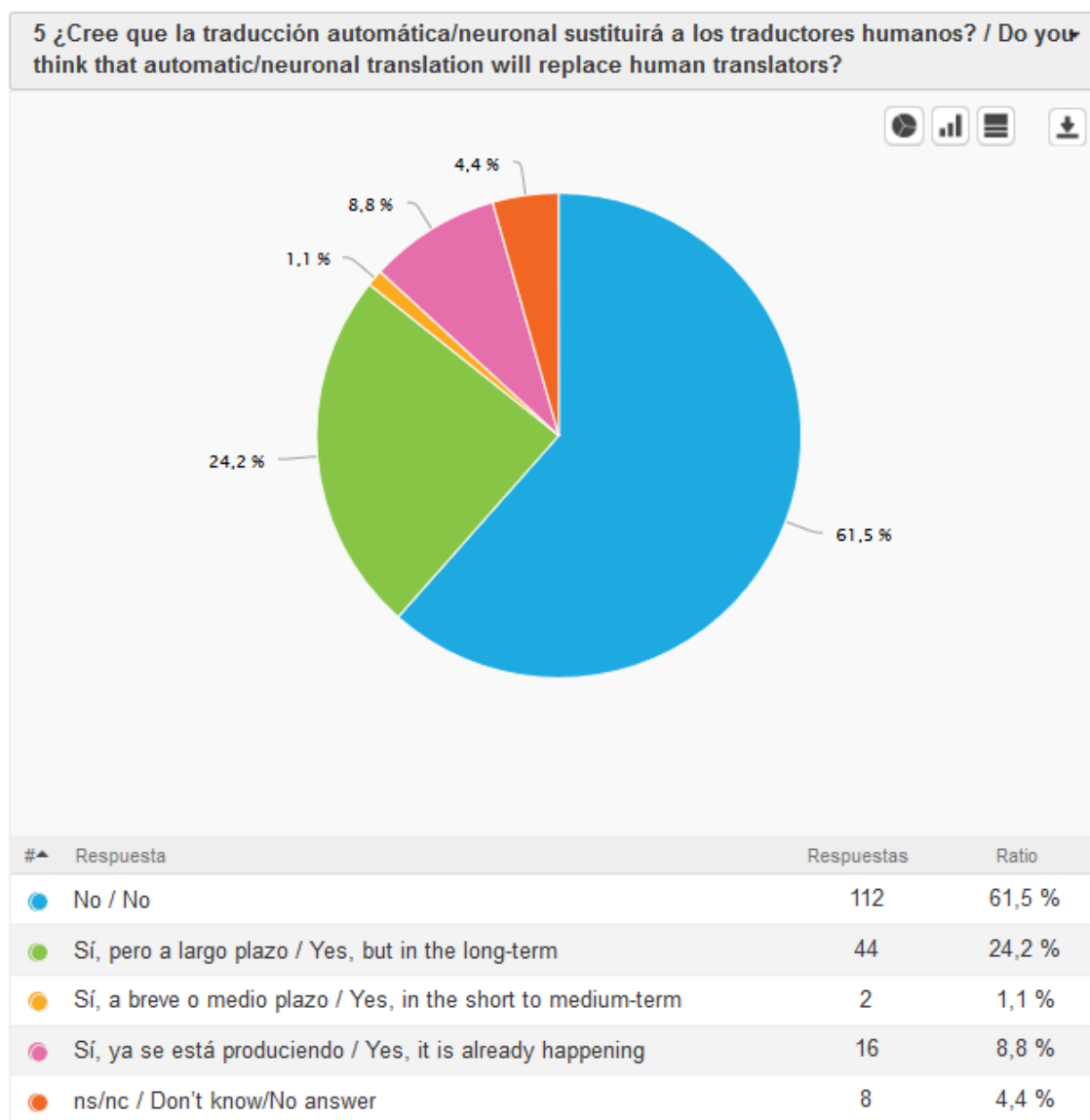
**4. What perception do you think translation service clients have of machine translation in general?**

- Optimal
- Very high
- High
- Medium
- Low
- Very low
- Terrible
- Don't know/No answer



### 5. Do you think that automatic/neuronal translation will replace human translators?

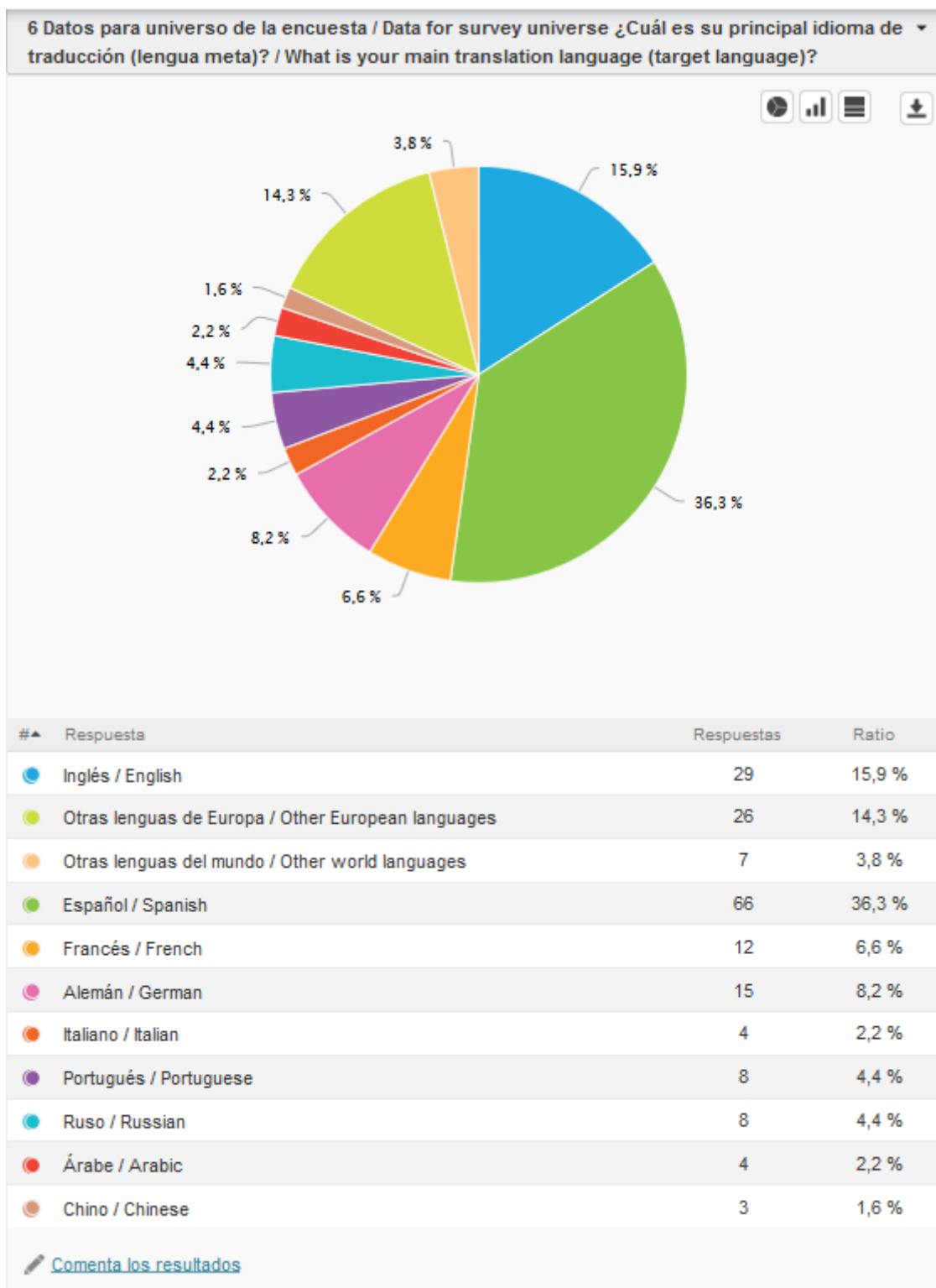
- No
- Yes, but in the long-term
- Yes, in the short to medium-term
- Yes, it is already happening
- Don't know/No answer



