There Is No Knowledge without Terminology: Key Factors for Organisational Learning

Blanca Nájera Villar and Diana Brändle

TermNet, Austria
`projects@termnet.org`

Abstract. Any company or organisation in the world has to manage its knowledge. For some it may be sufficient to have the knowledge in their brains. But as products and services are subject to constant innovation, most of the companies and organisations acting in the global market or on an international level find themselves confronted with the task of constantly updating, referencing, tracking and managing knowledge. Marketing material, speeches on conferences and sophisticated tools make us believe that it is easy to keep track of information in a company or organisation, to use single source publishing, touch each content only once, have it centrally stored and reuse it for multiple purposes. How many of you have really achieved this goal or know organisations, where all content-related processes run smoothly and are fed by a central knowledge base? Is it actually realistic to follow the ideal of ONE central knowledge base in a company / organisation or just an utopian idea? We will have a closer look at challenges and possible solutions for innovative organisations and companies when managing units of knowledge represented in the form of technical words or „terms" in one or more languages.

Keywords: Terminology, multilingual knowledge base, single source publishing, organisational learning, learning organisation, terminological database, organisational knowledge, globalisation, multilingual, terms.

1   Current Situation

The knowledge [3] related to a product or service is, if at all, stored in many different IT systems, serving different needs, targeting different user groups. The data have different formats, are assigned with different metadata, set up in various languages and are mostly stored at different places. Only certain users or user groups have access to specific data.

In lager companies or organisations it may even happen that people working in different departments or subsidiaries are not aware of existing inventories [4] in the other department or subsidiary, even if access to this information would be helpful for them. Obstacles for exchanging information are not only different formats, contents, tags, etc., but sometimes simply lacking knowledge of existing information [5]. Consequently, a lot of information is available redundantly in different systems;the effort for maintaining data in various systems costs a lot of time and money; and there is a high risk of inconsistent or even incorrect data.
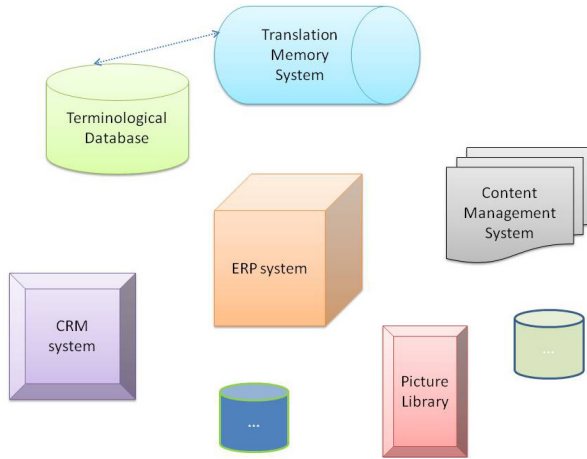
Fig. 1. Corporate knowledge stored in independent systems

2   One Central Knowledge Base or Several Systems?

For a long time terminologists were convinced that the ideal solution to manage corporate or organisational knowledge would be to put a terminological database [1], [7] at the centre of the IT landscape and feed other systems and contents with its data.

But this approach has proved to be unrealistic as the effort to manage all organisational or corporate knowledge with all its specific formats, target groups, languages, codes, pictures, texts, symbols, types of information, different development stages and workflow status, etc. in one system is unmanageable.
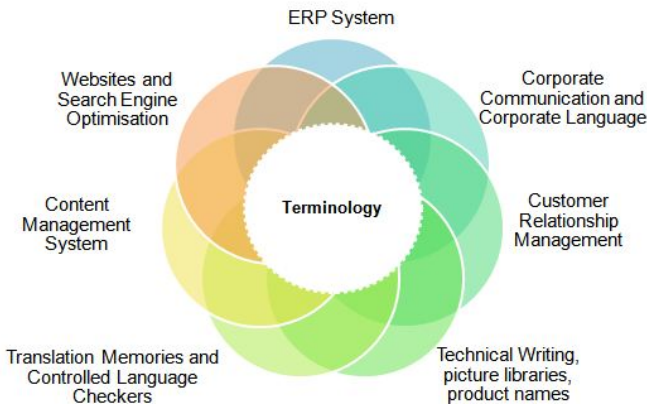

