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# I Summary

Terminology is an essential source of knowledge in technical communication. Especially in companies, many divisions deal with the development, dissemination, and use of terminology. Terminology ranges from construction and marketing, technical communication and training to translation and localization. In addition, the company's internal communication as well as the communication between companies and their clients is based on consistent and understandable terminology. Therefore, companies need to deal with processes and methods of terminology work and use tools for terminology management.

This is particularly true when user information is created for the use of products. The reason for this is the internationally applicable standard IEC/EN 82079-1, which summarizes the requirements for preparing instructions of use that will apply equally to the use of very small products as well as complex industrial machinery. In terms of terminology, IEC/EN 82079-1 requires the adaptation of terminology to the respective target group (target group adequacy) and its consistent use in all product-related user information, documents, and accompanying documents (see tekomp's commentary on standard, Chapter 7.3 Terminology).<sup>1</sup>

The subject of terminology work, however, often causes controversy within companies even to this day. Some people look at it mainly from a cost and investment perspective, whereas for others terminology work is a definite must to improve quality and efficiency. This apparent conflict will be resolved by conducting a cost and benefit study on terminology work supported by empirically verified data (indices). The study contains, amongst others, a section on the theoretical basis of terminology work, user experiences and case studies, indices for cost and benefit analyses, an overview of 17 systems for terminology management, terminology extraction and terminology check, as well as a description of the most important functions of software systems for terminology work. Furthermore, the study summarizes the results of an online survey of practical terminology work in companies.

## 1 Results of a Company Survey

In mid 2015, approximately 800 enterprises were polled via an online survey among tekomp-members about their experiences with and evaluation of terminology work in their fields. The collected data of the 504 respondents was analyzed. Around 24% of the participants were managerial staff and 74% were employees in companies. The remaining 2% were persons currently in training. Of the respondents, 72% worked in industrial enterprises and 17% worked in software companies; the remaining 11% worked in other companies.

When analyzing the results, the topicality and relevance of terminology problems in companies become apparent: in response to the question of how often it occurs that different corporate departments, or rather its employees, use different terms for the same thing (product part), 65% indicated that this happens regularly or very often, 24.5% said often, 7.7% stated that it happens occasionally and only 2.8% indicated that this happens rarely or never. The same results were drawn from the question of how often it occurs they use different designations in different documents for the same (product part): 43.9% indicated that this happens regularly or very often, 30.7% said often, 17.6% stated that it happens occasionally and only 7.9% indicated that this happens rarely or never.

The reason for this lies in the practice of having a range of divisions involved in assigning terms within the company: In about 80% of the surveyed companies, the corporate

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<sup>1</sup> Fritz et al. 2015, Schulz 2015.

## Summary

departments of Research/Development/Construction and Technical Communication primarily assign terms.

The Product Management and Marketing departments are also included in this list in about 62% of the companies. Localization/Translation or the Marketing division are assigned to this task in approximately 35% of the companies, and in almost one-fourth of the companies, the Top Management and Customer Service divisions (24.1% and 23.3%) or in some cases the Training division (20.2%) are involved. The table below gives a comprehensive overview of the results.

*Table 1: Division of companies involved in the allocation of terms*

<b>Corporate department</b>	<b>Percentage</b>
Research/(software) Development/Construction	81.8%
Technical Documentation	78.0%
Product Management/Portfolio Management	62.4%
Marketing	62.0%
Marketing/Sales	35.5%
Translation/Localization	34.5%
Top management	24.1%
Service/Customer service/After-Sales	23.3%
Training	20.2%
Corporate Communications/Public Relations	20.2%
Purchase/Procurement	12.7%
Quality Assurance/Quality Management	10.8%
Assembly/Assembly Planning/Production	9.0%
Servicing/Maintenance	5.3%
IT Service	4.5%
Customer Relationship Management/Partner Relationship Management	3.9%
Administration	2.0%
Controlling/Accounting	1.2%
Packaging	1.0%

The problematic nature of different terms has far-reaching consequences for work efficiency: After all, 26.6% of the respondents stated that the designations of product parts are frequently or very often not understood immediately. Another 25.3% indicated that this is often the case, 33.9% indicated that it occurs occasionally and according to only 13.9% it happens rarely or never. As a result, about 25.9% have to look up or ask for the correct terms very frequently, another 31.3% do so often, 29.3% occasionally and only 13.5% have to do so rarely or never. The results point out the importance and the repercussions of terminology problems in enterprises. They are a clear indicator for the time and financial expenditure that companies incur if the standardized terminology is not used.

