Translation Services in Figures

The new tekom survey on translation services and qualification of technical translators (2018)

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Dr. Michael Fritz – tekom
Overview

1. Introduction
   - Goals
   - Topics and random sampling

2. Findings
   - Scope (languages – volume – costs)
   - Purchase and selection
   - Methods and models
   - Quality and quality assurance measures
   - Qualification and competencies
   - Cooperation

3. Conclusion and discussion
Goals of the survey
Reason: High translation requirements of the industry

Who is “the industry” according to our practice?

- Manufacturers of physical products
- Software companies
- Service companies that provide services for B2B- and B2C-Customers
- Not the “Language Industry”
Reason: High translation requirements of the industry

- An average **11 different information products** are created, which, in turn, are translated into an average **13 different languages**

- 46% of technical communication related documentation is translated into more than 10 languages

- Many translators work in the field of technical translations

- High competence of technical translators is a critical success factor

- Technical translators need different competencies than translators working in other fields
Reason: Requirements based on standards

• **ISO 17100:2015** “...the ability to understand content produced in the source language and to reproduce it in the target language using the appropriate style and terminology”, “general or specialized knowledge of text-type conventions”, “Competence in research, information acquisition, and processing: the ability to efficiently acquire the additional linguistic and specialized knowledge necessary to understand the source language content and to produce the target language content”.

• **IEC 82079-1:2012**: “Where instructions for use are translated from the original language into others, expert translators or specialists shall be responsible for the translation including checking and proofreading, who should have basic competences in communication, particularly technical communication and be familiar with the subject area”. 
Topics and random sampling
Focused on the requirements of customers of translation services

- Translation volumes and costs
- Translation methods
- Translation systems
- Providers and models of translation services
- Criteria for selecting translation services
- Relevance of translation quality
- Professional background of technical translators
- Competencies of technical translators
- Cooperation with translators
767 persons mainly from
- Industry companies 72.5%
- Software companies 15.8%
- Service provider companies 6.5%.

Size of the companies
Scope: Number of languages

<table>
<thead>
<tr>
<th>No. of languages in which technical documentation is translated</th>
<th>Average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 30 Languages</td>
<td>7.2 %</td>
<td></td>
</tr>
<tr>
<td>21–30 Languages</td>
<td>18.7 %</td>
<td></td>
</tr>
<tr>
<td>11–20 Languages</td>
<td>20.5 %</td>
<td></td>
</tr>
<tr>
<td>2–10 Languages</td>
<td>43.1 %</td>
<td></td>
</tr>
<tr>
<td>1 Language</td>
<td>10.6 %</td>
<td></td>
</tr>
</tbody>
</table>

No. of languages in which technical documentation is translated: 12.9, Standard deviation: 11.3
### Scope: No. of languages by company size

<table>
<thead>
<tr>
<th></th>
<th>1 – 50 employees</th>
<th>50 - 250 employees</th>
<th>250 – 500 employees</th>
<th>500 – 1,000 employees</th>
<th>1,000 – 5,000 employees</th>
<th>More than 5,000 employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 language</td>
<td>30.5%</td>
<td>12.8%</td>
<td>6.6%</td>
<td>1.2%</td>
<td>10.8%</td>
<td>8.1%</td>
</tr>
<tr>
<td>2 - 10 languages</td>
<td>55.9%</td>
<td>57.1%</td>
<td>43.4%</td>
<td>39.5%</td>
<td>29.2%</td>
<td>37.1%</td>
</tr>
<tr>
<td>11 - 20 languages</td>
<td>8.5%</td>
<td>18.9%</td>
<td>30.2%</td>
<td>24.4%</td>
<td>20.8%</td>
<td>16.1%</td>
</tr>
<tr>
<td>21 - 30 languages</td>
<td>5.1%</td>
<td>8.7%</td>
<td>16.0%</td>
<td>31.4%</td>
<td>29.2%</td>
<td>27.4%</td>
</tr>
<tr>
<td>More than 31 languages</td>
<td>2.6%</td>
<td>3.8%</td>
<td>3.5%</td>
<td>10.0%</td>
<td>11.3%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>100.0%</td>
</tr>
</tbody>
</table>
Scope: Translation volume

<table>
<thead>
<tr>
<th>Translation volume for the entire technical documentation in standard pages</th>
<th>Average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 3,000 Standard pages</td>
<td>19.2 %</td>
<td></td>
</tr>
<tr>
<td>2,000–3,000 Standard pages</td>
<td>4.3 %</td>
<td></td>
</tr>
<tr>
<td>1,000–2,000 Standard pages</td>
<td>10.5 %</td>
<td></td>
</tr>
<tr>
<td>500–1,000 Standard pages</td>
<td>15.2 %</td>
<td></td>
</tr>
<tr>
<td>100–500 Standard pages</td>
<td>28.6 %</td>
<td></td>
</tr>
<tr>
<td>51–100 Standard pages</td>
<td>8.0 %</td>
<td></td>
</tr>
<tr>
<td>&lt; 50 Normseiten</td>
<td>14.1 %</td>
<td></td>
</tr>
</tbody>
</table>