Fig. 2. Outdated: Ideal to have a terminological database in the centre

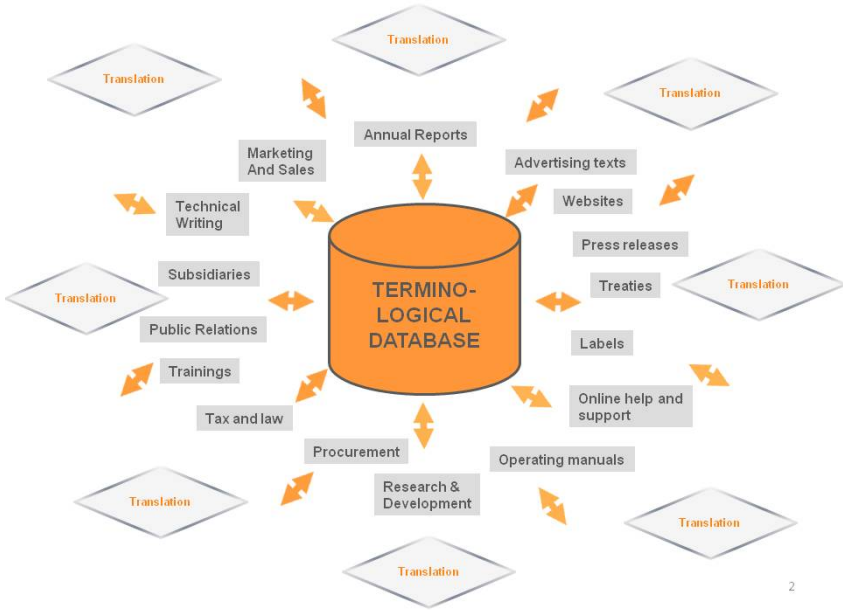The ideal of a central term base, however, still does make sense from a translation department's view:

Fig. 3. Central term base for translation departments or language service providers
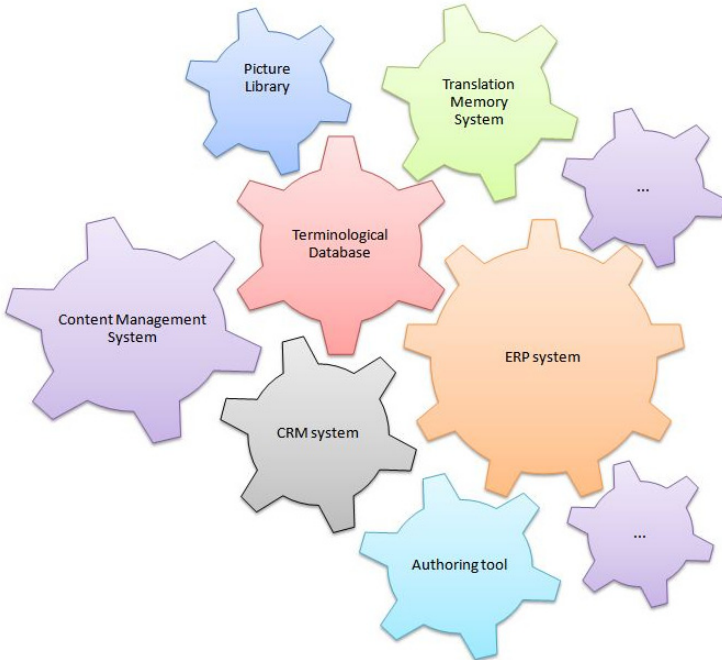

Fig. 4. Realistic approach: interlinked solutions and systems

Translation departments are dependent on input from other departments and have to exchange information and data that are relevant for translating various types of texts and contents. From this point of view it makes sense to put a terminological database in the centre of a language service provider's IT landscape.

To keep an eye on the bigger picture, the solution for larger companies and organisations will be a still heterogeneous IT landscape, except that exchanging data and using information for multiple purposes is made easier by increased automation that simplifies complex, interrelated processes involving many departments and persons. Single source publishing is certainly possibly, but it also depends on different systems which – at least so far - cannot all be replaced or merged.

3   Terminology in the Innovation Process

No matter, whether a new machine is being developed or a new service offered, innovative processes **are always accompanied by communication and documentation. An idea has to be given a name, its** features and functions have to be explained, its parts must be listed and all this knowledge should be easily accessible for all people involved.