#### Data for universe:

#### What is your main translation language (target language)?

- English
- Spanish
- French
- German
- Italian
- Portuguese
- Russian
- Arabic
- Chinese
- Other European languages
- Other world languages



**Universe of the survey:**

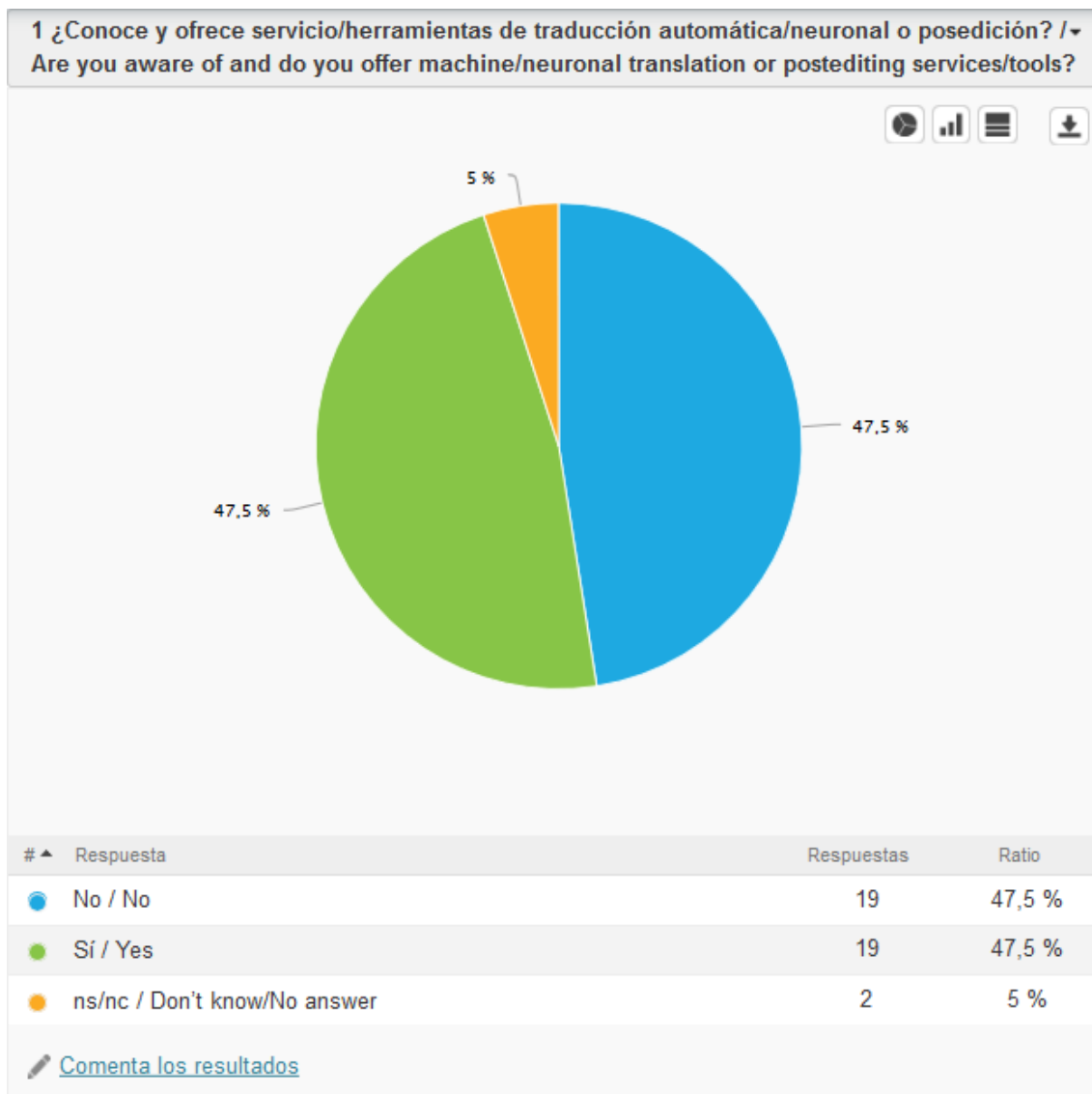
Survey carried out between the 12<sup>th</sup> of March and 1<sup>st</sup> of May 2019; number of respondents: 183; margin of error (based on percentage of those undecided in the first question): 3.3%.