1,650 characters per standard page
## Scope: translation volume by company size

<table>
<thead>
<tr>
<th></th>
<th>1 – 50 employees</th>
<th>50 - 250 employees</th>
<th>250 – 500 employees</th>
<th>500 – 1,000 employees</th>
<th>1,000 – 5,000 employees</th>
<th>More than 5,000 employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 50 standard pages</td>
<td>27.0%</td>
<td>15.2%</td>
<td>6.4%</td>
<td>14.3%</td>
<td>4.0%</td>
<td>16.7%</td>
</tr>
<tr>
<td>50 - 100 standard pages</td>
<td>16.2%</td>
<td>8.7%</td>
<td>4.3%</td>
<td>7.1%</td>
<td>4.0%</td>
<td>5.6%</td>
</tr>
<tr>
<td>100 - 500 standard pages</td>
<td>35.1%</td>
<td>33.7%</td>
<td>29.8%</td>
<td>28.6%</td>
<td>24.0%</td>
<td>22.2%</td>
</tr>
<tr>
<td>500 - 1,000 standard pages</td>
<td>10.8%</td>
<td>19.6%</td>
<td>19.1%</td>
<td>7.1%</td>
<td>12.0%</td>
<td>5.6%</td>
</tr>
<tr>
<td>1,000 - 13,000 standard pages</td>
<td>5.4%</td>
<td>13.0%</td>
<td>12.8%</td>
<td>21.4%</td>
<td>28.0%</td>
<td>22.2%</td>
</tr>
<tr>
<td>3,000 - 5,000 standard pages</td>
<td>2.7%</td>
<td>3.3%</td>
<td>6.4%</td>
<td>10.7%</td>
<td>8.0%</td>
<td>11.1%</td>
</tr>
<tr>
<td>More than 5,000 standard pages</td>
<td>2.7%</td>
<td>6.5%</td>
<td>21.3%</td>
<td>10.76%</td>
<td>20.0%</td>
<td>16.7%</td>
</tr>
</tbody>
</table>
Scope: translation costs of new documentation projects

<table>
<thead>
<tr>
<th>Percentage of translation costs</th>
<th>N</th>
<th>Average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 80%</td>
<td></td>
<td>6.7 %</td>
<td></td>
</tr>
<tr>
<td>61–80%</td>
<td></td>
<td>15.5 %</td>
<td></td>
</tr>
<tr>
<td>41–60%</td>
<td></td>
<td>20.6 %</td>
<td></td>
</tr>
<tr>
<td>21–40%</td>
<td></td>
<td>26.8 %</td>
<td></td>
</tr>
<tr>
<td>&lt; 21%</td>
<td></td>
<td>30.3 %</td>
<td></td>
</tr>
</tbody>
</table>
Scope: translation costs when updating documentation

<table>
<thead>
<tr>
<th>Percentage of translation costs</th>
<th>N</th>
<th>Average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>in all languages, proportionate to the total project costs for editing</td>
<td>373</td>
<td>34.36%</td>
<td>25.81%</td>
</tr>
</tbody>
</table>
### Percentage of translation costs

#### Table

<table>
<thead>
<tr>
<th>Description</th>
<th>N</th>
<th>Average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of translation costs in all languages, proportionate to the total project costs: New documentation projects</td>
<td>373</td>
<td>42.00%</td>
<td>25.69%</td>
</tr>
<tr>
<td>Percentage of translation costs in all languages, proportionate to the total project costs: Updating documentation projects</td>
<td>371</td>
<td>34.36%</td>
<td>25.81%</td>
</tr>
</tbody>
</table>

#### Graph

- Percentage for translation costs into all languages, proportionate of total project costs: Revision
- Percentage for translation costs into all languages, pro rata of total project costs: New creation

- > 80 %: 3.8 %, 6.7 %
- 61–80 %: 12.9 %, 15.5 %
- 41–60 %: 17.5 %, 20.6 %
- 21–40 %: 20.5 %, 26.8 %
- < 21 %: 45.3 %, 30.3 %
Requirements underlying purchasing decisions
Decision-making process

- Specialist department has the sole decision-making authority: 38.9%
- Cooperative co-determination: decision is taken together with a different department (e.g., Purchase): 43.4%
- No co-determination: decision is taken by a different department (e.g., Purchase): 17.8%
Criteria for selecting translation services