3.1   Examples from the Car Industry

Car models are modified every now and then. These so-called "facelifts" include mostly smaller changes of the head or rear lamps:

Audi S4 vorher nachher

Fig. 5. Facelift Audi S4 (© Audi AG)

A new generation of a car model is produced on average every 4 to 6 years. In the process of this so-called model changeover, comprehensive revisions and innovations concerning design and technology are carried out:

Fig. 6. Evolution of the AUDI A3 radiator grill (© Audi AG)

The above figure shows how the radiator grille of one individual car model changed over not even a decade. The terms for the individual model generation changed in German from "Ziergitter" over "doubleframe" to "singleframe".

The long-term effect of classifying information using a terminological database linked e.g. with an Enterprise Resource Planning system, a Customer Relationship Management database, spare parts and price lists, picture libraries, etc. will be more transparent knowledge that can be used for multiple purposes.

In a terminological term base information on the AUDI A3 radiator grille may look like this:

Entry no.: 1	
Subject field:	Automotive
Model:	A3
Model year:	2004 - 2011
German:	**Singleframe-Kühlergrill**
Part of speech:	noun
Gender:	nt
Definition:	…
Def-Source:	…
Source:	…
English:	…
French:	…

Fig. 7. Terminological entry no. 1

```
Entry no.: 2

Subject field:        Automotive
Model:                A3
Model year:           2003 – 2004
German:               Doubleframe-
                      Kühlergrill
Part of speech: noun
Gender:         nt
Definition:     …
Def-Source:     …
Source:                 …
English:        …
French:                 …
```

Fig. 8. Terminological entry no. 2

```
Entry no.: 3

Subject field:        Automotive
Model:                A3
Model year:           1996 – 2003

German:               Zierrahmen-
                      Kühlergrill
Part of speech: noun
Gender:         nt
Definition:     …
Def-Source:     …
Source:                 …
English:        …
```

Fig. 9. Terminological entry no. 3

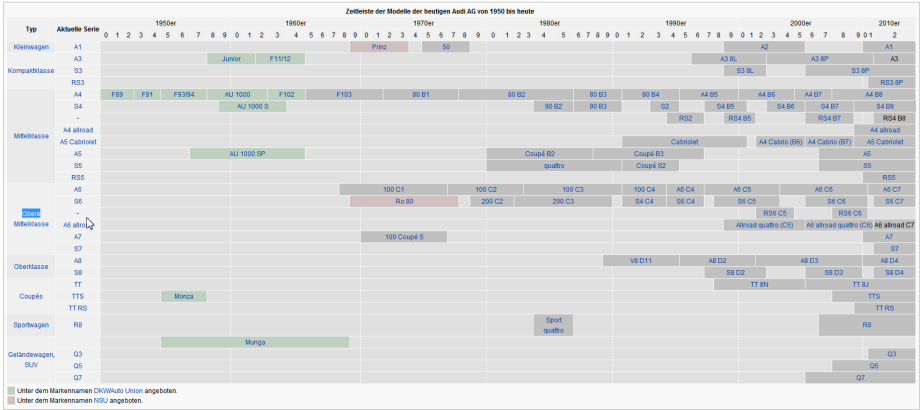**Fig. 10.** Audi paint "Eisvogelblau, Perleffekt" (© Audi AG)

The above picture shows an Audi A3 paint, called "Eisvogelblau, Perleffekt". It was only available until model year 2011 and since then has not been replaced. If you were a customer or retailer of Audi and would like to order a car in this colour, but could not find it, would it not be interesting for you to know that this model was

available with this paint until 2011, but not any more? If you were a customer or retailer of Audi in an English-speaking country, how would you find information unless you knew that the English equivalent for "Eisvogelblau, Perleffekt" was not – as you might possibly have expected "Kingfisher Blue, Pearl Effect" -, but "Glass Blue, pearl effect"?

If we look at the table below, we have an idea how complex it is not only to keep track of changes, but also to classify information (set up concept and classifications systems) in larger companies or organisations:

Fig. 11. Timeline of Audi's models from 1950 until today (© Audi AG)

One aspect on the way to achieve the goal of more transparent information and structured knowledge is to include terminology work right from the start in innovative processes, set up term creation rules based on the individual in-house classification system.