## 2.2 QUESTIONS FOR TRANSLATION AGENCIES (TSP)

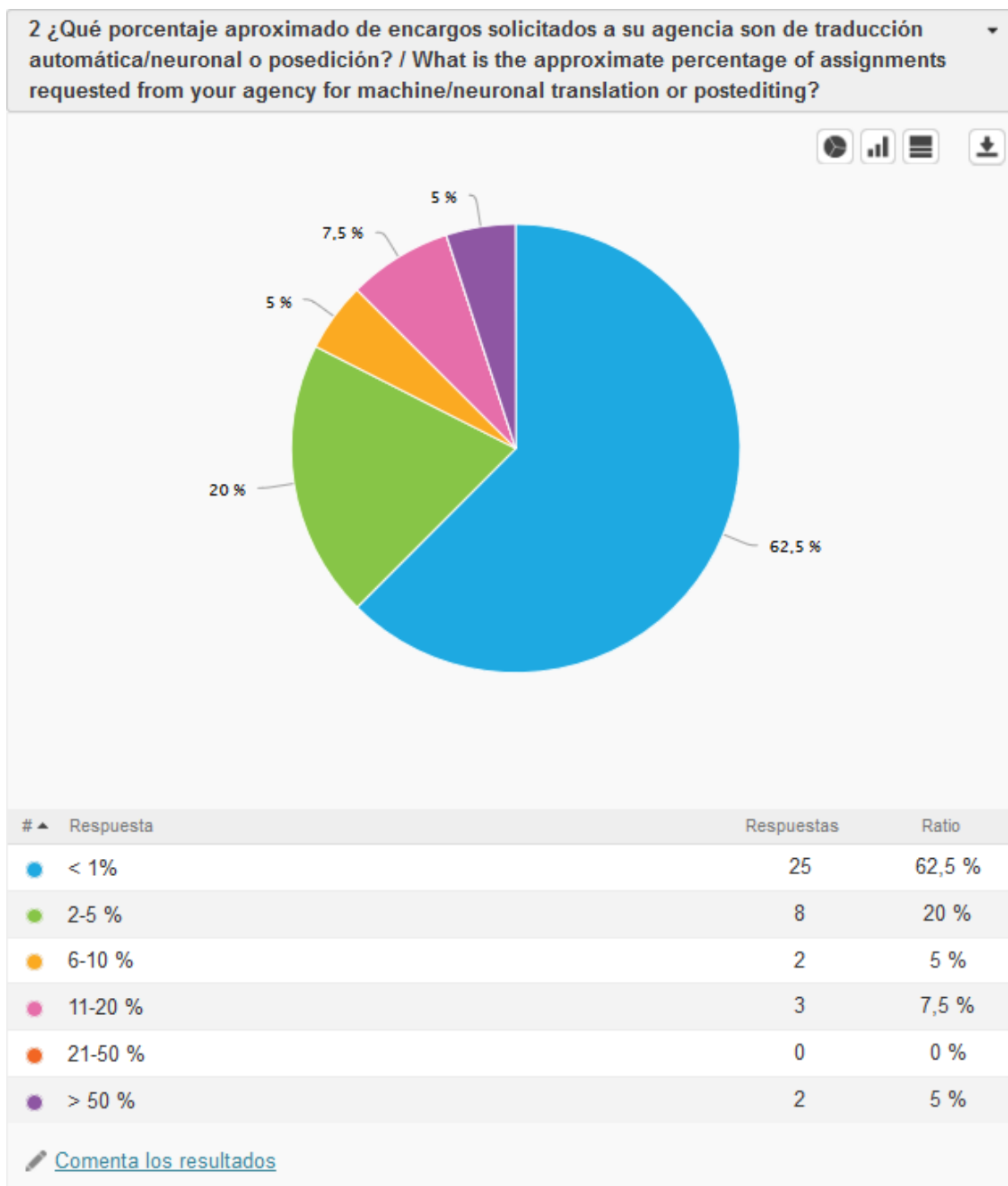
### 1. Are you aware of and do you offer machine/neuronal translation or postediting services/tools?

- No
- Yes. What are they?:
- Don't know/No answer



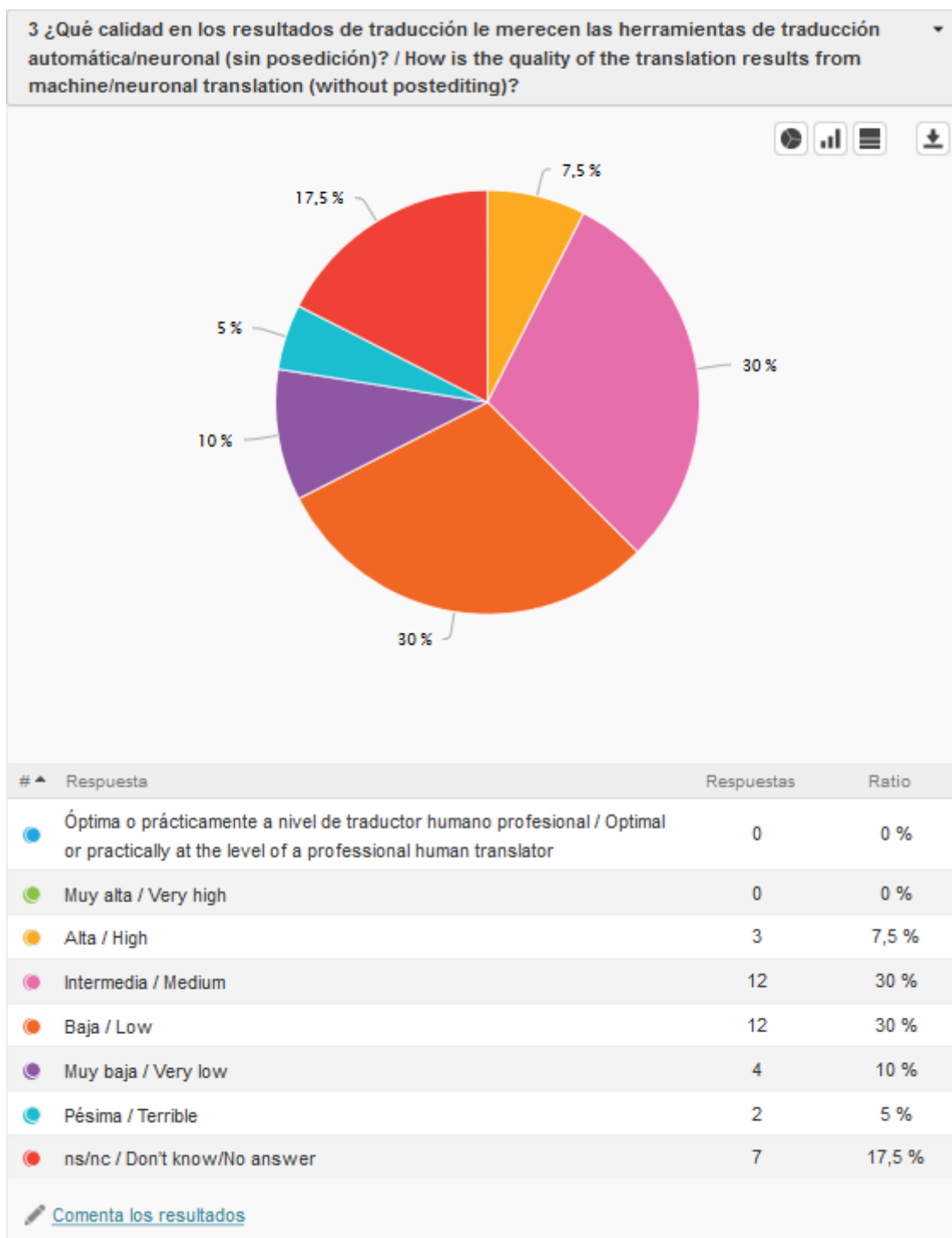
**2. What is the approximate percentage of assignments requested from your agency for machine/neuronal translation or postediting?**