Standardized terms have an enormous benefit, according to the survey respondents. 67.3% estimated that consistent terminology reduces the workload drastically and 23% to a rather large extent. The time saved is viewed as very large or large by 62.2% and as rather large by 26.9% of the respondents. The improvement in quality due to standardized terms is even regarded as large or very large by 86.5% of the respondents; as is the simplification of the comprehensibility for clients, which is considered as very large or large by 80.8%. With regards to potential cost savings, at least 14.5% view the potential for improvement as very high or high, and 17.9% as rather high.

According to the participants, the main benefit lies in quality improvement, where 26.4% think that it would be very large or large and another 29.7% think that it would be rather large.

Despite these clear figures, many enterprises do not acknowledge terminology work accordingly. Only 5.7% of the participants stated that terminology work is of great importance in the company. A further 17.5% estimated its importance as large, 30.5% as medium/average, and in 40.5% of the respondents' cases the importance is estimated as little or very little.

The problematic nature and importance of terminology work is largely known by companies. Therefore, it is surprising that only few companies are ready to invest in terminology work: merely 1% of the companies surveyed are prepared to set aside a very substantial investment for terminology work, 7.5% would approve a substantial investment and 29.9% a somewhat substantial investment. A considerable 50.7% is only ready to invest in terminology work in their company on a small or very small scale.

In percentages, there is a clear difference between companies already opting for terminology solutions and companies that are planning to do so. Table 2 shows these figures.

*Table 2: Readiness to invest in terminology work*

Willingness in the Company to Invest Effort in Terminology Work	Defined Terminology in the Company		Total
	Yes	No	
Very high effort	1.5%	0.4%	0.9%
High effort	17.0%	0.8%	8.0%
Medium effort	40.8%	20.0%	29.3 %
Low effort	28.2%	34.9%	31.9%
Very low effort	9.7%	26.7%	19.1%
I do not know	2.9%	17.3%	10.8%
Total	100.0%	100.0%	100.0%

The results of the terminology problems as well as the perceived benefit and the potential for improvement by terminology work on the one side, and the readiness to invest in terminology work on the other side, show the discrepancy between the importance of terminology work and the readiness of enterprises to invest in it. Most company divisions that want to introduce terminology work to the enterprise face this so-called "opinion and behavior discrepancy."

## 2 Cost-Benefit Aspects

How can we best handle the discrepancy between the necessity of terminology work and the lack of readiness to invest in it? As usual, companies here are facing the question of "motivating factors" again. Why is it necessary to introduce a new system or a new method? The benefit of terminology work needs to be identifiable to the companies. It is important to convince the decision makers that false terminology incurs high costs and that consistent and appropriate terminology saves the company from unnecessary spending. In general, there are two motivating factors for companies to act:

- Problems in corporate communication can occur, which create costs that can be resolved by means of terminology work.
- Terminology work improves the efficiency of information and communication processes in companies and can save costs.

Practice shows that the current reasoning in favor of terminology work is mostly based on the second motivating factor. This, however, ignores the fact that terminology work

is more than just a “nice to have”. Terminology work is indispensable. An explanation of the problems and all related consequences highlights the motivating factors for the introduction of terminology solutions in companies and leads to an increased readiness to invest. Here, the empirical data offers transparency to which extent terminology work can solve a company’s problems:

- Show, in particular to your company, that based on empirical analyses, the problems due to non-uniform terms are very widespread.
- Explain the potential effects on cost efficiency and quality.
- Explain that terminology work facilitates cost savings on various levels and can improve content quality.

The experiences of the survey participants provide clues as to where problems arise due to non-uniform terminology and which aspects can be improved with terminology work.

A selection of these aspects is presented below:

- Utilization of correct terms: higher
- Traceability of correct terms: faster
- Translation costs: decreasing
- Inconsistencies in localization: less
- Completion of documentation: faster
- Cost for rework on documentation: less
- Match-rate in the Translation Memory System: higher
- Corrections and Errors in translation: less
- Proofreading cycles: fewer
- Research work: less
- Traceability of documents: improved
- Comprehensibility of texts: easier and better
- Consistency and quality of texts: higher
- Re-usability: higher and easier
- Search process: faster and more uniform
- Work time: less
- Demand for coordination: less
- Text production: faster
- Recognition factor and corporate identity: higher
- Translation: easier and faster
- In-house communication: better and clearer
- Idea about what a concept refers to: more uniform
- Misunderstandings: fewer
- Definition of allowed and prohibited synonyms: easier
- Training of colleagues: faster
- Glossary: more uniform
- Production of spare part catalogs: faster and less expensive

Most of the stated problems and improvements due to terminology work can be documented empirically. It is relatively easy to collect data on e.g. the number of terminology-related queries or proofreading rounds at the text production and translation stages. Based on this information it is possible to derive the time savings and costs reduction.