4　　Demands on Organisational / Corporate Knowledge

As there are normally several or even many people, different departments, possibly different subsidiaries or contractors in various countries with cultural differences and several languages involved, information, documentation and communication has to meet various requirements [2], [6]:

It must be

- easily accessible (technically and as necessary in different languages)
- up-to-date
- comprehensive
- clear
- comprehensible
- traceable

4.1   Need for Metadata

Knowledge and information can only be tracked, referenced and managed if

- the idea behind a product or service is explained
- a definition of what separates this function, product or service from others is given and
- the designation(s) in the languages needed are recorded and contain sufficient meta data.

A knowledge base in the form of a terminological database can not only contain terms, but also illustrations, multi-media-files, symbols and icons – with the required meta data for correct use. Terminology forms an integral part of organisational learning, as it contains key information, on, for example, the following topics:

- Track changes - Who created the entry or term and when; Who changed the entry or term and when; Who created a certain field and when; Who changed a certain field and when.
- Usage - Which term is preferred or even prescribed or forbidden, for which application, in which type of text, for which product, company, etc.
- Locale-specific variances - Which term or spelling is used in which language and country.e.g. color (USA) vs. colour (UK)
- Geopolitical and cultural issues in Localisation - e.g.: Take great care when using flags, i.e. the flag of Taiwan for information in China

While in Germany, every do-it-yourselfer keeps a locksmith's hammer [figure 13] in the toolbox, the Anglo-Saxon counterpart has traditionally a claw hammer [figure 14] not only to hit nails into the wall, but also to remove them as necessary.

Accordingly, people from both sides of the Channel have different concepts of a hammer. And a German who is asked to use a hammer to remove a nail, will be amazed and grab for a set of pliers instead of a hammer.

5   Conclusions

A learning organisation [2], [6] must enable everybody involved in development, innovation and learning to have easy and quick access to relevant information, to have all important facts available (including meta data), no matter in which language, for which country, which product/service is concerned, to track history of a product/service and thus to prevent duplication efforts, repetition of mistakes and higher costs. Moreover, terminology, terminology management and the use of the reliable terminology resources guarantee quality of a product, protect customers and save costs [3], [7].

- Terminology helps to guarantee the quality of products and processes
- All companies and organisations produce terminology in written and oral form.
- Terminology is a part of the process and, also, of the product.

- Terminology management is crucial at the production of source texts (corporate knowledge) and technical documentation and should be implemented throughout the process (see figure 9).
- All stakeholders in an organisation or company should be included in terminology policies and planning.
- Terminology is an asset for any company helps it to stand out from competitors.

- Terminology helps to protect customers

- Clarity and safety are key premises in technical documentation – not only in the medical industry.
- Bad terminology management can influence the quality of the product and lead to legal claims.
- Technical documentation and, as a consequence, terminology are part of the product.
- Quality assurance is a key issue in the industry and technical documentation.
- Wrong terminology in technical documentation can cause damages to employees, customers, users, etc.

- Terminology management saves costs

Terminology management in technical documentation can lead to:

- 5% reduction of the translations costs,
- 10% reduction of the general costs through 100% matches in translation memories,
- 10% reduction of the work-load,
- 50% less in translation work,
- reduction of 60% in the translation questions and queries.
    (Schmitz und Straub, 2010)

Competitive business environments with dynamic development processes (i.e. SRCUM method) make it necessary to constantly maintain and update corporate/organisational knowledge and to make it accessible for changing users and user groups. A key factor for the long-lasting success of learning organisations is professional terminology work.

References

1. Arntz, R., Picht, H.: Einführung in die Terminologiearbeit (Introduction to terminology work). Georg Olms Verlag, Hildesheim (1991)
2. Biro, M., Messnarz, R.: Success Factors for Business Based Improvement. Software Quality Professional 2(2) (March 2000)
3. Budin, G., Swertz, C., Mitgutsch, K.: Knowledge Organization for a Global Learning Society (2006)
4. Edwards, K.: The importance of content inventories. In: MultiLingual, Annual Resource Directory (2012), http://www.multilingual.com

5. Galinski, C., Reineke, D.: Vor uns die Terminologieflut. In: eDITion, vol. 2 (2011)
6. O'Keeffe, T.: Towards Zero Management Learning Organisations (2006)
7. Zenk, W., Brändle, D.: Terminology to suit the master plan. In: tcworld (April 2010),
   `http://www.tcworld.info/tcworld/technical-`
   `communication/article/terminology-to-suit-the-master-plan`