- < 1%
- 2-5 %
- 6-10 %
- 11-20 %
- 21-50 %
- > 50 %
- Don't know/No answer



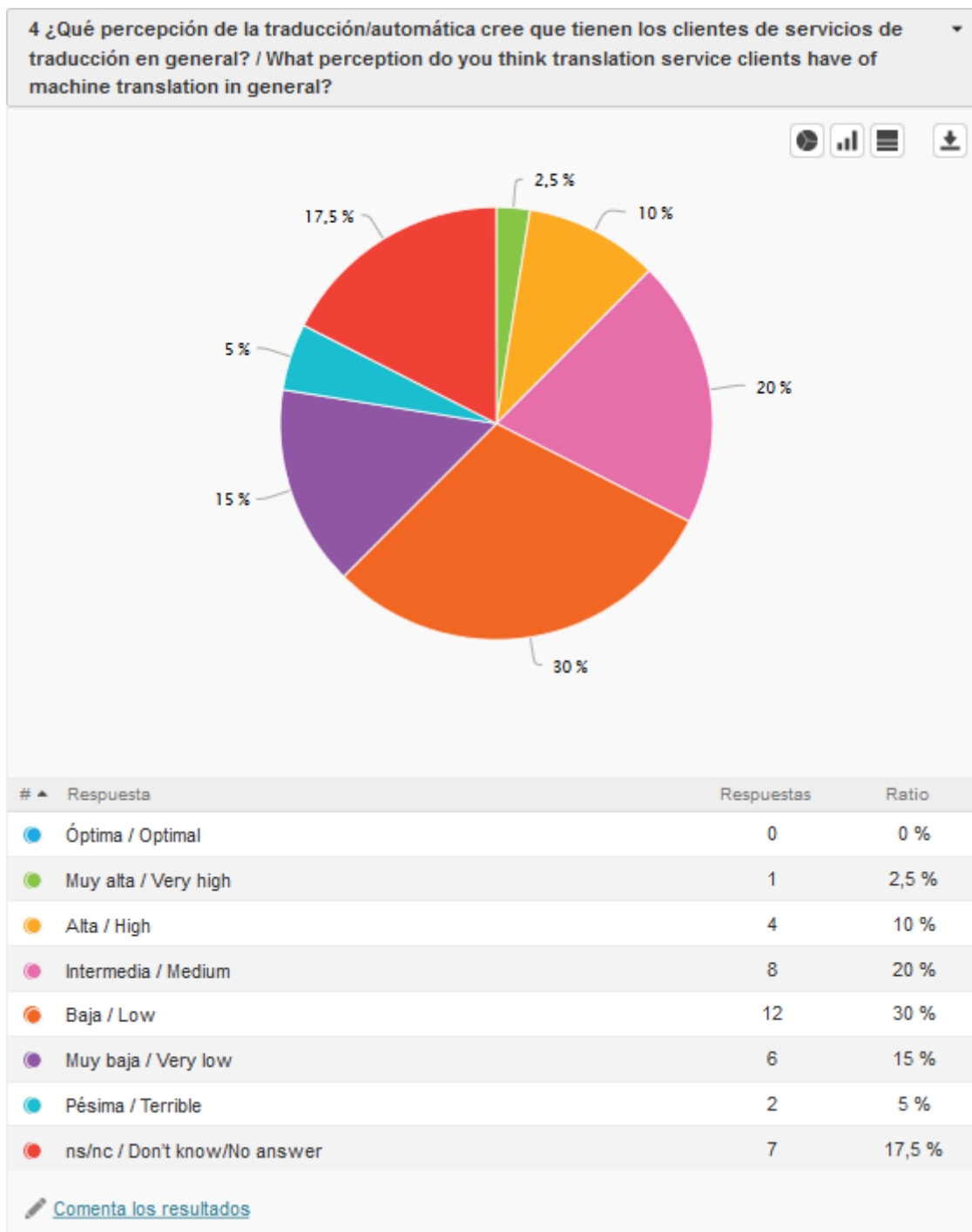
### 3. How is the quality of the translation results from machine/neuronal translation (without postediting)?

- Optimal or practically at the level of a professional human translator
- Very high
- High
- Medium
- Low
- Very low
- Terrible
- Don't know/No answer



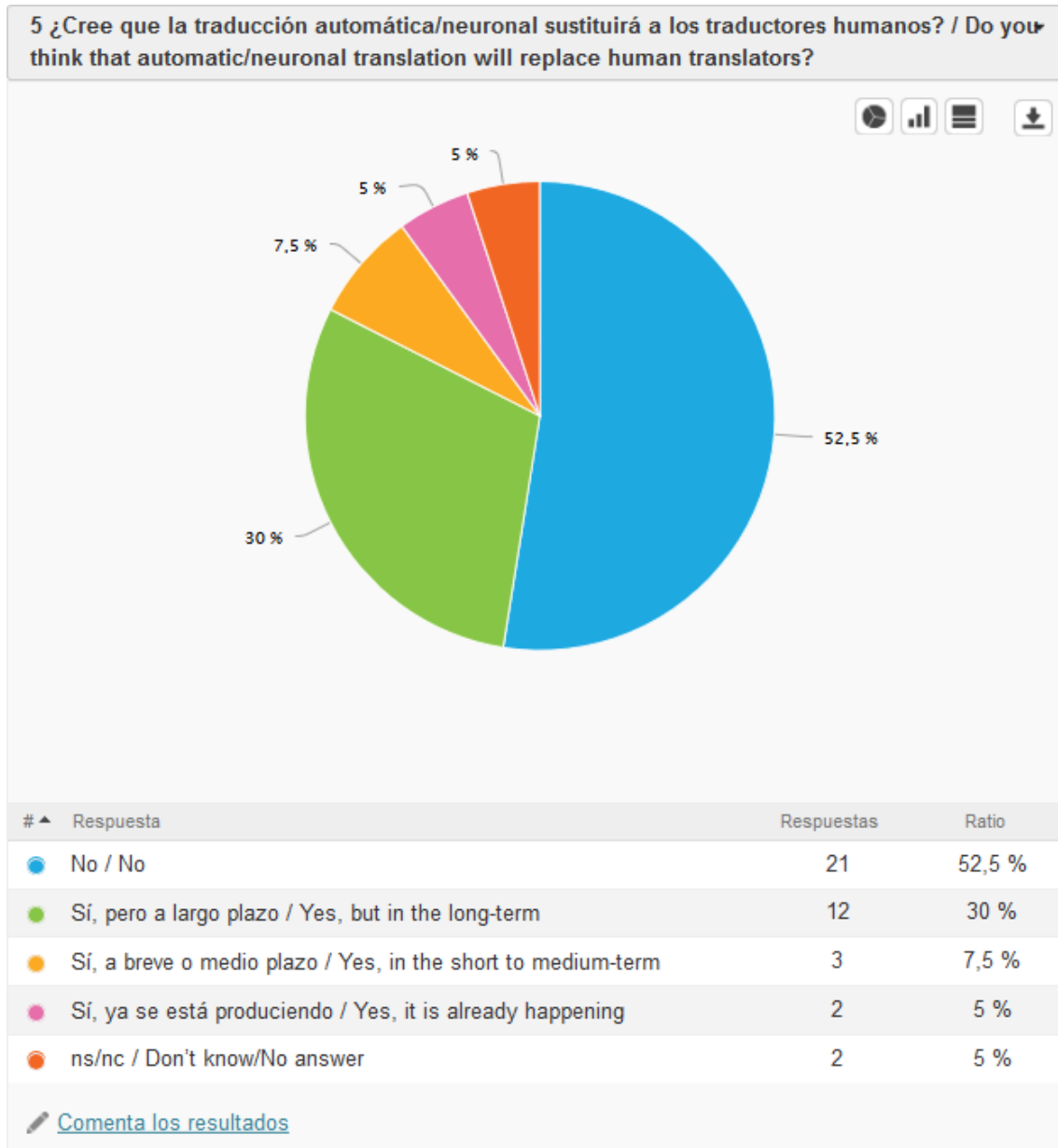
**4. What perception do you think translation service clients have of machine translation in general?**