- Provider works for competitors: 1.3%
- Provider specializes in one language: 4.4%
- Provider belongs to the region: 10.3%
- Provider has good capacity (many employees): 16.9%
- Provider has submitted the best offer: 17.6%
- Provider is known: 29.0%
- Provider is reachable quickly: 38.3%
- Provider works in accordance with the quality standard: 38.6%
- Provider has short translation times: 42.3%
- Provider works with qualified translators: 53.7%
- Provider translates from and into many languages: 56.7%
- Provider has technical knowledge: 58.8%
- Provider delivers high quality: 74.6%

Volume ➔ Competence ➔ Quality
Requirements regarding translation systems

- Translation memory systems: 95.5%
- Terminology database: 71.5%
- Translation management: 49.6%
- Project management tools: 16.0%
- Machine translation: 6.5%
Required methods
Data exchange with translation service providers

- Via email as attachment: 33.1%
- FTP server: 22.3%
- Customer portal: 15.8%
- Interface to the translation memory system: 14.2%
- Cloud solution: 6.0%
- Protected interface; own development: 5.7%
- On own premises; translator works on-site: 2.8%
Percentage of machine translation in the overall translation

<table>
<thead>
<tr>
<th>Machine translation</th>
<th>Average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6.2%</td>
<td>18.6%</td>
</tr>
</tbody>
</table>
Percentage of post-editing costs

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>76 % - 99 %</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51 % - 75 %</td>
<td></td>
<td>34.3 %</td>
</tr>
<tr>
<td>26 % - 50 %</td>
<td>28.4 %</td>
<td></td>
</tr>
<tr>
<td>1 % - 25 %</td>
<td>13.4 %</td>
<td></td>
</tr>
</tbody>
</table>

Machine translation: Costs for post-editing when compared with usual translation

Average: 27.6%
Standard deviation: 33.9%
Models used for translation services

- Service providers used for translation
- General contractors have an **internal language service** or **internal translators**
- Internal translation structures have **advantages** when compared to external providers
  - Low costs at the interface
  - Simplified cooperation between translators and technical communicators
  - Better industry and product knowledge of translators
- This has a positive impact on the efficiency and quality of the translation
- Sub-sampling of respondents with or without specific translation services as ideal offers
Models used for translation services

**Actual situation**

- **ACTUAL: Internal language service** 5.4%
- **ACTUAL: Freelancers** 12.6%
- **ACTUAL: Internal experts with knowledge of the target language** 14.3%
- **ACTUAL: Internal translators (with education/training)** 17.8%
- **ACTUAL: Language service providers (project manager with an external translator network)** 38.8%
- **ACTUAL: Translation companies (with own hired translators)** 60.3%

**Ideal situation**

- **IDEAL: Freelancer** 6.7%
- **IDEAL: Internal language service** 12.5%
- **IDEAL: Internal experts with knowledge of the target language** 13.2%
- **IDEAL: Internal translators (with education/training)** 27.9%
- **IDEAL: Language service providers (project manager with an external translator network)** 33.3%
- **IDEAL: Translation companies (with own hired translators)** 60.7%
Requirements regarding quality of translations
Required translation quality

- Very low: 0.3%
- Low: 1.2%
- Average: 16.8%
- High: 53.3%
- Very high: 28.5%
Weighing up quality with other requirements

Question: How are the criteria such as quality, time and cost weighted when awarding a translation job?

<table>
<thead>
<tr>
<th></th>
<th>Average</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>54.6%</td>
<td>20.7%</td>
</tr>
<tr>
<td>Duration</td>
<td>27.7%</td>
<td>19.4%</td>
</tr>
<tr>
<td>Costs</td>
<td>31.8%</td>
<td>18.7%</td>
</tr>
</tbody>
</table>
Required quality assurance measures

- Self-check by translator: 58.7%
- Four-eye principle: 51.6%
- Correct terminology: 48.6%
- Terminology consistency: 42.2%
- Final proofreading by a native speaker: 34.5%
- Use of technical language and technical terminology: 33.3%
- Review by a technical expert: 25.5%
- Revision: matching of content between the source and target text: 26.9%
- Compliance with a style guide: 23.2%
- Localization: 16.5%
- Post-editing: 8.9%
- Style check as per the way of expression in the native language: 6.2%
**Current situation**

- ACTUAL: Different course of study with a foreign language component: 8.0%
- ACTUAL: Different linguistic studies: 12.3%
- ACTUAL: Native speaker without training in translation: 14.5%
- ACTUAL: Studies in technical communication: 17.9%
- ACTUAL: Technical expert with foreign language skills: 20.6%
- ACTUAL: Completion of translation studies: 29.1%
- ACTUAL: Trained translator (professional training): 31.5%
- ACTUAL: Native speaker with training in translation: 60.5%