The experiences of the survey participants are as follows:

- 5% cost reduction with translations
- More 100% matches of translations lead to about 10% in cost reductions
- About 10% work saving
- About 50% less translation workload
- Estimated 30% cost saving per year
- Possible 20–30% cost reduction, including translation
- For further editing and translation, the cost reduction is revised to between 5- 20%

- About 25% cost reduction in the area of maintenance
- Reduction of the error rate means about 5% less workload for service and hotline
- About 50% time saving
- 25 to 33% more free time
- About 60% fewer further inquiries by translators
- 80% fewer complaints about the translations

This information in each case is related to a particular company and does not represent a general trend. Nevertheless, these experiences show that terminology management can offer considerable improvements and savings at different levels, which are measurable and thus provable. Figure 1 shows a first convergence model of the cost-benefit analysis for terminology work in enterprises.

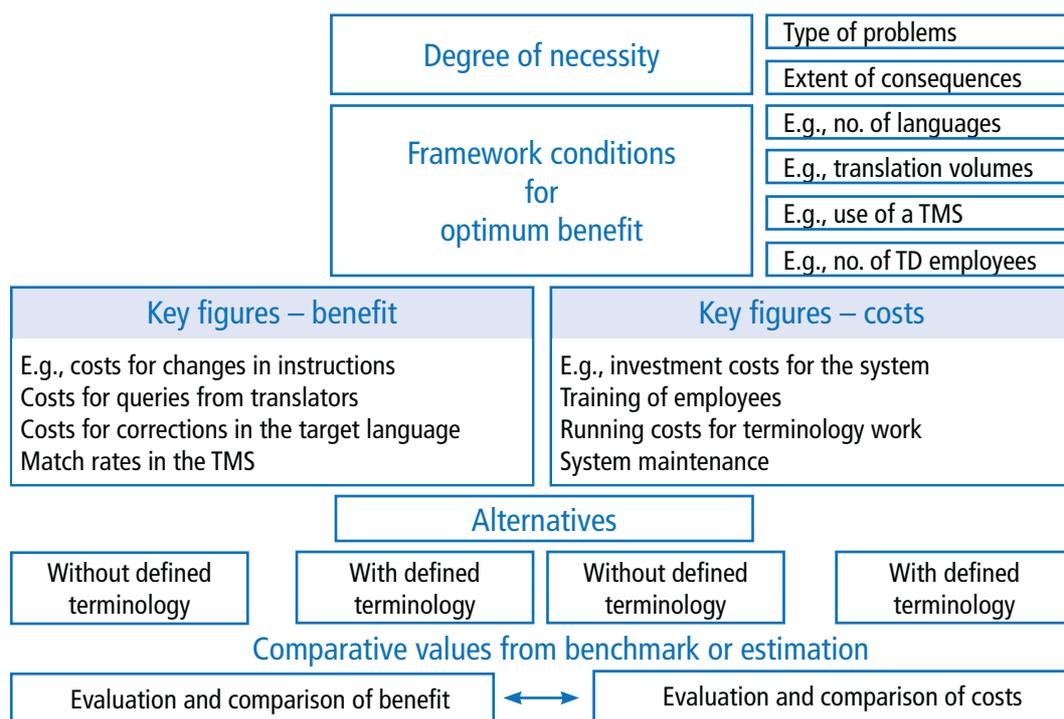


Figure 1: Model of a cost-benefit analysis for terminology work

So far terminology solutions have only been implemented by a small percentage of enterprises. Only 25.2% of the companies participating in the tekomp-survey are already using an active terminology management system. The results of the survey also document, however, that terminology work is currently a highly topical subject in many companies. About 21% of the participants are in the introduction phase of terminology work and 19.7% are in the information phase. About 18.7% of the companies are currently not concerned with the subject of terminology work and only 2% have opted against terminology work (6.9% did not specify).

The present study shall form the basis for decision making processes in enterprises. Among other aspects, the study contains important explanations on the theoretical basics of terminology work. The theoretical part is supported and complemented with reports of user experiences as well as company case studies. The presentation of the methodology for a cost-benefit analysis and the terminology indices enable companies to develop a business model that introduces their terminology.

The study further describes in detail all functions of software systems for terminology work as well as an overview of 17 international systems available on the market for terminology management, terminology extraction, and terminology check.