- Optimal
- Very high
- High
- Medium
- Low
- Very low
- Terrible
- Don't know/No answer



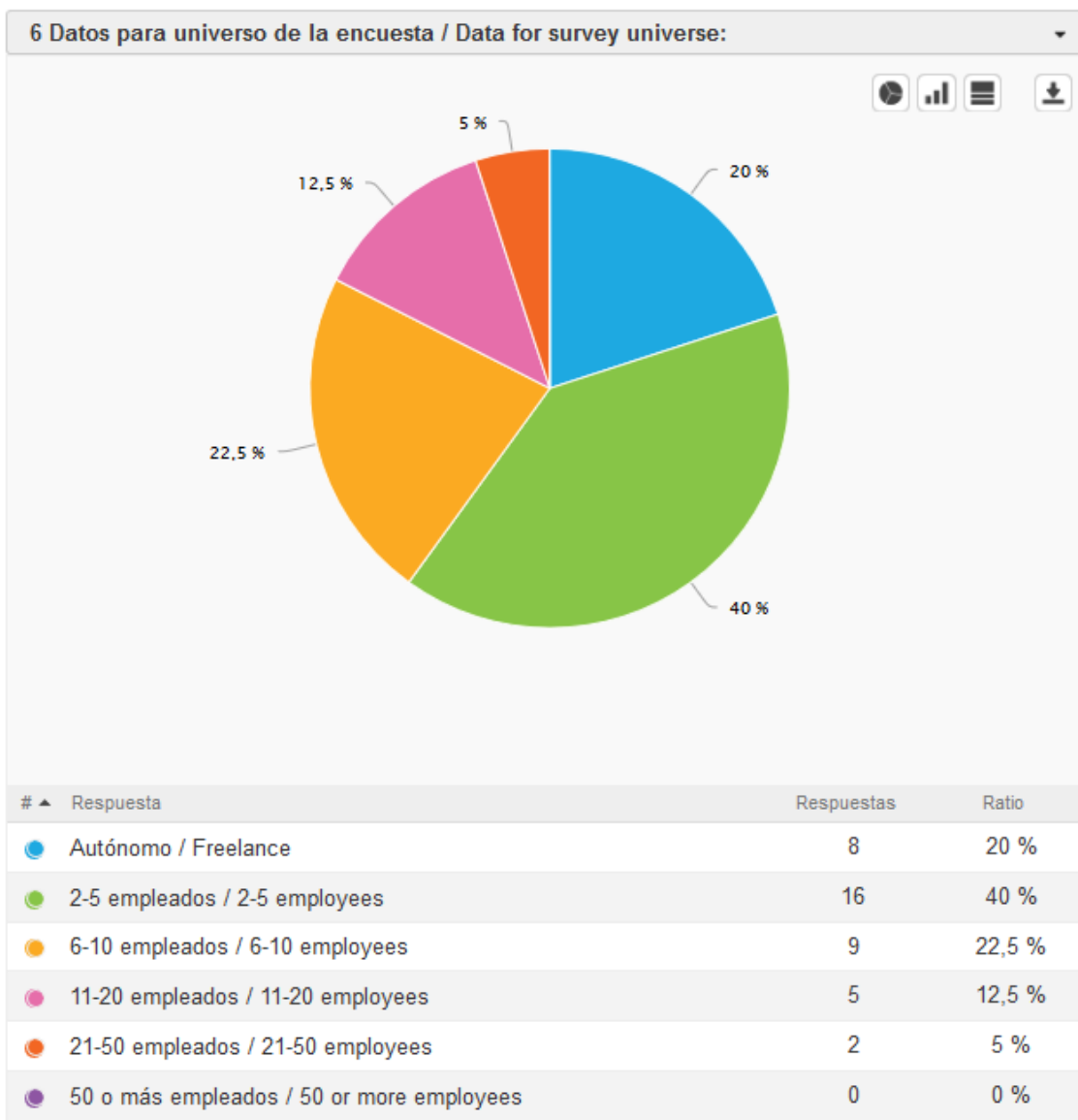
### 5. Do you think that automatic/neuronal translation will replace human translators?

- No
- Yes, but in the long-term
- Yes, in the short to medium-term
- Yes, it is already happening
- Don't know/No answer



**Data for universe:**

- Freelance
- 2-5 employees
- 6-10 employees
- 11-20 employees
- 21-50 employees
- 50 or more employees



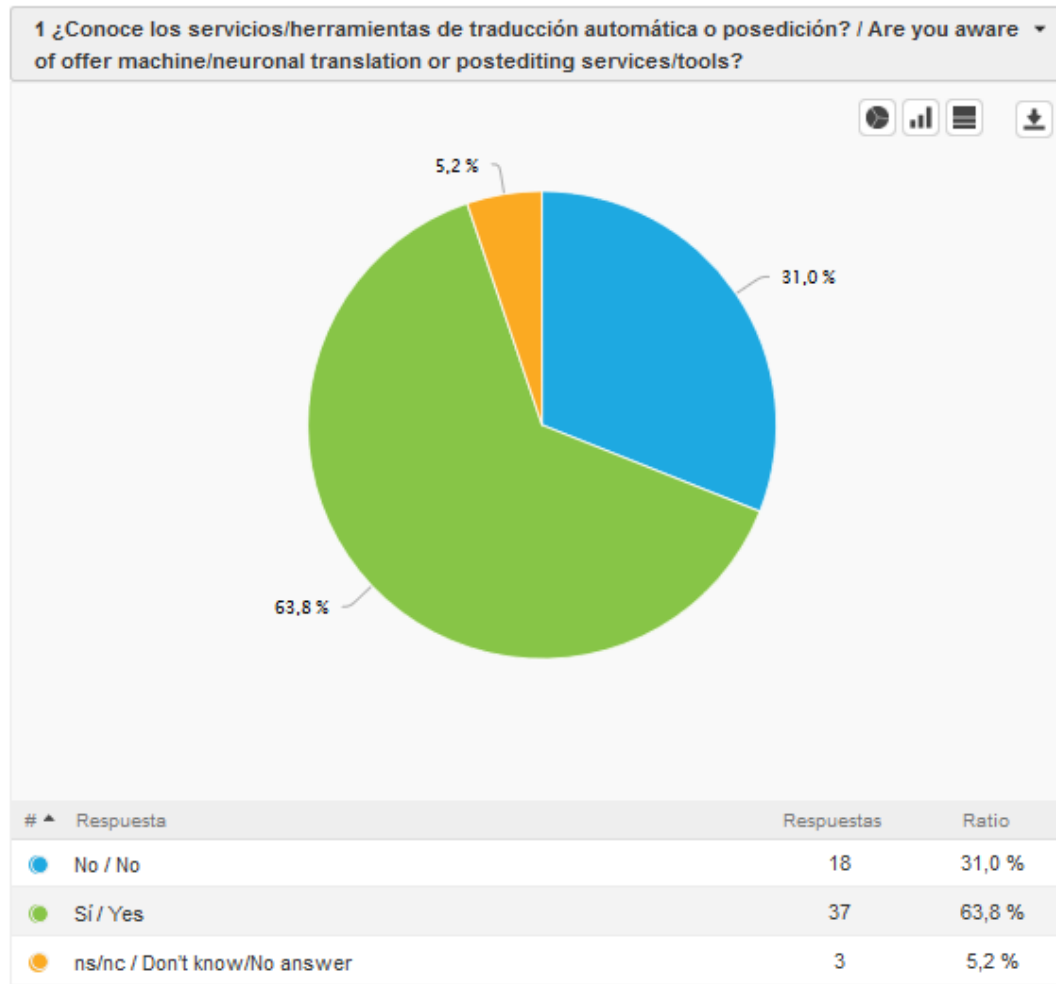
**Universe of the survey:**

Survey carried out between the 12<sup>th</sup> of March and 1<sup>st</sup> of May 2019; number of respondents: 40; margin of error (based on percentage of those undecided in the first question): 5%.