**Ideal situation**

- IDEAL: Different course of study with a foreign language component: 4.3%
- IDEAL: Native speaker without training in translation: 6.2%
- IDEAL: Different linguistic studies: 6.9%
- IDEAL: Technical expert with foreign language skills: 19.0%
- IDEAL: Studies in technical communication: 24.3%
- IDEAL: Completion of translation studies: 27.6%
- IDEAL: Trained translator (professional training): 34.7%
- IDEAL: Certified technical translator: 46.2%
- IDEAL: Native speaker with training in translation: 89.2%
Qualification: actual vs. ideal situation

- **ACTUAL:** Different course of study with a foreign language skills (8.0%)
- **IDEAL:** Different course of study with a foreign language skills (4.3%)
- **ACTUAL:** Different linguistic studies (12.3%)
- **IDEAL:** Different linguistic studies (6.9%)
- **ACTUAL:** Native speaker without training in translation (14.5%)
- **IDEAL:** Native speaker without training in translation (14.5%)
- **ACTUAL:** Trained translator (professional training) (17.9%)
- **IDEAL:** Trained translator (professional training) (20.6%)
- **ACTUAL:** Completion of translation studies (29.1%)
- **IDEAL:** Completion of translation studies (24.3%)
- **ACTUAL:** Technical expert with foreign language skills (21.0%)
- **IDEAL:** Technical expert with foreign language skills (19.0%)
- **ACTUAL:** Studies in technical communication (31.5%)
- **IDEAL:** Studies in technical communication (27.6%)
- **ACTUAL:** Native speaker with training in translation (34.7%)
- **IDEAL:** Native speaker with training in translation (60.5%)
- **IDEAL:** Certified technical translator (46.2%)
- **IDEAL:** Certified technical translator (69.2%)
Which competencies of translators are considered to be important and are a must in translators?

Based on the results, a competence profile for technical translators can be created as follows:

- 35% Language skills in the target language
- 20% Industry-specific specialist and technical knowledge
- 15% Terminology management
- 10% Knowledge of tools
- 10% Knowledge of technical communication and the creation process
- 5% Linguistics
- 5% Project management
Extrapolated to the list of criteria of the quality standard **DIN EN ISO 17100:2015**, this could mean the following order of priority:

1. Translation competencies, linguistic and textual competencies in the source and target languages
2. Domain competence
3. Information collection and processing
4. Cultural competence
5. Technical competence
6. Research competence
Technical Translators and Technical Communication
Importance of knowledge of technical translators about technical communication
Overlapping competence fields

- **Legal** requirements and standards (for e.g., country-specific legal and normative requirements)
- Implementation of international requirements (for e.g., product conformity)
- **Concept of multilingualism** and country-specific concepts
- **Cultural neutrality** of an information product or localization
- **Language standardization**: standardized language, writing and spelling rules, style guides, phrases, text blocks, safety instructions and controlled languages
- Research, information gathering and information mining
- **Terminology management**
- Requirements of multilingual documentation
Overlapping competence fields

- Media and multimodality
  - Use of various input and output media
- Systems and technologies of technical communication
  - CMS, Single Source and Cross Media Publishing
- Determination and analysis of target groups
- Analysis of products and technology
- Content creation, structuring and information architecture
- Project management
Overlapping competence fields

- **Multilingual workflow, planning for translation and localization** (process, localization etc.)

- **Translation methods**
  - Functional translation, human translation, machine translation, review processes

- **Language technology**: Software used for localization and translation, for e.g.:
  - Translation Memory
  - Translation Management Systems (TMS)
  - Machine Translation
  - Software localization tools
Importance of cooperation between translators and technical communicators

- Not important: 0.4%
- Less important: 5.0%
- Neither nor: 9.9%
- Important: 55.8%
- Very important: 28.8%
Conclusion and Overview
Conclusion and overview

- Companies have to handle very **high translation volumes**.
- In the process, they prioritize **high quality** over time aspects and costs.
- **Qualified employees** are the critical success factors here as well.
Many translators work in the field of technical communication. So far however, there is no specific training for translators that prepares them for the tasks in this particular field of activity. About half the respondents think that special training in technical translation would be ideal.
Conclusion and overview

- As mentioned at the start, IEC 82079-1:2012 (Preparation of instructions for use -- Structuring, content and presentation) stipulates a specific qualification for technical translators: “Where instructions for use are translated from the original language into others, expert translators or specialists shall be responsible for the translation including checking and proofreading, should have basic competences in communication, particularly technical communication and be familiar with the subject area”.

- Almost all respondents, 84.8%, believe that close collaboration between translators and technical communicators is important.
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