## 2.3 QUESTIONS FOR CLIENTS/USERS OF PROFESSIONAL TRANSLATION

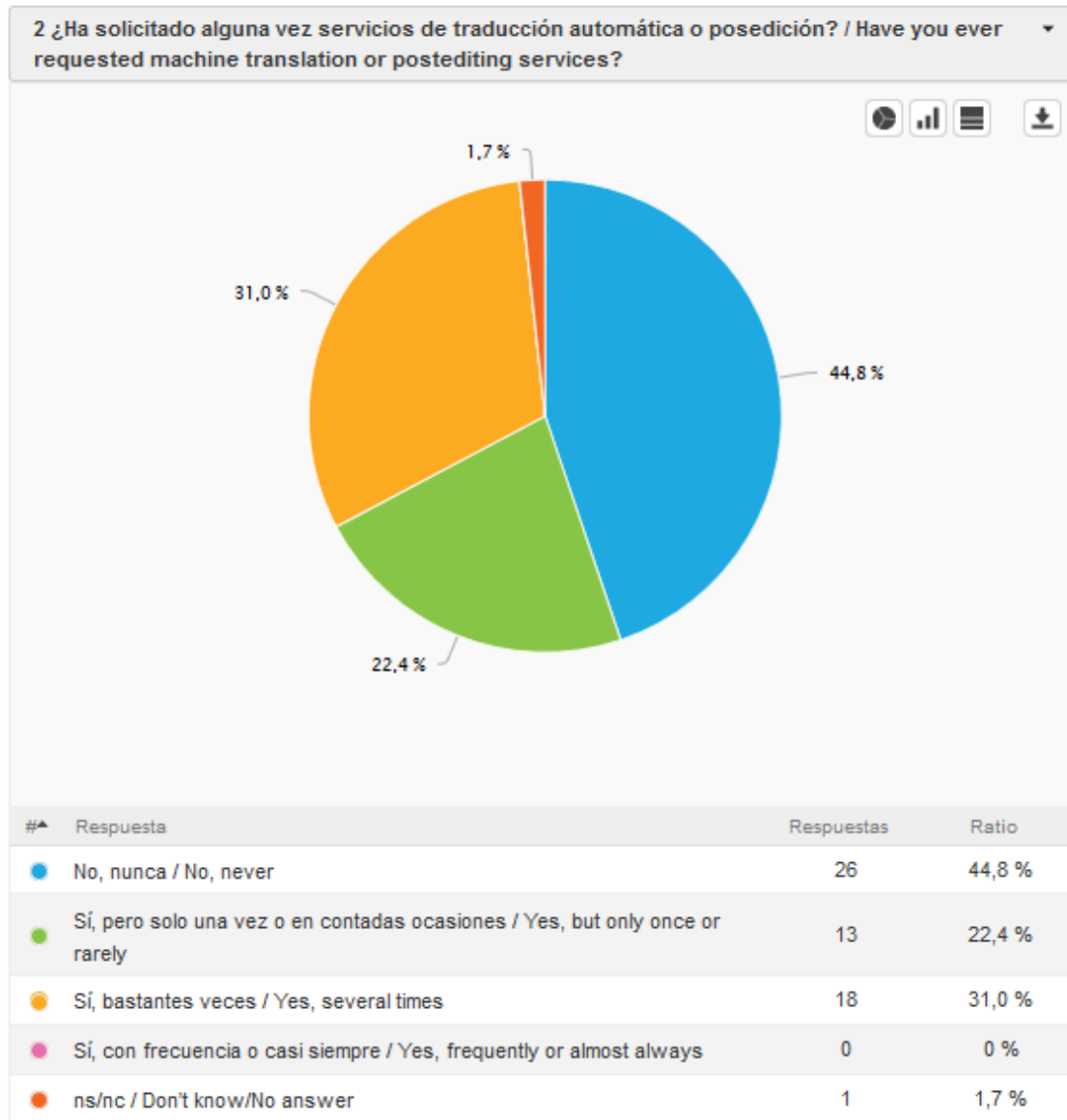
### 1. Are you aware of offer machine/neuronal translation or postediting services/tools?

- No
- Yes. What are they?:
- Don't know/No answer



**2. Have you ever requested machine translation or postediting services?**

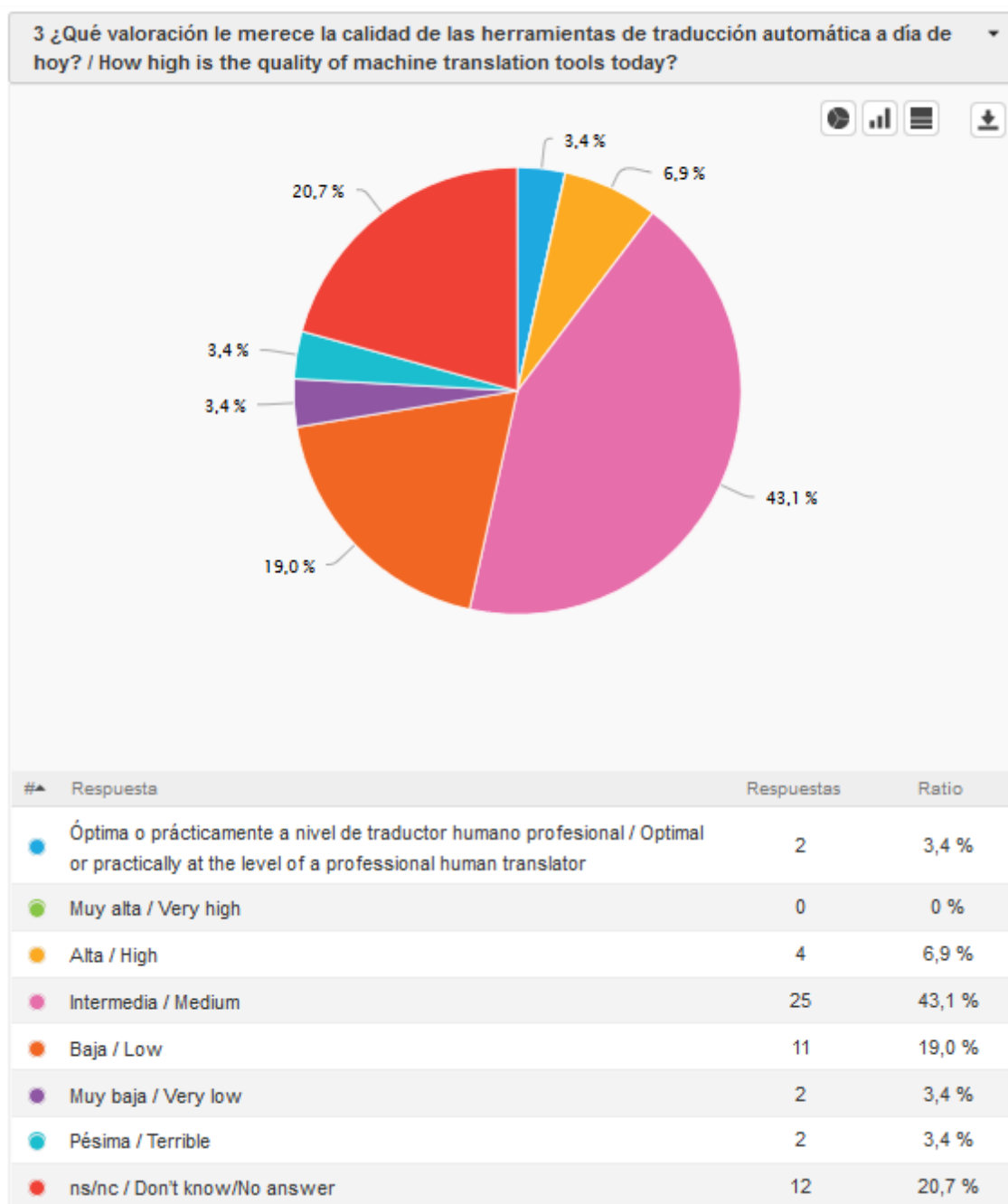
- No, never
- Yes, but only once or rarely
- Yes, several times
- Yes, frequently or almost always
- Don't know/No answer





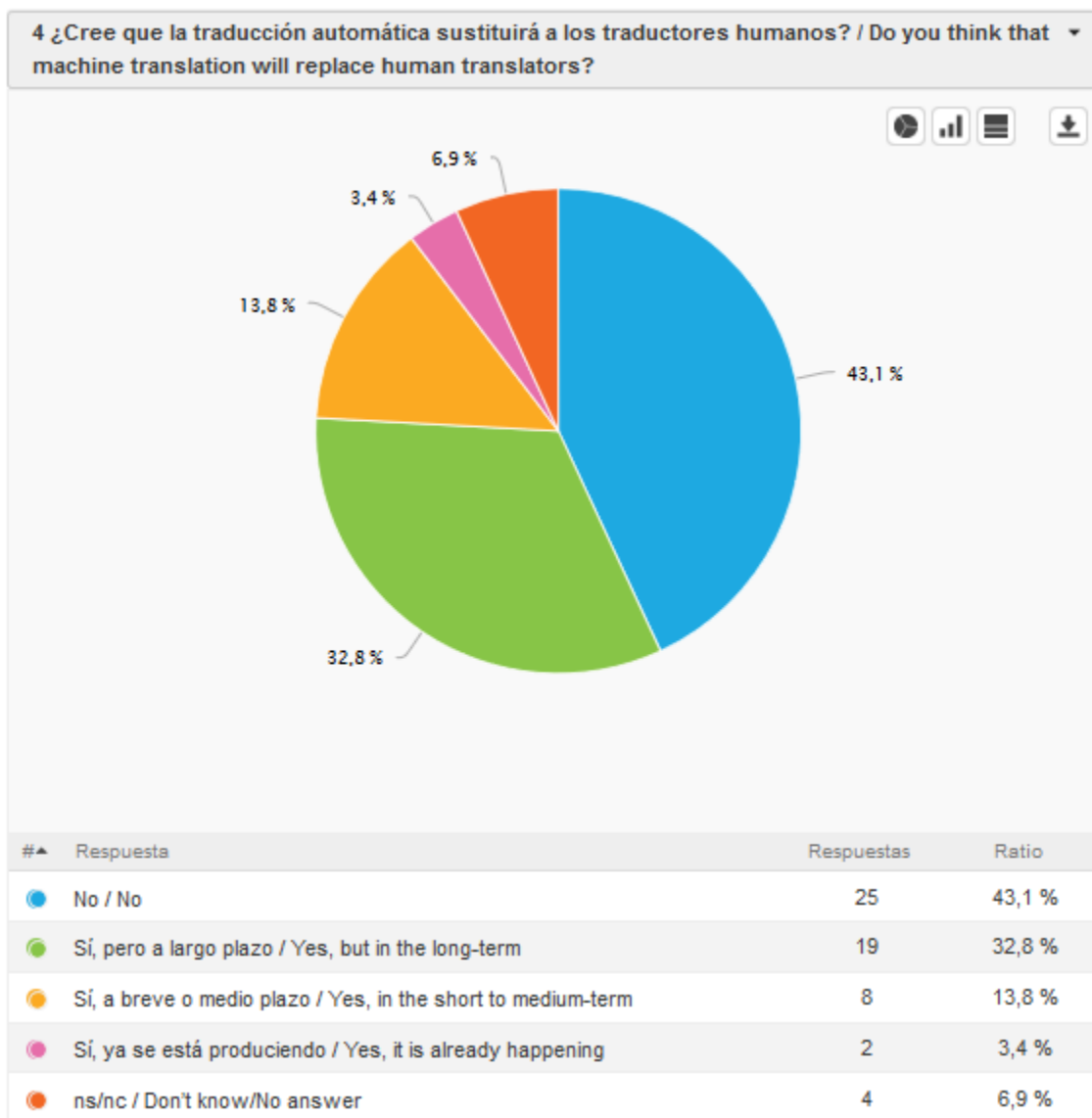
### 3. How high is the quality of machine translation tools today?

- Optimal or practically at the level of a professional human translator
- Very high
- High
- Medium
- Low
- Very low
- Terrible
- Don't know/No answer



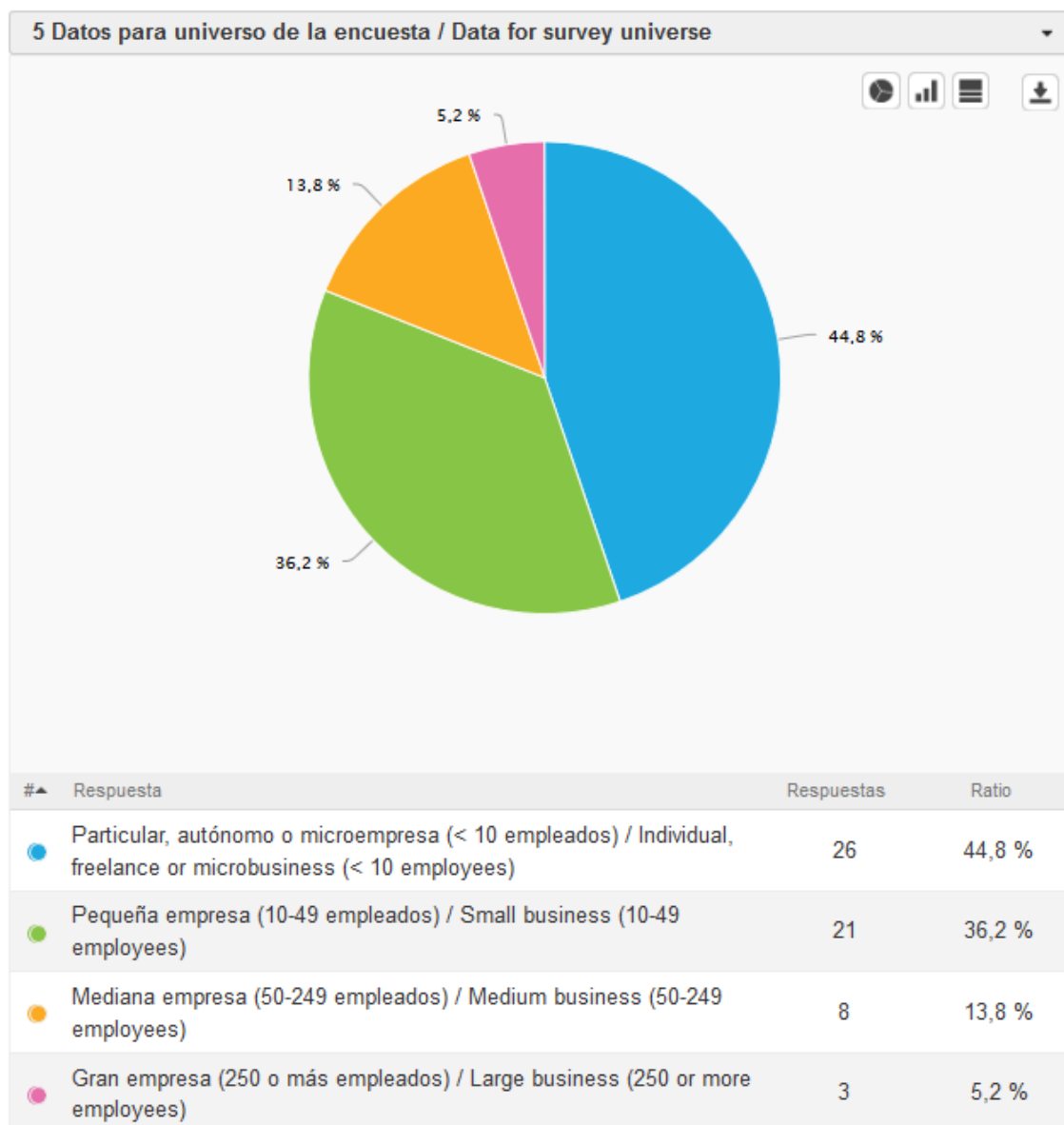
**4. Do you think that automatic/neuronal translation will replace human translators?**

- No
- Yes, but in the long-term
- Yes, in the short to medium-term
- Yes, it is already happening
- Don't know/No answer



**Data for the universe:**

- Individual, freelance or microbusiness (< 10 employees)
- Small business (10-49 employees)
- Medium business (50-249 employees)
- Large business (250 or more employees)

**Universe of the survey:**

Survey carried out between the 12<sup>th</sup> of March and 1<sup>st</sup> of May 2019; number of respondents: 58; margin of error (based on those undecided in the first question): 5.2%.

**3. Conclusions**

From the results obtained in the different surveys, we can present a series of general conclusions. Among professional translators, offering or even being aware of machine/neuronal translation and postediting services is not completely ubiquitous; and in any case the percentage of real MT/NT or postediting assignments is practically negligible, with over 55.5% responding that they make up under 1% of their total assignments, followed by 18.1% responding between 2-5%. As we can see, the percentage of real MT/NT or postediting assignments gradually reduces as the percentage of these assignments compared with the translator's total assignments increases, although it must also be highlighted that over 3% responded that they make up over 50% of their assignments.

This would appear to be consistent with translators' opinions of MT/NT as only a meagre 4.3% considered the quality of MT/NT to be high, very high or optimal. It is also notable that over 18% responded "Don't know/No answer"; perhaps for a not-insignificant number of translators, MT/NT is still not something they should worry about or analyse in-depth. A different matter is the perception that professional translators believe their clients to have of MT/NT. Although the responses are greatly divided between all options, it is evident that translators believe that clients rate MT/NT better than they do, although no one seems to think it is optimal. Finally, there is an overwhelming idea that MT/NT will not replace human translators, although it must be highlighted that almost 9% believe it is already occurring. Thus, MT/NT is not something that seems to be widespread or required in the world of commercial professional translation, although it must be highlighted that a small percentage of translators seem to use it regularly and have quite a positive opinion of it.

The data collected from the surveys of translation agencies seems to be very similar to that of the translators, which is logical. A great discrepancy between both these groups would not be easy to understand. Nevertheless, we can note some statistics: for example, the percentage of assignments with MT/NT with regard to the total assignments of agencies not exceeding 5% is even greater than among translators; that is, agencies state that they are carrying out very few MT/NT translations. Additionally, the rating of MT/NT is even worse among translation agencies than among translators.

Finally, with regard to the clients/users of professional translations, it seems that the conclusion we can draw is that approximately 30% of clients are aware of and request MT/NT, and that they also have an intermediate or positive assessment of the quality of this type of tool. In this sector, the percentage of those who believe that MT/NT will replace human translators is reduced, although a not-insignificant 17% believe that this will occur or that it is already occurring.

When we pose questions such as whether machine translation will one day reach the level of correctness of human translation, or whether machine translation will replace human translators, the first thing we should do is analyse the concepts we are using.

"Correct translation" does not exist in an unequivocal sense, as if there could only be a single target text which was optimal in terms of traductology, as in the Biblical translation of the Septuagint. Two translations carried out by two different translators which vary substantially may be "correct" to the same degree, based on the purpose and context in which the translation is carried out. It is easy to determine that a translation is "incorrect" or that it has "errors" (if a word from the source text has been given a completely different meaning in the target text, for example), but it is more complicated to talk about "correct" translations. This also applies to machine translations.

Additionally, the term *translation* in fact encompasses different concepts. One of them is that of *transfer* of information, and it is feasible for a programme to undertake this. Another concept is that of *reinterpretation*, or indeed *mediation*. Thus, a translator does not only transfer the content denoted in the text, but may also have to carry out work to reinterpret it (consider literary translations), or even mediation (in certain contexts, for example, swear words or insults in the original may have to be omitted in the target language). This second aspect of translation is more difficult than what a computer program can do today, although what artificial intelligence may be able to do in the future must not be ruled out.

Perhaps, beyond a refinement in the transfer of information by machine translation, we are on the way toward a substantial change in our assessment of translations, toward a restructuring or substantial change of what we understand *translation* to be, and what we expect of it. Perhaps it is already in the present, rather than in the future, that users of translations are satisfied with a target text that transfers the content denoted by the source text, even when we do not perceive it to be completely natural or optimal from a linguistic or stylistic perspective. Nevertheless, literary translation may be a turning point in this, as it has in fact always been within the world of translation.

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